GROVE GEAR



GEAR PRODUCTS CATALOG 8050

REGAL

PROVIDING THE WORLD'S BEST GEARING

GROVE GEAR

- Interchangeability – Replace's all major worldwide brands
- Quality – Superior Design & Precision Manufacturing
- Reliability – Best Lead time in the Industry

Grove Gear manufactures standard and custom gear drives for industrial and specialty applications. The product line is the most extensive line of gear reducers in North America and offers a solution for every power transmission need.

Grove Gear Iron Man offers a comprehensive and superior line of gear reducers, available in right angle worm and high efficiency options.

Electra-Gear aluminum products are a light weight, yet durable alternative to today's cast iron and steel models, and are available off-the-shelf or customized to your exact specifications.

Bravo and **Quadro** reducers are lightweight, sealed for life, aluminum worm reducers designed for small spaces including OEM designs with difficult installations as well as mobile equipment.

LeCentric reducers are available as a compact aluminum or Cast Iron in-line reducer also sealed for life with ratings to 15HP (aluminum) 40HP (cast iron).

Grove Gear designs and builds long lasting energy efficient gear reducers and **GEAR + MOTORS** to meet the increasing demands for efficiency.

Beyond our standard and modified standard products, our engineers will work with you to design and build custom solutions in several gearing technologies to fit your needs.



Grove Gear IRONMAN
GR Series
Worm Gear Reducers



Grove Gear IRONMAN
NH Series
Worm Gear Reducers



Electra-Gear
EL Series
Worm Gear Reducers



Grove Gear
Stainless Steel
Worm Gear Reducers



Grove Gear
BRAVO®
Gear Reducers

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Grove Gear LeCENTRIC™ Gear Reducers



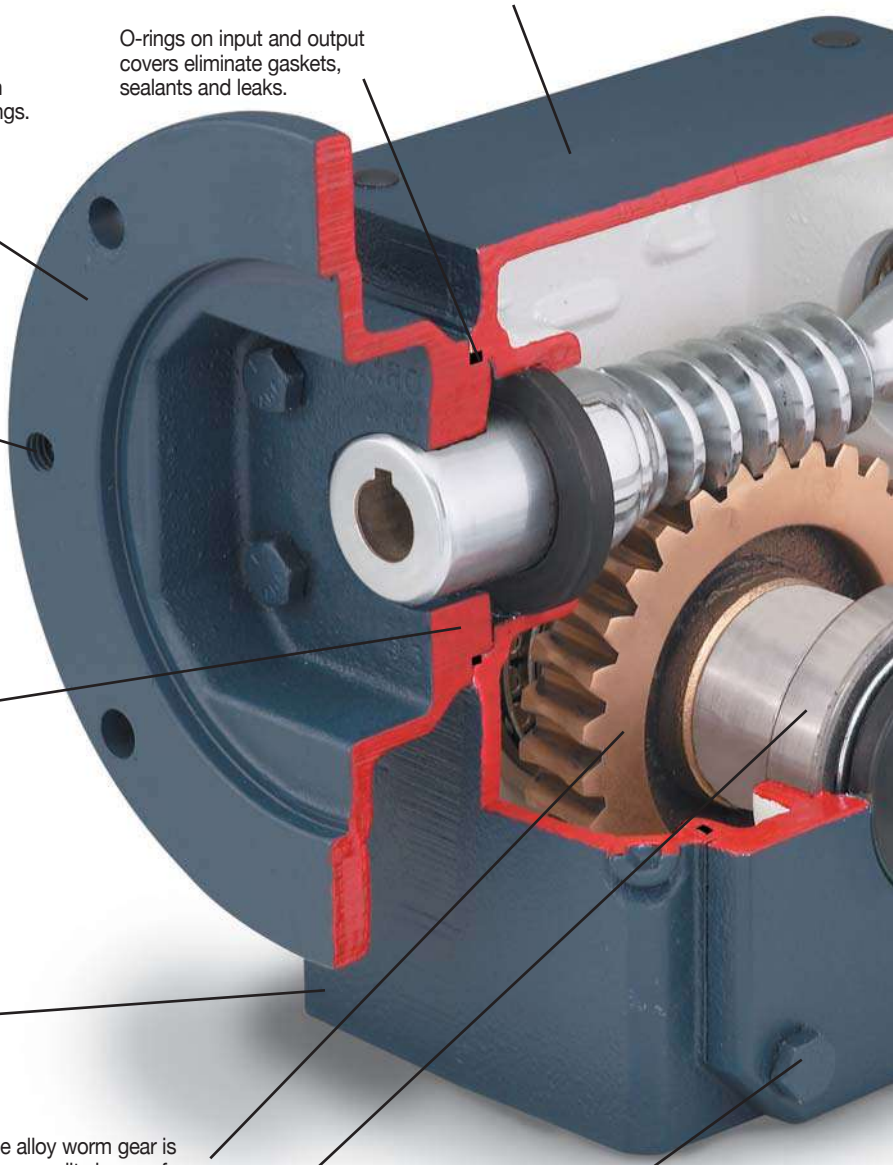
Grove Gear QUADRO® Gear Reducers

Cast Iron Gear Reducers and Gear Plus Motor Built For Industrial Use

Precision mounting surfaces and extra threaded bolt holes on top and bottom for flexibility and to accept a wide range of stock mounting accessories.

O-rings on input and output covers eliminate gaskets, sealants and leaks.

Cast aluminum NEMA C-input with machined fits for precision alignment of motors and bearings.



Push-off holes drilled and tapped into flange for quick motor removal on quill input styles (56 & 140TC frames).

Seal Guard** on quill-input styles protects input seal from damage during motor installation.

** Sizes 813 through 852 only

IronMan™ fine-grained, one-piece cast housing for rigidity and alignment. Machined for precision alignment of worm, worm gear, bearings and mounting surfaces. Superior resistance to environmental contaminants with high heat dissipation and noise reduction.

Bronze alloy worm gear is premium quality bronze for maximum strength, lubricity and superior life.

Tapered roller bearings on output shaft for high overhung and thrust load capacities.

Premium Grade 5 zinc-plated heat-treated bolts used throughout.

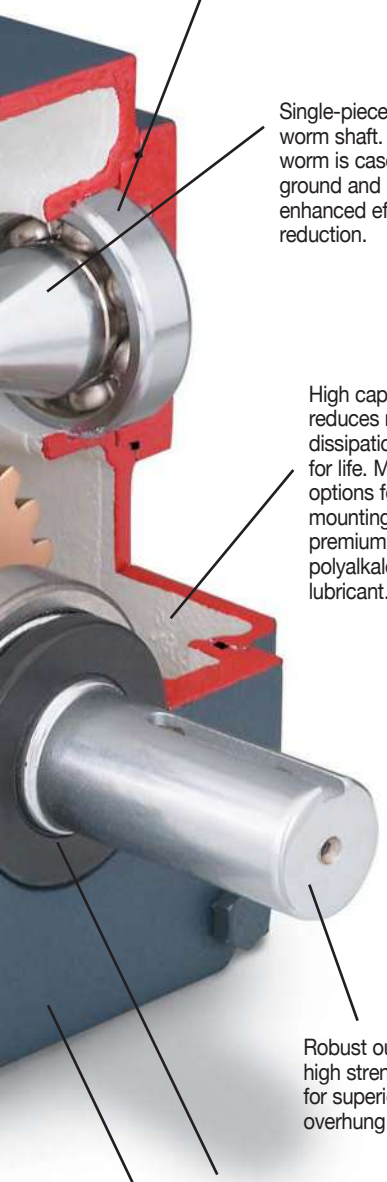
Mounting dimensions are interchangeable with Baldor 900 series, Boston Gear, Browning Raider, Falk, Morse Invader and other "industry standard" reducers.

Series Comparison

CAST IRON GR SERIES

CAST IRON NH SERIES

Oversized positively-retained high speed input shaft bearing for higher shock load capacity, shaft alignment and seal life. Ideal for frequent starting and reversing applications.



Single-piece, alloy steel input worm shaft. High lead angle worm is case-hardened, ground and polished for enhanced efficiency and noise reduction.

High capacity oil reservoir reduces noise, aids heat dissipation and lubricates for life. Multiple venting options for multi-position mounting. Factory filled with premium Mobil Glygoyle 460 polyalkalene glycol (PAG) lubricant.

Robust output shaft of high strength steel alloy for superior torque and overhung load capacities.

Viton® premium quality, double lip seals** throughout —on micro-finished surfaces— mean extended life, resistance to high temperature, abrasion and chemicals.

Single output cover design provides precise centering of gear for lower noise levels and higher overall gear efficiencies.

CAST IRON GR SERIES



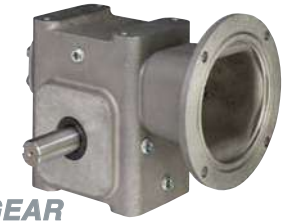
- Grove Gear IRONMAN 800 Series
- Cast Iron Housing Construction
- Mounting dimensions are interchangeable with most industry standard reducers
- Designed with industry leading premium features as standard
- Combines the premium features of the LEESON IRONMAN with the industry's broadest product offering of the Grove Gear Flexaline
- GEAR+MOTOR™ Available

CAST IRON NH SERIES



- Grove Gear IRONMAN Narrow Housing 800 Series
- Cast Iron Housing Construction
- Designed with industry leading premium features as standard
- Replacement for Grove Gear OE Series and original Alling Lander gear reducers
- Compact housing design to fit where other reducer brands cannot
- GEAR+MOTOR™ Available

ALUMINUM EL SERIES



ELECTRA-GEAR

- Electra-Gear 800 Series
- Aluminum Housing Construction
- Lightweight design with all the premium features of the GR and NH series as standard
- Replacement to original Electra-Gear reducers
- GEAR+MOTOR™ Available

ELECTRA-GEAR

Aluminum Gear Reducers Built For Industrial Use

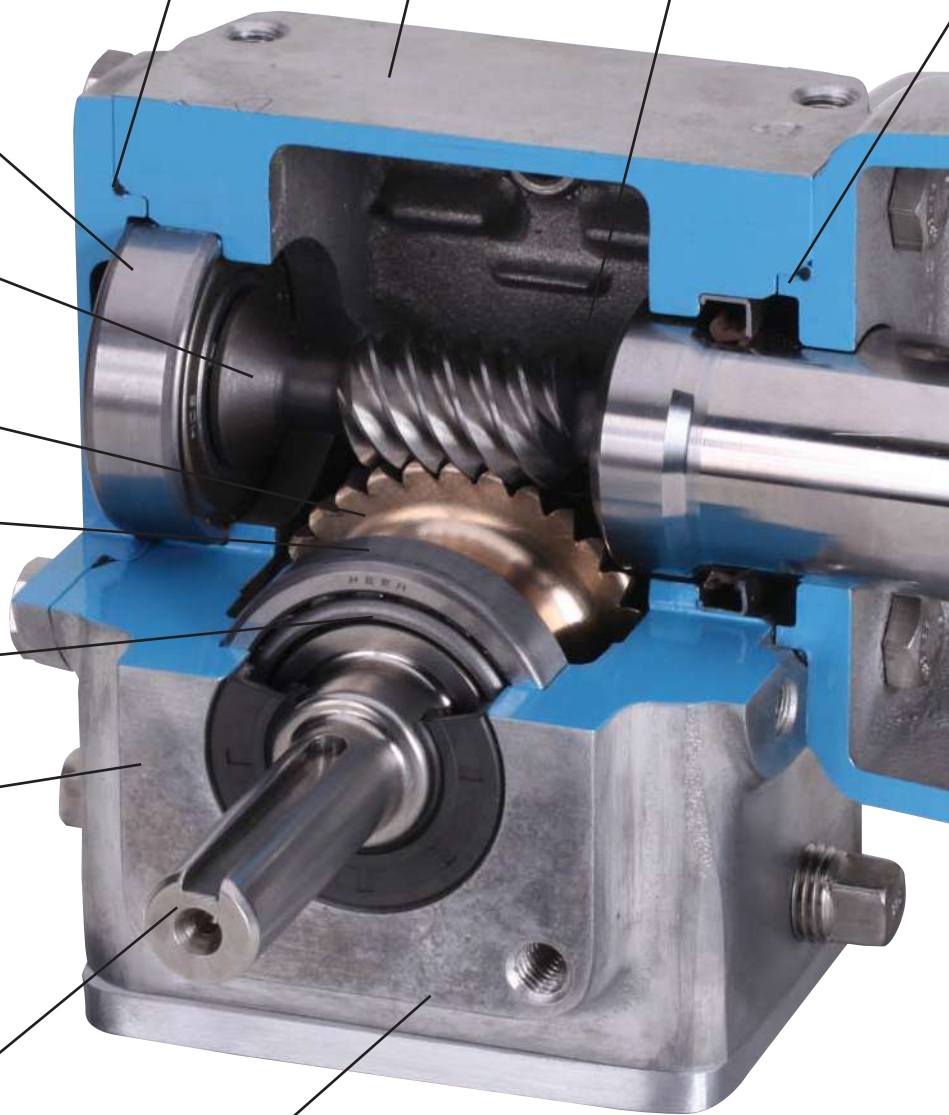
Precision mounting surfaces and extra threaded bolt holes on top and bottom for flexibility and to accept a wide range of stock mounting accessories.

High capacity oil reservoir reduces noise, aids heat dissipation and lubricates for life. Multiple venting options for multi-position mounting. Factory filled with premium synthetic Mobil Glygoyle 460 polyalkalene glycol (PAG) lubricant.

O-rings on input and output covers eliminate gaskets, sealants and leaks.

Oversized positively-retained high speed input shaft bearing for higher shock load capacity, shaft alignment and seal life. Ideal for frequent starting and reversing applications.

Single-piece, alloy steel input worm shaft. High lead angle worm is case-hardened, ground and polished for enhanced efficiency and noise reduction.



DIN1705 (CuSn45Ni4) bronze alloy provides maximum strength, lubricity and superior life.

Tapered roller bearings on output shaft for high overhung and thrust load capacities.

Viton® premium quality, double lip seals provide extended life and resistance to high temperature, abrasion and chemicals. Only non-rusting rubber O.D. seals used in all exposed locations.

EL Series One piece 356T cast aluminum housing to provide strength and rigidity. Polished finish also available.

Robust output shaft of high strength steel alloy for superior torque and overhung load capacities.

Single output cover design provides precise centering of gear for lower noise levels and higher overall gear efficiencies. Output shaft comes out non-cover side as standard.

EL Series Mounting dimensions same as the original Electra-Gear product with an option to match the industry standard dimensions of Grove Gear.

GR and NH Series Mounting dimensions are interchangeable with Baldor 900 series, Boston Gear, Browning Raider, Falk, Morse Invader and other "industry standard" reducers.

ALL FEATURES SHOWN ARE SAME FOR ALL GR, NH AND EL SERIES EXCEPT WHERE NOTED.



Seal Guard** on quill-input styles protects input seal from damage during motor installation.

** Sizes 813 through 852 only

Cast aluminum NEMA C-input with machined fits for precision alignment of motors and bearings. (EL Series)

Push-off holes drilled and tapped into flange for quick motor removal on quill input styles (56 & 140TC frames).

Premium Grade 5 zinc-plated bolts used throughout.

Series Comparison

CAST IRON GR SERIES



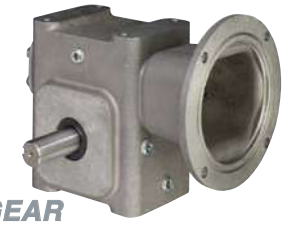
- Grove Gear IRONMAN 800 Series
- Cast Iron Housing Construction
- Mounting dimensions are interchangeable with most industry standard reducers
- Designed with industry leading premium features as standard
- Combines the premium features of the LEESON IRONMAN with the industry's broadest product offering of the Grove Gear Flexaline
- GEAR+MOTOR™ Available

CAST IRON NH SERIES



- Grove Gear IRONMAN Narrow Housing 800 Series
- Cast Iron Housing Construction
- Designed with industry leading premium features as standard
- Replacement for Grove Gear OE Series and original Alling Lander gear reducers
- Compact housing design to fit where other reducer brands cannot
- GEAR+MOTOR™ Available

ALUMINUM EL SERIES



ELECTRA-GEAR

- Electra-Gear 800 Series
- Aluminum Housing Construction
- Lightweight design with all the premium features of the GR and NH series as standard
- Replacement to original Electra-Gear reducers
- GEAR+MOTOR™ Available

Interchange Guide

Single Reduction


Style BMQ


Style TMQ


Style JMQ


Style FMQ


Style CMQ


Style FEMQ


Style HMQ


Style JHMQ


Style VLHMQ

CAST IRON GR SERIES / CAST IRON NH SERIES / ALUMINUM EL SERIES Reducer Style	Replaces Original GROVE GEAR OE Series Reducer Style	Replaces Original ELECTRA-GEAR Reducer Style
B	U	M
BM & BMQ	UFC & UF	MC & MSC
B★	N/A	ML
BM & BMQ★	N/A	MLC & MLSC
T & U	Z & UB	A
TM & TMQ	ZFC & ZF	AC & ASC
T★	N/A	AL
TM & TMQ★	N/A	ALC & ALSC
UM & UMQ	UBFC & UBF	NEW
J	J	JB
JM & JMQ	JFC & JF	JBC & JBSC
VL & VH	SL & SH	B
VLM & VLMQ	SLFC & SLF	BC & BSC
VHM	SHFC	N/A
VHMQ	SHF	N/A
F	K & V	N/A
FM & FMQ	KFC & KF / VFC & VF	N/A
C	P	N/A
CM & CMQ	PFC & PF	N/A
FE	E	N/A
FEM & FEMQ	EFC & EF	N/A
H	Y	MH_ & H_
HM & HMQ	YFC & YF	MH_C/ MH_SC & H_C/H_SC
JH	N/A	JBH_
JHM & JHMQ	N/A	JBH_C & JBH_SC
FH	M	RH_
FHM & FHMQ	MFC & MF	RH_C & H_C/H_SC & RH_SC
FR	N/A	New
FRM & FRMQ	N/A	New
FL	N/A	RL
FLM & FLMQ	N/A	RLC & RLSC
BL (Torque Limiter Reducer)	UL	N/A
BLM & BLMQ (Torque Limiter Reducer)	ULFC & ULF	N/A
ABC	N/A	ABC (contact factory)
Accessory		
Horizontal Base Kit (T & U)	Horizontal Base Kit (Z & UB)	Horizontal Base Kit (AK Kit #'s)
Vert. Output Shaft Base Kit (VL & VH)	Vert. Output Shaft Base Kit (SL & SH)	Vert. Output Shaft Base Kit (BK Kit #'s)
Vertical Input Shaft Base Kit (J)	Vert. Input Shaft Base Kit (J)	Vert. Input Shaft Base Kit (JBK Kit #'s)
Cast Iron Output Flange (F)	Cast Iron Output Flange (K & V)	Cast Iron Output Flange (Square)
ABC Base Kit	N/A	ABC
Cast Iron Output Flange for Solid Output Shaft Styles (FR)	N/A	Cast Iron Output Flange (Round)
Coupling Input "C" Flange Kit – Single Red.✚	C-Flange Mounting Kit	N/A
Coupling Input "C" Flange Kit – Double Red.✚	C-Flange Mounting Kit	N/A
Hollow Shaft Tie Rod Kit	Hollow Shaft Tie Rod Kit	Hollow Shaft Tie Rod Kit
Hollow Shaft Torque Arm Bracket	Hollow Shaft Torque Arm Bracket	Hollow Shaft Torque Arm Bracket (TAK Kit #'s)

★ Confirm required output shaft length
✚ Convert Style B to BM using coupling input kit

SEE PAGE 113 FOR DOUBLE REDUCTION

800 Series Gear Reducer Model Number Nomenclature

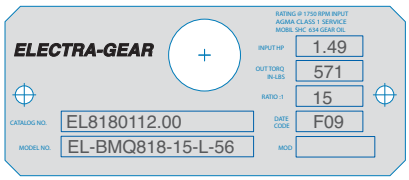
All new stock and custom 800 Series Grove Gear and Electra-Gear worm gear reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example EL8130001 and GR8130001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been Factory modified by the addition of an optional base for example, the modification number T818EL is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 3000 and higher (for example, GR8133000 and NH8133000) are WASHGUARD® reducers for washdown service.

Catalog numbers 5000 and higher (for example, GR8135000 and EL8135000) are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered by catalog number.

TYPICAL NAMEPLATE
(Electra-Gear shown)



Series Code

GR - Grove Gear IRONMAN Cast Iron Reducers
NH - Grove Gear IRONMAN Narrow Housing Cast Iron Reducers
EL - Electra-Gear Aluminum Reducers
GRG - Grove Gear Flexaline Interchange (Sizes 821, 826, 832)
GRL - Leeson IRONMAN Interchange (Sizes 821, 826, 832)

Style

SOLID OUTPUT SHAFT
BMQ – Motorized, Quill Input
BM – Motorized, Flexible Coupling Input
B – Non-Flanged

HOLLOW OUTPUT SHAFT
HMQ – Motorized, Quill Input
HM – Motorized, Flexible Coupling Input
H – Non-Flanged

WASHGUARD STYLES
W prefix; i.e. WBMQ denotes WASHDOWN Reducer
S prefix; i.e. SHMQ denotes All-Stainless Steel Reducer

Size

800 SERIES CENTER DISTANCES

Size	Center Distance (Inches)
813	1.33
815**	1.54
818	1.75
821	2.06
824	2.38
826	2.62
830	3.00
832	3.25
842	4.25
852	5.25
860	6.00
870*	7.00
880*	8.00
8100*	10.00

* GR Series only
** Not available in EL Series

Ratio

See Selection Tables on pages 22-48, for all available ratios.

Output Shaft Orientation

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft
* Viewed from drive end of reducer.

Motor Flange

Input Code		For Input Type	
Single Input	Dual Input		
blank	A	non-motorized	NEMA Input
48**	48A	48CZ	
56	56A	56C	
140	140A	143-5TC	
180	180A	182-4TC	
210	210A	213-5TC	
250	250A	254-6TC	
63	Contact Factory	D63D B5	IEC Input
71		D71D B5	
80		D80D B5	
90		D90D B5	
110		D100LD/D112MD B5	
132		D132D	

** Not available in EL Series

Output Bore Code

Hollow Shaft Only
See bottom right hand pages of Max Ratings Tables starting on page 27.

Sample Model Numbers

Solid Output Shaft - GR Series

Cast iron, single reduction, 2.38” reducer with 56C motorized quill input, left-hand output shaft, 30:1 ratio.

GR	-	BMQ	824	-	30	-	L	-	56
Series		Style	Size		Ratio		Shaft Orientation		Input Type

Hollow Output Shaft - EL Series

Aluminum, single reduction, 1.75” reducer with 56C motorized quill input, 1.00” hollow output bore, 10:1 ratio.

EL	-	HMQ	818	-	10	-	H	-	56	-	16
Series		Style	Size		Ratio		Shaft Orientation		Input Type		Output Bore Code

Cast Iron Solid Shaft Output Styles

CAST IRON GR SERIES | CAST IRON NH SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles BMQ, BM and B can be field or Factory modified into a wide range of styles. See pages 274-275 for details.

	Horizontal Base Worm Over	Horizontal Base Worm Under	Horizontal Base Worm Center	Vertical Input Shaft
MOTORIZED C-FLANGE QUILL INPUT				
Style BMQ	**Style TMQ**	**Style UMQ***	**Style RMQ**	**Style JMQ**
				
Ratings Pages: 22-48 Dimension Pages: GR Series 52-53 NH Series 74-75	Ratings Pages: 22-48 Dimension Pages: GR Series 54-55 NH Series 76-77	Ratings Pages: 22-48 Dimension Pages: GR Series 56-57 NH Series 78-79	Ratings Pages: 22-48 Dimension Pages: GR Series 62-63	Ratings Pages: 22-48 Dimension Pages: GR Series 58-59 NH Series 80-81
MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT				
Style BM	**Style TM**	**Style UM***	**Style RM**	**Style JM**
				
Ratings Pages: 22-48 Dimension Pages: GR Series 52-53 NH Series 74-75	Ratings Pages: 22-48 Dimension Pages: GR Series 54-55 NH Series 76-77	Ratings Pages: 22-48 Dimension Pages: GR Series 56-57 NH Series 78-79	Ratings Pages: 22-48 Dimension Pages: GR Series 62-63	Ratings Pages: 22-48 Dimension Pages: GR Series 58-59 NH Series 80-81
NON-FLANGED INPUT				
Style B	**Style T**	**Style U***	**Style R**	**Style J**
				
Ratings Pages: 22-48 Dimension Pages: GR Series 52-53 NH Series 74-75	Ratings Pages: 22-48 Dimension Pages: GR Series 54-55 NH Series 76-77	Ratings Pages: 22-48 Dimension Pages: GR Series 56-57 NH Series 78-79	Ratings Pages: 22-48 Dimension Pages: GR Series 62-63	Ratings Pages: 22-48 Dimension Pages: GR Series 58-59 NH Series 80-81

* Not a recommended mounting style. Contact Factory for selection assistance.

Additional accessories, options and assembly services are available, contact Factory for details.

Cast Iron
Solid Shaft Output Styles

Vertical Output Shaft Low Base

Style VLMQ**



Ratings Pages: 22-48

Dimension Pages:
GR Series 60-61
NH Series 82-83

Style VLM**



Ratings Pages: 22-48

Dimension Pages:
GR Series 60-61
NH Series 82-83

Style VL **



Ratings Pages: 22-48

Dimension Pages:
GR Series 60-61
NH Series 82-83

Vertical Output Shaft High Base

Style VHMQ**



Ratings Pages: 22-48

Dimension Pages:
GR Series 60-61
NH Series 82-83

Style VHM**



Ratings Pages: 22-48

Dimension Pages:
GR Series 60-61
NH Series 82-83

Style VH **



Ratings Pages: 22-48

Dimension Pages:
GR Series 60-61
NH Series 82-83

Flange Mounted Output Shaft

Style FMQ



Ratings Pages: 22-48

Dimension Pages:
GR Series 64-65
NH Series 84-85

Style FM



Ratings Pages: 22-48

Dimension Pages:
GR Series 64-65
NH Series 84-85

Style F



Ratings Pages: 22-48

Dimension Pages:
GR Series 64-65
NH Series 84-85

"C" Flange Mounted Output Shaft

Style CMQ



Ratings Pages: 22-48

Dimension Pages:
GR Series 66-67

Style CM



Ratings Pages: 22-48

Dimension Pages: GR Series 66-67

Style C

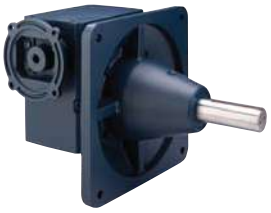


Ratings Pages: 22-48

Dimension Pages:
GR Series 66-67

Extended Flange Mounted Output Shaft

Style FEMQ



Ratings Pages: 22-48

Dimension Pages:
GR Series 72-73
NH Series 90-91

Style FEM



Ratings Pages: 22-48

Dimension Pages:
GR Series 72-73
NH Series 90-91

Style FE



Ratings Pages: 22-48

Dimension Pages:
GR Series 72-73
NH Series 90-91

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

Cast Iron Hollow Shaft Output Styles

CAST IRON GR SERIES | CAST IRON NH SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles HMQ, HM and H can be field or Factory modified into a wide range of styles. See pages 274-275 for details.

MOTORIZED C-FLANGE QUILL INPUT

Style HMQ



Ratings Pages: 22-48

Dimension Pages:
GR Series 68-69
NH Series 86-87

Vertical Input Shaft

Style JHMQ



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style HM



Ratings Pages: 22-48

Dimension Pages:
GR Series 68-69
NH Series 86-87

Style JHM



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

NON-FLANGED INPUT

Style H



Ratings Pages: 22-48

Dimension Pages:
GR Series 68-69
NH Series 86-87

Style JH



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Additional accessories, options and assembly services are available, Contact Factory for details.

Cast Iron Hollow Shaft Output Styles

Vertical Output Shaft Low Base

Style VLHMQ



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Style VLHM



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Style VLH



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Vertical Output Shaft High Base

Style VHHMQ



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Style VHHM



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Style VHH



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Flange Mounted Output Shaft

Style FHMQ



Ratings Pages: 22-48

Dimension Pages:
GR Series 70-71
NH Series 88-89

Style FHM



Ratings Pages: 22-48

Dimension Pages:
GR Series 70-71
NH Series 88-89

Style FH



Ratings Pages: 22-48

Dimension Pages:
GR Series 70-71
NH Series 88-89

ELECTRA-GEAR
Aluminum
Solid Shaft Output Styles

ALUMINUM EL SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles BMQ, BM and B can be field or Factory modified into a wide range of styles. See pages 278-279 for details.

	Stock Styles	Modified Stock Styles	
		Horizontal Base Worm Over	Horizontal Base Worm Under
MOTORIZED C-FLANGE QUILL INPUT	**Style BMQ**	**Style TMQ**	**Style UMQ***
			
	Ratings Pages: 22-48 Dimension Pages: EL Series 94-95	Ratings Pages: 22-48 Dimension Pages: EL Series 96-97	Ratings Pages: 22-48 Dimension Pages: EL Series 98-99
MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT	**Style BM**	**Style TM**	**Style UM***
			
	Ratings Pages: 22-48 Dimension Pages: EL Series 94-95	Ratings Pages: 22-48 Dimension Pages: EL Series 96-97	Ratings Pages: 22-48 Dimension Pages: EL Series 98-99
NON-FLANGED INPUT	**Style B**	**Style T**	**Style U***
			
	Ratings Pages: 22-48 Dimension Pages: EL Series 94-95	Ratings Pages: 22-48 Dimension Pages: EL Series 96-97	Ratings Pages: 22-48 Dimension Pages: EL Series 98-99

* Not a recommended mounting style. Contact Factory for selection assistance.

Additional accessories, options and assembly services are available, Contact Factory for details.

Vertical Input Shaft

Style JMQ**



Ratings Pages: 22-48

Dimension Pages:
EL Series 90-91

Style JM**



Ratings Pages: 22-48

Dimension Pages:
EL Series 90-91

Style J**



Ratings Pages: 22-48

Dimension Pages:
EL Series 90-91

Vertical Output Shaft Low Base

Style VLMQ**



Ratings Pages: 22-48

Dimension Pages:
EL Series 92-93

Style VLM **



Ratings Pages: 22-48

Dimension Pages:
EL Series 92-93

Style VL **



Ratings Pages: 22-48

Dimension Pages:
EL Series 92-93

Flange Mounted Output Shaft

Style FRMQ



Ratings Pages: 22-48

Dimension Pages:
EL Series 94-95

Style FRM



Ratings Pages: 22-48

Dimension Pages:
EL Series 94-95

Style FR



Ratings Pages: 22-48

Dimension Pages:
EL Series 94-95

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

ELECTRA-GEAR
Aluminum
Hollow Shaft Output Styles

ALUMINUM EL SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles HMQ, HM and H can be field or Factory modified into a wide range of styles. See pages 278-279 for details.

MOTORIZED C-FLANGE QUILL INPUT

Style HMQ



Ratings Pages: 22-48

Dimension Pages:
EL Series 96-97

Vertical Input Shaft

Style JHMQ



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style HM



Ratings Pages: 22-48

Dimension Pages:
EL Series 96-97

Style JHM



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

NON-FLANGE INPUT

Style H



Ratings Pages: 22-48

Dimension Pages:
EL Series 96-97

Style JH



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Additional accessories, options and assembly services are available, Contact Factory for details.

Vertical Output Shaft Low Base

Style VLHMQ



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Flange Mounted Output Shaft

Style FHMQ



Ratings Pages: 22-48

Dimension Pages:
EL Series 98-99

Style VLHM



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Style FHM



Ratings Pages: 22-48

Dimension Pages:
EL Series 98-99

Style VLH



Ratings Pages: 22-48

Dimension Pages:
Contact Factory

Style FH



Ratings Pages: 22-48

Dimension Pages:
EL Series 98-99

Additional accessories, options and assembly services are available, Contact Factory for details.

Quick Selections

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

How to Use

Based on required output RPM and input motor horsepower, read across chart for the appropriate reducer size. As a rule of thumb, use 1.00 service factor chart for applications having uniform loads with up to 10 hours service duration per day. Use 1.25 service factor chart for longer service or shock loading. These charts are to be considered as guides only. Refer to pages 417-418 or Contact Factory with specific application information.

1.0 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																				
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60	75	100
5	350	813	813	813	813	813	813	815	818	821	824	830*	832**	842	852	852	852	860	870	880	8100	8100
7.5	233	813	813	813	813	813	813	818	821	824	826	832	842	842	852	852	860	870	880	8100	8100	
10	175	813	813	813	813	813	815	818	821	824	830	832**	842	842	852	860	870	880	8100	8100		
15	117	813	813	813	813	815	815	821	824	826	832	842	842	852	870	870	880	8100	8100			
20	88	813	813	813	813	815	818	821	824	826	832**	842	852	860	870	880	8100	8100				
25	70	813	813	813	815	815	821	824	826	830*	842	842	852	870	880	8100	8100					
30	58	813	813	813	815	821	821	824	826	832	842	852	852	880	8100	8100						
40	44	813	813	813	815	821	824	826	830*	842	842	852	870	8100	8100							
50	35	813	813	815	818	821	824	830	832**	842	852	870	880	8100								
60	29	813	813	815	821	824	826	830*	832**	842	852	880	8100									
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100									
80	22	815	821	824	826	830	832	842	852	860												
100	18	821	824	826	830	842	842	852	852													

1.25 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																			
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60	75
5	350	813	813	813	813	813	813	815	821	824	826	832**	842	852	852	852	870	870	880	8100	8100
7.5	233	813	813	813	813	813	815	818	821	824	830*	842	842	852	852	870	870	880	8100	8100	
10	175	813	813	813	813	815	815	821	824	826	832	842	842	852	860	870	880	8100	8100		
15	117	813	813	813	813	815	818	821	824	830	842	842	852	860	870	880	8100	8100			
20	88	813	813	813	815	818	821	824	826	830*	842	842	852	870	880	8100	8100				
25	70	813	813	813	815	821	821	824	826	832**	842	852	860	880	8100	8100					
30	58	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100						
40	44	813	813	815	821	824	824	830*	832**	842	852	870	880	8100							
50	35	813	815	815	821	824	826	830*	842	842	852	880	8100								
60	29	813	815	818	821	824	830	832	842	852	870	8100	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100									
80	22	815	821	824	830	832	842	852	852												
100	18	815	824	830	832	842	852	852	860												

Note: This chart is meant as a guide for reducer selections at specific motor horsepowers.

Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 22-48.

♠ Refer to page 20 for exact ratio of single reduction worm gear reducers.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

1.50 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																		
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60
5	350	813	813	813	813	813	815	818	821	824	830*	832**	842	852	852	870	870	880	8100	8100
7.5	233	813	813	813	813	815	815	821	824	826	832	842	842	852	860	870	880	8100	8100	
10	175	813	813	813	813	815	818	821	824	826	832**	842	852	852	870	880	8100	8100		
15	117	813	813	813	815	818	821	824	826	830*	842	852	852	870	880	8100	8100			
20	88	813	813	813	815	821	821	824	826	832**	842	852	860	880	8100	8100				
25	70	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100					
30	58	813	813	815	821	821	824	830	832	842	852	870	880	8100						
40	44	813	815	815	821	824	826	830*	832**	842	852	880	8100							
50	35	813	815	818	821	824	830	832**	842	852	870	880	8100							
60	29	813	815	821	824	826	830*	842	842	852	880	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100								
80	22	821	824	826	830	842	842	852	860											
100	18	824	826	830	842	842	852	860												

1.75 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																		
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60
5	350	813	813	813	813	815	815	818	821	824	830*	842	842	852	860	870	880	8100	8100	8100
7.5	233	813	813	813	813	815	818	821	824	830	832**	842	852	852	870	880	880	8100		
10	175	813	813	813	815	818	821	824	824	830	842	842	852	870	870	880	8100			
15	117	813	813	813	815	821	821	824	826	832	842	852	852	870	8100	8100				
20	88	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100					
25	70	813	813	815	818	821	824	830	832	842	852	870	880	8100						
30	58	813	815	815	821	824	826	830*	832**	842	852	870	880	8100						
40	44	813	815	818	821	824	830	832**	842	842	860	880	8100							
50	35	813	815	821	824	826	830*	842	842	852	870	8100	8100							
60	29	815	818	821	824	830*	832**	842	842	852	880	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	8100									
80	22	821	824	826	830	842	842	852	860											
100	18	824	830	830	842	852	852													

2.00 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																	
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50
5	350	813	813	813	813	815	818	821	824	826	832**	842	852	852	870	870	880	8100	8100
7.5	233	813	813	813	813	815	821	824	824	830	842	842	852	860	870	880	8100	8100	
10	175	813	813	813	815	818	821	824	826	830*	842	852	852	870	880	8100	8100		
15	117	813	813	815	815	821	824	826	830	832**	842	852	870	880	8100	8100			
20	88	813	813	815	818	821	824	826	832	842	852	860	880	8100	8100				
25	70	813	815	815	821	824	824	830*	832**	842	852	870	880	8100					
30	58	813	815	818	821	824	826	832	842	842	852	880	8100						
40	44	813	815	821	824	826	830*	842	842	852	870	8100	8100						
50	35	815	818	821	824	830	832**	842	842	852	880	8100							
60	29	815	821	821	826	830*	832**	842	852	860	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	870	870	880	8100								
80	22	824	826	830	832	842	852	860											
100	18	826	830	832	842	852	852												

Note: This chart is meant as a guide for reducer selections at specific motor horsepowers.

Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 22-48.

♠ Refer to page 20 for exact ratio of single reduction worm gear reducers.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Exact Ratios

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Unit	5	7.5	10	15	20	25	30	40	50	60	70	80	100
813	X	X	X	X	X	X	X	X	X	X	NA	X	X
815	X	X	X	X	X	X	X	X	X	X	NA	X	X
818	X	X	X	X	X	X	X	X	X	X	NA	X	X
821	X	X	X	X	X	X	X	X	X	X	NA	X	X
824	X	X	X	X	X	X	X	X	X	X	NA	X	X
826	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
830	X	X	X	X	X	X	X	X	X	X	NA	X	X
832	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
842	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
852	5 1/8	X	X	X	X	X	X	X	X	X	NA	X	X
860	X	X	X	X	X	X	X	X	X	X	NA	X	X
870	5 1/8	7 2/5	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA
880	5 1/8	7 2/5	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA
8100	5 1/8	7 1/3	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA

HOLLOW SHAFT BORE SIZES (Inches)*

Fraction Size	Decimal Size	Output Bore Code	813	815	818	821	824	826	830	832	842	852	860	870	880	8100	Keyway**
5/8	0.625	10	■	■	■												3/16 x 3/32
11/16	0.688	11			■												3/16 x 3/32
3/4	0.750	12			■												3/16 x 3/32
7/8	0.875	14			■												3/16 x 3/32
1	1.000	16			■	■	■	■									1/4 x 1/8
1-1/8	1.125	18				■	■	■									1/4 x 1/8
1-3/16	1.188	19				■	■	■	■	■							1/4 x 1/8
1-1/4	1.250	20				■	■	■	■	■							1/4 x 1/8
1-7/16	1.438	23				■	■	■	■	■	■						3/8 x 3/16
1-1/2	1.500	24				■	■	■	■	■	■						3/8 x 3/16
1-5/8	1.625	26							■	■	■						3/8 x 3/16
1-11/16	1.688	27							■	■	■						3/8 x 3/16
1-3/4	1.750	28							■	■	■						3/8 x 3/16
1-7/8	1.875	30							■	■	■						1/2 x 1/4
1-15/16	1.938	31							■	■	■						1/2 x 1/4
2	2.000	32							■	■	■	■	■				1/2 x 1/4
2- 3/16	2.188	35							■	■	■	■	■				1/2 x 1/4
2-1/4	2.250	36										■	■				1/2 x 1/4
2-7/16	2.438	39										■	■	■			5/8 x 5/16
2-1/2	2.500	40										■	■	■			5/8 x 5/16
2-11/16	2.688	43										■	■	■			5/8 x 5/16
2-15/16	2.938	47										■	■	■			3/4 x 3/8
3	3.000	48										■	■	■			3/4 x 3/8
3-3/16	3.188	51										■	■				3/4 x 3/8
3-7/16	3.438	55										■	■	■	■	■	7/8 x 7/16
3-15/16	3.938	63												■	■	■	1 x 1/2
4-3/16	4.188	67													■		1 x 1/2
4-7/16	4.438	71													■	■	1 x 1/2
4-15/16	4.938	79														■	1-1/4 x 5/8
5-7/16	5.438	87														■	1-1/4 x 5/8

■ Stock Bore Sizes.

* Other bore sizes are available. Contact Factory for sizes and availability.

** Dimensions refer to customer driven shaft.

NOTE: Specify the required bore size when ordering. The suffix "XX" can be substituted with the bore code from table above.

How To Use Maximum Rating Tables

Maximum Rating Tables for Single Reduction Gear Reducers are shown on pages 22-48.

BEFORE YOU START:

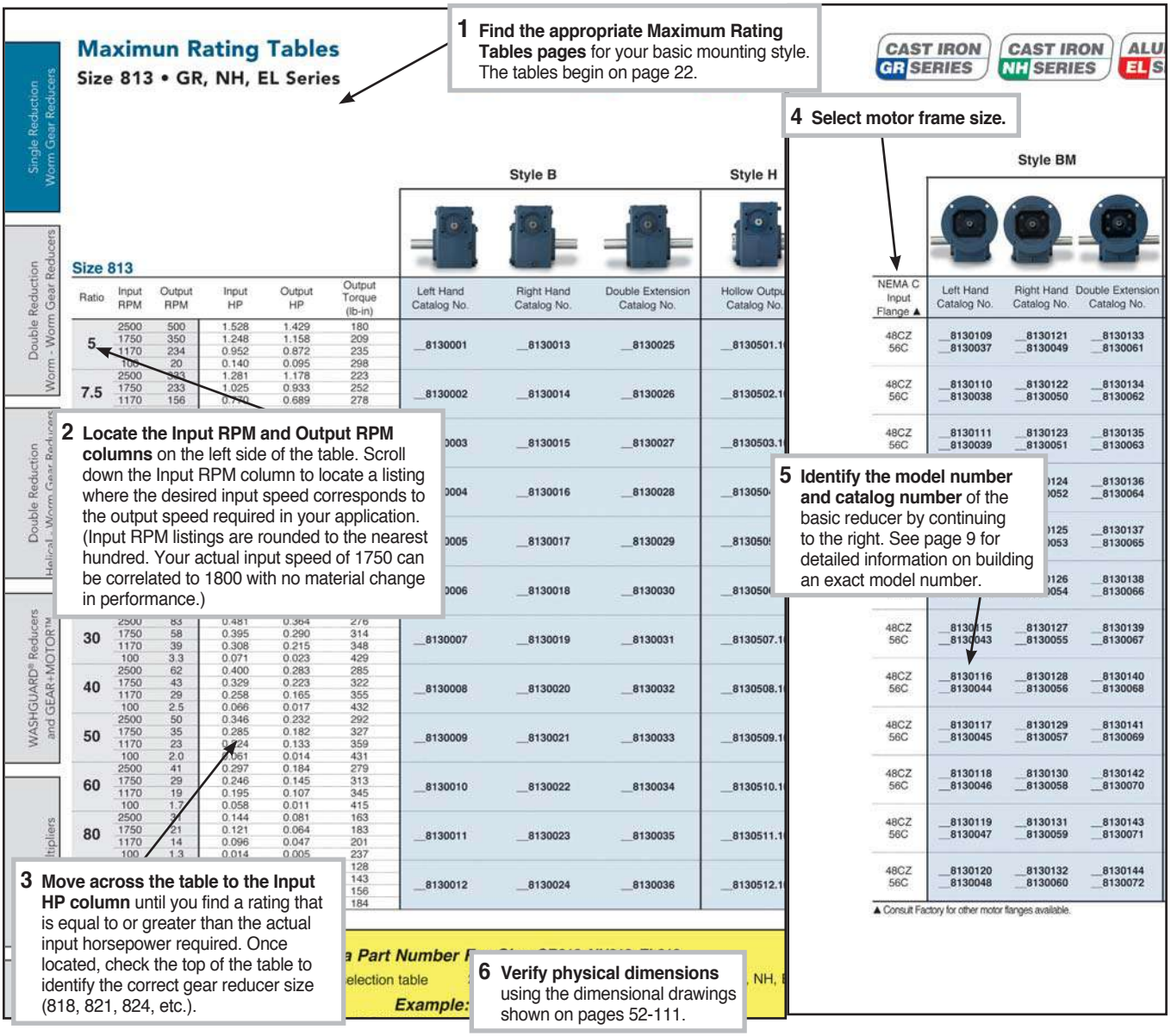
Identify the Service Factor of the application (see page 418).

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 10-17. Note the basic mounting style (BMQ, BM, etc.).

To select the proper gear reducer size, use the Maximum Rating Tables as shown:



Maximum Rating Tables

Size 813 • GR, NH, EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Size 813

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.
									
5	2500	500	1.528	1.429	180	__8130001	__8130013	__8130025	__8130501.10
	1750	350	1.248	1.158	209				
	1170	234	0.952	0.872	235				
	100	20	0.140	0.095	298				
7.5	2500	333	1.281	1.178	223	__8130002	__8130014	__8130026	__8130502.10
	1750	233	1.025	0.933	252				
	1170	156	0.770	0.689	278				
	100	13	0.118	0.072	339				
10	2500	250	1.016	0.912	230	__8130003	__8130015	__8130027	__8130503.10
	1750	175	0.823	0.729	263				
	1170	117	0.626	0.543	293				
	100	10	0.103	0.058	363				
15	2500	166	0.790	0.678	257	__8130004	__8130016	__8130028	__8130504.10
	1750	116	0.642	0.541	292				
	1170	78	0.491	0.402	325				
	100	6.7	0.090	0.042	401				
20	2500	125	0.681	0.562	283	__8130005	__8130017	__8130029	__8130505.10
	1750	87	0.551	0.445	320				
	1170	58	0.422	0.328	354				
	100	5.0	0.084	0.034	431				
25	2500	100	0.544	0.431	272	__8130006	__8130018	__8130030	__8130506.10
	1750	70	0.445	0.344	309				
	1170	46	0.344	0.255	344				
	100	4.0	0.074	0.027	423				
30	2500	83	0.481	0.364	276	__8130007	__8130019	__8130031	__8130507.10
	1750	58	0.395	0.290	314				
	1170	39	0.308	0.215	348				
	100	3.3	0.071	0.023	429				
40	2500	62	0.400	0.283	285	__8130008	__8130020	__8130032	__8130508.10
	1750	43	0.329	0.223	322				
	1170	29	0.258	0.165	355				
	100	2.5	0.066	0.017	432				
50	2500	50	0.346	0.232	292	__8130009	__8130021	__8130033	__8130509.10
	1750	35	0.285	0.182	327				
	1170	23	0.224	0.133	359				
	100	2.0	0.061	0.014	431				
60	2500	41	0.297	0.184	279	__8130010	__8130022	__8130034	__8130510.10
	1750	29	0.246	0.145	313				
	1170	19	0.195	0.107	345				
	100	1.7	0.058	0.011	415				
80	2500	31	0.144	0.081	163	__8130011	__8130023	__8130035	__8130511.10
	1750	21	0.121	0.064	183				
	1170	14	0.096	0.047	201				
	100	1.3	0.014	0.005	237				
100	2500	25	0.100	0.051	128	__8130012	__8130024	__8130036	__8130512.10
	1750	17	0.084	0.040	143				
	1170	11	0.067	0.029	156				
	100	1.0	0.010	0.003	184				

How To Build a Part Number For Size GR813, NH813, EL813

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, NH, EL)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output

GR-B813-5-L

GR8130001

Maximum Rating Tables

Size 813 • GR, NH, EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Ratio
48CZ 56C	__8130109 __8130037	__8130121 __8130049	__8130133 __8130061	__8130537.10 __8130513.10	__8130181 __8130073	__8130193 __8130085	__8130205 __8130097	__8130561.10 __8130525.10	5
48CZ 56C	__8130110 __8130038	__8130122 __8130050	__8130134 __8130062	__8130538.10 __8130514.10	__8130182 __8130074	__8130194 __8130086	__8130206 __8130098	__8130562.10 __8130526.10	7.5
48CZ 56C	__8130111 __8130039	__8130123 __8130051	__8130135 __8130063	__8130539.10 __8130515.10	__8130183 __8130075	__8130195 __8130087	__8130207 __8130099	__8130563.10 __8130527.10	10
48CZ 56C	__8130112 __8130040	__8130124 __8130052	__8130136 __8130064	__8130540.10 __8130516.10	__8130184 __8130076	__8130196 __8130088	__8130208 __8130100	__8130564.10 __8130528.10	15
48CZ 56C	__8130113 __8130041	__8130125 __8130053	__8130137 __8130065	__8130541.10 __8130517.10	__8130185 __8130077	__8130197 __8130089	__8130209 __8130101	__8130565.10 __8130529.10	20
48CZ 56C	__8130114 __8130042	__8130126 __8130054	__8130138 __8130066	__8130542.10 __8130518.10	__8130186 __8130078	__8130198 __8130090	__8130210 __8130102	__8130566.10 __8130530.10	25
48CZ 56C	__8130115 __8130043	__8130127 __8130055	__8130139 __8130067	__8130543.10 __8130519.10	__8130187 __8130079	__8130199 __8130091	__8130211 __8130103	__8130567.10 __8130531.10	30
48CZ 56C	__8130116 __8130044	__8130128 __8130056	__8130140 __8130068	__8130544.10 __8130520.10	__8130188 __8130080	__8130200 __8130092	__8130212 __8130104	__8130568.10 __8130532.10	40
48CZ 56C	__8130117 __8130045	__8130129 __8130057	__8130141 __8130069	__8130545.10 __8130521.10	__8130189 __8130081	__8130201 __8130093	__8130213 __8130105	__8130569.10 __8130533.10	50
48CZ 56C	__8130118 __8130046	__8130130 __8130058	__8130142 __8130070	__8130546.10 __8130522.10	__8130190 __8130082	__8130202 __8130094	__8130214 __8130106	__8130570.10 __8130534.10	60
48CZ 56C	__8130119 __8130047	__8130131 __8130059	__8130143 __8130071	__8130547.10 __8130523.10	__8130191 __8130083	__8130203 __8130095	__8130215 __8130107	__8130571.10 __8130535.10	80
48CZ 56C	__8130120 __8130048	__8130132 __8130060	__8130144 __8130072	__8130548.10 __8130524.10	__8130192 __8130084	__8130204 __8130096	__8130216 __8130108	__8130572.10 __8130536.10	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

Maximum Rating Tables

Size 815 • GR, NH Series

CAST IRON GR SERIES CAST IRON NH SERIES

Size 815

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500	2.310	2.151	271	__8150001	__8150013	__8150025	__8150501.10
	1750	350	1.939	1.794	323				
	1170	234	1.537	1.408	379				
	100	20	0.235	0.167	526				
7.5	2500	333	1.785	1.619	306	__8150002	__8150014	__8150026	__8150502.10
	1750	233	1.522	1.368	370				
	1170	156	1.205	1.068	431				
	100	13	0.196	0.125	591				
10	2500	250	1.500	1.324	334	__8150003	__8150015	__8150027	__8150503.10
	1750	175	1.279	1.116	402				
	1170	117	1.014	0.869	468				
	100	10	0.176	0.101	639				
15	2500	166	1.174	0.982	371	__8150004	__8150016	__8150028	__8150504.10
	1750	116	1.003	0.826	446				
	1170	78	0.800	0.643	519				
	100	6.7	0.155	0.075	706				
20	2500	125	1.077	0.860	434	__8150005	__8150017	__8150029	__8150505.10
	1750	87	0.919	0.719	518				
	1170	58	0.734	0.557	600				
	100	5.0	0.155	0.064	807				
25	2500	100	0.881	0.670	422	__8150006	__8150018	__8150030	__8150506.10
	1750	70	0.752	0.559	503				
	1170	46	0.602	0.431	580				
	100	4.0	0.137	0.049	775				
30	2500	83	0.729	0.526	398	__8150007	__8150019	__8150031	__8150507.10
	1750	58	0.630	0.442	478				
	1170	39	0.510	0.344	555				
	100	3.3	0.124	0.040	754				
40	2500	62	0.649	0.432	435	__8150008	__8150020	__8150032	__8150508.10
	1750	43	0.560	0.361	520				
	1170	29	0.456	0.279	601				
	100	2.5	0.122	0.032	808				
50	2500	50	0.536	0.329	415	__8150009	__8150021	__8150033	__8150509.10
	1750	35	0.464	0.274	494				
	1170	23	0.379	0.211	569				
	100	2.0	0.110	0.024	760				
60	2500	41	0.451	0.257	389	__8150010	__8150022	__8150034	__8150510.10
	1750	29	0.391	0.214	462				
	1170	19	0.321	0.165	532				
	100	1.7	0.099	0.019	707				
80	2500	31	0.219	0.109	220	__8150011	__8150023	__8150035	__8150511.10
	1750	21	0.204	0.093	269				
	1170	14	0.176	0.073	314				
	100	1.3	0.032	0.008	418				
100	2500	25	0.155	0.069	175	__8150012	__8150024	__8150036	__8150512.10
	1750	17	0.145	0.059	213				
	1170	11	0.126	0.046	248				
	100	1.0	0.024	0.005	328				

How To Build a Part Number For Size GR815 & NH815

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, NH)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output

GR-B815-5-L

GR8150001

Maximum Rating Tables

Size 815 • GR, NH Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Ratio
56C 143-5TC	__8150073 __8150109	__8150085 __8150121	__8150097 __8150133	__8150525.10 __8150537.10	__8150181 __8150217	__8150193 __8150229	__8150205 __8150241	__8150561.10 __8150573.10	5
56C 143-5TC	__8150074 __8150110	__8150086 __8150122	__8150098 __8150134	__8150526.10 __8150538.10	__8150182 __8150218	__8150194 __8150230	__8150206 __8150242	__8150562.10 __8150574.10	7.5
56C 143-5TC	__8150075 __8150111	__8150087 __8150123	__8150099 __8150135	__8150527.10 __8150539.10	__8150183 __8150219	__8150195 __8150231	__8150207 __8150243	__8150563.10 __8150575.10	10
56C 143-5TC	__8150076 __8150112	__8150088 __8150124	__8150100 __8150136	__8150528.10 __8150540.10	__8150184 __8150220	__8150196 __8150232	__8150208 __8150244	__8150564.10 __8150576.10	15
56C 143-5TC	__8150077 __8150113	__8150089 __8150125	__8150101 __8150137	__8150529.10 __8150541.10	__8150185 __8150221	__8150197 __8150233	__8150209 __8150245	__8150565.10 __8150577.10	20
56C	__8150078	__8150090	__8150102	__8150530.10	__8150186	__8150198	__8150210	__8150566.10	25
48CZ 56C	__8150043 __8150079	__8150055 __8150091	__8150067 __8150103	__8150519.10 __8150531.10	__8150151 __8150187	__8150163 __8150199	__8150175 __8150211	__8150555.10 __8150567.10	30
48CZ 56C	__8150044 __8150080	__8150056 __8150092	__8150068 __8150104	__8150520.10 __8150532.10	__8150152 __8150188	__8150164 __8150200	__8150176 __8150212	__8150556.10 __8150568.10	40
48CZ 56C	__8150045 __8150081	__8150057 __8150093	__8150069 __8150105	__8150521.10 __8150533.10	__8150153 __8150189	__8150165 __8150201	__8150177 __8150213	__8150557.10 __8150569.10	50
48CZ 56C	__8150046 __8150082	__8150058 __8150094	__8150070 __8150106	__8150522.10 __8150534.10	__8150154 __8150190	__8150166 __8150202	__8150178 __8150214	__8150558.10 __8150570.10	60
48CZ 56C	__8150047 __8150083	__8150059 __8150095	__8150071 __8150107	__8150523.10 __8150535.10	__8150155 __8150191	__8150167 __8150203	__8150179 __8150215	__8150559.10 __8150571.10	80
48CZ 56C	__8150048 __8150084	__8150060 __8150096	__8150072 __8150108	__8150524.10 __8150536.10	__8150156 __8150192	__8150168 __8150204	__8150180 __8150216	__8150560.10 __8150572.10	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

Maximum Rating Tables

Size 818 • GR, NH, EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Size 818

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500	3.095	2.900	366	__8180001	__8180013	__8180025	__8180501.XX
	1750	350	2.600	2.422	436				
	1170	234	2.066	1.906	513				
	100	20	0.312	0.228	717				
7.5	2500	333	2.307	2.127	402	__8180002	__8180014	__8180026	__8180502.XX
	1750	233	1.909	1.745	471				
	1170	156	1.473	1.328	537				
	100	13	0.227	0.147	697				
10	2500	250	1.996	1.820	459	__8180003	__8180015	__8180027	__8180503.XX
	1750	175	1.625	1.466	528				
	1170	117	1.239	1.099	592				
	100	10	0.196	0.118	744				
15	2500	166	1.485	1.301	492	__8180004	__8180016	__8180028	__8180504.XX
	1750	116	1.224	1.058	571				
	1170	78	0.945	0.799	645				
	100	6.7	0.165	0.087	823				
20	2500	125	1.283	1.093	551	__8180005	__8180017	__8180029	__8180505.XX
	1750	87	1.046	0.875	630				
	1170	58	0.803	0.652	702				
	100	5.0	0.150	0.069	872				
25	2500	100	1.088	0.900	567	__8180006	__8180018	__8180030	__8180506.XX
	1750	70	0.884	0.715	644				
	1170	46	0.678	0.530	713				
	100	4.0	0.135	0.055	874				
30	2500	83	0.892	0.702	531	__8180007	__8180019	__8180031	__8180507.XX
	1750	58	0.741	0.569	614				
	1170	39	0.580	0.428	692				
	100	3.3	0.126	0.047	880				
40	2500	62	0.739	0.551	556	__8180008	__8180020	__8180032	__8180508.XX
	1750	43	0.609	0.440	634				
	1170	29	0.476	0.328	706				
	100	2.5	0.113	0.035	874				
50	2500	50	0.625	0.444	559	__8180009	__8180021	__8180033	__8180509.XX
	1750	35	0.515	0.352	634				
	1170	23	0.404	0.260	701				
	100	2.0	0.103	0.027	857				
60	2500	41	0.542	0.363	550	__8180010	__8180022	__8180034	__8180510.XX
	1750	29	0.449	0.288	623				
	1170	19	0.354	0.213	689				
	100	1.7	0.097	0.022	842				
80	2500	31	0.247	0.156	314	__8180011	__8180023	__8180035	__8180511.XX
	1750	21	0.208	0.124	356				
	1170	14	0.164	0.091	392				
	100	1.3	0.023	0.009	470				
100	2500	25	0.167	0.097	245	__8180012	__8180024	__8180036	__8180512.XX
	1750	17	0.141	0.077	277				
	1170	11	0.111	0.057	304				
	100	1.0	0.016	0.006	362				

How To Build a Part Number For Size GR818, NH818 & EL818

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, NH, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output

GR-B818-5-L

GR8180001

Maximum Rating Tables

Size 818 • GR, NH, EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
56C 143-5TC	__8180037 __8180073	__8180049 __8180085	__8180061 __8180097	__8180513.XX __8180525.XX	__8180109 __8180145	__8180121 __8180157	__8180133 __8180169	__8180537.XX __8180549.XX	5
56C 143-5TC	__8180038 __8180074	__8180050 __8180086	__8180062 __8180098	__8180514.XX __8180526.XX	__8180110 __8180146	__8180122 __8180158	__8180134 __8180170	__8180538.XX __8180550.XX	7.5
56C 143-5TC	__8180039 __8180075	__8180051 __8180087	__8180063 __8180099	__8180515.XX __8180527.XX	__8180111 __8180147	__8180123 __8180159	__8180135 __8180171	__8180539.XX __8180551.XX	10
56C 143-5TC	__8180040 __8180076	__8180052 __8180088	__8180064 __8180100	__8180516.XX __8180528.XX	__8180112 __8180148	__8180124 __8180160	__8180136 __8180172	__8180540.XX __8180552.XX	15
56C 143-5TC	__8180041 __8180077	__8180053 __8180089	__8180065 __8180101	__8180517.XX __8180529XX	__8180113 __8180149	__8180125 __8180161	__8180137 __8180173	__8180541.XX __8180553.XX	20
56C 143-5TC	__8180042 __8180078	__8180054 __8180090	__8180066 __8180102	__8180518.XX __8180530.XX	__8180114 __8180150	__8180126 __8180162	__8180138 __8180174	__8180542.XX __8180554.XX	25
56C 143-5TC	__8180043 __8180079	__8180055 __8180091	__8180067 __8180103	__8180519.XX __8180531.XX	__8180115 __8180151	__8180127 __8180163	__8180139 __8180175	__8180543.XX __8180555.XX	30
48CZ 56C 143-5TC	__8180188 __8180044 __8180080	__8180200 __8180056 __8180092	__8180212 __8180068 __8180104	__8180568.XX __8180520.XX __8180532.XX	__8180224 __8180116 __8180152	__8180236 __8180128 __8180164	__8180248 __8180140 __8180176	__8180580.XX __8180544.XX __8180556.XX	40
48CZ 56C 143-5TC	__8180189 __8180045 __8180081	__8180201 __8180057 __8180093	__8180213 __8180069 __8180105	__8180569.XX __8180521.XX __8180533.XX	__8180225 __8180117 __8180153	__8180237 __8180129 __8180165	__8180249 __8180141 __8180177	__8180581.XX __8180545.XX __8180557.XX	50
48CZ 56C 143-5TC	__8180190 __8180046 __8180082	__8180202 __8180058 __8180094	__8180214 __8180070 __8180106	__8180570.XX __8180522.XX __8180534.XX	__8180226 __8180118 __8180154	__8180238 __8180130 __8180166	__8180250 __8180142 __8180178	__8180582.XX __8180546.XX __8180558.XX	60
48CZ 56C	__8180191 __8180047	__8180203 __8180059	__8180215 __8180071	__8180571.XX __8180523.XX	__8180227 __8180119	__8180239 __8180131	__8180251 __8180143	__8180583.XX __8180547.XX	80
48CZ 56C	__8180192 __8180048	__8180204 __8180060	__8180216 __8180072	__8180572.XX __8180524.XX	__8180228 __8180120	__8180240 __8180132	__8180252 __8180144	__8180584.XX __8180548.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	5/8"	11/16"	3/4"	7/8"	1"
Decimal Size	0.625	0.688	0.750	0.875	1.000
Output Bore Code	10	11	12	14	16

Maximum Rating Tables

Size 821 • GR, NH, EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Size 821

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
5	2500	500	4.305	4.043	510	__8210001	__8210013	__8210025	__8210501.XX
	1750	350	3.653	3.410	614				
	1170	234	2.873	2.657	716				
	100	20	0.433	0.310	977				
7.5	2500	333	3.300	3.051	577	__8210002	__8210014	__8210026	__8210502.XX
	1750	233	2.793	2.562	692				
	1170	156	2.194	1.989	804				
	100	13	0.341	0.230	1089				
10	2500	250	2.973	2.722	686	__8210003	__8210015	__8210027	__8210503.XX
	1750	175	2.464	2.235	805				
	1170	117	1.905	1.702	917				
	100	10	0.300	0.189	1192				
15	2500	166	2.284	2.035	769	__8210004	__8210016	__8210028	__8210504.XX
	1750	116	1.887	1.661	897				
	1170	78	1.459	1.259	1017				
	100	6.7	0.245	0.138	1309				
20	2500	125	1.914	1.642	828	__8210005	__8210017	__8210029	__8210505.XX
	1750	87	1.584	1.338	964				
	1170	58	1.229	1.012	1090				
	100	5.0	0.226	0.111	1397				
25	2500	100	1.623	1.359	857	__8210006	__8210018	__8210030	__8210506.XX
	1750	70	1.333	1.094	985				
	1170	46	1.030	0.820	1104				
	100	4.0	0.200	0.088	1386				
30	2500	83	1.359	1.102	833	__8210007	__8210019	__8210031	__8210507.XX
	1750	58	1.129	0.896	968				
	1170	39	0.882	0.677	1095				
	100	3.3	0.181	0.074	1399				
40	2500	62	1.096	0.829	836	__8210008	__8210020	__8210032	__8210508.XX
	1750	43	0.916	0.674	971				
	1170	29	0.722	0.509	1097				
	100	2.5	0.167	0.056	1401				
50	2500	50	0.925	0.670	845	__8210009	__8210021	__8210033	__8210509.XX
	1750	35	0.769	0.539	970				
	1170	23	0.606	0.403	1086				
	100	2.0	0.149	0.043	1359				
60	2500	41	0.799	0.535	809	__8210010	__8210022	__8210034	__8210510.XX
	1750	29	0.674	0.435	940				
	1170	19	0.539	0.328	1061				
	100	1.7	0.145	0.036	1354				
80	2500	31	0.357	0.236	476	__8210011	__8210023	__8210035	__8210511.XX
	1750	21	0.304	0.190	547				
	1170	14	0.241	0.141	609				
	100	1.3	0.034	0.015	743				
100	2500	25	0.251	0.150	379	__8210012	__8210024	__8210036	__8210512.XX
	1750	17	0.217	0.122	439				
	1170	11	0.175	0.091	491				
	100	1.0	0.026	0.010	605				

How To Build a Part Number For Size GRG821, GRL821, NH821, EL821

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GRG, GRL, NH, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Direct replacement to LEESON IRONMAN, style B, 5:1 ratio, left hand output

GRL-B821-5-L

GRL8210001

GRG = **GROVE GEAR**

- Direct replacement to Grove Gear Flexaline
- Mounting footprint 3.00" x 4.75"
- See pages 52-73 for dimensions

GRL = LEESON IRONMAN BY OHIO GEAR Interchange

- Direct replacement to LEESON IRONMAN & major brands.
- Mounting footprint 2.88" x 5.00"
- See pages 52-73 for dimensions

Maximum Rating Tables

Size 821 • GR, NH, EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
56C 143-5TC	__8210037 __8210073	__8210049 __8210085	__8210061 __8210097	__8210513.XX __8210525.XX	__8210109 __8210145	__8210121 __8210157	__8210133 __8210169	__8210537.XX __8210549.XX	5
56C 143-5TC	__8210038 __8210074	__8210050 __8210086	__8210062 __8210098	__8210514.XX __8210526.XX	__8210110 __8210146	__8210122 __8210158	__8210134 __8210170	__8210538.XX __8210550.XX	7.5
56C 143-5TC	__8210039 __8210075	__8210051 __8210087	__8210063 __8210099	__8210515.XX __8210527.XX	__8210111 __8210147	__8210123 __8210159	__8210135 __8210171	__8210539.XX __8210551.XX	10
56C 143-5TC	__8210040 __8210076	__8210052 __8210088	__8210064 __8210100	__8210516.XX __8210528.XX	__8210112 __8210148	__8210124 __8210160	__8210136 __8210172	__8210540.XX __8210552.XX	15
56C 143-5TC	__8210041 __8210077	__8210053 __8210089	__8210065 __8210101	__8210517.XX __8210529.XX	__8210113 __8210149	__8210125 __8210161	__8210137 __8210173	__8210541.XX __8210553.XX	20
56C 143-5TC	__8210042 __8210078	__8210054 __8210090	__8210066 __8210102	__8210518.XX __8210530.XX	__8210114 __8210150	__8210126 __8210162	__8210138 __8210174	__8210542.XX __8210554.XX	25
56C 143-5TC	__8210043 __8210079	__8210055 __8210091	__8210067 __8210103	__8210519.XX __8210531.XX	__8210115 __8210151	__8210127 __8210163	__8210139 __8210175	__8210543.XX __8210555.XX	30
56C 143-5TC	__8210044 __8210080	__8210056 __8210092	__8210068 __8210104	__8210520.XX __8210532.XX	__8210116 __8210152	__8210128 __8210164	__8210140 __8210176	__8210544.XX __8210556.XX	40
56C 143-5TC	__8210045 __8210081	__8210057 __8210093	__8210069 __8210105	__8210521.XX __8210533.XX	__8210117 __8210153	__8210129 __8210165	__8210141 __8210177	__8210545.XX __8210557.XX	50
48CZ 56C 143-5TC	__8210190 __8210046 __8210082	__8210202 __8210058 __8210094	__8210214 __8210070 __8210106	__8210570.XX __8210522.XX __8210534.XX	__8210226 __8210118 __8210154	__8210238 __8210130 __8210166	__8210250 __8210142 __8210178	__8210582.XX __8210546.XX __8210558.XX	60
48CZ 56C	__8210191 __8210047	__8210203 __8210059	__8210215 __8210071	__8210571.XX __8210523.XX	__8210227 __8210119	__8210239 __8210131	__8210251 __8210143	__8210583.XX __8210547.XX	80
48CZ 56C	__8210192 __8210048	__8210204 __8210060	__8210216 __8210072	__8210572.XX __8210524.XX	__8210228 __8210120	__8210240 __8210132	__8210252 __8210144	__8210584.XX __8210548.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Maximum Rating Tables

Size 824 • GR, NH, EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Size 824

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500.0	6.322	5.950	750	__8240001	__8240013	__8240025	__8240501.XX
	1750	350.0	5.323	4.985	898				
	1170	234.0	4.280	3.976	1071				
	100	20.0	0.655	0.489	1540				
7.5	2500	333.3	4.739	4.401	832	__8240002	__8240014	__8240026	__8240502.XX
	1750	233.3	3.992	3.685	995				
	1170	156.0	3.204	2.929	1183				
	100	13.3	0.502	0.357	1689				
10	2500	250.0	4.199	3.862	974	__8240003	__8240015	__8240027	__8240503.XX
	1750	175.0	3.564	3.253	1172				
	1170	117.0	2.808	2.531	1364				
	100	10.0	0.442	0.295	1857				
15	2500	166.7	3.268	2.913	1102	__8240004	__8240016	__8240028	__8240504.XX
	1750	116.7	2.765	2.439	1318				
	1170	78.0	2.178	1.888	1526				
	100	6.7	0.369	0.217	2056				
20	2500	125.0	2.750	2.365	1192	__8240005	__8240017	__8240029	__8240505.XX
	1750	87.5	2.326	1.972	1421				
	1170	58.5	1.835	1.522	1640				
	100	5.0	0.337	0.174	2193				
25	2500	100.0	2.335	1.949	1228	__8240006	__8240018	__8240030	__8240506.XX
	1750	70.0	1.967	1.615	1454				
	1170	46.8	1.551	1.239	1669				
	100	4.0	0.302	0.140	2205				
30	2500	83.3	1.945	1.579	1194	__8240007	__8240019	__8240031	__8240507.XX
	1750	58.3	1.653	1.317	1423				
	1170	39.0	1.314	1.016	1642				
	100	3.3	0.270	0.116	2197				
40	2500	62.5	1.574	1.195	1205	__8240008	__8240020	__8240032	__8240508.XX
	1750	43.8	1.342	0.994	1433				
	1170	29.3	1.074	0.766	1650				
	100	2.5	0.245	0.087	2198				
50	2500	50.0	1.335	0.961	1211	__8240009	__8240021	__8240033	__8240509.XX
	1750	35.0	1.137	0.795	1432				
	1170	23.4	0.911	0.609	1641				
	100	2.0	0.224	0.069	2163				
60	2500	41.7	1.149	0.806	1219	__8240010	__8240022	__8240034	__8240510.XX
	1750	29.2	0.967	0.656	1418				
	1170	19.5	0.770	0.496	1604				
	100	1.7	0.197	0.054	2054				
80	2500	31.3	0.520	0.348	701	__8240011	__8240023	__8240035	__8240511.XX
	1750	21.9	0.455	0.288	830				
	1170	14.6	0.370	0.219	946				
	100	1.3	0.056	0.024	1202				
100	2500	25.0	0.351	0.219	551	__8240012	__8240024	__8240036	__8240512.XX
	1750	17.5	0.307	0.180	648				
	1170	11.7	0.251	0.136	735				
	100	1.0	0.039	0.015	926				

How To Build a Part Number For Size GR824, NH824, EL824

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, NH, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
GR-B824-5-L
GR8240001

Maximum Rating Tables

Size 824 • GR, NH, EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
143-5TC 182-4TC	__8240073 __8240109	__8240085 __8240121	__8240097 __8240133	__8240525.XX __8240537.XX	__8240181 __8240217	__8240193 __8240229	__8240205 __8240241	__8240561.XX __8240573.XX	5
143-5TC 182-4TC	__8240074 __8240110	__8240086 __8240122	__8240098 __8240134	__8240526.XX __8240538.XX	__8240182 __8240218	__8240194 __8240230	__8240206 __8240242	__8240562.XX __8240574.XX	7.5
143-5TC 182-4TC	__8240075 __8240111	__8240087 __8240123	__8240099 __8240135	__8240527.XX __8240539.XX	__8240183 __8240219	__8240195 __8240231	__8240207 __8240243	__8240563.XX __8240575.XX	10
56C 143-5TC	__8240040 __8240076	__8240052 __8240088	__8240064 __8240100	__8240516.XX __8240528.XX	__8240148 __8240184	__8240160 __8240196	__8240172 __8240208	__8240552.XX __8240564.XX	15
56C 143-5TC	__8240041 __8240077	__8240053 __8240089	__8240065 __8240101	__8240517.XX __8240529.XX	__8240149 __8240185	__8240161 __8240197	__8240173 __8240209	__8240553.XX __8240565.XX	20
56C 143-5TC	__8240042 __8240078	__8240054 __8240090	__8240066 __8240102	__8240518.XX __8240530.XX	__8240150 __8240186	__8240162 __8240198	__8240174 __8240210	__8240554.XX __8240566.XX	25
56C 143-5TC	__8240043 __8240079	__8240055 __8240091	__8240067 __8240103	__8240519.XX __8240531.XX	__8240151 __8240187	__8240163 __8240199	__8240175 __8240211	__8240555.XX __8240567.XX	30
56C 143-5TC	__8240044 __8240080	__8240056 __8240092	__8240068 __8240104	__8240520.XX __8240532.XX	__8240152 __8240188	__8240164 __8240200	__8240176 __8240212	__8240556.XX __8240568.XX	40
56C 143-5TC	__8240045 __8240081	__8240057 __8240093	__8240069 __8240105	__8240521.XX __8240533.XX	__8240153 __8240189	__8240165 __8240201	__8240177 __8240213	__8240557.XX __8240569.XX	50
56C 143-5TC	__8240046 __8240082	__8240058 __8240094	__8240070 __8240106	__8240522.XX __8240534.XX	__8240154 __8240190	__8240166 __8240202	__8240178 __8240214	__8240558.XX __8240570.XX	60
56C	__8240047	__8240059	__8240071	__8240523.XX	__8240155	__8240167	__8240179	__8240559.XX	80
56C	__8240048	__8240060	__8240072	__8240524.XX	__8240156	__8240168	__8240180	__8240560.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.
* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Maximum Rating Tables

Size 826 • GR, NH, EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Size 826

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
5	2500	500	7.946	7.486	944	__8260001	__8260013	__8260025	__8260501.XX
	1750	350	6.693	6.276	1130				
	1170	234	5.439	5.061	1363				
	100	20	0.844	0.638	2010				
7.5	2500	333	5.877	5.453	1031	__8260002	__8260014	__8260026	__8260502.XX
	1750	233	4.956	4.571	1235				
	1170	156	4.018	3.671	1483				
	100	13	0.640	0.458	2166				
10	2500	250	5.338	4.904	1236	__8260003	__8260015	__8260027	__8260503.XX
	1750	175	4.492	4.097	1475				
	1170	117	3.579	3.226	1738				
	100	10	0.572	0.386	2431				
15	2500	166	4.316	3.881	1468	__8260004	__8260016	__8260028	__8260504.XX
	1750	116	3.614	3.216	1737				
	1170	78	2.821	2.468	1994				
	100	6.7	0.467	0.279	2637				
20	2500	125	3.503	3.050	1538	__8260005	__8260017	__8260029	__8260505.XX
	1750	87	2.965	2.549	1836				
	1170	58	2.339	1.970	2123				
	100	5.0	0.419	0.226	2849				
25	2500	100	2.955	2.505	1579	__8260006	__8260018	__8260030	__8260506.XX
	1750	70	2.487	2.076	1869				
	1170	46	1.957	1.594	2146				
	100	4.0	0.370	0.180	2837				
30	2500	83	2.556	2.115	1600	__8260007	__8260019	__8260031	__8260507.XX
	1750	58	2.145	1.743	1883				
	1170	39	1.687	1.332	2152				
	100	3.3	0.335	0.149	2816				
40	2500	62	1.989	1.545	1558	__8260008	__8260020	__8260032	__8260508.XX
	1750	43	1.695	1.287	1854				
	1170	29	1.354	0.993	2139				
	100	2.5	0.299	0.113	2857				
50	2500	50	1.672	1.237	1560	__8260009	__8260021	__8260033	__8260509.XX
	1750	35	1.420	1.023	1843				
	1170	23	1.135	0.784	2112				
	100	2.0	0.269	0.088	2783				
60	2500	41	1.433	1.015	1536	__8260010	__8260022	__8260034	__8260510.XX
	1750	29	1.216	0.835	1805				
	1170	19	0.973	0.637	2060				
	100	1.7	0.245	0.071	2689				
80	2500	31	0.659	0.456	919	__8260011	__8260023	__8260035	__8260511.XX
	1750	21	0.577	0.379	1092				
	1170	14	0.469	0.289	1247				
	100	1.3	0.070	0.032	1593				
100	2500	25	0.441	0.286	721	__8260012	__8260024	__8260036	__8260512.XX
	1750	17	0.386	0.236	851				
	1170	11	0.314	0.179	966				
	100	1.0	0.048	0.019	1222				

How To Build a Part Number For Size GR826, GRG826, GRL826, NH826, EL826

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, GRG, GRL, NH, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, hollow output shaft, 5:1 ratio, 180TC coupling input
GR-HMQ826-5-180TC-19
GR8260537.19

GRG = **GROVE GEAR**
- Direct replacement to Grove Gear Flexaline
- 1-1/4" solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only

GRL = LEESON IRONMAN BY OHIO GEAR Interchange
- Direct replacement to LEESON IRONMAN & major brands.
- Hollow shaft option available
- 1-1/8" solid output shaft diameter

Maximum Rating Tables

Size 826 • GR, NH, EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
143-5TC 182-4TC	__8260073 __8260109	__8260085 __8260121	__8260097 __8260133	__8260525.XX __8260537.XX	__8260181 __8260217	__8260193 __8260229	__8260205 __8260241	__8260561.XX __8260573.XX	5
143-5TC 182-4TC	__8260074 __8260110	__8260086 __8260122	__8260098 __8260134	__8260526.XX __8260538.XX	__8260182 __8260218	__8260194 __8260230	__8260206 __8260242	__8260562.XX __8260574.XX	7.5
143-5TC 182-4TC	__8260075 __8260111	__8260087 __8260123	__8260099 __8260135	__8260527.XX __8260539.XX	__8260183 __8260219	__8260195 __8260231	__8260207 __8260243	__8260563.XX __8260575.XX	10
143-5TC 182-4TC	__8260076 __8260112	__8260088 __8260124	__8260100 __8260136	__8260528.XX __8260540.XX	__8260184 __8260220	__8260196 __8260232	__8260208 __8260244	__8260564.XX __8260576.XX	15
56C 143-5TC 182-4TC	__8260041 __8260077 __8260113	__8260053 __8260089 __8260125	__8260065 __8260101 __8260137	__8260517.XX __8260529.XX __8260541.XX	__8260149 __8260185 __8260221	__8260161 __8260197 __8260233	__8260173 __8260209 __8260245	__8260553.XX __8260565.XX __8260577.XX	20
56C 143-5TC	__8260042 __8260078	__8260054 __8260090	__8260066 __8260102	__8260518.XX __8260530.XX	__8260150 __8260186	__8260162 __8260198	__8260174 __8260210	__8260554.XX __8260566.XX	25
56C 143-5TC	__8260043 __8260079	__8260055 __8260091	__8260067 __8260103	__8260519.XX __8260531.XX	__8260151 __8260187	__8260163 __8260199	__8260175 __8260211	__8260555.XX __8260567.XX	30
56C 143-5TC	__8260044 __8260080	__8260056 __8260092	__8260068 __8260104	__8260520.XX __8260532.XX	__8260152 __8260188	__8260164 __8260200	__8260176 __8260212	__8260556.XX __8260568.XX	40
56C 143-5TC	__8260045 __8260081	__8260057 __8260093	__8260069 __8260105	__8260521.XX __8260533.XX	__8260153 __8260189	__8260165 __8260201	__8260177 __8260213	__8260557.XX __8260569.XX	50
56C 143-5TC	__8260046 __8260082	__8260058 __8260094	__8260070 __8260106	__8260522.XX __8260534.XX	__8260154 __8260190	__8260166 __8260202	__8260178 __8260214	__8260558.XX __8260570.XX	60
56C 143-5TC	__8260047 __8260083	__8260059 __8260095	__8260071 __8260107	__8260523.XX __8260535.XX	__8260155 __8260191	__8260167 __8260203	__8260179 __8260215	__8260559.XX __8260571.XX	80
56C	__8260048	__8260060	__8260072	__8260524.XX	__8260156	__8260168	__8260180	__8260560.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.
* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1”	1-1/8”	1-3/16”	1-1/4”	1-7/16”	1-1/2”
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Maximum Rating Tables

Size 830 • GR & EL Series

CAST IRON GR SERIES ALUMINUM EL SERIES

Size 830

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500	10.661	10.091	1272	__8300001	__8300013	__8300025	__8300501.XX
	1750	350	9.093	8.573	1544				
	1170	234	7.434	6.966	1876				
	100	20	1.177	0.928	2925				
7.5	2500	333	8.178	7.669	1450	__8300002	__8300014	__8300026	__8300502.XX
	1750	233	6.879	6.421	1734				
	1170	156	5.668	5.251	2122				
	100	13	0.898	0.683	3228				
10	2500	250	7.293	6.745	1701	__8300003	__8300015	__8300027	__8300503.XX
	1750	175	6.151	5.655	2037				
	1170	117	4.989	4.541	2446				
	100	10	0.799	0.567	3573				
15	2500	166	5.734	5.149	1947	__8300004	__8300016	__8300028	__8300504.XX
	1750	116	4.843	4.311	2329				
	1170	78	3.903	3.426	2768				
	100	6.7	0.663	0.418	3949				
20	2500	125	4.662	4.067	2051	__8300005	__8300017	__8300029	__8300505.XX
	1750	87	3.947	3.407	2454				
	1170	58	3.198	2.713	2923				
	100	5.0	0.579	0.332	4189				
25	2500	100	3.957	3.355	2114	__8300006	__8300018	__8300030	__8300506.XX
	1750	70	3.355	2.807	2527				
	1170	46	2.713	2.223	2993				
	100	4.0	0.519	0.269	4238				
30	2500	83	3.389	2.787	2108	__8300007	__8300019	__8300031	__8300507.XX
	1750	58	2.879	2.332	2519				
	1170	39	2.335	1.845	2982				
	100	3.3	0.472	0.223	4217				
40	2500	62	2.639	2.054	2071	__8300008	__8300020	__8300032	__8300508.XX
	1750	43	2.251	1.720	2477				
	1170	29	1.843	1.366	2944				
	100	2.5	0.407	0.167	4200				
50	2500	50	2.238	1.654	2084	__8300009	__8300021	__8300033	__8300509.XX
	1750	35	1.915	1.383	2490				
	1170	23	1.569	1.094	2945				
	100	2.0	0.372	0.132	4156				
60	2500	41	1.907	1.336	2020	__8300010	__8300022	__8300034	__8300510.XX
	1750	29	1.637	1.117	2413				
	1170	19	1.348	0.883	2854				
	100	1.7	0.341	0.106	4026				
80	2500	31	0.972	0.671	1352	__8300011	__8300023	__8300035	__8300511.XX
	1750	21	0.895	0.585	1684				
	1170	14	0.757	0.463	1996				
	100	1.3	0.126	0.054	2731				
100	2500	25	0.656	0.424	1069	__8300012	__8300024	__8300036	__8300512.XX
	1750	17	0.603	0.367	1321				
	1170	11	0.511	0.289	1554				
	100	1.0	0.087	0.033	2100				

How To Build a Part Number For Size GR830 & EL830

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output

GR-B830-5-L

GR8300001

Maximum Rating Tables

Size 830 • GR & EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	__8300109 __8300145	__8300121 __8300157	__8300133 __8300169	__8300537.XX __8300549.XX	__8300253 __8300289	__8300265 __8300301	__8300277 __8300313	__8300585.XX __8300597.XX	5
182-4TC	__8300110	__8300122	__8300134	__8300538.XX	__8300254	__8300266	__8300278	__8300586.XX	7.5
143-5TC 182-4TC	__8300075 __8300111	__8300087 __8300123	__8300099 __8300135	__8300527.XX __8300539.XX	__8300219 __8300255	__8300231 __8300267	__8300243 __8300279	__8300575.XX __8300587.XX	10
143-5TC 182-4TC	__8300076 __8300112	__8300088 __8300124	__8300100 __8300136	__8300528.XX __8300540.XX	__8300220 __8300256	__8300232 __8300268	__8300244 __8300280	__8300576.XX __8300588.XX	15
143-5TC 182-4TC	__8300077 __8300113	__8300089 __8300125	__8300101 __8300137	__8300529.XX __8300541.XX	__8300221 __8300257	__8300233 __8300269	__8300245 __8300281	__8300577.XX __8300589.XX	20
143-5TC 182-4TC	__8300078 __8300114	__8300090 __8300126	__8300102 __8300138	__8300530.XX __8300542.XX	__8300222 __8300258	__8300234 __8300270	__8300246 __8300282	__8300578.XX __8300590.XX	25
143-5TC 182-4TC	__8300079 __8300115	__8300091 __8300127	__8300103 __8300139	__8300531.XX __8300543.XX	__8300223 __8300259	__8300235 __8300271	__8300247 __8300283	__8300579.XX __8300591.XX	30
56C 143-5TC	__8300044 __8300080	__8300056 __8300092	__8300068 __8300104	__8300520.XX __8300532.XX	__8300188 __8300224	__8300200 __8300236	__8300212 __8300248	__8300568.XX __8300580.XX	40
56C 143-5TC	__8300045 __8300081	__8300057 __8300093	__8300069 __8300105	__8300521.XX __8300533.XX	__8300189 __8300225	__8300201 __8300237	__8300213 __8300249	__8300569.XX __8300581.XX	50
56C 143-5TC	__8300046 __8300082	__8300058 __8300094	__8300070 __8300106	__8300522.XX __8300534.XX	__8300190 __8300226	__8300202 __8300238	__8300214 __8300250	__8300570.XX __8300582.XX	60
56C 143-5TC	__8300047 __8300083	__8300059 __8300095	__8300071 __8300107	__8300523.XX __8300535.XX	__8300191 __8300227	__8300203 __8300239	__8300215 __8300251	__8300571.XX __8300583.XX	80
56C 143-5TC	__8300048 __8300084	__8300060 __8300096	__8300072 __8300108	__8300524.XX __8300536.XX	__8300192 __8300228	__8300204 __8300240	__8300216 __8300252	__8300572.XX __8300584.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 830 • NH Series

CAST IRON NH SERIES

Size 830

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
	2500	500	7.726	7.325	923				
	1750	350	6.683	6.285	1131				
5	1170	234	5.645	5.249	1413	NH8300001	NH8300013	NH8300025	NH8300501.XX
	100	20	0.918	0.779	2454				
	2500	333	7.145	6.713	1269				
	1750	233	6.049	5.624	1519				
7.5	1170	156	5.210	4.779	1930	NH8300002	NH8300014	NH8300026	NH8300502.XX
	100	13	0.765	0.636	3003				
	2500	250	6.344	5.897	1486				
	1750	175	5.450	5.005	1802				
10	1170	117	4.586	4.144	2232	NH8300003	NH8300015	NH8300027	NH8300503.XX
	100	10	0.649	0.526	3312				
	2500	166	4.858	4.404	1665				
	1750	116	4.207	3.751	2026				
15	1170	78	3.507	3.062	2473	NH8300004	NH8300016	NH8300028	NH8300504.XX
	100	6.7	0.498	0.378	3573				
	2500	125	3.720	3.288	1657				
	1750	87	3.233	2.799	2015				
20	1170	58	2.717	2.291	2467	NH8300005	NH8300017	NH8300029	NH8300505.XX
	100	5.0	0.400	0.284	3584				
	2500	100	3.170	2.737	1724				
	1750	70	2.768	2.332	2099				
25	1170	46	2.319	1.895	2551	NH8300006	NH8300018	NH8300030	NH8300506.XX
	100	4.0	0.345	0.232	3653				
	2500	83	2.717	2.287	1729				
	1750	58	2.382	1.949	2105				
30	1170	39	2.004	1.582	2556	NH8300007	NH8300019	NH8300031	NH8300507.XX
	100	3.3	0.305	0.193	3656				
	2500	62	2.063	1.645	1659				
	1750	43	1.822	1.402	2018				
40	1170	29	1.557	1.144	2464	NH8300008	NH8300020	NH8300032	NH8300508.XX
	100	2.5	0.252	0.141	3559				
	2500	50	1.727	1.320	1663				
	1750	35	1.535	1.125	2026				
50	1170	23	1.312	0.912	2456	NH8300009	NH8300021	NH8300033	NH8300509.XX
	100	2.0	0.217	0.111	3505				
	2500	41	1.430	1.045	1580				
	1750	29	1.279	0.891	1924				
60	1170	19	1.100	0.722	2332	NH8300010	NH8300022	NH8300034	NH8300510.XX
	100	1.7	0.188	0.088	3327				
	2500	31	0.972	0.671	1352				
	1750	21	0.895	0.585	1684				
80	1170	14	0.757	0.463	1996	NH8300011	NH8300023	NH8300035	NH8300511.XX
	100	1.3	0.126	0.054	2731				
	2500	25	0.656	0.424	1069				
	1750	17	0.603	0.367	1321				
100	1170	11	0.511	0.289	1554	NH8300012	NH8300024	NH8300036	NH8300512.XX
	100	1.0	0.087	0.033	2100				






How To Build a Part Number For Size NH830

1. Select catalog number from the selection table
2. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Maximum Rating Tables

Size 830 • NH Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	NH8300109 NH8300145	NH8300121 NH8300157	NH8300133 NH8300169	NH8300537.XX NH8300549.XX	NH8300253 NH8300289	NH8300265 NH8300301	NH8300277 NH8300313	NH8300585.XX NH8300597.XX	5
182-4TC	NH8300110	NH8300122	NH8300134	NH8300538.XX	NH8300254	NH8300266	NH8300278	NH8300586.XX	7.5
143-5TC 182-4TC	NH8300075 NH8300111	NH8300087 NH8300123	NH8300099 NH8300135	NH8300527.XX NH8300539.XX	NH8300219 NH8300255	NH8300231 NH8300267	NH8300243 NH8300279	NH8300575.XX NH8300587.XX	10
143-5TC 182-4TC	NH8300076 NH8300112	NH8300088 NH8300124	NH8300100 NH8300136	NH8300528.XX NH8300540.XX	NH8300220 NH8300256	NH8300232 NH8300268	NH8300244 NH8300280	NH8300576.XX NH8300588.XX	15
143-5TC 182-4TC	NH8300077 NH8300113	NH8300089 NH8300125	NH8300101 NH8300137	NH8300529.XX NH8300541.XX	NH8300221 NH8300257	NH8300233 NH8300269	NH8300245 NH8300281	NH8300577.XX NH8300589.XX	20
143-5TC 182-4TC	NH8300078 NH8300114	NH8300090 NH8300126	NH8300102 NH8300138	NH8300530.XX NH8300542.XX	NH8300222 NH8300258	NH8300234 NH8300270	NH8300246 NH8300282	NH8300578.XX NH8300590.XX	25
143-5TC 182-4TC	NH8300079 NH8300115	NH8300091 NH8300127	NH8300103 NH8300139	NH8300531.XX NH8300543.XX	NH8300223 NH8300259	NH8300235 NH8300271	NH8300247 NH8300283	NH8300579.XX NH8300591.XX	30
56C 143-5TC	NH8300044 NH8300080	NH8300056 NH8300092	NH8300068 NH8300104	NH8300520.XX NH8300532.XX	NH8300188 NH8300224	NH8300200 NH8300236	NH8300212 NH8300248	NH8300568.XX NH8300580.XX	40
56C 143-5TC	NH8300045 NH8300081	NH8300057 NH8300093	NH8300069 NH8300105	NH8300521.XX NH8300533.XX	NH8300189 NH8300225	NH8300201 NH8300237	NH8300213 NH8300249	NH8300569.XX NH8300581.XX	50
56C 143-5TC	NH8300046 NH8300082	NH8300058 NH8300094	NH8300070 NH8300106	NH8300522.XX NH8300534.XX	NH8300190 NH8300226	NH8300202 NH8300238	NH8300214 NH8300250	NH8300570.XX NH8300582.XX	60
56C 143-5TC	NH8300047 NH8300083	NH8300059 NH8300095	NH8300071 NH8300107	NH8300523.XX NH8300535.XX	NH8300191 NH8300227	NH8300203 NH8300239	NH8300215 NH8300251	NH8300571.XX NH8300583.XX	80
56C 143-5TC	NH8300048 NH8300084	NH8300060 NH8300096	NH8300072 NH8300108	NH8300524.XX NH8300536.XX	NH8300192 NH8300228	NH8300204 NH8300240	NH8300216 NH8300252	NH8300572.XX NH8300584.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 832 • GR & EL Series

CAST IRON GR SERIES | ALUMINUM EL SERIES

Size 832

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
5	2500	500	13.94	13.24	1669	__8320097	__8320101	__8320105	__8320557.XX
	1750	350	11.92	11.29	2033				
	1170	234	9.790	9.220	2483				
	100	20	1.567	1.267	3994				
7.5	2500	333	10.36	9.695	1833	__8320098	__8320102	__8320106	__8320558.XX
	1750	233	8.863	8.264	2232				
	1170	156	7.286	6.747	2726				
	100	13	1.201	0.926	4375				
10	2500	250	9.601	8.943	2254	__8320001	__8320009	__8320017	__8320501.XX
	1750	175	8.092	7.497	2700				
	1170	117	6.604	6.066	3268				
	100	10	1.048	0.770	4853				
15	2500	166	7.258	6.582	2489	__8320002	__8320010	__8320018	__8320502.XX
	1750	116	6.127	5.516	2980				
	1170	78	5.031	4.478	3618				
	100	6.7	0.853	0.573	5413				
20	2500	125	6.122	5.412	2729	__8320003	__8320011	__8320019	__8320503.XX
	1750	87	5.180	4.536	3267				
	1170	58	4.215	3.636	3917				
	100	5.0	0.746	0.452	5695				
25	2500	100	5.162	4.457	2809	__8320004	__8320012	__8320020	__8320504.XX
	1750	70	4.373	3.732	3360				
	1170	46	3.543	2.968	3996				
	100	4.0	0.655	0.362	5710				
30	2500	83	4.262	3.562	2694	__8320005	__8320013	__8320021	__8320505.XX
	1750	58	3.619	2.986	3226				
	1170	39	2.987	2.415	3902				
	100	3.3	0.593	0.306	5787				
40	2500	62	3.434	2.736	2759	__8320006	__8320014	__8320022	__8320506.XX
	1750	43	2.926	2.293	3303				
	1170	29	2.402	1.833	3950				
	100	2.5	0.513	0.227	5710				
50	2500	50	2.883	2.199	2772	__8320007	__8320015	__8320023	__8320507.XX
	1750	35	2.462	1.841	3315				
	1170	23	2.018	1.461	3935				
	100	2.0	0.458	0.178	5601				
60	2500	41	2.471	1.812	2741	__8320008	__8320016	__8320024	__8320508.XX
	1750	29	2.114	1.515	3274				
	1170	19	1.733	1.197	3869				
	100	1.7	0.414	0.144	5448				
80	2500	31	1.122	0.796	1605	__8320099	__8320103	__8320107	__8320559.XX
	1750	21	1.030	0.695	2000				
	1170	14	0.869	0.551	2371				
	100	1.3	0.143	0.064	3246				
100	2500	25	0.754	0.503	1268	__8320100	__8320104	__8320108	__8320560.XX
	1750	17	0.691	0.435	1567				
	1170	11	0.584	0.343	1846				
	100	1.0	0.097	0.040	2496				

How To Build a Part Number For Size GR832, GRG832, GRL832, EL832

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, GRG, GRL, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, hollow output shaft, 5:1 ratio, 180TC coupling input
GR-HM832-5-H-180TC-19
GR8320569.19

GRG = **GROVE GEAR**
- Direct replacement to Grove Gear Flexaline
- 1-1/2" solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only

GRL = LEESON IRONMAN BY OHIO GEAR Interchange
- Direct replacement to LEESON IRONMAN & major brands.
- Hollow shaft option available
- 1-3/8" solid output shaft diameter

Maximum Rating Tables

Size 832 • GR & EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	__8320205 __8320217	__8320209 __8320229	__8320213 __8320241	__8320569.XX __8320573.XX	__8320277 __8320289	__8320281 __8320301	__8320285 __8320313	__8320593.XX __8320597.XX	5
182-4TC 213-5TC	__8320206 __8320218	__8320210 __8320230	__8320214 __8320242	__8320570.XX __8320574.XX	__8320278 __8320290	__8320282 __8320302	__8320286 __8320314	__8320594.XX __8320598.XX	7.5
143-5TC 182-4TC 213-5TC	__8320049 __8320073 __8320219	__8320057 __8320081 __8320231	__8320065 __8320089 __8320243	__8320517.XX __8320525.XX __8320575.XX	__8320145 __8320169 __8320291	__8320153 __8320177 __8320303	__8320161 __8320185 __8320315	__8320541.XX __8320549.XX __8320599.XX	10
143-5TC 182-4TC	__8320050 __8320074	__8320058 __8320082	__8320066 __8320090	__8320518.XX __8320526.XX	__8320146 __8320170	__8320154 __8320178	__8320162 __8320186	__8320542.XX __8320550.XX	15
143-5TC 182-4TC	__8320051 __8320075	__8320059 __8320083	__8320067 __8320091	__8320519.XX __8320527.XX	__8320147 __8320171	__8320155 __8320179	__8320163 __8320187	__8320543.XX __8320551.XX	20
143-5TC 182-4TC	__8320052 __8320076	__8320060 __8320084	__8320068 __8320092	__8320520.XX __8320528.XX	__8320148 __8320172	__8320156 __8320180	__8320164 __8320188	__8320544.XX __8320552.XX	25
143-5TC 182-4TC	__8320053 __8320077	__8320061 __8320085	__8320069 __8320093	__8320521.XX __8320529.XX	__8320149 __8320173	__8320157 __8320181	__8320165 __8320189	__8320545.XX __8320553.XX	30
56C 143-5TC 182-4TC	__8320030 __8320054 __8320078	__8320038 __8320062 __8320086	__8320046 __8320070 __8320094	__8320514.XX __8320522.XX __8320530.XX	__8320126 __8320150 __8320174	__8320134 __8320158 __8320182	__8320142 __8320166 __8320190	__8320538.XX __8320546.XX __8320554.XX	40
56C 143-5TC 182-4TC	__8320031 __8320055 __8320079	__8320039 __8320063 __8320087	__8320047 __8320071 __8320095	__8320515.XX __8320523.XX __8320531.XX	__8320127 __8320151 __8320175	__8320135 __8320159 __8320183	__8320143 __8320167 __8320191	__8320539.XX __8320547.XX __8320555.XX	50
56C 143-5TC 182-4TC	__8320032 __8320056 __8320080	__8320040 __8320064 __8320088	__8320048 __8320072 __8320096	__8320516.XX __8320524.XX __8320532.XX	__8320128 __8320152 __8320176	__8320136 __8320160 __8320184	__8320144 __8320168 __8320192	__8320540.XX __8320548.XX __8320556.XX	60
56C 143-5TC	__8320111 __8320195	__8320115 __8320199	__8320119 __8320203	__8320563.XX __8320567.XX	__8320255 __8320267	__8320259 __8320271	__8320263 __8320275	__8320587.XX __8320591.XX	80
56C	__8320112	__8320116	__8320120	__8320564.XX	__8320256	__8320260	__8320264	__8320588.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 832 • NH Series

CAST IRON NH SERIES

Size 832

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500	10.56	10.03	1306	NH8320097	NH8320101	NH8320105	NH8320557.XX
	1750	350	9.135	8.611	1602				
	1170	234	7.694	7.172	1995				
	100	20	1.289	1.097	3571				
7.5	2500	333	9.053	8.527	1612	NH8320098	NH8320102	NH8320106	NH8320558.XX
	1750	233	7.844	7.317	1976				
	1170	156	6.642	6.114	2469				
	100	13	1.136	0.949	4075				
10	2500	250	8.232	7.701	1941	NH8320001	NH8320009	NH8320017	NH8320501.XX
	1750	175	7.034	6.507	2343				
	1170	117	5.974	5.446	2932				
	100	10	0.857	0.704	4437				
15	2500	166	6.161	5.603	2118	NH8320002	NH8320010	NH8320018	NH8320502.XX
	1750	116	5.277	4.724	2551				
	1170	78	4.531	3.971	3207				
	100	6.7	0.682	0.518	4895				
20	2500	125	4.836	4.306	2170	NH8320003	NH8320011	NH8320019	NH8320503.XX
	1750	87	4.188	3.658	2633				
	1170	58	3.547	3.020	3253				
	100	5.0	0.528	0.381	4802				
25	2500	100	3.977	3.468	2185	NH8320004	NH8320012	NH8320020	NH8320504.XX
	1750	70	3.465	2.953	2658				
	1170	46	2.914	2.413	3248				
	100	4.0	0.434	0.298	4701				
30	2500	83	3.452	2.903	2195	NH8320005	NH8320013	NH8320021	NH8320505.XX
	1750	58	3.003	2.454	2651				
	1170	39	2.604	2.052	3315				
	100	3.3	0.425	0.265	5007				
40	2500	62	2.669	2.157	2174	NH8320006	NH8320014	NH8320022	NH8320506.XX
	1750	43	2.348	1.834	2641				
	1170	29	2.019	1.509	3251				
	100	2.5	0.330	0.189	4769				
50	2500	50	2.152	1.674	2110	NH8320007	NH8320015	NH8320023	NH8320507.XX
	1750	35	1.907	1.426	2568				
	1170	23	1.634	1.163	3130				
	100	2.0	0.270	0.143	4510				
60	2500	41	1.764	1.323	2001	NH8320008	NH8320016	NH8320024	NH8320508.XX
	1750	29	1.573	1.128	2437				
	1170	19	1.346	0.913	2951				
	100	1.7	0.225	0.111	4201				
80	2500	31	1.122	0.796	1605	NH8320099	NH8320103	NH8320107	NH8320559.XX
	1750	21	1.030	0.695	2000				
	1170	14	0.869	0.551	2371				
	100	1.3	0.143	0.064	3246				
100	2500	25	0.754	0.503	1268	NH8320100	NH8320104	NH8320108	NH8320560.XX
	1750	17	0.691	0.435	1567				
	1170	11	0.584	0.343	1846				
	100	1.0	0.097	0.040	2496				

How To Build a Part Number For Size NH832

1. Select catalog number from the selection table
2. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Maximum Rating Tables

Size 832 • NH Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	NH8320205 NH8320217	NH8320209 NH8320229	NH8320213 NH8320241	NH8320569.XX NH8320573.XX	NH8320277 NH8320289	NH8320281 NH8320301	NH8320285 NH8320313	NH8320593.XX NH8320597.XX	5
182-4TC 213-5TC	NH8320206 NH8320218	NH8320210 NH8320230	NH8320214 NH8320242	NH8320570.XX NH8320574.XX	NH8320278 NH8320290	NH8320282 NH8320302	NH8320286 NH8320314	NH8320594.XX NH8320598.XX	7.5
143-5TC 182-4TC 213-5TC	NH8320049 NH8320073 NH8320219	NH8320057 NH8320081 NH8320231	NH8320065 NH8320089 NH8320243	NH8320517.XX NH8320525.XX NH8320575.XX	NH8320145 NH8320169 NH8320291	NH8320153 NH8320177 NH8320303	NH8320161 NH8320185 NH8320315	NH8320541.XX NH8320549.XX NH8320599.XX	10
143-5TC 182-4TC	NH8320050 NH8320074	NH8320058 NH8320082	NH8320066 NH8320090	NH8320518.XX NH8320526.XX	NH8320146 NH8320170	NH8320154 NH8320178	NH8320162 NH8320186	NH8320542.XX NH8320550.XX	15
143-5TC 182-4TC	NH8320051 NH8320075	NH8320059 NH8320083	NH8320067 NH8320091	NH8320519.XX NH8320527.XX	NH8320147 NH8320171	NH8320155 NH8320179	NH8320163 NH8320187	NH8320543.XX NH8320551.XX	20
143-5TC 182-4TC	NH8320052 NH8320076	NH8320060 NH8320084	NH8320068 NH8320092	NH8320520.XX NH8320528.XX	NH8320148 NH8320172	NH8320156 NH8320180	NH8320164 NH8320188	NH8320544.XX NH8320552.XX	25
143-5TC 182-4TC	NH8320053 NH8320077	NH8320061 NH8320085	NH8320069 NH8320093	NH8320521.XX NH8320529.XX	NH8320149 NH8320173	NH8320157 NH8320181	NH8320165 NH8320189	NH8320545.XX NH8320553.XX	30
56C 143-5TC 182-4TC	NH8320030 NH8320054 NH8320078	NH8320038 NH8320062 NH8320086	NH8320046 NH8320070 NH8320094	NH8320514.XX NH8320522.XX NH8320530.XX	NH8320126 NH8320150 NH8320174	NH8320134 NH8320158 NH8320182	NH8320142 NH8320166 NH8320190	NH8320538.XX NH8320546.XX NH8320554.XX	40
56C 143-5TC 182-4TC	NH8320031 NH8320055 NH8320079	NH8320039 NH8320063 NH8320087	NH8320047 NH8320071 NH8320095	NH8320515.XX NH8320523.XX NH8320531.XX	NH8320127 NH8320151 NH8320175	NH8320135 NH8320159 NH8320183	NH8320143 NH8320167 NH8320191	NH8320539.XX NH8320547.XX NH8320555.XX	50
56C 143-5TC 182-4TC	NH8320032 NH8320056 NH8320080	NH8320040 NH8320064 NH8320088	NH8320048 NH8320072 NH8320096	NH8320516.XX NH8320524.XX NH8320532.XX	NH8320128 NH8320152 NH8320176	NH8320136 NH8320160 NH8320184	NH8320144 NH8320168 NH8320192	NH8320540.XX NH8320548.XX NH8320556.XX	60
56C 143-5TC	NH8320111 NH8320195	NH8320115 NH8320199	NH8320119 NH8320203	NH8320563.XX NH8320567.XX	NH8320255 NH8320267	NH8320259 NH8320271	NH8320263 NH8320275	NH8320587.XX NH8320591.XX	80
56C	NH8320112	NH8320116	NH8320120	NH8320564.XX	NH8320256	NH8320260	NH8320264	NH8320588.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 842 • GR, NH & EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Size 842

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500	20.79	19.87	2589	__8420001	__8420013	__8420025	__8420501.XX
	1750	350	18.08	17.25	3209				
	1170	234	15.18	14.43	4016				
	100	20	2.751	2.376	7738				
7.5	2500	333	18.84	17.83	3372	__8420002	__8420014	__8420026	__8420502.XX
	1750	233	16.27	15.36	4148				
	1170	156	13.42	12.61	5094				
	100	13	2.342	1.931	9126				
10	2500	250	17.39	16.37	4127	__8420003	__8420015	__8420027	__8420503.XX
	1750	175	14.93	14.00	5042				
	1170	117	12.31	11.47	6180				
	100	10	2.051	1.629	10629				
15	2500	166	12.94	11.92	4507	__8420004	__8420016	__8420028	__8420504.XX
	1750	116	11.13	10.20	5508				
	1170	78	9.193	8.357	6752				
	100	6.7	1.608	1.190	11245				
20	2500	125	11.02	9.91	4999	__8420005	__8420017	__8420029	__8420505.XX
	1750	87	9.462	8.458	6092				
	1170	58	7.816	6.913	7447				
	100	5.0	1.407	0.956	12056				
25	2500	100	9.256	8.164	5145	__8420006	__8420018	__8420030	__8420506.XX
	1750	70	7.940	6.946	6254				
	1170	46	6.551	5.658	7619				
	100	4.0	1.210	0.764	12038				
30	2500	83	7.517	6.455	4882	__8420007	__8420019	__8420031	__8420507.XX
	1750	58	6.481	5.517	5960				
	1170	39	5.384	4.518	7300				
	100	3.3	1.066	0.636	12026				
40	2500	62	6.101	5.013	5055	__8420008	__8420020	__8420032	__8420508.XX
	1750	43	5.262	4.274	6156				
	1170	29	4.379	3.490	7520				
	100	2.5	0.920	0.480	12090				
50	2500	50	5.088	4.029	5078	__8420009	__8420021	__8420033	__8420509.XX
	1750	35	4.389	3.426	6170				
	1170	23	3.655	2.788	7510				
	100	2.0	0.804	0.375	11809				
60	2500	41	4.333	3.317	5017	__8420010	__8420022	__8420034	__8420510.XX
	1750	29	3.681	2.772	5989				
	1170	19	3.116	2.285	7386				
	100	1.7	0.715	0.302	11439				
80	2500	31	2.019	1.486	2995	__8420011	__8420023	__8420035	__8420511.XX
	1750	21	1.760	1.257	3620				
	1170	14	1.585	1.049	4519				
	100	1.3	0.290	0.135	6804				
100	2500	25	1.341	0.933	2351	__8420012	__8420024	__8420036	__8420512.XX
	1750	17	1.201	0.792	2852				
	1170	11	1.062	0.655	3527				
	100	1.0	0.197	0.083	5219				

How To Build a Part Number For Size GR842, NH842, EL842

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, NH, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
GR-B842-5-L
GR8420001

Maximum Rating Tables

Size 842 • GR, NH & EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC 254-6TC	__8420109 __8420145 __8420181	__8420121 __8420157 __8420193	__8420133 __8420169 __8420205	__8420537.XX __8420549.XX __8420561.XX	__8420289 __8420325 __8420361	__8420301 __8420337 __8420373	__8420313 __8420349 __8420385	__8420597.XX __8420609.XX __8420621.XX	5
182-4TC 213-5TC 254-6TC	__8420110 __8420146 __8420182	__8420122 __8420158 __8420194	__8420134 __8420170 __8420206	__8420538.XX __8420550.XX __8420562.XX	__8420290 __8420326 __8420362	__8420302 __8420338 __8420374	__8420314 __8420350 __8420386	__8420598.XX __8420610.XX __8420622.XX	7.5
182-4TC 213-5TC 254-6TC	__8420111 __8420147 __8420183	__8420123 __8420159 __8420195	__8420135 __8420171 __8420207	__8420539.XX __8420551.XX __8420563.XX	__8420291 __8420327 __8420363	__8420303 __8420339 __8420375	__8420315 __8420351 __8420387	__8420599.XX __8420611.XX __8420623.XX	10
182-4TC 213-5TC	__8420112 __8420148	__8420124 __8420160	__8420136 __8420172	__8420540.XX __8420552.XX	__8420292 __8420328	__8420304 __8420340	__8420316 __8420352	__8420600.XX __8420612.XX	15
182-4TC 213-5TC	__8420113 __8420149	__8420125 __8420161	__8420137 __8420173	__8420541.XX __8420553.XX	__8420293 __8420329	__8420305 __8420341	__8420317 __8420353	__8420601.XX __8420613.XX	20
143-5TC 182-4TC 213-5TC	__8420078 __8420114 __8420150	__8420090 __8420126 __8420162	__8420102 __8420138 __8420174	__8420530.XX __8420542.XX __8420554.XX	__8420258 __8420294 __8420330	__8420270 __8420306 __8420342	__8420282 __8420318 __8420354	__8420590.XX __8420602.XX __8420614.XX	25
143-5TC 182-4TC	__8420079 __8420115	__8420091 __8420127	__8420103 __8420139	__8420531.XX __8420543.XX	__8420259 __8420295	__8420271 __8420307	__8420283 __8420319	__8420591.XX __8420603.XX	30
143-5TC 182-4TC	__8420080 __8420116	__8420092 __8420128	__8420104 __8420140	__8420532.XX __8420544.XX	__8420260 __8420296	__8420272 __8420308	__8420284 __8420320	__8420592.XX __8420604.XX	40
143-5TC 182-4TC	__8420081 __8420117	__8420093 __8420129	__8420105 __8420141	__8420533.XX __8420545.XX	__8420261 __8420297	__8420273 __8420309	__8420285 __8420321	__8420593.XX __8420605.XX	50
56C 143-5TC 182-4TC	__8420046 __8420082 __8420118	__8420058 __8420094 __8420130	__8420070 __8420106 __8420142	__8420522.XX __8420534.XX __8420546.XX	__8420226 __8420262 __8420298	__8420238 __8420274 __8420310	__8420250 __8420286 __8420322	__8420582.XX __8420594.XX __8420606.XX	60
56C 143-5TC	__8420047 __8420083	__8420059 __8420095	__8420071 __8420107	__8420523.XX __8420535.XX	__8420227 __8420263	__8420239 __8420275	__8420251 __8420287	__8420583.XX __8420595.XX	80
56C 143-5TC	__8420048 __8420084	__8420060 __8420096	__8420072 __8420108	__8420524.XX __8420536.XX	__8420228 __8420264	__8420240 __8420276	__8420252 __8420288	__8420584.XX __8420596.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 852 • GR, NH & EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Size 852

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500	37.08	35.61	4601	__8520085	__8520090	__8520095	__8520501.XX
	1750	350	32.51	31.17	5753				
	1170	234	27.55	26.35	7276				
	100	20	5.390	4.794	15484				
7.5	2500	333	32.21	30.68	5800	__8520086	__8520091	__8520096	__8520502.XX
	1750	233	28.10	26.70	7213				
	1170	156	23.67	22.42	9058				
	100	13	4.442	3.821	18062				
10	2500	250	26.55	24.99	6300	__8520001	__8520008	__8520015	__8520503.XX
	1750	175	23.15	21.73	7827				
	1170	117	19.50	18.23	9818				
	100	10	3.701	3.073	19367				
15	2500	166	20.77	19.05	7204	__8520002	__8520009	__8520016	__8520504.XX
	1750	116	18.11	16.55	8941				
	1170	78	15.26	13.86	11201				
	100	6.7	2.997	2.309	21826				
20	2500	125	16.69	14.95	7538	__8520003	__8520010	__8520017	__8520505.XX
	1750	87	14.56	12.98	9351				
	1170	58	12.29	10.87	11709				
	100	5.0	2.499	1.802	22716				
25	2500	100	13.95	12.18	7674	__8520087	__8520092	__8520097	__8520506.XX
	1750	70	12.19	10.57	9517				
	1170	46	10.298	8.848	11915				
	100	4.0	2.176	1.464	23068				
30	2500	83	12.056	10.264	7763	__8520004	__8520011	__8520018	__8520507.XX
	1750	58	10.538	8.910	9627				
	1170	39	8.918	7.457	12051				
	100	3.3	1.949	1.233	23305				
40	2500	62	9.258	7.533	7596	__8520005	__8520012	__8520019	__8520508.XX
	1750	43	8.105	6.538	9419				
	1170	29	6.878	5.471	11789				
	100	2.5	1.592	0.903	22772				
50	2500	50	7.727	5.990	7550	__8520006	__8520013	__8520020	__8520509.XX
	1750	35	6.777	5.199	9362				
	1170	23	5.766	4.350	11717				
	100	2.0	1.411	0.718	22622				
60	2500	41	6.621	4.912	7429	__8520007	__8520014	__8520021	__8520510.XX
	1750	29	5.816	4.263	9212				
	1170	19	4.961	3.567	11528				
	100	1.7	1.270	0.588	22251				
80	2500	31	3.226	2.217	4469	__8520088	__8520093	__8520098	__8520511.XX
	1750	21	2.906	1.902	5478				
	1170	14	2.618	1.600	6894				
	100	1.3	0.744	0.280	14089				
100	2500	25	2.285	1.504	3790	__8520089	__8520094	__8520099	__8520512.XX
	1750	17	2.072	1.291	4646				
	1170	11	1.820	1.052	5663				
	100	1.0	0.515	0.180	11331				

How To Build a Part Number For Size GR852, NH852, EL852

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, NH, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
GR-B852-5-L
GR8520085

Maximum Rating Tables

Size 852 • GR, NH & EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
213-5TC 254-6TC	__8520187 __8520202	__8520192 __8520207	__8520197 __8520212	__8520549.XX __8520561.XX	__8520325 __8520361	__8520337 __8520373	__8520349 __8520385	__8520609.XX __8520621.XX	5
213-5TC 254-6TC	__8520188 __8520203	__8520193 __8520208	__8520198 __8520213	__8520550.XX __8520562.XX	__8520326 __8520362	__8520338 __8520374	__8520350 __8520386	__8520610.XX __8520622.XX	7.5
213-5TC 254-6TC	__8520043 __8520064	__8520050 __8520071	__8520057 __8520078	__8520551.XX __8520563.XX	__8520327 __8520363	__8520339 __8520375	__8520351 __8520387	__8520611.XX __8520623.XX	10
213-5TC 254-6TC	__8520044 __8520065	__8520051 __8520072	__8520058 __8520079	__8520552.XX __8520564.XX	__8520328 __8520364	__8520340 __8520376	__8520352 __8520388	__8520612.XX __8520624.XX	15
182-4TC 213-5TC 254-6TC	__8520024 __8520045 __8520066	__8520031 __8520052 __8520073	__8520038 __8520059 __8520080	__8520541.XX __8520553.XX __8520565.XX	__8520293 __8520329 __8520365	__8520305 __8520341 __8520377	__8520317 __8520353 __8520389	__8520601.XX __8520613.XX __8520625.XX	20
182-4TC 213-5TC	__8520174 __8520189	__8520179 __8520194	__8520184 __8520199	__8520542.XX __8520554.XX	__8520294 __8520330	__8520306 __8520342	__8520318 __8520354	__8520602.XX __8520614.XX	25
182-4TC 213-5TC	__8520025 __8520046	__8520032 __8520053	__8520039 __8520060	__8520543.XX __8520555.XX	__8520295 __8520331	__8520307 __8520343	__8520319 __8520355	__8520603.XX __8520615.XX	30
143-5TC 182-4TC 213-5TC	__8520143 __8520026 __8520047	__8520155 __8520033 __8520054	__8520167 __8520040 __8520061	__8520532.XX __8520544.XX __8520556.XX	__8520260 __8520296 __8520332	__8520272 __8520308 __8520344	__8520284 __8520320 __8520356	__8520592.XX __8520604.XX __8520616.XX	40
143-5TC 182-4TC	__8520144 __8520027	__8520156 __8520034	__8520168 __8520041	__8520533.XX __8520545.XX	__8520261 __8520297	__8520273 __8520309	__8520285 __8520321	__8520593.XX __8520605.XX	50
143-5TC 182-4TC	__8520145 __8520028	__8520157 __8520035	__8520169 __8520042	__8520534.XX __8520546.XX	__8520262 __8520298	__8520274 __8520310	__8520286 __8520322	__8520594.XX __8520606.XX	60
143-5TC 182-4TC	__8520146 __8520175	__8520158 __8520180	__8520170 __8520185	__8520535.XX __8520547.XX	__8520263 __8520299	__8520275 __8520311	__8520287 __8520323	__8520595.XX __8520607.XX	80
143-5TC	__8520147	__8520159	__8520171	__8520536.XX	__8520264	__8520276	__8520288	__8520596.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	2”	2-3/16”	2-1/4”	2-7/16”	2-1/2”	2-11/16”	2-15/16”	3”	3-3/16”	3-7/16”
Decimal Size	2.000	2.188	2.250	2.438	2.500	2.688	2.938	3.000	3.188	3.438
Output Bore Code	32	35	36	39	40	43	47	48	51	55

Maximum Rating Tables

Size 860 • GR & EL Series

CAST IRON GR SERIES ALUMINUM EL SERIES

Size 860

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.*
									
5	2500	500	39.83	38.29	4827	__8600085	__8600090	__8600095	__8600501.XX
	1750	350	35.10	33.70	6068				
	1170	234	29.94	28.69	7726				
	100	20	6.203	5.581	17587				
7.5	2500	333	34.20	32.60	6163	*__8600086*	*__8600091*	*__8600096*	*__8600502.XX*
	1750	233	29.98	28.52	7704				
	1170	156	25.41	24.11	9740				
	100	13	5.018	4.371	20662				
10	2500	250	28.53	26.90	6782	__8600001	__8600008	__8600015	__8600503.XX
	1750	175	24.99	23.51	8467				
	1170	117	21.17	19.84	10687				
	100	10	4.198	3.542	22324				
15	2500	166	21.95	20.17	7628	__8600002	__8600009	__8600016	__8600504.XX
	1750	116	19.23	17.61	9515				
	1170	78	16.30	14.85	11996				
	100	6.7	3.337	2.623	24797				
20	2500	125	17.93	16.11	8123	__8600003	__8600010	__8600017	__8600505.XX
	1750	87	15.71	14.06	10127				
	1170	58	13.32	11.84	12758				
	100	5.0	2.805	2.078	26194				
25	2500	100	14.89	13.04	8219	__8600087	__8600092	__8600097	__8600506.XX
	1750	70	13.06	11.378	10245				
	1170	46	11.094	9.582	12903				
	100	4.0	2.418	1.678	26436				
30	2500	83	12.73	10.87	8222	__8600004	__8600011	__8600018	__8600507.XX
	1750	58	11.177	9.486	10249				
	1170	39	9.507	7.989	12911				
	100	3.3	2.143	1.400	26480				
40	2500	62	9.922	8.119	8187	__8600005	__8600012	__8600019	__8600508.XX
	1750	43	8.722	7.083	10203				
	1170	29	7.433	5.963	12848				
	100	2.5	1.761	1.042	26260				
50	2500	50	8.226	6.417	8088	__8600006	__8600013	__8600020	__8600509.XX
	1750	35	7.242	5.597	10079				
	1170	23	6.188	4.712	12691				
	100	2.0	1.544	0.823	25925				
60	2500	41	6.977	5.202	7869	__8600007	__8600014	__8600021	__8600510.XX
	1750	29	6.152	4.539	9808				
	1170	19	5.269	3.822	12352				
	100	1.7	1.376	0.669	25283				
80	2500	31	4.130	2.939	5962	__8600088	__8600093	__8600098	__8600511.XX
	1750	21	3.702	2.522	7264				
	1170	14	3.315	2.122	9142				
	100	1.3	0.950	0.382	19249				
100	2500	25	2.849	1.905	4802	__8600089	__8600094	__8600099	__8600512.XX
	1750	17	2.571	1.635	5886				
	1170	11	2.323	1.376	7408				
	100	1.0	0.686	0.244	15389				

How To Build a Part Number For Size GR860, EL860

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, EL)
3. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output

GR-B860-5-L

GR8600085

Maximum Rating Tables

Size 860 • GR & EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
254-6TC	__8600130	__8600135	__8600140	__8600537.XX	__8600289	__8600301	__8600313	__8600597.XX	5
254-6TC	__8600131	__8600136	__8600141	__8600538.XX	__8600290	__8600302	__8600314	__8600598.XX	7.5
213-5TC 254-6TC	__8600043 __8600064	__8600050 __8600071	__8600057 __8600078	__8600527.XX __8600539.XX	__8600255 __8600291	__8600267 __8600303	__8600279 __8600315	__8600587.XX __8600599.XX	10
213-5TC 254-6TC	__8600044 __8600065	__8600051 __8600072	__8600058 __8600079	__8600528.XX __8600540.XX	__8600256 __8600292	__8600268 __8600304	__8600280 __8600316	__8600588.XX __8600600.XX	15
182-4TC 213-5TC	__8600024 __8600045	__8600031 __8600052	__8600038 __8600059	__8600517.XX __8600529.XX	__8600221 __8600257	__8600233 __8600269	__8600245 __8600281	__8600577.XX __8600589.XX	20
182-4TC 213-5TC	__8600102 __8600117	__8600107 __8600122	__8600112 __8600127	__8600518.XX __8600530.XX	__8600222 __8600258	__8600234 __8600270	__8600246 __8600282	__8600578.XX __8600590.XX	25
182-4TC 213-5TC	__8600025 __8600046	__8600032 __8600053	__8600039 __8600060	__8600519.XX __8600531.XX	__8600223 __8600259	__8600235 __8600271	__8600247 __8600283	__8600579.XX __8600591.XX	30
182-4TC 213-5TC	__8600026 __8600047	__8600033 __8600054	__8600040 __8600061	__8600520.XX __8600532.XX	__8600224 __8600260	__8600236 __8600272	__8600248 __8600284	__8600580.XX __8600592.XX	40
182-4TC	__8600027	__8600034	__8600041	__8600521.XX	__8600225	__8600237	__8600249	__8600581.XX	50
143-5TC 182-4TC	__8600028	__8600035	__8600042	__8600522.XX	__8600190 __8600226	__8600202 __8600238	__8600214 __8600250	__8600570.XX __8600582.XX	60
143-5TC 182-4TC	__8600103	__8600108	__8600113	__8600523.XX	__8600191 __8600227	__8600203 __8600239	__8600215 __8600251	__8600571.XX __8600583.XX	80
143-5TC 182-4TC	__8600104	__8600109	__8600114	__8600524.XX	__8600192 __8600228	__8600204 __8600240	__8600216 __8600252	__8600572.XX __8600584.XX	100

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	2”	2-3/16”	2-1/4”	2-7/16”	2-1/2”	2-11/16”	2-15/16”	3”	3-3/16”	3-7/16”
Decimal Size	2.000	2.188	2.250	2.438	2.500	2.688	2.938	3.000	3.188	3.438
Output Bore Code	32	35	36	39	40	43	47	48	51	55

Maximum Rating Tables

Size 870, 880, 8100 • GR Series

CAST IRON GR SERIES

Size 870, 880, 8100

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Input HP	Output HP	Output Torque (lb-in)	Input HP	Output HP	Output Torque (lb-in)
	1750	350	51.1	49.1	9062	66.8	64.3	11866	104.6	100.9	18619
5	1170	234	43.3	41.3	11404	56.6	54.1	14932	88.5	84.9	23431
(5.13 actual)	100	20	9.2	8.18	26416	13.9	12.4	36447	22.1	19.8	63935
	1750	233	41.5	39.6	10572	54.3	52.0	13867	84.4	81.1	21413
7.5	1170	156	35.2	33.3	13304	46.0	43.8	17451	71.4	68.2	26947
(7.33 actual)	100	13	6.97	6.09	28388	9.72	8.54	39793	16.5	14.6	67727
	1750	175	36.16	34.28	12033	43.3	41.1	14447	67.1	64.0	22466
10	1170	117	30.72	28.8	15143	36.7	34.6	18181	56.8	53.8	28273
(9.75 actual)	100	10	6.22	5.32	32661	7.96	6.83	41958	13.6	11.8	72712
	1750	116	25.9	24.2	12827	33.8	31.7	16766	52.7	49.8	26308
15	1170	78	22.1	20.4	16143	28.7	26.7	21099	44.8	41.9	33107
(14.67 actual)	100	607	4.16	3.44	31744	5.75	6.82	44195	9.95	8.37	77295
	1750	887	19.9	18.2	13431	25.9	23.8	17575	40.4	37.3	27597
20	1170	58	17.0	15.3	16903	22.1	20.0	22118	34.4	31.4	34730
(20.50 actual)	100	5.0	3.35	2.60	33520	4.63	3.62	46792	8.01	6.35	82011
	1750	70	16.9	15.2	13462	21.9	19.9	17578	34.2	31.3	27618
25	1170	46	14.0	12.4	16417	18.7	16.7	22122	29.2	26.3	34756
(24.50 actual)	100	4.0	2.82	2.12	32790	3.86	2.94	45421	6.70	5.18	79871
	1750	58	14.1	12.5	13356	17.9	16.1	17166	28.5	25.8	27433
30	1170	39	11.9	10.3	16491	14.9	13.2	21058	24.4	21.7	34523
(29.50 actual)	100	3.3	2.30	1.68	31233	2.94	2.21	41088	5.49	4.12	76598
	1750	43	10.8	9.31	13399	14.0	12.1	17507	21.8	19.0	27471
40	1170	29	9.18	7.62	16416	12.1	10.2	22032	18.8	16.0	34571
	100	2.5	1.94	1.28	32194	2.64	1.77	44687	4.54	3.11	78246
	1750	35	8.74	7.23	13011	11.3	9.46	17028	17.4	14.8	26703
50	1170	23	7.43	5.93	15966	9.84	7.96	21429	15.1	12.4	33605
	100	2.0	1.62	0.99	31109	2.22	1.38	43469	3.79	2.41	75935
	1750	29	7.00	5.66	12220	9.05	7.40	15982	13.9	11.6	25107
60	1170	19	6.03	4.69	15143	7.63	6.01	19430	12.1	9.78	31597
	100	1.7	1.27	0.74	28131	1.75	1.04	39244	3.01	1.83	69119
	1750	21	5.74	4.48	11300	7.37	5.85	14743	11.4	9.22	23235
70	1170	14	4.96	3.71	13979	6.24	4.76	17921	9.98	7.76	29240
	100	1.3	1.09	0.60	26222	1.48	0.82	36215	2.59	1.46	64584

Specify model number when ordering reducer size 870, 880 or 8100. Refer to page 19 for how to build a model number.

Available bore codes - Size 870

Fraction Size	2-7/16"	2-1/2"	2-11/16"	2-15/16"	3"	3-7/16"	3-15/16"
Decimal Size	2.438	2.500	2.688	2.938	3.000	3.438	3.938
Output Bore Code	39	40	43	47	48	55	63

Available bore codes - Size 880

Fraction Size	3-7/16"	3-15/16"	4-3/16"	4-7/16"
Decimal Size	3.438	3.938	4.188	4.438
Output Bore Code	55	63	67	71

Available bore codes - Size 8100

Fraction Size	3-7/16"	3-15/16"	4-7/16"	4-15/16"	5-7/16"
Decimal Size	3.438	3.938	4.438	4.938	5.438
Output Bore Code	55	63	71	79	87

GR Series Weights

GR SERIES • SINGLE REDUCTION • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
Solid Output Shaft														
BMQ	17	21	24	29	45	56	68	75	146	247	331	---	---	---
BM	22	23	26	30	47	57	69	76	154	254	336	429	612	---
B	17	18	20	25	40	52	64	71	136	232	321	399	582	904
TMQ & UMQ	19	24	27	33	49	62	74	84	160	267	362	---	---	---
TM & UM	24	26	29	34	51	63	75	85	168	274	367	470	660	---
T & U	19	21	23	29	44	58	70	80	150	252	352	440	630	980
RMQ	---	28	31	38	54	68	83	106	170	262	---	---	---	---
RM	---	30	33	39	56	69	84	107	178	269	---	---	---	---
R	---	25	27	34	49	64	79	102	160	247	---	---	---	---
JMQ	18	22	26	32	48	61	74	81	156	262	---	---	---	---
JM	23	24	28	33	50	62	75	82	164	269	---	---	---	---
J	18	19	22	28	43	57	70	77	146	247	---	---	---	---
VHMQ & VLMQ	19	24	27	36	52	65	78	88	166	272	367	---	---	---
VHM & VLM	24	26	29	37	54	66	79	89	174	279	372	500	690	---
VH & VL	19	21	23	32	47	61	74	84	156	257	357	470	660	1060
FMQ	18	22	25	32	48	60	78	85	161	277	369	---	---	---
FM	23	24	27	33	50	61	79	86	169	284	374	489	630	
F	18	19	21	28	43	56	74	81	151	262	359	459	600	925
BFMQ	19	---	26	32	49	62	---	---	---	---	---	---	---	---
BFM	24	---	28	33	51	63	---	---	---	---	---	---	---	---
BF	19	---	22	28	44	58	---	---	---	---	---	---	---	---
CMQ	19	---	26	---	51	---	---	---	---	---	---	---	---	---
CM	24	---	28	---	53	---	---	---	---	---	---	---	---	---
C	19	---	22	---	48	---	---	---	---	---	---	---	---	---
FEMQ	---	---	---	---	---	---	78	85	176	278	373	---	---	---
FEM	---	---	---	---	---	---	79	86	184	285	378	590	810	
FE	---	---	---	---	---	---	74	71	166	263	363	560	780	1180
Hollow Output Shaft														
HMQ	18	21	25	30	47	55	69	77	149	247	331	---	---	---
HM	22	23	27	31	49	56	70	78	157	254	336	429	612	
H	18	19	21	26	42	51	65	73	139	232	321	399	582	904
FHMQ	19	22	27	33	50	59	79	87	164	277	369	---	---	---
FHM	23	24	29	34	51	60	80	88	172	284	374	444	630	---
FH	19	20	23	29	45	55	75	83	154	262	359	414	600	925
BFHMQ	20	---	27	33	51	61	---	---	---	---	---	---	---	---
BFHM	24	---	29	34	53	62	---	---	---	---	---	---	---	---
BFH	20	---	23	29	46	57	---	---	---	---	---	---	---	---

Δ Weights include oil. 870, 880, 8100 shipped without oil.

GR SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
T/U-Base	2	3	3	4	4	6	6	9	14	20	31	41	48	76
J-Base	1	1	2	3	3	5	6	6	10	15	---	---	---	---
VL/VH-Base	2	3	3	7	7	9	10	13	20	25	36	**	**	**
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30	38	**	**	**
BF-Flange (Steel)	2	---	2	3	4	6	---	---	---	---	---	---	---	---
R-Riser Block	---	7	7	9	9	12	15	31	24	15	---	---	---	---
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8	8	---	---	---
Coupling Input C-Flange Kits														
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16	---	---	---	---
180TC-210TC	---	---	---	---	11	11	11	11	16	18	22	30	30	---
250TC	---	---	---	---	---	---	---	28	30	30	32	34	36	---

** This accessory must be assembled at the Factory. It is not available as a kit for field installation.

NH Series Weights

CAST IRON NH SERIES

NH SERIES • SINGLE REDUCTION • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
Solid Output Shaft										
BMQ	14	18	20	25	38	48	58	64	124	210
BM	19	20	22	26	40	48	59	65	131	216
B	14	15	17	21	34	44	54	60	116	197
TMQ & UMQ	16	21	23	29	42	54	64	73	138	230
TM & UM	21	23	25	30	44	54	65	74	145	236
T & U	16	18	20	25	38	50	60	69	130	217
JMQ	15	19	22	28	41	53	64	70	134	225
JM	20	21	24	29	43	53	65	71	141	231
J	15	16	19	24	37	49	60	66	126	212
VHMQ & VLMQ	16	21	23	32	45	57	68	77	144	235
VHM & VLM	21	23	25	33	47	57	69	78	151	241
VH & VL	16	18	20	28	41	53	64	73	136	222
FMQ	15	19	22	28	41	52	68	74	139	240
FM	20	21	24	29	43	52	69	75	146	246
F	15	16	19	24	37	48	64	70	131	227
FEMQ	---	---	---	---	---	---	66	72	150	236
FEM	---	---	---	---	---	---	67	73	156	242
FE	---	---	---	---	---	---	63	60	141	224
BLMQ	---	---	20	---	38	---	---	---	---	---
BLM	---	---	22	---	40	---	---	---	---	---
BL	---	---	17	---	34	---	---	---	---	---
Hollow Output Shaft										
HMQ	15	18	21	26	40	47	59	65	127	210
HM	19	20	23	26	42	48	60	66	133	216
H	15	16	18	22	36	43	55	62	118	197
FHMQ	16	19	23	29	43	51	69	75	142	240
FHM	20	21	25	29	45	52	70	76	148	246
FH	16	17	20	25	39	47	65	72	133	227

Δ Weights include oil.

NH SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
T/U-Base	2	3	3	4	4	6	6	9	14	20
J-Base	1	1	2	3	3	5	6	6	10	15
VL/VH-Base	2	3	3	7	7	9	10	13	20	25
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16
180TC-210TC	---	---	---	---	11	11	11	11	16	18
250TC	---	---	---	---	---	---	---	28	30	30

EL SERIES • SINGLE REDUCTION • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
Solid Output Shaft										
BMQ	11	16	19	30	37	45	50	96	163	218
BM	15	17	20	31	38	46	50	102	168	222
B	11	13	17	26	34	42	47	90	153	212
TMQ & UMQ	12	18	22	33	41	51	58	103	171	228
TM & UM	16	19	23	34	42	52	58	109	176	232
T & U	12	15	20	29	38	48	55	97	161	222
JMQ	12	18	22	33	41	50	55	102	171	228
JM	16	19	23	34	42	51	55	108	176	232
J	12	15	20	29	38	47	52	96	161	222
VLMQ	13	19	22	33	41	50	55	102	171	228
VLM	17	20	23	34	42	51	55	108	176	232
VL	13	16	20	29	38	47	52	96	161	222
FMQ	---	18	22	33	40	51	57	104	171	239
FM	---	19	23	34	41	52	57	110	176	243
F	---	15	20	29	37	48	54	98	161	233
Hollow Output Shaft										
HMQ	12	17	20	31	36	46	51	98	163	218
HM	15	18	20	32	37	46	51	104	168	222
H	12	14	17	28	34	43	48	92	153	212
FHMQ	---	19	23	34	39	52	58	106	171	239
FHM	---	20	23	35	40	52	58	112	176	243
FH	---	16	20	31	37	49	55	100	161	233

Δ Weights include oil.

EL SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

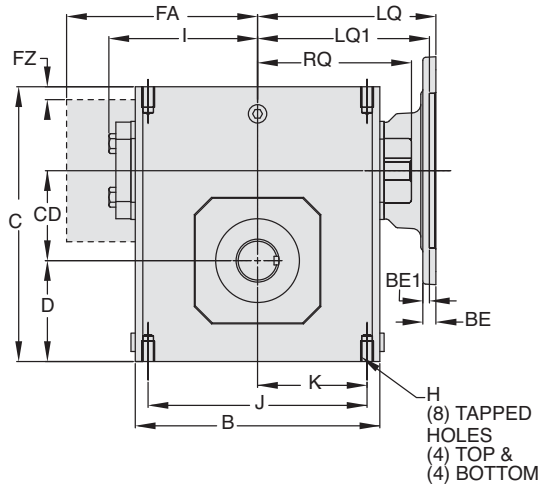
Accessory	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
ABC-Base	1	2	3	3	4	6	8	7	8	10
T/U-Base	1	2	3	3	4	6	8	7	8	10
J-Base	1	2	3	3	4	5	5	6	8	10
VL Base	2	3	3	3	4	5	5	6	8	10
FR & F-Flange	---	2	3	3	3	6	7	8	8	21
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	8	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	3	3	3	4	4	5	5	7	7	---
180TC-210TC	---	---	---	5	5	5	5	8	8	8
250TC	---	---	---	---	---	---	8	8	8	8

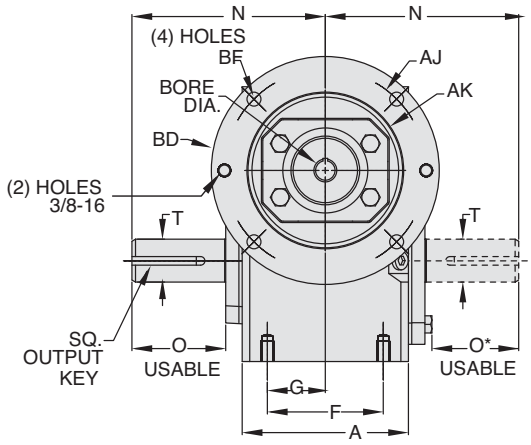
GR Series Dimensions

Styles: BMQ, BM, B

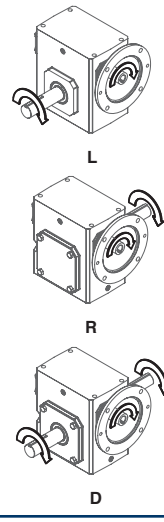
CAST IRON GR SERIES

Style BMQ

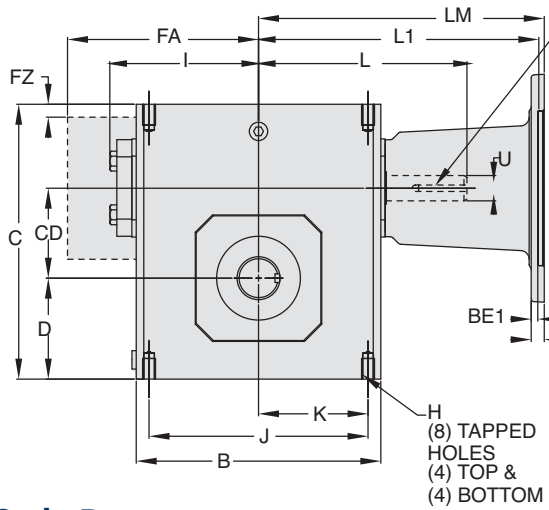


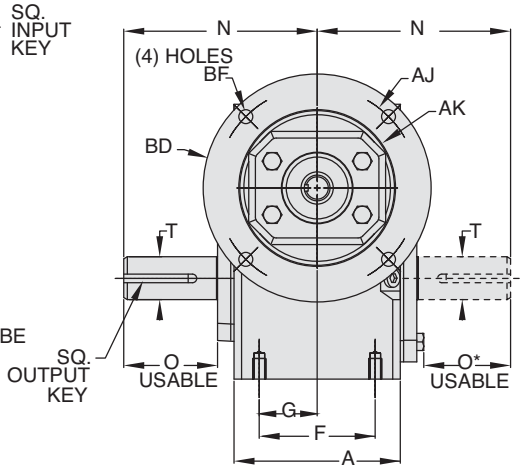


ASSEMBLIES

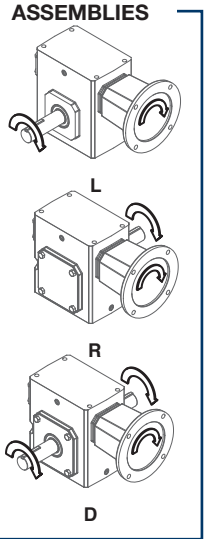


Style BM

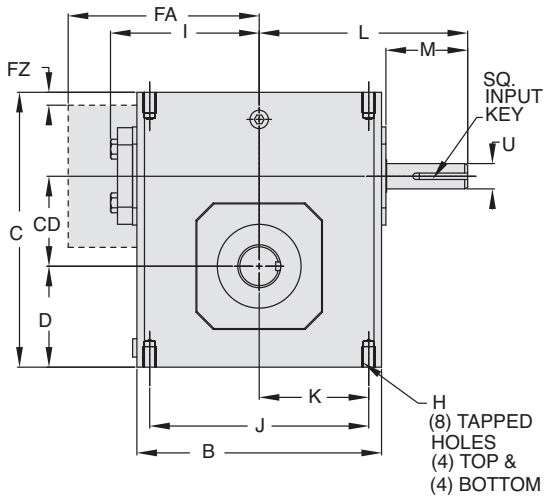


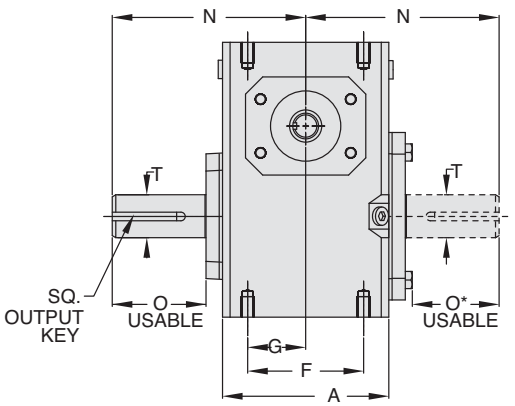


ASSEMBLIES

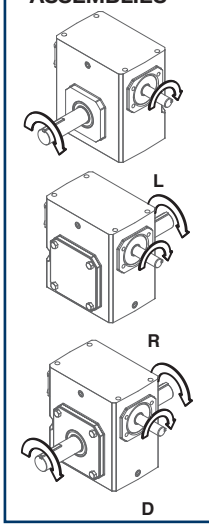


Style B





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

GR Series Dimensions

Styles: BMQ, BM, B

STYLE BMQ, BM, B DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	FA ▼	FZ ▼	G	H Tap Size	H Depth	I	J	K	L	M	N	O	O*	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❋	Output Key
GR813	2.82	3.80	4.66	1.72	1.33	2.00	N/A	N/A	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	3.44	4.88	5.38	1.91	1.54	2.75	N/A	N/A	1.38	5/16-18 UNC	.63	3.14	4.19	2.09	4.35	1.76	4.31	2.11	1.90	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	3.56	5.06	5.75	2.06	1.75	2.75	N/A	N/A	1.38	5/16-18 UNC	.63	3.24	4.19	2.09	4.45	1.76	4.31	2.05	1.84	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	3.81	5.80	6.38	2.28	2.06	▲	N/A	N/A	1.44	5/16-18 UNC	.63	3.61	▲	2.50	4.82	1.76	4.68	2.29	2.08	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	4.06	6.12	6.94	2.50	2.38	2.88	N/A	N/A	1.44	3/8-16 UNC	.69	3.77	5.00	2.50	5.51	2.38	5.14	2.66	2.44	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	4.84	7.12	8.00	2.94	2.63	3.38	N/A	N/A	1.69	3/8-16 UNC	.69	4.34	6.38	3.19	6.07	2.38	5.63	2.73	2.52	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	5.25	8.12	8.88	3.25	3.00	4.00	N/A	N/A	2.00	7/16-14 UNC	.88	4.84	7.00	3.50	6.57	2.38	6.75	3.60	3.36	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	5.75	8.50	9.38	3.50	3.25	4.00	N/A	N/A	2.00	7/16-14 UNC	.88	5.02	7.50	3.75	6.76	2.38	7.06	3.66	3.42	▲	.875	3/16 X 1.63	▲
GR842	6.13	10.25	11.38	4.44	4.25	5.00	N/A	N/A	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	9.57	3.47	8.12	4.50	4.21	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	7.19	13.00	14.00	5.12	5.25	5.81	N/A	N/A	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	10.88	3.38	9.06	4.78	4.53	2.000	1.250	1/4 X 3.00	1/2 X 3.50
GR860	8.13	14.25	16.50	6.50	6.00	6.38	11.13	0.33	3.19	5/8-11 UNC	1.00	N/A	12.75	6.38	11.78	3.41	10.00	4.65	4.65	2.500	1.500	3/8 X 3.00	5/8 X 4.00
GR870	7.63	14.88	18.91	7.59	7.00	5.50	11.37	0.35	2.75	1-8 UNC	1.56	N/A	12.50	6.25	11.50	2.97	11.76	5.65	5.65	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	8.63	17.00	20.96	8.86	8.00	6.50	12.52	0.57	3.25	1-8 UNC	1.66	N/A	14.25	7.13	12.50	2.84	12.25	5.98	5.98	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	9.53	20.88	25.47	10.36	10.00	6.88	14.69	0.51	3.44	1-1/4 -7 UNC	2.04	N/A	17.75	8.88	15.50	3.76	14.75	6.76	6.76	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✓		GRG
		(F)2.88" x (J)5.00"				✓	GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"					✓	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63			✓	GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	6.06	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR821✖	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style BM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style B and BM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

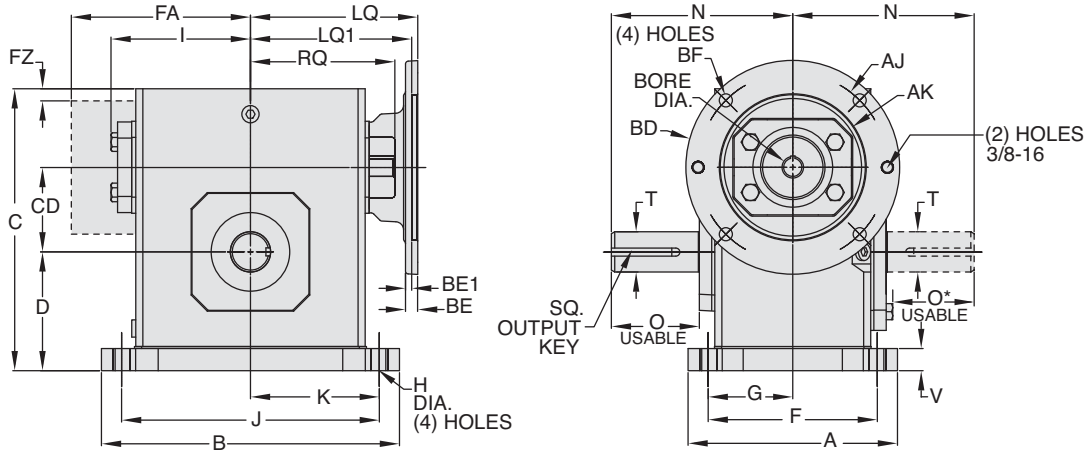
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

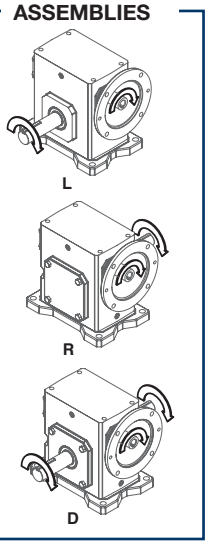
Styles: TMQ, TM, T

CAST IRON GR SERIES

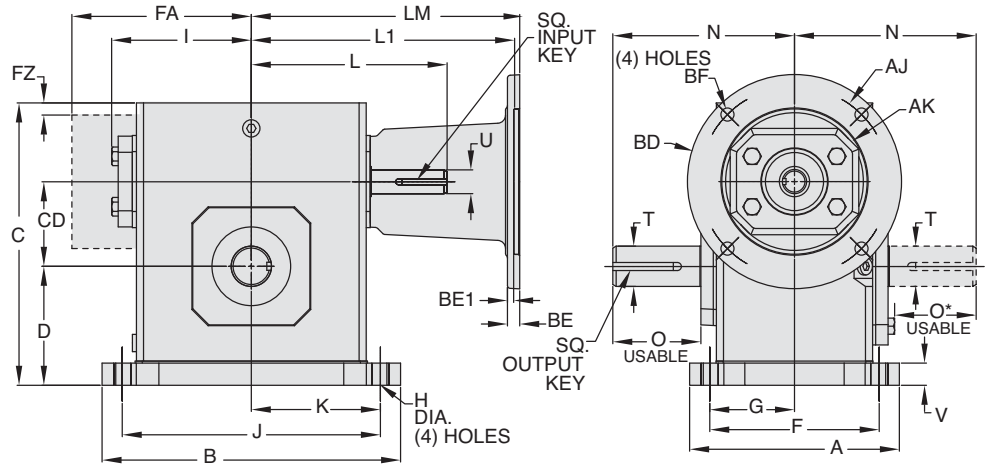
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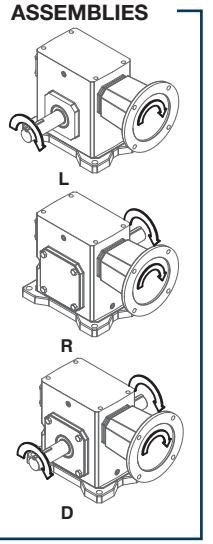
ASSEMBLIES



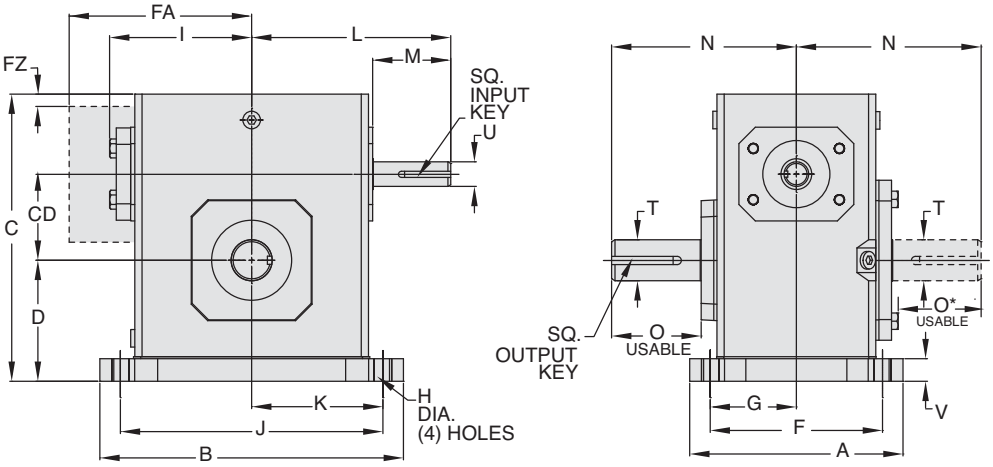
Style TM



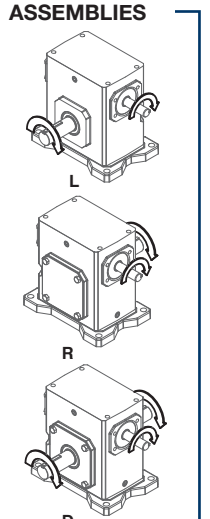
ASSEMBLIES



Style T



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE TMQ, TM, T DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	FA ▼	FZ ▼	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❋	Output Key
GR813	5.38	5.37	5.19	2.25	1.33	3.31	N/A	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	0.53	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	5.56	6.50	5.97	2.50	1.54	4.31	N/A	N/A	2.16	.41	3.14	5.25	2.63	4.35	1.76	4.31	2.11	1.90	0.59	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	5.75	6.99	6.44	2.75	1.75	4.50	N/A	N/A	2.25	.41	3.24	5.75	2.88	4.45	1.76	4.31	2.05	1.84	0.69	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	6.00	7.69	7.09	3.00	2.06	4.69	N/A	N/A	2.34	.47	3.61	6.38	3.19	4.82	1.76	4.68	2.29	2.08	0.72	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	6.19	8.37	7.69	3.25	2.38	4.88	N/A	N/A	2.44	.49	3.77	7.06	3.53	5.51	2.38	5.14	2.66	2.44	0.75	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	6.50	9.25	8.75	3.69	2.63	5.25	N/A	N/A	2.63	.53	4.34	8.00	4.00	6.07	2.38	5.63	2.73	2.52	0.75	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	7.50	10.00	9.63	4.00	3.00	5.88	N/A	N/A	2.94	.53	4.84	8.44	4.22	6.57	2.38	6.75	3.60	3.36	0.75	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	7.75	11.12	10.25	4.38	3.25	6.13	N/A	N/A	3.06	.53	5.02	9.50	4.75	6.76	2.38	7.06	3.66	3.42	0.81	▲	.875	3/16 X 1.63	3/8 X 2.25
GR842	9.75	13.24	12.38	5.44	4.25	7.63	N/A	N/A	3.81	.66	6.10	11.12	5.56	9.57	3.47	8.12	4.50	4.21	1.00	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	10.50	16.24	15.13	6.25	5.25	8.38	N/A	N/A	4.19	.78	7.50	14.12	7.06	10.88	3.38	9.06	4.78	4.53	1.13	2.000	1.250	1/4 X 3.00	1/2 X 3.50
GR860	12.00	18.99	17.75	7.75	6.00	9.50	11.13	0.33	4.75	.91	N/A	16.49	8.25	11.78	3.41	10.00	4.65	4.65	1.25	2.500	1.500	3/8 X 3.00	5/8 X 4.00
GR870	13.38	15.38	20.33	9.00	7.00	11.25	11.37	0.35	5.63	1.13	N/A	13.00	6.50	11.50	2.97	11.76	5.65	5.65	1.42	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	13.50	17.37	22.61	10.50	8.00	11.50	12.52	0.57	5.75	1.13	N/A	14.75	7.38	12.50	2.84	12.25	5.98	5.98	1.65	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	16.88	21.14	27.12	12.00	10.00	14.00	14.69	0.51	7.00	1.44	N/A	17.00	8.50	15.50	3.76	14.75	6.76	6.76	1.65	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical◊	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"					✓	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63			✓	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR821✖	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style TM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style T and TM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

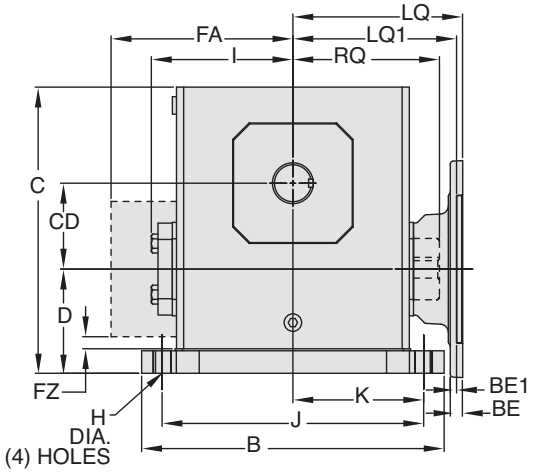
WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

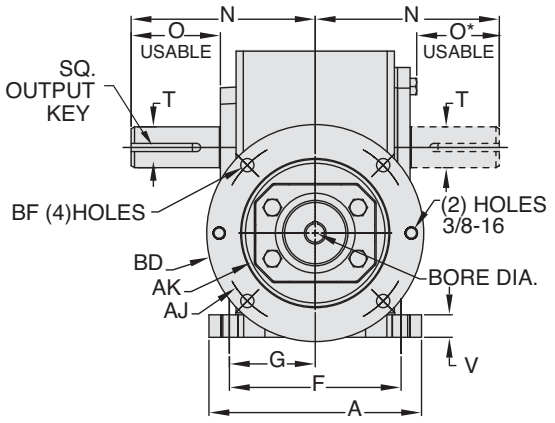
GR Series Dimensions

Styles: UMQ, UM, U

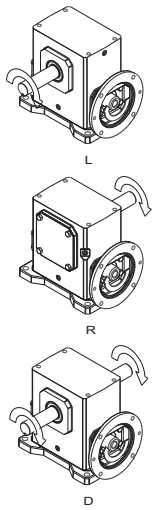
CAST IRON GR SERIES

Style UMQ

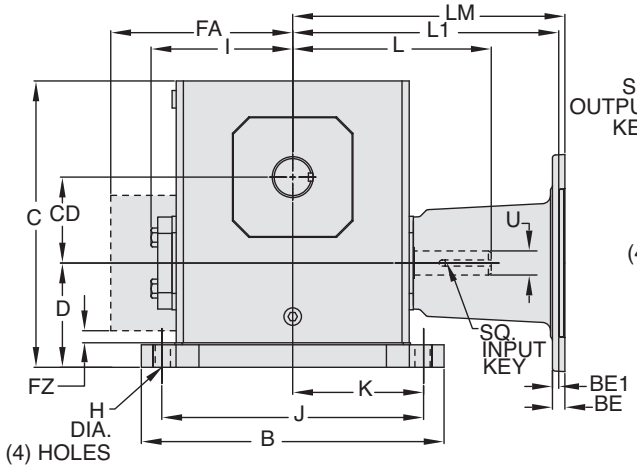


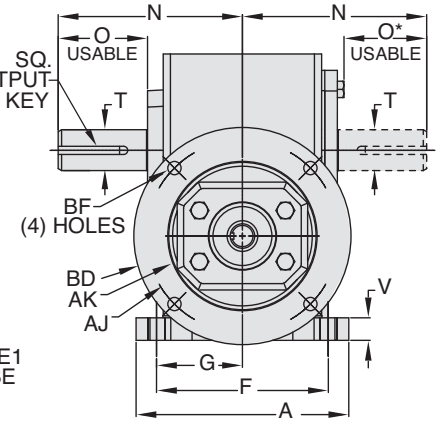


ASSEMBLIES

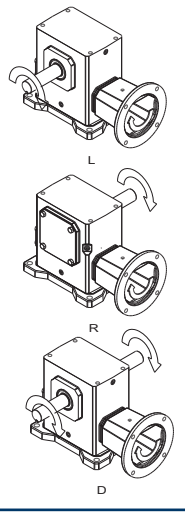


Style UM

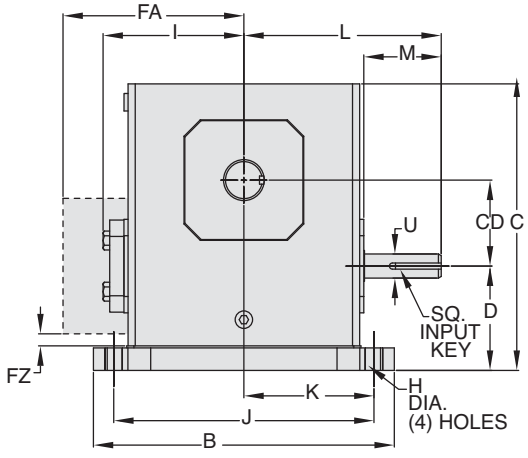


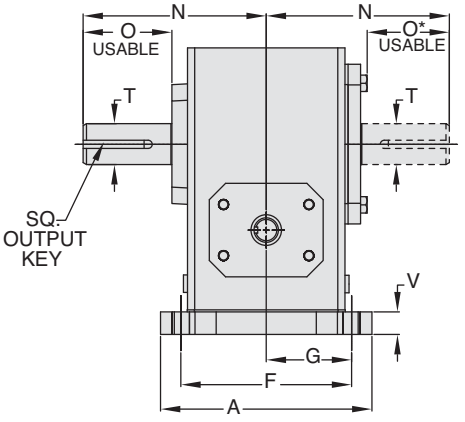


ASSEMBLIES

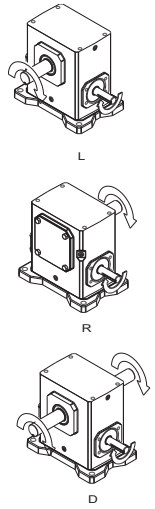


Style U





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE UMQ, UM, U DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	FA▼	FZ▼	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❋	Output Key
GR813	4.24	5.37	5.19	2.14	1.33	3.31	N/A	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	0.53	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	5.56	6.50	5.97	2.52	1.54	4.31	N/A	N/A	2.16	.41	3.14	5.25	2.63	4.35	1.76	4.31	2.11	1.90	0.59	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	5.75	6.99	6.44	2.63	1.75	4.50	N/A	N/A	2.25	.41	3.24	5.75	2.88	4.45	1.76	4.31	2.05	1.84	0.69	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	6.00	7.69	7.09	2.75	2.06	4.69	N/A	N/A	2.34	.47	3.61	6.38	3.19	4.82	1.76	4.68	2.29	2.08	0.72	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	6.19	8.37	7.69	2.81	2.38	4.88	N/A	N/A	2.44	.49	3.77	7.06	3.53	5.51	2.38	5.14	2.66	2.44	0.75	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	6.50	9.25	8.75	3.19	2.63	5.25	N/A	N/A	2.63	.53	4.34	8.00	4.00	6.07	2.38	5.63	2.73	2.52	0.75	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	7.50	10.00	9.63	3.38	3.00	5.88	N/A	N/A	2.94	.53	4.84	8.44	4.22	6.57	2.38	6.75	3.60	3.36	0.75	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	7.75	11.12	10.25	3.50	3.25	6.13	N/A	N/A	3.06	.53	5.02	9.50	4.75	6.76	2.38	7.06	3.66	3.42	0.81	▲	.875	3/16 X 1.63	3/8 X 2.25
GR842	9.75	13.24	12.38	3.69	4.25	7.63	N/A	N/A	3.81	.66	6.10	11.12	5.56	9.57	3.47	8.12	4.50	4.21	1.00	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	10.50	16.24	15.13	4.76	5.25	8.38	N/A	N/A	4.19	.78	7.50	14.12	7.06	10.88	3.38	9.06	4.78	4.53	1.13	2.000	1.250	1/4 X 3.00	1/2 X 3.50
GR860	12.00	18.99	17.75	5.25	6.00	9.50	11.13	0.33	4.75	.91	N/A	16.49	8.25	11.78	3.41	10.00	4.65	4.65	1.25	2.500	1.500	3/8 X 3.00	5/8 X 4.00
GR870	13.38	15.38	20.33	5.74	7.00	11.25	11.37	0.35	5.63	1.13	N/A	13.00	6.50	11.50	2.97	11.76	5.65	5.65	1.42	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	13.50	17.37	22.61	5.75	8.00	11.50	12.52	0.57	5.75	1.13	N/A	14.75	7.38	12.50	2.84	12.25	5.98	5.98	1.65	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	16.88	21.14	27.12	6.76	10.00	14.00	14.69	0.51	7.00	1.44	N/A	17.00	8.50	15.50	3.76	14.75	6.76	6.76	1.65	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"					✓	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63			✓	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style UM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style U and UM only.

▼Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

Note: Styles UMQ, UM and U are worm under mounting assemblies and not recommended due to increase potential for high speed shaft seal leakage and potential mounting interference. Motor flange may extend below base. Riser blocks are available upon request (see page 274). Contact Factory for selection assistance.

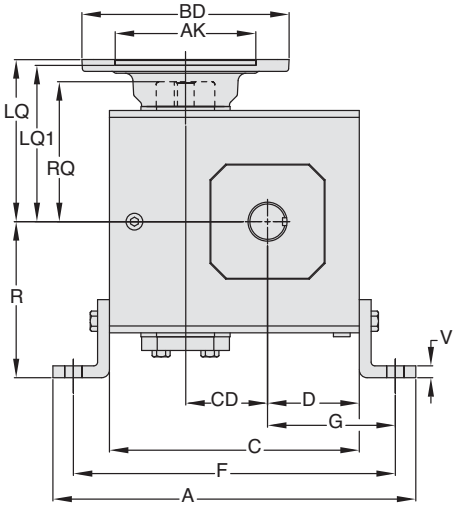
WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

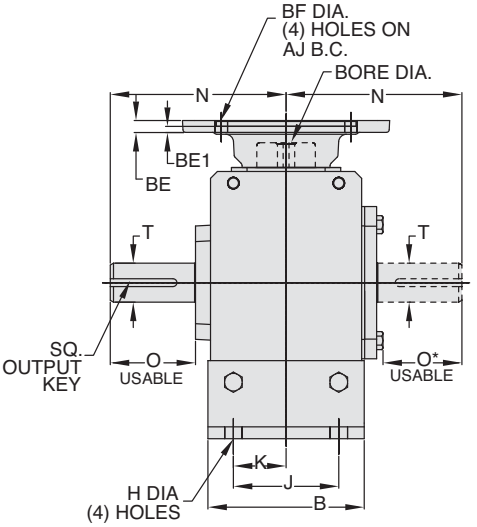
GR Series Dimensions

Styles: JMQ, JM, J

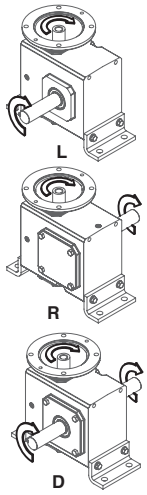
CAST IRON GR SERIES

Style JMQ

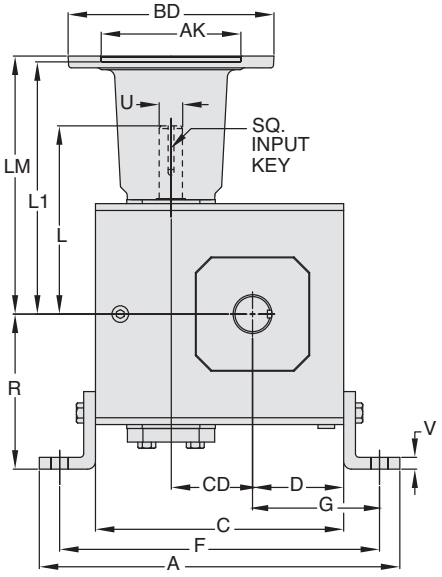


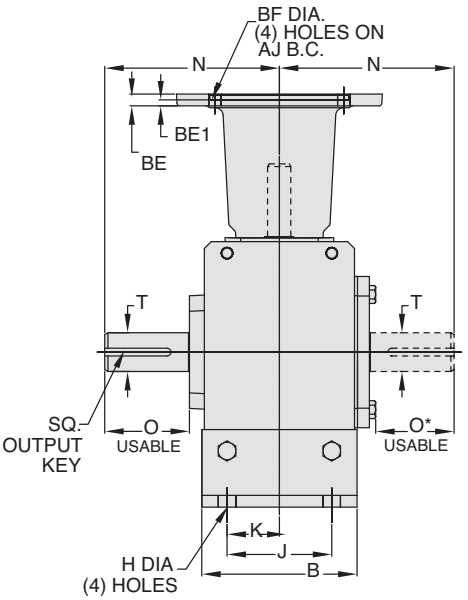


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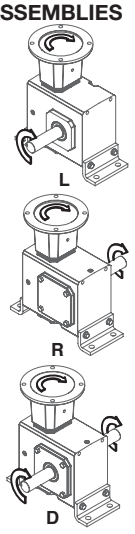


Style JM

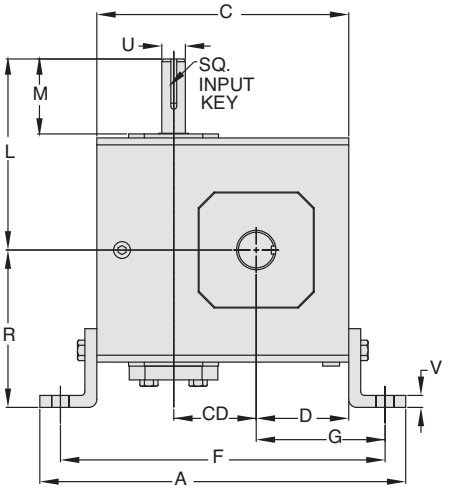


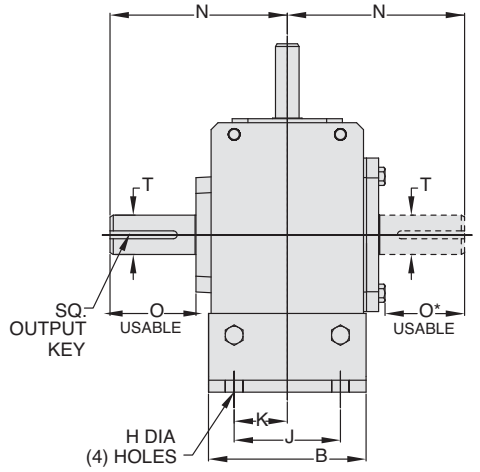


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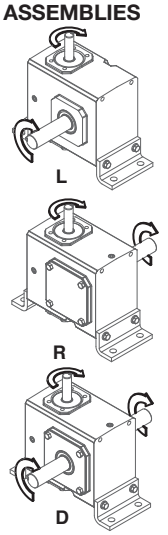


Style J





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE JMQ, JM, J DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❋	Output Key
GR813	7.42	2.75	4.66	1.72	1.33	6.42	2.60	.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	8.14	3.50	5.38	1.91	1.54	7.08	2.76	.44	2.75	1.38	4.35	1.76	4.31	2.11	1.90	3.50	0.25	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	8.51	3.50	5.75	2.06	1.75	7.45 - 7.63	3.00	.44 slot	2.50 - 2.75	1.25 - 1.38	4.45	1.76	4.31	2.05	1.84	3.50	0.25	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	9.76	4.00	6.38	2.28	2.06	8.63	3.40	.56 slot	2.63 - 2.75	1.31-1.38	4.82	1.76	4.68	2.29	2.08	4.01	0.38	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	10.31	4.00	6.94	2.50	2.38	9.19	3.63	.69	2.88	1.44	5.51	2.38	5.14	2.66	2.44	4.06	0.38	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	11.62	5.00	8.00	2.94	2.63	10.38	4.13	.56	3.38	1.69	6.07	2.38	5.63	2.73	2.52	5.00	0.38	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	12.64	6.00	8.88	3.25	3.00	11.38	4.50	.56	3.88	1.94	6.57	2.38	6.75	3.60	3.36	5.62	0.38	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	13.14	6.00	9.38	3.50	3.25	11.88	4.75	.56	3.88	1.94	6.76	2.38	7.06	3.66	3.42	5.63	0.38	▲	.875	3/16 X 1.63	3/8 X 2.25
GR842	16.38	7.00	11.38	4.44	4.25	14.88	6.19	.69	5.00	2.50	9.57	3.47	8.12	4.50	4.21	6.50	0.50	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	19.00	7.00	14.00	5.12	5.25	17.50	6.87	.69	5.81	2.91	10.88	3.38	9.06	4.78	4.53	7.75	0.50	2.000	1.250	1/4 X 3.00	1/2 X 3.50

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✓	✓	GRG GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"					✓	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63			✓	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09	4.56
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A
GR821✖	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style JM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style J and JM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

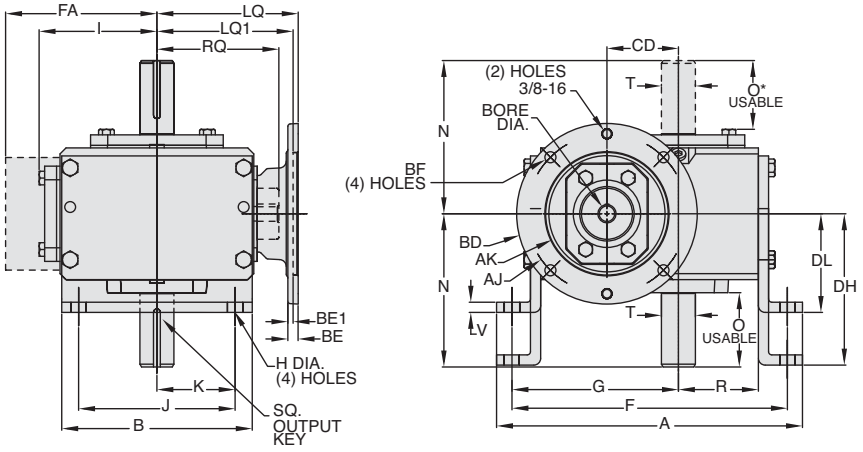
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

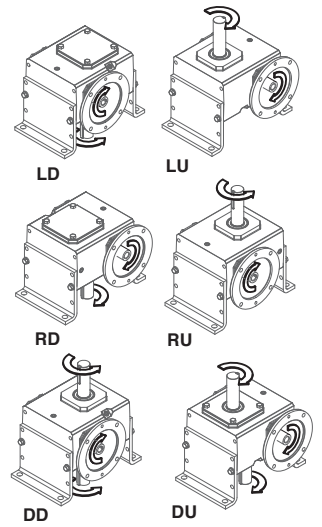
Styles: V_MQ, V_M, V_

CAST IRON GR SERIES

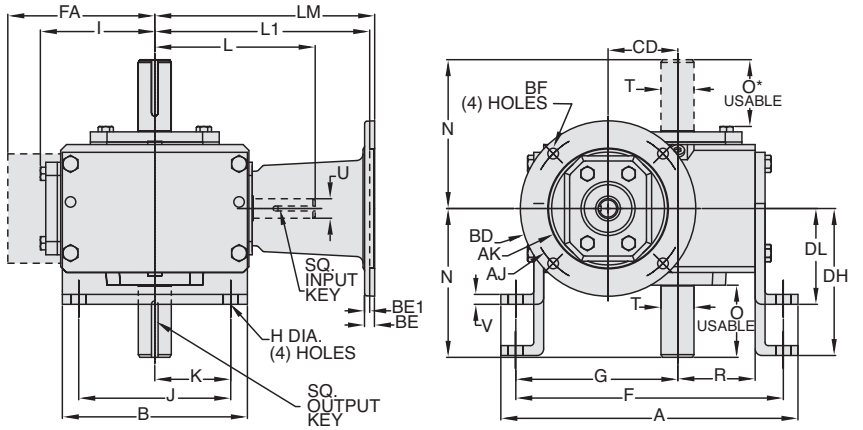
Style V(L or H)MQ



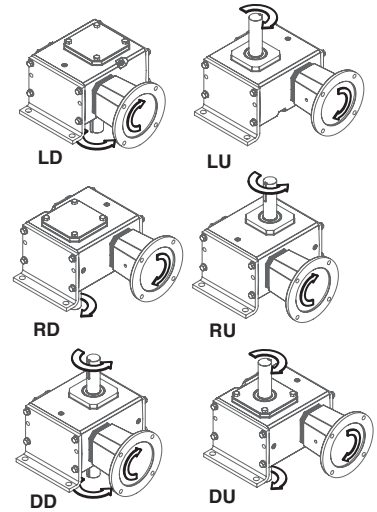
ASSEMBLIES



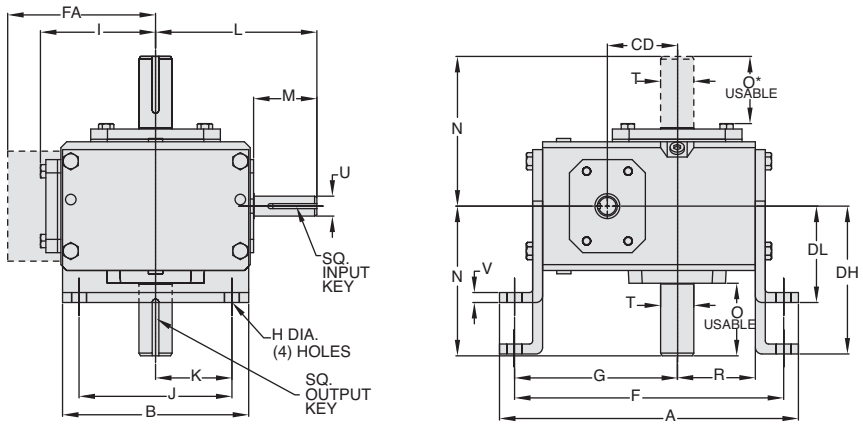
Style V(L or H)M



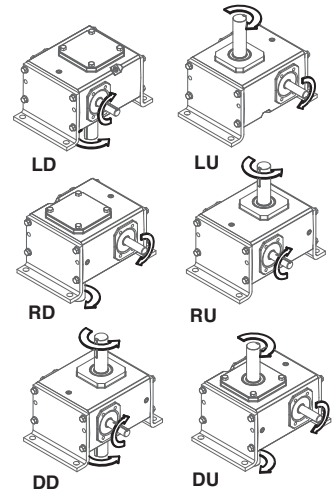
ASSEMBLIES



Style V(L or H)



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE V_MQ, V_M, V_ DIMENSIONS (Inches)

Size	A	B	CD	Model VLMQ DL	Model VHMQ DH	F	FA▼	FZ▼	G	H	I	J	K	L	M	N	O	O*	R	V	T MAX +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
GR813	7.26	4.00	1.33	2.63	3.56	6.50	N/A	N/A	3.86	0.38	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94	1.72	0.25	0.625	0.500	1/8 x 1.00	3/16 x 1.50
GR815	7.88	5.00	1.54	3.00	4.38	7.00	N/A	N/A	4.28	0.44	3.14	4.00	2.00	4.35	1.76	4.31	2.11	1.90	1.91	0.25	0.750	0.625	3/16 x 1.38	3/16 x 1.50
GR818	8.25	5.00	1.75	3.00	4.38	7.37	N/A	N/A	4.50	0.44	3.24	4.00	2.00	4.45	1.76	4.31	2.05	1.84	2.06	0.25	0.875	0.625	3/16 x 1.38	3/16 x 1.38
GR821	9.38	6.00	2.06	3.13	4.88	8.38	N/A	N/A	5.09	0.50	3.61	4.88	2.44	4.82	1.76	4.68	2.29	2.08	2.28	0.38	1.000	0.625	3/16 x 1.38	1/4 x 1.44
GR824	9.94	6.00	2.38	3.38	5.25	8.81	N/A	N/A	5.44	0.50	3.77	4.88	2.44	5.51	2.38	5.14	2.66	2.44	2.50	0.38	1.125	0.750	3/16 x 1.63	1/4 x 1.75
GR826	11.24	7.00	2.63	3.63	5.56	10.12	N/A	N/A	6.12	0.56	4.34	5.75	2.88	6.07	2.38	5.63	2.73	2.52	2.94	0.38	▲	0.750	3/16 x 1.63	1/4 x 1.75
GR830	12.50	8.00	3.00	3.94	5.88	11.13	N/A	N/A	6.75	0.56	4.84	6.00	3.00	6.57	2.38	6.75	3.60	3.36	3.25	0.38	1.250	0.875	3/16 x 1.63	1/4 x 1.75
GR832	13.00	8.50	3.25	4.69	6.25	11.88	N/A	N/A	7.13	0.56	5.02	6.13	3.06	6.76	2.38	7.06	3.66	3.42	3.50	0.38	▲	0.875	3/16 x 1.63	3/8 x 2.25
GR842	16.26	10.00	4.25	5.00	7.50	14.88	N/A	N/A	8.69	0.69	6.10	7.88	3.94	9.57	3.47	8.12	4.50	4.21	4.44	0.50	1.875	1.250	1/4 x 2.50	1/2 x 3.06
GR852	19.62	13.00	5.25	5.16	9.16	18.00	N/A	N/A	10.88	0.78	7.50	10.00	5.00	10.88	3.38	9.06	4.78	4.53	5.12	0.50	2.000	1.250	1/4 x 3.00	1/2 x 3.50
GR860	23.26	14.75	6.00	7.31	9.63	20.88	11.13	0.33	12.19	0.91	N/A	11.76	5.88	11.78	3.41	10.00	4.65	4.65	6.50	0.50	2.500	1.500	3/8 x 3.00	5/8 x 4.00
GR870	26.91	14.88	7.00	7.00	N/A	23.99	11.37	0.35	13.87	1.13	N/A	12.50	6.25	11.50	2.97	11.76	5.65	5.65	7.59	0.75	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	28.96	17.00	8.00	8.00	N/A	25.50	12.52	0.57	14.38	1.13	N/A	14.00	7.00	12.50	2.84	12.25	5.98	5.98	8.86	0.75	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	37.47	20.88	10.00	9.00	N/A	30.75	14.69	0.51	17.76	1.44	N/A	17.75	8.88	15.50	3.76	14.75	6.76	6.76	10.36	1.00	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"					✓	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63			✓	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A
GR821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	RQ D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A
GR821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	N/A
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style V_M with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style V_ and V_M only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

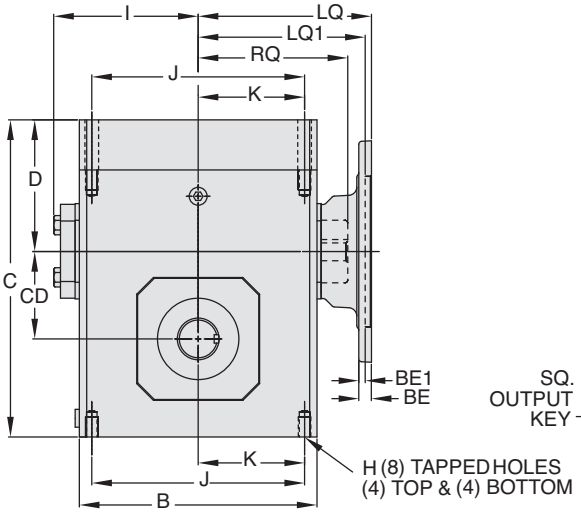
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

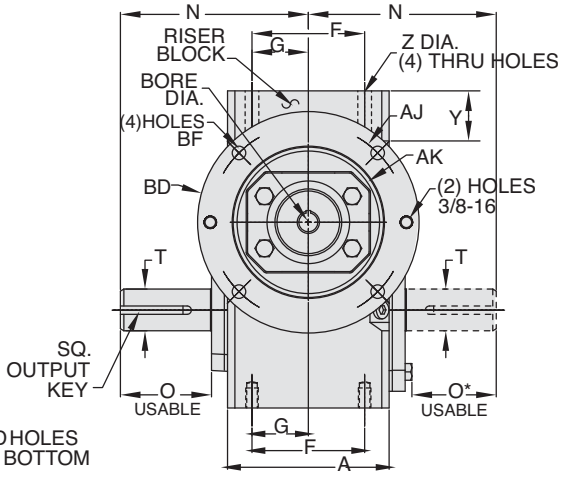
GR Series Dimensions

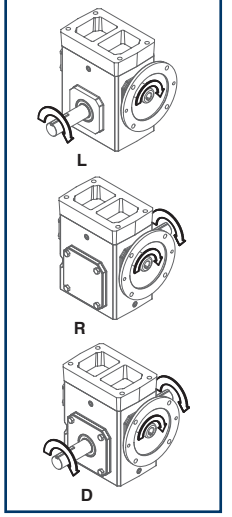
Styles: RMQ, RM, R

CAST IRON GR SERIES

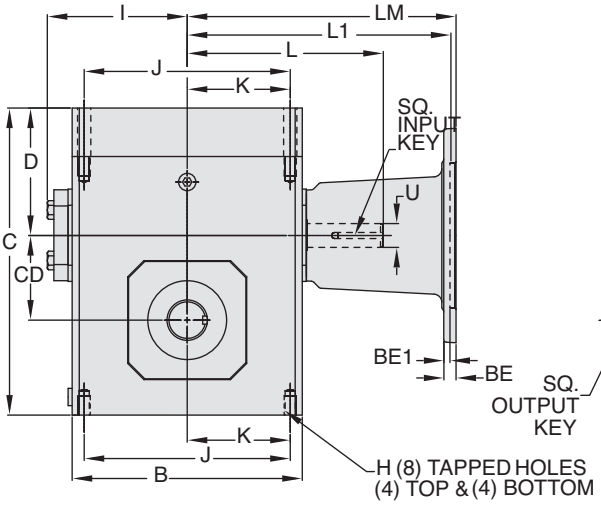
Style RMQ

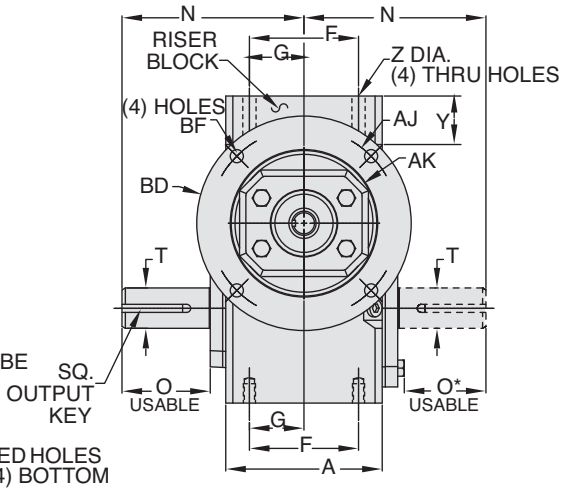


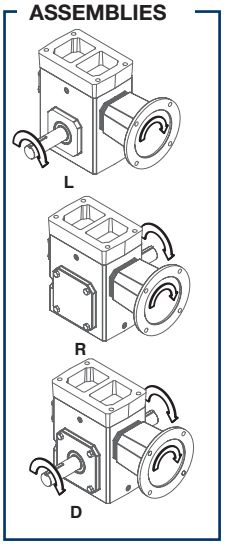




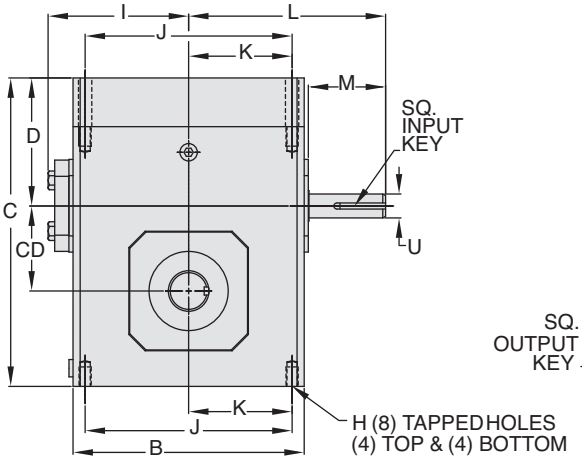
Style RM

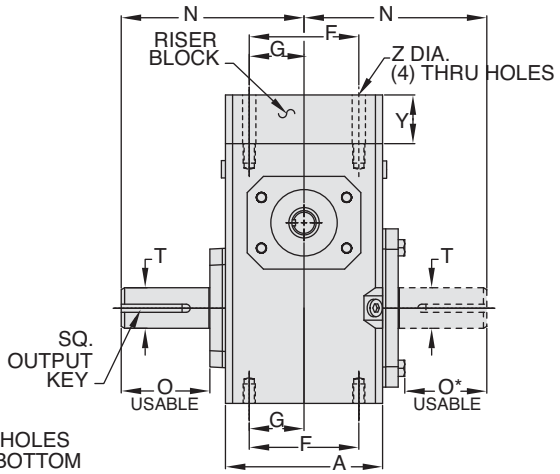


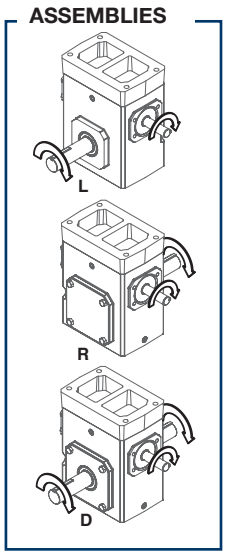




Style R







REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE RMQ, RM, R DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	G	H Tap Size	H Depth	I	J	K	L	M	N	O	O*	Y	Z	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❋	Output Key
GR815	3.44	4.88	7.38	3.93	1.54	2.75	1.38	5/16-18 UNC	.63	3.14	4.19	2.09	4.35	1.76	4.31	2.11	1.90	2.00	0.34	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	3.56	5.06	7.75	3.94	1.75	2.75	1.38	5/16-18 UNC	.63	3.24	4.19	2.09	4.45	1.76	4.31	2.05	1.84	2.00	0.34	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	3.81	5.80	8.38	4.03	2.06	▲	1.44	3/8-16 UNC	.63	3.61	▲	2.50	4.82	1.76	4.68	2.29	2.08	2.00	0.41	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	4.06	6.12	8.94	4.06	2.38	2.88	1.44	3/8-16 UNC	.69	3.77	5.00	2.50	5.51	2.38	5.14	2.66	2.44	2.00	0.41	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	4.84	7.12	9.50	3.94	2.63	3.38	1.69	3/8-16 UNC	.69	4.34	6.38	3.19	6.07	2.38	5.63	2.73	2.52	1.50	0.41	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	5.25	8.12	11.01	4.76	3.00	4.00	2.00	7/16-14 UNC	.88	4.84	7.00	3.50	6.57	2.38	6.75	3.60	3.36	2.13	0.47	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	5.75	8.50	11.50	4.75	3.25	4.00	2.00	7/16-14 UNC	.88	5.02	7.50	3.75	6.76	2.38	7.06	3.66	3.42	2.13	0.47	▲	.875	3/16 X 1.63	3/8 X 2.25
GR842	6.13	10.25	13.51	4.82	4.25	5.00	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	9.57	3.47	8.12	4.50	4.21	2.13	0.66	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	7.19	13.00	15.25	4.88	5.25	5.81	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	10.88	3.38	9.06	4.78	4.53	1.25	0.66	2.000	1.250	1/4 X 3.00	1/2 X 3.50*

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✓		GRG
		(F)2.88" x (J)5.00"				✓	GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"					✓	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63			✓	GRL

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	6.06	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR821✖	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style R and RM only.

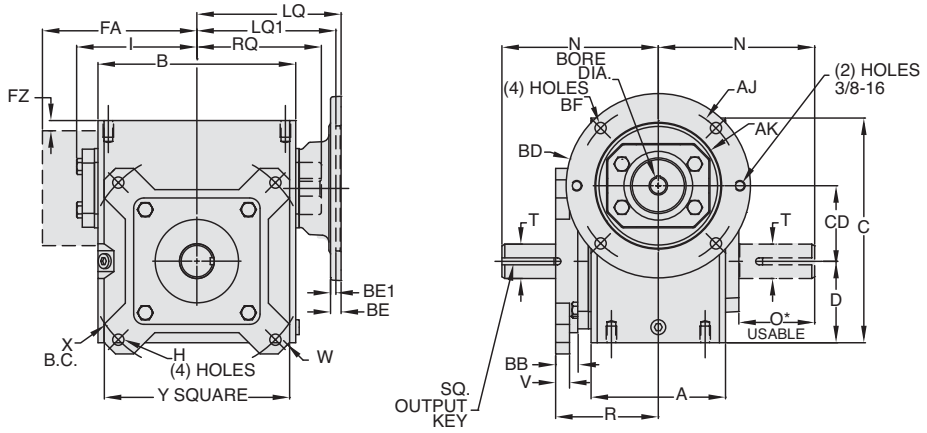
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

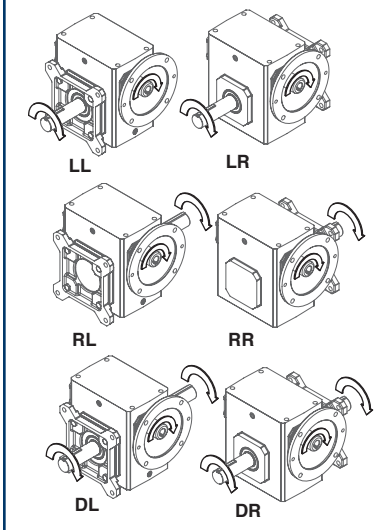
Styles: FMQ, FM, F

CAST IRON GR SERIES

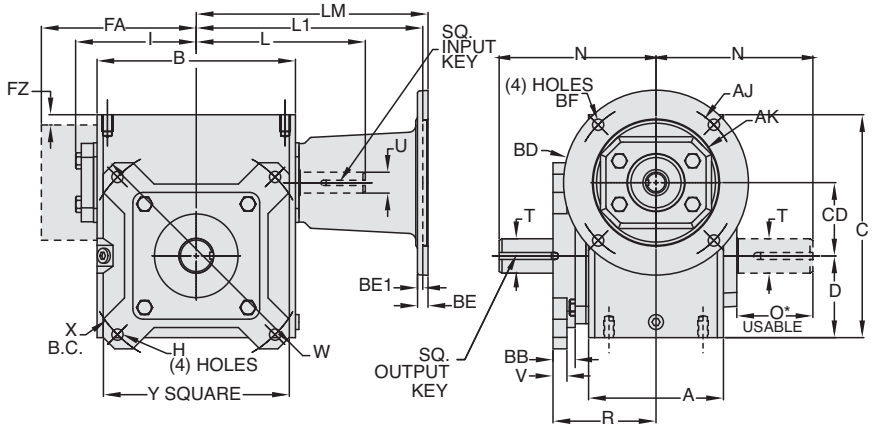
Style FMQ



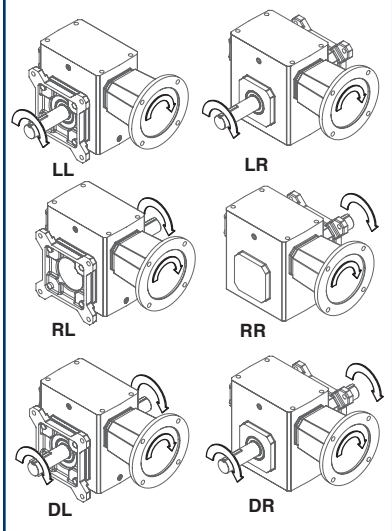
ASSEMBLIES



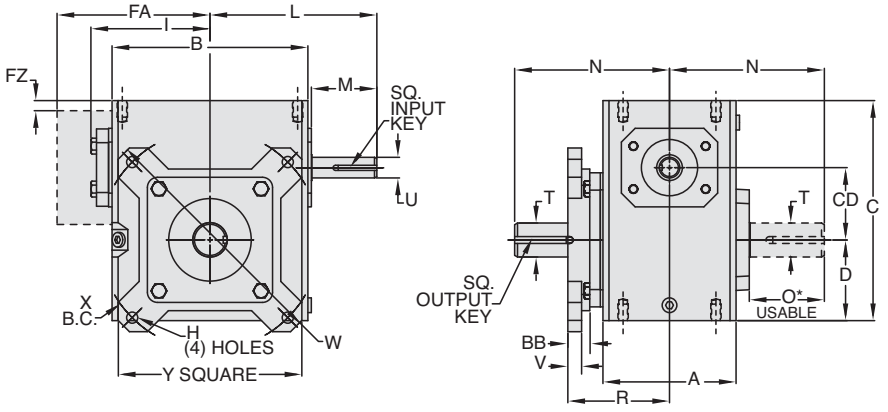
Style FM



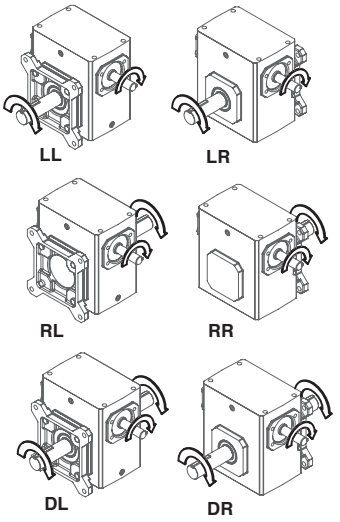
ASSEMBLIES



Style F



ASSEMBLIES



Sizes 813-8100 output flange must be mounted at Factory on styles FMQ, FM, F.

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FMQ, FM, F DIMENSIONS (Inches)

Series	A	B	BB	C	D	CD	FA▼	FZ▼	H	I	L	M	N	O	R	V	W	X	Y	T MAX+ -0.000 +0.0025	U +0.000 -0.0015	Input Key*	Output Key
GR813	2.82	3.80	0.675	4.66	1.72	1.33	N/A	N/A	0.03	2.61	3.82	1.76	4.00	1.94	2.52	0.38	5.92	5.00	4.50	0.625	0.500	1/8 x 1.00	3/16 x 1.50
GR815	3.44	4.88	0.675	5.38	1.91	1.54	N/A	N/A	0.03	3.14	4.35	1.76	4.31	1.90	2.87	0.38	5.88	5.00	4.50	0.750	0.625	3/16 x 1.38	3/16 x 1.50
GR818	3.56	5.06	0.925	5.75	2.06	1.75	N/A	N/A	0.03	3.24	4.45	1.76	4.31	1.84	3.18	0.38	6.64	5.88	5.00	0.875	0.625	3/16 x 1.38	3/16 x 1.38
GR821	3.81	5.80	1.24	6.38	2.28	2.06	N/A	N/A	0.41	3.61	4.82	1.76	4.68	2.08	3.69	0.44	7.88	7.00	5.99	1.000	0.625	3/16 x 1.38	1/4 x 1.44
GR824	4.06	6.12	1.560	6.94	2.50	2.38	N/A	N/A	0.41	3.77	5.51	2.38	5.14	2.44	3.73	0.44	8.39	7.50	6.27	1.125	0.750	3/16 x 1.63	1/4 x 1.75
GR826	4.84	7.12	0.796	8.00	2.94	2.63	N/A	N/A	0.41	4.34	6.07	2.38	5.63	2.52	3.70	0.50	8.88	8.00	6.67	▲	0.750	3/16 x 1.63	1/4 x 1.75
GR830	5.25	8.12	0.636	8.88	3.25	3.00	N/A	N/A	0.41	4.84	6.57	2.38	6.75	3.36	3.78	0.50	9.89	9.00	7.37	1.250	0.875	3/16 x 1.63	1/4 x 1.75
GR832	5.75	8.50	0.636	9.38	3.50	3.25	N/A	N/A	0.41	5.02	6.76	2.38	7.06	3.42	4.03	0.50	9.89	9.00	7.37	▲	0.875	3/16 x 1.63	3/8 x 2.25
GR842	6.13	10.25	0.940	11.38	4.44	4.25	N/A	N/A	0.56	6.10	9.57	3.47	8.12	4.21	4.56	0.62	12.95	11.50	9.65	1.875	1.250	1/4 x 2.50	1/2 x 3.06
GR852	7.19	13.00	1.340	14.00	5.12	5.25	N/A	N/A	0.69	7.50	10.88	3.38	9.16	4.53	5.62	0.75	15.50	14.00	11.75	2.000	1.250	1/4 x3.00	1/2 x 3.50
GR860	8.13	14.25	2.603	16.50	6.50	6.00	11.13	0.33	0.69	N/A	11.78	3.41	10.00	4.65	7.26	0.75	18.00	15.63	14.00	2.500	1.500	3/8 x 3.00	5/8 x 4.00
GR870	7.63	14.88	2.770	18.91	7.59	7.00	11.37	0.35	0.78	N/A	11.50	2.97	11.76	5.65	7.45	0.75	21.00	18.38	15.63	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	8.63	17.00	3.090	20.96	8.86	8.00	12.52	0.57	1.03	N/A	12.50	2.84	12.25	5.98	8.34	0.75	24.00	21.00	17.88	3.000	1.875	1/2 x 2.81**	3/4 X 4.50**
GR8100	9.53	20.88	3.298	25.47	10.36	10.00	14.69	0.51	1.03	N/A	15.50	3.76	14.75	6.76	9.07	1.00	29.00	25.00	21.19	3.750	2.250	1/2 x 3.69**	7/8 X 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✓	✓	GRG GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"					✓	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63			✓	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Series	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58 ●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Series	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	RQ D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A
GR821✖	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	N/A
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style FM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style F and FM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

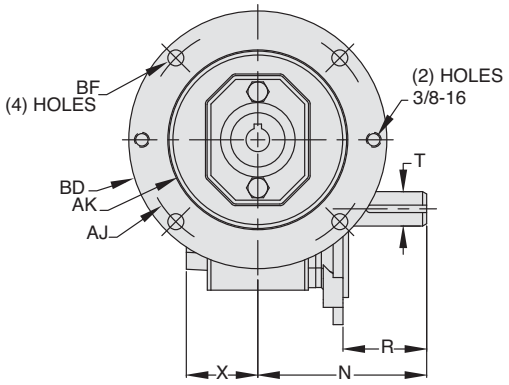
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

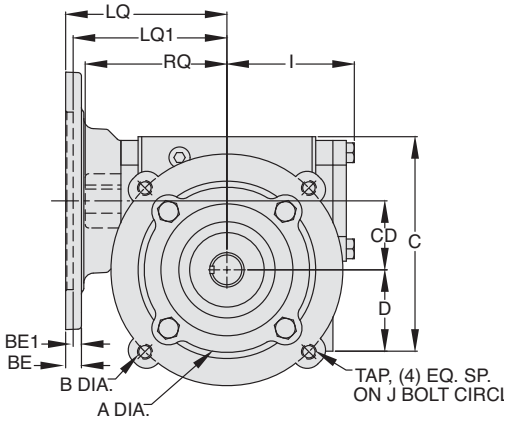
GR Series Dimensions

Styles: CMQ, CM, C

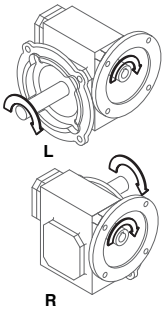
CAST IRON GR SERIES

Style CMQ

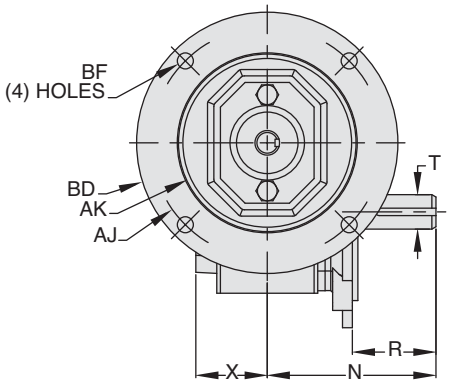


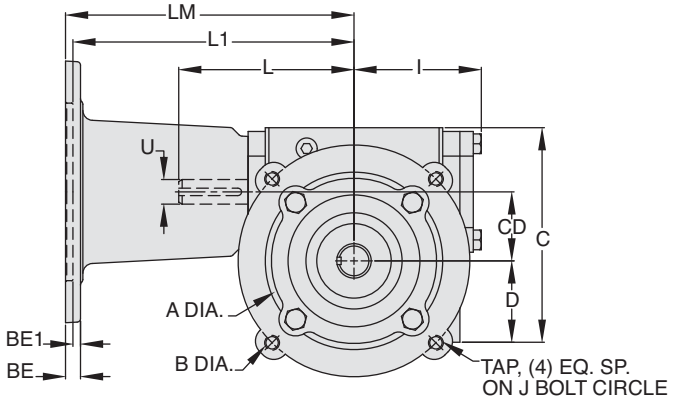


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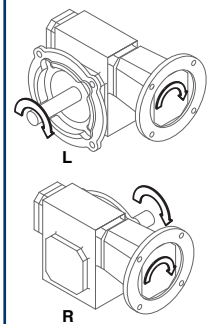


Style CM

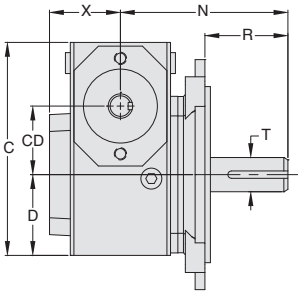


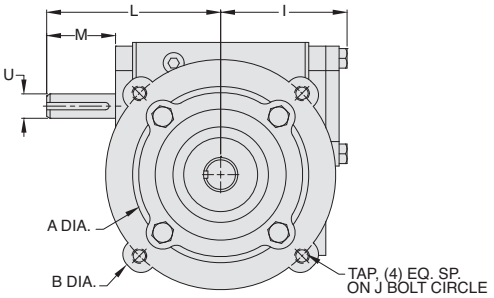


ASSEMBLIES

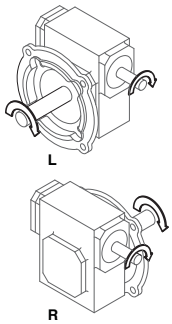


Style C





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE CMQ, CM, C DIMENSIONS (Inches)

Series	Output C-Face Frame	A	B	C	D	CD	I	J	L	M	N	R	X	Tap Size	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❋	Output Key
GR813	56C	4.50	6.64	4.66	1.72	1.33	2.61	5.88	3.82	1.76	5.00	2.06	1.84	3/8-16 UNC	.625	.500	1/8 X 1.00	3/16 X 1.50
GR818	140TC	4.50	6.64	5.44	2.06	1.75	3.24	5.88	4.45	1.76	4.28	2.13	1.81	3/8-16 UNC	.875	.625	3/16 X 1.38	3/16 X 1.38
GR824	180TC	8.50	9.00	6.88	2.69	2.38	3.77	7.25	5.51	2.38	6.59	2.37	1.97	1/2-13 UNC	1.125	.750	3/16 X 1.63	1/4 X 1.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Series	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❋ Style C and CM only.

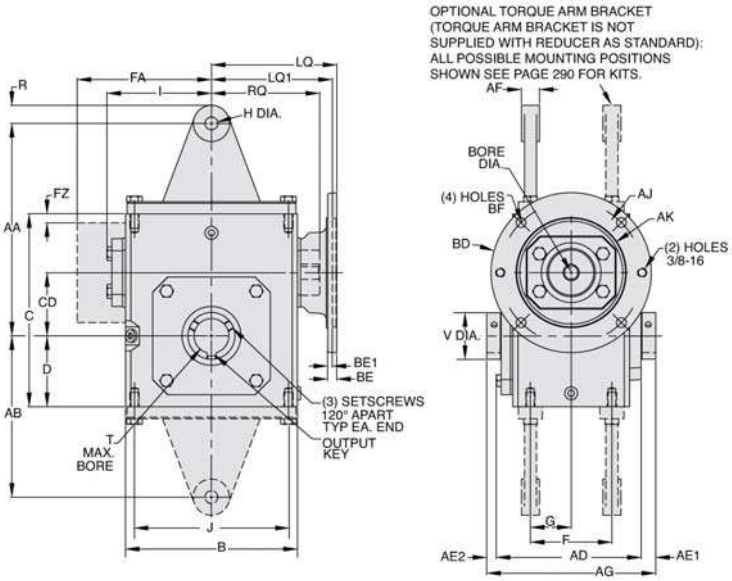
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

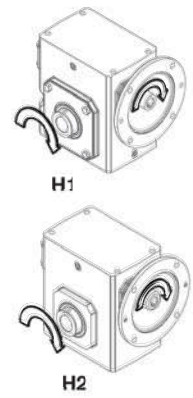
Styles: HMQ, HM, H

CAST IRON GR SERIES

Style HMQ

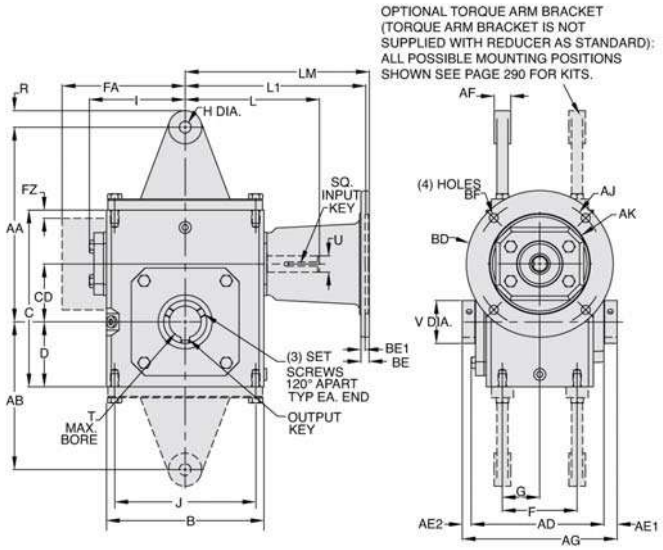


ASSEMBLIES

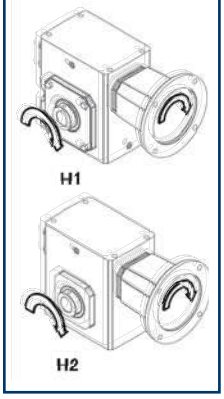


H1 SUPPLIED AS STANDARD UNLESS SPECIFIED.

Style HM

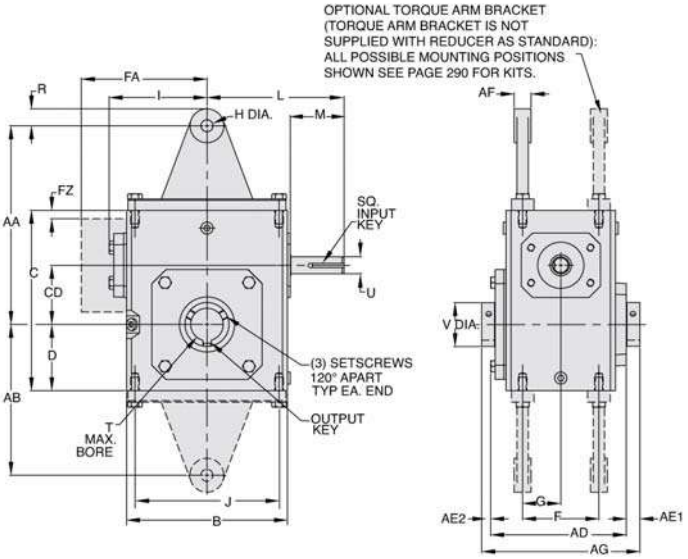


ASSEMBLIES

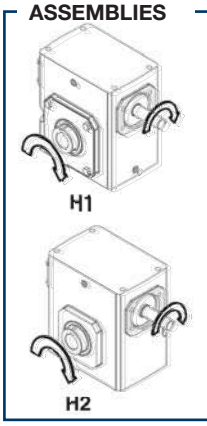


H1 SUPPLIED AS STANDARD UNLESS SPECIFIED.

Style H



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED.



STYLE HMQ, HM, H DIMENSIONS (Inches)

Series	AD	AE1	AE2	AG	B	C	D	CD	F	FA▼	FZ▼	G	I	J	L	M	V	T MAX -0.000 +0.0025	U +0.000 -0.0015	Input Key*	Output Key +
GR813	3.90	0.53	0.32	4.75	3.80	4.66	1.72	1.33	2.00	N/A	N/A	1.00	2.61	3.25	3.82	1.76	1.000	0.625	0.500	1/8 x 1.00	3/16 x 1.50
GR815	4.61	0.51	0.30	5.42	5.19	5.38	1.91	1.54	2.75	N/A	N/A	1.38	3.14	4.19	4.35	1.76	1.000	0.625	0.625	3/16 x 1.38	3/16 x 1.50
GR818	4.73	0.49	0.28	5.50	5.19	5.75	2.06	1.75	2.75	N/A	N/A	1.38	3.24	4.19	4.45	1.76	1.440	1.000	0.625	3/16 x 1.38	1/4 x 3.00
GR821	4.99	0.61	0.40	6.00	5.80	6.38	2.28	2.06	▲	N/A	N/A	1.44	3.61	▲	4.82	1.76	1.940	1.500	0.625	3/16 x 1.38	3/8 x 3.00
GR824	5.18	0.51	0.31	6.00	6.12	6.94	2.50	2.38	2.88	N/A	N/A	1.44	3.77	5.00	5.51	2.38	1.940	1.500	0.750	3/16 x 1.63	3/8 x 3.00
GR826x	6.01	0.60	0.39	7.00	7.38	8.00	2.94	2.63	3.38	N/A	N/A	1.69	4.34	6.38	6.07	2.38	1.940	1.500	0.750	3/16 x 1.63	3/8 x 3.00
GR830	6.53	0.60	0.36	7.50	8.12	8.88	3.25	3.00	4.00	N/A	N/A	2.00	4.84	7.00	6.57	2.38	2.756	2.188	0.875	3/16 x 1.63	1/2 x 3.00
GR832x	7.04	0.54	0.29	7.88	8.75	9.38	3.50	3.25	4.00	N/A	N/A	2.00	5.02	7.50	6.76	2.38	2.756	2.188	0.875	3/16 x 1.63	1/2 x 3.00
GR842	7.53	0.63	0.34	8.50	10.25	11.38	4.44	4.25	5.00	N/A	N/A	2.50	6.10	8.50	9.57	3.47	2.756	2.188	1.250	1/4 x 2.50	1/2 x 3.00
GR852	8.85	0.97	0.68	10.50	13.00	14.00	5.12	5.25	5.81	N/A	N/A	2.91	7.50	11.00	10.88	3.38	4.260	3.438	1.250	1/4 x3.00	7/8 x3.44
GR860	10.52	0.52	0.52	11.50	14.50	16.50	6.50	6.00	6.38	11.13	0.33	3.19	N/A	12.75	11.78	3.41	4.256	3.438	1.500	3/8 x 3.00	7/8 x 3.44
GR870	11.36	1.09	1.09	13.50	14.88	18.91	7.59	7.00	5.50	11.37	0.35	2.75	N/A	12.50	11.50	2.97	4.928	3.938	1.625	3/8 x 2.87**	1 x 1/2**
GR880	12.48	1.03	1.03	14.50	17.00	20.96	8.86	8.00	6.50	12.52	0.57	3.25	N/A	14.25	12.50	2.84	5.553	4.438	1.875	1/2 x 2.81**	1 x 1/2**
GR8100	15.78	1.39	1.39	18.50	20.88	25.47	10.36	10.00	6.88	14.69	0.51	3.44	N/A	14.75	15.50	3.76	4.256	5.438	2.250	1/2 x 3.69**	1-1/4 x 5/8**

▲ See feature comparison chart.

FEATURE COMPARISON (821)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
GR821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✓		GRG
		(F)2.88" x (J)5.00"				✓	GRL

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	6.06	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)✣

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR821✖	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

✣ Max bore dimensions shown. For additional bores available, refer to page 20.

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style HM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style H and HM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

Note: Torque arm bracket available separately. Refer to page 274 for kits. If a special bracket is required, refer to Style BMQ dimensions for mounting pad dimensions on top/ bottom of reducer.

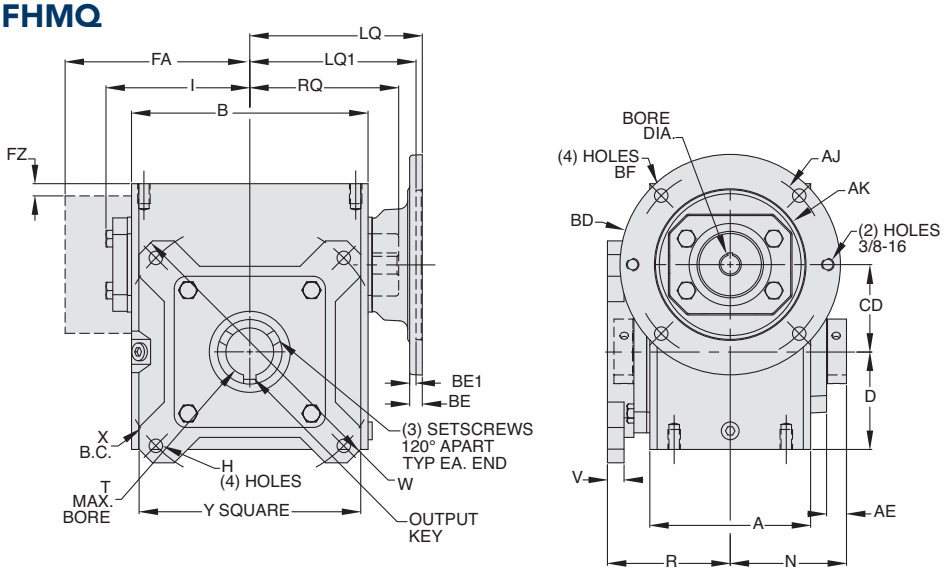
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

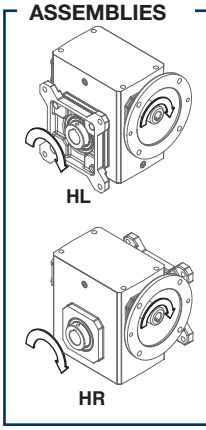
Styles: FHMQ, FHM, FH

CAST IRON GR SERIES

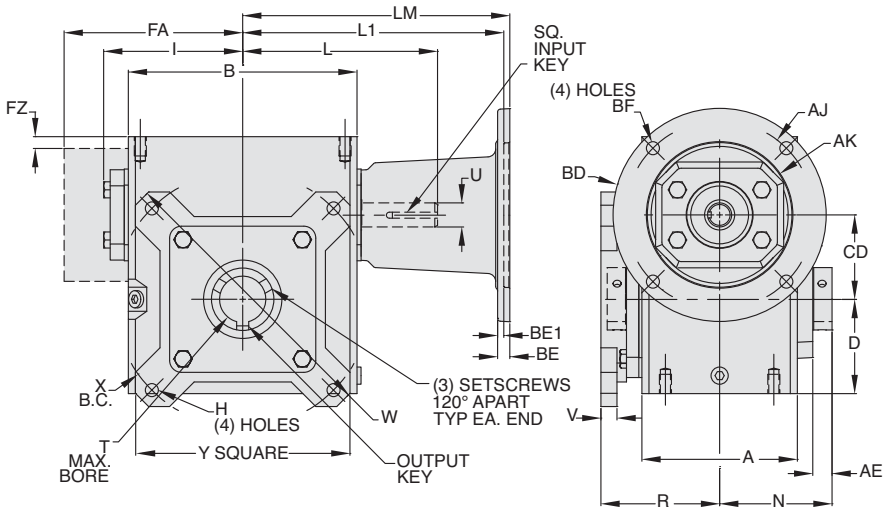
Style FHMQ



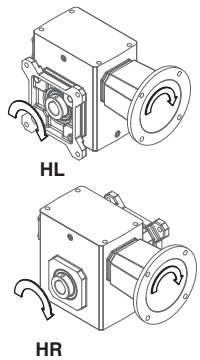
ASSEMBLIES



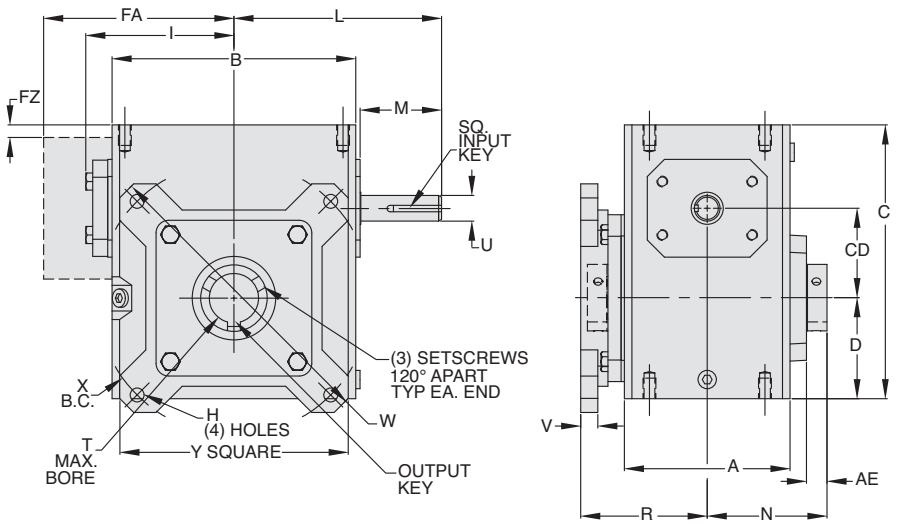
Style FHM



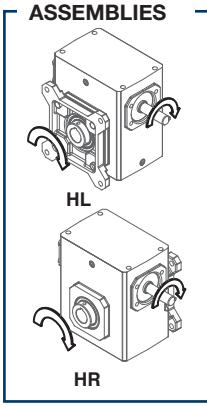
ASSEMBLIES



Style FH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FHMQ, FHM, FH DIMENSIONS (Inches)

Series	A	B	BB	C	D	CD	FA t	FZ t	H	I	L	M	N	O	R	V	W	X	Y	T MAX+ -0.000 +0.0025	U +0.000 -0.0015	Input Key*	Output Key
GR813	2.82	3.80	0.675	4.66	1.72	1.33	N/A	N/A	0.03	2.61	3.82	1.76	4.00	1.94	2.52	0.38	5.92	5.00	4.50	0.625	0.500	1/8 x 1.00	3/16 x 1.50
GR815	3.44	4.88	0.675	5.38	1.91	1.54	N/A	N/A	0.03	3.14	4.35	1.76	4.31	1.90	2.87	0.38	5.88	5.00	4.50	0.750	0.625	3/16 x 1.38	3/16 x 1.50
GR818	3.56	5.06	0.925	5.75	2.06	1.75	N/A	N/A	0.03	3.24	4.45	1.76	4.31	1.84	3.18	0.38	6.64	5.88	5.00	0.875	0.625	3/16 x 1.38	3/16 x 1.38
GR821	3.81	5.80	1.240	6.38	2.28	2.06	N/A	N/A	0.41	3.61	4.82	1.76	4.68	2.08	3.69	0.44	7.88	7.00	5.99	1.000	0.625	3/16 x 1.38	1/4 x 1.44
GR824	4.06	6.12	1.560	6.94	2.50	2.38	N/A	N/A	0.41	3.77	5.51	2.38	5.14	2.44	3.73	0.44	8.39	7.50	6.27	1.125	0.750	3/16 x 1.63	1/4 x 1.75
GR826x	4.84	7.12	0.796	8.00	2.94	2.63	N/A	N/A	0.41	4.34	6.07	2.38	5.63	2.52	3.70	0.50	8.88	8.00	6.67	1.125	0.750	3/16 x 1.63	1/4 x 1.75
GR830	5.25	8.12	0.636	8.88	3.25	3.00	N/A	N/A	0.41	4.84	6.57	2.38	6.75	3.36	3.78	0.50	9.89	9.00	7.37	1.250	0.875	3/16 x 1.63	1/4 x 1.75
GR832x	5.75	8.50	0.636	9.38	3.50	3.25	N/A	N/A	0.41	5.02	6.76	2.38	7.06	3.42	4.03	0.50	9.89	9.00	7.37	1.688	0.875	3/16 x 1.63	3/8 x 2.25
GR842	6.13	10.25	0.940	11.38	4.44	4.25	N/A	N/A	0.56	6.10	9.57	3.47	8.12	4.21	4.56	0.62	12.95	11.50	9.65	1.875	1.250	1/4 x 2.50	1/2 x 3.06
GR852	7.19	13.00	1.340	14.00	5.12	5.25	N/A	N/A	0.69	7.50	10.88	3.38	9.16	4.53	5.62	0.75	15.50	14.00	11.75	2.000	1.250	1/4 x3.00	1/2 x 3.50
GR860	8.13	14.25	2.603	16.50	6.50	6.00	11.13	0.33	0.69	N/A	11.78	3.41	10.00	4.65	7.26	0.75	18.00	15.63	14.00	2.500	1.500	3/8 x 3.00	5/8 x 4.00
GR870	7.63	14.88	2.770	18.91	7.59	7.00	11.37	0.35	0.78	N/A	11.50	2.97	11.76	5.65	7.45	0.75	21.00	18.38	15.63	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	8.63	17.00	3.090	20.96	8.86	8.00	12.52	0.57	1.03	N/A	12.50	2.84	12.25	5.98	8.34	0.75	24.00	21.00	17.88	3.000	1.875	1/2 x 2.81**	3/4 X 4.50**
GR8100	9.53	20.88	3.298	25.47	10.36	10.00	14.69	0.51	1.03	N/A	15.50	3.76	14.75	6.76	9.07	1.00	29.00	25.00	21.19	3.750	2.250	1/2 x 3.69**	7/8 X 5.00**

FEATURE COMPARISON (821)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	✓	✓	GRL

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 52-53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR821✖	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
GR826✖	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	6.06	N/A
GR832✖	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)✣

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR821✖	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826✖	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832✖	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

✣ Max bore dimensions shown. For additional bores available, refer to page 20.

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style FHM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

❋ Style FH and FHM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

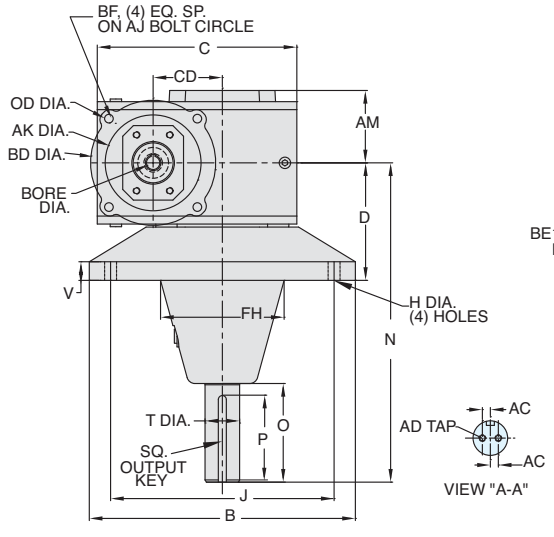
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

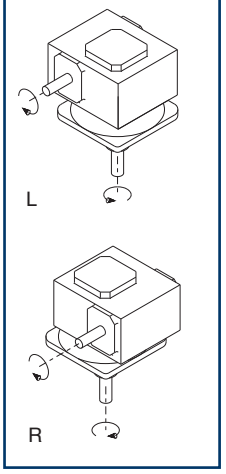
GR Series Dimensions

Styles: FEMQ, FEM, FE

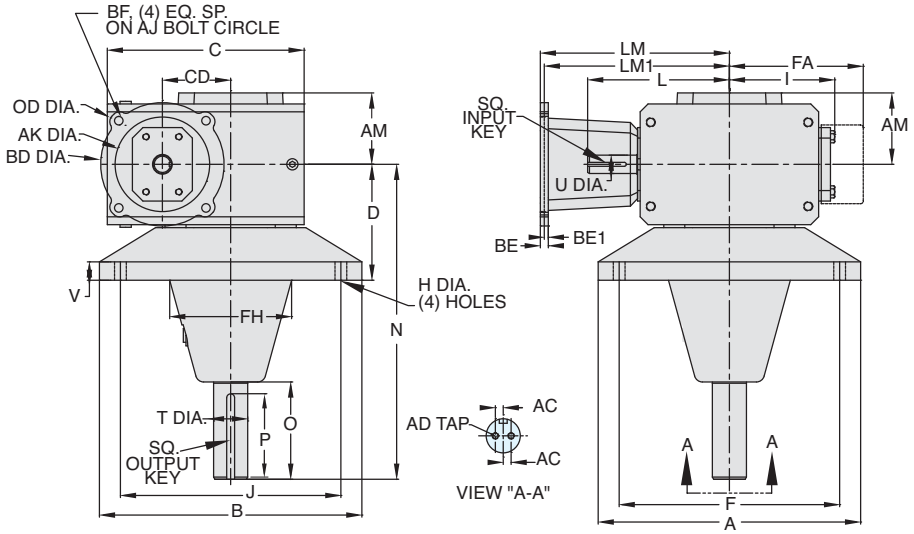
CAST IRON GR SERIES

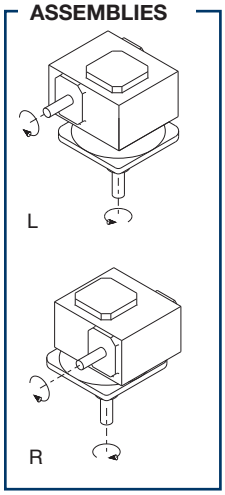
Style FEMQ



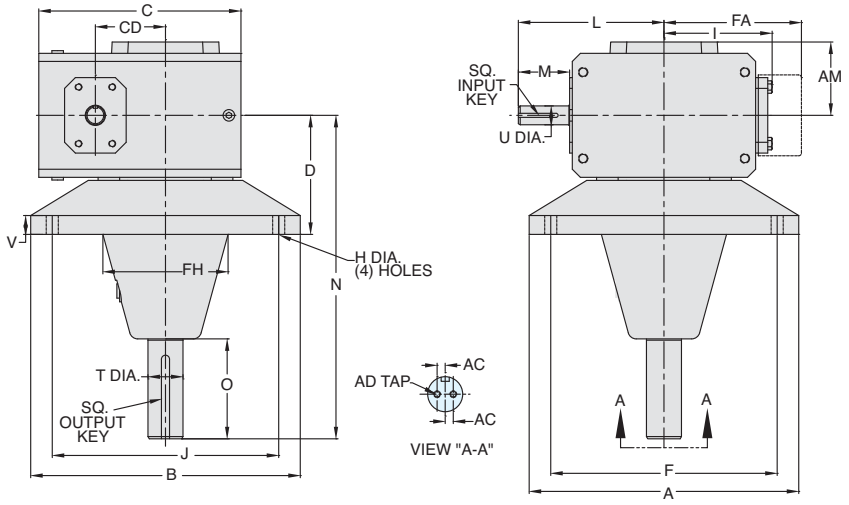


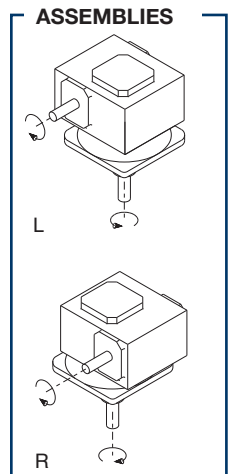
Style FEM





Style FE





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FEMQ, FEM, FE DIMENSIONS (Inches)

Series	A	AC	AD	AM	B	D	CD	F	FA ▼	FH	H	I	J	L	M
GR830	11.00	0.375	.31-18 UNC X 1.00 DP	3.15	11.00	4.60	3.00	9.00	N/A	5.12	.56	4.84	9.00	6.57	2.38
GR832	12.50	0.375	.31-18 UNC X 1.00 DP	3.40	12.50	5.52	3.25	10.50	N/A	5.75	.56	5.02	10.50	6.76	2.38
GR842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	5.74	4.25	12.00	N/A	6.75	.69	6.10	12.00	9.57	3.47
GR852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	6.00	5.25	14.00	N/A	8.00	.81	7.50	14.00	10.88	3.38
GR860	19.50	0.750	.38-16 UNC X 1.00 DP	5.28	19.50	7.00	6.00	17.00	11.13	9.50	.88	N/A	17.00	11.78	3.41
GR870	22.00	1.000	.38-16 UNC X 1.00 DP	6.06	22.00	8.50	7.00	19.00	11.37	10.75	1.13	N/A	19.00	11.50	2.97
GR880	28.00	1.062	.62-11 UNC X 1.50 DP	6.22	28.00	10.00	8.00	24.00	12.52	13.75	1.31	N/A	24.00	12.50	2.84
GR8100	32.00	1.118	.62-11 UNC X 1.50 DP	7.94	32.00	12.50	10.00	28.00	14.69	17.00	1.31	N/A	28.00	15.50	3.76

Series	N	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❋	P❖
GR830	14.38	4.96	0.78	1.438	.875	3/16 x 1.63	3/8 x 3.88
GR832	15.00	4.63	0.88	1.625	.875	3/16 x 1.63	3/8 x 3.69
GR842	16.50	5.91	1.00	1.688	1.250	1/4 X 2.50	3/8 x 4.68
GR852	16.50	5.62	1.25	2.188	1.250	1/4 X 3.00	1/2 x 4.63
GR860	22.50	7.63	1.50	2.438	1.500	3/8 X 3.00	5/8 x 6.50
GR870	24.00	7.63	1.75	2.937	1.625	3/8 x 2.87**	3/4 x 6.44
GR880	27.06	9.25	2.00	3.438	1.875	1/2 x 2.81**	7/8 x 8.00
GR8100	29.50	9.43	2.25	3.938	2.250	1/2 x 3.69**	1 x 7.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	56C/140TC	180TC	210TC	250TC	56C/140TC	180TC	210TC	250TC
GR830	8.82	9.82	N/A	5.95	6.15	6.56	N/A	5.32	5.63	6.06	N/A
GR832	9.01	10.01	N/A	6.14	6.34	6.75	N/A	5.51	5.81	6.25	N/A
GR842	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
GR852	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54
GR860	N/A	15.88	16.50	10.45	9.33	9.33	9.94	10.01	8.69	8.69	8.69
GR870	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ					RQ				
	D71D	D80D	D90D	D100LD/ D112MD	D132D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR830	4.78	5.41	5.41	5.88	N/A	4.59	5.22	5.22	5.57	N/A
GR832	4.97	5.59	5.59	6.07	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	6.38	6.39	7.17	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	7.78	7.78	8.57	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

❋ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style FEM with frame sizes 180TC-250TC.

■ 180TC not available

● Metric IEC B5 input flange options are available only on quill input styles.

❋ Style FE and FEM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

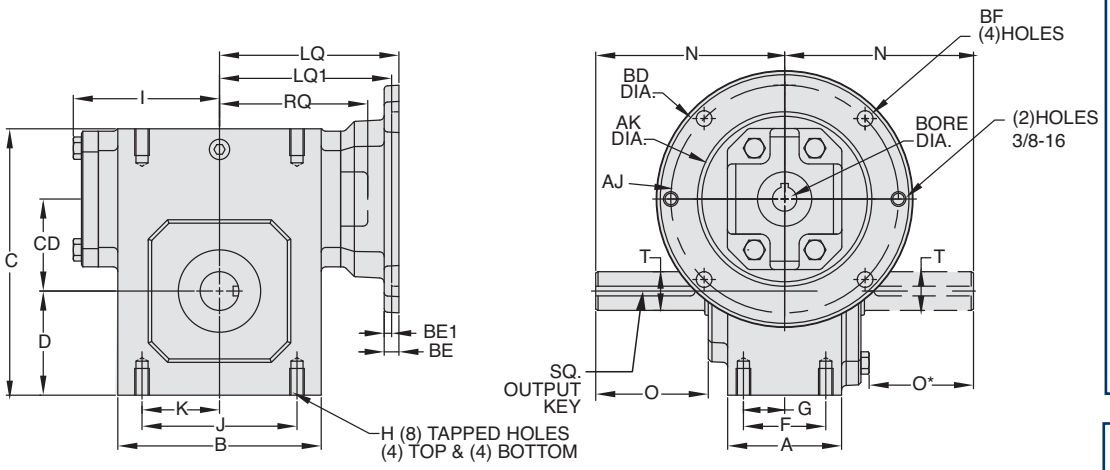
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

NH Series Dimensions

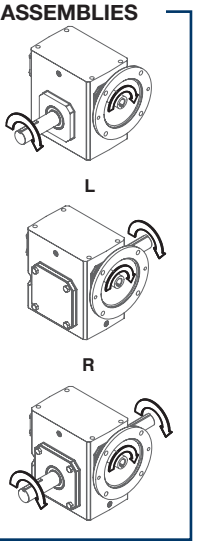
Styles: BMQ, BM, B

CAST IRON NH SERIES

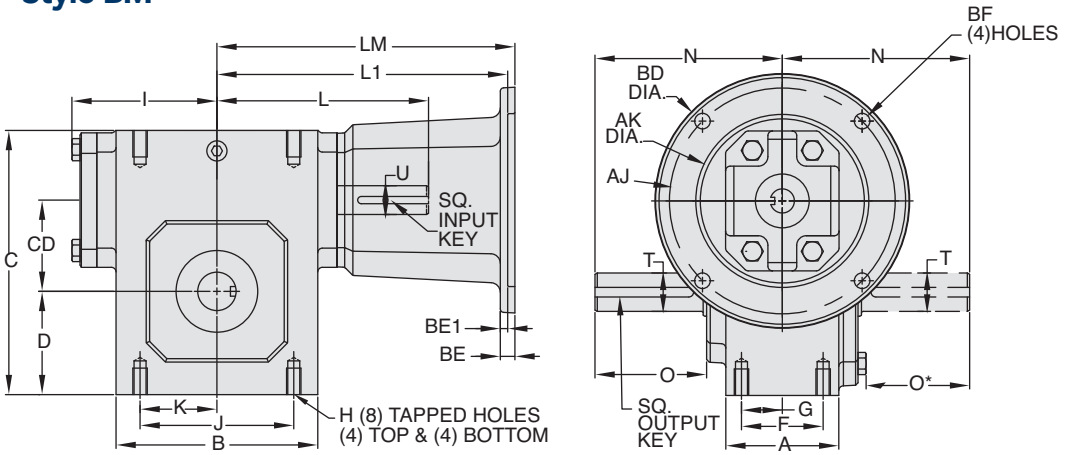
Style BMQ



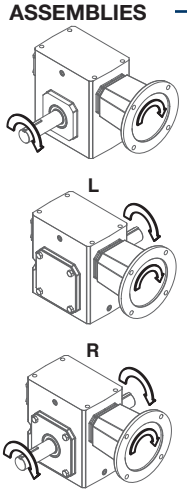
ASSEMBLIES



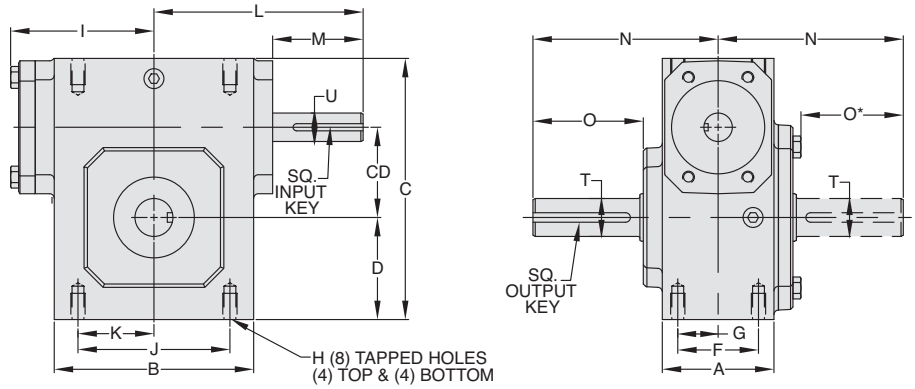
Style BM



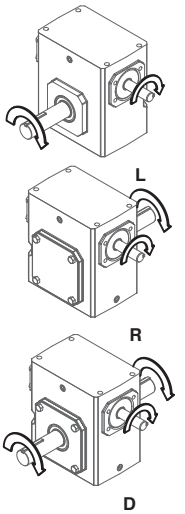
ASSEMBLIES



Style B



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE BMQ, BM, B DIMENSIONS (Inches)

Size	A	B	C	CD	D	F	G	H Tap Size	H Depth	I	J	K	L	M	N	O	O*	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	2.82	3.80	4.66	1.33	1.72	2.00	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	5.00	1.54	1.88	1.88	0.94	5/16-18 UNC	.63	3.14	3.25	1.63	4.35	1.76	4.25	2.56	2.35	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	2.56	4.50	5.44	1.75	2.06	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	4.45	1.76	4.75	2.94	2.73	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	2.50	4.50	6.00	2.06	2.31	1.88	0.94	5/16-18 UNC	.63	3.61	3.25	1.63	4.82	1.76	4.34	2.66	2.45	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	2.94	5.25	6.88	2.38	2.69	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	5.51	2.38	4.88	2.91	2.69	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	2.88	5.75	7.38	2.63	2.94	2.13	1.06	3/8-16 UNC	.69	4.34	4.00	2.00	6.07	2.38	5.25	3.28	3.07	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	3.12	6.62	8.25	3.00	3.38	2.38	1.19	3/8-16 UNC	.75	4.84	4.63	2.31	6.57	2.38	5.77	3.56	3.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	4.44	8.00	10.06	3.25	4.19	3.50	1.75	1/2-13 UNC	1.00	5.02	7.00	3.50	6.76	2.38	7.03	4.24	3.99	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	4.75	9.75	11.50	4.25	4.50	3.75	1.88	1/2-13 UNC	1.00	6.10	7.50	3.75	9.57	3.47	7.50	3.88	3.59	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	6.19	11.00	12.69	5.25	4.88	4.50	2.25	5/8-11 UNC	1.25	7.50	9.00	4.50	10.88	3.38	9.00	4.72	4.47	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.77■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style B and BM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
UF	BMQ
UFC	BM
U	B

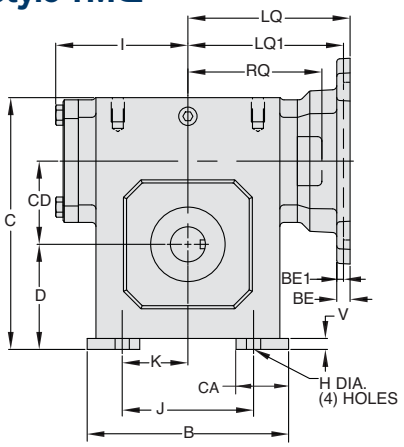
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

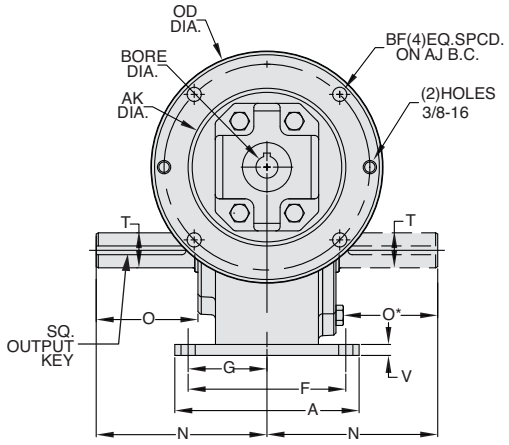
NH Series Dimensions

Styles: TMQ, TM, T

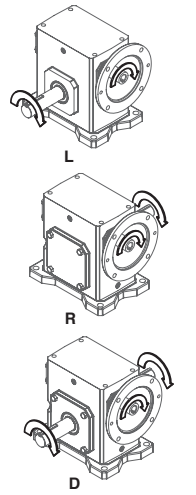
CAST IRON NH SERIES

Style TMQ

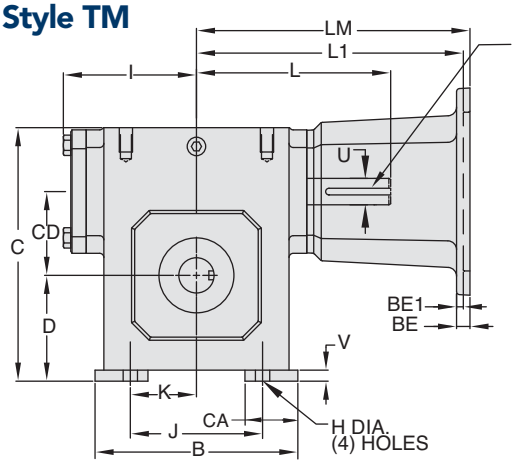


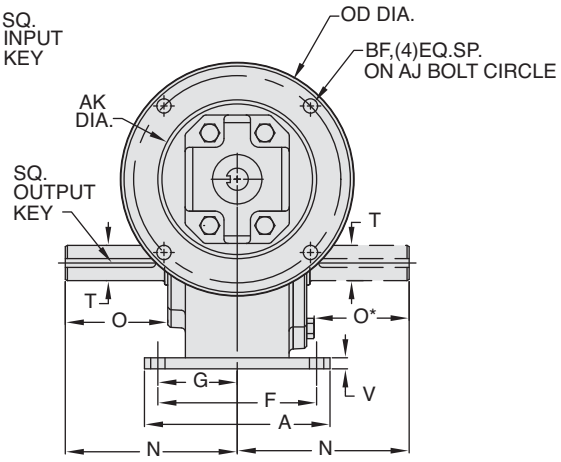


ASSEMBLIES

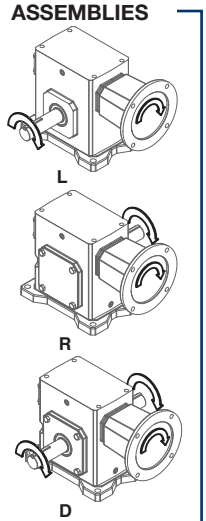


Style TM

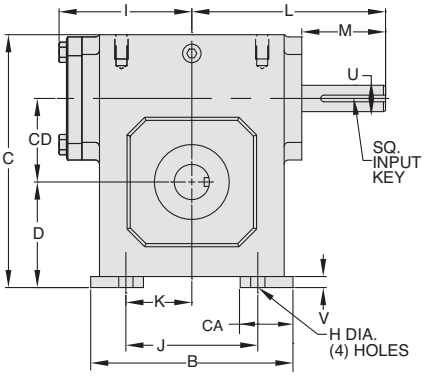


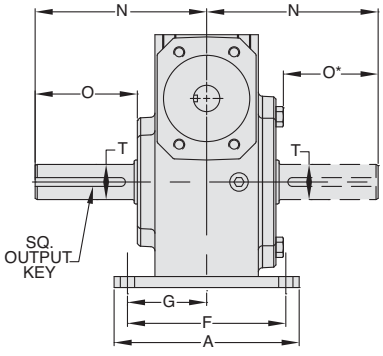


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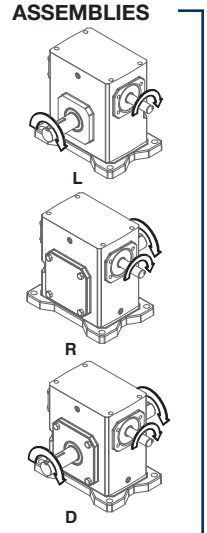


StyleT





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE TMQ, TM, T DIMENSIONS (Inches)

Size	A	B	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	4.00	5.01	4.97	1.50	1.33	2.03	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.31	1.50	1.54	2.19	4.50	2.25	0.34	3.14	4.19	2.09	4.35	1.76	4.25	2.56	2.35	0.31	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	4.62	5.89	5.82	1.88	1.75	2.44	3.50	1.75	0.41	3.24	4.63	2.31	4.45	1.76	4.75	2.94	2.73	0.38	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	5.25	5.19	6.31	1.50	2.06	2.63	4.50	2.25	0.34	3.61	4.19	2.09	4.82	1.76	4.34	2.66	2.45	0.31	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	5.25	5.75	7.19	1.50	2.38	3.00	4.50	2.25	0.41	3.77	3.75	1.88	5.51	2.38	4.88	2.91	2.69	0.31	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	6.13	6.51	7.69	2.00	2.63	3.25	4.13	2.06	0.41	4.34	4.75	2.38	6.07	2.38	5.25	3.28	3.07	0.31	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	6.13	7.74	8.56	2.25	3.00	3.69	4.13	2.06	0.41	4.84	6.00	3.00	6.57	2.38	5.77	3.56	3.31	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	7.50	9.25	10.44	2.50	3.25	4.56	6.50	3.25	0.41	5.02	7.75	3.88	6.76	2.38	7.03	4.24	3.99	0.38	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	6.75	10.99	12.00	2.50	4.25	5.00	5.75	2.88	0.56	6.10	9.75	4.88	9.57	3.47	7.50	3.88	3.59	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	8.25	13.24	13.82	3.00	5.25	6.00	7.00	3.50	0.69	7.50	12.00	6.00	10.88	3.38	9.00	4.72	4.47	1.13	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style T and TM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
ZF	TMQ
ZFC	TM
Z	T

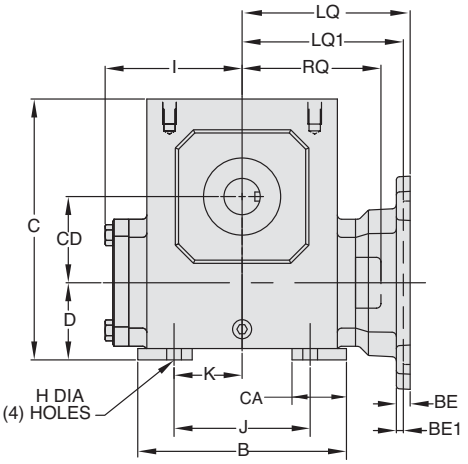
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

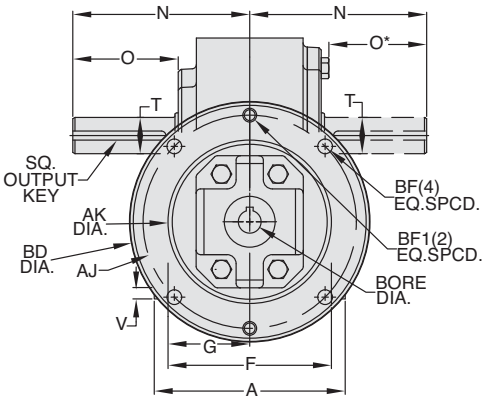
NH Series Dimensions

Styles: UMQ, UM, U

CAST IRON NH SERIES

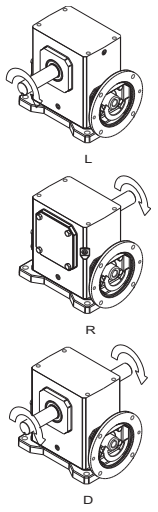
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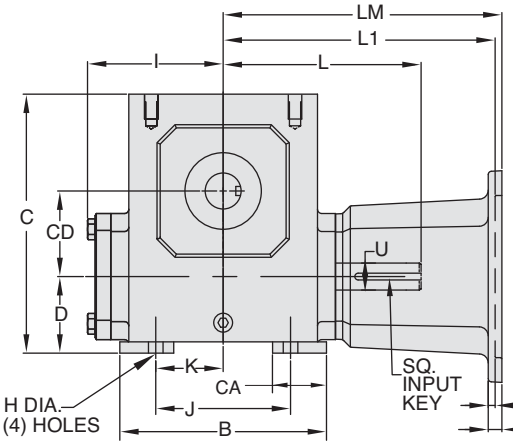


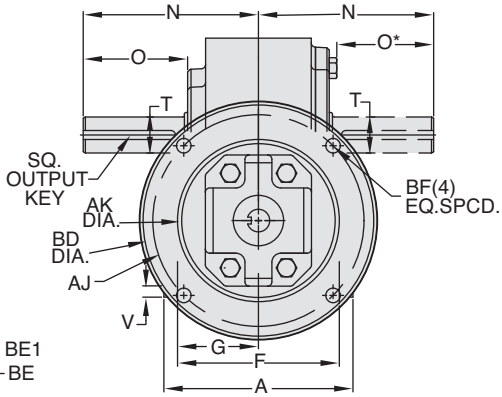
WARNING: "FLANGE MAY EXTEND BELOW BASE."

ASSEMBLIES



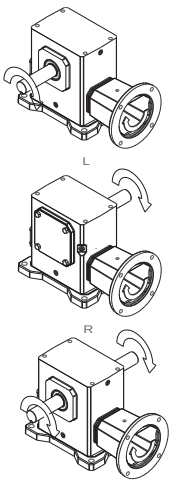
Style UM



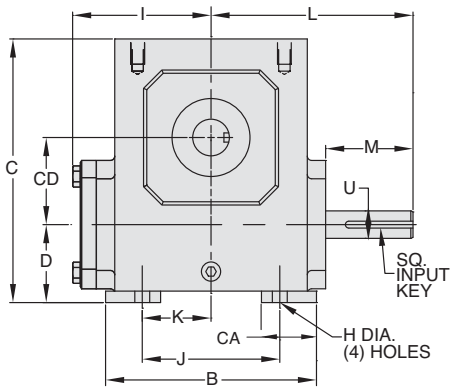


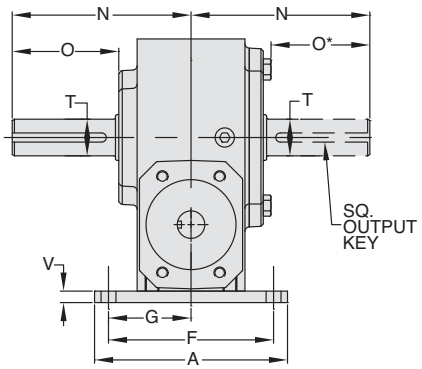
WARNING: "FLANGE MAY EXTEND BELOW BASE."

ASSEMBLIES

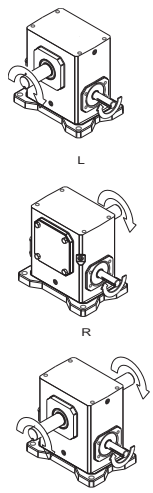


Style U





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

NH Series Dimensions

Styles: UMQ, UM, U

STYLE UMQ, UM, U DIMENSIONS (Inches)

Size	A	B	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	4.00	5.01	4.97	1.50	1.33	1.92	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.31	1.50	1.54	1.90	4.50	2.25	0.34	3.14	4.19	2.09	4.35	1.76	4.25	2.56	2.35	0.31	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	4.62	5.89	5.82	1.88	1.75	2.00	3.50	1.75	0.41	3.24	4.63	2.31	4.45	1.76	4.75	2.94	2.73	0.38	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	5.25	5.19	6.31	1.50	2.06	1.94	4.50	2.25	0.34	3.61	4.19	2.09	4.82	1.76	4.34	2.66	2.45	0.31	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	5.25	5.75	7.19	1.50	2.38	2.13	4.50	2.25	0.41	3.77	3.75	1.88	5.51	2.38	4.88	2.91	2.69	0.31	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	6.13	6.51	7.69	2.00	2.63	2.13	4.13	2.06	0.41	4.34	4.75	2.38	6.07	2.38	5.25	3.28	3.07	0.31	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	6.13	7.74	8.56	2.25	3.00	2.19	4.13	2.06	0.41	4.84	6.00	3.00	6.57	2.38	5.77	3.56	3.31	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	7.50	9.25	10.44	2.50	3.25	3.00	6.50	3.25	0.41	5.02	7.75	3.88	6.76	2.38	7.03	4.24	3.99	0.38	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	6.75	10.99	12.00	2.50	4.25	3.25	5.75	2.88	0.56	6.10	9.75	4.88	9.57	3.47	7.50	3.88	3.59	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	8.25	13.24	13.82	3.00	5.25	3.69	7.00	3.50	0.69	7.50	12.00	6.00	10.88	3.38	9.00	4.72	4.47	1.13	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style U and UM only.

Note: Styles UMQ, UM and U are worm under mounting assemblies and not recommended due to increase potential for high speed shaft seal leakage and potential mounting interference. Motor flange may extend below base. Contact Factory for selection assistance.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
UBF	UMQ
UBFC	UM
UB	U

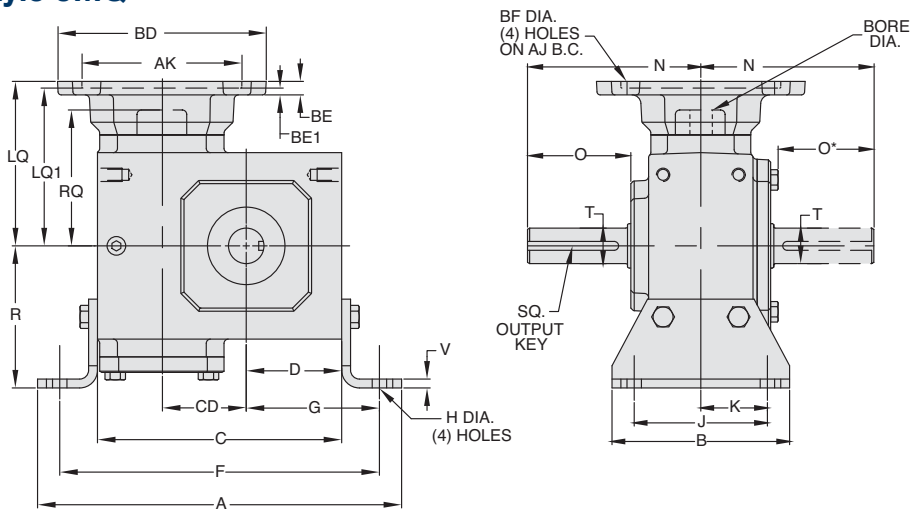
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

NH Series Dimensions

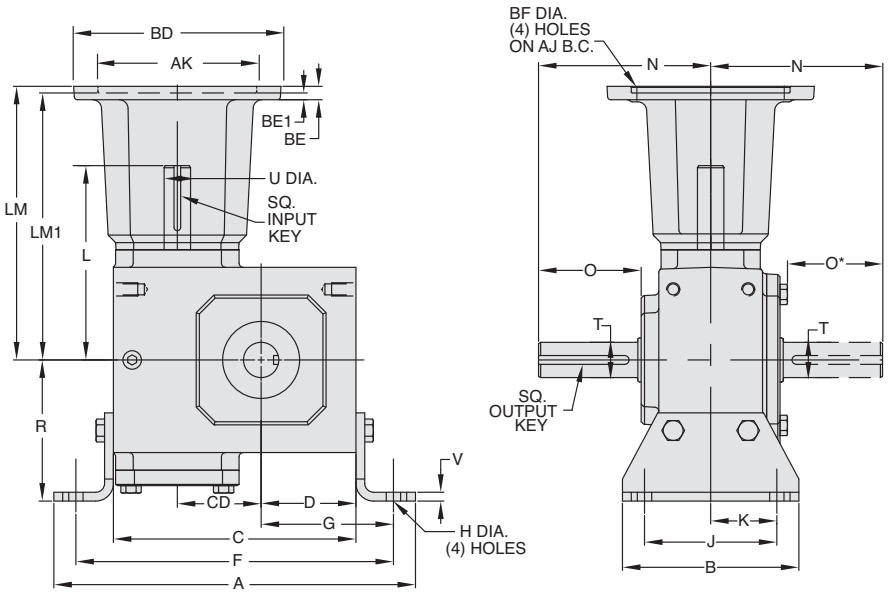
Styles: JMQ, JM, J

CAST IRON NH SERIES

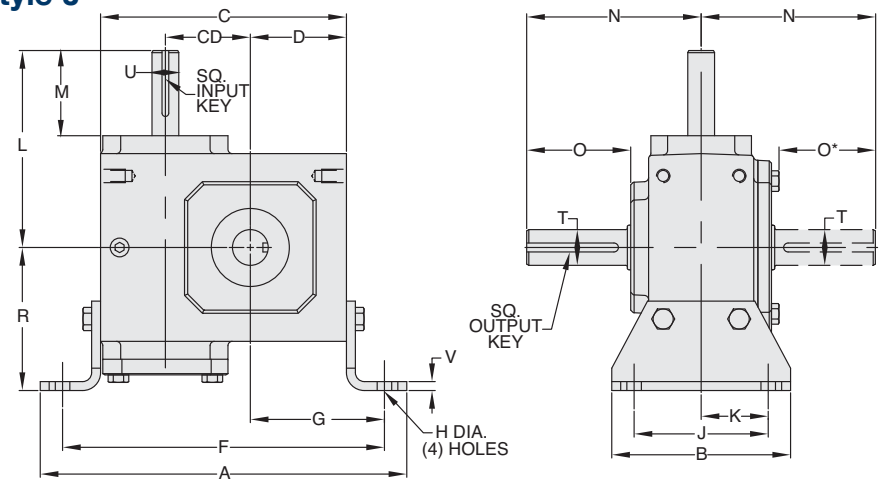
Style JMQ



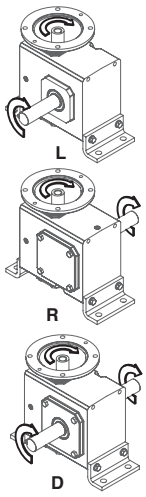
Style JM



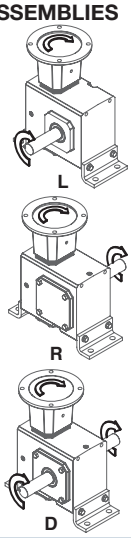
Style J



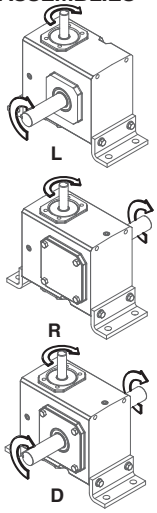
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE JMQ, JM, J DIMENSIONS (Inches)

Size	A	B	C	CD	D	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	7.42	2.75	4.66	1.33	1.72	6.42	2.60	0.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	8.06	3.75	5.00	1.54	1.88	7.06	2.91	0.34	2.75	1.38	4.35	1.76	4.25	2.56	2.35	3.75	0.25	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	8.50	3.75	5.44	1.75	2.06	7.50	3.09	0.34	2.75	1.38	4.45	1.76	4.75	2.94	2.73	4.00	0.25	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	9.06	3.75	6.00	2.06	2.31	8.06	3.34	0.34	2.75	1.38	4.82	1.76	4.34	2.66	2.45	3.75	0.25	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	9.96	5.00	6.88	2.38	2.69	8.70	3.60	0.41	3.75	1.88	5.51	2.38	4.88	2.91	2.69	4.44	0.25	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	10.46	5.00	7.38	2.63	2.94	9.20	3.85	0.41	3.75	1.88	6.07	2.38	5.25	3.28	3.07	4.44	0.25	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	12.01	5.25	8.25	3.00	3.38	10.75	4.63	0.41	4.00	2.00	6.57	2.38	5.77	3.56	3.31	4.94	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	14.00	6.25	10.06	3.25	4.19	12.50	5.41	0.53	5.00	2.50	6.76	2.38	7.03	4.24	3.99	5.25	0.31	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	16.50	6.75	11.50	4.25	4.50	15.00	6.25	0.69	5.00	2.50	9.57	3.47	7.50	3.88	3.59	6.50	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	17.69	7.20	12.69	5.25	4.88	16.31	6.69	0.69	5.81	2.91	10.88	3.38	9.00	4.72	4.47	7.75	0.50	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style J and JM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
JF	JMQ
JFC	JM
J	J

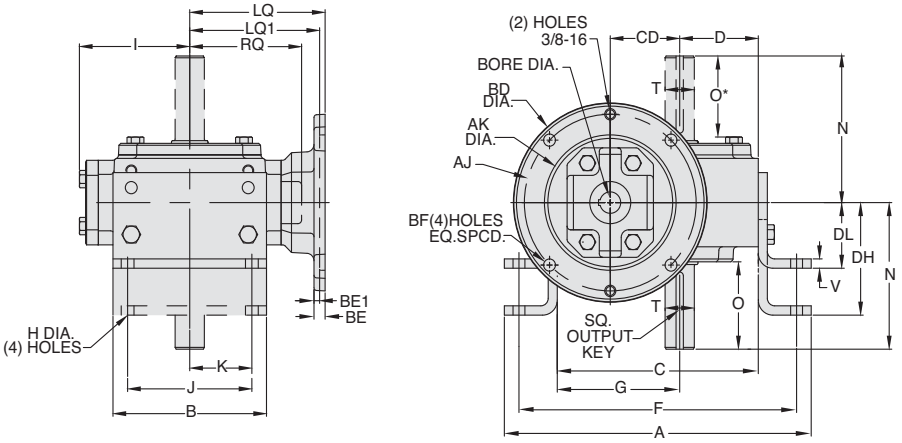
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

NH Series Dimensions

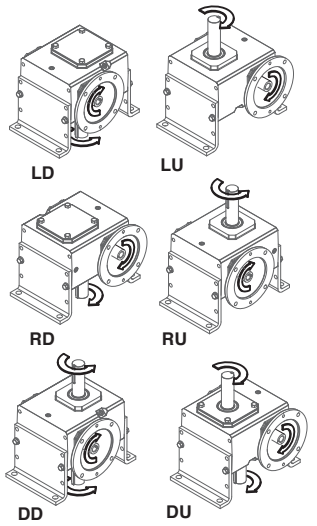
Styles: V_MQ, V_M, V_

CAST IRON NH SERIES

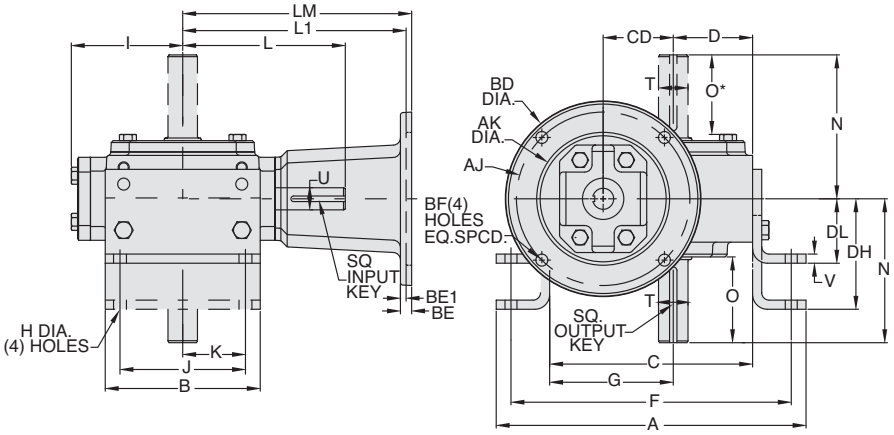
Style V(L OR H)MQ



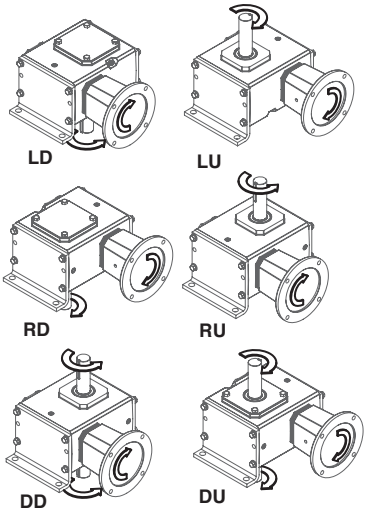
ASSEMBLIES



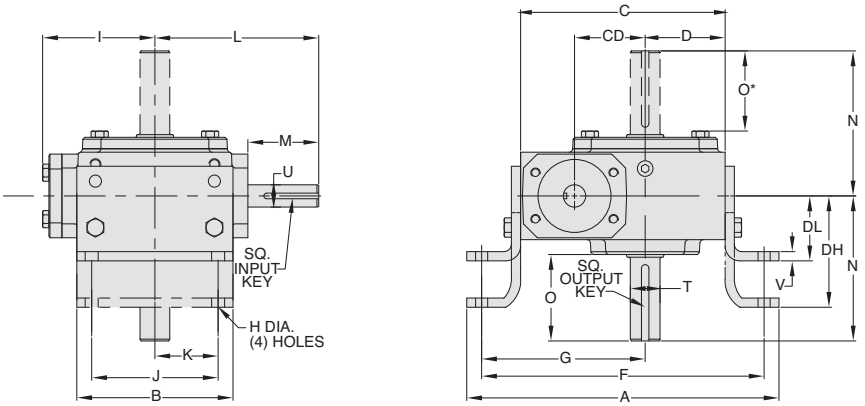
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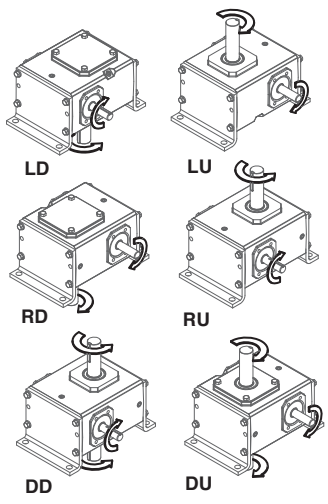
ASSEMBLIES



Style V(L OR H)



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE V_MQ, V_M, V_ DIMENSIONS (Inches)

Size	A	B	CD	DL	DH	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	7.78	4.00	1.33	2.00	3.88	6.78	4.00	0.44	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94	1.72	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	8.12	4.00	1.54	1.94	3.82	7.12	4.18	0.44	3.14	3.00	1.50	4.35	1.76	4.25	2.56	2.35	1.88	0.31	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	8.56	4.75	1.75	1.94	3.82	7.56	4.44	0.44	3.24	3.00	1.50	4.45	1.76	4.75	2.94	2.73	2.06	0.31	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	9.12	4.00	2.06	1.94	3.82	8.12	4.75	0.44	3.61	3.00	1.50	4.82	1.76	4.34	2.66	2.45	2.31	0.31	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	10.50	5.25	2.38	2.18	3.74	9.50	5.50	0.44	3.77	4.25	2.13	5.51	2.38	4.88	2.91	2.69	2.69	0.31	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	11.00	5.25	2.63	2.18	3.74	10.00	5.75	0.44	4.34	4.25	2.13	6.07	2.38	5.25	3.28	3.07	2.94	0.31	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	11.87	6.00	3.00	2.31	3.69	10.87	6.18	0.44	4.84	4.75	2.38	6.57	2.38	5.77	3.56	3.31	3.38	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	13.86	8.00	3.25	3.50	4.81	12.82	7.25	0.47	5.02	7.00	3.50	6.76	2.38	7.03	4.24	3.99	4.19	0.31	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	16.38	9.50	4.25	5.00	7.50	15.00	8.75	0.69	6.10	7.88	3.94	9.57	3.47	7.50	3.88	3.59	4.50	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	18.29	11.50	5.25	5.16	9.16	16.69	9.81	0.78	7.50	10.00	5.00	10.88	3.38	9.00	4.72	4.47	4.88	0.50	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style V_ and V_M only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
SLF	VLMQ
SLFC	VLM
SL	VL
SHF	VHMQ
SHFC	VHM
SH	VH

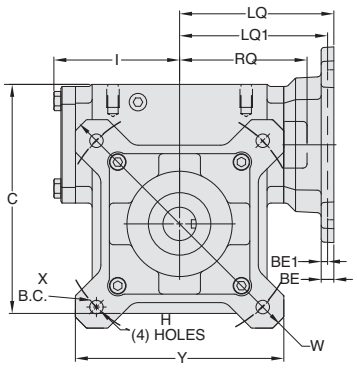
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

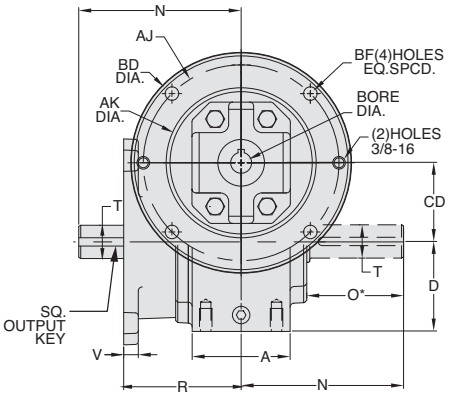
NH Series Dimensions

Styles: FMQ, FM, F

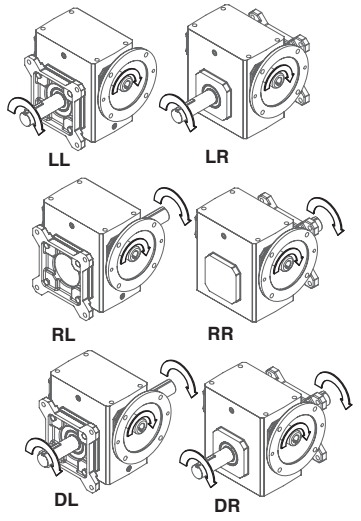
CAST IRON NH SERIES

Style FMQ

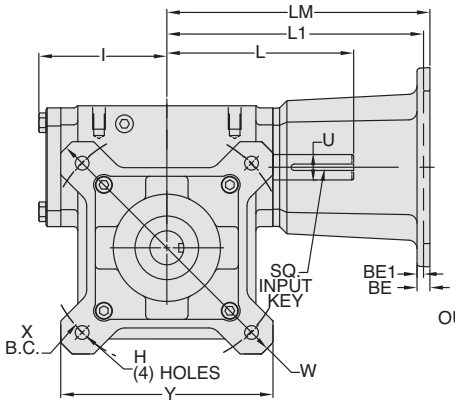


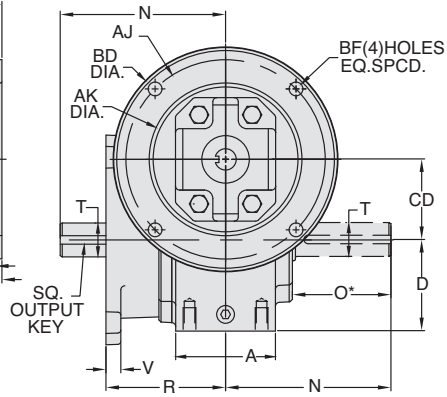


ASSEMBLIES

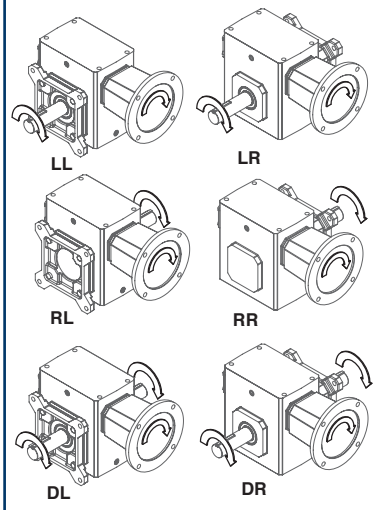


Style FM

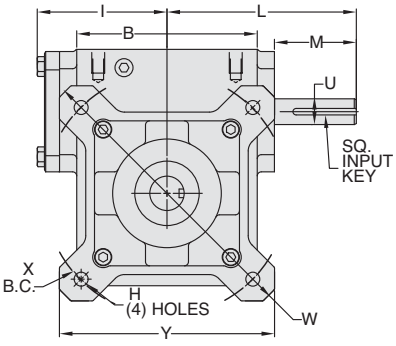


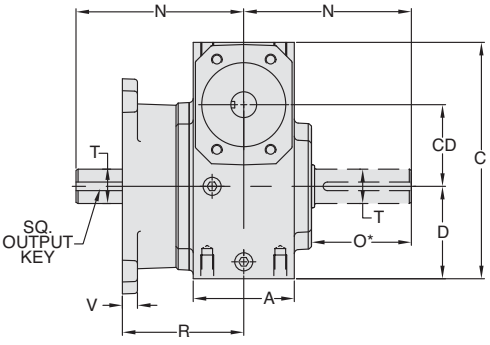


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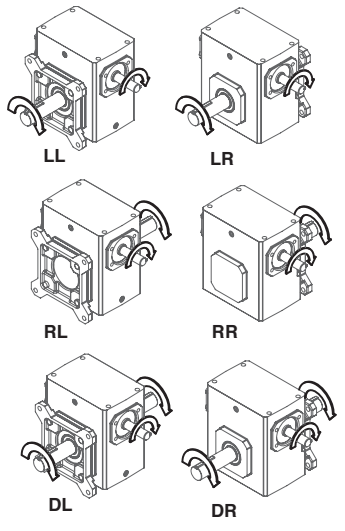


Style F





ASSEMBLIES



Sizes 813-852 output flange must be mounted at Factory on styles FMQ, FM, F.

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FMQ, FM, F DIMENSIONS (Inches)

Size	A	B	BL	C	CD	D	H	I	L	M	N	O*	R	W	X	Y	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	2.82	3.80	0.38	4.66	1.33	1.72	0.34	2.61	3.82	1.76	4.00	1.94	2.52	5.92	5.00	4.50	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	0.38	5.00	1.54	1.88	0.34	3.14	4.35	1.76	4.25	2.35	3.50	6.79	5.88	5.12	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	2.56	4.50	0.38	5.44	1.75	2.06	0.34	3.24	4.45	1.76	4.75	2.73	2.73	6.64	5.88	5.00	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	2.50	4.50	0.38	6.00	2.06	2.31	0.34	3.61	4.82	1.76	4.34	2.45	3.51	7.37	6.25	5.56	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	2.94	5.25	0.44	6.88	2.38	2.69	0.34	3.77	5.51	2.38	4.88	2.69	3.47	8.29	7.06	6.24	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	2.88	5.75	0.50	7.38	2.63	2.94	0.34	4.34	6.07	2.38	5.25	3.07	3.56	8.90	7.63	6.68	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	3.12	6.62	0.50	8.25	3.00	3.38	0.41	4.84	6.57	2.38	5.77	3.31	3.69	9.50	8.63	7.34	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	4.44	8.00	0.56	10.06	3.25	4.19	0.53	5.02	6.76	2.38	7.03	3.99	5.00	11.84	10.63	9.00	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	4.75	9.75	0.62	11.50	4.25	4.50	0.56	6.10	9.57	3.47	7.50	3.59	4.50	12.95	11.50	9.66	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	6.19	11.00	0.75	12.69	5.25	4.88	0.69	7.50	10.88	3.38	9.00	4.47	5.56	15.50	14.00	11.76	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style F and FM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
KF & VF	FMQ
KFC & VFC	FM
K & V	F

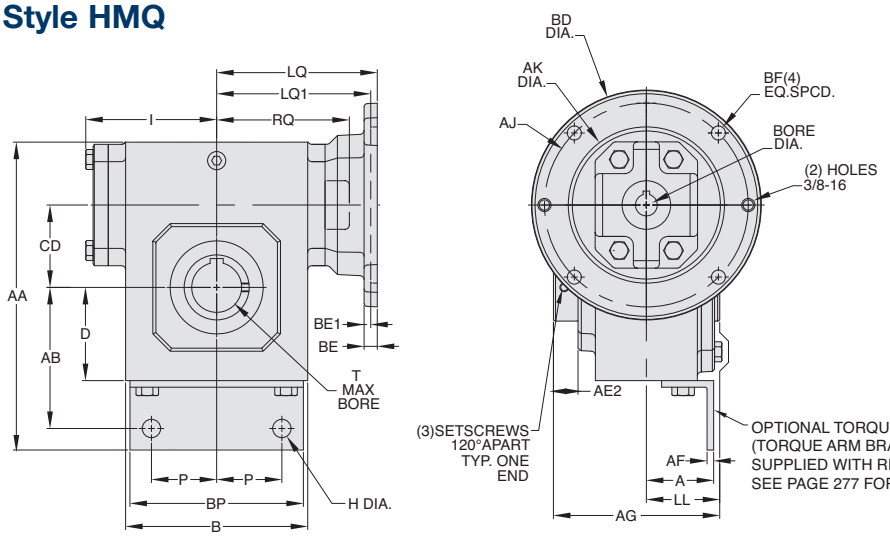
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

NH Series Dimensions

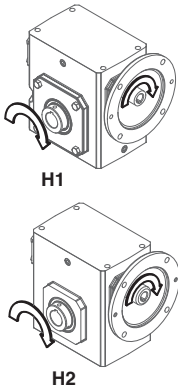
Styles: HMQ, HM, H

CAST IRON NH SERIES

Style HMQ

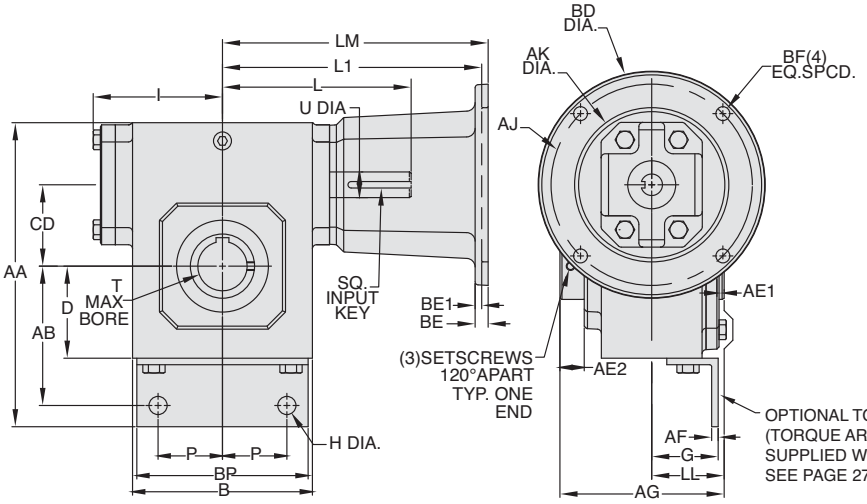


ASSEMBLIES

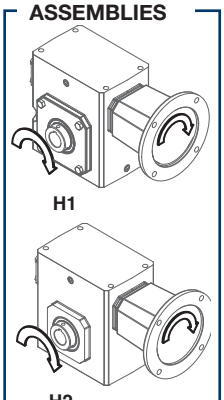


H1 SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style HM

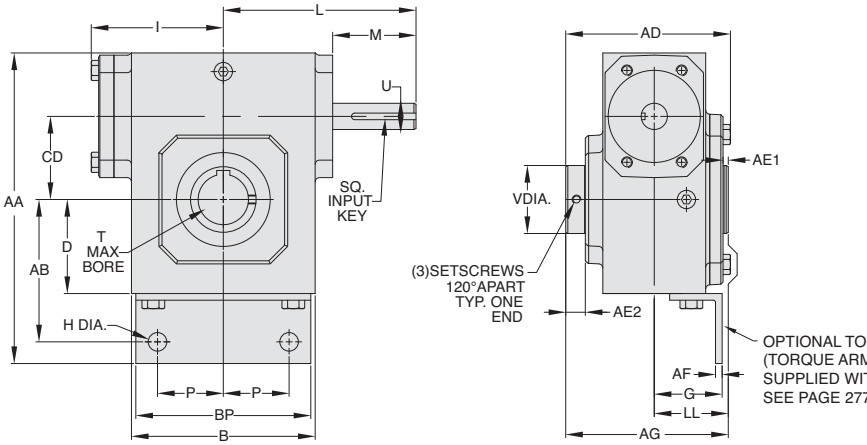


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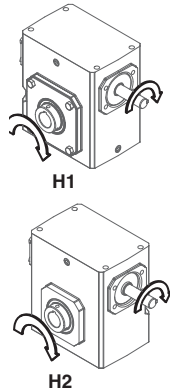


H1 SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style H



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

STYLE HMQ, HM, H DIMENSIONS (Inches)

Size	AA	AB	AD	AE1	AE2	AF	AG	B	C	CD	D	G	H	I	L	LL	M	P	V	T MAX +0.000 +0.0025	U +0.000 -0.0015	Input Key*	Output Key
NH813	6.660	3.100	3.900	0.500	0.530	0.190	4.750	3.800	4.660	1.330	1.720	1.880	0.530	2.610	3.820	2.380	1.760	1.380	1.000	0.625	0.500	1/8 x 1.00	3/16 x 1.50
NH815	7.000	3.260	3.590	0.376	0.510	0.190	4.080	4.060	5.000	1.540	1.880	1.820	0.530	3.140	4.350	1.880	1.760	1.380	1.000	0.625	0.625	3/16 x 1.38	3/16 x 1.50
NH818	7.440	3.440	3.830	0.551	0.560	0.190	4.290	4.500	5.440	1.750	2.060	1.820	0.530	3.240	4.450	1.980	1.760	1.380	1.440	1.000	0.625	3/16 x 1.38	1/4 x 3.00
NH821	8.000	3.690	3.570	0.300	0.850	0.190	4.650	4.500	6.000	2.060	2.310	1.820	0.530	3.610	4.820	2.120	1.760	1.380	1.940	1.500	0.625	3/16 x 1.38	3/8 x 3.00
NH824	8.880	4.070	4.160	0.180	0.560	0.190	4.650	5.250	6.880	2.380	2.690	1.940	0.530	3.770	5.510	2.120	2.380	1.880	1.940	1.500	0.750	3/16 x 1.38	3/8 x 3.00
NH826	9.380	4.320	4.150	0.595	0.560	0.190	4.650	5.750	7.380	2.630	2.940	1.940	0.530	4.340	6.070	2.120	2.380	1.880	1.940	1.500	0.750	3/16 x 1.63	3/8 x 3.00
NH830	10.250	4.760	4.670	0.460	0.560	0.250	5.160	6.620	8.250	3.000	3.380	2.320	0.530	4.840	6.570	2.380	2.380	2.380	2.510	1.938	0.875	3/16 x 1.63	1/2 x 3.00
NH832	12.060	5.570	5.830	0.490	0.570	0.250	6.310	8.000	10.060	3.250	4.190	2.870	0.530	5.020	6.760	2.950	2.380	3.510	2.510	1.938	0.875	3/16 x 1.63	1/2 x 3.00
NH842	14.000	6.380	7.530	1.000	0.630	0.380	8.500	9.750	11.500	4.250	4.500	3.260	0.530	6.100	9.570	4.250	3.470	3.690	2.750	2.188	1.250	1/4 x 2.50	1/2 x 3.00
NH852	15.190	6.760	8.810	1.620	0.970	0.380	10.500	11.000	12.690	5.250	4.880	3.630	0.530	7.500	10.880	5.250	3.380	4.620	4.260	3.438	1.250	1/4 x3.00	7/8 x3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- Max bore dimensions shown. For additional bores available, refer to page 20.

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style H and HM only.

Note: Torque arm bracket available separately. Refer to page 277 for kits. If a special bracket is required, refer to Style BMQ dimensions for mounting pad dimensions on top/bottom of reducer.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
YF	HMQ
YFC	HM
Y	H

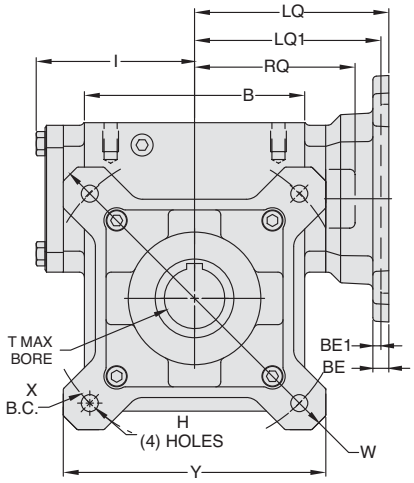
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

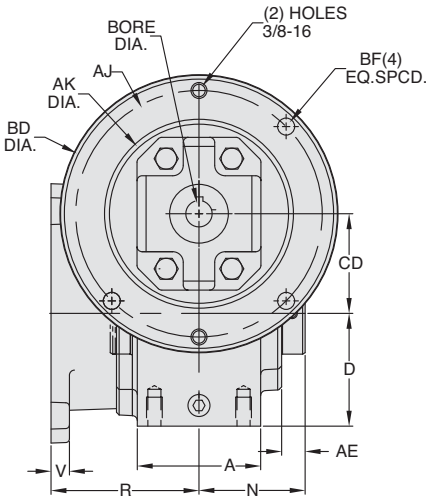
NH Series Dimensions

Styles: FHMQ, FHM, FH

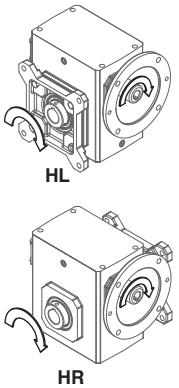
CAST IRON NH SERIES

Style FHMQ

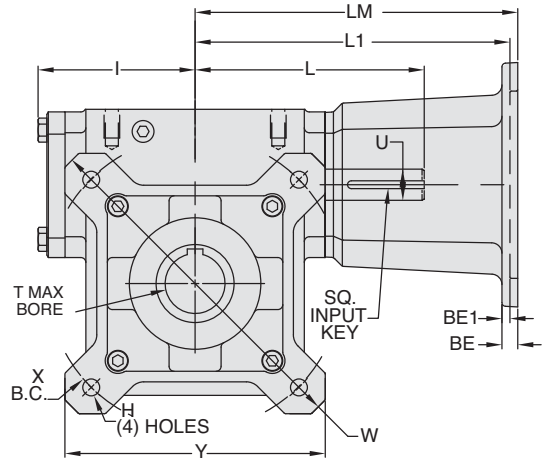


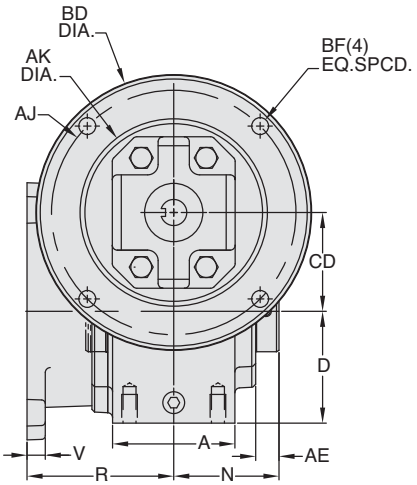


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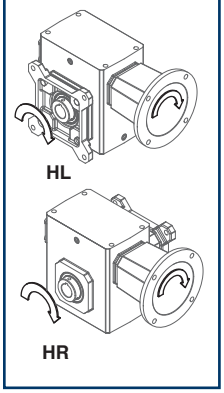


Style FHM

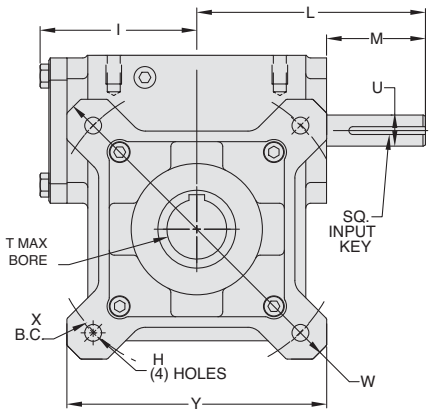


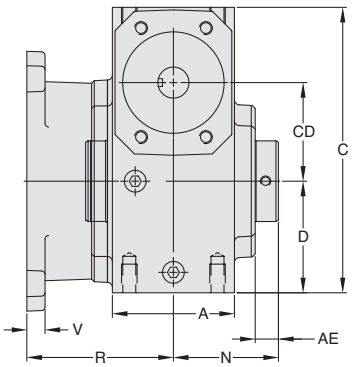


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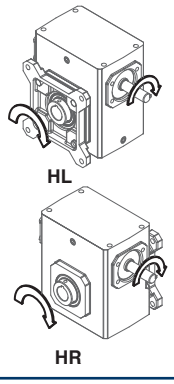


Style FH





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

NH Series Dimensions

Styles: FHMQ, FHM, FH

STYLE FHMQ, FHM, FH DIMENSIONS (Inches)

Size	A	AE	B	BL	C	CD	D	H	I	L	LL	M	N	R	V	W	X	Y	T MAX• -0.000 +0.0025	U +0.000 -0.0015	Input Key❊	Output Key •
NH813	2.82	0.53	3.80	0.38	4.66	1.33	1.72	0.34	2.61	3.82	2.38	1.76	2.37	2.52	1.00	5.92	5.00	4.50	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH815	2.57	0.51	4.06	0.38	5.00	1.54	1.88	0.34	3.14	4.35	1.88	1.76	2.20	3.50	1.00	6.79	5.88	5.12	0.625	0.625	3/16 X 1.38	3/16 x 1.50
NH818	2.56	0.56	4.50	0.38	5.44	1.75	2.06	0.34	3.24	4.45	1.92	1.76	2.37	2.74	1.44	6.64	5.88	5.00	1.000	0.625	3/16 X 1.38	1/4 x 3.00
NH821	2.50	0.85	4.50	0.38	6.00	2.06	2.31	0.34	3.61	4.82	2.12	1.76	2.53	3.50	1.94	7.37	6.25	5.56	1.500	0.625	3/16 X 1.38	3/8 x 3.00
NH824	2.94	0.56	5.25	0.44	6.88	2.38	2.69	0.34	3.77	5.51	2.12	2.38	2.53	3.53	1.94	8.29	7.06	6.24	1.500	0.750	3/16 X 1.63	3/8 x 3.00
NH826	2.88	0.56	5.75	0.50	7.38	2.63	2.94	0.34	4.34	6.07	2.12	2.38	2.53	3.62	1.94	8.90	7.63	6.68	1.500	0.750	3/16 X 1.63	3/8 x 3.00
NH830	3.12	0.56	6.62	0.50	8.25	3.00	3.38	0.41	4.84	6.57	2.38	2.38	2.78	3.75	2.51	9.50	8.63	7.34	2.188	0.875	3/16 X 1.63	1/2 x 3.00
NH832	4.44	0.57	8.00	0.56	10.06	3.25	4.19	0.53	5.02	6.76	2.95	2.38	3.36	5.06	2.51	11.84	10.63	9.00	2.188	0.875	3/16 X 1.63	1/2 x 3.00
NH842	4.75	0.63	9.75	0.62	11.50	4.25	4.50	0.56	6.10	9.57	4.25	3.47	4.25	4.56	2.75	12.95	11.50	9.66	2.188	1.250	1/4 X 2.50	1/2 x 3.00
NH852	6.19	0.97	11.00	0.75	12.69	5.25	4.88	0.69	7.50	10.88	5.25	3.38	5.25	5.62	4.26	15.50	14.00	11.76	3.438	1.250	1/4 X 3.00	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- Max bore dimensions shown. For additional bores available, refer to page 20.
- ◆ Keyway width by depth
- ■ 48CZ not available
- ❖ Metric IEC B5 input flange options are available only on quill input styles.
- ❊ Style FH and FHM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
MF	FHMQ
MFC	FHM
M	FH

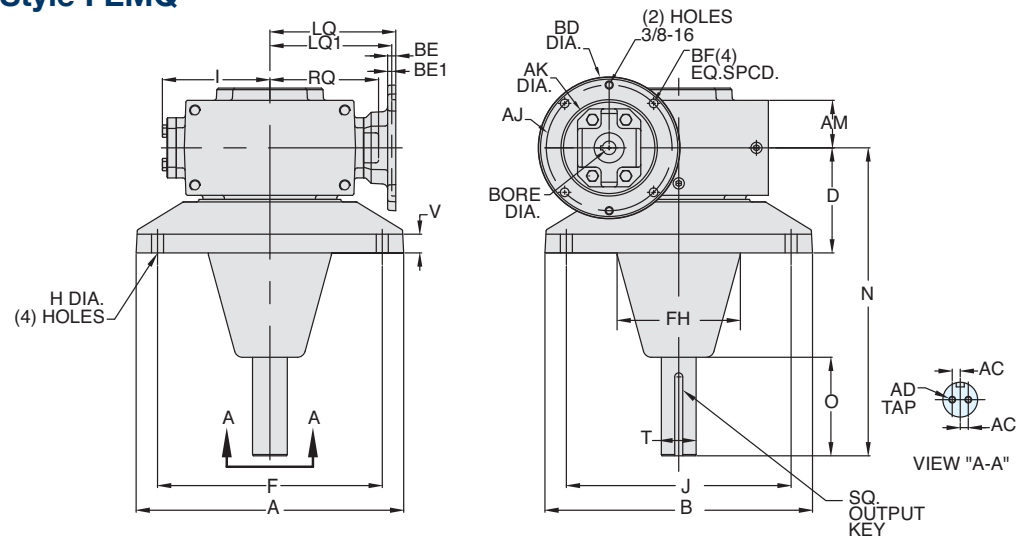
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

NH Series Dimensions

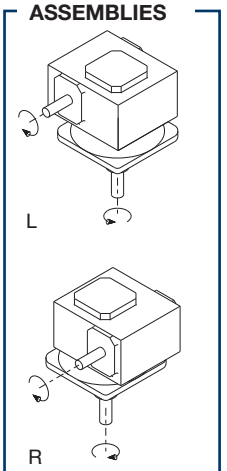
Styles: FEMQ, FEM, FE

CAST IRON NH SERIES

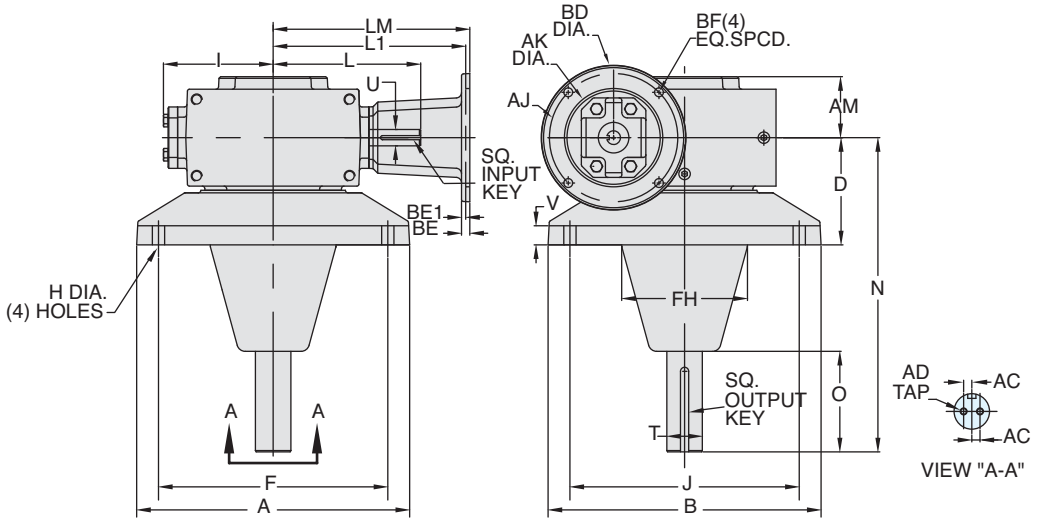
Style FEMQ



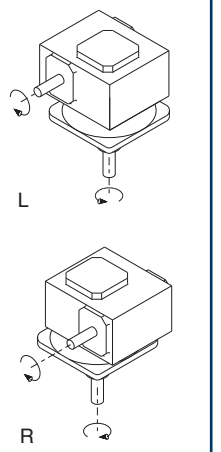
ASSEMBLIES



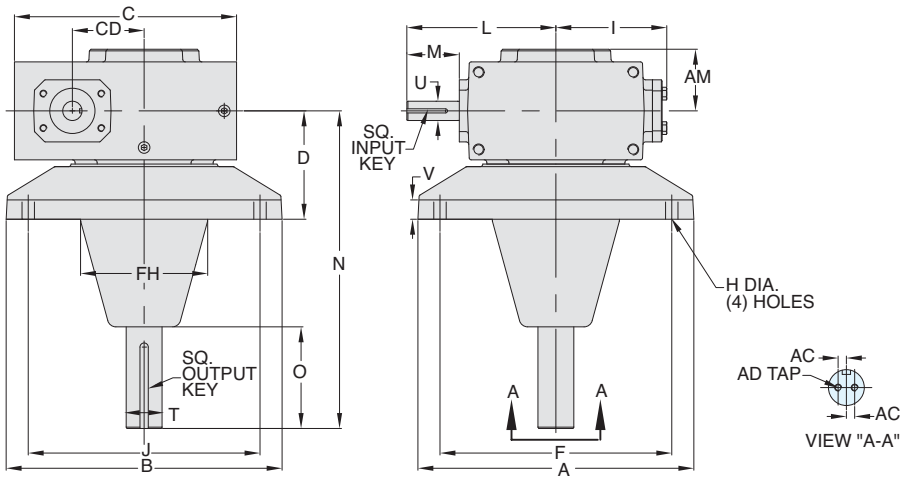
Style FEM



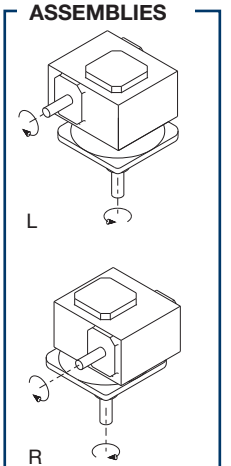
ASSEMBLIES



Style FE



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FEMQ, FEM, FE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	C	CD	D	F	FH	H	I	J	L	M	N	O	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	P**
NH830	11.00	0.375	.31-18 UNC X 1.00 DP	2.22	11.00	8.25	3.00	3.67	9.00	5.12	.56	4.84	9.00	6.57	2.38	13.15	4.66	0.78	1.438	.875	3/16 X 1.63	3/8 x 3.88
NH832	12.50	0.375	.31-18 UNC X 1.00 DP	2.79	12.50	10.06	3.25	4.91	10.50	5.75	.56	5.02	10.50	6.76	2.38	14.39	4.63	0.88	1.625	.875	3/16 X 1.63	3/8 x 3.69
NH842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	11.50	4.25	5.74	12.00	6.75	.69	6.10	12.00	9.57	3.47	16.25	5.66	1.00	1.688	1.25	1/4 X 2.50	3/8 x 4.68
NH852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	12.69	5.25	6.00	14.00	8.00	.81	7.50	14.00	10.88	3.38	16.50	5.62	1.25	2.188	1.25	1/4 X 3.00	1/2 x 4.63

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH830	N/A	8.82	9.82	N/A	5.69■	6.12	6.56	N/A	5.32■	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88■	6.31	6.75	N/A	5.51■	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style FE and FEM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
EF	FEMQ
EFC	FEM
E	FE

Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

NH Series Dimensions

Styles: BLMQ, BLM, BL

CAST IRON NH SERIES

TORQUE LIMITING DESIGN



Features

- ★ No external parts to align, assemble, or adjust for easy installation.
- ★ Pre-set to your torque limit for reduced installation time.
- ★ Clutch slips automatically to reduce costly downtime and shock damage.
- ★ When overload is removed the reducer returns to normal operation without having to reset the clutch.
- ★ Internal slip clutch runs in oil bath for longer life, rust prevention and less maintenance.
- ★ Lifetime torque setting eliminates the need for frequent adjustments.
- ★ Easily adjusted in the field, eliminating the need for factory re-calibration.

STYLE BLMQ, BLM, BL DIMENSIONS (Inches)

Size	A	B	C	CD	D	F	G	H Tap Size	H Depth	I	J	K	L	LL	M	N	O	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH818	2.56	4.50	5.44	1.75	2.06	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	4.45	3.60	1.76	4.75	2.94	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH824	2.94	5.25	6.88	2.38	2.69	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	5.51	3.78	2.38	4.88	2.91	1.000	0.750	3/16 X 1.63	1/4 X 1.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style BL and BLM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

CAPACITY RATINGS

Ratings	NH818 Output RPM	NH818 Max. Input H.P.	NH818 Output H.P.	NH818 Output Torque	NH824 Max. Input H.P.	NH824 Output H.P.	NH824 Output Torque
5	350	1.70	1.56	281	3.89	3.63	653
7 1/2	233	1.67	1.52	407	3.47	3.20	863
10	175	1.37	1.23	442	3.08	2.81	1011
15	117	1.03	.876	473	2.30	2.03	1095
20	87.5	.814	.677	487	1.83	1.56	1121
25	70.0	.665	.537	483	1.51	1.25	1124
30	58.3	.597	.451	487	1.32	1.05	1133
40	43.8	.469	.338	486	1.04	.778	1121
50	35.0	.377	.258	465	.847	.602	1084
60	29.2	.317	.204	442	.674	.466	1007
80	21.9	.208	.124	356	.455	.288	830
100	17.5	.141	.077	277	.307	.180	468

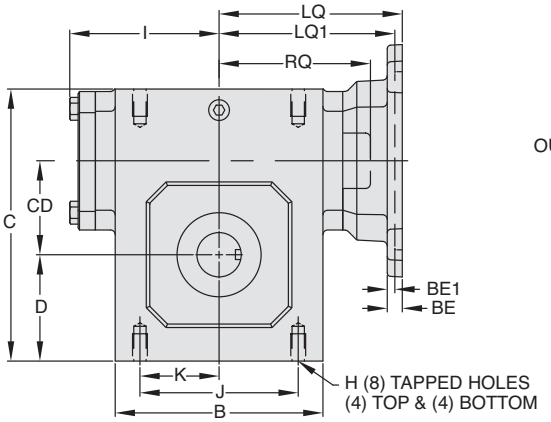
NOTE: All ratings based on 1750 RPM input speed with service factor of 1.0.

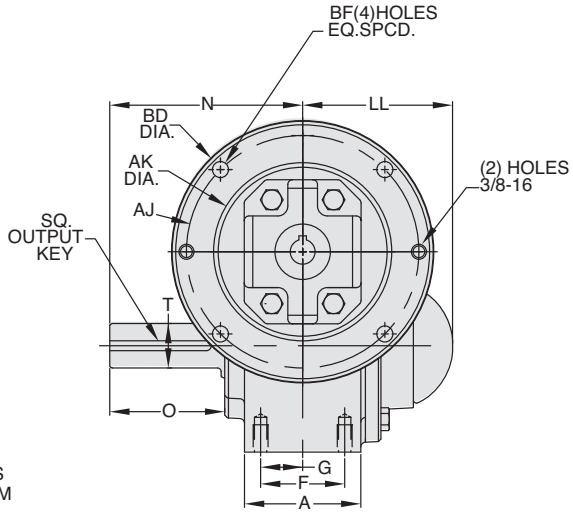
GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
ULF	BLMQ
ULFC	BLM
UL	BL

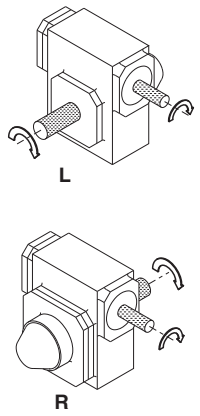
Refer to page 8 for complete interchange guide for original Grove Gear OE Series products.

Style BLMQ

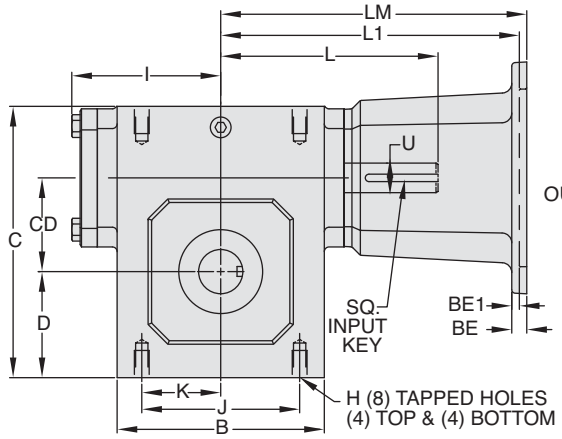


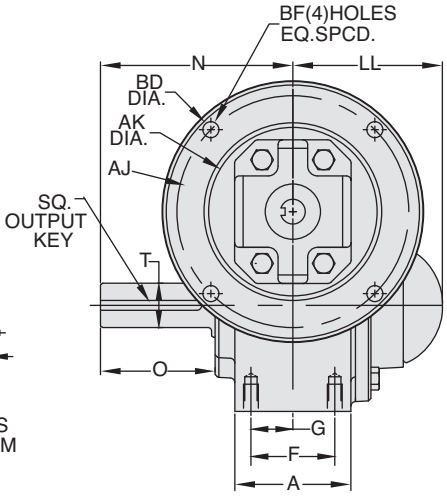


ASSEMBLIES

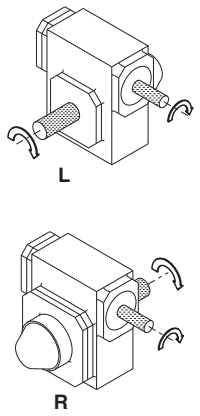


Style BLM

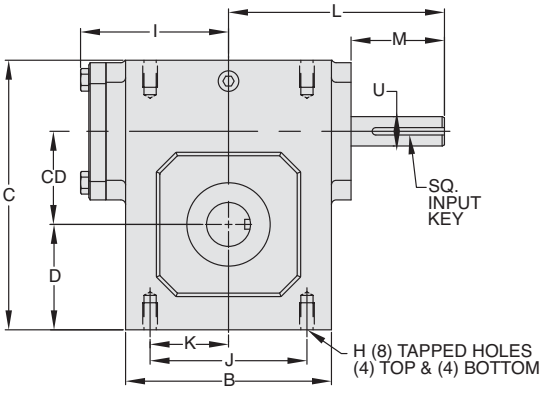


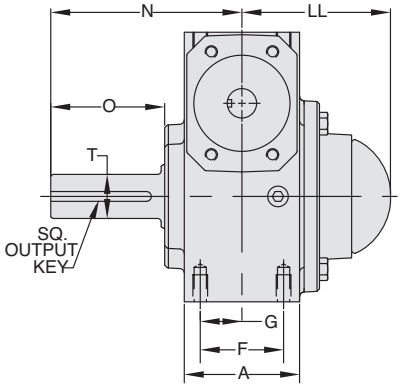


ASSEMBLIES

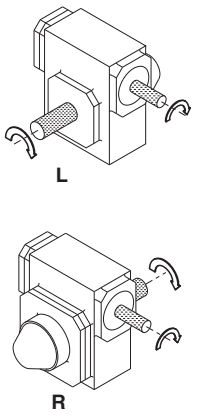


Style BL





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

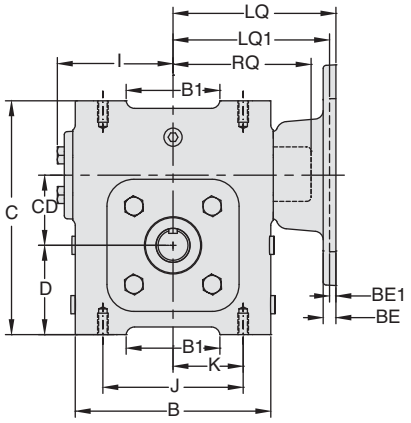
ELECTRA-GEAR

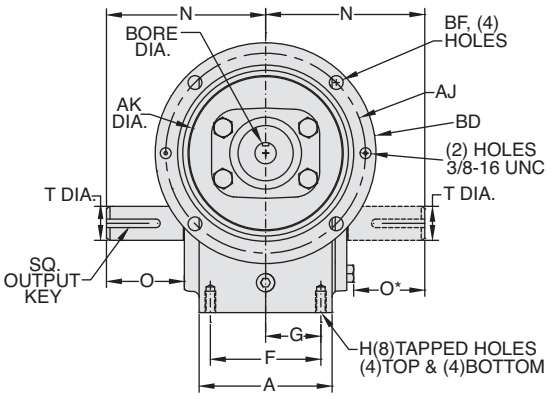
EL Series Dimensions

Styles: BMQ, BM, B

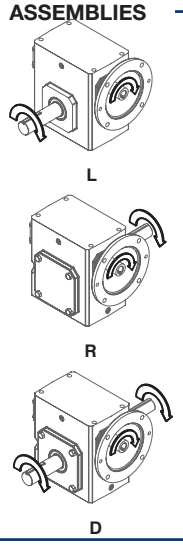
ALUMINUM EL SERIES

Style BMQ

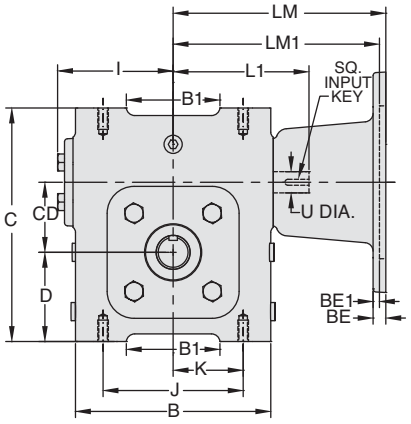


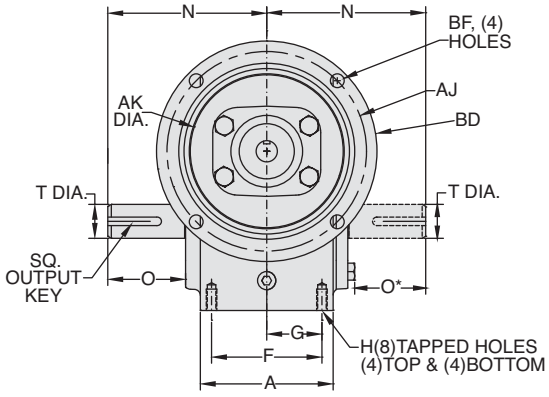


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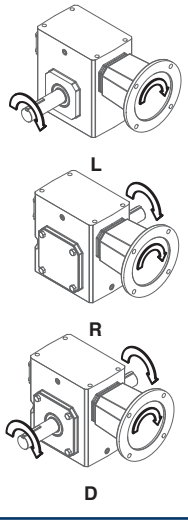


Style BM

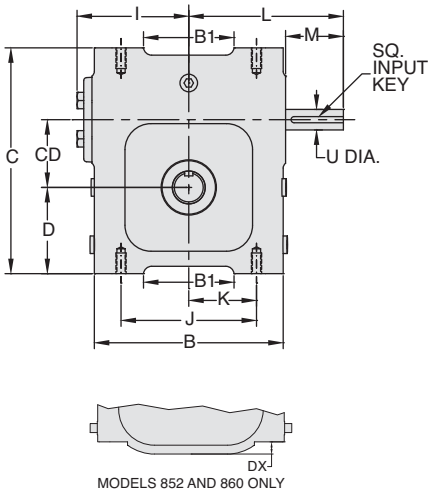




ASSEMBLIES

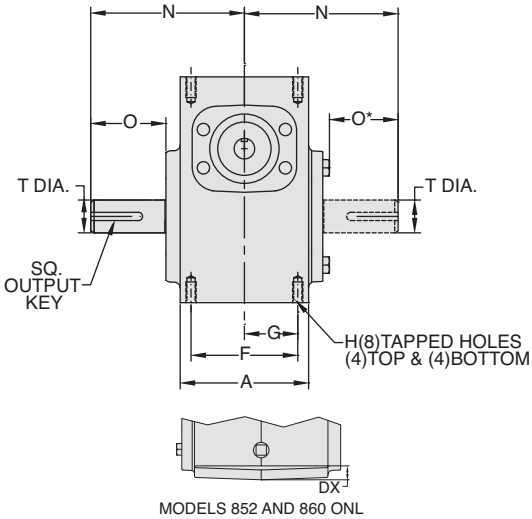


Style B



MODELS 852 AND 860 ONLY

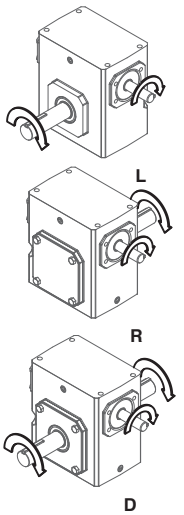
SIDE VIEW



MODELS 852 AND 860 ONL

END VIEW

ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE BMQ, BM, B DIMENSIONS (Inches)

Size	A	B	B1	C	CD	D	DX	F	G	H		I	J	K	L	M	N	O	O*	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style B Only)	Input Key (Style BM only)	Output Key
										Tap Size	Depth													
EL813	2.82	3.80	--	4.66	1.33	1.72	--	2.00	1.00	5/16-18	0.50	2.40	3.25	1.63	3.82	1.87	4.00	2.16	1.96	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.50	4.83	2.48	5.86	1.75	2.31	--	2.94	1.47	5/16-18	0.63	3.03	3.69	1.84	4.45	1.78	4.39	2.05	1.85	0.750	0.625	3/16 x1.38	3/16 x .500	3/16 x 1.38
EL821	3.91	5.75	2.76	6.88	2.06	2.63	--	3.25	1.63	3/8-16	0.87	3.40	4.13	2.06	4.82	1.76	4.68	2.29	2.09	1.000	0.625	3/16 x1.38	3/16 x .500	1/4 x 1.44
EL824	4.06	5.86	--	6.94	2.38	2.50	--	2.88	1.44	3/8-16	0.69	3.61	5.00	2.50	5.51	2.45	5.14	2.66	2.46	1.125	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL826	4.84	7.17	4.21	8.00	2.63	3.25	--	3.38	1.69	3/8-16	0.69	4.17	5.00	2.50	6.07	2.45	5.63	2.73	2.53	1.250	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL830	5.25	8.11	4.50	8.94	3.00	3.50	--	4.13	2.06	1/2-13	1.00	4.81	5.75	2.88	6.56	2.31	6.62	3.60	3.37	1.500	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL832	5.25	8.11	4.53	10.50	3.25	4.00	--	4.13	2.06	1/2-13	1.00	5.00	6.63	3.31	6.75	2.31	6.62	3.60	3.37	1.625	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL842	6.13	9.63	5.71	11.69	4.25	4.50	--	3.75	1.88	5/8-11	1.19	6.15	7.00	3.50	9.57	3.47	8.12	4.50	4.22	1.750	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	7.19	11.50	7.82	12.25	5.25	4.25	0.75	5.25	2.63	3/4-10	1.44	7.55	9.62	4.81	10.88	3.38	9.06	4.78	4.50	2.000	1.250	1/4 x 3.00	1/4 x 3.00	1/2 x 2.50
EL860	7.00	13.50	--	14.25	6.00	5.00	1.63	5.38	2.69	7/8-9	1.63	7.88	11.00	5.50	10.99	3.00	10.75	5.25	5.25	2.250	1.500	3/8 x 3.00	3/8 x 2.75	1/2 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

– Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

– EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

– See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
MSC or MLSC	BMQ
MC or MLC	BM
M or ML	B
M + "KV" Kit	B + "KV" Kit

Convert Style B to motorized coupling input using kits shown on page 278.

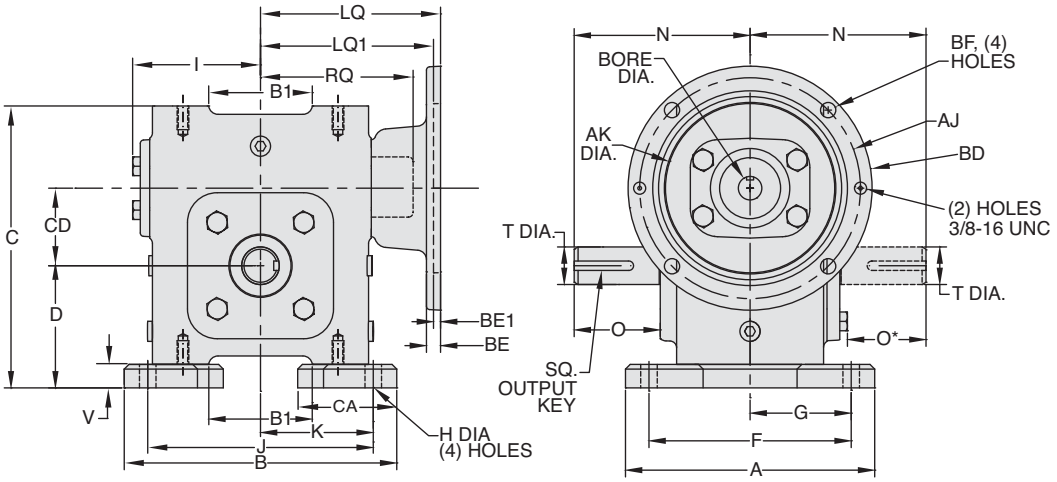
ELECTRA-GEAR

EL Series Dimensions

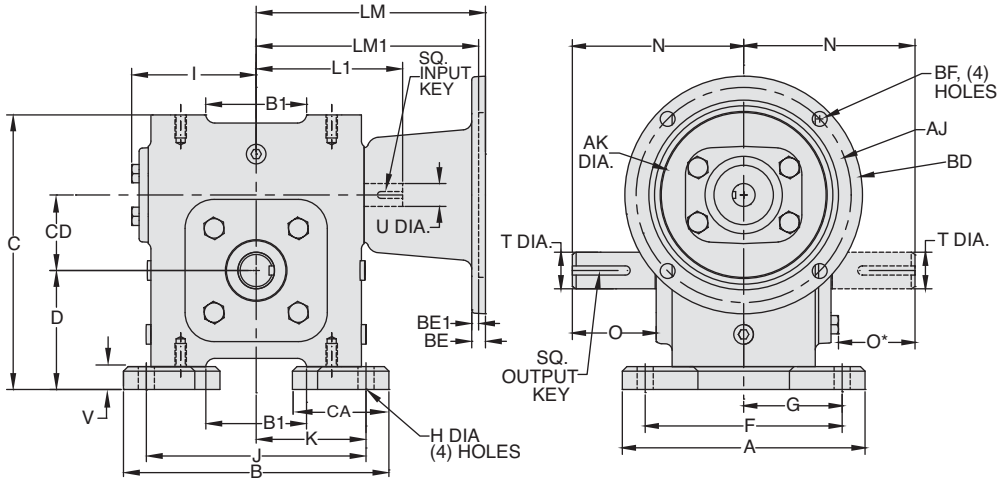
Styles: TMQ, TM, T

ALUMINUM EL SERIES

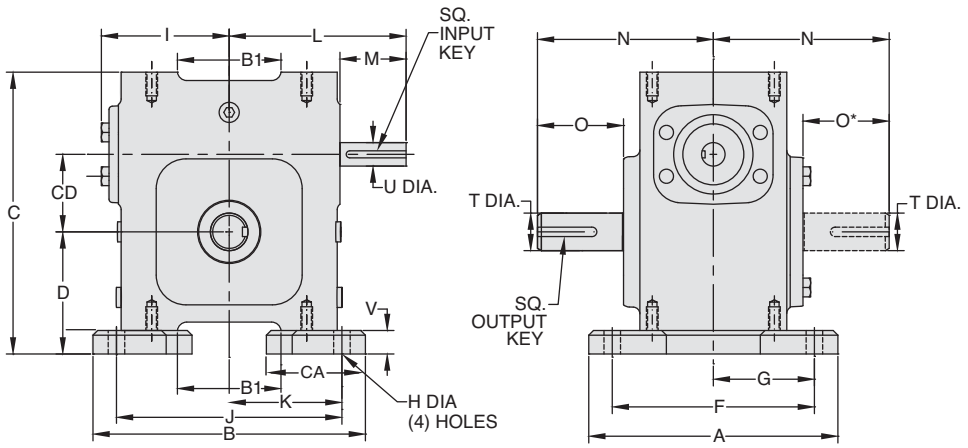
Style TMQ



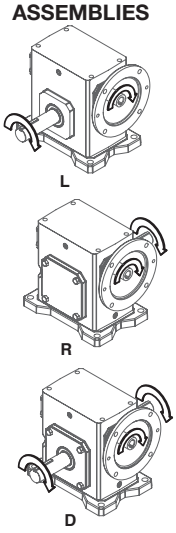
Style TM



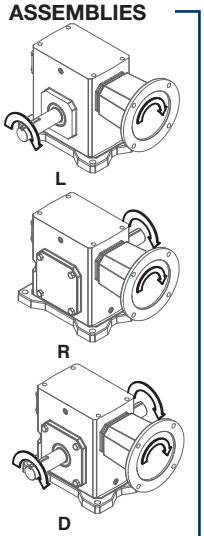
Style T



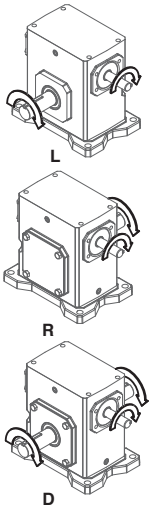
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE TMQ, TM, T DIMENSIONS (Inches)

Size	A	B	B1	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style T Only)	Input Key (Style TM only)	Output Key
EL813	4.06	5.13	--	5.19	1.56	1.33	2.25	3.31	1.66	0.34	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	0.53	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	5.19	6.06	2.48	6.42	2.15	1.75	2.84	4.38	2.19	0.38	3.03	5.25	2.63	4.35	1.78	4.39	2.05	1.85	0.56	0.750	0.625	3/16 x1.38	3/16 x .500	3/16 x 1.38
EL821	6.63	7.25	2.76	7.51	2.66	2.06	3.25	5.38	2.69	0.44	3.40	6.00	3.00	4.71	1.76	4.68	2.29	2.09	0.63	1.000	0.625	3/16 x1.38	3/16 x .500	1/4 x 1.44
EL824	6.38	7.69	--	7.63	2.59	2.38	3.25	4.88	2.44	0.47	3.61	6.19	3.09	5.51	2.45	5.14	2.66	2.46	0.75	1.125	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL826	6.63	8.13	4.21	8.69	2.81	2.63	3.94	5.38	2.69	0.50	4.17	6.88	3.44	6.07	2.45	5.63	2.73	2.53	0.69	1.250	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL830	9.00	9.88	4.50	9.69	3.69	3.00	4.25	7.50	3.75	0.56	4.81	8.38	4.19	6.56	2.31	6.62	3.60	3.37	0.75	1.500	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL832	9.13	10.88	4.53	11.25	3.69	3.25	4.75	7.63	3.82	0.56	5.00	9.38	4.69	6.75	2.31	6.62	3.60	3.37	0.75	1.625	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL842	10.00	10.50	5.71	12.94	3.38	4.25	5.75	8.00	4.00	0.81	6.15	8.50	4.25	9.57	3.47	8.12	4.50	4.22	1.25	1.750	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	10.75	12.13	7.82	13.75	2.50	5.25	5.75	8.75	4.38	0.81	7.55	9.75	4.88	10.88	3.38	9.06	4.78	4.50	1.50	2.000	1.250	1/4 x 3.00	1/4 x 3.00	1/2 x 2.50
EL860	11.75	13.50	--	16.00	4.35	6.00	6.75	9.50	4.75	0.94	7.88	10.50	5.25	10.99	3.00	10.75	5.25	5.25	1.75	2.250	1.500	3/8 x 3.00	3/8 x 2.75	1/2 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
ASC or ALSC	TMQ
AC or ALC	TM
A or AL	T
A + "KV" Kit	T + "KV" Kit

Convert Style T to motorized coupling input using kits shown on page 278.

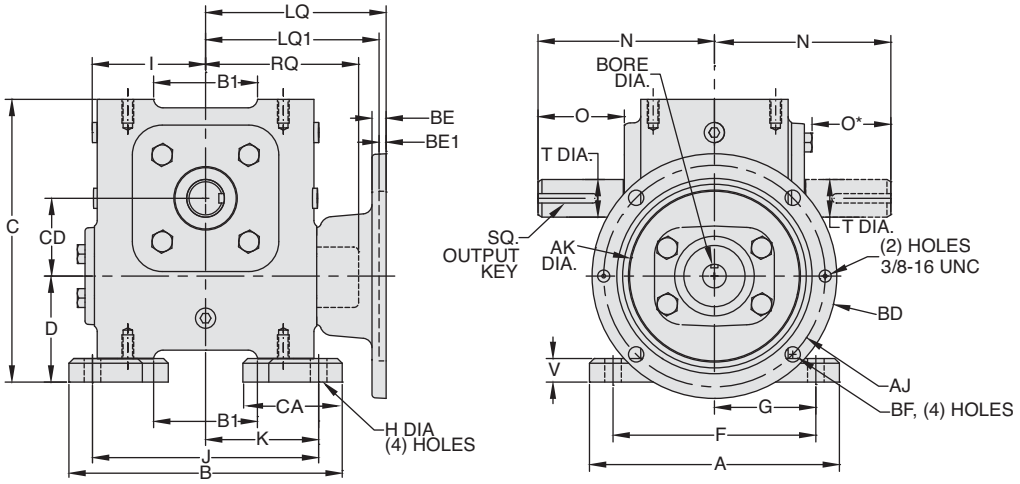
ELECTRA-GEAR

EL Series Dimensions

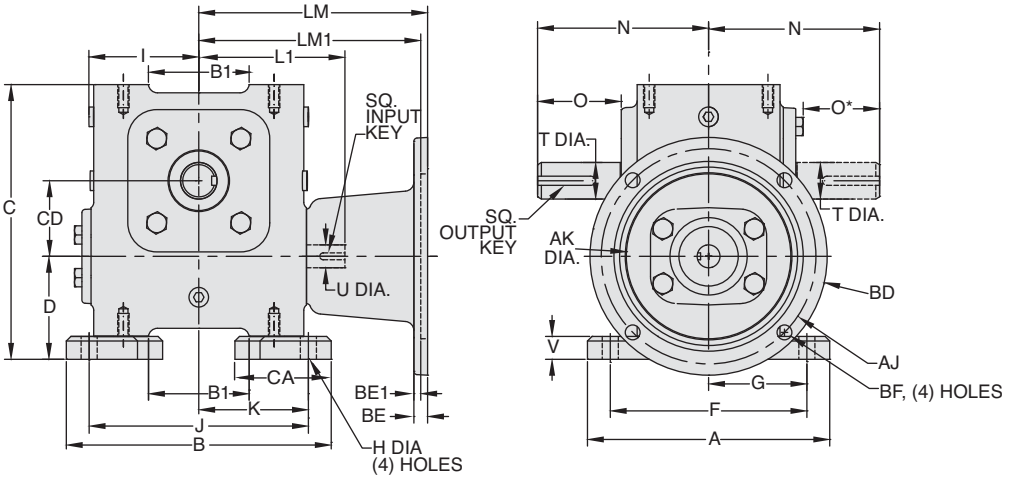
Styles: UMQ, UM, U

ALUMINUM EL SERIES

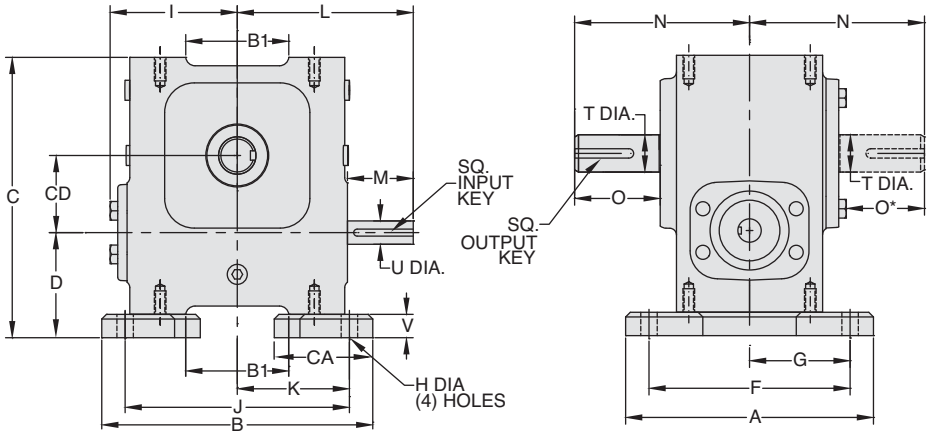
Style UMQ



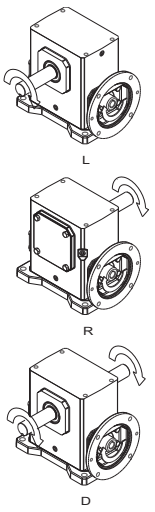
Style UM



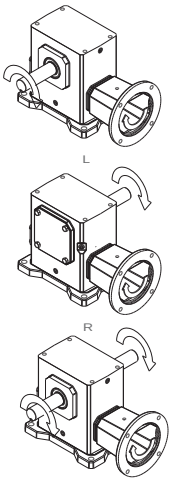
Style U



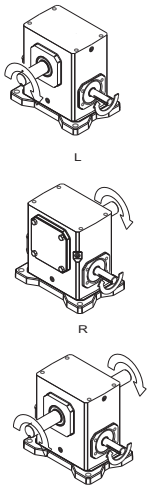
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE UMQ, UM, U DIMENSIONS (Inches)

Size	A	B	B1	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style U Only)	Input Key (Style UM only)	Output Key
EL813	4.06	5.13	--	5.19	1.56	1.33	2.13	3.31	1.66	0.34	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	0.53	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	5.19	6.06	2.48	6.42	2.15	1.75	2.37	4.38	2.19	0.38	3.03	5.25	2.63	4.35	1.78	4.39	2.05	1.85	0.56	0.750	0.625	3/16 x1.38	3/16 x .500	3/16 x 1.38
EL821	6.63	7.25	2.76	7.51	2.66	2.06	2.82	5.38	2.69	0.44	3.40	6.00	3.00	4.71	1.76	4.68	2.29	2.09	0.63	1.000	0.625	3/16 x1.38	3/16 x .500	1/4 x 1.44
EL824	6.38	7.69	--	7.63	2.59	2.38	2.81	4.88	2.44	0.47	3.61	6.19	3.09	5.51	2.45	5.14	2.66	2.46	0.75	1.125	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL826	6.63	8.13	4.21	8.69	2.81	2.63	2.81	5.38	2.69	0.50	4.17	6.88	3.44	6.07	2.45	5.63	2.73	2.53	0.69	1.250	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL830	9.00	9.88	4.50	9.69	3.69	3.00	3.19	7.50	3.75	0.56	4.81	8.38	4.19	6.56	2.31	6.62	3.60	3.37	0.75	1.500	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL832	9.13	10.88	4.53	11.25	3.69	3.25	4.00	7.63	3.82	0.56	5.00	9.38	4.69	6.75	2.31	6.62	3.60	3.37	0.75	1.625	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL842	10.00	10.50	5.71	12.94	3.38	4.25	4.19	8.00	4.00	0.81	6.15	8.50	4.25	9.57	3.47	8.12	4.50	4.22	1.25	1.750	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	10.75	12.13	7.82	13.75	2.50	5.25	4.25	8.75	4.38	0.81	7.55	9.75	4.88	10.88	3.38	9.06	4.78	4.50	1.50	2.000	1.250	1/4 x 3.00	1/4 x 3.00	1/2 x 2.50
EL860	11.75	13.50	--	16.00	4.35	6.00	5.00	9.50	4.75	0.94	7.88	10.50	5.25	10.99	3.00	10.75	5.25	5.25	1.75	2.250	1.500	3/8 x 3.00	3/8 x 2.75	1/2 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	UMQ
STANDARD CATALOGED	UM
OPTION	U

Convert Style U to motorized coupling input using kits shown on page 278.

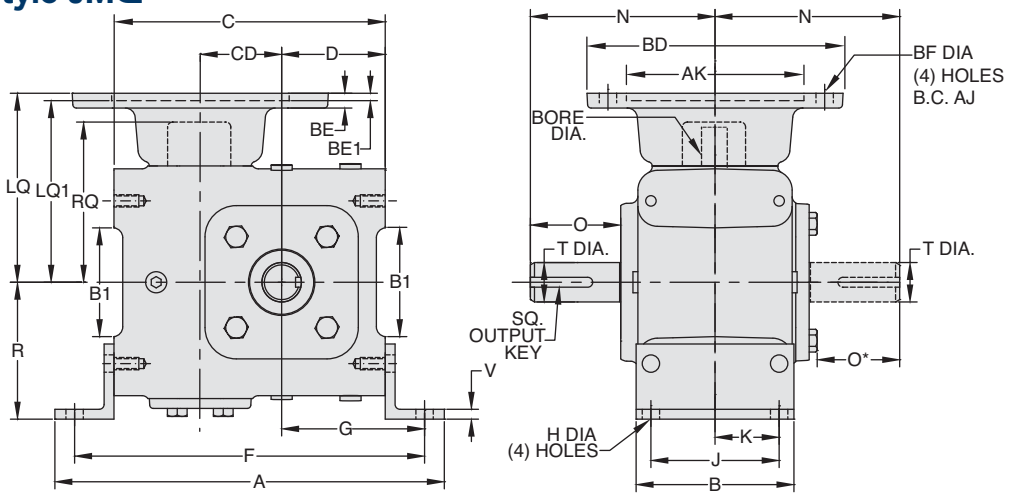
ELECTRA-GEAR

EL Series Dimensions

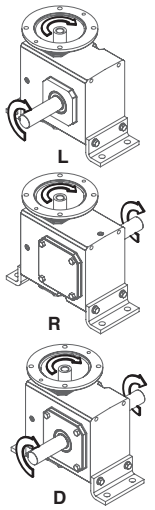
Styles: JMQ, JM, J

ALUMINUM EL SERIES

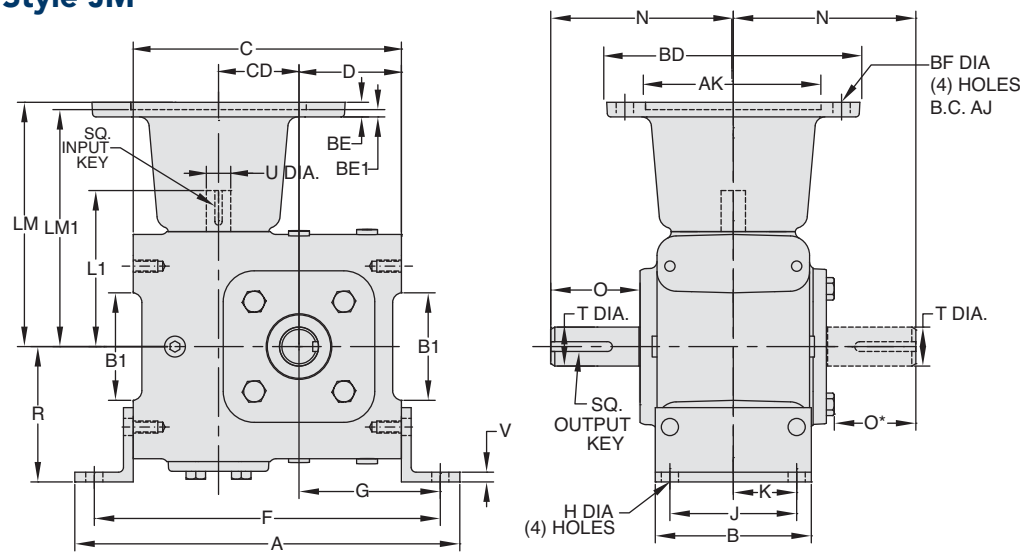
Style JMQ



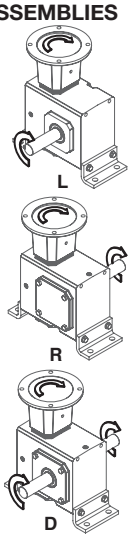
ASSEMBLIES



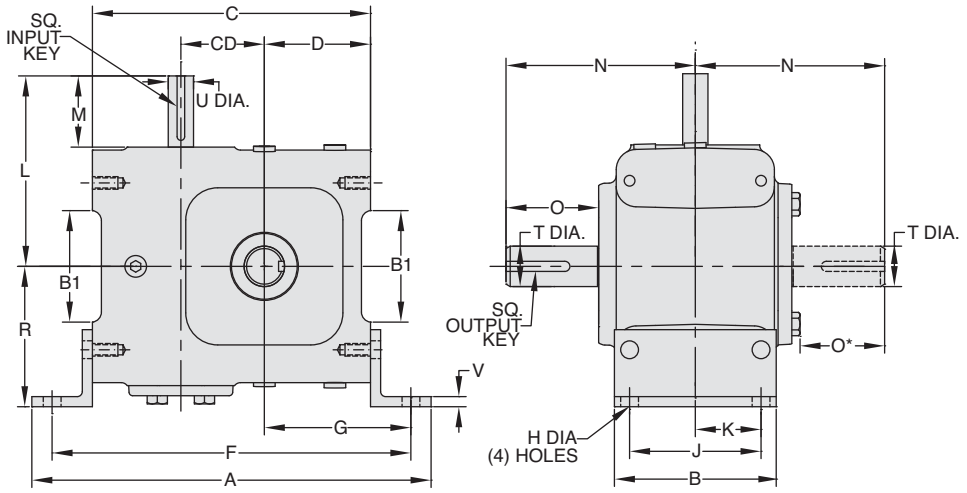
Style JM



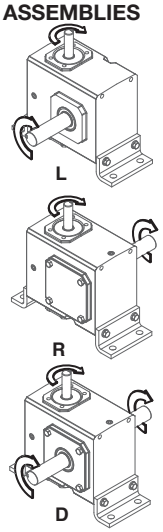
ASSEMBLIES



Style J



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE JMQ, JM, J DIMENSIONS (Inches)

Size	A	B	B1	C	CD	D	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style J Only)	Input Key (Style JM only)	Output Key
EL813	7.16	2.91	--	4.66	1.33	1.72	6.41	2.60	0.34	2.00	1.00	3.82	1.87	4.00	2.16	1.96	2.94	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	8.88	3.56	2.48	5.86	1.75	2.31	7.88	3.32	0.38	2.94	1.47	4.35	1.78	4.39	2.05	1.85	2.97	0.38	0.750	0.625	3/16 x1.38	3/16 x .500	3/16 x 1.38
EL821	987.00	4.00	2.76	6.88	2.06	2.63	8.87	3.62	0.44	3.25	1.63	4.71	1.76	4.68	2.29	2.09	3.47	0.25	1.000	0.625	3/16 x1.38	3/16 x .500	1/4 x 1.44
EL824	10.31	4.00	--	6.94	2.38	2.50	9.19	3.63	0.47	2.88	1.44	5.51	2.45	5.14	2.66	2.46	4.06	0.38	1.125	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL826	12.00	4.38	4.21	8.00	2.63	3.25	10.50	4.50	0.50	3.38	1.69	6.07	2.45	5.63	2.73	2.53	4.03	0.31	1.250	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL830	12.94	5.13	4.50	8.94	3.00	3.50	11.44	4.75	0.56	4.13	2.06	6.56	2.31	6.62	3.60	3.37	4.81	0.80	1.500	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL832	14.50	5.13	4.53	10.50	3.25	4.00	13.00	5.25	0.56	4.13	2.06	6.75	2.31	6.62	3.60	3.37	5.25	0.38	1.625	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL842	17.50	5.13	5.71	11.69	4.25	4.50	14.50	5.91	0.81	3.75	1.88	9.57	3.47	8.12	4.50	4.22	5.63	0.50	1.750	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	20.25	6.50	7.82	12.25	5.25	4.25	16.75	6.50	0.81	5.25	2.63	10.88	3.38	9.06	4.78	4.50	7.63	0.50	2.000	1.250	1/4 x 3.00	1/4 x 3.00	1/2 x 2.50
EL860	22.25	7.00	--	14.25	6.00	5.00	18.75	7.63	0.94	5.38	2.69	10.99	3.00	10.75	5.25	5.25	8.38	0.50	2.250	1.500	3/8 x 3.00	3/8 x 2.75	1/2 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

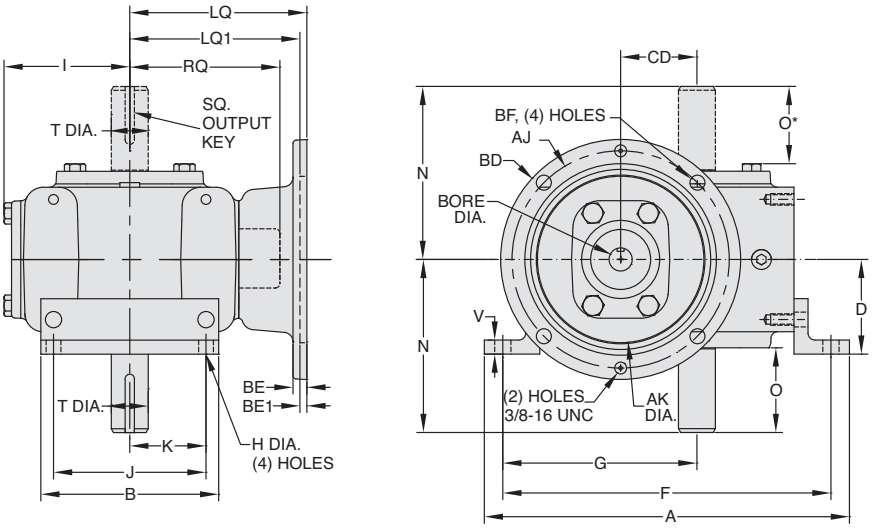
Original Style	New Style
JBSC or JBLSC	JMQ
JBC or JBLC	JM
JB or JBL	J
JB + "KV" Kit	J + "KV" Kit

Convert Style J to motorized coupling input using kits shown on page 278.

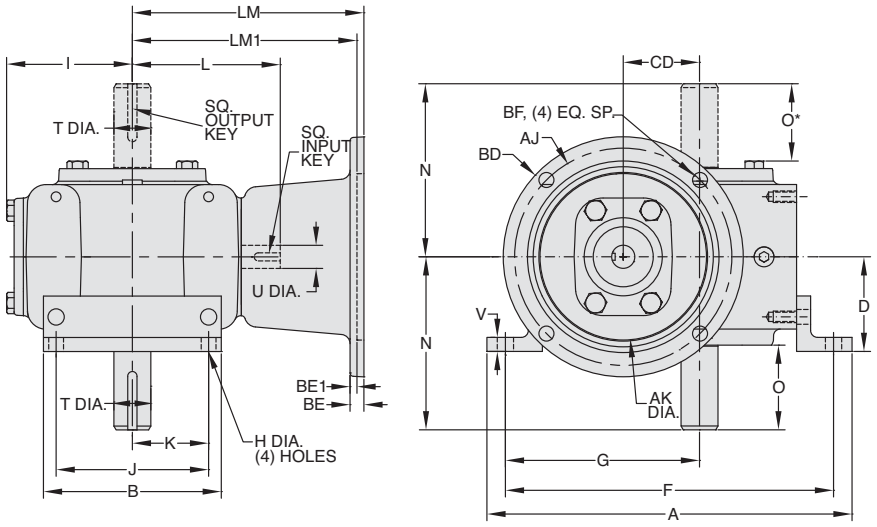
ELECTRA-GEAR
EL Series Dimensions
Styles: VLMQ, VLM, VL

ALUMINUM EL SERIES

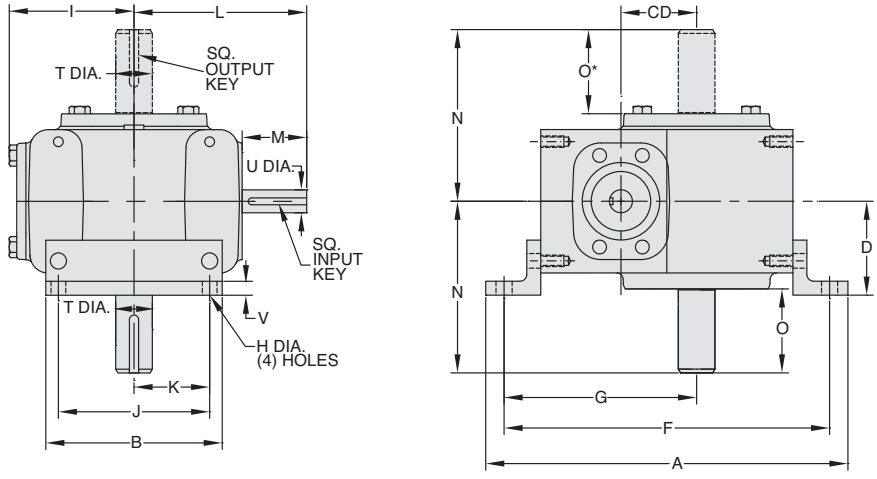
Style VLMQ



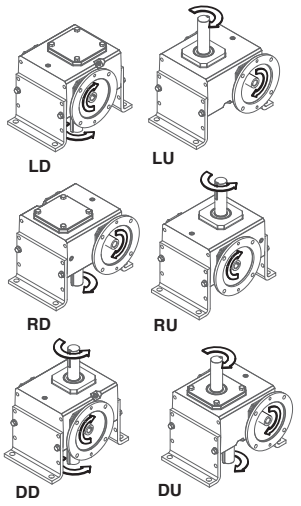
Style VLM



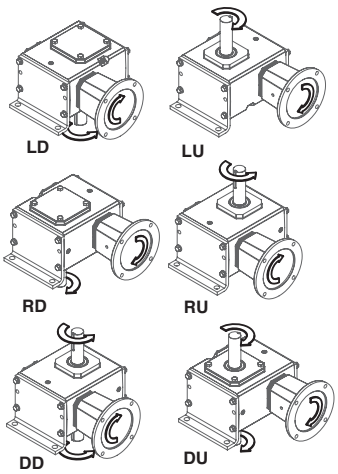
Style VL



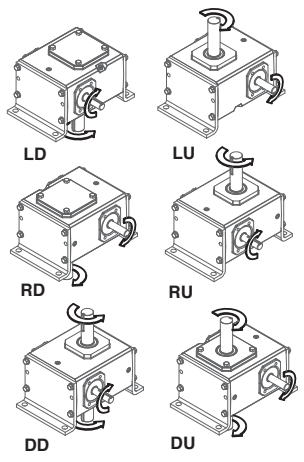
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE VLMQ, VLM, VL DIMENSIONS (Inches)

Size	A	B	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style VL Only)	Input Key (Style VLM only)	Output Key
EL813	7.16	4.13	1.33	2.31	6.16	3.69	0.34	2.40	3.25	1.63	3.82	1.87	4.00	2.16	1.96	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	8.88	4.25	1.75	2.28	7.88	4.57	0.38	3.03	3.69	1.84	4.35	1.78	4.39	2.05	1.85	0.38	0.750	0.625	3/16 x1.38	3/16 x .500	3/16 x 1.38
EL821	9.87	4.81	2.06	2.56	8.87	5.25	0.44	3.40	4.13	2.06	4.71	1.76	4.68	2.29	2.09	0.38	1.000	0.625	3/16 x1.38	3/16 x .500	1/4 x 1.44
EL824	10.88	5.88	2.38	2.75	9.38	5.66	0.47	3.61	5.00	2.50	5.51	2.45	5.14	2.66	2.46	0.31	1.125	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL826	12.00	5.88	2.63	2.81	10.50	6.00	0.50	4.17	5.00	2.50	6.07	2.45	5.63	2.73	2.53	0.31	1.250	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL830	12.94	6.75	3.00	3.75	11.44	6.69	0.56	4.81	5.75	2.88	6.56	2.31	6.62	3.60	3.37	0.25	1.500	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL832	14.50	7.63	3.25	3.75	13.00	7.75	0.56	5.00	6.63	3.31	6.75	2.31	6.62	3.60	3.37	0.38	1.625	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL842	17.50	8.38	4.25	4.59	14.69	8.69	0.81	6.15	7.00	3.50	9.57	3.47	8.12	4.50	4.22	0.50	1.750	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	19.25	11.50	5.25	5.88	16.88	10.35	0.81	7.55	9.63	4.82	10.88	3.38	9.06	4.78	4.50	0.50	2.000	1.250	1/4 x 3.00	1/4 x 3.00	1/2 x 2.50
EL860	21.25	13.50	6.00	6.38	18.63	11.44	0.94	7.88	11.00	5.50	10.99	3.00	10.75	5.25	5.25	0.63	2.250	1.500	3/8 x 3.00	3/8 x 2.75	1/2 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

– Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

– EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

– See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
BSC or BLSC	VLMQ
BC or BLC	VLM
B or BL	VL
B + "KV" Kit	VL + "KV" Kit

Convert Style VL to motorized coupling input using kits shown on page 278.

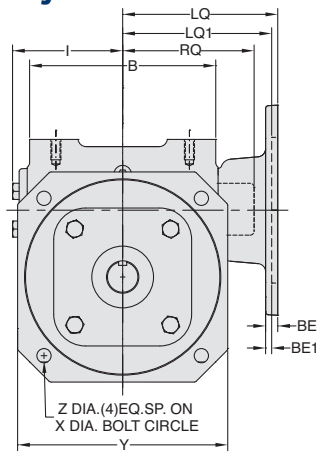
ELECTRA-GEAR

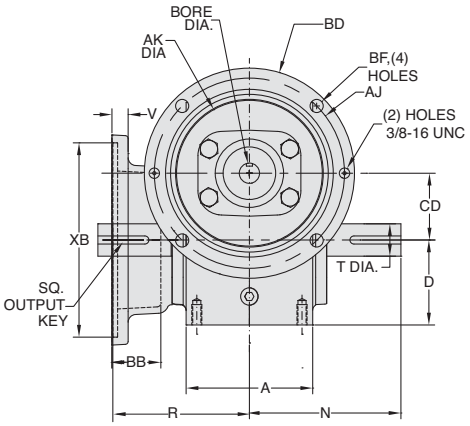
EL Series Dimensions

Styles: FRMQ, FRM, FR

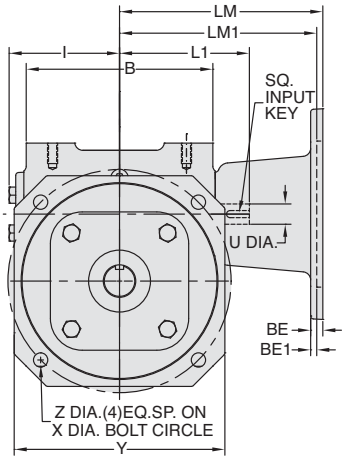
ALUMINUM EL SERIES

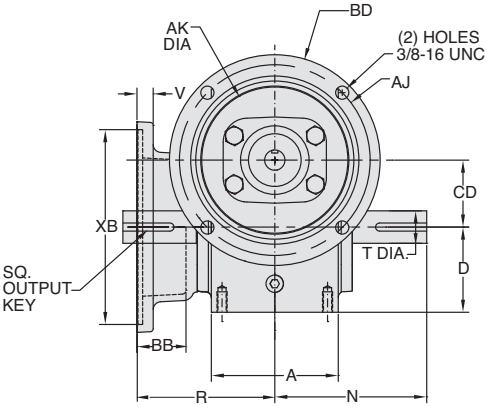
Style FRMQ



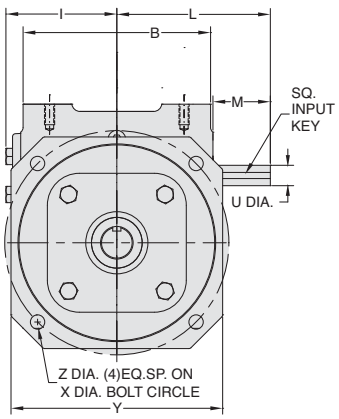


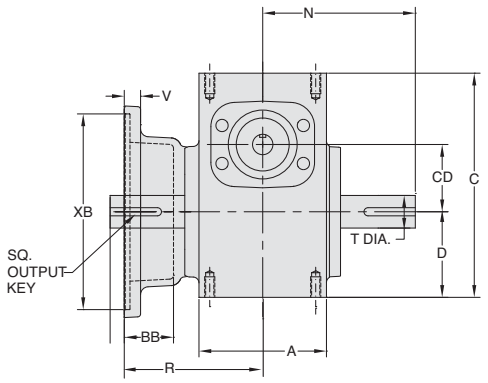
Style FRM



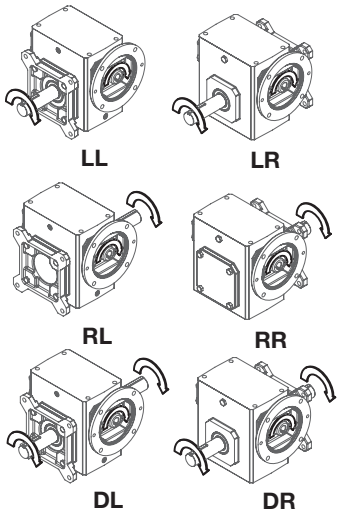


Style FR

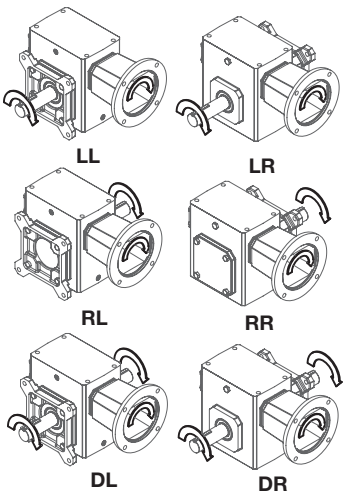




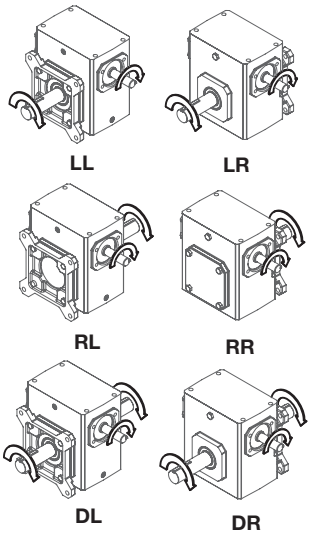
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FRMQ, FRM, FR DIMENSIONS (Inches)

Size	A	B	BB	C	CD	D	I	L	M	N	R	V	X	XB	Y	Z	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style F Only)	Input Key (Style FM only)	Output Key
EL818	3.50	4.83	1.27	5.86	1.75	2.31	3.03	4.35	1.78	4.39	3.53	0.38	3.13	-	4.00	0.34	0.750	0.625	3/16 x1.38	3/16 x .500	3/16 x 1.38
EL821	3.91	5.75	1.51	6.88	2.06	2.63	3.40	4.71	1.76	4.68	4.25	0.50	6.88	6.00	6.49	0.44	1.000	0.625	3/16 x1.38	3/16 x .500	1/4 x 1.44
EL824	4.06	5.86	1.35	6.94	2.38	2.50	3.61	5.51	2.45	5.14	4.15	0.63	7.75	6.50	6.99	0.50	1.125	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL826	4.84	7.17	1.35	8.00	2.63	3.25	4.17	6.07	2.45	5.63	4.56	0.63	7.75	6.50	6.99	0.50	1.250	0.750	3/16 x1.63	3/16 x .500	1/4 x 1.62
EL830	5.25	8.11	2.36	8.94	3.00	3.50	4.81	6.56	2.31	6.62	5.75	0.81	9.125-9.500	8.25	8.74	0.56	1.500	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL832	5.25	8.11	2.54	10.50	3.25	4.00	5.00	6.75	2.31	6.62	5.94	0.81	9.125-9.500	8.25	8.74	0.56	1.625	0.875	3/16 x1.63	3/16 x .500	3/8 x 2.25
EL842	6.13	9.63	2.06	11.69	4.25	4.50	6.15	9.57	3.47	8.12	6.06	0.75	10.75	9.75	11.00	0.69	1.750	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	7.19	11.50	1.18	12.25	5.25	4.25	7.55	10.88	3.38	9.06	5.75	0.69	12.75	11.50	14.24	0.81	2.000	1.250	1/4 x 3.00	1/4 x 3.00	1/2 x 2.50
EL860	7.00	13.50	0.25	14.25	6.00	5.00	7.88	10.99	3.00	10.75	7.25	1.00	15.25	13.00	17.00	0.81	2.250	1.500	3/8 x 3.00	3/8 x 2.75	1/2 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

NOTE: Size 813 not available.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	FRMQ
STANDARD CATALOGED	FRM
OPTION	FR

NOTE: Not a direct replacement to orginal ring base mounts. Styles R, RC, RSC.

Convert Style FR to motorized coupling input using kits shown on page 278.

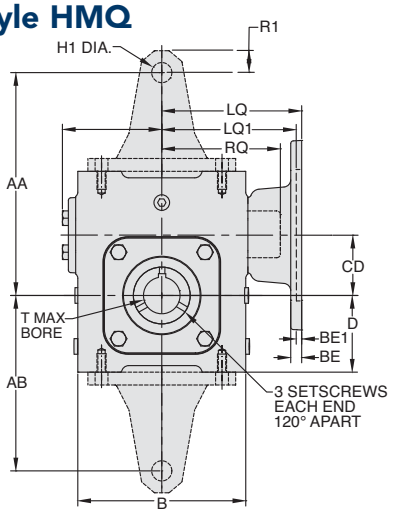
ELECTRA-GEAR

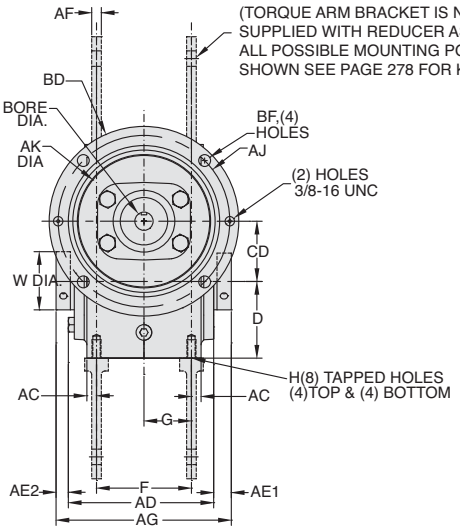
EL Series Dimensions

Styles: HMQ, HM, H

ALUMINUM EL SERIES

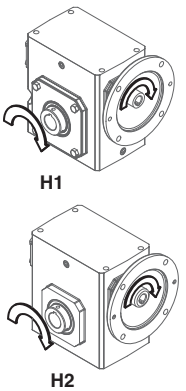
Style HMQ





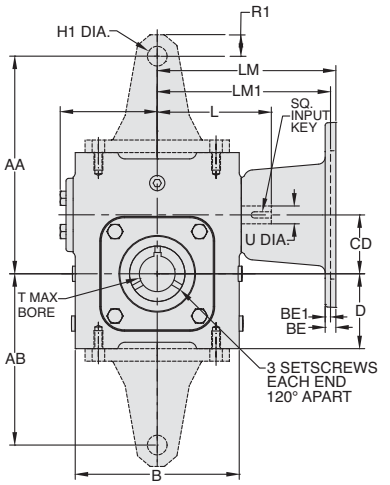
OPTIONAL TORQUE ARM BRACKET (TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD): ALL POSSIBLE MOUNTING POSITIONS SHOWN SEE PAGE 278 FOR KITS.

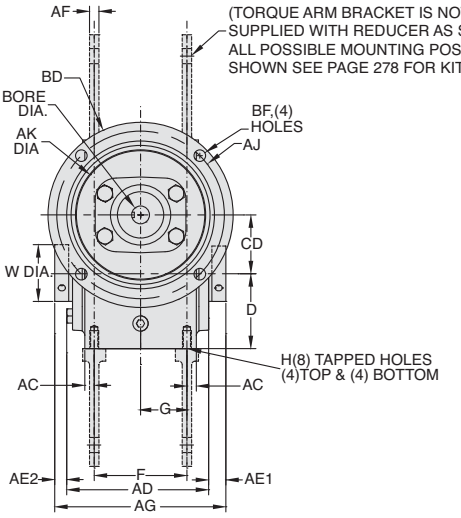
ASSEMBLIES



H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

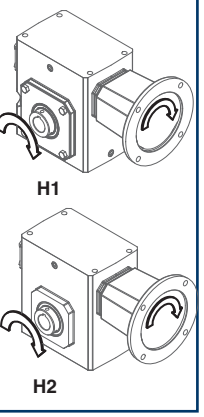
Style HM





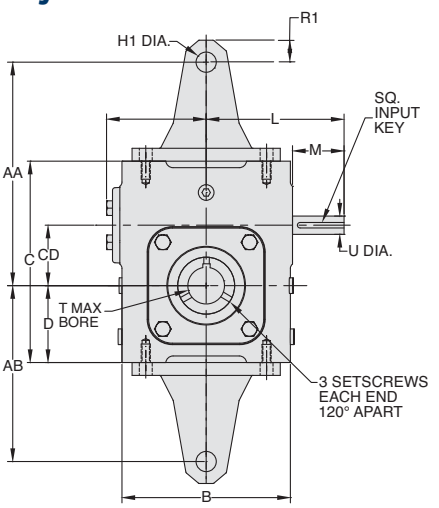
OPTIONAL TORQUE ARM BRACKET (TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD): ALL POSSIBLE MOUNTING POSITIONS SHOWN SEE PAGE 278 FOR KITS.

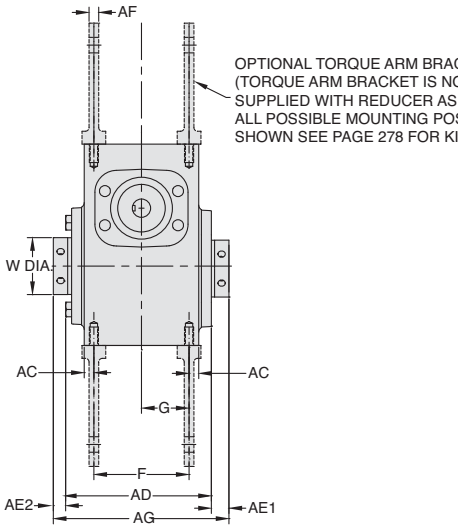
ASSEMBLIES



H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

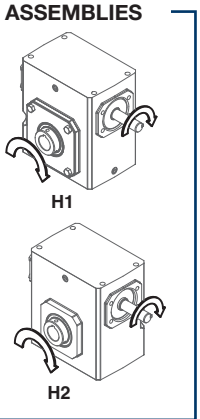
Style H





OPTIONAL TORQUE ARM BRACKET (TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD): ALL POSSIBLE MOUNTING POSITIONS SHOWN SEE PAGE 278 FOR KITS.

ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

STYLE HMQ, HM, H DIMENSIONS (Inches)

Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	C	CD	D	F	G	H1	I	L	M	R1	V	T MAX• +0.000 -0.0025	U +0.000 -0.0015	Input Key (Style H only)❊	Input Key (Style HM only)❊	Output Key
EL813	--	--	0.41	3.89	0.58	0.26	--	4.75	3.80	4.66	1.33	1.72	2.00	1.00	--	2.40	3.82	1.87	-	1.00	0.625	0.500	1/8 x 1.00	--	3/16 x 1.50
EL818	6.25	5.00	0.28	4.72	0.49	0.29	0.69	5.50	4.83	5.86	1.75	2.31	2.95	1.48	0.53	3.03	4.35	1.78	0.66	1.44	1.000	0.625	3/16 x 1.38	3/16 x .500	1/4 x 3.00
EL821	7.63	6.00	0.33	4.98	0.60	0.42	0.69	6.00	5.75	6.88	2.06	2.63	3.25	1.63	0.53	3.40	4.71	1.76	0.75	1.94	1.500*	0.625	3/16 X 1.38	3/16 x .500	3/8 x 3.00
EL824	7.81	5.87	0.59	5.17	1.02	0.81	0.69	6.00	5.86	6.94	2.38	2.50	2.88	1.44	0.53	3.61	5.51	2.45	0.75	1.94	1.500*	0.750	3/16 X 1.63	3/16 x .500	3/8 x 3.00
EL826	8.50	7.00	0.73	6.00	0.60	0.40	0.69	7.00	7.17	8.00	2.63	3.25	3.37	1.69	0.53	4.17	6.07	2.45	0.75	1.94	1.500*	0.750	3/16 x 1.63	3/16 x .500	3/8 x 3.00
EL830	9.94	8.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.94	3.00	3.50	4.13	2.07	0.53	4.81	6.56	2.31	0.81	2.75	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL832	12.50	10.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	10.50	3.25	4.00	4.13	2.07	0.53	5.00	6.75	2.31	0.88	2.75	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL842	14.69	12.00	1.19	7.52	0.63	0.35	0.69	8.50	9.63	11.69	4.25	4.50	3.75	1.88	0.53	6.15	9.57	3.47	0.88	2.75	2.188	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	17.75	14.00	0.97	8.84	0.97	0.69	0.81	10.50	11.50	12.25	5.25	4.25	5.25	2.63	0.66	7.55	10.88	3.38	1.13	4.26	3.438	1.250	1/4 X 3.00	1/4 x 3.00	7/8 x 4.00
EL860	20.25	16.00	0.81	11.00	0.81	0.81	0.81	10.38	13.50	14.25	6.00	5.00	5.38	2.69	0.66	7.88	10.99	3.00	1.13	3.74	3.438	1.500	3/8 x 3.00	3/8 x 2.75	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- • Max bore dimensions shown. For additional bores available, refer to page 20.
- ◆ Keyway width by depth
- ❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

Note: Torque arm bracket available separately. Refer to page 278 for kits. If a special bracket is required, refer to Style BMQ dimensions for mounting pad dimensions on top/bottom of reducer.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
MHSC	HMQ
MHC	HM
MH	H
MH + "KV" Kit	H + "KV" Kit

Convert Style H to motorized coupling input using kits shown on page 278.

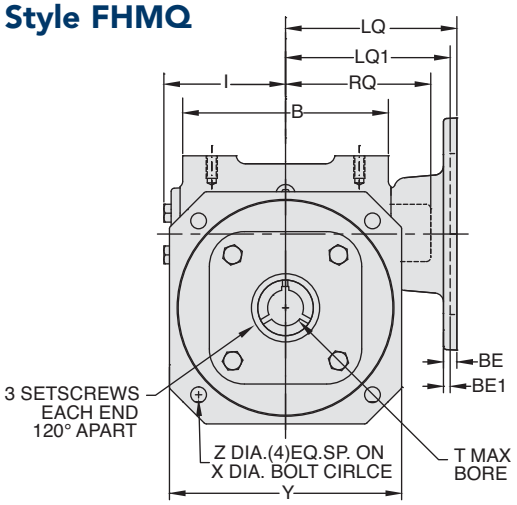
ELECTRA-GEAR

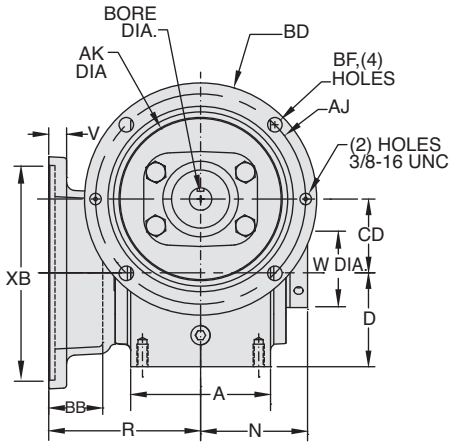
EL Series Dimensions

Styles: FHMQ, FHM, FH

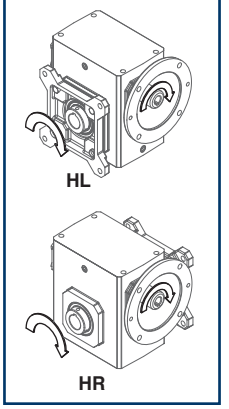
ALUMINUM EL SERIES

Style FHMQ

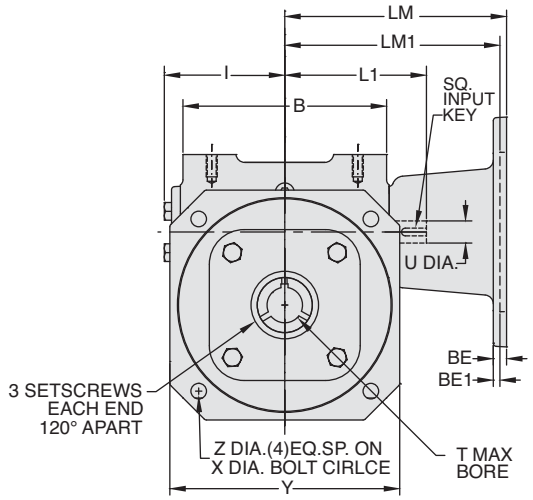


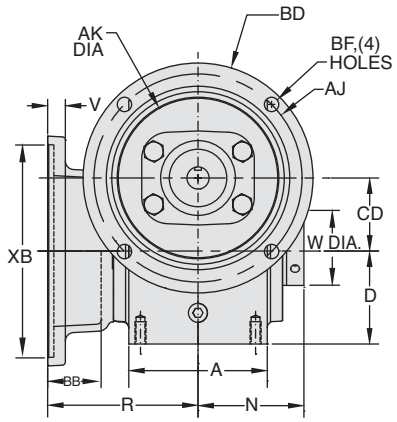


ASSEMBLIES

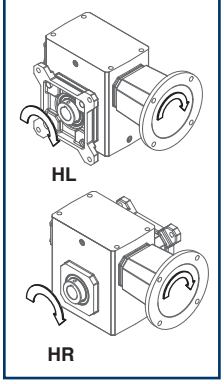


Style FHM

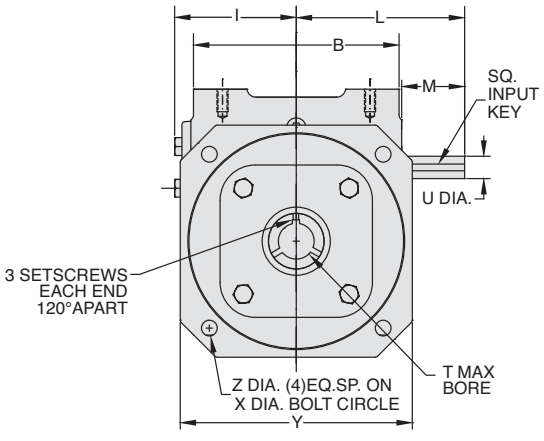


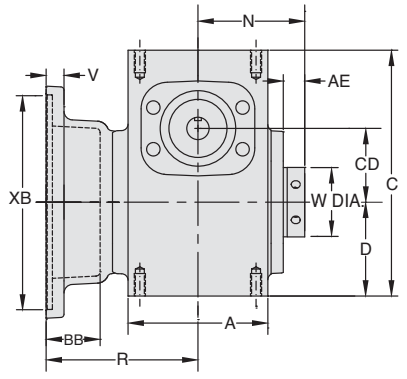


ASSEMBLIES

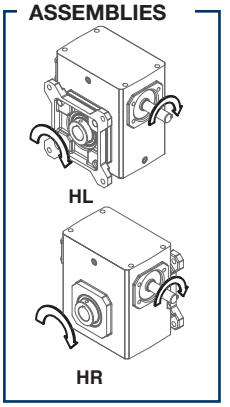


Style FH





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FHMQ, FHM, FH DIMENSIONS (Inches)

Size	A	AE	B	BB	C	CD	D	I	L	M	N	R	V	X	XB	Y	Z	T MAX• +0.000 -0.0025	U +0.000 -0.0015	Input Key (Style FH only)❊	Input Key (Style FHM only)❊	Output Key
EL818	3.50	0.49	4.83	1.27	5.86	1.75	2.31	3.03	4.35	1.78	2.75	3.53	0.38	3.13	-	4.00	0.34	1.000	0.625	3/16 x 1.38	3/16 x .500	1/4 x 3.00
EL821	3.91	0.60	5.75	1.51	6.88	2.06	2.63	3.40	4.71	1.76	2.99	4.25	0.50	6.88	6.00	6.49	0.44	1.500*	0.625	3/16 X 1.38	3/16 x .500	3/8 x 3.00
EL824	4.06	1.05	5.86	1.35	6.94	2.38	2.50	3.61	5.51	2.45	3.51	4.15	0.63	7.38	6.50	6.99	0.50	1.500*	0.750	3/16 X 1.63	3/16 x .500	3/8 x 3.00
EL826	4.84	0.60	7.17	1.35	8.00	2.63	3.25	4.17	6.07	2.45	3.19	4.56	0.63	7.38	6.50	6.99	0.50	1.500*	0.750	3/16 x 1.63	3/16 x .500	3/8 x 3.00
EL830	5.25	0.60	8.11	2.36	8.94	3.00	3.50	4.81	6.56	2.31	3.75	5.75	0.81	9.125-9.500	8.25	8.74	0.56	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL832	5.25	0.60	8.11	2.54	10.50	3.25	4.00	5.00	6.75	2.31	3.75	5.94	0.81	10.75	9.75	8.74	0.56	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL842	6.13	0.63	9.63	2.06	11.69	4.25	4.50	6.15	9.57	3.47	4.25	6.06	0.75	11.50	10.25	11.00	0.69	2.188	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	7.19	0.97	11.50	1.18	12.25	5.25	4.25	7.55	10.88	3.38	5.25	5.75	0.69	12.75	11.50	14.24	0.81	3.438	1.250	1/4 X 3.00	1/4 x 3.00	7/8 x 4.00
EL860	7.00	0.81	13.50	0.25	14.25	6.00	5.00	7.88	10.99	3.00	5.19	7.25	1.00	15.25	13.00	17.00	0.81	3.438	1.500	3/8 x 3.00	3/8 x 2.75	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- • Max bore dimensions shown. For additional bores available, refer to page 20.
- ◆ Keyway width by depth
- ❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 52 for GR Series dimensions.

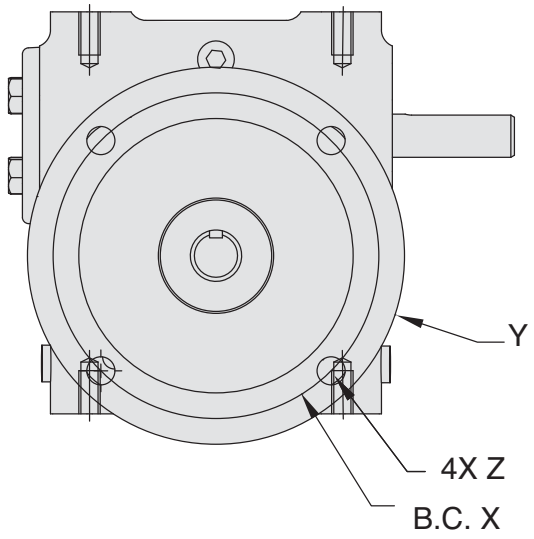
ELECTRA-GEAR INTERCHANGE GUIDE

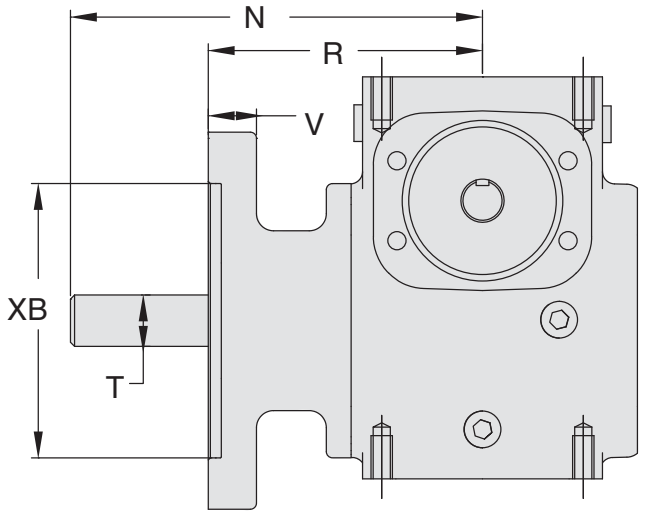
Original Style	New Style
RHSC	FHMQ
RHC	FHM
RH	FH
RH + "KV" Kit	FH + "KV" Kit

Convert Style FH to motorized coupling input using kits shown on page 278.

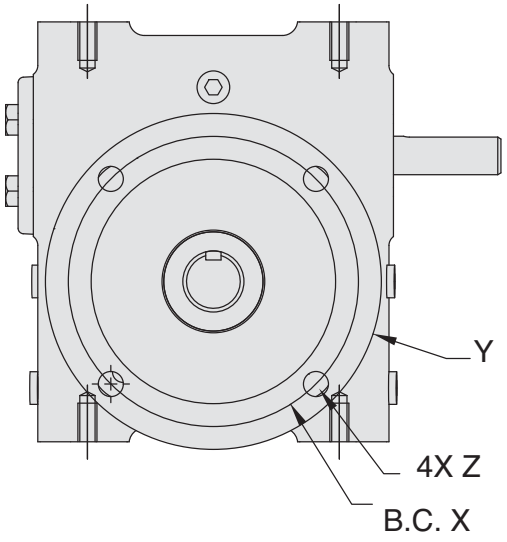
FL (Ring Base) Output Flange

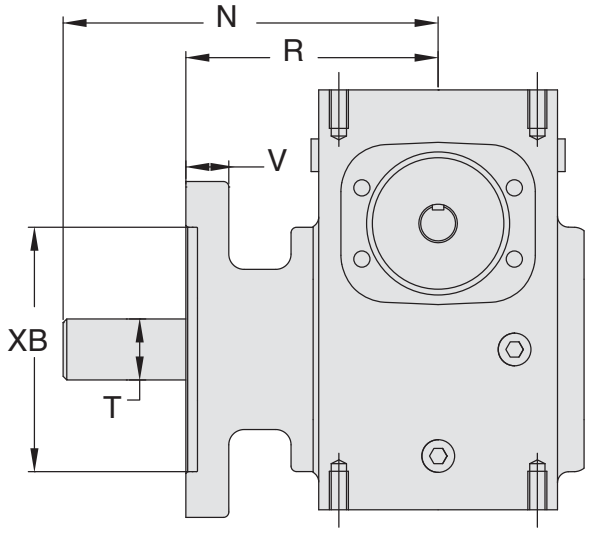
SIZE 818





SIZE 821





FL DIMENSIONS (inches)

Size	N	R	T +0.000 -0.0015	V	X	XB	Y	Z
818	6.01	400	0.750	0.703	4.75	4.002	5.50	0.41
821	6.14	4.13	1.000	0.703	4.75	4.002	5.50	0.41

FL Flange Kit must be assembled at Factory. Contact Factory to order.
Must designate LL (left) or RR (right).

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
RL	FL
RLC	FLM
RLSC	FLMQ

Model Number System

Double Reduction Worm - Worm

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

800 Series Gear Reducer Model Number Nomenclature

All new stock and custom 800 Series Grove Gear and Electra-Gear worm reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

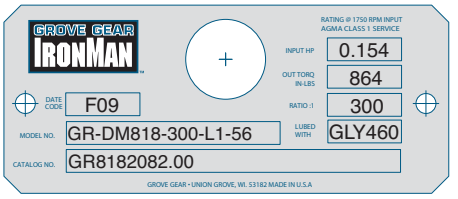
NOTE: All reducers also have a catalog number—for example EL8130001 and GR8130001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been Factory modified by the addition of an optional accessory, the modification number T818EL, for example, is stamped in the catalog number field of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 3000 and higher (for example, GR8133000 and NH8133000) are WASHGUARD® reducers for washdown service.

Catalog numbers 5000 (for example, GR8135000 and EL8135000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered by catalog number.

TYPICAL NAMEPLATE

(Grove Gear shown)



Series Code

GR - Grove Gear IRONMAN Cast Iron Reducers
NH - Grove Gear IRONMAN Narrow Housing Cast Iron Reducers
EL - Electra-Gear Aluminum Reducers
GRG - Grove Gear Flexaline Interchange (Sizes 821, 826, 832)
GRL - Leeson IRONMAN Interchange (Sizes 821, 826, 832)

Style

SOLID OUTPUT SHAFT
DMQ – Motorized, Quill Input
DM – Motorized, Flexible Coupling Input
D – Non-Flanged

HOLLOW OUTPUT SHAFT
DHMQ – Motorized, Quill Input
DHM – Motorized, Flexible Coupling Input
DH – Non-Flanged

WASHGUARD STYLES
W prefix; i.e. WDMQ denotes WASHDOWN Reducer
S prefix; i.e. SDMQ denotes All-Stainless Steel Reducer

Size

800 SERIES CENTER DISTANCES

Size	Center Distance (Inches)
813	1.33
815	1.54
818	1.75
821	2.06
824	2.38
826	2.62
830	3.00
832	3.25
842	4.25
852	5.25
860	6.00
870*	7.00
880*	8.00
8100*	10.00

* GR series only

Ratio

See Selection Tables on pages 122-126, for all available ratios.

Output Shaft Orientation

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft
* Viewed from drive end of reducer.

Mounting Assembly

Assembly numbers 1-6 are available. Refer to dimension layouts.

Motor Flange

Input Code		For Input Type	
Single Input	Dual Input		
blank	A	non-motorized	NEMA Input
48	48A	48CZ	
56	56A	56C	
140	140A	143-5TC	
180	180A	182-4TC	
210	210A	213-5TC	
250	250A	254-6TC	
63	Contact Factory	D63D B5	IEC Input
71		D71D B5	
80		D80D B5	
90		D90D B5	
110		D100LD/D112MD B5	
132		D132D	

Output Bore Code

Hollow Shaft Only
See page 130.

Sample Model Number

Solid Output Shaft - GR Series

Cast iron, double reduction, 2.38" reducer with 56C motorized quill input, left-hand output shaft, 300:1 ratio.

GR	-	DMQ	824	-	300	-	L1	-	56
Series		Style	Size		Ratio		Shaft Orientation		Input Type

Hollow Output Shaft - EL Series

Aluminum housing, double reduction, 1.75" reducer with 56C motorized quill input, 1.00" hollow output bore, 100:1 ratio.

EL	-	DHMQ	818	-	100	-	H1	-	56	-	16
Series		Style	Size		Ratio		Shaft Orientation		Input Type		Output Bore Code


Style DMQ


Style DUMQ


Style DJMQ


Style DFMQ


Style DFEMQ


Style DHMQ


Style DFHMQ


Style DXMQ


Style DXJMQ

CAST IRON GR SERIES / CAST IRON NH SERIES / ALUMINUM EL SERIES Reducer Style	Replaces Original GROVE GEAR OE Series Reducer Style	Replaces Original ELECTRA-GEAR Reducer Style
D	DU	D__M
DM & DMQ	DUFC & DUF	D__MC & D__MSC
DT & DU	DZ & DUB	D__A
DTM & DTMQ	DZFC & DZF	D__AC & D__ASC
DUM & DUMQ	DUBFC & DUBF	New
DJ	DJ	D__JB
DJM & DJMQ	DJFC & DJF	D__JBC & D__JBSC
DF	DK & DV	N/A
DFM & DFMQ	DKFC & DKF / DVFC & DVF	N/A
DFE	DE	N/A
DFEM & DFEMQ	DEFC & DEF	N/A
DH	DY	D_MH
DHM & DHMQ	DYFC & DYF	D_MHC & D_MHSC
DFH	DM	N/A
DFHM	DMFC	N/A
DFHMQ	DMF	N/A
DX	HWU	H__M
DXM	HWUFC	H__MC
DXMQ	HWUF	NEW
DXT & DXU	HWZ	H__A
DXTM	HWZFC	H__AC
DXTMQ	HWZF	NEW
DXUM	HWUBFC	H__AC
DXUMQ	HWUBF	NEW
DXJ	N/A	H__JB
DXJM	N/A	H__JBC
DXJMQ	N/A	NEW
DXVL	N/A	H__B
DXVLM	N/A	H__BC
DXVLMQ	N/A	NEW
DXFE	HWE	N/A
DXFEM & DXFEMQ	HWEFC & HWEF	N/A
DXH	HWY	H_MH
DXHM & DXHMQ	HWYFC & HWYF	H_MHC & H_MHSC
DFL	N/A	D__RL
DFLM & DFLMQ	N/A	D__RLC & D__RLSC
DFR	N/A	New
DFRM & DFRMQ	N/A	New
DVL & DVH	DSL & DSH	D__B
DVLM & DVLMQ	DSLFC & DSLF	D__BC & D__BSC
DVHM & DVHMQ	DSHFC & DSHF	N/A
DXFR	N/A	New
DXFRM	N/A	New
DXFRMQ	N/A	New
DXFL	N/A	H__RL
DXFLM & DXFLMQ	N/A	H__RLC

Cast Iron Solid Shaft Output Styles

CAST IRON GR SERIES | CAST IRON NH SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DMQ, DM and D can be field or Factory modified into a wide range of styles.

	Stock Styles	Modified Stock Styles	
		Horizontal Base Worm Over	Horizontal Base Worm Under
MOTORIZED C-FLANGE QUILL INPUT	**Style DMQ**	**Style DTMQ**	**Style DUMQ ***
			
	Ratings Pages: 122-126 Dimension Pages: GR Series 132-133 NH Series 150-151	Ratings Pages: 122-126 Dimension Pages: GR Series 134-135 NH Series 152-153	Ratings Pages: 122-126 Dimension Pages: GR Series 136-137 NH Series 154-155
MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT	**Style DM**	**Style DTM**	**Style DUM ***
			
	Ratings Pages: 122-126 Dimension Pages: GR Series 132-133 NH Series 150-151	Ratings Pages: 122-126 Dimension Pages: GR Series 134-135 NH Series 152-153	Ratings Pages: 122-126 Dimension Pages: GR Series 136-137 NH Series 154-155
	Style D	**Style DT**	**Style DU ***
			
	Ratings Pages: 122-126 Dimension Pages: GR Series 132-133 NH Series 150-151	Ratings Pages: 122-126 Dimension Pages: GR Series 134-135 NH Series 152-153	Ratings Pages: 122-126 Dimension Pages: GR Series 136-137 NH Series 154-155

Additional accessories, options and assembly services are available, Contact Factory for details.

* Not a recommended mounting style. Consult Factory for selection assistance.

Cast Iron
Solid Shaft Output Styles

Vertical Input Shaft

Style DJMQ



Ratings Pages: 122-126

Dimension Pages:
GR Series 138-139
NH Series 156-157

Style DJM



Ratings Pages: 122-126

Dimension Pages:
GR Series 138-139
NH Series 156-157

Style DJ



Ratings Pages: 122-126

Dimension Pages:
GR Series 138-139
NH Series 156-157

Vertical Output Shaft High/Low Base

Style DV_HMQ**



Ratings Pages: 122-126

Dimension Pages:
GR Series 140-141
NH Series 158-159

Style DV_HM **



Ratings Pages: 122-126

Dimension Pages:
GR Series 140-141
NH Series 158-159

Style DV_H**



Ratings Pages: 122-126

Dimension Pages:
GR Series 140-141
NH Series 158-159

Flange Mounted Output Shaft

Style DFMQ



Ratings Pages: 122-126

Dimension Pages:
GR Series 142-143
NH Series 160-161

Style DFM



Ratings Pages: 122-126

Dimension Pages:
GR Series 142-143
NH Series 160-161

Style DF



Ratings Pages: 122-126

Dimension Pages:
GR Series 142-143
NH Series 160-161

Drop Bearing Output Flange

Style DFEMQ



Ratings Pages: 122-126

Dimension Pages:
GR Series 148-149
NH Series 166-167

Style DFEM



Ratings Pages: 122-126

Dimension Pages:
GR Series 148-149
NH Series 166-167

Style DFE



Ratings Pages: 122-126

Dimension Pages:
GR Series 148-149
NH Series 166-167

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

Cast Iron Hollow Shaft Output Styles

CAST IRON GR SERIES | CAST IRON NH SERIES

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DHMQ, DHM and DH can be field or Factory modified into a wide range of styles.

Flange Mounted Output Shaft

MOTORIZED C-FLANGE QUILL INPUT

Style DHMQ



Ratings Pages: 122-126

Dimension Pages:
GR Series 144-145
NH Series 162-163

Style DFHMQ



Ratings Pages: 122-126

Dimension Pages:
GR Series 144-147
NH Series 164-165

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style DHM



Ratings Pages: 122-126

Dimension Pages:
GR Series 144-145
NH Series 162-163

Style DFHM



Ratings Pages: 122-126

Dimension Pages:
GR Series 146-147
NH Series 164-165

NON-FLANGED INPUT

Style DH



Ratings Pages: 122-126

Dimension Pages:
GR Series 144-145
NH Series 162-163

Style DFH



Ratings Pages: 122-126

Dimension Pages:
GR Series 146-147
NH Series 164-165

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DHMQ, DHM and DH can be field or Factory modified into a wide range of styles.

Style DHMQ

MOTORIZED C-FLANGE QUILL INPUT



Ratings Pages: 122-126

Dimension Pages:
EL Series 180-181

Style DFHMQ



Ratings Pages: 122-126

Dimension Pages:
EL Series 182-183

Style DHM

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT



Ratings Pages: 122-126

Dimension Pages:
EL Series 180-181

Style DFHM



Ratings Pages: 122-126

Dimension Pages:
EL Series 182-183

Style DH

NON-FLANGED INPUT



Ratings Pages: 122-126

Dimension Pages:
EL Series 180-181

Style DFH



Ratings Pages: 122-126

Dimension Pages:
EL Series 182-183

ELECTRA-GEAR
Aluminum
Solid Shaft Output Styles

ALUMINUM EL SERIES

Stock Styles | **Modified Stock Styles**

Using off-the-shelf accessories, stock styles DMQ, DM and D can be field or Factory modified into a wide range of styles.

Horizontal Base Worm Over

MOTORIZED C-FLANGE QUILL INPUT

Style DMQ



Ratings Pages: 122-126

Dimension Pages: EL Series 168-169

Style DTMQ



Ratings Pages: 122-126

Dimension Pages: EL Series 170-171

Style DUMQ



Ratings Pages: 122-126

Dimension Pages: EL Series 172-173

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style DM



Ratings Pages: 122-126

Dimension Pages: EL Series 168-169

Style DTM



Ratings Pages: 122-126

Dimension Pages: EL Series 170-171

Style DUM *



Ratings Pages: 122-126

Dimension Pages: EL Series 172-173

NON-FLANGED INPUT

Style D



Ratings Pages: 122-126

Dimension Pages: EL Series 168-169

Style DT



Ratings Pages: 122-126

Dimension Pages: EL Series 170-171

Style DU *



Ratings Pages: 122-126

Dimension Pages: EL Series 172-173

Additional accessories, options and assembly services are available, Contact Factory for details.

* Not a recommended mounting style. Consult Factory for selection assistance.

Vertical Input Shaft

Style DJMQ



Ratings Pages: 122-126

Dimension Pages:
EL Series 174-175

Style DJM



Ratings Pages: 122-126

Dimension Pages:
EL Series 174-175

Style DJ



Ratings Pages: 122-126

Dimension Pages:
EL Series 174-175

Vertical Output Shaft Low Base

Style DVLMQ **



Ratings Pages: 122-126

Dimension Pages:
EL Series 176-177

Style DVLM **



Ratings Pages: 122-126

Dimension Pages:
EL Series 176-177

Style DVL **



Ratings Pages: 122-126

Dimension Pages:
EL Series 176-177

Flange Mounted Output Shaft

Style DFRMQ



Ratings Pages: 122-126

Dimension Pages:
EL Series 178-179

Style DFRM



Ratings Pages: 122-126

Dimension Pages:
EL Series 178-179

Style DFR



Ratings Pages: 122-126

Dimension Pages:
EL Series 178-179

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

Quick Selections

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

How to Use

Based on required output RPM and input motor horsepower, read across chart for the appropriate reducer size. As a rule of thumb, use 1.00 service factor chart for applications having uniform loads with up to 10 hours service duration per day. Use 1.25 service factor chart for longer service or shock loading. These charts are to be considered as guides only. Typically double reduction reducers are selected based on application torque, not necessarily HP. Refer to page 418 or contact Factory with specific application information. Reducer size corresponds to center distances of secondary stage reducer, as shown in the chart below.

1.00 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25
75	23.3	813	813	815	815	821	824	826	830	832**	842	852	860	880	880	8100	8100
100	17.5	813	813	815	815	821	824	826	830*	842	842	852	860	880	8100	8100	
150	11.7	813	815	821	821	824	826	830*	832**	842	852	852	880	8100	8100		
200	8.75	815	815	821	824	826	830	832	842	842	852	870	880	8100			
250	7.00	815	818	821	824	826	830*	832**	842	852	852	880	8100	8100			
300	5.83	815	821	824	824	830	832	842	842	852	852	880	8100	8100			
400	4.38	821	821	824	826	830*	842	842	852	852	860	8100	8100				
500	3.50	821	824	826	830	832	842	842	852	852	880	8100					
600	2.92	821	824	826	830	832	842	852	852	860	880	8100					
750	2.33	824	824	830	830*	842	842	852	852	870	8100	8100					
900	1.94	824	826	830	832	842	842	852	852	880	8100						
1000	1.75	824	830	830	832	842	842	852	860	880	8100						
1200	1.46	824	830	830*	832	842	852	852	870	880	8100						
1500	1.17	830	830	832	842	842	852	860	880	8100	8100						
1800	9.72	830	830	832	842	852	852	860	8100	8100							
2400	.729	830	830*	842	842	852	852	880	8100	8100							
3000	.583	830	830*	842	842	852	852	880	8100								
3600	.486	830*	832**	842	852	852	880	8100									

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25
75	23.3	813	813	815	818	821	824	830	832**	842	842	852	880	880	8100	8100	
100	17.5	813	815	815	821	824	826	830	832**	842	842	852	880	880	8100		
150	11.7	815	815	821	824	826	830	832	842	842	852	870	880	8100			
200	8.75	815	821	824	824	830	832	842	842	852	852	880	8100	8100			
250	7.00	815	821	824	826	830	832**	842	842	852	852	880	8100				
300	5.83	818	821	824	826	830*	842	842	852	852	870	8100	8100				
400	4.38	821	824	826	830	832	842	842	852	852	880	8100					
500	3.50	824	824	830	830*	842	842	852	852	860	880	8100					
600	2.92	824	824	830	832	842	842	852	852	870	8100						
750	2.33	824	826	830	832	842	852	852	860	880	8100						
900	1.94	824	830	830*	832**	842	852	852	880	880	8100						
1000	1.75	826	830	830*	842	842	852	852	880	8100	8100						
1200	1.46	830	830	832	842	842	852	852	880	8100	8100						
1500	1.17	830	830	842	842	852	852	880	8100	8100							
1800	9.72	830	832	842	842	852	860	880	8100	8100							
2400	.729	830	842	842	852	852	880	8100	8100								
3000	.583	830*	842	842	852	852	880	8100									
3600	.486	832**	842	842	852	852	8100	8100									

Note: This chart is meant as a guide for reducer selections at specific motor horsepowers.

Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 122-126.

♠ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.

Refer to page 131 for exact ratio of double reduction worm-worm gear reducers.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

1.50 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM													
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15
75	23.3	813	815	815	821	824	826	830	842	842	852	860	880	880	8100
100	17.5	815	815	821	821	824	830	830*	842	842	852	860	880	8100	
150	11.7	815	821	821	824	826	832**	832**	842	852	852	880	8100	8100	
200	8.75	815	821	824	826	830	832**	842	842	852	860	880	8100		
250	7.00	821	821	824	826	830*	842	842	852	852	870	8100	8100		
300	5.83	821	824	826	830	832	842	842	852	852	880	8100			
400	4.38	824	824	830	830*	842	842	852	852	860	880	8100			
500	3.50	824	826	830	832	842	842	852	852	880	8100				
600	2.92	824	826	830*	832**	842	852	852	870	880	8100				
750	2.33	826	830	832**	842	842	852	852	880	8100	8100				
900	1.94	826	830	832**	842	842	852	852	880	8100					
1000	1.75	830	830	832**	842	842	852	860	880	8100					
1200	1.46	830	830*	832**	842	852	852	870	8100	8100					
1500	1.17	830	832	842	842	852	860	880	8100	8100					
1800	9.72	830	842	842	852	852	880	8100	8100						
2400	.729	842	842	852	852	852	880	8100							
3000	.583	842	842	852	852	852	8100	8100							
3600	.486	842	842	852	852	880	8100								

1.75 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM													
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15
75	23.3	813	815	821	821	824	830	830	842	842	852	860	880	8100	8100
100	17.5	815	815	821	824	826	830	832	842	842	852	870	8100	8100	
150	11.7	815	821	824	826	830	832	842	842	852	852	880	8100		
200	8.75	821	821	824	826	830*	842	842	852	852	870	8100	8100		
250	7.00	821	824	826	830	832**	842	842	852	852	880	8100			
300	5.83	821	824	826	830*	832**	842	852	852	860	880	8100			
400	4.38	824	826	830	832	842	842	852	852	880	8100				
500	3.50	824	826	830*	832**	842	852	852	870	880	8100				
600	2.92	826	830	832	842	842	852	852	880	8100	8100				
750	2.33	826	830	832**	842	842	852	860	880	8100					
900	1.94	830	830*	832**	842	852	852	880	8100	8100					
1000	1.75	830	830*	842	842	852	852	880	8100	8100					
1200	1.46	830	832	842	842	852	852	880	8100	8100					
1500	1.17	832	842	842	852	852	880	8100	8100						
1800	9.72	832	842	842	852	852	8100	8100							
2400	.729	842	842	852	852	870	8100	8100							
3000	.583	842	842	852	852	880	8100	8100							
3600	.486	842	842	852	852	8100	8100								

2.0 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM													
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15
75	23.3	815	815	821	824	826	830	832**	842	852	852	880	880	8100	
100	17.5	815	815	821	824	826	830*	842	842	852	852	880	8100	8100	
150	11.7	821	821	824	826	830*	832**	842	852	852	870	8100	8100		
200	8.75	821	824	826	830	832	842	842	852	852	880	8100			
250	7.00	821	824	826	830*	832**	842	852	852	860	880	8100			
300	5.83	824	824	830	832	842	842	852	852	870	8100	8100			
400	4.38	824	826	830*	832**	842	852	852	860	880	8100				
500	3.50	826	830	832	842	842	852	852	880	8100	8100				
600	2.92	826	830	832**	842	852	852	860	880	8100	8100				
750	2.33	830	830*	842	842	852	852	870	8100	8100					
900	1.94	830	832	842	842	852	852	880	8100	8100					
1000	1.75	830	832	842	842	852	860	880	8100	8100					
1200	1.46	830*	832**	842	842	852	870	880	8100						
1500	1.17	832	842	842	852	860	880	8100	8100						
1800	9.72	842	842	852	852	860	8100	8100							
2400	.729	842	842	852	852	880	8100	8100							
3000	.583	842	842	852	852	880	8100								
3600	.486	842	852	852	852	8100									

Note: This chart is meant as a guide for reducer selections at specific motor horsepowers.
Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 122-126.
♠ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 131 for exact ratio of double reduction worm-worm gear reducers.
* Size 832 must be used for NH Series for this selection.
** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES





SIZE 813, 815, 818 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE 813 Input HP	SIZE 813 Output HP	SIZE 813 Output TQ (lb-in)	SIZE 815** Input HP	SIZE 815** Output HP	SIZE 815** Output TQ (lb-in)	SIZE 818 Input HP	SIZE 818 Output HP	SIZE 818 Output TQ (lb-in)
75	1750	23.30	0.215	0.141	381	0.391	0.242	654	0.415	0.287	776
	1170	15.60	0.154	0.097	390	0.286	0.168	678	0.295	0.197	797
100	1750	17.50	0.183	0.114	411	0.339	0.194	698	0.344	0.230	827
	1170	11.70	0.130	0.078	420	0.249	0.134	721	0.244	0.157	847
150	1750	11.70	0.122	0.073	395	0.233	0.125	674	0.235	0.150	809
	1170	7.80	0.085	0.050	400	0.166	0.085	690	0.166	0.101	820
200	1750	8.75	0.104	0.059	425	0.187	0.095	686	0.195	0.119	858
	1170	5.85	0.075	0.040	430	0.136	0.065	698	0.137	0.081	868
250	1750	7.00	0.090	0.046	417	0.158	0.073	660	0.165	0.096	861
	1170	4.68	0.064	0.031	422	0.113	0.050	671	0.115	0.065	871
300	1750	5.83	0.084	0.039	422	0.139	0.064	699	0.154	0.080	864
	1170	3.90	0.060	0.026	427	0.099	0.044	706	0.110	0.054	876
400	1750	4.38	0.062	0.030	432	0.111	0.049	705	0.114	0.061	874
	1170	2.93	0.043	0.020	435	0.081	0.033	711	0.081	0.040	879
500	1750	3.50	0.053	0.024	424	0.098	0.039	708	0.097	0.049	877
	1170	2.34	0.007	0.016	427	0.069	0.026	713	0.068	0.032	882
600	1750	2.92	0.048	0.020	430	0.086	0.033	711	0.090	0.041	882
	1170	1.95	0.034	0.013	432	0.065	0.022	714	0.066	0.027	888
750	1750	2.33	0.040	0.016	427	0.071	0.025	683	0.080	0.032	886
	1170	1.56	0.030	0.011	429	0.055	0.017	686	0.061	0.023	891
900	1750	1.94	0.036	0.013	432	0.067	0.020	665	0.068	0.027	888
	1170	1.30	0.028	0.009	434	0.048	0.014	668	0.050	0.018	893
1000	1750	1.75	0.038	0.012	428	0.063	0.020	715	0.064	0.025	884
	1170	1.17	0.029	0.008	429	0.045	0.014	718	0.045	0.017	886
1200	1750	1.46	0.034	0.010	434	0.052	0.017	717	0.059	0.021	892
	1170	0.975	0.025	0.007	435	0.041	0.011	719	0.043	0.014	895
1500	1750	1.17	0.030	0.008	429	0.052	0.013	689	0.054	0.017	893
	1170	0.780	0.022	0.005	430	0.038	0.009	691	0.038	0.011	896
1800	1750	0.972	0.028	0.007	435	0.045	0.010	601	0.048	0.014	895
	1170	0.650	0.018	0.005	436	0.032	0.007	603	0.038	0.010	897
2400	1750	0.729	0.021	0.005	438	0.039	0.007	644	0.036	0.010	887
	1170	0.488	0.014	0.003	439	0.032	0.005	646	0.030	0.007	889
3000	1750	0.583	0.021	0.004	437	0.033	0.006	605	0.032	0.008	869
	1170	0.390	0.014	0.003	438	0.028	0.004	607	0.023	0.006	871
3600	1750	0.486	0.020	0.003	421	0.029	0.004	562	0.027	0.007	854
	1170	0.325	0.009	0.002	422	0.017	0.003	564	0.020	0.004	856

Select and order double reduction reducers with model number. Refer to page 112 for Model Number System.

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 131 for exact ratio of worm gear primary stage and worm gear secondary stage.
At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.
** Size 815 is not available in Electra aluminum EL Series.
For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles





Select and order double reduction reducers with model number. Refer to page 112 for Model Number System.

SIZES 821, 824, 826 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE 821 Input HP	SIZE 821 Output HP	SIZE 821 Output TQ (lb-in)	SIZE 824 Input HP	SIZE 824 Output HP	SIZE 824 Output TQ (lb-in)	SIZE 826 Input HP	SIZE 826 Output HP	SIZE 826 Output TQ (lb-in)
75	1750	23.30	0.631	0.455	1230	0.979	0.707	1910	1.226	0.911	2461
	1170	15.60	0.451	0.313	1266	0.702	0.489	1975	0.872	0.629	2540
100	1750	17.50	0.537	0.365	1315	0.829	0.567	2041	1.048	0.736	2649
	1170	11.70	0.384	0.251	1352	0.597	0.392	2109	0.755	0.508	2739
150	1750	11.70	0.366	0.238	1284	0.572	0.373	2010	0.753	0.509	2740
	1170	7.80	0.253	0.161	1303	0.397	0.253	2045	0.532	0.347	2803
200	1750	8.75	0.305	0.190	1372	0.478	0.298	2145	0.602	0.387	2787
	1170	5.85	0.216	0.129	1392	0.339	0.203	2182	0.426	0.263	2835
250	1750	7.00	0.252	0.151	1363	0.405	0.240	2160	0.501	0.309	2779
	1170	4.68	0.180	0.103	1381	1.276	0.164	2195	0.356	0.211	2824
300	1750	5.83	0.222	0.128	1392	0.346	0.201	2182	0.436	0.261	2835
	1170	3.90	0.158	0.087	1405	0.248	0.137	2207	0.312	0.177	2868
400	1750	4.38	0.179	0.098	1402	0.280	0.154	2201	0.353	0.200	2860
	1170	2.93	0.126	0.065	1412	0.197	0.102	2220	0.249	0.133	2885
500	1750	3.50	0.154	0.078	1408	0.241	0.123	2212	0.303	0.160	2875
	1170	2.34	0.108	0.052	1416	0.169	0.081	2227	0.215	0.106	2895
600	1750	2.92	0.134	0.065	1412	0.213	0.101	2205	0.253	0.127	2752
	1170	1.95	0.098	0.044	1419	0.154	0.069	2224	0.171	0.079	2568
750	1750	2.33	0.114	0.051	1409	0.181	0.081	2217	0.219	0.105	2871
	1170	1.56	0.087	0.036	1417	0.137	0.057	2232	0.166	0.073	2887
900	1750	1.94	0.100	0.043	1413	0.159	0.067	2224	0.189	0.086	2848
	1170	1.30	0.076	0.029	1420	0.118	0.046	2237	0.141	0.059	2863
1000	1750	1.75	0.099	0.041	1420	0.152	0.062	2175	0.156	0.066	2309
	1170	1.17	0.072	0.027	1424	0.099	0.038	1989	0.050	0.040	2107
1200	1750	1.46	0.088	0.034	1418	0.139	0.053	2234	0.125	0.048	2029
	1170	0.975	0.061	0.022	1423	0.100	0.035	2244	0.081	0.029	1882
1500	1750	1.17	0.076	0.027	1421	0.119	0.043	2240	0.113	0.042	2209
	1170	0.780	0.056	0.018	1426	0.087	0.029	2248	0.077	0.026	2044
1800	1750	0.972	0.068	0.023	1424	0.111	0.036	2244	0.107	0.038	2365
	1170	0.650	0.053	0.016	1427	0.085	0.025	2250	0.075	0.024	2184
2400	1750	0.729	0.056	0.016	1425	0.087	0.025	2244	0.096	0.028	2563
	1170	0.488	0.043	0.011	1429	0.069	0.018	2250	0.070	0.019	2336
3000	1750	0.583	0.053	0.013	1381	0.080	0.021	2206	0.091	0.026	2691
	1170	0.390	0.040	0.009	1384	0.057	0.014	2212	0.061	0.016	2456
3600	1750	0.486	0.048	0.011	1378	0.064	0.017	2090	0.084	0.022	2741
	1170	0.325	0.034	0.007	1381	0.042	0.010	2095	0.055	0.013	2748

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 131 for exact ratio of worm gear primary stage and worm gear secondary stage.
At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES





Select and order double reduction reducers with model number. Refer to page 112 for Model Number System.

SIZES 830, 832 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE GR830 & EL830 Input HP	SIZE GR830 & EL830 Output HP	SIZE GR830 & EL830 Output TQ (lb-in)	SIZE NH830 Input HP	SIZE NH830 Output HP	SIZE NH830 Output TQ (lb-in)	SIZE GR832 & EL832 Input HP	SIZE GR832 & EL832 Output HP	SIZE GR832 & EL832 Output TQ (lb-in)	SIZE NH832 Input HP	SIZE NH832 Output HP	SIZE NH832 Output TQ (lb-in)
75	1750	23.30	1.811	1.338	3615	1.610	1.190	3206	2.005	1.482	4002	1.610	1.190	3214
	1170	15.60	1.312	0.932	3764	1.190	0.845	3412	1.569	1.109	4481	1.320	0.933	3770
100	1750	17.50	1.528	1.063	3830	1.310	0.912	3284	1.984	1.405	5059	1.610	1.140	4114
	1170	11.70	1.108	0.741	3990	0.950	0.635	3420	1.528	1.038	5592	1.250	0.849	4574
150	1750	11.70	1.075	0.714	3844	0.970	0.644	3482	1.537	0.973	5243	1.330	0.842	4547
	1170	7.80	0.766	0.486	3925	0.694	0.440	3552	1.136	0.679	5485	0.984	0.588	4755
200	1750	8.75	0.904	0.566	4076	0.775	0.485	3491	1.208	0.768	5534	1.020	0.649	4673
	1170	5.85	0.649	0.386	4163	0.556	0.331	3563	0.870	0.525	5658	0.734	0.443	4773
250	1750	7.00	0.770	0.458	4128	0.665	0.396	3563	1.016	0.617	5557	0.838	0.509	4581
	1170	4.68	0.557	0.314	4213	0.479	0.270	3633	0.735	0.423	5675	0.603	0.347	4673
300	1750	5.83	0.638	0.365	3967	0.580	0.332	3589	0.931	0.517	5615	0.811	0.450	4865
	1170	3.90	0.462	0.248	4010	0.417	0.224	3625	0.680	0.356	5747	0.589	0.308	4975
400	1750	4.38	0.549	0.294	4209	0.467	0.250	3599	0.735	0.399	5722	0.616	0.335	4824
	1170	2.93	0.389	0.196	4254	0.336	0.169	3636	0.523	0.266	5786	0.444	0.226	4876
500	1750	3.50	0.466	0.236	4257	0.402	0.204	3669	0.591	0.302	5440	0.528	0.270	4855
	1170	2.34	0.330	0.157	4301	0.290	0.138	3705	0.414	0.197	5400	0.382	0.182	4896
600	1750	2.92	0.409	0.195	4235	0.357	0.170	3671	0.571	0.268	5817	0.497	0.233	5032
	1170	1.95	0.297	0.132	4279	0.258	0.115	3707	0.419	0.182	5886	0.361	0.157	5088
750	1750	2.33	0.359	0.157	4301	0.313	0.137	3705	0.484	0.214	5858	0.429	0.188	5066
	1170	1.56	0.274	0.110	4331	0.229	0.092	3729	0.370	0.150	5914	0.313	0.127	5111
900	1750	1.94	0.315	0.129	4279	0.278	0.114	3707	0.440	0.177	5886	0.389	0.157	5088
	1170	1.30	0.234	0.089	4309	0.203	0.077	3731	0.330	0.122	5933	0.286	0.106	5127
1000	1750	1.75	0.314	0.123	4324	0.262	0.103	3723	0.411	0.165	5776	0.334	0.134	4821
	1170	1.17	0.234	0.083	4346	0.195	0.069	3741	0.301	0.111	5827	0.244	0.090	4861
1200	1750	1.46	0.277	0.102	4302	0.233	0.086	3725	0.378	0.136	5731	0.327	0.118	5117
	1170	0.975	0.200	0.067	4324	0.174	0.058	3743	0.258	0.085	5503	0.241	0.079	5146
1500	1750	1.17	0.206	0.067	3537	0.211	0.069	3741	0.282	0.093	4905	0.287	0.095	5134
	1170	0.780	0.148	0.043	3395	0.158	0.046	3754	0.201	0.059	4684	0.216	0.064	5158
1800	1750	0.972	0.193	0.059	3746	0.188	0.058	3743	0.221	0.067	4221	0.261	0.079	5146
	1170	0.650	0.145	0.040	3580	0.142	0.039	3755	0.169	0.045	4045	0.199	0.053	5165
2400	1750	0.729	0.173	0.046	4136	0.158	0.042	3646	0.183	0.051	4565	0.206	0.057	4892
	1170	0.488	0.133	0.031	3900	0.120	0.028	3659	0.141	0.034	4318	0.156	0.038	4909
3000	1750	0.583	0.168	0.041	4261	0.137	0.033	3588	0.182	0.046	4823	0.170	0.043	4620
	1170	0.390	0.149	0.027	4276	0.104	0.019	3600	0.129	0.029	4553	0.129	0.029	4636
3600	1750	0.486	0.151	0.033	4128	0.120	0.026	3406	0.174	0.040	5064	0.143	0.033	4300
	1170	0.325	0.100	0.020	4142	0.091	0.018	3417	0.112	0.023	4767	0.109	0.022	4314

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 131 for exact ratio of worm gear primary stage and worm gear secondary stage.
At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles





Select and order double reduction reducers with model number. Refer to page 112 for Model Number System.

SIZES 842, 852, 860 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE 842 Input HP	SIZE 842 Output HP	SIZE 842 Output TQ (lb-in)	SIZE 852 Input HP	SIZE 852 Output HP	SIZE 852 Output TQ (lb-in)	SIZE 860** Input HP	SIZE 860** Output HP	SIZE 860** Output TQ (lb-in)
75	1750	23.30	3.845	2.941	7945	7.099	5.472	14782	9.100	7.135	19271
	1170	15.60	3.001	2.215	8949	5.800	4.296	17357	6.941	5.231	21133
100	1750	17.50	3.820	2.815	10140	7.206	5.269	18977	8.665	5.947	21417
	1170	11.70	2.978	2.099	11307	5.470	3.822	20589	6.123	4.355	23458
150	1750	11.70	2.870	2.029	10931	5.336	3.724	20059	5.945	4.357	23471
	1170	7.80	2.182	1.479	11950	4.273	2.845	22985	3.283	3.093	24995
200	1750	8.75	2.347	1.612	11613	4.438	2.983	21487	4.954	3.416	24607
	1170	5.85	1.689	1.109	11953	3.258	2.082	22429	2.728	2.397	25821
250	1750	7.00	1.960	1.290	11619	3.834	2.424	21825	4.251	2.759	24841
	1170	4.68	1.417	0.890	11941	2.827	1.699	22777	2.354	1.943	26061
300	1750	5.83	1.704	1.100	11955	3.230	2.065	22434	3.607	2.376	25821
	1170	3.90	1.226	0.754	12191	2.358	1.429	23097	2.627	1.652	26689
400	1750	4.38	1.376	0.847	12132	2.660	1.601	22932	3.009	1.848	26473
	1170	2.93	0.973	0.567	12313	1.895	1.079	23443	2.138	1.249	27140
500	1750	3.50	1.149	0.679	12219	2.249	1.290	23238	2.516	1.492	26872
	1170	2.34	0.787	0.441	12092	1.591	0.863	23655	1.801	1.000	27416
600	1750	2.92	0.936	0.524	11386	1.951	1.079	23447	2.242	1.249	27151
	1170	1.95	0.665	0.348	11241	1.411	0.736	23798	1.629	0.854	27602
750	1750	2.33	0.873	0.446	12217	1.686	0.869	23807	1.929	0.999	27386
	1170	1.56	0.650	0.314	12369	1.270	0.613	24161	1.458	0.707	27851
900	1750	1.94	0.766	0.371	12293	1.516	0.725	24049	1.622	0.827	27434
	1170	1.30	0.566	0.256	12420	1.121	0.503	24406	1.218	0.575	27900
1000	1750	1.75	0.749	0.351	12273	1.467	0.687	24072	1.611	0.792	27737
	1170	1.17	0.538	0.236	12417	1.059	0.463	24342	1.171	0.535	28088
1200	1750	1.46	0.665	0.295	12389	1.325	0.579	24316	1.403	0.659	27683
	1170	0.975	0.465	0.192	12485	0.931	0.378	24589	1.000	0.433	28138
1500	1750	1.17	0.538	0.226	11853	0.938	0.393	20658	1.240	0.535	28088
	1170	0.780	0.361	0.141	11117	0.654	0.254	19979	0.903	0.360	28328
1800	1750	0.972	0.439	0.168	10608	0.915	0.356	22441	1.000	0.401	25273
	1170	0.650	0.320	0.111	10016	0.666	0.238	21472	0.767	0.283	25490
2400	1750	0.729	0.371	0.129	11595	0.785	0.267	24026	0.839	0.310	27893
	1170	0.488	0.272	0.086	10782	0.618	0.192	24206	0.694	0.223	28130
3000	1750	0.583	0.360	0.116	12214	0.756	0.227	23866	0.750	0.255	26792
	1170	0.390	0.269	0.078	12271	0.557	0.153	24044	0.602	0.171	27020
3600	1750	0.486	0.315	0.094	11816	0.688	0.186	23474	0.653	0.183	23067
	1170	0.325	0.213	0.057	11870	0.456	0.113	23649	0.436	0.111	23264

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 131 for exact ratio of worm gear primary stage and worm gear secondary stage.

At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.
** Size 860 is only available in GR & EL Series.
For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

Maximum Rating Tables

GR Series • All Stock Styles

CAST IRON GR SERIES





SIZES 870, 880, 8100 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE GR870 Input HP	SIZE GR870 Output HP	SIZE GR870 Output TQ (lb-in)	SIZE GR880 Input HP	SIZE GR880 Output HP	SIZE GR880 Output TQ (lb-in)	SIZE GR8100 Input HP	SIZE GR8100 Output HP	SIZE GR8100 Output TQ (lb-in)
75	1750	23.30	9.13	7.55	20601	15.50	13.00	35507	26.50	22.50	61010
	1170	15.60	7.69	6.16	25161	12.00	9.78	39931	20.40	16.90	68348
100	1750	17.50	9.13	7.22	27535	12.60	10.10	38575	20.80	17.00	64363
	1170	11.70	7.04	5.37	30607	9.55	7.40	42191	16.20	12.80	72302
150	1750	11.70	7.25	5.53	30621	9.82	7.62	42212	16.50	13.00	72069
	1170	7.80	5.31	3.90	32270	7.23	5.41	44811	12.30	9.38	77678
200	1750	8.75	5.81	4.32	31857	7.92	5.98	44158	13.50	10.30	76261
	1170	5.85	4.21	3.00	33136	5.75	4.18	46181	9.93	7.31	80671
250	1750	7.00	4.90	3.54	31238	6.61	4.88	43010	11.30	8.45	74571
	1170	4.68	3.55	2.46	32432	4.80	3.40	44863	8.31	5.96	78638
300	1750	5.83	4.27	2.99	33136	5.82	4.17	46181	10.10	7.29	80671
	1170	3.90	3.06	2.05	34024	4.19	2.87	47593	7.29	5.06	83779
400	1750	4.38	3.41	2.29	33805	4.65	3.20	47245	8.12	5.62	83011
	1170	2.93	2.43	1.56	34477	3.33	2.19	48316	5.85	3.87	85377
500	1750	3.50	2.86	1.85	34209	3.88	2.60	45835	6.89	4.57	84431
	1170	2.34	2.04	1.26	34752	2.78	1.77	46812	4.96	3.13	86351
600	1750	2.92	2.53	1.56	34477	3.43	2.18	48316	6.03	3.86	85377
	1170	1.95	1.81	1.06	34936	2.46	1.48	49049	4.34	2.63	87006
750	1750	2.33	2.13	1.27	33682	2.87	1.77	46812	5.04	3.13	82964
	1170	1.56	1.53	0.86	34109	2.05	1.20	47481	3.63	2.13	84459
900	1750	1.94	1.73	1.01	32016	2.50	1.47	46627	4.13	2.49	79353
	1170	1.30	1.24	0.68	32391	1.80	0.99	46972	2.97	1.69	80681
1000	1750	1.75	1.73	0.95	35031	2.34	1.33	49201	4.21	2.37	87344
	1170	1.17	1.24	0.64	35308	1.68	0.90	49644	3.05	1.60	88332
1200	1750	1.46	1.52	0.79	35168	2.05	1.12	49420	3.73	1.98	87832
	1170	0.975	1.10	0.53	35402	1.48	0.75	49793	2.72	1.34	88666
1500	1750	1.17	1.28	0.65	34325	1.71	0.90	47819	3.13	1.61	85216
	1170	0.780	0.93	0.44	34542	1.23	0.61	48159	2.28	1.09	85980
1800	1750	0.972	1.04	0.51	32580	1.29	0.67	42944	2.56	1.28	81353
	1170	0.650	0.76	0.34	32770	0.93	0.45	43207	1.86	0.86	82031
2400	1750	0.729	0.90	0.39	33661	1.20	0.54	46987	2.17	0.96	83314
	1170	0.488	0.65	0.26	33868	0.87	0.37	47314	1.59	0.65	84037
3000	1750	0.583	0.76	0.30	32512	1.02	0.42	45708	1.83	0.78	80836
	1170	0.390	0.55	0.20	32710	0.74	0.29	46025	1.35	0.51	81535
3600	1750	0.486	0.60	0.23	29307	0.80	0.32	41112	1.46	0.57	73284
	1170	0.325	0.44	0.15	29473	0.58	0.21	41376	1.07	0.38	73877

Select and order double reduction reducers with model number. Refer to page 112 for Model Number System.

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 131 for exact ratio of worm gear primary stage and worm gear secondary stage.

At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-420. (Not available in NH or EL)



GR SERIES • DOUBLE REDUCTION WORM - WORM • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
Solid Output Shaft														
DMQ	34	38	41	46	62	73	89	96	175	303	406	482	728	1151
DM	39	43	46	51	67	78	91	98	176	304	407	493	736	1158
D	34	38	41	46	62	73	86	93	171	299	402	478	718	1136
DTMQ & DUMQ	36	41	44	50	66	79	95	105	189	323	437	523	776	1227
DTM & DUM	41	46	49	55	71	84	97	107	190	324	438	534	784	1234
DT & DU	36	41	44	50	66	79	92	102	185	319	433	519	766	1212
DJMQ	35	39	43	49	65	78	95	102	185	318	---	---	---	---
DJM	40	44	48	54	70	83	97	104	186	319	---	---	---	---
DJ	35	39	43	49	65	78	92	99	181	314	---	---	---	---
DVLMQ & DVHMQ	36	41	44	53	69	82	99	109	195	328	442	553	806	1307
DVLM & DVHM	41	46	49	58	74	87	101	111	196	329	443	564	814	1314
DVL & DVH	36	41	44	53	69	82	96	106	191	324	438	549	796	1292
DFMQ	35	39	43	49	65	77	99	106	190	333	444	497	746	1172
DFM	40	44	48	54	70	82	101	108	191	334	445	508	754	1179
DF	35	39	43	49	65	77	96	103	186	329	440	493	736	1157
DFEMQ	---	---	---	---	---	---	99	106	205	334	448	647	930	1431
DFEM	---	---	---	---	---	---	101	108	206	335	449	658	938	1438
DFE	---	---	---	---	---	---	96	103	201	330	444	643	920	1406
Hollow Output Shaft														
DHMQ	35	38	42	47	64	72	90	98	178	303	406	482	728	1151
DHM	40	42	46	51	68	76	92	100	179	304	407	493	736	1158
DH	35	38	42	47	64	72	87	95	174	299	402	478	718	1136
DFHMQ	36	39	44	50	67	76	100	108	193	333	444	497	746	1172
DFHM	41	43	48	54	71	80	102	110	194	334	445	508	754	1179
DFH	36	39	44	50	67	76	97	105	189	329	440	493	736	1157
DBFHMQ	37	---	44	50	68	78	---	---	---	---	---	---	---	---
DBFHM	42	---	48	54	72	82	---	---	---	---	---	---	---	---
DBFH	37	---	44	50	68	78	---	---	---	---	---	---	---	---

Δ Weights include oil. 870, 880, 8100 shipped without oil.

GR SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	IRONMAN Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
T/U-Base	2	3	3	4	4	6	6	9	14	20	31	41	48	76
J-Base	1	1	2	3	3	5	6	6	10	15	---	---	---	---
VL/VH-Base	2	3	3	7	7	9	10	13	20	25	36	**	**	**
**F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30	38	**	**	**
BF-Flange (Steel)	2	---	2	3	4	6	---	---	---	---	---	---	---	---
R-Riser Block	---	7	7	9	9	12	15	31	24	15	---	---	---	---
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8	8	---	---	---
Coupling Input C-Flange Kits														
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16	---	---	---	---
180TC-210TC	---	---	---	---	11	11	11	11	16	18	22	30	30	---
250TC	---	---	---	---	---	---	---	28	30	30	32	34	36	---

** This accessory must be assembled at the Factory. It is not available as a kit for field installation.

NH Series Weights

CAST IRON NH SERIES

NH SERIES • DOUBLE REDUCTION WORM-WORM • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
Solid Output Shaft										
DMQ	29	32	35	39	53	62	76	82	149	258
DM	33	37	39	43	57	66	77	83	150	258
D	29	32	35	39	53	62	73	79	145	254
DTMQ & DUMQ	31	35	38	43	57	68	82	91	163	278
DTM & DUM	35	40	42	47	61	72	83	92	164	278
DT & DU	31	35	38	43	57	68	79	88	159	274
DJMQ	30	33	37	42	56	67	82	88	159	273
DJM	34	38	41	46	60	71	83	89	160	273
DJ	30	33	37	42	56	67	79	85	155	269
DVLMQ & DVHMQ	31	35	38	46	60	71	86	95	169	283
DVLM & DVHM	35	40	42	50	64	75	87	96	170	283
DVL & DVH	31	35	38	46	60	71	83	92	165	279
DFMQ	30	33	37	42	56	66	86	92	164	288
DFM	34	38	41	46	60	70	87	93	165	288
DF	30	33	37	42	56	66	83	89	160	284
DFEMQ	---	---	---	---	---	---	99	106	205	334
DFEM	---	---	---	---	---	---	101	108	206	335
DFE	---	---	---	---	---	---	96	103	201	330
Hollow Output Shaft										
DHMQ	30	32	36	40	54	61	77	83	151	258
DHM	34	36	39	43	58	65	78	85	152	258
DH	30	32	36	40	54	61	74	81	148	254
DFHMQ	31	33	38	43	57	65	87	93	166	288
DFHM	35	37	41	46	61	69	88	95	167	288
DFH	31	33	38	43	57	65	84	91	163	284

Δ Weights include oil.

NH SERIES • ACCESSORIES • APPROXIMATE WEIGHTSΔ (LBS.)

Accessory	IRONMAN Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
T/U-Base	2	3	3	4	4	6	6	9	14	20
J-Base	1	1	2	3	3	5	6	6	10	15
VL/VH-Base	2	3	3	7	7	9	10	13	20	25
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16
180TC-210TC	---	---	---	---	11	11	11	11	16	18
250TC	---	---	---	---	---	---	---	28	30	30

EL SERIES • DOUBLE REDUCTION WORM-WORM • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
Solid Output Shaft										
DMQ	22	27	30	41	48	59	63	116	200	268
DM	26	30	34	44	51	60	65	116	201	269
D	22	27	30	41	48	57	61	113	197	265
DTMQ & DUMQ	23	29	33	44	52	65	71	123	208	278
DTM & DUM	27	32	37	47	55	66	73	123	209	279
DT & DU	23	29	33	44	52	63	69	120	205	275
DJMQ	23	29	33	44	52	64	68	122	208	278
DJM	27	32	37	47	55	65	70	122	209	279
DJ	23	29	33	44	52	62	66	119	205	275
DVLMQ	24	30	33	44	52	64	68	122	208	278
DVLM	28	33	37	47	55	65	70	122	209	279
DVL	24	30	33	44	52	62	66	119	205	275
DFMQ	---	29	33	44	51	65	70	124	208	289
DFM	---	32	37	47	54	66	72	124	209	290
DF	---	29	33	44	51	63	68	121	205	286
Hollow Output Shaft										
DHMQ	23	28	31	42	48	59	65	117	200	268
DHM	26	30	34	45	50	61	66	118	201	269
DH	23	28	31	42	48	57	63	115	197	265
DFHMQ	---	30	34	45	51	65	72	125	208	289
DFHM	---	32	37	48	53	67	73	126	209	290
DFH	---	30	34	45	51	63	70	123	205	286

Δ Weights include oil.

EL SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
ABC Base	1	2	3	3	4	6	8	7	8	10
T/U-Base	1	2	3	3	4	6	8	7	8	10
J-Base	1	2	3	3	4	5	5	6	8	10
VL Base	2	3	3	3	4	5	5	6	8	10
FR and F-Flange	---	2	3	3	3	6	7	8	8	21
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	8	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	3	3	3	4	4	5	5	7	7	---
180TC-210TC	---	---	---	5	5	5	5	8	8	8
250TC	---	---	---	---	---	---	8	8	8	8

* Will not fit solid output shaft models.
✪ Will not fit hollow output shaft models.

Hollow Bore Shaft Sizes

GR, NH & EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

HOLLOW SHAFT BORE SIZES (Inches)*

Fraction Size	Decimal Size	Output Bore Code	813	815	818	821	824	826	830	832	842	852	860	870	880	8100	Keyway**
5/8	0.625	10	■	■	■												3/16 x 3/32
11/16	0.688	11			■												3/16 x 3/32
3/4	0.750	12			■												3/16 x 3/32
7/8	0.875	14			■												3/16 x 3/32
1	1.000	16			■	■	■	■									1/4 x 1/8
1-1/8	1.125	18				■	■	■									1/4 x 1/8
1-3/16	1.188	19				■	■	■	■	■							1/4 x 1/8
1-1/4	1.250	20				■	■	■	■	■							1/4 x 1/8
1-7/16	1.438	23				■	■	■	■	■	■						3/8 x 3/16
1-1/2	1.500	24							■	■	■						3/8 x 3/16
1-5/8	1.625	26							■	■	■						3/8 x 3/16
1-11/16	1.688	27							■	■	■						3/8 x 3/16
1-3/4	1.750	28							■	■	■						3/8 x 3/16
1-7/8	1.875	30							■	■	■						1/2 x 1/4
1-15/16	1.938	31									■						1/2 x 1/4
2	2.000	32									■	■	■				1/2 x 1/4
2-3/16	2.188	35									■	■	■				1/2 x 1/4
2-1/4	2.250	36										■	■				1/2 x 1/4
2-7/16	2.438	39										■	■				5/8 x 5/16
2-1/2	2.500	40										■	■				5/8 x 5/16
2-11/16	2.688	43										■	■				5/8 x 5/16
2-15/16	2.938	47										■	■				3/4 x 3/8
3	3.000	48										■	■				3/4 x 3/8
3-3/16	3.188	51										■	■				3/4 x 3/8
3-7/16	3.438	55										■	■	■	■	■	7/8 x 7/16
3-15/16	3.938	63												■	■	■	1 x 1/2
4-3/16	4.188	67													■		1 x 1/2
4-7/16	4.438	71													■	■	1 x 1/2
4-15/16	4.938	79														■	1-1/4 x 5/8
5-7/16	5.438	87														■	1-1/4 x 5/8

■ Stock Bore Sizes.

* Other bore sizes are available. Contact Factory for sizes and availability.

** Dimensions refer to customer driven shaft.

NOTE: Specify the required bore size when ordering. The suffix "XX" can be substituted with the bore code from table above.

DOUBLE REDUCTION & WORM–WORM EXACT RATIO COMBINATIONS

Total Ratio	GEAR REDUCER SIZE													
	813		815 (GR+NH)		818		821		824		826		830**	
	P 813	S 813	P 813	S 815	P 813	S 818	P 813	S 821	P 813	S 824	P 813	S 826	P 818	S 830
75	5	15	5	15	5	15	5	15	5	15	5	15	5	15
100	5	20	5	20	5	20	5	20	5	20	5	20	5	20
150	10	15	7.5	20	10	15	10	15	10	15	7.5	20	10	15
200	10	20	10	20	10	20	10	20	10	20	10	20	10	20
250	10	25	10	25	10	25	10	25	10	25	10	25	10	25
300	10	30	15	20	10	30	15	20	15	20	15	20	20	15
400	20	20	20	20	20	20	20	20	20	20	20	20	20	20
500	20	25	25	20	25	20	25	20	25	20	25	20	20	25
600	20	30	30	20	20	30	30	20	20	30	30	20	20	30
750	30	25	30	25	25	30	25	30	25	30	30	25	30	25
900	30	30	30	30	30	30	30	30	30	30	30	30	30	30
1000	40	25	50	20	50	20	50	20	50	20	50	20	40	25
1200	40	30	60	20	40	30	40	30	40	30	60	20	40	30
1500	60	25	60	25	50	30	50	30	50	30	60	25	60	25
1800	60	30	60	30	60	30	60	30	60	30	60	30	60	30
2400	60	40	60	40	60	40	60	40	60	40	60	40	60	40
3000	60	50	60	50	60	50	60	50	60	50	60	50	60	50
3600	60	60	60	60	60	60	60	60	60	60	60	60	60	60

Total Ratio	GEAR REDUCER SIZE													
	832**		842		852		860		870		880		8100	
	P 818	S 832	P 821	S 842	P 826	S 852	P 832	S 860	P 832	S 870	P 842	S 880	P 852	S 8100
75	5	15	5	15	5.17	15	5.17	15	5.17	14.67	5.17	14.67	5.13	14.67
100	5	20	5	20	5.17	20	5.17	20	5.17	20.50	5.17	20.50	5.13	20.50
150	5	30	7.5	20	7.5	20	10	15	7.5	20.50	7.5	20.50	10	14.67
200	10	20	10	20	10	20	10	20	10	20.50	10	20.50	10	20.50
250	10	25	10	25	10	25	10	25	10	24.50	10	24.50	10	24.50
300	10	30	15	20	15	20	20	15	15	20.50	15	20.50	20	14.67
400	20	20	20	20	20	20	20	20	20	20.50	20	20.50	20	20.50
500	25	20	25	20	25	20	25	20	25	20.50	25	20.50	25	20.50
600	20	30	30	20	30	20	30	20	30	20.50	30	20.50	30	20.50
750	25	30	25	30	30	25	30	25	30	24.50	30	24.50	30	24.50
900	30	30	30	30	30	30	60	15	30	29.50	30	29.50	60	14.67
1000	25	40	25	40	40	25	50	20	50	20.50	40	24.50	50	20.50
1200	40	30	40	30	40	30	60	20	60	20.50	40	29.50	60	20.50
1500	50	30	50	30	60	25	60	25	60	24.50	60	24.50	60	24.50
1800	60	30	60	30	60	30	60	30	60	29.50	60	29.50	60	29.50
2400	60	40	60	40	60	40	60	40	60	40	60	40	60	40
3000	60	50	60	50	60	50	60	50	60	50	60	50	60	50
3600	60	60	60	60	60	60	60	60	60	60	60	60	60	60

Note: Exact ratios are listed. P = Primary stage reducer ratio S = Secondary stage reducer ratio
* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
** For NH Series, P = 815

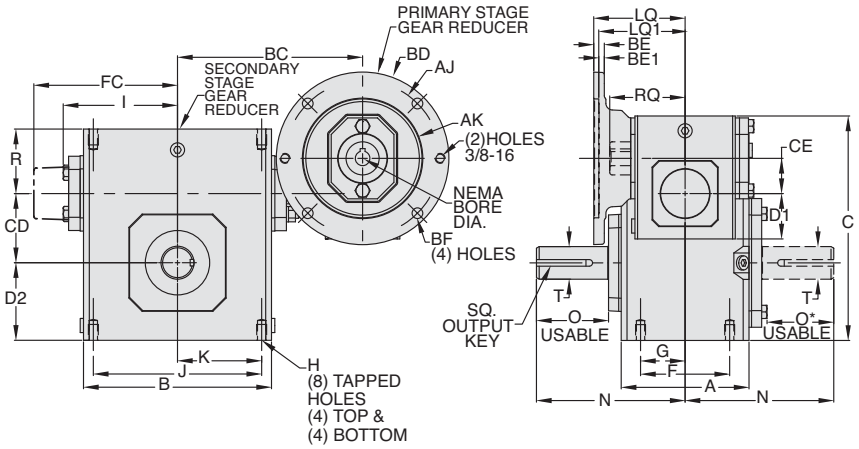
For exact total of double reduction package multiply "P" by the "S" ratio.

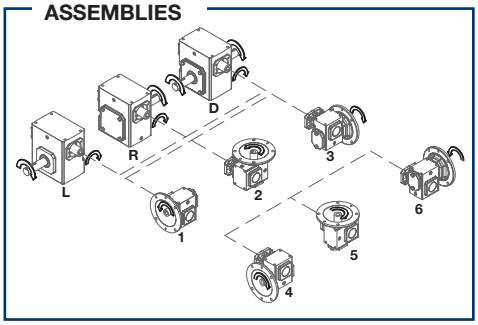
GR Series Dimensions

Styles: DMQ, DM, D

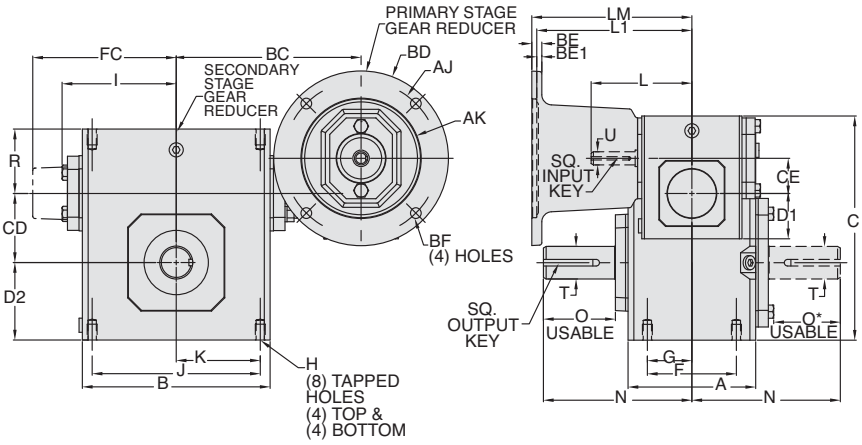
CAST IRON GR SERIES

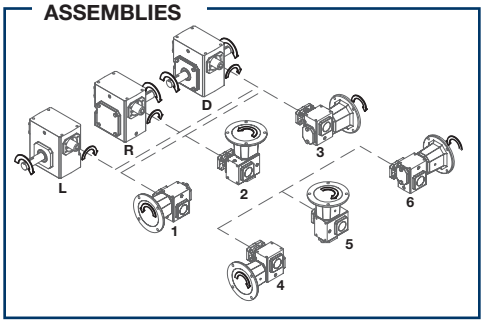
Style DMQ



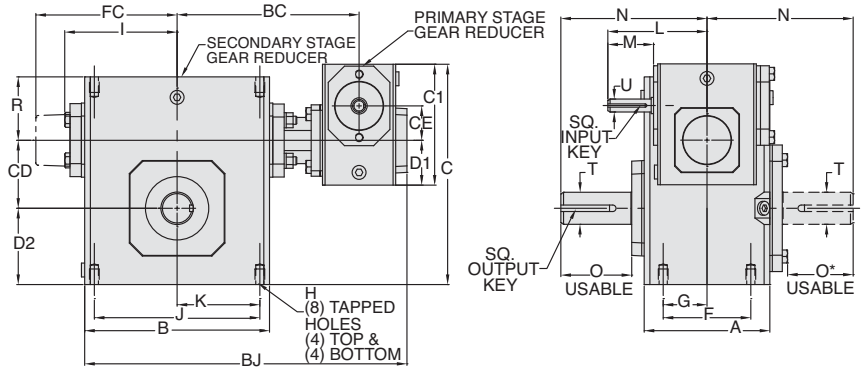


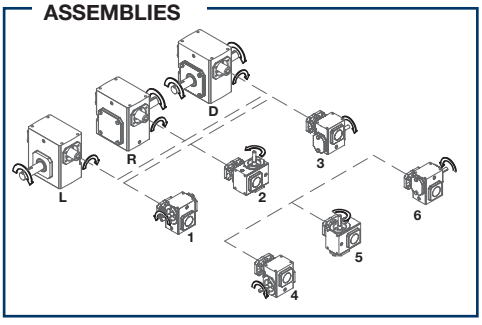
Style DM





Style D





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DMQ, DM, D DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	FC▼	G	H Tap Size	H Depth	I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	2.82	3.80	5.32	9.06	5.99	1.33	1.33	4.66	1.72	1.72	2.00	N/A	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	1.61	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	3.44	4.88	5.85	10.13	6.38	1.54	1.33	4.66	1.72	1.91	2.75	N/A	1.38	5/16-18 UNC	.63	3.14	4.19	2.09	3.82	1.76	4.31	2.11	1.90	1.93	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	3.56	5.06	5.94	10.32	6.75	1.75	1.33	4.66	1.72	2.06	2.75	N/A	1.38	5/16-18 UNC	.63	3.24	4.19	2.09	3.82	1.76	4.31	2.05	1.84	1.94	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	3.81	5.80	6.32	11.06	7.28	2.06	1.33	4.66	1.72	2.28	▲	N/A	1.44	3/8-16 UNC	.63	3.61	▲	2.50	3.82	1.76	4.68	2.29	2.08	2.03	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	4.06	6.12	6.44	11.35	7.81	2.38	1.33	4.66	1.72	2.50	2.88	N/A	1.44	3/8-16 UNC	.69	3.77	5.00	2.50	3.82	1.76	5.14	2.66	2.44	2.06	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	4.84	7.12	7.01	12.41	8.50	2.63	1.33	4.66	1.72	2.94	3.38	N/A	1.69	3/8-16 UNC	.69	4.34	6.38	3.19	3.82	1.76	5.63	2.73	2.52	2.44	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	5.25	8.12	7.86	14.12	9.94	3.00	1.75	5.38	2.06	3.25	4.00	N/A	2.00	7/16-14 UNC	.88	4.84	7.00	3.50	4.45	1.76	6.75	3.60	3.36	2.63	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	5.75	8.50	8.05	14.50	10.44	3.25	1.75	5.38	2.06	3.50	4.00	N/A	2.00	7/16-14 UNC	.88	5.02	7.50	3.75	4.45	1.76	7.06	3.66	3.42	2.63	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	6.13	10.25	9.18	16.69	12.78	4.25	2.06	6.38	2.28	4.44	5.00	N/A	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	4.82	1.76	8.12	4.50	4.21	2.69	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	7.19	13.00	11.57	20.97	15.43	5.25	2.63	8.00	2.94	5.12	5.81	N/A	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	6.07	2.38	9.06	4.78	4.53	3.63	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	8.13	14.25	13.30	23.82	18.38	6.00	3.25	9.38	3.50	6.50	6.38	10.24	3.19	5/8-11 UNC	1.00	N/A	12.75	6.38	6.76	2.38	10.00	4.65	4.65	4.00	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	7.63	14.88	12.96	24.33	20.46	7.00	3.25	9.38	3.50	7.59	5.50	10.63	2.75	1-8 UNC	1.56	N/A	12.50	6.25	6.76	2.38	11.76	5.65	5.65	4.33	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	8.63	17.00	13.94	26.69	23.79	8.00	4.25	11.38	4.44	8.86	6.50	11.93	3.25	1-8 UNC	1.66	N/A	14.25	7.13	9.57	3.47	12.25	5.98	5.98	4.11	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	9.53	20.88	17.05	32.74	29.24	10.00	5.25	14.00	5.12	10.36	6.88	14.34	3.44	1-1/4 -7 UNC	2.04	N/A	17.75	8.88	10.88	3.38	14.75	6.76	6.76	5.12	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✔		GRG
		(F)2.88" x (J)5.00"				✔	GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832✖	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832✖	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

❊ Style D and DM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

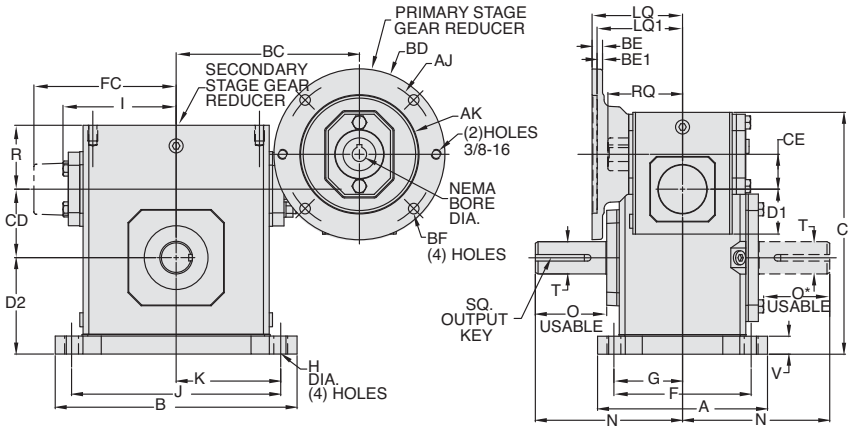
WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

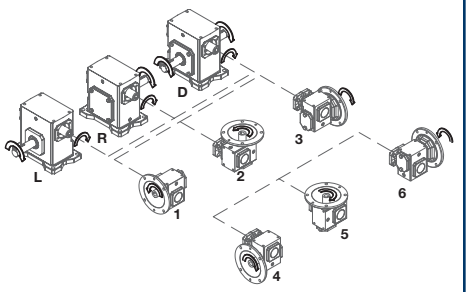
Styles: DTMQ, DTM, DT

CAST IRON GR SERIES

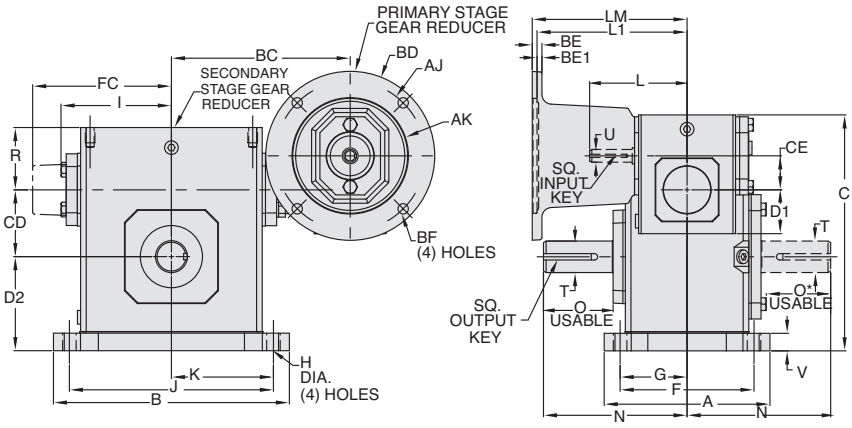
Style DTMQ



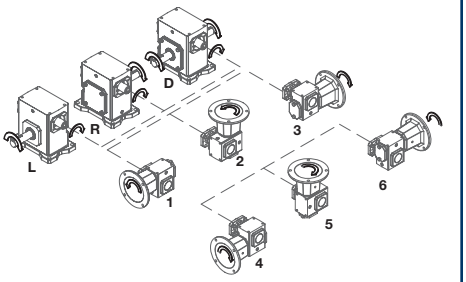
ASSEMBLIES



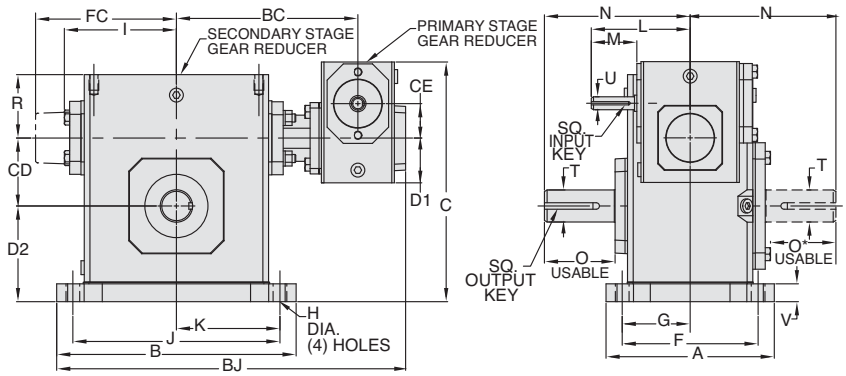
Style DTM



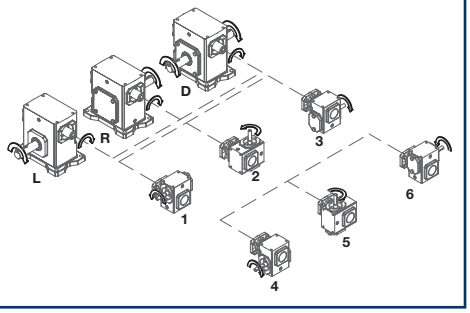
ASSEMBLIES



Style DT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DTMQ, DTM, DT DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	FC▼	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	4.24	5.37	5.32	9.85	6.52	1.33	1.33	4.66	1.72	2.25	3.31	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	1.61	0.53	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	5.56	6.50	5.85	10.94	6.98	1.54	1.33	4.66	1.72	2.50	4.31	N/A	2.16	.41	3.14	5.25	2.63	3.82	1.76	4.31	2.11	1.90	1.93	0.59	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	5.75	6.99	5.94	11.28	7.44	1.75	1.33	4.66	1.72	2.75	4.50	N/A	2.25	.41	3.24	5.75	2.88	3.82	1.76	4.31	2.05	1.84	1.94	0.69	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	6.00	7.69	6.32	12.01	8.00	2.06	1.33	4.66	1.72	3.00	4.69	N/A	2.34	.47	3.61	6.38	3.19	3.82	1.76	4.68	2.29	2.08	2.03	0.72	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	6.19	8.37	6.44	12.48	8.56	2.38	1.33	4.66	1.72	3.25	4.88	N/A	2.44	.49	3.77	7.06	3.53	3.82	1.76	5.14	2.66	2.44	2.06	0.75	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	6.50	9.25	7.01	13.48	9.25	2.63	1.33	4.66	1.72	3.69	5.25	N/A	2.63	.53	4.34	8.00	4.00	3.82	1.76	5.63	2.73	2.52	2.44	0.75	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	7.50	10.00	7.86	15.08	9.94	3.00	1.75	5.38	2.06	4.00	5.88	N/A	2.94	.53	4.84	8.44	4.22	4.35	1.76	6.75	3.60	3.36	2.63	0.75	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	7.75	11.12	8.05	15.81	10.44	3.25	1.75	5.38	2.06	4.38	6.13	N/A	3.06	.53	5.02	9.50	4.75	4.35	1.76	7.06	3.66	3.42	2.63	0.81	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	9.75	13.24	9.18	18.19	13.78	4.25	2.06	6.38	2.28	5.44	7.63	N/A	3.81	.66	6.10	11.12	5.56	4.82	1.76	8.12	4.50	4.21	2.69	1.00	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	10.50	16.24	11.57	22.59	16.56	5.25	2.63	8.00	2.94	6.25	8.38	N/A	4.19	.78	7.50	14.12	7.06	6.07	2.38	9.06	4.78	4.53	3.63	1.13	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	12.00	18.99	13.30	26.19	19.63	6.00	3.25	9.38	3.50	7.75	9.50	10.24	4.75	.91	N/A	16.49	8.25	6.76	2.38	10.00	4.65	4.65	4.00	1.25	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	13.38	15.38	12.96	24.58	21.88	7.00	3.25	9.38	3.50	9.00	11.25	10.63	5.63	1.13	N/A	13.00	6.50	6.76	2.38	11.76	5.65	5.65	4.33	1.42	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	13.50	17.37	13.94	26.88	25.44	8.00	4.25	11.38	4.44	10.50	11.50	11.93	5.75	1.13	N/A	14.75	7.38	9.57	3.47	12.25	5.98	5.98	4.11	1.65	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	16.88	21.14	17.05	32.92	30.88	10.00	5.25	14.00	5.12	12.00	14.00	14.34	7.00	1.44	N/A	17.00	8.50	10.88	3.38	14.75	6.76	6.76	5.12	1.65	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

▲ See feature comparison chart.

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 132-133 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832✖	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832✖	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

❊ Style DT and DTM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

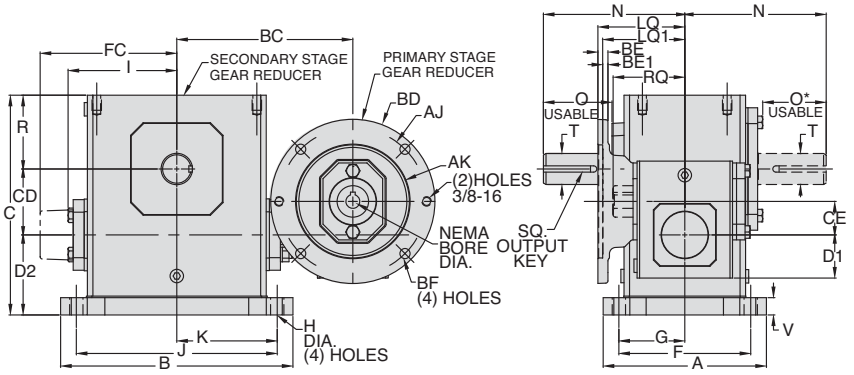
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

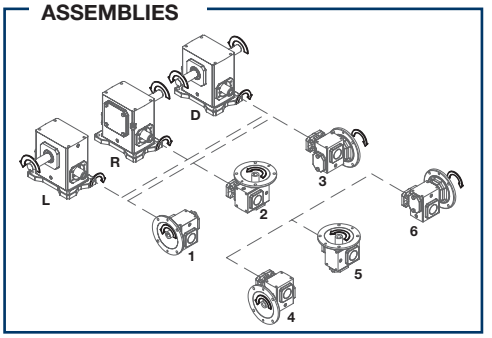
GR Series Dimensions

Styles: DUMQ, DUM, DU

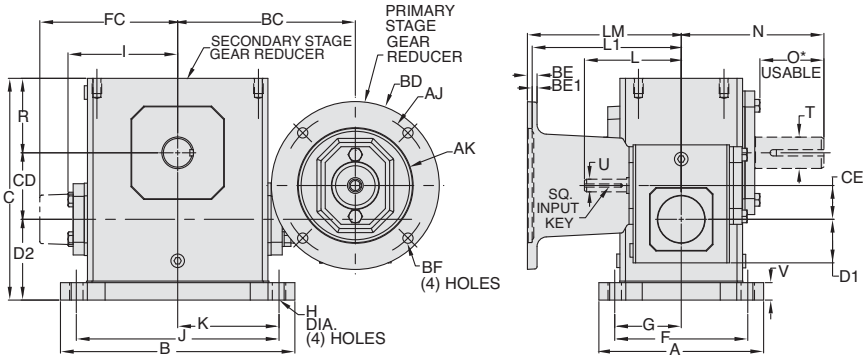
CAST IRON GR SERIES

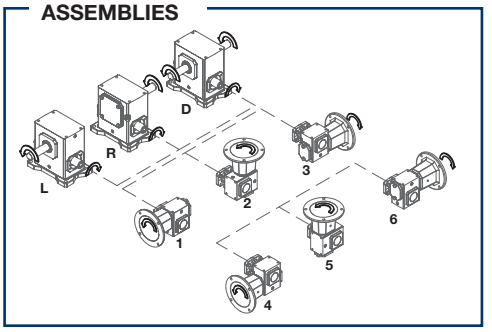
Style DUMQ



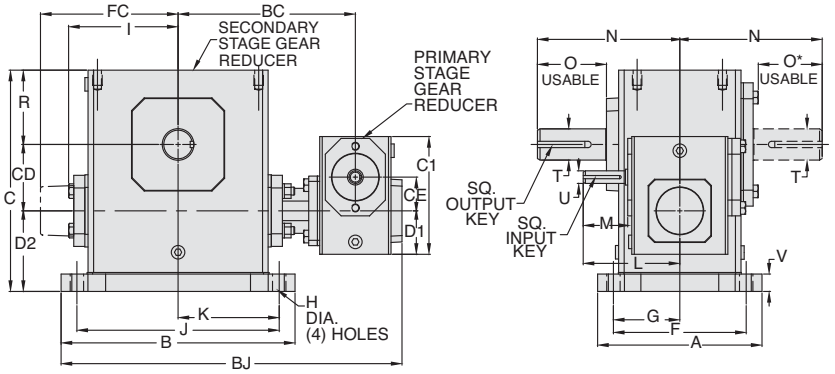


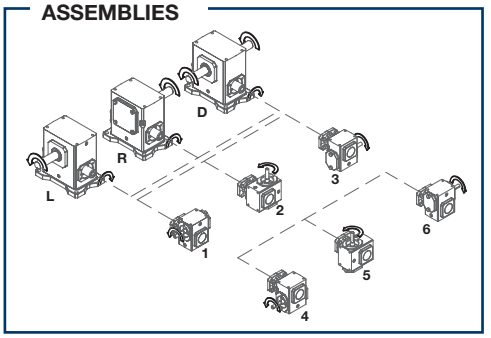
Style DUM





Style DU





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUMQ, DUM, DU DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	FC▼	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	4.24	5.37	5.32	9.85	5.19	1.33	1.33	4.66	1.72	2.14	3.31	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	1.72	0.53	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	5.56	6.50	5.85	10.94	5.97	1.54	1.33	4.66	1.72	2.52	4.31	N/A	2.16	.41	3.14	5.25	2.63	3.82	1.76	4.31	2.11	1.90	1.91	0.59	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	5.75	6.99	5.94	11.28	6.44	1.75	1.33	4.66	1.72	2.63	4.50	N/A	2.25	.41	3.24	5.75	2.88	3.82	1.76	4.31	2.05	1.84	2.06	0.69	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	6.00	7.69	6.32	12.01	7.09	2.06	1.33	4.66	1.72	2.75	4.69	N/A	2.34	.47	3.61	6.38	3.19	3.82	1.76	4.68	2.29	2.08	2.28	0.72	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	6.19	8.37	6.44	12.48	7.69	2.38	1.33	4.66	1.72	2.81	4.88	N/A	2.44	.49	3.77	7.06	3.53	3.82	1.76	5.14	2.66	2.44	2.50	0.75	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	6.50	9.25	7.01	13.48	8.75	2.63	1.33	4.66	1.72	3.19	5.25	N/A	2.63	.53	4.34	8.00	4.00	3.82	1.76	5.63	2.73	2.52	2.94	0.75	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	7.50	10.00	7.86	15.08	9.94	3.00	1.75	5.38	2.06	3.38	5.88	N/A	2.94	.53	4.84	8.44	4.22	4.35	1.76	6.75	3.60	3.36	3.25	0.75	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	7.75	11.12	8.05	15.81	10.44	3.25	1.75	5.38	2.06	3.50	6.13	N/A	3.06	.53	5.02	9.50	4.75	4.35	1.76	7.06	3.66	3.42	3.50	0.81	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	9.75	13.24	9.18	18.19	12.38	4.25	2.06	6.38	2.28	3.69	7.63	N/A	3.81	.66	6.10	11.12	5.56	4.82	1.76	8.12	4.50	4.21	4.44	1.00	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	10.50	16.24	11.57	22.59	15.13	5.25	2.63	8.00	2.94	4.76	8.38	N/A	4.19	.78	7.50	14.12	7.06	6.07	2.38	9.06	4.78	4.53	5.12	1.13	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	12.00	18.99	13.30	26.19	17.75	6.00	3.25	9.38	3.50	5.25	9.50	10.24	4.75	.91	N/A	16.49	8.25	6.76	2.38	10.00	4.65	4.65	6.50	1.25	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	13.38	15.38	12.96	24.58	20.33	7.00	3.25	9.38	3.50	5.74	11.25	10.63	5.63	1.13	N/A	13.00	6.50	6.76	2.38	11.76	5.65	5.65	7.59	1.42	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	13.50	17.37	13.94	26.88	22.61	8.00	4.25	11.38	4.44	5.75	11.50	11.93	5.75	1.13	N/A	14.75	7.38	9.57	3.47	12.25	5.98	5.98	8.86	1.65	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	16.88	21.14	17.05	32.92	27.12	10.00	5.25	14.00	5.12	6.76	14.00	14.34	7.00	1.44	N/A	17.00	8.50	10.88	3.38	14.75	6.76	6.76	10.36	1.65	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

FEATURE COMPARISON (821, 826, 832)

▲ See feature comparison chart.

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 132-133 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832✖	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832✖	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

❊ Style DU and DUM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

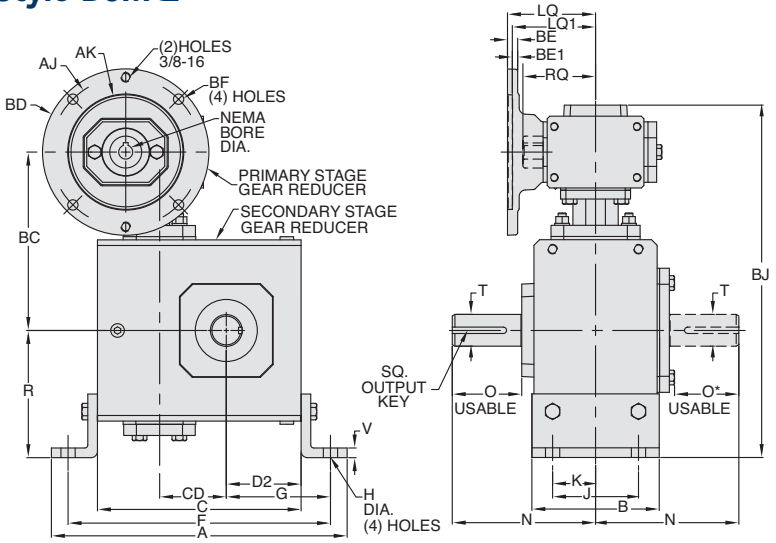
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

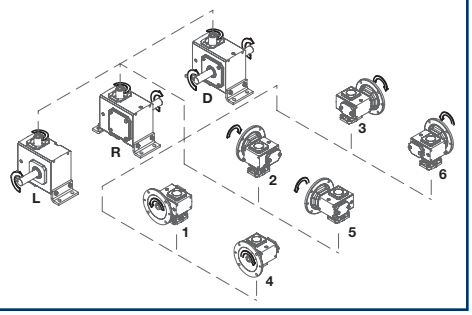
Styles: DJMQ, DJM, DJ

CAST IRON GR SERIES

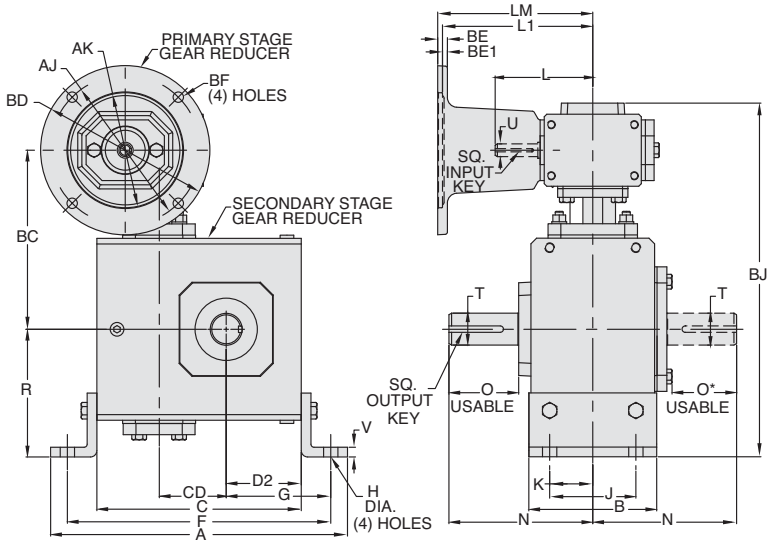
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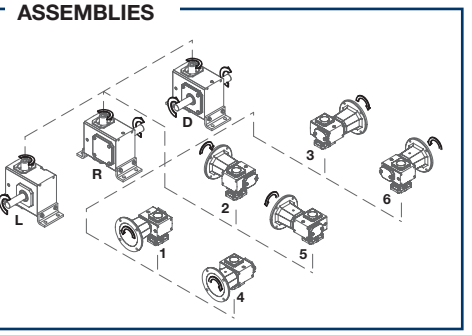
ASSEMBLIES



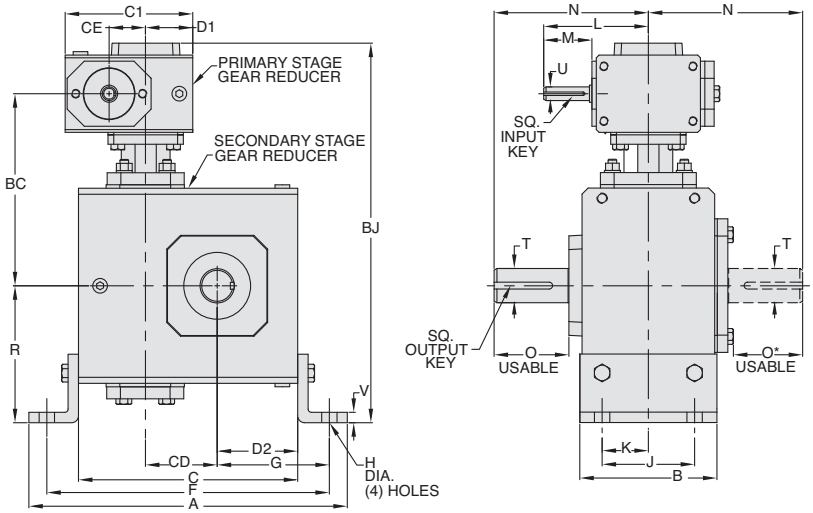
Style DJM



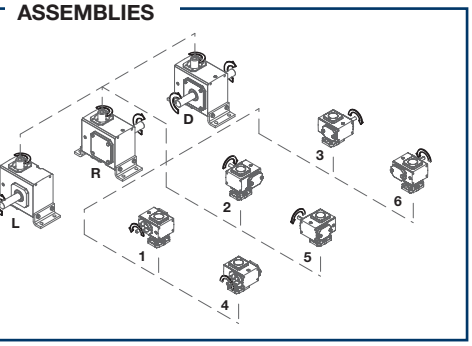
ASSEMBLIES



Style DJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJMQ, DJM, DJ DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	7.42	2.75	5.32	10.10	4.66	1.33	1.33	4.66	1.72	1.72	6.42	2.60	.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	8.14	3.50	5.85	11.20	5.38	1.54	1.33	4.66	1.72	1.91	7.08	2.76	.44	2.75	1.38	3.82	1.76	4.31	2.11	1.90	3.50	0.25	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	8.51	3.50	5.94	11.29	5.75	1.75	1.33	4.66	1.72	2.06	7.45 - 7.63	3.00	.44 slot	2.50 - 2.75	1.25 - 1.38	3.82	1.76	4.31	2.05	1.84	3.50	0.25	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	9.76	4.00	6.32	12.17	6.38	2.06	1.33	4.66	1.72	2.28	8.63	3.40	.56 slot	2.63 - 2.75	1.31-1.38	3.82	1.76	4.68	2.29	2.08	4.01	0.38	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	10.31	4.00	6.44	12.35	6.94	2.38	1.33	4.66	1.72	2.50	9.19	3.63	.69	2.88	1.44	3.82	1.76	5.14	2.66	2.44	4.06	0.38	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	11.62	5.00	7.01	13.85	8.00	2.63	1.33	4.66	1.72	2.94	10.38	4.13	.56	3.38	1.69	3.82	1.76	5.63	2.73	2.52	5.00	0.38	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	12.64	6.00	7.86	15.68	9.94	3.00	1.75	5.38	2.06	3.25	11.38	4.50	.56	3.88	1.94	4.35	1.76	6.75	3.60	3.36	5.62	0.38	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	13.14	6.00	8.05	15.88	10.44	3.25	1.75	5.38	2.06	3.50	11.88	4.75	.56	3.88	1.94	4.35	1.76	7.06	3.66	3.42	5.63	0.38	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	16.38	7.00	9.18	18.07	11.38	4.25	2.06	6.38	2.28	4.44	14.88	6.19	.69	5.00	2.50	4.82	1.76	8.12	4.50	4.21	6.50	0.50	1.875	0.625	1/4 X 2.88**	1/2 X 3.06
GR852	19.00	7.00	11.57	22.22	14.00	5.25	2.63	8.00	2.94	5.12	17.50	6.87	.69	5.81	2.91	6.07	2.38	9.06	4.78	4.53	7.75	0.50	2.000	0.750	1/4 X 3.00**	1/2 X 3.50

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 132-133 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832✖	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832✖	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

❊ Style DJ and DJM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

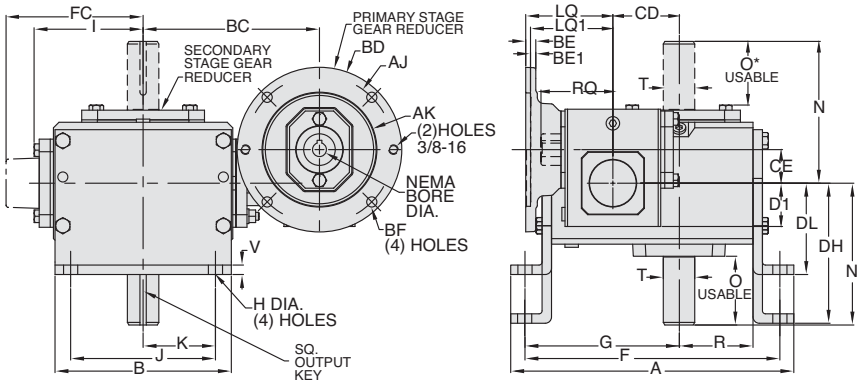
WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

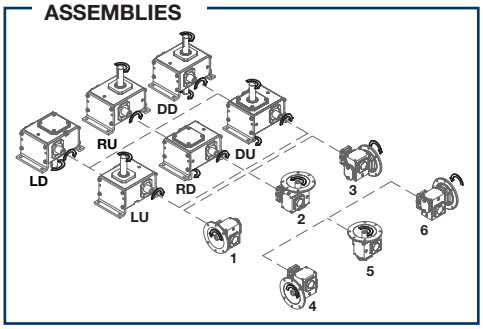
GR Series Dimensions

Styles: DV_MQ, DV_M, DV_

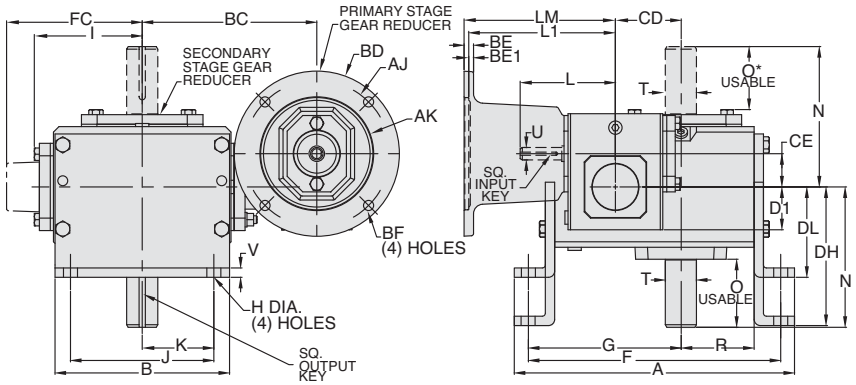
CAST IRON GR SERIES

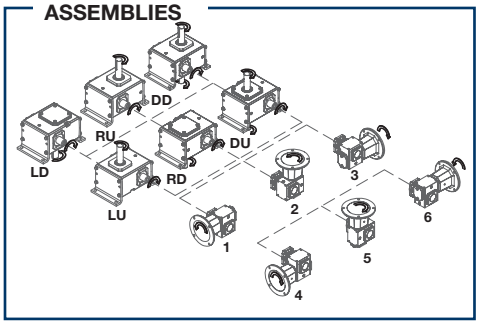
Style DV(L or H)MQ



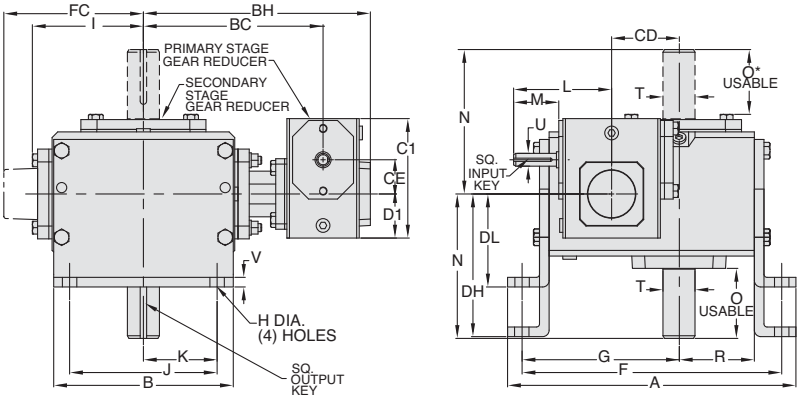


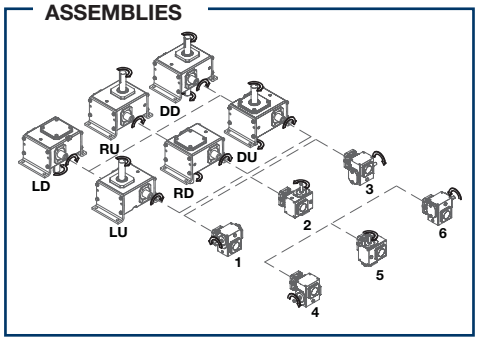
Style DV(L or H)M





Style DV(L or H)





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DV_MQ, DV_M, DV_ DIMENSIONS (Inches)

Size	A	B	BC	BH	CD	CE	C1	D1	DL	DH	F	FC▼	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	7.26	4.00	5.32	7.16	1.33	1.33	4.66	1.72	2.63	3.56	6.50	N/A	3.86	.38	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94	1.72	0.25	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	7.88	5.00	5.85	7.69	1.54	1.33	4.66	1.72	3.00	4.38	7.00	N/A	4.28	.44	3.14	4.00	2.00	3.82	1.76	4.31	2.11	1.90	1.91	0.25	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	8.25	5.00	5.94	7.79	1.75	1.33	4.66	1.72	3.00	4.38	7.37	N/A	4.50	.44	3.24	4.00	2.00	3.82	1.76	4.31	2.05	1.84	2.06	0.25	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	9.38	6.00	6.32	8.16	2.06	1.33	4.66	1.72	3.13	4.88	8.38	N/A	5.09	.50	3.61	4.88	2.44	3.82	1.76	4.68	2.29	2.08	2.28	0.38	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	9.94	6.00	6.44	8.29	2.38	1.33	4.66	1.72	3.38	5.25	8.81	N/A	5.44	.50	3.77	4.88	2.44	3.82	1.76	5.14	2.66	2.44	2.50	0.38	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	11.24	7.00	7.01	8.85	2.63	1.33	4.66	1.72	3.63	5.56	10.12	N/A	6.12	.56	4.34	5.75	2.88	3.82	1.76	5.63	2.73	2.52	2.94	0.38	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	12.50	8.00	7.86	10.06	3.00	1.75	5.38	2.06	3.94	5.88	11.13	N/A	6.75	.56	4.84	6.00	3.00	4.35	1.76	6.75	3.60	3.36	3.25	0.38	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	13.00	8.50	8.05	10.25	3.25	1.75	5.38	2.06	4.69	6.25	11.88	N/A	7.13	.56	5.02	6.13	3.06	4.35	1.76	7.06	3.66	3.42	3.50	0.38	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	16.26	10.00	9.18	11.57	4.25	2.06	6.38	2.28	5.00	7.50	14.88	N/A	8.69	.69	6.10	7.88	3.94	4.82	1.76	8.12	4.50	4.21	4.44	0.50	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	19.62	13.00	11.57	14.47	5.25	2.63	8.00	2.94	5.16	9.16	18.00	N/A	10.88	.78	7.50	10.00	5.00	6.07	2.38	9.06	4.78	4.53	5.12	0.50	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	23.26	14.75	13.30	16.70	6.00	3.25	9.38	3.50	7.31	9.63	20.88	10.24	12.19	.91	N/A	11.76	5.88	6.76	2.38	10.00	4.65	4.65	6.50	0.50	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	26.91	14.88	12.96	16.90	7.00	3.25	9.38	3.50	7.00	N/A	23.99	10.63	13.87	1.13	N/A	12.50	6.25	6.76	2.38	11.76	5.65	5.65	7.59	0.75	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	28.96	17.00	13.94	18.19	8.00	4.25	11.38	4.44	8.00	N/A	25.50	11.93	14.38	1.13	N/A	14.00	7.00	9.57	3.47	12.25	5.98	5.98	8.86	0.75	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	37.47	20.88	17.05	22.30	10.00	5.25	14.00	5.12	9.00	N/A	30.75	14.34	17.76	1.44	N/A	17.75	8.88	10.88	3.38	14.75	6.76	6.76	10.36	1.00	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

FEATURE COMPARISON (821, 826, 832)

▲ See feature comparison chart.

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3.8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 132-133 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832✖	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832✖	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

❊ Style DVL/DVH and DVLM/DVHM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

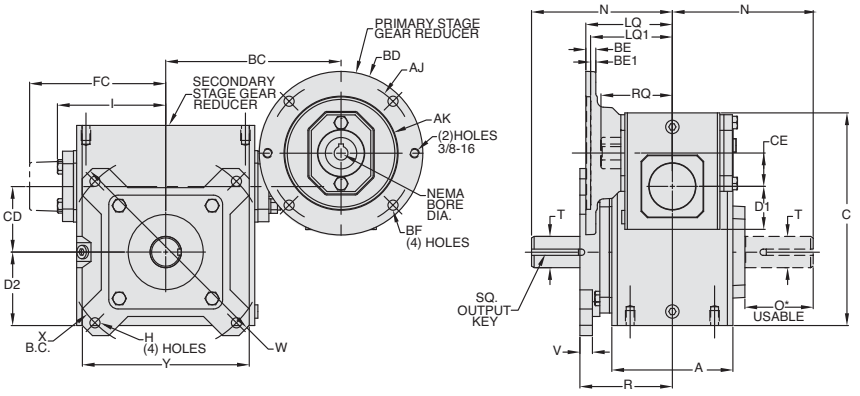
WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

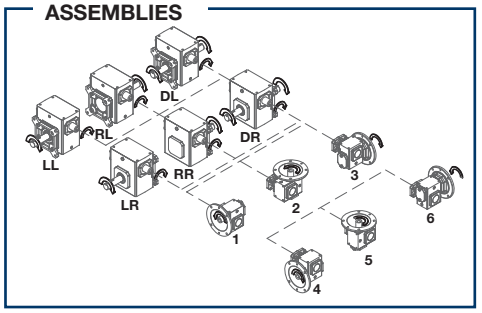
GR Series Dimensions

Styles: DFMQ, DFM, DF

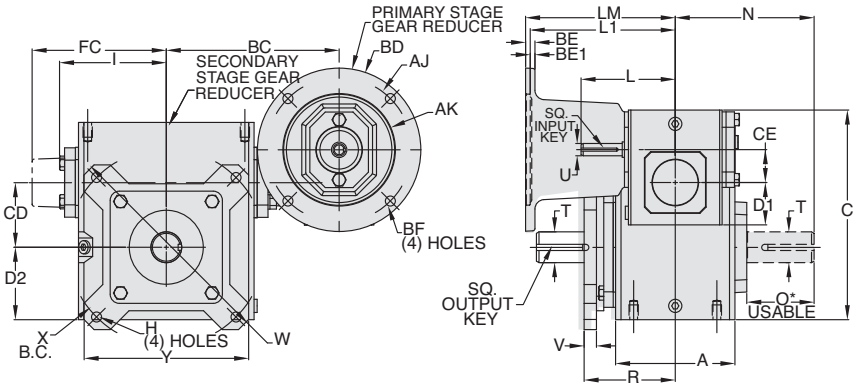
CAST IRON GR SERIES

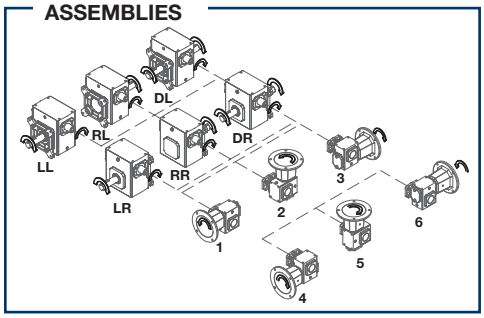
Style DFMQ



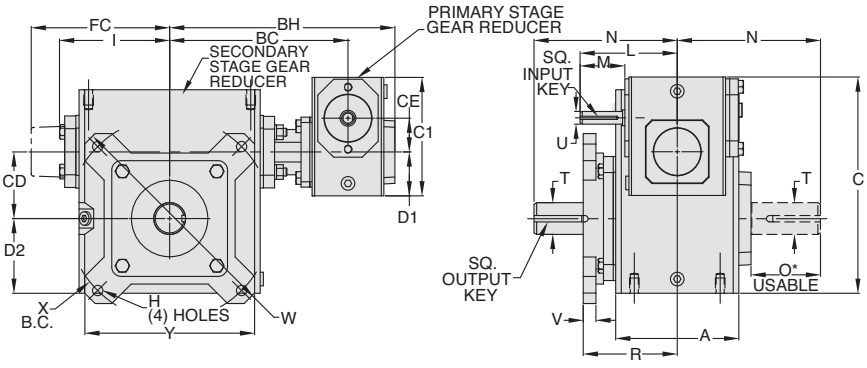


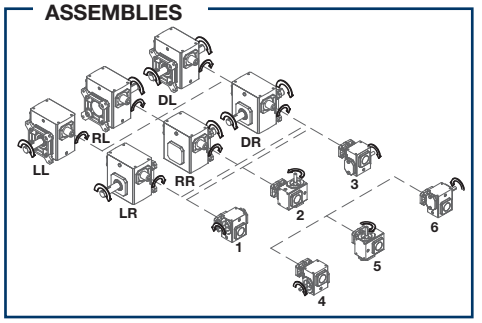
Style DFM





Style DF





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Sizes 813-8100 output flange must be mounted at Factory on styles FMQ, FM, F.

STYLE DFMQ, DFM, DF DIMENSIONS (Inches)

Size	A	BC	BH	C	CD	CE	C1	D1	D2	FC▼	H	I	L	M	N	O*	R	V	W	X	Y	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	2.82	5.32	7.16	5.99	1.33	1.33	4.66	1.72	1.72	N/A	.34	2.61	3.82	1.76	4.00	1.94	2.52	0.38	5.92	5.00	4.50	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	3.44	5.85	7.69	6.38	1.54	1.33	4.66	1.72	1.91	N/A	.34	3.14	3.82	1.76	4.31	1.90	2.87	0.38	5.88	5.00	4.50	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	3.56	5.94	7.79	6.75	1.75	1.33	4.66	1.72	2.06	N/A	.34	3.24	3.82	1.76	4.31	1.84	3.18	0.38	6.64	5.88	5.00	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	3.81	6.32	8.16	7.28	2.06	1.33	4.66	1.72	2.28	N/A	.41	3.61	3.82	1.76	4.68	2.08	3.69	0.44	7.88	7.00	5.99	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	4.06	6.44	8.29	7.81	2.38	1.33	4.66	1.72	2.50	N/A	.41	3.77	3.82	1.76	5.14	2.44	3.73	0.44	8.39	7.50	6.27	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	4.84	7.01	8.85	8.50	2.63	1.33	4.66	1.72	2.94	N/A	.41	4.34	3.82	1.76	5.63	2.52	3.70	0.50	8.88	8.00	6.67	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	5.25	7.86	10.06	9.94	3.00	1.75	5.38	2.06	3.25	N/A	.41	4.84	4.35	1.76	6.75	3.36	3.78	0.50	9.89	9.00	7.37	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	5.75	8.05	10.25	10.44	3.25	1.75	5.38	2.06	3.50	N/A	.41	5.02	4.35	1.76	7.06	3.42	4.03	0.50	9.89	9.00	7.37	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	6.13	9.18	11.57	12.78	4.25	2.06	6.38	2.28	4.44	N/A	.56	6.10	4.82	1.76	8.12	4.21	4.56	0.62	12.95	11.50	9.65	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	7.19	11.57	14.47	15.43	5.25	2.63	8.00	2.94	5.12	N/A	.69	7.50	6.07	2.38	9.06	4.53	5.62	0.75	15.50	14.00	11.75	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	8.13	13.30	16.70	18.38	6.00	3.25	9.38	3.50	6.50	10.24	.69	N/A	6.76	2.38	10.00	4.65	7.26	0.75	18.00	15.63	14.00	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	7.63	12.96	16.90	20.46	7.00	3.25	9.38	3.50	7.59	10.63	.78	N/A	6.76	2.38	11.76	5.65	7.45	0.75	21.00	18.38	15.63	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	8.63	13.94	18.19	23.79	8.00	4.25	11.38	4.44	8.86	11.93	1.03	N/A	9.57	3.47	12.25	5.98	8.34	0.75	24.00	21.00	17.88	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	9.53	17.05	22.30	29.24	10.00	5.25	14.00	5.12	10.36	14.34	1.03	N/A	10.88	3.38	14.75	6.76	9.07	1.00	29.00	25.00	21.19	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

FEATURE COMPARISON (821, 826, 832)

▲ See feature comparison chart.

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
GR821	Identical	Identical◊	Identical	Identical	✔	✔	GRG GRL
GR826	1.250" 1.125"	Identical	Identical	Identical	✔	✔	GRG GRL
GR832	1.500" 1.375"	Identical	3/8 x 2.63 5/16 x 2.63	Identical	✔	✔	GRG GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 132-133 (DMQ, DM, D).

MOTOR MOUNTING DIMENSIONS

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832✖	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832✖	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

❊ Style DF and DFM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

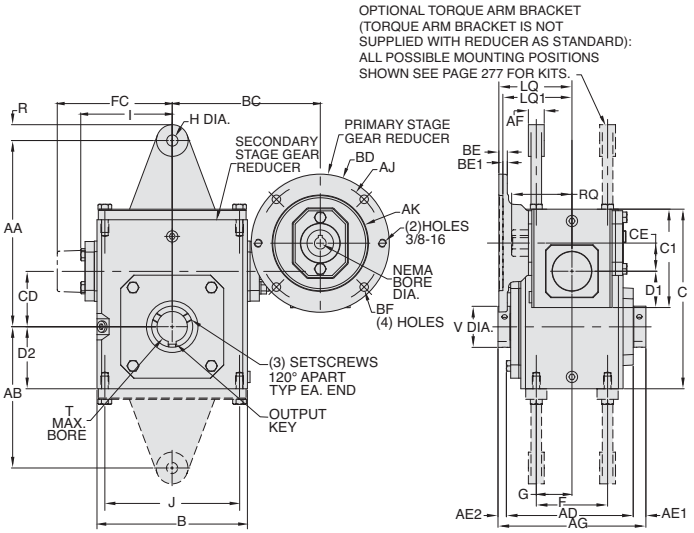
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

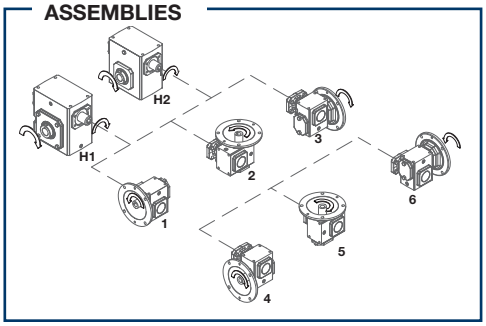
Styles: DHMQ, DHM, DH

CAST IRON GR SERIES

Style DHMQ

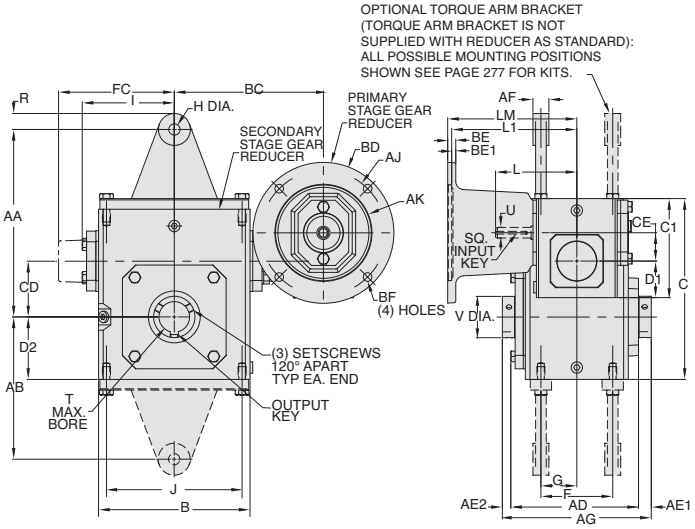


ASSEMBLIES

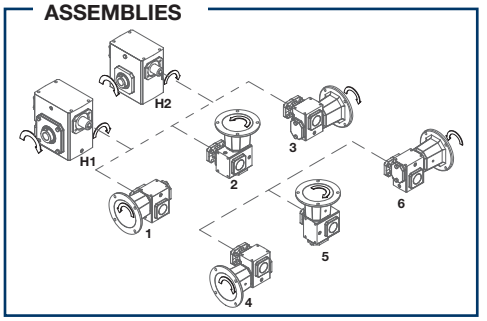


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DHM

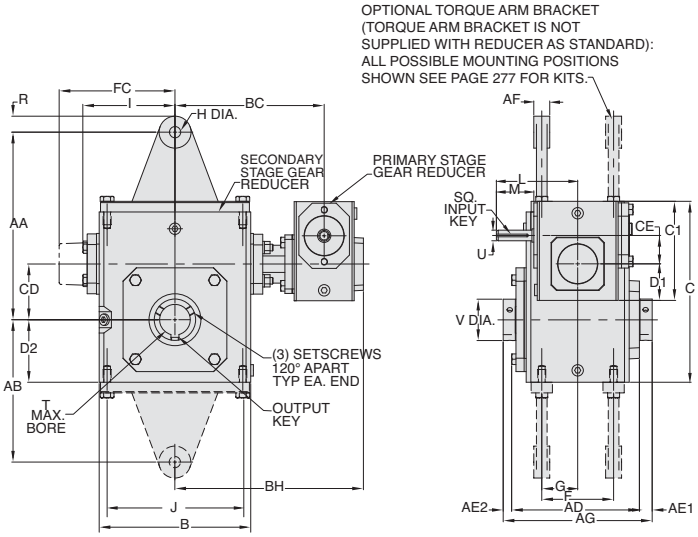


ASSEMBLIES

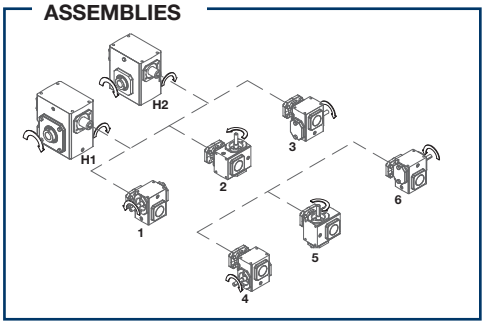


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.



STYLE DHMQ, DHM, DH DIMENSIONS (Inches)

Size	AA	AB	AD	AE1	AE2	AF	AG	B	BC	BH	C	CD	CE	C1	C2	D1	D2	F	FC▼	G	H	I	J	L	M	R	V	T MAX• -0.000 +0.0025	U +0.000 -0.0015	Input Key❊	Output Key
GR813	4.19	2.97	3.90	0.53	0.32	0.75	4.75	3.80	5.32	7.16	5.99	1.33	1.33	4.66	4.66	1.72	1.72	2.00	N/A	1.00	0.53	2.61	3.25	3.82	1.76	0.50	1.00	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR815	5.97	4.41	4.61	0.51	0.30	0.75	5.42	5.19	5.85	7.69	6.38	1.54	1.33	4.66	5.38	1.72	1.91	2.75	N/A	1.38	0.53	3.14	4.19	3.82	1.76	0.75	1.00	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR818	6.19	4.56	4.73	0.49	0.28	0.75	5.50	5.19	5.94	7.79	6.75	1.75	1.33	4.66	5.75	1.72	2.06	2.75	N/A	1.38	0.53	3.24	4.19	3.82	1.76	0.75	1.44	1.000	.500	1/8 x 1.00	1/4 x 3.00
GR821	7.24	5.43	4.99	0.61	0.40	0.75	6.00	5.80	6.32	8.16	7.28	2.06	1.33	4.66	6.38	1.72	2.28	▲	N/A	1.44	0.53	3.61	▲	3.82	1.76	0.75	1.44	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR824	7.69	5.75	5.18	0.51	0.31	0.75	6.00	6.12	6.44	8.29	7.81	2.38	1.33	4.66	6.94	1.72	2.50	2.88	N/A	1.44	0.53	3.77	5.00	3.82	1.76	0.75	1.94	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR826	8.81	6.69	6.01	0.60	0.39	0.75	7.00	7.38	7.01	8.85	8.50	2.63	1.33	4.66	8.00	1.72	2.94	3.38	N/A	1.69	0.53	4.34	6.38	3.82	1.76	0.75	1.94	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR830	10.63	8.25	6.53	0.60	0.36	0.75	7.50	8.12	7.86	10.06	9.94	3.00	1.75	5.38	8.88	2.06	3.25	4.00	N/A	2.00	0.53	4.84	7.00	4.35	1.76	0.88	2.51	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR832	10.88	8.50	7.04	0.54	0.29	0.75	7.88	8.75	8.05	10.25	10.44	3.25	1.75	5.38	9.38	2.06	3.50	4.00	N/A	2.00	0.53	5.02	7.50	4.35	1.76	0.88	2.51	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR842	11.94	9.44	7.53	0.63	0.34	0.75	8.50	10.25	9.18	11.57	12.78	4.25	2.06	6.38	11.38	2.28	4.44	5.00	N/A	2.50	0.53	6.10	8.50	4.82	1.76	0.75	2.75	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR852	13.88	10.12	8.85	0.97	0.68	1.00	10.50	13.00	11.57	14.47	15.43	5.25	2.63	8.00	14.00	2.94	5.12	5.81	N/A	2.91	0.66	7.50	11.00	6.07	2.38	1.00	4.26	3.438	.750	3/16 x 1.63	7/8 x 3.44
GR860	15.00	11.50	10.52	0.52	0.52	0.38	11.50	14.50	13.30	16.70	18.38	6.00	3.25	9.38	16.50	3.50	6.50	6.38	10.24	3.19	0.66	N/A	12.75	6.76	2.38	0.69	4.18	3.438	.875	3/16 x 1.63	7/8 x 3.44
GR870	N/A	N/A	11.36	1.09	1.09	N/A	13.50	14.88	12.96	16.90	20.46	7.00	3.25	9.38	18.91	3.50	7.59	5.50	10.63	2.75	N/A	N/A	12.50	6.76	2.38	N/A	4.92	3.938	.875	3/16 x 1.75**	1 x 1/2**
GR880	N/A	N/A	12.48	1.03	1.03	N/A	14.50	17.00	13.94	18.19	23.79	8.00	4.25	11.38	20.96	4.44	8.86	6.50	11.93	3.25	N/A	N/A	14.25	9.57	3.47	N/A	5.55	4.438	1.250	1/4 X 2.88**	1 x 1/2**
GR8100	N/A	N/A	15.78	1.39	1.39	N/A	18.50	20.88	17.05	22.30	29.24	10.00	5.25	14.00	25.47	5.12	10.36	6.88	14.34	3.44	N/A	N/A	17.75	10.88	3.38	N/A	6.67	5.438	1.250	1/4 X 3.00**	1-1/4 x 5/8**

▲ See feature comparison chart.

FEATURE COMPARISON (821)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	✔		GRG
		(F)2.88" x (J)5.00"			✔	GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

• Max bore dimensions shown. For additional bores available, refer to page 130.
** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DH and DHM only.
❖ Metric IEC B5 input flange options are available only on quill input styles.
✖ Dimensions same for GRG and GRL Series
▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

Note: Torque arm bracket available separately. Refer to page 277 for kits. If a special bracket is required, refer to Style DMQ dimensions for mounting pad dimensions on top/bottom of reducer.

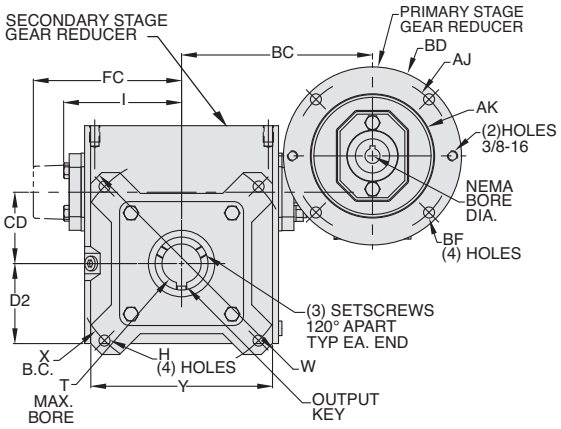
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

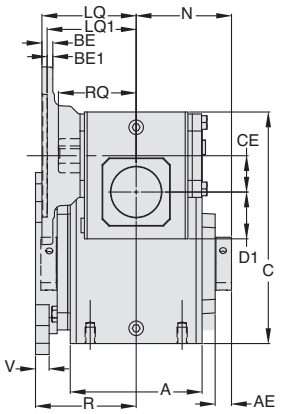
GR Series Dimensions

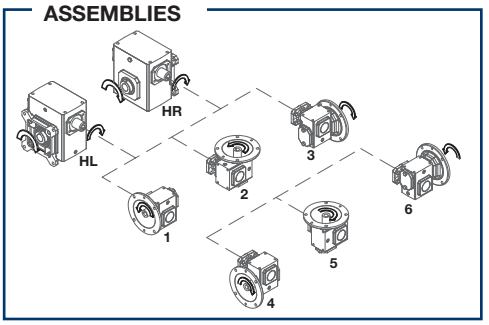
Styles: DFHMQ, DFHM, DFH

CAST IRON GR SERIES

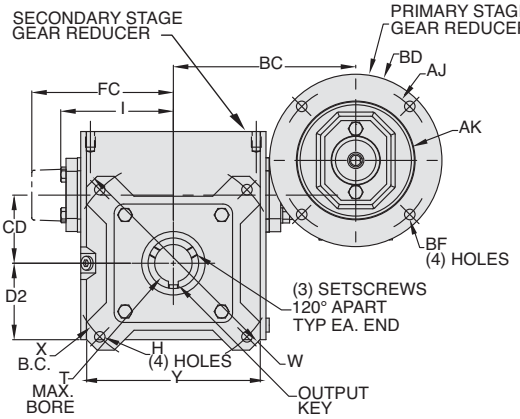
Style DFHMQ

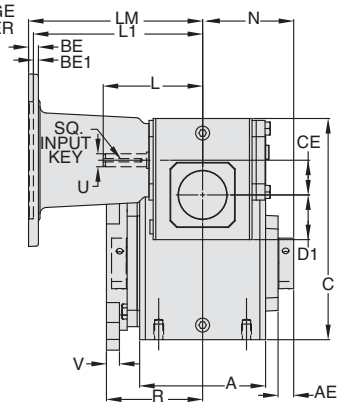


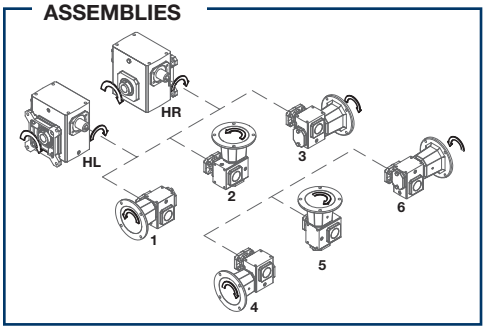




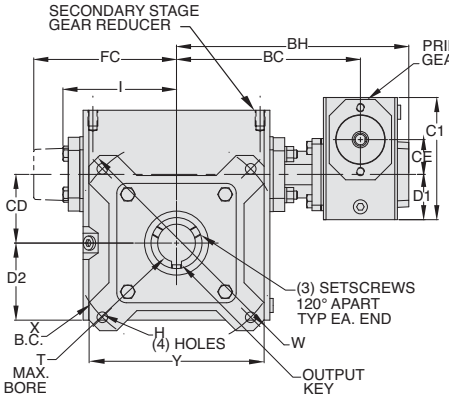
Style DFHM

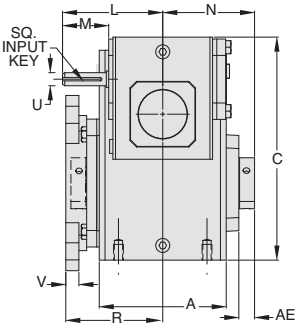


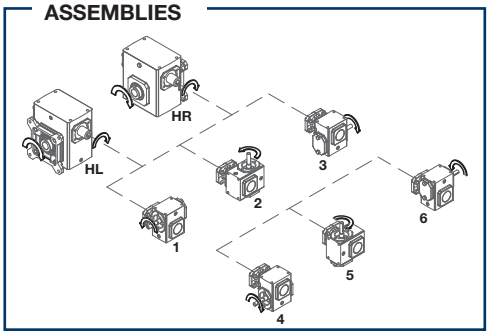




Style DFH







REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFHMQ, DFHM, DFH DIMENSIONS (Inches)

Size	A	AE	BC	BH	C	CD	CE	C1	D1	D2	FC▼	H	I	L	M	N	R	V	W	X	Y	T MAX• -0.000 +0.0025	U +0.000 -0.0015	Input Key❊	Output Key
GR813	2.82	0.53	5.32	7.16	5.99	1.33	1.33	4.66	1.72	1.72	N/A	.34	2.61	3.82	1.76	2.38	2.52	0.38	5.92	5.00	4.50	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR815	3.44	0.51	5.85	7.69	6.38	1.54	1.33	4.66	1.72	1.91	N/A	.34	3.14	3.82	1.76	2.71	2.87	0.38	5.88	5.00	4.50	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR818	3.56	0.49	5.94	7.79	6.75	1.75	1.33	4.66	1.72	2.06	N/A	.34	3.24	3.82	1.76	2.75	3.18	0.38	6.64	5.88	5.00	1.000	.500	1/8 x 1.00	1/4 x 3.00
GR821	3.81	0.61	6.32	8.16	7.28	2.06	1.33	4.66	1.72	2.28	N/A	.41	3.61	3.82	1.76	3.00	3.69	0.44	7.88	7.00	5.99	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR824	4.06	0.51	6.44	8.29	7.81	2.38	1.33	4.66	1.72	2.50	N/A	.41	3.77	3.82	1.76	3.00	3.73	0.44	8.39	7.50	6.27	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR826	4.84	0.60	7.01	8.85	8.50	2.63	1.33	4.66	1.72	2.94	N/A	.41	4.34	3.82	1.76	3.50	3.70	0.50	8.88	8.00	6.67	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR830	5.25	0.60	7.86	10.06	9.94	3.00	1.75	5.38	2.06	3.25	N/A	.41	4.84	4.35	1.76	3.75	3.78	0.50	9.89	9.00	7.37	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR832	5.75	0.54	8.05	10.25	10.44	3.25	1.75	5.38	2.06	3.50	N/A	.41	5.02	4.35	1.76	3.94	4.03	0.50	9.89	9.00	7.37	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR842	6.13	0.63	9.18	11.57	12.78	4.25	2.06	6.38	2.28	4.44	N/A	.56	6.10	4.82	1.76	4.25	4.56	0.62	12.95	11.50	9.65	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR852	7.19	0.97	11.57	14.47	15.43	5.25	2.63	8.00	2.94	5.12	N/A	.69	7.50	6.07	2.38	5.25	5.62	0.75	15.50	14.00	11.75	3.438	.750	3/16 x 1.63	7/8 x 3.44
GR860	8.13	0.52	13.30	16.70	18.38	6.00	3.25	9.38	3.50	6.50	10.24	.69	N/A	6.76	2.38	5.75	7.26	0.75	18.00	15.63	14.00	3.438	.875	3/16 x 1.63	7/8 x 3.44
GR870	7.63	1.09	12.96	16.90	20.46	7.00	3.25	9.38	3.50	7.59	10.63	.78	N/A	6.76	2.38	6.75	7.45	0.75	21.00	18.38	15.63	3.938	.875	3/16 x 1.75**	1 x 1/2**
GR880	8.63	1.03	13.94	18.19	23.79	8.00	4.25	11.38	4.44	8.86	11.93	1.03	N/A	9.57	3.47	7.25	8.34	0.75	24.00	21.00	17.88	4.438	1.250	1/4 X 2.88**	1 x 1/2**
GR8100	9.53	1.39	17.05	22.30	29.24	10.00	5.25	14.00	5.12	10.36	14.34	1.03	N/A	10.88	3.38	9.25	9.07	1.00	29.00	25.00	21.19	5.438	1.250	1/4 X 3.00**	1-1/4 x 5/8**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	✔	✔	GRG GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 132-133 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821✖	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821✖	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- • Max bore dimensions shown. For additional bores available, refer to page 140.
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- ■ 48CZ not available
- ❊ Style DFH and DFHM only.
- ❖ Metric IEC B5 input flange options are available only on quill input styles.
- ✖ Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

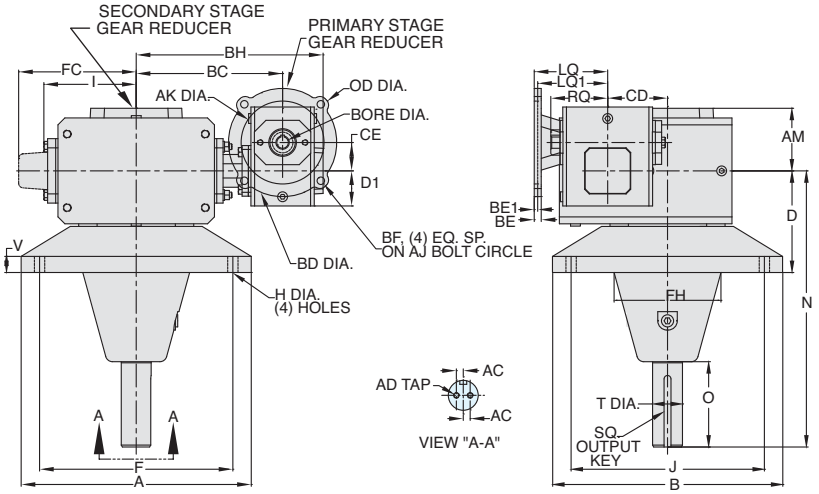
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

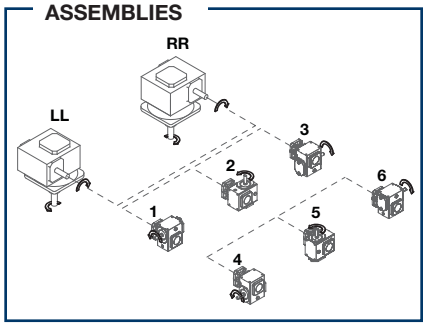
GR Series Dimensions

Styles: DFEMQ, DFEM, DFE

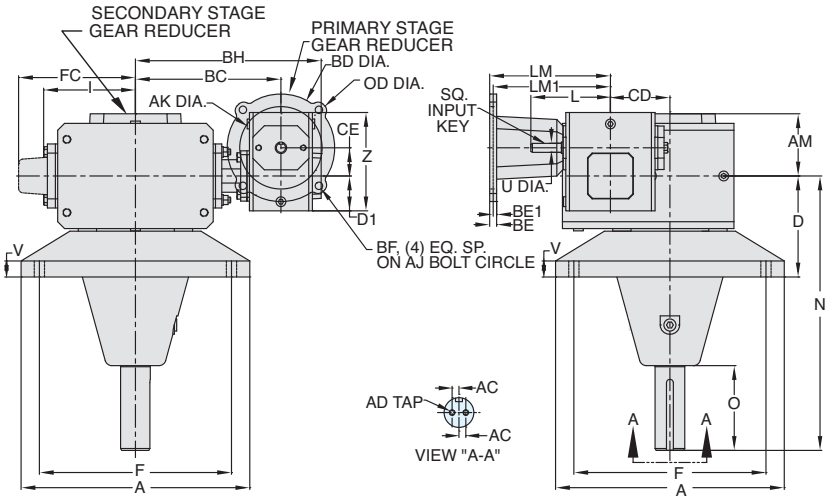
CAST IRON GR SERIES

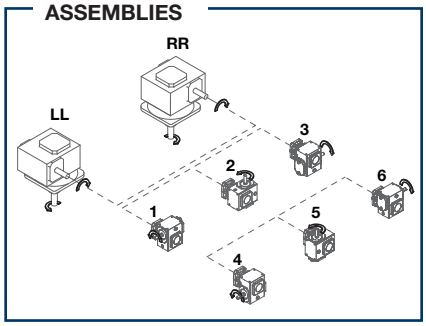
Style DFEMQ



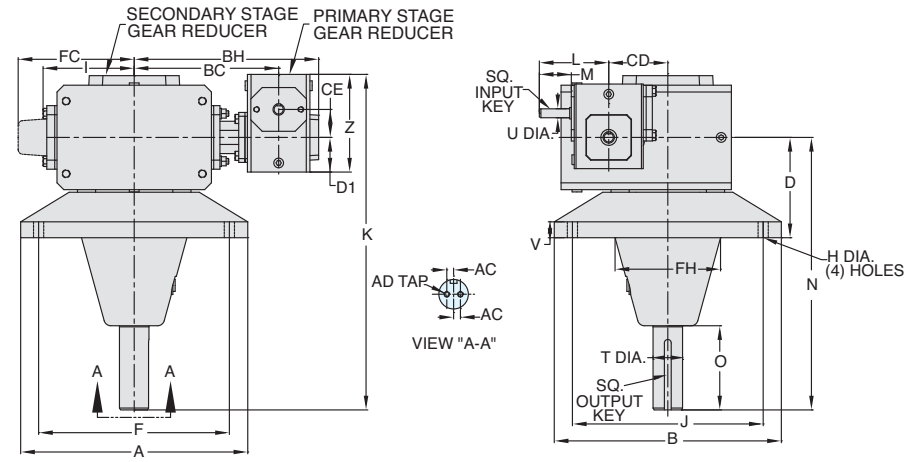


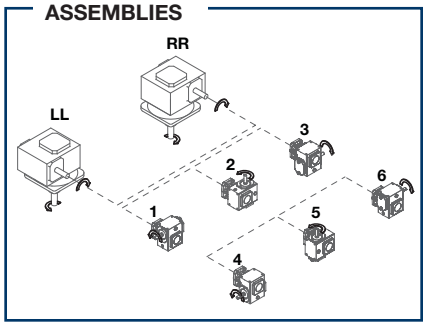
Style DFEM





Style DFE





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFEMQ, DFEM, DFE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	BC	BH	CD	CE	C1	D	D1	F	FC▼	FH
GR830	11.00	0.375	.31-18 UNC X 1.00 DP	3.15	11.00	7.86	10.06	3.00	1.75	5.38	4.60	2.06	9.00	N/A	5.12
GR832	12.50	0.375	.31-18 UNC X 1.00 DP	3.40	12.50	8.05	10.25	3.25	1.75	5.38	5.52	2.06	10.50	N/A	5.75
GR842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	9.18	11.57	4.25	2.06	6.38	5.74	2.28	12.00	N/A	6.75
GR852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	11.57	14.47	5.25	2.62	8.00	6.00	2.94	14.00	N/A	8.00
GR860	19.50	0.750	.38-16 UNC X 1.00 DP	5.28	19.50	13.30	16.70	6.00	3.25	9.38	7.00	3.50	17.00	10.24	9.50
GR870	22.00	1.000	.38-16 UNC X 1.00 DP	6.06	22.00	12.96	16.90	7.00	3.25	9.38	8.50	3.50	19.00	10.63	10.75
GR880	28.00	1.062	.62-11 UNC X 1.50 DP	6.22	28.00	13.94	18.19	8.00	4.25	11.38	10.00	4.44	24.00	11.93	13.75
GR8100	32.00	1.118	.62-11 UNC X 1.50 DP	7.94	32.00	17.05	22.30	10.00	5.25	14.00	12.50	5.12	28.00	14.34	17.00

Size	H	I	J	K	L	M	N	O[3]	V -0.0015	T -0.000 -0.0015	U +0.000	P❊	Output Key❊
GR830	.56	4.84	9.00	17.85	4.35	1.76	14.38	4.96	0.78	1.438	.625	3/16 x 1.38	3/8 x 3.88
GR832	.56	5.02	10.50	18.47	4.35	1.76	15.00	4.63	0.88	1.438	.625	3/16 x 1.38	3/8 x 3.69
GR842	.69	6.10	12.00	20.59	4.82	1.76	16.50	5.91	1.00	1.688	.625	3/16 x 1.38	3/8 x 4.68
GR852	.81	7.50	14.00	21.56	6.07	2.38	16.50	5.62	1.25	2.188	.750	3/16 x 1.63	1/2 x 4.63
GR860	.88	N/A	17.00	28.36	6.76	2.38	22.50	7.63	1.50	2.438	.875	3/16 x 1.63	5/8 x 6.50
GR870	1.13	N/A	19.00	29.88	6.76	2.38	24.00	7.63	1.75	2.937	.875	3/16 x 1.75**	3/4 x 6.44
GR880	1.31	N/A	24.00	34.00	9.57	3.47	27.06	9.25	2.00	3.438	1.250	1/4 X 2.88**	7/8 x 8.00
GR8100	1.31	N/A	28.00	38.38	10.88	3.38	29.50	9.43	2.25	3.938	1.250	1/4 X 3.00**	1 x 7.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/140TC	L1 180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/D112MD	LQ1 D132D	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/D112MD	RQ D132D
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DFE and DFEM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.
▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

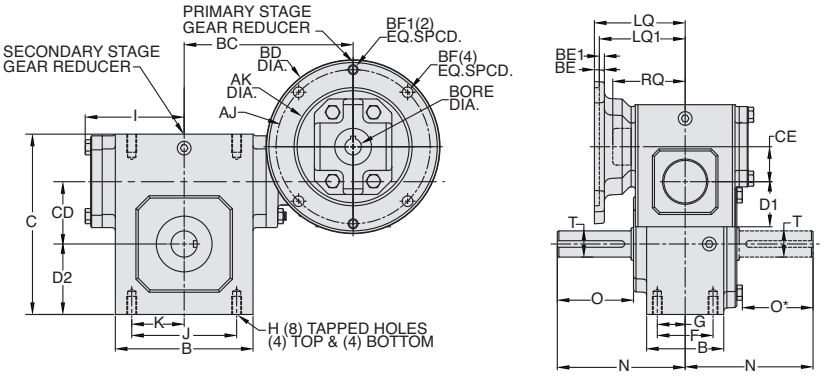
[3] "O" dimension is the minimum dimension to output or screw head on sizes GR860-GR8100

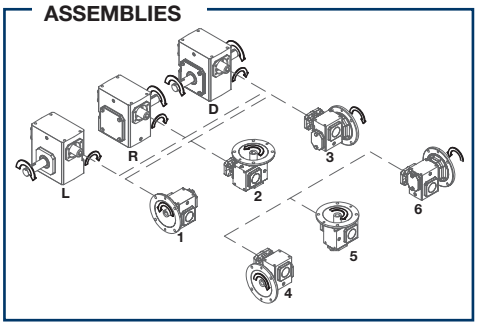
NH Series Dimensions

Styles: DMQ, DM, D

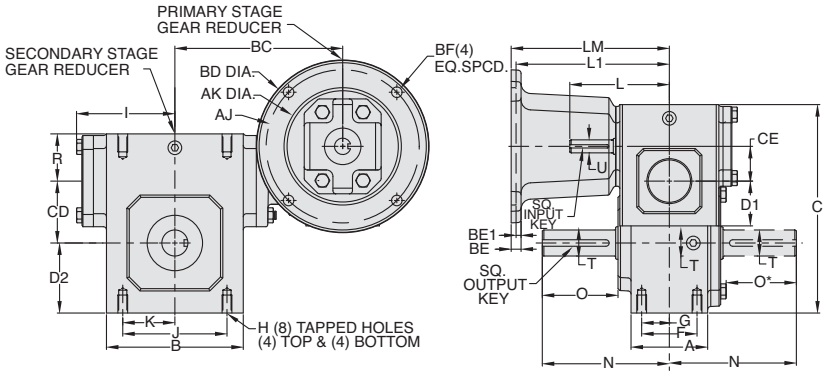
CAST IRON NH SERIES

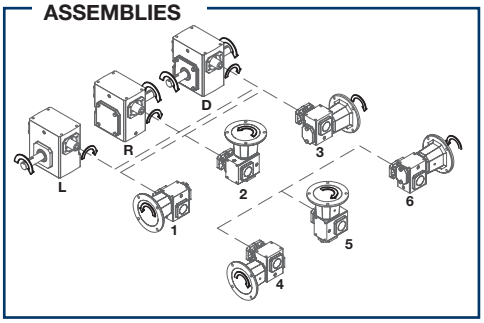
Style DMQ



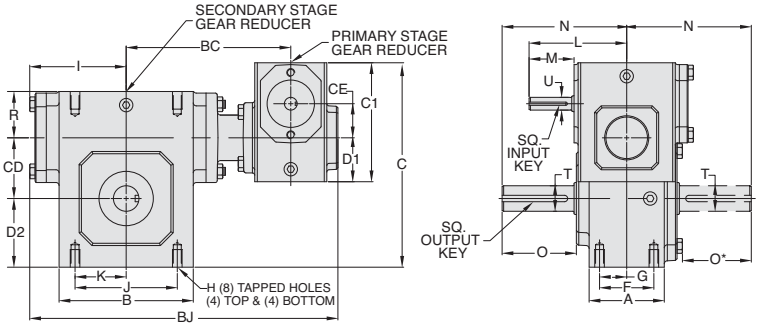


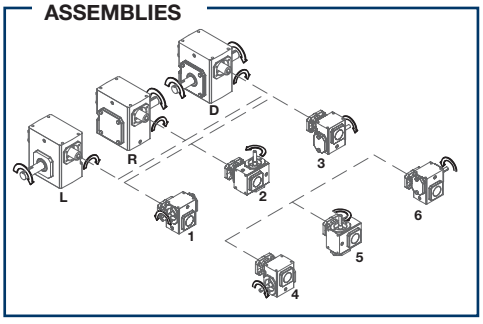
Style DM





Style D





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DMQ, DM, D DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H Tap Size	H Depth	I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	2.82	3.80	5.32	9.06	4.66	1.33	1.33	4.66	1.72	1.72	2.00	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	1.61	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	5.85	9.72	5.03	1.54	1.33	4.66	1.72	1.88	1.88	0.94	5/16-18 UNC	.63	3.14	3.25	1.63	3.82	1.76	4.25	2.56	2.35	1.58	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	2.56	4.50	5.94	10.03	5.42	1.75	1.33	4.66	1.72	2.06	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	3.82	1.76	4.75	2.94	2.73	1.63	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	2.50	4.50	6.32	10.41	5.98	2.06	1.33	4.66	1.72	2.31	1.88	0.94	5/16-18 UNC	.63	3.61	3.25	1.63	3.82	1.76	4.34	2.66	2.45	1.63	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	2.94	5.25	6.44	10.91	6.68	2.38	1.33	4.66	1.72	2.69	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	3.82	1.76	4.88	2.91	2.69	1.81	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	2.88	5.75	7.01	11.73	7.18	2.63	1.33	4.66	1.72	2.94	2.13	1.06	3/8-16 UNC	.69	4.34	4.00	2.00	3.82	1.76	5.25	3.28	3.07	1.81	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	3.12	6.62	7.35	12.35	8.22	3.00	1.75	5.00	2.06	3.38	2.38	1.19	3/8-16 UNC	.75	4.84	4.63	2.31	4.35	1.76	5.77	3.56	3.31	1.87	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	4.44	8.00	7.53	13.22	9.28	3.25	1.75	5.00	2.06	4.19	3.50	1.75	1/2-13 UNC	1.00	5.02	7.00	3.50	4.35	1.76	7.03	4.24	3.99	2.62	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	4.75	9.75	8.47	15.03	10.38	4.25	2.06	6.00	2.31	4.50	3.75	1.88	1/2-13 UNC	1.00	6.10	7.50	3.75	4.82	1.76	7.50	3.88	3.59	2.75	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	6.19	11.00	10.64	18.11	11.94	5.25	2.63	7.38	2.94	4.88	4.50	2.25	5/8-11 UNC	1.25	7.50	9.00	4.50	6.07	2.38	9.00	4.72	4.47	2.56	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style D and DM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DUF	DMQ
DUFC	DM
DU	D

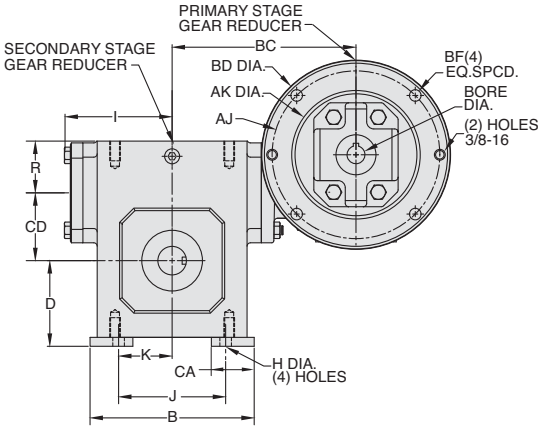
Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

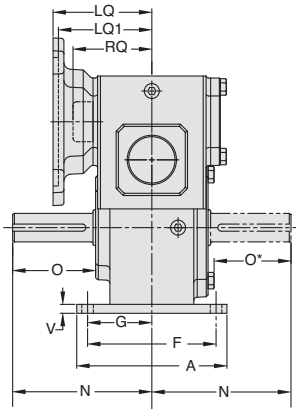
NH Series Dimensions

Styles: DTMQ, DTM, DT

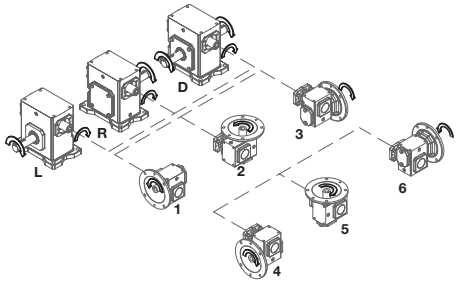
CAST IRON NH SERIES

Style DTMQ

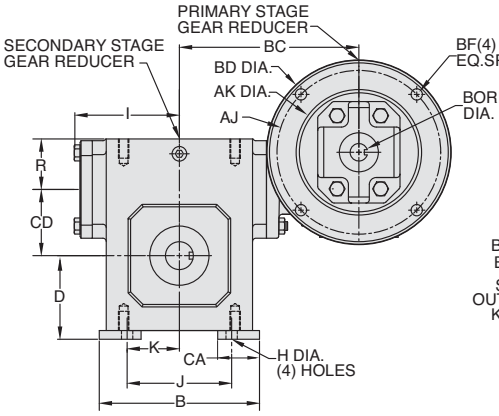


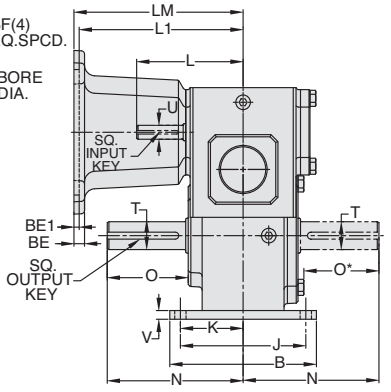


ASSEMBLIES

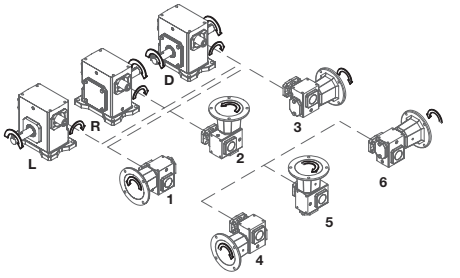


Style DTM

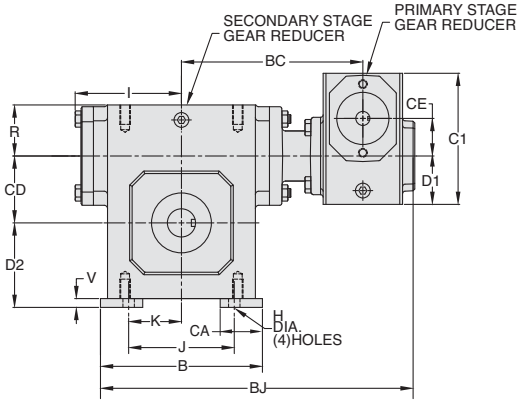


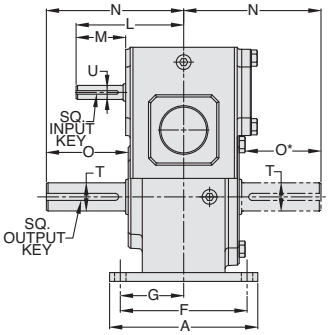


ASSEMBLIES

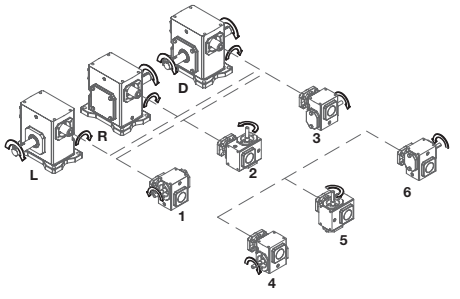


Style DT





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DTMQ, DTM, DT DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CA	CD	CE	C1	D1	D2	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	4.00	5.01	5.32	9.67	4.97	1.50	1.33	1.33	4.66	1.72	2.03	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	1.61	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.85	10.29	5.34	1.50	1.54	1.33	4.66	1.72	2.19	4.50	2.25	0.34	3.14	4.19	2.09	3.82	1.76	4.25	2.56	2.35	1.58	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	4.62	5.89	5.94	10.73	5.80	1.88	1.75	1.33	4.66	1.72	2.44	3.50	1.75	0.41	3.24	4.63	2.31	3.82	1.76	4.75	2.94	2.73	1.63	0.38	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	5.25	5.19	6.32	10.76	6.29	1.50	2.06	1.33	4.66	1.72	2.63	4.50	2.25	0.34	3.61	4.19	2.09	3.82	1.76	4.34	2.66	2.45	1.63	0.31	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	5.25	5.75	6.44	11.16	6.99	1.50	2.38	1.33	4.66	1.72	3.00	4.50	2.25	0.41	3.77	3.75	1.88	3.82	1.76	4.88	2.91	2.69	1.81	0.31	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	6.13	6.51	7.01	12.11	7.49	2.00	2.63	1.33	4.66	1.72	3.25	4.13	2.06	0.41	4.34	4.75	2.38	3.82	1.76	5.25	3.28	3.07	1.81	0.31	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	6.13	7.74	7.35	12.91	8.22	2.25	3.00	1.75	5.00	2.06	3.69	4.13	2.06	0.41	4.84	6.00	3.00	4.35	1.76	5.77	3.56	3.31	1.87	0.31	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	7.50	9.25	7.53	13.85	9.28	2.50	3.25	1.76	5.00	2.06	4.56	6.50	3.25	0.41	5.02	7.75	3.88	4.35	1.76	7.03	4.24	3.99	2.62	0.38	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	6.75	10.99	8.47	15.65	10.88	2.50	4.25	2.06	6.00	2.31	5.00	5.75	2.88	0.56	6.10	9.75	4.88	4.82	1.76	7.50	3.88	3.59	2.75	0.50	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	8.25	13.24	10.64	19.23	13.07	3.00	5.25	2.63	7.38	2.94	6.00	7.00	3.50	0.69	7.50	12.00	6.00	6.07	2.38	9.00	4.72	4.47	2.56	1.13	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DT and DTM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DZF	DTMQ
DZFC	DTM
DZ	DT

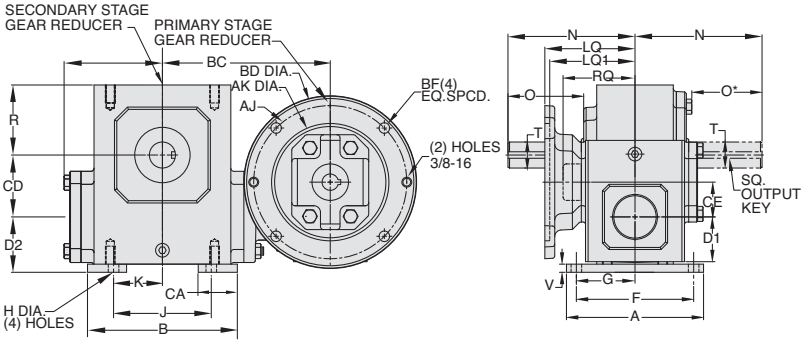
Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

NH Series Dimensions

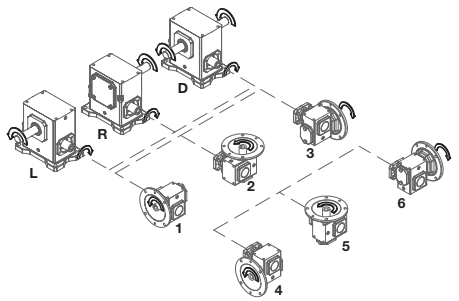
Styles: DUMQ, DUM, DU

CAST IRON NH SERIES

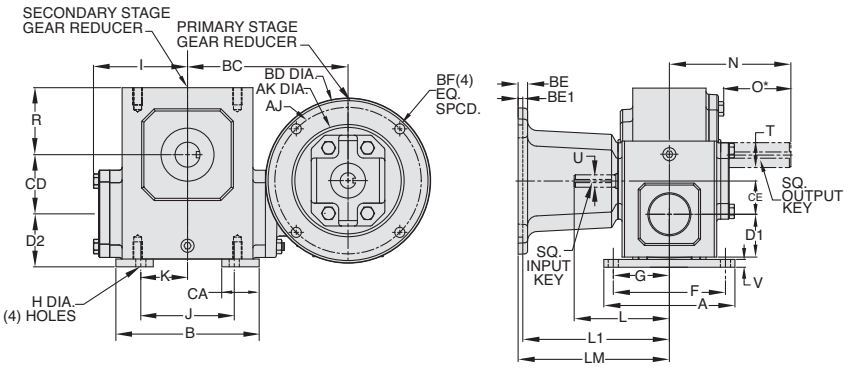
Style DUMQ



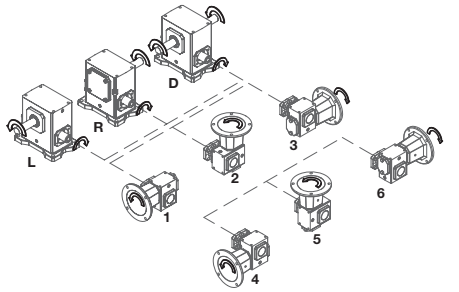
ASSEMBLIES



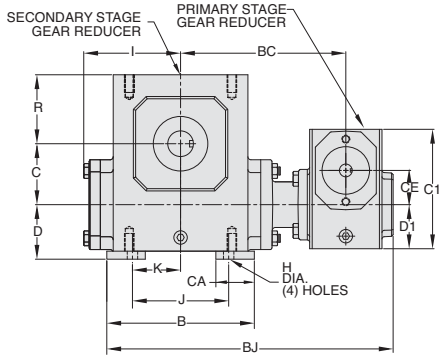
Style DUM

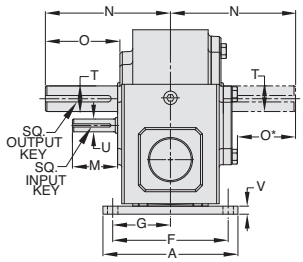


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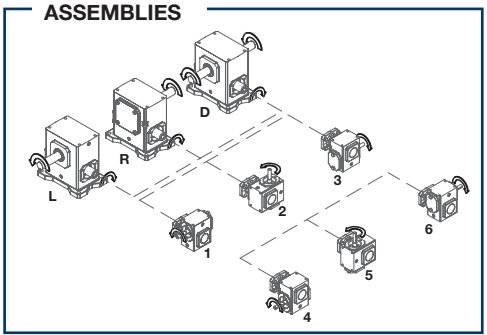


Style DU





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUMQ, DUM, DU DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CA	CD	CE	C1	D1	D2	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	4.00	5.01	5.32	9.67	4.97	1.50	1.33	1.33	4.66	1.72	1.92	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	1.72	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.85	10.29	5.34	1.50	1.54	1.33	4.66	1.72	1.90	4.50	2.25	0.34	3.14	4.19	2.09	3.82	1.76	4.25	2.56	2.35	1.88	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	4.62	5.89	5.94	10.73	5.80	1.88	1.75	1.33	4.66	1.72	2.00	3.50	1.75	0.41	3.24	4.63	2.31	3.82	1.76	4.75	2.94	2.73	2.06	0.38	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	5.25	5.19	6.32	10.76	6.29	1.50	2.06	1.33	4.66	1.72	1.94	4.50	2.25	0.34	3.61	4.19	2.09	3.82	1.76	4.34	2.66	2.45	2.31	0.31	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	5.25	5.75	6.44	11.16	6.99	1.50	2.38	1.33	4.66	1.72	2.13	4.50	2.25	0.41	3.77	3.75	1.88	3.82	1.76	4.88	2.91	2.69	2.69	0.31	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	6.13	6.51	7.01	12.11	7.49	2.00	2.63	1.33	4.66	1.72	2.13	4.13	2.06	0.41	4.34	4.75	2.38	3.82	1.76	5.25	3.28	3.07	2.94	0.31	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	6.13	7.74	7.35	12.91	8.22	2.25	3.00	1.75	5.00	2.06	2.19	4.13	2.06	0.41	4.84	6.00	3.00	4.35	1.76	5.77	3.56	3.31	3.38	0.31	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	7.50	9.25	7.53	13.85	9.28	2.50	3.25	1.75	5.00	2.06	3.00	6.50	3.25	0.41	5.02	7.75	3.88	4.35	1.76	7.03	4.24	3.99	4.19	0.38	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	6.75	10.99	8.47	15.65	10.88	2.50	4.25	2.06	6.00	2.31	3.25	5.75	2.88	0.56	6.10	9.75	4.88	4.82	1.76	7.50	3.88	3.59	4.50	0.50	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	8.25	13.24	10.64	19.23	13.07	3.00	5.25	2.63	7.38	2.94	3.69	7.00	3.50	0.69	7.50	12.00	6.00	6.07	2.38	9.00	4.72	4.47	4.88	1.13	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DU and DUM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DUBF	DUMQ
DUBFC	DUM
DUB	DU

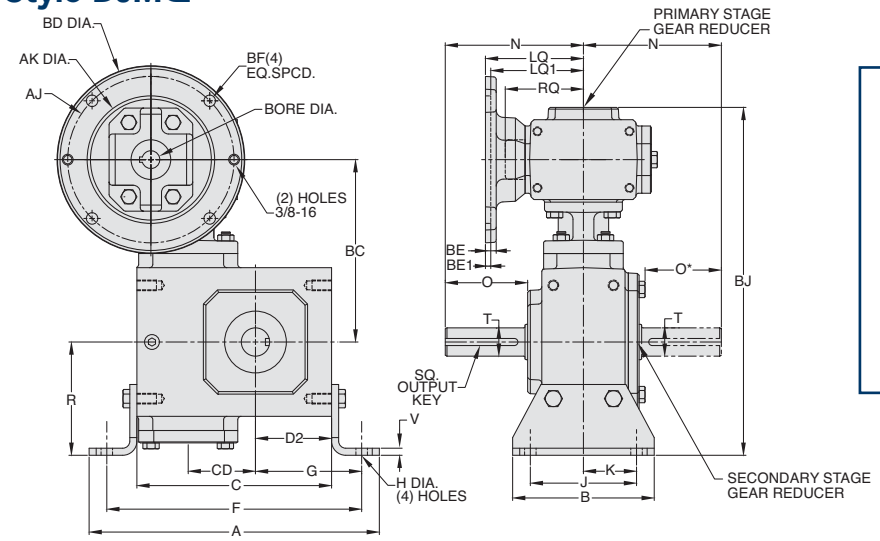
Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

NH Series Dimensions

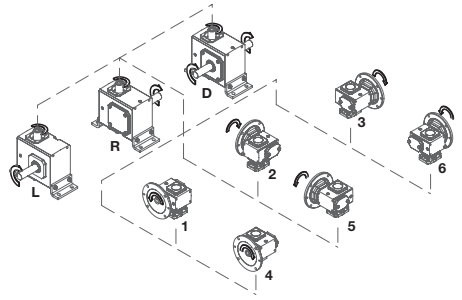
Styles: DJMQ, DJM, DJ

CAST IRON NH SERIES

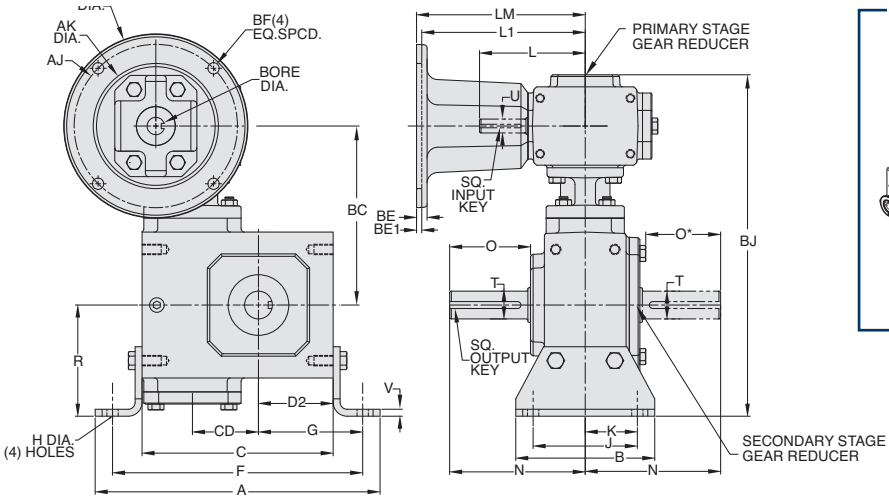
Style DJMQ



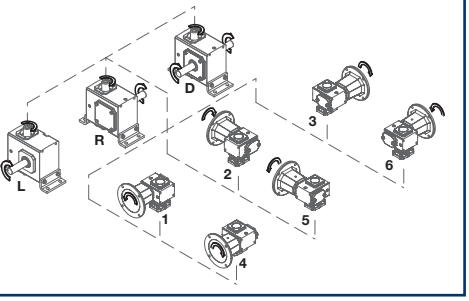
ASSEMBLIES



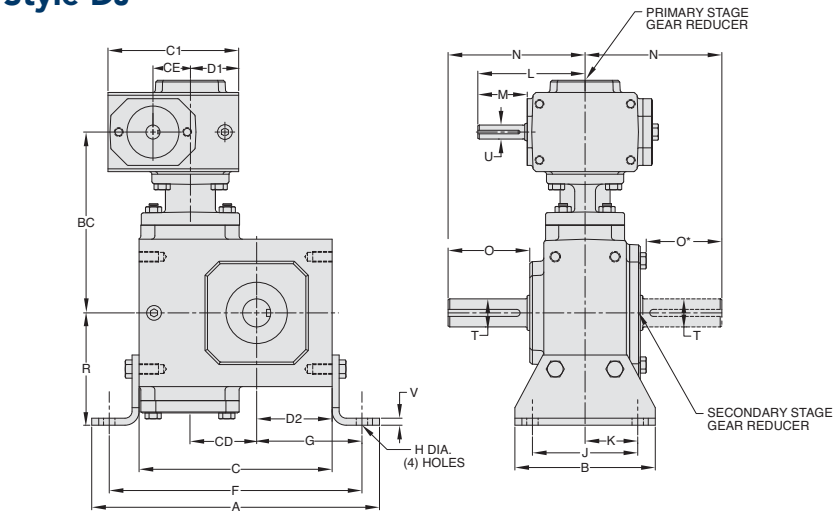
Style DJM



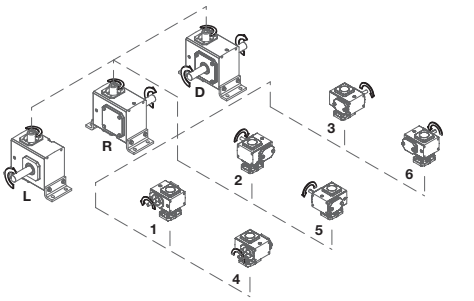
ASSEMBLIES



Style DJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DJMQ, DJM, DJ DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	7.42	2.75	5.32	10.10	4.66	1.33	1.33	4.66	1.72	1.72	6.42	2.60	0.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	8.06	3.75	5.85	11.44	5.00	1.54	1.33	4.66	1.72	1.88	7.06	2.91	0.34	2.75	1.38	3.82	1.76	4.25	2.56	2.35	3.75	0.25	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	8.50	3.75	5.94	11.78	5.44	1.75	1.33	4.66	1.72	2.06	7.50	3.09	0.34	2.75	1.38	3.82	1.76	4.75	2.94	2.73	4.00	0.25	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	9.06	3.75	6.32	11.91	6.00	2.06	1.33	4.66	1.72	2.31	8.06	3.34	0.34	2.75	1.38	3.82	1.76	4.34	2.66	2.45	3.75	0.25	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	9.96	5.00	6.44	12.72	6.88	2.38	1.33	4.66	1.72	2.69	8.70	3.60	0.41	3.75	1.88	3.82	1.76	4.88	2.91	2.69	4.44	0.25	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	10.46	5.00	7.01	13.29	7.38	2.63	1.33	4.66	1.72	2.94	9.20	3.85	0.41	3.75	1.88	3.82	1.76	5.25	3.28	3.07	4.44	0.25	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	12.01	5.25	7.35	13.98	8.22	3.00	1.75	5.00	2.06	3.38	10.75	4.63	0.41	4.00	2.00	4.35	1.76	5.77	3.56	3.31	4.94	0.31	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	14.00	6.25	7.53	14.47	9.28	3.25	1.75	5.00	2.06	4.19	12.50	5.41	0.53	5.00	2.50	4.35	1.76	7.03	4.24	3.99	5.25	0.31	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	16.50	6.75	8.47	16.65	11.50	4.25	2.06	6.00	2.31	4.50	15.00	6.25	0.69	5.00	2.50	4.82	1.76	7.50	3.88	3.59	6.50	0.50	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	17.69	7.20	10.64	20.36	12.69	5.25	2.63	7.38	2.94	4.88	16.31	6.69	0.69	5.81	2.91	6.07	2.38	9.00	4.72	4.47	7.75	0.50	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DJ and DJM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DJF	DJMQ
DJFC	DJM
DJ	DJ

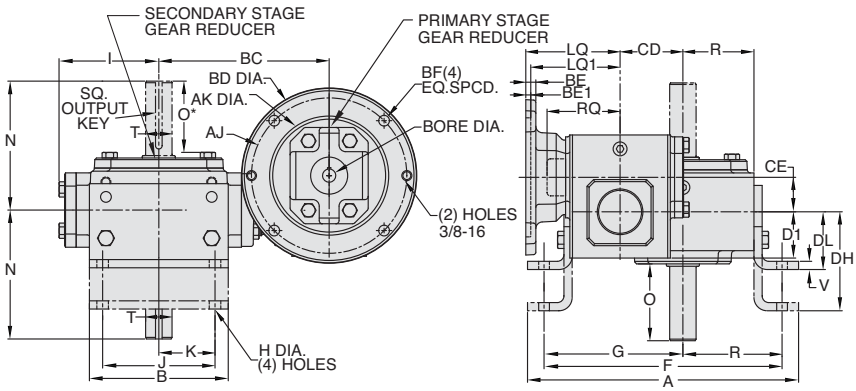
Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

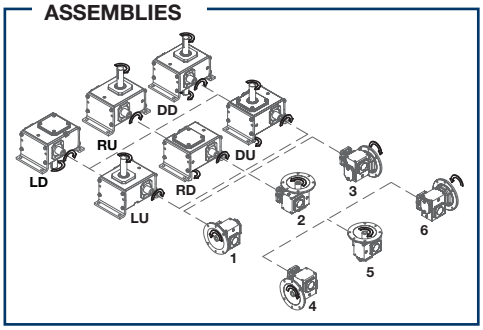
NH Series Dimensions

Styles: DV_MQ, DV_M, DV_

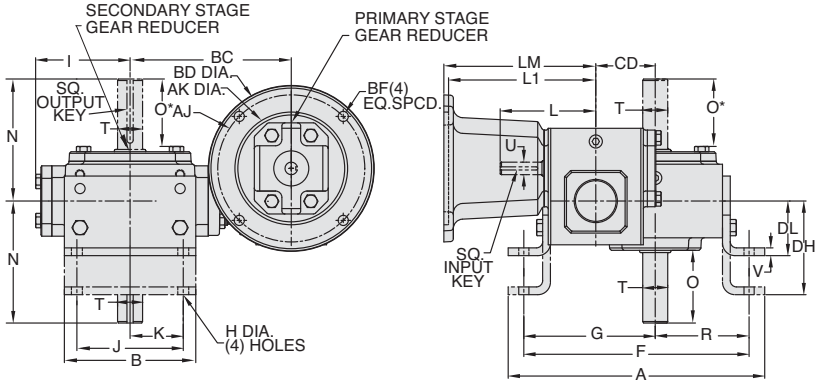
CAST IRON NH SERIES

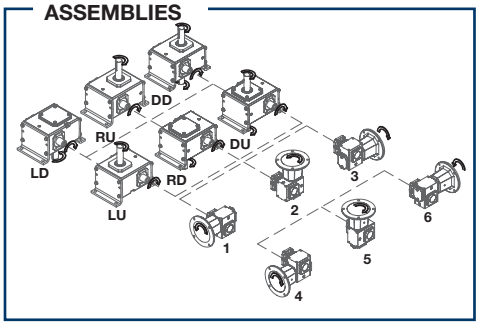
Style DV(L OR H)MQ



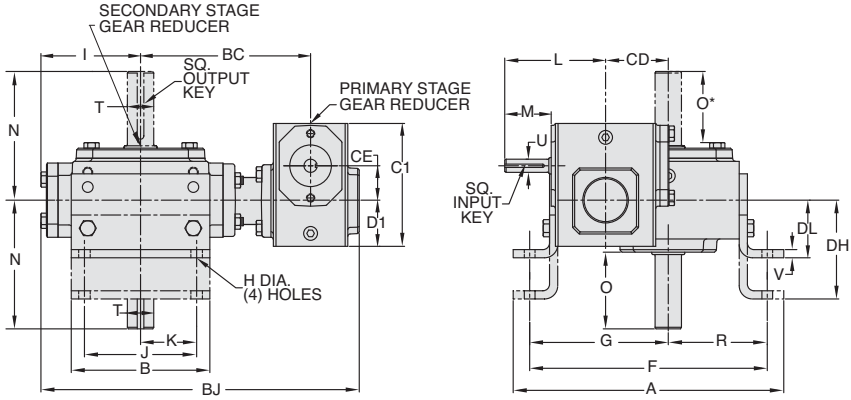


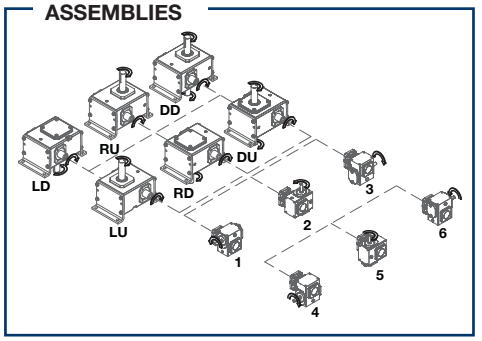
Style DV(L OR H)M





Style DV(L OR H)





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DV_MQ, DV_M, DV_ DIMENSIONS (Inches)

Size	A	B	BC	BH	CD	CE	C1	D1	DL	DH	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key	Output Key
NH813	7.78	4.00	5.32	7.16	1.33	1.33	4.66	1.72	2.00	3.88	6.78		0.44	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94		0.31	0.750	0.500	1/8 x 1.00	3/16 x 1.50
NH815	8.12	4.00	5.85	7.69	1.54	1.33	4.66	1.72	1.94	3.82	7.12		0.44	3.14	3.00	1.50	3.82	1.76	4.25	2.56	2.35		0.31	0.750	0.500	1/8 x 1.00	3/69 x 1.50
NH818	8.56	4.75	5.94	7.78	1.75	1.33	4.66	1.72	1.94	3.82	7.56		0.44	3.24	3.00	1.50	3.82	1.76	4.75	2.94	2.73		0.31	1.000	0.500	1/8 x 1.00	1/4 x 1.75
NH821	9.12	4.00	6.32	8.16	2.06	1.33	4.66	1.72	1.94	3.82	8.12		0.44	3.61	3.00	1.50	3.82	1.76	4.34	2.66	2.45		0.31	0.875	0.500	1/8 x 1.00	3/16 x 1.50
NH824	10.5	5.25	6.44	8.28	2.38	1.33	4.66	1.72	2.18	3.74	9.50		0.44	3.77	4.25	2.13	3.82	1.76	4.88	2.91	2.69		0.31	1.000	0.500	1/8 x 1.00	1/4 x 1.75
NH826	11.00	5.25	7.01	8.85	2.63	1.33	4.66	1.72	2.18	3.74	10.00		0.44	4.34	4.25	2.13	3.82	1.76	5.25	3.28	3.07		0.31	1.125	0.500	1/8 x 1.00	1/4 x 1.75
NH830	11.87	6.00	7.35	9.04	3.00	1.75	5.00	2.06	2.31	3.69	10.87		0.44	4.84	4.75	2.38	4.35	1.76	5.77	3.56	3.31		0.31	1.250	0.625	3/16 x 1.38	1/4 x 1.75
NH832	13.86	8.00	7.53	9.22	3.25	1.75	5.00	2.06	3.50	4.81	12.82		0.47	5.02	7.00	3.50	4.35	1.76	7.03	4.24	3.99		0.31	1.500	0.625	3/16 x 1.38	3/8 x 2.25
NH842	16.38	9.50	8.47	10.15	4.25	2.06	6.00	2.31	5.00	7.50	15.00		0.69	6.10	7.88	3.94	4.82	1.76	7.50	3.88	3.59		0.50	1.750	0.625	3/16 x 1.38	3/8 x 2.25
NH852	18.29	11.50	10.64	12.61	5.25	2.63	7.38	2.94	5.16	9.16	16.69		0.78	7.50	10.00	5.00	6.07	2.38	9.00	4.72	4.47		0.50	2.000	0.750	3/16 x 1.38	1/2 x 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DVL and DVLM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DSLF	DVLMQ
DSLFC	DVLM
DSL	DVL
DSHF	DVHMQ
DSHFC	DVHM
DSH	DVH

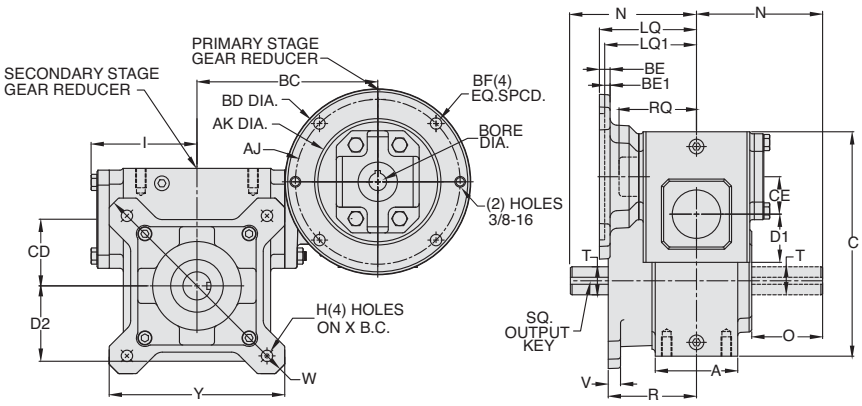
Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

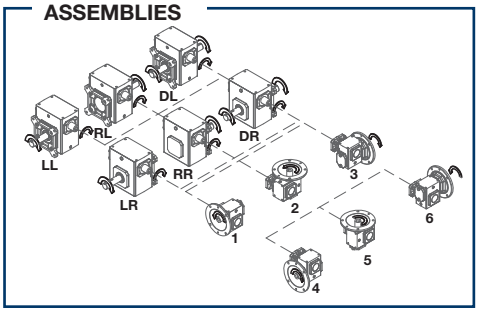
NH Series Dimensions

Styles: DFMQ, DFM, DF

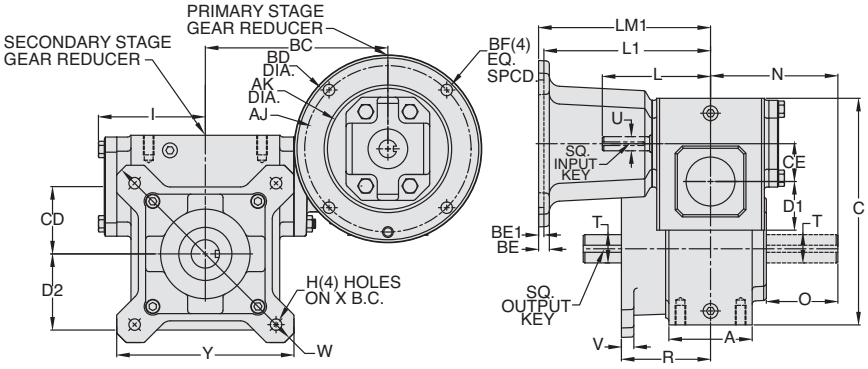
CAST IRON NH SERIES

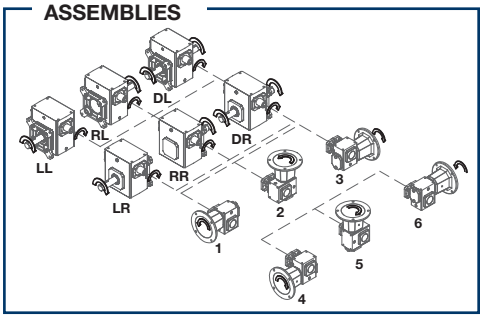
Style DFMQ



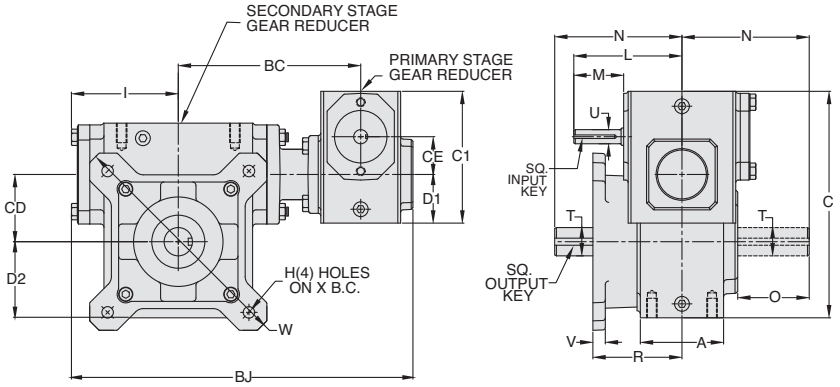


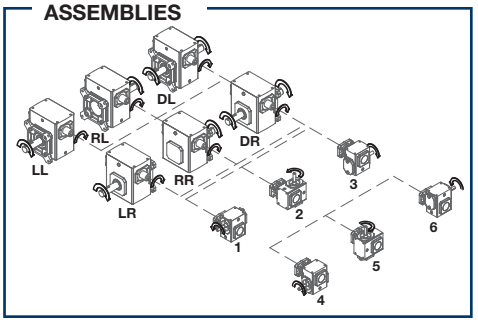
Style DFM





Style DF





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Sizes 813-852 output flange must be mounted at Factory on styles FMQ, FM, F.



STYLE DFMQ, DFM, DF DIMENSIONS (Inches)

Size	A	B	BC	BH	BL	C	CD	CE	C1	D1	D2	H	I	L	M	N	O*	R	V	W	X	Y	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	2.82	3.80	5.32	7.16	0.38	4.66	1.33	1.33	4.66	1.72	1.72	0.34	2.61	3.82	1.76	4.00	1.94	2.52	0.25	5.92	5.00	4.50	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	5.85	7.69	0.38	5.03	1.54	1.33	4.66	1.72	1.88	0.34	3.14	3.82	1.76	4.25	2.35	3.50	0.25	6.79	5.88	5.12	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	2.56	4.50	5.94	7.78	0.38	5.42	1.75	1.33	4.66	1.72	2.06	0.34	3.24	3.82	1.76	4.75	2.73	2.73	0.25	6.64	5.88	5.00	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	2.50	4.50	6.32	8.16	0.38	5.98	2.06	1.33	4.66	1.72	2.31	0.34	3.61	3.82	1.76	4.34	2.45	3.51	0.25	7.37	6.25	5.56	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	2.94	5.25	6.44	8.28	0.44	6.68	2.38	1.33	4.66	1.72	2.69	0.34	3.77	3.82	1.76	4.88	2.69	3.47	0.25	8.29	7.06	6.24	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	2.88	5.75	7.01	8.85	0.50	7.18	2.63	1.33	4.66	1.72	2.94	0.34	4.34	3.82	1.76	5.25	3.07	3.56	0.25	8.90	7.63	6.68	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	3.12	6.62	7.35	9.04	0.50	8.22	3.00	1.75	5.00	2.06	3.38	0.41	4.84	4.35	1.76	5.77	3.31	3.69	0.31	9.50	8.63	7.34	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	4.44	8.00	7.53	9.22	0.56	9.28	3.25	1.75	5.00	2.06	4.19	0.53	5.02	4.35	1.76	7.03	3.99	5.00	0.31	11.84	10.63	9.00	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	4.75	9.75	8.47	10.15	0.62	10.38	4.25	2.06	6.00	2.31	4.50	0.56	6.10	4.82	1.76	7.50	3.59	4.50	0.50	12.95	11.50	9.66	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	6.19	11.00	10.64	12.61	0.75	11.94	5.25	2.63	7.38	2.94	4.88	0.69	7.50	6.07	2.38	9.00	4.47	5.56	0.50	15.50	14.00	11.76	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DF and DFM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DKF & DVF	DFMQ
DKFC & DVFC	DFM
DK & DV	DF

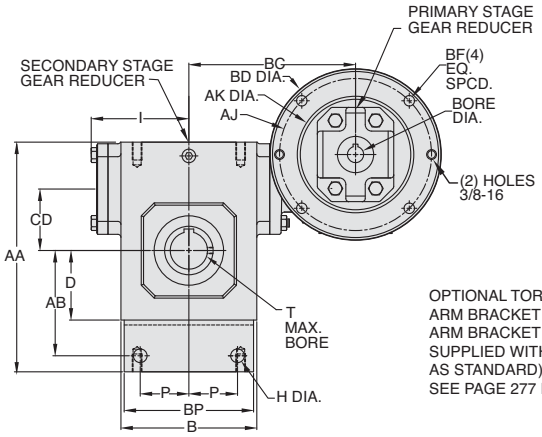
Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

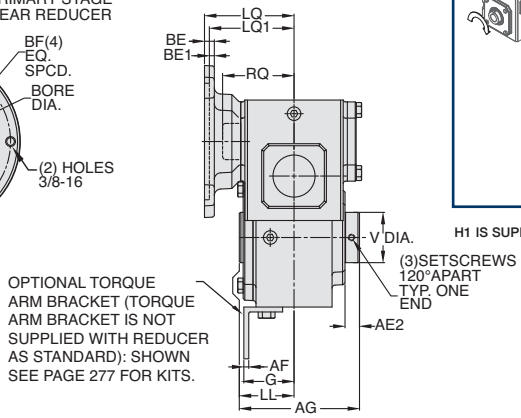
NH Series Dimensions

Styles: DHMQ, DHM, DH

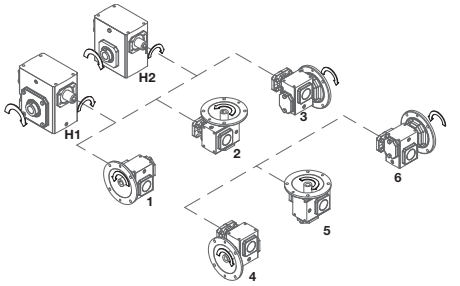
CAST IRON NH SERIES

Style DHMQ



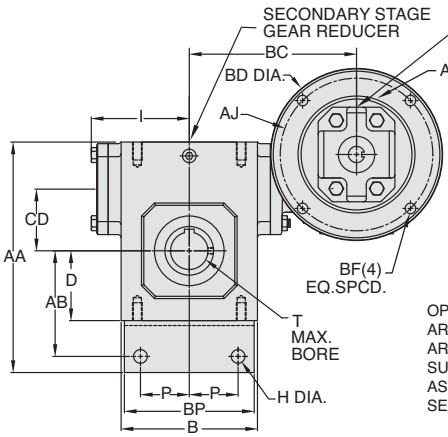


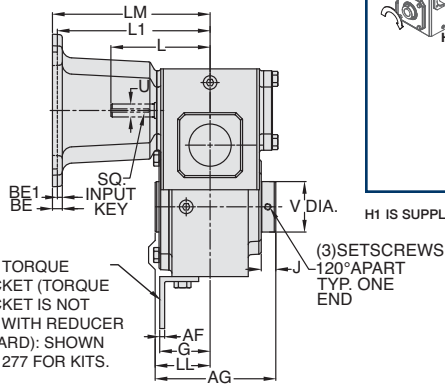
ASSEMBLIES



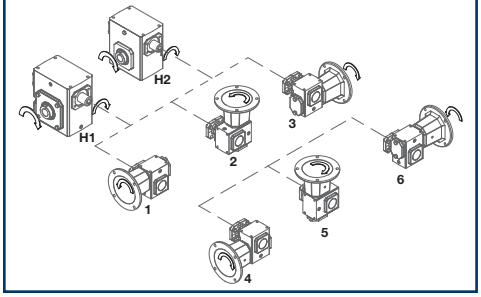
H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DHM



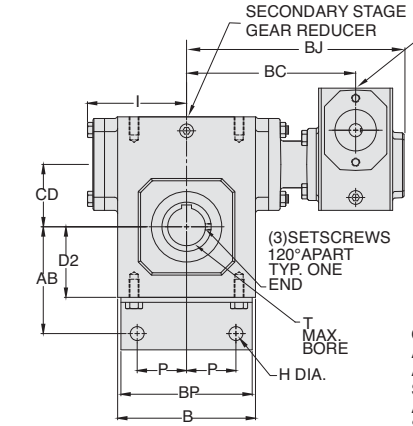


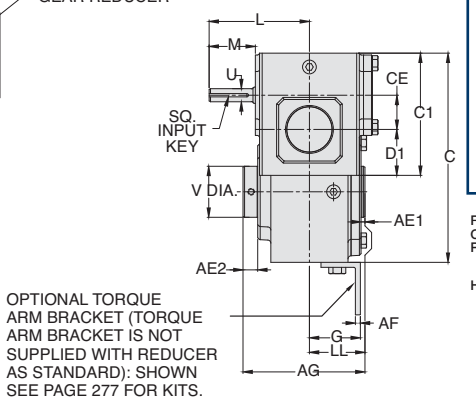
ASSEMBLIES



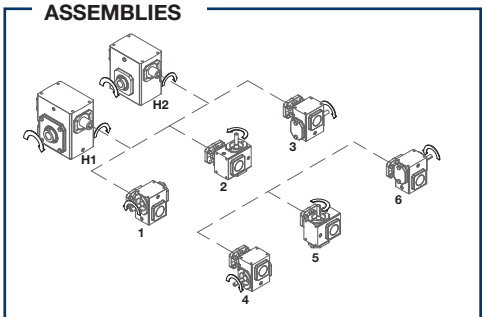
H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DH





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.



STYLE DHMQ, DHM, DH DIMENSIONS (Inches)

Size	AA	AB	AD	AE2	AF	AG	B	BC	BH	C	CD	CE	C1	D1	D2	G	H	I	L	LL	M	P*	V	T MAX• -0.000 +0.0025	U +0.000 -0.0015	Input Key❊	Output Key
NH813	6.66	3.10	3.90	0.53	0.19	4.75	3.80	5.32	7.16	4.66	1.33	1.33	4.66	1.72	1.72	1.88	0.53	2.61	3.82	2.38	1.76	1.38	1.00	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH815	7.00	3.26	3.59	0.51	0.19	4.08	4.06	5.85	7.69	5.03	1.54	1.33	4.66	1.72	1.88	1.82	0.53	3.14	3.82	1.88	1.76	1.38	1.00	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH818	7.44	3.44	3.83	0.56	0.19	4.29	4.50	5.94	7.78	5.42	1.75	1.33	4.66	1.72	2.06	1.82	0.53	3.24	3.82	1.98	1.76	1.38	1.44	1.000	0.500	1/8 X 1.00	1/4 x 3.00
NH821	8.00	3.69	3.57	0.85	0.19	4.65	4.50	6.32	8.16	5.98	2.06	1.33	4.66	1.72	2.31	1.82	0.53	3.61	3.82	2.12	1.76	1.38	1.94	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH824	8.88	4.07	4.16	0.56	0.19	4.65	5.25	6.44	8.28	6.68	2.38	1.33	4.66	1.72	2.69	1.94	0.53	3.77	3.82	2.12	1.76	1.88	1.94	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH826	9.38	4.32	4.15	0.56	0.19	4.65	5.75	7.01	8.85	7.18	2.63	1.33	4.66	1.72	2.94	1.94	0.53	4.34	3.82	2.12	1.76	1.88	1.94	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH830	10.25	4.76	4.67	0.56	0.25	5.16	6.62	7.35	9.04	8.22	3.00	1.75	5.00	2.06	3.38	2.32	0.53	4.84	4.35	2.38	1.76	2.38	2.51	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH832	12.06	5.57	5.83	0.57	0.25	6.31	8.00	7.53	9.22	9.28	3.25	1.75	5.00	2.06	4.19	2.87	0.53	5.02	4.35	2.95	1.76	3.51	2.51	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH842	14.00	6.38	7.53	0.63	0.38	8.50	9.75	8.47	10.15	10.38	4.25	2.06	6.00	2.31	4.50	3.26	0.53	6.10	4.82	4.25	1.76	3.69	2.75	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH852	15.19	6.76	8.81	0.97	0.38	10.50	11.00	10.64	12.61	11.94	5.25	2.63	7.38	2.94	4.88	3.63	0.53	7.50	6.07	5.25	2.38	4.62	4.26	3.438	0.750	3/16 X 1.63	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

Note: Torque arm bracket available seperately. Refer to page 277 for kits. If a special bracket is required, refer to Style DMQ dimensions for mounting pad dimensions on top/bottom of reducer.

- Max bore dimensions shown. For additional bores available, refer to page 130.

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DH and DHM only.

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DYF	DHMQ
DYFC	DHM
DY	DH

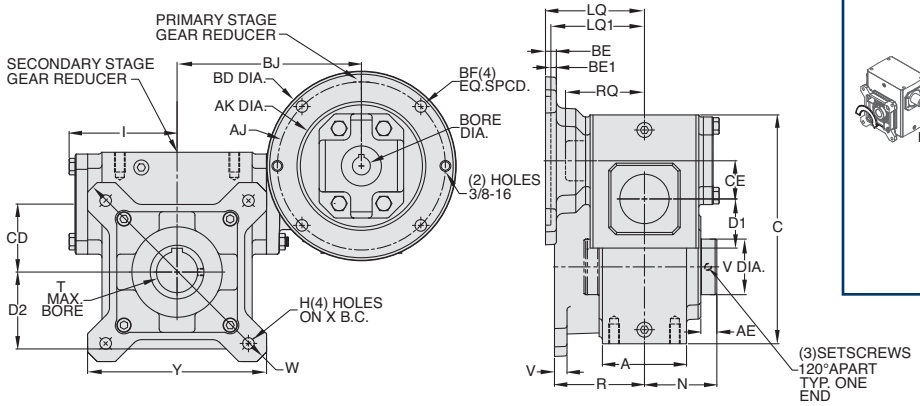
Refer to page 113 for complete interchange guide for original Grove Gear OE Series..

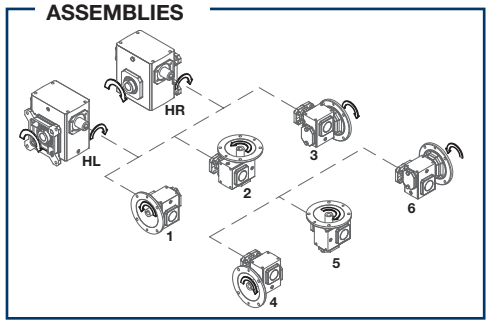
NH Series Dimensions

Styles: DFHMQ, DFHM, DFH

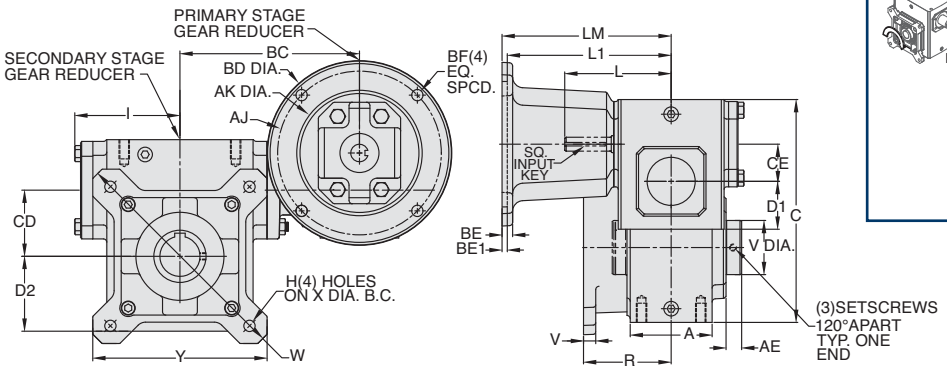
CAST IRON NH SERIES

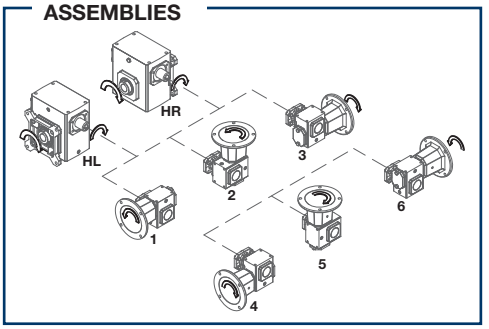
Style DFHMQ



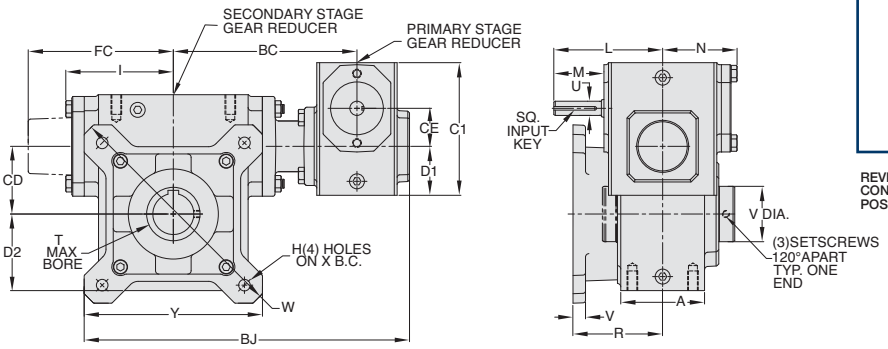


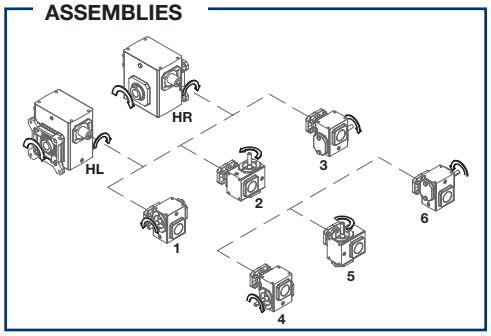
Style DFHM





Style DFH





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DFHMQ, DFHM, DFH DIMENSIONS (Inches)

Size	A	AE	B	BC	BH	BL	C	CD	CE	C1	D1	D2	H	I	L	M	N	R	V	W	X	Y	T MAX• -0.000 +0.0025	U +0.000 -0.0015	Input Key❊	Output Key•
NH813	2.82	0.53	3.80	5.32	7.16	0.38	4.66	1.33	1.33	4.66	1.72	1.72	0.34	2.61	3.82	1.76	2.37	2.52	1.00	5.92	5.00	4.50	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH815	2.57	0.51	4.06	5.85	7.69	0.38	5.03	1.54	1.33	4.66	1.72	1.88	0.34	3.14	3.82	1.76	2.20	3.50	1.00	6.79	5.88	5.12	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH818	2.56	0.56	4.50	5.94	7.78	0.38	5.42	1.75	1.33	4.66	1.72	2.06	0.34	3.24	3.82	1.76	2.37	2.74	1.44	6.64	5.88	5.00	1.000	0.500	1/8 X 1.00	1/4 x 3.00
NH821	2.50	0.85	4.50	6.32	8.16	0.38	5.98	2.06	1.33	4.66	1.72	2.31	0.34	3.61	3.82	1.76	2.53	3.50	1.94	7.37	6.25	5.56	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH824	2.94	0.56	5.25	6.44	8.28	0.44	6.68	2.38	1.33	4.66	1.72	2.69	0.34	3.77	3.82	1.76	2.53	3.53	1.94	8.29	7.06	6.24	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH826	2.88	0.56	5.75	7.01	8.85	0.50	7.18	2.63	1.33	4.66	1.72	2.94	0.34	4.34	3.82	1.76	2.53	3.62	1.94	8.90	7.63	6.68	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH830	3.12	0.56	6.62	7.35	9.04	0.50	8.22	3.00	1.75	5.00	2.06	3.38	0.41	4.84	4.35	1.76	2.78	3.75	2.51	9.50	8.63	7.34	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH832	4.44	0.57	8.00	7.53	9.22	0.56	9.28	3.25	1.75	5.00	2.06	4.19	0.53	5.02	4.35	1.76	3.36	5.06	2.51	11.84	10.63	9.00	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH842	4.75	0.63	9.75	8.47	10.15	0.62	10.38	4.25	2.06	6.00	2.31	4.50	0.56	6.10	4.82	1.76	4.25	4.56	2.75	12.95	11.50	9.66	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH852	6.19	0.97	11.00	10.64	12.61	0.75	11.94	5.25	2.63	7.38	2.94	4.88	0.69	7.50	6.07	2.38	5.25	5.62	4.26	15.50	14.00	11.76	3.438	0.750	3/16 X 1.63	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- Max bore dimensions shown. For additional bores available, refer to page 130.

◆ Keyway width by depth

■ 48CZ not available

❖ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DFH and DFHM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DMF	DFHMQ
DMFC	DFHM
DM	DFH

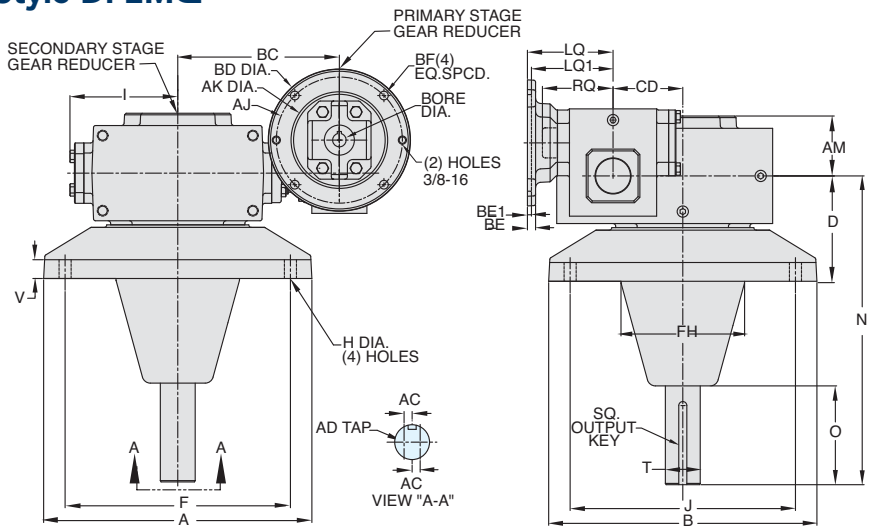
Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

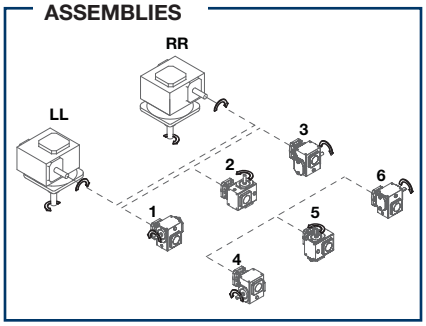
NH Series Dimensions

Styles: DFEMQ, DFEM, DFE

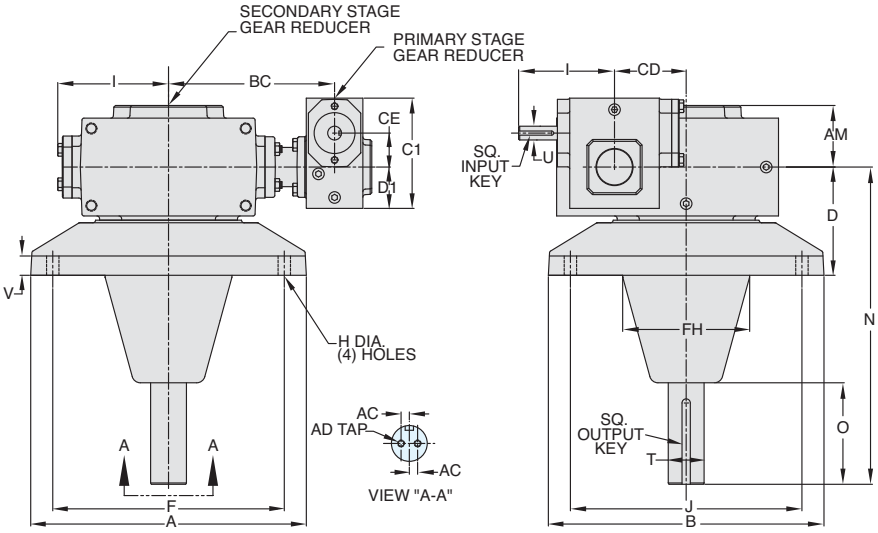
CAST IRON NH SERIES

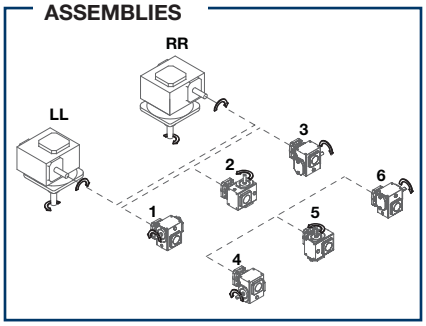
Style DFEMQ



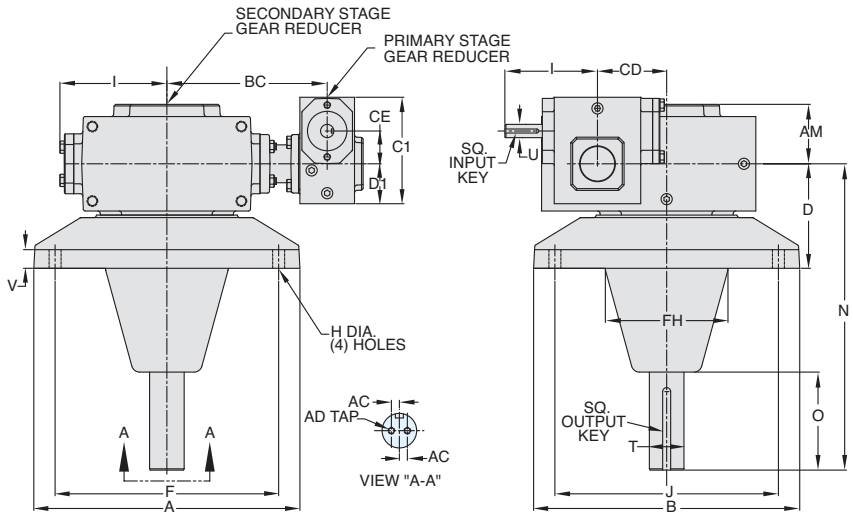


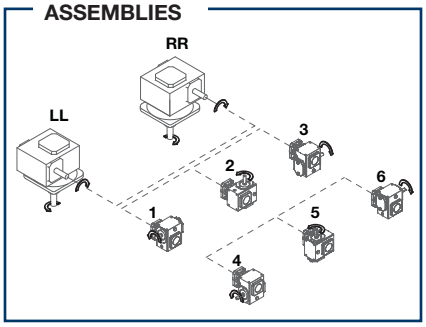
Style DFEM





Style DFE





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DFEMQ, DFEM, DFE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	BC	BH	CD	CE	C1	D	D1	F	FH
NH830	11.00	0.375	.31-18 UNC X 1.00 DP	2.22	11.00	7.35	9.04	3.00	1.75	5.00	3.67	2.06	9.00	5.12
NH832	12.50	0.375	.31-18 UNC X 1.00 DP	2.79	12.50	7.53	9.22	3.25	1.75	5.00	4.91	2.06	10.50	5.75
NH842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	8.47	10.15	4.25	2.06	6.00	5.74	2.31	12.00	6.75
NH852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	10.64	12.61	5.25	2.63	7.38	6.00	2.94	14.00	8.00

Size	H	I	J	K	L	M	N	O	V	T MAX +0.000 +0.0015	U +0.000 -0.0015	Input Key*	P**
NH830	0.56	4.84	9.00	16.27	4.35	1.76	13.15	4.66	0.78	1.438	0.875	3/16 x 1.63	3/8 x 3.88
NH832	0.56	5.02	10.50	17.51	4.35	1.76	14.39	4.63	0.88	1.625	0.875	3/16 x 1.63	3/8 x 3.69
NH842	0.69	6.10	12.00	19.94	4.82	1.76	16.25	5.66	1.00	1.688	1.25	1/4 x 2.50	3/8 x 4.68
NH852	0.81	7.50	14.00	20.94	6.07	2.38	16.50	5.62	1.25	2.188	1.25	1/4 x 3.00	1/2 x 4.63

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)❖

Size	LQ1 D63D	LQ1 D71D	LQ1 D80D	LQ1 D90D	LQ1 D100LD/ D112MD	RQ D63D	RQ D71D	RQ D80D	RQ D90D	RQ D100LD/ D112MD
NH830	3.15	3.18	3.42	N/A	N/A	2.98	3.00	3.24	N/A	N/A
NH832	3.15	3.18	3.42	N/A	N/A	2.98	3.00	3.24	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❖ Metric IEC B5 input flange options are available only on quill input styles.
❊ Style DFE and DFEM only.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DEF	DFEMQ
DEFC	DFEM
DE	DFE

Refer to page 113 for complete interchange guide for original Grove Gear OE Series.

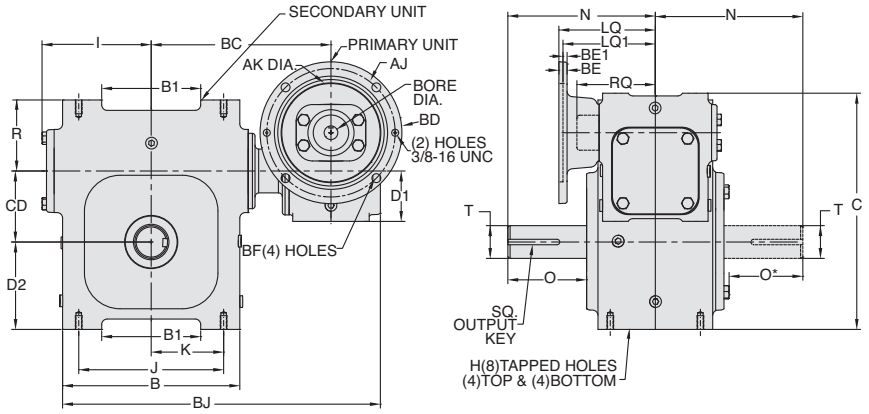
ELECTRA-GEAR

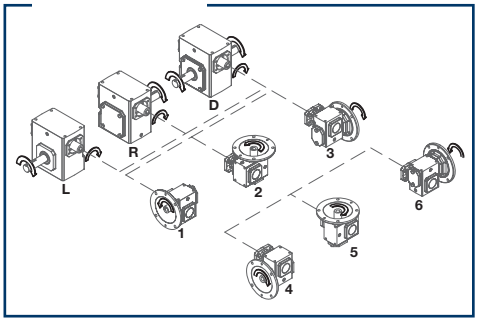
ALUMINUM EL SERIES

EL Series Dimensions

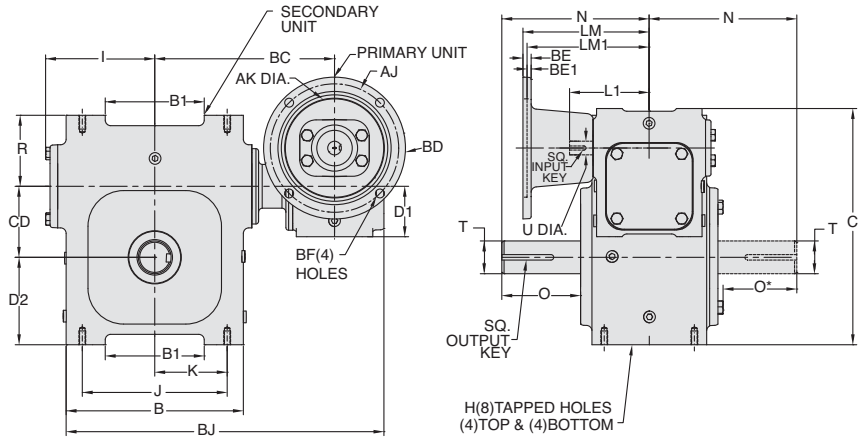
Styles: DMQ, DM, D

Style DMQ

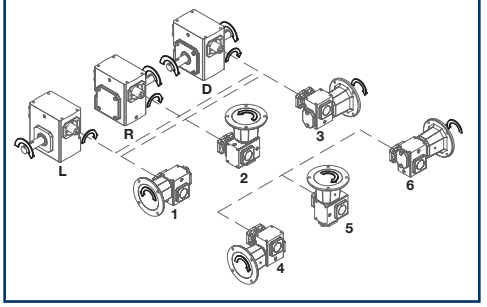




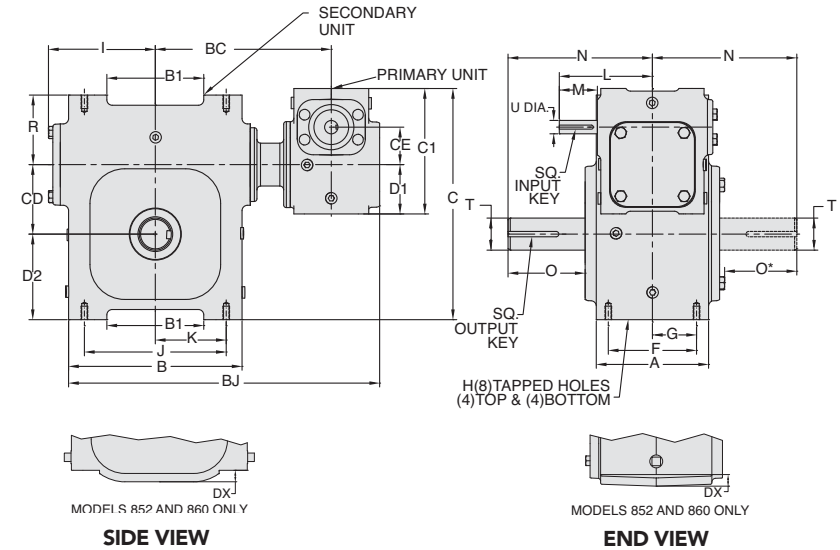
Style DM

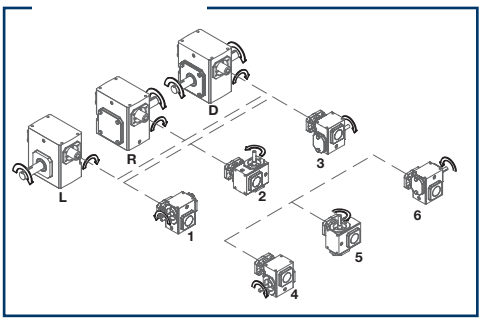


ASSEMBLIES



Style D





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

SIDE VIEW

END VIEW

EL Series Dimensions

Styles: DMQ, DM, D

STYLE DMQ, DM, D DIMENSIONS (Inches)

Size	A	B	B1	BC	BJ	C	CD	CE	C1	D1	D2	DX	F	G	H		I
															Tap Size	Depth	
EL813	2.82	3.80	--	5.32	9.02	5.99	1.33	1.33	4.66	1.72	1.72	--	2.00	1.00	5/16-18	0.50	2.40
EL818	3.50	4.83	2.48	5.94	10.05	7.00	1.75	1.33	4.66	1.72	2.31	--	2.94	1.47	5/16-18	0.63	3.03
EL821	3.91	5.75	2.76	6.32	10.97	7.63	2.06	1.33	4.66	1.72	2.63	--	3.25	1.63	3/8-16	0.87	3.40
EL824	4.06	5.86	--	6.43	11.08	7.81	2.38	1.33	4.66	1.72	2.50	--	2.88	1.44	3/8-16	0.69	3.61
EL826	4.84	7.17	4.21	6.99	12.39	8.81	2.63	1.33	4.66	1.72	3.25	--	3.38	1.69	3/8-16	0.69	4.17
EL830	5.25	8.11	4.50	8.04	14.16	10.06	3.00	1.75	5.86	2.31	3.50	--	4.13	2.06	1/2-13	1.00	4.81
EL832	5.25	8.11	4.53	8.23	14.16	10.81	3.25	1.75	5.86	2.31	4.00	--	4.13	2.06	1/2-13	1.00	5.00
EL842	6.13	9.63	5.71	9.17	11.56	13.00	4.25	2.06	6.88	2.63	4.50	--	3.75	1.88	5/8-11	1.19	6.15
EL852	7.19	11.50	7.82	11.57	14.47	13.75	5.25	2.63	8.00	3.25	4.25	0.75	5.25	2.63	3/4-10	1.44	7.55
EL860	7.00	13.50	--	12.63	23.57	14.25	6.00	3.25	10.50	3.50	5.00	1.63	5.38	2.69	7/8-9	1.63	7.88

Size	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style D only)	Input Key (Style DM only)	Output Key
EL813	3.25	1.63	3.82	1.87	4.00	2.16	1.96	1.61	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.69	1.84	3.82	1.87	4.39	2.05	1.85	1.81	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	4.13	2.06	3.82	1.87	4.68	2.29	2.09	2.19	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	5.00	2.50	3.82	1.87	5.14	2.66	2.46	2.06	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	5.00	2.50	3.82	1.87	5.63	2.73	2.53	2.13	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	5.75	2.88	4.45	1.78	6.62	3.60	3.37	2.44	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	6.63	3.31	4.45	1.78	6.62	3.60	3.37	3.25	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	7.00	3.50	4.82	1.76	8.12	4.50	4.22	2.94	1.750	0.625	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	9.62	4.81	6.07	2.45	9.06	4.78	4.50	2.75	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	11.00	5.50	6.75	2.31	10.75	5.25	5.25	3.25	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	L1		LQ	LQ1	RQ	
	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

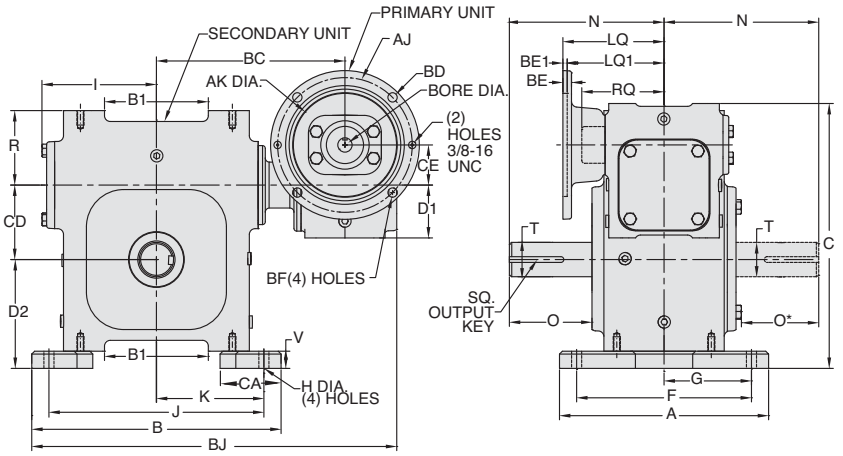
Original Style	New Style
D_MSC or D_MLSC	DMQ
D_MC or D_MLC	DM
D_M or D_ML	D

Convert Style D to motorized coupling input using kits shown on page 278.

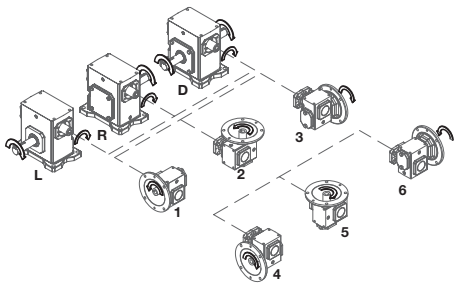
ELECTRA-GEAR
EL Series
Dimensions
Styles: DTMQ, DTM, DT

ALUMINUM EL SERIES

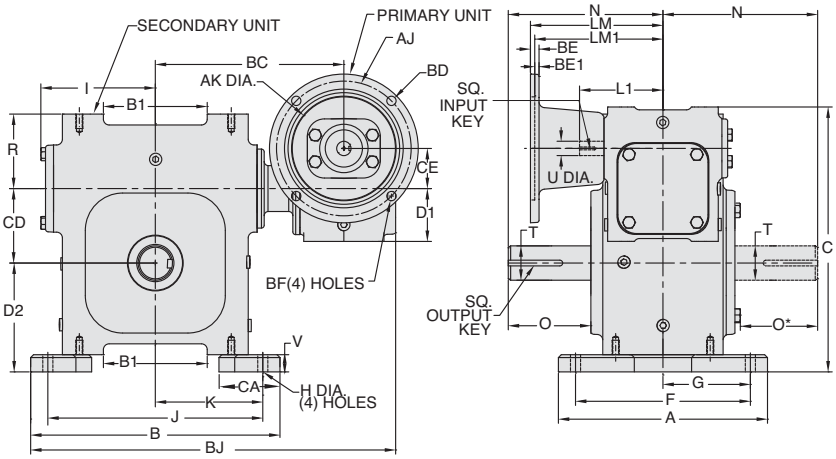
Style DTMQ

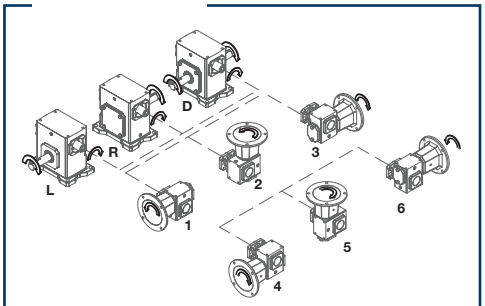


ASSEMBLIES

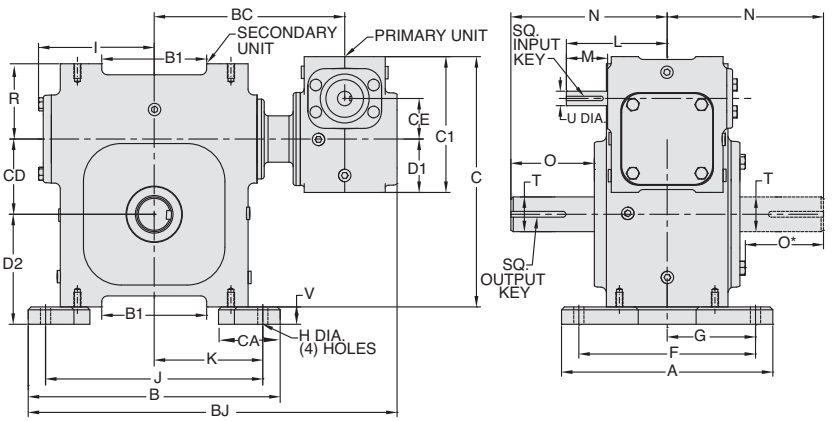


Style DTM

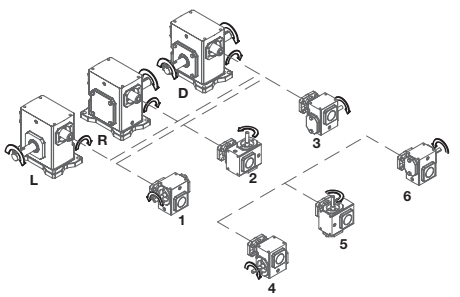




Style DT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

EL Series Dimensions

Styles: DTMQ, DTM, DT

STYLE DTMQ, DTM, DT DIMENSIONS (Inches)

Size	A	B	BC	BJ	B1	C	CA	CD	CE	C1	D1	D2	F	G	H
EL813	4.06	5.13	5.32	9.73	--	6.52	1.56	1.33	1.33	4.66	1.72	2.25	3.31	1.66	0.34
EL818	5.19	6.06	5.94	10.82	2.48	7.56	2.06	1.75	1.33	4.66	1.72	2.87	4.38	2.19	0.38
EL821	6.63	7.25	6.32	11.79	2.76	8.26	2.40	2.06	1.33	4.66	1.72	3.26	5.38	2.69	0.44
EL824	6.38	7.69	6.43	12.11	--	8.56	2.59	2.38	1.33	4.66	1.72	3.25	4.88	2.44	0.47
EL826	6.63	8.13	6.99	12.90	4.21	9.50	2.81	2.63	1.33	4.66	1.72	3.94	5.38	2.69	0.50
EL830	9.00	9.88	8.04	15.24	4.50	10.81	3.69	3.00	1.75	5.86	2.31	4.25	7.50	3.75	0.56
EL832	9.13	10.88	8.23	15.93	4.53	11.56	3.69	3.25	1.75	5.86	2.31	4.75	7.63	3.82	0.56
EL842	10.00	10.50	9.17	16.68	5.71	14.25	3.38	4.25	2.06	6.88	2.63	5.75	8.00	4.00	0.81
EL852	10.75	12.13	11.57	19.98	7.82	15.25	2.50	5.25	2.63	8.00	3.25	5.75	8.75	4.38	0.81
EL860	11.75	13.50	12.63	22.44	--	17.50	4.35	6.00	3.25	10.50	3.50	6.75	9.50	4.75	0.94

Size	I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	V	Input Key (Style DT only)❊	Input Key (Style DTM only)❊	Output Key
EL813	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	1.61	0.625	0.500	0.53	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL818	3.03	5.25	2.63	3.82	1.87	4.39	2.05	1.85	1.81	0.750	0.500	0.56	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	3.40	6.00	3.00	3.82	1.87	4.68	2.29	2.09	2.19	1.000	0.500	0.63	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	3.61	6.19	3.09	3.82	1.87	5.14	2.66	2.46	2.06	1.125	0.500	0.75	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	4.17	6.88	3.44	3.82	1.87	5.63	2.73	2.53	2.13	1.250	0.500	0.69	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	4.81	8.38	4.19	4.45	1.78	6.62	3.60	3.37	2.44	1.500	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	5.00	9.38	4.69	4.45	1.78	6.62	3.60	3.37	3.25	1.625	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	6.15	8.50	4.25	4.82	1.76	8.12	4.50	4.22	2.94	1.750	0.625	1.25	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	7.55	9.75	4.88	6.07	2.45	9.06	4.78	4.50	2.75	2.000	0.750	1.50	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	7.88	10.50	5.25	6.75	2.31	10.75	5.25	5.25	3.25	2.250	0.875	1.75	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

– Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

– EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

– See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_ASC or D_ALSC	DTMQ
D_AC or D_ALC	DTM
D_A or D_AL	DT

Convert Style DT to motorized coupling input using kits shown on page 278.

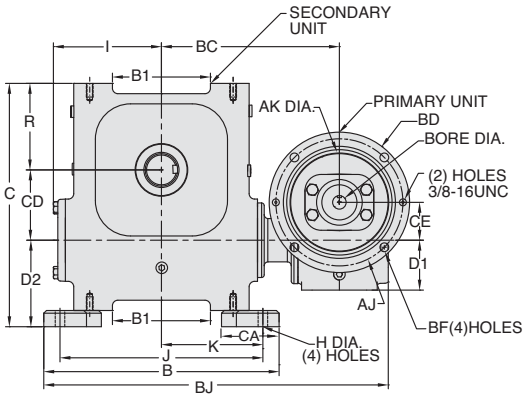
ELECTRA-GEAR

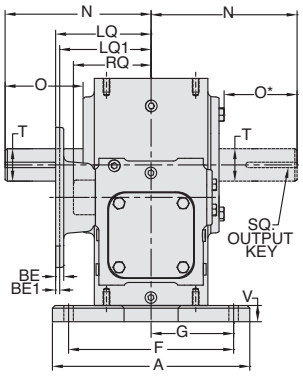
EL Series Dimensions

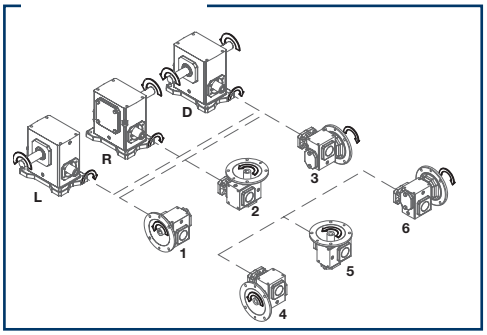
Styles: DUMQ, DUM, DU

ALUMINUM EL SERIES

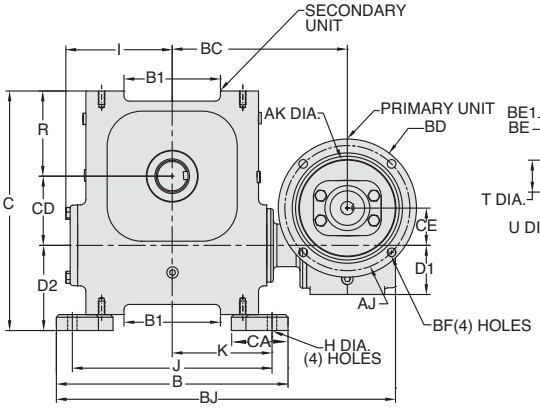
Style DUMQ

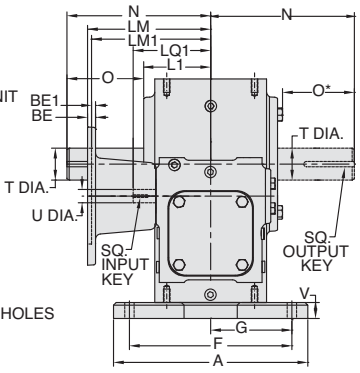




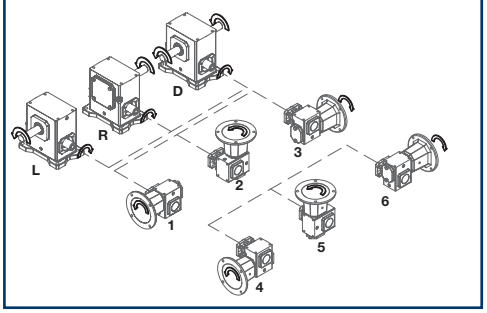


Style DUM

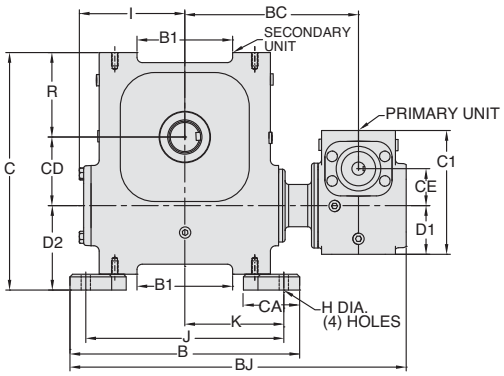


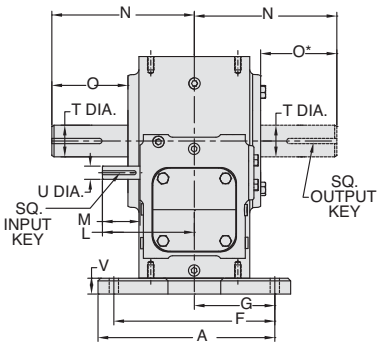


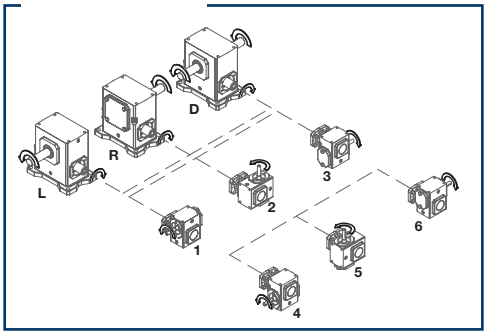
ASSEMBLIES



Style DU







REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

EL Series Dimensions

Styles: DUMQ, DUM, DU

STYLE DUMQ, DUM, DU DIMENSIONS (Inches)

Size	A	B	BC	BJ	B1	C	CA	CD	CE	C1	D1	D2	F	G	H
EL813	4.06	5.13	5.32	9.73	--	5.19	1.56	1.33	1.33	4.66	1.72	1.72	3.31	1.66	0.34
EL818	5.19	6.06	5.94	10.82	2.48	6.42	2.15	1.75	1.33	4.66	1.72	2.31	4.38	2.19	0.38
EL821	6.63	7.25	6.32	11.79	2.76	7.51	2.66	2.06	1.33	4.66	1.72	2.63	5.38	2.69	0.44
EL824	6.38	7.69	6.43	12.11	--	7.63	2.59	2.38	1.33	4.66	1.72	2.50	4.88	2.44	0.47
EL826	6.63	8.13	6.99	12.90	4.21	8.69	2.81	2.63	1.33	4.66	1.72	3.25	5.38	2.69	0.50
EL830	9.00	9.88	8.04	15.24	4.50	9.69	3.69	3.00	1.75	5.86	2.31	3.50	7.50	3.75	0.56
EL832	9.13	10.88	8.23	15.93	4.53	11.25	3.69	3.25	1.75	5.86	2.31	4.00	7.63	3.82	0.56
EL842	10.00	10.50	9.17	16.68	5.71	12.94	3.38	4.25	2.06	6.88	2.63	4.50	8.00	4.00	0.81
EL852	10.75	12.13	11.57	19.89	7.82	13.75	2.50	5.25	2.63	8.00	3.25	4.25	8.75	4.38	0.81
EL860	11.75	13.50	12.63	22.44	--	16.00	4.35	6.00	3.25	10.50	3.50	5.00	9.50	4.75	0.94

Size	I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	V	Input Key (Style DU only)❊	Input Key (Style DUM only)❊	Output Key
EL813	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	1.72	0.625	0.500	0.53	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.03	5.25	2.63	3.82	1.87	4.39	2.05	1.85	2.30	0.750	0.500	0.56	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	3.40	6.00	3.00	3.82	1.87	4.68	2.29	2.09	2.63	1.000	0.500	0.63	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	3.61	6.19	3.09	3.82	1.87	5.14	2.66	2.46	2.50	1.125	0.500	0.75	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	4.17	6.88	3.44	3.82	1.87	5.63	2.73	2.53	3.25	1.250	0.500	0.69	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	4.81	8.38	4.19	4.45	1.78	6.62	3.60	3.37	3.50	1.500	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	5.00	9.38	4.69	4.45	1.78	6.62	3.60	3.37	4.00	1.625	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	6.15	8.50	4.25	4.82	1.76	8.12	4.50	4.22	4.19	1.750	0.625	1.25	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	7.55	9.75	4.88	6.07	2.45	9.06	4.78	4.50	4.25	2.000	0.750	1.50	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	7.88	10.50	5.25	6.75	2.31	10.75	5.25	5.25	5.00	2.250	0.875	1.75	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	DUMQ
STANDARD CATALOGED	DUM
OPTION	DU

Convert Style DU to motorized coupling input using kits shown on page 278.

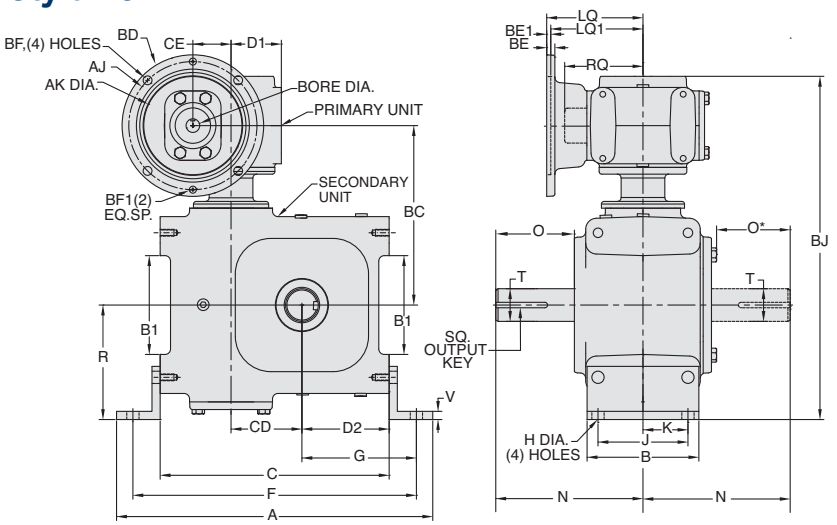
ELECTRA-GEAR

EL Series Dimensions

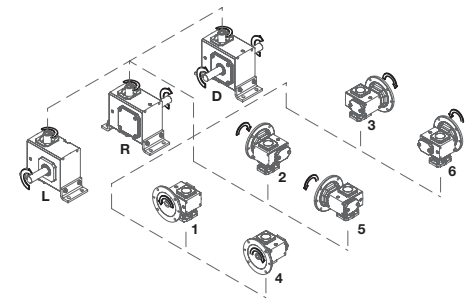
Styles: DJMQ, DJM, DJ

ALUMINUM EL SERIES

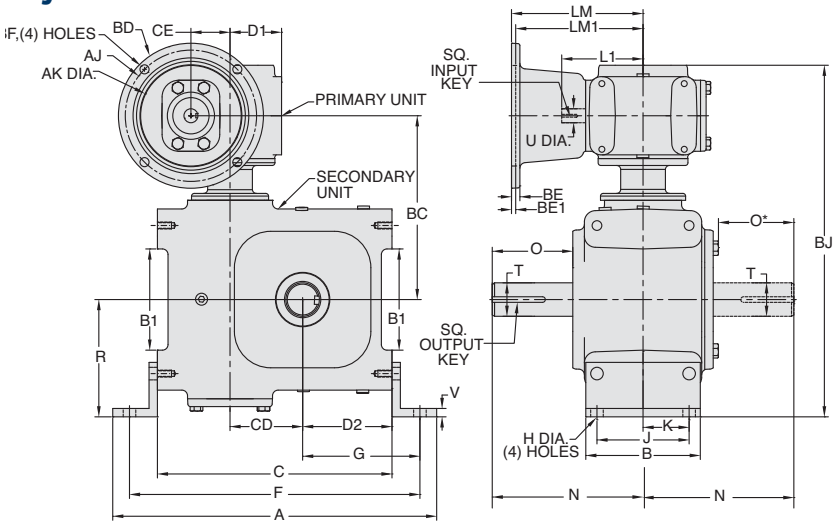
Style DJMQ

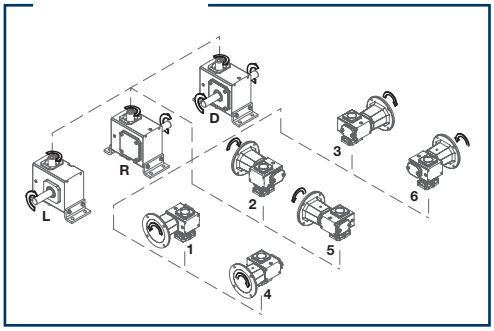


ASSEMBLIES

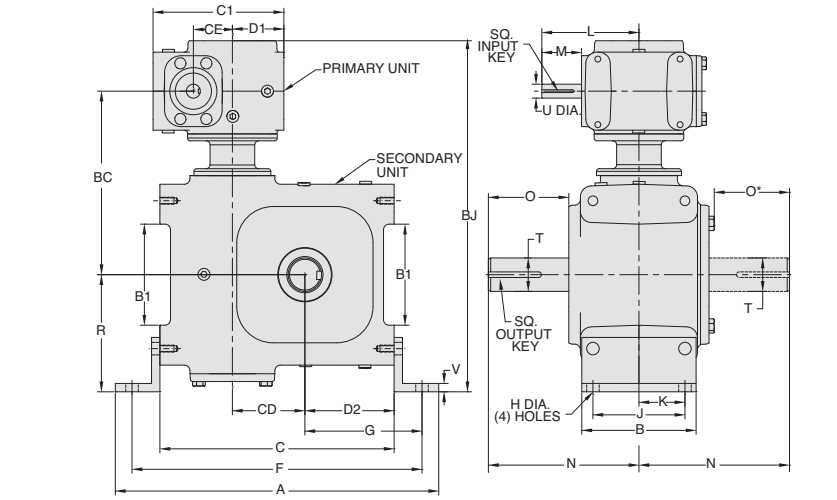


Style DJM

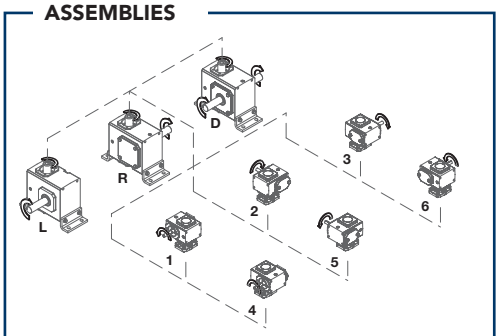




Style DJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

EL Series Dimensions

Styles: DJMQ, DJM, DJ

STYLE DJMQ, DJM, DJ DIMENSIONS (Inches)

Size	A	B	B1	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H	J	K
EL813	7.16	2.91	--	5.32	10.10	4.66	1.33	1.33	4.66	1.72	1.72	6.41	2.60	0.34	2.00	1.00
EL818	8.88	3.56	2.48	5.94	10.76	5.86	1.75	1.33	4.66	1.72	2.31	7.88	3.32	0.38	2.94	1.47
EL821	9.87	4.00	2.76	6.32	11.63	6.88	2.06	1.33	4.66	1.72	2.63	8.87	3.62	0.44	3.25	1.63
EL824	10.31	4.00	--	6.43	12.33	6.94	2.38	1.33	4.66	1.72	2.50	9.19	3.63	0.69	2.88	1.44
EL826	12.00	4.38	4.21	6.99	12.86	8.00	2.63	1.33	4.66	1.72	3.25	10.50	4.50	0.50	3.38	1.69
EL830	12.94	5.13	4.50	8.04	15.11	8.94	3.00	1.75	5.86	2.31	3.50	11.44	4.75	0.56	4.13	2.06
EL832	14.50	5.13	4.53	8.23	15.74	10.50	3.25	1.75	5.86	2.31	4.00	13.00	5.25	0.56	4.13	2.06
EL842	17.50	5.13	5.71	9.17	17.06	11.69	4.25	2.06	6.88	2.63	4.50	14.50	5.91	0.81	3.75	1.88
EL852	20.25	6.50	7.82	11.57	21.46	12.25	5.25	2.63	8.00	3.25	4.25	16.75	6.50	0.81	5.25	2.63
EL860	22.25	7.00	--	12.63	24.07	14.25	6.00	3.25	10.50	3.50	5.00	18.75	7.63	0.94	5.38	2.69

Size	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style DJ only)❊	Input Key (Style DJM only)❊	Output Key
EL813	3.82	1.87	4.00	2.16	1.96	2.94	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.82	1.87	4.39	2.05	1.85	2.97	0.38	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	3.82	1.87	4.68	2.29	2.09	3.47	0.38	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	3.82	1.87	5.14	2.66	2.46	4.06	0.31	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	3.82	1.87	5.63	2.73	2.53	4.03	0.31	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	4.45	1.78	6.62	3.60	3.37	4.81	0.25	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	4.45	1.78	6.62	3.60	3.37	5.25	0.38	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	4.82	1.76	8.12	4.50	4.22	5.63	0.50	1.750	0.625	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	6.07	2.45	9.06	4.78	4.50	7.63	0.50	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	6.75	2.31	10.75	5.25	5.25	8.38	0.63	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft
◆ Keyway width by depth
❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_JBSC or D_JBLSC	DJMQ
D_JBC or D_JBLC	DJM
D_JB or D_JBL	DJ

Convert Style DJ to motorized coupling input using kits shown on page 278.

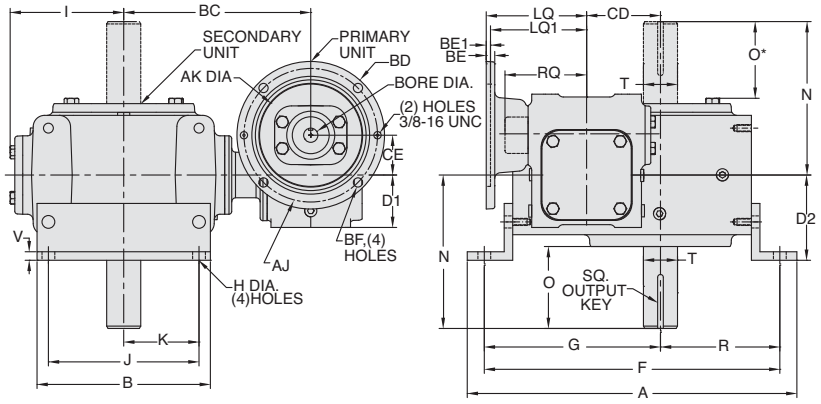
ELECTRA-GEAR

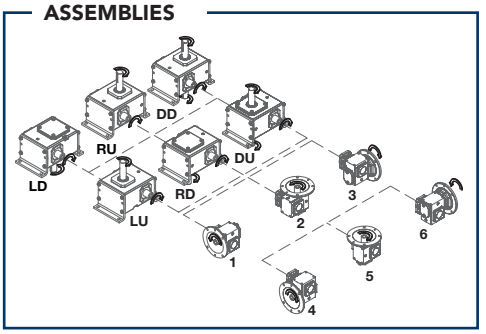
EL Series Dimensions

Styles: DVLMQ, DVLM, DVL

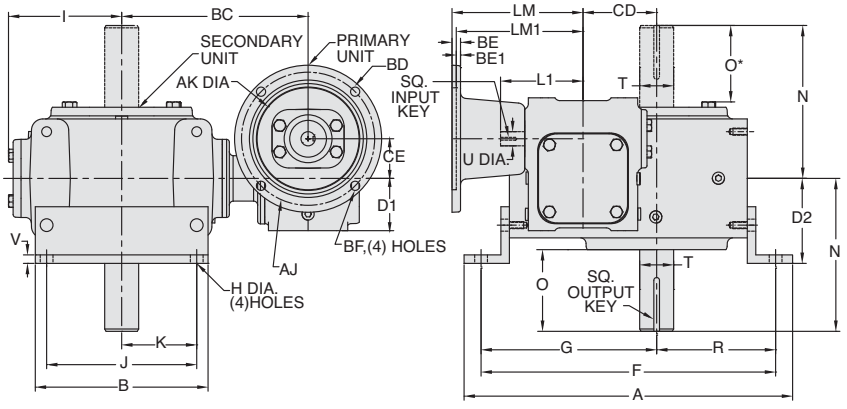
ALUMINUM EL SERIES

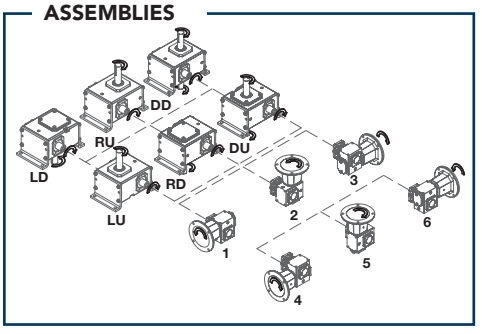
Style DVLMQ



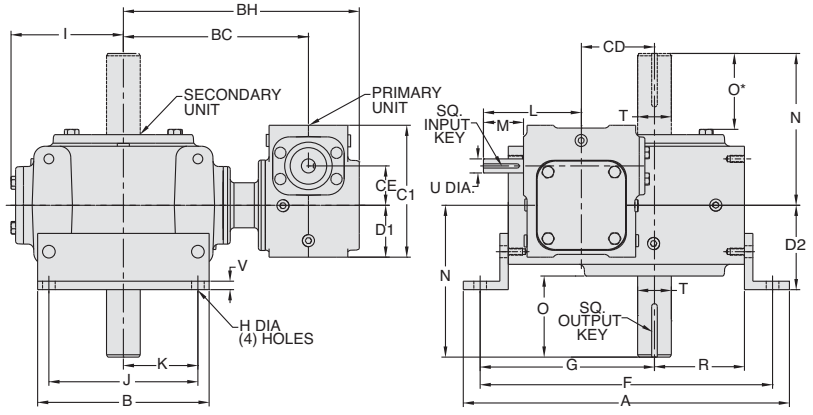


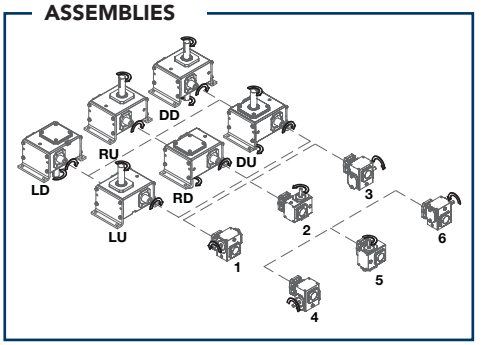
Style DVLM





Style DVL





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DVLMQ, DVLM, DVL DIMENSIONS (Inches)

Size	A	B	BC	BH	CD	CE	C1	D1	D2	F	G	H	I	J	K	L
EL813	7.16	4.13	5.32	7.16	1.33	1.33	4.66	1.72	2.31	6.16	3.69	0.34	2.40	3.25	1.63	3.82
EL818	8.88	4.25	5.94	7.79	1.75	1.33	4.66	1.72	2.28	7.88	4.57	0.38	3.03	3.69	1.84	3.82
EL821	9.87	4.81	6.32	8.16	2.06	1.33	4.66	1.72	2.56	8.87	5.25	0.44	3.40	4.13	2.06	3.82
EL824	10.88	5.88	6.43	8.27	2.38	1.33	4.66	1.72	2.75	9.38	5.66	0.50	3.61	5.00	2.50	3.82
EL826	12.00	5.88	6.99	8.83	2.63	1.33	4.66	1.72	2.81	10.50	6.00	0.50	4.17	5.00	2.50	3.82
EL830	12.94	6.75	8.04	10.30	3.00	1.75	5.86	2.31	3.75	11.44	6.69	0.56	4.81	5.75	2.88	4.45
EL832	14.50	7.63	8.23	10.49	3.25	1.75	5.86	2.31	3.75	13.00	7.75	0.56	5.00	6.63	3.31	4.45
EL842	17.50	8.38	9.17	11.56	4.25	2.06	6.88	2.63	4.59	14.50	8.60	0.81	6.15	7.00	3.50	4.82
EL852	19.25	11.50	11.57	14.47	5.25	2.63	8.00	3.25	5.88	16.88	9.19	0.81	7.55	9.63	4.82	6.07
EL860	21.25	13.50	12.63	15.69	6.00	3.25	10.50	3.50	6.38	18.63	11.44	0.94	7.88	11.00	5.50	6.75

Size	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style DVL only)❊	Input Key (Style DVLM only)❊	Output Key
EL813	1.87	4.00	2.16	1.96	1.72	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	1.87	4.39	2.05	1.85	2.31	0.38	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	1.87	4.68	2.29	2.09	2.63	0.38	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	1.87	5.14	2.66	2.46	2.50	0.31	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	1.87	5.63	2.73	2.53	3.25	0.31	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	1.78	6.62	3.60	3.37	3.50	0.25	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	1.78	6.62	3.60	3.37	4.00	0.38	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	1.76	8.12	4.50	4.22	4.50	0.50	1.750	0.625	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	2.45	9.06	4.78	4.50	4.25	0.50	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	2.31	10.75	5.25	5.25	5.00	0.63	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_BSC or D_BLSC	DVLMQ
D_BC or D_BLC	DVLM
D_B or D_BL	DVL

Convert Style DVL to motorized coupling input using kits shown on page 278.

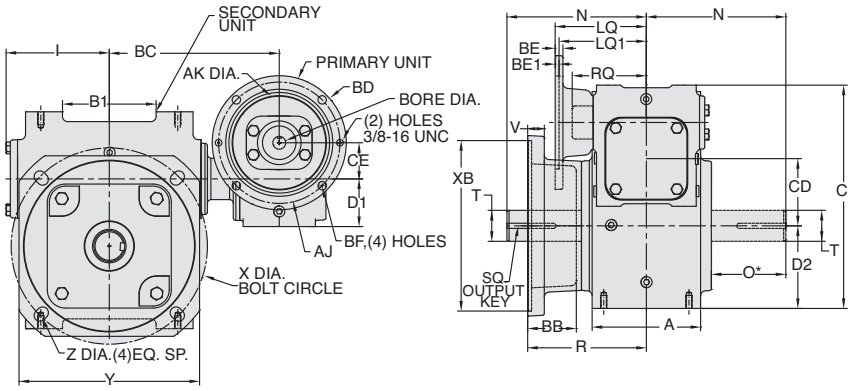
ELECTRA-GEAR

EL Series Dimensions

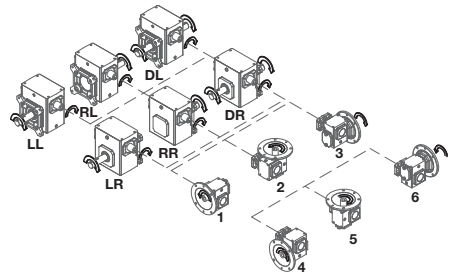
Styles: DFRMQ, DFRM, DFR

ALUMINUM EL SERIES

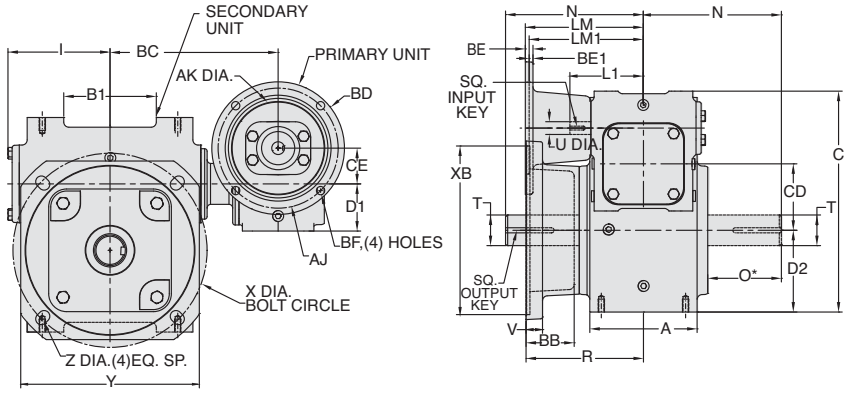
Style DFRMQ



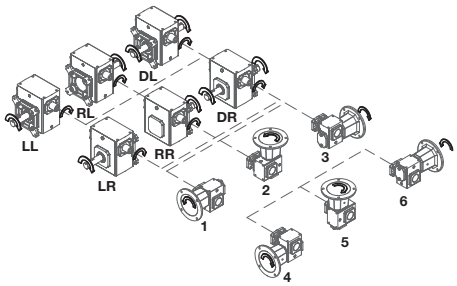
ASSEMBLIES



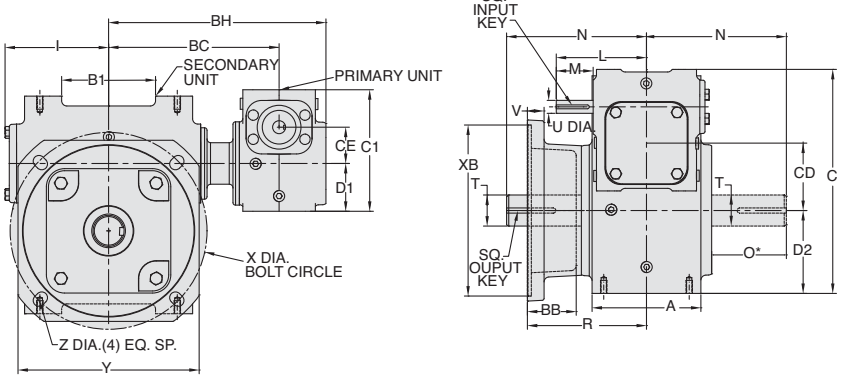
Style DFRM



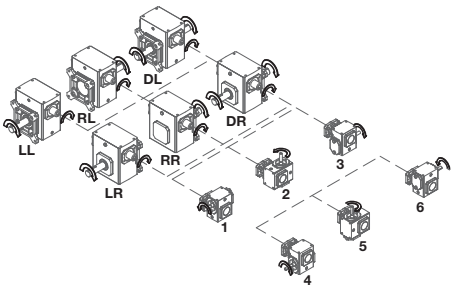
ASSEMBLIES



Style DFR



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

EL Series Dimensions

Styles: DFRMQ, DFRM, DFR

STYLE DFRMQ, DFRM, DFR DIMENSIONS (Inches)

Size	A	BB	BC	BH	B1	C	CD	CE	C1	D1	D2	I	L	M	N	O*
EL818	3.50	1.27	5.94	7.79	2.48	7.00	1.75	1.33	4.66	1.72	2.31	3.03	3.82	1.87	4.39	1.85
EL821	3.91	1.51	6.32	8.16	2.76	7.63	2.06	1.33	4.66	1.72	2.63	3.40	3.82	1.87	4.68	2.09
EL824	4.06	1.35	6.43	8.27	--	7.81	2.38	1.33	4.66	1.72	2.50	3.61	3.82	1.87	5.14	2.46
EL826	4.84	1.35	6.99	8.83	4.21	8.81	2.63	1.33	4.66	1.72	3.25	4.17	3.82	1.87	5.63	2.53
EL830	5.25	2.36	8.04	10.30	4.50	10.06	3.00	1.75	5.86	2.31	3.50	4.81	4.45	1.78	6.62	3.37
EL832	5.25	2.54	8.23	10.49	4.53	10.81	3.25	1.75	5.86	2.31	4.00	5.00	4.45	1.78	6.62	3.37
EL842	6.13	2.06	9.17	11.56	5.71	13.00	4.25	2.06	6.88	2.63	4.50	6.15	4.82	1.76	8.12	4.22
EL852	7.19	1.18	11.57	14.47	7.82	13.75	5.25	2.63	8.00	3.25	4.25	7.55	6.07	2.45	9.06	4.50
EL860	7.00	0.25	12.63	15.69	--	14.25	6.00	3.25	10.50	3.50	5.00	7.88	6.75	2.31	10.75	5.25

Size	R	V	X	XB	Y	Z	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style DF only)❊	Input Key (Style DFM only)❊	Output Key
EL818	3.53	0.38	3.13	-	4.00	0.34	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	4.25	0.50	6.88	6.00	6.49	0.44	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	4.15	0.63	7.75	6.50	6.99	0.50	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	4.56	0.63	7.75	6.50	6.99	0.50	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	5.75	0.81	9.125-9.500	8.25	8.74	0.56	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	5.94	0.81	9.125-.9500	8.25	8.74	0.56	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	6.06	0.75	10.75	9.75	11.00	0.69	1.750	0.625	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	5.75	0.69	12.75	11.50	14.24	0.81	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	7.25	1.00	15.25	13.00	17.00	0.81	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	DFRMQ
STANDARD CATALOGED	DFRM
OPTION	DFR

NOTE: New styles are not a direct replacement to orignal ring base.

Convert Style DFR to motorized coupling input using kits shown on page 278.

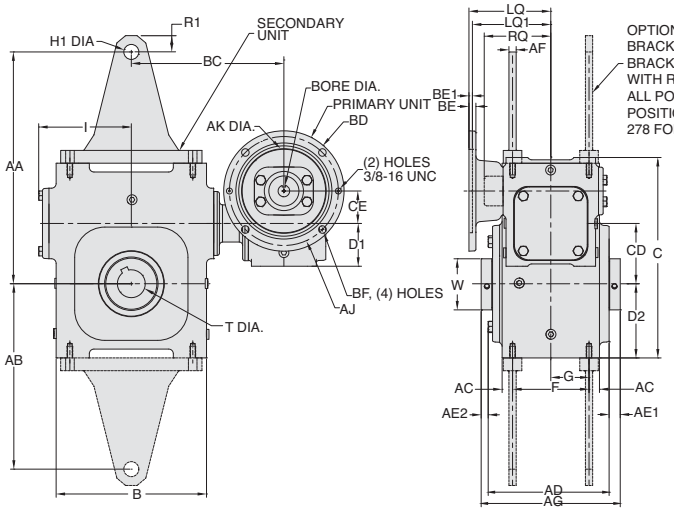
ELECTRA-GEAR

EL Series Dimensions

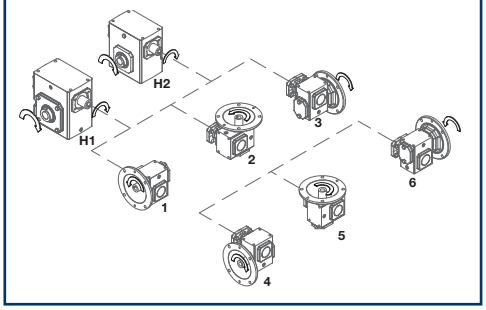
Styles: DHMQ, DHM, DH

ALUMINUM EL SERIES

Style DHMQ

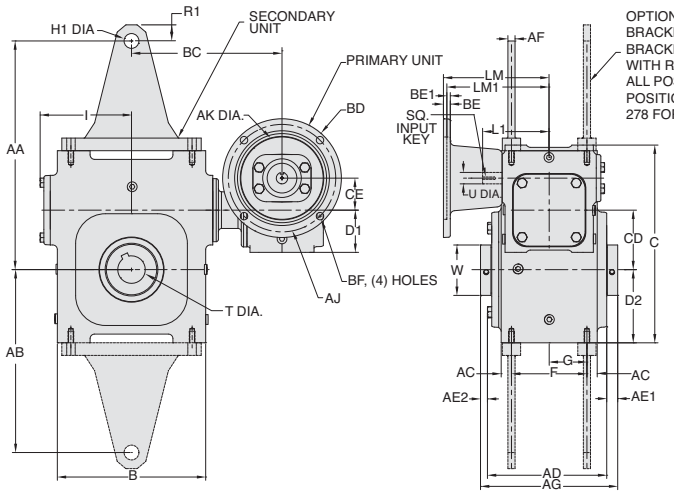


ASSEMBLIES

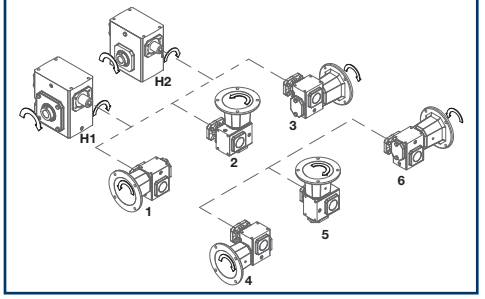


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DHM

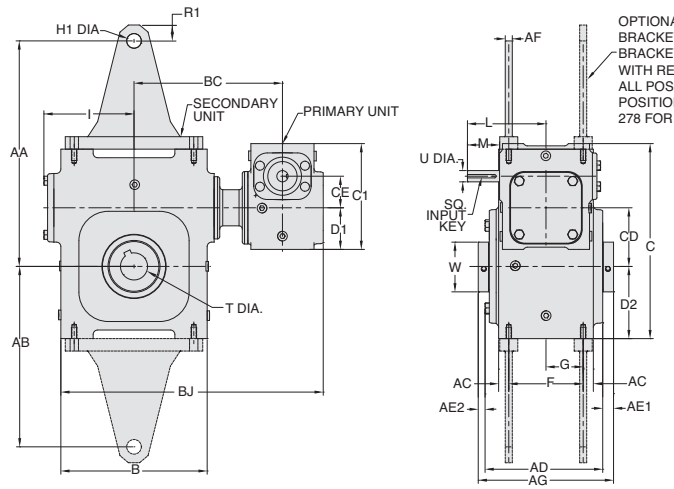


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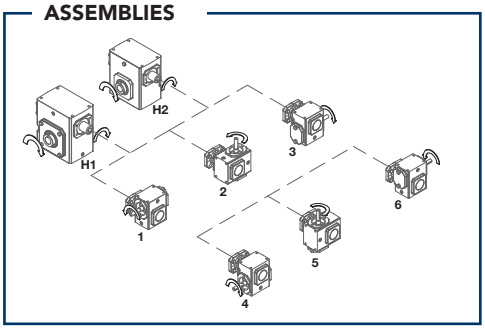


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

STYLE DHMQ, DHM, DH DIMENSIONS (Inches)

D2	Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	BC	C	CD	CE	C1	D1
EL813	--	--	0.41	3.89	0.58	0.26	--	4.75	3.80	5.32	5.99	1.33	1.33	4.66	1.72	1.72
EL818	6.25	5.00	0.28	4.72	0.49	0.29	0.69	5.50	4.83	5.94	7.00	1.75	1.33	4.66	1.72	2.31
EL821	7.63	6.00	0.33	4.98	0.60	0.42	0.69	6.00	5.75	6.32	7.63	2.06	1.33	4.66	1.72	2.63
EL824	7.81	5.87	0.59	5.17	1.02	0.81	0.69	6.00	5.86	6.43	7.81	2.38	1.33	4.66	1.72	2.50
EL826	8.50	7.00	0.73	6.00	0.60	0.40	0.69	7.00	7.17	6.99	8.81	2.63	1.33	4.66	1.72	3.25
EL830	9.94	8.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.04	10.06	3.00	1.75	5.86	2.31	3.50
EL832	12.50	10.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.23	10.81	3.25	1.75	5.86	2.31	4.00
EL842	14.69	12.00	1.19	7.52	0.63	0.35	0.69	8.50	9.63	9.17	13.00	4.25	2.06	6.88	2.63	4.50
EL852	17.75	14.00	0.97	8.84	0.97	0.69	0.81	10.50	11.50	11.57	15.50	5.25	2.63	8.00	3.25	4.25
EL860	20.25	16.00	0.81	11.00	0.81	0.81	0.81	10.38	13.50	12.63	14.25	6.00	3.25	10.50	3.50	5.00

Size	F	G	H1	I	L	M	R1	V	T MAX• -0.000 +0.0025	U +0.000 -0.0015	Input Key (Style DH only)❊	Input Key (Style DHM only)❊	Output Key
EL813	2.00	1.00	--	2.40	3.82	1.87	-	1.00	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.50
EL818	2.94	1.47	0.53	3.03	3.82	1.87	0.66	1.44	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 3.00
EL821	3.25	1.63	0.53	3.40	3.82	1.87	0.75	1.94	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL824	2.88	1.44	0.53	3.61	3.82	1.87	0.75	1.94	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL826	3.38	1.69	0.53	4.17	3.82	1.87	0.75	1.94	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL830	4.13	2.06	0.53	4.81	4.45	1.78	0.81	2.76	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL832	4.13	2.06	0.53	5.00	4.45	1.78	0.88	2.76	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL842	3.75	1.88	0.53	6.15	4.82	1.76	0.88	2.76	2.188	0.625	3/16 X 1.38	3/16 x .500	1/2 x 3.00
EL852	5.25	2.63	0.66	7.55	6.07	2.45	1.13	4.26	3.438	0.750	3/16 x 1.63	3/16 x .500	7/8 x 4.00
EL860	5.38	2.69	0.66	7.88	6.75	2.31	1.13	3.74	3.438	0.875	3/16 x 1.63	3/16 x .500	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

Note: Torque arm bracket available separately. Refer to page 278 for kits. If a special bracket is required, refer to Style DMQ dimensions for mounting pad dimensions on top/bottom of reducer.

- • Max bore dimensions shown. For additional bores available, refer to page 130.
- ◆ Keyway width by depth
- ❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_MHSC	DHMQ
D_MHC	DHM
D_MH	DH

Convert Style DH to motorized coupling input using kits shown on page 278.

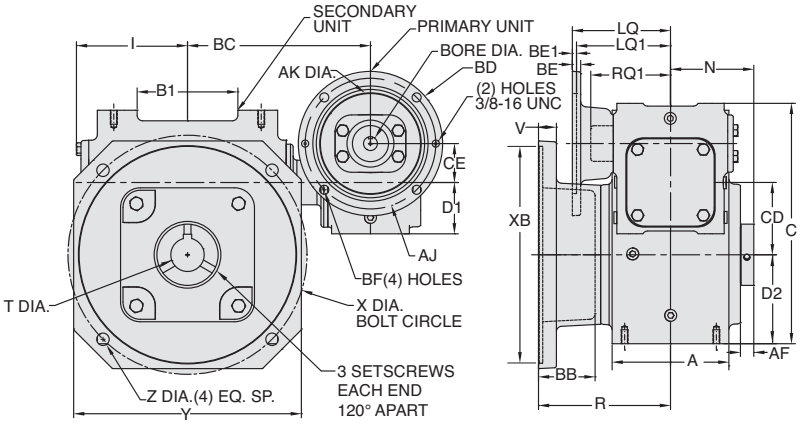
ELECTRA-GEAR

EL Series Dimensions

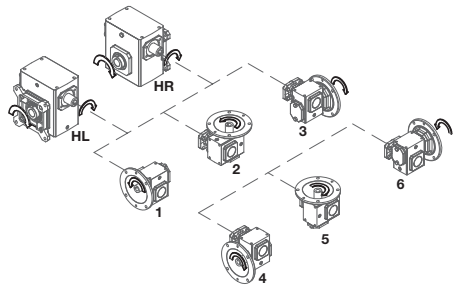
Styles: DFHMQ, DFHM, DFH

ALUMINUM EL SERIES

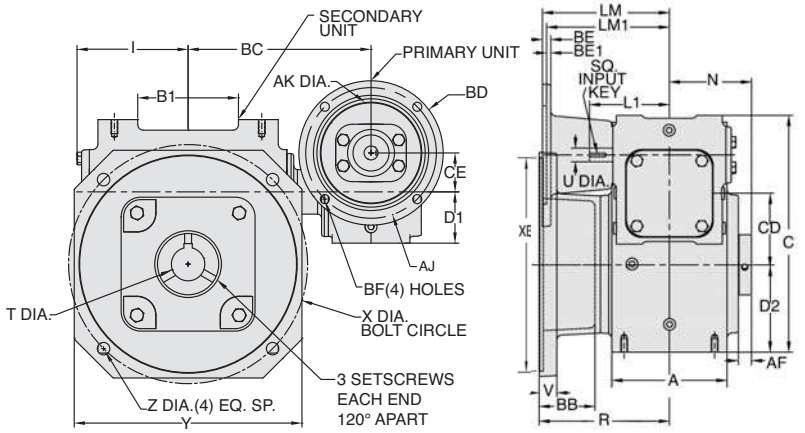
Style DFHMQ



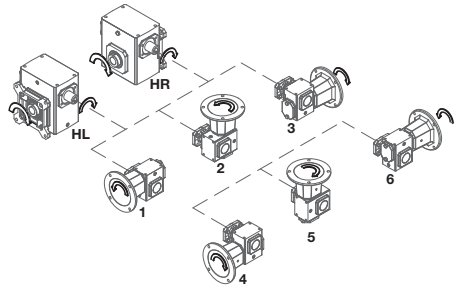
ASSEMBLIES



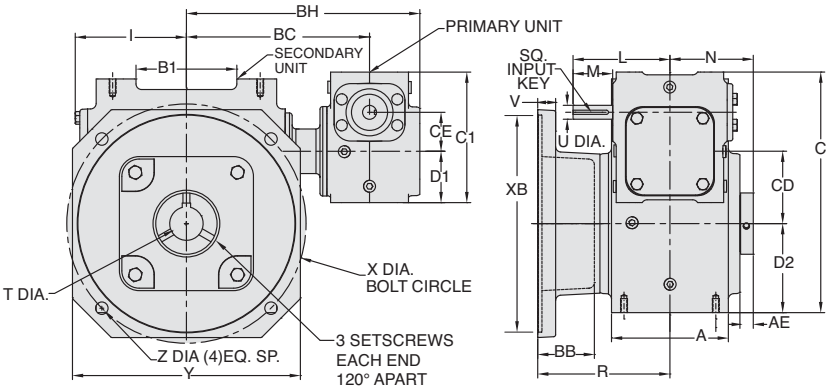
Style DFHM



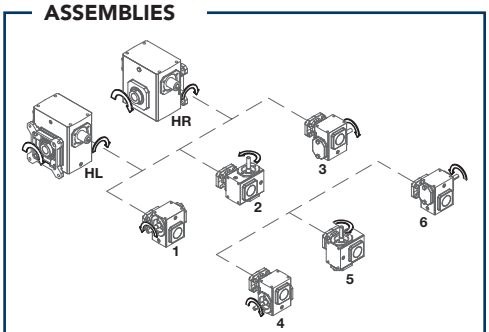
ASSEMBLIES



Style DFH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

EL Series Dimensions

Styles: DFHMQ, DFHM, DFH

STYLE DFHMQ, DFHM, DFH DIMENSIONS (Inches)

Size	A	AE	B1	BB	BC	BH	C	CD	CE	C1	D1	D2	I	L	M	N
EL818	3.50	0.49	2.48	1.27	5.94	7.79	7.00	1.75	1.33	4.66	1.72	1.72	3.03	3.82	1.87	2.75
EL821	3.91	0.60	2.76	1.51	6.32	8.16	7.63	2.06	1.33	4.66	1.72	2.31	3.40	3.82	1.87	2.99
EL824	4.06	1.05	--	1.35	6.43	8.27	7.81	2.38	1.33	4.66	1.72	2.63	3.61	3.82	1.87	3.51
EL826	4.84	0.60	4.21	1.35	6.99	8.83	8.81	2.63	1.33	4.66	1.72	2.50	4.17	3.82	1.87	3.19
EL830	5.25	0.60	4.50	2.36	8.04	10.30	10.06	3.00	1.75	5.86	2.31	3.25	4.81	4.45	1.78	3.75
EL832	5.25	0.60	4.53	2.54	8.23	10.49	10.81	3.25	1.75	5.86	2.31	3.50	5.00	4.45	1.78	3.75
EL842	6.13	0.63	5.71	2.06	9.17	11.56	13.00	4.25	2.06	6.88	2.63	4.00	6.15	4.82	1.76	4.25
EL852	7.19	0.97	7.82	1.18	11.57	14.47	15.50	5.25	2.63	8.00	3.25	4.50	7.55	6.07	2.45	5.25
EL860	7.00	0.81	--	0.25	12.63	15.69	14.25	6.00	3.25	10.50	3.50	4.25	7.88	6.75	2.31	5.19

Size	R	V	X	XB	Y	Z	T MAX• -0.000 +0.0025	U +0.000 -0.0015	Input Key (Style DFH only)❊	Input Key (Style DFHM only)❊	Output Key
EL818	3.53	0.38	3.13	-	4.00	0.34	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 3.00
EL821	4.25	0.50	6.88	6.00	6.49	0.44	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL824	4.15	0.63	7.38	6.50	6.99	0.50	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL826	4.56	0.63	7.38	6.50	6.99	0.50	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL830	5.75	0.81	9.125-9.500	8.25	8.74	0.56	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL832	5.94	0.81	10.75	9.75	8.74	0.56	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL842	6.06	0.75	11.50	10.25	11.00	0.69	2.188	0.625	3/16 X 1.38	3/16 x .500	1/2 x 3.00
EL852	5.75	0.69	12.75	11.50	14.24	0.81	3.438	0.750	3/16 x 1.63	3/16 x .500	7/8 x 4.00
EL860	7.25	1.00	15.25	13.00	17.00	0.81	3.438	0.875	3/16 x 1.63	3/16 x .500	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- • Max bore dimensions shown. For additional bores available, refer to page 130.
- ◆ Keyway width by depth
- ❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

– Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

– EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
– See page 132 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_RHSC	DFHMQ
D_RHC	DFHM
D_RH	DFH

Convert Style DFH to motorized coupling input using kits shown on page 278.

Model Number System
Double Reduction Helical-Worm

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

800 Series Gear Reducer Model Number Nomenclature

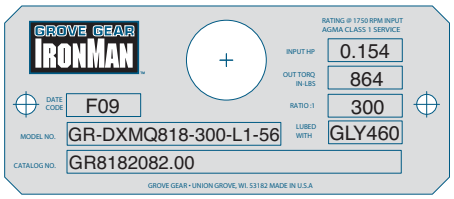
All new stock and custom 800 Series Grove Gear and Electra-Gear worm reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example EL8130001 and GR8130001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been Factory modified by the addition of an optional base for example, the modification number T818, for example, is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 3000 and higher (for example, GR8133000 and NH8133000) are WASHGUARD® reducers for washdown service.

Catalog numbers 5000 (for example, GR8135000 and EL8135000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered by catalog number.

TYPICAL NAMEPLATE
(Grove Gear shown)



Series Code

GR - Grove Gear IRONMAN Cast Iron Reducers
NH - Grove Gear IRONMAN Narrow Housing Cast Iron Reducers
EL - Electra-Gear Aluminum Reducers
GRG - Grove Gear Flexaline Interchange (Sizes 821, 826, 832)
GRL - Leeson IRONMAN Interchange (Sizes 821, 826, 832)

Style

SOLID OUTPUT SHAFT
DXMQ – Motorized, Quill Input
DXM – Motorized, Flexible Coupling Input
DX – Non-Flanged

HOLLOW OUTPUT SHAFT
DXHMQ – Motorized, Quill Input
DXHM – Motorized, Flexible Coupling Input
DXH – Non-Flanged

WASHGUARD STYLES
W prefix; i.e. WDXMQ denotes WASHDOWN Reducer
S prefix; i.e. SDXMQ denotes All-Stainless Steel Reducer

Size

800 SERIES CENTER DISTANCES

Size	Center Distance (Inches)
813	1.33
815	1.54
818	1.75
821	2.06
824	2.38
826	2.62
830	3.00
832	3.25
842	4.25
852	5.25
860	6.00
870*	7.00
880*	8.00
8100*	10.00

* GR series only

Ratio

See Selection Tables on pages 194-197, for all available ratios.

Output Shaft Orientation

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft
* Viewed from drive end of reducer.

Mounting Assembly

Assembly numbers 1-6 are available. Refer to dimension layouts.

Motor Flange

Input Code		For Input Type	
Single Input	Dual Input		
blank	A	non-motorized	NEMA Input
48	48A	48CZ	
56	56A	56C	
140	140A	143-5TC	
180	180A	182-4TC	
210	210A	213-5TC	
250	250A	254-6TC	
63	Contact Grove Gear	D63D B5	IEC Input
71		D71D B5	
80		D80D B5	
90		D90D B5	
110		D100LD/D112MD B5	
132		D132D	

Output Bore Code

Hollow Shaft Only
See page 130.

Sample Model Numbers

Solid Output Shaft - GR Series

Cast iron, double reduction, 2.38” reducer with 56C motorized quill input, left-hand output shaft, 300:1 ratio.

GR	-	DXMQ	824	-	300	-	L1	-	56
Series		Style	Size		Ratio		Shaft Orientation		Input Type

Hollow Output Shaft - EL Series

Aluminum, double reduction, 1.75” reducer with 56C motorized quill input, 1.00” hollow output bore, 100:1 ratio.

EL	-	DXHMQ	818	-	100	-	H13	-	56	-	16
Series		Style	Size		Ratio		Shaft Orientation		Input Type		Output Bore Code

Cast Iron Solid Shaft Output Styles

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DXMQ, DXM and DX can be field or Factory modified into a wide range of styles.*

	Stock Styles	Modified Stock Styles	
		Horizontal Base Worm Over	Vertical Input Shaft
MOTORIZED C-FLANGE QUILL INPUT	**Style DXMQ**	**Style DXTMQ**	**Style DXJMQ**
			
	Ratings Pages: 194-197 Dimension Pages: GR Series 202-203 NH Series 220-221	Ratings Pages: 194-197 Dimension Pages: GR Series 204-205 NH Series 222-223	Ratings Pages: 194-197 Dimension Pages: GR Series 208-209 NH Series Contact Factory
MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT	**Style DXM**	**Style DXTM**	**Style DXJM**
			
	Ratings Pages: 194-197 Dimension Pages: GR Series 202-203 NH Series 220-221	Ratings Pages: 194-197 Dimension Pages: GR Series 204-205 NH Series 222-223	Ratings Pages: 194-197 Dimension Pages: GR Series 208-209 NH Series Contact Factory
NON-FLANGED INPUT	**Style DX**	**Style DXT**	**Style DXJ**
			
	Ratings Pages: 194-197 Dimension Pages: GR Series 202-203 NH Series 220-221	Ratings Pages: 194-197 Dimension Pages: GR Series 204-205 NH Series 222-223	Ratings Pages: 194-197 Dimension Pages: GR Series 208-209 NH Series Contact Factory

***Additional accessories, options and assembly services are available, Contact Factory for details.**

Cast Iron Solid Shaft Output Styles

CAST IRON GR SERIES | CAST IRON NH SERIES

Modified Stock Styles

MOTORIZED C-FLANGE QUILL INPUT

Vertical Output Shaft High / Low Base

Style DXV_MQ**



Ratings Pages: 194-197

Dimension Pages:
GR Series 210-211
NH Series Contact Factory

Flange Mounted Output Shaft

Style DXFMQ



Ratings Pages: 194-197

Dimension Pages:
GR Series 212-213
NH Series Contact Factory

Flange Mounted Output Shaft

Style DXFEMQ



Ratings Pages: 194-197

Dimension Pages:
GR Series 218-2129
NH Series 228-229

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style DXV_M**



Ratings Pages: 194-197

Dimension Pages:
GR Series 210-211
NH Series Contact Factory

Style DXFM



Ratings Pages: 194-197

Dimension Pages:
GR Series 212-213
NH Series Contact Factory

Style DXFEM



Ratings Pages: 194-197

Dimension Pages:
GR Series 218-219
NH Series 228-229

NON-FLANGED INPUT

Style DXV**



Ratings Pages: 194-197

Dimension Pages:
GR Series 210-211
NH Series Contact Factory

Style DXF



Ratings Pages: 194-197

Dimension Pages:
GR Series 212-213
NH Series Contact Factory

Style DXFE



Ratings Pages: 194-197

Dimension Pages:
GR Series 218-219
NH Series 228-229

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

Cast Iron Hollow Shaft Output Styles

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DXHMQ, DXHM and DXH can be field or Factory modified into a wide range of styles.

MOTORIZED C-FLANGE QUILL INPUT

Style DXHMQ



Ratings Pages: 194-197

Dimension Pages:
GR Series 214-215
NH Series 224-225

Flange Mounted Output Shaft

Style DXFHMQ



Ratings Pages: 194-197

Dimension Pages:
GR Series 216-217
NH Series 226-227

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style DXHM



Ratings Pages: 194-197

Dimension Pages:
GR Series 214-215
NH Series 224-225

Style DXFHM



Ratings Pages: 194-197

Dimension Pages:
GR Series 216-217
NH Series 226-227

NON-FLANGED INPUT

Style DXH



Ratings Pages: 194-197

Dimension Pages:
GR Series 214-215
NH Series 224-225

Style DXFH



Ratings Pages: 194-197

Dimension Pages:
GR Series 216-217
NH Series 226-227

ELECTRA-GEAR

Aluminum
Hollow Shaft Output Styles

ALUMINUM EL SERIES

Stock Styles	Modified Stock Styles

Using off-the-shelf accessories, stock styles DXHMQ, DXHM and DXH can be field or Factory modified into a wide range of styles.

MOTORIZED C-FLANGE QUILL INPUT

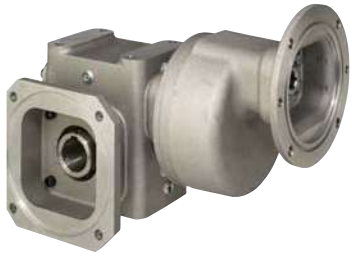
Style DXHMQ



Ratings Pages: 194-197

Dimension Pages:
EL Series 242-243

Style DXFHMQ



Ratings Pages: 194-197

Dimension Pages:
EL Series 244-245

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style DXHM



Ratings Pages: 194-197

Dimension Pages:
EL Series 242-243

Style DXFHM



Ratings Pages: 194-197

Dimension Pages:
EL Series 244-245

NON-FLANGED INPUT

Style DXH



Ratings Pages: 194-197

Dimension Pages:
EL Series 242-2453

Style DXFH



Ratings Pages: 194-197

Dimension Pages:
EL Series 244-245

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DXMQ, DXM and DX can be field or Factory modified into a wide range of styles.

MOTORIZED C-FLANGE QUILL INPUT

Style DXMQ	Horizontal Base Worm Over Style DXTMQ	Horizontal Base Worm Under Style DXUMQ*
		
Ratings Pages: 194-197 Dimension Pages: EL Series 230-231	Ratings Pages: 194-197 Dimension Pages: EL Series 232-233	Ratings Pages: 194-197 Dimension Pages: EL Series 234-235

MOTORIZED C-FLANGE FLEXIBLE COUPLING INPUT

Style DXM	Style DXTM	Style DXUM*
		
Ratings Pages: 194-197 Dimension Pages: EL Series 230-231	Ratings Pages: 194-197 Dimension Pages: EL Series 232-233	Ratings Pages: 194-197 Dimension Pages: EL Series 234-235

NON-FLANGED INPUT

Style DX	Style DXT	Style DXU*
		
Ratings Pages: 194-197 Dimension Pages: EL Series 230-231	Ratings Pages: 194-197 Dimension Pages: EL Series 232-233	Ratings Pages: 194-197 Dimension Pages: EL Series 234-235

Additional accessories, options and assembly services are available, Contact Factory for details.

* Not a recommended mounting style. Consult Factory for selection assistance.

ELECTRA-GEAR
Aluminum
Solid Shaft Output Styles

ALUMINUM EL SERIES

Modified Stock Styles

Vertical Input Shaft

Style DXJMQ



Ratings Pages: 194-197

Dimension Pages:
EL Series 236-237

Style DXJM



Ratings Pages: 194-197

Dimension Pages:
EL Series 236-237

Style DXJ



Ratings Pages: 194-197

Dimension Pages:
EL Series 236-237

Vertical Output Shaft Low Base

Style DXVLMQ



Ratings Pages: 194-197

Dimension Pages:
EL Series 238-239

Style DXVLM



Ratings Pages: 194-197

Dimension Pages:
EL Series 238-239

Style DXVL



Ratings Pages: 194-197

Dimension Pages:
EL Series 238-239

Flange Mounted Output Shaft

Style DXFRMQ



Ratings Pages: 194-197

Dimension Pages:
EL Series 240-241

Style DXFRM



Ratings Pages: 194-197

Dimension Pages:
EL Series 240-241

Style DXFR



Ratings Pages: 194-197

Dimension Pages:
EL Series 240-241

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

How to Use

Based on required output RPM and input motor horsepower, read across chart for the appropriate reducer size. As a rule of thumb, use 1.00 service factor chart for applications having uniform loads with up to 10 hours service duration per day. Use 1.25 service factor chart for longer service or shock loading. These charts are to be considered as guides only. Typically double reduction reducers are selected based on application torque, not necessarily HP. Refer to page 418 or contact Factory with specific application information. Series numbers correspond to center distances of secondary stage reducer, as shown in the chart below.

1.00 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																	
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40
10	175.0	813	813	813	813	813	813	815	818	821	824	830	842	842	852	852	N/A	N/A	N/A
15	116.7	813	813	813	813	813	815	815	821	824	826	832	842	842	852	852	N/A	N/A	N/A
20	87.5	813	813	813	813	813	815	818	821	824	826	832	842	842	852	N/A	N/A	N/A	N/A
25	70.0	813	813	813	813	815	818	821	824	826	830*	842	842	852	870	880	880	880	8100
30	58.3	813	813	813	813	815	818	821	824	826	830*	842	842	852	N/A	N/A	N/A	N/A	
40	43.8	813	813	813	815	815	821	824	826	830	832	842	852	852	N/A	N/A	N/A	N/A	
45	38.9	813	813	813	815	815	821	824	826	830	832	842	852	852	N/A	N/A	N/A	N/A	
50	35.0	813	813	813	815	818	821	824	826	830	842	842	852	860	870	880	8100	8100	
60	29.2	813	813	815	815	821	824	824	826	830*	842	842	852	860	N/A	N/A	N/A		
75	23.3	813	813	815	815	821	824	826	830	832	842	852	852	870	880	8100	8100		
80	21.9	813	813	815	815	821	824	826	832	832**	842	852	860	N/A	N/A	N/A			
100	17.5	813	813	815	815	821	824	826	832	842	842	852	870	880	8100	8100			
125	14.0	813	815	815	821	824	826	830	832**	842	842	852	870	880	8100				
150	11.7	813	815	815	821	824	826	830*	842	842	852	860	880	8100	8100				
200	8.8	813	815	821	821	824	830*	832**	842	842	852	870	8100	8100					
250	7.0	815	815	821	824	826	830*	842	842	852	852	880	8100	8100					
300	5.8	815	815	821	824	830	832**	842	842	852	860	8100							
400	4.4	821	824	830	830	842	842	852	852	860									
500	3.5	826	830	832	842	842	852	852	860										
600	2.9	826	830	830	842	842	852	852	860										

1.25 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM																
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30
10	175.0	813	813	813	813	813	815	815	821	824	826	832	842	842	852	N/A	N/A	N/A
15	116.7	813	813	813	813	815	815	821	824	824	830	842	842	852	852	N/A	N/A	N/A
20	87.5	813	813	813	813	815	818	821	824	826	830	842	842	852	N/A	N/A	N/A	N/A
25	70.0	813	813	813	815	815	821	824	826	830	832	842	852	870	870	880	8100	8100
30	58.3	813	813	813	815	815	821	824	826	830	832	842	852	852	N/A	N/A	N/A	N/A
40	43.8	813	813	813	815	821	824	824	830	830*	842	842	852	N/A	N/A	N/A	N/A	N/A
45	38.9	813	813	813	815	821	824	824	830	830*	842	842	852	N/A	N/A	N/A	N/A	N/A
50	35.0	813	813	815	815	821	824	826	830	832	842	852	852	870	880	8100	8100	8100
60	29.2	813	813	815	815	821	824	826	830	832**	842	852	860	N/A	N/A	N/A		
75	23.3	813	813	815	821	824	824	830	832	842	842	852	870	880	8100	8100		
80	21.9	813	813	815	821	824	824	830	832	842	842	852	N/A	N/A	N/A			
100	17.5	813	815	815	821	824	826	830*	832**	842	852	852	880	880	8100			
125	14.0	815	815	821	821	824	830	832	842	842	852	870	880	8100	8100			
150	11.7	815	815	821	824	826	830*	832	842	842	852	870	8100	8100				
200	8.8	815	818	821	824	826	832	842	842	852	860	870	8100	8100				
250	7.0	815	821	824	824	830*	832**	842	852	852	870	8100	8100					
300	5.8	815	821	824	826	830*	842	842	852	852	880	8100						
400	4.4	824	826	830	832	842	852	852	860									
500	3.5	830	830	842	842	852	852	860										
600	2.9	826	830	832	842	852	852	852										

Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 194-197.

♠ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.

Refer to page 201 for exact ratio of helical primary stage and worm gear secondary stage.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Quick Selections

GR • NH • EL Series

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

1.50 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25
10	175.0	813	813	813	813	813	815	818	824	824	830	842	842	852	N/A	N/A	N/A
15	116.7	813	813	813	813	815	818	821	824	826	830	842	842	852	N/A	N/A	N/A
20	87.5	813	813	813	813	815	821	821	824	826	832	842	852	852	N/A	N/A	N/A
25	70.0	813	813	813	815	818	824	824	826	830*	842	852	870	870	880	880	8100
30	58.3	813	813	813	815	818	821	824	826	830*	842	842	852	N/A	N/A	N/A	N/A
40	43.8	813	813	815	815	821	824	826	830	832	842	852	852	N/A	N/A	N/A	N/A
45	38.9	813	813	815	815	821	824	826	830*	832**	842	852	N/A	N/A	N/A	N/A	N/A
50	35.0	813	813	815	818	821	824	826	832	842	842	852	870	870	8100	8100	8100
60	29.2	813	815	815	821	824	826	826	832	842	842	852	N/A	N/A	N/A		
75	23.3	813	815	818	821	824	826	830	832**	842	852	852	870	880	8100		
80	21.9	813	815	815	821	824	826	830*	842	842	852	860	N/A	N/A	N/A		
100	17.5	815	815	821	821	824	830	832	842	842	852	870	880	8100	8100		
125	14.0	815	815	821	824	826	830*	832**	842	842	852	870	8100	8100			
150	11.7	815	815	821	824	826	832	842	842	852	852	880	8100	8100			
200	8.8	815	821	824	824	830*	832**	842	852	852	870	8100	8100				
250	7.0	815	821	824	826	830*	842	842	852	852	880	8100					
300	5.8	815	821	824	830	832**	842	842	852	860	880						
400	4.4	826	830	830	842	842	852	852									
500	3.5	830	832	842	842	852	852	860									
600	2.9	830	830	842	842	852	852	860									

1.75 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM														
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20
10	175.0	813	813	813	813	815	818	821	824	824	830*	842	842	852	N/A	N/A
15	116.7	813	813	813	813	815	821	821	824	830	832	842	852	852	N/A	N/A
20	87.5	813	813	813	815	818	821	824	826	830	832**	842	852	N/A	N/A	N/A
25	70.0	813	813	815	815	821	824	824	830	842	842	852	870	870	880	8100
30	58.3	813	813	815	815	821	824	824	830	832	842	852	852	N/A	N/A	N/A
40	43.8	813	813	815	818	821	824	826	832	842	842	852	N/A	N/A	N/A	N/A
45	38.9	813	813	815	821	821	824	826	832	842	842	852	N/A	N/A	N/A	N/A
50	35.0	813	813	818	821	824	826	830	832	842	842	852	870	880	8100	8100
60	29.2	813	815	818	821	824	826	830	832**	842	852	852	N/A	N/A	N/A	
75	23.3	813	815	821	821	824	830	832	842	842	852	870	880	8100	8100	
80	21.9	813	815	821	824	824	830	832	842	842	852	N/A	N/A	N/A		
100	17.5	815	815	821	824	826	830*	832**	842	842	852	870	8100	8100		
125	14.0	815	818	821	824	830	832**	842	842	852	852	880	8100	8100		
150	11.7	815	821	824	824	830	832**	842	842	852	860	880	8100			
200	8.8	815	821	824	826	830*	842	842	852	852	880	8100				
250	7.0	821	821	824	830	832**	842	842	852	860	880	8100				
300	5.8	821	824	826	830*	832**	842	852	852	880	8100					
400	4.4	826	830	832	842	852	852	860								
500	3.5	830	842	842	852	852	860									
600	2.9	830	832	842	842	852	852	860								

2.00 Service Factor

Nominal Ratio♠	Output RPM	Input Horsepower @ 1750 RPM														
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20
10	175.0	813	813	813	813	815	818	821	824	826	830*	842	852	852	N/A	N/A
15	116.7	813	813	813	815	815	821	824	826	830	832	842	852	852	N/A	N/A
20	87.5	813	813	813	815	818	821	824	826	830*	842	842	852	N/A	N/A	N/A
25	70.0	813	813	815	818	821	824	826	830*	842	842	852	870	870	880	8100
30	58.3	813	813	815	815	821	824	826	830*	832**	842	852	N/A	N/A	N/A	
40	43.8	813	815	815	821	824	826	830	832	842	842	852	N/A	N/A	N/A	
45	38.9	813	815	815	821	824	826	830	832**	842	842	852	N/A	N/A	N/A	
50	35.0	813	815	821	821	824	826	830	842	842	852	860	870	880	8100	
60	29.2	815	815	821	821	824	826	830*	842	842	852	860	N/A	N/A		
75	23.3	815	815	821	824	826	830	832	842	842	852	870	880	8100		
80	21.9	815	815	821	824	826	830*	832**	842	842	852	N/A	N/A	N/A		
100	17.5	815	815	821	824	826	832	842	842	852	852	880	8100	8100		
125	14.0	815	821	824	824	830	832**	842	842	852	870	880	8100			
150	11.7	815	821	824	826	830*	842	842	852	852	870	8100	8100			
200	8.8	821	821	824	830	832**	842	842	852	860	880	8100				
250	7.0	821	824	826	830*	842	842	852	852	880	8100	8100				
300	5.8	821	824	830	832**	842	842	852	860	880	8100					
400	4.4	830	830	842	842	852	852	860								
500	3.5	832	842	842	852	852	860									
600	2.9	830	842	842	852	852	860									

Note: This chart is meant as a guide for reducer selections at specific motor horsepowers.
Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 194-197.
♠ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 201 for exact ratio of helical primary stage and worm gear secondary stage.
* Size 832 must be used for NH Series for this selection.
** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.
indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

How To Use Maximum Rating Tables

Maximum Rating Tables for Double Reduction Gear Reducers are shown on pages 193-196.

BEFORE YOU START:

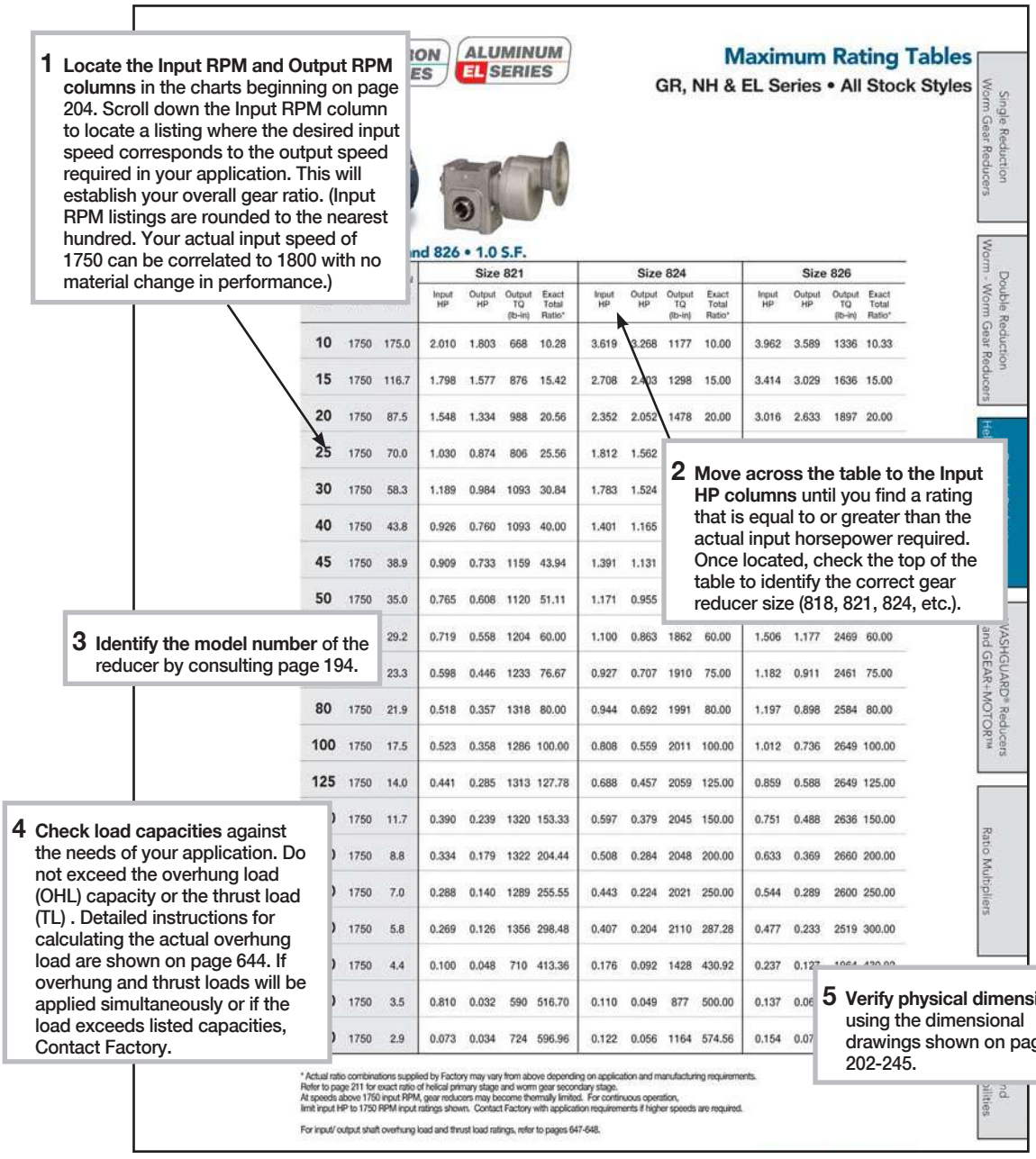
Identify the Service Factor of the application (see page 418).

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 185-190.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:



1 **Locate the Input RPM and Output RPM columns** in the charts beginning on page 204. Scroll down the Input RPM column to locate a listing where the desired input speed corresponds to the output speed required in your application. This will establish your overall gear ratio. (Input RPM listings are rounded to the nearest hundred. Your actual input speed of 1750 can be correlated to 1800 with no material change in performance.)

2 **Move across the table to the Input HP columns** until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (818, 821, 824, etc.).

3 **Identify the model number** of the reducer by consulting page 194.

4 **Check load capacities** against the needs of your application. Do not exceed the overhung load (OHL) capacity or the thrust load (TL) . Detailed instructions for calculating the actual overhung load are shown on page 644. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, Contact Factory.

5 **Verify physical dimensions** using the dimensional drawings shown on pages 202-245.

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES





Sizes 813, 815 and 818 • 1.0 S.F.

Nominal Ratio	Input RPM	Nominal Output RPM	Size 813				Size 815**				Size 818			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*
10	1750	175.0	0.767	0.679	252	10.00	1.265	1.123	416	10.00	1.702	1.524	564	10.00
15	1750	116.7	0.616	0.530	294	15.00	0.993	0.849	472	15.00	1.196	1.041	578	15.00
20	1750	87.5	0.505	0.420	311	20.00	0.838	0.691	511	20.00	1.000	0.853	632	20.00
25	1750	70.0	0.370	0.306	282	25.00	0.629	0.528	486	25.00	0.844	0.718	662	25.00
30	1750	58.3	0.399	0.311	345	30.00	0.665	0.510	566	30.00	0.770	0.623	692	30.00
40	1750	43.8	0.302	0.235	338	40.00	0.516	0.401	576	40.00	0.595	0.479	690	40.00
45	1750	40.1	0.306	0.229	363	43.69	0.519	0.385	609	43.69	0.590	0.463	732	43.69
50	1750	35.0	0.251	0.187	345	50.00	0.429	0.322	593	50.00	0.492	0.382	705	50.00
60	1750	29.2	0.244	0.174	375	60.00	0.418	0.295	638	60.00	0.469	0.352	760	60.00
75	1750	23.3	0.205	0.138	382	75.00	0.352	0.237	656	75.00	0.392	0.281	777	75.00
80	1750	21.9	0.215	0.140	404	80.00	0.392	0.254	731	80.00	0.402	0.282	812	80.00
100	1750	17.5	0.179	0.110	395	100.00	0.327	0.196	704	100.00	0.345	0.227	818	100.00
125	1750	14.0	0.153	0.087	403	125.00	0.280	0.157	723	125.00	0.292	0.181	833	125.00
150	1750	11.7	0.142	0.074	408	150.00	0.246	0.127	701	150.00	0.261	0.150	831	150.00
200	1750	8.8	0.124	0.056	413	200.00	0.228	0.102	753	200.00	0.221	0.113	831	200.00
250	1750	7.0	0.111	0.045	413	250.00	0.196	0.077	709	250.00	0.194	0.089	817	250.00
300	1750	6.1	0.102	0.039	421	287.28	0.188	0.072	777	287.28	0.179	0.079	849	287.288
400	1750	4.4	0.040	0.015	228	400.00	0.086	0.027	392	400.00	0.068	0.031	451	400.00
500	1750	3.5	0.030	0.010	180	500.00	0.063	0.017	308	500.00	0.046	0.019	348	500.00
600	1750	3.0	0.029	0.011	232	574.56	0.065	0.019	403	574.56	0.049	0.021	459	574.56

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 201 for exact ratio of helical primary stage and worm gear secondary stage.
** Size 815 is not available in EL Series.
At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input / output shaft overhung load and thrust load ratings, refer to pages 419-422.

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles





Sizes 821, 824 and 826 • 1.0 S.F.

Nominal Ratio	Input RPM	Nominal Output RPM	Size 821				Size 824				Size 826			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*
10	1750	175.0	2.010	1.803	668	10.00	3.619	3.268	1177	10.00	3.962	3.589	1336	10.00
15	1750	116.7	1.798	1.577	876	15.00	2.708	2.403	1298	15.00	3.414	3.029	1636	15.00
20	1750	87.5	1.548	1.334	988	20.00	2.352	2.052	1478	20.00	3.016	2.633	1897	20.00
25	1750	70.0	1.030	0.874	806	25.00	1.812	1.562	1406	25.00	2.337	2.025	1823	25.00
30	1750	58.3	1.189	0.984	1093	30.00	1.783	1.524	1598	30.00	2.299	1.968	2064	30.00
40	1750	43.8	0.926	0.760	1093	40.00	1.401	1.165	1676	40.00	1.812	1.510	2173	40.00
45	1750	40.1	0.909	0.733	1159	43.69	1.391	1.131	1778	43.69	1.784	1.464	2303	43.69
50	1750	35.0	0.765	0.608	1120	50.00	1.171	0.955	1721	50.00	1.517	1.242	2236	50.00
60	1750	29.2	0.719	0.558	1204	60.00	1.100	0.863	1862	60.00	1.506	1.177	2469	60.00
75	1750	23.3	0.598	0.446	1233	75.00	0.927	0.707	1910	75.00	1.182	0.911	2461	75.00
80	1750	21.9	0.518	0.357	1318	80.00	0.944	0.692	1991	80.00	1.197	0.898	2584	80.00
100	1750	17.5	0.523	0.358	1286	100.00	0.808	0.559	2011	100.00	1.012	0.736	2649	100.00
125	1750	14.0	0.441	0.285	1313	125.00	0.688	0.457	2059	125.00	0.859	0.588	2649	125.00
150	1750	11.7	0.390	0.239	1320	150.00	0.597	0.379	2045	150.00	0.751	0.488	2636	150.00
200	1750	8.8	0.334	0.179	1322	200.00	0.508	0.284	2048	200.00	0.633	0.369	2660	200.00
250	1750	7.0	0.288	0.140	1289	250.00	0.443	0.224	2021	250.00	0.544	0.289	2600	250.00
300	1750	6.1	0.269	0.126	1356	287.28	0.407	0.204	2110	287.28	0.477	0.233	2519	287.28
400	1750	4.4	0.100	0.048	710	400.00	0.176	0.092	1428	400.00	0.237	0.127	1964	400.00
500	1750	3.5	0.810	0.032	590	500.00	0.110	0.049	877	500.00	0.137	0.064	1157	500.00
600	1750	3.0	0.073	0.034	724	574.56	0.122	0.056	1164	574.56	0.154	0.075	1542	574.56

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 201 for exact ratio of helical primary stage and worm gear secondary stage.
At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES





Sizes 830 & 832 • 1.0 S.F.

Nominal Ratio	Input RPM	Nominal Output RPM	Size GR830 & EL830				Size NH830				Size GR832 & EL832				Size NH832			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Ratio Ratio*
10	1750	175.0	6.000	5.475	1972	10.00	5.080	4.570	1645	10.00	6.000	5.410	2011	10.34	6.000	5.410	2011	10.34
15	1750	116.7	4.857	4.376	2364	7.5	4.560	4.030	2180	7.5	6.000	5.407	2921	15.00	5.920	5.260	2839	15.00
20	1750	87.5	4.242	3.747	2699	10.00	3.970	3.450	2488	10.00	5.632	5.026	3620	20.00	5.190	4.560	3287	20.00
25	1750	70.0	3.000	2.642	2379	5.00	2.750	2.400	2157	5.00	3.000	2.669	2403	25.85	3.000	2.620	2360	25.85
30	1750	58.3	3.256	2.830	2968	30.00	2.930	2.560	2771	30.00	4.210	3.703	3884	29.13	3.850	3.410	3680	29.13
40	1750	43.8	2.574	2.187	3147	40.00	2.390	2.030	2924	40.00	3.427	2.953	4249	40.00	3.140	2.700	3894	40.00
45	1750	40.1	2.545	2.110	3320	43.69	2.230	1.870	3026	43.69	3.337	2.824	4442	43.69	2.970	2.500	4044	43.69
50	1750	35.0	2.157	1.805	3250	50.00	2.000	1.680	3020	50.00	2.870	2.441	4395	50.00	2.640	2.240	4028	50.00
60	1750	29.2	2.021	1.625	3507	60.00	1.820	1.470	3181	60.00	2.657	2.190	4727	60.00	2.440	1.980	4284	60.00
75	1750	23.3	1.702	1.338	3615	75.00	1.520	1.210	3279	75.00	2.238	1.811	4892	75.00	2.060	1.640	4434	75.00
80	1750	21.9	1.684	1.291	3714	80.00	1.430	1.100	3186	80.00	2.221	1.745	5023	80.00	1.890	1.470	4247	80.00
100	1750	17.5	1.441	1.049	3773	100.00	1.210	0.910	3284	100.00	1.872	1.409	5068	100.00	1.590	1.220	4385	100.00
125	1750	14.0	1.226	0.863	3886	125.00	1.030	0.750	3359	125.00	1.588	1.160	5224	125.00	1.300	0.958	4312	125.00
150	1750	11.7	1.074	0.716	3868	150.00	0.900	0.620	3362	150.00	1.392	0.970	5243	150.00	1.230	0.842	4547	150.00
200	1750	8.8	0.879	0.534	3844	200.00	0.730	0.450	3266	200.00	1.137	0.723	5208	200.00	0.951	0.606	4361	200.00
250	1750	7.0	0.766	0.424	3815	250.00	0.620	0.360	3226	250.00	0.971	0.570	5130	250.00	0.772	0.460	4141	250.00
300	1750	6.1	0.696	0.386	3989	300.00	0.530	0.280	3062	300.00	0.895	0.524	5412	300.00	0.639	0.358	3868	300.00
400	1750	4.1	0.400	0.200	3172	430.92	0.400	0.200	3172	430.92	0.483	0.258	4006	430.92	0.483	0.258	4006	430.92
500	1750	3.5	0.240	0.110	1157	500.00	0.240	0.110	1157	500.00	0.270	0.129	2326	500.00	0.270	0.129	2326	500.00
600	1750	3.0	0.270	0.130	3508	574.56	0.270	0.130	3508	574.56	0.307	0.150	3112	574.56	0.307	0.150	3112	574.56

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage.
At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles





Sizes 842, 852 and 860 • 1.0 S.F.

Nominal Ratio	Nominal Input RPM	Output RPM	Size 842				Size 852				Size 860**			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*
10	1750	175.0	13.43	12.469	4640	10.00	20.00	18.699	6902	10.00	20.00	18.74	6748	10.00
15	1750	116.7	11.93	10.934	5907	15.00	20.00	18.501	9994	15.00	20.00	18.54	10013	15.00
20	1750	87.5	10.76	9.770	7037	20.00	17.27	15.751	11345	20.00	18.67	17.08	12302	20.00
25	1750	65.5	7.471	6.797	6529	26.70	10.07	9.273	8835	26.70	10.07	9.32	8389	26.70
30	1750	58.3	8.056	7.120	7693	30.00	13.54	11.980	12944	30.00	14.41	12.80	13824	30.00
40	1750	43.8	6.701	5.950	8660	40.45	11.35	10.188	14828	40.45	11.35	10.24	14836	40.45
45	1750	39.4	6.293	5.480	8781	44.46	11.05	9.668	15492	44.46	11.99	10.54	16884	44.46
50	1750	33.9	5.568	4.881	9074	51.57	9.81	8.718	16208	51.57	10.07	9.02	16240	51.67
60	1750	28.8	5.061	4.340	9476	60.68	9.11	7.876	17195	60.68	9.82	8.39	17924	60.68
75	1750	23.3	4.121	3.527	9581	75.38	7.71	6.578	18345	77.38	8.21	6.78	18118	75.38
80	1750	21.6	4.277	3.525	10261	80.90	7.377	6.161	17934	80.90	8.22	6.93	20079	80.90
100	1750	16.9	3.575	2.884	10725	103.34	6.259	5.143	19122	103.34	6.89	5.60	20287	103.34
125	1750	13.5	2.989	2.318	10776	129.18	5.300	4.181	19432	129.18	5.71	4.55	22053	129.18
150	1750	11.6	2.685	2.078	11292	150.76	4.765	3.795	20618	150.76	5.32	4.29	23533	150.76
200	1750	8.5	2.099	1.449	10775	206.68	3.636	2.582	19198	206.68	3.93	2.83	21924	206.68
250	1750	6.7	1.765	1.139	10584	258.35	3.103	2.052	19075	258.35	3.32	2.23	21649	258.35
300	1750	5.8	1.618	1.043	11335	301.52	2.829	1.904	20687	301.52	3.13	2.15	23615	301.52
400	1750	4.2	0.781	0.417	6210	413.36	1.718	0.797	11864	413.36	2.19	1.08	16037	413.36
500	1750	3.4	0.526	0.257	4782	516.70	1.206	0.522	9707	516.70	1.56	0.69	12884	516.70
600	1750	3.0	0.588	0.298	6468	603.04	1.374	0.590	12810	603.04	1.75	0.80	17397	603.04

Sizes 870, 880 and 8100 • 1.0 S.F.

Nominal Ratio	Nominal Input RPM	Output RPM	Size 870***				Size 880***				Size 8100***			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio
25	1750	70.0	19.60	18.10	17000	26.05	31.90	29.70	26900	25.23	42.10	39.30	36800	26.02
37.5	1750	46.7	18.60	16.90	22900	37.61	26.80	24.60	32300	36.43	42.10	39.00	52300	37.23
50	1750	25.0	15.20	13.70	24400	49.56	21.70	19.70	34100	48.00	37.80	34.60	61700	49.50
75	1750	23.3	11.20	9.74	26200	74.55	16.20	14.30	37100	72.21	28.40	25.20	67700	74.46
100	1750	17.5	8.95	7.41	27800	104.20	12.60	10.60	38600	100.92	22.30	19.00	71400	104.08
125	1750	14.0	7.56	6.14	27500	124.53	10.80	8.90	38600	120.61	18.90	15.80	70600	124.39
138	1750	12.7	6.90	5.84	29000	138.08	10.20	8.75	41200	130.65	17.80	15.40	79000	139.22
150	1750	11.7	6.26	4.95	26700	149.95	9.05	7.27	38000	145.23	15.80	13.00	69000	149.77
185	1750	9.5	5.52	4.43	30800	192.99	8.00	6.53	42900	182.61	14.20	11.70	83900	194.59
200	1750	8.8	5.06	3.70	27100	203.32	7.00	5.22	37000	196.92	12.40	9.46	69200	203.08
210	1750	8.3	4.90	4.07	30200	205.92	6.94	5.84	43200	205.78	12.60	10.70	80800	212.23
250	1750	7.0	3.77	3.25	28500	244.04	5.35	4.63	41100	246.38	10.10	8.81	77300	243.65
280	1750	6.3	3.98	3.09	32000	287.82	5.50	4.38	45300	287.62	10.10	8.13	86800	296.64
300	1750	5.8	3.31	2.23	24500	304.98	4.78	3.23	34300	295.38	7.15	5.69	62400	304.62

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
** Size 860 is only available in GR and EL Series
*** Sizes 870, 880 and 8100 are only available in GR Series
Refer to page 201 for exact ratio of helical primary stage and worm gear secondary stage.
At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.
For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.
EL Series sizes 842-860 have cast iron primary. Contact Factory for dimensions.

GR Series Weights

CAST IRON GR SERIES

GR SERIES • DOUBLE REDUCTION HELICAL – WORM • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
Solid Output Shaft														
DXMQ	36	40	43	48	67	78	90	97	191	292	376	---	---	---
DXM	---	---	---	---	70	83	95	102	196	297	381	---	---	---
DX	---	---	---	---	65	76	88	95	187	288	372	510	770	1250
DXTMQ & DXUMQ	38	43	46	52	71	84	96	106	205	312	407	---	---	---
DXTM & DXUM	---	---	---	---	74	89	101	111	210	317	412	---	---	---
DXT & DXU	---	---	---	---	69	82	94	104	201	308	403	551	818	1326
DXJMQ	37	41	45	51	70	83	96	103	201	307	---	---	---	---
DXJM	---	---	---	---	73	88	101	108	206	312	---	---	---	---
DXJ	---	---	---	---	68	81	94	101	197	303	---	---	---	---
DXVLMQ & DXVHMQ	38	43	46	55	74	87	100	110	211	317	412	---	---	---
DXVLM & DXVHM	---	---	---	---	77	92	105	115	216	322	417	---	---	---
DXVL & DXVH	---	---	---	---	72	85	98	108	207	313	408	581	848	1403
DXFMQ	37	41	45	51	70	82	100	107	206	322	414	---	---	---
DXFM	---	---	---	---	73	87	105	112	211	327	419	---	---	---
DXF	---	---	---	---	68	80	98	105	202	318	410	540	788	1271
DXFEMQ	---	---	---	---	---	---	100	107	221	323	418	---	---	---
DXFEM	---	---	---	---	---	---	101	108	229	330	423	---	---	---
DXFE	---	---	---	---	---	---	96	103	211	308	408	671	968	1526
Hollow Output Shaft														
DXHMQ	37	40	44	49	69	77	91	99	194	292	376	---	---	---
DXHM	---	---	---	---	71	78	92	100	202	299	381	---	---	---
DXH	---	---	---	---	64	73	87	95	184	277	366	510	770	1250
DXFHMQ	38	41	46	52	72	81	101	109	209	322	414	---	---	---
DXFHM	---	---	---	---	74	82	102	110	217	329	419	---	---	---
DXFH	---	---	---	---	67	77	97	105	199	307	404	540	788	1271
DXBFHMQ	39	---	46	52	73	83	---	---	---	---	---	---	---	---
DXBFHM	---	---	---	---	75	84	---	---	---	---	---	---	---	---
DXBFH	---	---	---	---	68	79	---	---	---	---	---	---	---	---

Δ Weights include oil. 870, 880, 8100 shipped without oil.

GR SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
T/U-Base	2	3	3	4	4	6	6	9	14	20	31	41	48	76
J-Base	1	1	2	3	3	5	6	6	10	15	---	---	---	---
VL/VH-Base	2	3	3	7	7	9	10	13	20	25	36	**	**	**
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30	38	**	**	**
BF-Flange (Steel)	2	---	2	3	4	6	---	---	---	---	---	---	---	---
R-Riser Block	---	7	7	9	9	12	15	31	24	15	---	---	---	---
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8	8	---	---	---
Coupling Input C-Flange Kits														
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16	---	---	---	---
180TC-210TC	---	---	---	---	11	11	11	11	16	18	22	30	30	---
250TC	---	---	---	---	---	---	---	28	30	30	32	34	36	---

** This accessory must be assembled at the Factory. It is not available as a kit for field installation.

NH SERIES • DOUBLE REDUCTION HELICAL – WORM • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
Solid Output Shaft										
DXMQ	31	34	37	41	57	66	77	82	162	248
DXM	---	---	---	---	60	71	81	87	167	252
DX	---	---	---	---	55	65	75	81	159	245
DXTMQ & DXUMQ	33	37	40	45	61	72	83	91	176	268
DXTM & DXUM	---	---	---	---	64	77	87	96	181	272
DXT & DXU	---	---	---	---	59	71	81	90	173	265
DXJMQ	32	35	39	44	60	71	83	88	172	263
DXJM	---	---	---	---	63	76	87	93	177	267
DXJ	---	---	---	---	58	70	81	87	169	260
DXVLMQ & DXVHMQ	33	37	40	48	64	75	87	95	182	273
DXVLM & DXVHM	---	---	---	---	67	80	91	100	187	277
DXVL & DXVH	---	---	---	---	62	74	85	94	179	270
DXFMQ	32	35	39	44	60	70	87	92	177	278
DXFM	---	---	---	---	63	75	91	97	182	282
DXF	---	---	---	---	58	69	85	91	174	275
DXFEMQ	---	---	---	---	---	---	72	77	160	233
DXFEM	---	---	---	---	---	---	73	78	165	238
DXFE	---	---	---	---	---	---	69	74	152	223
Hollow Output Shaft										
DXHMQ	31	34	37	42	59	65	77	84	165	248
DXHM	---	---	---	---	60	66	78	85	172	254
DXH	---	---	---	---	54	62	74	81	156	235
DXFHMQ	32	35	39	45	62	69	87	94	180	278
DXFHM	---	---	---	---	63	70	88	95	187	284
DXFH	---	---	---	---	57	66	84	91	171	265

Δ Weights include oil.

NH SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
T/U-Base	2	3	3	4	4	6	6	9	14	20
J-Base	1	1	2	3	3	5	6	6	10	15
VL/VH-Base	2	3	3	7	7	9	10	13	20	25
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16
180TC-210TC	---	---	---	---	11	11	11	11	16	18
250TC	---	---	---	---	---	---	---	28	30	30

ELECTRA-GEAR

EL Series Weights

ALUMINUM EL SERIES

EL SERIES • DOUBLE REDUCTION HELICAL – WORM • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842✢	EL852✢	EL860✢
Solid Output Shaft										
DXMQ	24	28	32	44	51	59	64	126	193	248
DXM	---	---	---	46	55	63	67	129	196	251
DX	---	---	---	43	50	58	63	123	190	246
DXTMQ & DXUMQ	25	30	35	47	55	65	72	133	201	258
DXTM & DXUM	---	---	---	49	59	69	75	136	204	261
DXT & DXU	---	---	---	46	54	64	71	130	198	256
DXJMQ	25	30	35	47	55	64	69	132	201	258
DXJM	---	---	---	49	59	68	72	135	204	261
DXJ	---	---	---	46	54	63	68	129	198	256
DXVLMQ	26	31	35	47	55	64	69	132	201	258
DXVLM	---	---	---	49	59	68	72	135	204	261
DXVL	---	---	---	46	54	63	68	129	198	256
DXFMQ	---	30	35	47	54	65	71	134	201	269
DXFM	---	---	---	49	58	69	74	137	204	272
DXF	---	---	---	46	53	64	70	131	198	267
Hollow Output Shaft										
DXHMQ	24	29	32	46	51	60	65	128	193	248
DXHM	---	---	---	47	51	61	66	133	197	251
DXH	---	---	---	42	48	57	63	121	183	242
DXFHMQ	---	31	35	49	54	66	72	136	201	269
DXFHM	---	---	---	50	54	67	73	141	205	272
DXFH	---	---	---	45	51	63	70	129	191	263

✢ Primary unit is cast iron. Contact Factory for dimensions.

Δ Weights include oil.

EL SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
ABC-Base	1	2	3	3	4	6	8	7	8	10
T/U-Base	1	2	3	3	4	6	8	7	8	10
J-Base	1	2	3	3	4	5	5	6	8	10
VL Base	2	3	3	3	4	5	5	6	8	10
FR and F-Flange	---	2	3	3	3	6	7	8	8	21
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	8	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	3	3	3	4	4	5	5	7	7	---
180TC-210TC	---	---	---	5	5	5	5	8	8	8
250TC	---	---	---	---	---	---	8	8	8	8

* Will not fit solid output shaft models.

✪ Will not fit hollow output shaft models.

DOUBLE REDUCTION • HELICAL – WORM • EXACT RATIO COMBINATIONS

Total Ratio	Gear Reducer Size													
	813		815		818		821		824		826		830	
	P TX	S 813	P TX	S 815	P TX	S 818	P TX	S 821	P TX	S 824	P TX	S 826	P TX	S 830
10	2.000	5	2.000	5	2.000	5	2.000	5	2.000	5	2.000	5	2.000	5
15	2.000	7.5	2.000	7.5	2.000	7.5	2.000	7.5	2.000	7.5	2.000	7.5	2.000	7.5
20	2.000	10	2.000	10	2.000	10	2.000	10	2.000	10	2.000	10	2.000	10
25	5.000	5	5.000	5	5.000	5	5.000	5	5.000	5	5.000	5	5.000	5
30	2.000	15	2.000	15	2.000	15	2.000	15	2.913	10	2.913	10	2.913	10
40	4.000	10	4.000	10	4.000	10	4.000	10	4.000	10	4.000	10	4.000	10
45	2.913	15	2.913	15	2.913	15	2.913	15	2.913	15	2.913	15	2.913	15
50	5.000	10	5.000	10	5.000	10	5.000	10	5.000	10	5.000	10	5.000	10
60	4.000	15	4.000	15	4.000	15	4.000	15	4.000	15	4.000	15	4.000	15
75	5.000	15	5.000	15	5.000	15	5.000	15	5.000	15	5.000	15	5.000	15
80	4.000	20	4.000	20	4.000	20	4.000	20	4.000	20	4.000	20	4.000	20
100	4.000	25	4.000	25	4.000	25	4.000	25	4.000	25	4.000	25	4.000	25
125	5.000	25	5.000	25	5.000	25	5.000	25	5.000	25	5.000	25	5.000	25
150	5.000	30	5.000	30	5.000	30	5.000	30	5.000	30	5.000	30	5.000	30
200	5.000	40	5.000	40	5.000	40	5.000	40	5.000	40	5.000	40	5.000	40
250	5.000	50	5.000	50	5.000	50	5.000	50	5.000	50	5.000	50	5.000	50
300	7.182	40	7.182	40	7.182	40	7.182	40	7.182	40	5.000	60	5.000	60
400	5.000	80	5.000	80	5.000	80	5.000	80	7.182	60	7.182	60	7.182	60
500	5.000	100	5.000	100	5.000	100	5.000	100	5.000	100	5.000	100	5.000	100
600	7.182	80	7.182	80	7.182	80	7.182	80	7.182	80	7.182	80	7.182	80

Total Ratio	Gear Reducer Size													
	832		842		852		860		870		880		8100	
	P TX	S 832	P TX3	S 842	P TX3	S 852	P TX3	S 860	P HEL	S 870	P HEL	S 880	P HEL	S 8100
10	2.000	5.17	2.000	5.17	2.000	5.13	2.000	5	-	-	-	-	-	-
15	2.000	7.5	2.000	7.5	2.000	7.5	2.000	7.5	-	-	-	-	-	-
20	2.000	10	2.000	10	2.000	10	2.000	10	-	-	-	-	-	-
25	5.000	5.17	5.167	5.17	5.167	5.13	5.167	5	5.083	5.13	4.923	5.13	5.077	5.13
30	2.913	10	2.000	15	2.000	15	2.000	15	-	-	-	-	-	-
37.5	-	-	-	-	-	-	-	-	5.083	7.40	4.923	7.40	5.077	7.33
40	4.000	10	4.045	10	4.045	10	4.045	10	-	-	-	-	-	-
45	2.913	15	2.964	15	2.964	15	2.964	15	-	-	-	-	-	-
50	5.000	10	5.167	10	5.167	10	5.167	10	5.083	9.75	4.923	9.75	5.077	9.75
60	4.000	15	4.045	15	4.045	15	4.045	15	-	-	-	-	-	-
75	5.000	15	7.538	10	5.167	15	5.167	15	5.083	14.67	4.923	14.67	5.077	14.67
80	4.000	20	4.045	20	4.045	20	4.045	20	-	-	-	-	-	-
100	4.000	25	5.167	20	5.167	20	5.167	25	5.083	20.50	4.923	20.50	5.077	20.50
125	5.000	25	5.167	25	5.167	25	5.167	25	-	-	-	-	-	-
138	-	-	-	-	-	-	-	-	9.414	14.67	8.908	14.67	9.492	14.67
150	5.000	30	7.538	20	7.538	20	7.538	20	5.083	29.50	4.923	29.50	5.077	29.50
185	-	-	-	-	-	-	-	-	9.414	20.50	8.908	20.50	9.492	20.50
200	5.000	40	5.167	40	5.167	40	5.167	40	5.083	40.00	4.923	40.00	5.077	40.00
210	-	-	-	-	-	-	-	-	14.04	14.67	14.03	14.67	14.47	14.67
250	5.000	50	5.167	50	5.167	50	5.167	50	25.030	9.75	25.270	9.75	24.990	9.75
280	-	-	-	-	-	-	-	-	14.040	20.50	14.030	20.50	14.470	20.50
300	5.000	60	7.538	40	7.538	40	7.538	40	5.083	60.00	4.923	60.00	5.077	60.00
400	7.182	60	5.167	80	5.167	80	5.167	80	-	-	-	-	-	-
500	5.000	100	5.167	100	5.167	100	5.167	100	-	-	-	-	-	-
600	7.182	80	7.538	80	7.538	80	7.538	80	-	-	-	-	-	-

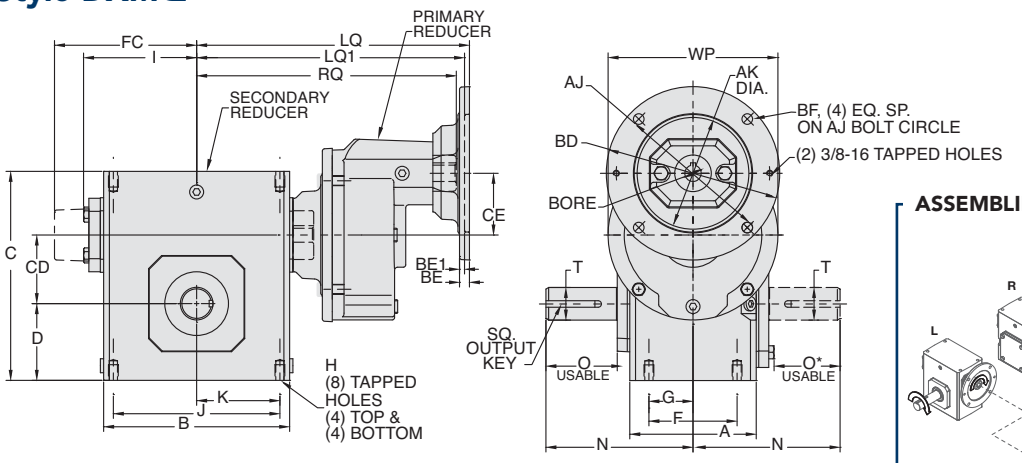
Note: Exact ratios are listed. P = Primary stage reducer ratio S = Secondary stage reducer ratio
* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
For exact total ratio of the double reduction package, multiply "P" by "S" ratio.

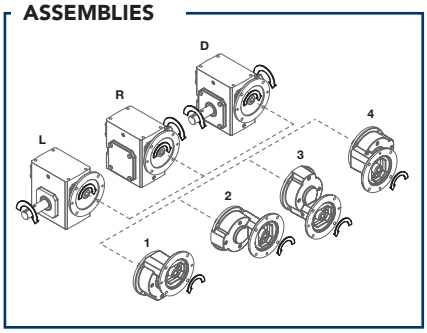
GR Series Dimensions

Styles: DXMQ, DXM, DX

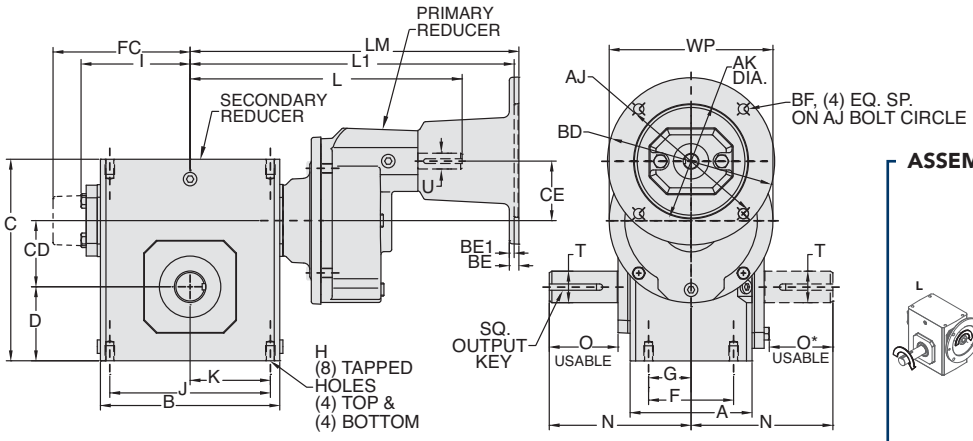
CAST IRON GR SERIES

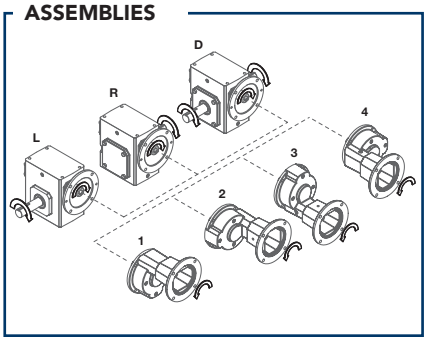
Style DXMQ



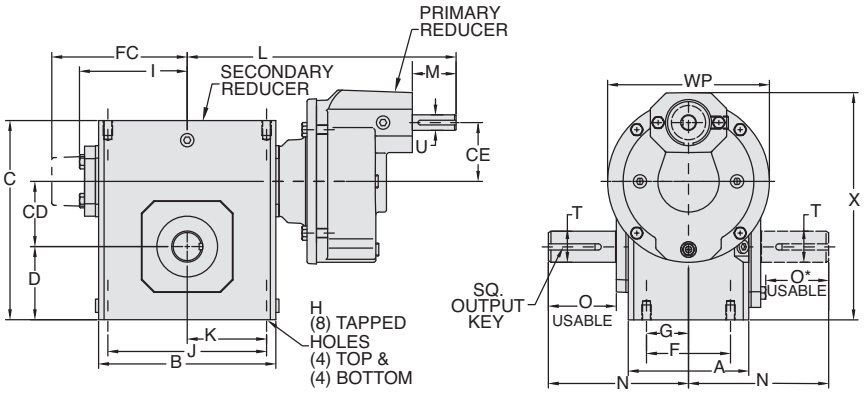


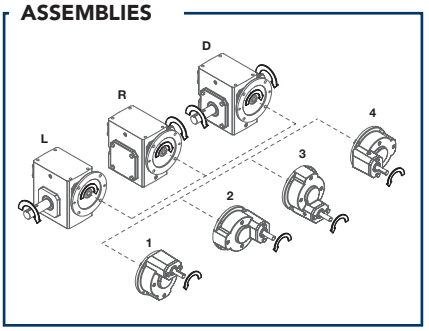
Style DXM





Style DX





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXMQ, DXM, DX DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	FC▼	G	H Tap Size	H Depth	I	J	K	L	M	N	O	O*	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	2.82	3.80	4.66	1.33	1.91	1.72	2.00	N/A	1.00	5/16-18 UNC	0.50	2.61	3.25	1.63	7.75	1.76	4.00	2.16	1.94	6.50	6.16	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	3.44	4.88	5.38	1.54	1.91	1.91	2.75	N/A	1.38	5/16-18 UNC	0.63	3.14	4.19	2.09	8.28	1.76	4.31	2.11	1.90	6.50	6.56	0.750	0.625	3/16 x 3/32	3/16 x 1.50
GR818	3.56	5.06	5.75	1.75	1.91	2.06	2.75	N/A	1.38	5/16-18 UNC	0.63	3.24	4.19	2.09	8.38	1.76	4.31	2.05	1.84	6.50	6.92	0.875	0.625	3/16 x 3/32	3/16 x 1.38
GR821	3.81	5.80	6.38	2.06	1.91	2.28	▲	N/A	1.44	3/8-16 UNC	0.63	3.61	▲	2.50	8.75	1.76	4.68	2.29	2.08	6.50	7.45	1.000	0.625	3/16 x 3/32	1/4 x 1.44
GR824	4.06	6.12	6.94	2.38	2.36	2.50	2.88	N/A	1.44	3/8-16 UNC	0.69	3.77	5.00	2.50	8.92	1.76	5.14	2.66	2.44	6.50	8.45	1.125	0.625	3/16 x 3/32	1/4 x 1.75
GR826	4.84	7.12	8.00	2.63	2.36	2.94	3.38	N/A	1.69	3/8-16 UNC	0.69	4.34	6.38	3.19	9.48	1.76	5.63	2.73	2.52	6.50	9.13	▲	0.625	3/16 x 1.38	1/4 x 1.75
GR830	5.25	8.12	8.88	3.00	2.36	3.25	4.00	N/A	2.00	7/16-14 UNC	0.88	4.84	7.00	3.50	10.24	1.76	6.75	3.60	3.36	6.50	9.82	1.250	0.625	3/16 x 1.38	1/4 x 1.75
GR832	5.75	8.50	9.38	3.25	2.36	3.50	4.00	N/A	2.00	7/16-14 UNC	0.88	5.02	7.50	3.75	10.43	1.76	7.06	3.66	3.42	6.50	10.32	▲	0.625	3/16 x 1.38	3/8 x 2.25
GR842	6.13	10.25	11.38	4.25	2.87	4.44	5.00	N/A	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	17.48	3.61	8.12	4.50	4.21	8.50	13.31	1.875	1.250	1/4 x 2.00	1/2 x 3.06
GR852	7.19	13.00	14.00	5.25	2.87	5.12	5.81	N/A	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	18.88	3.61	9.06	4.78	4.53	8.50	14.99	2.000	1.250	1/4 x 2.00	1/2 x 3.50
GR860	8.13	14.25	16.50	6.00	2.87	6.50	6.38	10.24	3.19	5/8-11 UNC	1.00	N/A	12.75	6.38	19.60	3.61	10.00	4.65	4.65	8.50	17.12	2.500	1.250	1/4 x 2.00	5/8 x 4.00
GR870	7.63	14.88	18.91	7.00	3.49	7.59	5.50	10.63	2.75	1-8 UNC	1.56	N/A	12.50	6.25	19.68	2.50	11.76	5.65	5.65	10.36	21.84	2.750	1.250	1/4 x 2.25**	5/8 x 4.00**
GR880	8.63	17.00	20.96	8.00	4.07	8.86	6.50	11.93	3.25	1-8 UNC	1.66	N/A	14.25	7.13	21.30	3.00	12.25	5.98	5.98	11.64	25.93	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100	9.53	20.88	25.47	10.00	4.90	10.36	6.88	14.34	3.44	1-1/4 -7 UNC	2.04	N/A	17.75	8.88	25.78	3.50	14.75	6.76	6.76	13.85	31.35	3.750	1.500	3/8 x 3.25**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✔		GRG
		(F)2.88" x (J)5.00"				✔	GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56TC/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft
** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DX and DXM only
★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.
❖ Metric IEC B5 input flange options are available only on quill input styles
✖ Dimensions same for GRG and GRL Series
▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

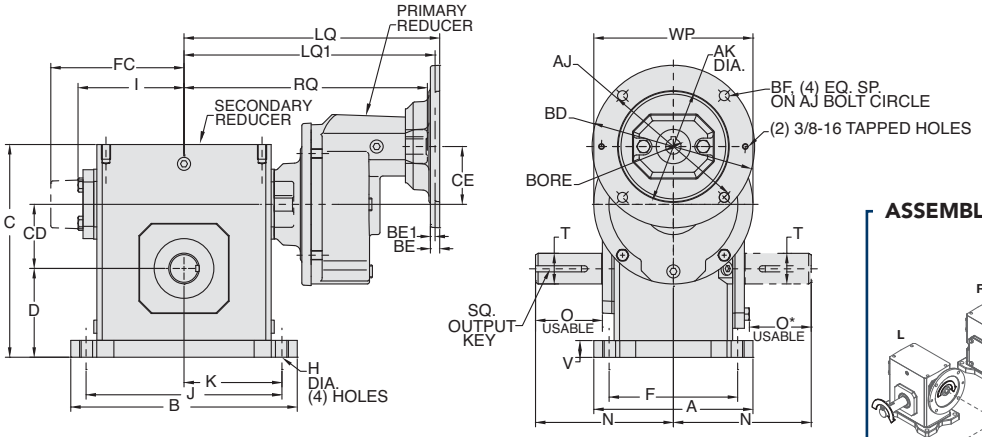
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

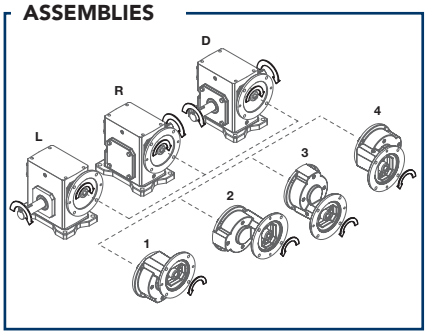
GR Series Dimensions

Styles: DXTMQ, DXTM, DXT

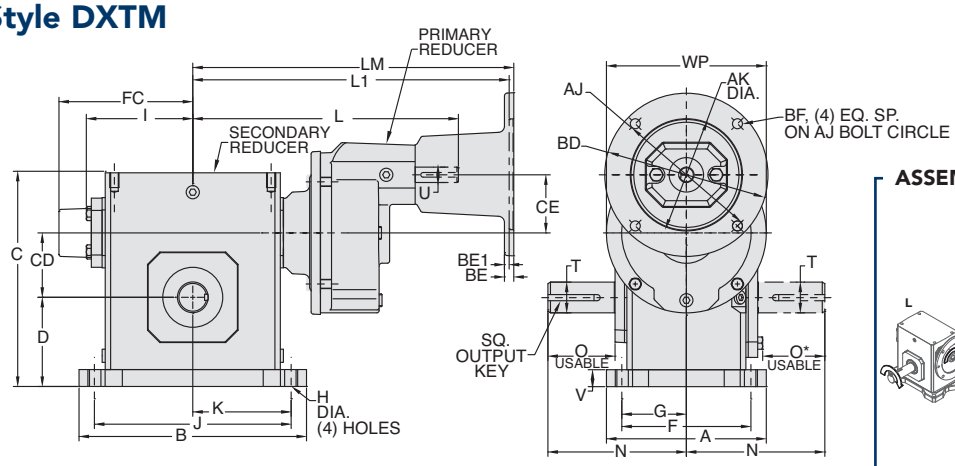
CAST IRON GR SERIES

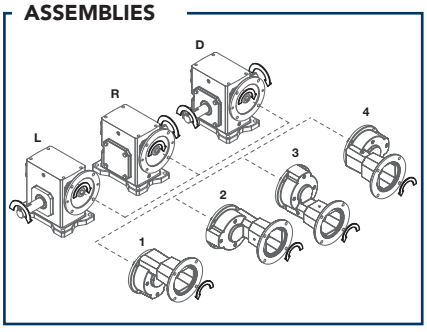
Style DXTMQ



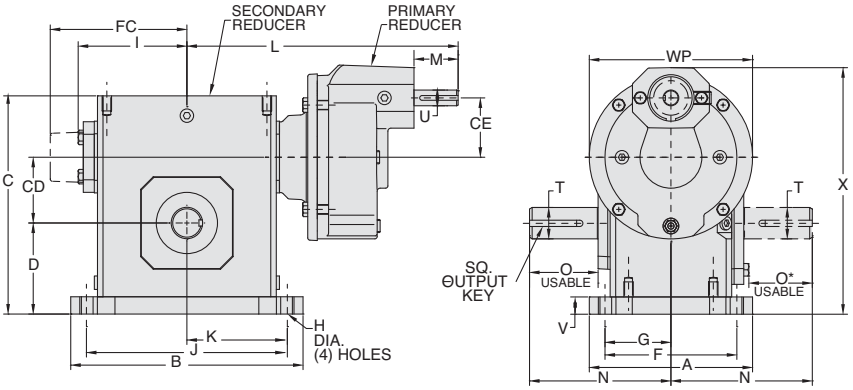


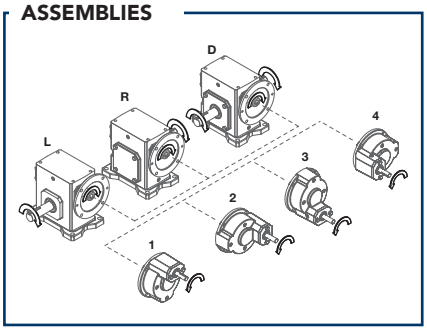
Style DXTM





Style DXT





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DXTMQ, DXTM, DXT DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	FC▼	G	H	I	J	K	L	M	N	O	O*	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	4.24	5.37	5.19	1.33	1.91	2.25	3.31	N/A	1.66	0.34	2.61	4.37	2.19	7.75	1.76	4.00	2.16	1.94	0.53	6.50	6.16	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	5.56	6.50	5.97	1.54	1.91	2.50	4.31	N/A	2.16	0.41	3.14	5.25	2.63	8.28	1.76	4.31	2.11	1.90	0.59	6.50	7.15	0.750	0.625	3/16 x 3/32	3/16 x 1.50
GR818	5.75	6.99	6.44	1.75	1.91	2.75	4.50	N/A	2.25	0.41	3.24	5.75	2.88	8.38	1.76	4.31	2.05	1.84	0.69	6.50	7.61	0.875	0.625	3/16 x 3/32	3/16 x 1.38
GR821	6.00	7.69	7.09	2.06	1.91	3.00	4.69	N/A	2.34	0.47	3.61	6.38	3.19	8.75	1.76	4.68	2.29	2.08	0.72	6.50	8.17	1.000	0.625	3/16 x 3/32	1/4 x 1.44
GR824	6.19	8.37	7.69	2.38	2.36	3.25	4.88	N/A	2.44	0.49	3.77	7.06	3.53	8.92	1.76	5.14	2.66	2.44	0.75	6.50	9.20	1.125	0.625	3/16 x 3/32	1/4 x 1.75
GR826	6.50	9.25	8.75	2.63	2.36	3.69	5.25	N/A	2.63	0.53	4.34	8.00	4.00	9.48	1.76	5.63	2.73	2.52	0.75	6.50	9.88	▲	0.625	3/16 x 3/32	1/4 x 1.75
GR830	7.50	10.00	9.63	3.00	2.36	4.00	5.88	N/A	2.94	0.53	4.84	8.44	4.22	10.24	1.76	6.75	3.60	3.36	0.75	6.50	10.57	1.250	0.625	3/16 x 3/32	1/4 x 1.75
GR832	7.75	11.12	10.25	3.25	2.36	4.38	6.13	N/A	3.06	0.53	5.02	9.50	4.75	10.43	1.76	7.06	3.66	3.42	0.81	6.50	11.20	▲	0.625	3/16 x 3/32	3/8 x 2.25
GR842	9.75	13.24	12.38	4.25	2.87	5.44	7.63	N/A	3.81	0.66	6.10	11.12	5.56	17.48	3.61	8.12	4.50	4.21	1.00	8.50	14.31	1.875	1.250	1/4 x 2.00	1/2 x 3.06
GR852	10.50	16.24	15.13	5.25	2.87	6.25	8.38	N/A	4.19	0.78	7.50	14.12	7.06	18.88	3.61	9.06	4.78	4.53	1.13	8.50	16.12	2.000	1.250	1/4 x 2.00	1/2 x 3.50
GR860	12.00	18.99	17.75	6.00	2.87	7.75	9.50	10.24	4.75	0.91	N/A	16.49	8.25	19.60	3.61	10.00	4.65	4.65	1.25	8.50	18.37	2.500	1.250	1/4 x 2.00	5/8 x 4.00
GR870★	13.38	15.38	20.33	7.00	3.49	9.00	11.25	10.63	5.63	1.13	N/A	13.00	6.50	19.68	2.50	11.76	5.65	5.65	1.42	10.36	23.25	2.750	1.250	1/4 x 2.25**	5/8 x 4.00**
GR880★	13.50	17.37	22.61	8.00	4.07	10.50	11.50	11.93	5.75	1.13	N/A	14.75	7.38	21.30	3.00	12.25	5.98	5.98	1.65	11.64	27.57	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	16.88	21.14	27.12	10.00	4.90	12.00	14.00	14.34	7.00	1.44	N/A	17.00	8.50	25.78	3.50	14.75	6.76	6.76	1.65	13.85	32.99	3.750	1.500	3/8 x 3.25**	7/8 x 5.00*

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 202-203 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft
** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DXT and DXTM only.
★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

❖ Metric IEC B5 input flange options are available only on quill input styles.
✖ Dimensions same for GRG and GRL Series
▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

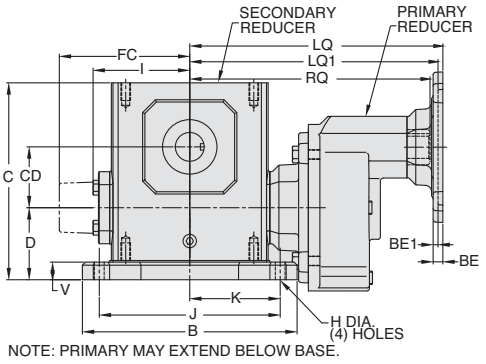
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

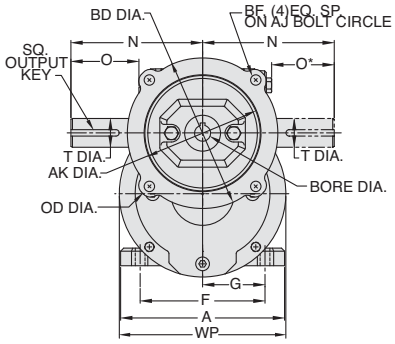
Styles: DXUMQ, DXUM, DXU

CAST IRON GR SERIES

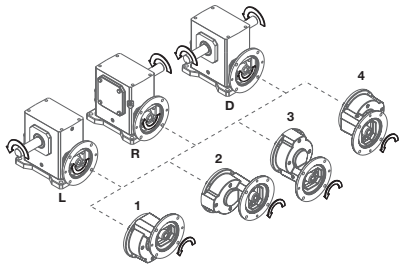
Style DXUMQ



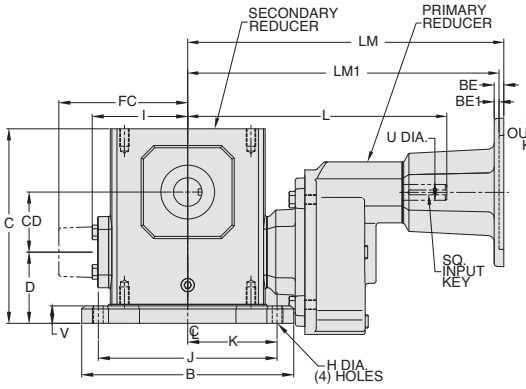
NOTE: PRIMARY MAY EXTEND BELOW BASE.



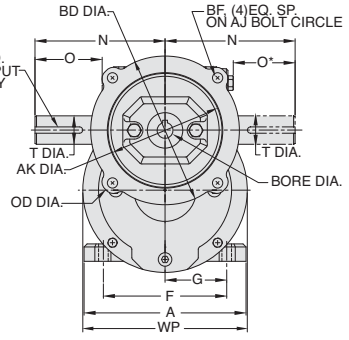
ASSEMBLIES



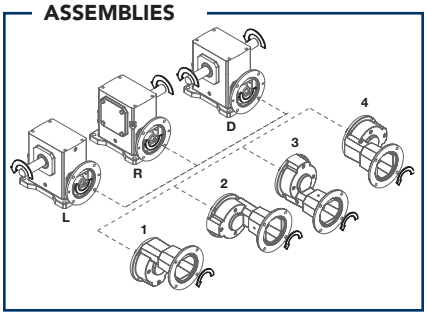
Style DXUM



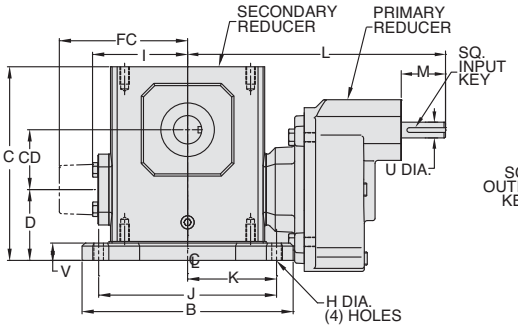
NOTE: PRIMARY MAY EXTEND BELOW BASE.



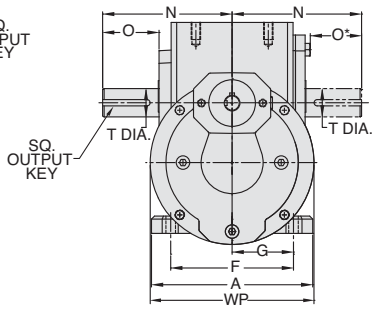
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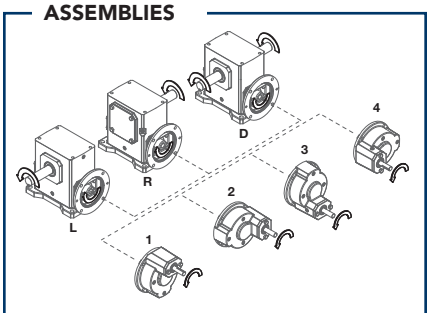
Style DXU



NOTE: PRIMARY MAY EXTEND BELOW BASE.



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXUMQ, DXUM, DXU DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	FC▼	G	H	I	J	K	L	M	N	O	O*	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	4.24	5.37	5.19	1.33	1.91	2.25	3.31	N/A	1.66	0.34	2.61	4.37	2.19	7.75	1.76	4.00	2.16	1.94	0.53	6.50	6.16	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	5.56	6.50	5.97	1.54	1.91	2.50	4.31	N/A	2.16	0.41	3.14	5.25	2.63	8.28	1.76	4.31	2.11	1.90	0.59	6.50	7.15	0.750	0.625	3/16 x 3/32	3/16 x 1.50
GR818	5.75	6.99	6.44	1.75	1.91	2.75	4.50	N/A	2.25	0.41	3.24	5.75	2.88	8.38	1.76	4.31	2.05	1.84	0.69	6.50	7.61	0.875	0.625	3/16 x 3/32	3/16 x 1.38
GR821	6.00	7.69	7.09	2.06	1.91	3.00	4.69	N/A	2.34	0.47	3.61	6.38	3.19	8.75	1.76	4.68	2.29	2.08	0.72	6.50	8.17	1.000	0.625	3/16 x 3/32	1/4 x 1.44
GR824	6.19	8.37	7.69	2.38	2.36	3.25	4.88	N/A	2.44	0.49	3.77	7.06	3.53	8.92	1.76	5.14	2.66	2.44	0.75	6.50	9.20	1.125	0.625	3/16 x 3/32	1/4 x 1.75
GR826	6.50	9.25	8.75	2.63	2.36	3.69	5.25	N/A	2.63	0.53	4.34	8.00	4.00	9.48	1.76	5.63	2.73	2.52	0.75	6.50	9.88	▲	0.625	3/16 x 3/32	1/4 x 1.75
GR830	7.50	10.00	9.63	3.00	2.36	4.00	5.88	N/A	2.94	0.53	4.84	8.44	4.22	10.24	1.76	6.75	3.60	3.36	0.75	6.50	10.57	1.250	0.625	3/16 x 3/32	1/4 x 1.75
GR832	7.75	11.12	10.25	3.25	2.36	4.38	6.13	N/A	3.06	0.53	5.02	9.50	4.75	10.43	1.76	7.06	3.66	3.42	0.81	6.50	11.20	▲	0.625	3/16 x 3/32	3/8 x 2.25
GR842	9.75	13.24	12.38	4.25	2.87	5.44	7.63	N/A	3.81	0.66	6.10	11.12	5.56	17.48	3.61	8.12	4.50	4.21	1.00	8.50	14.31	1.875	1.250	1/4 x 2.00	1/2 x 3.06
GR852	10.50	16.24	15.13	5.25	2.87	6.25	8.38	N/A	4.19	0.78	7.50	14.12	7.06	18.88	3.61	9.06	4.78	4.53	1.13	8.50	16.12	2.000	1.250	1/4 x 2.00	1/2 x 3.50
GR860	12.00	18.99	17.75	6.00	2.87	7.75	9.50	10.24	4.75	0.91	N/A	16.49	8.25	19.60	3.61	10.00	4.65	4.65	1.25	8.50	18.37	2.500	1.250	1/4 x 2.00	5/8 x 4.00
GR870★	13.38	15.38	20.33	7.00	3.49	9.00	11.25	10.63	5.63	1.13	N/A	13.00	6.50	19.68	2.50	11.76	5.65	5.65	1.42	10.36	23.25	2.750	1.250	1/4 x 2.25**	5/8 x 4.00**
GR880★	13.50	17.37	22.61	8.00	4.07	10.50	11.50	11.93	5.75	1.13	N/A	14.75	7.38	21.30	3.00	12.25	5.98	5.98	1.65	11.64	27.57	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	16.88	21.14	27.12	10.00	4.90	12.00	14.00	14.34	7.00	1.44	N/A	17.00	8.50	25.78	3.50	14.75	6.76	6.76	1.65	13.85	32.99	3.750	1.500	3/8 x 3.25**	7/8 x 5.00*

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 202-203 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❁
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft
** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DXU and DXUM only.
★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

✣ Primary stage may extend below U-base.
✖ Dimensions same for GRG and GRL Series
▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

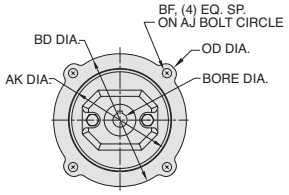
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

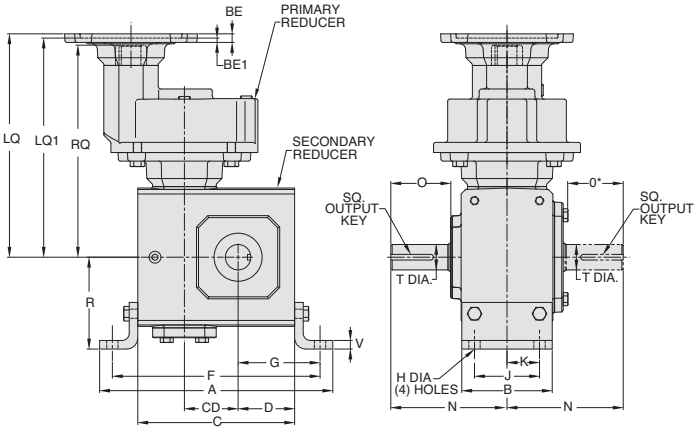
GR Series Dimensions

Styles: DXJMQ, DXJM, DXJ

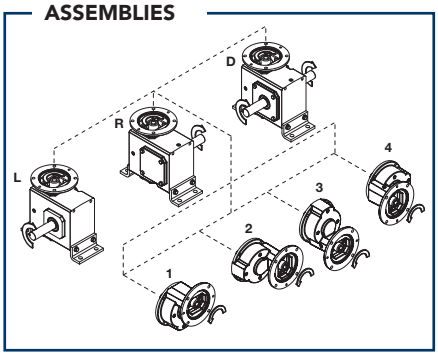
CAST IRON GR SERIES

Style DXJMQ

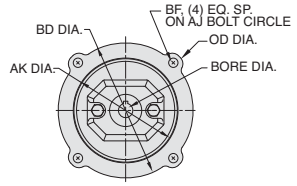


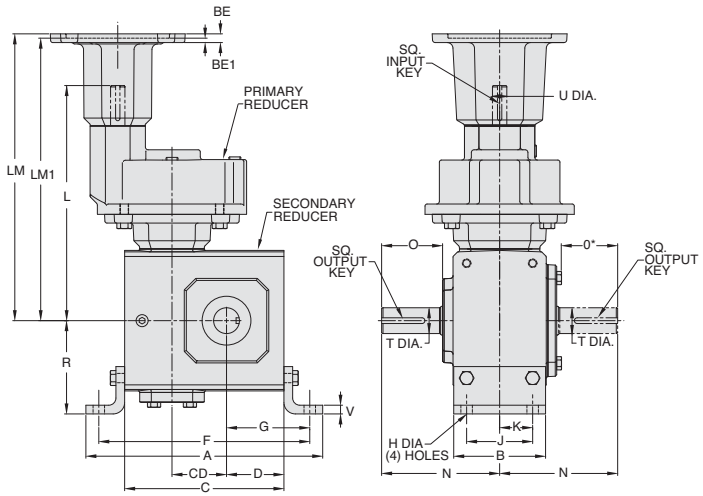


ASSEMBLIES

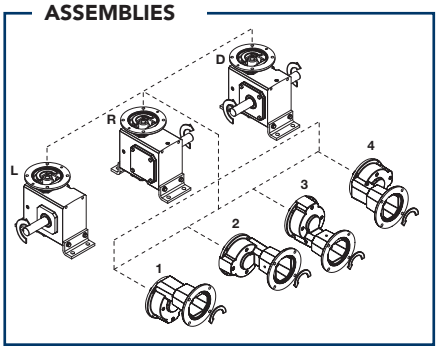


Style DXJM

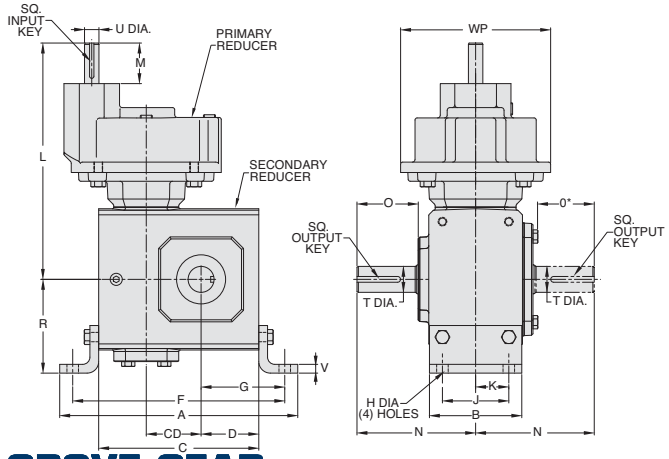




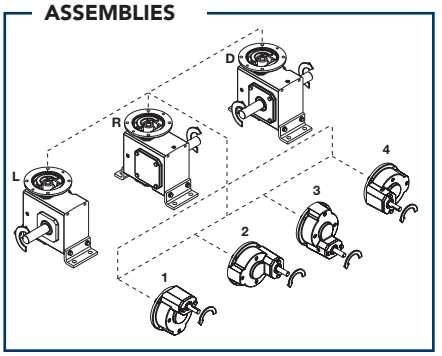
ASSEMBLIES



Style DXJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJMQ, DXJM, DXJ DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	N	O	O*	R	V	WP	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	7.42	2.75	4.66	1.33	1.91	1.72	6.42	2.60	.38	2.00	4.37	1.00	7.75	1.76	4.00	2.16	1.94	2.94	0.25	6.50	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	8.14	3.50	5.38	1.54	1.91	1.91	7.08	2.76	.44	2.75	5.25	1.38	8.28	1.76	4.31	2.11	1.90	3.50	0.25	6.50	0.750	0.625	3/16 x 3/32	3/16 x 1.50
GR818	8.51	3.50	5.75	1.75	1.91	2.06	7.45 - 7.63	3.00	.44 slot	2.50 - 2.75	5.75	1.25 - 1.38	8.38	1.76	4.31	2.05	1.84	3.50	0.25	6.50	0.875	0.625	3/16 x 3/32	3/16 x 1.38
GR821	9.76	4.00	6.38	2.06	1.91	2.28	8.63	3.40	.56 slot	2.63 - 2.75	6.38	1.31-1.38	8.75	1.76	4.68	2.29	2.08	4.01	0.38	6.50	1.000	0.625	3/16 x 3/32	1/4 x 1.44
GR824	10.31	4.00	6.94	2.38	2.36	2.50	9.19	3.63	.69	2.88	7.06	1.44	8.92	1.76	5.14	2.66	2.44	4.06	0.38	6.50	1.125	0.625	3/16 x 3/32	1/4 x 1.75
GR826	11.62	5.00	8.00	2.63	2.36	2.94	10.38	4.13	.56	3.38	8.00	1.69	9.48	1.76	5.63	2.73	2.52	5.00	0.38	6.50	▲	0.625	3/16 x 3/32	1/4 x 1.75
GR830	12.64	6.00	8.88	3.00	2.36	3.25	11.38	4.50	.56	3.88	8.44	1.94	10.24	1.76	6.75	3.60	3.36	5.62	0.38	6.50	1.250	0.625	3/16 x 3/32	1/4 x 1.75
GR832	13.14	6.00	9.38	3.25	2.36	3.50	11.88	4.75	.56	3.88	9.50	1.94	10.43	1.76	7.06	3.66	3.42	5.63	0.38	6.50	▲	0.625	3/16 x 3/32	3/8 x 2.25
GR842	16.38	7.00	11.38	4.25	2.87	4.44	14.88	6.19	.69	5.00	11.12	2.40	17.48	3.61	8.12	4.50	4.21	6.50	0.50	8.50	1.875	1.250	1/4 x 2.00	1/2 x 3.06
GR852	19.00	7.00	14.00	5.25	2.87	5.12	17.50	6.87	.69	5.81	14.12	2.91	18.88	3.61	9.06	4.78	4.53	7.75	0.50	8.50	2.000	1.250	1/4 x 2.00	1/2 x 3.50

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG GRL
826	1.250" 1.125"	Identical	Identical	Identical	✔	 ✔	GRG GRL
832	1.500" 1.375"	Identical	3/8 x 2.63 5/16 x 2.63	Identical	✔	 ✔	GRG GRL

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 202-203 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56TC/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

⋆ Applies to double output shaft
◆ Keyway width by depth
■ 48CZ not available
❊ Style DXJ and DXJM only.

❖ Metric IEC B5 input flange options are available only on quill input styles.
✖ Dimensions same for GRG and GRL Series

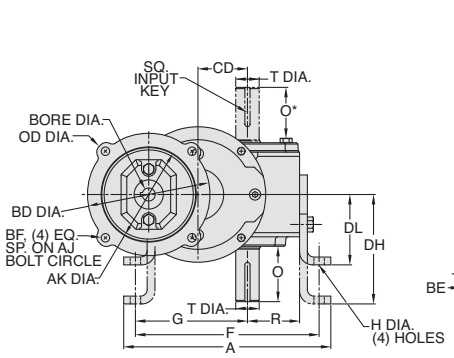
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

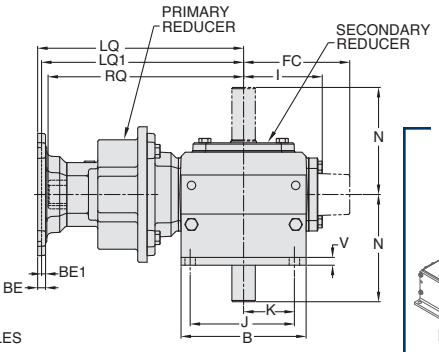
GR Series Dimensions

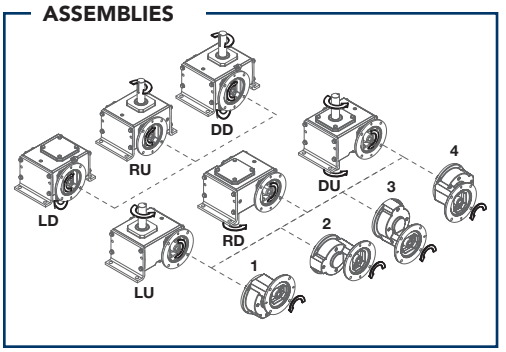
Styles: DXV_MQ, DXV_M, DXV_

CAST IRON GR SERIES

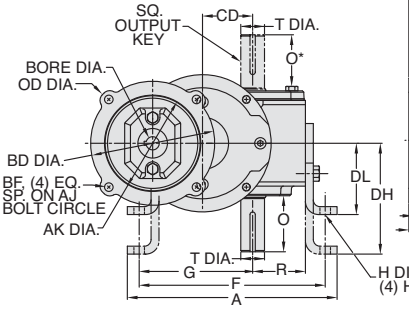
Style DXV (L or H) MQ

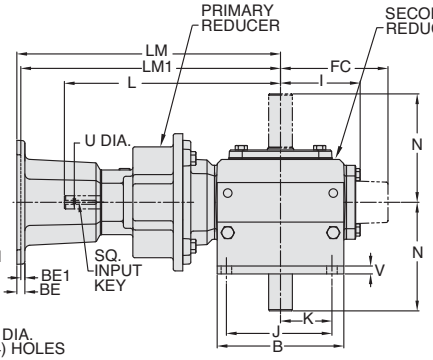


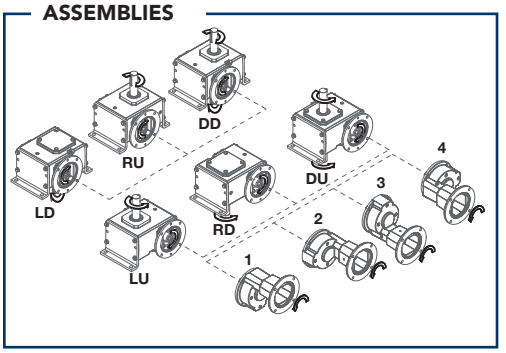




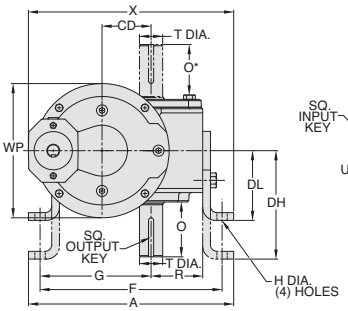
Style DXV (L or H) M

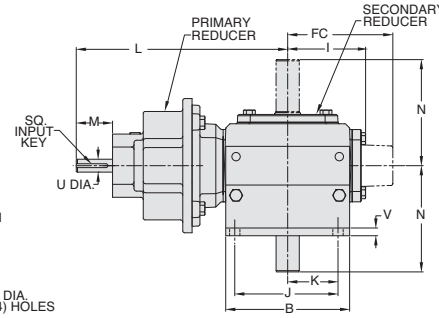


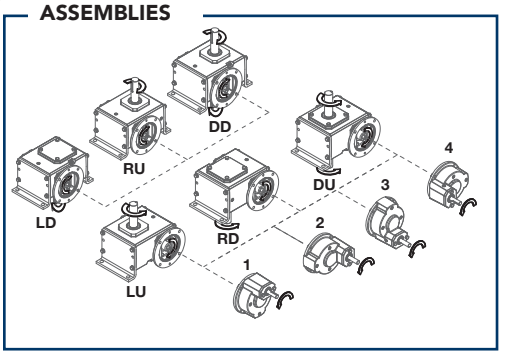




Style DXV (L or H)







REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXV (L or H) MQ, DXV (L or H) M, DXV (L or H) DIMENSIONS (Inches)

Size	A	B	CD	CE	DL	DH	F	FC▼	G	H	I	J	K	L	M	N	O	O*	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	7.26	4.00	1.33	1.91	2.63	3.56	6.50	N/A	3.86	0.38	2.61	3.00	1.50	7.75	1.76	4.00	2.16	1.94	0.25	6.50	7.46	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	7.88	5.00	1.54	1.91	3.00	4.38	7.00	N/A	4.28	0.44	3.14	4.00	2.00	8.28	1.76	4.31	2.11	1.90	0.25	6.50	7.81	0.750	0.625	3/16 x 3/32	3/16 x 1.50
GR818	8.25	5.00	1.75	1.91	3.00	4.38	7.37	N/A	4.50	0.44	3.24	4.00	2.00	8.38	1.76	4.31	2.05	1.84	0.25	6.50	8.17	0.875	0.625	3/16 x 3/32	3/16 x 1.38
GR821	9.38	6.00	2.06	1.91	3.13	4.88	8.38	N/A	5.09	0.50	3.61	4.88	2.44	8.75	1.76	4.68	2.29	2.08	0.38	6.50	8.95	1.000	0.625	3/16 x 3/32	1/4 x 1.44
GR824	9.94	6.00	2.38	2.36	3.38	5.25	8.81	N/A	5.44	0.50	3.77	4.88	2.44	8.92	1.76	5.14	2.66	2.44	0.38	6.50	9.95	1.125	0.625	3/16 x 3/32	1/4 x 1.75
GR826	11.24	7.00	2.63	2.36	3.63	5.56	10.12	N/A	6.12	0.56	4.34	5.75	2.88	9.48	1.76	5.63	2.73	2.52	0.38	6.50	10.75	▲	0.625	3/16 x 3/32	1/4 x 1.75
GR830	12.50	8.00	3.00	2.36	3.94	5.88	11.13	N/A	6.75	0.56	4.84	6.00	3.00	10.24	1.76	6.75	3.60	3.36	0.38	6.50	11.63	1.250	0.625	3/16 x 3/32	1/4 x 1.75
GR832	13.00	8.50	3.25	2.36	4.69	6.25	11.88	N/A	7.13	0.56	5.02	6.13	3.06	10.43	1.76	7.06	3.66	3.42	0.38	6.50	12.13	▲	0.625	3/16 x 3/32	3/8 x 2.25
GR842	16.26	10.00	4.25	2.87	5.00	7.50	14.88	N/A	8.69	0.69	6.10	7.88	3.94	17.48	3.61	8.12	4.50	4.21	0.50	8.50	15.75	1.875	1.250	1/4 x 2.00	1/2 x 3.06
GR852	19.62	13.00	5.25	2.87	5.16	9.16	18.00	N/A	10.88	0.78	7.50	10.00	5.00	18.88	3.61	9.06	4.78	4.53	0.50	8.50	17.80	2.000	1.250	1/4 x 2.00	1/2 x 3.50
GR860	23.26	14.75	6.00	2.87	7.31	9.63	20.88	10.24	12.19	0.91	N/A	11.76	5.88	19.60	3.61	10.00	4.65	4.65	0.50	8.50	20.50	2.500	1.250	1/4 x 2.00	5/8 x 4.00
GR870★	26.91	14.88	7.00	3.49	7.00	N/A	23.99	10.63	13.87	1.13	N/A	12.50	6.25	19.68	2.50	11.76	5.65	5.65	0.75	10.36	25.84	2.750	1.250	1/4 x 2.25**	5/8 x 4.00**
GR880★	28.96	17.00	8.00	4.07	8.00	N/A	25.50	11.93	14.38	1.13	N/A	14.00	7.00	21.30	3.00	12.25	5.98	5.98	0.75	11.64	29.93	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	37.47	20.88	10.00	4.90	9.00	N/A	30.75	14.34	17.76	1.44	N/A	17.75	8.88	25.78	3.50	14.75	6.76	6.76	1.00	13.85	37.35	3.750	1.500	3/8 x 3.25**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical		GRL	GRG
826	1.250"	Identical	Identical	Identical			GRG
	1.125"					GRL	
832	1.500"	Identical	3/8 x 2.63	Identical	GRG		
	1.375"		5/16 x 2.63			GRL	

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 202-203 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft
** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DXV_ and DXV_M only.
★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.
✖ Dimensions same for GRG and GRL Series
▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

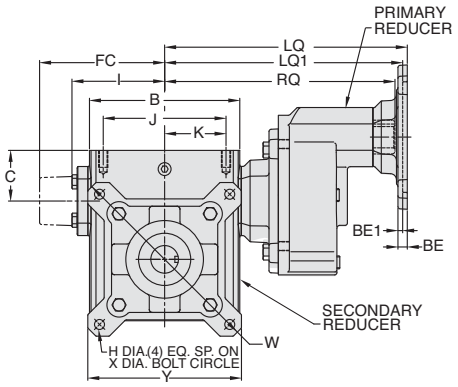
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

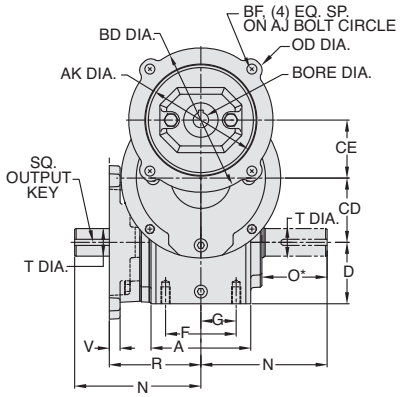
GR Series Dimensions

Styles: DXFMQ, DXFM, DXF

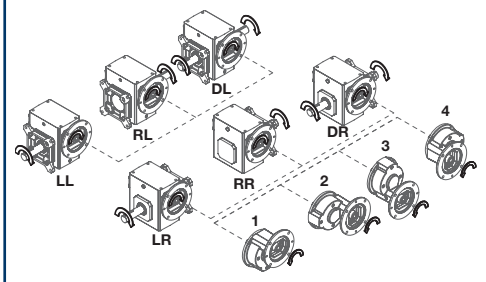
CAST IRON GR SERIES

Style DXFMQ

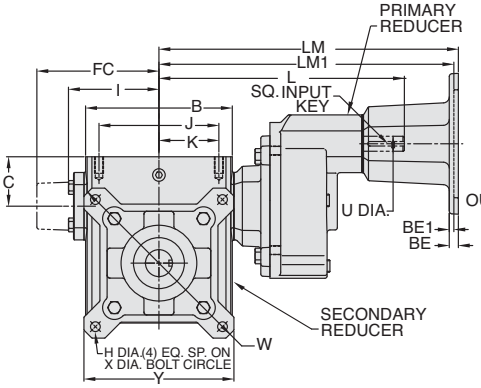


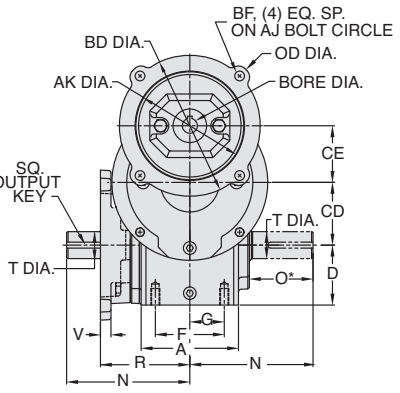


ASSEMBLIES

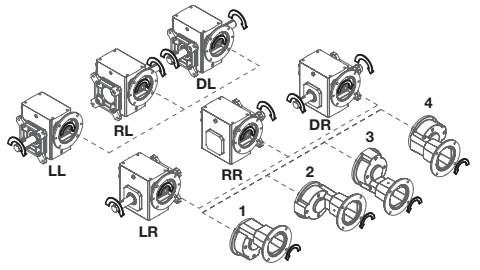


Style DXFM

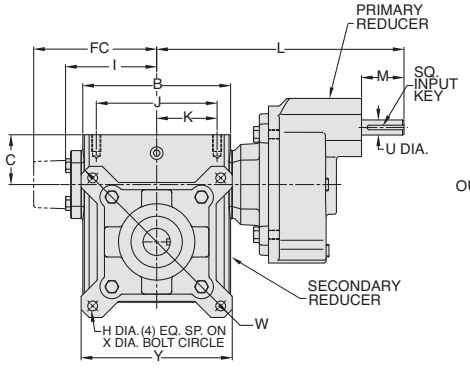


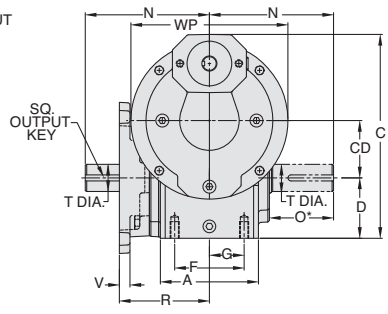


ASSEMBLIES

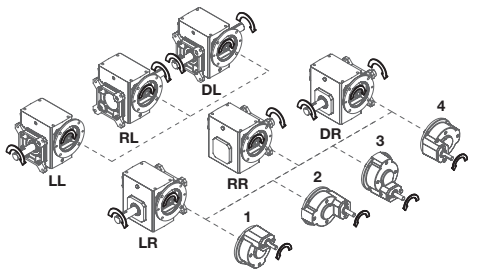


Style DXF





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Sizes 815-8100 output flange must be mounted at Factory on styles FMQ, FM, F.

STYLE DXFMQ, DXFM, DXF DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	FC▼	H	I	L	M	N	O*	V	WP	X	XA	Y	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	2.82	3.80	4.66	1.33	1.91	1.72	N/A	0.34	2.61	7.75	1.76	4.00	1.94	0.38	6.50	5.00	6.16	4.50	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	3.44	4.88	5.38	1.54	1.91	1.91	N/A	0.34	3.14	8.28	1.76	4.31	1.90	0.38	6.50	5.00	6.56	4.50	0.750	0.625	3/16 x 3/32	3/16 x 1.50
GR818	3.56	5.06	5.75	1.75	1.91	2.06	N/A	0.34	3.24	8.38	1.76	4.31	1.84	0.38	6.50	5.88	6.92	5.00	0.875	0.625	3/16 x 3/32	3/16 x 1.38
GR821	3.81	5.80	6.38	2.06	1.91	2.28	N/A	0.41	3.61	8.75	1.76	4.68	2.08	0.44	6.50	7.00	7.45	5.99	1.000	0.625	3/16 x 3/32	1/4 x 1.44
GR824	4.06	6.12	6.94	2.38	2.36	2.50	N/A	0.41	3.77	8.92	1.76	5.14	2.44	0.44	6.50	7.50	8.45	6.27	1.125	0.625	3/16 x 3/32	1/4 x 1.75
GR826	4.84	7.12	8.00	2.63	2.36	2.94	N/A	0.41	4.34	9.48	1.76	5.63	2.52	0.50	6.50	8.00	9.13	6.67	▲	0.625	3/16 x 3/32	1/4 x 1.75
GR830	5.25	8.12	8.88	3.00	2.36	3.25	N/A	0.41	4.84	10.24	1.76	6.75	3.36	0.50	6.50	9.00	9.82	7.37	1.250	0.625	3/16 x 3/32	1/4 x 1.75
GR832	5.75	8.50	9.38	3.25	2.36	3.50	N/A	0.41	5.02	10.43	1.76	7.06	3.42	0.50	6.50	9.00	10.32	7.37	▲	0.625	3/16 x 3/32	3/8 x 2.25
GR842	6.13	10.25	11.38	4.25	2.87	4.44	N/A	0.56	6.10	17.48	3.61	8.12	4.21	0.62	8.50	11.50	13.31	9.65	1.875	1.250	1/4 x 2.00	1/2 x 3.06
GR852	7.19	13.00	14.00	5.25	2.87	5.12	N/A	0.69	7.50	18.88	3.61	9.06	4.53	0.75	8.50	14.00	14.99	11.75	2.000	1.250	1/4 x 2.00	1/2 x 3.50
GR860	8.13	14.25	16.50	6.00	2.87	6.50	10.24	0.69	N/A	19.60	3.61	10.00	4.65	0.75	8.50	15.63	17.12	14.00	2.500	1.250	1/4 x 2.00	5/8 x 4.00
GR870★	7.63	14.88	18.91	7.00	3.49	7.59	10.63	0.78	N/A	19.68	2.50	11.76	5.65	0.75	10.36	18.38	21.84	15.63	2.750	1.250	1/4 x 2.25**	5/8 x 4.00**
GR880★	8.63	17.00	20.96	8.00	4.07	8.86	11.93	1.03	N/A	21.30	3.00	12.25	5.98	0.75	11.64	21.00	25.93	17.88	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	9.53	20.88	25.47	10.00	4.90	10.36	14.34	1.03	N/A	25.78	3.50	14.75	6.76	1.00	13.85	25.00	31.35	21.19	3.750	1.500	3/8 x 3.25**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✔	✔	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✔		GRG
	1.125"					✔	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✔		GRG
	1.375"		5/16 x 2.63			✔	GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 202-203 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF❂
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft
** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DXF and DXFM only.
★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.
✖ Dimensions same for GRG and GRL Series
▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

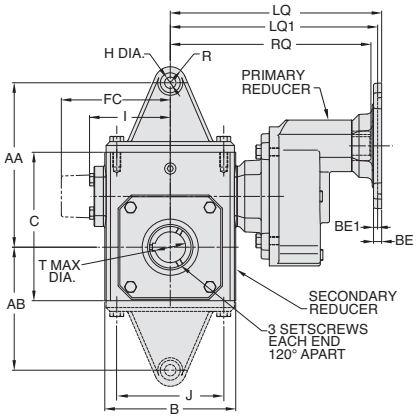
WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

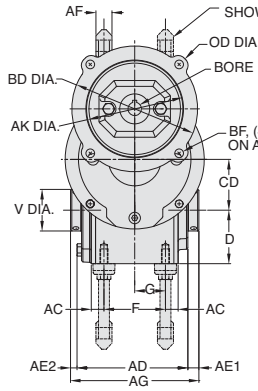
GR Series Dimensions

Styles: DXHMQ, DXHM, DXH

CAST IRON GR SERIES

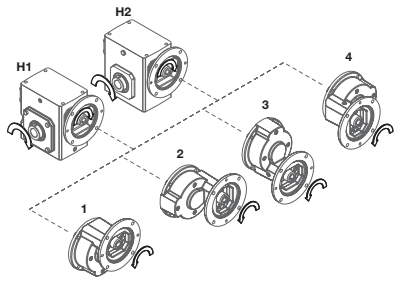
Style DXHMQ





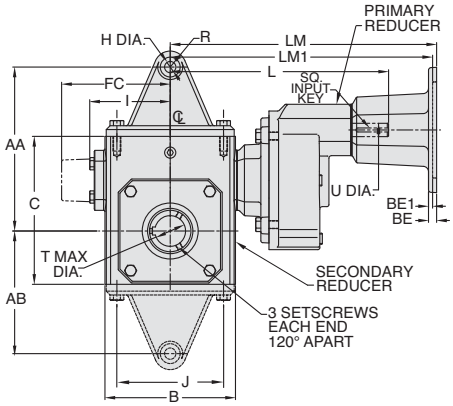
OPTIONAL TORQUE ARM BRACKET (TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD): ALL POSSIBLE MOUNTING POSITIONS SHOWN SEE PAGE 274 FOR KITS.

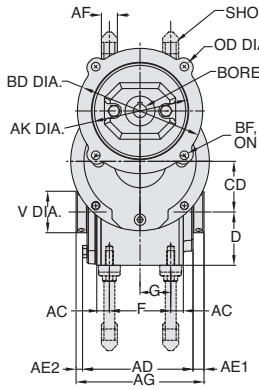
ASSEMBLIES



H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

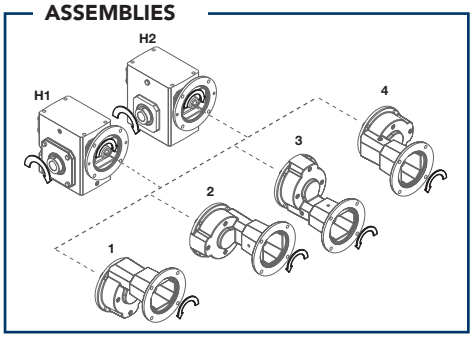
Style DXHM





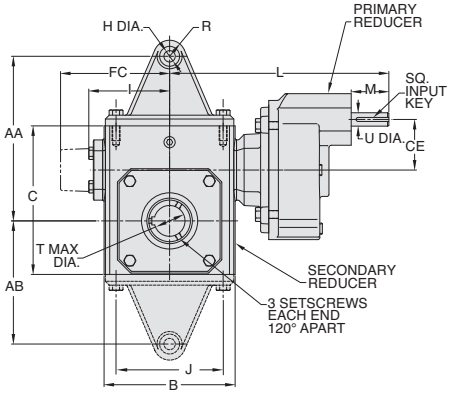
OPTIONAL TORQUE ARM BRACKET (TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD): ALL POSSIBLE MOUNTING POSITIONS SHOWN SEE PAGE 274 FOR KITS.

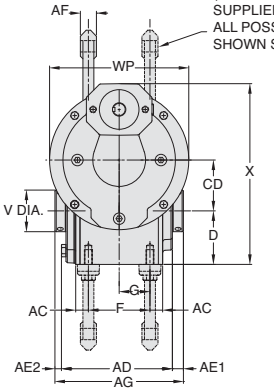
ASSEMBLIES



H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

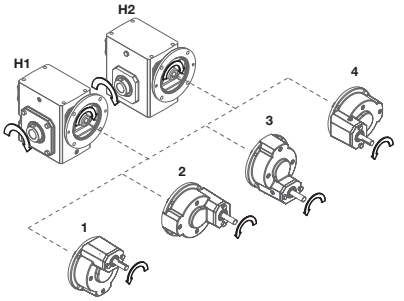
Style DXH





OPTIONAL TORQUE ARM BRACKET (TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD): ALL POSSIBLE MOUNTING POSITIONS SHOWN SEE PAGE 274 FOR KITS.

ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.



STYLE DXHMQ, DXHM, DXH DIMENSIONS (Inches)

Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	C	CD	CE	D	F	FC▼	G	H	I	J	L	M	R	V	WP	X	T -0.000 +0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	4.19	2.97	0.41	3.90	0.53	0.32	0.75	4.75	3.80	4.66	1.33	1.91	1.72	2.00	N/A	1.00	0.53	2.61	3.25	7.75	1.76	0.50	1.00	6.50	6.16	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	5.97	4.41	0.35	4.61	0.51	0.30	0.75	5.42	5.19	5.38	1.54	1.91	1.91	2.75	N/A	1.38	0.53	3.14	4.19	8.28	1.76	0.75	1.00	6.50	6.56	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR818	6.19	4.56	0.41	4.73	0.49	0.28	0.75	5.50	5.19	5.75	1.75	1.91	2.06	2.75	N/A	1.38	0.53	3.24	4.19	8.38	1.76	0.75	1.44	6.50	6.92	1.000	0.625	3/16 x 3/32	3/16 x 1.38
GR821	7.24	5.43	0.41	4.99	0.61	0.40	0.75	6.00	5.80	6.38	2.06	1.91	2.28	3.00	N/A	1.44	0.53	3.61	▼	8.75	1.76	0.75	1.44	6.50	7.45	1.500	0.625	3/16 x 3/32	1/4 x 1.44
GR824	7.69	5.75	0.59	5.18	0.51	0.31	0.75	6.00	6.12	6.94	2.38	2.36	2.50	2.88	N/A	1.44	0.53	3.77	5.00	8.92	1.76	0.75	1.94	6.50	8.45	1.500	0.625	3/16 x 3/32	1/4 x 1.75
GR826	8.81	6.69	0.73	6.01	0.60	0.39	0.75	7.00	7.38	8.00	2.63	2.36	2.94	3.38	N/A	1.69	0.53	4.34	6.33	9.48	1.76	0.75	1.94	6.50	9.13	1.500	0.625	3/16 x 3/32	1/4 x 1.75
GR830	10.63	8.25	0.63	6.53	0.60	0.36	0.75	7.50	8.12	8.88	3.00	2.36	3.25	4.00	N/A	2.00	0.53	4.84	7.00	10.24	1.76	0.88	2.51	6.50	9.82	2.188	0.625	3/16 x 3/32	1/4 x 1.75
GR832	10.88	8.50	0.88	7.04	0.54	0.29	0.75	7.88	8.75	9.38	3.25	2.36	3.50	4.00	N/A	2.00	0.53	5.02	7.50	10.43	1.76	0.88	2.51	6.50	10.32	2.188	0.625	3/16 x 3/32	3/8 x 2.25
GR842	11.94	9.44	0.56	7.53	0.63	0.34	0.75	8.50	10.25	11.38	4.25	2.87	4.44	5.00	N/A	2.50	0.53	6.10	8.50	17.48	3.61	0.75	2.75	8.50	13.31	2.188	1.250	1/4 x 2.50	1/2 x 3.06
GR852	13.88	10.12	0.69	8.85	0.97	0.68	1.00	10.50	13.00	14.00	5.25	2.87	5.12	5.81	N/A	2.91	0.66	7.50	11.00	18.88	3.61	1.00	4.26	8.50	14.99	3.438	1.250	1/4 x 3.00	1/2 x 3.50
GR860	15.00	11.50	0.88	10.52	0.52	0.52	0.38	11.50	14.50	16.50	6.00	2.87	6.50	6.38	10.24	3.19	0.66	N/A	12.75	19.60	3.61	0.69	4.18	8.50	17.12	3.438	1.250	3/8 x 3.00	5/8 x 4.00
GR870★	N/A	N/A	1.06	11.36	1.09	1.09	N/A	13.50	14.88	18.91	7.00	3.49	7.59	5.50	10.63	2.75	N/A	N/A	12.50	19.68	2.50	N/A	4.92	10.36	21.84	3.938	1.250	3/8 x 2.87**	5/8 x 4.00**
GR880★	N/A	N/A	1.06	12.48	1.03	1.03	N/A	14.50	17.00	20.96	8.00	4.07	8.86	6.50	11.93	3.25	N/A	N/A	14.25	21.30	3.00	N/A	5.55	11.64	25.93	4.438	1.375	1/2 x 2.81**	3/4 x 4.50**
GR8100★	N/A	N/A	1.33	15.78	1.39	1.39	N/A	18.50	20.88	25.47	10.00	4.90	10.36	6.88	14.34	3.44	N/A	N/A	17.75	25.78	3.50	N/A	6.67	13.85	31.35	5.438	1.500	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	✔		GRG
		(F)2.88" x (J)5.00"			✔	GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56TC/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NOTE: Sizes GR870-8100 torque arm not available.

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- • Max bore dimensions shown. For additional bores available, refer to page 140.
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- ■ 48CZ not available
- ❊ Style DXH and DXHM only.
- ★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.
- ❖ Metric IEC B5 input flange options are available only on quill input styles.
- ✖ Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

Torque arm bracket available separately. Refer to page 274 for kits. If a special bracket is required, refer to Style DXMQ dimensions for mounting pad dimensions on top/bottom of reducer.

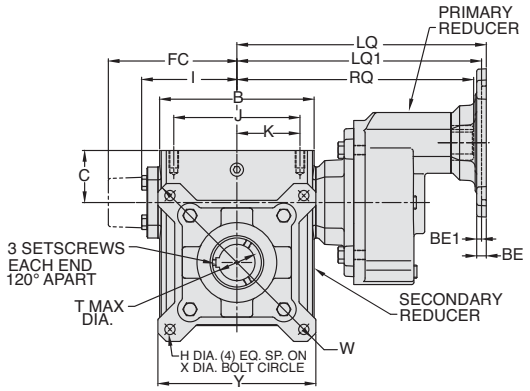
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

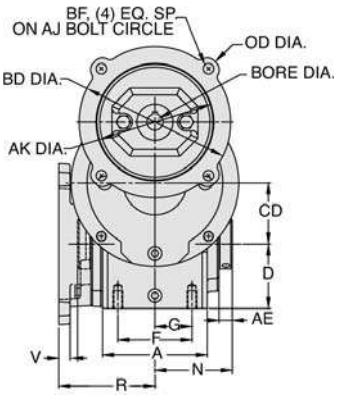
GR Series Dimensions

Styles: DXFHMQ, DXFHM, DXFH

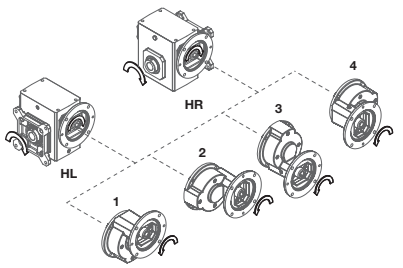
CAST IRON GR SERIES

Style DXFHMQ

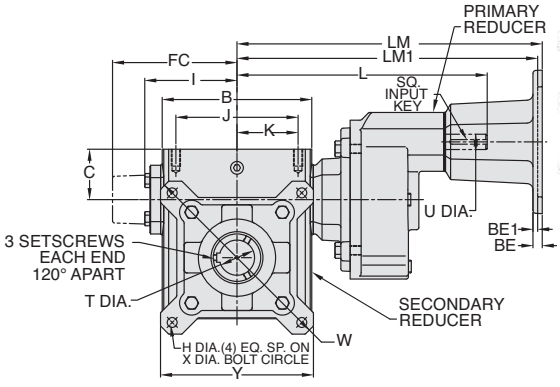


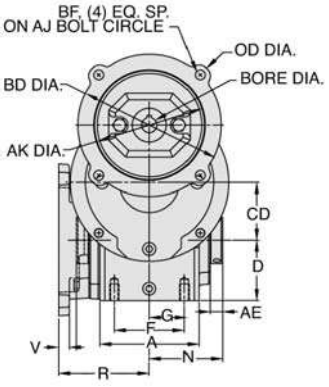


ASSEMBLIES

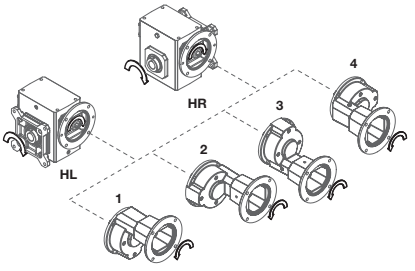


Style DXFHM

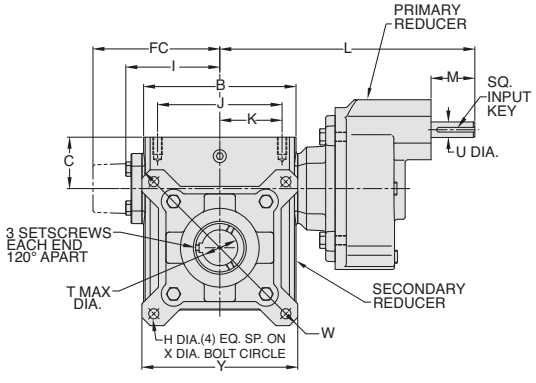


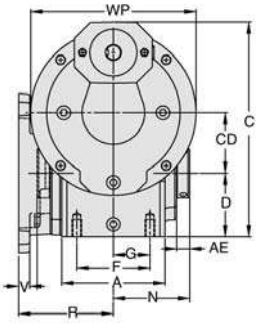


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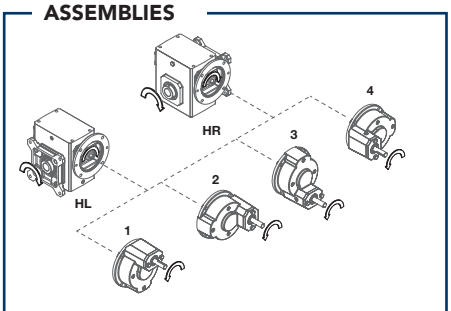


Style DXFH





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFHMQ, DXFHM, DXFH DIMENSIONS (Inches)

Size	A	AE	B	C	CD	CE	D	FC▼	H	I	L	M	N	R	V	W	WP	X	T -0.000 +0.0015	U +0.000 -0.0015	Input Key❊	Output Key
GR813	2.82	0.53	3.80	4.66	1.33	1.91	1.72	N/A	0.34	2.61	7.75	1.76	2.38	2.52	0.38	5.92	6.50	5.92	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR815	3.44	0.51	4.88	5.38	1.54	1.91	1.91	N/A	0.34	3.14	8.28	1.76	2.71	2.87	0.38	5.88	6.50	5.88	0.625	0.625	3/16 x 3/32	3/16 x 1.50
GR818	3.56	0.49	5.06	5.75	1.75	1.91	2.06	N/A	0.34	3.24	8.38	1.76	2.75	3.18	0.38	6.64	6.50	6.64	1.000	0.625	3/16 x 3/32	3/16 x 1.38
GR821	3.81	0.61	5.80	6.38	2.06	1.91	2.28	N/A	0.41	3.61	8.75	1.76	3.00	3.69	0.44	7.88	6.50	7.88	1.500	0.625	3/16 x 3/32	1/4 x 1.44
GR824	4.06	0.55	6.12	6.94	2.38	2.36	2.50	N/A	0.41	3.77	8.92	1.76	3.00	3.73	0.44	8.39	6.50	8.39	1.500	0.625	3/16 x 3/32	1/4 x 1.75
GR826	4.84	0.60	7.12	8.00	2.63	2.36	2.94	N/A	0.41	4.34	9.48	1.76	3.50	3.70	0.50	8.88	6.50	8.88	1.500	0.625	3/16 x 3/32	1/4 x 1.75
GR830	5.25	0.60	8.12	8.88	3.00	2.36	3.25	N/A	0.41	4.84	10.24	1.76	3.75	3.78	0.50	9.89	6.50	9.89	2.188	0.625	3/16 x 3/32	1/4 x 1.75
GR832	5.75	0.54	8.50	9.38	3.25	2.36	3.50	N/A	0.41	5.02	10.43	1.76	3.94	4.03	0.50	9.89	6.50	9.89	2.188	0.625	3/16 x 3/32	3/8 x 2.25
GR842	6.13	0.63	10.25	11.38	4.25	2.87	4.44	N/A	0.56	6.10	17.48	3.61	4.25	4.56	0.62	12.95	8.50	12.95	2.188	1.250	1/4 x 2.50	1/2 x 3.06
GR852	7.19	0.97	13.00	14.00	5.25	2.87	5.12	N/A	0.69	7.50	18.88	3.61	5.25	5.62	0.75	15.50	8.50	15.50	3.438	1.250	1/4 x 3.00	1/2 x 3.50
GR860	8.13	0.52	14.25	16.50	6.00	2.87	6.50	10.24	0.69	N/A	19.60	3.61	5.75	7.26	0.75	18.00	8.50	18.00	3.438	1.250	3/8 x 3.00	5/8 x 4.00
GR870★	7.63	1.09	14.88	18.91	7.00	3.49	7.59	10.63	0.78	N/A	19.68	2.50	6.75	7.45	0.75	21.00	10.36	21.00	3.938	1.250	3/8 x 2.87**	5/8 x 4.00**
GR880★	8.63	1.03	17.00	20.96	8.00	4.07	8.86	11.93	1.03	N/A	21.30	3.00	7.25	8.34	0.75	24.00	11.64	24.00	4.438	1.375	1/2 x 2.81**	3/4 x 4.50**
GR8100★	9.53	1.39	20.88	25.47	10.00	4.90	10.36	14.34	1.03	N/A	25.78	3.50	9.25	9.07	1.00	29.00	13.85	29.00	5.438	1.500	1/2 x 3.69**	7/8 x 5 .00**

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	✔	✔	GRG GRL

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 202-203 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56TC/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
GR813	10.0	N/A	N/A	8.52	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
GR815	10.53	N/A	N/A	9.05	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
GR818	10.63	N/A	N/A	9.15	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
GR821✖	11.00	N/A	N/A	9.52	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
GR824	11.17	N/A	N/A	9.69■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
GR826✖	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832✖	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- • Max bore dimensions shown. For additional bores available, refer to page 140.
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- ■ 48CZ not available
- ❊ Style DXFH and DXFHM only.
- ★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.
- ✖ Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

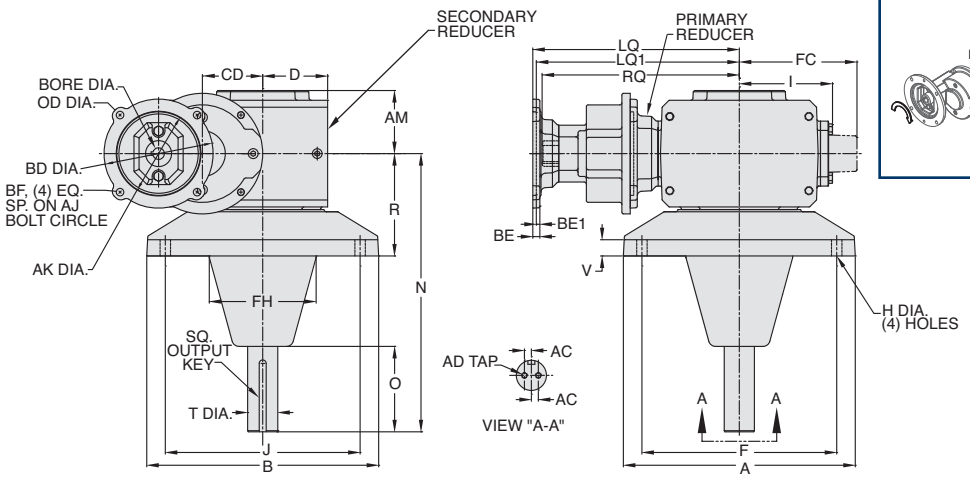
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GR Series Dimensions

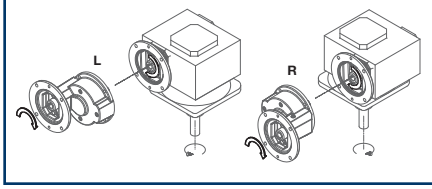
Styles: DXFEMQ, DXFEM, DXFE

CAST IRON GR SERIES

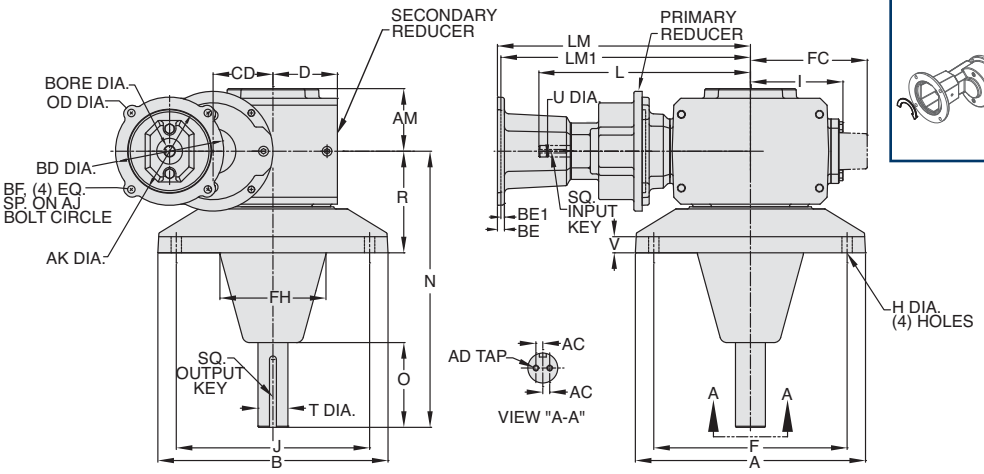
Style DXFEMQ



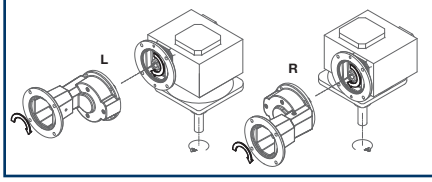
ASSEMBLIES



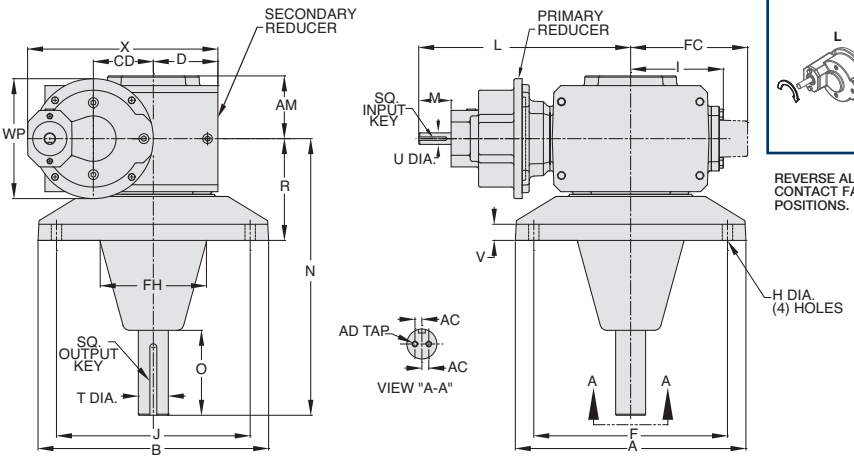
Style DXFEM



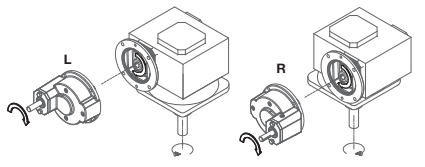
ASSEMBLIES



Style DXFE



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFEMQ, DXFEM, DXFE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	CD	D	F	FC▼	H
GR830	11.00	0.375	.31-18 UNC X 1.00 DP	3.15	11.00	3.00	4.60	9.00	N/A	0.56
GR832	12.50	0.375	.31-18 UNC X 1.00 DP	3.40	12.50	3.25	5.52	10.50	N/A	0.56
GR842	14.00	0.500	.31-16 UNC X 1.00 DP	3.62	14.00	4.25	5.74	12.00	N/A	0.69
GR852	16.00	0.750	.31-16 UNC X 1.00 DP	4.28	16.00	5.25	6.00	14.00	N/A	0.81
GR860	19.50	0.750	.31-16 UNC X 1.00 DP	5.28	19.50	6.00	7.00	17.00	10.24	0.88
GR870★	22.00	1.000	.31-16 UNC X 1.00 DP	6.06	22.00	7.00	8.50	19.00	10.63	1.13
GR880★	28.00	1.062	.31-11 UNC X 1.50 DP	6.22	28.00	8.00	8.86	24.00	11.93	1.31
GR8100★	32.00	1.118	.31-11 UNC X 1.50 DP	7.94	32.00	10.00	12.50	28.00	14.34	1.31

Size	I	J	L	M	N	O∋	R	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	P❊
GR830	4.84	9.00	10.24	1.76	14.38	4.96	3.25	0.78	6.50	9.82	1.438	0.875	3/16 x 3/32	3/8 x 3.88
GR832	5.02	10.50	10.43	1.76	15.00	4.63	3.50	0.88	6.50	10.32	1.625	0.875	3/16 x 3/32	3/8 x 3.69
GR842	6.10	12.00	17.48	1.76	16.50	5.91	4.44	1.00	8.50	13.31	1.688	1.250	3/16 x 3/32	3/8 x 4.68
GR852	7.50	14.00	18.88	1.76	16.50	5.62	5.12	1.25	8.50	14.99	2.188	1.250	3/16 x 3/32	1/2 x 4.63
GR860	N/A	17.00	19.60	1.76	22.50	7.63	6.50	1.50	8.50	17.12	2.438	1.500	3/16 x 3/32	5/8 x 6.50
GR870★	N/A	19.00	19.68	1.76	24.00	7.63	7.59	1.75	10.36	21.84	2.937	1.625	3/16 x 3/32	3/4 x 6.44
GR880★	N/A	24.00	21.30	1.76	27.06	9.25	8.86	2.00	11.64	25.93	3.438	1.375	3/16 x 3/32	7/8 x 8.00
GR8100★	N/A	28.00	25.78	1.76	29.50	9.43	10.36	2.25	13.85	31.35	3.938	2.250	3/16 x 3/32	1 x 7.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR830	12.49	N/A	N/A	11.01■	N/A	N/A	N/A	10.62■	N/A	N/A	N/A
GR832	12.68	N/A	N/A	11.20■	N/A	N/A	N/A	10.81■	N/A	N/A	N/A
GR842	N/A	19.44	20.00	N/A	14.05	13.75	14.31	N/A	13.22	13.22	13.78
GR852	N/A	20.84	21.40	N/A	15.15	15.15	15.71	N/A	14.52	14.52	15.08
GR860	N/A	22.42	23.04	N/A	15.87	15.87	16.48	N/A	15.23	15.23	15.23

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
❊ Style DXFE and DXFEM only.
∋ "O" dimension is the minimum dimension to output seal or screw head on sizes GR860-GR8100.

❖ Metric IEC B5 input flange options are available only on quill input styles.
▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

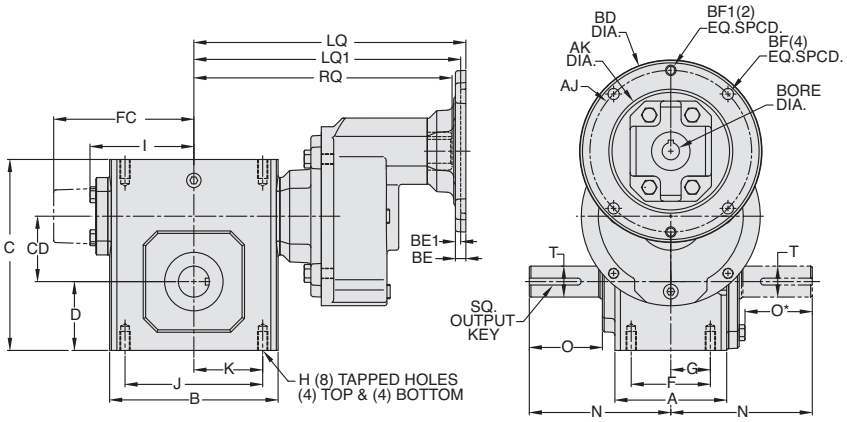
⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

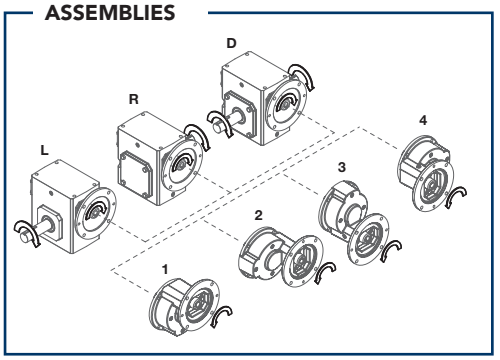
NH Series Dimensions

Styles: DXMQ, DXM, DX

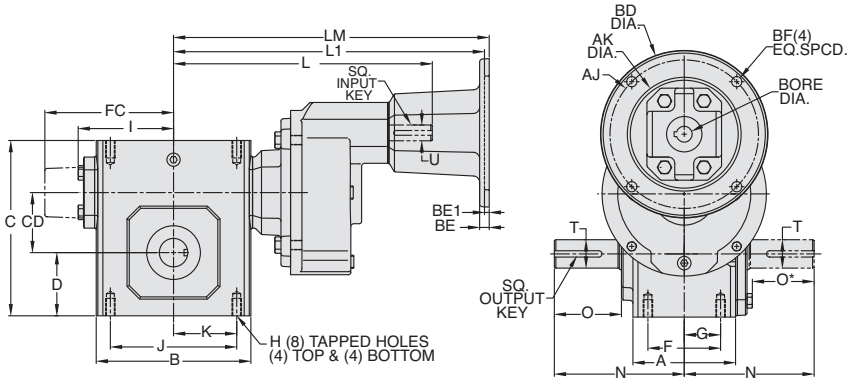
CAST IRON NH SERIES

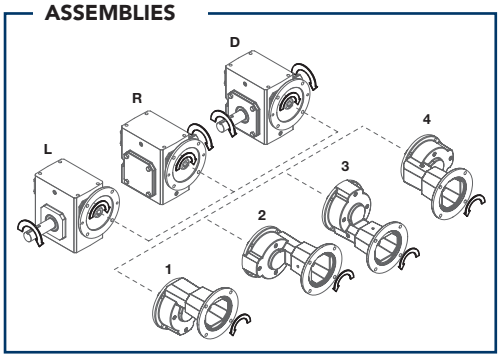
Style DXMQ



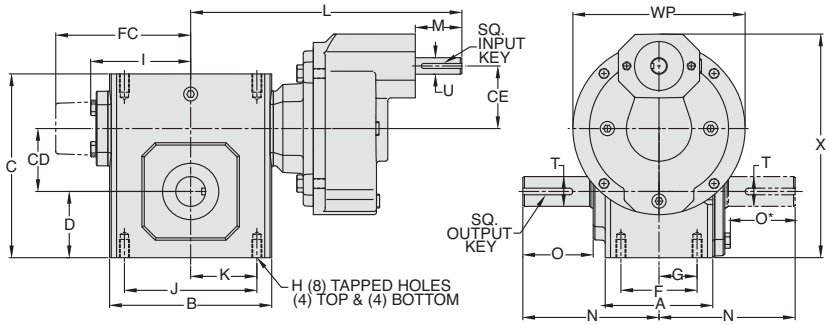


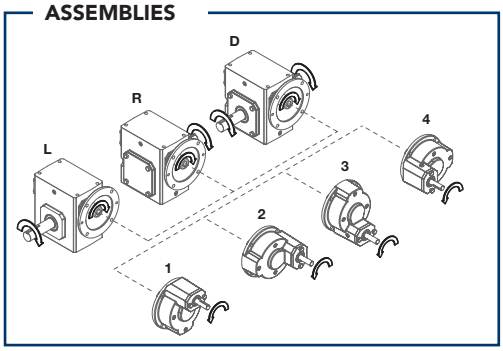
Style DXM





Style DX





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

NH Series Dimensions

Styles: DXMQ, DXM, DX

STYLE DXMQ, DXM, DX DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	D1	E	F	G	H Tap Size	H Depth	I	J	K	L	M	N	O	O*	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	2.82	3.80	4.66	1.33	1.91	1.72	2.81	2.47	2.00	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	7.75	1.76	4.00	2.16	1.94	6.50	6.16	0.750	0.625	3/16 x 3/32	3/16 x 1.50
NH815	2.57	4.06	5.00	1.54	1.91	1.91	2.81	2.47	1.88	0.94	5/16-18 UNC	.63	3.14	3.25	1.63	8.28	1.76	4.25	2.56	2.35	6.50	6.53	0.750	0.625	3/16 x 3/32	3/16 x 1.50
NH818	2.56	4.50	5.44	1.75	1.91	2.06	2.81	2.47	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	8.38	1.76	4.75	2.94	2.73	6.50	6.92	1.000	0.625	3/16 x 3/32	1/4 x 1.75
NH821	2.50	4.50	6.00	2.06	1.91	2.28	2.81	2.47	1.88	0.94	3/8-16 UNC	.63	3.61	3.25	1.63	8.75	1.76	4.34	2.66	2.45	6.50	7.48	0.875	0.625	3/16 x 3/32	3/16 x 1.50
NH824	2.94	5.25	6.88	2.38	2.36	2.50	3.25	2.82	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	8.92	1.76	4.88	2.91	2.69	6.50	8.64	1.000	0.625	3/16 x 3/32	1/4 x 1.75
NH826	2.88	5.75	7.38	2.63	2.36	2.94	3.25	2.82	2.13	1.06	3/8-16 UNC	.69	4.34	4.00	2.00	9.48	1.76	5.25	3.28	3.07	6.50	9.13	1.125	0.625	3/16 x 3/32	1/4 x 1.75
NH830	3.12	6.62	8.25	3.00	2.36	3.25	3.25	2.82	2.38	1.19	3/8-16 UNC	.75	4.84	4.63	2.31	9.98	1.76	5.77	3.56	3.31	6.50	9.95	1.250	0.625	3/16 x 3/32	1/4 x 1.75
NH832	4.44	8.00	10.06	3.25	2.36	3.50	3.25	2.82	3.50	1.75	1/2-13 UNC	1.00	5.02	7.00	3.50	10.17	1.76	7.03	4.24	3.99	6.50	11.01	1.500	0.625	3/16 x 3/32	3/8 x 2.25
NH842	4.75	9.75	11.50	4.25	2.87	4.44	4.25	4.03	3.75	1.88	1/2-13 UNC	1.00	6.10	7.50	3.75	9.57	3.61	7.50	3.88	3.59	8.50	13.37	1.750	1.250	1/4 x 2.50	3/8 x 2.25
NH852	6.19	11.00	12.69	5.25	2.87	5.12	4.25	4.03	4.50	2.25	5/8-11 UNC	1.25	7.50	9.00	4.50	10.88	3.61	9.00	4.72	4.47	8.50	14.75	2.000	1.250	1/4 x 3.00	1/2 x 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	L1 180TC/ 210TC	L1 250TC	LQ 48CZ/ 56TC/140TC	LQ1 180TC	LQ1 210TC	LQ1 250TC	RQ 48CZ/ 56C/140TC	RQ 180TC	RQ 210TC	RQ 250TC
NH813	10.00	N/A	N/A	8.52■	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
NH815	10.53	N/A	N/A	9.05■	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
NH818	10.63	N/A	N/A	9.15■	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
NH821	11.00	N/A	N/A	9.52■	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
NH824	11.17	N/A	N/A	9.96■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
NH826	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
NH830	12.23	N/A	N/A	10.75■	N/A	N/A	N/A	10.36■	N/A	N/A	N/A
NH832	12.42	N/A	N/A	10.94■	N/A	N/A	N/A	10.55■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❊ Style D and DM only

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWUF	DXMQ
HWUFC	DXM
HWU	DX

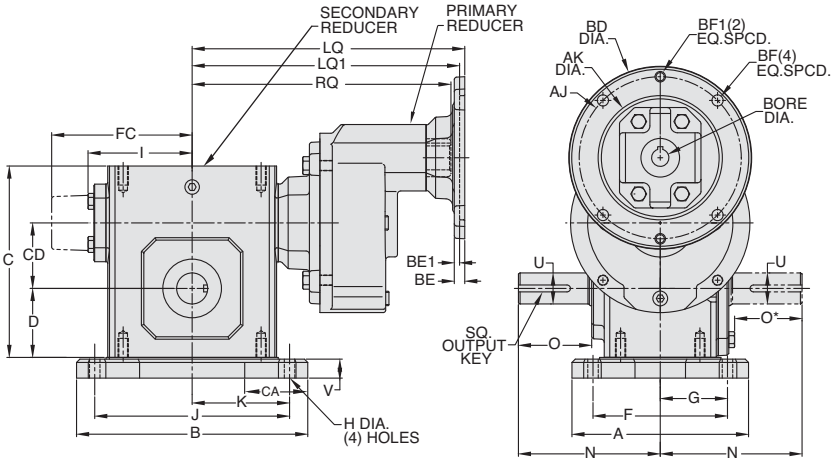
Refer to page 113 for complete interchange guide for original Grove Gear OE Series products.

NH Series Dimensions

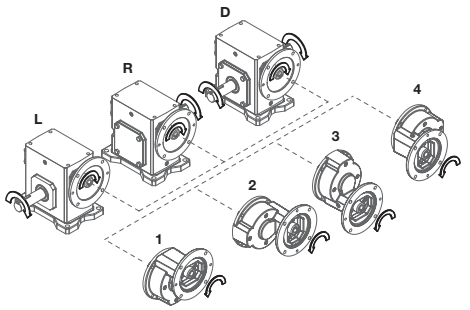
Styles: DXTMQ, DXTM, DXT

CAST IRON NH SERIES

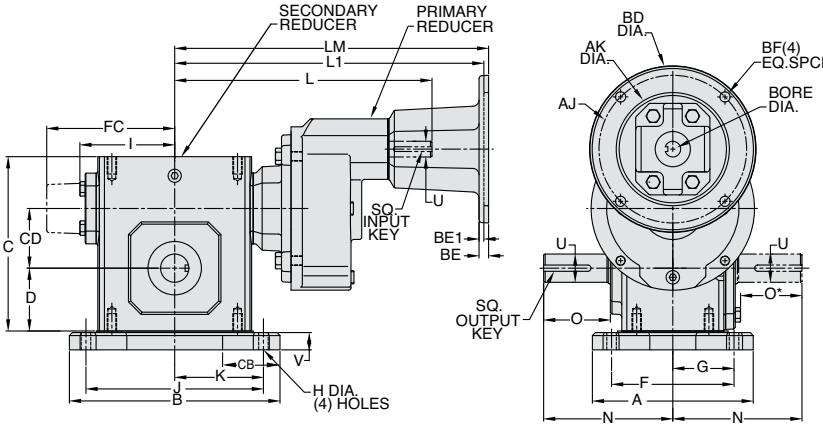
Style DXTMQ



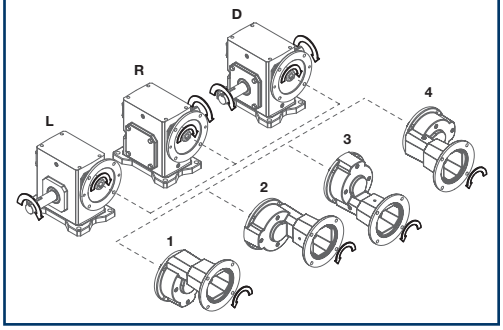
ASSEMBLIES



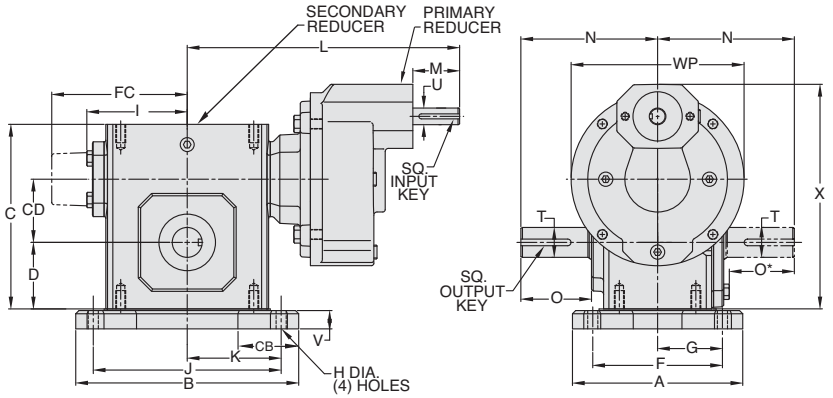
Style DXTM



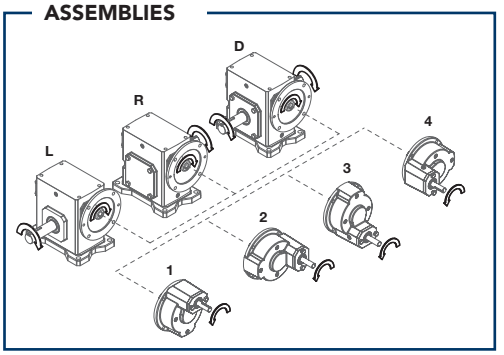
ASSEMBLIES



Style DXT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

NH Series Dimensions

Styles: DXTMQ, DXTM, DXT

STYLE DXTMQ, DXTM, DXT DIMENSIONS (Inches)

Size	A	B	C	CD	CA	CE	D	D1	E	F	G	H	I	J	K	L	M	N	O	O*	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	4.00	5.01	4.97	1.33	1.50	1.91	1.72	2.81	2.47	3.25	1.63	0.28	2.61	4.25	2.13	7.75	1.76	4.00	2.16	1.94	0.31	6.50	6.47	0.750	0.625	3/16 x 3/32	3/16 x 1.50
NH815	5.25	5.19	5.31	1.54	1.50	1.91	1.88	2.81	2.47	4.50	2.25	0.34	3.14	4.19	2.09	8.28	1.76	4.25	2.56	2.35	0.31	6.50	6.84	0.750	0.625	3/16 x 3/32	3/16 x 1.50
NH818	4.62	5.89	5.82	1.75	1.88	1.91	2.06	2.81	2.47	3.50	1.75	0.41	3.24	4.63	2.31	8.38	1.76	4.75	2.94	2.73	0.38	6.50	7.30	1.000	0.625	3/16 x 3/32	1/4 x 1.75
NH821	5.25	5.19	6.31	2.06	1.50	1.91	2.31	2.81	2.47	4.50	2.25	0.34	3.61	4.19	2.09	8.75	1.76	4.34	2.66	2.45	0.31	6.50	7.79	0.875	0.625	3/16 x 3/32	3/16 x 1.50
NH824	5.25	5.75	7.19	2.38	1.50	2.36	2.69	3.25	2.82	4.50	2.25	0.41	3.77	3.75	1.88	8.92	1.76	4.88	2.91	2.69	0.31	6.50	8.95	1.000	0.625	3/16 x 3/32	1/4 x 1.75
NH826	6.13	6.51	7.69	2.63	2.00	2.36	2.94	3.25	2.82	4.13	2.06	0.41	4.34	4.75	2.38	9.48	1.76	5.25	3.28	3.07	0.31	6.50	9.44	1.125	0.625	3/16 x 3/32	1/4 x 1.75
NH830	6.13	7.74	8.56	3.00	2.25	2.36	3.38	3.25	2.82	4.13	2.06	0.41	4.84	6.00	3.00	9.98	1.76	5.77	3.56	3.31	0.31	6.50	10.26	1.250	0.625	3/16 x 3/32	1/4 x 1.75
NH832	7.50	9.25	10.44	3.25	2.50	2.36	4.19	3.25	2.82	6.50	3.25	0.41	5.02	7.75	3.88	10.17	1.76	7.03	4.24	3.99	0.38	6.50	11.39	1.500	0.625	3/16 x 3/32	3/8 x 2.25
NH842	6.75	10.99	12.00	4.25	2.50	2.87	4.50	4.25	4.03	5.75	2.88	0.56	6.10	9.75	4.88	9.57	3.61	7.50	3.88	3.59	0.50	8.50	13.87	1.750	1.250	1/4 x 2.50	3/8 x 2.25
NH852	8.25	13.24	13.82	5.25	3.00	2.87	4.88	4.25	4.03	7.00	3.50	0.69	7.50	12.00	6.00	10.88	3.61	9.00	4.72	4.47	1.13	8.50	15.88	2.000	1.250	1/4 x 3.00	1/2 x 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	10.00	N/A	N/A	8.52■	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
NH815	10.53	N/A	N/A	9.05■	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
NH818	10.63	N/A	N/A	9.15■	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
NH821	11.00	N/A	N/A	9.52■	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
NH824	11.17	N/A	N/A	9.96■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
NH826	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
NH830	12.23	N/A	N/A	10.75■	N/A	N/A	N/A	10.36■	N/A	N/A	N/A
NH832	12.42	N/A	N/A	10.94■	N/A	N/A	N/A	10.55■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

❊ Style DXT and DXTM only

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWZF	DXTMQ
HWZFC	DXTM
HWZ	DXT

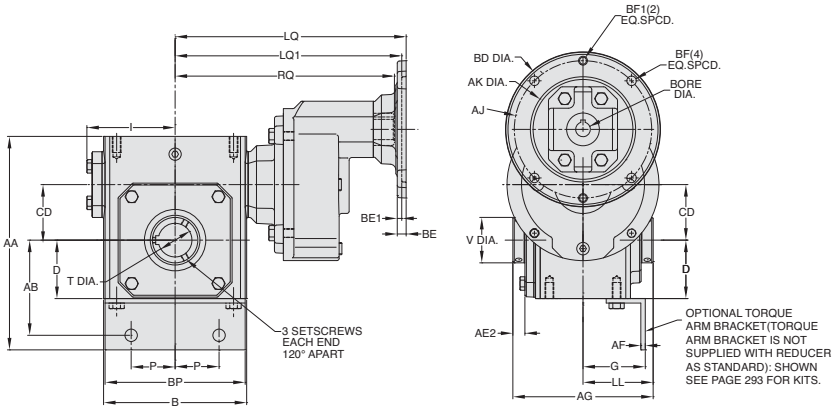
Refer to page 113 for complete interchange guide for original Grove Gear OE Series products.

NH Series Dimensions

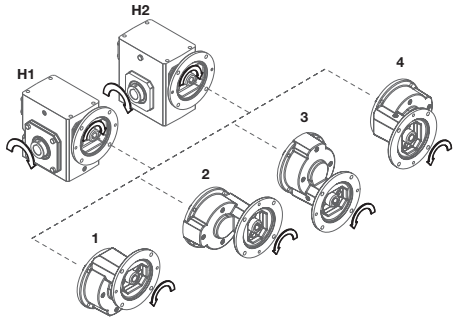
Styles: DXHMQ, DXHM, DXH

CAST IRON NH SERIES

Style DXHMQ

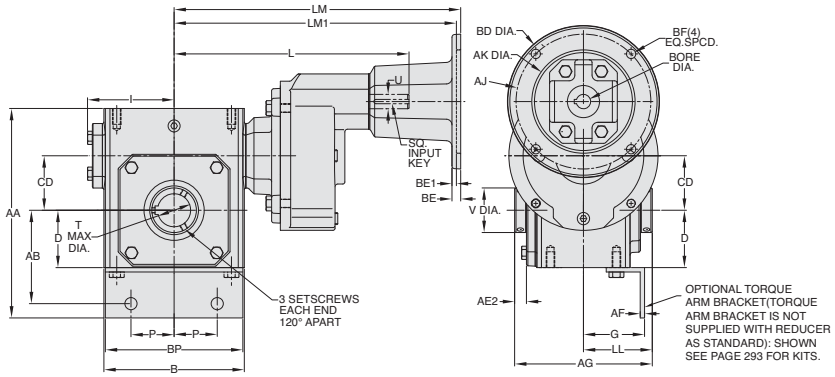


ASSEMBLIES

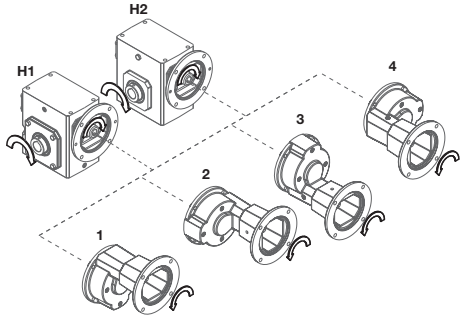


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXHM

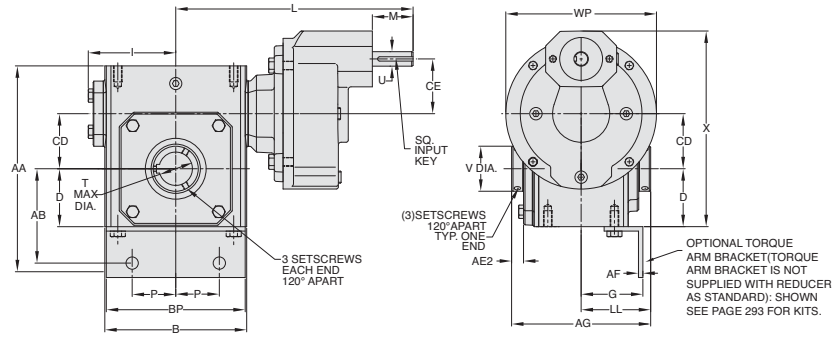


ASSEMBLIES

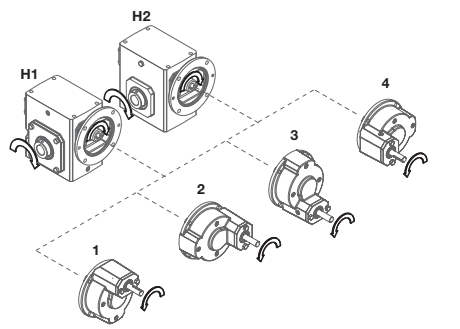


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

NH Series Dimensions

Styles: DXHMQ, DXHM, DXH

STYLE DXHMQ, DXHM, DXH DIMENSIONS (Inches)

Size	AA	AB	AD	AE2	AF	AG	B	C	CD	CE	D	D1	E	G	H	I	L	LL	M	P	V	WP	X	T -0.000 +0.0015	U +0.000 -0.0015	Input Key❊	Output Key•
NH813	6.66	3.10	3.90	0.53	0.19	4.75	3.80	4.66	1.33	1.91	1.72	2.81	2.47	1.88	0.53	2.61	7.75	2.38	1.76	1.38	1.00	6.50	6.47	0.625	0.625	3/16 x 3/32	3/16 x 1.50
NH815	7.00	3.26	3.59	0.51	0.19	4.08	4.06	5.00	1.54	1.91	1.88	2.81	2.47	1.82	0.53	3.14	8.28	1.88	1.76	1.38	1.00	6.50	6.84	0.625	0.625	3/16 x 3/32	3/16 x 1.50
NH818	7.44	3.44	3.83	0.56	0.19	4.29	4.50	5.44	1.75	1.91	2.06	2.81	2.47	1.82	0.53	3.24	8.38	1.98	1.76	1.38	1.44	6.50	7.30	1.000	0.625	3/16 x 3/32	1/4 x 3.00
NH821	8.00	3.69	3.57	0.85	0.19	4.65	4.50	6.00	2.06	1.91	2.31	2.81	2.47	1.82	0.53	3.61	8.75	2.12	1.76	1.38	1.94	6.50	7.79	1.500	0.625	3/16 x 3/32	3/8 x 3.00
NH824	8.88	4.07	4.16	0.56	0.19	4.65	5.25	6.88	2.38	2.36	2.69	3.25	2.82	1.94	0.53	3.77	8.92	2.12	1.76	1.38	1.94	6.50	8.95	1.500	0.625	3/16 x 3/32	3/8 x 3.00
NH826	9.38	4.32	4.15	0.56	0.19	4.65	5.75	7.38	2.63	2.36	2.94	3.25	2.82	1.94	0.53	4.34	9.48	2.12	1.76	1.38	1.94	6.50	9.44	1.500	0.625	3/16 x 3/32	3/8 x 3.00
NH830	10.25	4.76	4.67	0.56	0.25	5.16	6.62	8.25	3.00	2.36	3.38	3.25	2.82	2.32	0.53	4.84	9.98	2.38	1.76	2.38	2.51	6.50	10.26	2.188	0.625	3/16 x 3/32	1/2 x 3.00
NH832	12.06	5.57	5.83	0.57	0.25	6.31	8.00	10.06	3.25	2.36	4.19	3.25	2.82	2.87	0.53	5.02	10.17	2.95	1.76	3.51	2.51	6.50	11.39	2.188	0.625	3/16 x 3/32	1/2 x 3.00
NH842	14.00	6.38	7.53	0.63	0.38	8.50	9.75	11.50	4.25	2.87	4.50	4.25	4.03	3.26	0.53	6.10	9.57	4.25	3.61	3.69	2.75	8.50	13.87	2.188	1.250	1/4 x 2.50	1/2 x 3.00
NH852	15.19	6.76	8.81	0.97	0.38	10.50	11.00	12.69	5.25	2.87	4.88	4.25	4.03	3.63	0.53	7.50	10.88	5.25	3.61	4.62	4.26	8.50	15.88	3.438	1.250	1/4 x 3.00	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	10.00	N/A	N/A	8.52■	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
NH815	10.53	N/A	N/A	9.05■	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
NH818	10.63	N/A	N/A	9.15■	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
NH821	11.00	N/A	N/A	9.52■	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
NH824	11.17	N/A	N/A	9.96■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
NH826	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
NH830	12.23	N/A	N/A	10.75■	N/A	N/A	N/A	10.36■	N/A	N/A	N/A
NH832	12.42	N/A	N/A	10.94■	N/A	N/A	N/A	10.55■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- • Max bore dimensions shown. For additional bores available, refer to page 130.
- ◆ Keyway width by depth
- ■ 48CZ not available
- ❊ Style DXH and DXHM only

Torque arm bracket available separately. Refer to page 277 for kits. If a special bracket is required, refer to Style DXMQ dimensions for mounting pad dimensions on top/bottom of reducer.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWYF	DXHMQ
HWYFC	DXHM
HWY	DXH

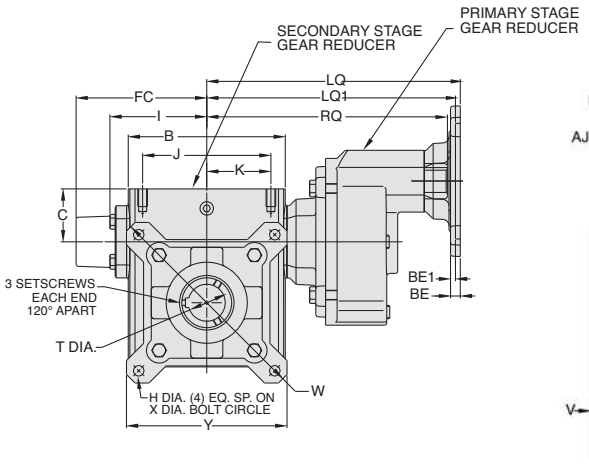
Refer to page 113 for complete interchange guide for original Grove Gear OE Series products.

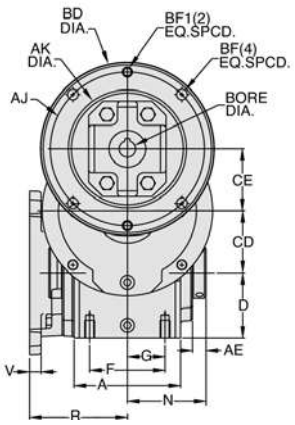
NH Series Dimensions

Styles: DXFHMQ, DXFHM, DXFH

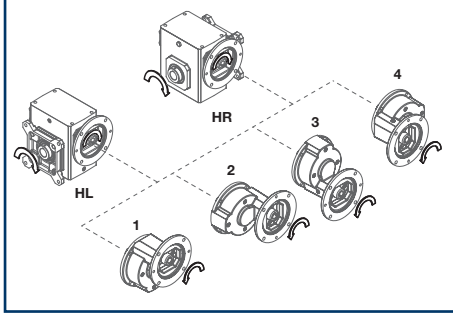
CAST IRON NH SERIES

Style DXFHMQ

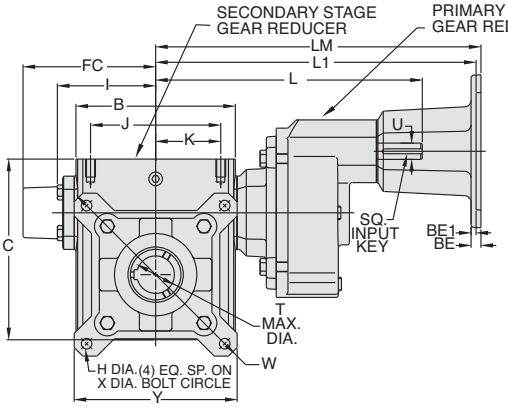


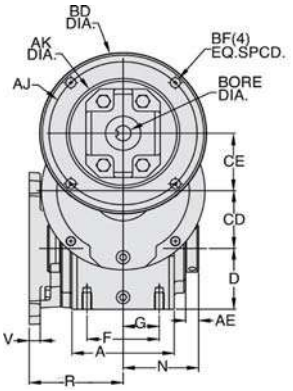


ASSEMBLIES

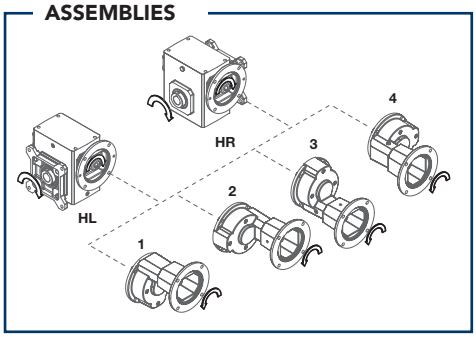


Style DXFHM

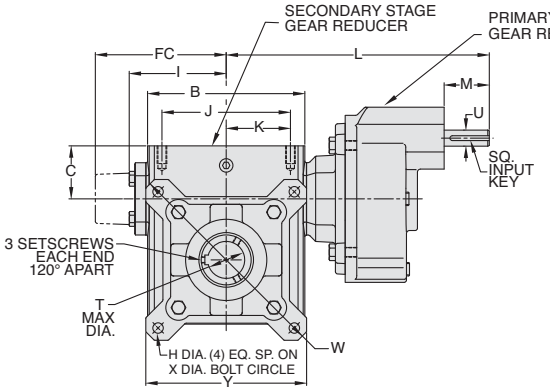


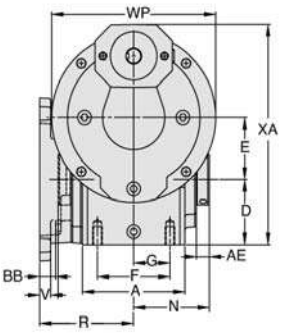


ASSEMBLIES

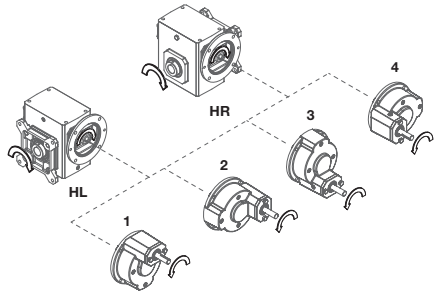


Style DXFH





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

NH Series Dimensions

Styles: DXFHMQ, DXFHM, DXFH

STYLE DXFHMQ, DXFHM, DXFH DIMENSIONS (Inches)

Size	A	AE	B	BL	C	CD	CE	D	D1	E	H	I	L	M	N	R	V	W	WP	X	XA	Y	T -0.000 +0.0015	U +0.000 -0.0015	Input Key❊	Output Key
NH813	2.82	0.53	3.80	0.38	4.66	1.33	1.91	1.72	2.81	2.47	0.34	2.61	7.75	1.76	2.37	2.52	1.00	5.92	6.50	5.00	6.47	4.50	0.750	0.625	3/16 x 3/32	3/16 x 1.50
NH815	2.57	0.51	4.06	0.38	5.00	1.54	1.91	1.88	2.81	2.47	0.34	3.14	8.28	1.76	2.20	3.50	1.00	6.79	6.50	5.88	6.84	5.12	0.750	0.625	3/16 x 3/32	3/16 x 1.50
NH818	2.56	0.56	4.50	0.38	5.44	1.75	1.91	2.06	2.81	2.47	0.34	3.24	8.38	1.76	2.37	2.74	1.44	6.64	6.50	5.88	7.30	5.00	1.000	0.625	3/16 x 3/32	1/4 x 1.75
NH821	2.50	0.85	4.50	0.38	6.00	2.06	1.91	2.31	2.81	2.47	0.34	3.61	8.75	1.76	2.53	3.50	1.94	7.37	6.50	6.25	7.79	5.56	0.875	0.625	3/16 x 3/32	3/16 x 1.50
NH824	2.94	0.56	5.25	0.44	6.88	2.38	2.36	2.69	3.25	2.82	0.34	3.77	8.92	1.76	2.53	3.53	1.94	8.29	6.50	7.06	8.95	6.24	1.000	0.625	3/16 x 3/32	1/4 x 1.75
NH826	2.88	0.56	5.75	0.50	7.38	2.63	2.36	2.94	3.25	2.82	0.34	4.34	9.48	1.76	2.53	3.62	1.94	8.90	6.50	7.63	9.44	6.68	1.125	0.625	3/16 x 3/32	1/4 x 1.75
NH830	3.12	0.56	6.62	0.55	8.25	3.00	2.36	3.38	3.25	2.82	0.41	4.84	9.98	1.76	2.78	3.75	2.51	9.50	6.50	8.63	10.26	7.34	1.250	0.625	3/16 x 3/32	1/4 x 1.75
NH832	4.44	0.57	8.00	0.56	10.06	3.25	2.36	4.19	3.25	2.82	0.53	5.02	10.17	1.76	3.36	5.06	2.51	11.84	6.50	10.63	11.39	9.00	1.500	0.625	3/16 x 3/32	3/8 x 2.25
NH842	4.75	0.63	9.75	0.62	11.50	4.25	2.87	4.50	4.25	4.03	0.56	6.10	9.57	3.61	4.25	4.56	2.75	12.95	8.50	11.50	13.87	9.66	1.750	1.250	1/4 x 2.50	3/8 x 2.25
NH852	6.19	0.97	11.00	0.75	12.69	5.25	2.87	4.88	4.25	4.03	0.69	7.50	10.88	3.61	5.25	5.62	4.26	15.50	8.50	14.00	15.88	11.76	2.000	1.250	1/4 x 3.00	1/2 x 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	10.00	N/A	N/A	8.52■	N/A	N/A	N/A	8.13■	N/A	N/A	N/A
NH815	10.53	N/A	N/A	9.05■	N/A	N/A	N/A	8.66■	N/A	N/A	N/A
NH818	10.63	N/A	N/A	9.15■	N/A	N/A	N/A	8.76■	N/A	N/A	N/A
NH821	11.00	N/A	N/A	9.52■	N/A	N/A	N/A	9.13■	N/A	N/A	N/A
NH824	11.17	N/A	N/A	9.96■	N/A	N/A	N/A	9.30■	N/A	N/A	N/A
NH826	11.73	N/A	N/A	10.25■	N/A	N/A	N/A	9.86■	N/A	N/A	N/A
NH830	12.23	N/A	N/A	10.75■	N/A	N/A	N/A	10.36■	N/A	N/A	N/A
NH832	12.42	N/A	N/A	10.94■	N/A	N/A	N/A	10.55■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- Max bore dimensions shown. For additional bores available, refer to page 130.
- ◆ Keyway width by depth
- ■ 48CZ not available
- ❊ Style DXFH and DXFHM only

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWMF	DXFHMQ
HWMFC	DXFHM
HMY	DXFH

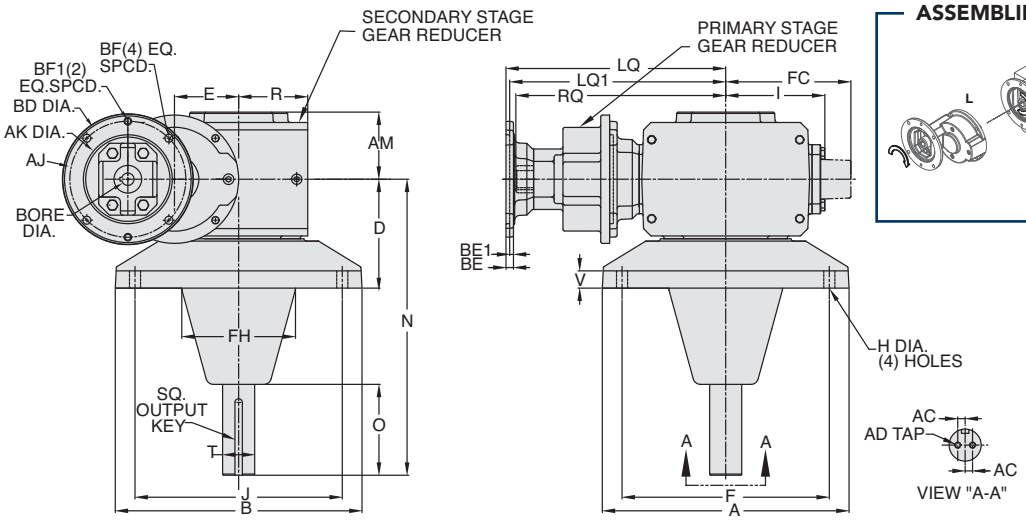
Refer to page 113 for complete interchange guide for original Grove Gear OE Series products.

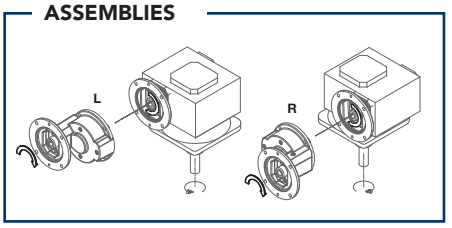
NH Series Dimensions

Styles: DXFEMQ, DXFEM, DXFE

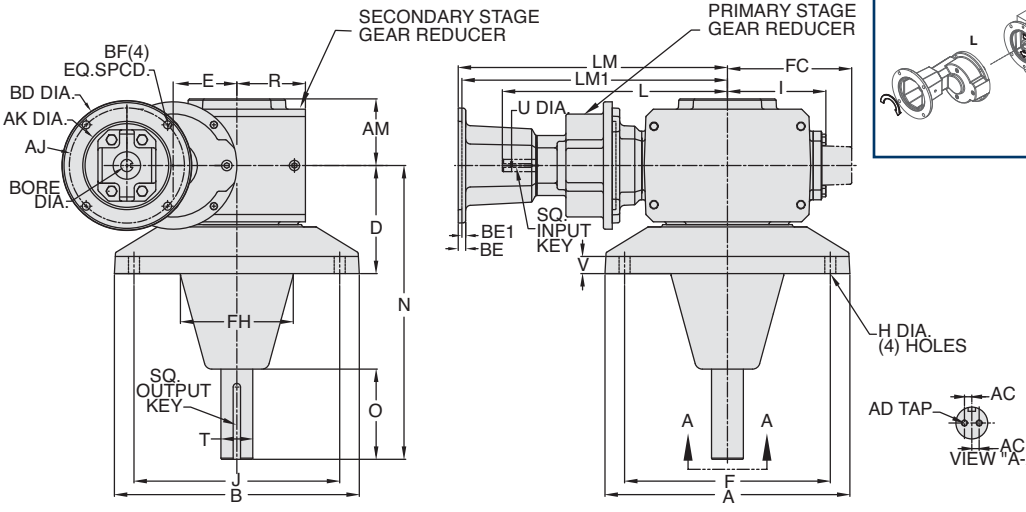
CAST IRON NH SERIES

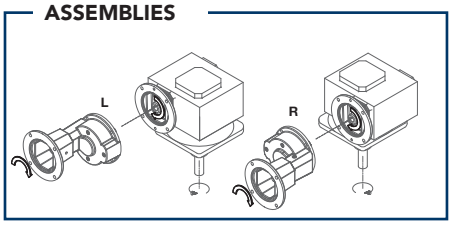
Style DXFEMQ



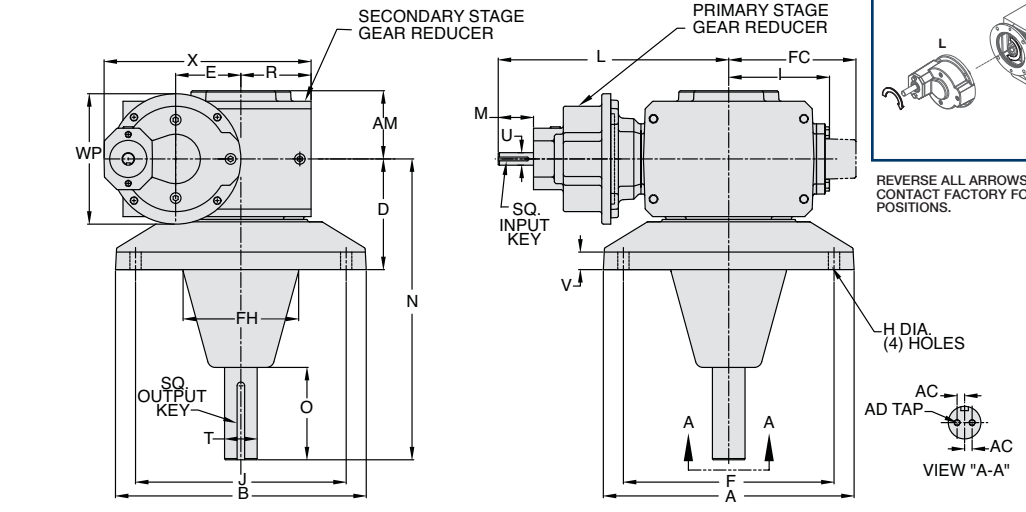


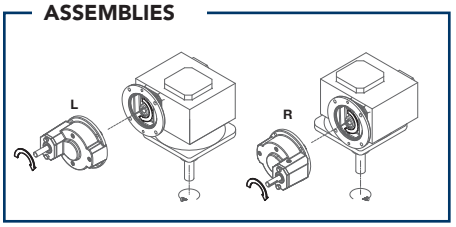
Style DXFEM





Style DXFE





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFHMQ, DXFHM, DXFH DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	CD	D	F	FH	H	I	L	M	N	O	R	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key❊	P**
NH830	11.00	0.375	.31-18 UNC X 1.00 DP	2.22	11.00	3.00	3.67	9.00	5.12	0.56	4.84	9.98	1.76	2.78	4.66	3.38	0.78	6.50	8.63	1.438	0.625	3/16 x 3/32	3/8 x 3.88
NH832	12.50	0.375	.31-18 UNC X 1.00 DP	2.79	12.50	3.25	4.91	10.50	5.75	0.56	5.02	10.17	1.76	3.36	4.63	4.19	0.88	6.50	10.63	1.625	0.625	3/16 x 3/32	3/8 x 3.69
NH842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	4.25	5.74	12.00	6.75	0.69	6.10	10.75	1.76	4.25	5.66	4.50	1.00	6.50	11.50	1.688	1.250	3/16 x 3/32	3/8 x 4.68
NH852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	5.25	6.00	14.00	8.00	0.81	7.50	12.14	1.76	5.25	5.62	4.88	1.25	6.50	14.00	2.188	1.250	3/16 x 3/32	1/2 x 4.63

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1		LQ	LQ1			RQ			
	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56TC/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH830	12.23	N/A	N/A	10.75■	N/A	N/A	N/A	10.36■	N/A	N/A	N/A
NH832	12.42	N/A	N/A	10.94■	N/A	N/A	N/A	10.55■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

‡ Metric IEC B5 input flange options are available only on quill input styles.

❊ Style DXFE and DXFEM only

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWMF	DXFEMQ
HWMFC	DXFEM
HMY	DXFE

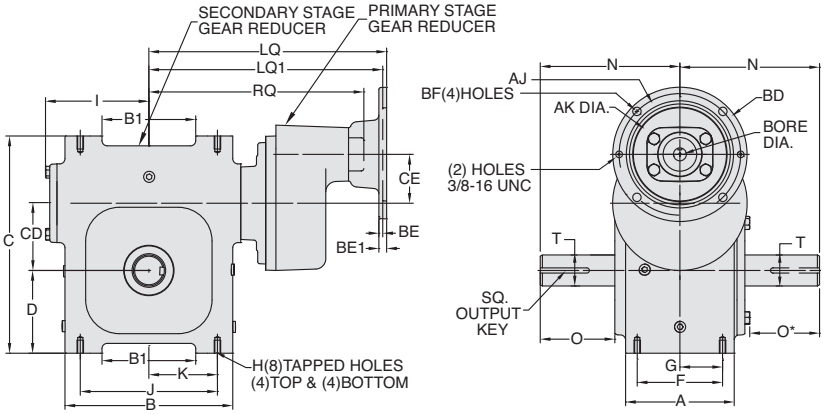
Refer to page 113 for complete interchange guide for original Grove Gear OE Series products.

ELECTRA-GEAR

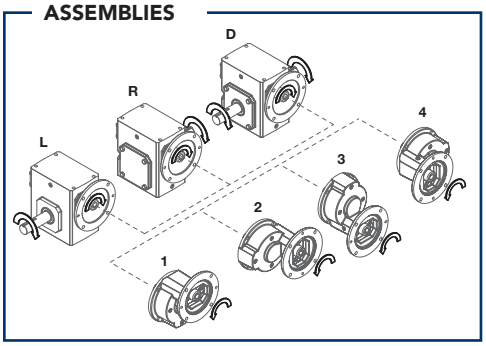
EL Series
Dimensions
Styles: DXMQ, DXM, DX

ALUMINUM EL SERIES

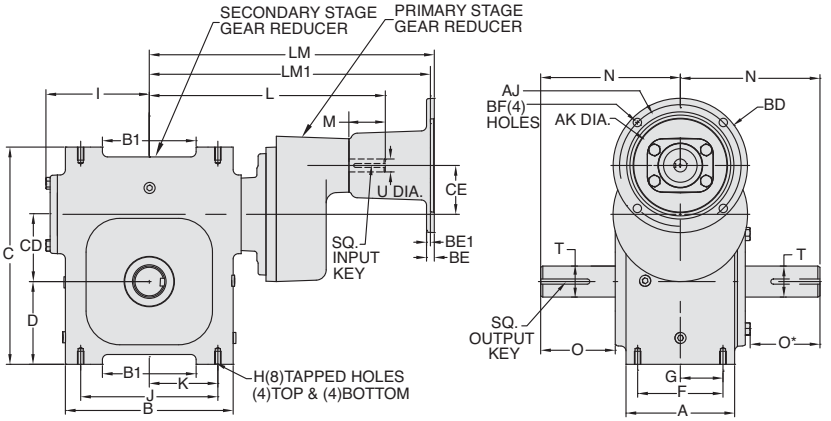
Style DXMQ



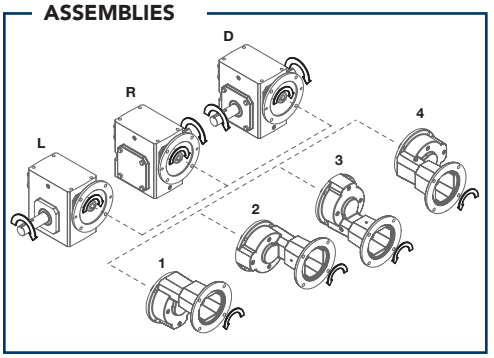
ASSEMBLIES



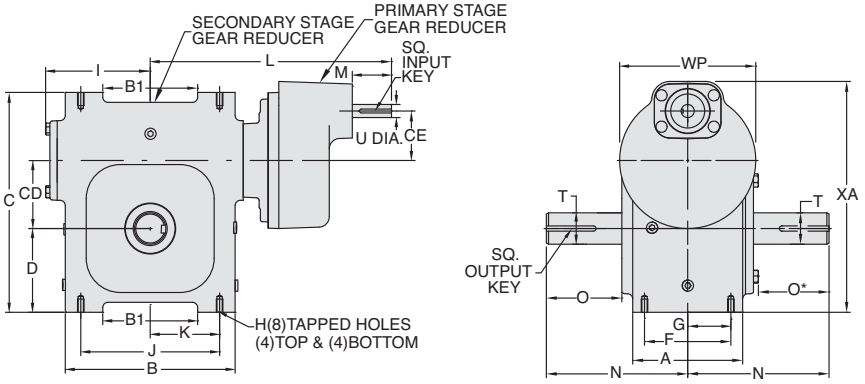
Style DXM



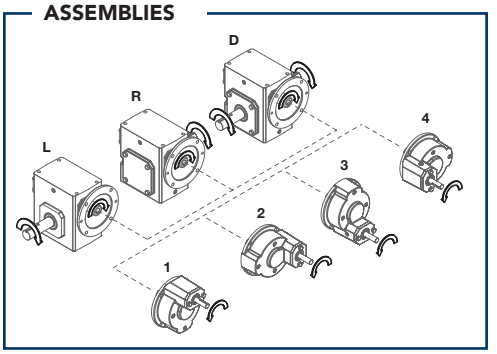
ASSEMBLIES



Style DX



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXMQ, DXM, DX DIMENSIONS (Inches)

Size	A	B	B1	C	CD	CE	D	DX	F	G	H Tap Size	H Depth	I	J	K	L	M
EL813	2.82	3.80	--	4.66	1.33	1.91	1.72	--	2.00	1.00	5/16-18 UNC	0.50	2.40	3.25	1.63	8.08	1.76
EL818	3.50	4.83	2.48	5.86	1.75	1.91	2.31	--	2.94	1.47	5/16-18 UNC	0.63	3.03	3.69	1.84	8.71	1.76
EL821	3.91	5.75	2.76	6.88	2.06	1.91	2.63	--	3.25	1.63	3/8-16 UNC	0.87	3.40	4.13	2.06	9.08	1.76
EL824	4.06	5.86	--	6.94	2.38	2.36	2.50	--	2.88	1.44	3/8-16 UNC	0.69	3.61	5.00	2.50	9.06	1.76
EL826	4.84	7.17	4.21	8.00	2.63	2.36	3.25	--	3.38	1.69	3/8-16 UNC	0.69	4.17	5.00	2.50	9.62	1.76
EL830	5.25	8.11	4.50	8.94	3.00	2.36	3.50	--	4.13	2.06	3/8-16 UNC	1.00	4.81	5.75	2.88	10.26	1.76
EL832	5.25	8.11	4.53	10.50	3.25	2.36	4.00	--	4.13	2.06	1/2-13 UNC	1.00	5.00	6.63	3.31	10.45	1.76

Size	N	O	O*	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL813	4.00	2.16	1.94	6.50	6.83	0.625	0.625	3/16 x 3/32	3/16 x 1.50
EL818	4.39	2.05	1.85	6.50	7.83	0.750	0.625	3/16 x 3/32	1/4 x 1.75
EL821	4.68	2.29	2.09	6.50	8.46	1.000	0.625	3/16 x 3/32	3/16 x 1.50
EL824	5.14	2.66	2.46	6.50	8.65	1.125	0.625	3/16 x 3/32	1/4 x 1.75
EL826	5.63	2.73	2.53	6.50	9.65	1.250	0.625	3/16 x 3/32	1/4 x 1.75
EL830	6.75	3.60	3.37	6.50	10.27	1.500	0.625	3/16 x 3/32	1/4 x 1.75
EL832	6.75	3.60	3.37	6.50	11.02	1.625	0.625	3/16 x 3/32	3/8 x 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	10.33	--	8.85	--	8.46	7.47
EL818	10.96	--	9.48	--	9.09	8.10
EL821	11.33	--	9.85	--	9.46	8.41
EL824	11.31	--	9.83	10.04	9.44	9.01
EL826	11.87	--	10.39	10.60	10.00	9.57
EL830	12.51	--	11.03	11.23	10.64	10.20
EL832	12.70	--	11.22	11.42	10.83	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

* Applies to double output shaft
◆ Keyway width by depth
❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

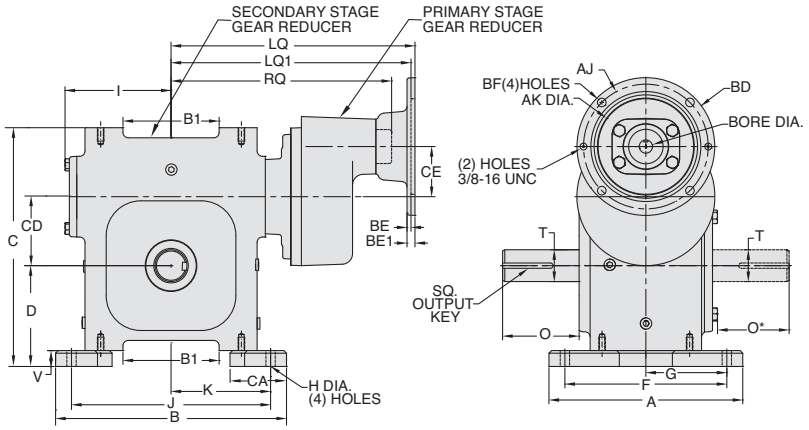
Original Style	New Style
H_MSC or H_MLSC	DXMQ
H_MC or H_MLC	DXM
H_M or H_ML	DX

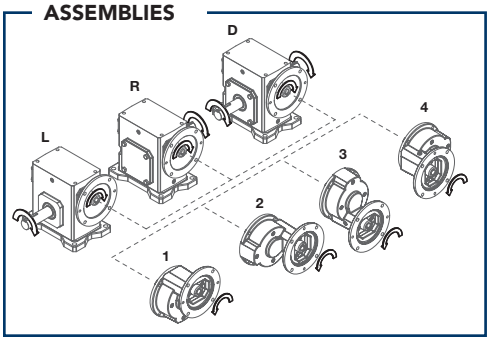
Convert Style DX to motorized coupling input using kits shown on page 278.

ELECTRA-GEAR
EL Series
Dimensions
Styles: DXTMQ, DXTM, DXT

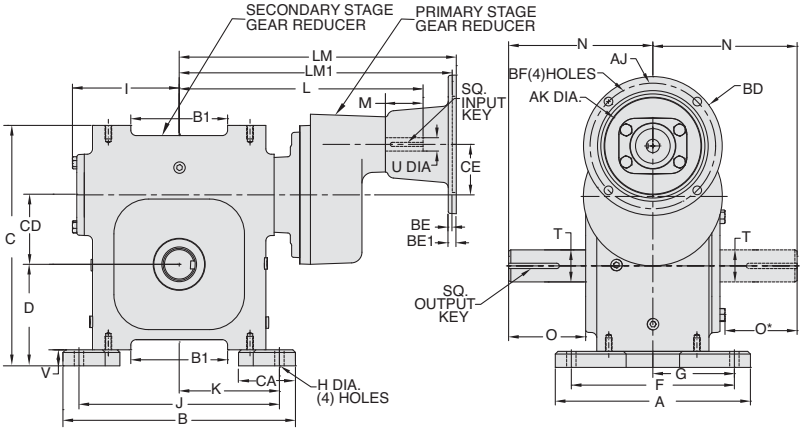
ALUMINUM EL SERIES

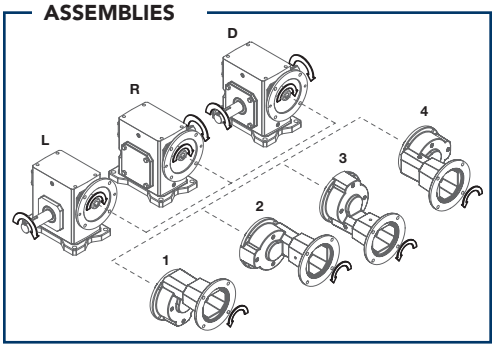
Style DXTMQ



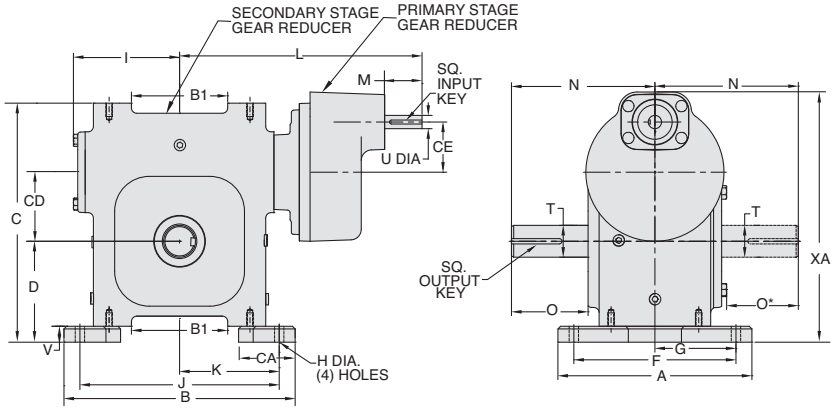


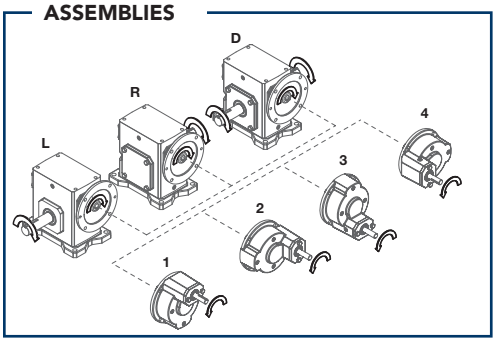
Style DXTM





Style DXT





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXTMQ, DXTM, DXT DIMENSIONS (Inches)

Size	A	B	B1	C	CD	CA	CE	D	F	G	H	I	J	K	L	M
EL813	4.06	5.13	--	4.66	1.33	1.56	1.91	2.25	3.31	1.66	0.34	2.40	4.38	2.19	8.08	1.76
EL818	5.19	6.06	2.48	5.86	1.75	2.15	1.91	2.84	4.38	2.19	0.38	3.03	5.25	2.63	8.71	1.76
EL821	6.63	7.25	2.76	6.88	2.06	2.66	1.91	3.25	5.38	2.69	0.44	3.40	6.00	3.00	9.08	1.76
EL824	6.38	7.69	--	6.94	2.38	2.59	2.36	3.25	4.88	2.44	0.47	3.61	6.19	3.09	9.06	1.76
EL826	6.63	8.13	4.21	8.00	2.63	2.81	2.36	3.94	5.38	2.69	0.50	4.17	6.88	3.44	9.62	1.76
EL830	9.00	9.88	4.50	8.94	3.00	3.69	2.36	4.25	7.50	3.75	0.56	4.81	8.38	4.19	10.26	1.76
EL832	9.13	10.88	4.53	10.50	3.25	3.69	2.36	4.75	7.63	3.82	0.56	5.00	9.38	4.69	10.45	1.76

Size	N	O	O*	V	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL813	4.00	2.16	1.96	0.53	6.50	7.36	0.625	0.625	3/16 x 3/32	3/16 x 1.38
EL818	4.39	2.05	1.85	0.56	6.50	8.39	0.750	0.625	3/16 x 3/32	3/16 x 1.38
EL821	4.68	2.29	2.09	0.63	6.50	9.09	1.000	0.625	3/16 x 3/32	1/4 x 1.44
EL824	5.14	2.66	2.46	0.75	6.50	9.40	1.125	0.625	3/16 x 3/32	1/4 x 1.62
EL826	5.63	2.73	2.53	0.69	6.50	10.34	1.250	0.625	3/16 x 3/32	1/4 x 1.62
EL830	6.75	3.60	3.37	0.75	6.50	11.02	1.500	0.625	3/16 x 3/32	3/8 x 2.25
EL832	6.75	3.60	3.37	0.75	6.50	11.77	1.625	0.625	3/16 x 3/32	3/8 x 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	10.33	--	8.85	--	8.46	7.47
EL818	10.96	--	9.48	--	9.09	8.10
EL821	11.33	--	9.85	--	9.46	8.41
EL824	11.31	--	9.83	10.04	9.44	9.01
EL826	11.87	--	10.39	10.60	10.00	9.57
EL830	12.51	--	11.03	11.23	10.64	10.20
EL832	12.70	--	11.22	11.42	10.83	10.39

NOTE: Larger sizes available with cast iron primary - Contact Factory.

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft
◆ Keyway width by depth
❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_ASC or H_ALSC	DXTMQ
H_AC or H_ALC	DXTM
H_A or H_AL	DXT

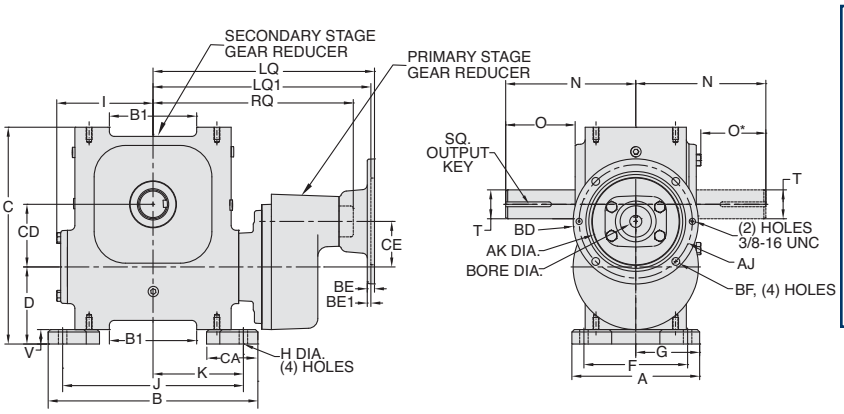
Convert Style DXT to motorized coupling input using kits shown on page 278.

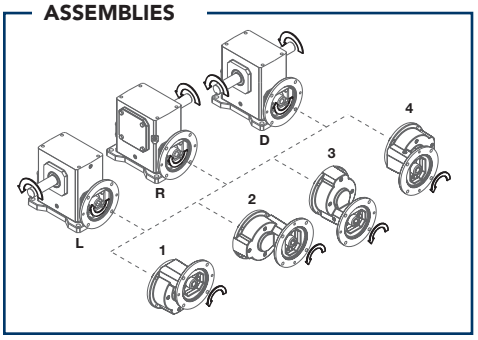
ALUMINUM EL SERIES

EL Series Dimensions

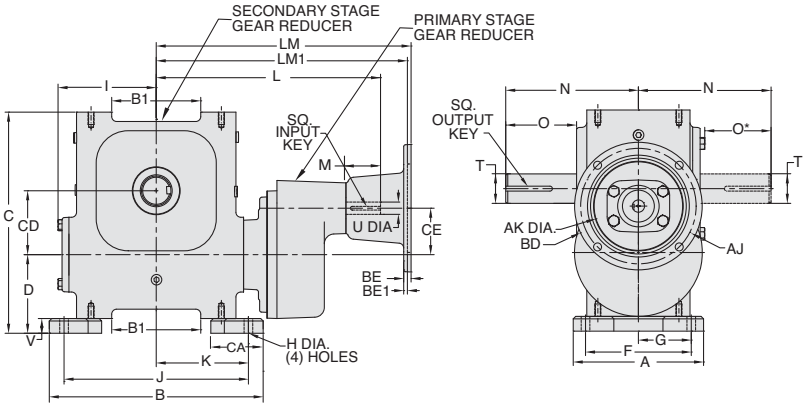
Styles: DXUMQ, DXUM, DXU

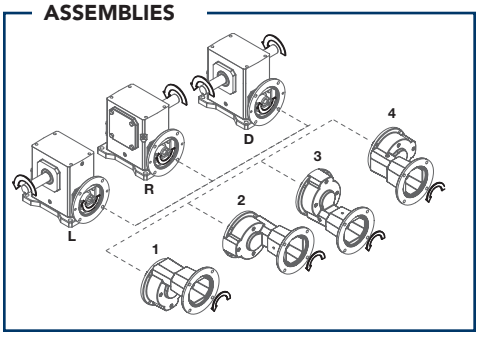
Style DXUMQ



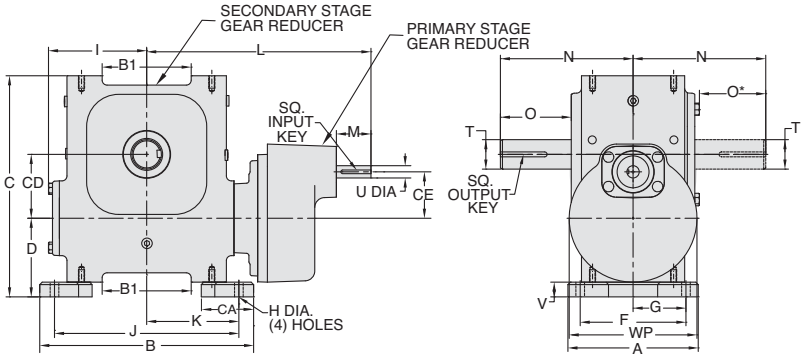


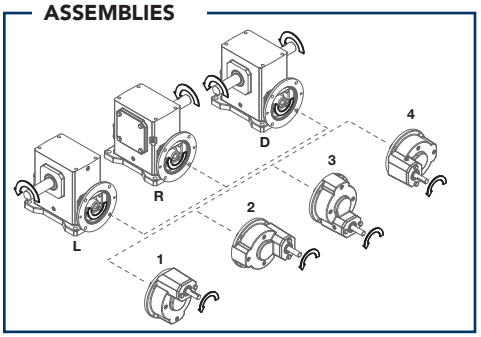
Style DXUM





Style DXU





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXUMQ, DXUM, DXU DIMENSIONS (Inches)

Size	A	B	B1	C	CD	CA	CE	D	F	G	H	I	J	K	L	M
EL813	4.06	5.13	--	4.66	1.33	1.56	1.91	2.25	3.31	1.66	0.34	2.40	4.38	2.19	8.08	1.76
EL818	5.19	6.06	2.48	5.86	1.75	2.15	1.91	2.84	4.38	2.19	0.38	3.03	5.25	2.63	8.71	1.76
EL821	6.63	7.25	2.76	6.88	2.06	2.66	1.91	3.25	5.38	2.69	0.44	3.40	6.00	3.00	9.08	1.76
EL824	6.38	7.69	--	6.94	2.38	2.59	2.36	3.25	4.88	2.44	0.47	3.61	6.19	3.09	9.06	1.76
EL826	6.63	8.13	4.21	8.00	2.63	2.81	2.36	3.94	5.38	2.69	0.50	4.17	6.88	3.44	9.62	1.76
EL830	9.00	9.88	4.50	8.94	3.00	3.69	2.36	4.25	7.50	3.75	0.56	4.81	8.38	4.19	10.26	3.61
EL832	9.13	10.88	4.53	10.50	3.25	3.69	2.36	4.75	7.63	3.82	0.56	5.00	9.38	4.69	10.45	3.61

Size	N	O	O*	V	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL813	4.00	2.16	1.96	0.53	6.50	7.36	0.625	0.625	3/16 x 3/32	3/16 x 1.38
EL818	4.39	2.05	1.85	0.56	6.50	8.39	0.750	0.625	3/16 x 3/32	3/16 x 1.38
EL821	4.68	2.29	2.09	0.63	6.50	9.09	1.000	0.625	3/16 x 3/32	1/4 x 1.44
EL824	5.14	2.66	2.46	0.75	6.50	9.40	1.125	0.625	3/16 x 3/32	1/4 x 1.62
EL826	5.63	2.73	2.53	0.69	6.50	10.34	1.250	0.625	3/16 x 3/32	1/4 x 1.62
EL830	6.75	3.60	3.37	0.75	6.50	11.02	1.500	0.625	3/16 x 3/32	3/8 x 2.25
EL832	6.75	3.60	3.37	0.75	6.50	11.77	1.625	0.625	3/16 x 3/32	3/8 x 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	10.33	--	8.85	--	8.46	7.47
EL818	10.96	--	9.48	--	9.09	8.10
EL821	11.33	--	9.85	--	9.46	8.41
EL824	11.31	--	9.83	10.04	9.44	9.01
EL826	11.87	--	10.39	10.60	10.00	9.57
EL830	12.51	--	11.03	11.23	10.64	10.20
EL832	12.70	--	11.22	11.42	10.83	10.39

NOTE: Larger sizes available with cast iron primary - Contact Factory.

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft
◆ Keyway width by depth
❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	DXUMQ
STANDARD CATALOGED	DXUM
OPTION	DXU

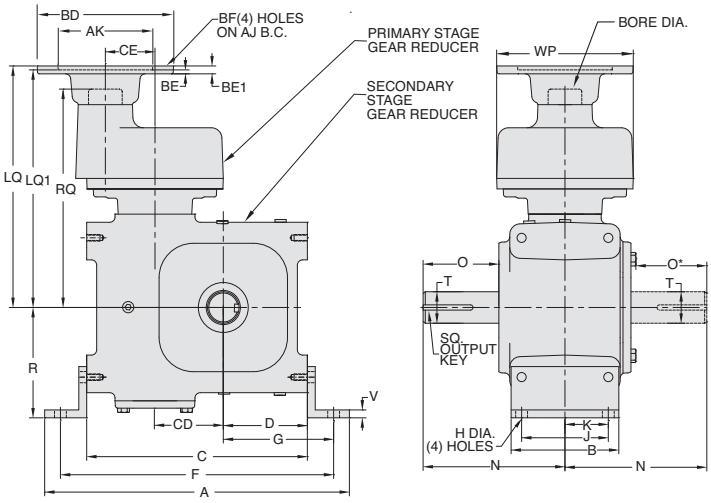
Convert Style DXU to motorized coupling input using kits shown on page 278.

ELECTRA-GEAR

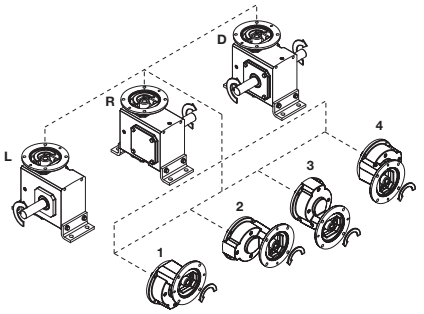
EL Series
Dimensions
Styles: DXJMQ, DXJM, DXJ

ALUMINUM EL SERIES

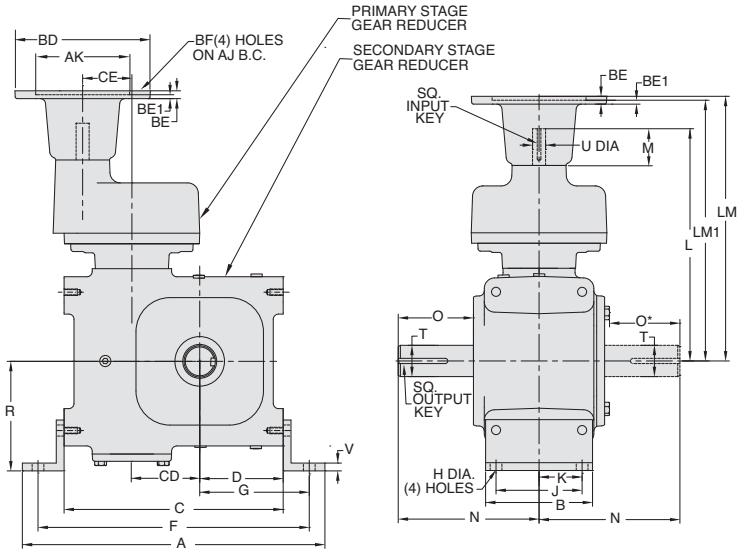
Style DXJMQ



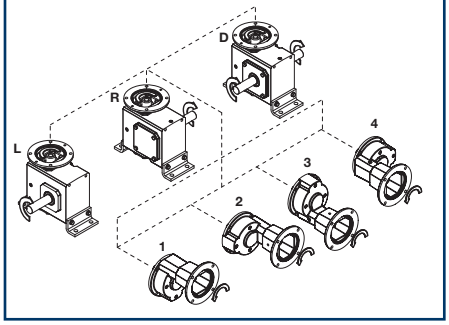
ASSEMBLIES



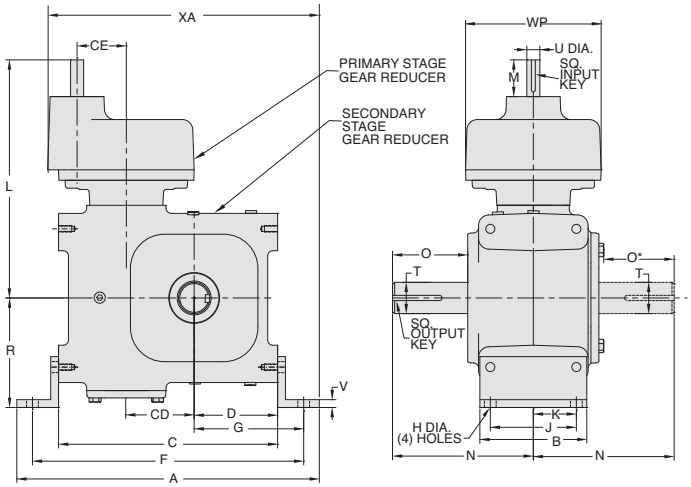
Style DXJM



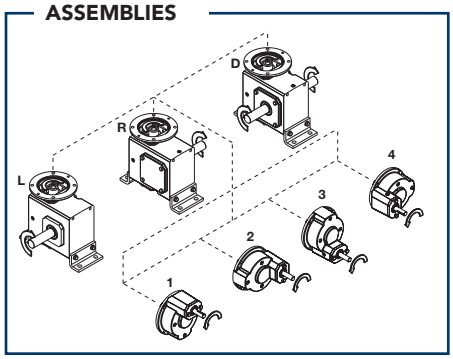
ASSEMBLIES



Style DXJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJMQ, DXJM, DXJ DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	G	H	J	K	L	M
EL813	7.16	2.91	4.66	1.33	1.91	1.72	6.41	2.60	0.34	2.00	1.00	8.08	1.76
EL818	8.88	3.56	5.86	1.75	1.91	2.31	7.88	3.32	0.38	2.94	1.47	8.71	1.76
EL821	9.87	4.00	6.88	2.06	1.91	2.63	8.87	3.62	0.44	3.25	1.63	9.08	1.76
EL824	10.31	4.00	6.94	2.38	2.36	2.50	9.19	3.63	0.47	2.88	1.44	9.06	1.76
EL826	12.00	4.38	8.00	2.63	2.36	3.25	10.50	4.50	0.50	3.38	1.69	9.62	1.76
EL830	12.94	5.13	8.94	3.00	2.36	3.50	11.44	4.75	0.56	4.13	2.06	10.26	1.76
EL832	14.50	5.13	10.50	3.25	2.36	4.00	13.00	5.25	0.56	4.13	2.06	10.45	1.76

Size	N	O	O*	R	V	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL813	4.00	2.16	1.96	2.94	0.53	6.50	7.36	0.625	0.625	3/16 x 3/32	3/16 x 1.38
EL818	4.39	2.05	1.85	2.97	0.56	6.50	8.39	0.750	0.625	3/16 x 3/32	3/16 x 1.38
EL821	4.68	2.29	2.09	3.47	0.63	6.50	9.09	1.000	0.625	3/16 x 3/32	1/4 x 1.44
EL824	5.14	2.66	2.46	4.06	0.75	6.50	9.40	1.125	0.625	3/16 x 3/32	1/4 x 1.62
EL826	5.63	2.73	2.53	4.03	0.69	6.50	10.34	1.250	0.625	3/16 x 3/32	1/4 x 1.62
EL830	6.75	3.60	3.37	4.81	0.75	6.50	11.02	1.500	0.625	3/16 x 3/32	3/8 x 2.25
EL832	6.75	3.60	3.37	5.25	0.75	6.50	11.77	1.625	0.625	3/16 x 3/32	3/8 x 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	10.33	--	8.85	--	8.46	7.47
EL818	10.96	--	9.48	--	9.09	8.10
EL821	11.33	--	9.85	--	9.46	8.41
EL824	11.31	--	9.83	10.04	9.44	9.01
EL826	11.87	--	10.39	10.60	10.00	9.57
EL830	12.51	--	11.03	11.23	10.64	10.20
EL832	12.70	--	11.22	11.42	10.83	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

* Applies to double output shaft
◆ Keyway width by depth
❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_JBSC or H_JBLSC	DXJMQ
H_JBC or H_JBC	DXJM
H_JB or H_JB	DXJ

Convert Style DXJ to motorized coupling input using kits shown on page 278.

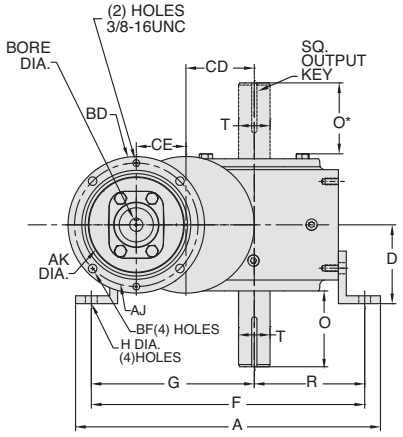
ELECTRA-GEAR

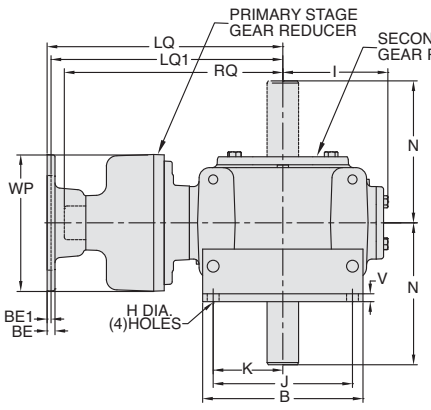
ALUMINUM EL SERIES

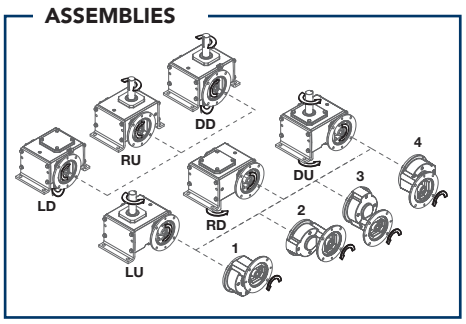
EL Series Dimensions

Styles: DXVLMQ, DXVLM, DXVL

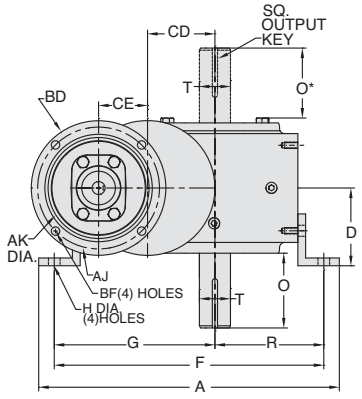
Style DXVLMQ

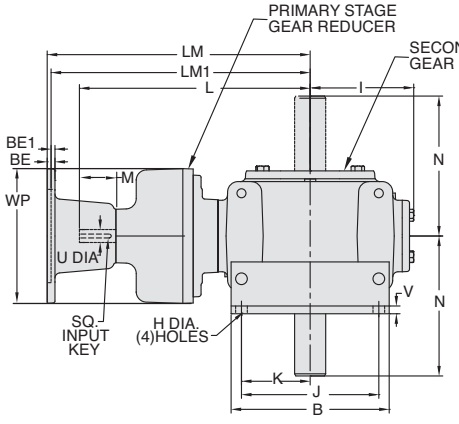


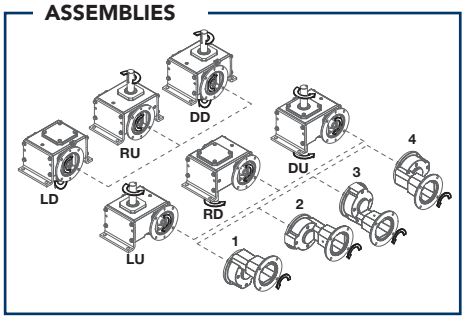




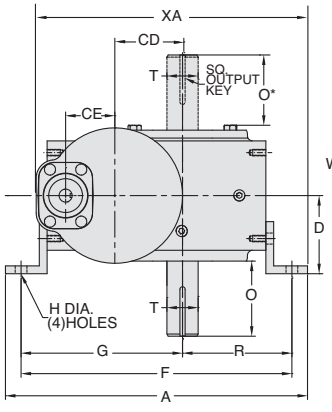
Style DXVLM

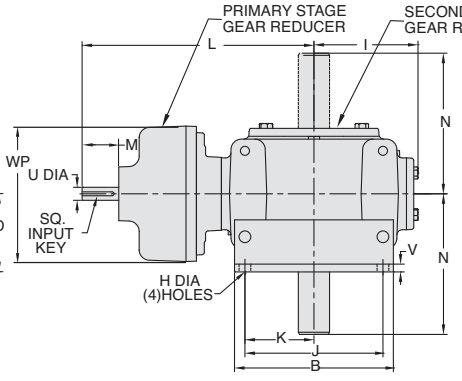


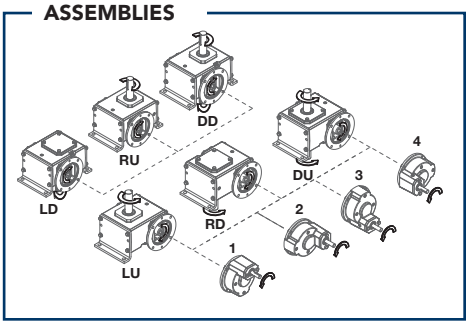




Style DXVL







REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

EL Series Dimensions

Styles: DXVLMQ, DXVLM, DXVL

STYLE DXVLMQ, DXVLM, DXVL DIMENSIONS (Inches)

Size	A	B	CD	CE	D	F	G	H	J	K	L	M
EL813	7.16	4.13	1.33	1.91	2.31	6.16	3.69	0.34	3.25	1.00	8.08	1.76
EL818	8.88	4.25	1.75	1.91	2.28	7.88	4.57	0.38	3.69	1.47	8.71	1.76
EL821	9.87	4.81	2.06	1.91	2.56	8.87	5.25	0.44	4.13	1.63	9.08	1.76
EL824	10.31	5.88	2.38	2.36	2.75	9.38	5.66	0.47	5.00	1.44	9.06	1.76
EL826	12.00	5.88	2.63	2.36	2.81	10.50	6.00	0.50	5.00	1.69	9.62	1.76
EL830	12.94	6.75	3.00	2.36	3.75	11.44	6.69	0.56	5.75	2.06	10.26	1.76
EL832	14.50	7.63	3.25	2.36	3.75	13.00	7.75	0.56	6.63	2.06	10.45	1.76

Size	N	O	O*	R	V	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL813	4.00	2.16	1.96	1.72	0.19	6.50	8.08	0.625	0.625	3/16 x 3/32	3/16 x 1.38
EL818	4.39	2.05	1.85	2.31	0.38	6.50	9.33	0.750	0.625	3/16 x 3/32	3/16 x 1.38
EL821	4.68	2.29	2.09	2.63	0.38	6.50	9.96	1.000	0.625	3/16 x 3/32	1/4 x 1.44
EL824	5.14	2.66	2.46	2.50	0.31	6.50	10.65	1.125	0.625	3/16 x 3/32	1/4 x 1.62
EL826	5.63	2.73	2.53	3.25	0.31	6.50	11.65	1.250	0.625	3/16 x 3/32	1/4 x 1.62
EL830	6.75	3.60	3.37	3.50	0.25	6.50	12.27	1.500	0.625	3/16 x 3/32	3/8 x 2.25
EL832	6.75	3.60	3.37	4.00	0.38	6.50	14.52	1.625	0.625	3/16 x 3/32	3/8 x 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	10.33	--	8.85	--	8.46	7.47
EL818	10.96	--	9.48	--	9.09	8.10
EL821	11.33	--	9.85	--	9.46	8.41
EL824	11.31	--	9.83	10.04	9.44	9.01
EL826	11.87	--	10.39	10.60	10.00	9.57
EL830	12.51	--	11.03	11.23	10.64	10.20
EL832	12.70	--	11.22	11.42	10.83	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

* Applies to double output shaft

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

– EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

– See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_BSC or H_BLSC	DXVLMQ
H_BC or H_BLC	DXVLM
H_B or H_BL	DXVL

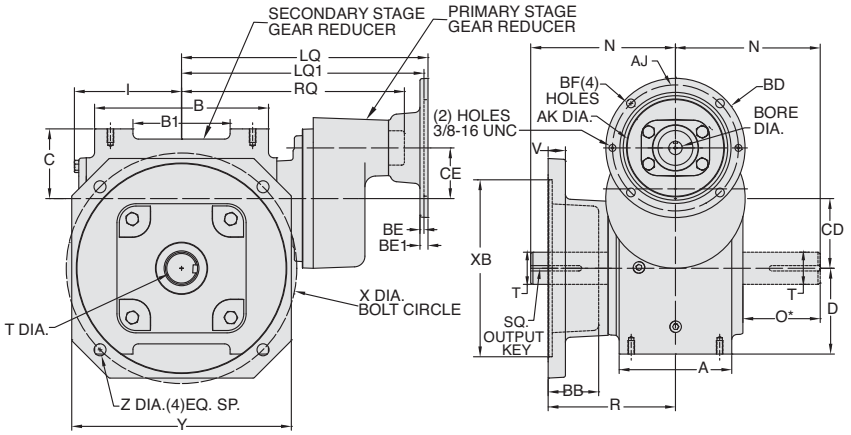
Convert Style DXVL to motorized coupling input using kits shown on page 278.

ALUMINUM EL SERIES

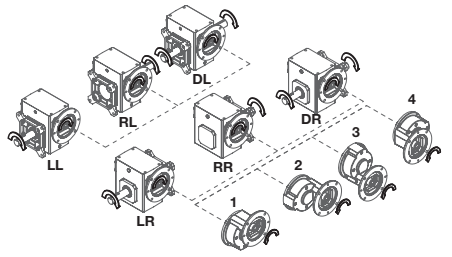
EL Series Dimensions

Styles: DXFRMQ, DXFRM, DXFR

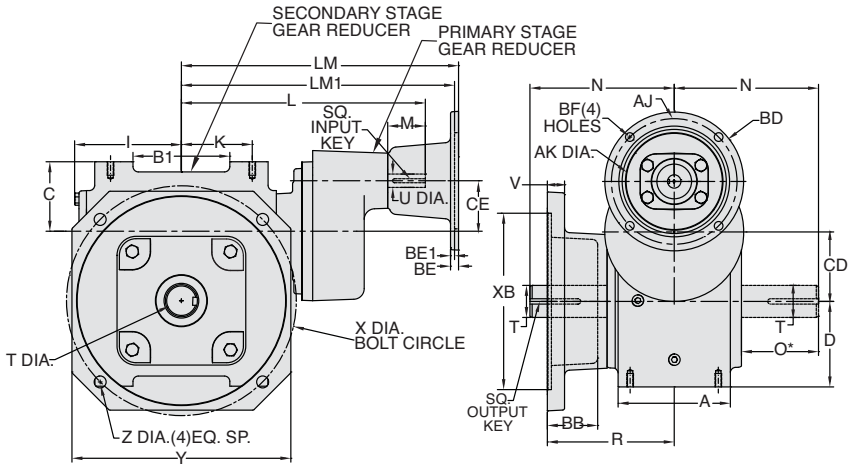
Style DXFRMQ



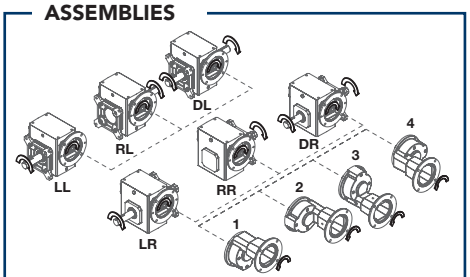
ASSEMBLIES



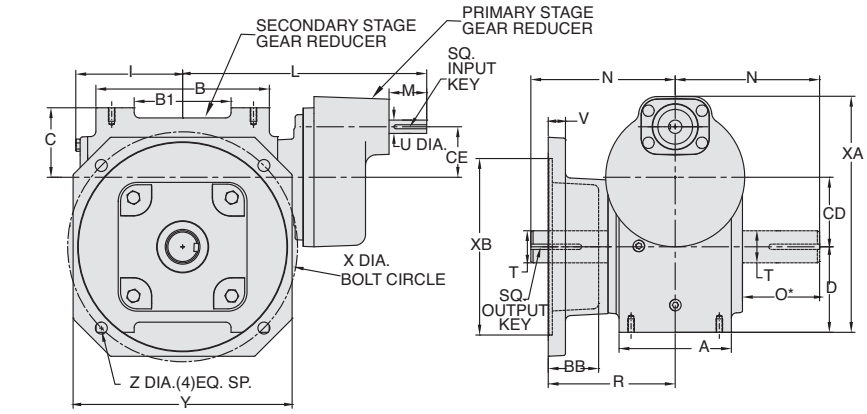
Style DXFRM



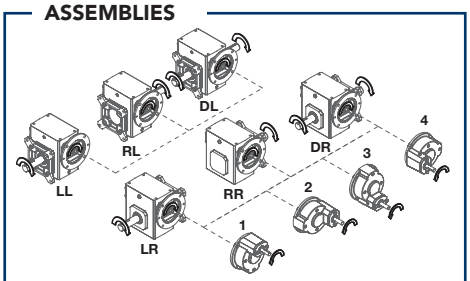
ASSEMBLIES



Style DXFR



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFRMQ, DXFRM, DXFR DIMENSIONS (Inches)

Size	A	B	B1	BB	C	CD	CE	D	I	L	M	N	O*	R
EL818	3.50	4.83	2.48	1.27	1.81	1.75	1.91	2.28	3.03	8.71	1.76	4.39	1.85	3.53
EL821	3.91	5.75	2.76	1.51	2.19	2.06	1.91	2.56	3.40	9.08	1.76	4.68	2.09	4.25
EL824	4.06	5.86	--	1.35	2.06	2.38	2.36	2.75	3.61	9.06	1.76	5.14	2.46	4.15
EL826	4.84	7.17	4.21	1.35	2.12	2.63	2.36	2.81	4.17	9.62	1.76	5.63	2.53	4.56
EL830	5.25	8.11	4.50	2.36	2.44	3.00	2.36	3.75	4.81	10.26	1.76	6.75	3.37	5.75
EL832	5.25	8.11	4.53	2.54	3.25	3.25	2.36	3.75	5.00	10.45	1.76	6.75	3.37	5.94

Size	V	WP	X	XA	XB	Y	Z	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL818	0.38	6.50	3.13	7.83	-	4.10	0.34	0.750	0.625	3/16 x 3/32	3/16 x 1.38
EL821	0.38	6.50	6.88	8.46	6.00	6.49	0.44	1.000	0.625	3/16 x 3/32	1/4 x 1.44
EL824	0.31	6.50	7.75	8.65	6.50	6.99	0.50	1.125	0.625	3/16 x 3/32	1/4 x 1.62
EL826	0.31	6.50	7.75	9.65	6.50	6.99	0.50	1.250	0.625	3/16 x 3/32	1/4 x 1.62
EL830	0.25	6.50	9.13-9.50 ▲	10.27	8.25	8.74	0.56	1.500	0.625	3/16 x 3/32	3/8 x 2.25
EL832	0.38	6.50	9.13-9.50 ▲	11.02	8.25	8.74	0.56	1.625	0.625	3/16 x 3/32	3/8 x 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL818	10.96	--	9.48	--	9.09	--
EL821	11.33	--	9.85	--	9.46	--
EL824	11.31	--	9.83	10.83	9.44	10.63
EL826	11.87	--	10.39	11.42	10.00	11.36
EL830	12.51	--	11.03	11.92	10.64	11.86
EL832	12.70	--	11.22	12.10	10.83	12.05

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

* Applies to double output shaft

▲ Slotted holes

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	DXFRMQ
STANDARD CATALOGED	DXFRM
OPTION	DXFR

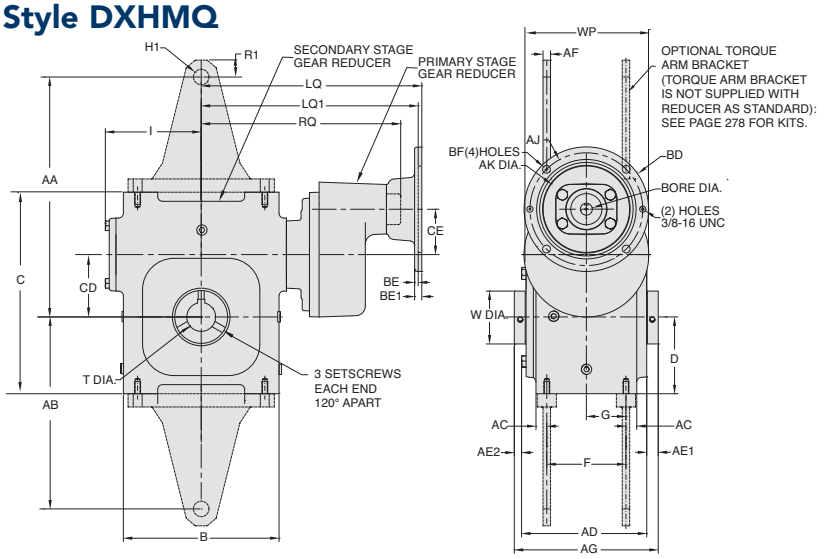
NOTE: New styles are not a direct replacement to orignal ring base.

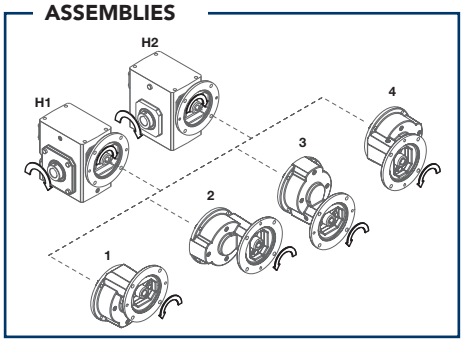
Convert Style DXFR to motorized coupling input using kits shown on page 278.

ELECTRA-GEAR
EL Series
Dimensions
Styles: DXHMQ, DXHM, DXH

ALUMINUM EL SERIES

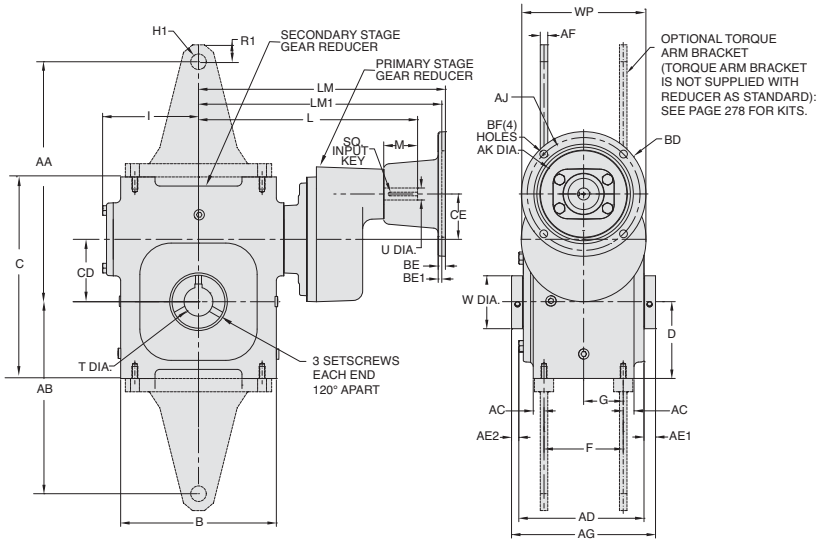
Style DXHMQ

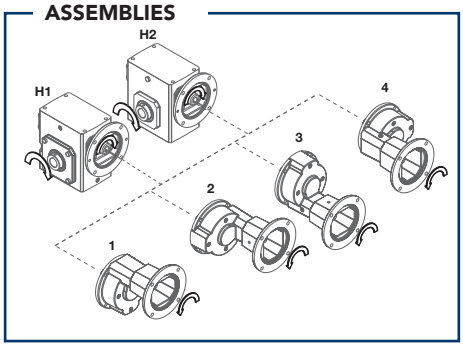




H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

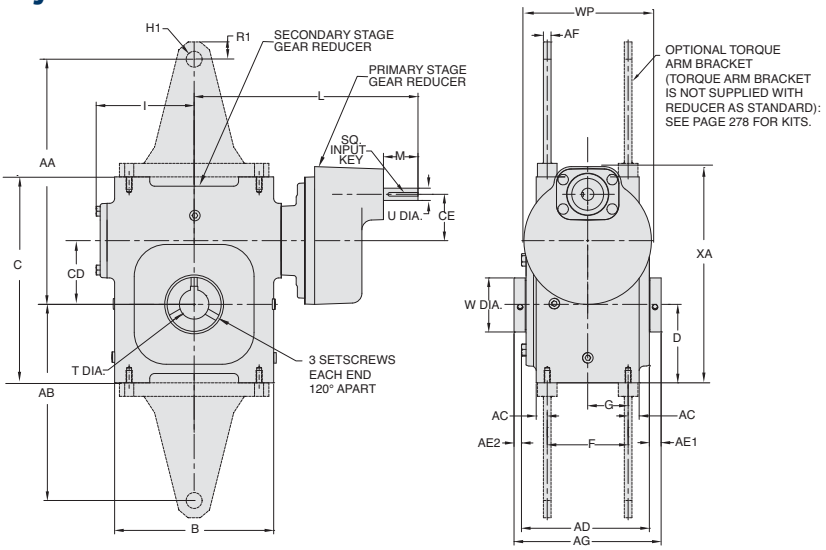
Style DXHM

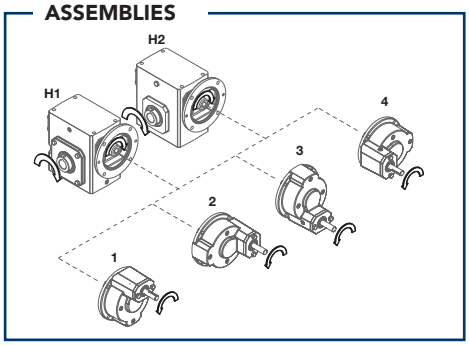




H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXH





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

STYLE DXHMQ, DXHM, DXH DIMENSIONS (Inches)

Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	C	CD	CE	D	F	G	H1
EL813	--	--	0.41	3.89	0.58	0.26	--	4.73	3.80	4.66	1.33	1.91	1.72	2.00	1.00	--
EL818	6.25	5.00	0.28	4.72	0.49	0.29	0.69	5.50	4.83	5.86	1.75	1.91	2.31	2.94	1.47	0.53
EL821	7.63	6.00	0.33	4.98	0.60	0.42	0.69	6.00	5.75	6.88	2.06	1.91	2.63	3.25	1.63	0.53
EL824	7.81	5.87	0.59	5.17	1.02	0.81	0.69	7.00	5.86	6.94	2.38	2.36	2.50	2.88	1.44	0.53
EL826	8.50	7.00	0.73	6.00	0.60	0.40	0.69	7.00	7.17	8.00	2.63	2.36	3.25	3.38	1.69	0.53
EL830	9.94	8.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.94	3.00	2.36	3.50	4.13	2.06	0.53
EL832	12.50	10.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	10.50	3.25	2.36	4.00	4.13	2.06	0.53

Size	I	L	M	R1	W	WP	XA	T -0.000 +0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL813	2.40	8.08	1.76	-	1.00	6.50	6.83	0.625	0.625	3/16 x 3/32	3/16 x 1.38
EL818	3.03	8.71	1.76	0.66	1.44	6.50	7.83	1.000	0.625	3/16 x 3/32	3/16 x 1.38
EL821	3.40	9.08	1.76	0.75	1.94	6.50	8.46	1.500*	0.625	3/16 x 3/32	1/4 x 1.44
EL824	3.61	9.06	1.76	0.75	1.94	6.50	8.56	1.500*	0.625	3/16 x 3/32	1/4 x 1.62
EL826	4.17	9.62	1.76	0.75	1.94	6.50	9.65	1.500*	0.625	3/16 x 3/32	1/4 x 1.62
EL830	4.81	10.26	1.76	0.81	2.76	6.50	10.27	2.188	0.625	3/16 x 3/32	3/8 x 2.25
EL832	5.00	10.45	1.76	0.88	2.76	6.50	11.02	2.188	0.625	3/16 x 3/32	3/8 x 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	10.33	--	8.85	--	8.46	7.47
EL818	10.96	--	9.48	--	9.09	8.10
EL821	11.33	--	9.85	--	9.46	8.41
EL824	11.31	--	9.83	10.04	9.44	9.01
EL826	11.87	--	10.39	10.60	10.00	9.57
EL830	12.51	--	11.03	11.23	10.64	10.20
EL832	12.70	--	11.22	11.42	10.83	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- Max bore dimensions shown. For additional bores available, refer to page 130.
- ◆ Keyway width by depth
- ❊ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_MHSC	DXHMQ
H_MHC	DXHM
H_MH	DXH

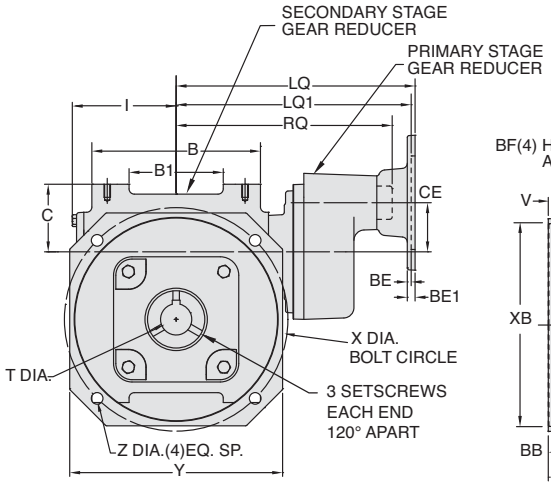
Convert Style DXH to motorized coupling input using kits shown on page 278.

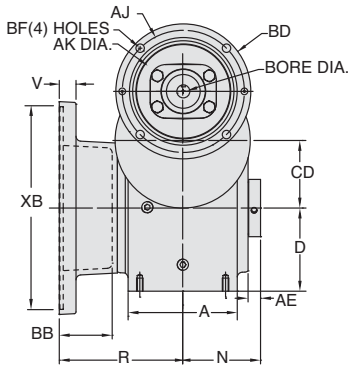
ELECTRA-GEAR

EL Series
Dimensions
Styles: DXFHMQ, DXFHM, DXFH

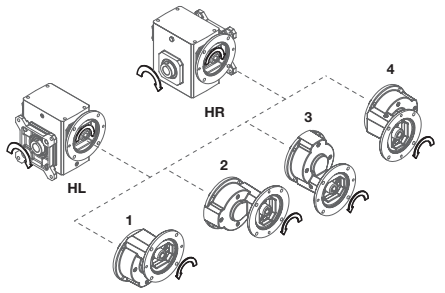
ALUMINUM EL SERIES

Style DXFHMQ

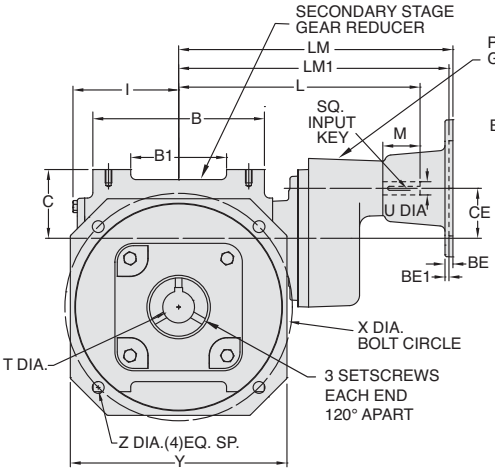


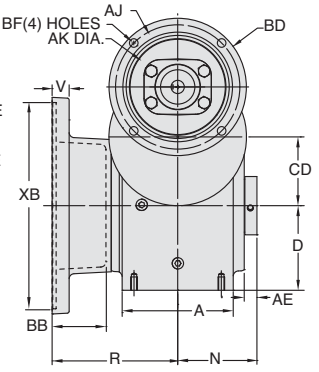


ASSEMBLIES

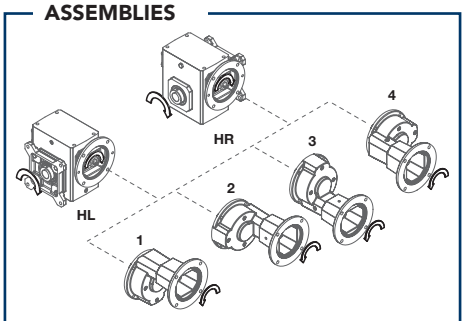


Style DXFHM

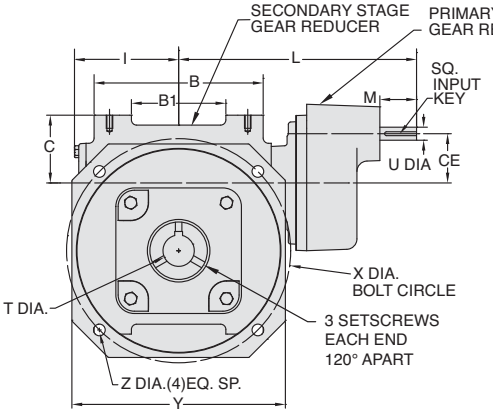


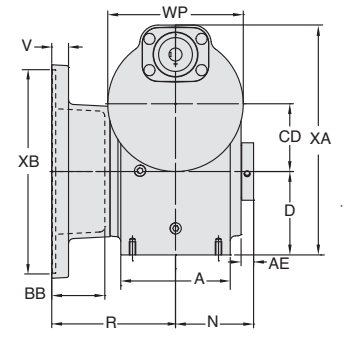


ASSEMBLIES

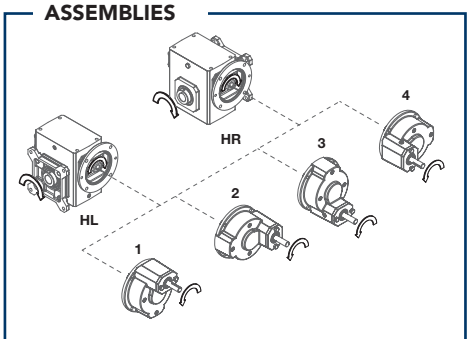


Style DXFH





ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT Factory FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFHMQ, DXFHM, DXFH DIMENSIONS (Inches)

Size	A	AE	B	BB	B1	C	CD	CE	D	I	L	M	N	R	V
EL818	3.50	0.49	4.83	1.27	2.48	1.81	1.75	1.91	2.31	3.03	8.71	1.76	2.75	3.53	0.38
EL821	3.91	0.60	5.75	1.51	2.76	2.19	2.06	1.91	2.63	3.40	9.08	1.76	2.99	4.25	0.50
EL824	4.06	1.05	5.86	1.35	--	2.06	2.38	2.36	2.50	3.61	9.06	1.76	3.51	4.15	0.63
EL826	4.84	0.60	7.17	1.35	4.21	2.12	2.63	2.36	3.25	4.17	9.62	1.76	3.19	4.56	0.63
EL830	5.25	0.60	8.11	2.36	4.50	2.44	3.00	2.36	3.50	4.81	10.26	1.76	3.75	5.75	0.81
EL832	5.25	0.60	8.11	2.54	4.53	3.25	3.25	2.36	4.00	5.00	10.45	1.76	3.75	5.94	0.81

Size	W	WP	X	XA	XB	Y	Z	T -0.000 +0.0015	U +0.000 -0.0015	Input Key ❊	Output Key
EL818	1.44	6.50	3.13	7.83	-	4.10	0.34	1.000	0.625	3/16 x 3/32	1/4 x 3.00
EL821	1.94	6.50	6.88	8.46	6.00	6.49	0.44	1.500*	0.625	3/16 x 3/32	3/8 x 3.00
EL824	1.94	6.50	7.38	8.65	6.50	6.99	0.50	1.500*	0.625	3/16 x 3/32	3/8 x 3.00
EL826	1.94	6.50	7.38	9.65	6.50	6.99	0.50	1.500*	0.625	3/16 x 3/32	3/8 x 3.00
EL830	2.76	6.50	9.13-9.50 ▲	10.27	8.25	8.74	0.56	2.188	0.625	3/16 x 3/32	1/2 x 3.00
EL832	2.76	6.50	10.75	11.02	8.25	10.24	0.56	2.188	0.625	3/16 x 3/32	1/2 x 3.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56TC/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL818	10.96	--	9.48	--	9.09	--
EL821	11.33	--	9.85	--	9.46	--
EL824	11.31	--	9.83	10.83	9.44	10.63
EL826	11.87	--	10.39	11.42	10.00	11.36
EL830	12.51	--	11.03	11.92	10.64	11.86
EL832	12.70	--	11.22	12.10	10.83	12.05

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- Max bore dimensions shown. For additional bores available, refer to page 130.

▲ Slotted holes

◆ Keyway width by depth

❊ Solid input shaft and C-faced coupling input reducers have same input shaft length and key.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.

— See page 202 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_RHSC	DXFHMQ
H_RHC	DXFHM
H_RH	DXFH

Convert Style DXFH to motorized coupling input using kits shown on page 278.

WASHGUARD Gear Reducers & GEAR+MOTOR™

With gear reducers in epoxy painted cast iron, polished aluminum and stainless steel, Grove Gear offers a solution for any washdown application.



CAST IRON WASHGUARD® GEAR REDUCERS

Grove Gear **IRONMAN WASHGUARD®** reducers are designed and built to withstand the rigors of high pressure washdown environments in food service and other wet or humid conditions. A white, food-grade epoxy finish provides superior durability in wet environments and resists caustic cleaning solutions. All standard cast iron products are available enhanced with WASHGUARD® features assuring trouble-free operation.



ALUMINUM PLATINUM GEAR REDUCERS

EL Series PLATINUM aluminum gear reducers are a light weight, yet durable alternative for food processing and washguard environments featuring a smooth, polished and paint-free finish. They are available off-the-shelf or customized to your exact specifications. Available in worm gear reducers, ratio multipliers and small, helical-concentric reducers.



STAINLESS STEEL GEAR REDUCERS

Premium WASHGUARD® All-Stainless reducers offer superior corrosion protection. Our stainless steel housing, shaft, covers and external hardware offer an exceptionally long life. Each reducer comes with USDA H1 synthetic oil, eliminating the need for oil changes. Our premium stainless gear reducers are supplied with 316 grade stainless steel housing and covers. These premium reducers offer superior corrosion protection, and can withstand the harshest conditions. Available in worm gear reducers, ratio multipliers, helical-concentric and helical-bevel reducers.



GEAR+MOTOR™

Stock GEAR+MOTOR™

Combining Grove Gear built tough, long lasting, energy efficient gear reducers with performance matched LEESON or Lincoln motors, you can maximize system efficiency and rely on unmatched product strength, precision and dependability.

REFER TO PAGES 258-259 FOR FEATURES

- Viton® double-lip seals - up to five times more durable than nitrile seals - provide added resistance to chemicals
- Patented Forsheda V-ring on output shaft provides extra protection from contaminants
- O-ring on "flat-faced" input flange provides a positive seal against moisture intrusion
- Food grade white epoxy paint
- Food-Grade Synthetic Lubricant, Mobil PAG 460 or equivalent, meets USDA Class H1 standards

GOOD

- Nine sizes available to 29 HP
- Available in single, double and triple reduction with ratios from 5:1 to 216,000:1
- Worm gear reducers and helical-worm gear reducers
- Clean, polished and paint-free finish
- Lightweight alternative to cast iron
- Lower cost alternative to stainless steel
- Superior corrosion resistance to painted cast iron
- Food-Grade Synthetic Lubricant, Mobil PAG 460 or equivalent, meets USDA Class H1 standards
- Stainless steel shafts and hardware

BETTER

- O-ring on face of input flange provides a positive seal against moisture intrusion
- Stainless steel output shaft
- Stainless steel hardware, including square-head pipe plugs to eliminate particle entrapment in vent locations
- Viton® double-lip shaft seals for superior resistance to chemicals common in washdown applications
- Food-Grade Synthetic Lubricant, Mobil PAG 460 or equivalent, meets USDA Class H1 standards
- Housing and covers are 300 series cast stainless steel to withstand extreme environments

BEST

Chemical Compatibility Summary

Material	Reaction Level to Material		
	Cast Iron	Aluminum	316 Stainless
Ammonia Anhydrous	D	B	A
Acetic Acid	D	B	B
Arsenic Acid	D	D	A
Barium Chloride	C	D	A
Barium Sulfate	B	B	B
Beer	D	A	A
Butter	D	A	A
Butyl Alcohol	A	B	C
Calcium Chloride	C	D	B
Carbonic Acid	D	B	A
Catsup	D	D	A
Citric Acid	D	C	A
Chlorine (Dry)	A	C	A
Detergents	N/A	B	A
Diethylene Glycol	A	B	A
Formaldehyde	D	A	A
Grape Juice	D	N/A	A
Lactic Acid	D	B	B
Mayonaise	D	A	A
Nitric Acid (50%)	D	D	A
Salad Dressing	D	B	A
Soap Solutions	A	C	A
Sodium Hydroxide (80%)	D	D	B
Sodium Hypochlorite (<20%)	D	D	C
Sodium Sulfide	A	C	B
Soy Sauce	D	A	A
Sulferic Acid (<10%)	C	D	B
Sulfer Dioxide	N/A	C	A
Tannic Acid	C	C	A
Turpentine	A	C	B
Vegetable Juice	D	D	A
Vinegar	D	D	A
Water, Fresh	D	B	A
Water, Salt	D	B	B
Whey	N/A	B	A
Whiskey and Wines	D	C	A
Zinc Chloride	D	D	B
Zinc Sulfate	D	D	A

A = Excellent
B = Good, minor effect
C = Fair, moderate affect (not recommended for continuous use)
D = Severe effect, not recommended
N/A = Information not available







WASHGUARD® Gear Reducers Designed For Washdown Duty

WASHGUARD® Reducer Features

Grove Gear WASHGUARD® gear reducers are designed and built to withstand the rigors of high-pressure washdowns in nearly any severe environment, including: food service, chemical and poultry processing, car washes and more. Built on the foundation of Grove Gear's industrial-duty Grove Gear Ironman™ line, these reducers add exclusive WASHGUARD® All-Stainless features to ensure trouble-free operation.

Combine the gear reducer with a LEESON WASHGUARD® epoxy painted or All-Stainless motor for a Gear+Motor™ that boasts an unmatched ability to thrive under conditions that would quickly destroy most other motors and gear reducers.

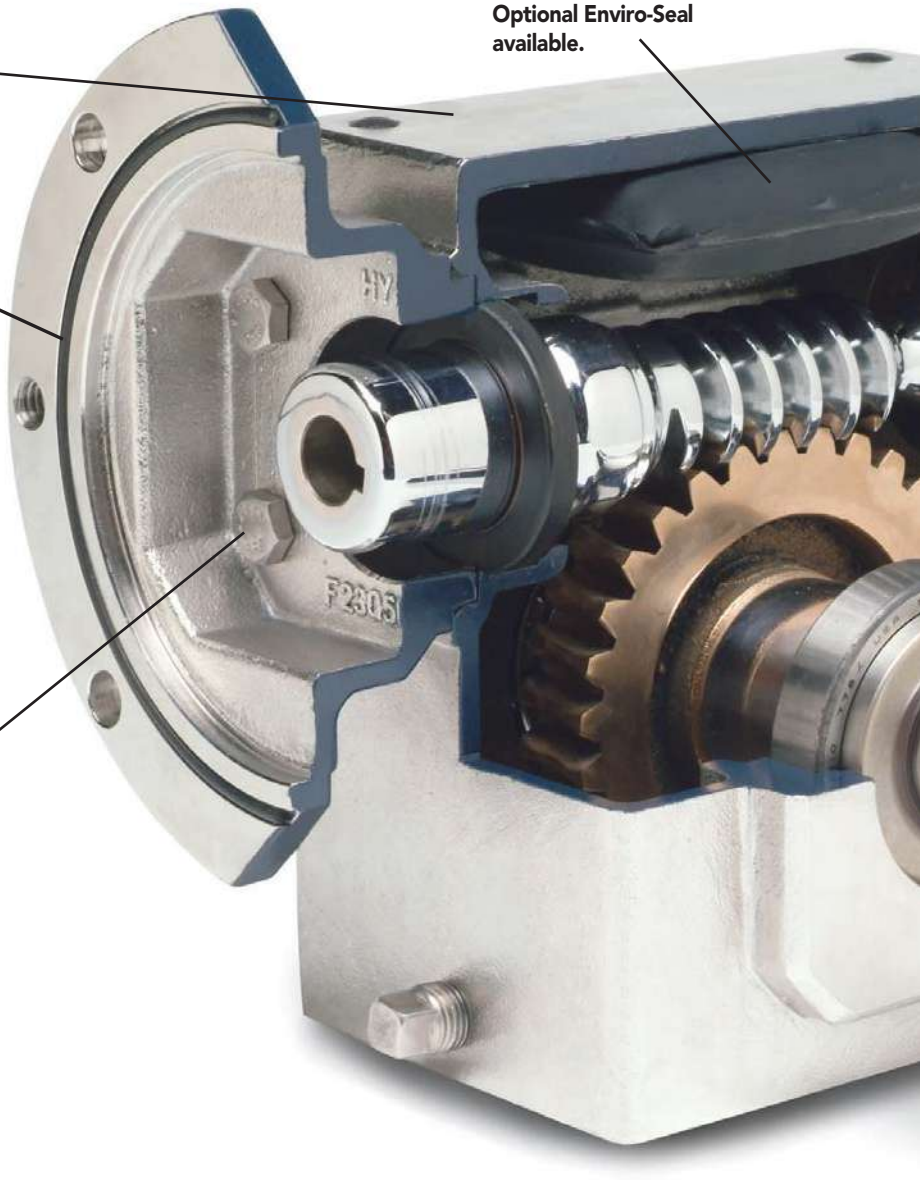
WASHGUARD® housing options
- Premium 316 grade stainless steel
- Polished aluminum
- Epoxy painted cast iron

Optional Enviro-Seal available.

O-ring on input flange provides a positive seal against moisture intrusion.

All features are found on All-Stainless Steel, PLATINUM aluminum and epoxy painted cast iron gear reducers.

Stainless steel assembly hardware resists corrosion from moisture and chemicals.





Food-Grade Synthetic Oil Mobil Glygoyle PAG 460 meets USDA Class H1 standards while providing superior mechanical/thermal performance and extended life.

O-ring seals on input and output covers eliminate gaskets, sealants and leaks.

Viton® double-lip seals and **Viton® double-lip seals** are up to five times more durable than nitrile seals and provide superior resistance to chemical corrosion in severe applications. (Stainless case output seals standard on All-Stainless reducers only.)

303 stainless steel output shaft is corrosion resistant for long life and ease of servicing (stainless steel output shafts are standard for sizes 813-832 and available as an option for sizes 842-860).

Non-compressible stainless steel shims keep factory bearing settings constant.



WASHGUARD®

Combine WASHGUARD® white epoxy gear reducers and WASHGUARD® white epoxy motors.

Enhanced performance in wet, humid areas.



PLATINUM WASHGUARD® with STAINLESS FRAME MOTOR

Combine PLATINUM polished aluminum reducers and paint-free stainless motors.

Superior, extended life in severe environments.



PREMIUM WASHGUARD® ALL-STAINLESS

Combine all-stainless reducers and motors to create a package suitable for nearly any severe duty application.

Maximum service in critically clean or corrosive environments.

Additional WASHGUARD® Products Available

- Ratio Multipliers
- Double reduction worm reducers
- Size 842-8100 worm reducers
- High efficiency products

GEAR+MOTOR™

WASHGUARD®
Maximum Rating Tables
Size 813 • GR, EL Series

WASHGUARD GR SERIES PLATINUM EL SERIES

813 Series

Ratio	Input RPM	Output RPM✛	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Style WBMQ Left Hand Catalog No.	Style WBMQ Right Hand Catalog No.	Style WBMQ Double Extension Catalog No.	Style WHMQ Hollow Output Catalog No.
5	1750	350.0	1.248	1.158	209	56C	**__8133001**	**__8133013**	**__8133025**	**__8133501.10**
7.5	1750	233.3	1.025	0.933	252	56C	**__8133002**	**__8133014**	**__8133026**	**__8133502.10**
10	1750	175.0	0.823	0.729	263	56C	**__8133003**	**__8133015**	**__8133027**	**__8133503.10**
15	1750	116.7	0.642	0.541	292	56C	**__8133004**	**__8133016**	**__8133028**	**__8133504.10**
20	1750	87.5	0.551	0.445	320	56C	**__8133005**	**__8133017**	**__8133029**	**__8133505.10**
25	1750	70.0	0.445	0.344	309	56C	**__8133006**	**__8133018**	**__8133030**	**__8133506.10**
30	1750	58.3	0.395	0.290	314	56C	**__8133007**	**__8133019**	**__8133031**	**__8133507.10**
40	1750	43.8	0.329	0.223	322	56C	**__8133008**	**__8133020**	**__8133032**	**__8133508.10**
50	1750	35.0	0.285	0.182	327	56C	**__8133009**	**__8133021**	**__8133033**	**__8133509.10**
60	1750	29.2	0.246	0.145	313	56C	**__8133010**	**__8133022**	**__8133034**	**__8133510.10**
80	1750	21.9	0.121	0.064	183	56C	**__8133011**	**__8133023**	**__8133035**	**__8133511.10**
100	1750	17.5	0.084	0.040	143	56C	**__8133012**	**__8133024**	**__8133036**	**__8133512.10**

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Contact Factory for other motor flanges available.

✛ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 22-23.

How To Build a Part Number For Size GR813, EL813

1. Select partial catalog number from the selection table 2. Replace leading "__" with series code (GR, EL)

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C
GR-WBMQ813-10-L-56
GR8133003

WASHGUARD®
Maximum Rating Tables
Size 815 • GR Series



815 Series

Ratio	Input RPM	Output RPM✢	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Style WBMQ Left Hand Catalog No.	Style WBMQ Right Hand Catalog No.	Style WBMQ Double Extension Catalog No.	Style WHMQ Hollow Output Catalog No.
5	1750	350.0	1.939	1.794	323	56C	__8153001	__8153013	__8153025	__8153501.10
						140TC	__8153037	__8153049	__8153061	__8153513.10
7.5	1750	233.3	1.522	1.368	370	56C	__8153002	__8153014	__8153026	__8153502.10
						140TC	__8153038	__8153050	__8153062	__8153514.10
10	1750	175.0	1.279	1.116	402	56C	__8153003	__8153015	__8153027	__8153503.10
						140TC	__8153039	__8153051	__8153063	__8153515.10
15	1750	116.7	1.003	0.826	446	56C	__8153004	__8153016	__8153028	__8153504.10
						140TC	__8153040	__8153052	__8153064	__8153516.10
20	1750	87.5	0.919	0.719	518	56C	__8153005	__8153017	__8153029	__8153505.10
						140TC	__8153041	__8153053	__8153065	__8153517.10
25	1750	70.0	0.752	0.559	503	56C	__8153006	__8153018	__8153030	__8153506.10
30	1750	58.3	0.630	0.442	478	56C	__8153007	__8153019	__8153031	__8153507.10
40	1750	43.8	0.560	0.361	520	56C	__8153008	__8153020	__8153032	__8153508.10
50	1750	35.0	0.464	0.274	494	56C	__8153009	__8153021	__8153033	__8153509.10
60	1750	29.2	0.391	0.214	462	56C	__8153010	__8153022	__8153034	__8153510.10
80	1750	21.9	0.204	0.093	269	56C	__8153011	__8153023	__8153035	__8153511.10
100	1750	17.5	0.145	0.059	213	56C	__8153012	__8153024	__8153036	__8153512.10

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

** Size 815 is not available in EL Series.

▲ Contact Factory for other motor flanges available.

✢ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 24-25.

How To Build a Part Number For Size GR815, EL815

1. Select partial catalog number from the selection table 2. Replace leading "__" with series code (GR)

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C
GR-WBMQ815-10-L-56
GR8153003

WASHGUARD®
Maximum Rating Tables
Size 818 • GR, EL Series

WASHGUARD GR SERIES PLATINUM EL SERIES

818 Series



Ratio	Input RPM	Output RPM✢	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Style WBMQ Left Hand Catalog No.	Style WBMQ Right Hand Catalog No.	Style WBMQ Double Extension Catalog No.	Style WHMQ Hollow Output Catalog No.
5	1750	350.0	2.600	2.422	436	56C	__8183001	__8183013	__8183025	__8183501.XX
						143-5TC	__8183037	__8183049	__8183061	__8183513.XX
7.5	1750	233.3	1.909	1.745	471	56C	__8183002	__8183014	__8183026	__8183502.XX
						143-5TC	__8183038	__8183050	__8183062	__8183514.XX
10	1750	175.0	1.625	1.466	528	56C	__8183003	__8183015	__8183027	__8183503.XX
						143-5TC	__8183039	__8183051	__8183063	__8183515.XX
15	1750	116.7	1.224	1.058	571	56C	__8183004	__8183016	__8183028	__8183504.XX
						143-5TC	__8183040	__8183052	__8183064	__8183516.XX
20	1750	87.5	1.046	0.875	630	56C	__8183005	__8183017	__8183029	__8183505.XX
						143-5TC	__8183041	__8183053	__8183065	__8183517.XX
25	1750	70.0	0.884	0.715	644	56C	__8183006	__8183018	__8183030	__818506.XX
30	1750	58.3	0.741	0.569	614	56C	__8183007	__8183019	__8183031	__8183507.XX
40	1750	43.8	0.609	0.440	634	56C	__8183008	__8183020	__8183032	__8183508.XX
50	1750	35.0	0.515	0.352	634	56C	__8183009	__8183021	__8183033	__8183509.XX
60	1750	29.2	0.449	0.288	623	56C	__8183010	__8183022	__8183034	__8183510.XX
80	1750	21.9	0.208	0.124	356	56C	__8183011	__8183023	__8183035	__8183511.XX
100	1750	17.5	0.141	0.077	277	56C	__8183012	__8183024	__8183036	__8183512.XX

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Contact Factory for other motor flanges available.

✢ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 26-27.

How To Build a Part Number For Size GR818, EL818

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, EL)
3. For Hollow output, replace "XX" suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C
GR-WBMQ818-10-L-56
GR8183003

Available bore codes

Fraction Size	5/8"	11/16"	3/4"	7/8"	1"
Decimal Size	0.625	0.688	0.750	0.875	1.000
Output Bore Code	10	11	12	14	16

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

WASHGUARD®
Maximum Rating Tables
Size 821 • GR, EL Series

821 Series

							Style WBMQ			Style WHMQ
										
Ratio	Input RPM	Output RPM✛	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	1750	350.0	3.653	3.410	614	56C	__8213001	__8213013	__8213025	__8213501.XX
						143-5TC	__8213037	__8213049	__8213061	__8213513.XX
7.5	1750	233.3	2.793	2.562	692	56C	__8213002	__8213014	__8213026	__8213502.XX
						143-5TC	__8213038	__8213050	__8213062	__8213514.XX
10	1750	175.0	2.464	2.235	805	56C	__8213003	__8213015	__8213027	__8213503.XX
						143-5TC	__8213039	__8213051	__8213063	__8213515.XX
15	1750	116.7	1.887	1.661	897	56C	__8213004	__8213016	__8213028	__8213504.XX
						143-5TC	__8213040	__8213052	__8213064	__8213516.XX
20	1750	87.5	1.584	1.338	964	56C	__8213005	__8213017	__8213029	__8213505.XX
						143-5TC	__8213041	__8213053	__8213065	__8213517.XX
25	1750	70.0	1.333	1.094	985	56C	__8213006	__8213018	__8213030	__8213506.XX
						143-5TC	__8213042	__8213054	__8213066	__8213518.XX
30	1750	58.3	1.129	0.896	968	56C	__8213007	__8213019	__8213031	__8213507.XX
						143-5TC	__8213043	__8213055	__8213067	__8213519.XX
40	1750	43.8	0.916	0.674	971	56C	__8213008	__8213020	__8213032	__8213508.XX
50	1750	35.0	0.769	0.539	970	56C	__8213009	__8213021	__8213033	__8213509.XX
60	1750	29.2	0.674	0.435	940	56C	__8213010	__8213022	__8213034	__8213510.XX
80	1750	21.9	0.304	0.190	547	56C	__8213011	__8213023	__8213035	__8213511.XX
100	1750	17.5	0.217	0.122	439	56C	__8213012	__8213024	__8213036	__8213512.XX

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.
▲ Contact Factory for other motor flanges available.
✛ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 28-29.

How To Build a Part Number For Size GRG821, GRL821, EL821

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GRG, GRL, EL)
3. For Hollow output, replace "XX" suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C
GRG-WBMQ821-10-L-56, GRG8213003

GRG = GROVE GEAR
- Direct replacement to Grove Gear Flexaline
- Mounting footprint 3.00" x 4.75"
- See pages 52-73 for dimensions

GRL = LEESON IRONMAN BY OHIO GEAR Interchange
- Direct replacement to LEESON IRON-MAN & major brands.
- Mounting footprint 2.88" x 5.00"
- See pages 52-73 for dimensions

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

WASHGUARD®
Maximum Rating Tables
Size 824 • GR, EL Series

WASHGUARD GR SERIES PLATINUM EL SERIES

824 Series



Ratio	Input RPM	Output RPM✛	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Style WBMQ Left Hand Catalog No.	Style WBMQ Right Hand Catalog No.	Style WBMQ Double Extension Catalog No.	Style WHMQ Hollow Output Catalog No.*
5	1750	350.0	5.323	4.985	898	143-5TC	__8243037	__8243049	__8243061	__8243513.XX
7.5	1750	233.3	3.992	3.685	995	143-5TC	__8243038	__8243050	__8243062	__8243514.XX
10	1750	175.0	3.564	3.253	1172	143-5TC	__8243039	__8243051	__8243063	__8243515.XX
15	1750	116.7	2.765	2.439	1318	56C	__8243004	__8243016	__8243028	__8243504.XX
						143-5TC	__8243040	__8243052	__8243064	__8243516.XX
20	1750	87.5	2.326	1.972	1421	56C	__8243005	__8243017	__8243029	__8243505.XX
						143-5TC	__8243041	__8243053	__8243065	__8243517.XX
25	1750	70.0	1.967	1.615	1454	56C	__8243006	__8243018	__8243030	__8243506.XX
						143-5TC	__8243042	__8243054	__8243066	__8243518.XX
30	1750	58.3	1.653	1.317	1423	56C	__8243007	__8243019	__8243031	__8243507.XX
						143-5TC	__8243043	__8243055	__8243067	__8243519.XX
40	1750	43.8	1.342	0.994	1433	56C	__8243008	__8243020	__8243032	__8243508.XX
						143-5TC	__8243044	__8243056	__8243068	__8243520.XX
50	1750	35.0	1.137	0.795	1432	56C	__8243009	__8243021	__8243033	__8243509.XX
						143-5TC	__8243045	__8243057	__8243069	__8243521.XX
60	1750	29.2	0.967	0.656	1418	56C	__8243010	__8243022	__8243034	__8243510.XX
80	1750	21.9	0.455	0.288	830	56C	__8243011	__8243023	__8243035	__8243511.XX
100	1750	17.5	0.307	0.180	648	56C	__8243012	__8243024	__8243036	__8243512.XX

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.
▲ Contact Factory for other motor flanges available.
✛ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 30-31.

How To Build a Part Number For Size GR824, EL824

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, EL)
3. For Hollow output, replace "XX" suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 140TC
GR-WBMQ824-10-L-140, GR8243039

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

WASHGUARD® Maximum Rating Tables

Size 826 • GR, EL Series

826 Series

							Style WBMQ			Style WHMQ
										
Ratio	Input RPM	Output RPM✢	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5 (5.17 actual)	1750	350.0	6.693	6.276	1130	143-5TC	__8263037	__8263049	__8263061	__8263513.XX
7.5	1750	233.3	4.956	4.571	1235	143-5TC	__8263038	__8263050	__8263062	__8263514.XX
10	1750	175.0	4.492	4.097	1475	143-5TC	__8263039	__8263051	__8263063	__8263515.XX
15	1750	116.7	3.614	3.216	1737	143-5TC	__8263040	__8263052	__8263064	__8263516.XX
20	1750	87.5	2.965	2.549	1836	56C	__8263005	__8263017	__8263029	__8263505.XX
						143-5TC	__8263041	__8263053	__8263065	__8263517.XX
25	1750	70.0	2.487	2.076	1869	56C	__8263006	__8263018	__8263030	__8263506.XX
						143-5TC	__8263042	__8263054	__8263066	__8263518.XX
30	1750	58.3	2.145	1.743	1883	56C	__8263007	__8263019	__8263031	__8263507.XX
						143-5TC	__8263043	__8263055	__8263067	__8263519.XX
40	1750	43.8	1.695	1.287	1854	56C	__8263008	__8263020	__8263032	__8263508.XX
						143-5TC	__8263044	__8263056	__8263068	__8263520.XX
50	1750	35.0	1.420	1.023	1843	56C	__8263009	__8263021	__8263033	__8263509.XX
						143-5TC	__8263045	__8263057	__8263069	__8263521.XX
60	1750	29.2	1.216	0.835	1805	56C	__8263010	__8263022	__8263034	__8263510.XX
						143-5TC	__8263046	__8263058	__8263070	__8263522.XX
80	1750	21.9	0.577	0.379	1092	56C	__8263011	__8263023	__8263035	__8263511.XX
100	1750	17.5	0.386	0.236	851	56C	__8263012	__8263024	__8263036	__8263512.XX

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.
▲ Contact Factory for other motor flanges available.
✢ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 32-33.

How To Build a Part Number For Size GR826, GRG826, GRL826, EL826

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, GRG, GRL, EL)
3. For Hollow output, replace "XX" suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 140TC
GRG-WBMQ826-10-L-140, GRG8263039

GRG = **GROVE GEAR**

- Direct replacement to Grove Gear Flexaline
- 1-1/4" solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only

GRL = IRONMAN BY OHIO GEAR Interchange

- Direct replacement to LEESON IRON-MAN & major brands.
- Hollow shaft option available
- 1-1/8" solid output shaft diameter

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

WASHGUARD®
Maximum Rating Tables
Size 830 • GR, EL Series

WASHGUARD GR SERIES | PLATINUM EL SERIES

830 Series



Ratio	Input RPM	Output RPM✢	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Style WBMQ Left Hand Catalog No.	Style WBMQ Right Hand Catalog No.	Style WBMQ Double Extension Catalog No.	Style WHMQ Hollow Output Catalog No.*
5	1750	350.0	9.093	8.573	1544	143-5TC	__8303037	__8303049	__8303061	__8303513.XX
7.5	1750	233.3	6.879	6.421	1734	143-5TC	__8303038	__8303050	__8303062	__8303514.XX
10	1750	175.0	6.151	5.655	2037	143-5TC	__8303039	__8303051	__8303063	__8303515.XX
15	1750	116.7	4.843	4.311	2329	143-5TC	__8303040	__8303052	__8303064	__8303516.XX
20	1750	87.5	3.947	3.407	2454	143-5TC	__8303041	__8303053	__8303065	__8303517.XX
25	1750	70.0	3.355	2.807	2527	143-5TC	__8303042	__8303054	__8303066	__8303518.XX
30	1750	58.3	2.879	2.332	2519	143-5TC	__8303043	__8303055	__8303067	__8303519.XX
40	1750	43.8	2.251	1.720	2477	56C	__8303008	__8303020	__8303032	__8303508.XX
						143-5TC	__8303044	__8303056	__8303068	__8303520.XX
50	1750	35.0	1.915	1.383	2490	56C	__8303009	__8303021	__8303033	__8303509.XX
						143-5TC	__8303045	__8303057	__8303069	__8303521.XX
60	1750	29.2	1.637	1.117	2413	56C	__8303010	__8303022	__8303034	__8303510.XX
						143-5TC	__8303046	__8303058	__8303070	__8303522.XX
80	1750	21.9	0.895	0.585	1684	56C	__8303011	__8303023	__8303035	__8303511.XX
						143-5TC	__8303047	__8303059	__8303071	__8303523.XX
100	1750	17.5	0.603	0.367	1321	56C	__8303012	__8303024	__8303036	__8303512.XX

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.
▲ Contact Factory for other motor flanges available.
✢ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 34-35.

How To Build a Part Number For Size GR830, EL830

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code
3. For Hollow output, replace "XX" suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 140TC
GR-WBMQ830-10--140-L, GR8303039

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.250	1.500	1.625	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

WASHGUARD® Maximum Rating Tables

Size 832 • GR, EL Series

832 Series

Style WBMQ | Style WHMQ



Ratio	Input RPM	Output RPM✛	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5 (5.167 actual)	1750	350.0	11.92	11.29	2033	143-5TC	__8323037	__8323049	__8323061	__8323513.XX
7.5	1750	233.3	8.863	8.264	2232	143-5TC	__8323038	__8323050	__8323062	__8323514.XX
10	1750	175.0	8.092	7.497	2700	143-5TC	__8323039	__8323051	__8323063	__8323515.XX
15	1750	116.7	6.127	5.516	2980	143-5TC	__8323040	__8323052	__8323064	__8323516.XX
20	1750	87.5	5.180	4.536	3267	143-5TC	__8323041	__8323053	__8323065	__8323517.XX
25	1750	70.0	4.373	3.732	3360	143-5TC	__8323042	__8323054	__8323066	__8323518.XX
30	1750	58.3	3.619	2.986	3226	143-5TC	__8323043	__8323055	__8323067	__8323519.XX
40	1750	43.8	2.926	2.293	3303	56C	__8323008	__8323020	__8323032	__8323508.XX
						143-5TC	__8323044	__8323056	__8323068	__8323520.XX
50	1750	35.0	2.462	1.841	3315	56C	__8323009	__8323021	__8323033	__8323509.XX
						143-5TC	__8323045	__8323057	__8323069	__8323521.XX
60	1750	29.2	2.114	1.515	3274	56C	__8323010	__8323022	__8323034	__8323510.XX
						143-5TC	__8323046	__8323058	__8323070	__8323522.XX
80	1750	21.9	1.030	0.695	2000	56C	__8323011	__8323023	__8323035	__8323511.XX
						143-5TC	__8323047	__8323059	__8323071	__8323523.XX
100	1750	17.5	0.691	0.435	1567	56C	__8323012	__8323024	__8323036	__8323512.XX

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.
▲ Contact Factory for other motor flanges available.
✛ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 38-39.

How To Build a Part Number For Size GR832, GRG832, GRL832, EL832

1. Select partial catalog number from the selection table
2. Replace leading "__" with series code (GR, GRG, GRL, EL)
3. For Hollow output, replace "XX" suffix with bore code.

Example:

GR Style WBMQ, 10:1 Left Hand Output, 140TC
GRG-WBMQ832-10-L-140, GRG8323039

GRG = **GROVE GEAR**

- Direct replacement to Grove Gear Flexaline
- 1-1/2" solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only

GRL = LEESON IRONMAN BY OHIO GEAR Interchange

- Direct replacement to LEESON IRONMAN & major brands.
- Hollow shaft option available
- 1-3/8" solid output shaft diameter

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Stainless Steel Maximum Rating Tables

Size 813

813 Series

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	Style SBMQ L Assembly Catalog No.	Style SBMQ R Assembly Catalog No.	Style SBMQ D Assembly Catalog No.	Style SHMQ H1 Assembly Catalog No.*	Style SHMQ H2 Assembly Catalog No.*
5	2500	500.0	1.528	1.429	180	56C	S133003700	S133004900	S133006100	S133045710	S133046910
	1750	350.0	1.248	1.158	209						
	1170	234.0	0.952	0.872	235						
	100	20.0	0.140	0.095	298						
7.5	2500	333.3	1.281	1.178	223	56C	S133003800	S133005000	S133006200	S133045810	S133047010
	1750	233.3	1.025	0.933	252						
	1170	156.0	0.770	0.689	278						
	870	116.0	0.615	0.540	293						
	100	13.3	0.118	0.072	339						
10	2500	250.0	1.016	0.912	230	56C	S133003900	S133005100	S133006300	S133045910	S133047110
	1750	175.0	0.823	0.729	263						
	1170	117.0	0.626	0.543	293						
	100	10.0	0.103	0.058	363						
15	2500	166.7	0.790	0.678	257	56C	S133004000	S133005200	S133006400	S133046010	S133047210
	1750	116.7	0.642	0.541	292						
	1170	78.0	0.491	0.402	325						
	100	6.7	0.090	0.042	401						
20	2500	125.0	0.681	0.562	283	56C	S133004100	S133005300	S133006500	S133046110	S133047310
	1750	87.5	0.551	0.445	320						
	1170	58.5	0.422	0.328	354						
	100	5.0	0.084	0.034	431						
25	2500	100.0	0.544	0.431	272	56C	S133004200	S133005400	S133006600	S133046210	S133047410
	1750	70.0	0.445	0.344	309						
	1170	46.8	0.344	0.255	344						
	100	4.0	0.074	0.027	423						
30	2500	83.3	0.481	0.364	276	56C	S133004300	S133005500	S133006700	S133046310	S133047510
	1750	58.3	0.395	0.290	314						
	1170	39.0	0.308	0.215	348						
	100	3.3	0.071	0.023	429						
40	2500	62.5	0.400	0.283	285	56C	S133004400	S133005600	S133006800	S133046410	S133047610
	1750	43.8	0.329	0.223	322						
	1170	29.3	0.258	0.165	355						
	100	2.5	0.066	0.017	432						
50	2500	50.0	0.346	0.232	292	56C	S133004500	S133005700	S133006900	S133046510	S133047710
	1750	35.0	0.285	0.182	327						
	1170	23.4	0.224	0.133	359						
	100	2.0	0.061	0.014	431						
60	2500	41.7	0.297	0.184	279	56C	S133004600	S133005800	S133007000	S133046610	S133047810
	1750	29.2	0.246	0.145	313						
	1170	19.5	0.195	0.107	345						
	100	1.7	0.058	0.011	415						
80	2500	31.3	0.144	0.081	163	56C	S133004700	S133005900	S133007100	S133046710	S133047910
	1750	21.9	0.121	0.064	183						
	1170	14.6	0.096	0.047	201						
	100	1.3	0.014	0.005	237						
100	2500	25.0	0.100	0.051	128	56C	S133004800	S133006000	S133007200	S133046810	S133048010
	1750	17.5	0.084	0.040	143						
	1170	11.7	0.067	0.029	156						
	100	1.0	0.010	0.003	184						

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	5/8"
Decimal Size	0.625
Output Bore Code	10

Stainless Steel
Maximum Rating Tables
Size 815

815 Series

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	Style SBMQ L Assembly Catalog No.	Style SBMQ R Assembly Catalog No.	Style SBMQ D Assembly Catalog No.	Style SHMQ H1 Assembly Catalog No.*	Style SHMQ H2 Assembly Catalog No.*
	2500	500.0	2.310	2.151	271	56C					
5	1750	350.0	1.939	1.794	323		S153003700	S153004900	S153006100	S153045710	S153046910
	1170	234.0	1.537	1.408	379	143-5TC					
	100	20.0	0.235	0.167	526		S153007300	S153008500	S153009700	S153048110	S153049310
	2500	333.3	1.785	1.619	306	56C					
7.5	1750	233.3	1.522	1.368	370		S153003800	S153005000	S153006200	S153045810	S153047010
	1170	156.0	1.205	1.068	431	143-5TC					
	100	13.3	0.196	0.125	591		S153007400	S153008600	S153009800	S153048210	S153049410
	2500	250.0	1.500	1.324	334	56C					
10	1750	175.0	1.279	1.116	402		S153003900	S153005100	S153006300	S153045910	S153047110
	1170	117.0	1.014	0.869	468	143-5TC					
	100	10.0	0.176	0.101	639		S153007500	S153008700	S153009900	S153048310	S153049510
	2500	166.7	1.174	0.982	371	56C					
15	1750	116.7	1.003	0.826	446		S153004000	S153005200	S153006400	S153046010	S153047210
	1170	78.0	0.800	0.643	519	143-5TC					
	100	6.7	0.155	0.075	706		S153007600	S153008800	S153010000	S153048410	S153049610
	2500	125.0	1.077	0.860	434	56C					
20	1750	87.5	0.919	0.719	518		S153004100	S153005300	S153006500	S153046110	S153047310
	1170	58.5	0.734	0.557	600	143-5TC					
	100	5.0	0.155	0.064	807		S153007700	S153008900	S153010100	S153048510	S153049710
	2500	100.0	0.881	0.670	422	56C					
25	1750	70.0	0.752	0.559	503		S153004200	S153005400	S153006600	S153046210	S153047410
	1170	46.8	0.602	0.431	580	143-5TC					
	100	4.0	0.137	0.049	775		S153007800	S153009000	S153010200	S153048610	S153049810
	2500	83.3	0.729	0.526	398	56C					
30	1750	58.3	0.630	0.442	478		S153004300	S153005500	S153006700	S153046310	S153047510
	1170	39.0	0.510	0.344	555	143-5TC					
	100	3.3	0.124	0.040	754		S153007900	S153009100	S153010300	S153048710	S153049910
	2500	62.5	0.649	0.432	435	56C					
40	1750	43.8	0.560	0.361	520		S153004400	S153005600	S153006800	S153046410	S153047610
	1170	29.3	0.456	0.279	601	143-5TC					
	100	2.5	0.122	0.032	808		S153008000	S153009200	S153010400	S153048810	S153050010
	2500	50.0	0.536	0.329	415	56C					
50	1750	35.0	0.464	0.274	494		S153004500	S153005700	S153006900	S153046510	S153047710
	1170	23.4	0.379	0.211	569	143-5TC					
	100	2.0	0.110	0.024	760		S153008100	S153009300	S153010500	S153048910	S153050110
	2500	41.7	0.451	0.257	389	56C					
60	1750	29.2	0.391	0.214	462		S153004600	S153005800	S153007000	S153046610	S153047810
	1170	19.5	0.321	0.165	532	143-5TC					
	100	1.7	0.099	0.019	707		S153008200	S153009400	S153010600	S153049010	S153050210
	2500	31.3	0.219	0.109	220	56C					
80	1750	21.9	0.204	0.093	269		S153004700	S153005900	S153007100	S153046710	S153047910
	1170	14.6	0.176	0.073	314	143-5TC					
	100	1.3	0.032	0.008	418		S153008300	S153009500	S153010700	S153049110	S153050310
	2500	25.0	0.155	0.069	175	56C					
100	1750	17.5	0.145	0.059	213		S153004800	S153006000	S153007200	S153046810	S153048010
	1170	11.7	0.126	0.046	248	143-5TC					
	100	1.0	0.024	0.005	328		S153008400	S153009600	S153010800	S153049210	S153050410

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	5/8"
Decimal Size	0.625
Output Bore Code	10

Stainless Steel Maximum Rating Tables

Size 818

818 Series



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
							Style SBMQ			Style SHMQ	Style SHMQ
5	2500	500.0	3.095	2.900	366	56C	S183003700	S183004900	S183006100	S1830457XX	S1830469XX
	1750	350.0	2.600	2.422	436						
	1170	234.0	2.066	1.906	513	143-5TC	S183007300	S183008500	S183009700	S1830481XX	S1830493XX
	100	20.0	0.312	0.228	717						
7.5	2500	333.3	2.307	2.127	402	56C	S183003800	S183005000	S183006200	S1830458XX	S1830470XX
	1750	233.3	1.909	1.745	471						
	1170	156.0	1.473	1.328	537	143-5TC	S183007400	S183008600	S183009800	S1830482XX	S1830494XX
	100	13.3	0.227	0.147	697						
10	2500	250.0	1.996	1.820	459	56C	S183003900	S183005100	S183006300	S1830459XX	S1830471XX
	1750	175.0	1.625	1.466	528						
	1170	117.0	1.239	1.099	592	143-5TC	S183007500	S183008700	S183009900	S1830483XX	S1830495XX
	100	10.0	0.196	0.118	744						
15	2500	166.7	1.485	1.301	492	56C	S183004000	S183005200	S183006400	S1830460XX	S1830472XX
	1750	116.7	1.224	1.058	571						
	1170	78.0	0.945	0.799	645	143-5TC	S183007600	S183008800	S183010000	S1830484XX	S1830496XX
	100	6.7	0.165	0.087	823						
20	2500	125.0	1.283	1.093	551	56C	S183004100	S183005300	S183006500	S1830461XX	S1830473XX
	1750	87.5	1.046	0.875	630						
	1170	58.5	0.803	0.652	702	143-5TC	S183007700	S183008900	S183010100	S1830485XX	S1830497XX
	100	5.0	0.150	0.069	872						
25	2500	100.0	1.088	0.900	567	56C	S183004200	S183005400	S183006600	S1830462XX	S1830474XX
	1750	70.0	0.884	0.715	644						
	1170	46.8	0.678	0.530	713	143-5TC	S183007800	S183009000	S183010200	S1830486XX	S1830498XX
	100	4.0	0.135	0.055	874						
30	2500	83.3	0.892	0.702	531	56C	S183004300	S183005500	S183006700	S1830463XX	S1830475XX
	1750	58.3	0.741	0.569	614						
	1170	39.0	0.580	0.428	692	143-5TC	S183007900	S183009100	S183010300	S1830487XX	S1830499XX
	100	3.3	0.126	0.047	880						
40	2500	62.5	0.739	0.551	556	56C	S183004400	S183005600	S183006800	S1830464XX	S1830476XX
	1750	43.8	0.609	0.440	634						
	1170	29.3	0.476	0.328	706	143-5TC	S183008000	S183009200	S183010400	S1830488XX	S1830500XX
	100	2.5	0.113	0.035	874						
50	2500	50.0	0.625	0.444	559	56C	S183004500	S183005700	S183006900	S1830465XX	S1830477XX
	1750	35.0	0.515	0.352	634						
	1170	23.4	0.404	0.260	701	143-5TC	S183008100	S183009300	S183010500	S1830489XX	S1830501XX
	100	2.0	0.103	0.027	857						
60	2500	41.7	0.542	0.363	550	56C	S183004600	S183005800	S183007000	S1830466XX	S1830478XX
	1750	29.2	0.449	0.288	623						
	1170	19.5	0.354	0.213	689	143-5TC	S183008200	S183009400	S183010600	S1830490XX	S1830502XX
	100	1.7	0.097	0.022	842						
80	2500	31.3	0.247	0.156	314	56C	S183004700	S183005900	S183007100	S1830467XX	S1830479XX
	1750	21.9	0.208	0.124	356						
	1170	14.6	0.164	0.091	392	143-5TC	S183008300	S183009500	S183010700	S1830491XX	S1830503XX
	100	1.3	0.023	0.009	470						
100	2500	25.0	0.167	0.097	245	56C	S183004800	S183006000	S183007200	S1830468XX	S1830480XX
	1750	17.5	0.141	0.077	277						
	1170	11.7	0.111	0.057	304	143-5TC	S183008400	S183009600	S183010800	S1830492XX	S1830504XX
	100	1.0	0.016	0.006	362						

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	5/8"	11/16"	3/4"	7/8"	1"
Decimal Size	0.625	0.688	0.750	0.875	1.000
Output Bore Code	10	11	12	14	16

Stainless Steel
Maximum Rating Tables
Size 821

821 Series

							Style SBMQ			Style SHMQ	Style SHMQ
											
Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
5	2500	500.0	4.305	4.043	510	56C	S213003700	S213004900	S213006100	S2130457XX	S2130469XX
	1750	350.0	3.653	3.410	614						
	1170	234.0	2.873	2.657	716	143-5TC	S213007300	S213008500	S213009700	S2130481XX	S2130493XX
	100	20.0	0.433	0.310	977						
7.5	2500	333.3	3.300	3.051	577	56C	S213003800	S213005000	S213006200	S2130458XX	S2130470XX
	1750	233.3	2.793	2.562	692						
	1170	156.0	2.194	1.989	804	143-5TC	S213007400	S213008600	S213009800	S2130482XX	S2130494XX
	100	13.3	0.341	0.230	1089						
10	2500	250.0	2.973	2.722	686	56C	S213003900	S213005100	S213006300	S2130459XX	S2130471XX
	1750	175.0	2.464	2.235	805						
	1170	117.0	1.905	1.702	917	143-5TC	S213007500	S213008700	S213009900	S2130483XX	S2130495XX
	100	10.0	0.300	0.189	1192						
15	2500	166.7	2.284	2.035	769	56C	S213004000	S213005200	S213006400	S2130460XX	S2130472XX
	1750	116.7	1.887	1.661	897						
	1170	78.0	1.459	1.259	1017	143-5TC	S213007600	S213008800	S213010000	S2130484XX	S2130496XX
	100	6.7	0.245	0.138	1309						
20	2500	125.0	1.914	1.642	828	56C	S213004100	S213005300	S213006500	S2130461XX	S2130473XX
	1750	87.5	1.584	1.338	964						
	1170	58.5	1.229	1.012	1090	143-5TC	S213007700	S213008900	S213010100	S2130485XX	S2130497XX
	100	5.0	0.226	0.111	1397						
25	2500	100.0	1.623	1.359	857	56C	S213004200	S213005400	S213006600	S2130462XX	S2130474XX
	1750	70.0	1.333	1.094	985						
	1170	46.8	1.030	0.820	1104	143-5TC	S213007800	S213009000	S213010200	S2130486XX	S2130498XX
	100	4.0	0.200	0.088	1386						
30	2500	83.3	1.359	1.102	833	56C	S213004300	S213005500	S213006700	S2130463XX	S2130475XX
	1750	58.3	1.129	0.896	968						
	1170	39.0	0.882	0.677	1095	143-5TC	S213007900	S213009100	S213010300	S2130487XX	S2130499XX
	100	3.3	0.181	0.074	1399						
40	2500	62.5	1.096	0.829	836	56C	S213004400	S213005600	S213006800	S2130464XX	S2130476XX
	1750	43.8	0.916	0.674	971						
	1170	29.3	0.722	0.509	1097	143-5TC	S213008000	S213009200	S213010400	S2130488XX	S2130500XX
	100	2.5	0.167	0.056	1401						
50	2500	50.0	0.925	0.670	845	56C	S213004500	S213005700	S213006900	S2130465XX	S2130477XX
	1750	35.0	0.769	0.539	970						
	1170	23.4	0.606	0.403	1086	143-5TC	S213008100	S213009300	S213010500	S2130489XX	S2130501XX
	100	2.0	0.149	0.043	1359						
60	2500	41.7	0.799	0.535	809	56C	S213004600	S213005800	S213007000	S2130466XX	S2130478XX
	1750	29.2	0.674	0.435	940						
	1170	19.5	0.539	0.328	1061	143-5TC	S213008200	S213009400	S213010600	S2130490XX	S2130502XX
	100	1.7	0.145	0.036	1354						
80	2500	31.3	0.357	0.236	476	56C	S213004700	S213005900	S213007100	S2130467XX	S2130479XX
	1750	21.9	0.304	0.190	547						
	1170	14.6	0.241	0.141	609	143-5TC	S213008300	S213009500	S213010700	S2130491XX	S2130503XX
	100	1.3	0.034	0.015	743						
100	2500	25.0	0.251	0.150	379	56C	S213004800	S213006000	S213007200	S2130468XX	S2130480XX
	1750	17.5	0.217	0.122	439						
	1170	11.7	0.175	0.091	491	143-5TC	S213008400	S213009600	S213010800	S2130492XX	S2130504XX
	100	1.0	0.026	0.010	605						

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Stainless Steel Maximum Rating Tables

Size 824

824 Series



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No. (Style SBMQ)	R Assembly Catalog No. (Style SBMQ)	D Assembly Catalog No. (Style SBMQ)	H1 Assembly Catalog No.* (Style SHMQ)	H2 Assembly Catalog No.* (Style SHMQ)
5	2500	500.0	6.322	5.950	750	143-5TC	S243003700	S243004900	S243006100	S2430457XX	S2430469XX
	1750	350.0	5.323	4.985	898						
	1170	234.0	4.280	3.976	1071	182-4TC	S243007300	S243008500	S243009700	S2430481XX	S2430493XX
	100	20.0	0.655	0.489	1540						
7.5	2500	333.3	4.739	4.401	832	143-5TC	S243003800	S243005000	S243006200	S2430458XX	S2430470XX
	1750	233.3	3.992	3.685	995						
	1170	156.0	3.204	2.929	1183	182-4TC	S243007400	S243008600	S243009800	S2430482XX	S2430494XX
	100	13.3	0.502	0.357	1689						
10	2500	250.0	4.199	3.862	974	143-5TC	S243003900	S243005100	S243006300	S2430459XX	S2430471XX
	1750	175.0	3.564	3.253	1172						
	1170	117.0	2.808	2.531	1364	182-4TC	S243007500	S243008700	S243009900	S2430483XX	S2430495XX
	100	10.0	0.442	0.295	1857						
15	2500	166.7	3.268	2.913	1102	56C	S243000400	S243001600	S243002800	S2430436XX	S2430448XX
	1750	116.7	2.765	2.439	1318						
	1170	78.0	2.178	1.888	1526	143-5TC	S243004000	S243005200	S243006400	S2430460XX	S2430472XX
	100	6.7	0.369	0.217	2056						
20	2500	125.0	2.750	2.365	1192	56C	S243000500	S243001700	S243002900	S2430437XX	S2430449XX
	1750	87.5	2.326	1.972	1421						
	1170	58.5	1.835	1.522	1640	143-5TC	S243004100	S243005300	S243006500	S2430461XX	S2430473XX
	100	5.0	0.337	0.174	2193						
25	2500	100.0	2.335	1.949	1228	56C	S243000600	S243001800	S243003000	S2430438XX	S2430450XX
	1750	70.0	1.967	1.615	1454						
	1170	46.8	1.551	1.239	1669	143-5TC	S243004200	S243005400	S243006600	S2430462XX	S2430474XX
	100	4.0	0.302	0.140	2205						
30	2500	83.3	1.945	1.579	1194	56C	S243000700	S243001900	S243003100	S2430439XX	S2430451XX
	1750	58.3	1.653	1.317	1423						
	1170	39.0	1.314	1.016	1642	143-5TC	S243004300	S243005500	S243006700	S2430463XX	S2430475XX
	100	3.3	0.270	0.116	2197						
40	2500	62.5	1.574	1.195	1205	56C	S243000800	S243002000	S243003200	S2430440XX	S2430452XX
	1750	43.8	1.342	0.994	1433						
	1170	29.3	1.074	0.766	1650	143-5TC	S243004400	S243005600	S243006800	S2430464XX	S2430476XX
	100	2.5	0.245	0.087	2198						
50	2500	50.0	1.335	0.961	1211	56C	S243000900	S243002100	S243003300	S2430441XX	S2430453XX
	1750	35.0	1.137	0.795	1432						
	1170	23.4	0.911	0.609	1641	143-5TC	S243004500	S243005700	S243006900	S2430465XX	S2430477XX
	100	2.0	0.224	0.069	2163						
60	2500	41.7	1.149	0.806	1219	56C	S243001000	S243002200	S243003400	S2430442XX	S2430454XX
	1750	29.2	0.967	0.656	1418						
	1170	19.5	0.770	0.496	1604	143-5TC	S243004600	S243005800	S243007000	S2430466XX	S2430478XX
	100	1.7	0.197	0.054	2054						
80	2500	31.3	0.520	0.348	701	56C	S243001100	S243002300	S243003500	S2430443XX	S2430455XX
	1750	21.9	0.455	0.288	830						
	1170	14.6	0.370	0.219	946						
	100	1.3	0.056	0.024	1202						
100	2500	25.0	0.351	0.219	551	56C	S243001200	S243002400	S243003600	S2430444XX	S2430456XX
	1750	17.5	0.307	0.180	648						
	1170	11.7	0.251	0.136	735						
	100	1.0	0.039	0.015	926						

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Stainless Steel
Maximum Rating Tables
Size 826

826 Series

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	Style SBMQ L Assembly Catalog No.	Style SBMQ R Assembly Catalog No.	Style SBMQ D Assembly Catalog No.	Style SHMQ H1 Assembly Catalog No.*	Style SHMQ H2 Assembly Catalog No.*
5	2500	500.0	7.946	7.486	944	143-5TC	S263003700	S263004900	S263006100	S2630457XX	S2630469XX
	1750	350.0	6.693	6.276	1130						
(5.17	1170	234.0	5.439	5.061	1363	182-4TC	S263007300	S263008500	S263009700	S2630481XX	S2630493XX
actual)	100	20.0	0.844	0.638	2010						
7.5	2500	333.3	5.877	5.453	1031	143-5TC	S263003800	S263005000	S263006200	S2630458XX	S2630470XX
	1750	233.3	4.956	4.571	1235						
	1170	156.0	4.018	3.671	1483	182-4TC	S263007400	S263008600	S263009800	S2630482XX	S2630494XX
	100	13.3	0.640	0.458	2166						
10	2500	250.0	5.338	4.904	1236	143-5TC	S263003900	S263005100	S263006300	S2630459XX	S2630471XX
	1750	175.0	4.492	4.097	1475						
	1170	117.0	3.579	3.226	1738	182-4TC	S263007500	S263008700	S263009900	S2630483XX	S2630495XX
	100	10.0	0.572	0.386	2431						
15	2500	166.7	4.316	3.881	1468	143-5TC	S263004000	S263005200	S263006400	S2630460XX	S2630472XX
	1750	116.7	3.614	3.216	1737						
	1170	78.0	2.821	2.468	1994	182-4TC	S263007600	S263008800	S263010000	S2630484XX	S2630496XX
	100	6.7	0.467	0.279	2637						
20	2500	125.0	3.503	3.050	1538	56C	S263000500	S263001700	S263002900	S2630437XX	S2630449XX
	1750	87.5	2.965	2.549	1836						
	1170	58.5	2.339	1.970	2123	143-5TC	S263004100	S263005300	S263006500	S2630461XX	S2630473XX
	100	5.0	0.419	0.226	2849	182-4TC	S263007700	S263008900	S263010100	S2630485XX	S2630497XX
25	2500	100.0	2.955	2.505	1579	56C	S263000600	S263001800	S263003000	S2630438XX	S2630450XX
	1750	70.0	2.487	2.076	1869						
	1170	46.8	1.957	1.594	2146	143-5TC	S263004200	S263005400	S263006600	S2630462XX	S2630474XX
	100	4.0	0.370	0.180	2837						
30	2500	83.3	2.556	2.115	1600	56C	S263000700	S263001900	S263003100	S2630439XX	S2630451XX
	1750	58.3	2.145	1.743	1883						
	1170	39.0	1.687	1.332	2152	143-5TC	S263004300	S263005500	S263006700	S2630463XX	S2630475XX
	100	3.3	0.335	0.149	2816						
40	2500	62.5	1.989	1.545	1558	56C	S263000800	S263002000	S263003200	S2630440XX	S2630452XX
	1750	43.8	1.695	1.287	1854						
	1170	29.3	1.354	0.993	2139	143-5TC	S263004400	S263005600	S263006800	S2630464XX	S2630476XX
	100	2.5	0.299	0.113	2857						
50	2500	50.0	1.672	1.237	1560	56C	S263000900	S263002100	S263003300	S2630441XX	S2630453XX
	1750	35.0	1.420	1.023	1843						
	1170	23.4	1.135	0.784	2112	143-5TC	S263004500	S263005700	S263006900	S2630465XX	S2630477XX
	100	2.0	0.269	0.088	2783						
60	2500	41.7	1.433	1.015	1536	56C	S263001000	S263002200	S263003400	S2630442XX	S2630454XX
	1750	29.2	1.216	0.835	1805						
	1170	19.5	0.973	0.637	2060	143-5TC	S263004600	S263005800	S263007000	S2630466XX	S2630478XX
	100	1.7	0.245	0.071	2689						
80	2500	31.3	0.659	0.456	919	56C	S263001100	S263002300	S263003500	S2630443XX	S2630455XX
	1750	21.9	0.577	0.379	1092						
	1170	14.6	0.469	0.289	1247	143-5TC	S263004700	S263005900	S263007100	S2630467XX	S2630479XX
	100	1.3	0.070	0.032	1593						
100	2500	25.0	0.441	0.286	721	56C	S263001200	S263002400	S263003600	S2630444XX	S2630456XX
	1750	17.5	0.386	0.236	851						
	1170	11.7	0.314	0.179	966						
	100	1.0	0.048	0.019	1222						

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

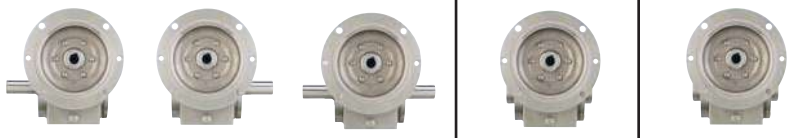
Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Stainless Steel Maximum Rating Tables

Size 832

832 Series



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	Style SBMQ L Assembly Catalog No.	Style SBMQ R Assembly Catalog No.	Style SBMQ D Assembly Catalog No.	Style SHMQ H1 Assembly Catalog No.*	Style SHMQ H2 Assembly Catalog No.*
5	2500	500.0	10.56	10.03	1306	182-4TC	S323007300	S323008500	S323009700	S3230625XX	S3230637XX
	1750	350.0	9.135	8.611	1602						
(5.17	1170	234.0	7.694	7.172	1995	213-5TC	S323010900	S323012100	S323013300	S3230649XX	S3230661XX
actual)	100	20.0	1.289	1.097	3571						
7.5	2500	333.3	9.053	8.527	1612	182-4TC	S323007400	S323008600	S323009800	S3230626XX	S3230638XX
	1750	233.3	7.844	7.317	1976						
	1170	156.0	6.642	6.114	2469	213-5TC	S323011000	S323012200	S323013400	S3230650XX	S3230662XX
	100	13.3	1.136	0.949	4075						
10	2500	250.0	8.232	7.701	1941	143-5TC	S323003900	S323005100	S323006300	S3230603XX	S3230615XX
	1750	175.0	7.034	6.507	2343						
	1170	117.0	5.974	5.446	2932	182-4TC	S323007500	S323008700	S323009900	S3230627XX	S3230639XX
	100	10.0	0.857	0.704	4437	213-5TC	S323011100	S323012300	S323013500	S3230651XX	S3230663XX
15	2500	166.7	6.161	5.603	2118	143-5TC	S323004000	S323005200	S323006400	S3230604XX	S3230616XX
	1750	116.7	5.277	4.724	2551						
	1170	78.0	4.531	3.971	3207	182-4TC	S323007600	S323008800	S323010000	S3230628XX	S3230640XX
	100	6.7	0.682	0.518	4895						
20	2500	125.0	4.836	4.306	2170	143-5TC	S323004100	S323005300	S323006500	S3230605XX	S3230617XX
	1750	87.5	4.188	3.658	2633						
	1170	58.5	3.547	3.020	3253	182-4TC	S323007700	S323008900	S323010100	S3230629XX	S3230641XX
	100	5.0	0.528	0.381	4802						
25	2500	100.0	3.977	3.468	2185	143-5TC	S323004200	S323005400	S323006600	S3230606XX	S3230618XX
	1750	70.0	3.465	2.953	2658						
	1170	46.8	2.914	2.413	3248	182-4TC	S323007800	S323009000	S323010200	S3230630XX	S3230642XX
	100	4.0	0.434	0.298	4701						
30	2500	83.3	3.452	2.903	2195	143-5TC	S323004300	S323005500	S323006700	S3230607XX	S3230619XX
	1750	58.3	3.003	2.454	2651						
	1170	39.0	2.604	2.052	3315	182-4TC	S323007900	S323009100	S323010300	S3230631XX	S3230643XX
	100	3.3	0.425	0.265	5007						
40	2500	62.5	2.669	2.157	2174	56C	S323000800	S323002000	S323003200	S3230584XX	S3230596XX
	1750	43.8	2.348	1.834	2641						
	1170	29.3	2.019	1.509	3251	143-5TC	S323004400	S323005600	S323006800	S3230608XX	S3230620XX
	100	2.5	0.330	0.189	4769	182-4TC	S323008000	S323009200	S323010400	S3230632XX	S3230644XX
50	2500	50.0	2.152	1.674	2110	56C	S323000900	S323002100	S323003300	S3230585XX	S3230597XX
	1750	35.0	1.907	1.426	2568						
	1170	23.4	1.634	1.163	3130	143-5TC	S323004500	S323005700	S323006900	S3230609XX	S3230621XX
	100	2.0	0.270	0.143	4510	182-4TC	S323008100	S323009300	S323010500	S3230633XX	S3230645XX
60	2500	41.7	1.764	1.323	2001	56C	S323001000	S323002200	S323003400	S3230586XX	S3230598XX
	1750	29.2	1.573	1.128	2437						
	1170	19.5	1.346	0.913	2951	143-5TC	S323004600	S323005800	S323007000	S3230610XX	S3230622XX
	100	1.7	0.225	0.111	4201	182-4TC	S323008200	S323009400	S323010600	S3230634XX	S3230646XX
80	2500	31.3	1.122	0.796	1605	56C	S323001100	S323002300	S323003500	S3230587XX	S3230599XX
	1750	21.9	1.030	0.695	2000						
	1170	14.6	0.869	0.551	2371	143-5TC	S323004700	S323005900	S323007100	S3230611XX	S3230623XX
	100	1.3	0.143	0.064	3246						
100	2500	25.0	0.754	0.503	1268	56C	S323001200	S323002400	S323003600	S3230588XX	S3230600XX
	1750	17.5	0.691	0.435	1567						
	1170	11.7	0.584	0.343	1846						
	100	1.0	0.097	0.040	2496						

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.75	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	31	32	35

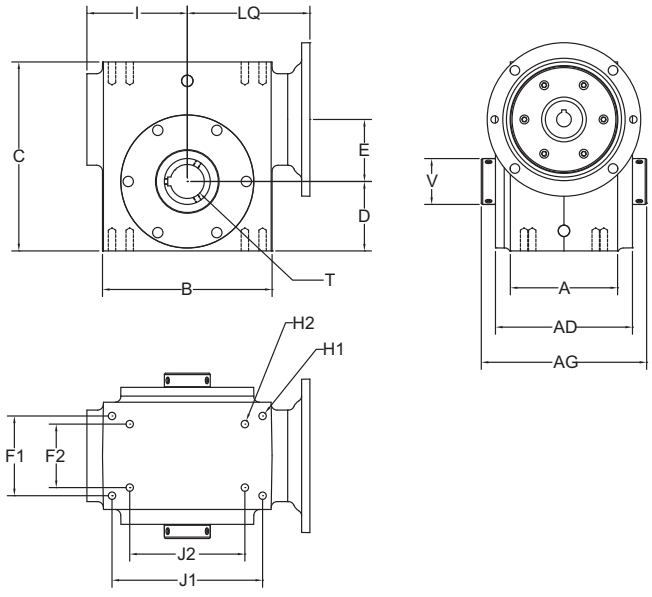
HMQ Style

	A	AD	B	C	D	E	F1	F2	H1	H2	I	J1	J2	LQ (56C)	LQ (180TC)	T MAX	T KWY	V	AG
813	2.82	3.69	3.80	4.66	1.72	1.333	2.00	N/A	5/16-18	N/A	2.38	3.25	N/A	3.48	N/A	0.625	3/16 x 3/32	1.00	4.75
815	3.44	4.40	4.88	5.38	1.91	1.540	2.75	N/A	5/16-18	N/A	2.91	4.19	N/A	4.01	N/A	0.625	3/16 x 3/32	1.00	5.42
818	3.32	4.40	5.06	5.75	2.06	1.750	2.75	1.63	5/16-18	1/4-20	3.01	4.19	3.13	4.11	N/A	1.000	1/4 x 1/8	1.44	5.50
821	3.60	4.78	5.80	6.38	2.28	2.063	3.00	2.00	5/16-18	5/16-18	3.38	4.75	4.00	4.48	N/A	1.500	3/8 x 3/16	1.94	6.00
824	4.06	4.97	6.12	6.94	2.50	2.375	2.88	N/A	3/8-16	N/A	3.69	5.00	N/A	4.63	5.24	1.500	3/8 x 3/16	1.94	6.00
826	4.54	5.80	7.25	8.00	2.94	2.625	3.38	2.69	3/8-16	3/8-16	4.25	6.38	4.88	5.19	5.80	1.500	3/8 x 3/16	1.94	7.00
832	5.45	6.80	8.50	9.38	3.50	3.250	4.00	2.75	7/16-14	1/2-13	4.94	7.50	6.25	5.88	6.49	2.188	1/2 x 1/4	2.75	7.88

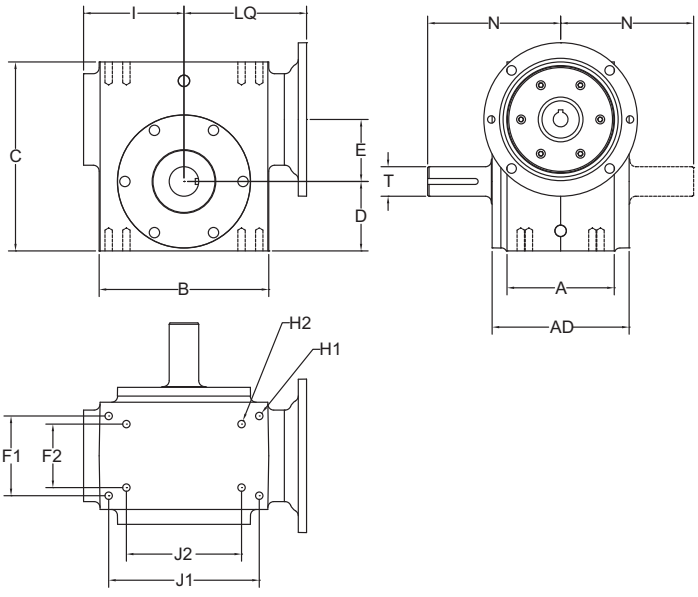
BMQ Style

	A	AD	B	C	D	E	F1	F2	H1	H2	I	J1	J2	LQ (56C)	LQ (180TC)	N	O/P Key	T
813	2.82	3.69	3.80	4.66	1.72	1.333	2.00	N/A	5/16-18	N/A	2.38	3.25	N/A	3.48	N/A	4.00	3/16 x 1.75	0.625
815	3.44	4.40	4.88	5.38	1.91	1.540	2.75	N/A	5/16-18	N/A	2.91	4.19	N/A	4.01	N/A	4.31	3/16 x 1.75	0.750
818	3.32	4.40	5.06	5.75	2.06	1.750	2.75	1.63	5/16-18	1/4-20	3.01	4.19	3.13	4.11	N/A	4.31	3/16 x 1.38	0.875
821	3.60	4.78	5.80	6.38	2.28	2.063	3.00	2.00	5/16-18	5/16-8	3.38	4.75	4.00	4.48	N/A	4.68	1/4 x 1.45	1.000
824	4.06	4.97	6.12	6.94	2.50	2.375	2.88	N/A	3/8-16	N/A	3.69	5.00	N/A	4.63	5.24	5.14	1/4 x 1.75	1.125
826	4.54	5.80	7.25	8.00	2.94	2.625	3.38	2.69	3/8-16	3/8-16	4.25	6.38	4.88	5.19	5.80	5.63	1/4 x 2.00	1.250
832	5.45	6.80	8.50	9.38	3.50	3.250	4.00	2.75	7/16-14	1/2-13	4.94	7.50	6.25	5.88	6.49	7.06	3/8 x 2.63	1.500

HMQ Style



BMQ Style



Ratio Multipliers

Dual purpose design can be used as a stand alone single reduction inline reducer or as a bolt-on to the input of any c-faced gear reducer to multiply overall reduction ratio.

Stainless Steel Ratio Multipliers

Stainless steel ratio multipliers provide superior resistance to corrosion in critical and harsh environments.



Specifications

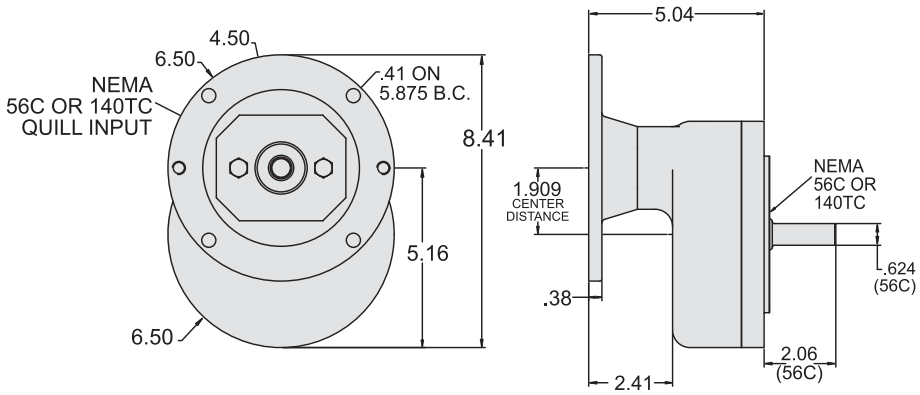
- Available with ratings to 4.7 HP
- Ratios from 2:1 to 7.5:1

Standard Features

- 316 stainless steel housing
- Factory-filled with premium Mobil Glygoyle 460 polyalkalene glycol lubricant – USDA Class H1 approved
- Viton® double lip seals provide extended life through increased resistance to high temperature, abrasion and chemicals
- C Flange or solid input styles available
- 56C - 140TC input/output
- Helical gearing to optimize system efficiency

STAINLESS GR SERIES

Stainless TX – Style TXMQ



Dimensions (inches)

Style	Frame Combinations (Input - Output)	AJ	AK	BD	OD	BE	BE1	BF	Input Bore	Input Keyway**	Weight (lbs)
TXMQ	56C	5.88	4.50	5.88	6.64	0.38	N/A	0.41	0.625	3/16 x 3/32	22
	140TC	5.88	4.50	5.88	6.64	0.38	N/A	0.41	0.875	3/16 x 3/32	22

**keyway width by depth

Available Selections

Exact Ratio	Motor C-Flange	Output C-Flange	Catalog Number
2.929	56C	56C	**707702**
	56C	140TC	**707707**
4.000	56C	56C	**707703**
	56C	140TC	**707708**
	140TC	56C	**707713**
	140TC	140TC	**707718**
5.111	56C	56C	**707704**
	56C	140TC	**707709**
	140TC	56C	**707714**
	140TC	140TC	**707719**
7.461	56C	56C	**707705**
	56C	140TC	**707710**
	140TC	56C	**707715**
	140TC	140TC	**707720**

Cast Iron Ratio Multipliers

TX3

Standard Features

- Cast iron housing
- Factory-filled with premium Mobil Glygoyle 460 polyalkalene glycol lubricant – USDA Class H1 approved
- Viton® double lip seals provide extended life through increased resistance to high temperature, abrasion and chemicals
- C Flange or solid input styles available
- 180TC to 210TC input/output
- Helical gearing to optimize system efficiency



Specifications

- Available with ratings to 20 HP
- Ratios from 2:1 to 7.5:1

Aluminum Ratio Multipliers

Aluminum ratio multipliers are lightweight and a paint-free alternative to cast iron options.

TX

Standard Features

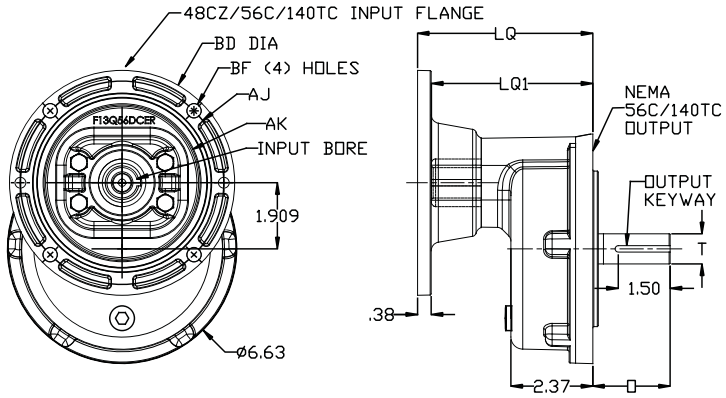
- Aluminum housing
- Factory-filled with premium Mobil Glygoyle 460 polyalkalene glycol lubricant – USDA Class H1 approved
- Viton® double lip seals provide extended life through increased resistance to high temperature, abrasion and chemicals
- C Flange or solid input styles available
- 48C, 56C, 140TC input and 56C/140TC output
- Helical gearing to optimize system efficiency
- EL and GR painted style available



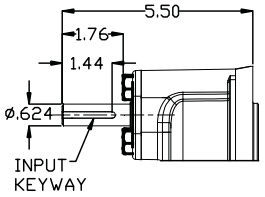
Specifications

- Available with ratings to 6 HP
- Ratios from 2:1 to 7.2:1.

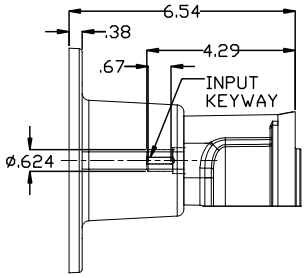
Style TXMQ



Style TX



Style TXM



Dimensions (inches)

Style	Frame Combinations (Input - Output)	AJ	AK	BD	BF	LQ	LQ1	Input Bore Dia.	O	T	Input Keyway	Output Keyway	Weight lbs.
TXMQ, TXM, TX	48CZ-56C	3.75	3.00	4.21	0.28	4.80	4.41	0.500	2.06	0.625	1/8 x 1/16	3/16 x 3/32	12
	56C-56C	5.88	4.50	6.64	0.41	5.06	4.67	0.625	2.06	0.625	3/16 x 3/32	3/16 x 3/32	12
	56C-140TC	5.88	4.50	6.64	0.41	5.06	4.67	0.625	2.13	0.875	3/16 x 3/32	3/16 x 3/32	12
	140TC-56C	5.88	4.50	6.64	0.41	5.06	4.67	0.875	2.06	0.625	3/16 x 3/32	3/16 x 3/32	12
	140TC-140TC	5.88	4.50	6.64	0.41	5.06	4.67	0.875	2.13	0.875	3/16 x 3/32	3/16 x 3/32	12

Available Selections

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Painted* Catalog No.	Unpainted Catalog No.
2.000	**TXMQ**	48CZ	56C	**708200L**	**EL708200**
		56C	56C	**708201L**	**EL708201**
		56C	143-5TC	**708202L**	**EL708202**
		143-5TC	56C	**708203L**	**EL708203**
		143-5TC	143-5TC	**708204L**	**EL708204**
	TXM	56C	56C	**708205L**	**EL708205**
		56C	143-5TC	**708206L**	**EL708206**
		143-5TC	56C	**708207L**	**EL708207**
		143-5TC	143-5TC	**708208L**	**EL708208**
	TX	-	56C	**708209L**	**EL708209**
		-	140TC	**708210L**	**EL708210**
2.913	**TXMQ**	48CZ	56C	**708211L**	**EL708211**
		56C	56C	**708212L**	**EL708212**
		56C	143-5TC	**708213L**	**EL708213**
		143-5TC	56C	**708214L**	**EL708214**
		143-5TC	143-5TC	**708215L**	**EL708215**
	TXM	56C	56C	**708216L**	**EL708216**
		56C	143-5TC	**708217L**	**EL708217**
		143-5TC	56C	**708218L**	**EL708218**
		143-5TC	143-5TC	**708219L**	**EL708219**
	TX	-	56C	**708220L**	**EL708220**
		-	140TC	**708221L**	**EL708221**
4.000	**TXMQ**	48CZ	56C	**708222L**	**EL708222**
		56C	56C	**708223L**	**EL708223**
		56C	143-5TC	**708224L**	**EL708224**
		143-5TC	56C	**708225L**	**EL708225**
		143-5TC	143-5TC	**708226L**	**EL708226**
	TXM	56C	56C	**708227L**	**EL708227**
		56C	143-5TC	**708228L**	**EL708228**
		143-5TC	56C	**708229L**	**EL708229**
		143-5TC	143-5TC	**708230L**	**EL708230**
	TX	-	56C	**708231L**	**EL708231**
		-	140TC	**708232L**	**EL708232**

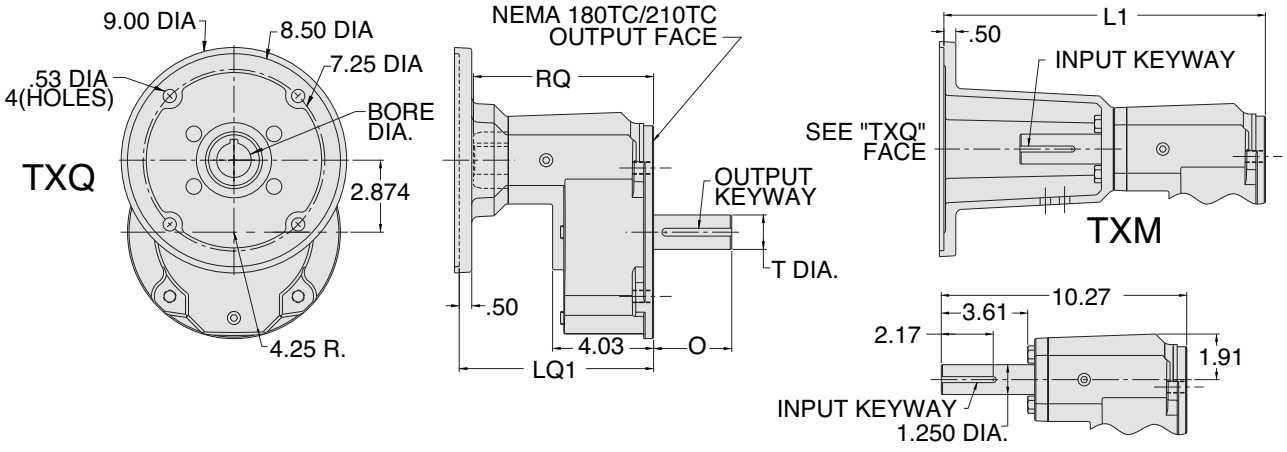
Exact Ratio	Style	Motor C-Flange	Output C-Flange	Painted* Catalog No.	Unpainted Catalog No.
5.000	**TXMQ**	48CZ	56C	**708233L**	**EL708233**
		56C	56C	**708234L**	**EL708234**
		56C	143-5TC	**708235L**	**EL708235**
		143-5TC	56C	**708236L**	**EL708236**
		143-5TC	143-5TC	**708237L**	**EL708237**
	TXM	56C	56C	**708238L**	**EL708238**
		56C	143-5TC	**708239L**	**EL708239**
		143-5TC	56C	**708240L**	**EL708240**
		143-5TC	143-5TC	**708241L**	**EL708241**
	TX	-	56C	**708242L**	**EL708242**
		-	140TC	**708243L**	**EL708243**
7.182	**TXMQ**	48CZ	56C	**708244L**	**EL708244**
		56C	56C	**708245L**	**EL708245**
		56C	143-5TC	**708246L**	**EL708246**
		143-5TC	56C	**708247L**	**EL708247**
		143-5TC	143-5TC	**708248L**	**EL708248**
	TXM	56C	56C	**708249L**	**EL708249**
		56C	143-5TC	**708250L**	**EL708250**
		143-5TC	56C	**708251L**	**EL708251**
		143-5TC	143-5TC	**708252L**	**EL708252**
	TX	-	56C	**708253L**	**EL708253**
		-	140TC	**708254L**	**EL708254**

* Standard Grove Gear blue paint

Dimensions

CAST IRON GR SERIES

Cast Iron Size 3 – Style TX3



Dimensions (inches)

TX

Style	Frame Combinations (Input - Output)	Input Bore	L1	LQ1	O	RQ	T +0.000 -0.0015	Input Keyway*	Output Keyway*	Weight (lbs.)
TXMQ, TXM, TX	180TC - 180TC	1.125	13.45	7.76	2.62	7.25	1.125	.250 x .125	.250 x .125 x 1.80	45
	210TC - 180TC	1.375	13.45	7.76	2.62	7.25	1.125	.312 x .156**	.250 x .125 x 1.80	45
	250TC - 180TC	1.625	14.01	8.32	2.62	7.65	1.125	.375 x .188**	.250 x .125 x 1.80	45
	180TC - 210TC	1.125	13.45	7.76	3.12	7.25	1.375	.250 x .125	.312 x .156 x 2.63	45
	210TC - 210TC	1.375	13.45	7.76	3.12	7.25	1.375	.312 x .156**	.312 x .156 x 2.63	45
	250TC - 210TC	1.625	14.01	8.32	3.12	7.65	1.375	.375 x .188**	.312 x .156 x 2.63	45

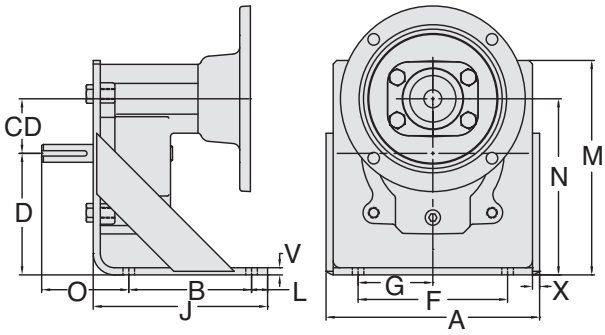
* Keyway width by depth
** Input keyway for styles TXM & TX is .250 x .125

Available Selections

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
2.000	TXMQ	182-4TC	182-4TC	**707060L**
		182-4TC	213-5TC	**707061L**
		213-5TC	213-5TC	**707064L**
		254-6TC	213-5TC	**707067L**
	TXM	182-4TC	182-4TC	**707090L**
		213-5TC	213-5TC	**707094L**
		254-6TC	213-5TC	**707097L**
	TX	--	213-5TC	**707121L**
2.964	TXMQ	182-4TC	182-4TC	**707069L**
		182-4TC	213-5TC	**707070L**
		213-5TC	182-4TC	**707072L**
		213-5TC	213-5TC	**707073L**
	TXM	182-4TC	182-4TC	**707099L**
		182-4TC	213-5TC	**707100L**
		213-5TC	182-4TC	**707102L**
		213-5TC	213-5TC	**707103L**
	TX	--	182-4TC	**707123L**
		--	213-5TC	**707124L**

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
4.045	TXMQ	182-4TC	182-4TC	**707075L**
		182-4TC	213-5TC	**707076L**
		213-5TC	182-4TC	**707078L**
		213-5TC	213-5TC	**707079L**
	TXM	182-4TC	182-4TC	**707105L**
		182-4TC	213-5TC	**707106L**
		213-5TC	182-4TC	**707108L**
		213-5TC	213-5TC	**707109L**
	TX	--	182-4TC	**707126L**
		--	213-5TC	**707127L**
5.167	TXMQ	182-4TC	182-4TC	**707081L**
		182-4TC	213-5TC	**707082L**
		213-5TC	182-4TC	**707084L**
		213-5TC	213-5TC	**707085L**
	TXM	182-4TC	182-4TC	**707111L**
		182-4TC	213-5TC	**707112L**
		213-5TC	182-4TC	**707114L**
		213-5TC	213-5TC	**707115L**
	TX	--	182-4TC	**707129L**
		--	213-5TC	**707130L**
7.538	TXMQ	182-4TC	182-4TC	**707087L**
	TXM	182-4TC	182-4TC	**707117L**
	TX	--	182-4TC	**707132L**

Ratio Multiplier Foot Kit for Styles TBX, TBXM, TBXMQ



Dimensions (inches)

Size	Output	A	B	CD	D	F	G	H	J	X	L	M	N	O	V	X	Catalog Number	Weight (lbs)
TX	56C	7.50	4.31	1.909	4.250	5.25	2.63	0.41	6.13	0.25	0.56	7.50	6.16	3.06	.25	.25	**G185655**	2.0
	140TC	7.50	4.31	1.909	4.250	5.25	2.63	0.41	6.13	0.25	0.56	7.50	6.16	3.12	.25	.25		
TX3	180TC	9.50	5.25	2.874	5.000	7.00	3.50	0.53	7.38	0.25	0.63	9.44	7.88	3.88	.25	.25		
	210TC	9.50	5.25	2.874	5.000	7.00	3.50	0.53	7.38	0.25	0.63	9.44	7.88	4.38	.25	.25	**G185657**	3.0
	250TC	9.50	5.25	2.874	5.000	7.00	3.50	0.53	7.38	0.25	0.63	9.44	7.88	5.00	.25	.25		

NOTE: Foot kit is painted steel construction.

Maximum Rating Tables

Stainless TX

Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output TQ. (lb-in.)	Overhung Load (lbs.)
2.056	1750	851	4.69	4.55	347	222
2.929	1750	598	3.64	3.53	384	265
4.000	1750	438	2.91	2.82	419	300
5.111	1750	342	2.33	2.26	428	300
7.462	1750	235	1.56	1.52	419	300

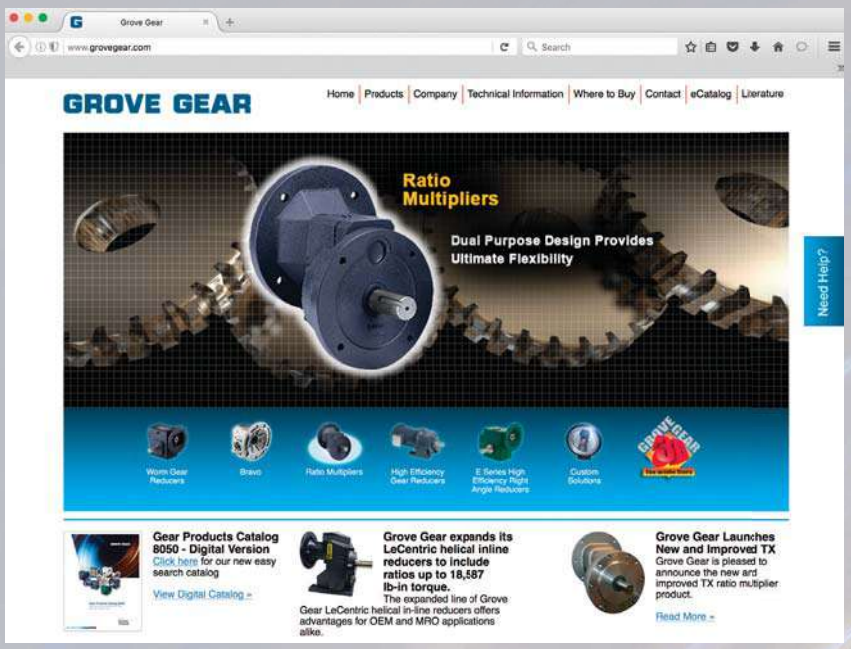
TX

Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output TQ. (lb-in.)	Overhung Load 56C Output (lbs.)	Overhung Load 140TC Output (lbs.)
2.000	1750	875	6.00	5.88	424	358	358
2.913	1750	601	4.21	4.13	433	375	434
4.000	1750	438	3.63	3.55	511	375	455
5.000	1750	350	3.00	2.94	529	375	455
7.182	1750	244	2.62	2.57	664	375	455

TX3

Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output TQ. (lb-in.)	Overhung Load (lbs.)
2.000	1750	875	20.00	19.6	1412	900
2.964	1750	590	12.98	12.72	1357	900
4.045	1750	433	11.35	11.13	1621	900
5.167	1750	339	10.07	9.87	1836	900
7.538	1750	232	5.80	5.69	1544	900

Product Support is Just a Click Away



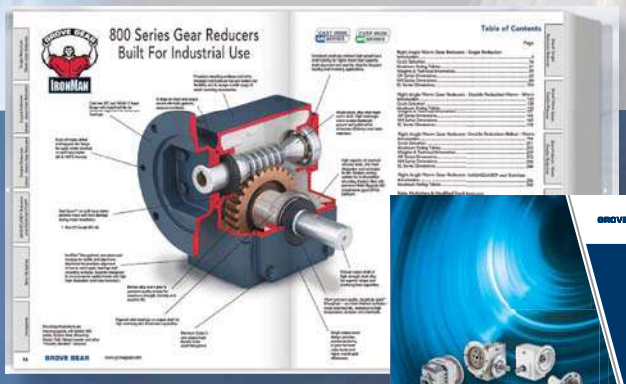
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- Instruction and maintenance manuals
- 2-D and 3-D CAD drawings
- Parts lists

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- Custom Mounting Brackets/Bases
- Longer/Shorter Shaft Extensions
- Special Shaft Extension Diameters
- Cross-drilled Holes on Shafts
- Custom Ratios
- Stainless-Steel Hollow Output Shafts
- Reduced Backlash Designs





Modified Stock Gear Reducers

CAST IRON GR SERIES

STYLE T OR U HORIZONTAL BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185000	2
GR815	G185120	3
GR818	G185005	3
GR821	G185010	4
GR824	G185015	4
GR826	G185020	6
GR830	G185121	6
GR832	G185025	9
GR842	G185030	14
GR852	G185035	20
GR860	G185040	31
GR870	G185189	41
GR880	G185190	48
GR8100	G185191	76

STYLE VL & VH VERTICAL OUTPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185002	2
GR815	G185127	3
GR818	G185007	3
GR821	G185012	7
GR824	G185017	7
GR826	G185022	9
GR830	G185128	10
GR832	G185027	13
GR842	■	20
GR852	■	25
GR860	■	36
GR870	■	71
GR880	■	78
GR8100	■	156

■ VL & VH bases for sizes 842-8100 require grease retainer and zerk fittings in output covers and must be installed at Factory. Contact Factory for field replacement kits.

** Must designate D or U.

STYLE J VERTICAL INPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185001	1
GR815	G185122	1
GR818	G185006	2
GR821	G185011	3
GR824	G185016	3
GR826	G185021	5
GR830	G185123	6
GR832	G185124	6
GR842	◆	10
GR852	◆	15

◆ J Brackets for sizes 842-852 require grease fittings in input covers and must be installed at Factory. Contact Factory for field replacement kits.

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813 - 842	G185152	5
GR852 - 860	G185153	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory▲ Kit Only Catalog No.
GR813	G185450
GR815	G185451
GR818	G185451
GRG821	G185452
GRL821	G185453
GR824	G185454
GR826	G185455
GR830	G185456
GR832	G185457
GR842	G185458
GR852	G185459
GR860	G185460
GR870	--
GR880	--
GR8100	--

▲ Torque arm bracket mounts to hollow shaft reducer.

STYLE F OUTPUT FLANGE CAST IRON



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185130**	1
GR815	G185131**	1
GR818	G185132**	2
GR821	G185133**	3
GR824	G185134**	3
GR826	G185135**	4
GR830	G185136**	10
GR832	G185137**	10
GR842	G185138**	15
GR852	G185139**	30
GR860	G185140**	38
GR870	**	**
GR880	**	**
GR8100	**	**

** Output flange must be installed at Factory for all solid output shaft reducers (sizes 813-8100). Specify Mod-Squad Service Number for flange when ordering these reducers.

▼ Flange can only mount to "bolted cover side" of hollow reducer on sizes 813-852. Please specify correct mounting assembly with order. Refer to pages 64-65, for assembly positions. Must designate L (left) or R (right).

STYLE R RISER BLOCK



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR815	G185141	7
GR818	G185142	7
GR821	G185143	9
GR824	G185144	9
GR826	G185145	12
GR830	G185146	15
GR832	G185147	31
GR842	G185148	24
GR852	G185149	15

NOTE: Mounting bolts are not included.

BM STYLE INPUT FLANGE KITS**



Reducer Size	NEMA Input Frame Size					
	48CZ	56C	143-5TC	182-4TC	213-5TC	254-6TC
GR813	G185161	G185090	--	--	--	--
GR815	G185162	G185163	G185164	--	--	--
GR818	G185165	G185091	G185092	--	--	--
GR821	G185166	G185093	G185094	--	--	--
GR824	--	G185095	G185096	G185097	--	--
GR826	--	G185098	G185099	G185100	--	--
GR830	--	G185167	G185168	G185169	--	--
GR832	--	G185101	G185102	G185103	G185170	--
GR842	--	G185171	G185104	G185105	G185106	G185172
GR852	--	--	G185173	G185107	G185108	G185109
GR860	--	--	--	G185174	G185110	G185111

** All kits include flexible coupling.

DOUBLE REDUCTION ADAPTOR KITS



Reducer Size	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs.)
GR813 - GR821	G185150	813	56C	3

Note: Sizes 824-8100 must be assembled at Factory.

HOLLOW OUTPUT SHAFT PROTECTIVE COVERS

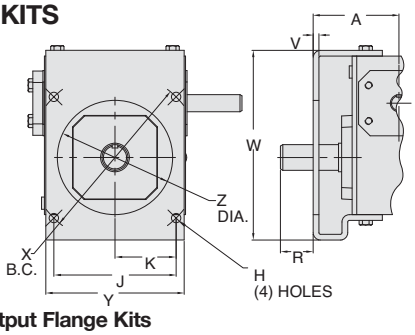
Series	Accessory Kit Only Catalog No.
GR818	G185154.00
GR821-GR826	G185155.00
GR830-GR832	G185156.00



This protective cap mounts to integral output side of reducer and covers the unused output bore for single extension or hollow output shaft assemblies. Cover will not mount to bolted cover side of reducer. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

BF STYLE OUTPUT FLANGE KITS





Style BF Output Flange - Steel

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style BF	Weight (lbs)
GR813	G185004	BF813GR	6
GR818	G185009	BF818GR	6
GRL821	G185014	BF821GR	10
GR824	G185019	BF824GR	10
GR826	G185024	BF826GR	13

Must designate L (left) or R (right).



Style BF Output Flange Kits

Series	A	H	J	K	R	V	W	X	Y	Z
813	3.00	0.34	3.54	1.77	1.00	0.19	5.55	5.00	4.25	3.62
818	3.50	0.34	4.16	2.08	0.81	0.19	6.66	5.88	4.81	4.06
821	3.75	0.41	4.60	2.30	0.93	0.19	7.47	6.50	5.75	4.50
824	3.72	0.41	5.30	2.65	1.37	0.25	8.30	7.50	6.00	5.00
826	4.06	0.41	5.66	2.83	1.57	0.25	9.25	8.00	7.18	6.00

Modified Stock Gear Reducers

CAST IRON NH SERIES

STYLE T OR U HORIZONTAL BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
NH813	G185200	2
NH815	G185201	3
NH818	G185202	3
NH821	G185203	4
NH824	G185204	4
NH826	G185205	6
NH830	G185206	6
NH832	G185207	9
NH842	G185208	14
NH852	G185209	20

STYLE J VERTICAL INPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
NH813	G185210	1
NH815	G185211	1
NH818	G185212	2
NH821	G185213	3
NH824	G185214	3
NH826	G185215	5
NH830	G185216	6
NH832	G185217	6
NH842	◆	10
NH852	◆	15

◆ J Brackets for sizes 842-852 require NH grease fittings in input covers and must be installed at Factory. Contact Factory for field replacement kits.

STYLE F OUTPUT FLANGE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
NH813	G185228	1
NH815	G185229**	1
NH818	G185230**	2
NH821	G185231**	3
NH824	G185232**	3
NH826	G185233**	4
NH830	G185234**	10
NH832	G185235**	10
NH842	G185236**	15
NH852	G185237**	30

** Output flange must be installed at Factory for all solid output shaft reducers (sizes 813-852).Specify Mod-Squad Service Number for flange when ordering these reducers.

▼ Flange can only mount to "bolted cover side" of hollow reducers. Please specify correct mounting assembly with order. Refer to pages 84-85, for assembly positions. Must designate L (left) or R (right).

STYLE VL & VH VERTICAL OUTPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
NH813	G185220	2
NH815	G185221	3
NH818	G185222	3
NH821	G185223	7
NH824	G185224	7
NH826	G185225	9
NH830	G185226	10
NH832	G185227	13
NH842	■	20
NH852	■	25

■ VL & VH bases for sizes 842-852 require grease retainer and zerk fittings in output covers and must be installed at Factory. Contact Factory for field replacement kits.

** Must designate D or U.

BM STYLE INPUT FLANGE KITS**



Reducer Size	NEMA Input Frame Size					
	48CZ	56C	143-5TC	182-4TC	213-5TC	254-6TC
NH813	G185161	G185090	--	--	--	--
NH815	G185162	G185163	G185164	--	--	--
NH818	G185165	G185091	G185092	--	--	--
NH821	G185166	G185093	G185094	--	--	--
NH824	--	G185095	G185096	G185097	--	--
NH826	--	G185098	G185099	G185100	--	--
NH830	--	G185112	G185113	G185114	G185115	--
NH832	--	G185112	G185113	G185114	G185115	--
NH842	--	G185171	G185104	G185105	G185106	G185172
NH852	--	--	G185173	G185107	G185108	G185109

** All kits include flexible coupling.

DOUBLE REDUCTION ADAPTOR KITS



Reducer Size	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs.)
NH813 - NH821	G185238	813	56C	3

Note: Sizes 824-8100 must be assembled at Factory.

HOLLOW OUTPUT SHAFT PROTECTIVE COVERS

Series	Accessory Kit Only Catalog No.
NH818	G185154.00
NH821-NH826	G185155.00
NH830-NH832	G185156.00



This protective cap mounts to integral output side of reducer and covers the unused output bore for single extension or hollow output shaft assemblies. Cover will not mount to bolted cover side of reducer. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
NH813-842	G185152	5
NH852	G185153	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory ▲ Kit Only Catalog No.
NH813	G185450
NH815	G185464
NH818	G185463
NH821	G185465
NH824	G185466
NH826	G185467
NH830	G185468
NH832	G185469
NH842	G185470
NH852	G185471

▲ Torque arm bracket mounts to hollow shaft reducer.

ELECTRA-GEAR
Modified Stock Gear Reducers

ALUMINUM EL SERIES

STYLE T OR U HORIZONTAL BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813	G185260	1
EL818	G185261	2
EL821	G185262	3
EL824	G185263	3
EL826	G185264	4
EL830	G185265	6
EL832	G185266	8
EL842	G185267	7
EL852	G185268	8
EL860	G185269	10

STYLE J VERTICAL INPUT BASE



(WHITE EPOXY)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813	G185270	1
EL818	G185271	2
EL821	G185272	3
EL824	G185273	3
EL826	G185274	4
EL830	G185275	5
EL832	G185276	5
EL842	◆	6
EL852	◆	8
EL860	◆	10

◆ J Brackets for sizes 842-852 require grease fittings in input covers and must be installed at Factory. Contact Factory for field replacement kits.

STYLE VL VERTICAL OUTPUT BASE



(WHITE EPOXY)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813	G185278	2
EL818	G185279	3
EL821	G185280	3
EL824	G185281	3
EL826	G185282	4
EL830	G185283	5
EL832	G185284	5
EL842	■	6
EL852	■	8
EL860	■	10

■ VL bases for sizes 842-852 require grease fittings in output covers and must be installed at Factory. Contact Factory for field replacement kits.

** Must designate D or U.

BM STYLE INPUT FLANGE KITS**



Reducer Size	NEMA Input Frame Size				
	56C	140TC	180TC	210TC	250TC
EL813	G185501	G185511	–	–	–
EL818	G185502	G185512	–	–	–
EL821	G185502	G185512	–	–	–
EL842	G185503	G185513	G185523	G185573	G185583
EL852	G185503	G185513	G185523	G185573	G185583

** All kits include flexible coupling

DOUBLE REDUCTION ADAPTOR KITS



Reducer Size	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs.)
EL813 - EL821	G185296	813	56C	2

Note: Sizes 824-8100 must be assembled at Factory.

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813-842	G185152	5
EL852-860	G185153	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory▲ Kit Only Catalog No.
EL813	–
EL818	G185480
EL821	G185481
EL824	G185472
EL826	G185473
EL830	G185474
EL832	G185475
EL842	G185476
EL852	G185477
EL860	G185478

▲ Torque arm bracket mounts to hollow shaft reducer.

STYLE F & FR OUTPUT FLANGE KITS

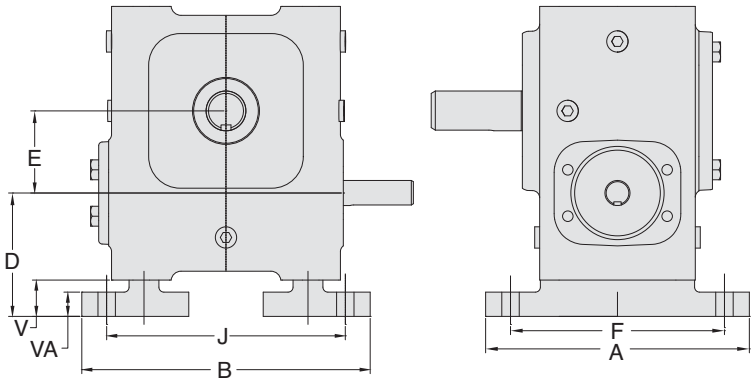


Reducer Size	Accessory Kit Only Catalog No. Style F Hollow Output Flange	Accessory Kit Only Catalog No. Style FR Solid Output Flange	Weight (lbs)
EL818	G185287	G185298	2
EL821	G185288	G185299	3
EL824	G185289	G185300	3
EL826	G185289	G185300	3
EL830	G185291	G185302	6
EL832	G185291	G185303	7
EL842	G185293	G185304	8
EL852	G185294	G185295	8
EL860	✦	✦	21

✦ Output flange must be installed at Factory.

"ABC" Base Kit

"ABC" base can be mounted on top or bottom of reducer. Please specify mounting position with order.



ABC BASE DIMENSIONS

Size	A	B	CD	D	F	J	V	VA	Accessory Kit Only Catalog No.	Weight (lbs)
818	5.19	4.50	1.75	3.67	4.38	3.69	1.36	0.55	G185620	2
821	6.63	7.25	2.06	3.24	5.38	6.00	0.92	0.61	G185621	3
826	6.63	8.12	2.63	3.93	5.38	6.87	1.06	0.68	G185622	4
830	9.00	9.87	3.00	4.24	7.50	8.37	1.31	0.74	G185623	6
832	9.13	10.88	3.25	4.74	7.63	9.38	0.74	0.74	G185624	8
842	10.00	10.50	4.25	5.73	8.00	8.50	1.23	1.23	G185625	7
852	10.75	12.12	5.25	5.73	8.75	9.74	1.48	1.48	G185626	8
860	11.75	13.50	6.00	6.73	9.50	11.50	1.73	1.73	G185627	10

Foot kit can be mounted on top or bottom of reducer

Modified Stock Gear Reducer Accessories

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

BLUE TOUCH-UP PAINT

Container Size	Catalog No.
16 oz can	G185404



WORM GEAR OIL

Container Size	Catalog No.
Quart	G185405



⚠ CAUTION

This oil is standard in all Grove Gear (GR and NH Series) and Electra-Gear (EL Series) worm reducers. It is a synthetic Polyglycol (PAG) blend, only intended for use in worm gear reducers and cannot be mixed with any other oil type.

NEMA C-FACE QUILL INPUT BUSHINGS



Frame Conversion	Input Quill Bore Size (inch)	Accessory Kit Only Catalog #
180TC to 140TC	1-1/8 to 7/8	G175230
180TC to 56C	1-1/8 to 5/8	G175229
140TC to 56C	7/8 to 5/8	G175228

Note: Bushing allows multiple NEMA frame motors to mount to a single gearbox by reducing the input quill shaft diameter as noted. Application may also require a different input flange size. Bushings are not intended for use in output bores.

ONE-WAY POPPET VENT



Reducer Size	Accessory Kit Only Catalog No.
813	G185407
815	
818	
821	
824	
826	
830	
832	
842	
852	G185408
860	
870	G185409
880	
8100	G185410

Note: Standard vent is two-way design. Poppet vent is a one-way design, reducing chance of oil vapors escaping into environment. For ultimate protection, refer to the Enviroseal design.

OIL LEVEL SIGHT GLASS PLUG



Reducer Size	Accessory Kit Only Catalog No.
813	G185411
815	
818	
821	
824	
826	
830	
832	
842	
852	G185412
860	
870	G185413
880	
8100	G185414

Note: Sight Gage is used to visually check if oil level of gearbox is above or below proper level.

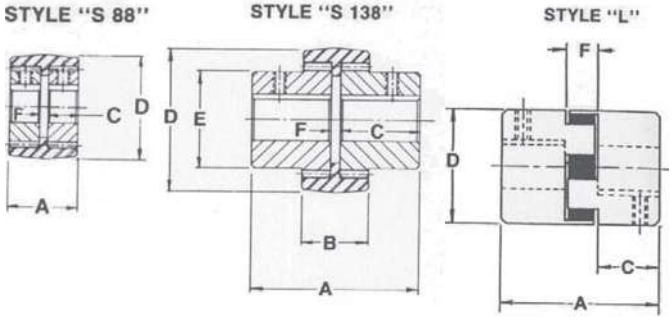
Modified Stock Gear Reducer Accessories

INPUT COUPLING KITS* • SERIES GR • NH • EL

Reducer Size	NEMA Input Frame Size											
	48CZ		56C		140TC		180TC		210TC		250TC	
	Part Number	Style	Part Number	Style	Part Number	Style	Part Number	Style	Part Number	Style	Part Number	Style
813	041239	S88	040929	S88	040931	S88	--	--	--	--	--	--
815 - 821	040929	S88	040932	S88	040934	S88	--	--	--	--	--	--
824 - 826	--		040933	S88	040935	S88	040937	S138	--	--	--	--
830 - 832	--		040934	S88	040936	S88	040938	S138	040939	S138	--	--
842 - 852	--		012230	S138	012231	S138	041067	S138	040941	S138	012410	M300
860	--		--	--	--	--	013205	L110	013206	L110	013207	L150
870	--		--	--	--	--	014468	L110	014469	L110	014470	M300
880	--		--	--	--	--	--	--	014471	L150	014472	M400

* Coupling kits include 2 coupling halves, flexible sleeve/element and retaining hardware. All couplings are keyed, not splined.

COUPLING DIMENSIONS - INCHES



DIMENSIONS

Model	A	B	C	D	E	F	Available Sizes
S88	1.25	–	.56	1.88	–	.12	3/8, 1/2, 5/8, 3/4, 7/8
S138	3.36	1.25	1.62	2.88	2.00	.12	5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4 1-3/8, 1-1/2, 1-5/8, 1-7/8
L-070	2.00	–	.75	1.36	–	.50	3/8, 1/2, 5/8
L-150	4.50	–	1.75	3.75	–	1.00	1-1/4, 1-3/8, 1-5/8, 1-7/8

RATINGS - HP

Model	RPM 100	600	900	1200	1800	3600
S88	.20	1.2	1.8	2.4	3.6	7.2
S138	.60	3.6	5.4	7.2	10.8	21.6
L-070	–	–	–	.72	1.08	2.16
L-150	–	–	–	20.4	30.6	61.2

Enviro-Seal



Note: Enviroseal is standard on all WASHGUARD® / PLATINUM reducers in this catalog.

Note: By adding the "Enviroseal" feature to any standard GR Series reducer, the original "Grove Gold" features are duplicated. This feature can be added to any GR, NH or EL Series worm reducer or ratio multiplier for a "Sealed-For-Life" ventless design. Specify "Envirseal Option" with order.

INPUT COUPLING SLEEVES** • SERIES GR • NH • EL

Reducer Size	NEMA Input Frame Size					
	48CZ	56C	143-5TC	182-4TC	213-5TC	254-6TC
813	040699	040699	040699	--	--	--
815 - 821	040699	040699	040699	--	--	--
824 - 826	--	040699	040699	040792	--	--
830 - 832	--	040699	040699	040792	040792	--
842 - 852	--	040792	040792	040792	040792	095555B
860	--	--	--	013205	013205	095521
870	--	--	--	013205	013205	095555B
880	--	--	--	--	095521	095561B

** Includes coupling sleeve only. For complete 3-piece coupling kit, refer to Input Coupling Kits.

Stock WASHGUARD® Gear Reducer Accessories

WASHGUARD GR SERIES

WASHGUARD® STYLE T OR U HORIZONTAL BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185045	2
GR815	G185180	3
GR818	G185046	3
GR821	G185047	4
GR824	G185048	4
GR826	G185049	6
GR830	G185181	6
GR832	G185182	9

Contact Factory for larger sizes

WASHGUARD® STYLE J VERTICAL INPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185054	1
GR815	G185183	1
GR818	G185055	2
GR821	G185056	3
GR824	G185057	3
GR826	G185058	5
GR830	G185184	6
GR832	G185185	6

WASHGUARD® HOLLOW SHAFT TIE ROD KIT



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813-842	G185088	5
GR852-860	G185089	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

WASHGUARD® STYLE VL & VH VERTICAL OUTPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185063	2
GR815	G185186	3
GR818	G185064	3
GR821	G185065	7
GR824	G185066	7
GR826	G185067	9
GR830	G185187	10
GR832	G185188	13

* Style VL and VH mountings use the same base with a different assembly position.
** Must designate D or U.

WASHGUARD® STYLE F OUTPUT FLANGE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185307	1
GR815	G185308	1
GR818	G185309	2
GR821	G185310	3
GR824	G185311	3
GR826	G185312	4
GR830	G185313	10
GR832	G185314	10

Contact Factory for larger sizes

▼ Flange can only mount to "bolted cover side" of hollow reducer on sizes 813-852. Please specify correct mounting assembly with order. Refer to pages 64-65, for assembly positions. Must designate L (left) or R (right).

WASHGUARD® TORQUE ARM BRACKET



Reducer Size	Accessory ▲ Kit Only Catalog No.
GR813	G185630
GR815	G185632
GR818	G185632
GR821	G185633
GR824	G185634
GR826	G185635
GR830	G185636
GR832	G185637

▲ Torque arm braket mounts to hollow shaft reducer.

WASHGUARD® HOLLOW OUTPUT SHAFT PROTECTIVE COVERS

Reducer Size	Accessory Kit Only Catalog No.
GR818	Contact Factory
GR821	
GR824	
GR826	



This protective cap mounts to integral output side of reducer and covers the unused output bore for single extension or hollow output shaft assemblies. Cover will not mount to bolted cover side of reducer. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

WASHGUARD® STYLE BF OUTPUT FLANGE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813	G185081	2
GR818	G185082	2
GRL821	G185083	3
GR824	G185084	4
GR826	G185085	6

Must designate L (left) or R (right).

PLATINUM SERIES STYLE T OR U HORIZONTAL BASE



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813	G185260P	1
EL818	G185261P	2
EL821	G185262P	3
EL824	G185263P	3
EL826	G185264P	4
EL830	G185265P	6
EL832	G185266P	8

PLATINUM SERIES STYLE J VERTICAL INPUT BASE*



Reducer Size	Accessory* Kit Only Catalog No.	Weight (lbs)
EL813	G185270	1
EL818	G185271	2
EL821	G185272	3
EL824	G185273	3
EL826	G185274	4
EL830	G185275	5
EL832	G185276	5

* Painted white epoxy.

PLATINUM SERIES STYLE VL VERTICAL OUTPUT BASE*



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813	G185278	2
EL818	G185279	3
EL821	G185280	3
EL824	G185281	3
EL826	G185282	4
EL830	G185283	6
EL832	G185284	7

* Painted white epoxy.
** Must designate D or V.

STYLE F & FR OUTPUT FLANGE KITS



Reducer Size	Accessory Kit Only Catalog No. Style F Hollow Output Flange	Accessory Kit Only Catalog No. Style FR Solid Output Flange	Weight (lbs)
EL813	—	—	—
EL818	G185287P	G185298P	2
EL821	G185288P	G185299P	3
EL824	G185289P	G185300P	3
EL826	G185289P	G185300P	3
EL830	G185291P	G185302P	6
EL832	G185291P	G185303P	7

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813-842	G185088	5
EL852-860	G185089	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory Kit Only Catalog No. ▲
EL813	G185479
EL818	G185480
EL821	G185481
EL824	G185472
EL826	G185473
EL830	G185474
EL832	G185475

▲ Torque arm braket mounts to hollow shaft reducer.

STAINLESS STEEL ONE-WAY POPPET VENT



Reducer Size	Accessory Kit Only Catalog No.
SS813	G183407
SS815	
SS818	
SS821	
SS824	
SS826	
SS 832	

Note: Standard vent is two-way design. Poppet vent is a one-way design, reducing chance of oil vapors escaping into environment. For ultimate protection, refer to the Enviroseal design.

STAINLESS STEEL STYLE T OR U HORIZONTAL BASE



Stainless Steel Style T or U Horizontal Base • GR Series

Reducer Size	Accessory Kit Catalog No.
S13	G185350.00
S15	G185351.00
S18	G185352.00
S21	G185353.00
S24	G185354.00
S26	G185355.00
S32	G185356.00

STAINLESS STEEL STYLE F OUTPUT FLANGE



Stainless Steel Style F Output Flange • GR Series

Series	Accessory Kit Only Catalog No.
S13	G185667.00
S15	G185667.00
S18	G185668.00
S21	G185669.00
S24	G185670.00
S26	G185671.00
S32	G185672.00

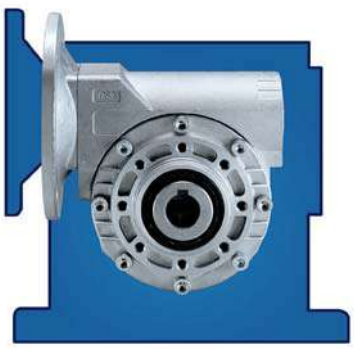
▼ Flange can only mount to "bolted cover side" of hollow reducer on sizes 813-852. Please specify correct mounting assembly with order. Refer to pages 74-75, for assembly positions. Must designate L (left) or R (right).

Bravo! An Alternative For Machine

Vent Free Design.** No breather or vents to leak! Factory lubricated for life with premium synthetic Mobil Glygoyle 460 (PAG) lubricant with an operation range of -25°F to +220°F (-32°C to +104°C).

Single-piece aluminum alloy housing is vacuum impregnated with Resinol RT (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

NEMA C flange with quill input accepts 56C, 143-5TC and 182-4TC motor frames.
or
B5 & B14 IEC metric flange options with quill input accepts D56, D63, D71, D80, D90, D100 and D112 motor frames.



Bravo,® up to two-thirds lighter and one-third smaller than cast iron reducer of similar center distance!

Hollow output shaft mounting is standard at no extra cost. Reduces total drive envelope size, weight and cost. Solid shaft single and double output is available.

Designers

Bravo™
ALUMINUM GEAR REDUCERS

Oversized bearings support positively-retained, high speed shaft for higher shock load capacity — ideal for frequent starting and reversing applications. Premium, Nitrile® high temperature seals each end.

Single-piece alloy steel input shaft and worm shaft. High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

Bronze alloy worm gear is centrifugally cast onto an iron hub for maximum strength, lubricity and superior life.

Oversized bearings for radial load capability and maximum hollow output shaft diameters.

Premium, high-temperature Nitrile® output seals.

Impregnated and machined bearing caps with exterior machined surfaces mate to a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware. No need to remove bearing covers to mount/change accessory kits.

** 512 Series is filled with synthetic oil or equivalent. Operating temperature range of 512 Series is +5°F to +220°F (-15°C to +104°C)

Start with one of four basic units...

Motorized HMQ



Motorized BMQ



Non-Motorized H

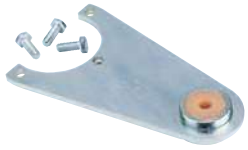


Non-Motorized B



and add mounting accessories...

Reaction Arm R



Horizontal T Base





FL Flange (Long)



F Flange (Short)

To create thousands of gear and GEAR+MOTOR™ combinations



www.grovegear.com

GROVE GEAR

Bravo™ ALUMINUM GEAR REDUCERS Mounting Style Guide

Hollow Output Shaft Mounted

MOTORIZED QUILL INPUT

HMQ



Ratings: Pages 290-294
Dimensions: Page 296

RHMQ



Ratings: Pages 290-294
Dimensions: Page 298

FHMQ



Ratings: Pages 290-294
Dimensions: Page 300

NON-MOTORIZED SOLID INPUT SHAFT

H



Ratings: Pages 290-294
Dimensions: Page 296

RH



Ratings: Pages 290-294
Dimensions: Page 298

FH



Ratings: Pages 290-294
Dimensions: Page 300

SOLID OUTPUT SHAFT

MOTORIZED QUILL INPUT

BMQ



Ratings: Pages 290-294
Dimensions: Page 297

RMQ



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 299

FMQ



Ratings: Pages 290-294
Dimensions: Page 301

NON-MOTORIZED SOLID INPUT SHAFT

B



Ratings: Pages 290-294
Dimensions: Page 297

R



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 299

F



Ratings: Pages 290-294
Dimensions: Page 301

MOUNTING ACCESSORIES

Select the appropriate mounting accessories from this wide variety of options.



REACTION ARM R



F FLANGE
(SHORT FLANGE)

❖ Non-Standard Option assemblies may be useful in certain applications. Please contact Factory with application details.

FLHMQ



Ratings: Pages 290-294
Dimensions: Page 302

THMQ



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 304

UHMQ



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 306

JHMQ



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 308

FLH



Ratings: Pages 290-294
Dimensions: Page 302

TH



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 304

UH



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 306

JH



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 308

FLMQ



Ratings: Pages 290-294
Dimensions: Page 303

TMQ



Ratings: Pages 290-294
Dimensions: Page 305

UMQ



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 309

JMQ



Ratings: Pages 290-294
Dimensions: Page 309

FL



Ratings: Pages 290-294
Dimensions: Page 303



FL FLANGE
(LONG FLANGE)

T



Ratings: Pages 290-294
Dimensions: Page 305



HORIZONTAL BASE
(WORM OVER ASSEMBLY)

U



(❖Non-Standard Option)
Ratings: Pages 290-294
Dimensions: Page 307



HORIZONTAL BASE
(WORM UNDER ASSEMBLY)

J



Ratings: Pages 290-294
Dimensions: Page 309



HORIZONTAL BASE
(VERTICAL INPUT SHAFT)

Bravo™ ALUMINUM GEAR REDUCERS Model Number System

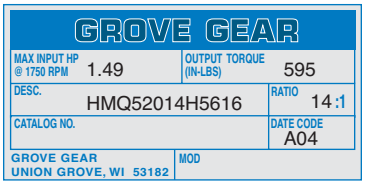
Grove Gear 500 Series Gear Reducer Model Number Nomenclature

All stock and custom 500 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example W5180001. Reducers and renewal parts should be ordered by catalog number. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 5000 (for example, W5185000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered from Grove Gear by catalog number.

TYPICAL NAMEPLATE



Style

SOLID OUTPUT SHAFT
BMQ – Motorized, Quill Input
B – Non-Flanged

HOLLOW OUTPUT SHAFT
HMQ – Motorized, Quill Input
H – Non-Flanged

Series

ALUMINUM 500 SERIES CENTER DISTANCES

Series	Center Distance (Inches)	(mm)
512	1.18	30
518	1.77	45
520	1.97	50
525	2.48	63
534	3.35	85

Ratio

See Selection Tables on pages 290-294 for all available ratios

Output Shaft Orientation

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft

* Viewed from drive end of reducer.

Motor Flange

NEMA Input Flange Code	For NEMA Frame
56	56C
140	143-5TC
180	182-4TC

IEC Input Flange Code	For IEC Frame
56B14	56B14
56B5	56B5
63B14	63B14
63B5	63B5
71B14	71B14
71B5	71B5
80B14	80B14
80B5	80B5
90B14	90B14
90B5	90B5
100B14	100B14/112B14
100B5	100B5/112B5

Shaft Dimension Code

OUTPUT SHAFT DIMENSION CODE

Series	NEMA/Inch Options Shaft Dia.	Shaft* Code	IEC/Metric Options Shaft Dia.	Shaft Code
512	N/A	N/A	14mm	14
518	3/4”	12	18mm	18
520	1”	16	25mm	25
525	1-1/8”	18	25mm	25
534	1-1/2”	24	35mm	35

*Shaft Diameter in 1/16ths of an inch.

Diameters and shaft codes of hollow bore styles are identical to those of solid shaft styles. Reducers with NEMA inputs will have inch-dimensioned output shafts and reducers with IEC inputs will have metric dimensioned output shafts as standard.

Sample Model Number

Solid Shaft

Motorized Quill Input, Single Reduction Reducer, 1.77” Center Distance, 14:1 Ratio, Left Hand Output Shaft, and 5/8” Input Bore with NEMA 56C Flange.

BMQ	518	14	L	56	12
Style	Series	Ratio	Mounting Assembly	Motor Input Flange	Shaft Code

Hollow Shaft

Motorized Quill Input, Single Reduction Reducer, 1.77” Center Distance, 14:1 Ratio, 3/4” Hollow Output Shaft, and 5/8” Input Bore with NEMA 56C Flange.

HMQ	518	14	H	56	12
Style	Series	Ratio	Mounting Assembly	Motor Input Flange	Shaft Code

How To Use Maximum Rating Tables

Maximum Rating Tables for Single Reduction Gear Reducers are shown on pages 290-294.

BEFORE YOU START:

Identify the Service Factor of the application (see page 417).

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 286-287. Note the basic mounting style (BMQ, HMQ, etc.).

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 290.

2 Locate the Input RPM and Output RPM columns on the left side of the table. Scroll down the Input RPM column to locate a listing where the desired input speed corresponds to the output speed required in your application. (Input RPM listings are rounded to the nearest hundred. Your actual input speed of 1750 can be correlated to 1800 with no material change in performance.)

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (512, 518, 520, etc.).

4 Select motor frame size.

5 Identify catalog number of the basic reducer by continuing to the right. See page 288 for detailed information on building an exact model number.

6 Verify physical dimensions using the dimensional drawings shown on page 296.

Maximum Rating Tables
518 Series • All Styles

Style BMQ | Style HMQ



Input RPM		Input HP			EMA C Input Flange*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	1.378	1.103	278	56C	W5180031	W5180041	W5180051	W5180071
	1150	164	0.950	0.760	292					
10	1750	175	0.981	0.775	279	56C	W5180032	W5180042	W5180052	W5180072
	1150	115	0.679	0.536	294					
14	1750	125	0.871	0.670	338	56C	W5180033	W5180043	W5180053	W5180073
	1150	82	0.602	0.463	356					
21	1750	83	0.796	0.533	405	56C	W5180034	W5180044	W5180054	
	1150	55	0.555	0.372	426					
28	1750	63	0.631	0.410	410	56C	W5180035	W5180045	W5180055	
	1150	47	0.494	0.321	431					
37	1750	47	0.490	0.309	414	56C	W5180036	W5180046	W5180056	
	1150	31	0.340	0.214	436					
46	1750	38	0.397	0.234	388	56C	W5180037	W5180047	W5180057	
	1150	25	0.274	0.162	408					
60	1750	29	0.363	0.203	442	56C	W5180038	W5180048	W5180058	W5180078
	1150	19.2	0.250	0.140	465					
70	1750	25.0	0.204	0.110	278	56C	W5180039	W5180049	W5180059	W5180079
	1150	16.4	0.137	0.074	292					
102	1750	17.2	0.144	0.070	261	56C	W5180040	W5180050	W5180060	W5180080
	1150	11.3	0.098	0.048	275					

* Contact Factory for metric IEC input flange options available.

Style H

Bravo™ ALUMINUM GEAR REDUCERS — Maximum Rating Tables

512 Series • All Styles

512 Series • Style BMQ & HMQ • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	IEC Metric Input Flange*	Style BMQ Left Hand Catalog No.	Style BMQ Right Hand Catalog No.	Style BMQ Double Extension Catalog No.	Style HMQ Hollow Output Catalog No.
7	1750	250	0.764	0.611	154	56B14	W5120025	W5120033	W5120041	W5120081
	1150	164	0.528	0.422	162	63B14	W5120049	W5120057	W5120065	W5120089
10	1750	165	0.510	0.398	152	56B14	W5120026	W5120034	W5120042	W5120082
	1150	108	0.353	0.275	160	63B14	W5120050	W5120058	W5120066	W5120090
15	1750	117	0.441	0.322	174	56B14	W5120027	W5120035	W5120043	W5120083
	1150	77	0.305	0.223	183	63B14	W5120051	W5120059	W5120067	W5120091
20	1750	92	0.386	0.270	185	56B14	W5120028	W5120036	W5120044	W5120084
	1150	61	0.268	0.187	195	63B14	W5120052	W5120060	W5120068	W5120092
30	1750	58	0.299	0.185	200	56B14	W5120029	W5120037	W5120045	W5120085
	1150	38	0.206	0.128	210	63B14	W5120053	W5120061	W5120069	W5120093
40	1750	45	0.246	0.140	197	56B14	W5120030	W5120038	W5120046	W5120086
	1150	29	0.170	0.097	207	63B14	W5120054	W5120062	W5120070	W5120094
61	1750	29	0.168	0.084	184	56B14	W5120031	W5120039	W5120047	W5120087
	1150	18.9	0.116	0.058	194	63B14	W5120055	W5120063	W5120071	W5120095
80	1750	21.9	0.106	0.051	146	56B14	W5120032	W5120040	W5120048	W5120088
	1150	14.4	0.073	0.035	154	63B14	W5120056	W5120064	W5120072	W5120096

* Contact Factory for other metric IEC input flange options available.

512 Series • Style B & H • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.
7	1750	250	0.764	0.611	154	Contact Factory			Contact Factory
	1150	164	0.528	0.422	162				
10	1750	165	0.510	0.398	152	Contact Factory			Contact Factory
	1150	108	0.353	0.275	160				
15	1750	117	0.441	0.322	174	Contact Factory			Contact Factory
	1150	77	0.305	0.223	183				
20	1750	92	0.386	0.270	185	Contact Factory			Contact Factory
	1150	61	0.268	0.187	195				
30	1750	58	0.299	0.185	200	Contact Factory			Contact Factory
	1150	38	0.206	0.128	210				
40	1750	44	0.246	0.140	197	Contact Factory			Contact Factory
	1150	29	0.170	0.097	207				
61	1750	29	0.168	0.084	184	Contact Factory			Contact Factory
	1150	18.9	0.116	0.058	194				
80	1750	21.9	0.106	0.051	146	Contact Factory			Contact Factory
	1150	14.4	0.073	0.035	154				

518 Series • Style BMQ & HMQ • 1.0 S.F.



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Style BMQ Left Hand Catalog No.	Style BMQ Right Hand Catalog No.	Style BMQ Double Extension Catalog No.	Style HMQ Hollow Output Catalog No.
7	1750	250	1.378	1.103	278	56C	W5180031	W5180041	W5180051	W5180071
	1150	164	0.950	0.760	292					
10	1750	175	0.981	0.775	279	56C	W5180032	W5180042	W5180052	W5180072
	1150	115	0.679	0.536	294					
14	1750	125	0.871	0.670	338	56C	W5180033	W5180043	W5180053	W5180073
	1150	82	0.602	0.463	356					
21	1750	83	0.796	0.533	405	56C	W5180034	W5180044	W5180054	W5180074
	1150	55	0.555	0.372	426					
28	1750	63	0.631	0.410	410	56C	W5180035	W5180045	W5180055	W5180075
	1150	47	0.494	0.321	431					
37	1750	47	0.490	0.309	414	56C	W5180036	W5180046	W5180056	W5180076
	1150	31	0.340	0.214	436					
46	1750	38	0.397	0.234	388	56C	W5180037	W5180047	W5180057	W5180077
	1150	25	0.274	0.162	408					
60	1750	29	0.363	0.203	442	56C	W5180038	W5180048	W5180058	W5180078
	1150	19.2	0.250	0.140	465					
70	1750	25.0	0.204	0.110	278	56C	W5180039	W5180049	W5180059	W5180079
	1150	16.4	0.137	0.074	292					
102	1750	17.2	0.144	0.070	261	56C	W5180040	W5180050	W5180060	W5180080
	1150	11.3	0.098	0.048	275					

* Contact Factory for metric IEC input flange options available.

518 Series • Style B & H • 1.0 S.F.



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.
7	1750	250	1.378	1.103	278	W5180001	W5180011	W5180021	W5180061
	1150	164	0.950	0.760	292				
10	1750	175	0.981	0.775	279	W5180002	W5180012	W5180022	W5180062
	1150	115	0.679	0.536	294				
14	1750	125	0.871	0.670	338	W5180003	W5180013	W5180023	W5180063
	1150	82	0.602	0.463	356				
21	1750	83	0.796	0.533	405	W5180004	W5180014	W5180024	W5180064
	1150	55	0.555	0.372	426				
28	1750	63	0.631	0.410	410	W5180005	W5180015	W5180025	W5180065
	1150	47	0.494	0.321	431				
37	1750	47	0.490	0.309	414	W5180006	W5180016	W5180026	W5180066
	1150	31	0.340	0.214	436				
46	1750	38	0.397	0.234	388	W5180007	W5180017	W5180027	W5180067
	1150	25	0.274	0.162	408				
60	1750	29	0.363	0.203	442	W5180008	W5180018	W5180028	W5180068
	150	19.2	0.250	0.140	465				
70	1750	25.0	0.204	0.110	278	W5180009	W5180019	W5180029	W5180069
	1150	16.4	0.137	0.074	292				
102	1750	17.2	0.144	0.070	261	W5180010	W5180020	W5180030	W5180070
	1150	11.3	0.098	0.048	275				

Bravo™ ALUMINUM GEAR REDUCERS — Maximum Rating Tables

520 Series • All Styles

520 Series • Style BMQ & HMQ • 1.0 S.F.

Style BMQ | Style HMQ



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	2.472	2.027	511	56C	W5200034	W5200045	W5200056	W5200078
	1150	164	1.707	1.400	538					
10	1750	175	1.961	1.569	565	56C	W5200035	W5200046	W5200057	W5200079
	1150	115	1.355	1.084	594					
14	1750	125	1.494	1.180	595	56C	W5200036	W5200047	W5200058	W5200080
	1150	82	1.031	0.814	626					
18	1750	97	1.196	0.897	583	56C	W5200037	W5200048	W5200059	W5200081
	1150	64	0.830	0.622	613					
26	1750	67	0.889	0.613	577	56C	W5200038	W5200049	W5200060	W5200082
	1150	44	0.614	0.424	607					
36	1750	49	0.684	0.472	607	56C	W5200039	W5200050	W5200061	W5200083
	1150	32	0.470	0.324	639					
43	1750	41	0.604	0.399	613	56C	W5200040	W5200051	W5200062	W5200084
	1150	27	0.419	0.276	645					
60	1750	29	0.486	0.282	613	56C	W5200041	W5200052	W5200063	W5200085
	1150	19.2	0.335	0.194	645					
68	1750	25.7	0.420	0.239	580	56C	W5200042	W5200053	W5200064	W5200086
	1150	16.9	0.289	0.165	610					
80	1750	21.9	0.368	0.199	569	56C	W5200043	W5200054	W5200065	W5200087
	1150	14.4	0.246	0.133	599					
100	1750	17.5	0.295	0.147	516	56C	W5200044	W5200055	W5200066	W5200088
	1150	11.5	0.207	0.103	543					

* Contact Factory for metric IEC input flange options available.

520 Series • Style B & H • 1.0 S.F.

Style B | Style H



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	2.472	2.027	511	W5200001	W5200012	W5200023	W5200067
	1150	164	1.707	1.400	538				
10	1750	175	1.961	1.569	565	W5200002	W5200013	W5200024	W5200068
	1150	115	1.355	1.084	594				
14	1750	125	1.494	1.180	595	W5200003	W5200014	W5200025	W5200069
	1150	82	1.031	0.814	626				
18	1750	97	1.196	0.897	583	W5200004	W5200015	W5200026	W5200070
	1150	64	0.830	0.622	613				
26	1750	67	0.889	0.613	577	W5200005	W5200016	W5200027	W5200071
	1150	44	0.614	0.424	607				
36	1750	49	0.684	0.472	607	W5200006	W5200017	W5200028	W5200072
	1150	32	0.470	0.324	639				
43	1750	41	0.604	0.399	613	W5200007	W5200018	W5200029	W5200073
	1150	27	0.419	0.276	645				
60	1750	29	0.486	0.282	613	W5200008	W5200019	W5200030	W5200074
	1150	19.2	0.335	0.194	645				
68	1750	25.7	0.420	0.239	580	W5200009	W5200020	W5200031	W5200075
	1150	16.9	0.289	0.165	610				
80	1750	21.9	0.368	0.199	569	W5200010	W5200021	W5200032	W5200076
	1150	14.4	0.246	0.133	599				
100	1750	17.5	0.295	0.147	516	W5200011	W5200022	W5200033	W5200077
	1150	11.5	0.207	0.103	543				

525 Series • Style BMQ & HMQ • 1.0 S.F.



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Style BMQ Left Hand Catalog No.	Style BMQ Right Hand Catalog No.	Style BMQ Double Extension Catalog No.	Style HMQ Hollow Output Catalog No.
7	1750	250	5.24	4.35	1097	56C	W5250034	W5250045	W5250056	W5250111
	1150	164	3.62	3.01	1155	140TC	W5250067	W5250078	W5250089	W5250122
10	1750	175	4.19	3.39	1222	56C	W5250035	W5250046	W5250057	W5250112
	1150	115	2.90	2.35	1287	140TC	W5250068	W5250079	W5250090	W5250123
15	1750	117	2.85	2.25	1214	56C	W5250036	W5250047	W5250058	W5250113
	1150	77	1.98	1.56	1278	140TC	W5250069	W5250080	W5250091	W5250124
19	1750	92	2.24	1.75	1197	56C	W5250037	W5250048	W5250059	W5250114
	1150	61	1.56	1.22	1260	140TC	W5250070	W5250081	W5250092	W5250125
24	1750	73	1.92	1.44	1246	56C	W5250038	W5250049	W5250060	W5250115
	1150	48	1.33	1.00	1312	140TC	W5250071	W5250082	W5250093	W5250126
30	1750	58	1.58	1.17	1274	56C	W5250039	W5250050	W5250061	W5250116
	1150	38	1.09	0.81	1341	140TC	W5250072	W5250083	W5250094	W5250127
36	1750	49	1.46	1.00	1281	56C	W5250040	W5250051	W5250062	W5250117
	1150	32	1.01	0.68	1349	140TC	W5250073	W5250084	W5250095	W5250128
45	1750	39	1.11	0.73	1182	56C	W5250041	W5250052	W5250063	W5250118
	1150	25.6	0.78	0.51	1244	140TC	W5250074	W5250085	W5250096	W5250129
67	1750	26.1	0.73	0.44	1069	56C	W5250042	W5250053	W5250064	W5250119
	1150	17.2	0.51	0.30	1125	140TC	W5250075	W5250086	W5250097	W5250130
80	1750	21.9	0.63	0.36	1034	56C	W5250043	W5250054	W5250065	W5250120
	1150	14.4	0.42	0.24	1089	140TC	W5250076	W5250087	W5250098	W5250131
94	1750	18.6	0.51	0.26	878	56C	W5250044	W5250055	W5250066	W5250121
	1150	12.2	0.34	0.18	924	140TC	W5250077	W5250088	W5250099	W5250132

* Contact Factory for metric IEC input flange options available.

525 Series • Style B & H • 1.0 S.F.



Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.
7	1750	250	5.24	4.35	1097	W5250001	W5250012	W5250023	W5250100
	1150	164	3.62	3.01	1155				
10	1750	175	4.19	3.39	1222	W5250002	W5250013	W5250024	W5250101
	1150	115	2.90	2.35	1287				
15	1750	117	2.85	2.25	1214	W5250003	W5250014	W5250025	W5250102
	1150	77	1.98	1.56	1278				
19	1750	92	2.24	1.75	1197	W5250004	W5250015	W5250026	W5250103
	1150	61	1.56	1.22	1260				
24	1750	73	1.92	1.44	1246	W5250005	W5250016	W5250027	W5250104
	1150	48	1.33	1.00	1312				
30	1750	58	1.58	1.17	1274	W5250006	W5250017	W5250028	W5250105
	1150	38	1.09	0.81	1341				
36	1750	49	1.46	1.00	1281	W5250007	W5250018	W5250029	W5250106
	1150	32	1.01	0.68	1349				
45	1750	39	1.11	0.73	1182	W5250008	W5250019	W5250030	W5250107
	1150	25.6	0.78	0.51	1244				
67	1750	26.1	0.73	0.44	1069	W5250009	W5250020	W5250031	W5250108
	1150	17.2	0.51	0.30	1125				
80	1750	21.9	0.63	0.36	1034	W5250010	W5250021	W5250032	W5250109
	1150	14.4	0.42	0.24	1089				
94	1750	18.6	0.51	0.26	878	W5250011	W5250022	W5250033	W5250110
	1150	12.2	0.34	0.18	924				

Bravo™ ALUMINUM GEAR REDUCERS — Maximum Rating Tables

534 Series • All Styles

534 Series • BMQ & HMQ • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Style BMQ Left Hand Catalog No.	Style BMQ Right Hand Catalog No.	Style BMQ Double Extension Catalog No.	Style HMQ Hollow Output Catalog No.
7	1750	250	8.26	7.27	1832	180TC	W5340109	W5340121	W5340133	W5340181
	1150	164	5.70	5.02	1929					
10	1750	175	7.62	6.10	2196	140TC	W5340074	W5340086	W5340098	W5340170
	1150	115	5.27	4.22	2312	180TC	W5340110	W5340122	W5340134	W5340182
14	1750	125	5.91	4.61	2323	140TC	W5340075	W5340087	W5340099	W5340171
	1150	82	4.08	3.18	2446	180TC	W5340111	W5340123	W5340135	W5340183
20	1750	88	3.91	3.09	2212	140TC	W5340076	W5340088	W5340100	W5340172
	1150	58	2.71	2.14	2329	180TC	W5340112	W5340124	W5340136	W5340184
28	1750	63	3.37	2.53	2528	140TC	W5340078	W5340090	W5340102	W5340174
	1150	41	2.31	1.73	2661	180TC	W5340114	W5340126	W5340138	W5340186
38	1750	46	2.34	1.66	2279	56C	W5340043	W5340055	W5340067	W5340163
	1150	30	1.61	1.14	2399	140TC	W5340079	W5340091	W5340103	W5340175
52	1750	34	1.82	1.20	2229	56C	W5340045	W5340057	W5340069	W5340165
	1150	22.1	1.24	0.82	2347	140TC	W5340081	W5340093	W5340105	W5340177
67	1750	26.1	1.56	1.01	2458	56C	W5340046	W5340058	W5340070	W5340166
	1150	17.2	1.07	0.70	2588	140TC	W5340082	W5340094	W5340106	W5340178
96	1750	18.2	0.99	0.52	1735	56C	W5340048	W5340060	W5340072	W5340168
	1150	12.0	0.66	0.35	1827	140TC	W5340084	W5340096	W5340108	W5340180

* Contact Factory for additional NEMA and metric IEC input flange options available.

534 Series • Styles B & H • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Extension Catalog No.	Style H Hollow Output Catalog No.
7	1750	250	8.26	7.27	1832	W5340001	W5340013	W5340025	W5340145
	1150	164	5.70	5.02	1929				
10	1750	175	7.62	6.10	2196	W5340002	W5340014	W5340026	W5340146
	1150	115	5.27	4.22	2312				
14	1750	125	5.91	4.61	2323	W5340003	W5340015	W5340027	W5340147
	1150	82	4.08	3.18	2446				
20	1750	88	3.91	3.09	2212	W5340004	W5340016	W5340028	W5340148
	1150	58	2.71	2.14	2329				
28	1750	63	3.37	2.53	2528	W5340006	W5340018	W5340030	W5340150
	1150	41	2.31	1.73	2661				
38	1750	46	2.34	1.66	2279	W5340007	W5340019	W5340031	W5340151
	1150	30	1.61	1.14	2399				
52	1750	34	1.82	1.20	2229	W5340009	W5340021	W5340033	W5340153
	1150	22.1	1.24	0.82	2347				
67	1750	26.1	1.56	1.01	2458	W5340010	W5340022	W5340034	W5340154
	1150	17.2	1.07	0.70	2588				
96	1750	18.2	0.99	0.52	1735	W5340012	W5340024	W5340036	W5340156
	1150	12.0	0.66	0.35	1827				

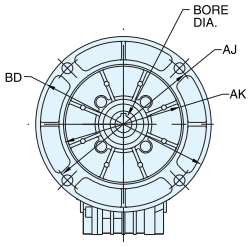
SINGLE REDUCTION • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size 512	518	520	525	534	Reducer Style	Reducer Size 512	518	520	525	534
Solid Output Shaft Models						**Hollow Output Shaft Models**					
BMQ	3	7	9	14	29	HMQ	3	6	7	12	24
B	3	6	9	14	27	H	3	5	7	12	22
TMQ, UMQ, JMQ	5	9	11	17	34	THMQ, UHMQ JHMQ	5	8	9	15	29
T, U, J	5	8	11	17	32	TH, UH, JH	5	7	9	15	27
FMQ, RMQ	4	8	10	16	32	FHMQ, RHMQ	4	7	8	14	27
F, R	4	7	10	16	30	FH, RH	4	6	8	14	25
FLMQ	4	9	11	17	34	FLHMQ	4	8	9	15	29
FL	4	8	11	17	32	FLH	4	7	9	15	27

Δ Weights include grease and oil.

REDUCER ACCESSORIES • APPROXIMAT WEIGHTS (LBS.)

Accessory	Reducer Size 512	518	520	525	534
T/U - Base	2	2	2	3	5
J - Base	2	2	2	3	5
F - Flange	1	1	1	2	3
FL - Flange	1	2	2	3	5
R - Reaction Arm	1	1	1	2	3



SINGLE REDUCTION • MOTOR FRAME COMBINATIONS

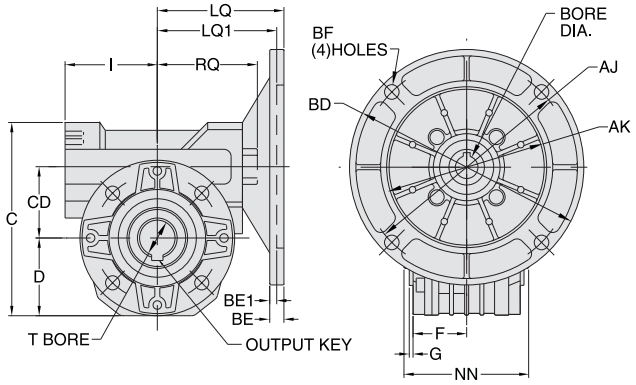
Reducer Size	NEMA or IEC Frame Size	Dimensions - Inches (MM) AK	AJ	BD	Bore Dia.	Available Ratios 10	15	20	30	40	61	80				
512	IEC 56B5	3.15 (80)	3.94 (100)	4.72 (120)	(9)	■	■	■	■	■	■	■				
	IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)	■	■	■	■	■	■	■				
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	.	.	.	.	.	.	.				
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	.	.	.	.	.	.	.				
						7	**10**	**14**	**21**	**28**	**37**	**46**	**60**	**70**	**102**	
518	NEMA 56C	4.50	5.88	6.50	0.625	.	.	.	.	.	.	.	.	.	.	
	IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)	■	■	■	■	■	■	■	■	■	■	
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■	■	■	■	
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■	■	■	■	
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	.	.	.	.	.	.	.	.	.	.	
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	.	.	.	.	.	.	.	.	.	.	
						7	**10**	**14**	**18**	**26**	**36**	**43**	**60**	**68**	**80**	**100**
520	NEMA 56C	4.50	5.88	6.50	0.625	.	.	.	.	.	.	.	.	.	.	.
	IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)						■	■	■	■	■	■
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■	■	■	■	■
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■	■	■	■	■
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	.	.	.	.	.	.
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■	■	■	■	■	.	.	.	.	.	.
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	.	.	.	.	.						
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	.	.	.	.	.						
						7	**10**	**15**	**19**	**24**	**30**	**36**	**45**	**67**	**80**	**94**
525	NEMA 56C	4.50	5.88	6.50	0.625	■	■	■	■	■	■	■	■	■	■	■
	NEMA 140TC	4.50	5.88	6.50	0.875	.	.	.	.	.	.	.	.	.	.	.
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)								■	■	■	■
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	■	■	■	■	■	■
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■	■	■	■	■	■	■	■	■	■	■
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■	■	■	■	■	■	■	.	.	.	.
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■	■	■	■	■	■	■	.	.	.	.
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	.	.	.	.	.	.	.				
	IEC 90B14	3.74 (95)	4.53 (115)	5.51 (140)	(24)	.	.	.	.	.	.	.				
						7	**10**	**14**	**20**	**28**	**38**	**52**	**67**	**96**		
534	NEMA 56C	4.50	5.88	6.50	0.625	■	■	■	■	■	■	■	■	■		
	NEMA 140TC	4.50	5.88	6.50	0.875	■	■	■	■	■	■	■	■	■		
	NEMA 180TC	8.50	7.25	9.00	1.125	.	.	.	.	.	.	.	.	.		
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)						■	■	■	■		
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■	■	■	■	■	■	■	■	■		
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■	■	■	■	■	■	■	■	■		
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	■	■	■	■	■	.	.	.	.		
	IEC 90B14	3.74 (95)	4.53 (115)	5.51 (140)	(24)	■	■	■	■	■	.	.	.	.		
	IEC 100/112 B5	7.09 (180)	8.46 (215)	9.84 (250)	(28)	.	.	.	.	.						
	IEC 100/112 B14	4.33 (110)	5.12 (130)	6.30 (160)	(28)	.	.	.	.	.						

• Reducer selections are available. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

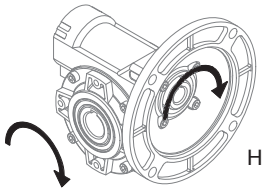
■ Reducer selections are available. A bushing will be provided with reducer to achieve input bore diameter shown. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style HMQ



ASSEMBLIES



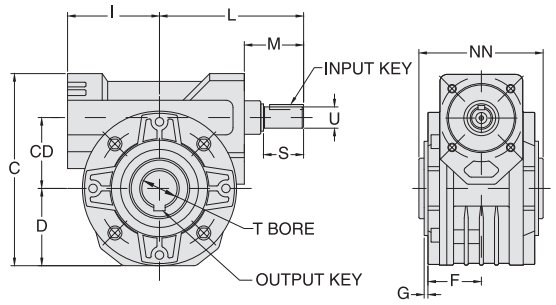
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE HMQ DIMENSIONS - Inches (MM)

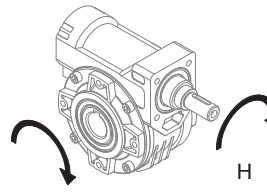
Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	OUTPUT KEY*
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.16	2.21	(14) ●	(5) ●
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.56	2.60	0.750	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.19	2.83	1.000	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.72	3.58	1.125	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.31	4.33	1.500	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard. Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style H



ASSEMBLIES



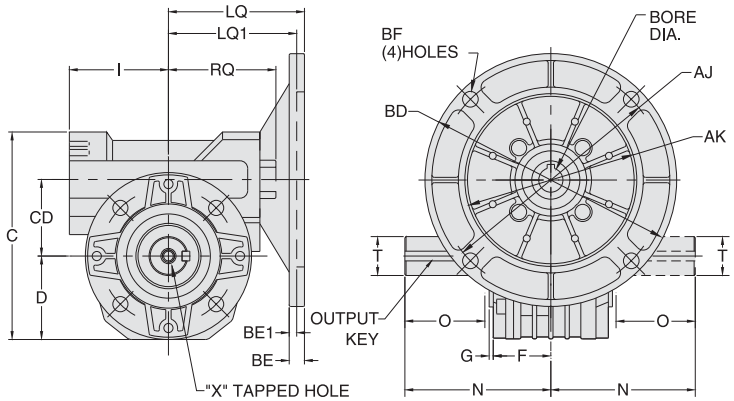
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE H DIMENSIONS** - Inches

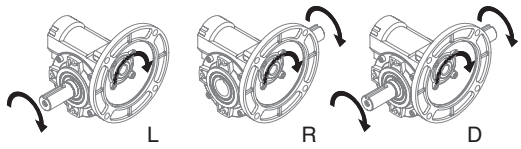
Series	C	CD	D	F	G	I	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.56	1.18	0.750	0.625	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.19	1.18	1.000	0.625	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.72	1.75	1.125	0.750	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.31	1.75	1.500	0.875	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style BMQ



ASSEMBLIES



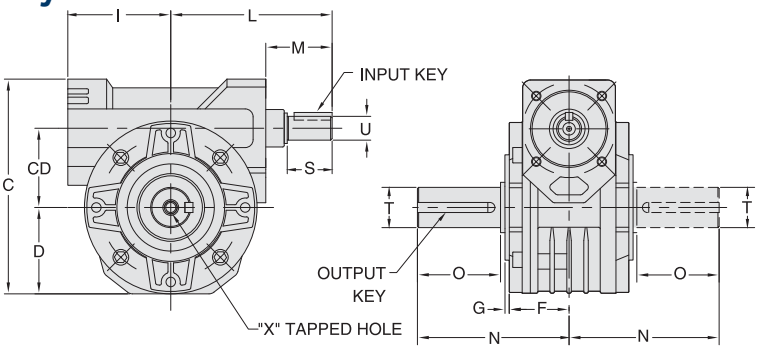
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE BMQ DIMENSIONS - Inches (MM)

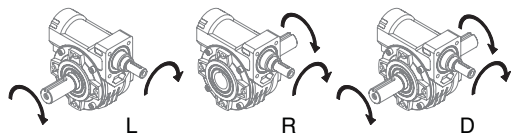
Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	N	O*	RQ	T* +0.000 -0.001	X Tap Size	X Depth	OUTPUT KEY*
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.48	1.01	2.21	(14)✿	N/A	N/A	(5) ✿
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.97	1.26	2.60	0.750	1/4-20 UNC	0.62	3/16 x 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.94	2.05	2.83	1.000	5/16-18 UNC	0.75	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.85	2.36	3.58	1.125	5/16-18 UNC	0.75	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.55	2.36	4.33	1.500	5/16-18 UNC	0.75	3/8 X 2.00

✿ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style B



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE B DIMENSIONS** - Inches

Series	C	CD	D	F	G	I	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.97	1.26	1.18	0.750	0.625	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.94	2.05	1.18	1.000	0.625	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.85	2.36	1.75	1.125	0.750	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.55	2.36	1.75	1.500	0.875	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

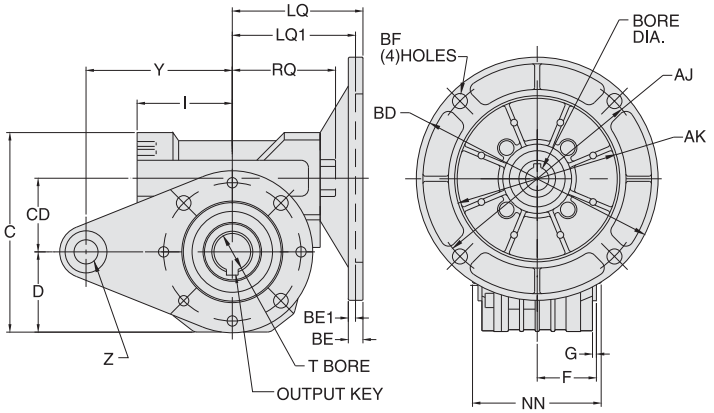
OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ1◆ IEC B5 & B14 Options D56D	D63D	D71D	D80D	D90D	D100LD■	T ✓ (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

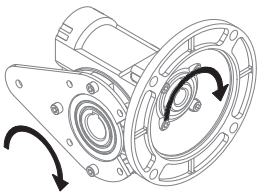
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
◆ Dimensions are maximum (B5 and B14 options)
◊ B14 option not available
❑ B5 Option not available
■ Also applies to frame size D112MD
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style RHMQ



ASSEMBLIES



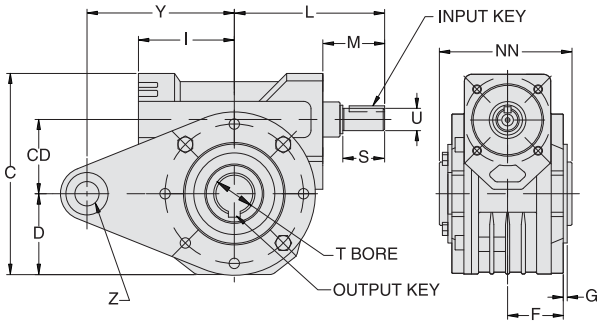
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE RHMQ DIMENSIONS - Inches (MM)

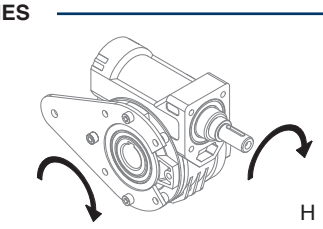
Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	Y	Z	OUTPUT KEY*
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.16	2.21	(14)●	3.94	0.315	(5)●
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.56	2.60	0.750	3.94	0.315	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.19	2.83	1.000	3.94	0.315	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.72	3.58	1.125	5.91	0.394	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.31	4.33	1.500	7.87	0.787	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard. Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style RH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

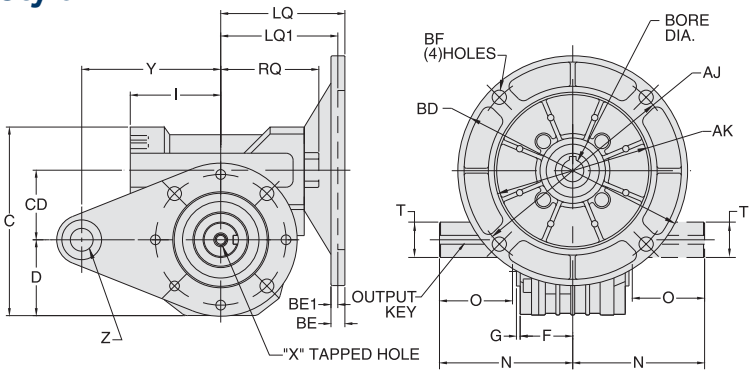
STYLE RH DIMENSIONS** - Inches

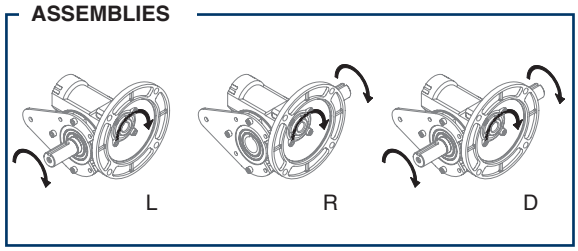
Series	C	CD	D	F	G	I	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	Y	Z	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.56	1.18	0.750	0.625	3.94	0.315	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.19	1.18	1.000	0.625	3.94	0.315	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.72	1.75	1.125	0.750	5.91	0.394	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.31	1.75	1.500	0.875	7.87	0.787	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

REFER TO PAGE 348 FOR DETAILED DIMENSIONS OF REACTION ARM.

Style RMQ





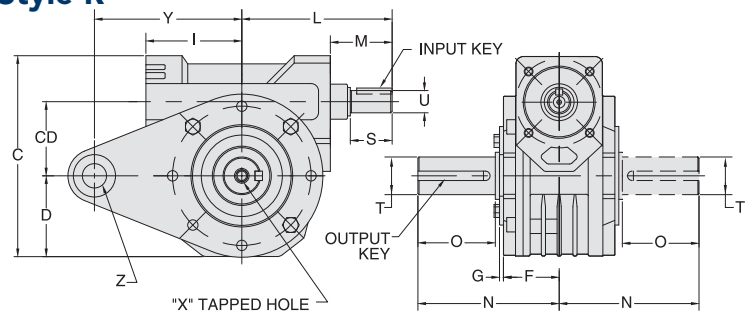
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

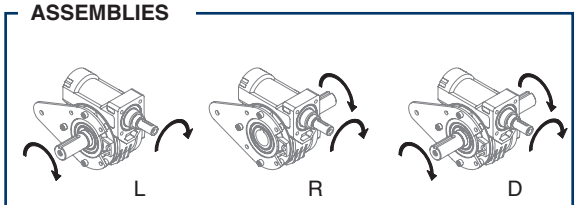
STYLE RMQ DIMENSIONS - Inches (MM)

Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	N	O*	RQ	T* +0.000 -0.001	X Tap Size	X Depth	Y	Z	OUTPUT KEY*
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.48	1.01	2.21	(14)✿	N/A	N/A	3.94	0.315	(5)✿
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.97	1.26	2.60	0.750	1/4-20 UNC	0.62	3.94	0.315	3/16 x 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.94	2.05	2.83	1.000	5/16-18 UNC	0.75	3.94	0.315	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.85	2.36	3.58	1.125	5/16-18 UNC	0.75	5.91	0.394	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.55	2.36	4.33	1.500	5/16-18 UNC	0.75	7.87	0.787	3/8 X 2.00

✿ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style R





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE R DIMENSIONS** - Inches

Series	C	CD	D	F	G	I	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	Y	Z	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.97	1.26	1.18	0.750	0.625	1/4-20 UNC	0.62	3.94	0.315	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.94	2.05	1.18	1.000	0.625	5/16-18 UNC	0.75	3.94	0.315	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.85	2.36	1.75	1.125	0.750	5/16-18 UNC	0.75	5.91	0.394	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.55	2.36	1.75	1.500	0.875	5/16-18 UNC	0.75	7.87	0.787	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ1◆ IEC B5 & B14 Options D56D	D63D	D71D	D80D	D90D	D100LD■	T ✓	O	N	Output Keyway
							(standard for metric units)			
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

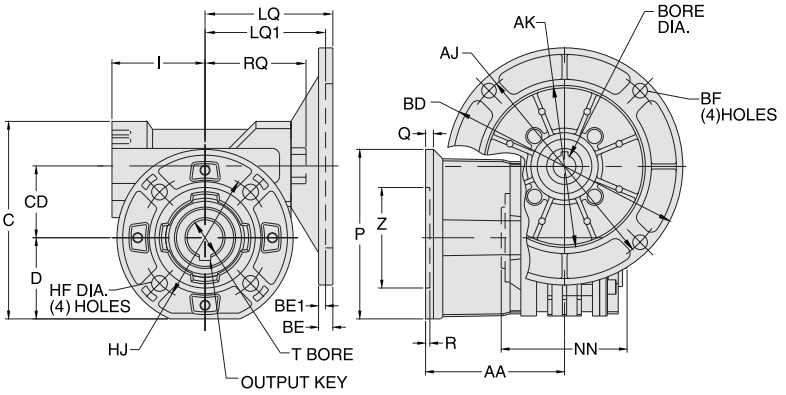
OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	AK	BD	BE	BF	B14❖ AJ	AK	BD	BE	BF❖	Input Bore Dia	Input Keyway▲
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

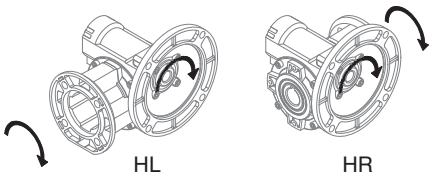
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
◆ Dimensions are maximum (B5 and B14 options)
◊ B14 option not available
❑ B5 Option not available
■ Also applies to frame size D112MD
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style FHMQ



ASSEMBLIES



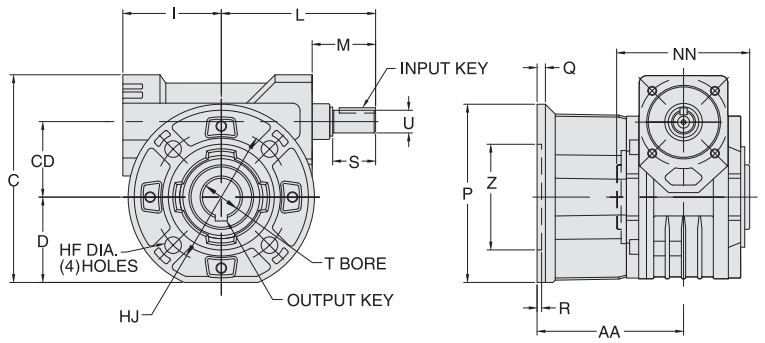
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FHMQ DIMENSIONS - Inches (MM)

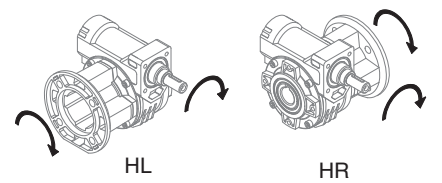
Series	AA	C	CD	D	HF	HJ	I	LQ* 56/140	LQ1* 180	NN	P	Q	R	RQ +0.0015 -0.0000	T*	Z	OUTPUT KEY*
512	1.99	3.54	1.18	1.54	0.276	2.68	1.81	*	N/A	2.16	3.15	0.24	0.236	2.21	(14)_	1.968	(5) _
518	2.38	4.76	1.77	1.93	0.335	3.43	2.16	3.33	N/A	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	3.35	5.33	1.97	2.15	0.413	3.54	2.56	3.51	N/A	3.19	4.84	0.47	0.354	2.83	1.000	2.756	1/4 X 1.62
525	3.39	6.69	2.48	2.76	0.413	5.91	3.11	4.08	N/A	4.72	6.89	0.51	0.276	3.58	1.125	4.528	1/4 X 2.00
534	4.25	9.15	3.35	3.72	0.512	6.93	3.86	4.83	5.35	5.31	8.07	0.63	0.197	4.33	1.500	5.984	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard.
Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style FH



ASSEMBLIES



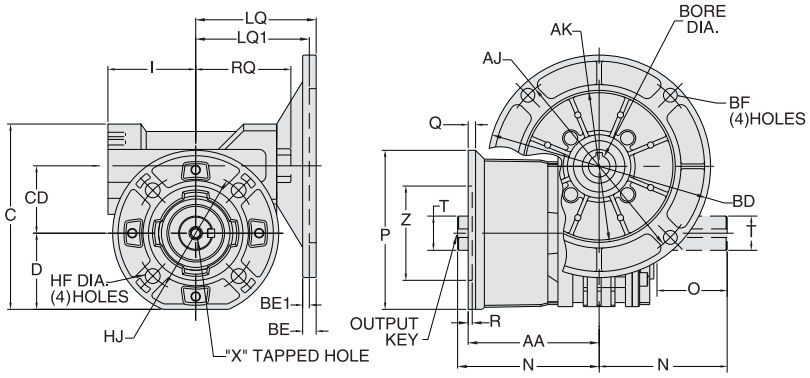
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FH DIMENSIONS** - Inches

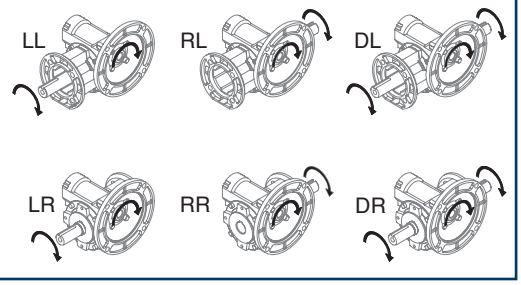
Series	AA	C	CD	D	HF	HJ	I	L	M	NN	P	Q	R	S +0.0015 -0.0000	T +0.000 -0.001	U	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.72	6.89	0.51	0.276	1.75	1.125	0.750	4.528	3/16 x 1.50	1/4 X 2.00
534	4.25	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.31	8.07	0.63	0.197	1.75	1.500	0.875	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style FMQ



ASSEMBLIES



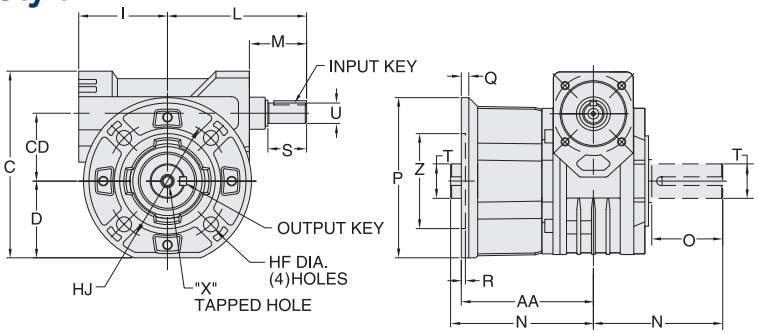
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FMQ DIMENSIONS - Inches (MM)

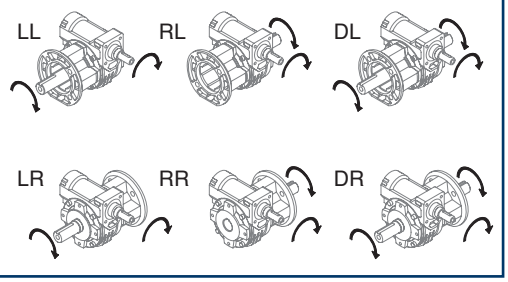
Series	AA	C	CD	D	I	HF	HJ	LQ* 56/140	LQ1* 180	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X Tap Size	X Depth	Z	OUTPUT KEY*
512	1.99	3.54	1.18	1.54	1.81	0.276	2.68	*	N/A	2.48	1.01	3.15	0.24	0.236	2.21	(14)✿	N/A	N/A	1.968	(5)✿
518	2.38	4.76	1.77	1.93	2.16	0.335	3.43	3.33	N/A	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	3.35	5.33	1.97	2.15	2.56	0.413	3.54	3.51	N/A	3.94	2.05	4.84	0.47	0.354	2.83	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	3.39	6.69	2.48	2.76	3.11	0.413	5.91	4.08	N/A	4.85	2.36	6.89	0.51	0.276	3.58	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	4.25	9.15	3.35	3.72	3.86	0.512	6.93	4.83	5.35	5.55	2.36	8.07	0.63	0.197	4.33	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

✿ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style F



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE F DIMENSIONS** - Inches

Series	AA	C	CD	D	HF	HJ	I	L	M	N	O	P	Q	R	S +0.000 -0.001	T +0.000 -0.001	U	X Tap Size	X Depth	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.85	2.36	6.89	0.51	0.276	1.75	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 x 1.50	1/4 X 2.00
534	4.25	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.55	2.36	8.07	0.63	0.197	1.75	1.500	0.875	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

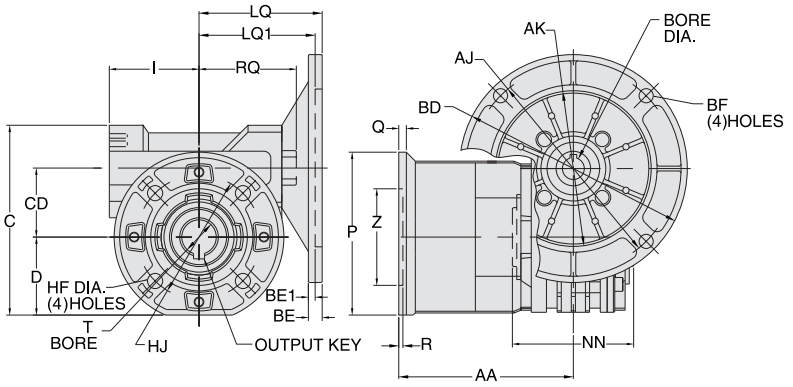
OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ1◆ IEC B5 & B14 Options D56D	D63D	D71D	D80D	D90D	D100LD■	T ✓ (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

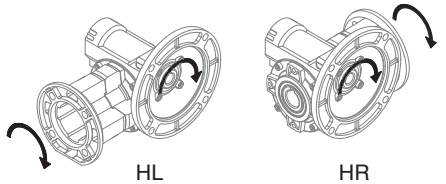
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
◆ Dimensions are maximum (B5 and B14 options)
◊ B14 option not available
❑ B5 Option not available
■ Also applies to frame size D112MD
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style FLHMQ



ASSEMBLIES



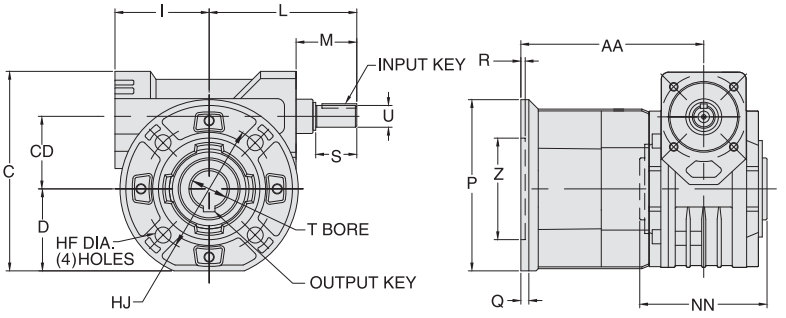
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FLHMQ DIMENSIONS - Inches (MM)

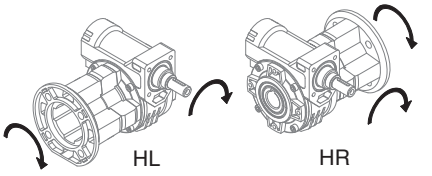
Series	AA	C	CD	D	HF	HJ	I	LQ* 56/140	LQ1* 180	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
512	2.19	3.54	1.18	1.54	0.335	3.43	1.81	*	N/A	2.16	4.33	0.24	0.236	2.21	(14)●	2.362	(5)●
518	3.56	4.76	1.77	1.93	0.335	3.43	2.16	3.33	N/A	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	4.51	5.33	1.97	2.15	0.413	3.54	2.56	3.51	N/A	3.19	4.84	0.47	0.354	2.83	1.000	2.756	1/4 X 1.62
525	4.57	6.69	2.48	2.76	0.413	5.91	3.11	4.08	N/A	4.72	6.89	0.51	0.276	3.58	1.125	4.528	1/4 X 2.00
534	5.85	9.15	3.35	3.72	0.512	6.93	3.86	4.83	5.35	5.31	8.07	0.63	0.197	4.33	1.500	5.984	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard.
Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style FLH



ASSEMBLIES



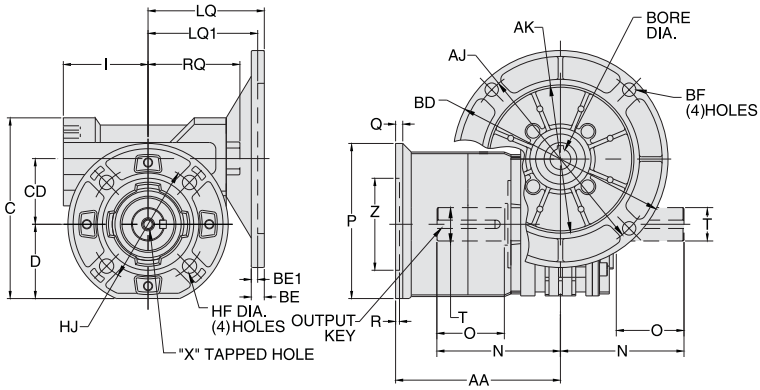
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FLH DIMENSIONS** - Inches

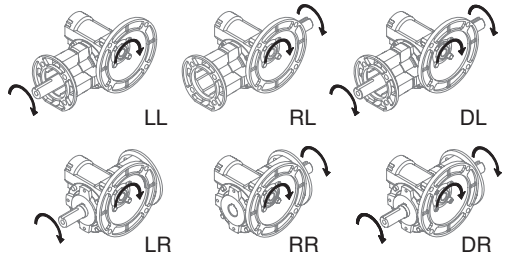
Series	AA	C	CD	D	HF	HJ	I	L	M	NN	P	Q	R	S +0.0015 -0.0000	T +0.000 -0.001	U	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.72	6.89	0.51	0.276	1.75	1.125	0.750	4.528	3/16 x 1.50	1/4 X 2.00
534	5.85	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.31	8.07	0.63	0.197	1.75	1.500	0.875	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style FLMQ



ASSEMBLIES



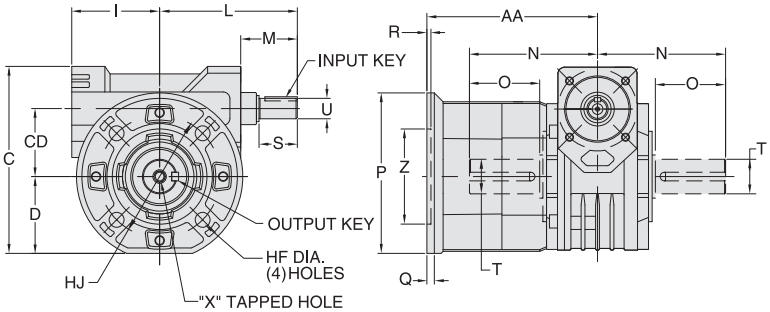
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FLMQ DIMENSIONS - Inches (MM)

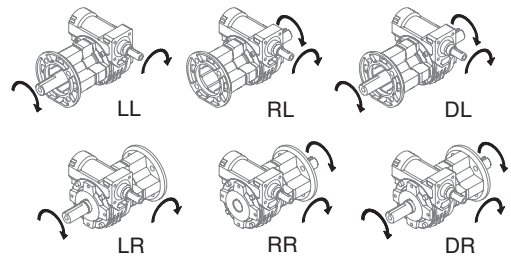
Series	AA	C	CD	D	I	HF	HJ	LQ* 56/140	LQ1* 180	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X Tap Size	X Depth	Z	OUTPUT KEY*
512	2.19	3.54	1.18	1.54	1.81	0.335	3.43	*	N/A	2.48	1.01	4.33	0.24	0.236	2.21	(14)✿	N/A	N/A	2.362	(5)✿
518	3.56	4.76	1.77	1.93	2.16	0.335	3.43	3.33	N/A	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	4.51	5.33	1.97	2.15	2.56	0.413	3.54	3.51	N/A	3.94	2.05	4.84	0.47	0.354	2.83	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	4.57	6.69	2.48	2.76	3.11	0.413	5.91	4.08	N/A	4.85	2.36	6.89	0.51	0.276	3.58	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	5.85	9.15	3.35	3.72	3.86	0.512	6.93	4.83	5.35	5.55	2.36	8.07	0.63	0.197	4.33	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

✿ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style FL



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FL DIMENSIONS** - Inches

Series	AA	C	CD	D	HF	HJ	I	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.85	2.36	6.89	0.51	0.276	1.75	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 x 1.50	1/4 X 2.00
534	5.85	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.55	2.36	8.07	0.63	0.197	1.75	1.500	0.875	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA MOTOR MOUNTING DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/33
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

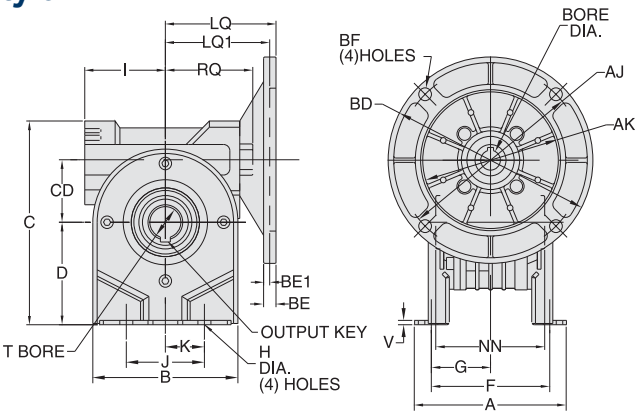
OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ1◆ IEC B5 & B14 Options D56D	D63D	D71D	D80D	D90D	D100LD■	T ✓ (standard for metric units)	O	N	Output Keyway
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

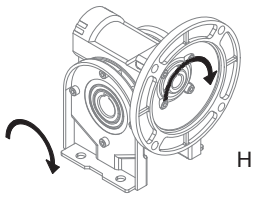
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
◆ Dimensions are maximum (B5 and B14 options)
◊ B14 option not available
❑ B5 Option not available
■ Also applies to frame size D112MD
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style THMQ



ASSEMBLIES



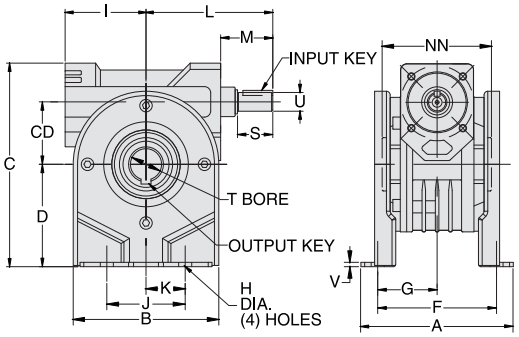
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE THMQ DIMENSIONS - Inches (MM)

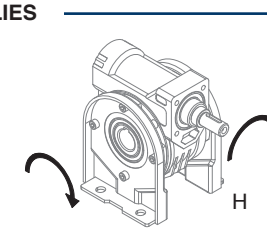
Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
512	3.43	3.07	4.17	1.18	2.17	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.16	2.21	(14)●	0.12	(5)●
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.19	2.83	1.000	0.14	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.72	3.58	1.125	0.16	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.31	4.33	1.500	0.20	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard. Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style TH



ASSEMBLIES



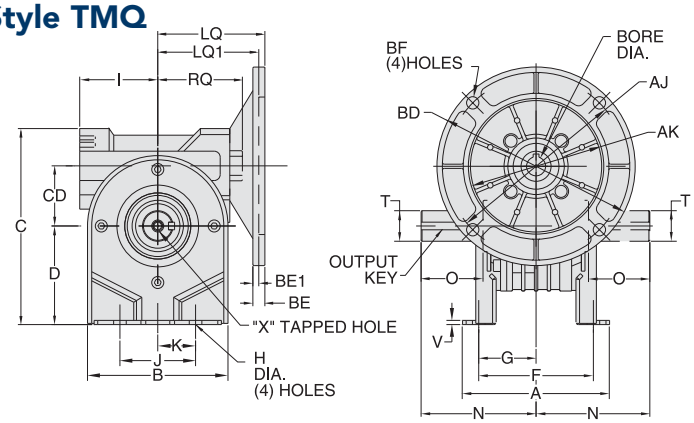
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE TH DIMENSIONS** - Inches

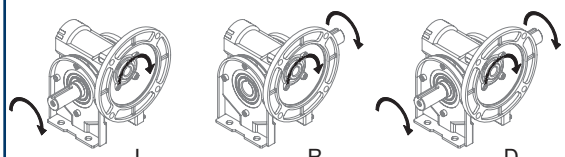
Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.72	1.75	1.125	0.750	0.16	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.31	1.75	1.500	0.875	0.20	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style TMQ



ASSEMBLIES

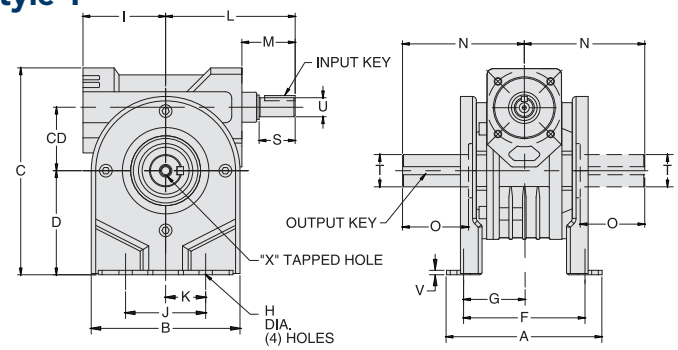


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE TMQ DIMENSIONS - Inches (MM)

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	N	O	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
512	3.43	3.07	4.17	1.18	2.17	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.48	1.01	2.21	(14)✿	0.12	N/A	N/A	(5)✿
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.94	2.05	2.83	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.85	2.36	3.58	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.55	2.36	4.33	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

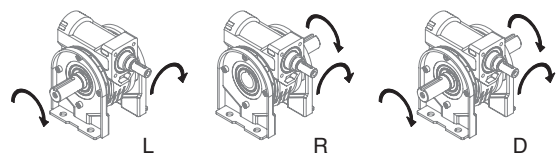
Style T



✿ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE T DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	O	S +0.000 -0.001	T +0.000 -0.001	U	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.85	2.36	1.75	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.55	2.36	1.75	1.500	0.875	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ1◆ IEC B5 & B14 Options D56D	D63D	D71D	D80D	D90D	D100LD■	T ✓	O (standard for metric units)	N	Output Keyway
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	AK	BD	BE	BF	B14❖ AJ	AK	BD	BE	BF❖	Input Bore Dia	Input Keyway▲
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)

◆ Dimensions are maximum (B5 and B14 options)

◊ B14 option not available

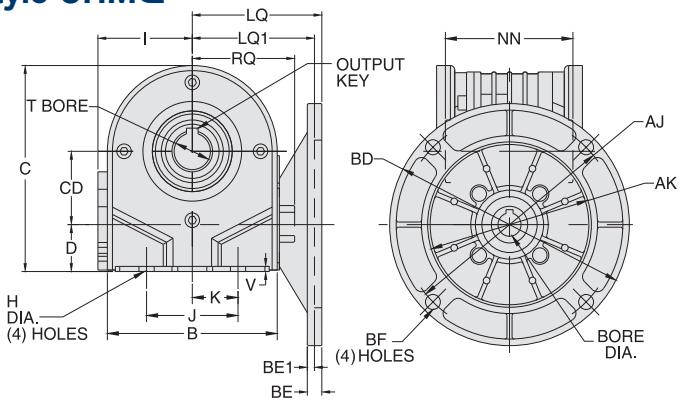
❑ B5 Option not available

■ Also applies to frame size D112MD

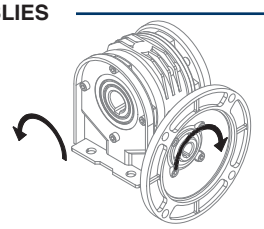
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style UHMQ



ASSEMBLIES



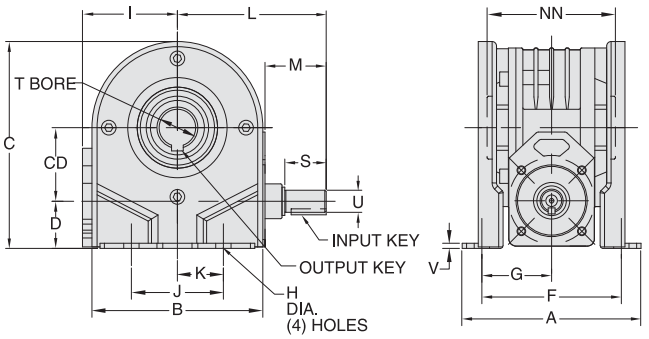
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE UHMQ DIMENSIONS - Inches (MM)

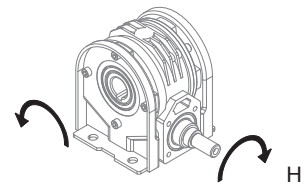
Series	A^	B	C	CD	D	F^	G^	H	I	J	K	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
512	3.43	3.07	3.70	1.18	0.98	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.16	2.21	(14)●	0.12	(5)●
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.19	2.83	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.72	3.58	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.31	4.33	1.500	0.20	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard. Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.
^ Refer to style UH for reference to this dimension.

Style UH



ASSEMBLIES



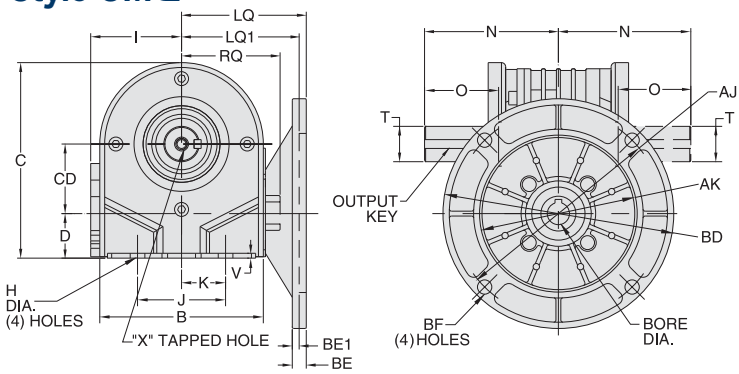
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE UH DIMENSIONS** - Inches

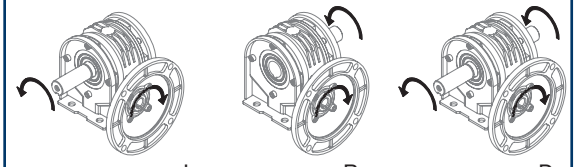
Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.72	1.75	1.125	0.750	0.16	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.31	1.75	1.500	0.875	0.20	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style UMQ



ASSEMBLIES



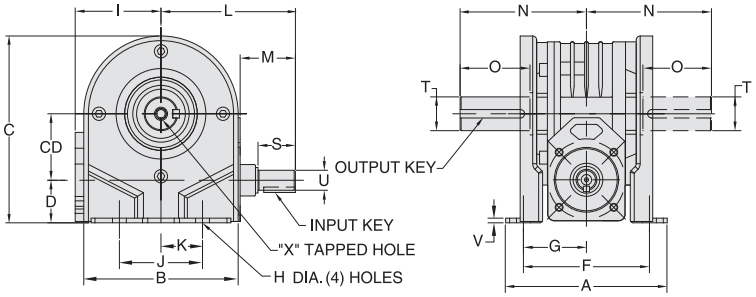
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE UMQ DIMENSIONS - Inches (MM)

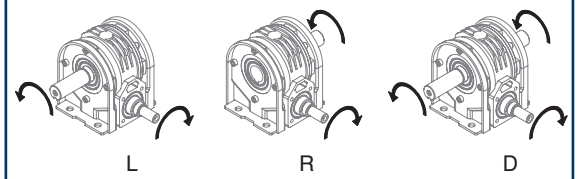
Series	A^	B	C	CD	D	F^	G^	H	I	J	K	LQ* 56/140	LQ1* 180	N	O	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
512	3.43	3.07	3.70	1.18	0.98	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.48	1.01	2.21	(14)✿	0.12	N/A	N/A	(5)✿
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.94	2.05	2.83	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.85	2.36	3.58	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.55	2.36	4.33	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

✿ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.
^ Refer to style U for reference to this dimension.

Style U



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE U DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.85	2.36	1.75	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.55	2.36	1.75	1.500	0.875	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

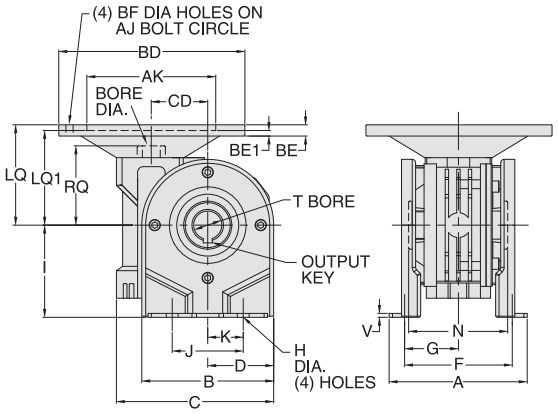
OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ1◆ IEC B5 & B14 Options D56D	D63D	D71D	D80D	D90D	D100LD■	T ✓ (standard for metric units)	O	N	Output Keyway
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

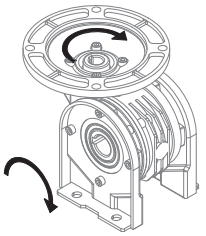
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
◆ Dimensions are maximum (B5 and B14 options)
◊ B14 option not available
❑ B5 Option not available
■ Also applies to frame size D112MD
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style JHMQ



ASSEMBLIES



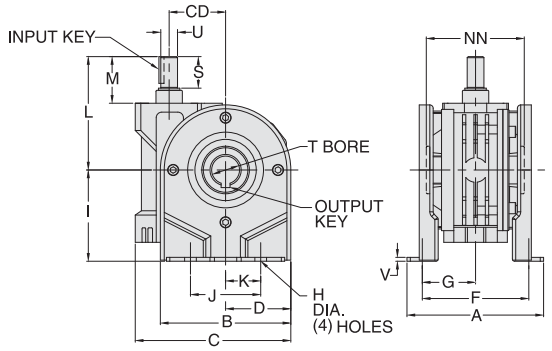
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE JHMQ DIMENSIONS - Inches (MM)

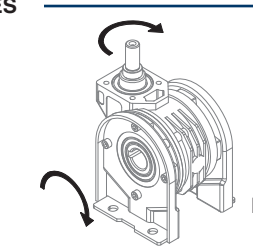
Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
512	3.43	3.07	3.54	1.18	1.54	2.60	1.30	0.256	2.16	1.97	0.99	*	N/A	2.16	2.21	(14)●	0.12	(5)●
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.33	N/A	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	3.51	N/A	3.19	2.83	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	4.08	N/A	4.72	3.58	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	4.83	5.35	5.31	4.33	1.500	0.20	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard. Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style JH



ASSEMBLIES



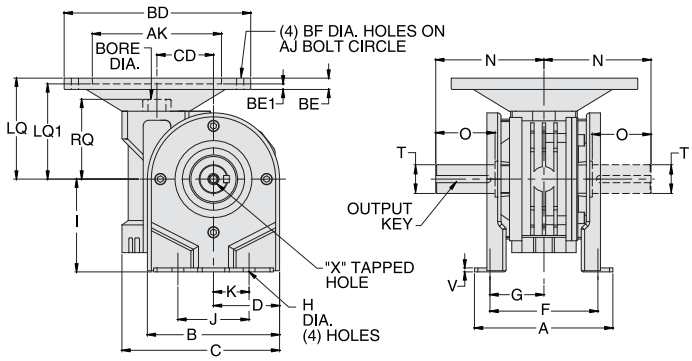
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

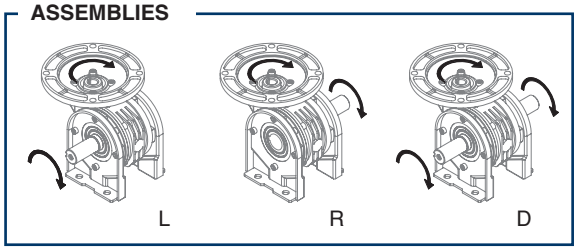
STYLE JH DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	4.11	1.74	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	5.43	2.24	4.72	1.75	1.125	0.750	0.16	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	6.38	2.52	5.31	1.75	1.500	0.875	0.20	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style JMQ





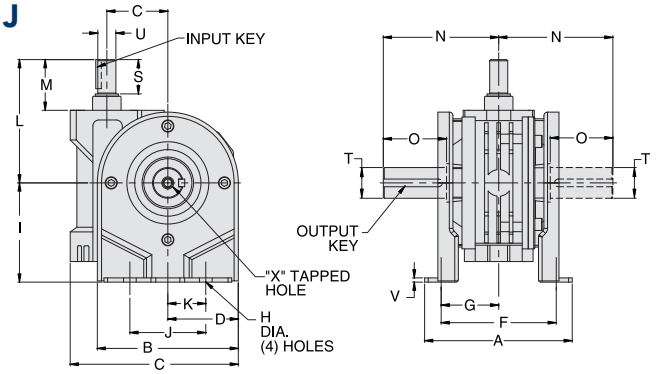
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

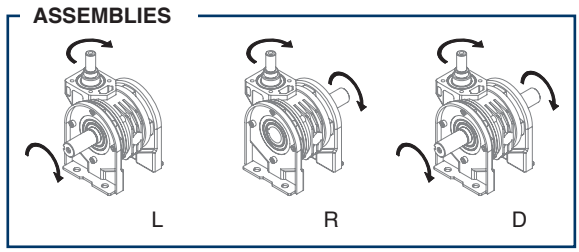
STYLE JMQ DIMENSIONS - Inches (MM)

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	N	O	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
512	3.43	3.07	3.54	1.18	1.54	2.60	1.30	0.256	2.16	1.97	0.99	*	N/A	2.48	1.01	2.21	(14)✿	0.12	N/A	N/A	(5)✿
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.33	N/A	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	3.51	N/A	3.94	2.05	2.83	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	4.08	N/A	4.85	2.36	3.58	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	4.83	5.35	5.55	2.36	4.33	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

✿ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style J





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE J DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	4.11	1.74	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	5.43	2.24	4.85	2.36	1.75	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	6.38	2.52	5.55	2.36	1.75	1.500	0.875	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ1◆ IEC B5 & B14 Options D56D	D63D	D71D	D80D	D90D	D100LD■	T ✓	O (standard for metric units)	N	Output Keyway
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
◆ Dimensions are maximum (B5 and B14 options)
◊ B14 option not available
❑ B5 Option not available
■ Also applies to frame size D112MD
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Bravo™ ALUMINUM GEAR REDUCERS Mounting Style Guide

Hollow Output Shaft Mounted

MOTORIZED QUILL INPUT

DHMQ



Ratings: Pages 313-314
Dimensions: Page 316

DRHMQ



Ratings: Pages 313-314
Dimensions: Page 364

DFHMQ



Ratings: Pages 313-314
Dimensions: Page 318

NON-MOTORIZED SOLID INPUT SHAFT

DH



Ratings: Pages 3313-314
Dimensions: Page 316

DRH



Ratings: Pages 313-314
Dimensions: Page 364

DFH



Ratings: Pages 3313-314
Dimensions: Page 318

Solid Output Shaft

MOTORIZED QUILL INPUT

DMQ



Ratings: Pages 313-314
Dimensions: Page 317

DRMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 364

DFMQ



Ratings: Pages 313-314
Dimensions: Page 319

NON-MOTORIZED SOLID INPUT SHAFT

D



Ratings: Pages 313-314
Dimensions: Page 317

DR



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 364

DF



Ratings: Pages 313-314
Dimensions: Page 319

Mounting Accessories

Select the appropriate mounting accessories from this wide variety of options.



REACTION ARM R



F FLANGE
(SHORT FLANGE)

❖ Non-Standard Option assemblies may be useful in certain applications. Please contact Factory with application details.

DFLHMQ



Ratings: Pages 313-314
Dimensions: Page 320

DTHMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 322

DUHMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 324

DJHMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 326

DFLH



Ratings: Pages 313-314
Dimensions: Page 320

DTH



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 322

DUH



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 324

DJH



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 326

DFLMQ



Ratings: Pages 313-314
Dimensions: Page 321

DTMQ



Ratings: Pages 313-314
Dimensions: Page 323

DUMQ



Ratings: Pages 313-314
Dimensions: Page 325

DJMQ



Ratings: Pages 313-314
Dimensions: Page 327

DFL



Ratings: Pages 313-314
Dimensions: Page 321



FL FLANGE
(LONG FLANGE)

DT



Ratings: Pages 313-314
Dimensions: Page 323



HORIZONTAL BASE
(WORM OVER ASSEMBLY)

DU



Ratings: Pages 313-314
Dimensions: Page 325



HORIZONTAL BASE
(WORM UNDER ASSEMBLY)

DJ



Ratings: Pages 313-314
Dimensions: Page 327



HORIZONTAL BASE
(VERTICAL INPUT SHAFT)

Bravo™ ALUMINUM GEAR REDUCERS — Double Reduction • Worm - Worm Model Number System

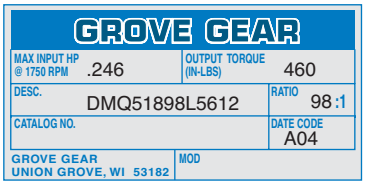
Grove Gear 500 Series Gear Reducer Model Number Nomenclature

All stock and custom 500 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example W5180001. Reducers and renewal parts should be ordered by catalog number. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 5000 (for example, W5185000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered from Grove Gear by catalog number.

TYPICAL NAMEPLATE



Style

SOLID OUTPUT SHAFT
DMQ – Motorized, Quill Input
D – Non-Flanged

HOLLOW OUTPUT SHAFT
DHMQ – Motorized, Quill Input
DH – Non-Flanged

Series

ALUMINUM 500 SERIES CENTER DISTANCES

Series	Center Distance (Inches)	(mm)
518	1.77	45
520	1.97	50
525	2.48	63
534	3.35	85

Ratio

See Selection Tables on pages 313-314 for all available ratios

Output Shaft Orientation

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft
* Viewed from drive end of reducer.

Mounting Assembly

Assembly numbers 1-6 are available. Refer to dimensional layout on pages 316-327.

Motor Flange

NEMA Input Flange Code	For NEMA Frame
56	56C
140	143-5TC

IEC Input Flange Code	For IEC Frame
56B14	56B14
63B14	63B14
63B5	63B5
71B14	71B14
71B5	71B5

Shaft Dimension Code

OUTPUT SHAFT DIMENSION CODE ▲

Series	NEMA/Inch Options Shaft Dia.	Shaft* Code	IEC/Metric Options Shaft Dia.	Shaft Code
518	3/4"	12	18mm	18
520	1"	16	25mm	25
525	1-1/8"	18	25mm	25
534	1-1/2"	24	35mm	35

*Shaft Diameter in 1/16ths of an inch.
▲ Diameters and shaft codes of hollow bore styles are identical to those of solid shaft styles. Reducers with NEMA inputs will have inch dimensioned output shafts and reducers with IEC inputs will have metric dimensioned output shafts as standard.

Sample Model Number

Solid Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77" Center Distance, 3600:1 Ratio, Left Hand Output Shaft, Parallel Input & Output Shafts and 5/8" Input Bore with NEMA 56C Flange.

DMQ	518	3600	L	1	56	12
Style	Series	Ratio	Output Shaft	Mounting Assembly Flange	Motor Input	Shaft Code

Hollow Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77" Center Distance, 3600:1 Ratio, 3/4" Hollow Output Shaft, Parallel Input & Output Shafts and 5/8" Input Bore with NEMA 56C Flange.

DHMQ	518	3600	H	1	56	12
Style	Series	Ratio	Output Shaft	Mounting Assembly	Motor Input Flange	Shaft Code





518 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	0.332	0.182	460
	1150	16.43	0.230	0.126	485
98	1750	17.86	0.246	0.130	460
	1150	11.73	0.170	0.090	485
147	1750	11.90	0.190	0.095	504
	1150	7.82	0.132	0.066	531
210	1750	8.33	0.139	0.067	504
	1150	5.48	0.096	0.046	531
294	1750	5.95	0.106	0.048	504
	1150	3.91	0.073	0.033	531
441	1750	3.97	0.088	0.032	504
	1150	2.61	0.061	0.022	531
588	1750	2.98	0.072	0.024	504
	1150	1.96	0.050	0.017	531
777	1750	2.25	0.060	0.018	504
	1150	1.48	0.042	0.012	531
966	1750	1.81	0.054	0.014	504
	1150	1.19	0.037	0.010	531
1288	1750	1.36	0.045	0.011	504
	1150	0.893	0.031	0.008	531
1702	1750	1.03	0.037	0.008	504
	1150	0.676	0.026	0.006	531
2220	1750	0.788	0.030	0.006	504
	1150	0.518	0.021	0.004	531
3600	1750	0.486	0.018	0.004	460
	1150	0.319	0.012	0.002	485

520 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	0.573	0.309	780
	1150	16.43	0.396	0.214	821
98	1750	17.86	0.425	0.221	780
	1150	11.73	0.294	0.153	821
140	1750	12.50	0.305	0.158	799
	1150	8.21	0.211	0.110	841
182	1750	9.62	0.259	0.122	799
	1150	6.32	0.179	0.084	841
260	1750	6.73	0.198	0.085	799
	1150	4.42	0.137	0.059	841
364	1750	4.81	0.145	0.061	799
	1150	3.16	0.100	0.042	841
546	1750	3.21	0.107	0.041	799
	1150	2.11	0.074	0.028	841
676	1750	2.59	0.091	0.033	799
	1150	1.70	0.063	0.023	841
962	1750	1.82	0.072	0.023	799
	1150	1.20	0.050	0.016	841
1260	1750	1.39	0.065	0.018	799
	1150	0.913	0.045	0.012	841
1591	1750	1.10	0.056	0.014	799
	1150	0.723	0.039	0.010	841
2220	1750	0.788	0.045	0.009	757
	1150	0.518	0.031	0.007	797
3600	1750	0.486	0.028	0.006	757
	1150	0.319	0.019	0.004	797

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 312.

Bravo™ ALUMINUM GEAR REDUCERS — Maximum Rating Tables

525 & 534 Series • All Stock Styles





525 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	1.396	0.768	1935
	1150	16.43	0.966	0.531	2037
105	1750	16.67	0.948	0.512	1935
	1150	10.95	0.655	0.354	2037
150	1750	11.67	0.689	0.358	1935
	1150	7.67	0.477	0.248	2037
210	1750	8.33	0.556	0.256	1935
	1150	5.48	0.385	0.177	2037
300	1750	5.83	0.426	0.179	1935
	1150	3.83	0.295	0.124	2037
420	1750	4.17	0.328	0.128	1935
	1150	2.74	0.227	0.089	2037
630	1750	2.78	0.259	0.085	1935
	1150	1.83	0.179	0.059	2037
840	1750	2.08	0.206	0.064	1935
	1150	1.37	0.143	0.044	2037
1110	1750	1.58	0.162	0.049	1935
	1150	1.04	0.112	0.034	2037
1380	1750	1.27	0.139	0.039	1935
	1150	0.833	0.096	0.027	2037
1800	1750	0.972	0.115	0.030	1935
	1150	0.639	0.079	0.021	2037
2160	1750	0.810	0.096	0.025	1935
	1150	0.532	0.066	0.017	2037
4020	1750	0.435	0.064	0.013	1935
	1150	0.286	0.044	0.009	2037

534 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	1.577	0.899	2266
	1150	16.43	1.091	0.622	2386
98	1750	17.86	1.127	0.642	2266
	1150	11.73	0.779	0.444	2386
140	1750	12.50	0.920	0.534	2690
	1150	8.21	0.636	0.369	2832
196	1750	8.93	0.733	0.381	2690
	1150	5.87	0.507	0.264	2832
280	1750	6.25	0.798	0.375	3784
	1150	4.11	0.553	0.260	3983
392	1750	4.46	0.609	0.268	3784
	1150	2.93	0.421	0.185	3983
588	1750	2.98	0.484	0.179	3784
	1150	1.96	0.335	0.124	3983
784	1750	2.23	0.394	0.134	3784
	1150	1.47	0.273	0.093	3983
1036	1750	1.69	0.307	0.101	3784
	1150	1.11	0.213	0.070	3983
1288	1750	1.36	0.272	0.082	3784
	1150	0.893	0.188	0.056	3983
1680	1750	1.04	0.181	0.053	3186
	1150	0.685	0.126	0.036	3354
2280	1750	0.768	0.144	0.039	3186
	1150	0.504	0.099	0.027	3354
3120	1750	0.561	0.113	0.028	3186
	1150	0.369	0.079	0.020	3354

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 312.

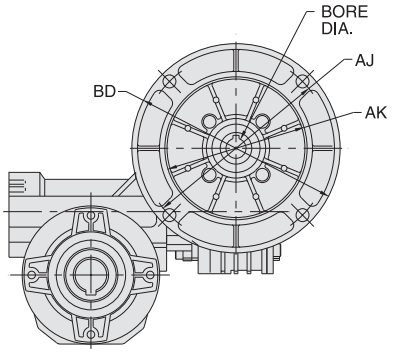
DOUBLE REDUCTION • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size 518	520	525	534	Reducer Style	Reducer Size 518	520	525	534
Solid Output Shaft Models					Hollow Output Shaft Models				
DMQ	13	15	20	35	DHMQ	12	13	18	30
D	12	15	20	33	DH	11	13	18	28
DTMQ, DUMQ	15	17	23	40	DTHMQ, DUHMQ	14	15	21	35
DT, DU	14	17	23	38	DTH, DUH	13	15	21	33
DJMQ	15	17	23	40	DJHMQ	14	15	21	35
DJ	14	17	23	38	DJH	13	15	21	33
DFMQ	14	16	22	38	DFHMQ	13	14	20	33
DF	13	16	22	36	DFH	12	14	20	31
DFLMQ	15	17	23	40	DFLHMQ	14	15	21	35
DFL	14	17	23	38	DFLH	13	15	21	33
DRMQ	14	16	22	38	DRHMQ	13	14	20	33
DR	13	16	22	36	DRH	12	14	20	31

Δ Weights include grease and oil.

REDUCER ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size 518	520	525	534
T/U - Base	2	2	3	5
J - Base	2	2	3	5
F - Flange	1	1	2	3
FL - Flange	2	2	3	5
R - Reaction Arm	1	1	2	3



DOUBLE REDUCTION • MOTOR FRAME COMBINATIONS

NEMA or IEC Frame Size	Dimensions - Inches (MM) AK	AJ	BD	Bore Dia.	Reducer Size 518	520	525	534
NEMA 56C	4.50	5.88	6.50	0.625	●	●	●	●
IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)	■	■	■	■
IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■
IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■
IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	●	●	●	●
IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	●	●	●	●

● Reducer selections are available. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.
■ Reducer selections are available. A bushing will be provided with reducer to achieve input bore diameter shown. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

DOUBLE REDUCTION • WORM-WORM • EXACT RATIO COMBINATIONS

518

TOTAL RATIO	P 518	S 518
70	7	10
98	7	14
147	21	7
210	21	10
294	21	14
441	21	21
588	21	28
777	21	37
966	46	21
1288	46	28
1702	46	37
2220	60	37
3600	60	60

520

TOTAL RATIO	P 518	S 520
70	7	10
98	7	14
140	10	14
182	7	26
260	10	26
364	14	26
546	21	26
676	26	26
962	37	26
1260	21	60
1591	37	43
2220	37	60
3600	60	60

525

TOTAL RATIO	P 518	S 525
70	7	10
105	7	15
150	10	15
210	7	30
300	10	30
420	14	30
630	21	30
840	28	30
1110	37	30
1380	46	30
1800	60	30
2160	60	36
4020	67	60

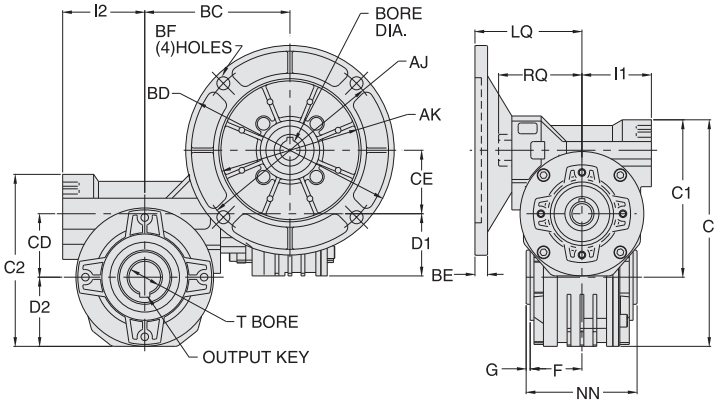
534

TOTAL RATIO	P 518	S 534
70	7	10
98	7	14
140	7	20
196	7	28
280	10	28
392	14	28
588	21	28
784	28	28
1036	37	28
1288	46	28
1680	60	28
2280	60	38
3120	60	52

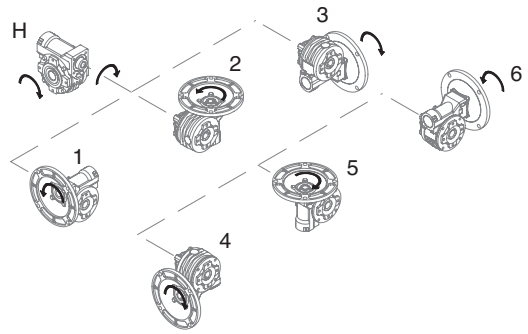
P = Primary stage reducer ratio
S = Secondary stage reducer ratio

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DHMQ



ASSEMBLIES



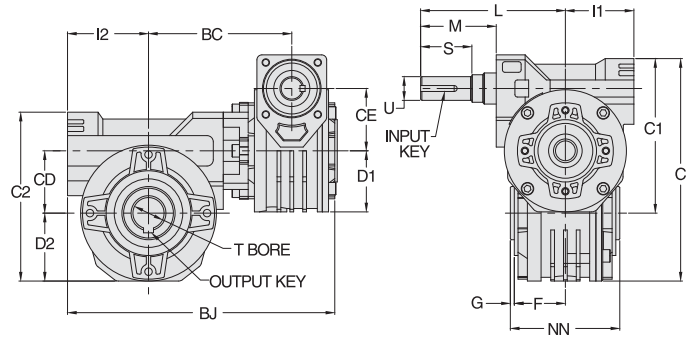
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DHMQ DIMENSIONS - Inches

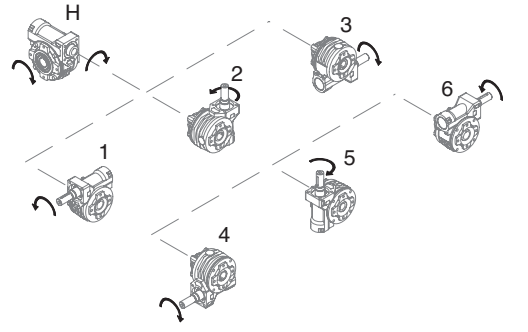
Series	BC	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	OUTPUT KEY*
518	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.33	2.56	2.60	0.750	3/16 X 1.00
520	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.33	3.19	2.60	1.000	1/4 X 1.62
525	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.33	4.72	2.60	1.125	1/4 X 2.00
534	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.33	5.31	2.60	1.500	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DH



ASSEMBLIES

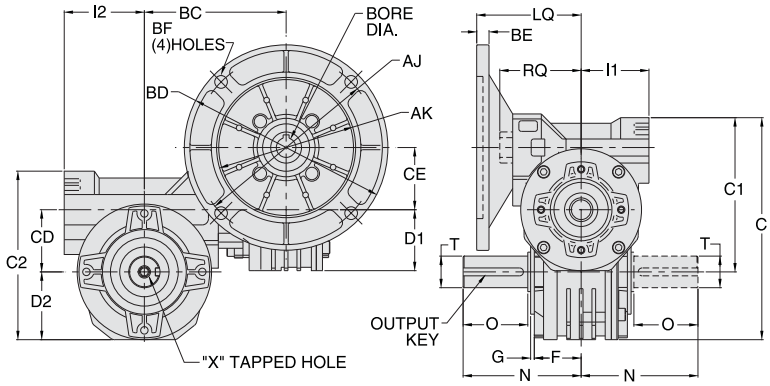


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

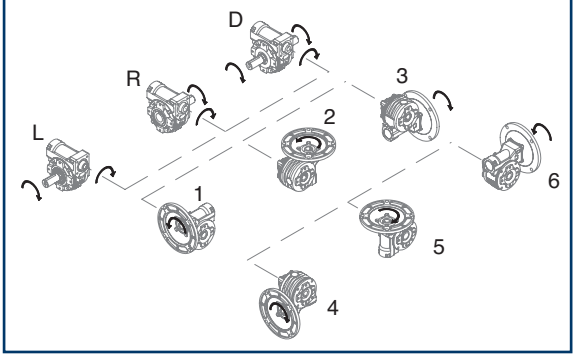
STYLE DH DIMENSIONS - Inches

Series	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	INPUT KEY	OUTPUT KEY
518	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.86	1.67	2.56	1.18	0.750	0.625	3/16 X 1.00	3/16 X 1.00
520	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.86	1.67	3.19	1.18	1.000	0.625	3/16 X 1.00	1/4 X 1.62
525	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.86	1.67	4.72	1.18	1.125	0.625	3/16 X 1.00	1/4 X 2.00
534	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.86	1.67	5.31	1.18	1.500	0.625	3/16 X 1.00	3/8 X 2.00

Style DMQ



ASSEMBLIES



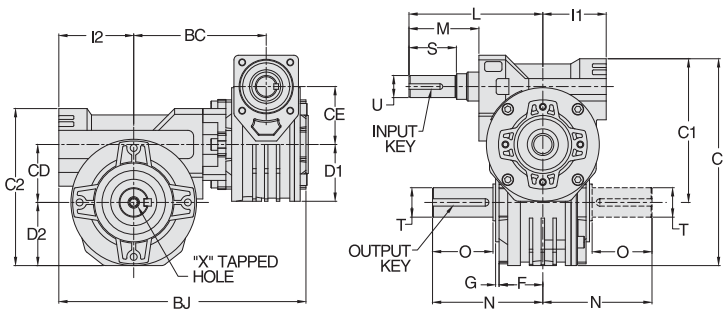
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DMQ DIMENSIONS - Inches

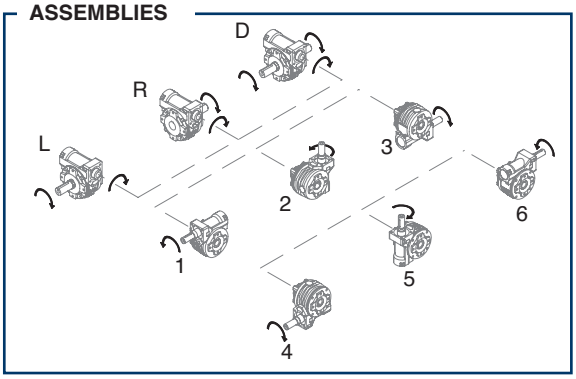
Series	BC	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	X Tap Size	X Depth	OUTPUT KEY*
518	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.33	2.97	1.26	2.60	0.750	1/4-20 UNC	0.62	3/16 x 1.00
520	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.33	3.94	2.05	2.60	1.000	5/16-18 UNC	0.75	1/4 X 1.62
525	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.33	4.85	2.36	2.60	1.125	5/16-18 UNC	0.75	1/4 X 2.00
534	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.33	5.55	2.36	2.60	1.500	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style D



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE D DIMENSIONS - Inches

Series	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.86	1.67	2.97	1.26	1.18	0.750	0.625	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.86	1.67	3.94	2.05	1.18	1.000	0.625	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.86	1.67	4.85	2.36	1.18	1.125	0.625	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.86	1.67	5.55	2.36	1.18	1.500	0.625	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	N/A	N/A	N/A	N/A	N/A	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5

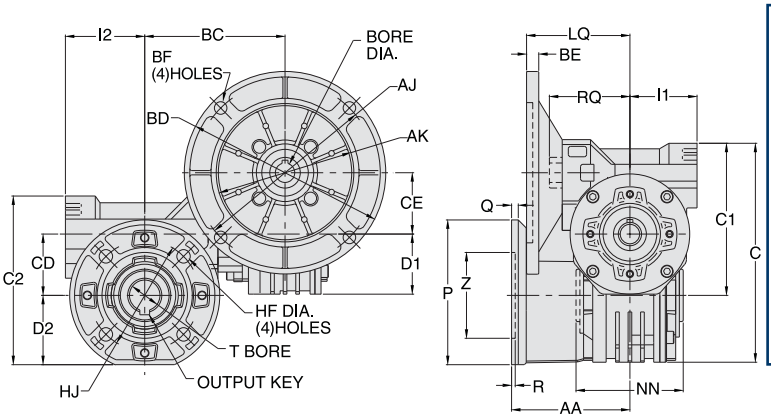
OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D56D■	LQ◆ D63D	LQ◆ D71D	T H7 (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
518	74❖	74❖	74	18	32	75	6
520	74❖	74❖	74	25	52	100	8
525	74❖	74❖	74	25	60	123	8
534	74❖	74❖	74	35	60	141	10

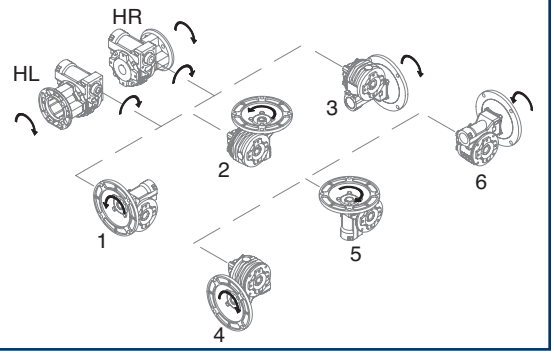
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)
◆ Dimensions are maximum (B5 and B14 options)
■ B5 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DFHMQ



ASSEMBLIES



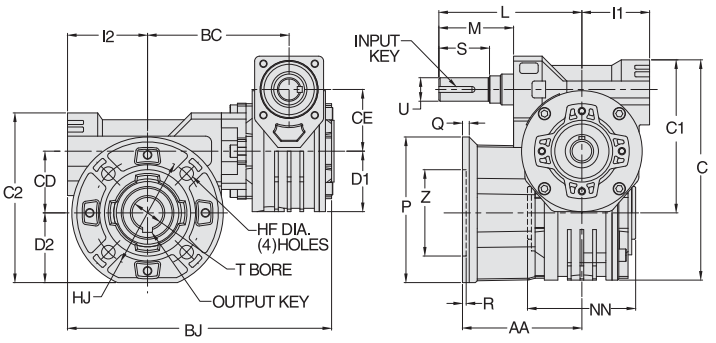
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFHMQ DIMENSIONS - Inches

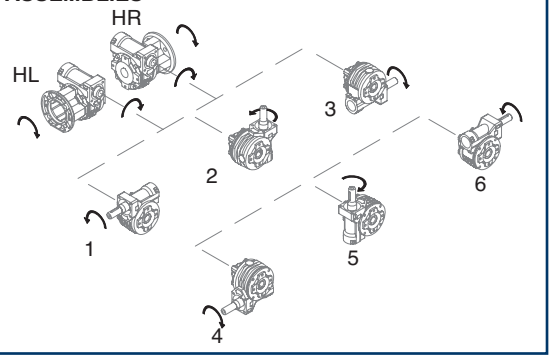
Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	2.38	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	3.35	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.19	4.84	0.47	0.354	2.60	1.000	2.756	1/4 X 1.62
525	3.39	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.72	6.89	0.51	0.276	2.60	1.125	4.528	1/4 X 2.00
534	4.25	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.31	8.07	0.63	0.197	2.60	1.500	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DFH



ASSEMBLIES

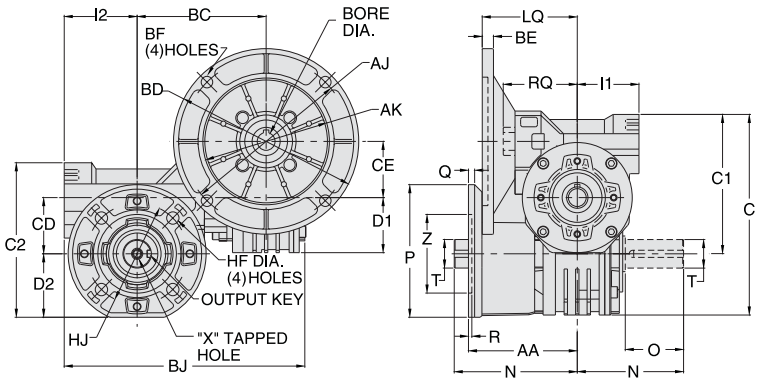


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

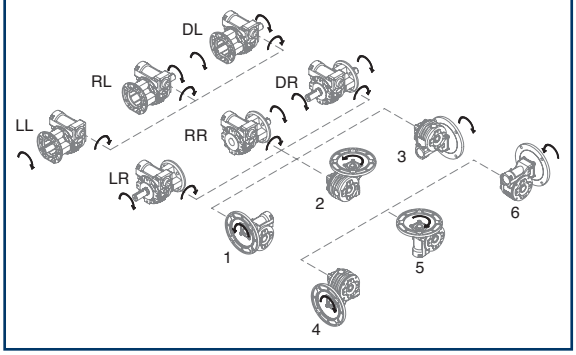
STYLE DFH DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.72	6.89	0.51	0.276	1.18	1.125	0.625	4.528	3/16 X 1.00	1/4 X 2.00
534	4.25	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.31	8.07	0.63	0.197	1.18	1.500	0.625	5.984	3/16 X 1.00	3/8 X 2.00

Style DFMQ



ASSEMBLIES



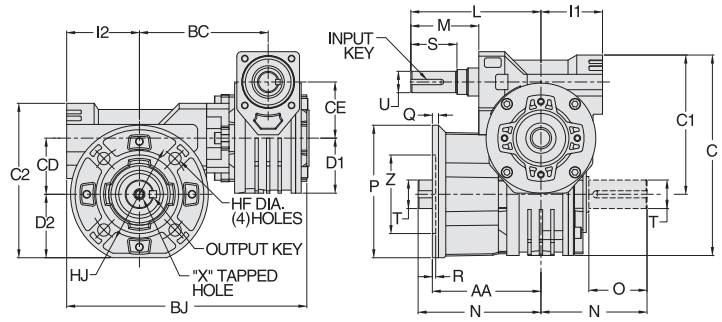
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFMQ DIMENSIONS - Inches

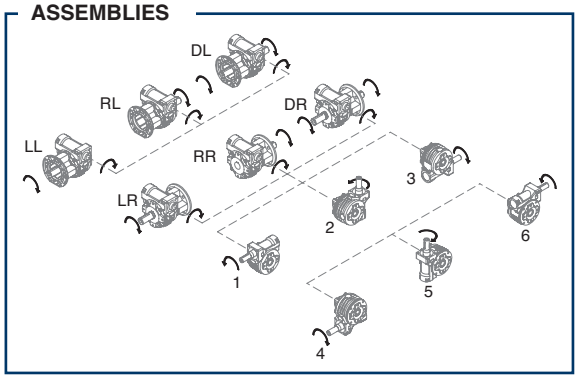
Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X Tap Size	X Depth	Z	OUTPUT KEY*
518	2.38	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	3.35	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.94	2.05	4.84	0.47	0.354	2.60	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	3.39	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.85	2.36	6.89	0.51	0.276	2.60	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	4.25	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.55	2.36	8.07	0.63	0.197	2.60	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DF



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DF DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.85	2.36	6.89	0.51	0.276	1.18	1.125	0.625	5/16-18 UNC	0.75	4.528	3/16 X 1.00	1/4 X 2.00
534	4.25	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.55	2.36	8.07	0.63	0.197	1.18	1.500	0.625	5/16-18 UNC	0.75	5.984	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D56D■	LQ◆ IEC B5 & B14 Options D63D	LQ◆ IEC B5 & B14 Options D71D	T H7 (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
518	74❖	74❖	74	18	32	75	6
520	74❖	74❖	74	25	52	100	8
525	74❖	74❖	74	25	60	123	8
534	74❖	74❖	74	35	60	141	10

OPTIONAL METRIC DIMENSIONS✪ - MM

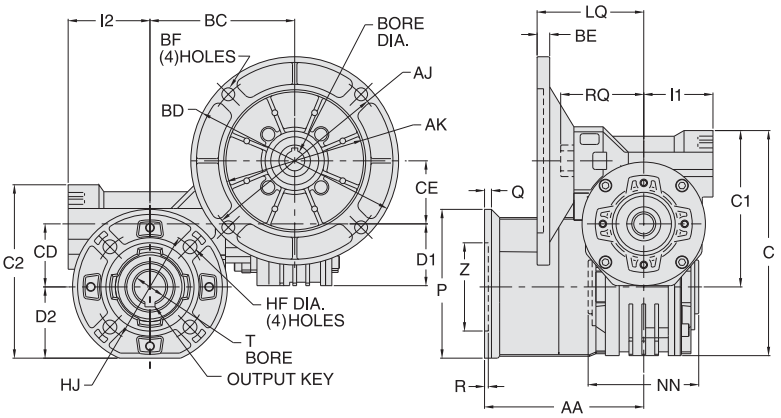
IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	N/A	N/A	N/A	N/A	N/A	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5

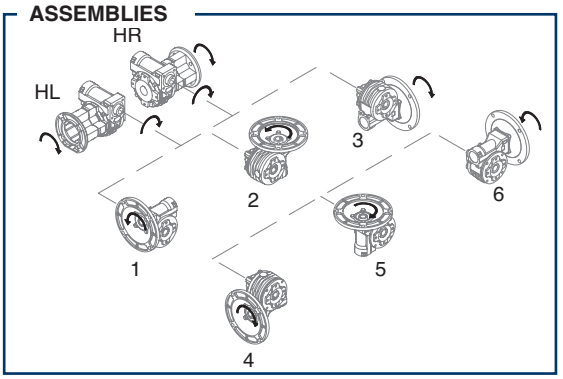
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)
◆ Dimensions are maximum (B5 and B14 options)
■ B5 Option not available

Bravo™ ALUMINUM GEAR REDUCERS

Dimensions

Style DFLHMQ





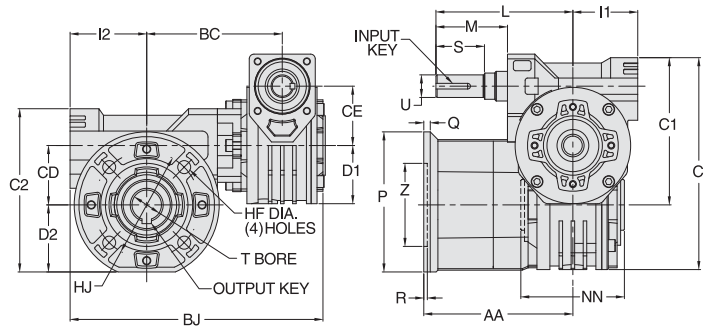
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

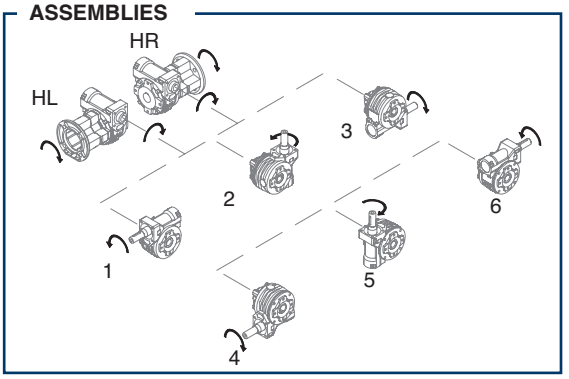
STYLE DFLHMQ DIMENSIONS - Inches

Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	3.56	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	4.51	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.19	4.84	0.47	0.354	2.60	1.000	2.756	1/4 X 1.62
525	4.57	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.72	6.89	0.51	0.276	2.60	1.125	4.528	1/4 X 2.00
534	5.85	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.31	8.07	0.63	0.197	2.60	1.500	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DFLH



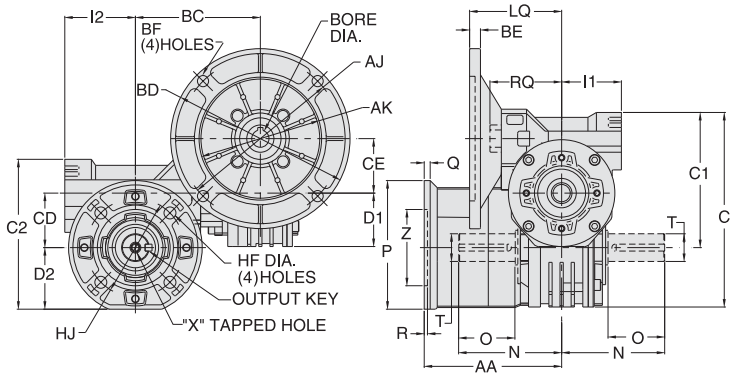


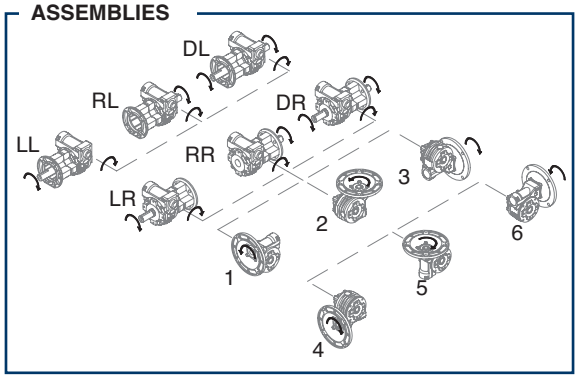
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFLH DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.72	6.89	0.51	0.276	1.18	1.125	0.625	4.528	3/16 X 1.00	1/4 X 2.00
534	5.85	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.31	8.07	0.63	0.197	1.18	1.500	0.625	5.984	3/16 X 1.00	3/8 X 2.00

Style DFLMQ





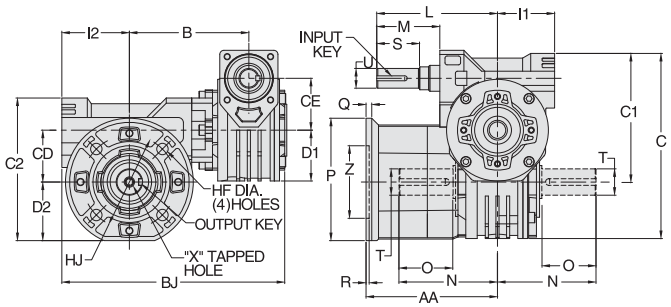
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

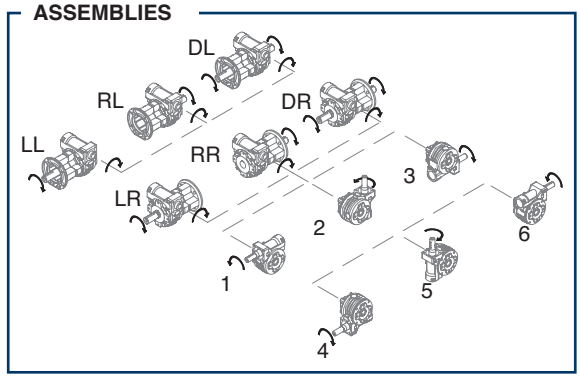
STYLE DFLMQ DIMENSIONS - Inches

Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X Tap Size	X Depth	Z	OUTPUT KEY*
518	3.56	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	4.51	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.94	2.05	4.84	0.47	0.354	2.60	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	4.57	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.85	2.36	6.89	0.51	0.276	2.60	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	5.85	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.55	2.36	8.07	0.63	0.197	2.60	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DFL





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFL DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.85	2.36	6.89	0.51	0.276	1.18	1.125	0.625	5/16-18 UNC	0.75	4.528	3/16 X 1.00	1/4 X 2.00
534	5.85	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.55	2.36	8.07	0.63	0.197	1.18	1.500	0.625	5/16-18 UNC	0.75	5.984	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D56D■	LQ◆ D63D	LQ◆ D71D	T H7	O	N	Output Keyway
				(standard for metric units)			
518	74❖	74❖	74	18	32	75	6
520	74❖	74❖	74	25	52	100	8
525	74❖	74❖	74	25	60	123	8
534	74❖	74❖	74	35	60	141	10

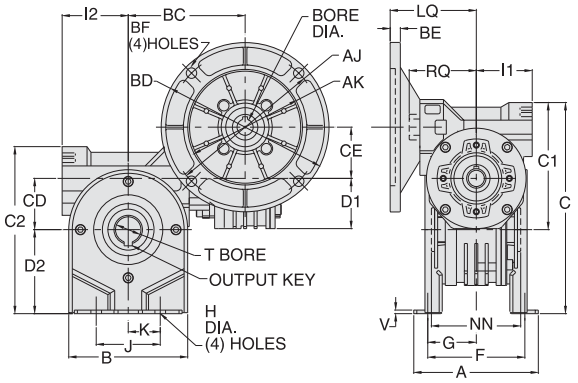
OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	N/A	N/A	N/A	N/A	N/A	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5

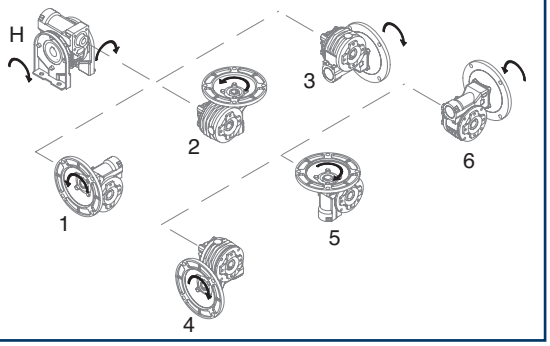
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)
◆ Dimensions are maximum (B5 and B14 options)
■ B5 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DTHMQ



ASSEMBLIES



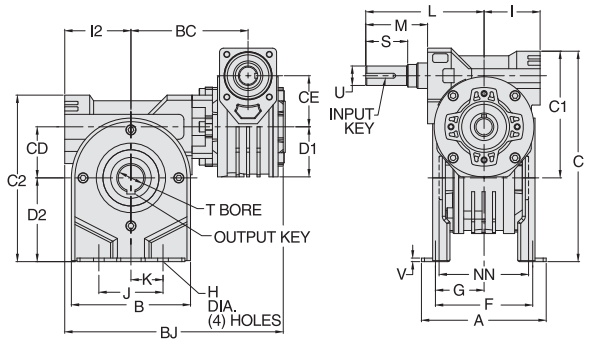
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DTHMQ DIMENSIONS - Inches

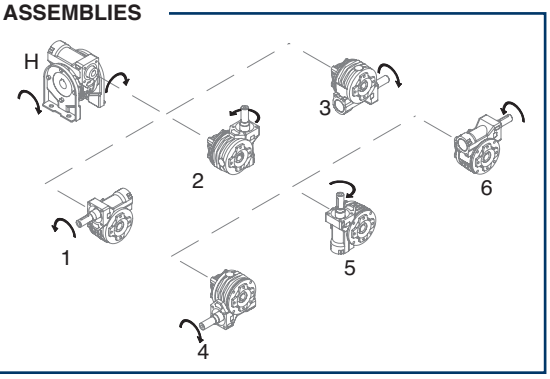
Series	A	B	BC	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.35	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	4.53	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.19	2.60	1.000	0.14	1/4 X 1.62
525	5.67	5.24	5.75	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.72	2.60	1.125	0.16	1/4 X 2.00
534	7.17	7.09	6.76	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.31	2.60	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DTH



ASSEMBLIES

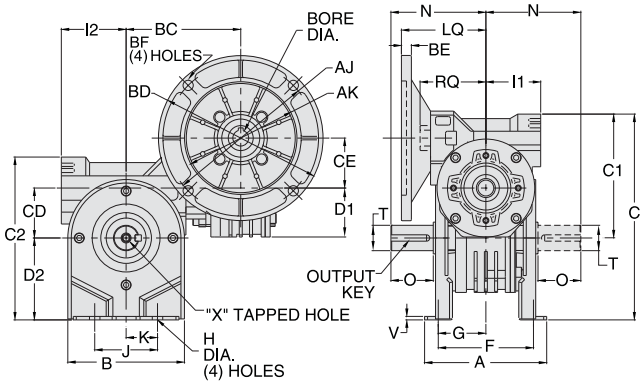


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

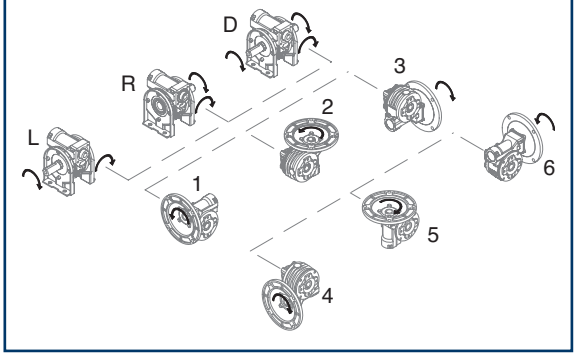
STYLE DTH DIMENSIONS - Inches

Series	A	B	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	7.90	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.86	1.67	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	10.24	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.72	1.18	1.125	0.625	0.16	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.31	1.18	1.500	0.625	0.20	3/16 X 1.00	3/8 X 2.00

Style DTMQ



ASSEMBLIES



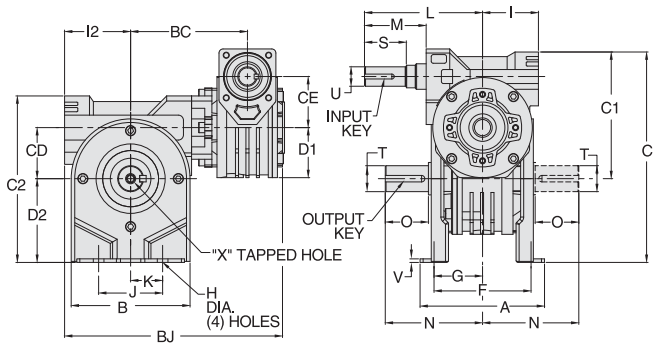
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DTMQ DIMENSIONS - Inches

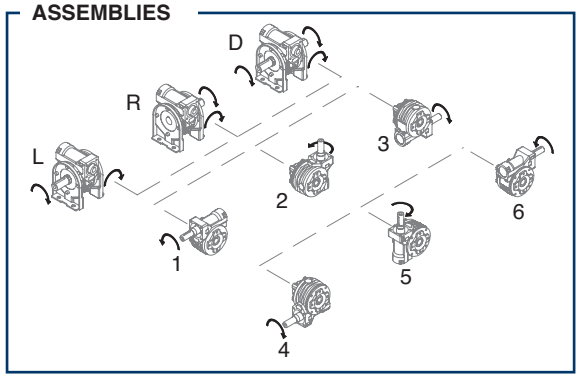
Series	A	B	BC	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
518	3.94	3.86	4.35	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	4.53	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.94	2.05	2.60	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	5.75	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.85	2.36	2.60	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	6.76	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.55	2.36	2.60	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DT DIMENSIONS - Inches

Series	A	B	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	7.90	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.86	1.67	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	10.24	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.85	2.36	1.18	1.125	0.625	0.16	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.55	2.36	1.18	1.500	0.625	0.20	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D56D■	LQ◆ D63D	LQ◆ D71D	T H7 (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
518	74❖	74❖	74	18	32	75	6
520	74❖	74❖	74	25	52	100	8
525	74❖	74❖	74	25	60	123	8
534	74❖	74❖	74	35	60	141	10

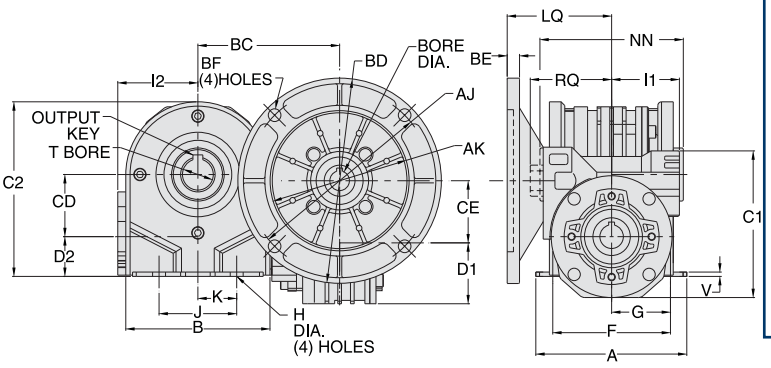
OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	N/A	N/A	N/A	N/A	N/A	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5

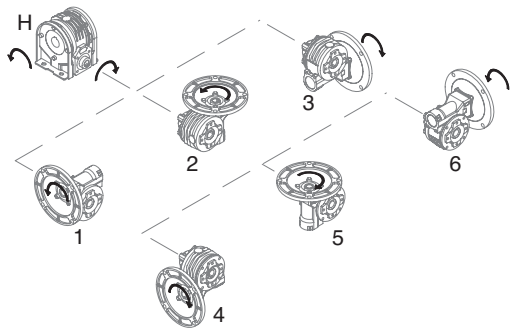
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)
◆ Dimensions are maximum (B5 and B14 options)
■ B5 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DUHMQ



ASSEMBLIES



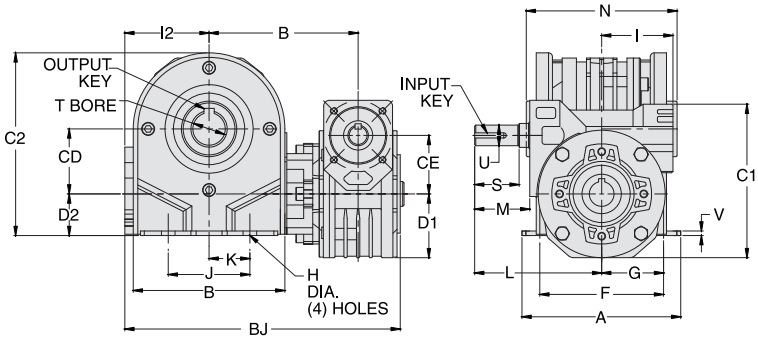
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUHMQ DIMENSIONS - Inches

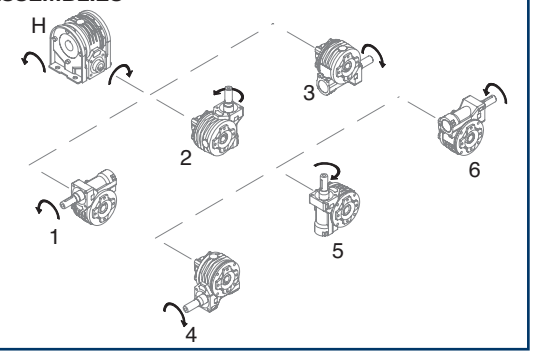
Series	A	B	BC	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.35	4.76	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	4.53	4.76	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.19	2.60	1.000	0.14	1/4 X 1.62
525	5.67	5.24	5.75	4.76	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.72	2.60	1.125	0.16	1/4 X 2.00
534	7.17	7.09	6.76	4.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.31	2.60	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DUH



ASSEMBLIES

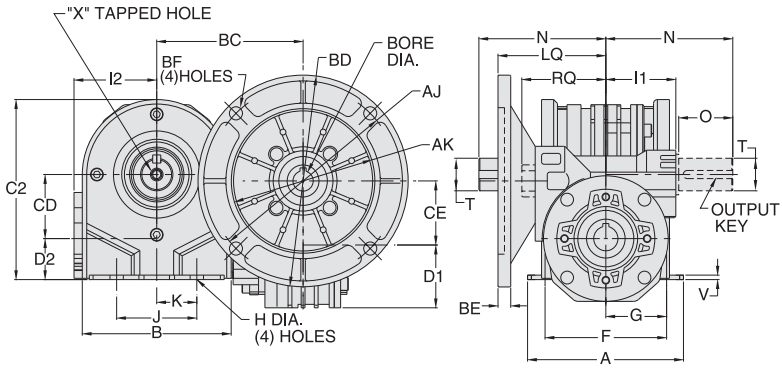


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

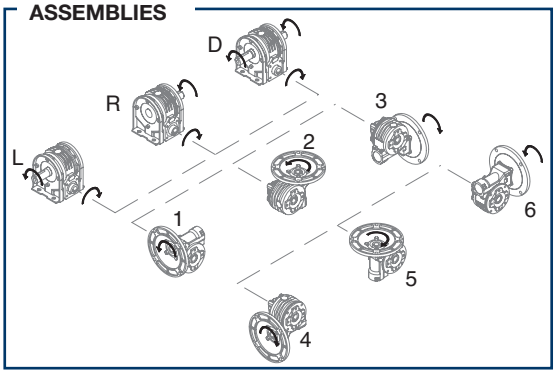
STYLE DUH DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	7.90	4.76	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	4.76	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.86	1.67	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	10.24	4.76	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.72	1.18	1.125	0.625	0.16	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	4.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.31	1.18	1.500	0.625	0.20	3/16 X 1.00	3/8 X 2.00

Style DUMQ



ASSEMBLIES



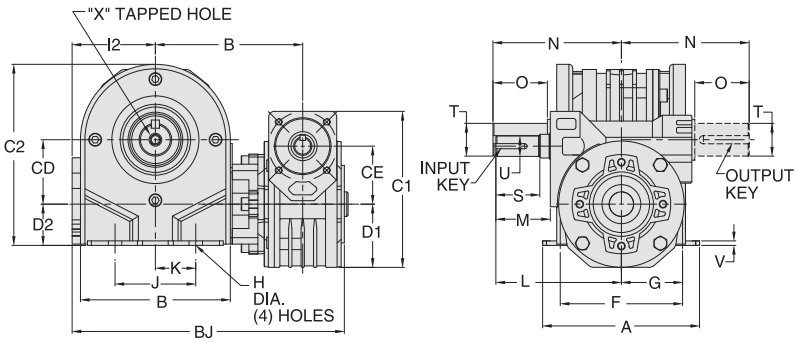
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUMQ DIMENSIONS - Inches

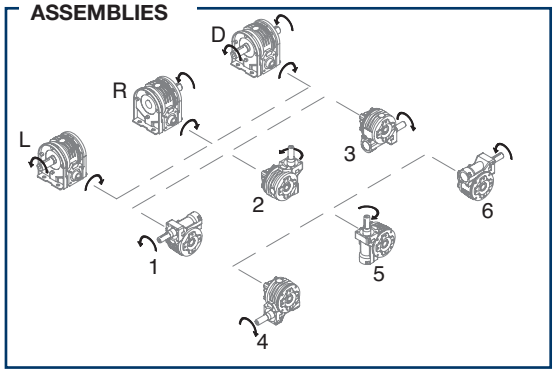
Series	A	B	BC	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
518	3.94	3.86	4.35	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	4.53	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.94	2.05	2.60	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	5.75	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.85	2.36	2.60	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	6.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.55	2.36	2.60	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DU



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DU DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I2	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	7.90	4.76	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	4.76	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.56	2.48	1.24	3.86	1.67	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	10.24	4.76	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	3.11	3.74	1.87	3.86	1.67	4.85	2.36	1.18	1.125	0.625	0.16	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	4.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	3.86	5.51	2.76	3.86	1.67	5.55	2.36	1.18	1.500	0.625	0.20	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D56D■	LQ◆ IEC B5 & B14 Options D63D	LQ◆ IEC B5 & B14 Options D71D	T H7 (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
518	74❖	74❖	74	18	32	75	6
520	74❖	74❖	74	25	52	100	8
525	74❖	74❖	74	25	60	123	8
534	74❖	74❖	74	35	60	141	10

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D56D	N/A	N/A	N/A	N/A	N/A	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5

✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

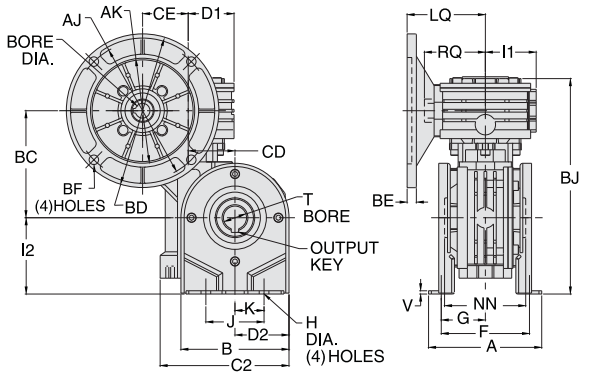
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)

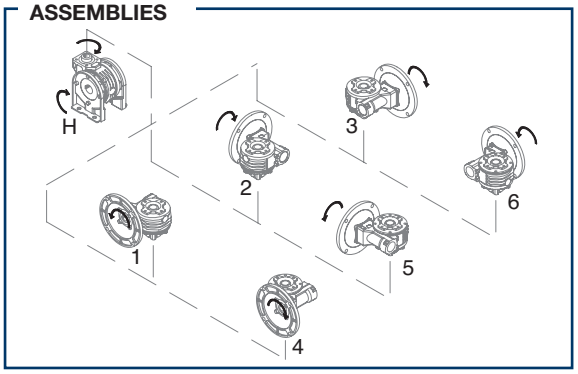
◆ Dimensions are maximum (B5 and B14 options)

■ B5 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DJHMQ





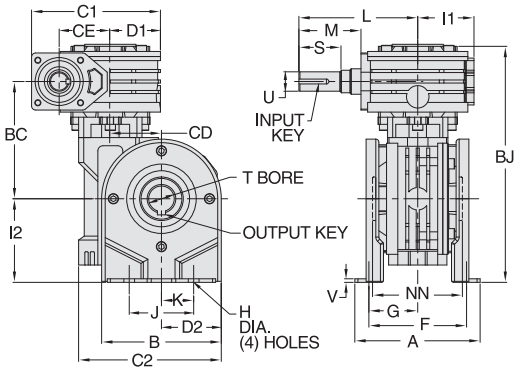
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

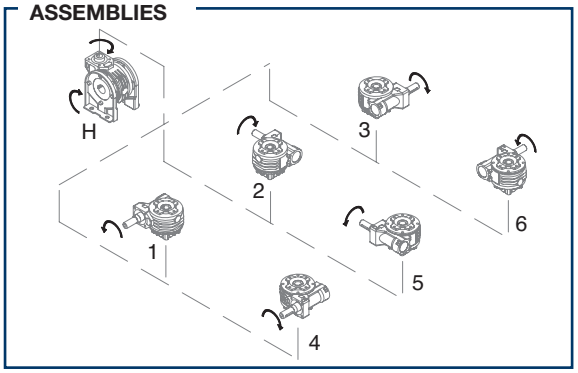
STYLE DJHMQ DIMENSIONS - Inches

Series	A	B	BC	BJ	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.35	8.57	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.83	1.97	0.99	3.33	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	4.53	9.13	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	3.22	2.48	1.24	3.33	3.19	2.60	1.000	0.14	1/4 X 1.62
525	5.67	5.24	5.75	11.07	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.94	3.74	1.87	3.33	4.72	2.60	1.125	0.16	1/4 X 2.00
534	7.17	7.09	6.76	13.74	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	5.59	5.51	2.76	3.33	5.31	2.60	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DJH



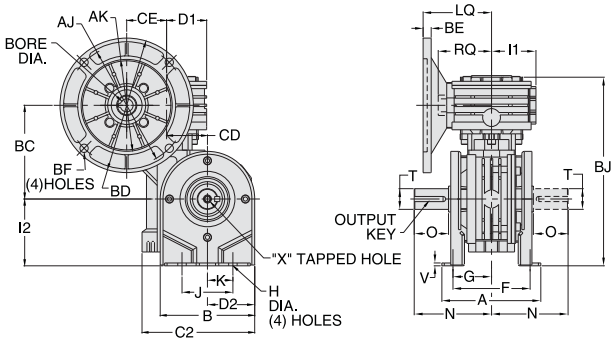


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

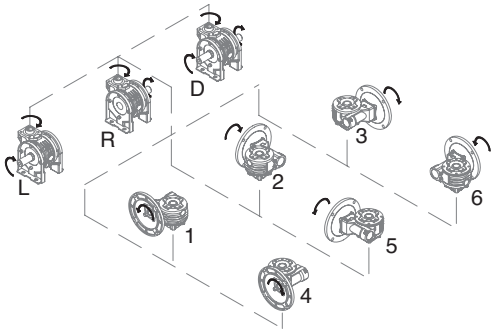
STYLE DJH DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	8.57	4.76	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	9.13	4.76	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.86	1.67	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	11.07	4.76	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.72	1.18	1.125	0.625	0.16	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	13.74	4.76	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.31	1.18	1.500	0.625	0.20	3/16 X 1.00	3/8 X 2.00

Style DJMQ



ASSEMBLIES



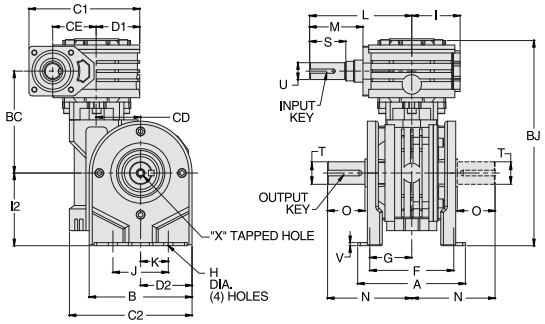
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJMQ DIMENSIONS - Inches

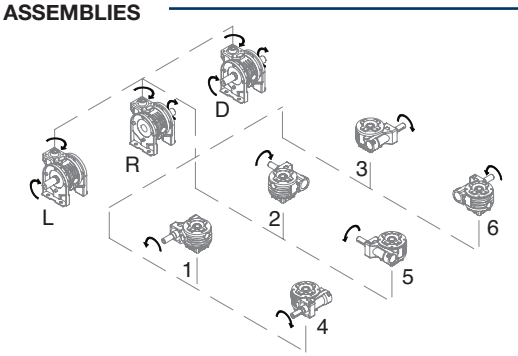
Series	A	B	BC	BJ	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
518	3.94	3.86	4.35	8.57	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.83	1.97	0.99	3.33	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	4.53	9.13	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	3.22	2.48	1.24	3.33	3.94	2.05	2.60	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	5.75	11.07	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.94	3.74	1.87	3.33	4.85	2.36	2.60	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	6.76	13.74	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	5.59	5.51	2.76	3.33	5.55	2.36	2.60	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJ DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	8.57	4.76	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.83	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	9.13	4.76	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	3.22	2.48	1.24	3.86	1.67	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	11.07	4.76	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.94	3.74	1.87	3.86	1.67	4.85	2.36	1.18	1.125	0.625	0.16	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	13.74	4.76	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	5.59	5.51	2.76	3.86	1.67	5.55	2.36	1.18	1.500	0.625	0.20	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D56D■	D63D	D71D	T H7 (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
518	74❖	74❖	74	18	32	75	6
520	74❖	74❖	74	25	52	100	8
525	74❖	74❖	74	25	60	123	8
534	74❖	74❖	74	35	60	141	10

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	AK	BD	BE	BF	B14❖ AJ	AK	BD	BE	BF❖	Input Bore Dia	Input Keyway▲
D56D	N/A	N/A	N/A	N/A	N/A	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5

✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)
◆ Dimensions are maximum (B5 and B14 options)
■ B5 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Mounting Style Guide

Hollow Output Shaft Mounted

MOTORIZED QUILL INPUT

DXHMQ



Ratings: Pages 313-314
Dimensions: Page 334

DXRHMQ



Ratings: Pages 313-314
Dimensions: Page 348

DXFHMQ



Ratings: Pages 313-314
Dimensions: Page 336

NON-MOTORIZED SOLID INPUT SHAFT

DXH



Ratings: Pages 313-314
Dimensions: Page 334

DXRH



Ratings: Pages 313-314
Dimensions: Page 348

DXFH



Ratings: Pages 313-314
Dimensions: Page 336

Solid Output Shaft

MOTORIZED QUILL INPUT

DXMQ



Ratings: Pages 313-314
Dimensions: Page 335

DXRMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 348

DXFMQ



Ratings: Pages 313-314
Dimensions: Page 337

NON-MOTORIZED SOLID INPUT SHAFT

DX



Ratings: Pages 313-314
Dimensions: Page 335

DXR



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 348

DXF



Ratings: Pages 313-314
Dimensions: Page 337

Mounting Accessories

Select the appropriate mounting accessories from this wide variety of options.



REACTION ARM R



F FLANGE (SHORT FLANGE)

❖ Non-Standard Option assemblies may be useful in certain applications. Please contact Factory with application details.

DXFLHMQ



Ratings: Pages 313-314
Dimensions: Page 338

DXTHMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 340

DXUHMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 342

DXJHMQ



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 344

DXFLH



Ratings: Pages 313-314
Dimensions: Page 338

DXTH



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 340

DXUH



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 342

DXJH



(❖Non-Standard Option)
Ratings: Pages 313-314
Dimensions: Page 344

DXFLMQ



Ratings: Pages 313-314
Dimensions: Page 339

DXTMQ



Ratings: Pages 313-314
Dimensions: Page 3341

DXUMQ



Ratings: Pages 313-314
Dimensions: Page 343

DXJMQ



Ratings: Pages 313-314
Dimensions: Page 345

DXFL



Ratings: Pages 313-314
Dimensions: Page 339



FL FLANGE
(LONG FLANGE)

DXT



Ratings: Pages 313-314
Dimensions: Page 341



HORIZONTAL BASE
(WORM OVER ASSEMBLY)

DXU



Ratings: Pages 313-314
Dimensions: Page 343



HORIZONTAL BASE
(WORM UNDER ASSEMBLY)

DXJ



Ratings: Pages 313-314
Dimensions: Page 345



HORIZONTAL BASE
(VERTICAL INPUT SHAFT)

Bravo™ ALUMINUM GEAR REDUCERS Double Reduction • Helical - Worm Model Number System

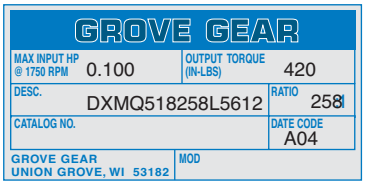
Grove Gear 500 Series Gear Reducer Model Number Nomenclature

All stock and custom 500 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example W5180001. Reducers and renewal parts should be ordered by catalog number. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 5000 (for example, W5185000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered from Grove Gear by catalog number.

TYPICAL NAMEPLATE



Style

SOLID OUTPUT SHAFT
DXMQ – Motorized, Quill Input
DX – Non-Flanged

HOLLOW OUTPUT SHAFT
DXHMQ – Motorized, Quill Input
DXH – Non-Flanged

Series

ALUMINUM 500 SERIES CENTER DISTANCES

Series	Center Distance (Inches)	(mm)
518	1.77	45
520	1.97	50
525	2.48	63
534	3.35	85

Ratio

See Selection Tables on pages 331-332 for all available ratios

Output Shaft Orientation

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft
* Viewed from drive end of reducer.

Motor Flange

NEMA Input Flange Code	For NEMA Frame
56	56C
140	143-5TC

IEC Input Flange Code	For IEC Frame
63B14	63B14
63B5	63B5
71B14	71B14
71B5	71B5
80B14	80B14
80B5	80B5
90B14	90B14
90B5	90B5

Shaft Dimension Code

OUTPUT SHAFT DIMENSION CODE ▲

Series	NEMA/Inch Options Shaft Dia.	Shaft* Code	IEC/Metric Options Shaft Dia.	Shaft Code
518	3/4”	12	18mm	18
520	1”	16	25mm	25
525	1-1/8”	18	25mm	25
534	1-1/2”	24	35mm	35

*Shaft Diameter in 1/16ths of an inch.
▲ Diameters and shaft codes of hollow bore styles are identical to those of solid shaft styles. Reducers with NEMA inputs will have inch dimensioned output shafts and reducers with IEC inputs will have metric dimensioned output shafts as standard.

Sample Model Number

Solid Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77” Center Distance, 258:1 Ratio, Left Hand Output Shaft, and 5/8” Input Bore with NEMA 56C Flange.

DXMQ	518	258	L	56	12
Style	Series	Ratio	Output Shaft	Motor Input	Shaft Code

Hollow Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77” Center Distance, 258:1 Ratio, 3/4” Hollow Output Shaft, and 5/8” Input Bore with NEMA 56C Flange.

DXHMQ	518	258	H	56	12
Style	Series	Ratio	Output Shaft	Motor Input Flange	Shaft Code



518 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
30.1	1750	58.1	0.523	0.387	420
	1150	38.2	0.363	0.269	443
43	1750	40.7	0.377	0.271	420
	1150	26.7	0.261	0.188	443
60.2	1750	29.07	0.323	0.194	420
	1150	19.10	0.224	0.134	443
90.3	1750	19.38	0.227	0.129	420
	1150	12.74	0.157	0.090	443
120.4	1750	14.53	0.183	0.097	420
	1150	9.55	0.127	0.067	443
159.1	1750	11.00	0.150	0.073	420
	1150	7.23	0.104	0.051	443
197.8	1750	8.85	0.125	0.059	420
	1150	5.81	0.087	0.041	443
258	1750	6.78	0.100	0.045	420
	1150	4.46	0.070	0.031	443
301	1750	5.81	0.068	0.027	294
	1150	3.82	0.047	0.019	310
438.6	1750	3.99	0.052	0.019	294
	1150	2.62	0.036	0.013	310

* Contact Factory for additional ratio options available.

520 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
30.1	1750	58.1	0.714	0.543	589
	1150	38.2	0.494	0.376	620
43	1750	40.7	0.507	0.380	589
	1150	26.7	0.350	0.263	620
60.2	1750	29.1	0.394	0.272	589
	1150	19.1	0.272	0.188	620
77.4	1750	22.61	0.396	0.241	673
	1150	14.86	0.274	0.167	708
111.8	1750	15.65	0.274	0.167	673
	1150	10.29	0.189	0.116	708
154.8	1750	11.30	0.215	0.121	673
	1150	7.43	0.149	0.083	708
184.9	1750	9.46	0.180	0.088	589
	1150	6.22	0.125	0.061	620
258	1750	6.78	0.135	0.063	589
	1150	4.46	0.093	0.044	620
292.4	1750	5.98	0.109	0.048	504
	1150	3.93	0.075	0.033	531
344	1750	5.09	0.068	0.027	336
	1150	3.34	0.047	0.019	354
430	1750	4.07	0.060	0.022	336
	1150	2.67	0.042	0.015	354

* Contact Factory for additional ratio options available.

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 330.

Maximum Rating Tables

525 & 534 Series • All Stock Styles





525 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
29.5	1750	59.4	1.767	1.307	1387
	1150	39.0	1.221	0.903	1460
37.2	1750	47.0	1.417	1.034	1387
	1150	30.9	0.981	0.716	1460
46.5	1750	37.6	1.340	0.938	1572
	1150	24.7	0.927	0.649	1655
55.8	1750	31.4	1.224	0.783	1572
	1150	20.6	0.845	0.541	1655
69.8	1750	25.09	1.026	0.626	1572
	1150	16.49	0.710	0.433	1655
87.8	1750	19.94	0.731	0.526	1664
	1150	13.10	0.506	0.364	1752
110.9	1750	15.78	0.595	0.417	1664
	1150	10.37	0.412	0.288	1752
138.6	1750	12.63	0.505	0.333	1664
	1150	8.30	0.350	0.231	1752
166.3	1750	10.52	0.463	0.278	1664
	1150	6.91	0.320	0.192	1752
207.9	1750	8.42	0.359	0.198	1480
	1150	5.53	0.249	0.137	1558
309.5	1750	5.65	0.260	0.133	1480
	1150	3.72	0.180	0.092	1558
369.6	1750	4.73	0.236	0.111	1480
	1150	3.11	0.164	0.077	1558
434.3	1750	4.03	0.166	0.070	1093
	1150	2.65	0.115	0.048	1151

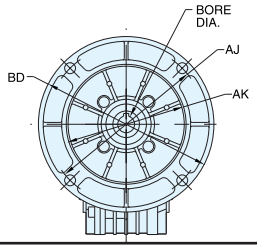
* Contact Factory for additional ratio options available.

534 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
32.3	1750	54.1	3.207	2.309	2690
	1150	35.6	2.221	1.599	2831
46.2	1750	37.9	2.311	1.618	2690
	1150	24.9	1.598	1.118	2831
58.9	1750	29.7	2.247	1.506	3195
	1150	19.5	1.553	1.041	3363
80.6	1750	21.71	1.804	1.101	3195
	1150	14.27	1.248	0.761	3363
103.9	1750	16.85	1.311	0.787	2943
	1150	11.07	0.907	0.544	3098
129.4	1750	13.53	1.053	0.632	2943
	1150	8.89	0.728	0.437	3098
175.6	1750	9.97	0.844	0.532	3363
	1150	6.55	0.584	0.368	3540
240.2	1750	7.28	0.696	0.369	3195
	1150	4.79	0.482	0.256	3363
309.5	1750	5.65	0.551	0.286	3195
	1150	3.72	0.382	0.198	3363
422.1	1750	4.15	0.373	0.194	2943
	1150	2.72	0.257	0.134	3098
443.5	1750	3.95	0.351	0.158	2522
	1150	2.59	0.242	0.109	2653
604.8	1750	2.89	0.289	0.116	2522
	1150	1.90	0.200	0.080	2653

* Contact Factory for additional ratio options available.

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 330.



DOUBLE REDUCTION • HELICAL/WORM • MOTOR FRAME COMBINATIONS

Reducer Size	NEMA or IEC Frame Size	Dimensions - Inches (MM) AK	AJ	BD	Bore Dia.	Available Ratios
518	NEMA 56C	4.50	5.88	6.50	0.625	30.1 43 60.2 90.3 120.4 159.1 197.8 258 301 438.6
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	• • • • • • • • • •
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	• • • • • • • • • •
						30.1 43 60.2 77.4 111.8 154.8 184.9 258 292.4 344 430
520	NEMA 56C	4.50	5.88	6.50	0.625	• • • • • • • • • • •
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	• • • • • • • • • • •
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	• • • • • • • • • • •
						29.5 37.2 46.5 55.8 69.8 87.8 110.9 138.6 166.3 207.9 309.5 369.6 434.3
525	NEMA 56C	4.50	5.88	6.50	0.625	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	NEMA 140TC	4.50	5.88	6.50	0.875	• • • • • • • • • • • • •
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■ ■ ■ ■ ■ ■ ■ ■
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■ ■ ■ ■ ■ ■ ■ ■
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■ ■ ■ ■ ■ ■ ■ • • • • • •
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■ ■ ■ ■ ■ ■ ■ • • • • • •
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■ ■ ■ ■ ■ • •
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■ ■ ■ ■ ■ • •
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	• • • • •
	IEC 90B14	3.74 (95)	4.53 (115)	5.51 (140)	(24)	• • • • •
						32.3 46.2 58.9 80.6 103.9 129.4 175.6 240.2 309.5 422.1 443.5 604.8
534	NEMA 56C	4.50	5.88	6.50	0.625	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	NEMA 140TC	4.50	5.88	6.50	0.875	• • • • • • • • • • • •
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■ ■ ■ ■ ■ ■
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■ ■ ■ ■ ■ • • • • • • • •
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■ ■ ■ ■ ■ • • • • • • • •
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	• • • • •
	IEC 90B14	3.74 (95)	4.53 (115)	5.51 (140)	(24)	• • • • •

• Reducer selections are available. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

■Reducer selections are available. A bushing will be provided with reducer to achieve input bore diameter shown. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

DOUBLE REDUCTION • HELICAL/WORM • EXACT RATIO COMBINATIONS

518

TOTAL RATIO	P HELICAL	S 518
30.1	4.3	7
43	4.3	10
60.2	4.3	14
90.3	4.3	21
120.4	4.3	28
159.1	4.3	37
197.8	4.3	46
258	4.3	60
301	4.3	70
438.6	4.3	102

520

TOTAL RATIO	P HELICAL	S 520
30.1	4.3	7
43	4.3	10
60.2	4.3	14
77.4	4.3	18
111.8	4.3	26
154.8	4.3	36
184.9	4.3	43
258	4.3	60
292.4	4.3	68
344	4.3	80
430	4.3	100

525

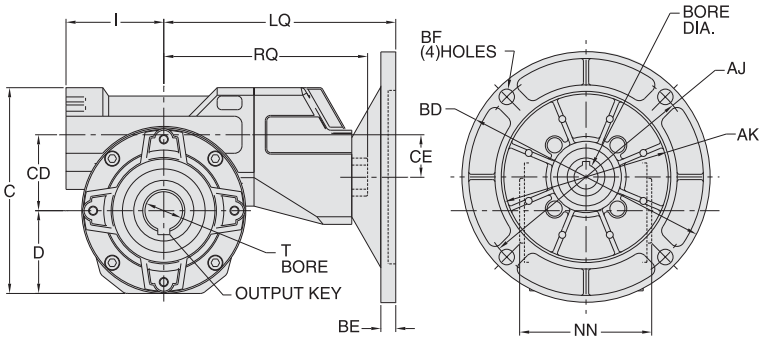
TOTAL RATIO	P HELICAL	S 525
29.5	1.55	19
37.2	1.55	24
46.5	1.55	30
55.8	1.55	36
69.8	1.55	45
87.8	4.62	19
110.9	4.62	24
138.6	4.62	30
166.3	4.62	36
207.9	4.62	45
309.5	4.62	67
369.6	4.62	80
434.3	4.62	94

534

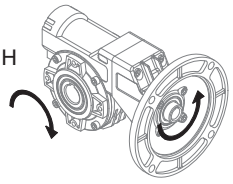
TOTAL RATIO	P HELICAL	S 534
32.3	4.62	7
46.2	4.62	10
58.9	1.55	38
80.6	1.55	52
103.9	1.55	67
129.4	4.62	28
175.6	4.62	38
240.2	4.62	52
309.5	4.62	67
422.1	6.3	67
443.5	4.62	96
604.8	6.3	96

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DXHMQ



ASSEMBLIES



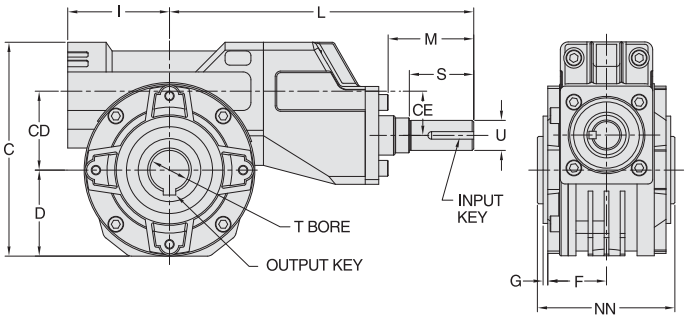
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXHMQ DIMENSIONS - Inches

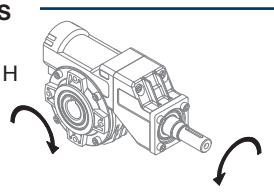
Series	C	CD	CE	D	F^	G^	I	LQ* 56/140	NN	RQ	T* +0.0015 -0.0000	OUTPUT KEY*
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.23	2.56	5.59	0.750	3/16 X 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.41	3.19	5.77	1.000	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	7.17	4.72	6.49	1.125	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	7.84	5.31	7.42	1.500	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.
^ Refer to Style DXH for reference to this dimension.

Style DXH



ASSEMBLIES

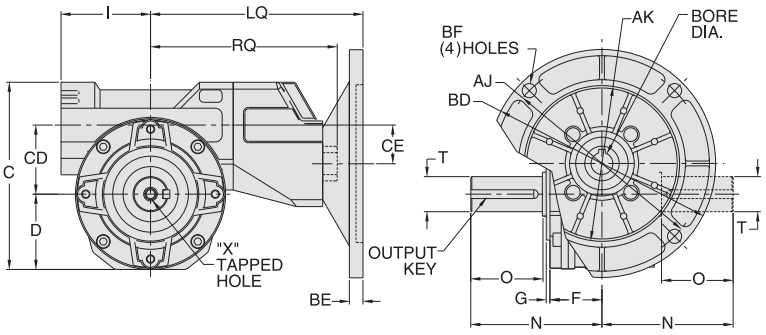


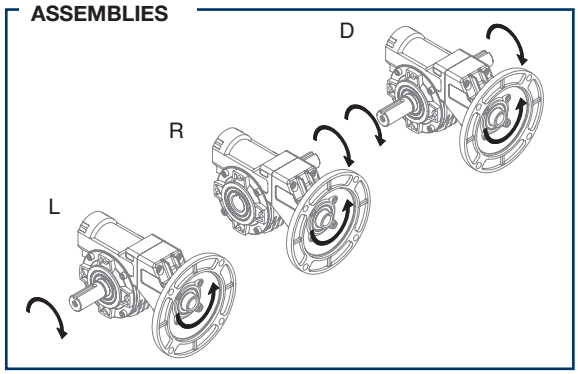
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXH DIMENSIONS - Inches

Series	C	CD	CE	D	F	G	I	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.65	1.65	2.56	1.42	0.750	0.625	3/16 X 1.12	3/16 X 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.83	1.83	3.19	1.42	1.000	0.625	3/16 X 1.12	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	8.54	2.00	4.72	1.65	1.125	0.750	3/16 X 1.50	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	9.21	2.65	5.31	1.65	1.500	0.750	3/16 X 1.50	3/8 X 2.00

Style DXMQ





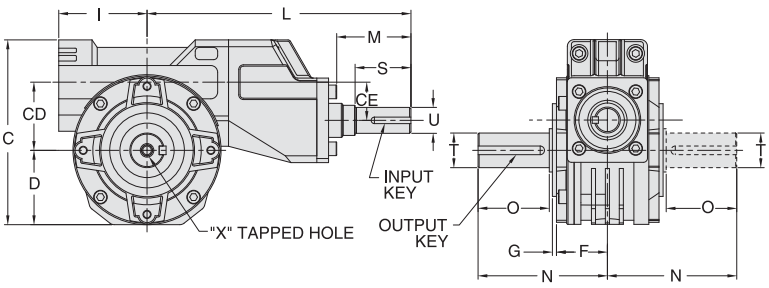
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

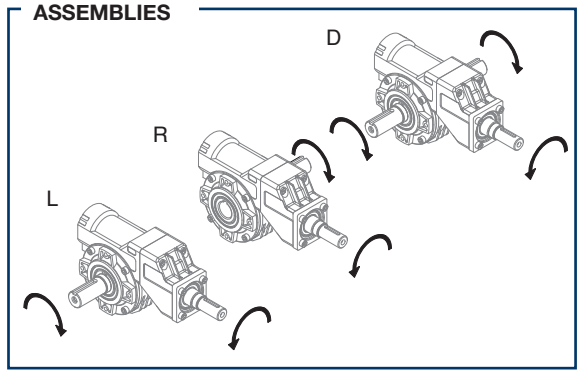
STYLE DXMQ DIMENSIONS - Inches

Series	C	CD	CE	D	F	G	I	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	X Tap Size	X Depth	OUTPUT KEY*
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.23	2.97	1.26	5.59	0.750	1/4-20 UNC	0.62	3/16 x 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.41	3.94	2.05	5.77	1.000	5/16-18 UNC	0.75	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	7.17	4.85	2.36	6.49	1.125	5/16-18 UNC	0.75	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	7.84	5.55	2.36	7.42	1.500	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DX





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DX DIMENSIONS - Inches

Series	C	CD	CE	D	F	G	I	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.65	1.65	2.97	1.26	1.42	0.750	0.625	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.83	1.83	3.94	2.05	1.42	1.000	0.625	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	8.54	2.00	4.85	2.36	1.65	1.125	0.750	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	9.21	2.65	5.55	2.36	1.65	1.500	0.750	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D63D	D71D	D80D	D90D	T H7	O	N	Output Keyway
	(standard for metric units)							
518	136 ❖	136	N/A	N/A	18	32	75	6
520	141 ❖	141	N/A	N/A	25	52	100	8
525	179 ❖	179 ❖	179 ❖	179	25	60	123	8
534	197 ■	197 ❖	197 ❖	197	35	60	141	10

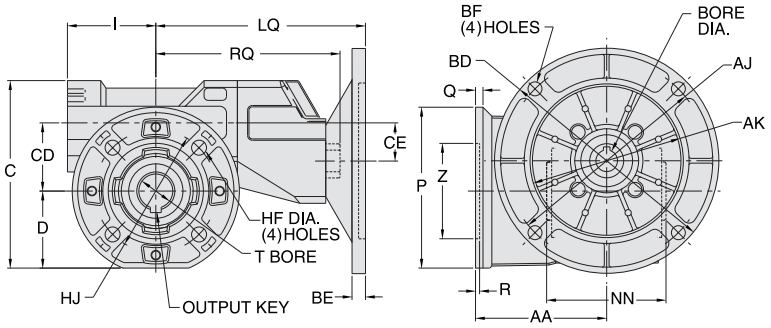
OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	AK	BD	BE	BF	B14❖ AJ	AK	BD	BE	BF❖	Input Bore Dia	Input Keyway▲
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

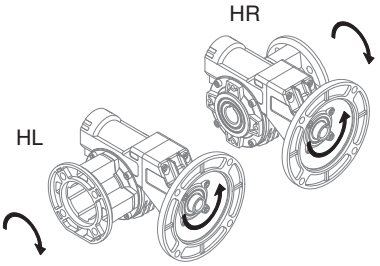
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)
◆ Dimensions are maximum (B5 and B14 options)
■ B14 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DXFHMQ



ASSEMBLIES



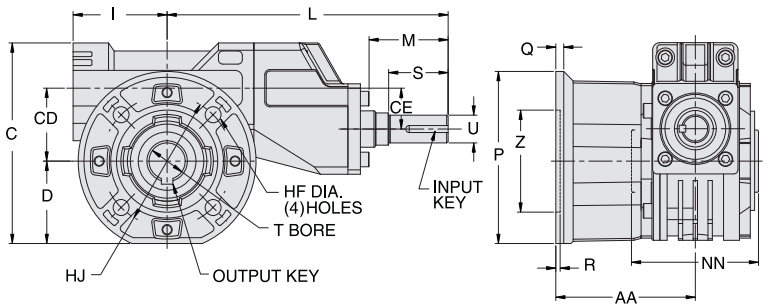
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFHMQ DIMENSIONS - Inches

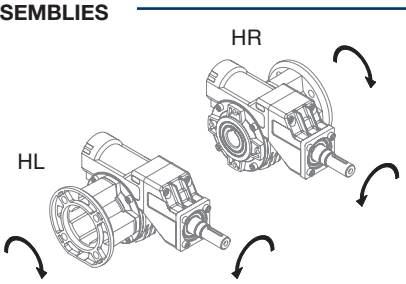
Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.56	4.33	0.35	0.354	5.59	0.750	2.362	3/16 X 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.19	4.84	0.47	0.354	5.77	1.000	2.756	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.72	6.89	0.51	0.276	6.49	1.125	4.528	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.31	8.07	0.63	0.197	7.42	1.500	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DXFH



ASSEMBLIES

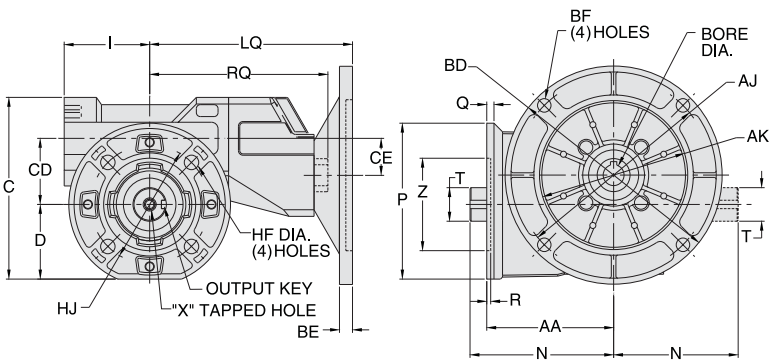


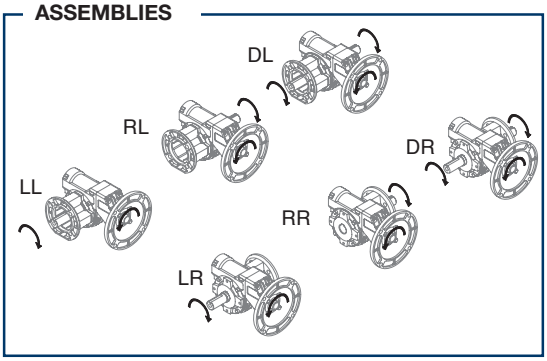
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFH DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.56	4.33	0.35	0.354	1.42	0.750	0.625	2.362	3/16 X 1.12	3/16 X 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.19	4.84	0.47	0.354	1.42	1.000	0.625	2.756	3/16 X 1.12	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.72	6.89	0.51	0.276	1.65	1.125	0.750	4.528	3/16 X 1.50	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.31	8.07	0.63	0.197	1.65	1.500	0.750	5.984	3/16 X 1.50	3/8 X 2.00

Style DXFMQ





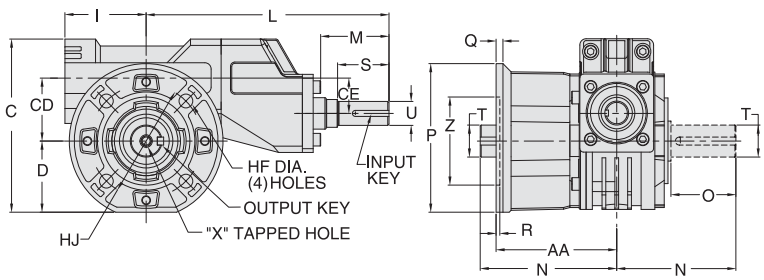
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

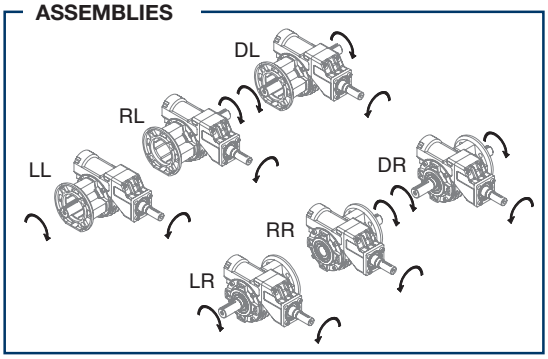
STYLE DXFMQ DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X Tap Size	X Depth	Z	OUTPUT KEY*
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.97	1.26	4.33	0.35	0.354	5.59	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.94	2.05	4.84	0.47	0.354	5.77	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.85	2.36	6.89	0.51	0.276	6.49	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.55	2.36	8.07	0.63	0.197	7.42	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DXF





REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXF DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.97	1.26	4.33	0.35	0.354	1.42	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.12	3/16 X 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.94	2.05	4.84	0.47	0.354	1.42	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.12	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.85	2.36	6.89	0.51	0.276	1.65	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 X 1.50	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.55	2.36	8.07	0.63	0.197	1.65	1.500	0.750	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D63D	LQ◆ IEC B5 & B14 Options D71D	LQ◆ IEC B5 & B14 Options D80D	LQ◆ IEC B5 & B14 Options D90D	T H7 (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
518	136 ❖	136	N/A	N/A	18	32	75	6
520	141 ❖	141	N/A	N/A	25	52	100	8
525	179 ❖	179 ❖	179 ❖	179	25	60	123	8
534	197 ■	197 ❖	197 ❖	197	35	60	141	10

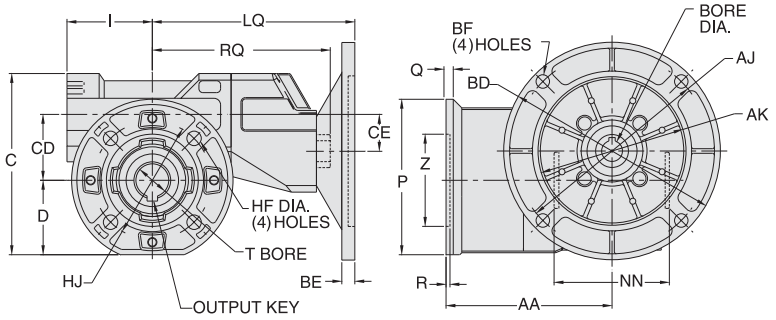
OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

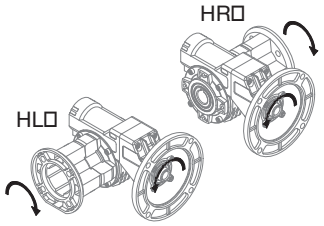
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)
◆ Dimensions are maximum (B5 and B14 options)
■ B14 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DXFLHMQ



ASSEMBLIES



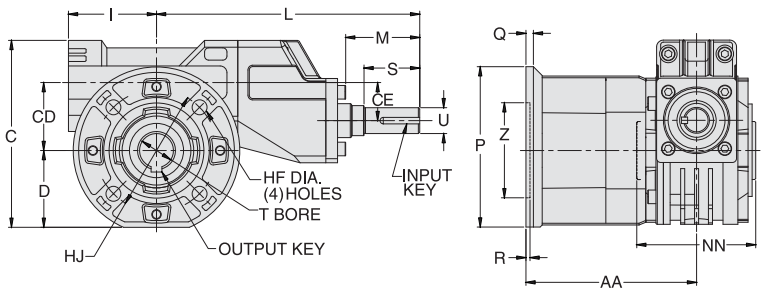
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFLHMQ DIMENSIONS - Inches

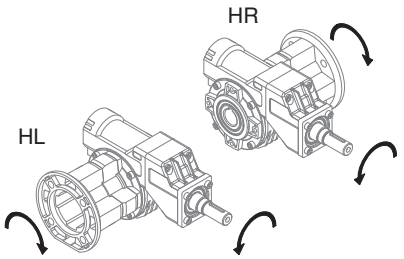
Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.56	4.33	0.35	0.354	5.59	0.750	2.362	3/16 X 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.19	4.84	0.47	0.354	5.77	1.000	2.756	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.72	6.89	0.51	0.276	6.49	1.125	4.528	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.31	8.07	0.63	0.197	7.42	1.500	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DXFLH



ASSEMBLIES

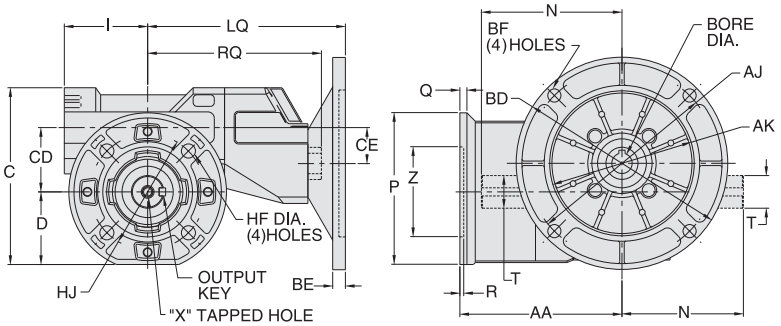


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

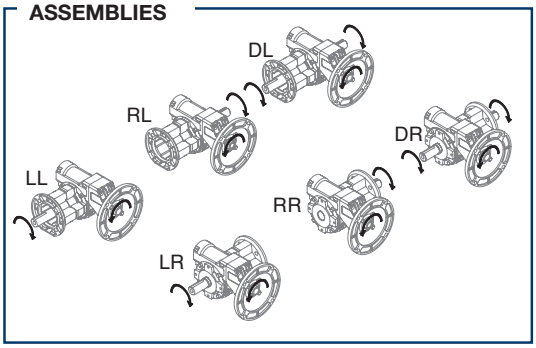
STYLE DXFLH DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.56	4.33	0.35	0.354	1.42	0.750	0.625	2.362	3/16 X 1.12	3/16 X 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.19	4.84	0.47	0.354	1.42	1.000	0.625	2.756	3/16 X 1.12	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.72	6.89	0.51	0.276	1.65	1.125	0.750	4.528	3/16 X 1.50	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.31	8.07	0.63	0.197	1.65	1.500	0.750	5.984	3/16 X 1.50	3/8 X 2.00

Style DXFLMQ



ASSEMBLIES



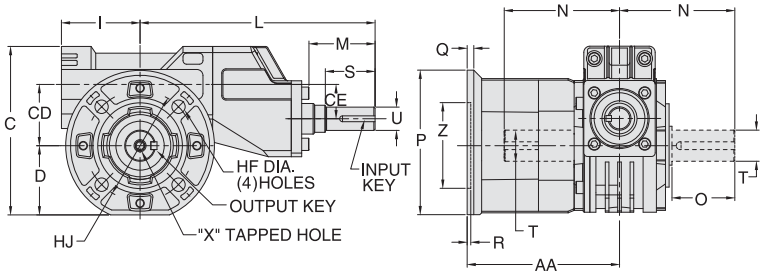
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFLMQ DIMENSIONS - Inches

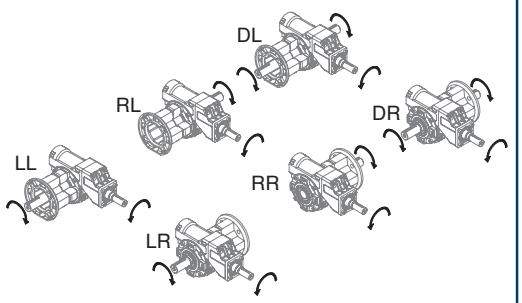
Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X Tap Size	X Depth	Z	OUTPUT KEY*
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.97	1.26	4.33	0.35	0.354	5.59	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.94	2.05	4.84	0.47	0.354	5.77	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.85	2.36	6.89	0.51	0.276	6.49	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.55	2.36	8.07	0.63	0.197	7.42	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DXFL



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFL DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X Tap Size	X Depth	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.97	1.26	4.33	0.35	0.354	1.42	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.12	3/16 X 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.94	2.05	4.84	0.47	0.354	1.42	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.12	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.85	2.36	6.89	0.51	0.276	1.65	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 X 1.50	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.55	2.36	8.07	0.63	0.197	1.65	1.500	0.750	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D63D	D71D	D80D	D90D	T H7	O	N	Output Keyway (standard for metric units)
518	136 ❖	136	N/A	N/A	18	32	75	6
520	141 ❖	141	N/A	N/A	25	52	100	8
525	179 ❖	179 ❖	179 ❖	179	25	60	123	8
534	197 ■	197 ❖	197 ❖	197	35	60	141	10

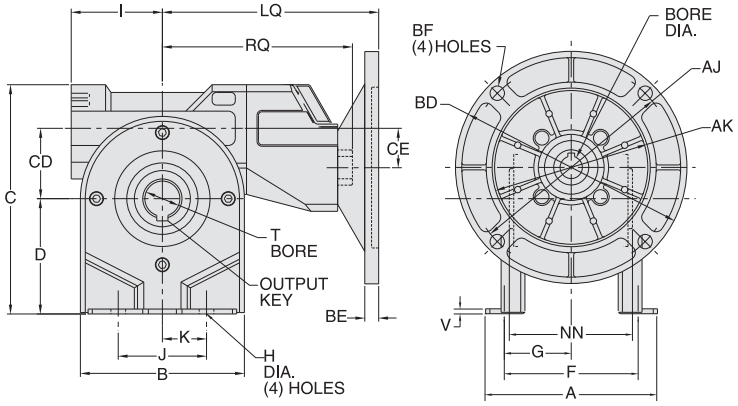
OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	AK	BD	BE	BF	B14❖ AJ	AK	BD	BE	BF❖	Input Bore Dia	Input Keyway▲
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

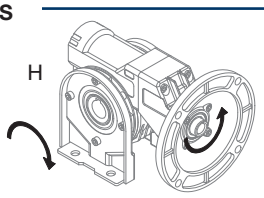
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)
◆ Dimensions are maximum (B5 and B14 options)
■ B14 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DXTHMQ



ASSEMBLIES



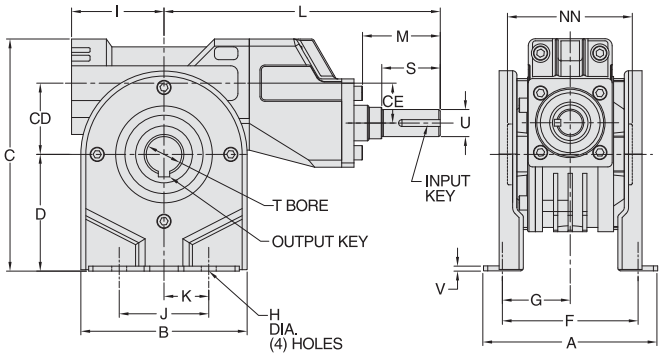
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXTHMQ DIMENSIONS - Inches

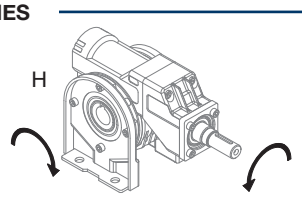
Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.56	5.59	0.750	0.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.19	5.77	1.000	0.14	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.72	6.49	1.125	0.16	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.31	7.42	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DXTH



ASSEMBLIES

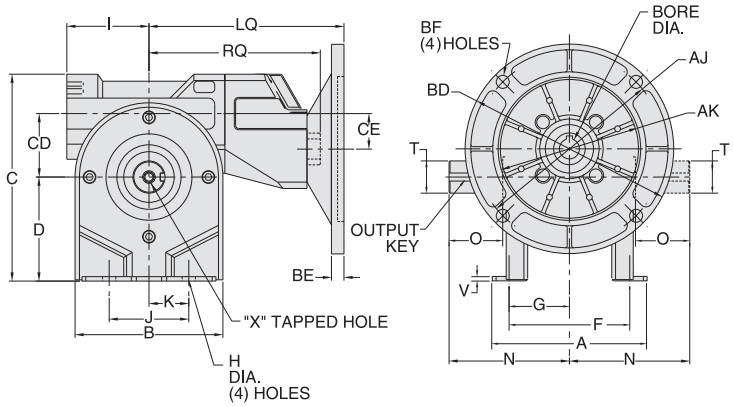


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

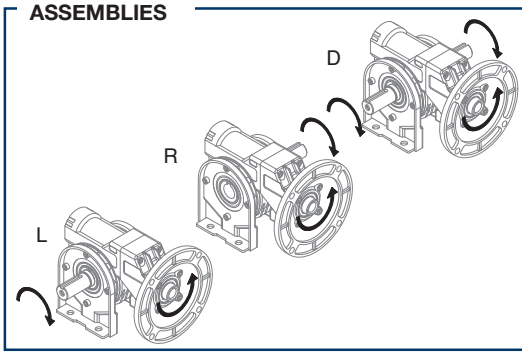
STYLE DXTH DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.56	1.42	0.750	0.625	0.12	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.19	1.42	1.000	0.625	0.14	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.72	1.65	1.125	0.750	0.16	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.31	1.65	1.500	0.750	0.20	3/16 X 1.50	3/8 X 2.00

Style DXTMQ



ASSEMBLIES



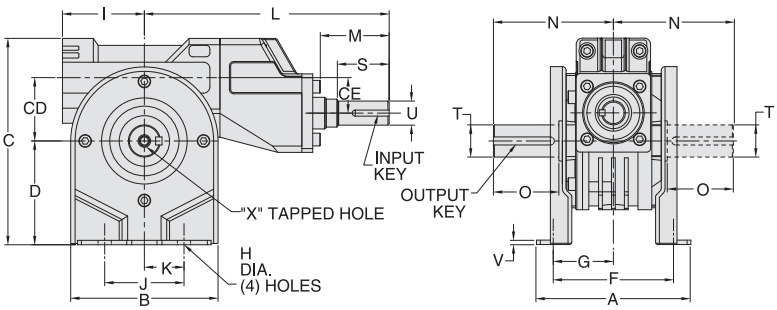
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXTMQ DIMENSIONS - Inches

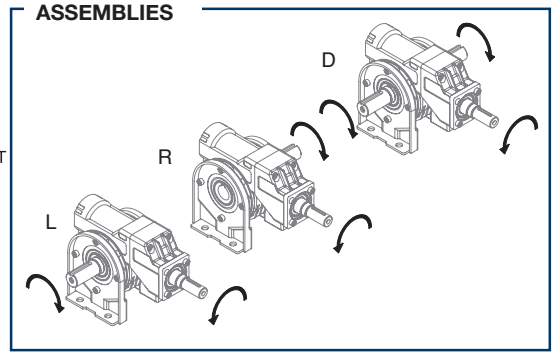
Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.97	1.26	5.59	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.94	2.05	5.77	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.85	2.36	6.49	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.55	2.36	7.42	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DXT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXT DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.97	1.26	1.42	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.94	2.05	1.42	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.85	2.36	1.65	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.55	2.36	1.65	1.500	0.750	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D63D	D71D	D80D	D90D	T H7	O	N	Output Keyway
					(standard for metric units)			
518	136 ❖	136	N/A	N/A	18	32	75	6
520	141 ❖	141	N/A	N/A	25	52	100	8
525	179 ❖	179 ❖	179 ❖	179	25	60	123	8
534	197 ■	197 ❖	197 ❖	197	35	60	141	10

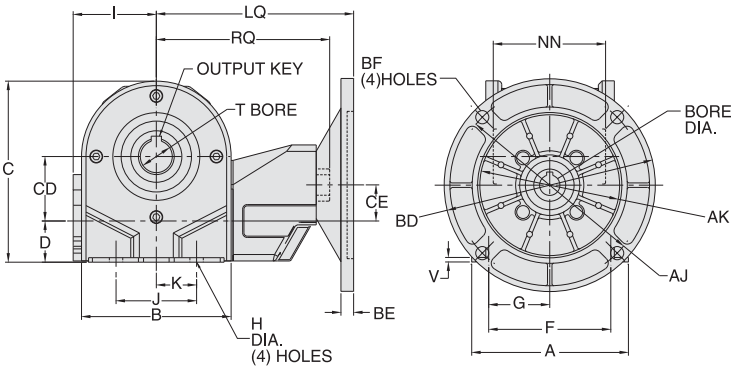
OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	AK	BD	BE	BF	B14❖ AJ	AK	BD	BE	BF❖	Input Bore Dia	Input Keyway▲
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

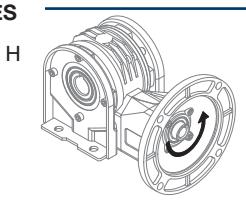
✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)
◆ Dimensions are maximum (B5 and B14 options)
■ B14 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DXUHMQ



ASSEMBLIES



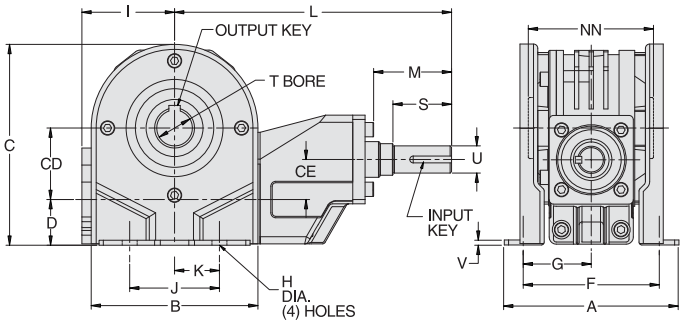
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXUHMQ DIMENSIONS - Inches

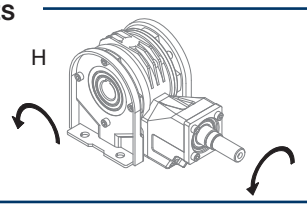
Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.56	5.59	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.19	5.77	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.72	6.49	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.31	7.42	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DXUH



ASSEMBLIES

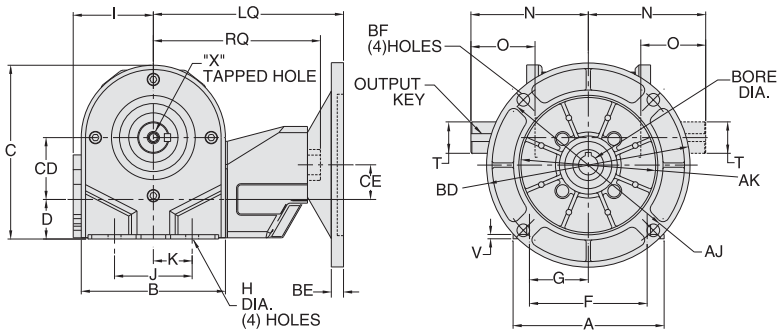


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

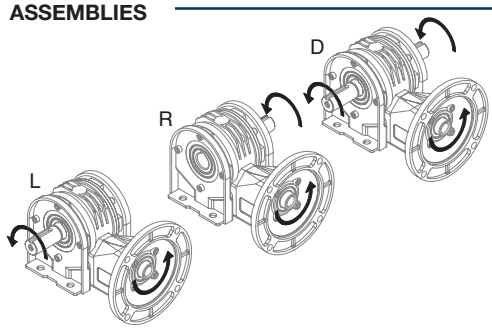
STYLE DXUH DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.56	1.42	0.750	0.625	0.12	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.19	1.42	1.000	0.625	0.14	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.72	1.65	1.125	0.750	0.16	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.31	1.65	1.500	0.750	0.20	3/16 X 1.50	3/8 X 2.00

Style DXUMQ



ASSEMBLIES



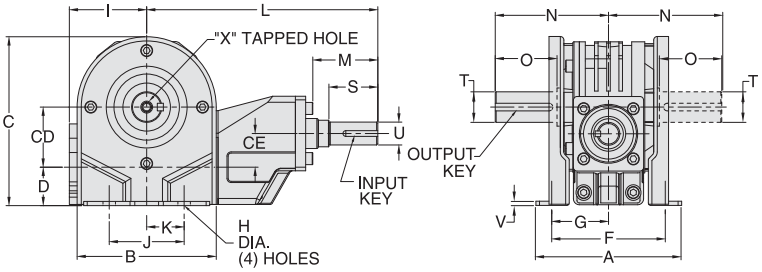
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXUMQ DIMENSIONS - Inches

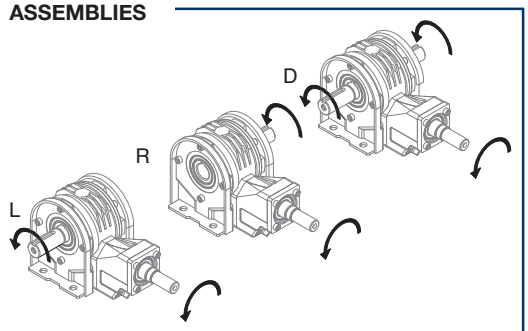
Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.97	1.26	5.59	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.94	2.05	5.77	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.85	2.36	6.49	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.55	2.36	7.42	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DXU



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXU DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.97	1.26	1.42	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.94	2.05	1.42	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.85	2.36	1.65	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.55	2.36	1.65	1.500	0.750	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ♦ IEC B5 & B14 Options D63D	D71D	D80D	D90D	T H7	O	N	Output Keyway
					(standard for metric units)			
518	136 ❖	136	N/A	N/A	18	32	75	6
520	141 ❖	141	N/A	N/A	25	52	100	8
525	179 ❖	179 ❖	179 ❖	179	25	60	123	8
534	197 ■	197 ❖	197 ❖	197	35	60	141	10

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	AK	BD	BE	BF	B14❖ AJ	AK	BD	BE	BF❖	Input Bore Dia	Input Keyway▲
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

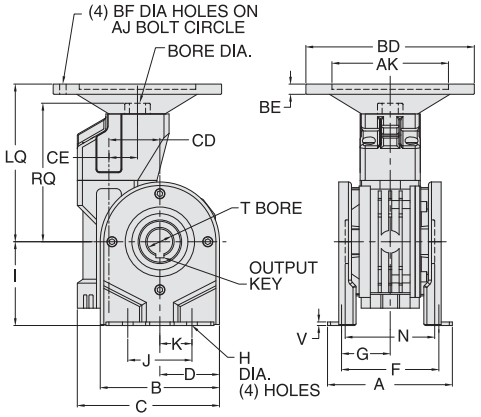
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)

♦ Dimensions are maximum (B5 and B14 options)

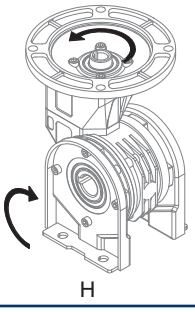
■ B14 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Dimensions

Style DXJHMQ



ASSEMBLIES



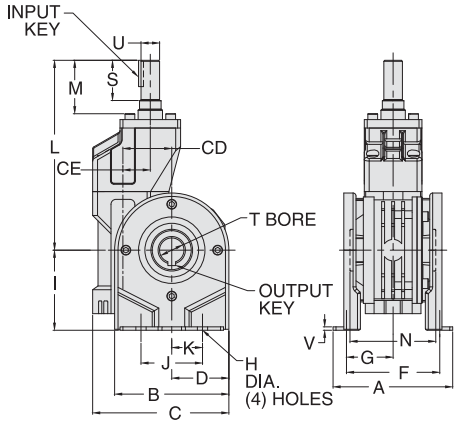
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJHMQ DIMENSIONS - Inches

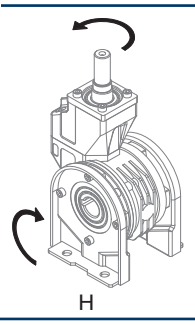
Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.23	2.56	5.59	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.41	3.19	5.77	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	7.17	4.72	6.49	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	7.84	5.31	7.42	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style DXJH



ASSEMBLIES

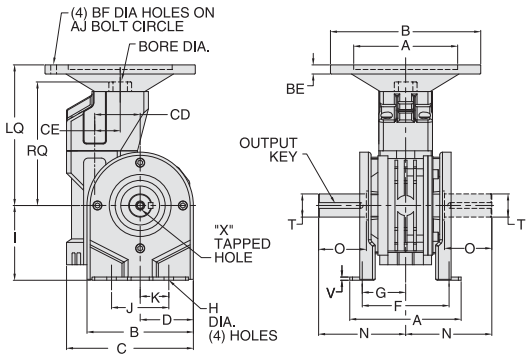


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

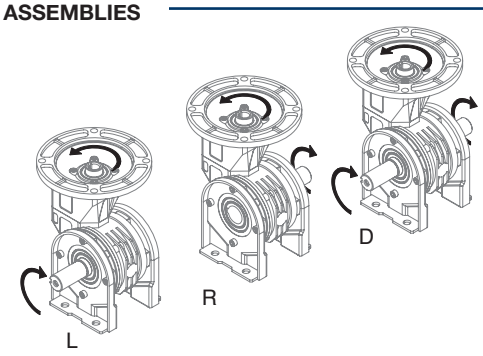
STYLE DXJH DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.65	1.65	2.56	1.42	0.750	0.625	0.12	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.83	1.83	3.19	1.42	1.000	0.625	0.14	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	8.54	2.00	4.72	1.65	1.125	0.750	0.16	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	9.21	2.65	5.31	1.65	1.500	0.750	0.20	3/16 X 1.50	3/8 X 2.00

Style DXJMQ



ASSEMBLIES



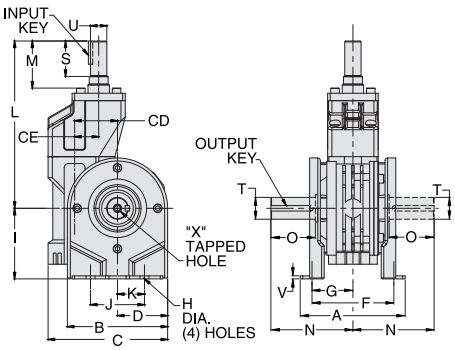
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJMQ DIMENSIONS - Inches

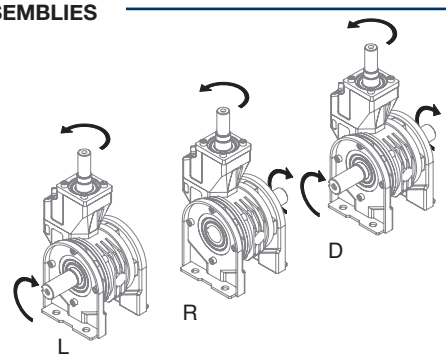
Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	V	X Tap Size	X Depth	OUTPUT KEY*
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.23	2.97	1.26	5.59	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.41	3.94	2.05	5.77	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	7.17	4.85	2.36	6.49	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	7.84	5.55	2.36	7.42	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below.
Contact Factory for availability of metric options.

Style DXJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X Tap Size	X Depth	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.65	1.65	2.97	1.26	1.42	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.83	1.83	3.94	2.05	1.42	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	8.54	2.00	4.85	2.36	1.65	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	9.21	2.65	5.55	2.36	1.65	1.500	0.750	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC Frame	B5 AJ	B5 AK	B5 BD	B5 BE	B5 BF	B14❖ AJ	B14❖ AK	B14❖ BD	B14❖ BE	B14❖ BF❖	Input Bore Dia	Input Keyway▲
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

OPTIONAL METRIC DIMENSIONS✪ - MM

Series	LQ◆ IEC B5 & B14 Options D63D	D71D	D80D	D90D	T H7 (standard for metric units)	O (standard for metric units)	N (standard for metric units)	Output Keyway (standard for metric units)
518	136 ❖	136	N/A	N/A	18	32	75	6
520	141 ❖	141	N/A	N/A	25	52	100	8
525	179 ❖	179 ❖	179 ❖	179	25	60	123	8
534	197 ■	197 ❖	197 ❖	197	35	60	141	10

✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)
◆ Dimensions are maximum (B5 and B14 options)
■ B14 Option not available

Bravo™ ALUMINUM GEAR REDUCERS Modified Stock Gear Reducers

Quick shipment is standard on all Grove Gear BRAVO® stock and modified stock gear reducers. A wide range of mounting styles are offered and are listed on the accompanying chart. Start with one of the stock reducer styles shown—add an accessory—and create a new mounting style.

STYLE T, U OR J HORIZONTAL BASE



MOTORIZED C FLANGE QUILL INPUT



(Style BMQ Shown)

NON-FLANGED



(Style B Shown)

Type	Stock Reducer Style	T Base Worm Over	U Base Worm Under	J Base Vertical Input
Single Reduction Solid Shaft	**BMQ**	**TMQ**	**UMQ***	**JMQ**
Single Reduction Hollow Shaft	**HMQ**	**THMQ**	**UHMQ***	**JHMQ**
Double Reduction Worm-Worm Solid Shaft	**DMQ**	**DTMQ**	**DUMQ***	**DJMQ**
Double Reduction Worm-Worm Hollow Shaft	**DHMQ**	**DTHMQ**	**DUHMQ***	**DJHMQ**
Double Reduction Helical-Worm Solid Shaft	**DXMQ**	**DXTMQ**	**DXUMQ***	**DXJMQ**
Double Reduction Helical-Worm Hollow Shaft	**DXHMQ**	**DXTHMQ**	**DXUHMQ***	**DXJHMQ**
Single Reduction Solid Shaft	**B**	**T**	**U***	**J**
Single Reduction Hollow Shaft	**H**	**TH**	**UH***	**JH**
Double Reduction Worm-Worm Solid Shaft	**D**	**DT**	**DU***	**DJ**
Double Reduction Worm-Worm Hollow Shaft	**DH**	**DTH**	**DUH***	**DJH**
Double Reduction Helical-Worm Solid Shaft	**DX**	**DXT**	**DXU***	**DXJ**
Double Reduction Helical-Worm Hollow Shaft	**DXH**	**DXTH**	**DXUH***	**DXJH**

* Not a recommended mounting style. Consult Factory for selection assistance.

STYLE F OUTPUT FLANGE	STYLE FL OUTPUT FLANGE	STYLE R REACTION ARM
		
F Short Output Flange	FL Long Output Flange	R Reaction Arm Shaft
FMQ	**FLMQ**	**RMQ**
FHMQ	**FLHMQ**	**RHMQ**
DFMQ	**DFLMQ**	**DRMQ**
DFHMQ	**DFLHMQ**	**DRHMQ**
DXFMQ	**DXFLMQ**	**DXRMQ**
DXFHMQ	**DXFLHMQ**	**DXRHMQ**
F	**FL**	**R**
FH	**FLH**	**RH**
DF	**DFL**	**DR**
DFH	**DFLH**	**DRH**
DXF	**DXFL**	**DXR**
DXFH	**DXFLH**	**DXRH**

More Grove Gear BRAVO® accessories, options and assembly services are available.
See page 348.

Ordering Information

Style T, U or J - Horizontal Base

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	**G175231**	2
518	**G175205**	2
520	**G175206**	2
525	**G175207**	3
534	**G175208**	5

Style F - Short Output Flange

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	**G175232**	1
518	**G175209**	1
520	**G175210**	1
525	**G175211**	2
534	**G175212**	3

Style FL - Long Output Flange

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	**G175233**	1
518	**G175213**	2
520	**G175214**	2
525	**G175215**	3
534	**G175216**	5

Style R - Reaction Arm

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	**G175234**	1
518	**G175201**	1
520	**G175202**	1
525	**G175203**	2
534	**G175204**	3

Refer to page 348 for reaction arm dimensions.

Bravo™ Gear Reducer Accessories

ALUMINUM GEAR REDUCERS

Solid Output Shaft Accessory Kits





SINGLE EXTENSION INCH DIMENSIONS*

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	CONTACT Factory	
518	G175236	2
520	G175237	3
525	G175521	3
534	G175238	6

SINGLE EXTENSION METRIC DIMENSIONS†

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	G175240	2
518	G175241	2
520	G175242	3
525	G175243	3
534	G175244	6

* Shaft dimensions are in inches. These shafts will only fit into reducers with inch dimensioned output bores.

† Shaft dimensions are in millimeters. These shafts will only fit into reducers with metric dimensioned output bores.

DOUBLE EXTENSION INCH DIMENSIONS*

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	CONTACT Factory	
518	G175221	3
520	G175222	4
525	G175223	4
534	G175224	7

* Shaft dimensions are in inches. These shafts will only fit into reducers with inch dimensioned output bores.

DOUBLE EXTENSION METRIC DIMENSIONS†

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	G175245	3
518	G175246	3
520	G175247	4
525	G175248	4
534	G175249	7

† Shaft dimensions are in millimeters. These shafts will only fit into reducers with metric dimensioned output bores.

Motorized C-Face Quill Input Bushing Kits

NEMA Bushing Kits ◊ - Inches

Frame Conversion	Input Quill Bore Size (Inch)	Accessory Kit Only Catalog No.	Weight (lbs)
180TC to 140TC	1-1/8 to 7/8	G175230	0.5
180TC to 56C	1-1/8 to 5/8	G175229	0.4
140TC to 56C	7/8 to 5/8	G175228	0.4

◊ Bushing reduces the bore size of input quill to accommodate a smaller motor shaft diameter. The application may also require a different input flange size. Bushings are not intended to be used in output bores.

IEC Bushing Kits ◊ - MM

Frame Conversion	Input Quill Bore Size (mm)	Accessory Kit Only Catalog No.	Weight (lbs)
D63 to D56	11 to 9	G175259	0.4
D71 to D63	14 to 11	G175251	0.4
D71 to D56	14 to 9	G175252	0.4
D80 to D71	19 to 14	G175253	0.4
D80 to D63	19 to 11	G175254	0.4
D90 to D80	24 to 19	G175255	0.4
D90 to D71	24 to 14	G175256	0.4
DF100/112 to D90	28 to 24	G175257	0.5
DF100/112 to D80	28 to 19	G175258	0.5

◊ Bushing reduces the bore size of input quill to accommodate a smaller motor shaft diameter. The application may also require a different input flange size. Bushings are not intended to be used in output bores.

Double Reduction Adapter Kits

Series	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs)
518	G175225	518	0.625	1
520	G175225	518	0.625	1
525	G175226	518	0.875	1
534	G175227	518	1.125	1.5

Protection Cap Accessory Kits Ω

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	G175250	0.3
518	G175217	0.3
520	G175218	0.3
525	G175219	0.4
534	G175220	0.6

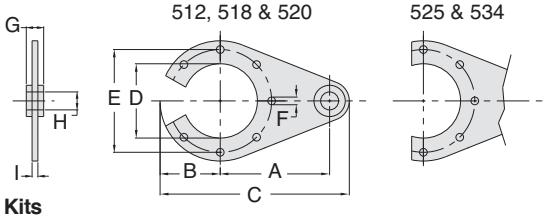


Ω This protective cap covers the unused output bore for single extension assemblies. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

Style R Reaction Arm Dimensions







Style R - Reaction Arm Kits

Series	A	B	C	D	E	F	G	H	I
512	3.94	1.57	6.22	1.97	2.56	0.28	0.16	0.31	0.16
518	3.94	1.77	6.22	1.97	2.56	0.28	0.16	0.31	0.16
520	3.94	2.17	6.81	2.68	3.70	0.28	0.16	0.31	0.16
525	5.91	2.17	9.25	2.95	3.54	0.35	0.79	0.39	0.24
534	7.87	3.15	12.60	4.33	5.12	0.43	0.98	0.79	0.24

Refer to page 347 for accessory kits available.

HELICAL - WORM REDUCTION • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size 518	520	525	534
Solid Output Shaft Models				
DXMQ	9	11	19	47
DX	8	11	19	47
DXTMQ, DXUMQ	11	13	22	52
DXT, DXU	10	13	22	52
DXJMQ	11	13	22	52
DXJ	10	13	22	52
DXFMQ	10	12	21	50
DXF	9	12	21	50
DXFLMQ	11	13	22	52
DXFL	10	13	22	52
DRMQ	10	12	21	50
DXR	9	12	21	50
Hollow Output Shaft Models				
DXHMQ	8	9	17	42
DXH	7	9	17	42
DXTHMQ, DXUHMQ	10	11	20	47
DXTH, DXUH	9	11	20	47
DXJHMQ	10	11	20	47
DXJH	9	11	20	47
DXFHMQ	9	10	19	45
DXFH	8	10	19	45
DXFLHMQ	10	11	20	47
DXFLH	9	11	20	47
DXRHMQ	9	10	19	45
DXRH	8	10	19	45

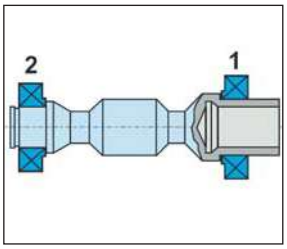
Δ Weight includes grease/ oil.

REDUCER ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size 518	520	525	534
T/U - Base	2	2	3	5
J - Base	2	2	3	5
F - Flange	1	1	2	3
FL - Flange	2	2	3	5
R - Reaction Arm	1	1	2	3

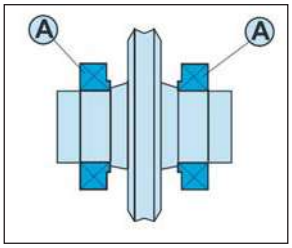
Bravo™ ALUMINUM GEAR REDUCERS Additional Capabilities

Grove Gear Bravo® reducers are available with many special options on request.
Select from the common options below or contact Factory with specific application requests.
Contact Factory for availability of reducers with special features.



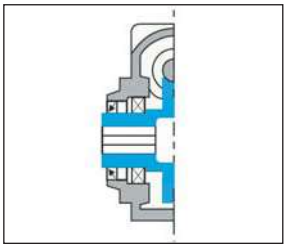
Tapered roller bearings on input worm shaft

REDUCER SIZE	1	2
512	--	--
518	--	--
520	32005X	30204
525	32007X	30205
534	32009X	30206



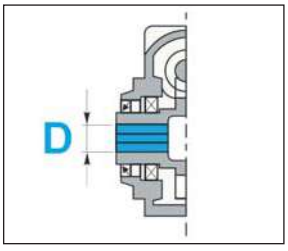
Tapered roller bearings on output shaft

REDUCER SIZE	A
512	--
518	--
520	32008X
525	32009X
534	32011X



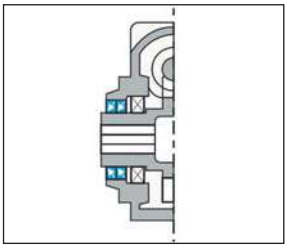
Stainless steel (AISI 303) or bronze output bore

REDUCER SIZE	MAX DIAMETER INCHES (MM)
512	0.550 (14)
518	0.875 (22.2)
520	1.1875 (30.16)
525	1.3125 (33.33)
534	1.625 (41.27)



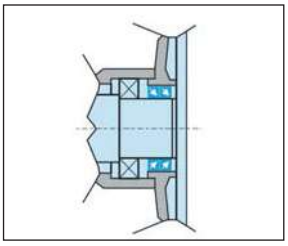
Non-standard output bore

REDUCER SIZE	MAX DIAMETER INCHES (MM)
512	0.550 (14)
518	0.875 (22.2)
520	1.1875 (30.16)
525	1.3125 (33.33)
534	1.625 (41.27)



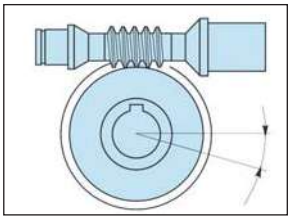
Double output seals

REDUCER SIZE(MM)	SEAL SIZE
512	--
518	--
520	--
525	45/62/7
534	55/80/8



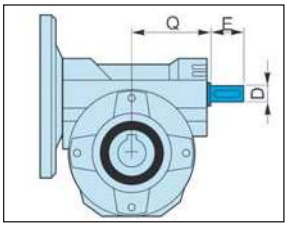
Double input seals

REDUCER SIZE(MM)	SEAL SIZE
512	20/30/7
518	25/40/7
520	25/40/7 or 30/40/7
525	35/47/7
534	45/62/7



Minimum backlash gearing

ALL SIZES AVAILABLE. CONTACT FACTORY WITH REQUIREMENTS.



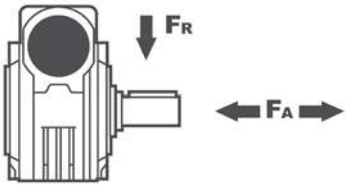
Double input worm shaft extension

ALL SIZES AVAILABLE. CONTACT FACTORY WITH REQUIREMENTS.

SPECIAL OPTIONS NOT PICTURED INCLUDE:

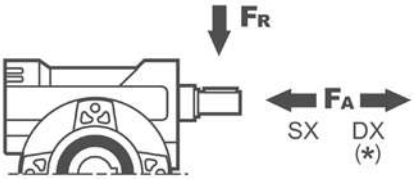
- Epoxy paint
- Custom mounting accessories
- Custom ratios
- NEMA input flange/ metric dimensioned output shaft combinations
- IEC input flange/ inch dimensioned output shaft combinations
- Special solid output shaft extensions

Maximum Overhung Load‡ and Thrust Load Ratings (lbs.)



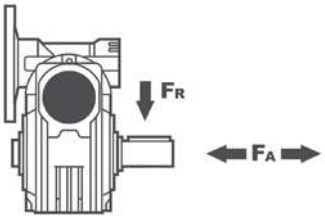
Single Reduction Output Shaft Ratings‡

Output RPM	Series									
	512		518		520		525		534	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
200	27	135	40	200	54	270	81	405	112	562
150	31	157	45	225	63	315	90	450	130	652
100	36	180	50	248	68	338	104	518	135	675
75	40	202	54	270	76	382	112	562	157	787
50	45	225	58	315	86	428	135	675	180	900
25	56	281	68	405	108	562	158	855	225	1125
15	63	315	90	450	126	629	180	899	261	1304



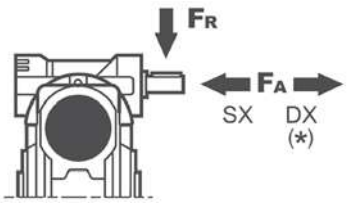
Single Reduction Input Shaft Ratings‡

Input RPM	Series									
	512		518		520		525		534	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
1750	4	21	9	43	16	79	19	93	33	167



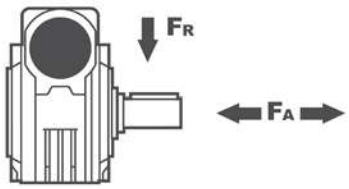
Double Reduction Worm - Worm Output Shaft Ratings‡

Output RPM	Series							
	518		520		525		534	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
25	68	405	108	562	158	855	225	1125
15	90	450	126	629	180	899	261	1304



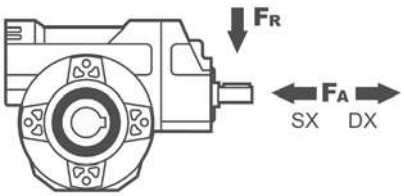
Double Reduction Worm - Worm Input Shaft Ratings‡

Input RPM	Series							
	518		520		525		534	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
1750	9	43	9	43	9	43	9	43



Double Reduction Helical - Worm Output Shaft Ratings‡

Output RPM	Series							
	518		520		525		534	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
75	54	270	76	382	112	562	157	787
50	58	315	86	428	135	675	180	900
25	68	405	108	562	158	855	225	1125
15	90	450	126	629	180	899	261	1304

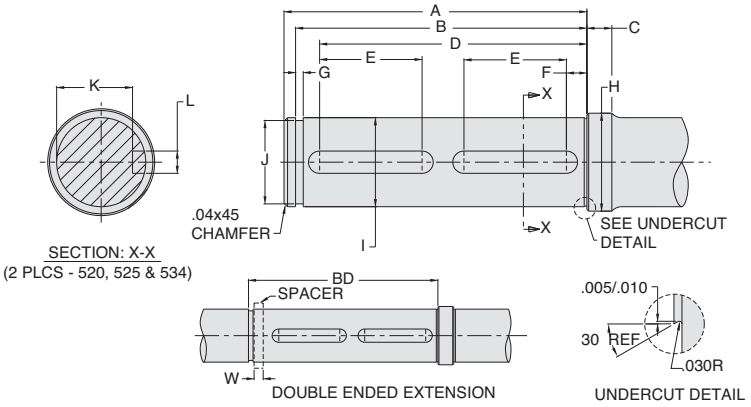


Double Reduction Helical - Worm Input Shaft Ratings‡

Input RPM	Series							
	518		520		525		534	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
1750	9	46	9	46	13	63	22	112

F_R = Radial load rating = overhung load (lbs)
F_A = Axial load rating = thrust rating (lbs)
* Axial loads in the DX direction should be avoided.
‡ Overhung load is located at centerline of shaft extension for solid input/ output shaft style

Bravo™ ALUMINUM GEAR REDUCERS — Gear Reducer Drive Shaft Recommendations



There are several possible methods to retain a drive shaft into the hollow bore of a gear reducer. A few common options are listed below:

- Retain drive shaft with a retaining ring (illustrated above)
- Retain drive shaft with a locknut
- Retain drive shaft with a thrust plate and fastener
- Retain drive shaft with a collar and setscrew
- Retain drive shaft with a recessed plate and fastener

DRIVEN SHAFT RECOMMENDATIONS ● HOLLOW BORE IN INCHES

Dimensions - Inches

Series	A	B +/- 0.0025	C	D	F	Retaining Ring Groove G +0.005/ - 0.000	Retaining Ring Groove J +/- 0.002	Retaining Ring Mfg. No. (Waldes Truarc)	H	I +/- 0.0005	Keyway E	Keyway K +/- 0.0025	Keyway L +/- 0.001	Double Extension Details BD +/ 0.0025	Double Extension Details W * +/- 0.001
518	2.80	2.6445	0.43	N/A	0.18	0.086	0.703	5160-75	0.88	0.749	1.15	0.6365	0.1875	3.0755	0.430
520	3.50	3.2725	0.30	3.00	0.23	0.086	0.937	5160-98	1.12	0.999	1.15	0.8565	0.250	3.5735	0.300
525	5.00	4.8225	0.13	4.25	0.22	0.103	1.058	5160-112	1.25	1.124	1.53	0.9785	0.250	4.9535	0.130
534	5.65	5.4315	0.53	5.00	0.28	0.120	1.405	5160-150	1.75	1.499	1.65	1.2815	0.375	5.9625	0.530

* Dimension "W" refers to the width of spacer used.

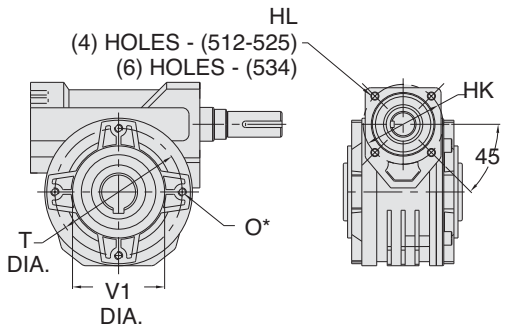
DRIVEN SHAFT RECOMMENDATIONS ● HOLLOW BORE IN MILLIMETERS

Dimensions - MM

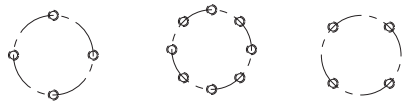
Series	A	B +/- 0.064	C	D	F	Retaining Ring Groove G +0.12/ - 0.00	Retaining Ring Groove J +/- 0.05	Retaining Ring Mfg. No. (Waldes Truarc)	H	I - 0.005/ -0.020	Keyway E	Keyway K +/- 0.05	Keyway L + 0.015/-0.000	Double Extension Details BD +/ 0.064	Double Extension Details W * +/- 0.02
512	60.5	56.223	10	N/A	5	1.1	13	5100-55	19.1	14	20.2	10.8	5	66.383	10.16
518	71.1	67.170	11	N/A	5	1.4	16	5160-66	22.4	18	30.2	14.5	6	78.118	10.92
520	88.9	83.120	8	76.2	5	2.3	23.5	5160-98	28.4	25	30.2	21.0	8	90.767	7.62
525	127.0	122.492	3	108.0	8	2.6	26	5160-106	31.8	28	40.2	24.0	8	125.819	3.30
534	143.5	137.960	14	127.0	9	2.6	32.8	5160-137	44.5	35	50.2	30.0	10	151.448	13.46

* Dimension "W" refers to the width of spacer used.

BOLT CIRCLE DIMENSIONS - mm

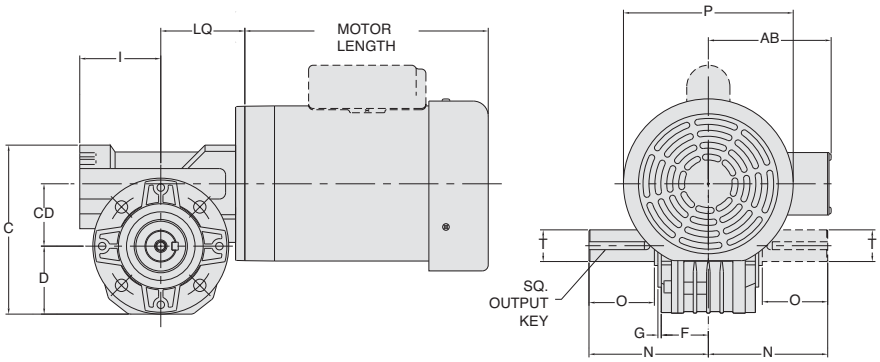


O*			T DIA.	V1 DIA. (h8)	HL	HK DIA.
512	4 - M6 x 9	VIEW - A	65	50	M5 x 11	44
518	4 - M6 x 14	VIEW - A	65	50	M6 x 15	59
520	4 - M6 x 9	VIEW - A	94	68	M6 x 16	59
525	8 - M8 x 17	VIEW - B	90	75	M8 x 17	80
534	4 - M10 x 8	VIEW - C	130	110	M6 x 16	90



VIEW - A VIEW - B VIEW - C

GEAR+MOTOR™ DIMENSIONS



BMQ STYLE DIMENSIONS - Inches (MM)

Series	C	CD	D	F	G	I	N	O	T +0.000 -0.001	OUTPUT KEY
512	3.54 (89.9)	1.18 (30)	1.54 (39)	1.18 (30)	0.08 (2)	1.81(46)	2.48 (63.0)	1.01(25.7)	(14)*	(5)
518	4.76 (121)	1.77 (45)	1.93 (49)	1.38 (35)	0.08 (2)	2.16 (55)	2.97 (75.4)	1.26 (32.0)	0.750	3/16 x 1.00
520	5.33 (135)	1.97 (50)	2.15 (54.5)	1.50 (38)	0.12 (3)	2.56 (65)	3.94 (100.1)	2.05 (52.1)	1.000	1/4 X 1.62
525	6.69 (170)	2.48 (63)	2.76 (70)	1.77 (45)	0.19 (5)	3.11 (79)	4.85 (123.2)	2.36 (59.9)	1.125	1/4 X 2.00
534	9.15 (232)	3.35 (85)	3.72 (94.5)	2.52 (64)	0.14 (3.5)	3.86 (98)	5.55 (141.0)	2.36 (59.9)	1.500	3/8 X 2.00

* Tolerance is -0.005/ -0.0020.

NEMA MOTOR MOUNTING DIMENSIONS - Inches

Series	AB		LQ		P	
	56C/140TC	180TC	56C/140TC	180TC	56C/140TC	180TC
518	5.31	N/A	3.33	N/A	7.16	9.22
520	5.31	N/A	3.51	N/A	7.16	9.22
525	5.31	N/A	4.08	N/A	7.16	9.22
534	5.31	6.44	4.83	5.35	7.16	9.22

Refer to page 663 for NEMA motor length dimensions.

IEC MOTOR MOUNTING DIMENSIONS -Inches

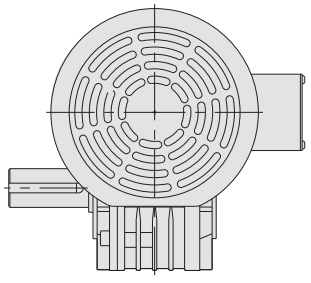
Contact Factory for outline drawings of specific IEC BRAVO® Gear+Motor™ combinations.

Refer to page 423 for IEC motor dimensions.

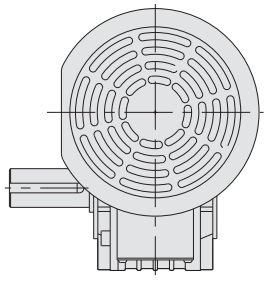
MOTOR MOUNTING POSITIONS

Conduit box position viewed from input side of reducer.

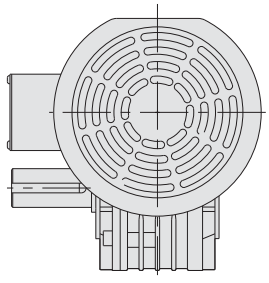
STANDARD MOUNTING POSITION



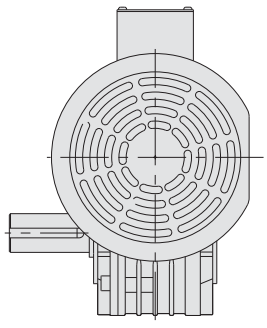
1 Conduit box horizontal on right side.



2 Conduit box vertical on bottom side.

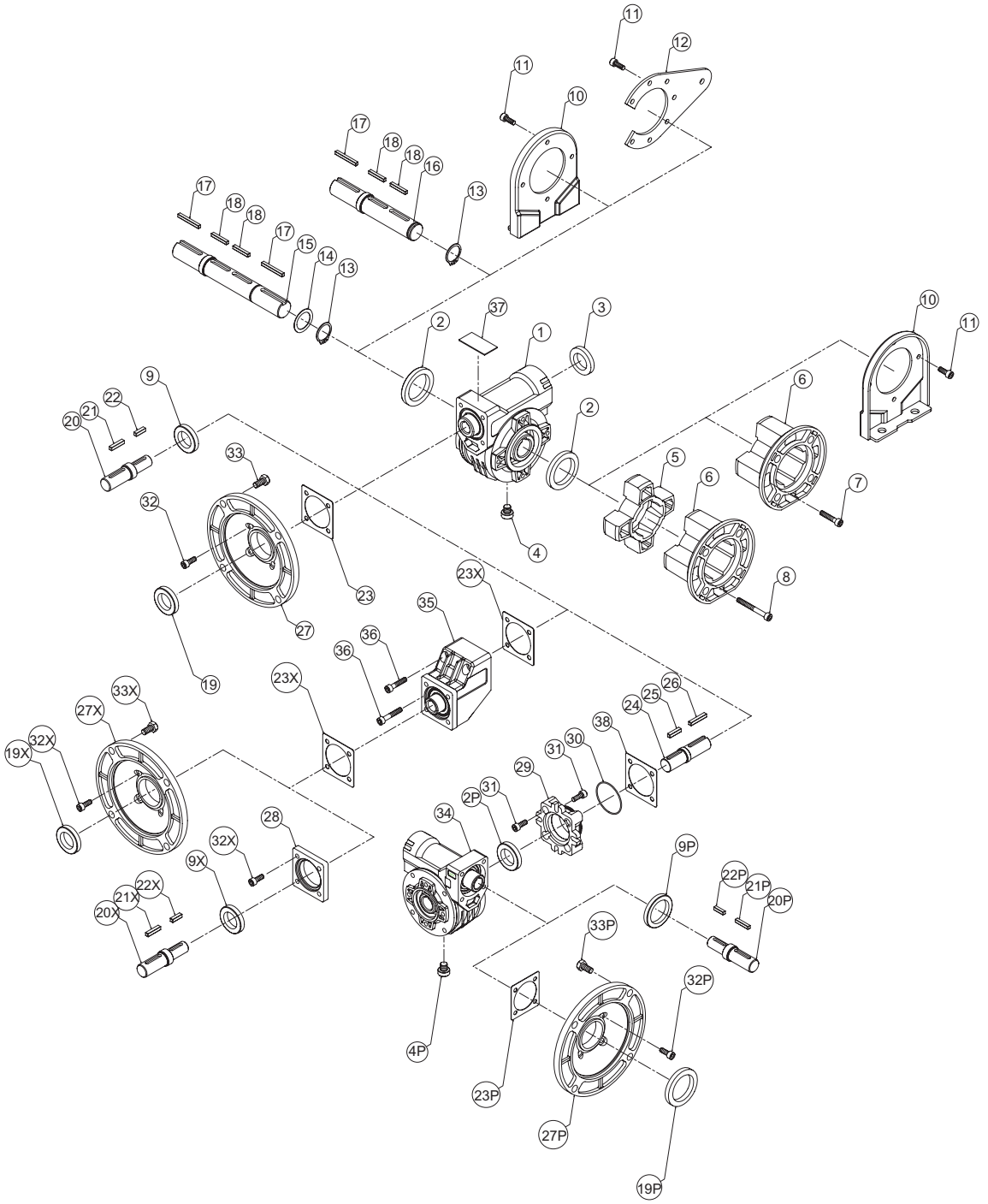


3 Conduit box horizontal on left side.



4 Conduit box vertical on top side.

BRAVO® Exploded View



ITEM #	DESCRIPTION
1	GEAR MODULE
2,2P	OIL SEAL - OUTPUT
3	RCA SEAL PLUG
4,4P	DRAIN PLUG
5	FL-SPACER
6	F-FLANGE
7	SOCKET HEAD CAPSCREW
8	SOCKET HEAD CAPSCREW
9,9P,9X	OIL SEAL - NON-MOTORIZED INPUT
10	HORIZONTAL BASE
11	SOCKET HEAD CAPSCREW
12	REACTION ARM
13	RETAINING RING
14	SPACER
15	OUTPUT SHAFT - DOUBLE EXTENSION
16	OUTPUT SHAFT - SINGLE EXTENSION
17	KEY-OUTPUT (EXTENSION)
18	KEY-OUTPUT (INTERNAL)
19,19P,19X	OIL SEAL - MOTORIZED INPUT
20,20P,20X	INPUT SHAFT - NON-MOTORIZED INPUT
21,21P,21X	KEY - INPUT (EXTENSION)
22,22P,22X	KEY -INPUT (INTERNAL)
23,23P,23X	GASKET
24	CONNECTOR SHAFT
25	KEY
26	KEY
27,27P,27X	FLANGE - MOTORIZED INPUT
28	INPUT COVER
29	CONNECTOR FLANGE - DOUBLE REDUCTION
30	O-RING
31	SOCKET HEAD CAPSCREW
32,32P,32X	SOCKET HEAD CAPSCREW
33,33P,33X	HEX HEAD CAPSCREW
34	PRIMARY GEAR MODULE - DOUBLE REDUCTION
35	HELICAL STEP MODULE - DOUBLE REDUCTION
36	SOCKET HEAD CAPSCREW
37	NAMEPLATE
38	GASKET

General Operation

1. Run the motor which drives the reducer and check the direction of reducer output rotation. Consult motor nameplate for instructions to reverse the direction of rotation.
2. Attaching the load: On direct coupled installations, check shaft and coupling alignment between speed reducer and loading mechanism. On chain/sprocket and belt/pulley installation, locate the sprocket or pulley as close to the oil seal as possible to minimize overhung load. Check to verify that the overhung load does not exceed specifications published in the catalog.
3. High momentum loads: If coasting to a stop is undesirable, a braking mechanism should be provided to the speed reducer output or the driven mechanism.

⚠ CAUTION The system of connected rotating parts must be free from critical speed, torsional or other type vibration, no matter how induced. The responsibility for this system analysis lies with the purchaser of the speed reducer.

Installation Instructions

The following instructions apply to standard Grove Gear Bravo® type reducers with base or flange mounting in motorized and non-motorized single and double reduction options.

1. Mount the unit to a rigid flat surface using grade 5 or higher fasteners. The mounting fasteners should be the largest standard size that will fit in the base mounting hole. Shim as required under flange or base feet which do not lie flat against the mounting surface.
2. Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Bravo® reducers are properly filled at Factory with sufficient lubricant quantity for nearly any mounting position.

   BRAVO aluminum gear reducers: Series 512-525 utilize a vent-free design and are Factory filled with synthetic oil formulated for lifetime lubrication & wide operating temperature range (+5F to +220F). It is not necessary to change the lubricant unless the reducer is used in a severe environment. If these reducers will be used in severe environment or if lubricant must be replaced, contact Factory.
3. Connect motor to speed reducer.

⚠ CAUTION DO NOT CHANGE MOUNTING POSITIONS WITHOUT CONTACTING FACTORY. Altering the mounting position may require special lubrication provisions which must be factory installed.

⚠ CAUTION Do not operate the reducer without making sure it contains the correct amount of oil. Confirm that mounting position on nameplate matches application requirement per Figure 1. Do not overfill or underfill with oil, or injury to personnel, reducer or other equipment may result.

⚠ CAUTION A unit cannot be used as an integral part of a machine superstructure which would impose additional loads on the unit other than those imposed by the torque being transmitted either through a shaft-mounted arrangement, and any shaft mounted power transmitting device. (e.g. sprockets, pulleys, couplings)

⚠ CAUTION For safe operation and to maintain the unit warranty, when changing a factory installed fastener for any reason it becomes the responsibility of the person making the change to properly account for fastener grade, thread engagement, load, tightening torque and the means of torque retention.

Lubrication

Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Bravo® reducers are properly filled at Factory with sufficient lubricant quantity for any mounting position.

Change oil only when performing maintenance that requires gearbox disassembly or if the reducer is operated in a severe environment. If oil must be replaced, use only Mobil PAG 460.

Mobil PAG 460 is H1 Food Grade approved lube.

⚠ CAUTION Lubricant should be changed more often if gear reducer is used in a severe environment. (ie: humid, wet, caustic, etc)

⚠ CAUTION Do not mix different lubricants in the reducer.

SPECIAL LUBRICATION REQUIREMENTS – Sizes 518-534
- Reducer is mounted with input worm shaft vertical
- Input speed is sustained less than 900 RPM

NOTE: The reducer may require modifications to assure proper lubrication in these applications. Contact Factory for more detail.

For lubrication requirements of helical reducers (primaries of helical worm reducers and ratio multipliers), contact Factory.

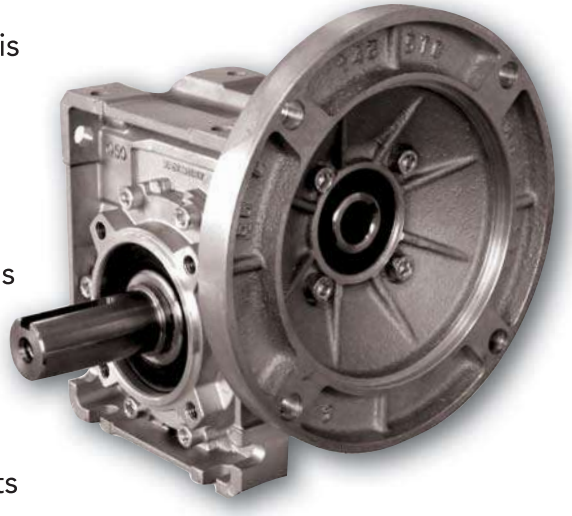
Lubrication type	Series				
	512	518	520	525	534
Oil (ounces)	2.2	3.0	5.2	13	41

16 oz. = 1 pint	1 quart = .9463 liter
2 pints = 1 quart	1 gallon = 3.785 liter
4 quarts = 1 gallon	1 lb = .4535 kg.
1 gallon = 128 oz.	

Driven to be the Best

Quadro Aluminum Worm Gear Reducers

Advantages



- Compact and lightweight aluminum alloy housing is up to one third smaller than alternatives
- Ideal for difficult installations
- Four sizes available with ratings to 8 HP
- Available in single and double reduction with ratios from 7:1 to 4020:1.
- Unique square design eliminates the need for mounting feet
- Available in both Nema and IEC inputs and outputs
- Factory-filled with premium Mobil Glygoyle 460 polyalkalene glycol lubricant
- Vent free design to eliminate leaks
- Available pre-assembled with LEESON motors for the perfect GEAR+MOTOR™ package
- Mounting dimensions are interchangeable with many major brands

A Multitude of Washdown Applications



Food Processing | Meat & Poultry Processing | Dairy | Chemical Processing | Washdown

Additional Capabilities

Vent Free Design.** No breather or vents to leak! Factory lubricated for life with premium synthetic Mobil Glygoyle 460 (PAG) lubricant or equivalent suitable for continuous operation within a -10°F to 120°F ambient temperature range.

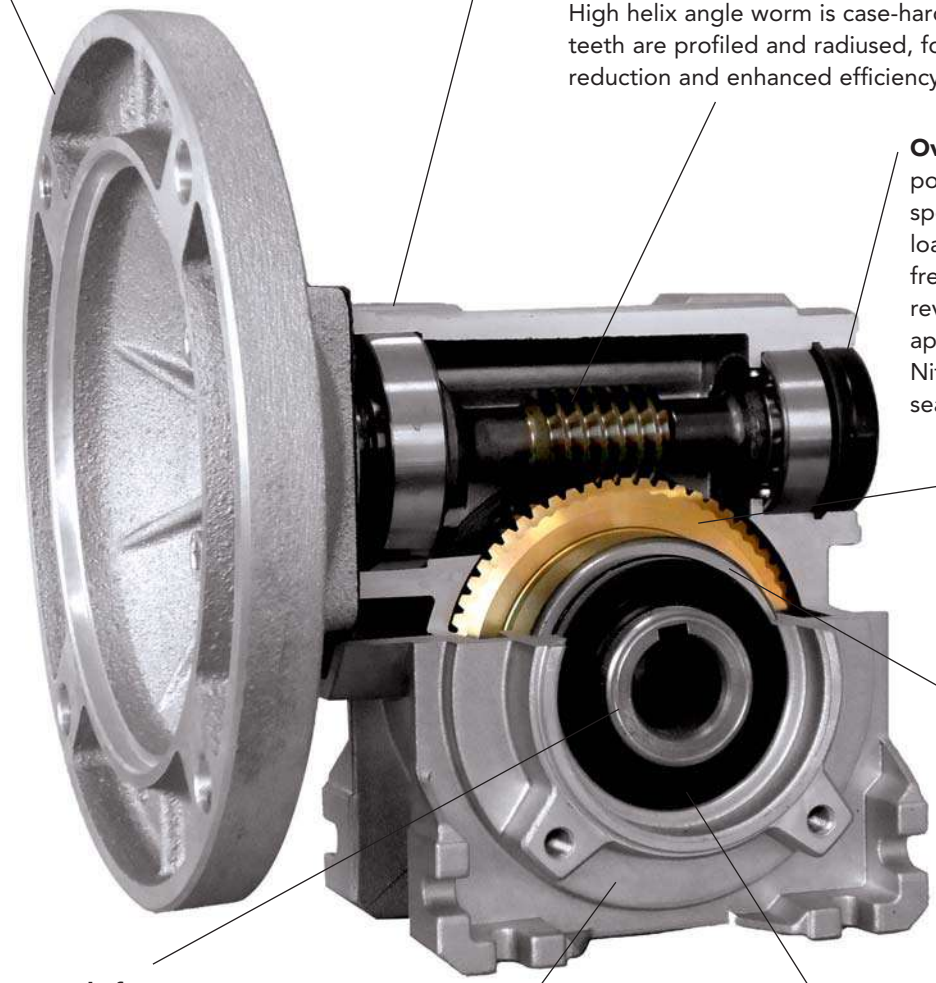
NEMA C flange with quill input accepts 56C, 143-5TC and 182-4TC motor frames.

or

B5 & B14 IEC metric flange options with quill input accepts D56, D63, D71, D80, D90, D100 and D112 motor frames.

Single-piece aluminum alloy housing is vacuum impregnated with Resinol RT (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

Alloy steel input shaft and worm shaft. High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.



Oversized bearings support positively-retained, high speed shaft for higher shock load capacity — ideal for frequent starting and reversing applications. Premium, Nitrile® high temperature seals each end.

Bronze alloy worm gear is centrifugally cast onto an iron hub for maximum strength, lubricity and superior life.

Oversized bearings for radial load capability and maximum hollow output shaft diameters.

Hollow output shaft mounting is standard at no extra cost. Reduces total drive envelope size, weight and cost. Solid shaft single and double output is available.

Premium, high-temperature Nitrile® output seals.

Impregnated and machined bearing caps with exterior machined surfaces mate to a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware. No need to remove bearing covers to mount/change accessory kits.

Mounting Style Guide

Hollow Output Shaft Mounted

MOTORIZED QUILL INPUT

HMQ



RHMQ



FHMQ



FLHMQ



NON-MOTORIZED SOLID INPUT SHAFT

H



RH



FH



FLH



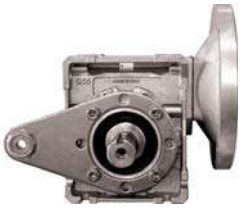
Solid Output Shaft

MOTORIZED QUILL INPUT

BMQ



RMQ



FMQ



FLMQ



NON-MOTORIZED SOLID INPUT SHAFT

B



R



F



FL



518 Series • 1.0 S.F.

							Style BMQ			Style HMQ
										
Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	NEMA C Input Flange▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Ext. Catalog No.	Hollow Output Catalog No.
7	1750 1150	250 164	1.378 0.950	1.103 0.760	278 292	56C	Q518003112	Q518004112	Q518005112	Q518007112
10	1750 1150	175 115	0.981 0.679	0.775 0.536	279 294	56C	Q518003212	Q518004212	Q518005212	Q518007212
14	1750 1150	125 82	0.871 0.602	0.670 0.463	338 356	56C	Q518003312	Q518004312	Q518005312	Q518007312
21	1750 1150	83 55	0.796 0.555	0.533 0.372	405 426	56C	Q518003412	Q518004412	Q518005412	Q518007412
28	1750 1150	63 47	0.631 0.494	0.410 0.321	410 431	56C	Q518003512	Q518004512	Q518005512	Q518007512
37	1750 1150	47 31	0.490 0.340	0.309 0.214	414 436	56C	Q518003612	Q518004612	Q518005612	Q518007612
46	1750 1150	38 25	0.397 0.274	0.234 0.162	388 408	56C	Q518003712	Q518004712	Q518005712	Q518007712
60	1750 1150	29 19.2	0.363 0.250	0.203 0.140	442 465	56C	Q518003812	Q518004812	Q518005812	Q518007812
70	1750 1150	25.0 16.4	0.204 0.137	0.110 0.074	278 292	56C	Q518003912	Q518004912	Q518005912	Q518007912
102	1750 1150	17.2 11.3	0.144 0.098	0.070 0.048	261 275	56C	Q518004012	Q518005012	Q518006012	Q518008012

▲ Contact Factory for other motor flanges available.

Quadro Aluminum Worm Gear Reducers
Maximum Rating Tables

518 Series • 1.0 S.F.

Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	Style B: Left Hand Catalog No.	Style B: Right Hand Catalog No.	Style B: Double Ext. Catalog No.	Style H: Hollow Output Catalog No.
7	1750	250	1.378	1.103	278	Q518000112	Q518001112	Q518002112	Q518006112
	1150	164	0.950	0.760	292				
10	1750	175	0.981	0.775	279	Q518000212	Q518001212	Q518002212	Q518006212
	1150	115	0.679	0.536	294				
14	1750	125	0.871	0.670	338	Q518000312	Q518001312	Q518002312	Q518006312
	1150	82	0.602	0.463	356				
21	1750	83	0.796	0.533	405	Q518000412	Q518001412	Q518002412	Q518006412
	1150	55	0.555	0.372	426				
28	1750	63	0.631	0.410	410	Q518000512	Q518001512	Q518002512	Q518006512
	1150	47	0.494	0.321	431				
37	1750	47	0.490	0.309	414	Q518000612	Q518001612	Q518002612	Q518006612
	1150	31	0.340	0.214	436				
46	1750	38	0.397	0.234	388	Q518000712	Q518001712	Q518002712	Q518006712
	1150	25	0.274	0.162	408				
60	1750	29	0.363	0.203	442	Q518000812	Q518001812	Q518002812	Q518006812
	1150	19.2	0.250	0.140	465				
70	1750	25.0	0.204	0.110	278	Q518000912	Q518001912	Q518002912	Q518006912
	1150	16.4	0.137	0.074	292				
102	1750	17.2	0.144	0.070	261	Q518001012	Q518002012	Q518003012	Q518007012
	1150	11.3	0.098	0.048	275				

520 Series • 1.0 S.F.

							Style BMQ			Style HMQ
										
Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	NEMA C Input Flange▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Ext. Catalog No.	Hollow Output Catalog No.
7	1750 1150	250 164	2.472 1.707	2.027 1.400	511 538	56C	Q520003416	Q520004516	Q520005616	Q520007816
10	1750 1150	175 115	1.961 1.355	1.569 1.084	565 594	56C	Q520003516	Q520004616	Q520005716	Q520007916
14	1750 1150	125 82	1.494 1.031	1.180 0.814	595 626	56C	Q520003616	Q520004716	Q520005816	Q520008016
18	1750 1150	97 64	1.196 0.830	0.897 0.622	583 613	56C	Q520003716	Q520004816	Q520005916	Q520008116
26	1750 1150	67 44	0.889 0.614	0.613 0.424	577 607	56C	Q520003816	Q520004916	Q520006016	Q520008216
36	1750 1150	49 32	0.684 0.470	0.472 0.324	607 639	56C	Q520003916	Q520005016	Q520006116	Q520008316
43	1750 1150	41 27	0.604 0.419	0.399 0.276	613 645	56C	Q520004016	Q520005116	Q520006216	Q520008416
60	1750 1150	29 19.2	0.486 0.335	0.282 0.194	613 645	56C	Q520004116	Q520005216	Q520006316	Q520008516
68	1750 1150	25.7 16.9	0.420 0.289	0.239 0.165	580 610	56C	Q520004216	Q520005316	Q520006416	Q520008616
80	1750 1150	21.9 14.4	0.368 0.246	0.199 0.133	569 599	56C	Q520004316	Q520005416	Q520006516	Q520008716
100	1750 1150	17.5 11.5	0.295 0.207	0.147 0.103	516 543	56C	Q520004416	Q520005516	Q520006616	Q520008816

▲ Contact Factory for other motor flanges available.

Quadro Aluminum Worm Gear Reducers
Maximum Rating Tables

520 Series • 1.0 S.F.

Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Ext. Catalog No.	Style H Hollow Output Catalog No.
									
7	1750	250	2.472	2.027	511	**Q520000116**	**Q520001216**	**Q520002316**	**Q520006716**
	1150	164	1.707	1.400	538				
10	1750	175	1.961	1.569	565	**Q520000216**	**Q520001316**	**Q520002416**	**Q520006816**
	1150	115	1.355	1.084	594				
14	1750	125	1.494	1.180	595	**Q520000316**	**Q520001416**	**Q520002516**	**Q520006916**
	1150	82	1.031	0.814	626				
18	1750	97	1.196	0.897	583	**Q520000416**	**Q520001516**	**Q520002616**	**Q520007016**
	1150	64	0.830	0.622	613				
26	1750	67	0.889	0.613	577	**Q520000516**	**Q520001616**	**Q520002716**	**Q520007116**
	1150	44	0.614	0.424	607				
36	1750	49	0.684	0.472	607	**Q520000616**	**Q520001716**	**Q520002816**	**Q520007216**
	1150	32	0.470	0.324	639				
43	1750	41	0.604	0.399	613	**Q520000716**	**Q520001816**	**Q520002916**	**Q520007316**
	1150	27	0.419	0.276	645				
60	1750	29	0.486	0.282	613	**Q520000816**	**Q520001916**	**Q520003016**	**Q520007416**
	1150	19.2	0.335	0.194	645				
68	1750	25.7	0.420	0.239	580	**Q520000916**	**Q520002016**	**Q520003116**	**Q520007516**
	1150	16.9	0.289	0.165	610				
80	1750	21.9	0.368	0.199	569	**Q520001016**	**Q520002116**	**Q520003216**	**Q520007616**
	1150	14.4	0.246	0.133	599				
100	1750	17.5	0.295	0.147	516	**Q520001116**	**Q520002216**	**Q520003316**	**Q520007716**
	1150	11.5	0.207	0.103	543				

525 Series • 1.0 S.F.

							Style BMQ			Style HMQ
										
Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	NEMA C Input Flange▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Ext. Catalog No.	Hollow Output Catalog No.
7	1750	250	5.24	4.35	1097	56C	Q525003418	Q525004518	Q525005618	Q525007818
	1150	164	3.62	3.01	1155	140TC	Q525056218	Q525057318	Q525058418	Q525060618
10	1750	175	4.19	3.39	1222	56C	Q525003518	Q525004618	Q525005718	Q525007918
	1150	115	2.90	2.35	1287	140TC	Q525056318	Q525057418	Q525058518	Q525060718
15	1750	117	2.85	2.25	1214	56C	Q525003618	Q525004718	Q525005818	Q525008018
	1150	77	1.98	1.56	1278	140TC	Q525056418	Q525057518	Q525058618	Q525060818
19	1750	92	2.24	1.75	1197	56C	Q525003718	Q525004818	Q525005918	Q525008118
	1150	61	1.56	1.22	1260	140TC	Q525056518	Q525057618	Q525058718	Q525060918
24	1750	73	1.92	1.44	1246	56C	Q525003818	Q525004918	Q525006018	Q525008218
	1150	48	1.33	1.00	1312	140TC	Q525056618	Q525057718	Q525058818	Q525061018
30	1750	58	1.58	1.17	1274	56C	Q525003918	Q525005018	Q525006118	Q525008318
	1150	38	1.09	0.81	1341	140TC	Q525056718	Q525057818	Q525058918	Q525061118
36	1750	49	1.46	1.00	1281	56C	Q525004018	Q525005118	Q525006218	Q525008418
	1150	32	1.01	0.68	1349	140TC	Q525056818	Q525057918	Q525059018	Q525061218
45	1750	39	1.11	0.73	1182	56C	Q525004118	Q525005218	Q525006318	Q525008518
	1150	25.6	0.78	0.51	1244	140TC	Q525056918	Q525058018	Q525059118	Q525061318
67	1750	26.1	0.73	0.44	1069	56C	Q525004218	Q525005318	Q525006418	Q525008618
	1150	17.2	0.51	0.30	1125	140TC	Q525057018	Q525058118	Q525059218	Q525061418
80	1750	21.9	0.63	0.36	1034	56C	Q525004318	Q525005418	Q525006518	Q525008718
	1150	14.4	0.42	0.24	1089	140TC	Q525057118	Q525058218	Q525059318	Q525061518
94	1750	18.6	0.51	0.26	878	56C	Q525004418	Q525005518	Q525006618	Q525008818
	1150	12.2	0.34	0.18	924	140TC	Q525057218	Q525058318	Q525059418	Q525061618

▲ Contact Factory for other motor flanges available.

Quadro Aluminum Worm Gear Reducers
Maximum Rating Tables

525 Series • 1.0 S.F.

Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	Style B Left Hand Catalog No.	Style B Right Hand Catalog No.	Style B Double Ext. Catalog No.	Style H Hollow Output Catalog No.
									
7	1750 1150	250 164	5.24 3.62	4.35 3.01	1097 1155	**Q525000118**	**Q525001218**	**Q525002318**	**Q525006718**
10	1750 1150	175 115	4.19 2.90	3.39 2.35	1222 1287	**Q525000218**	**Q525001318**	**Q525002418**	**Q525006818**
15	1750 1150	117 77	2.85 1.98	2.25 1.56	1214 1278	**Q525000318**	**Q525001418**	**Q525002518**	**Q525006918**
19	1750 1150	92 61	2.24 1.56	1.75 1.22	1197 1260	**Q525000418**	**Q525001518**	**Q525002618**	**Q525007018**
24	1750 1150	73 48	1.92 1.33	1.44 1.00	1246 1312	**Q525000518**	**Q525001618**	**Q525002718**	**Q525007118**
30	1750 1150	58 38	1.58 1.09	1.17 0.81	1274 1341	**Q525000618**	**Q525001718**	**Q525002818**	**Q525007218**
36	1750 1150	49 32	1.46 1.01	1.00 0.68	1281 1349	**Q525000718**	**Q525001818**	**Q525002918**	**Q525007318**
45	1750 1150	39 25.6	1.11 0.78	0.73 0.51	1182 1244	**Q525000818**	**Q525001918**	**Q525003018**	**Q525007418**
67	1750 1150	26.1 17.2	0.73 0.51	0.44 0.30	1069 1125	**Q525000918**	**Q525002018**	**Q525003118**	**Q525007518**
80	1750 1150	21.9 14.4	0.63 0.42	0.36 0.24	1034 1089	**Q525001018**	**Q525002118**	**Q525003218**	**Q525007618**
94	1750 1150	18.6 12.2	0.51 0.34	0.26 0.18	878 924	**Q525001118**	**Q525002218**	**Q525003318**	**Q525007718**

534 Series • 1.0 S.F.

							Style BMQ			Style HMQ
										
Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	NEMA C Input Flange▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Ext. Catalog No.	Hollow Output Catalog No.
7	1750	250	8.26	7.27	1832	180TC	Q534089224	Q534090124	Q534091024	Q534092824
	1150	164	5.70	5.02	1929					
10	1750	175	7.62	6.10	2196	140TC	Q534046124	Q534047024	Q534047924	Q534049724
	1150	115	5.27	4.22	2312	180TC	Q534089324	Q534090224	Q534091124	Q534092924
14	1750	125	5.91	4.61	2323	140TC	Q534046224	Q534047124	Q534048024	Q534049824
	1150	82	4.08	3.18	2446	180TC	Q534089424	Q534090324	Q534091224	Q534093024
20	1750	88	3.91	3.09	2212	140TC	Q534046324	Q534047224	Q534048124	Q534049924
	1150	58	2.71	2.14	2329	180TC	Q534089524	Q534090424	Q534091324	Q534093124
28	1750	63	3.37	2.53	2528	140TC	Q534046424	Q534047324	Q534048224	Q534050024
	1150	41	2.31	1.73	2661	180TC	Q534089624	Q534090524	Q534091424	Q534093224
38	1750	46	2.34	1.66	2279	56C	Q534003324	Q534004224	Q534005124	Q534006924
	1150	30	1.61	1.14	2399	140TC	Q534046524	Q534047424	Q534048324	Q534050124
52	1750	34	1.82	1.20	2229	56C	Q534003424	Q534004324	Q534005224	Q534007024
	1150	22.1	1.24	0.82	2347	140TC	Q534046624	Q534047524	Q534048424	Q534050224
67	1750	26.1	1.56	1.01	2458	56C	Q534003524	Q534004424	Q534005324	Q534007124
	1150	17.2	1.07	0.70	2588	140TC	Q534046724	Q534047624	Q534048524	Q534050324
96	1750	18.2	0.99	0.52	1735	56C	Q534003624	Q534004524	Q534005424	Q534007224
	1150	12.0	0.66	0.35	1827	140TC	Q534046824	Q534047724	Q534048624	Q534050424

▲ Contact Factory for other motor flanges available.

534 Series • 1.0 S.F.

						Style B			Style H
									
Exact Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb.-in.)	Left Hand Catalog No.	Right Hand Catalog No.	Double Ext. Catalog No.	Hollow Output Catalog No.
7	1750	250	8.26	7.27	1832	Q534000124	Q534001024	Q534001924	Q534005524
	1150	164	5.70	5.02	1929				
10	1750	175	7.62	6.10	2196	Q534000224	Q534001124	Q534002024	Q534005624
	1150	115	5.27	4.22	2312				
14	1750	125	5.91	4.61	2323	Q534000324	Q534001224	Q534002124	Q534005724
	1150	82	4.08	3.18	2446				
20	1750	88	3.91	3.09	2212	Q534000424	Q534001324	Q534002224	Q534005824
	1150	58	2.71	2.14	2329				
28	1750	63	3.37	2.53	2528	Q534000524	Q534001424	Q534002324	Q534005924
	1150	41	2.31	1.73	2661				
38	1750	46	2.34	1.66	2279	Q534000624	Q534001524	Q534002424	Q534006024
	1150	30	1.61	1.14	2399				
52	1750	34	1.82	1.20	2229	Q534000724	Q534001624	Q534002524	Q534006124
	1150	22.1	1.24	0.82	2347				
67	1750	26.1	1.56	1.01	2458	Q534000824	Q534001724	Q534002624	Q534006224
	1150	17.2	1.07	0.70	2588				
96	1750	18.2	0.99	0.52	1735	Q534000924	Q534001824	Q534002724	Q534006324
	1150	12.0	0.66	0.35	1827				

Dimensions

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyways▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS✪ - MM

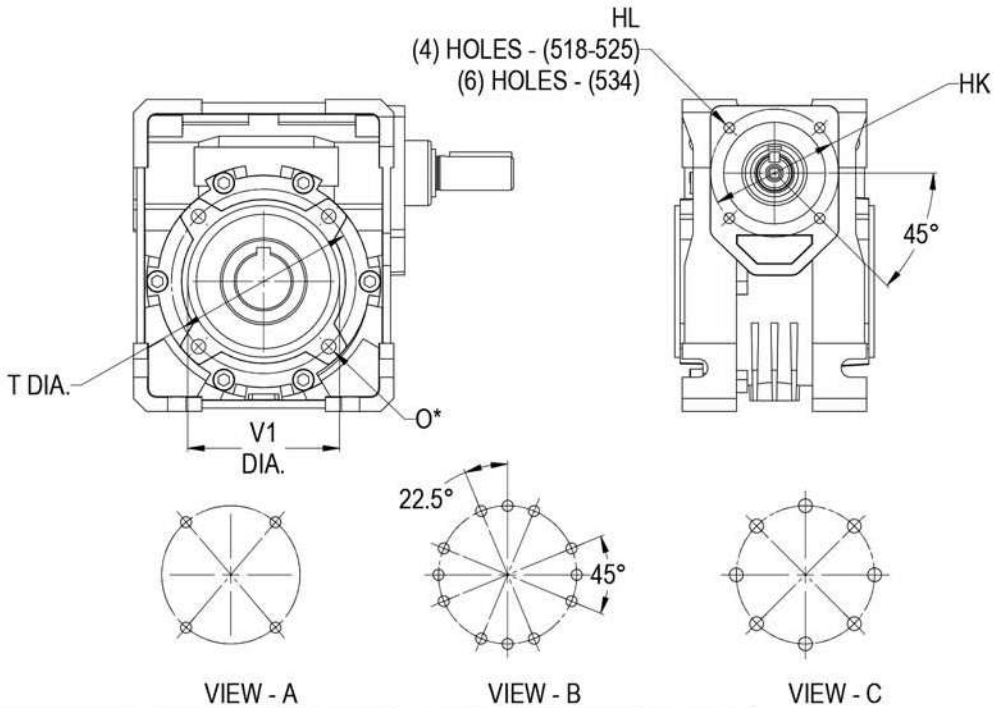
IEC Frame	B5					B14❖					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF❖		
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

✪ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
❖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
◆ Dimensions are maximum (B5 and B14 options)
◊ B14 option not available
❑ B5 Option not available
■ Also applies to frame size D112MD
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

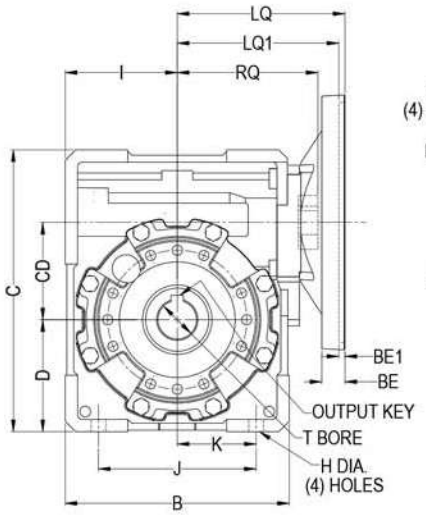
OPTIONAL METRIC DIMENSIONS✪ - MM

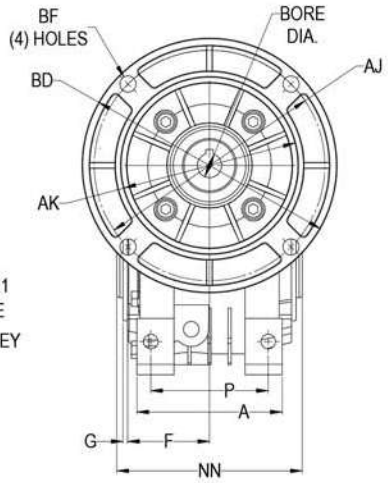
Series	LQ1◆ IEC B5 & B14 Options						T✓	O	N	Output Keyway
	D56D	D63D	D71D	D80D	D90D	D100LD■	(standard for metric units)			
512	62.5❖	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74❖❑	74❖	74	N/A	N/A	N/A	18	32	75	6
520	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	60	123	8
534	N/A	N/A	124 ◊	124	124	124	35	60	141	10

BOLT CIRCLE DIMENSIONS - MM

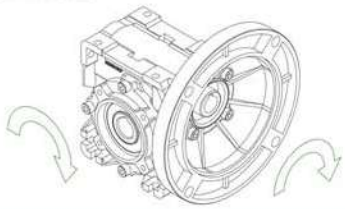


Series	O*		T DIA.	V1 DIA. (h8)	HL	HK DIA.
518	4 - M6 X 12	VIEW - A	75	60	M6 X 15	59
520	4 - M8 X 11	VIEW - A	85	70	M6 X 16	59
525	12 - M8 X 14	VIEW - B	90	75	M8 X 17	80
534	8 - M10 X 17	VIEW - C	130	110	M6 X 16	90





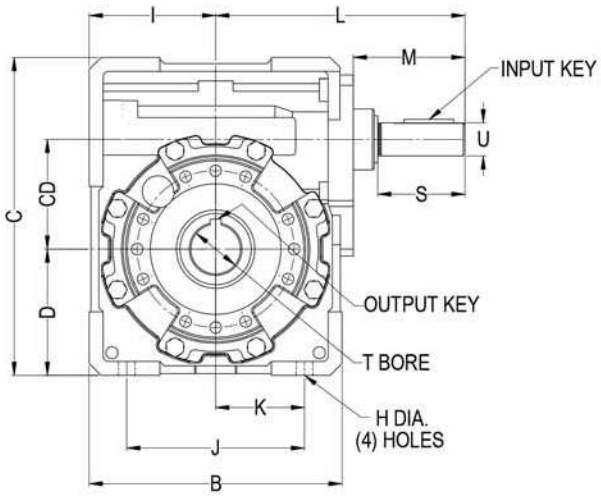
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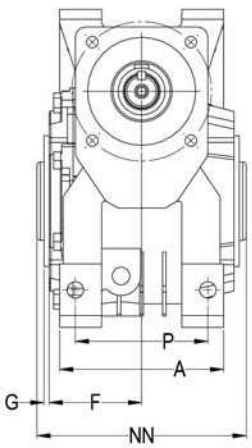


HMQ Style

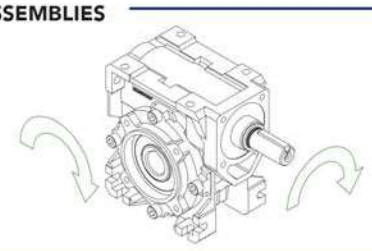
Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	NN	P	RQ	T* +0.0015/-0.0000	OUTPUT KEY*
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	3.54	N/A	2.56	2.36	2.60	0.750	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	3.74	N/A	3.19	2.76	2.83	1.000	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	4.08	N/A	4.72	2.99	3.58	1.125	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	4.83	5.35	5.32	3.98	4.33	1.500	3/8X2.00

* Metric options are available. Refer to dimensions on page 11.
Contact Factory for availability of metric options.





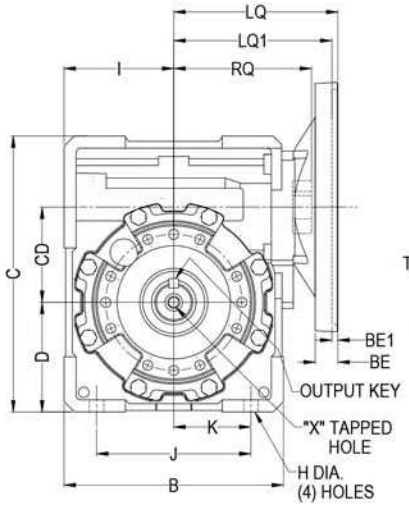
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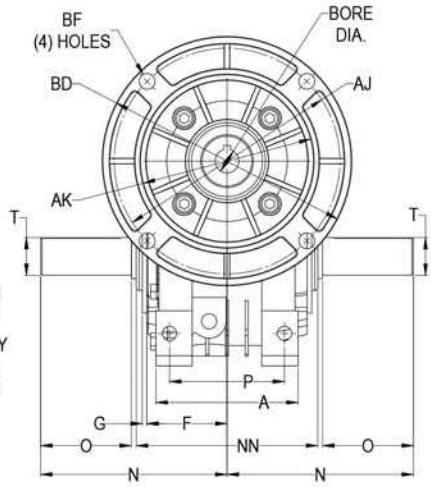


H Style

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	P	S	T +0.0015/-0.0000	U +0.000/-0.001	INPUT KEY	OUTPUT KEY
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	4.11	1.69	2.56	2.36	1.18	0.750	0.625	3/16X1.00	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	4.32	1.76	3.19	2.76	1.18	1.000	0.625	3/16X1.00	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	5.45	2.34	4.72	2.99	1.77	1.125	0.750	3/16X1.50	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	6.40	2.54	5.32	3.98	1.75	1.500	0.875	3/16X1.50	3/8X2.00

Dimensions





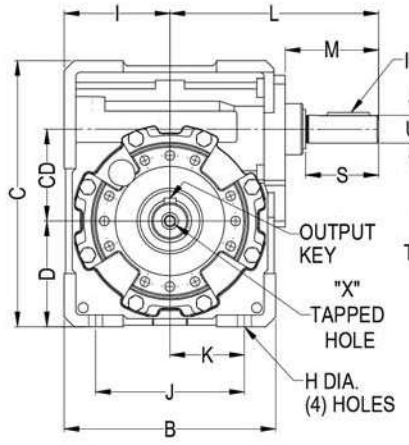
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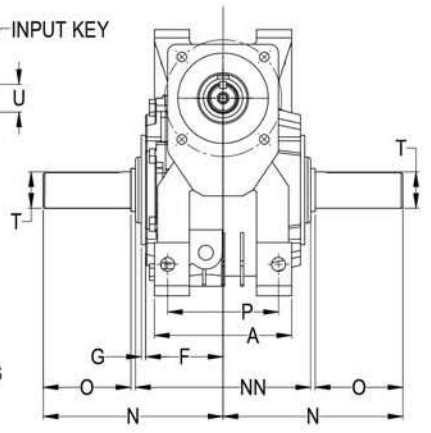


BMQ Style

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	N	NN	O*	P	RQ	T* +0.000/-0.001	X Tap Size	X Depth	Output Key*
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	3.54	N/A	2.97	2.56	1.26	2.36	2.60	0.750	1/4-20 UNC	0.62	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	3.74	N/A	3.95	3.19	2.05	2.76	2.83	1.000	5/16-18 UNC	0.75	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	4.08	N/A	4.85	4.72	2.36	2.99	3.58	1.125	5/16-18 UNC	0.75	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	4.83	5.35	5.55	5.32	2.36	3.98	4.33	1.500	3/8-16 UNC	0.88	3/8X2.00

* Metric options are available. Refer to dimensions on page 11.
Contact Factory for availability of metric options.



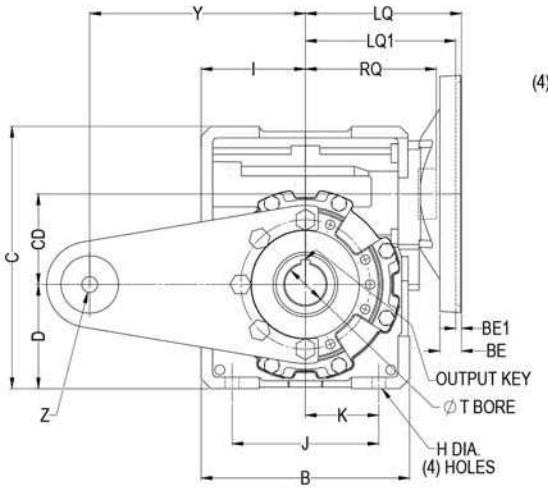


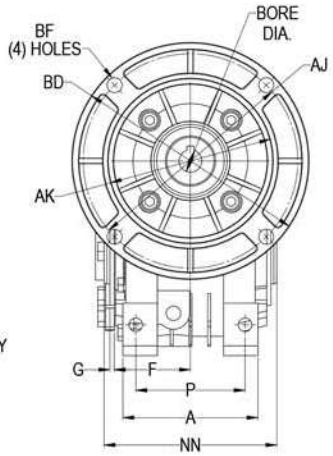
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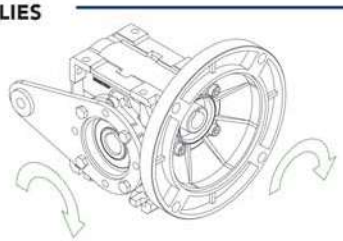
B Style

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	NN	O	P	S	T +0.000/ -0.001	U +0.000/ -0.001	X Tap Size	X Depth	Input Key	Output Key
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	4.11	1.69	2.97	2.56	1.26	2.36	1.18	0.750	0.625	1/4-20 UNC	0.62	3/16X1.00	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	4.32	1.76	3.95	3.19	2.05	2.76	1.18	1.000	0.625	5/16-18 UNC	0.75	3/16X1.00	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	5.45	2.34	4.85	4.72	2.36	2.99	1.77	1.125	0.750	5/16-18 UNC	0.75	3/16X1.50	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	6.40	2.54	5.55	5.32	2.36	3.98	1.75	1.500	0.875	3/8-16 UNC	0.88	3/16X1.50	3/8X2.00





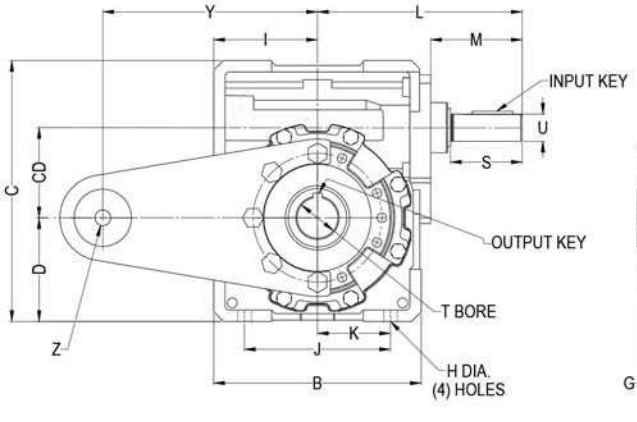
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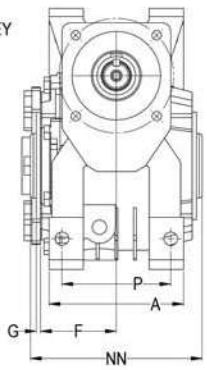


RHMQ Style

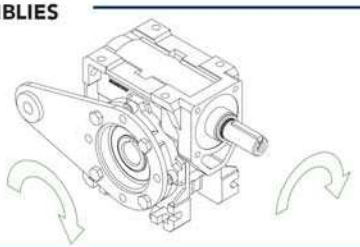
Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	NN	P	RQ	T* +0.0015/-0.0000	Y	Z	OUTPUT KEY*
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	3.54	N/A	2.56	2.36	2.60	0.750	3.94	0.394	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	3.74	N/A	3.19	2.76	2.83	1.000	3.94	0.394	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	4.08	N/A	4.72	2.99	3.58	1.125	5.91	0.433	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	4.83	5.35	5.32	3.98	4.33	1.500	7.87	0.787	3/8X2.00

* Metric options are available. Refer to dimensions on page 11.
Contact Factory for availability of metric options.





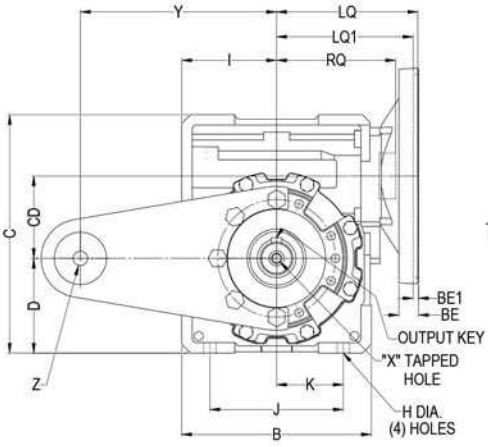
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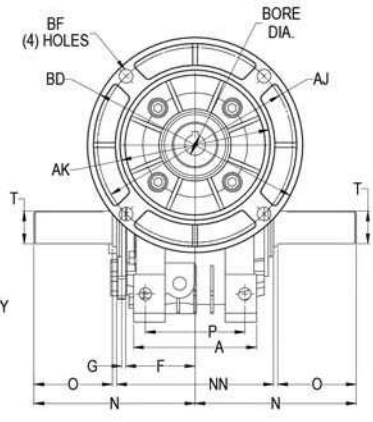


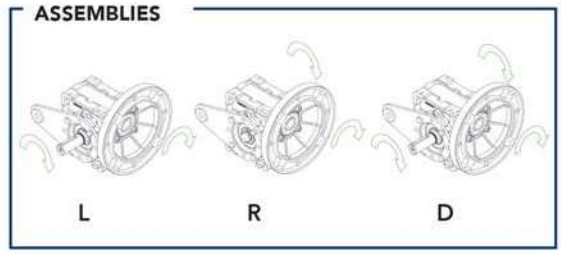
RH Style

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	P	S	T +.0.0015/- 0.0000	U +0.000/- 0.001	Y	Z	Input Key	Output Key
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	4.11	1.69	2.56	2.36	1.18	0.750	0.625	3.94	0.394	3/16X1.00	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	4.32	1.76	3.19	2.76	1.18	1.000	0.625	3.94	0.394	3/16X1.00	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	5.45	2.34	4.72	2.99	1.77	1.125	0.750	5.91	0.433	3/16X1.50	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	6.40	2.54	5.32	3.98	1.75	1.500	0.875	7.87	0.787	3/16X1.50	3/8X2.00

Dimensions



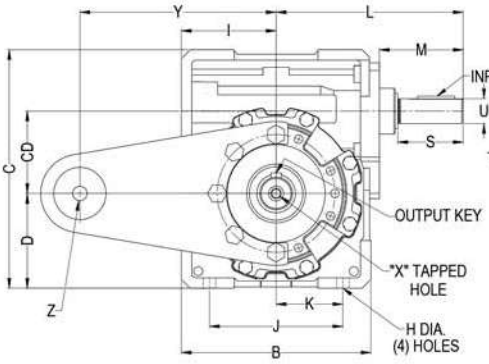


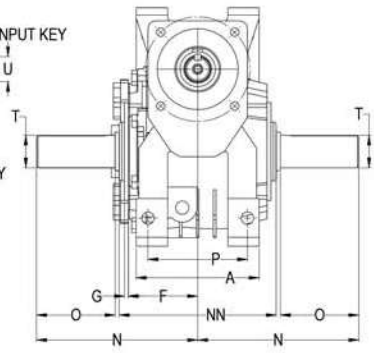


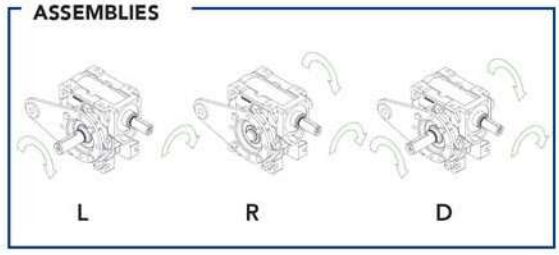
RMQ Style

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	N	NN	O*	P	RQ	T* +0.000/- 0.001	X Tap Size	X Depth	Y	Z	Output Key*
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	3.54	N/A	2.97	2.56	1.26	2.36	1.18	0.750	1/4-20 UNC	0.62	3.94	0.394	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	3.74	N/A	3.95	3.19	2.05	2.76	1.18	1.000	5/16-18 UNC	0.75	3.94	0.394	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	4.08	N/A	4.85	4.72	2.36	2.99	1.77	1.125	5/16-18 UNC	0.75	5.91	0.433	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	4.83	5.35	5.55	5.32	2.36	3.98	1.75	1.500	3/8-16 UNC	0.88	7.87	0.787	3/8X2.00

* Metric options are available. Refer to dimensions on page 11.
Contact Factory for availability of metric options.

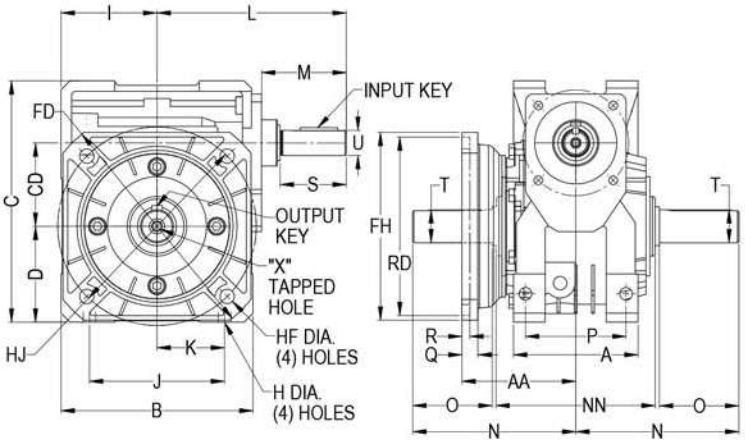


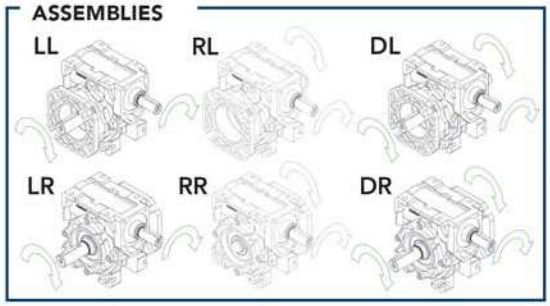




R Style

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	NN	O	P	S	T +0.000/- 0.001	U +0.000/- 0.001	X Tap Size	X Depth	Y	Z	Input Key	Output Key
518	2.80	3.94	4.78	1.77	1.97	1.44	0.10	0.26	1.97	2.76	1.38	4.11	1.69	2.97	2.56	1.26	2.36	1.18	0.750	0.625	1/4-20 UNC	0.62	3.94	0.394	3/16X1.00	3/16X1.00
520	3.35	4.72	5.67	1.97	2.36	1.71	0.10	0.33	2.36	3.15	1.58	4.32	1.76	3.95	3.19	2.05	2.76	1.18	1.000	0.625	5/16-18 UNC	0.75	3.94	0.394	3/16X1.00	1/4X1.62
525	3.70	5.71	7.19	2.48	2.85	2.09	0.12	0.37	2.85	4.02	2.01	5.45	2.34	4.85	4.72	2.36	2.99	1.77	1.125	0.750	5/16-18 UNC	0.75	5.91	0.433	3/16X1.50	1/4X2.00
534	4.92	7.87	9.67	3.35	3.94	2.52	0.14	0.43	3.94	5.67	2.83	6.40	2.54	5.55	5.32	2.36	3.98	1.75	1.500	0.875	3/8-16 UNC	0.88	7.87	0.787	3/16X1.50	3/8X2.00

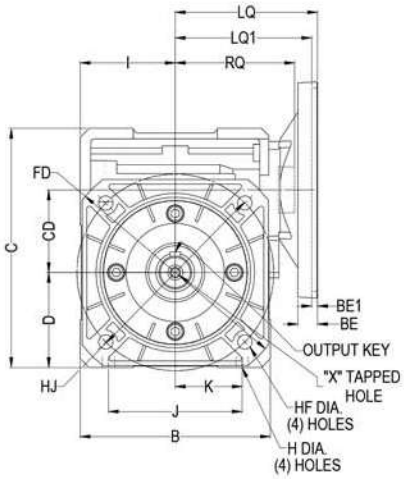


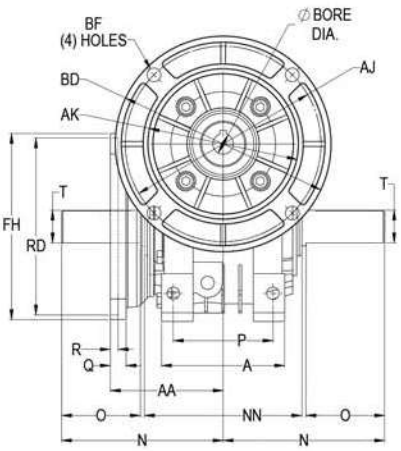


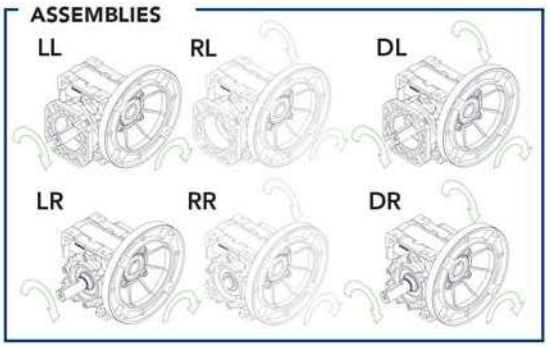
F Style

Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	L	M	N	NN	O	P	Q	R	RD	S
518	2.80	2.64	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	4.11	1.69	2.97	2.56	1.26	2.36	0.28	0.16	2.3640/2.3622	1.18
520	3.35	3.54	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	4.32	1.76	3.95	3.19	2.05	2.76	0.35	0.20	2.7577/2.7559	1.18
525	3.70	3.39	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	5.45	2.34	4.85	4.72	2.36	2.99	0.47	0.24	4.5354/4.5335	1.77
534	4.92	4.25	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	6.40	2.54	5.55	5.32	2.36	3.98	0.63	0.20	5.9867/5.9843	1.75

Series	T +0.000/-0.001	U +0.000/-0.001	X Tap Size	X Depth	Input Key	Output Key
518	0.750	0.625	1/4-20 UNC	0.62	3/16X1.00	3/16X1.00
520	1.000	0.625	5/16-18 UNC	0.75	3/16X1.00	1/4X1.62
525	1.125	0.750	5/16-18 UNC	0.75	3/16X1.50	1/4X2.00
534	1.500	0.875	3/8-16 UNC	0.88	3/16X1.50	3/8X2.00





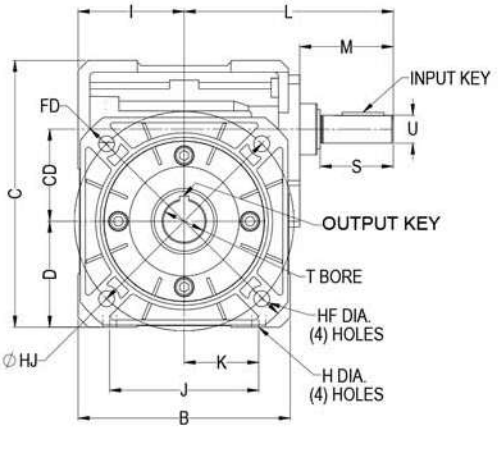


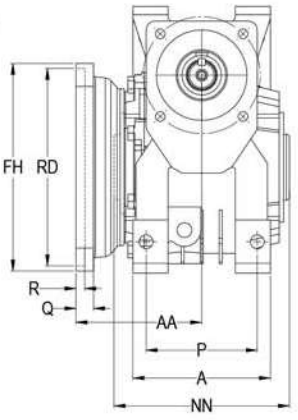
FMQ Style

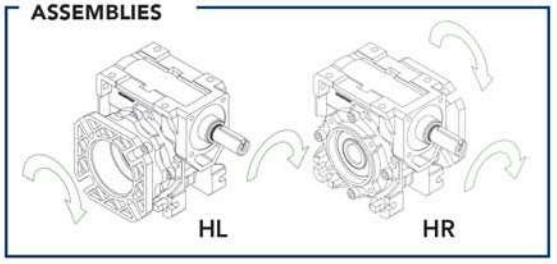
Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	LQ* 56/140	LQ1* 180	N	NN	O*	P	Q	R	RD	RQ	T* +0.000/ -0.001	X Tap Size	X Depth	Output Key*
518	2.80	2.64	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	3.54	N/A	2.97	2.56	1.26	2.36	0.28	0.16	2.3640/ 2.3622	2.60	0.750	1/4-20 UNC	0.62	3/16X 1.00
520	3.35	3.54	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	3.74	N/A	3.95	3.19	2.05	2.76	0.35	0.20	2.7577/ 2.7559	2.83	1.000	5/16-18 UNC	0.75	1/4X 1.62
525	3.70	3.39	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	4.08	N/A	4.85	4.72	2.36	2.99	0.47	0.24	4.5354/ 4.5335	3.58	1.125	5/16-18 UNC	0.75	1/4X 2.00
534	4.92	4.25	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	4.83	5.35	5.55	5.32	2.36	3.98	0.63	0.20	5.9867/ 5.9843	4.33	1.500	3/8-16 UNC	0.88	3/8X 2.00

* Metric options are available. Refer to dimensions on page 336.
Contact Factory for availability of metric options.

Dimensions

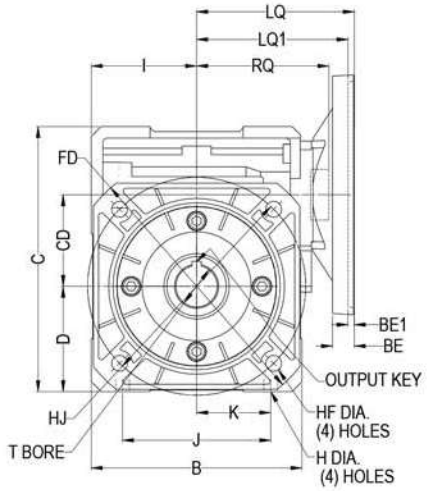


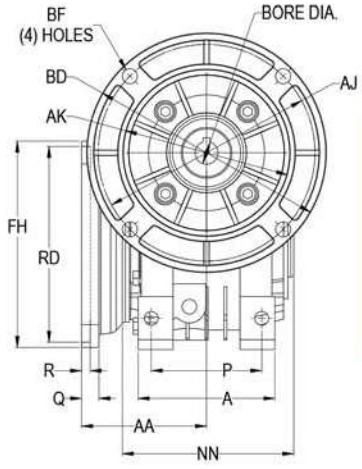


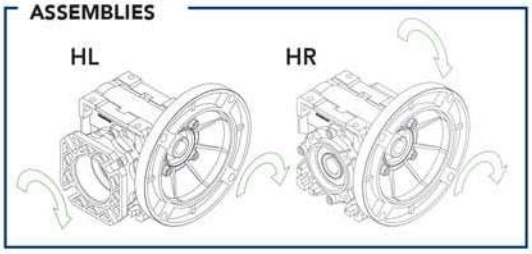


FH Style

Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	L	M	NN	P	Q	R	RD	S	T +0.0015/ -0.0000	U +0.000/ -0.001	Input Key	Output Key
518	2.80	2.64	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	4.11	1.69	2.56	2.36	0.28	0.16	2.3640/ 2.3622	1.18	0.750	0.625	3/16X 1.00	3/16X 1.00
520	3.35	3.54	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	4.32	1.76	3.19	2.76	0.35	0.20	2.7577/ 2.7559	1.18	1.000	0.625	3/16X 1.00	1/4X 1.62
525	3.70	3.39	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	5.45	2.34	4.72	2.99	0.47	0.24	4.5354/ 4.5335	1.77	1.125	0.750	3/16X 1.50	1/4X 2.00
534	4.92	4.25	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	6.40	2.54	5.32	3.98	0.63	0.20	5.9867/ 5.9843	1.75	1.500	0.875	3/16X 1.50	3/8X 2.00



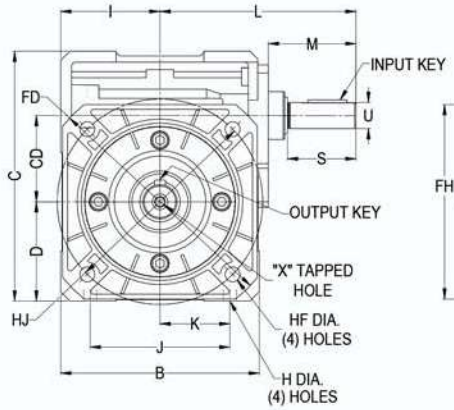


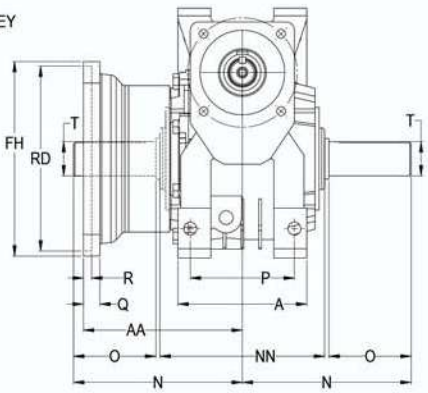


FHMQ Style

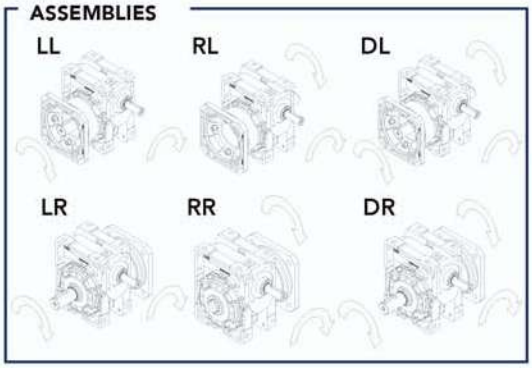
Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	LQ* 56/140	LQ1* 180	NN	P	Q	R	RD	RQ	T* +0.0015/ -0.0000	Output Key*
518	2.80	2.64	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	3.54	N/A	2.56	2.36	0.28	0.16	2.3640/ 2.3622	2.60	0.750	3/16X 1.00
520	3.35	3.54	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	3.74	N/A	3.19	2.76	0.35	0.20	2.7577/ 2.7559	2.83	1.000	1/4X 1.62
525	3.70	3.39	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	4.08	N/A	4.72	2.99	0.47	0.24	4.5354/ 4.5335	3.58	1.125	1/4X 2.00
534	4.92	4.25	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	4.83	5.35	5.32	3.98	0.63	0.20	5.9867/ 5.9843	4.33	1.500	3/8X 2.00

* Metric options are available. Refer to dimensions on page 336.
Contact Factory for availability of metric options.





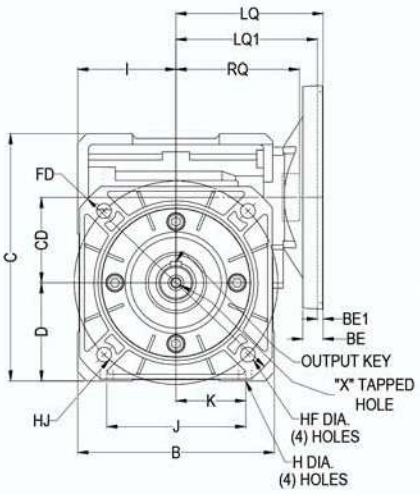
ASSEMBLIES

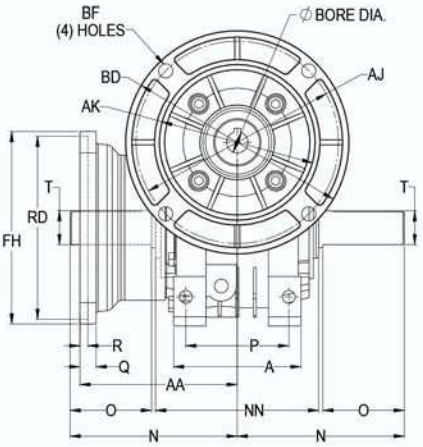


FL Style

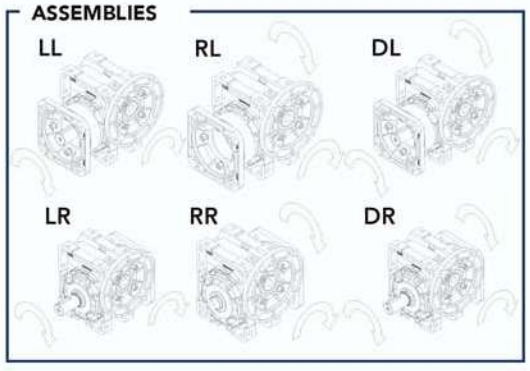
Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	L	M	N	NN	O	P	Q	R	RD	S
518	2.80	3.82	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	4.11	1.69	2.97	2.56	1.26	2.36	0.28	0.16	2.3640/2.3622	1.18
520	3.35	4.72	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	4.32	1.76	3.95	3.19	2.05	2.76	0.35	0.20	2.7577/2.7559	1.18
525	3.70	4.57	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	5.45	2.34	4.85	4.72	2.36	2.99	0.47	0.24	4.5354/4.5335	1.77
534	4.92	5.85	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	6.40	2.54	5.55	5.32	2.36	3.98	0.63	0.20	5.9867/5.9843	1.75

Series	T +0.000/-0.001	U +0.000/-0.001	X Tap Size	X Depth	Input Key	Output Key
518	0.750	0.625	1/4-20 UNC	0.62	3/16X1.00	3/16X1.00
520	1.000	0.625	5/16-18 UNC	0.75	3/16X1.00	1/4X1.62
525	1.125	0.750	5/16-18 UNC	0.75	3/16X1.50	1/4X2.00
534	1.500	0.875	3/8-16 UNC	0.88	3/16X1.50	3/8X2.00





ASSEMBLIES



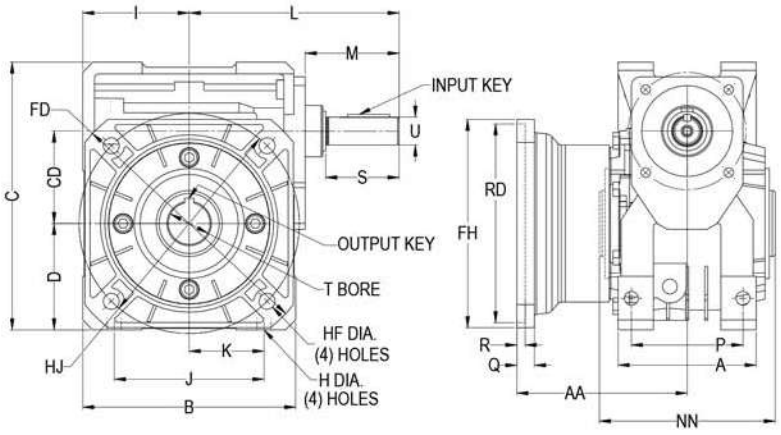
FLMQ Style

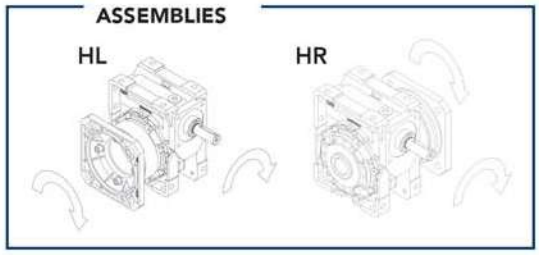
Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	LQ* 56/140	LQ1* 180	N	NN	O*	P	Q	R
518	2.80	3.82	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	3.54	N/A	2.97	2.56	1.26	2.36	0.28	0.16
520	3.35	4.72	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	3.74	N/A	3.95	3.19	2.05	2.76	0.35	0.20
525	3.70	4.57	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	4.08	N/A	4.85	4.72	2.36	2.99	0.47	0.24
534	4.92	5.85	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	4.83	5.35	5.55	5.32	2.36	3.98	0.63	0.20

Series	RD	RQ	T* +0.000/-0.001	X Tap Size	X Depth	Output Key*
518	2.3640/2.3622	2.60	0.750	1/4-20 UNC	0.62	3/16X1.00
520	2.7577/2.7559	2.83	1.000	5/16-18 UNC	0.75	1/4X1.62
525	4.5354/4.5335	3.58	1.125	5/16-18 UNC	0.75	1/4X2.00
534	5.9867/5.9843	4.33	1.500	3/8-16 UNC	0.88	3/8X2.00

* Metric options are available. Refer to dimensions on page 336.
Contact Factory for availability of metric options.

Dimensions

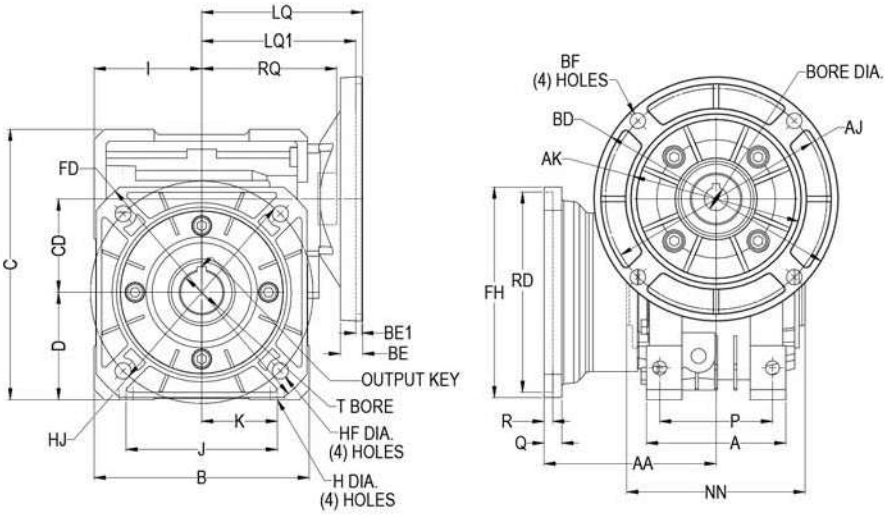


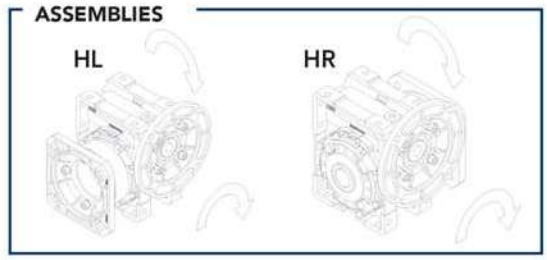


FLH Style

Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	L	M	NN	P	Q	R
518	2.80	3.82	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	4.11	1.69	2.56	2.36	0.28	0.16
520	3.35	4.72	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	4.32	1.76	3.19	2.76	0.35	0.20
525	3.70	4.57	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	5.45	2.34	4.72	2.99	0.47	0.24
534	4.92	5.85	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	6.40	2.54	5.32	3.98	0.63	0.20

Series	RD	S	T +0.0015/-0.0000	U +0.000/-0.001	Input Key	Output Key
518	2.3640/2.3622	1.18	0.750	0.625	3/16X1.00	3/16X1.00
520	2.7577/2.7559	1.18	1.000	0.625	3/16X1.00	1/4X1.62
525	4.5354/4.5335	1.77	1.125	0.750	3/16X1.50	1/4X2.00
534	5.9867/5.9843	1.75	1.500	0.875	3/16X1.50	3/8X2.00





FLHMQ Style

Series	A	AA	B	C	CD	D	FD	FH	H	HF	HJ	I	J	K	LQ* 56/140	LQ1* 180	NN	P	Q	R
518	2.80	3.82	3.94	4.78	1.77	1.97	4.33	3.74	0.26	0.35	2.95	1.97	2.76	1.38	3.54	N/A	2.56	2.36	0.28	0.16
520	3.35	4.72	4.72	5.67	1.97	2.36	4.92	4.33	0.33	0.43	3.35	2.36	3.15	1.58	3.74	N/A	3.19	2.76	0.35	0.20
525	3.70	4.57	5.71	7.19	2.48	2.85	7.09	5.59	0.37	0.43	5.91	2.85	4.02	2.01	4.08	N/A	4.72	2.99	0.47	0.24
534	4.92	5.85	7.87	9.67	3.35	3.94	-	Ø8.071	0.43	0.51	6.93	3.94	5.67	2.83	4.83	5.35	5.32	3.98	0.63	0.20

Series	RD	RQ	T* +0.0015/-0.0000	Output Key*
518	2.3640/2.3622	2.60	0.750	3/16X1.00
520	2.7577/2.7559	2.83	1.000	1/4X1.62
525	4.5354/4.5335	3.58	1.125	1/4X2.00
534	5.9867/5.9843	4.33	1.500	3/8X2.00

* Metric options are available. Refer to dimensions on page 336.
Contact Factory for availability of metric options.

Style F Short Output Flange

Series	Accessory Kit Catalog No.
518	Q175209
520	Q175210
525	Q175211
534	Q175212



(534 Flanges are shown in photo)

Style FL Long Output Flange

Series	Accessory Kit Catalog No.
*518	Q175213
*520	Q175214
**525	Q175215
**534	Q175216

* Single piece machined flange
** FL Flange is two pieces as shown for 525 & 534.

Solid Output Shaft to Single Extension Inch Dimensions

Series	Accessory Kit Catalog No.
518	Q175236
520	Q175237
525	Q175521
534	Q175238

NOTE: Shaft dimensions are in inches. These shafts will only fit into reducers with inch dimensioned output bores.



Solid Output Shaft to Single Extension Metric Dimensions

Series	Accessory Kit Catalog No.
518	Q175241
520	Q175242
525	Q175243
534	Q175244

NOTE: Shaft dimensions are in millimeters. These shafts will only fit into reducers with metric dimensioned output bores.



Protection Cap Accessory Kit◆

Series	Accessory Kit Catalog No.
518	Q175217
520	Q175218
525	Q175219
534	Q175220

◆ This protective cap covers the unused output bore for single extension assemblies. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

Double Output Shaft to Single Extension Inch Dimensions

Series	Accessory Kit Catalog No.
518	Q175221
520	Q175222
525	Q175223
534	Q175224

NOTE: Shaft dimensions are in inches. These shafts will only fit into reducers with inch dimensioned output bores.

Quadro Aluminum Worm Gear Reducer Accessories

Double Reduction Adapter Kits*

Series	Accessory Kit Catalog No.	Primary Unit Size	Secondary Unit Quill Size
518	Q175225	518	0.625
520	Q175225	518	0.625
525	Q175226	518	0.875
534	Q175227	518	1.125

* Kits are for reducer styles with NEMA input and inch shaft dimensions.

Motorized C-Face Quill Input Bushing Kit (inches)

Frame Conversion	Input Quill Bore Size (inch)	Accessory Kit Catalog No.
180TC to 140TC	1to1/8 to 7/8	Q175230
180TC to 56C	1to1/8 to 5/8	Q175231
140TC to 56C	7/8 to 5/8	Q175232

NOTE: Bushing reduces the bore size of input quill to accommodate a smaller motor shaft diameter. The application may also require a different input flange size. Bushings are not intended to be used in ouput bores.

Motorized C-Face Quill Input Bushing Kit (metric)

Frame Conversion	Input Quill Bore Size (mm)	Accessory Kit Catalog No.
D63 to D56	11 to 9	Q175259
D71 to D63	14 to 11	Q175251
D71 to D56	14 to 9	Q175252
D80 to D71	19 to 14	Q175253
D80 to D63	19 to 11	Q175254
D90 to D80	24 to 19	Q175255
D90 to D71	24 to 14	Q175256
DF100/112 to D90	28 to 24	Q175257
DF100/112 to D80	28 to 19	Q175258

NOTE: Bushing reduces the bore size of input quill to accommodate a smaller motor shaft diameter. The application may also require a different input flange size. Bushings are not intended to be used in ouput bores.

Double Output Shaft to Single Extension Metric Dimensions

Series	Accessory Kit Catalog No.
518	Q175246
520	Q175247
525	Q175248
534	Q175249

NOTE: Shaft dimensions are in millimeters. These shafts will only fit into reducers with metric dimensioned output bores.



Style R – Reaction Arm

Series	Accessory Kit Catalog No.
518	Q175201
520	Q175202
525	Q175203
534	Q175204

Notes

LeCENTRIC™

Model Number System

P & R Series • Helical-Coaxial

Grove Gear LeCENTRIC™ Helical-Coaxial Model Number System

The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order GEAR+MOTOR™, simply specify the reducer, motor catalog numbers and "GEAR+MOTOR™".

Type

P - Aluminum Alloy Helical-Coaxial Reducer
R - Cast Iron Helical Coaxial Reducer

Style

BASIC STYLES
BQ - Base Mount with Quill Input
FQ - Output Flange Mount with Quill Input
BN - Base Mount with Solid Input Shaft
FN - Output Flange Mount with Solid Input Shaft

Size

Size	Housing Construction
717	Aluminum
727	Aluminum
747	Aluminum
757	Aluminum
767	Cast Iron
777	Cast Iron
787	Cast Iron
797	Cast Iron

Number of Gear Reductions

2 Double Reduction
3 Triple Reduction

Ratio

See rating tables for available ratios.

Motor Frame Codes

M5	56C
M7	143-145TC
M9	182-184TC
M11	213-215TC
M13	254-256TC
NM	Non-Motorized

Mounting Accessories

LeCENTRIC™ 700 Series
B1 - B9 = Base Mount Options
F1 - F4 = Flange Mount Options

Mounting Position

See page 407 for mounting position. B3 is assigned unless noted.

Sample Model Numbers

Aluminum, size 727 triple reduction, base mount unit with quill input, 38.40:1 ratio, 56C motor frame.

P	BQ	727	3	–	38.40	–	M5	–	B1	–	B3
Type	Style	Size	Reduction		Ratio		Motor Frame		Mounting Accessories		Mounting

Cast iron, size 777 double reduction, base mount unit with solid input shaft, 62.63:1 ratio, mounting vertical down.

R	BN	777	2	–	62.63	–	B2	–	V5
Type	Style	Size	Reduction		Ratio		Mounting Accessories		Mounting

SPECIFY REDUCER MOUNTING POSITION AT TIME OF ORDER. REFER TO PAGE 407 FOR POSSIBLE MOUNTING POSITIONS. LeCENTRIC™ REDUCERS WILL BE FACTORY FILLED WITH OIL FOR POSITION B3 UNLESS OTHERWISE SPECIFIED.

Any of the preferred stock 700 Series reducers are available on a quick shipment basis, assembled with an interchange base or output flange of your choice. Output flanges are listed on page 410. Interchange bases are listed on pages 408-409

START	CHOOSE		
	Base Mount	OR	Flange Mount
Select Basic Reducer Double or Triple Reduction			
SEE MAX RATINGS p. 380-396	SEE INTERCHANGE BASE p. 408-409		SEE OUTPUT FLANGE p. 410
			
			

"How To Use" Maximum Rating Tables

P & R Series • Helical-Coaxial • Aluminum & Cast Iron Case • 1750 Input RPM

Maximum Rating Tables for Double and Triple Reduction Gear Reducers start on page 5. Selection of the appropriate gear reducer can be made using these tables.

BEFORE YOU START:
Identify the Service Factor of the application.

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style chart shown on page 379. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 381.

5 Select motor frame size if reducer is to have a motorized input.

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (717, 727, 747, 757, etc.).

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity shown in the table. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

6 Identify the catalog number of the reducer by continuing to the right. See page 378 for detailed information on building an exact catalog number. The XX suffix will be replaced with optional Mod-Squad codes as detailed on page 378.

7 Verify physical dimensions using the dimensional drawings shown on pages 397-404.

8 Determine reducer mounting position from page 407.

LeCENTRIC

Double Reduction
Maximum Rating Tables
P717 Series • Helical - Inline
Aluminum Case • 1750 Input RPM




P7172 • DOUBLE REDUCTION					NON-MOTORIZED	MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
503	602	5.00	3.48	204	P7172045.XX	56C 143-5TC	P7172001.XX P7172023.XX
405	602	4.03	4.32	216	P7172046.XX	56C 143-5TC	P7172002.XX P7172024.XX
[illegible]	602	2.80	5.50	230	P7172047.XX	56C 143-5TC	P7172003.XX P7172025.XX
[illegible]	602	2.74	6.36	250	P7172048.XX	56C 143-5TC	P7172004.XX P7172026.XX
[illegible]	602	2.40	7.26	260	P7172049.XX	56C 143-5TC	P7172005.XX P7172027.XX
[illegible]	602	2.21	7.89	266	P7172050.XX	56C 143-5TC	P7172006.XX P7172028.XX
[illegible]	798	2.30	10.04	284	P7172052.XX	56C 143-5TC	
[illegible]	798	1.98	11.64	293	P7172053.XX	56C 143-5TC	
[illegible]	798	1.74	13.26	305	P7172054.XX	56C 143-5TC	
[illegible]	798	1.50	15.37	321	P7172055.XX	56C 143-5TC	
[illegible]	798	1.40	16.20	335	P7172056.XX	56C 143-5TC	P7172012.XX P7172034.XX
[illegible]	798	1.21	18.80	350	P7172057.XX	56C 143-5TC	P7172013.XX P7172035.XX
[illegible]	[illegible]	[illegible]	21.54	374	P7172058.XX	56C 143-5TC	P7172014.XX P7172036.XX
[illegible]	[illegible]	[illegible]	22.26	375	P7172059.XX	56C 143-5TC	P7172015.XX P7172037.XX

Double Reduction
Maximum Rating Tables
P717 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM





P7172 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
498	602	5.00	3.52	204	P7172045.XX	56C 143-5TC	P7172001.XX P7172023.XX
401	602	4.03	4.37	216	P7172046.XX	56C 143-5TC	P7172002.XX P7172024.XX
315	602	2.80	5.56	230	P7172047.XX	56C 143-5TC	P7172003.XX P7172025.XX
275	602	2.74	6.36	250	P7172048.XX	56C 143-5TC	P7172004.XX P7172026.XX
239	602	2.40	7.33	260	P7172049.XX	56C 143-5TC	P7172005.XX P7172027.XX
222	602	2.21	7.89	266	P7172050.XX	56C 143-5TC	P7172006.XX P7172028.XX
174	798	2.30	10.06	284	P7172052.XX	56C 143-5TC	P7172008.XX P7172030.XX
150	798	1.98	11.66	293	P7172053.XX	56C 143-5TC	P7172009.XX P7172031.XX
132	798	1.74	13.26	305	P7172054.XX	56C 143-5TC	P7172010.XX P7172032.XX
114	798	1.50	15.37	321	P7172055.XX	56C 143-5TC	P7172011.XX P7172033.XX
108	798	1.40	16.20	335	P7172056.XX	56C 143-5TC	P7172012.XX P7172034.XX
93	798	1.21	18.78	350	P7172057.XX	56C 143-5TC	P7172013.XX P7172035.XX
81	798	1.07	21.54	374	P7172058.XX	56C 143-5TC	P7172014.XX P7172036.XX
79	798	1.04	22.29	375	P7172059.XX	56C 143-5TC	P7172015.XX P7172037.XX
67	798	0.86	26.31	420	P7172060.XX	56C	P7172016.XX
60	798	0.79	29.40	435	P7172061.XX	56C	P7172017.XX
49	798	0.63	35.91	470	P7172062.XX	56C	P7172018.XX
46	798	0.60	38.37	478	P7172063.XX	56C	P7172019.XX
37	798	0.48	46.87	507	P7172064.XX	56C	P7172020.XX
35	798	0.46	50.67	510	P7172065.XX	56C	P7172021.XX
28	798	0.37	61.89	532	P7172066.XX	56C	P7172022.XX

* Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC

Triple Reduction
Maximum Rating Tables
P717 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM





P7173 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
52	798	0.71	33.85	459	P7173017.XX	56C	P7173001.XX
46	798	0.62	38.40	478	P7173018.XX	56C	P7173002.XX
40	798	0.55	43.69	495	P7173019.XX	56C	P7173003.XX
35	798	0.47	50.64	510	P7173020.XX	56C	P7173004.XX
33	798	0.44	53.36	520	P7173021.XX	56C	P7173005.XX
29	798	0.39	61.21	525	P7173022.XX	56C	P7173006.XX
28	798	0.38	61.85	532	P7173023.XX	56C	P7173007.XX
25	798	0.34	70.95	540	P7173024.XX	56C	P7173008.XX
24	798	0.32	73.43	540	P7173025.XX	56C	P7173009.XX
23	798	0.31	74.77	540	P7173026.XX	56C	P7173010.XX
20	798	0.27	86.66	540	P7173027.XX	56C	P7173011.XX
18	798	0.25	96.85	540	P7173028.XX	56C	P7173012.XX
17	798	0.23	102.89	540	P7173029.XX	56C	P7173013.XX
14	798	0.20	126.40	540	P7173030.XX	56C	P7173014.XX
13	798	0.18	135.69	540	P7173031.XX	56C	P7173015.XX
11	798	0.14	165.74	540	P7173032.XX	56C	P7173016.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Double Reduction
Maximum Rating Tables
P727 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM





P7272 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
498	708	5.88	3.52	268	P7272045.XX	56C 143-5TC	P7272001.XX P7272023.XX
401	775	5.19	4.37	289	P7272046.XX	56C 143-5TC	P7272002.XX P7272024.XX
315	887	4.67	5.56	350	P7272047.XX	56C 143-5TC	P7272003.XX P7272025.XX
275	949	4.32	6.36	376	P7272048.XX	56C 143-5TC	P7272004.XX P7272026.XX
239	1065	4.24	7.33	391	P7272049.XX	56C 143-5TC	P7272005.XX P7272027.XX
222	1065	3.90	7.89	400	P7272050.XX	56C 143-5TC	P7272006.XX P7272028.XX
174	1190	3.43	10.06	420	P7272052.XX	56C 143-5TC	P7272008.XX P7272030.XX
150	1190	2.96	11.66	445	P7272053.XX	56C 143-5TC	P7272009.XX P7272031.XX
132	1190	2.60	13.26	476	P7272054.XX	56C 143-5TC	P7272010.XX P7272032.XX
114	1190	2.24	15.37	508	P7272055.XX	56C 143-5TC	P7272011.XX P7272033.XX
108	1158	2.03	16.20	520	P7272056.XX	56C 143-5TC	P7272012.XX P7272034.XX
93	1158	1.75	18.78	535	P7272057.XX	56C 143-5TC	P7272013.XX P7272035.XX
81	1190	1.60	21.54	562	P7272058.XX	56C 143-5TC	P7272014.XX P7272036.XX
79	1190	1.55	22.29	562	P7272059.XX	56C 143-5TC	P7272015.XX P7272037.XX
67	1158	1.25	26.31	615	P7272060.XX	56C 143-5TC	P7272016.XX P7272038.XX
60	1190	1.17	29.40	629	P7272061.XX	56C 143-5TC	P7272017.XX P7272039.XX
49	1158	0.92	35.91	660	P7272062.XX	56C	P7272018.XX
46	1127	0.85	38.37	663	P7272063.XX	56C	P7272019.XX
37	1065	0.65	46.87	674	P7272064.XX	56C	P7272020.XX
35	1127	0.64	50.67	674	P7272065.XX	56C	P7272021.XX
28	1065	0.49	61.89	674	P7272066.XX	56C	P7272022.XX

* Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC

Triple Reduction
Maximum Rating Tables
P727 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM




P7273 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
52	1189	1.06	33.85	645	P7273017.XX	56C	P7273001.XX
46	1118	0.87	38.40	663	P7273018.XX	56C	P7273002.XX
40	1189	0.81	43.69	674	P7273019.XX	56C	P7273003.XX
35	1189	0.70	50.64	674	P7273020.XX	56C	P7273004.XX
33	1162	0.64	53.36	674	P7273021.XX	56C	P7273005.XX
29	1189	0.58	61.21	674	P7273022.XX	56C	P7273006.XX
28	1162	0.55	61.85	674	P7273023.XX	56C	P7273007.XX
25	1189	0.50	70.95	674	P7273024.XX	56C	P7273008.XX
24	1118	0.46	73.43	674	P7273025.XX	56C	P7273009.XX
23	1162	0.46	74.77	674	P7273026.XX	56C	P7273010.XX
20	1162	0.39	86.66	674	P7273027.XX	56C	P7273011.XX
18	1189	0.37	96.85	674	P7273028.XX	56C	P7273012.XX
17	1171	0.34	102.89	674	P7273029.XX	56C	P7273013.XX
14	1162	0.29	126.40	674	P7273030.XX	56C	P7273014.XX
13	1189	0.26	135.69	674	P7273031.XX	56C	P7273015.XX
11	1162	0.21	165.74	674	P7273032.XX	56C	P7273016.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Double Reduction
Maximum Rating Tables
P747 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM





P7472 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
485	1473	11.80	3.61	450	P7472058.XX	143-5TC 182-4TC	P7472020.XX P7472039.XX
414	1792	12.27	4.23	474	P7472059.XX	143-5TC 182-4TC	P7472021.XX P7472040.XX
349	2200	12.69	5.01	491	P7472060.XX	143-5TC 182-4TC	P7472022.XX P7472041.XX
288	2200	10.49	6.07	522	P7472061.XX	143-5TC 182-4TC	P7472023.XX P7472042.XX
257	2404	10.22	6.81	540	P7472062.XX	143-5TC 182-4TC	P7472024.XX P7472043.XX
220	2404	8.73	7.96	579	P7472064.XX	143-5TC 182-4TC	P7472026.XX P7472045.XX
185	2502	7.66	9.45	615	P7472065.XX	143-5TC 182-4TC	P7472027.XX P7472046.XX
153	2600	6.58	11.43	658	P7472066.XX	143-5TC 182-4TC	P7472028.XX P7472047.XX
123	2300	4.68	14.21	693	P7472067.XX	143-5TC 182-4TC	P7472029.XX P7472048.XX
105	2502	4.36	16.62	711	P7472068.XX	56C 143-5TC 182-4TC	P7472011.XX P7472030.XX P7472049.XX
87	2502	3.60	20.10	780	P7472069.XX	56C 143-5TC 182-4TC	P7472012.XX P7472031.XX P7472050.XX
70	2300	2.66	24.98	877	P7472070.XX	56C 143-5TC 182-4TC	P7472013.XX P7472032.XX P7472051.XX
60	2502	2.46	29.41	900	P7472071.XX	56C 143-5TC	P7472014.XX P7472033.XX
49	2502	2.03	35.58	922	P7472072.XX	56C 143-5TC	P7472015.XX P7472034.XX
43	2404	1.72	40.50	988	P7472073.XX	56C 143-5TC	P7472016.XX P7472035.XX
40	2300	1.50	44.23	1012	P7472074.XX	56C 143-5TC	P7472017.XX P7472036.XX
36	2404	1.42	49.00	1028	P7472075.XX	56C 143-5TC	P7472018.XX P7472037.XX
29	2200	1.04	60.90	1050	P7472076.XX	56C 143-5TC	P7472019.XX P7472038.XX

* Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC

Triple Reduction
Maximum Rating Tables
P747 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM




P7473 • TRIPLE REDUCTION

					NON-MOTORIZED	MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
52	2396	2.10	34.01	918	**P7473045.XX**	56C 143-5TC	**P7473001.XX P7473023.XX**
44	2396	1.80	39.79	988	**P7473046.XX**	56C 143-5TC	**P7473002.XX P7473024.XX**
37	2396	1.51	47.22	1028	**P7473047.XX**	56C 143-5TC	**P7473003.XX P7473025.XX**
32	2396	1.31	54.73	1041	**P7473048.XX**	56C 143-5TC	**P7473004.XX P7473026.XX**
31	2396	1.25	57.13	1050	**P7473049.XX**	56C 143-5TC	**P7473005.XX P7473027.XX**
26	2396	1.08	66.22	1075	**P7473050.XX**	56C 143-5TC	**P7473006.XX P7473028.XX**
25	2396	1.01	71.01	1079	**P7473051.XX**	56C 143-5TC	**P7473007.XX P7473029.XX**
23	2396	0.93	76.69	1091	**P7473052.XX**	56C 143-5TC	**P7473008.XX P7473030.XX**
21	2396	0.87	82.30	1091	**P7473053.XX**	56C 143-5TC	**P7473009.XX P7473031.XX**
21	2396	0.86	83.59	1091	**P7473054.XX**	56C 143-5TC	**P7473010.XX P7473032.XX**
19	2396	0.77	92.78	1102	**P7473055.XX**	56C	**P7473011.XX**
17	2396	0.68	104.68	1112	**P7473056.XX**	56C	**P7473012.XX**
15	2396	0.61	117.22	1124	**P7473057.XX**	56C	**P7473013.XX**
14	2396	0.56	126.65	1130	**P7473058.XX**	56C	**P7473014.XX**
13	2396	0.53	136.62	1136	**P7473059.XX**	56C	**P7473015.XX**
12	2396	0.49	145.68	1150	**P7473060.XX**	56C	**P7473016.XX**
11	2396	0.45	157.40	1168	**P7473061.XX**	56C	**P7473017.XX**
11	2396	0.44	165.29	1186	**P7473062.XX**	56C	**P7473018.XX**
9.7	2396	0.39	180.40	1186	**P7473063.XX**	56C	**P7473019.XX**
8.6	2396	0.35	204.12	1186	**P7473064.XX**	56C	**P7473020.XX**
7.8	2396	0.32	224.18	1195	**P7473065.XX**	56C	**P7473021.XX**
6.3	2396	0.26	278.62	1214	**P7473066.XX**	56C	**P7473022.XX**

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Double Reduction
Maximum Rating Tables
P757 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM





P7572 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
485	1651	13.22	3.61	534	P7572134.XX	143-5TC 182-4TC	P7572058.XX P7572096.XX
414	1932	13.23	4.23	566	P7572135.XX	143-5TC 182-4TC	P7572059.XX P7572097.XX
349	2293	13.23	5.01	603	P7572136.XX	143-5TC 182-4TC	P7572060.XX P7572098.XX
288	2774	13.23	6.07	629	P7572137.XX	143-5TC 182-4TC	P7572061.XX P7572099.XX
257	2860	12.15	6.81	646	P7572138.XX	143-5TC 182-4TC	P7572062.XX P7572100.XX
220	3180	11.55	7.96	663	P7572140.XX	143-5TC 182-4TC	P7572064.XX P7572102.XX
185	3000	9.18	9.45	674	P7572141.XX	143-5TC 182-4TC	P7572065.XX P7572103.XX
153	3442	8.71	11.43	778	P7572142.XX	143-5TC 182-4TC	P7572066.XX P7572104.XX
125	3800	7.71	14.00	850	P7572143.XX	143-5TC 182-4TC	P7572067.XX P7572105.XX
105	3800	6.61	16.62	872	P7572144.XX	143-5TC 182-4TC	P7572068.XX P7572106.XX
87	3800	5.47	20.10	900	P7572145.XX	143-5TC 182-4TC	P7572069.XX P7572107.XX
71	3800	4.40	24.61	944	P7572146.XX	143-5TC 182-4TC	P7572070.XX P7572108.XX
60	3000	2.95	29.41	1012	P7572147.XX	56C 143-5TC	P7572033.XX P7572071.XX
49	3000	2.44	35.58	1079	P7572148.XX	56C 143-5TC	P7572034.XX P7572072.XX
43	2567	1.83	40.50	1192	P7572149.XX	56C 143-5TC	P7572035.XX P7572073.XX
40	2800	1.83	44.23	1304	P7572150.XX	56C 143-5TC	P7572036.XX P7572074.XX
36	2777	1.64	49.00	1330	P7572151.XX	56C 143-5TC	P7572037.XX P7572075.XX
29	2800	1.33	60.90	1367	P7572152.XX	56C 143-5TC	P7572038.XX P7572076.XX

* Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
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FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC

Triple Reduction
Maximum Rating Tables
P757 Series • Helical-Coaxial • Aluminum Case • 1750 Input RPM





P7573 • TRIPLE REDUCTION

					NON-MOTORIZED	MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
52	3372	2.96	34.01	1060	**P7573111.XX**	56C 143-5TC	**P7573023.XX P7573067.XX**
44	3372	2.53	39.79	1192	**P7573112.XX**	56C 143-5TC	**P7573024.XX P7573068.XX**
37	3372	2.13	47.22	1330	**P7573113.XX**	56C 143-5TC	**P7573025.XX P7573069.XX**
32	3372	1.84	54.73	1354	**P7573114.XX**	56C 143-5TC	**P7573026.XX P7573070.XX**
31	3372	1.76	57.13	1354	**P7573115.XX**	56C 143-5TC	**P7573027.XX P7573071.XX**
26	3372	1.52	66.22	1398	**P7573116.XX**	56C 143-5TC	**P7573028.XX P7573072.XX**
25	3372	1.42	71.01	1398	**P7573117.XX**	56C 143-5TC	**P7573029.XX P7573073.XX**
23	3372	1.31	76.69	1414	**P7573118.XX**	56C 143-5TC	**P7573030.XX P7573074.XX**
21	3372	1.22	82.30	1422	**P7573119.XX**	56C 143-5TC	**P7573031.XX P7573075.XX**
21	3372	1.20	83.59	1422	**P7573120.XX**	56C 143-5TC	**P7573032.XX P7573076.XX**
19	3372	1.09	92.78	1430	**P7573121.XX**	56C 143-5TC	**P7573033.XX P7573077.XX**
17	3372	0.96	104.68	1454	**P7573122.XX**	56C 143-5TC	**P7573034.XX P7573078.XX**
15	3372	0.86	117.22	1461	**P7573123.XX**	56C 143-5TC	**P7573035.XX P7573079.XX**
14	3372	0.79	126.65	1468	**P7573124.XX**	56C	**P7573036.XX**
13	3372	0.74	135.74	1472	**P7573125.XX**	56C	**P7573037.XX**
12	3372	0.69	145.68	1475	**P7573126.XX**	56C	**P7573038.XX**
11	3372	0.64	157.40	1492	**P7573127.XX**	56C	**P7573039.XX**
11	3372	0.61	165.29	1492	**P7573128.XX**	56C	**P7573040.XX**
9.4	3372	0.54	185.29	1498	**P7573129.XX**	56C	**P7573041.XX**
8.5	3372	0.49	205.43	1502	**P7573130.XX**	56C	**P7573042.XX**
7.8	3372	0.45	224.18	1510	**P7573131.XX**	56C	**P7573043.XX**
6.3	3372	0.36	278.62	1510	**P7573132.XX**	56C	**P7573044.XX**

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Double Reduction Maximum Rating Tables

R767 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM





R7672 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
266	3363	14.80	6.57	825	R7672069.XX	56C 143-5TC 182-4TC 213-5TC	R7672001.XX R7672018.XX R7672035.XX R7672052.XX
232	3452	13.21	7.56	910	R7672070.XX	56C 143-5TC 182-4TC 213-5TC	R7672002.XX R7672019.XX R7672036.XX R7672053.XX
198	3629	11.90	8.82	1014	R7672071.XX	56C 143-5TC 182-4TC 213-5TC	R7672003.XX R7672020.XX R7672037.XX R7672054.XX
141	5133	11.99	12.39	1077	R7672072.XX	56C 143-5TC 182-4TC 213-5TC	R7672004.XX R7672021.XX R7672038.XX R7672055.XX
123	5310	10.79	14.24	1155	R7672073.XX	56C 143-5TC 182-4TC 213-5TC	R7672005.XX R7672022.XX R7672039.XX R7672056.XX
104	5886	10.16	16.75	1210	R7672074.XX	56C 143-5TC 182-4TC 213-5TC	R7672006.XX R7672023.XX R7672040.XX R7672057.XX
91	5974	8.97	19.25	1243	R7672075.XX	56C 143-5TC 182-4TC 213-5TC	R7672007.XX R7672024.XX R7672041.XX R7672058.XX
80	5974	7.93	21.78	1326	R7672076.XX	56C 143-5TC 182-4TC 213-5TC	R7672008.XX R7672025.XX R7672042.XX R7672059.XX
70	5974	6.90	25.04	1461	R7672077.XX	56C 143-5TC 182-4TC 213-5TC	R7672009.XX R7672026.XX R7672043.XX R7672060.XX
60	5974	5.91	29.23	1521	R7672078.XX	56C 143-5TC 182-4TC 213-5TC	R7672010.XX R7672027.XX R7672044.XX R7672061.XX
57	5974	5.64	30.65	1539	R7672079.XX	56C 143-5TC 182-4TC 213-5TC	R7672011.XX R7672028.XX R7672045.XX R7672062.XX
48.9	5974	4.83	35.78	1587	R7672080.XX	56C 143-5TC 182-4TC 213-5TC	R7672012.XX R7672029.XX R7672046.XX R7672063.XX
45.4	5133	3.85	38.55	1608	R7672081.XX	56C 143-5TC 182-4TC 213-5TC	R7672013.XX R7672030.XX R7672047.XX R7672064.XX
39.5	5886	3.84	44.32	1648	R7672082.XX	56C 143-5TC 182-4TC 213-5TC	R7672014.XX R7672031.XX R7672048.XX R7672065.XX
33.8	5974	3.34	51.74	1735	R7672083.XX	56C 143-5TC 182-4TC 213-5TC	R7672015.XX R7672032.XX R7672049.XX R7672066.XX
28.7	4248	2.01	61.03	1813	R7672084.XX	56C 143-5TC 182-4TC 213-5TC	R7672016.XX R7672033.XX R7672050.XX R7672067.XX
24.6	4956	2.01	71.25	1876	R7672085.XX	56C 143-5TC 182-4TC 213-5TC	R7672017.XX R7672034.XX R7672051.XX R7672068.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

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RPM =	Revolutions Per Minute
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FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC™

Triple Reduction
Maximum Rating Tables
R767 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM





R7673 • TRIPLE REDUCTION

					NON-MOTORIZED	MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
28.3	5974	2.85	61.89	1819	R7673039.XX	56C 143-5TC	R7673001.XX R7673020.XX
24.6	5974	2.48	71.16	1876	R7673040.XX	56C 143-5TC	R7673002.XX R7673021.XX
21.2	5974	2.14	82.48	1928	R7673041.XX	56C 143-5TC	R7673003.XX R7673022.XX
18.2	5974	1.83	96.29	1974	R7673042.XX	56C 143-5TC	R7673004.XX R7673023.XX
17.4	5974	1.76	100.51	1986	R7673043.XX	56C 143-5TC	R7673005.XX R7673024.XX
15.1	5974	1.53	115.56	2021	R7673044.XX	56C 143-5TC	R7673006.XX R7673025.XX
13.9	5886	1.38	125.96	2023	R7673045.XX	56C 143-5TC	R7673007.XX R7673026.XX
13	5974	1.31	134.91	2023	R7673046.XX	56C 143-5TC	R7673008.XX R7673027.XX
11.9	5974	1.20	147.05	2023	R7673047.XX	56C 143-5TC	R7673009.XX R7673028.XX
10.3	5974	1.04	170.44	2023	R7673048.XX	56C 143-5TC	R7673010.XX R7673029.XX
9.5	5974	0.96	184.15	2023	R7673049.XX	56C 143-5TC	R7673011.XX R7673030.XX
8.5	5974	0.86	205.87	2023	R7673050.XX	56C 143-5TC	R7673012.XX R7673031.XX
7.3	5974	0.73	240.34	2023	R7673051.XX	56C 143-5TC	R7673013.XX R7673032.XX
6.3	5886	0.62	279.22	2023	R7673052.XX	56C 143-5TC	R7673014.XX R7673033.XX
5.4	5974	0.54	325.97	2023	R7673053.XX	56C 143-5TC	R7673015.XX R7673034.XX
4.8	5886	0.48	364.41	2023	R7673054.XX	56C 143-5TC	R7673016.XX R7673035.XX
4.1	5974	0.41	425.43	2023	R7673055.XX	56C 143-5TC	R7673017.XX R7673036.XX
3.6	5886	0.36	481.19	2023	R7673056.XX	56C 143-5TC	R7673018.XX R7673037.XX
3.1	5974	0.31	561.76	2023	R7673057.XX	56C 143-5TC	R7673019.XX R7673038.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

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FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Double Reduction Maximum Rating Tables

R777 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM





R7772 • DOUBLE REDUCTION

					NON-MOTORIZED	MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
218	4602	16.60	8.02	1645	R7772069.XX	56C 143-5TC 182-4TC 213-5TC	R7772001.XX R7772018.XX R7772035.XX R7772052.XX
191	5222	16.45	9.18	1702	R7772070.XX	56C 143-5TC 182-4TC 213-5TC	R7772002.XX R7772019.XX R7772036.XX R7772053.XX
164	6019	16.30	10.68	1753	R7772071.XX	56C 143-5TC 182-4TC 213-5TC	R7772003.XX R7772020.XX R7772037.XX R7772054.XX
116	6859	13.13	15.11	2048	R7772072.XX	56C 143-5TC 182-4TC 213-5TC	R7772004.XX R7772021.XX R7772038.XX R7772055.XX
101	7833	13.09	17.3	2145	R7772073.XX	56C 143-5TC 182-4TC 213-5TC	R7772005.XX R7772022.XX R7772039.XX R7772056.XX
87	7966	11.45	20.13	2235	R7772074.XX	56C 143-5TC 182-4TC 213-5TC	R7772006.XX R7772023.XX R7772040.XX R7772057.XX
75	7966	9.85	23.39	2398	R7772075.XX	56C 143-5TC 182-4TC 213-5TC	R7772007.XX R7772024.XX R7772041.XX R7772058.XX
64	7966	8.47	27.21	2563	R7772076.XX	56C 143-5TC 182-4TC 213-5TC	R7772008.XX R7772025.XX R7772042.XX R7772059.XX
58	7966	7.57	30.42	2653	R7772077.XX	56C 143-5TC 182-4TC 213-5TC	R7772009.XX R7772026.XX R7772043.XX R7772060.XX
49.5	7966	6.51	35.38	2780	R7772078.XX	56C 143-5TC 182-4TC 213-5TC	R7772010.XX R7772027.XX R7772044.XX R7772061.XX
47	7921	6.15	37.24	2818	R7772079.XX	56C 143-5TC 182-4TC 213-5TC	R7772011.XX R7772028.XX R7772045.XX R7772062.XX
40.4	7966	5.32	43.31	2917	R7772080.XX	56C 143-5TC 182-4TC 213-5TC	R7772012.XX R7772029.XX R7772046.XX R7772063.XX
37.2	6240	3.84	47.02	2973	R7772081.XX	56C 143-5TC 182-4TC 213-5TC	R7772013.XX R7772030.XX R7772047.XX R7772064.XX
32.5	7169	3.85	53.85	3057	R7772082.XX	56C 143-5TC 182-4TC 213-5TC	R7772014.XX R7772031.XX R7772048.XX R7772065.XX
27.9	7966	3.68	62.63	3140	R7772083.XX	56C 143-5TC 182-4TC 213-5TC	R7772015.XX R7772032.XX R7772049.XX R7772066.XX
23.6	5178	2.02	74.16	3217	R7772084.XX	56C 143-5TC 182-4TC 213-5TC	R7772016.XX R7772033.XX R7772050.XX R7772067.XX
20.3	6019	2.02	86.25	3276	R7772085.XX	56C 143-5TC 182-4TC 213-5TC	R7772017.XX R7772034.XX R7772051.XX R7772068.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

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SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC™

Triple Reduction
Maximum Rating Tables
R777 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM





R7773 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
23.2	7302	2.86	75.5	3224	R7773037.XX	56C 143-5TC	R7773001.XX R7773019.XX
20.2	7966	2.72	86.47	3278	R7773038.XX	56C 143-5TC	R7773002.XX R7773020.XX
17.5	7966	2.35	100.22	3327	R7773039.XX	56C 143-5TC	R7773003.XX R7773021.XX
15	7966	2.02	116.56	3372	R7773040.XX	56C 143-5TC	R7773004.XX R7773022.XX
12.8	7966	1.72	136.82	3372	R7773041.XX	56C 143-5TC	R7773005.XX R7773023.XX
11.4	7169	1.38	153.05	3372	R7773042.XX	56C 143-5TC	R7773006.XX R7773024.XX
10.7	7966	1.44	163.31	3372	R7773043.XX	56C 143-5TC	R7773007.XX R7773025.XX
9.8	7966	1.32	178.01	3372	R7773044.XX	56C 143-5TC	R7773008.XX R7773026.XX
9.1	7966	1.23	191.67	3372	R7773045.XX	56C 143-5TC	R7773009.XX R7773027.XX
8.5	7966	1.14	206.32	3372	R7773046.XX	56C 143-5TC	R7773010.XX R7773028.XX
7.9	7966	1.06	222.92	3372	R7773047.XX	56C 143-5TC	R7773011.XX R7773029.XX
7.2	7966	0.97	242.18	3372	R7773048.XX	56C 143-5TC	R7773012.XX R7773030.XX
7	7966	0.94	250.15	3372	R7773049.XX	56C 143-5TC	R7773013.XX R7773031.XX
6.1	7966	0.81	289.08	3372	R7773050.XX	56C 143-5TC	R7773014.XX R7773032.XX
5.3	7877	0.70	330.31	3372	R7773051.XX	56C 143-5TC	R7773015.XX R7773033.XX
4.4	7966	0.60	394.59	3372	R7773052.XX	56C 143-5TC	R7773016.XX R7773034.XX
3.4	7966	0.46	514.99	3372	R7773053.XX	56C 143-5TC	R7773017.XX R7773035.XX
2.6	7966	0.35	680.03	3372	R7773054.XX	56C 143-5TC	R7773018.XX R7773036.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Double Reduction Maximum Rating Tables

R787 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM • Integral Base



R7872 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number***	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
396	6196	40.54	4.42	2023	CONTACT FACTORY	182-4TC 213-5TC 254-6TC	R7872001.XX R7872016.XX R7872031.XX
330	6196	33.81	5.3	2023		182-4TC 213-5TC 254-6TC	R7872002.XX R7872017.XX R7872032.XX
274	7081	32.09	6.38	2140		182-4TC 213-5TC 254-6TC	R7872003.XX R7872018.XX R7872033.XX
210	7081	24.58	8.33	2428		182-4TC 213-5TC 254-6TC	R7872004.XX R7872019.XX R7872034.XX
175	7966	23.06	9.99	2566		182-4TC 213-5TC 254-6TC	R7872005.XX R7872020.XX R7872035.XX
155	9736	25.00	11.26	2641		182-4TC 213-5TC 254-6TC	R7872006.XX R7872021.XX R7872036.XX
146	10621	25.54	12.03	2675		182-4TC 213-5TC 254-6TC	R7872007.XX R7872022.XX R7872037.XX
130	12391	26.54	13.5	2810		182-4TC 213-5TC 254-6TC	R7872008.XX R7872023.XX R7872038.XX
119	13276	26.22	14.65	2929		182-4TC 213-5TC 254-6TC	R7872009.XX R7872024.XX R7872039.XX
108	13276	23.61	16.26	2999		182-4TC 213-5TC 254-6TC	R7872010.XX R7872025.XX R7872040.XX
100	13276	21.86	17.56	3051		182-4TC 213-5TC 254-6TC	R7872011.XX R7872026.XX R7872041.XX
81	14161	19.05	21.5	3207		182-4TC 213-5TC 254-6TC	R7872012.XX R7872027.XX R7872042.XX
68	14161	15.82	25.88	3387		182-4TC 213-5TC 254-6TC	R7872013.XX R7872028.XX R7872043.XX
56	12922	12.02	31.09	3477		182-4TC 213-5TC 254-6TC	R7872014.XX R7872029.XX R7872044.XX
46.8	14161	10.94	37.43	3546		182-4TC 213-5TC 254-6TC	R7872015.XX R7872030.XX R7872045.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.
***Contact factory for non-motorized reducers

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC™

Triple Reduction
Maximum Rating Tables
R787 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM • Integral Base





R7873 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
40.7	14161	9.72	43.03	3591	R7873053.XX	56C 143-5TC 182-4TC 213-5TC	R7873001.XX R7873014.XX R7873027.XX R7873040.XX
36.1	13719	8.35	48.52	3737	R7873054.XX	56C 143-5TC 182-4TC 213-5TC	R7873002.XX R7873015.XX R7873028.XX R7873041.XX
33.8	14161	8.07	51.81	3819	R7873055.XX	56C 143-5TC 182-4TC 213-5TC	R7873003.XX R7873016.XX R7873029.XX R7873042.XX
30.1	14161	7.19	58.17	3953	R7873056.XX	56C 143-5TC 182-4TC 213-5TC	R7873004.XX R7873017.XX R7873030.XX R7873043.XX
27.7	13719	6.42	63.09	4039	R7873057.XX	56C 143-5TC 182-4TC 213-5TC	R7873005.XX R7873018.XX R7873031.XX R7873044.XX
25	15931	6.72	70.05	4136	R7873058.XX	56C 143-5TC 182-4TC 213-5TC	R7873006.XX R7873019.XX R7873032.XX R7873045.XX
23.1	15931	6.22	75.65	4204	R7873059.XX	56C 143-5TC 182-4TC 213-5TC	R7873007.XX R7873020.XX R7873033.XX R7873046.XX
19.2	15931	5.17	91.09	4344	R7873060.XX	56C 143-5TC 182-4TC 213-5TC	R7873008.XX R7873021.XX R7873034.XX R7873047.XX
15.7	15931	4.22	111.5	4470	R7873061.XX	56C 143-5TC 182-4TC 213-5TC	R7873009.XX R7873022.XX R7873035.XX R7873048.XX
13.1	15931	3.51	133.91	4496	R7873062.XX	56C 143-5TC 182-4TC 213-5TC	R7873010.XX R7873023.XX R7873036.XX R7873049.XX
10.9	15931	2.92	161.24	4496	R7873063.XX	56C 143-5TC 182-4TC 213-5TC	R7873011.XX R7873024.XX R7873037.XX R7873050.XX
9.5	12834	2.06	184.4	4496	R7873064.XX	56C 143-5TC 182-4TC 213-5TC	R7873012.XX R7873025.XX R7873038.XX R7873051.XX
7.9	15489	2.06	222.04	4496	R7873065.XX	56C 143-5TC 182-4TC 213-5TC	R7873013.XX R7873026.XX R7873039.XX R7873052.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Double Reduction
Maximum Rating Tables

R797 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM



R7972 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number***	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
293	8851	42.81	5.98	2363	CONTACT FACTORY	182-4TC 213-5TC 254-6TC	R7972001.XX R7972017.XX R7972033.XX
246	10400	42.36	7.1	2605		182-4TC 213-5TC 254-6TC	R7972002.XX R7972018.XX R7972034.XX
203	11949	40.06	8.63	2828		182-4TC 213-5TC 254-6TC	R7972003.XX R7972019.XX R7972035.XX
155	13276	34.07	11.27	3037		182-4TC 213-5TC 254-6TC	R7972004.XX R7972020.XX R7972036.XX
131	15046	32.52	13.38	3218		182-4TC 213-5TC 254-6TC	R7972005.XX R7972021.XX R7972037.XX
115	16816	31.92	15.24	3397		182-4TC 213-5TC 254-6TC	R7972006.XX R7972022.XX R7972038.XX
108	18587	33.06	16.26	3449		182-4TC 213-5TC 254-6TC	R7972007.XX R7972023.XX R7972039.XX
97	18587	29.71	18.09	3530		182-4TC 213-5TC 254-6TC	R7972008.XX R7972024.XX R7972040.XX
88	18233	26.61	19.82	3596		182-4TC 213-5TC 254-6TC	R7972009.XX R7972025.XX R7972041.XX
80	18587	24.45	21.98	3705		182-4TC 213-5TC 254-6TC	R7972010.XX R7972026.XX R7972042.XX
74	18587	22.85	23.53	3808		182-4TC 213-5TC 254-6TC	R7972011.XX R7972027.XX R7972043.XX
72	17170	20.47	24.25	3843		182-4TC 213-5TC 254-6TC	R7972012.XX R7972028.XX R7972044.XX
61	18587	18.67	28.8	3955		182-4TC 213-5TC 254-6TC	R7972013.XX R7972029.XX R7972045.XX
50	18587	15.36	34.99	4050		182-4TC 213-5TC 254-6TC	R7972014.XX R7972030.XX R7972046.XX
42	17347	12.05	41.64	4118		182-4TC 213-5TC 254-6TC	R7972015.XX R7972031.XX R7972047.XX
34.6	18587	10.62	50.6	4359		182-4TC 213-5TC 254-6TC	R7972016.XX R7972032.XX R7972048.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.
***Contact factory for non-motorized reducers

IN THIS BROCHURE

RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

LeCENTRIC

Triple Reduction
Maximum Rating Tables
R797 Series • Helical-Coaxial • Cast Iron Case • 1750 Input RPM





R7973 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED Basic Reducer Catalog Number**	MOTORIZED QUILL INPUT Motor Frame	MOTORIZED QUILL INPUT Basic Reducer Catalog Number**
36	18587	11.31	48.55	4301	R7973057.XX	56C 143-5TC 182-4TC 213-5TC	R7973001.XX R7973015.XX R7973029.XX R7973043.XX
30.4	18587	9.52	57.64	4533	R7973058.XX	56C 143-5TC 182-4TC 213-5TC	R7973002.XX R7973016.XX R7973030.XX R7973044.XX
26.7	18587	8.36	65.64	4686	R7973059.XX	56C 143-5TC 182-4TC 213-5TC	R7973003.XX R7973017.XX R7973031.XX R7973045.XX
25	18587	7.84	70.04	4757	R7973060.XX	56C 143-5TC 182-4TC 213-5TC	R7973004.XX R7973018.XX R7973032.XX R7973046.XX
22.5	18587	7.04	77.93	4860	R7973061.XX	56C 143-5TC 182-4TC 213-5TC	R7973005.XX R7973019.XX R7973033.XX R7973047.XX
20.5	18587	6.43	85.36	4943	R7973062.XX	56C 143-5TC 182-4TC 213-5TC	R7973006.XX R7973020.XX R7973034.XX R7973048.XX
18.5	18587	5.80	94.7	5026	R7973063.XX	56C 143-5TC 182-4TC 213-5TC	R7973007.XX R7973021.XX R7973035.XX R7973049.XX
17.3	18587	5.42	101.35	5075	R7973064.XX	56C 143-5TC 182-4TC 213-5TC	R7973008.XX R7973022.XX R7973036.XX R7973050.XX
14.2	18587	4.46	123.15	5171	R7973065.XX	56C 143-5TC 182-4TC 213-5TC	R7973009.XX R7973023.XX R7973037.XX R7973051.XX
11.6	18587	3.64	150.73	5171	R7973066.XX	56C 143-5TC 182-4TC 213-5TC	R7973010.XX R7973024.XX R7973038.XX R7973052.XX
9.8	18587	3.06	179.39	5171	R7973067.XX	56C 143-5TC 182-4TC 213-5TC	R7973011.XX R7973025.XX R7973039.XX R7973053.XX
8	18587	2.52	217.98	5171	R7973068.XX	56C 143-5TC 182-4TC 213-5TC	R7973012.XX R7973026.XX R7973040.XX R7973054.XX
7.1	17259	2.06	247.03	5171	R7973069.XX	56C 143-5TC 182-4TC 213-5TC	R7973013.XX R7973027.XX R7973041.XX R7973055.XX
5.8	18587	1.83	300.17	5171	R7973070.XX	56C 143-5TC 182-4TC 213-5TC	R7973014.XX R7973028.XX R7973042.XX R7973056.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS BROCHURE

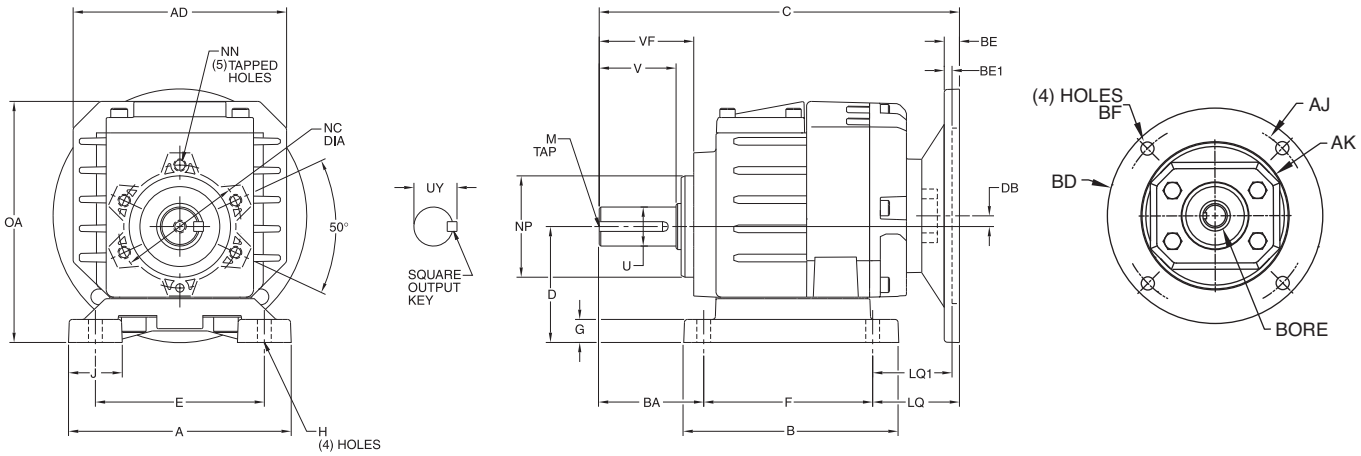
RPM =	Revolutions Per Minute
HP =	Horsepower
TQ =	Torque (lb-in.)
OHL =	Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL =	Thrust Load (lbs.) - Output Shaft

FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 408-410.

SELECT REDUCER MOUNTING POSITION ON PAGE 407

Helical-Coaxial Dimensions

Motorized • Base Mount • Aluminum Case



Motorized Quill Input, Double Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	C		D	DB	E	F	G	H	J	LQ	LQ1	M	
					56/140	180								56/140	180	TAP	DEPTH
P7172	5.71	5.47	5.51	2.28	8.83	NA	2.95	0.27	4.33	4.33	0.59	0.35	1.38	2.23	NA	1/4-20	0.62
P7272	5.71	5.47	6.02	2.95	9.23	NA	3.54	0.27	4.33	5.12	0.79	0.35	1.38	1.16	NA	5/16-18	0.75
P7472	6.69	7.01	7.76	3.54	11.49	12.02	4.53	0.21	5.31	6.50	0.94	0.55	1.65	1.45	1.98	5/16-18	0.75
P7572	6.69	7.95	7.76	3.54	12.20	12.73	4.53	0.61	5.31	6.50	0.94	0.55	1.65	2.16	2.69	5/16-18	0.75

Size	NC	NP	NN		OA	U +0.000/ -0.001	UY	V	VF	Output Key
			TAP	DEPTH						
P7172	3.15	2.60	M8	0.67	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12
P7272	3.15	2.60	M8	0.67	6.71	1.000	1.11	1.97	2.40	1/4 x 1.62
P7472	4.84	4.17	M10	0.71	8.52	1.250	1.36	2.36	2.97	1/4 x 2.00
P7572	4.84	4.17	M10	0.71	8.58	1.250*	1.36	2.36	2.97	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Motorized Quill Input, Triple Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	C	D	DB	E	F	G	H	J	LQ	M	
														TAP	DEPTH
P7173	5.71	5.47	5.51	2.28	9.60	2.95	0.13	4.33	4.33	0.59	0.35	1.38	2.99	1/4-20	0.62
P7273	5.71	5.47	6.02	2.95	10.00	3.54	0.13	4.33	5.12	0.79	0.35	1.38	1.93	5/16-18	0.75
P7473	6.69	7.01	7.76	3.54	11.83	4.53	0.59	5.31	6.50	0.94	0.55	1.65	1.83	5/16-18	0.75
P7573	6.69	7.95	7.76	3.54	12.55	4.53	0.61	5.31	6.50	0.94	0.55	1.65	2.51	5/16-18	0.75

Size	NC	NP	NN		OA	U +0.000/ -0.001	UY	V	VF	Output Key
			TAP	DEPTH						
P7173	3.15	2.60	M8	0.67	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12
P7273	3.15	2.60	M8	0.67	6.71	1.000	1.11	1.97	2.40	1/4 x 1.62
P7473	4.84	4.17	M10	0.71	8.52	1.250	1.36	2.36	2.97	1/4 x 2.00
P7573	4.84	4.17	M10	0.71	8.58	1.250*	1.36	2.36	2.97	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

* 1.375" diameter shaft is available. Contact Factory for availability.

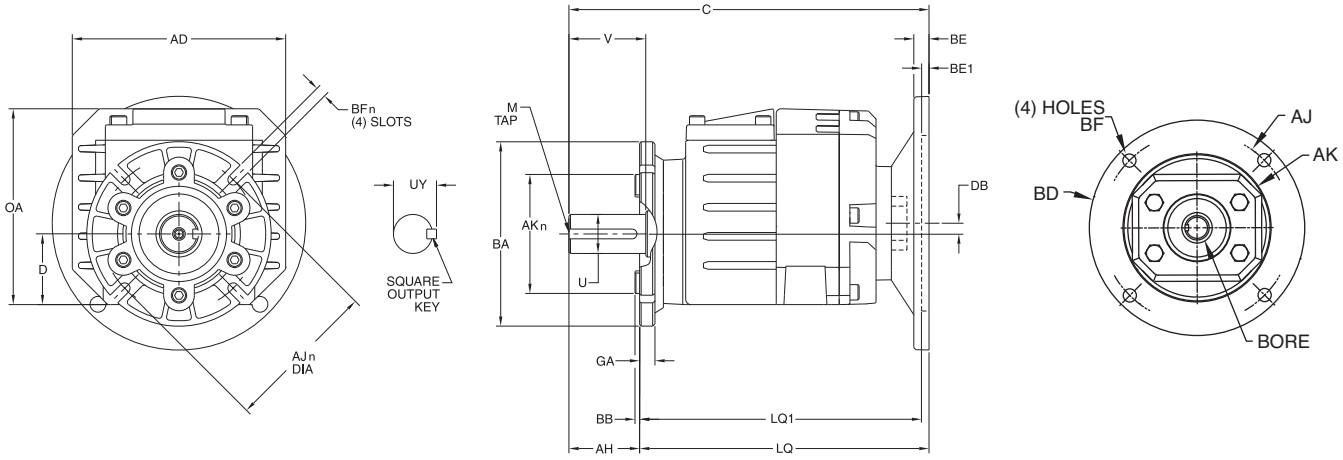
B1 Base Mount is shown. See pages 408-409 for all available interchange bases

For NEMA motor mounting dimensions see page 410.

LeCENTRIC™

Helical-Coaxial Dimensions

Motorized • Flange Mount • Aluminum Case



Motorized Quill Input, Double Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C		D	DB	GA
								56/140	180			
P7172	5.47	1.41	3.94	3.15	4.72	0.12	0.28	8.83	N/A	1.81	0.27	0.39
P7272	5.47	1.79	3.94	3.15	4.72	0.12	0.28	9.23	N/A	1.81	0.27	0.39
P7472	7.01	2.24	5.12	4.33	6.30	0.14	0.43	11.49	12.02	2.76	0.21	0.61
P7572	7.95	2.60	5.12	4.33	6.30	0.14	0.43	12.20	12.73	2.76	0.61	0.61

Size	LQ 56C/140TC	LQ1	M		OA	U +0.000/ -0.001	UY	V	Output Key
			TAP	DEPTH					
P7172	7.42	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12
P7272	7.44	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	1/4 x 1.62
P7472	9.25	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	1/4 x 2.00
P7572	10.00	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Motorized Quill Input, Triple Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C	D	DB	GA
P7173	5.47	1.41	3.94	3.15	4.72	0.12	0.28	9.60	1.81	0.13	0.39
P7273	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.00	1.81	0.13	0.39
P7473	7.01	2.24	5.12	4.33	6.30	0.14	0.43	11.83	2.76	0.59	0.61
P7573	7.95	2.60	5.12	4.33	6.30	0.14	0.43	12.55	2.76	0.61	0.61

Size	LQ 56C/140TC	LQ1	M		OA	U +0.000/ -0.001	UY	V	Output Key
			TAP	DEPTH					
P7173	8.19	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12
P7273	8.21	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	1/4 x 1.62
P7473	9.59	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	1/4 x 2.00
P7573	10.35	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	1/4 x 2.00

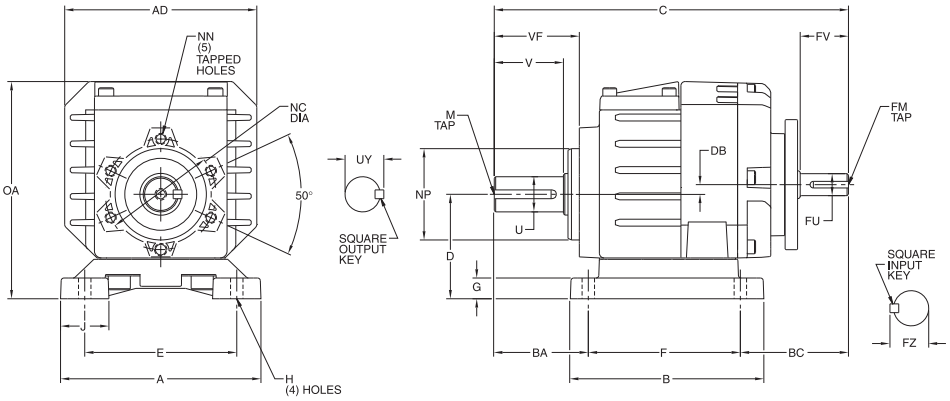
Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

* 1.375" diameter shaft is available. Contact Factory for availability.
n Tolerance of AK on flanges with BA dimension under 6.30" is -0.0014 to -0.0028". Flanges with a BA of 6.30" or larger have a AK tolerance of -0.0017 to -0.0033".

F1 Flange Mount is shown. See page 410 for all available output flanges
For NEMA motor mounting dimensions see page 407.

Helical-Coaxial Dimensions

Non-Motorized • Base Mount • Aluminum Case



Non-Motorized, Double Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	BC	C	D	DB	E	F	FM TAP	FM DEPTH	FU +0.000/ -0.001	FV	FZ	G	H	J
P7172	5.71	5.47	5.51	2.28	3.28	9.88	2.95	0.27	4.33	4.33	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
P7272	5.71	5.47	6.02	2.95	2.20	10.26	3.54	0.27	4.33	5.12	1/4-20	0.62	0.625	1.57	0.70	0.79	0.35	1.38
P7472	6.69	7.01	7.76	3.54	2.96	13.00	4.53	0.21	5.31	6.50	5/16-18	0.75	0.750s	1.97	0.83	0.94	0.55	1.65
P7572	6.69	7.95	7.76	3.54	3.63	13.67	4.53	0.61	5.31	6.50	5/16-18	0.75	0.750s	1.97	0.83	0.94	0.55	1.65

Size	M TAP	M DEPTH	NC	NN TAP	NN DEPTH	NP	OA	U +0.000/ -0.001	UY	V	VF	Input Key	Output Key
P7172	1/4-20	0.62	3.15	M8	0.67	2.60	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12	3/16 x 1.12
P7272	5/16-18	0.75	3.15	M8	0.67	2.60	6.71	1.000	1.11	1.97	2.40	3/16 x 1.12	1/4 x 1.62
P7472	5/16-18	0.75	4.84	M10	0.71	4.17	8.52	1.250	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00
P7572	5/16-18	0.75	4.84	M10	0.71	4.17	8.58	1.250*	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Non-Motorized, Triple Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	BC	C	D	DB	E	F	FM TAP	FM DEPTH	FU +0.000/ -0.001	FV	FZ	G	H	J
P7173	5.71	5.47	5.51	2.28	3.45	10.06	2.95	0.13	4.33	4.33	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
P7273	5.71	5.47	6.02	2.95	2.38	10.44	3.54	0.13	4.33	5.12	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
P7473	6.69	7.01	7.76	3.54	2.88	12.92	4.53	0.59	5.31	6.50	5/16-18	0.75	0.750	1.57	0.83	0.94	0.55	1.65
P7573	6.69	7.95	7.76	3.54	3.56	13.60	4.53	0.61	5.31	6.50	5/16-18	0.75	0.750	1.57	0.83	0.94	0.55	1.65

Size	M TAP	M DEPTH	NC	NN TAP	NN DEPTH	NP	OA	U +0.000/ -0.001	UY	V	VF	Input Key	Output Key
P7173	1/4-20	0.62	3.15	M8	0.67	2.60	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12	3/16 x 1.12
P7273	5/16-18	0.75	3.15	M8	0.67	2.60	6.71	1.000	1.11	1.97	2.40	3/16 x 1.12	1/4 x 1.62
P7473	5/16-18	0.75	4.84	M10	0.71	4.17	8.52	1.250	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00
P7573	5/16-18	0.75	4.84	M10	0.71	4.17	8.58	1.250*	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

* 1.375" diameter shaft is available. Contact Factory for availability.
s 0.875" diameter shaft is available on 2-stage reducers only. Contact factory for availability.

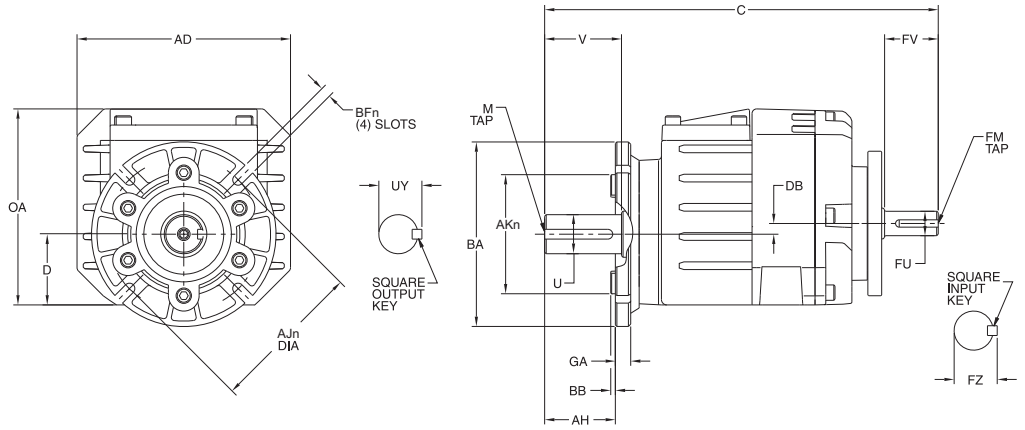
B1 Base Mount is shown. See pages 408-409 for all available interchange bases

For NEMA motor mounting dimensions see page 410.

LeCENTRIC™

Helical-Coaxial Dimensions

Non-Motorized • Flange Mount • Aluminum Case



Non-Motorized, Double Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C	D	DB	FM TAP	FM DEPTH	FU +0.000/ -0.001	FV	FZ
P7172	5.47	1.41	3.94	3.15	4.72	0.12	0.28	9.88	1.81	0.27	1/4-20	0.62	0.625	1.57	0.70
P7272	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.26	1.81	0.27	1/4-20	0.62	0.625	1.57	0.70
P7472	7.01	2.24	5.12	4.33	6.30	0.14	0.43	13.00	2.76	0.21	5/16-18	0.75	0.750s	1.97	0.83
P7572	7.95	2.60	5.12	4.33	6.30	0.14	0.43	13.67	2.76	0.61	5/16-18	0.75	0.750s	1.97	0.83

Size	GA	M TAP	M DEPTH	OA	U +0.000/ -0.001	UY	V	Input Key	Output Key
P7172	0.39	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12	3/16 x 1.12
P7272	0.39	1/4-20	0.62	5.02	1.000	1.11	1.97	3/16 x 1.12	1/4 x 1.62
P7472	0.61	5/16-18	0.75	6.75	1.250	1.36	2.36	3/16 x 1.50	1/4 x 2.00
P7572	0.61	5/16-18	0.75	6.81	1.250*	1.36	2.36	3/16 x 1.50	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Non-Motorized, Triple Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C	D	DB	FM TAP	FM DEPTH	FU +0.000/ -0.001	FV	FZ
P7173	5.47	1.41	3.94	3.15	4.72	0.12	0.28	10.06	1.81	0.13	1/4-20	0.62	0.625	1.57	0.70
P7273	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.44	1.81	0.13	1/4-20	0.62	0.625	1.57	0.70
P7473	7.01	2.24	5.12	4.33	6.30	0.14	0.43	12.92	2.76	0.59	5/16-18	0.75	0.750	1.57	0.83
P7573	7.95	2.60	5.12	4.33	6.30	0.14	0.43	13.60	2.76	0.61	5/16-18	0.75	0.750	1.57	0.83

Size	GA	M TAP	M DEPTH	OA	U +0.000/ -0.001	UY	V	Input Key	Output Key
P7173	0.39	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12	3/16 x 1.12
P7273	0.39	5/16-18	0.75	5.02	1.000	1.11	1.97	3/16 x 1.12	1/4 x 1.62
P7473	0.61	5/16-18	0.75	6.75	1.250	1.36	2.36	3/16 x 1.50	1/4 x 2.00
P7573	0.61	5/16-18	0.75	6.81	1.250*	1.36	2.36	3/16 x 1.50	1/4 x 2.00

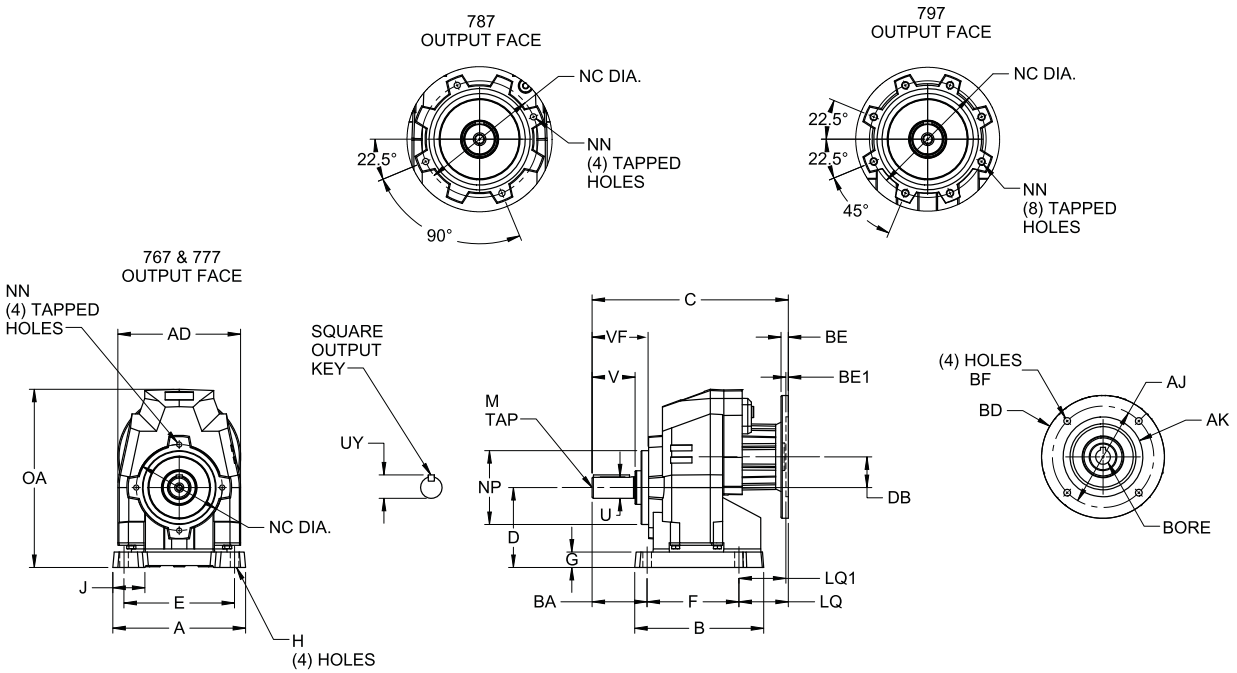
Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

* 1.375" diameter shaft is available. Contact Factory for availability.
s 0.875" diameter shaft is available on 2-stage reducers only. Contact Factory for availability.
n Tolerance of AK on flanges with BA dimension under 6.30" is -0.0014 to -0.0028".
Flanges with a BA of 6.30" or larger have a AK tolerance of -0.0017 to -0.0033".

F1 Flange Mount is shown. See page 410 for all available output flanges
For NEMA motor mounting dimensions see page 407.

Helical-Coaxial Dimensions

Motorized • Base Mount • Cast Iron Case



Motorized Quill Input, Double Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	C 56/140	C 180	C 210	C 250	D	DB	E	F	G	H	J
R767	8.504	7.874	8.268	3.524	12.737	13.442	13.976	N/A	5.118	1.969	7.087	5.886	0.984	0.551	2.047
R777	10.630	9.685	8.583	4.134	13.464	14.170	14.705	N/A	6.102	2.697	8.858	6.142	1.181	0.709	2.441
R787	11.417	8.661	12.205	5.512	N/A	19.606	19.606	19.606	7.087	1.398	8.465	10.236	1.181	0.709	N/A
R797	11.811	11.083	10.696	4.921	N/A	19.606	19.606	19.606	7.677	2.579	9.843	7.087	0.984	0.709	4.080

Size	LQ 56/140	LQ1 180/210/250	M TAP	M DEPTH	NC	NP	NN TAP	NN DEPTH	OA	U 0.000 / -0.001	UY	V	VF	OUTPUT KEY
R767	3.327	3.852	1/2-13	1.26	5.512	4.724	M10	0.748	11.417	1.375	1.51	2.756	3.622	5/16 x 2.13
R777	3.189	3.714	5/8-11	1.38	6.299	5.512	M12	0.748	13.130	1.625	1.79	3.150	4.016	3/8 x 2.25
R787	N/A	3.539	3/4-10	1.42	7.480	6.496	M12	0.709	14.961	2.125	2.35	3.937	5.157	1/2 x 2.81
R797	N/A	7.279	3/4-10	1.42	7.480	6.496	M12	0.709	16.614	2.125	2.35	3.937	5.157	1/2 x 2.81

Motorized Quill Input, Triple Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	D	DB	E	F	G	H	J	LQ 56/140	LQ1 180/210/250	M TAP	M DEPTH
R767	8.504	7.874	8.268	3.524	5.118	0.472	7.087	5.886	0.984	0.551	2.047	3.721	N/A	1/2-13	1.26
R777	10.630	9.685	8.526	4.134	6.102	1.201	8.858	6.142	1.181	0.709	2.441	3.583	N/A	5/8-11	1.38
R787	11.417	8.661	12.205	5.512	7.087	3.366	8.465	10.236	1.181	0.709	N/A	1.890	2.415	3/4-10	1.42
R797	11.811	11.083	10.696	4.921	7.677	4.547	9.843	7.087	0.984	0.709	4.08	5.630	6.155	3/4-10	1.42

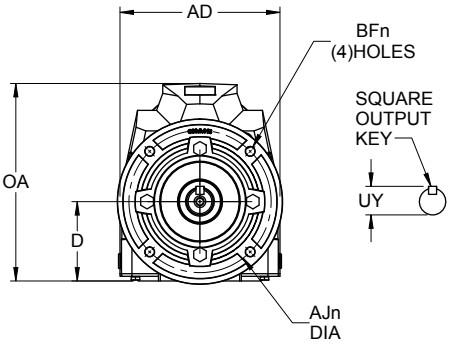
Size	NC	NP	NN TAP	NN DEPTH	OA	U 0.000 / -0.001	UY	V	VF	OUTPUT KEY
R767	5.512	4.724	M10	0.748	11.417	1.375	1.51	2.756	3.622	5/16 x 2.13
R777	6.299	5.512	M12	0.748	13.130	1.625	1.79	3.150	4.016	3/8 x 2.25
R787	7.48	6.496	M12	0.709	14.961	2.125	2.35	3.937	5.157	1/2 x 2.81
R797	7.48	6.496	M12	0.709	16.614	2.125	2.35	3.937	5.157	1/2 x 2.81

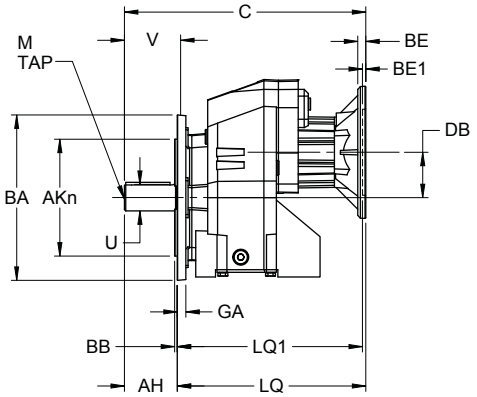
Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.5	6.5	0.38	N/A	0.625	3/16 X3/32	0.41
140TC	5.88	4.5	6.5	0.38	N/A	0.875	3/16 X3/32	0.41
180TC	7.25	8.5	8.5	N/A	0.5	1.125	1/4 X 1/8	0.53
210TC	7.25	8.5	8.5	N/A	0.5	1.375	5/16 X 5/32	0.53
250TC	7.25	8.5	8.5	N/A	0.5	1.625	3/8 X 3/16	0.53

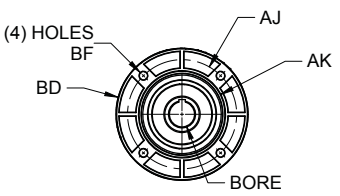
LeCENTRIC

Helical-Coaxial Dimensions

Motorized • Flange Mount • Cast Iron Case







Motorized Quill Input, Double Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C 56/140	C 180	C 210	C 250	D	DB	GA
R767	7.874	2.756	6.496	5.118	7.874	0.138	0.433	12.737	13.442	13.976	N/A	3.937	1.969	0.433
R777	9.685	3.150	8.465	7.087	9.843	0.157	0.551	13.465	14.170	14.705	N/A	4.724	2.697	0.512
R787	8.661	3.937	10.433	9.055	11.811	0.157	0.551	N/A	19.606	19.606	19.606	7.087	1.398	0.827
R797	11.083	3.937	10.433	9.055	11.811	0.157	0.551	N/A	19.606	19.606	19.606	5.512	2.579	0.827

Size	LQ 56C/140TC	LQ1 180/210/250	M TAP	M DEPTH	OA	U 0.000 / -0.001	UY	V	OUTPUT KEY
R767	9.981	10.506	1/2-13	1.26	10.236	1.375	1.51	2.756	5/16 x 2.13
R777	10.315	10.840	5/8-11	1.38	11.752	1.625	1.79	3.150	3/8 x 2.25
R787	N/A	15.350	3/4-10	1.42	14.961	2.125	2.35	3.937	1/2 x 2.81
R797	N/A	15.350	3/4-10	1.42	14.429	2.125	2.35	3.937	1/2 x 2.81

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.5	6.5	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.5	6.5	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.5	8.5	N/A	0.5	1.125	1/4 X 1/8	0.53
210TC	7.25	8.5	8.5	N/A	0.5	1.375	5/16 X 5/32	0.53
250TC	7.25	8.5	8.5	N/A	0.5	1.625	3/8 X 3/16	0.53

Motorized Quill Input, Triple Reduction (F1 Flange Mount Shown)

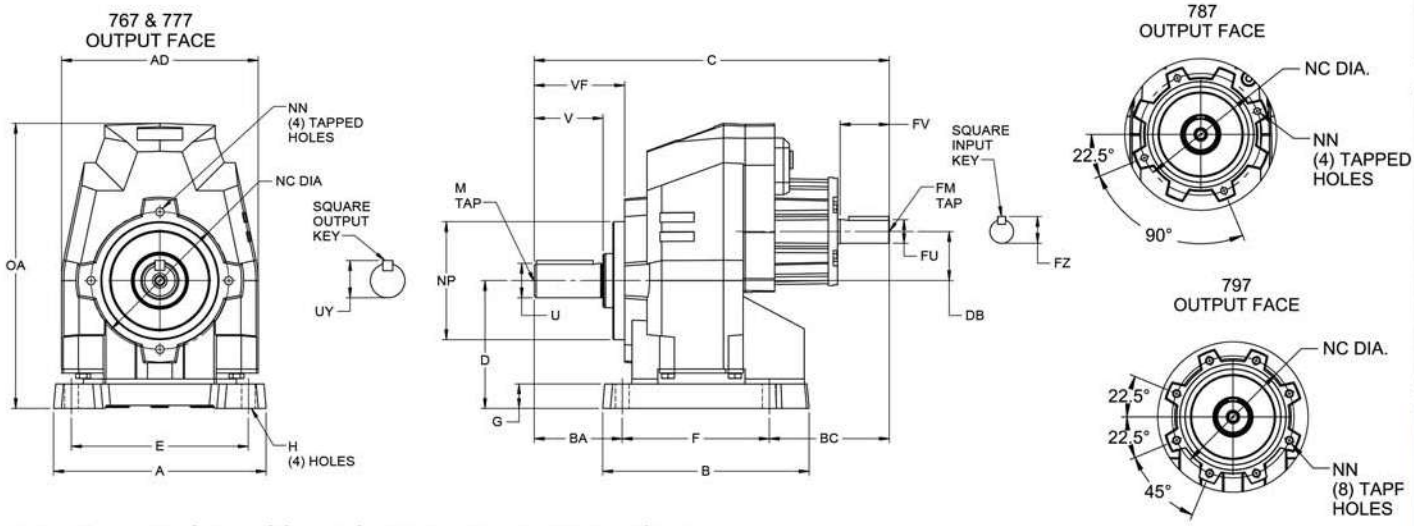
Size	AD	AH	AJn	AKn	BA	BB	BFn	C 56/140	C 180	C 210	C 250	D	DB	GA
R767	7.874	2.756	6.496	5.118	7.847	0.138	0.433	13.130	N/A	N/A	N/A	3.937	0.472	0.433
R777	9.685	3.150	8.465	7.087	9.843	0.157	0.551	13.859	N/A	N/A	N/A	4.724	1.201	0.512
R787	8.661	3.937	10.433	9.055	11.811	0.157	0.551	17.638	18.343	18.878	N/A	7.087	3.366	0.827
R797	11.083	3.937	10.433	9.055	11.811	0.157	0.551	17.638	18.343	18.878	N/A	5.512	4.547	0.827

Size	LQ 56C/140TC	LQ1 180/210/250	M TAP	M DEPTH	OA	U 0.000 / -0.001	UY	V	OUTPUT KEY
R767	10.374	N/A	1/2-13	1.26	10.236	1.375	1.51	2.756	5/16 x 2.13
R777	10.709	N/A	5/8-11	1.38	11.752	1.625	1.79	3.150	3/8 x 2.25
R787	13.701	14.226	3/4-10	1.42	14.961	2.125	2.35	3.937	1/2 x 2.81
R797	13.701	14.226	3/4-10	1.42	14.429	2.125	2.35	3.937	1/2 x 2.81

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.5	6.5	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.5	6.5	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.5	8.5	N/A	0.5	1.125	1/4 X 1/8	0.53
210TC	7.25	8.5	8.5	N/A	0.5	1.375	5/16 X 5/32	0.53
250TC	7.25	8.5	8.5	N/A	0.5	1.625	3/8 X 3/16	0.53

Helical-Coaxial Dimensions

Non-Motorized • Base Mount • Cast Iron Case



Non-Motorized, Double Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	BC	C	D	DB	E	F	FM TAP	FM DEPTH	FU 0.000 / -0.001	FV	FZ	G	H	J
R767	8.504	7.874	8.268	3.524	4.803	14.213	5.118	1.969	7.087	5.886	1/4-20	0.71	0.875	1.97	0.96	0.984	0.551	2.047
R777	10.630	9.685	8.583	4.134	4.665	14.941	6.102	2.697	8.858	6.142	1/4-20	0.71	0.875	1.97	0.96	1.181	0.709	2.441
R787	CONSULT/CONTACT FACTORY																	
R797	CONSULT/CONTACT FACTORY																	

Size	M TAP	M DEPTH	NC	NN TAP	NN DEPTH	NP	OA	U 0.000 / -0.001	UY	V	VF	INPUT KEY	OUTPUT KEY
R767	1/2-13	1.26	5.512	M10	0.748	4.724	11.417	1.375	1.51	2.756	3.622	3/16 X 1.50	5/16 X 2.13
R777	5/8-11	1.38	6.299	M12	0.748	5.512	13.130	1.625	1.79	3.150	4.016	3/16 X 1.50	3/8 X 2.25
R787	CONSULT/CONTACT FACTORY												
R797	CONSULT/CONTACT FACTORY												

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.5	6.5	0.38	N/A	0.625	3/16 X 3 /32	0.41
140TC	5.88	4.5	6.5	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.5	8.5	N/A	0.5	1.125	1/4 X 1/8	0.53
210TC	7.25	8.5	8.5	N/A	0.5	1.375	5/16 X 5/32	0.53
250TC	7.25	8.5	8.5	N/A	0.5	1.625	3/8 X 3/16	0.53

Non-Motorized, Triple Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	BC	C	D	DB	E	F	FM TAP	FM DEPTH	FU 0.000 / -0.001	FV	FZ	G	H	J
R767	8.504	7.874	8.268	3.524	4.583	14.544	5.118	0.472	7.087	5.886	1/4-20	0.71	0.750	1.97	0.83	0.984	0.551	2.047
R777	10.630	9.685	8.583	4.134	4.445	15.277	6.102	1.201	8.858	6.142	1/4-20	0.71	0.750	1.97	0.83	1.181	0.709	2.441
R787	11.417	8.661	12.205	5.512	3.366	19.114	7.087	3.366	8.465	10.236	1/4-20	0.71	0.875	1.97	0.96	1.181	0.709	N/A
R797	11.811	11.083	10.696	4.921	7.106	19.114	7.677	4.547	9.843	7.087	1/4-20	0.71	0.875	1.97	0.96	0.984	0.709	4.080

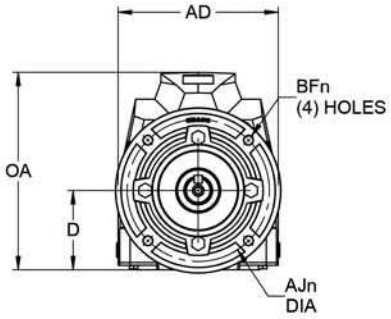
Size	M TAP	M DEPTH	NC	NN TAP	NN DEPTH	NP	OA	U 0.000 / -0.001	UY	V	VF	INPUT KEY	OUTPUT KEY
R767	1/2-13	1.26	5.512	M10	0.748	4.724	11.417	1.375	1.51	2.756	3.622	3/16 X 1.50	5/16 X 2.13
R777	5/8-11	1.38	6.299	M12	0.748	5.512	13.130	1.625	1.79	3.150	4.016	3/16 X 1.50	3/8 X 2.25
R787	3/4-10	1.42	7.480	M12	0.709	6.496	14.961	2.125	2.35	3.937	5.157	3/16 X 1.50	1/2 X 2.81
R797	3/4-10	1.42	7.480	M12	0.709	6.496	16.614	2.125	2.35	3.937	5.157	3/16 X 1.50	1/2 X 2.81

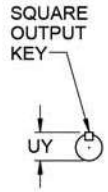
Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.5	6.5	0.38	N/A	0.625	3/16 X3/32	0.41
140TC	5.88	4.5	6.5	0.38	N/A	0.875	3/16 X3/32	0.41
180TC	7.25	8.5	8.5	N/A	0.5	1.125	1/4 X 1/8	0.53
210TC	7.25	8.5	8.5	N/A	0.5	1.375	5/16 X 5/32	0.53

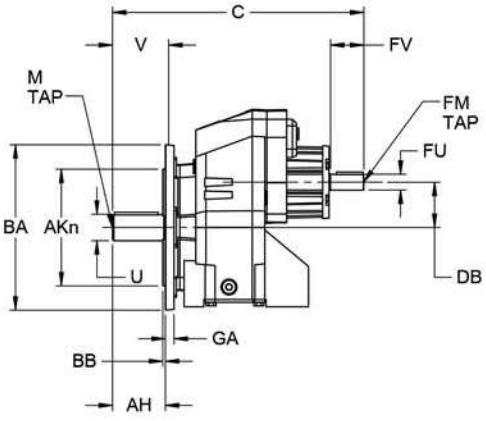
LeCENTRIC

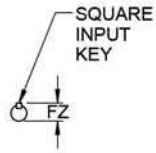
Helical-Coaxial Dimensions

Non-Motorized • Flange Mount • Cast Iron Case









Non-Motorized, Double Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C	D	DB	FM TAP	FM DEPTH	FU +0.000/-0.001	FV	FZ
R767	7.874	2.756	6.496	5.118	7.874	0.138	0.433	14.213	3.937	1.969	1/4-20	0.71	0.875	1.97	0.96
R777	9.685	3.150	8.465	7.087	9.843	0.157	0.551	14.941	4.724	2.697	1/4-20	0.71	0.875	1.97	0.96
R787	CONSULT/CONTACT FACTORY														
R797	CONSULT/CONTACT FACTORY														

Size	GA	M TAP	M DEPTH	OA	U 0.000 / -0.001	UY	V	INPUT KEY	OUTPUT KEY
R767	0.433	1/2-13	1.26	10.236	1.375	1.51	2.756	3/16 X 1.50	5/16 x 2.13
R777	0.512	5/8-11	1.38	11.752	1.625	1.79	3.150	3/16 X 1.50	3/8 x 2.25
R787	CONSULT/CONTACT FACTORY								
R797	CONSULT/CONTACT FACTORY								

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.5	6.5	0.38	N/A	0.625	3/16 X3/32	0.41
140TC	5.88	4.5	6.5	0.38	N/A	0.875	3/16 X3/32	0.41
180TC	7.25	8.5	8.5	N/A	0.5	1.125	1/4 X 1/8	0.53
210TC	7.25	8.5	8.5	N/A	0.5	1.375	5/16 X 5/32	0.53
250TC	7.25	8.5	8.5	N/A	0.5	1.625	3/8 X 3/16	0.53

Non-Motorized, Triple Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C	D	DB	FM TAP	FM DEPTH	FU +0.000/-0.001	FV	FZ
R767	7.874	2.756	6.496	5.118	7.874	0.138	0.433	13.922	3.937	0.472	1/4-20	0.71	0.750	1.97	0.83
R777	9.685	3.150	8.465	7.087	9.843	0.157	0.551	14.720	4.724	1.201	1/4-20	0.71	0.750	1.97	0.83
R787	8.661	3.937	10.433	9.055	11.811	0.157	0.551	19.114	7.087	3.366	1/4-20	0.71	0.875	1.97	0.96
R797	11.083	3.937	10.433	9.055	11.811	0.157	0.551	19.114	5.512	4.547	1/4-20	0.71	0.875	1.97	0.96

Size	GA	M TAP	M DEPTH	OA	U 0.000 / -0.001	UY	V	INPUT KEY	OUTPUT KEY
R767	0.433	1/2-13	1.26	10.236	1.375	1.51	2.756	3/16 X 1.50	5/16 x 2.13
R777	0.512	5/8-11	1.38	11.752	1.625	1.79	3.150	3/16 X 1.50	3/8 x 2.25
R787	0.827	3/4-10	1.42	14.961	2.125	2.35	3.937	3/16 X 1.50	1/2 x 2.81
R797	0.827	3/4-10	1.42	14.429	2.125	2.35	3.937	3/16 X 1.50	1/2 x 2.81

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.5	6.5	0.38	N/A	0.625	3/16 X3/32	0.41
140TC	5.88	4.5	6.5	0.38	N/A	0.875	3/16 X3/32	0.41
180TC	7.25	8.5	8.5	N/A	0.5	1.125	1/4 X 1/8	0.53
210TC	7.25	8.5	8.5	N/A	0.5	1.375	5/16 X 5/32	0.53
250TC	7.25	8.5	8.5	N/A	0.5	1.625	3/8 X 3/16	0.53

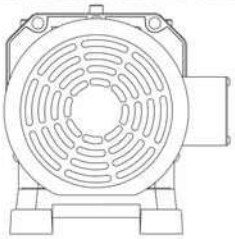
Available Motor Frames

Reducer Size	# of Stages	56C	143-5TC	182-4TC	213-5TC	254-6TC
717	2-Stage	X	X			
	3-Stage	X				
727	2-Stage	X	X			
	3-Stage	X				
747	2-Stage	X	X	X		
	3-Stage	X	X			
757	2-Stage	X	X	X		
	3-Stage	X	X			
767	2-Stage	X	X	X	X	
	3-Stage	X	X			
777	2-Stage	X	X	X	X	
	3-Stage	X	X			
787	2-Stage			X	X	X
	3-Stage	X	X	X	X	
797	2-Stage			X	X	X
	3-Stage	X	X	X	X	

Motor Mounting Position

Conduit box position viewed from input side of reducer.

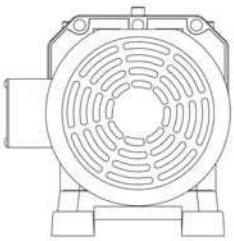
STANDARD MOUNTING POSITION



1 Conduit box horizontal on right side.



2 Conduit box vertical on bottom side.



3 Conduit box horizontal on left side.



4 Conduit box vertical on top side.

Overhung Loads and Thrust Loads

An overhung load exists when a force is applied at right angles to a shaft beyond the shaft's outermost bearing. Pulleys, sheaves and sprockets will cause an overhung load when used as a power take-off. The amount of overhung load will vary, depending on the type of power take-off used and its mounting location on the shaft. The LeCENTRIC™ overhung load ratings listed in this catalog and in selection tables are calculated at the centerline of the shaft.

Overhung load ratings are listed for each reducer size and should not be exceeded. If the basic reducer is selected using a service factor, that factor must also be used in the equations below.

Output Shaft OHL =

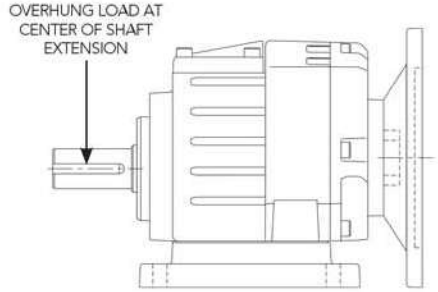
$$\frac{126000 \times \text{Input HP} \times \text{Overhung Load Factor} \times \text{Efficiency}}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Output RPM}}$$

Input Shaft OHL =

$$\frac{126000 \times \text{Input HP} \times \text{Overhung Load Factor}}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Input RPM}}$$

Overhung Load Factors—

Sprocket	1.00
Gear Pinion	1.25
V-Belt Sheave or Pulley	1.50
Flat Belt	2.50



Maximum Overhung Load Capacities

External Load Applied		Drive Size							
		717	727	747	757	767	777	787	797
Input Shaft OHL (lbs.)	2-Stage	112	112	180	180	450	506	*	*
	3-Stage	100	100	135	135	270	450	506	506
Output Shaft OHL (lbs.)	Refer to Selection Tables for overhung load variable by output RPM.								

NOTE: The overhung load capacities in the catalog are calculated at centerline of shaft extension with no thrust load.

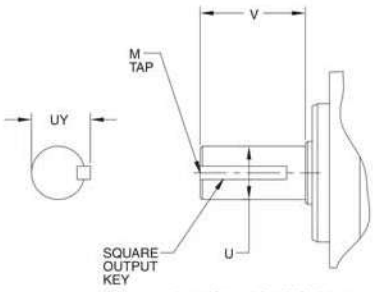
*** Contact factory for these sizes and stages.**

Available Input and Output Shafts

Output Shaft Options

Reducer Size	U +0.000/ -0.001	UY	V	KEY	M TAP	M DEPTH
717	0.750	0.83	1.57	3/16 x 1.12 SQ	1/4-20	0.62
727	1.000	1.11	1.97	1/4 x 1.62 SQ	5/16-18	0.75
747	1.250	1.36	2.36	1/4 x 2.00 SQ	5/16-18	0.75
757	1.250	1.36	2.36	1/4 x 2.00 SQ	5/16-18	0.75
	1.375**	1.51	2.76	5/16 x 2.25 SQ	3/8-16	0.88
767	1.375	1.51	2.756	5/16 X 2.13 SQ	1/2-13	1.26
777	1.625	1.79	3.15	3/8 X 2.25 SQ	5/8-11	1.38
787	2.125	2.35	3.937	1/2 X 2.81 SQ	3/4-10	1.42
797	2.125	2.35	3.937	1/2 X 2.81 SQ	3/4-10	1.42

**Optional size. Contact factory for availability. The standard shaft diameters are shown in dimensional pages.



Input/Output Shaft Options

Input Shaft Options

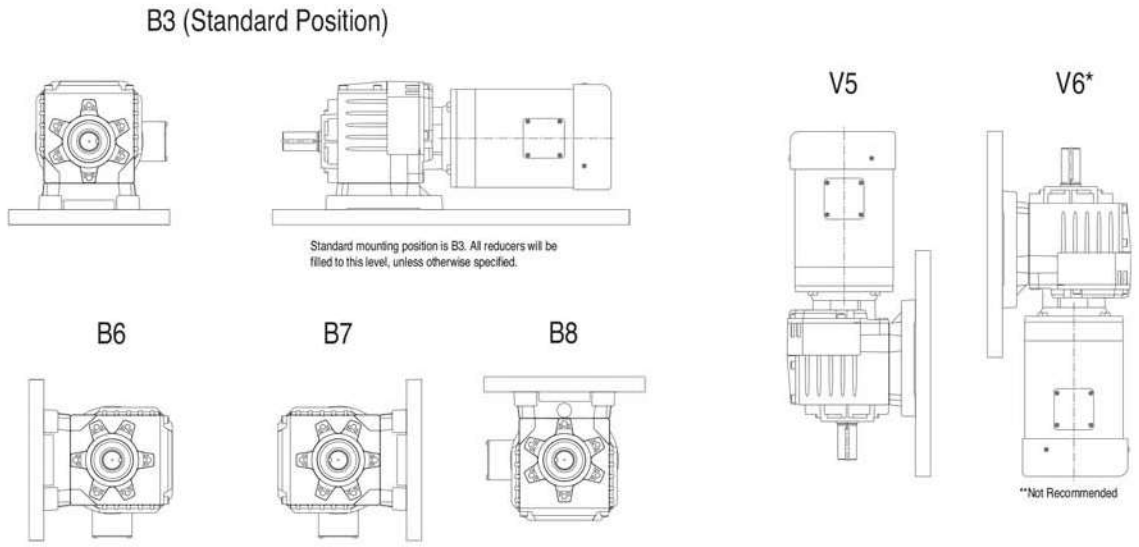
Reducer Size	U +0.000/ -0.001	UY	V	KEY	M TAP	M DEPTH
717	0.625	0.70	1.57	3/16 x 1.12 SQ	1/4-20	0.62
727	0.625	0.70	1.57	3/16 x 1.12 SQ	1/4-20	0.62
747	0.750	0.83	1.97	3/16 x 1.50 SQ	5/16-18	0.75
	0.875**					
757	0.750	0.83	1.97	3/16 x 1.50 SQ	5/16-18	0.75
	0.875**					
767	0.625***	0.70	1.57	3/16 x 1.12 SQ	1/4-20	0.62
	0.750	0.83	1.97	3/16 x 1.50 SQ	1/4-20	0.71
	0.875**	0.96				
777	0.625***	0.70	1.57	3/16 x 1.12 SQ	1/4-20	0.62
	0.750	0.83	1.97	3/16 x 1.50 SQ	1/4-20	0.71
	0.875**	0.96				
787	0.750*	0.83	1.97	3/16 x 1.50 SQ	1/4-20	0.71
	0.875*	0.96				
797	0.750*	0.83	1.97	3/16 x 1.50 SQ	1/4-20	0.71
	0.875*	0.96				

* Size available for 3 stage ratios only.
** Size available for 2 stage ratios only.
*** Optional size for 3 stage ratios only. Contact factory for availability.
The standard shaft diameters are shown in dimensional pages.

Helical-Coaxial Mounting Positions

Reducer Mounting Positions

Carefully follow lubrication instructions and installation manuals furnished with the gear reducer. All standard LeCENTRIC™ Inline Reducers are factory filled with Mobil Glygoyle 460 Polyglycol lubricant. The mounting position is stamped on all LeCENTRIC™ Reducer nameplates. Position B3 is standard. Specify mounting position of reducer for correct oil fill. Positions B3-B8 are horizontal mounts. Positions V5 and V6 are vertical mounts.



Motorized Reducers & GEAR+MOTOR™

The Reducer and Motor are assembled at the Factory, and filled with the proper quantity of lubricant based on your specified mounting position. Special integral gearmotors are available. Consult Factory for details.

Standard Integral Gearmotors and GEAR+MOTOR™ are assembled at the Factory with the conduit box and the conduit opening at the position illustrated on page 29. The user may rotate the body of the motor to reposition the conduit box (in 90° increments from original position). The conduit opening may also be repositioned at 90° increments from the original position. Both operations may be performed without disassembling the drive.

Backstops

Backstops are available as Factory options. Consult the Factory for details.

Lube Quantities (Ounces)

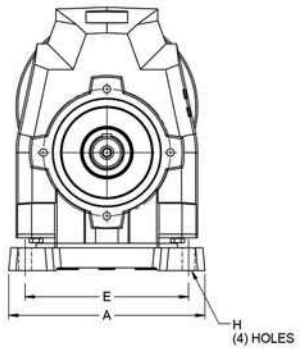
Reducer Size		B3	B6	B7	B8	V5	V6
717	2-Stage	8.5	10.0	13.5	13.5	13.5	17.0
	3-Stage	10.0	12.0	15.0	15.0	15.0	18.5
727	2-Stage	8.5	10.0	13.5	13.5	13.5	17.0
	3-Stage	10.0	12.0	15.0	15.0	15.0	18.5
747	2-Stage	15.0	19.0	34.0	37.0	37.0	39.0
	3-Stage	25.5	25.5	35.5	39.0	40.5	40.5
757	2-Stage	19.0	29.0	37.0	40.5	40.5	42.0
	3-Stage	25.5	30.5	39.0	42.0	44.0	46.0
767	2-Stage	73.9	49.3	49.3	45.8	79.2	56.3
	3-Stage	77.4	49.3	49.3	45.8	84.5	59.8
777	2-Stage	112.6	66.9	66.9	54.6	112.6	77.4
	3-Stage	116.1	66.9	66.9	54.6	119.7	81.0
787	2-Stage	190.1	126.7	126.7	98.6	207.7	147.8
	3-Stage	193.6	133.7	133.7	112.6	246.4	161.9
797	2-Stage	207.7	133.7	133.7	119.7	235.8	154.9
	3-Stage	211.2	144.3	144.3	130.2	256.9	172.5

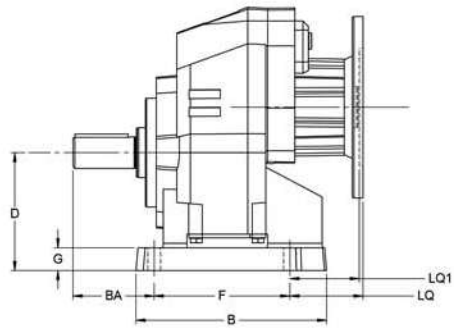
Note: Multiply the above quantities by 0.06 to obtain the equivalent weight of oil in pounds.

LeCENTRIC

Helical-Coaxial Interchange Base Selections

Base Mounting Dimensions
Motorized Quill Input





Size 717 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

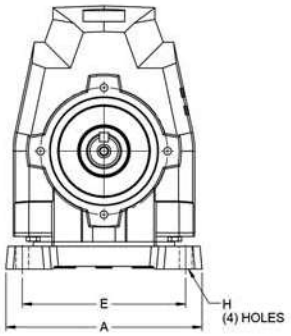
Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ - 56C/140TC 2-Stage	LQ - 56C/140TC 3-Stage
No Base	00	N/A												
SEW R17	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	4.33	0.59	0.35	2.23	2.99
SEW R32	B1	G175710	5.71	5.51	2.28	4.25	4.43	2.95	4.33	3.35	0.59	0.35	3.20	3.97
Bonfiglioli C10	B2**	G175711	5.71	5.51	2.28	4.17	4.35	3.35	4.33	3.43	0.99	0.35	3.12	3.89
Brook Hansen SFN03B	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99
Browning CbN20	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99
David Brown M03	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99
Falk 03UC	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99
Grove 2032/3	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99
Hansen 0	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99
Lenze 4	B3	G175712	5.67	4.41	2.01	4.88	5.06	3.15	4.13	2.99	0.40	0.35	3.83	4.60
Leroy Somer NXT N20	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99
Motovario 032/3	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.15	0.59	0.35	2.23	2.99
Nord SK02	B4	G175713	5.67	4.41	1.97	5.55	5.73	3.39	4.33	2.36	0.64	0.35	4.50	5.27
Nord SK172	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	4.33	0.59	0.35	2.23	2.99
Stober C002/3	B5	G175714	5.67	4.41	2.17	5.27	5.45	3.23	4.33	2.44	0.48	0.28	4.22	4.99
Sumitomo 4085	B6	G175715	5.67	4.41	1.85	5.67	5.85	3.15	4.72	2.36	0.40	0.35	4.62	5.39

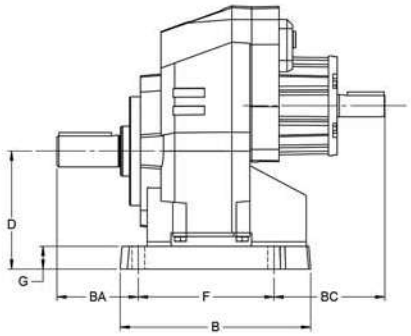
Size 727 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ - 56C/140TC 2-Stage	LQ - 56C/140TC 3-Stage
No Base	00	N/A												
SEW R27	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
SEW R37	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
SEW R40	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
Bonfiglioli C20	B2	G175718	6.10	5.35	2.68	3.35	3.53	3.94	5.12	4.23	0.67	0.43	2.32	3.09
Brook Hansen SFN15B	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
Browning CbN21	B3	G175719	5.31	6.12	2.63	1.13	1.31	3.15	4.33	6.50	0.62	0.35	0.10	0.87
David Brown M04	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
Dodge Quantis HB38	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
Falk 04UC	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
Flender/ Motox D30	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
Grove 2042/3	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99
Hansen 1	B3	G175719	5.31	6.12	2.63	1.13	1.31	3.15	4.33	6.50	0.62	0.35	0.10	0.87
Lenze 5	B4	G175720	7.09	5.47	2.63	4.09	4.27	3.94	4.92	3.54	0.66	0.43	3.06	3.83
Leroy Somer NXT N21	B3	G175719	5.31	6.12	2.63	1.13	1.31	3.15	4.33	6.50	0.62	0.35	0.10	0.87
Motovario 042/3	B5	G175721	5.71	5.08	2.95	3.96	4.14	3.15	4.33	3.35	0.59	0.35	2.93	3.70
Nord SK272	B1	G175717	5.71	5.98	2.95	2.20	2.38	3.54	4.33	5.12	0.71	0.35	1.15	2.99
Stober C102/3	B7	G175723	7.09	5.47	2.64	4.86	5.04	4.02	5.91	2.76	0.74	0.35	3.83	4.60
Sumitomo 4097	B8	G175724	7.09	5.47	2.36	4.36	4.54	3.94	5.90	3.54	0.66	0.43	3.33	4.10

Size 747 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ - 56C/140TC 2-Stage	LQ - 56C/140TC 3-Stage	LQ1 180TC
No Base	00	N/A													
SEW R47	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
SEW R60	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Bonfiglioli C30	B2	G175726	7.48	6.14	3.07	4.83	4.75	4.33	6.30	5.10	0.79	0.43	3.32	3.66	3.85
Brook Hansen SFN25B	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Browning CbN22	B3	G175727	7.52	8.58	3.01	2.43	2.35	3.94	5.31	7.56	0.75	0.55	0.92	1.26	1.45
David Brown M06	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Dodge Quantis HB48	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Falk 06UC	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Flender/ Motox D40	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Grove 2062	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Hansen 2	B3	G175727	7.52	8.58	3.01	2.43	2.35	3.94	5.31	7.56	0.75	0.55	0.92	1.26	1.45
Lenze 6	B4	G175728	7.87	6.59	3.25	5.58	5.50	4.92	6.30	4.17	0.92	0.53	4.07	4.41	4.60
Leroy Somer NXT N22	B3	G175727	7.52	8.58	3.01	2.43	2.35	3.94	5.31	7.56	0.75	0.55	0.92	1.26	1.45
Motovario 052	B5	G175729	7.48	5.51	3.54	5.52	5.44	4.33	5.31	3.94	0.71	0.43	4.01	4.35	4.54
Nord SK22	B6	G175730	7.87	6.59	3.30	6.55	6.47	4.92	6.30	3.15	0.92	0.43	5.04	5.38	5.57
Nord SK472	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98
Stober C202	B7	G175731	7.87	6.59	3.11	6.54	6.46	4.53	6.69	3.35	0.53	0.43	5.03	5.37	5.56





Base Mounting Dimensions
Non-Motorized Input

Helical-Coaxial Interchange Base Selections

Size 757 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ - 56C/140TC 2-Stage	LQ - 56C/140TC 3-Stage	LQ1 180TC
No Base	00	N/A													
SEW R57	B1**	G175732	6.69	7.76	3.94	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
SEW R60	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Bonfiglioli C30	B2	G175733	7.48	6.14	3.07	5.90	5.97	4.33	6.30	5.10	0.79	0.43	4.43	4.78	4.96
Bonfiglioli C40	B9	G175740	8.50	7.30	3.54	4.64	4.71	5.12	7.09	5.89	0.71	0.55	3.17	3.52	3.70
Brook Hansen SFN25B	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Browning CbN22	B3	G175734	7.52	8.58	3.01	3.50	3.57	3.94	5.31	7.56	0.75	0.55	2.03	2.38	2.56
David Brown M06	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Dodge Quantis HB48	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Falk 06UC	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Flender/ Motox D40	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Grove 2062	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Hansen 2	B3	G175734	7.52	8.58	3.01	3.50	3.57	3.94	5.31	7.56	0.75	0.55	2.03	2.38	2.56
Lenze 6	B4	G175735	7.87	6.59	3.25	6.65	6.72	4.92	6.30	4.17	0.92	0.53	5.18	5.53	5.71
Leroy Somer NXT N22	B3	G175734	7.52	8.58	3.01	3.50	3.57	3.94	5.31	7.56	0.75	0.55	2.03	2.38	2.56
Motovario 052	B5	G175736	7.48	5.51	3.54	6.59	6.66	4.33	5.31	3.94	0.71	0.43	5.12	5.47	5.65
Nord SK22	B6	G175737	7.97	6.59	3.30	7.62	7.69	4.92	6.30	3.15	0.92	0.43	6.15	6.50	6.68
Nord SK572	B1**	G175732	6.69	7.76	3.94	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69
Stober C202	B7	G175738	7.87	6.59	3.11	7.61	7.68	4.53	6.69	3.35	0.53	0.43	6.14	6.49	6.67

** Requires optional 1.375" diameter shaft to obtain stated BA dimension. Contact Factory for availability.

Size 767 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ - 56C/140TC 2-Stage	LQ - 56C/140TC 3-Stage	LQ1 - 182/4TC 2-Stage	LQ1 - 182/4TC 3-Stage	LQ1 -213/5TC 2-Stage	LQ1 -213/5TC 3-Stage
No Base	00	N/A																
SEW R67	B2	G175746	8.268	9.252	3.937	2.598	2.378	5.118	5.906	7.677	0.984	0.551	1.122	1.516	1.647	N/A	2.027	N/A
Nord SK672/3	B2	G175746	8.268	9.252	3.937	2.598	2.378	5.118	5.906	7.677	0.984	0.551	1.122	1.516	1.647	N/A	2.027	N/A
Bonfiglioli C41	B1	G175745	8.504	8.268	3.524	4.803	4.583	5.118	7.087	5.886	0.984	0.551	3.327	3.721	3.852	N/A	4.232	N/A
David Brown M0622/632	B2	G175746	8.268	9.252	3.937	2.598	2.378	5.118	5.906	7.677	0.984	0.551	1.122	1.516	1.647	N/A	2.027	N/A
STM A70	B2	G175746	8.268	9.252	3.937	2.598	2.378	5.118	5.906	7.677	0.984	0.551	1.122	1.516	1.647	N/A	2.027	N/A

Size 777 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ -56C/140TC 2-Stage	LQ -56C/140TC 3-Stage	LQ1 -182/4TC 2-Stage	LQ1 -182/4TC 3-Stage	LQ1 -213/5TC 2-Stage	LQ1 -213/5TC 3-Stage
No Base	00	N/A																
SEW R77	B2	G175748	9.055	9.646	4.528	2.343	2.122	5.512	6.693	8.071	0.709	0.689	1.063	1.26	1.588	N/A	1.968	N/A
Nord SK772/3	B2	G175748	9.055	9.646	4.528	2.343	2.122	5.512	6.693	8.071	0.709	0.689	1.063	1.26	1.588	N/A	1.968	N/A
Bonfiglioli C51	B1	G175747	10.63	8.583	4.134	4.665	4.445	6.102	8.858	6.142	1.181	0.709	3.189	3.583	3.714	N/A	4.094	N/A
David Brown M0722/732	B2	G175748	9.055	9.646	4.528	2.343	2.122	5.512	6.693	8.071	0.709	0.689	1.063	1.26	1.588	N/A	1.968	N/A
Motovario H060	B2	G175748	9.055	9.646	4.528	2.343	2.122	5.512	6.693	8.071	0.709	0.689	1.063	1.26	1.588	N/A	1.968	N/A
SITI MNHL40	B2	G175748	9.055	9.646	4.528	2.343	2.122	5.512	6.693	8.071	0.709	0.689	1.063	1.26	1.588	N/A	1.968	N/A
STM A80	B2	G175748	9.055	9.646	4.528	2.343	2.122	5.512	6.693	8.071	0.709	0.689	1.063	1.26	1.588	N/A	1.968	N/A

Size 787 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ -56C/140TC 2-Stage	LQ -56C/140TC 3-Stage	LQ1 -182/4TC 2-Stage	LQ1 -182/4TC 3-Stage	LQ1 -213/5TC 2-Stage	LQ1 -213/5TC 3-Stage
No Base	00	N/A																

Size 797 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix	Accessory Kit No.	Critical Interchange Dimensions (Inches) A	B	BA	BC 2-Stage	BC 3-Stage	D	E	F	G	H	LQ -56C/140TC 2-Stage	LQ -56C/140TC 3-Stage	LQ1 -182/4TC 2-Stage	LQ1 -182/4TC 3-Stage	LQ1 -213/5TC 2-Stage	LQ1 -213/5TC 3-Stage	LQ1 -254/6TC 2-Stage	LQ1 -254/6TC 3-Stage
No Base	00	N/A																		
SEW R87	B2	G175750	11.417	12.192	5.512	C F	3.366	7.087	8.465	10.236	1.181	0.709	N/A	1.89	3.519	2.415	3.519	2.795	3.519	N/A
Nord SK872/3	B2	G175750	11.417	12.192	5.512	O A	3.366	7.087	8.465	10.236	1.181	0.709	N/A	1.89	3.519	2.415	3.519	2.795	3.519	N/A
Bonfiglioli C61	B1	G175749	11.811	10.696	4.921	N C	7.106	7.677	9.843	7.087	0.984	0.709	N/A	5.63	7.259	6.155	7.259	6.535	7.259	N/A
David Brown M0822/832	B2	G175750	11.417	12.192	5.512	T T	3.366	7.087	8.465	10.236	1.181	0.709	N/A	1.89	3.519	2.415	3.519	2.795	3.519	N/A
Motovario H080	B2	G175750	11.417	12.192	5.512	A O	3.366	7.087	8.465	10.236	1.181	0.709	N/A	1.89	3.519	2.415	3.519	2.795	3.519	N/A
SITI MNHL50	B2	G175750	11.417	12.192	5.512	C R	3.366	7.087	8.465	10.236	1.181	0.709	N/A	1.89	3.519	2.415	3.519	2.795	3.519	N/A
STM A100	B2	G175750	11.417	12.192	5.512	T Y	3.366	7.087	8.465	10.236	1.181	0.709	N/A	1.89	3.519	2.415	3.519	2.795	3.519	N/A

LeCENTRIC

Helical-Coaxial Output Flange Selections

Size 717 • Flange Mount • Mod-Squad Codes • Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)								
			AH	AJ	AK◊	BA	BB	BF	GA	LQ 2-Stage	LQ 3-Stage
No Flange	00	N/A									
Option 1	F1	G175701	1.41	3.94	3.15	4.72	0.12	0.28	0.39	7.42	8.19
Option 2	F2	G175702	1.41	4.53	3.74	5.51	0.12	0.35	0.39	7.42	8.19
Option 3	F3	G175703	1.41	5.12	4.33	6.30	0.14	0.35	0.39	7.42	8.19
Option 4	F4	G175704	1.41	6.54	5.12	7.87	0.14	0.43	0.43	7.42	8.19

Size 727 • Flange Mount • Mod-Squad Codes • Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)								
			AH	AJ	AK◊	BA	BB	BF	GA	LQ 2-Stage	LQ 3-Stage
No Flange	00	N/A									
Option 1	F1	G175701	1.79	3.94	3.15	4.72	0.12	0.28	0.39	7.44	8.21
Option 2	F2	G175702	1.79	4.53	3.74	5.51	0.12	0.35	0.39	7.44	8.21
Option 3	F3	G175703	1.79	5.12	4.33	6.30	0.14	0.35	0.39	7.44	8.21
Option 4	F4	G175704	1.79	6.54	5.12	7.87	0.14	0.43	0.43	7.44	8.21

Size 747 • Flange Mount • Mod-Squad Codes • Accessory Kits

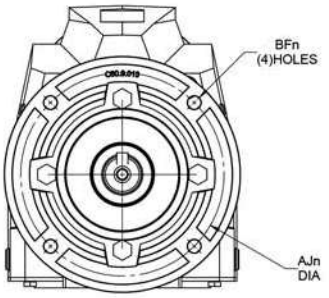
Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)									
			AH	AJ	AK◊	BA	BB	BF	GA	LQ 2-Stage	LQ 3-Stage	LQ1
No Flange	00	N/A										
Option 1	F1	G175705	2.24	5.12	4.33	6.30	0.14	0.43	0.61	9.25	9.59	9.78
Option 2	F2	G175706	2.30	6.46	5.12	7.87	0.14	0.43	0.51	9.19	9.53	9.72
Option 3	F3	G175707	2.30	8.47	7.09	9.84	0.16	0.55	0.61	9.19	9.53	9.72

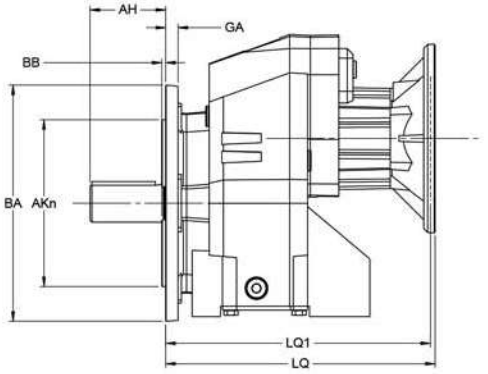
Size 757 • Flange Mount • Mod-Squad Codes • Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)									
			AH	AJ	AK◊	BA	BB	BF	GA	LQ 2-Stage	LQ 3-Stage	LQ1
No Flange	00	N/A										
Option 1	F1	G175705	2.60	5.12	4.33	6.30	0.14	0.43	0.61	10.00	10.35	10.53
Option 2	F2	G175706	2.66	6.46	5.12	7.87	0.14	0.43	0.51	9.94	10.29	10.47
Option 3	F3	G175707	2.66	8.47	7.09	9.84	0.16	0.55	0.61	9.94	10.29	10.47

◊ Tolerance of AK on flanges with BA dimension under 6.30" is -0.0014 to -0.0028". Flanges with a BA of 6.30" or larger have a AK tolerance of -0.0017 to -0.0033".

Output Flange Mounting Dimensions





Size 767 • Flange Mount • Mod-Squad Codes • Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)															
			AH	AJ	AK	BA	BB	BF	GA	LQ 56-140 2-Stage	LQ 56-140 3-Stage	LQ1 180 2-Stage	LQ1 180 3-Stage	LQ1 210 2-Stage	LQ1 210 3-Stage	LQ1 250 2-Stage	LQ1 250 3-Stage
No Flange	00	N/A															
Option 1	F1	G175751	2.756	6.496	5.118	7.874	0.138	0.433	0.433	9.981	10.374	10.506	N/A	10.902	N/A	N/A	N/A
Option 2	F2	G175752	2.756	8.465	7.087	9.843	0.157	0.551	0.512	9.981	10.374	10.506	N/A	10.902	N/A	N/A	N/A

Size 777 • Flange Mount • Mod-Squad Codes • Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)															
			AH	AJ	AK	BA	BB	BF	GA	LQ 56-140 2-Stage	LQ 56-140 3-Stage	LQ1 180 2-Stage	LQ1 180 3-Stage	LQ1 210 2-Stage	LQ1 210 3-Stage	LQ1 250 2-Stage	LQ1 250 3-Stage
No Flange	00	N/A															
Option 1	F1	G175753	3.15	8.465	7.087	9.843	0.157	0.551	0.512	10.315	10.709	10.84	N/A	11.236	N/A	N/A	N/A
Option 2	F2	G175754	3.15	10.433	9.055	11.811	0.157	0.551	0.63	10.315	10.709	10.84	N/A	11.236	N/A	N/A	N/A

Size 787 • Flange Mount • Mod-Squad Codes • Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)															
			AH	AJ	AK	BA	BB	BF	GA	LQ 56-140 2-Stage	LQ 56-140 3-Stage	LQ1 180 2-Stage	LQ1 180 3-Stage	LQ1 210 2-Stage	LQ1 210 3-Stage	LQ1 250 2-Stage	LQ1 250 3-Stage
No Flange	00	N/A															
Option 1	F1	G175755	3.937	10.433	9.055	11.811	0.157	0.551	0.827	N/A	13.701	15.33	14.226	15.33	14.622	15.33	N/A
Option 2	F2	G175756	3.937	11.811	9.843	13.78	0.197	0.709	0.827	N/A	13.701	15.33	14.226	15.33	14.622	15.33	N/A

Size 797 • Flange Mount • Mod-Squad Codes • Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)															
			AH	AJ	AK	BA	BB	BF	GA	LQ 56-140 2-Stage	LQ 56-140 3-Stage	LQ1 180 2-Stage	LQ1 180 3-Stage	LQ1 210 2-Stage	LQ1 210 3-Stage	LQ1 250 2-Stage	LQ1 250 3-Stage
No Flange	00	N/A															
Option 1	F1	G175755	3.937	10.433	9.055	11.811	0.157	0.551	0.827	N/A	13.701	15.33	14.226	15.33	14.622	15.33	N/A
Option 2	F2	G175756	3.937	11.811	9.843	13.78	0.197	0.709	0.827	N/A	13.701	15.33	14.226	15.33	14.622	15.33	N/A
Option 3	F3	G175757	3.937	15.748	13.78	17.717	0.197	0.709	0.866	N/A	13.701	15.33	14.226	15.33	14.622	15.33	N/A

Shipping Weights and Motor Compatability

P & R Series • Helical-Coaxial

Reducer Weights - Foot Mounted (lbs.)

Unit Size	Solid Input Shaft	NEMA FRAME						
		56C/140TC	180TC	210TC	250TC	280TC	320TC	360TC
P7172	13	13	-	-	-	-	-	-
P7173	14	14	-	-	-	-	-	-
P7472	26	26	28	-	-	-	-	-
P7473	27	27	-	-	-	-	-	-
P7572	33	33	35	-	-	-	-	-
P7573	32	32	-	-	-	-	-	-
R7672	74	74	76	78	-	-	-	-
R7673	74	74	-	-	-	-	-	-
R7772	96	96	98	100	-	-	-	-
R7773	96	96	-	-	-	-	-	-
R7872	-	-	169	169	169	-	-	-
R7873	156	156	158	160				
R7972	-	-	236	236	236	-	-	-
R7973	208	208	210	212	-	-	-	-

Reducer Weights - Flange Mounted (lbs.)

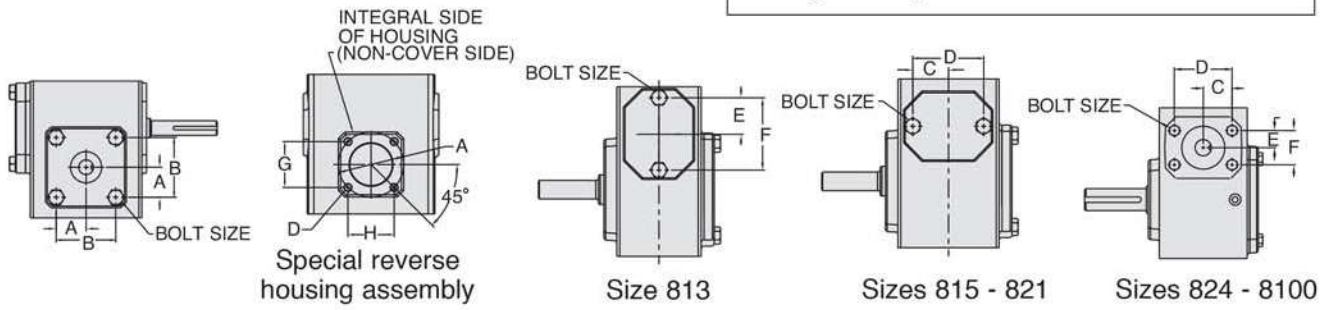
Unit Size	Solid Input Shaft	NEMA FRAME						
		56C/140TC	180TC	210TC	250TC	280TC	320TC	360TC
P7172	12	12	-	-	-	-	-	-
P7173	13	13	-	-	-	-	-	-
P7472	26	26	28	-	-	-	-	-
P7473	27	27	-	-	-	-	-	-
P7572	33	33	35	-	-	-	-	-
P7573	32	32	-	-	-	-	-	-
R7672	66	66	68	70	-	-	-	-
R7673	66	66	-	-	-	-	-	-
R7772	87	87	89	91	-	-	-	-
R7773	87	87						
R7872	-	-	179	181	183	-	-	-
R7873	156	177	179	181	-	-	-	-
R7972	-	-	217	219	221	-	-	-
R7973	208	208	210	212	-	-	-	-

CAST IRON GR SERIES

CAST IRON NH SERIES

Bolt Circle Dimensions

Series GR & NH reducers do not have tapped holes on "integral cover side" of reducer. Integral side of reducer can be machined with tapped holes. See reverse housing assembly below for dimensions.



Special reverse housing assembly

Size 813

Sizes 815 - 821

Sizes 824 - 8100

Special reverse housing assembly - Contact Factory for availability.

GR & NH SERIES OUTPUT COVER DIMENSIONS

UNIT	A	B	G	H	BOLT SIZE
813	1.016	2.033	1.768	1.768	.312-18
815	1.016	2.033	1.768	1.768	.312-18
818	1.480	2.961	2.051	2.051	.312-18
821	1.480	2.961	2.652	2.652	.312-18
824	1.856	3.712	2.652	2.652	.312-18
826	1.856	3.712	2.652	2.652	.312-18
830	2.298	4.596	3.536	3.536	.375-16
832	2.298	4.596	3.536	3.536	.375-16
842	2.939	5.877	3.712	3.712	.438-14
852	3.359	6.717	5.303	5.303	.438-14
860	Consult Factory				.500-13
870	Consult Factory				.500-13
880	Consult Factory				.500-13
8100	Consult Factory				.500-13

GR SERIES INPUT COVER DIMENSIONS

UNIT	C	D	E	F	BOLT SIZE
813	1.219	2.438	N/A	N/A	.312-18
815	1.219	2.438	N/A	N/A	.312-18
818	1.219	2.438	N/A	N/A	.312-18
821	1.219	2.438	N/A	N/A	.312-18
824	1.313	2.625	0.781	1.562	.312-18
826	1.313	2.625	0.781	1.562	.312-18
830	1.600	3.200	1.050	2.100	.438-14
832	1.600	3.200	1.050	2.100	.438-14
842	1.600	3.200	1.050	2.100	.438-14
852	1.600	3.200	1.050	2.100	.438-14
860	1.370	2.740	1.370	2.740	.438-14
870	2.033	4.066	2.033	4.066	.438-14
880	2.121	4.242	2.121	4.242	.500-13
8100	Consult Factory				.625-11

GR & NH SERIES INTEGRAL SIDE OF HOUSING

UNIT	A	G	H	BOLT SIZE
813	2.500	1.768	1.768	.312-18
815	2.500	1.768	1.768	.312-18
818	2.900	2.051	2.051	.312-18
821	3.750	2.652	2.652	.312-18
824	3.750	2.652	2.652	.312-18
826	3.750	2.652	2.652	.312-18
830	5.000	3.536	3.536	.375-16
832	5.000	3.536	3.536	.375-16
842	5.250	3.712	3.712	.438-14
852	7.500	5.303	5.303	.438-14

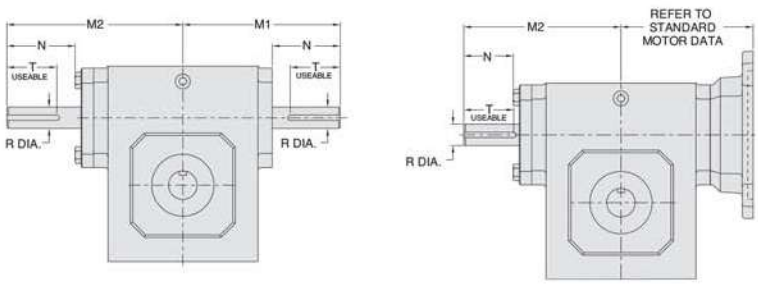
NH SERIES INPUT COVER DIMENSIONS

UNIT	C	D	E	F	BOLT SIZE
813	1.219	2.438	N/A	N/A	.312-18
815	1.219	2.438	N/A	N/A	.312-18
818	1.219	2.438	N/A	N/A	.312-18
821	1.219	2.438	N/A	N/A	.312-18
824	1.313	2.625	0.781	1.562	.312-18
826	1.313	2.625	0.781	1.562	.312-18
830	1.313	2.625	0.781	1.562	.312-18
832	1.313	2.625	0.781	1.562	.312-18
842	1.600	3.200	1.050	2.100	.438-14
852	1.600	3.200	1.050	2.100	.438-14

DUAL INPUT SHAFT EXTENSION DIMENSIONS

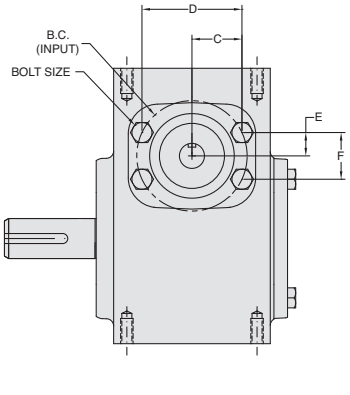
Unit	M1	M2	N	R	T**
813	3.82	4.37	1.76	.500	1/8 x 1.44
815	4.35	4.90	1.76	.625	3/16 x 1.50
818	4.45	5.00	1.76	.625	3/16 x 1.50
821	4.82	5.37	1.76	.625	3/16 x 1.50
824	5.51	6.15	2.38	.750	3/16 x 1.50
826	6.07	6.72	2.38	.750	3/16 x 1.50
830	6.57	7.22	2.38	.875	3/16 x 1.50
832	6.76	7.40	2.38	.875	3/16 x 1.50
842	9.57	9.57	3.47	1.250	1/4 x 2.88
852	10.88	10.88	3.38	1.250	1/4 x 3.00
860	11.78	14.55	3.41	1.500	3/8 x 3.00

**Keyway width by length

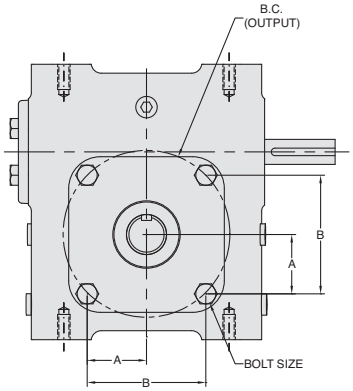


Specify complete model number when ordering reducer with dual input shaft. Catalog number assigned upon receipt of order.

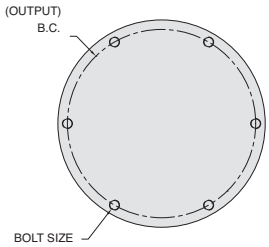
Bolt Circle Dimensions



ALL SIZES



SIZE: 813-852



SIZE: 860

EL SERIES INPUT COVER DIMENSIONS

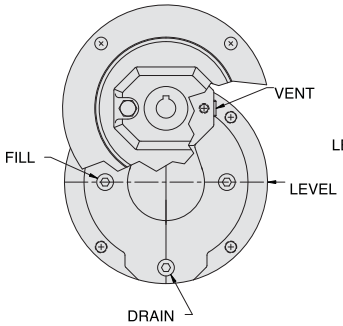
UNIT	C	D	E	F	Input B.C.	BOLT SIZE
813	0.583	1.166	1.248	2.496	N/A	5/16-18
818	1.248	2.496	0.583	1.166	N/A	5/16-18
821	1.248	2.496	0.583	1.166	N/A	5/16-18
824	1.010	2.020	1.510	3.020	N/A	5/16-18
826	1.010	2.020	1.510	3.020	N/A	5/16-18
830	1.010	2.020	1.510	3.020	N/A	5/16-18
832	1.010	2.020	1.510	3.020	N/A	5/16-18
842	1.600	3.200	1.050	2.100	N/A	7/16-14
852	1.600	3.200	1.050	2.100	N/A	7/16-14
860	1.724	3.447	1.724	3.447	4.875	1/2-13

EL SERIES OUTPUT COVER DIMENSIONS

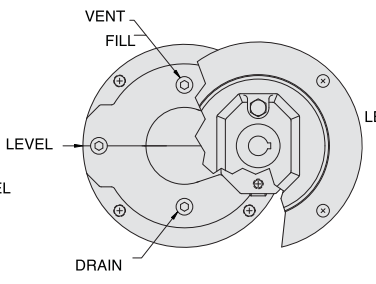
UNIT	A*	B*	Output B.C.*	BOLT SIZE
813	1.016	2.033	2.875	5/16-18
818	1.480	2.961	4.188	5/16-18
821	1.480	2.961	4.188	5/16-18
824	1.856	3.712	5.250	5/16-18
826	1.856	3.712	5.250	5/16-18
830	2.298	4.596	6.500	3/8-16
832	2.298	4.596	6.500	3/8-16
842	2.939	5.877	8.312	7/16-14
852	3.359	6.717	9.500	1/2-13
860	N/A	N/A	11.750	1/2-13

*** Housing has exactly the same tapped holes on both sides of reducer as standard for mounting EL Series accessories in field.**

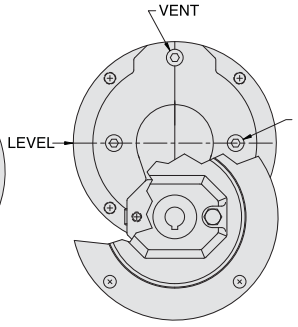
Ratio Multiplier Vent Plug Location



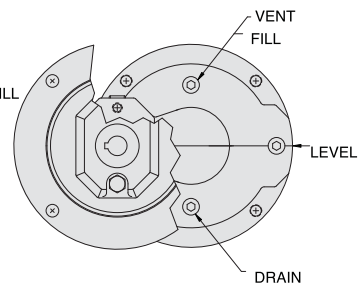
Position 1



Position 2



Position 3



Position 4

- Units are factory filled for Position 1 (input over mounting position). Verify proper oil level for other mountings.
- The "Input Under" mounting position is not recommended due to the increased probability of leakage from the high speed shaft seals.
- Special provisions are required for vertical shaft mountings. Consult factory for details.

Technical Information

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

The precision-made gears and bearings in Grove Gear/Electra-Gear Speed Reducers require high-grade lubricants of the proper viscosity to maintain trouble-free performance. Synthetic lubricants provide the potential for numerous benefits including wider operating temperature range and increased interval between changes. For normal ambient temperatures (-10°F to 105°F)▲ we recommend the use of ISO viscosity grade Mobile Glygoyle 460 polyalkalene glycol (PAG) lubricant which is the standard oil shipped in our product and is compatible with the Viton® seal material used through size 852. For other temperatures, contact Factory for a recommendation. For synthetic lubrication to be used in helical reducers (primaries of helical-worm reducers and ratio multipliers), contact Factory.

▲ Temperature range for continuous duty. For intermittent duty, contact Factory.

Oil Capacities (ounces) - Standard Units

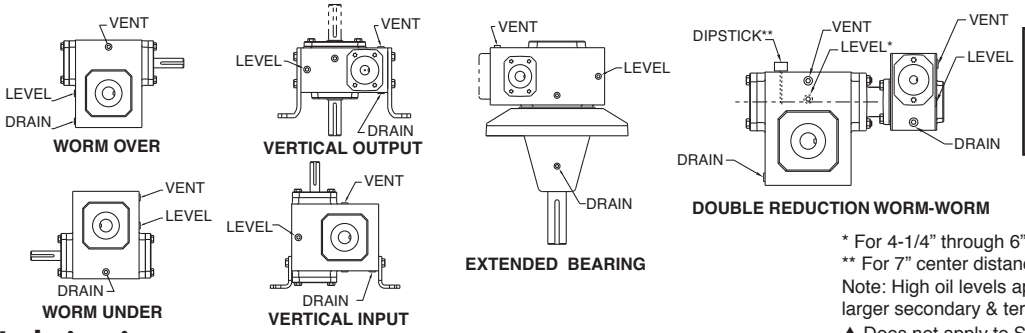
Mounting Position	UNIT SIZE													
	813	815	818	821	824	826	830	832	842	852	860	870*	880*	8100*
Worm Over	4	12	12	20	24	40	56	72	112	188	312	560	768	1152
Worm Under	8	16	20	28	40	60	84	108	152	304	328	524	820	1280
Vertical Output	4	16	16	28	32	48	68	88	128	248	320	332	460	640
Vertical Input	4	16	16	24	32	48	72	92	128	248	325	584	800	1200
Extended Bearing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	128	192	272	432	640	1008	1632
Worm Over on Secondary Unit of Double Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	192	308	320	485	805	1144	1716
Stainless Steel and Washguard - All Mounting Positions	7	15	15	19	28	44	78	76	N/A	N/A	N/A	N/A	N/A	N/A

Shipped Dry (without oil)

CAUTION Always check for proper oil level after filling. Capacities vary somewhat with model and mounting position. Oil should rise to bottom edge of level hole. Do not overfill.

CAUTION Do not operate the reducer without making sure it contains the correct amount of oil. Do not overfill or underfill with oil, or injury to personnel, reducer or other equipment may result.

Standard Gear Reducer Mounting Positions & Vent Plug, Level and Drain Locations ▲



16 oz. = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon
1 gallon = 128 oz. = 231 cu. in.

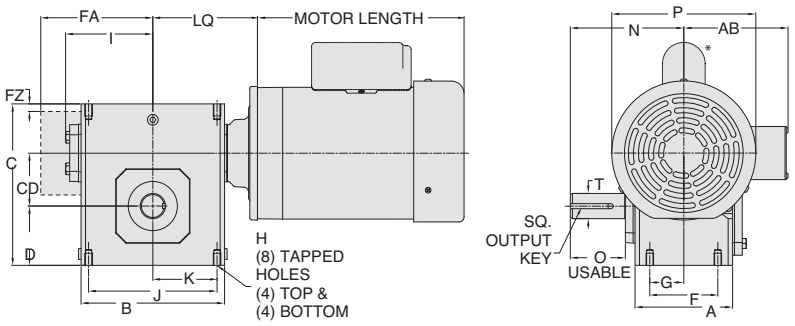
* For 4-1/4" through 6" center distance units (far side plug).
** For 7" center distance & larger units.
Note: High oil levels applies to all 4+1/4" center distance & larger secondary & tertiary units regardless of primary unit type.
▲ Does not apply to Stainless Steel, WASHGUARD or units with Enviroseal option.

Lubrication

Units shipped from Factory are assembled to properly lubricate all internal components based on a specific assumed mounting orientation. Factory assumed mounting orientations are given below. If a size 818 or larger unit will be mounted in a different orientation than listed below, or run with sustained input speeds less than 1200 RPM, it should be specified with the order. The unit can then be modified to assure proper lubrication.

Factory Assumed Mounting Orientation	Applicable Unit Styles*	
Worm Over	B, T, F, H, FH, C,	Single Reduction
	D, DT, DF, DH, DFH	Double Reduction Worm-Worm
	DX, DXT, DXH, DXFH,	Double Reduction Helical-Worm
	TT	Triple Reduction Worm-Worm-Worm
Worm Under	U	Single Reduction
	DU	Double Reduction Worm-Worm
Vertical Output	VL/VH, FE	Single Reduction
	DVL/DVH, DFE	Double Reduction Worm-Worm
	DXVL/DXVH, DXFE	Double Reduction Helical-Worm
Vertical Input	J	Single Reduction
	DJ	Double Reduction Worm-Worm
	DXJ	Double Reduction Helical-Worm

GEAR+MOTOR™ Dimensions



STYLE BMQ & BM GEARMOTOR DIMENSIONS (Inches)

Series	A	B	C	D	CD	F	FA	FZ	G	H Tap	H Depth	I	J	K	N	O	T	Output Key
GR813	2.82	3.80	4.66	1.72	1.33	2.00	N/A	N/A	1.00	5/16-18	0.50	2.61	3.25	1.63	4.00	2.16	0.625	3/16 X 1.50
GR815	3.44	4.88	5.38	1.91	1.54	2.75	N/A	N/A	1.38	5/16-18	0.63	3.14	4.19	2.09	4.31	2.11	0.750	3/16 X 1.50
GR818	3.56	5.06	5.75	2.06	1.75	2.75	N/A	N/A	1.38	5/16-18	0.63	3.24	4.19	2.09	4.31	2.05	0.875	3/16 X 1.38
GR821	3.81	5.80	6.38	2.28	2.06	2.88	N/A	N/A	1.44	3/8-16	0.60	3.61	5.00	2.50	4.68	2.29	1.000	1/4 X 1.44
GR824	4.06	6.12	6.94	2.50	2.38	2.88	N/A	N/A	1.44	3/8-16	0.69	3.77	5.00	2.50	5.14	2.66	1.125	1/4 X 1.75
GR826	4.84	7.12	8.00	2.94	2.63	3.38	N/A	N/A	1.69	3/8-16	0.69	4.34	6.38	3.19	5.63	2.73	1.125	1/4 X 1.75
GR830	5.25	8.12	8.88	3.25	3.00	4.00	N/A	N/A	2.00	7/16-14	0.88	4.84	7.00	3.50	6.75	3.60	1.250	1/4 X 2.25
GR832	5.75	8.50	9.38	3.50	3.25	4.00	N/A	N/A	2.00	7/16-14	0.88	5.02	7.50	3.75	7.06	3.66	1.375	5/16 X 2.50
GR842	6.13	10.25	11.38	4.44	4.25	5.00	N/A	N/A	2.50	5/8-11	1.00	6.10	8.50	4.25	8.12	4.50	1.875	1/2 X 3.06
GR852	7.19	13.00	14.00	5.12	5.25	5.81	N/A	N/A	2.91	5/8-11	1.25	7.50	11.00	5.50	9.06	4.78	2.000	1/2 X 3.50
GR860	8.13	14.25	16.50	6.50	6.00	6.38	11.13	0.33	3.19	5/8-11	1.00	N/A	12.75	6.38	10.00	4.65	2.500	5/8 X 4.00

* Capacitor housing, single phase only, 2-1/4" high

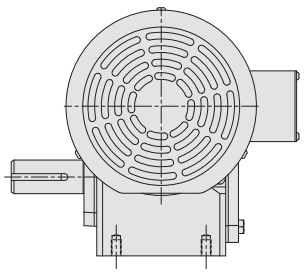
MOTOR MOUNTING DIMENSIONS

Series	LQ BMQ 48CZ	LQ BMQ 56C/140TC	LQ BMQ 180TC	LQ BMQ 210TC	LQ BM 48CZ	LQ BM 56C/140TC	LQ BM 180TC	LQ BM 210TC	P 48CZ	P 56C/140TC	P 180TC	P 210TC	AB 48CZ	AB 56C/140TC	AB 180TC	AB 210TC
GR813	3.46	3.46	N/A	N/A	5.63	6.07	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR815	3.99	3.99	N/A	N/A	6.16	6.60	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR818	4.09	4.09	N/A	N/A	6.26	6.70	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR821	4.46	4.46	N/A	N/A	6.63	7.07	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR824	N/A	4.63	5.06	N/A	N/A	7.76	8.76	8.76	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR826	N/A	5.19	5.62	N/A	N/A	8.32	9.32	9.32	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR830	N/A	5.69	6.12	6.56	N/A	8.82	9.82	9.82	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR832	N/A	5.88	6.31	6.75	N/A	9.01	10.01	10.01	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR842	N/A	6.45	7.21	7.21	N/A	11.81	12.90	12.90	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR852	N/A	7.85	8.61	8.61	N/A	13.21	14.30	14.30	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR860	N/A	10.45	9.33	9.33	N/A	N/A	15.88	15.88	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59

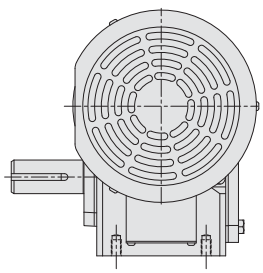
Motor Mounting Postions - All Products

Conduit box position viewed from input side of reducer.

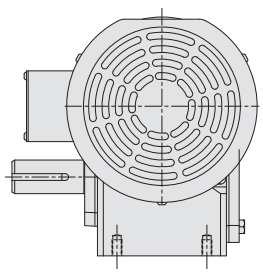
STANDARD MOUNTING POSITION



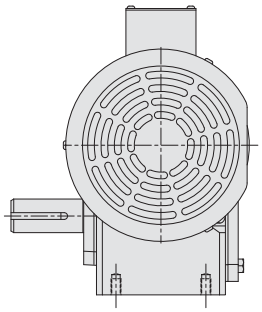
1 Conduit box horizontal on right side.



2 Conduit box vertical on bottom side.



3 Conduit box horizontal on left side.



4 Conduit box vertical on top side.

Technical Information

SPEED REDUCER NOMENCLATURE & DEFINITIONS

BACKLASH – Rotational movement of the output shaft when holding the input shaft stationary and rotating the output alternately clockwise and counter clockwise. Backlash is defined as the clearance between adjacent tooth flanks in a pair of mounted gears. In any gearset, some amount of backlash (clearance) is necessary to prevent damage brought about by gear tooth interference. Lack of backlash may cause noise, overloading, overheating of gears and bearings and even seizing and failure.

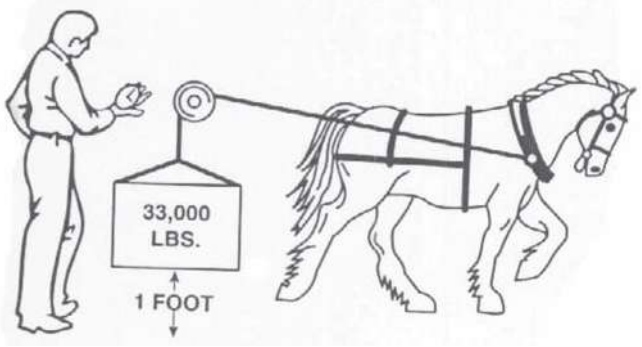
CENTER DISTANCE – On a single reduction reducer, this is the distance between the center lines of the input and output shafts. Shaft center lines may be parallel or at right angles to one another. The center distance of multiple stage reducers usually refers to the lowest speed stage (last reduction).

THRUST LOAD – Forces imposed on a shaft parallel to the shaft axis. It is often encountered on shafts driving mixers, fans, blowers and similar machines. When thrust load acts on a speed reducer, you must be sure that the thrust load rating of the reducer is high enough that it's shafts and bearings can absorb the load.

MECHANICAL RATING – The maximum power or torque that a speed reducer can transmit, based on the strength and durability of its components, is it's mechanical rating. Obviously, the reducer may be rated no higher than the strength or durability of its weakest component. Reducers typically have a safety margin of two to three on their mechanical ratings. Thus, a reducer can withstand momentary overloads of 200-300% of its mechanical rating during a start up or other brief overload situations.

MOUNTING POSITION – The relationship of the input and output shafts relative to the floor line.

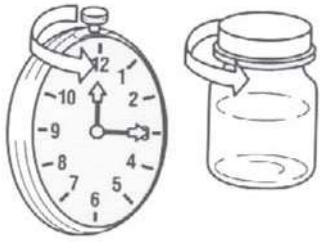
HORSEPOWER – A measure of the rate of doing work and equals the power required to lift 33,000 pounds one foot in one minute.



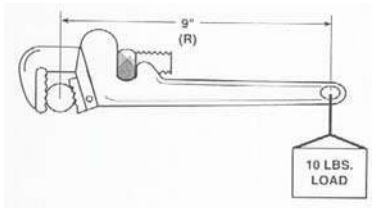
INPUT HORSEPOWER – The amount of power applied to the input shaft of a reducer by the prime mover is it's input horsepower. It is often used as a selection basis for power transmission components, and it appears in the rating table of drive manufacturer's published data. Remember that input horsepower ratings represent the maximum amount of power that the reducer can safely handle.

OUTPUT HORSEPOWER – The amount of power available at the output shaft of a reducer is it's output horsepower. Due to losses caused by inefficiency, output horsepower is always less than input horsepower.

TORQUE – A twisting effort tending to cause rotation. Because most power transmission is associated with rotating elements, torque becomes important as a measurement of the effort required to produce work in the rotational mode. Torque is expressed as a force multiplied by a lever arm. It is stated in several units – pound feet, pound inches, ounce inches, ounce feet, etc. However, the most commonly used is pound inches.

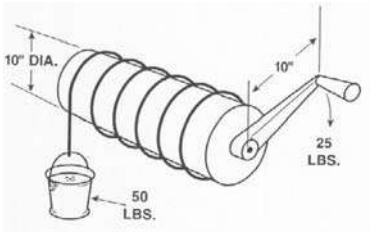


In the case of speed reducers and gears, force or load is usually expressed in pounds and distance in inches. For example, if a load of 10 pounds is applied to a shaft by means of a wrench 9 inches long, we then have a torque of 10 pounds x 9 inches or 90 lb. in.



It is important to note that torque measurement is not dependent on time. The same amount of torque may be required to run a shaft slowly or rapidly, but the introduction of a time element causes work to be performed, and work is measured in terms of horsepower. Consider the application of drawing water from a well via winch and bucket.

In raising a 50-pound pail of water with a 10-inch diameter (5-inch radius) drum and a 10-inch crank arm, 25 pounds (neglecting friction) must be applied to the 10-inch crank



arm to overcome the torque created by the weight of the pail of water acting on the 5-inch drum radius. If no motion is involved, the system is in balance, and although torque is being exerted, no work is being done. If the crank is turned at the rate of 10 RPM, the resulting work done is:

$$HP = \frac{T \times RPM}{63{,}000} = \frac{250 \times 10}{63{,}000} = \text{approx .04 HP}$$

If the crank is turned twice as fast, the horsepower expended becomes:

$$\frac{250 \times 20}{63{,}000} = \text{approx .08 HP}$$

Therefore, exerting the same torque at twice the speed requires twice the horsepower.

RATIO – is defined as the driving speed divided by the driven speed. If a 1750 RPM electric motor is used to drive a 350 RPM conveyor, the ratio would be a q750/350 = 5:1. Ratio is useful for calculating speed reduction and torque multiplication from driver to driven member. For example, a 5:1 ratio Uniline speed reducer directly connected to an electric motor would reduce the motor speed to 1/5 of its original value while multiplying the motor torque to 5 times the original value (neglecting friction loses).

SPEED REDUCER SELECTION – Before a reducer can be selected for any given application, the equivalent horsepower is computed by multiplying the specified or actual horsepower by the service factor for the particular load classification for which the unit is to be used. It is necessary that the unit selected have a capacity equal to or in excess of this equivalent horsepower. The recommended service factors for various load classifications and duration of service are shown for several types of prime movers on page 418.

Load classifications for various applications are given on page 418. They are classified into three commonly recognized load classifications: Uniform, Moderate Shock, and Heavy Shock.

Service factors represent the normal relationship between gear design power rating and the continuous power requirements. Applications involving unusual or severe loading or requiring a high degree of dependability should be carefully reviewed with the manufacturer before a service factor is applied.

Applications with high-torque motors and motors for intermittent operations, applications where extreme repetitive shock occurs, or where high-energy loads must be absorbed, as when stalling, require special consideration and are not covered by the service factors given on page 418.

When drives are equipped with brakes on the input, and the torque rating of the brake exceeds the rating of the motor, the rating of the brake dictates the selection of the gear unit.

The maximum momentary or starting load must not exceed 300 percent of rated load (200 percent overload). Rated load is defined as the unit rating with a service factor of 1.0.

⚠ CAUTION

It is the responsibility of the original equipment manufacturer or user to install and/or operate Ohio Gear Products in conformance with applicable local and national safety codes, suitable guards for rotating shafts and couplings should be used at all times. Good safety procedures should always be observed whenever working with or around any transmission equipment. Fitness for use is the customer's decision and responsibility.

SERVICE FACTORS – Numbers which modify the loads which must be considered in selecting a speed reducer are called service factors. They vary with the type of service in which the reducer is to be used, the kind of prime mover involved and the duty cycle.

WORM GEAR REDUCER SERVICE FACTORS

Proper determination of an application's service factor characteristics is critical for maximum reducer life and trouble free service. See the definition of service factor in the glossary.

All Grove Gear reducers and Gear+Motors™ are sized for applications having an AGMA defined service of 1.0, unless otherwise stated. (Alternately, 1.0 service factor is sometimes expressed as "Class I Service".) Reducers in such applications operate on a continuous duty basis, for 10 hours per day or less, and are free of recurrent shock loads. When operating characteristics are different than noted, the input horsepower and torque ratings listed must be divided by the service factor selected from the table below. This table applies to reducers with an electric or hydraulic motor input.

SPECIAL APPLICATION CONSIDERATIONS

⚠ CAUTION : Please contact Grove Gear for assistance in applications not listed or for applications with unusual characteristics. Including the following:

- Input speeds not listed in catalog
- Frequent starting or repetitive shock applications
- Selection of reducers for man lifts or people moving equipment
- High energy loads, including stalling

WORM REDUCERS:

- Starting or momentary overloads exceeding 200% of gear reducer mechanical capacity (100% overload)

SERVICE FACTOR TABLE

Duration of Service (Hours per day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	—*	—*	1.00	1.25
Less than 3 Hours	1.00	1.00	1.25	1.50
3 - 10 Hours	1.00	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

* Unspecified service factors should be 1.00 or as agreed upon by the user and manufacturer.

When a single or multi-cylinder engine is the input power, the service factor selected from the table above should be increased by multiplying the value by the factor selected from the table below.

Service Factor Conversion Table for Engine Driven Applications.

Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

On page 418, AGMA standardized service factor data is listed for a wide variety of applications operating 3 to 10 hours per day and for 10 hours or more per day.
BACK-DRIVING – This is the converse of self-locking. Depending upon ratio and many variables, it is difficult to predict the back-driving capability of a reducer. Worm gear reducers are not intended to be used as speed increasers. Consult factory for back-driving applications.

PEOPLE CONVEYING EQUIPMENT – Selection of gear drives for applications whose primary purpose is the transportation of people is not approved. This includes such applications as freight or passenger elevators, escalators, man lift platforms, and ski tows and ski lifts.

If the primary purpose of the application is material conveyance and occasionally people are transported, the warranty may remain in effect provided the design and load conditions are not exceeded and certification to the appropriate safety codes and load conditions has been obtained by the system designer or end user from the appropriate enforcement authorities.

STORED & INACTIVE GEAR DRIVE – Each drive is protected with rust preventive that will protect parts against rust for a period of 6 months in an indoor dry shelter.

If a drive is to be stored, or is inactive after installation beyond the above periods, drain oil from housing and spray all internal parts with a rust preventive oil that is soluble in lubricating oil and rotate the shafts several times by hand. Before operating, drives which have been stored or inactive must be filled to the proper level.

Periodically inspect stored or inactive gear drives and spray or add rust inhibitor every six months, or more often if necessary. Indoor dry storage is recommended.

EXCESSIVE OVERLOADS – The maximum momentary or starting load must not exceed 300% of rated load (200% overload). Rated load is defined as gear drive rating with a service factor of 1.0. If the maximum starting or momentary load exceeds the above conditions, compute a second equivalent power rating by dividing the peak load by two. The gear drive selected must have capacity equal to, or in excess of, the larger equivalent power rating.

REVERSING SERVICE – Applications involving either more than 20 reversals per ten hour period, or less than 20 reversals per ten hour period with peak torques greater than 200% of normal load must be referred to Factory.

BRAKE EQUIPPED APPLICATIONS – When a gear drive is equipped with a "working" brake that is used to decelerate the motion of the system and the brake is located between the prime mover and the gear drive, select the drive based on the brake rating or highest equivalent power rating, whichever is greater. If the brake is used for holding only and is applied after the motion of the system has come to rest, the brake rating must be less than 200% of the catalog rating, refer the application to Factory. Also refer to Factory all applications in which the brake is located on the output shaft of the gear drive.

OVERSIZED PRIME MOVER – Published service factors do not cover applications that require oversize prime movers for high energy or peak loads. Refer such applications to Factory for selection of suitable drives.

MAXIMUM INPUT SPEEDS FOR WORM GEAR REDUCERS (GR, NH, EL SERIES)
Size 813 through 852 2500 RPM
Size 860 through 8100 1750 RPM

NOTE: Horsepower ratings for 1750 RPM should not be exceeded when operating at higher input speeds. For higher input speeds, contact Factory.

APPLICATION CONSIDERATIONS:

Belt Conveyors – To determine the torque, establish the belt pull. In calculating this, the effects of sliding friction and angle or inclination must be considered. The table below shows application factors which may be sued in determining belt pull based upon common combinations of materials and various angles.

Material Combinations	Angle from the Horizontal									
	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
Pivoting Bucket Conveyor	0.025	0.19	0.36	0.52	0.66	0.78	0.88	0.95	0.99	1.00
Belt on Rollers	0.025	0.19	0.36	0.52	0.66	0.78	0.88	0.95	0.99	1.00
Metal on Metal (Finished)	0.20	0.37	0.53	0.67	0.80	0.89	0.97	1.01	1.02	1.00
Fabric on Steel	0.27	0.44	0.60	0.74	0.85	0.94	1.00	1.03	1.03	1.00
Fabric on Wood	0.32	0.49	0.63	0.77	0.88	0.97	1.02	1.04	1.04	1.00
Leather on Wood	0.35	0.52	0.67	0.80	0.91	0.99	1.04	1.06	1.05	1.00
Wood on Wood	0.35	0.52	0.67	0.80	0.91	0.99	1.04	1.06	1.05	1.00
Plastic on Steel	0.35	0.52	0.67	0.80	0.91	0.99	1.04	1.06	1.05	1.00
Metal on Wood	0.40	0.57	0.72	0.85	0.95	1.02	1.07	1.08	1.05	1.00
Rubber on Wood	0.45	0.62	0.76	0.89	0.99	1.05	1.09	1.09	1.06	1.00
Rubber on Steel	0.50	0.67	0.81	0.93	1.03	1.09	1.12	1.11	1.07	1.00
Leather on Metal	0.56	0.72	0.87	0.98	1.06	1.12	1.14	1.13	1.08	1.00

The procedure involves selection of the proper application factor for the calculations:
Belt Pull = (Total Weight on Conveyor) x (Application Factor)
Torque = (Belt Pull) x (Radius of Head Pulley)

Example: An inclined belt conveyor is to move boxes of steel parts. The belt is fabric on rollers. Five boxes will be on the conveyor at a time, and each weighs 50 pounds. The conveyor is inclined at 10° to the horizontal, and the head pulley diameter is 7". How much torque is required at the head pulley?

Select .44 as the application factor.
Determine weight: 5 x 50 = 250 Lbs.
Determine belt pull: 250 x .44 = 110 Lbs.
Determine torque: 110 x 3.5 = 385 Lb. Ins.

HOISTS – A worm gear is generally said to be self-locking or irreversible when the gear cannot drive the worm. This static condition can be upset by vibrations from nearby machinery or other sources. Many worm gear reducers are not self-locking, and even a particular size and ratio, which may appear to be, cannot be depended upon for this purpose. Also, a reducer which holds the load when upward movement is stopped may not when the load inertia is moving downward and the motor is stopped. For complete locking assurance, it is recommended that a fail-safe brake be used for such an application.

Technical Information

A.G.M.A. SERVICE FACTORS

Application	Service Factor 3-10 Hours	Over 10 Hours
AGITATORS		
Pure Liquids	1.00	1.25
Liquids & Solids	1.25	1.50
Liquids-Variable Density	1.25	1.50
APRON CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
APRON FEEDERS	1.25	1.50
ASSEMBLY CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
BARGE HAUL PULLERS	1.50	1.75
BARKING		
Drums (Coupling Connected)		1.75
Mechanical		1.75
BAR SCREENS (Sewage)	1.00	1.25
BELT CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
BELT FEEDERS	1.25	1.50
BLOWERS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Vane	1.00	1.25
BOLTING MACHINERY	1.00	1.25
BREWING & DISTILLING		
Bottling Machinery	1.00	1.25
Brew Kettles, Cont. Duty	1.00	1.25
Can Filling Machines	1.00	1.25
Cookers-Cont. Duty	1.00	1.25
Mash Tubs-Cont. Duty	1.00	1.25
Scale Hoppers-Frequent Starts	1.25	1.50
BUCKET		
Conveyors Uniform	1.00	1.25
Conveyors Heavy Duty	1.25	1.50
Elevators Cont.	1.00	1.25
Elevators Uniform	1.00	1.25
Elevators Heavy Duty	1.25	1.50
CALENDARS		
Rubber		1.50
Textile	1.25	1.50
CANE KNIVES		1.50
CAN FILLING MACHINES	1.00	1.25
CAR DUMPERS	1.50	1.75
CAR PULLERS	1.25	1.50
CENTRIFUGAL		
Blowers, Compressors, Discharge Elevator, Fans or Pumps	1.00	1.25
CHAIN CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
CLARIFIERS	1.00	1.25
CLASSIFIERS	1.25	1.50
CLAY WORKING INDUSTRY		
Brick Press	1.75	2.00
Briquette Machines	1.75	2.00
Clay Working Machinery	1.25	1.50
Plug Mills	1.25	1.50
COMPRESSORS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Reciprocating:		
Multi-Cylinder	1.25	1.50
Single Cylinder	1.50	1.75
CONCRETE MIXERS		
Continuous	1.25	1.50
Intermittent	1.25	1.50
CONVEYORS-Uniformly Loaded or Fed Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	1.00	1.25
CONVEYORS-Severe Duty		
Live Roll		Contact Factory
Reciprocating, Shaker	1.50	1.75
COOLING TOWER FANS		Contact Factory
CRANES		
Dry Dock Cranes		Contact Factory
Main Hoist	1.00	1.25
Bridge and Trolley Travel		Contact Factory
CRUSHERS		
Ore or Stone	1.50	1.75
Sugar		1.50
DISC FEEDERS	1.00	1.25
DOUBLE ACTING PUMPS		
2 or more Cylinders	1.25	1.50
Single Cylinder		Contact Factory
DRAW BENCH (Metal Mills)		
Carriage & Main Drive	1.25	1.50
DREDGES		
Cable Reels, Conveyors	1.25	1.50
Cutter Head & Jig Drives	1.75	2.00
Maneuvering Winches, Pumps	1.25	1.50
Screen Drives	1.50	1.75
Stackers, Utility Winches	1.25	1.50
ELEVATORS		
Bucket-Uniform Load	1.00	1.25
Bucket-Heavy Duty	1.25	1.50
Bucket-Continuous	1.00	1.25
Centrifugal Discharge	1.00	1.25
Escalators		Not Approved
Freight		Not Approved
Gravity Discharge	1.00	1.25
Man Lifts, Passenger		Not Approved
EXTRUDERS (Plastic)		
Film Sheet, Coating, Rods, Pipe Tubing	1.25	1.25
Blow Molders, Pre-plasticizers		1.50
FANS		
Centrifugal	1.00	1.25
COOLING TOWERS		Contact Factory
Forced Draft		1.25
Induced Draft	1.25	1.50
Large (Mine, etc.)	1.25	1.50
Large Industrial	1.25	1.50
Light (Small Diameter)	1.00	1.25
FEEDERS		
Apron, Belt	1.25	1.50
Disc	1.00	1.25
Reciprocating	1.75	2.00
Screw	1.25	1.50
FLIGHT		
Conveyors, Uniform	1.00	1.25
Conveyors, Heavy	1.25	1.50
FOOD INDUSTRY		
Beet Slicers	1.25	1.50
Bottling, Can Filling Mach.	1.00	1.25
Cereal Cookers	1.00	1.25
Dough Mixers, Meat Grinders	1.25	1.50
HAMMER MILLS	1.50	1.75
HOISTS		
Heavy Duty	1.75	2.00
Medium Duty	1.25	1.50
Skip Hoist	1.25	1.50
INDUCED DRAFT FANS	1.25	1.50
LAUNDRY WASHERS AND TUMBLERS	1.25	1.50
LINE SHAFTS		
Driving Processing Equipment	1.25	1.50
Other Line Shafts, Light	1.00	1.25
LUMBER INDUSTRY		
Barkers-Spindle Feed	1.25	1.50
Barkers-Main Drive	1.75	1.75
Carriage Drive		Contact Factory
CONVEYORS		
Burner	1.25	1.50
Main or Heavy Duty	1.50	1.50
Main Log	1.75	2.00
Re-saw Merry-Go-Round	1.25	1.50
Slab	1.75	2.00
Transfer	1.25	1.50
Chains-Floor	1.50	1.50
Chains-Green	1.50	1.75
Cut-Off Saws-Chain & Drag	1.50	1.75
Debarking Drums	1.75	2.00
Feeds-Edger	1.25	1.50
Feeds-Gang	1.50	1.50
Feeds-Trimmer	1.25	1.50
Log Deck	1.50	1.50
Log Hauls-Incline Well Type	1.50	1.50
Log Turning Devices	1.50	1.50
Planer Feed	1.25	1.50
Planer Tilting Hoist	1.50	1.50
Rolls-Live-Off Bearing-Roll Cases	1.50	1.50
Sorting Table, Tipple Hoist	1.25	1.50
Transfers-Chain & Craneway	1.50	1.75
Tray Drives	1.25	1.50
Veneer Lathe Drives		Contact Factory
MACHINE TOOLS		
Auxiliary Drives	1.00	1.25
Bending Rolls	1.25	1.50
Main Drives	1.25	1.50
Notching Press (Belted)		Contact Factory
Plate Planers	1.50	1.75
Punch Press (Geared)	1.50	1.75
Tapping Machines	1.50	1.75
METAL MILLS		
Draw Bench Carriages & Main Drives	1.25	1.50
Pinch, Dryer and Scrubber Rolls Reversing		Contact Factory
Slitters	1.25	1.50
Table Conveyors Non-Reversing Group Drives	1.25	1.50
Individual Drives	1.50	1.75
Reversing Wire Drawing & Flattening Machines	1.25	1.50
Wire Winding Machines	1.25	1.50
MILLS, ROTARY		
Ball and Rod Mills with Spur Ring Gear		1.75
with Helical Ring Gear		1.50
Direct Connect		1.50
Cement Kilns, Dryers, Coolers, Pebble, Plain & Wedge Bar Mills		1.50
Tumbling Barrels	1.50	1.75
MIXERS (Also see Agitators)		
Concrete, Cont. & Int.	1.25	1.50
Constant Density	1.00	1.25
Variable Density	1.25	1.50
OIL INDUSTRY		
Chillers	1.25	1.50
Oil Well Pumping		Contact Factory
Paraffin Filter Press	1.25	1.50
Rotary Kilns	1.25	1.50
PAPER MILLS		Contact Factory
PASSENGER ELEVATORS		Contact Factory
PLATE PLANERS	1.50	1.75
PRINTING PRESSES		Contact Factory
PUMPS		
Centrifugal	1.00	1.25
Proportioning	1.25	1.50
Reciprocating		
Single Act, 3 or more Cyl.	1.25	1.50
Double Act, 2 or more Cyl.	1.25	1.50
Single Act, 1 or 2 Cyl		Contact Factory
Double Act, 1 Cyl.		Contact Factory
Rotary: Gear, Lobe, Vane	1.00	1.25
PUNCH PRESSES (Gear Driven)	1.50	1.75
RUBBER & PLASTIC INDUSTRIES		
Calendars		1.50
Crackers		1.75
Laboratory Equipment	1.25	1.50
Mills (2 on line)	1.50	
Mills (3 on line)	1.25	
Mixing Mills	1.50	1.50
Refiners		1.50
Sheeters		1.50
Tire Building & Machines		Contact Factory
Tire & Tube Press Openers		Contact Factory
Tubers & Strainers		1.50
Warming Mills		1.50
SCREENS		
Air Washing	1.00	1.25
Rotary-Sand or Gravel	1.25	1.50
Traveling Water Intake	1.00	1.25
SEWAGE DISPOSAL		
Bar Screens	1.00	1.25
Chemical Feeders	1.00	1.25
Collectors	1.00	1.25
Dewatering Screens	1.25	1.50
Scum Breakers	1.25	1.50
Slow or Rapid Mixers	1.25	1.50
Thickeners	1.25	1.50
Vacuum Filters	1.25	1.50
SKI TOWS & LIFTS		Not Approved
STOKERS	1.00	1.25
STONE CRUSHERS	1.50	1.75
SUGAR INDUSTRY		
Cane Knives, Crushers, Mills		1.50
TABLE CONVEYORS (Non-Reversing)		
Group Drives	1.25	1.50
Individual Drives	1.50	1.75
Reversing		Contact Factory
TEXTILE INDUSTRY		
Batchers, Calendars	1.25	1.50
Card Machines	1.25	1.50
Dry Cans, Dryers	1.25	1.50
Dyeing Machinery	1.25	1.50
Knitting Machinery		Contact Factory
Looms, Mangles, Nappers, Pads	1.25	1.50
Range Drives		Contact Factory
Slashers, Soapers, Spinners	1.25	1.50
Tenter Frames, Washers, Winders	1.25	1.50
TUMBLING BARRELS	1.50	1.75
VANE BLOWERS	1.00	1.25
WINDLASS		Contact Factory
WIRE		
Drawing Machines	1.25	1.50
Winding Machines	1.25	1.50

$$TQ_{(In\text{-}lb)} = \frac{(HP \times 63025)}{RPM} \qquad HP_{(Rotational)} = \frac{TQ_{(In\text{-}Lb)} \times RPM}{63025}$$

$$TQ_{(ft\text{-}lb)} = \frac{(HP \times 5252)}{RPM} \qquad HP_{(Rotational)} = \frac{TQ_{(ft\text{-}lb)} \times RPM}{5252}$$

$$TQ_{(In\text{-}lb)} = W \times R \qquad HP_{(Linear)} = \frac{W \times V}{33000}$$

Torque and Horsepower

Torque as it is related to gear reducers is defined as a twisting motion resulting in rotational movement. Horsepower is a measure of the rate of doing work, and depends on speed of rotation and the radius of rotation.

$$HP = \frac{TQ \times Speed\ (RPM)}{63025} \qquad TQ = \frac{HP \times 63025}{RPM}$$

Efficiency

The efficiency of a Worm Gear Speed Reducer is dependent on input speed, lead angle of the worm, type of lubricant, ambient temperature and many other variables. The efficiency for speed reducer can be easily calculated as follows.

$$Efficiency = \frac{Output\ HP}{Input\ HP}$$

$$Efficiency_{(Total)} = Eff_1 + Eff_2 + Eff_3$$

Overhung Load & Thrust Loads

An overhung load exists when a force is applied at right angles to a shaft beyond the shaft's outermost bearing. Pulleys, sheaves and sprockets will cause an overhung load when used as a power take-off. The amount of overhung load will vary, depending on the type of power take-off used and its mounting location on the shaft. The catalog Overhung Load ratings listed below are calculated at the centerline of the shaft.

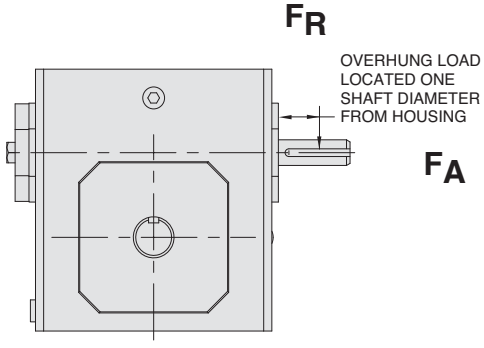
Overhung load ratings are listed for each reducer size and should not be exceeded. If the basic reducer is selected using a service factor, that factor must also be used in the equations below.

$$Output\ Shaft\ OHL = \frac{126000 \times Motor\ HP \times OL}{Pitch\ Diameter\ (of\ sprocket,\ pulley\ or\ sheave) \times Output\ RPM}$$

$$Input\ Shaft\ OHL = \frac{126000 \times Motor\ HP \times OL}{Pitch\ Diameter\ (of\ sprocket,\ pulley\ or\ sheave) \times Input\ RPM}$$

Overhung Load Factors (O_L)

Sprocket	1.00
Gear Pinion	1.25
V-Belt Sheave or Pulley	1.50
Flat Belt	2.50



LOAD LOCATION FACTORS - LF:

Distance	813	815	818	820	824	826	830	832	842	852	860-8100
1 x T	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
2 x T	0.46	0.61	0.49	0.58	0.58	0.57	0.48	0.57	0.56	0.56	
3 x T	0.30	0.44	0.32	0.41	0.41	0.40	0.32	0.40	0.39	0.39	Contact Factory
4 x T	0.22	0.34	0.24	0.31	0.31	0.31	0.24	0.31	0.30	0.30	
5 x T	0.18	0.28	0.19	0.26	0.26	0.25	0.19	0.25	0.24	0.24	

Distance = distance of load from side of housing in terms of shaft diameter 'T'
T = Shaft diameter

Overhung Load – Overhung load is imposed upon a shaft when a pinion or sprocket is used as a power take-off. The magnitude of the load varies with the type of PTO and its location to the shaft bearing. Calculate the load (including minimum required service factor) and check the result against the tabulated overhung load rating. The overhung load formula below considers the transmitted horsepower with service factor. This is appropriate for applications where starting loads, momentary overloads and brake capacities do not exceed 200% of gear reducer rating (100% overload). For other conditions, calculate the actual application load by multiplying the transmitted power by the appropriate service factor.

Lf = load location factor (the input shaft OHL is assumed to be applied at one shaft diameter from the seal cage, (Lf = 1.0) if the load is applied at a distance greater than one shaft diameter from the seal cage, refer the application to the Factory). The calculated overhung load must be less than or equal to the capacity shown on pages 420-422.

Load Location Factor (Lf) – the output shaft load location factors are shown below.

CAST IRON GR SERIES

MAXIMUM OVERHUNG LOAD◊ AND THRUST LOAD RATINGS (LBS.)

GR SERIES • SINGLE REDUCTION • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
5	700	860	1200	1000	1770	1625	2170	2275	2800	3100	3538			
7.5	700	860	1200	1035	1770	1625	2170	2275	2930	3245	3723			
10	700	860	1200	1065	1770	1625	2170	2275	3010	3370	3723			
15	700	860	1200	1125	1770	1625	2170	2275	3190	3560	3723			
20	700	860	1200	1175	1770	1625	2170	2275	3320	3560	3723			
25	700	860	1200	1210	1770	1625	2170	2275	3445	3560	3723	6209	7761	11028
30	700	860	1200	1255	1770	1625	2170	2275	3550	3560	3723			
40	700	860	1200	1315	1770	1625	2170	2275	3715	3560	3723			
50	700	860	1200	1385	1770	1625	2170	2275	3730	3560	3723			
60	700	860	1200	1415	1770	1625	2170	2275	3730	3570	3723			
70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
80	700	860	1200	1495	1770	1625	2170	2275	3740	3590	3723	N/A	N/A	N/A
100	700	860	1200	1580	1770	1625	2170	2275	3750	3600	3723	N/A	N/A	N/A

Ratio	Gear Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
5	827	794	793	735	1451	1420	1729	1605	1445	1675	3633			
7.5	948	946	868	811	1659	1609	1944	1869	1640	2021	3990			
10	1070	1056	976	898	1820	1762	2147	2026	1788	2449	3990	4009	4777	6808
15	1144	1144	1144	1099	2091	2069	2549	2490	2319	3033	3990			
All other single reduction ratios	1144	1144	1144	1144	2091	2091	2574	2574	2533	3412	3990			

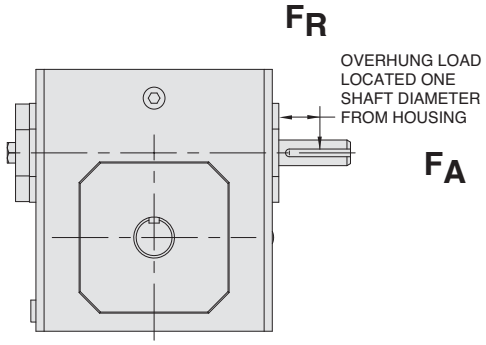
GR SERIES • SINGLE REDUCTION EXTENDED BEARING DESIGN • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size							
	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
All Ratios	605	959	1200	2524	2245	3791	4850	8500

GR SERIES • SINGLE REDUCTION • INPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
All Ratios	75	75	75	75	125	125	150	150	175	300	450	450	450	500

◊ Output shaft overhung load rating (lbs) is based on load applied one shaft diameter from face of reducer housing.
FR = Radial load rating = overhung load (lbs)
FA = Axial load rating = thrust rating (lbs)



MAXIMUM OVERHUNG LOAD◊ AND THRUST LOAD RATINGS (LBS.)

NH SERIES • SINGLE REDUCTION • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
5	860	860	1250	775	1300	1750	1950	2250	2800	3100
7.5	860	860	1250	775	1300	1750	1950	2250	2930	3245
10	860	860	1250	775	1300	1750	1950	2250	3010	3370
15	860	860	1250	775	1300	1750	1950	2250	3190	3560
20	860	860	1250	775	1300	1750	1950	2250	3320	3560
25	860	860	1250	775	1300	1750	1950	2250	3445	3560
30	860	860	1250	775	1300	1750	1950	2250	3550	3560
40	860	860	1250	775	1300	1750	1950	2250	3715	3560
50	860	860	1250	775	1300	1750	1950	2250	3730	3560
60	860	860	1250	775	1300	1750	1950	2250	3730	3570
80	860	860	1250	775	1300	1750	1950	2250	3740	3590
100	860	860	1250	775	1300	1750	1950	2250	3750	3600

NH SERIES • SINGLE REDUCTION • OUTPUT SHAFT THRUST LOAD F_A

Ratio	Gear Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
5	827	794	793	735	1451	1420	1729	1605	1445	1675
7.5	948	946	868	811	1659	1609	1944	1869	1640	2021
10	1070	1056	976	898	1820	1762	2147	2026	1788	2449
15	1144	1144	1144	1099	2091	2069	2549	2490	2319	3033
All other single reduction ratios	1144	1144	1144	1144	2091	2091	2574	2574	2533	3412

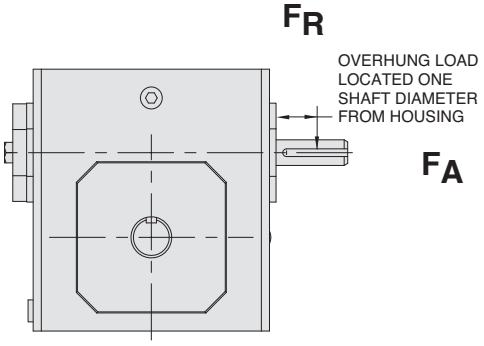
NH SERIES • SINGLE REDUCTION EXTENDED BEARING DESIGN • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size			
	NH830	NH832	NH842	NH852
All Ratios	605	959	1200	2524

NH SERIES • SINGLE REDUCTION • INPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
All Ratios	75	75	75	75	125	125	150	150	175	300

◊ Output shaft overhung load rating (lbs) is based on load applied one shaft diameter from face of reducer housing.
F_R = Radial load rating = overhung load (lbs)
FA = Axial load rating = thrust rating (lbs)



ALUMINUM EL SERIES

MAXIMUM OVERHUNG LOAD◊ AND THRUST LOAD RATINGS (LBS.)

EL SERIES • SINGLE REDUCTION • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
5	700	920	1000	1770	1625	2170	2170	2800	3100	3538
7.5	700	920	1035	1770	1625	2170	2170	2930	3245	3723
10	700	920	1065	1770	1625	2170	2170	3010	3370	3723
15	700	920	1125	1770	1625	2170	2170	3190	3560	3723
20	700	920	1175	1770	1625	2170	2170	3320	3560	3723
25	700	920	1210	1770	1625	2170	2170	3445	3560	3723
30	700	920	1255	1770	1625	2170	2170	3550	3560	3723
40	700	920	1315	1770	1625	2170	2170	3715	3560	3723
50	700	920	1385	1770	1625	2170	2170	3730	3560	3723
60	700	920	1415	1770	1625	2170	2170	3730	3570	3723
80	700	920	1495	1770	1625	2170	2170	3740	3590	3723
100	700	920	1580	1770	1625	2170	2170	3750	3600	3723

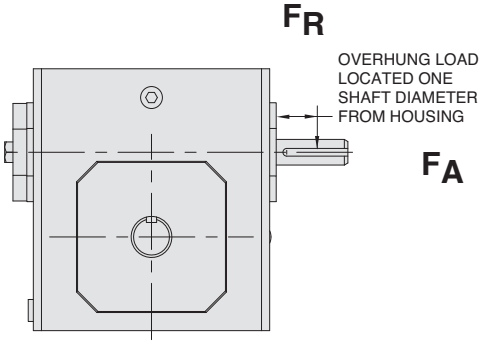
EL SERIES • SINGLE REDUCTION • OUTPUT SHAFT THRUST LOAD F_A

Ratio	Gear Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
5	827	793	735	1451	1420	1729	1605	1445	1675	3633
7.5	948	868	811	1659	1609	1944	1869	1640	2021	3990
10	1070	976	898	1820	1762	2147	2026	1788	2449	3990
15	1144	1144	1099	2091	2069	2549	2490	2319	3033	3990
All other single reduction ratios	1144	1144	1144	2091	2091	2574	2574	2533	3412	3990

EL SERIES • SINGLE REDUCTION • INPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
All Ratios	75	75	75	125	125	150	150	175	300	450

◊ Output shaft overhung load rating (lbs) is based on load applied one shaft diameter from face of reducer housing.
F_R = Radial load rating = overhung load (lbs)
FA = Axial load rating = thrust rating (lbs)



Additional Engineering Equations and Conversion Factors

Velocity(FPM) = V = .2618 x D x RPM

$$\text{Rotational Speed} = \text{RPM} = \frac{V}{(.2618 \times D)}$$

$$\text{Ratio} = \frac{\text{Input RPM}}{\text{Output RPM}} = \frac{\text{No. Teeth in Driver}}{\text{No. Teeth in Driven}} = \frac{\text{Diameter of Driver}}{\text{Diameter of Driven}}$$

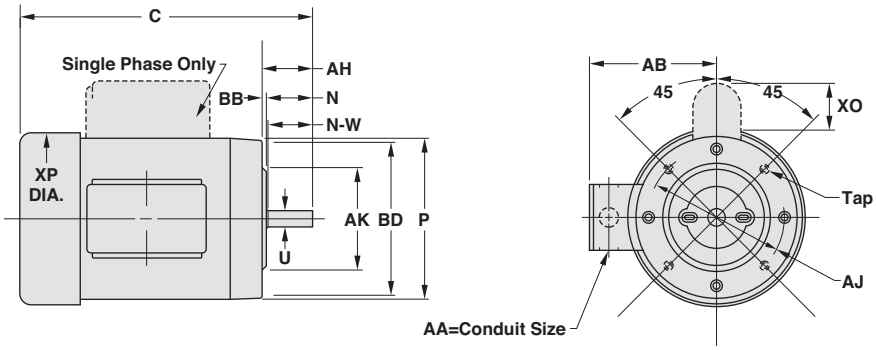
$$\text{Ratio(Total)} = \text{Ratio}_1 + \text{Ratio}_2 + \text{Ratio}_3$$

1 inch = 25.4 MM
1 lb = 4.448 N
1 in-lb = .11298 Nm
1HP = 746 Watts = .746 kW
1kW = 1.34 HP
°F = 9/5 x °C + 32
°C = 5/9 x (°F - 32)

Where:
D = Diameter (inches)
HP = Horsepower
R= Radius (inches)
RPM - Rotational Speed
TQ = Torque
V = linear velocity (FPM)
W = force or tension (lbs)

MOTOR DIMENSIONS
AC & DC MOTORS • NEMA C FACE

CRITICAL MOUNTING DIMENSIONS



The condensed dimensions shown on these pages are for general reference only and are not for construction.

NEMA SHAFT AND KEYWAY DIMENSIONS ■ (Inches)

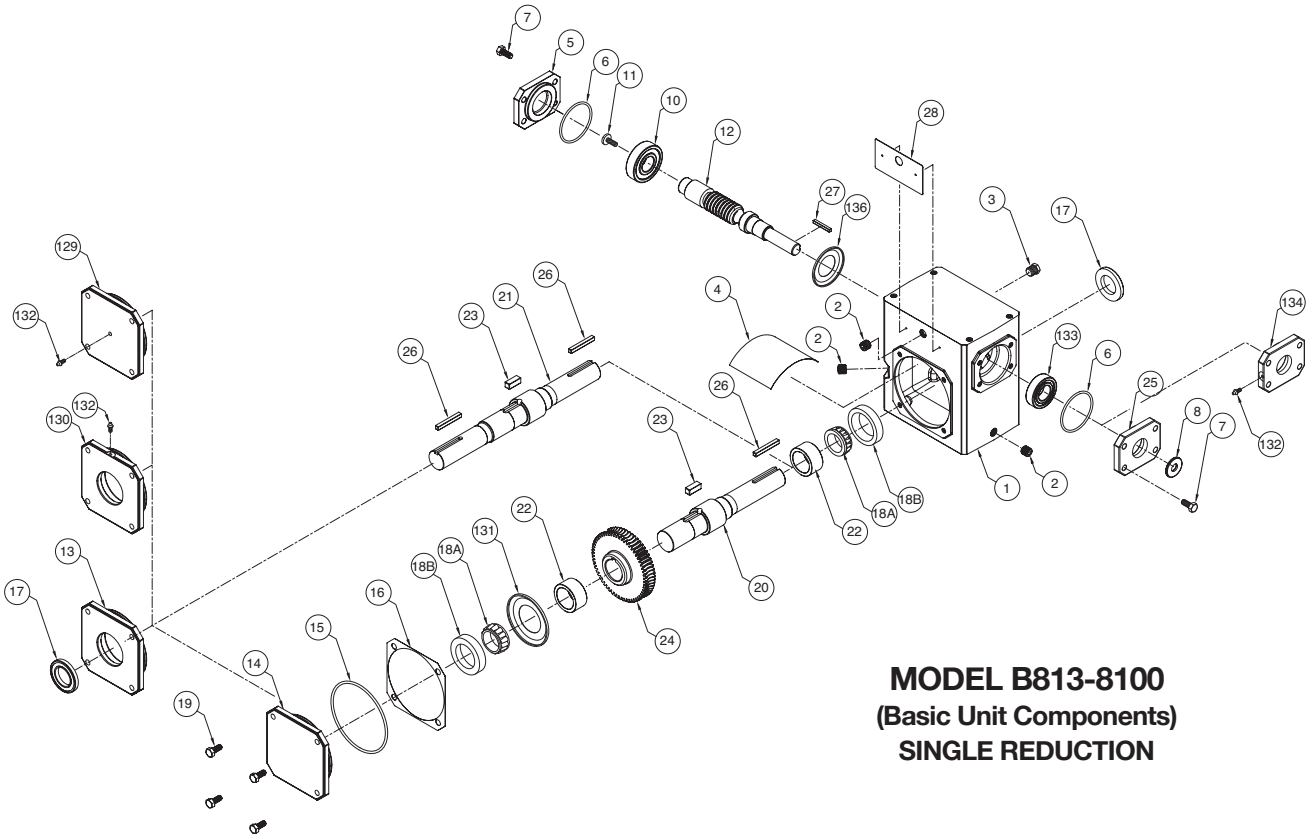
NEMA SHAFT (U)	KEYWAY DIMENSIONS (R)	(S)	NEMA SHAFT (U)	KEYWAY DIMENSIONS (R)	(S)
5/8	33/64	3/16	2-3/8	2-1/64	5/8
7/8	49/64	3/16	2-1/2	2-3/16	5/8
1-1/8	63/64	1/4	2-7/8	2-29/64	3/4
1-3/8	1-13/64	5/16	3-3/8	2-7/8	7/8
1-5/8	1-13/32	3/8	3-7/8	3-5/16	1

■ S is keyway width.
U minus R is keyway depth.

NEMA DIMENSIONS (Inches)

Frame Size ▲	N	P	U	N-W	AA	AB	AH	AJ	AK	BB	BD	XO	XP	TAP	KEY
S56	$1\frac{15}{16}$	$5\frac{19}{32}$	$\frac{5}{8}$	$1\frac{7}{8}$	$\frac{1}{2}$	$4\frac{7}{8}$	$2\frac{1}{16}$	$5\frac{7}{8}$	$4\frac{1}{2}$	$\frac{1}{8}$	$6\frac{1}{2}$	$2\frac{1}{4}$	$5\frac{7}{8}$	$\frac{3}{8}$-16	$\frac{3}{16}$
56		$6\frac{19}{32}$				$5\frac{5}{16}$							$7\frac{5}{32}$		
143T 145T	$2\frac{3}{8}$	$6\frac{19}{32}$	$\frac{7}{8}$	$2\frac{1}{4}$	$\frac{3}{4}$	$5\frac{5}{16}$	$2\frac{1}{8}$	$5\frac{7}{8}$	$4\frac{1}{2}$	$\frac{1}{8}$	$6\frac{1}{2}$	$2\frac{1}{4}$	$7\frac{5}{32}$	$\frac{3}{8}$-16	$\frac{3}{16}$
182T 184T	$2\frac{7}{8}$	$8\frac{15}{32}$	$1\frac{1}{8}$	$2\frac{3}{4}$	$\frac{3}{4}$	$6\frac{3}{8}$	$2\frac{5}{8}$	$7\frac{1}{4}$	$8\frac{1}{2}$	$\frac{1}{4}$	$8\frac{7}{8}$	$2\frac{1}{4}$	$9\frac{3}{32}$	$\frac{1}{2}$-13	$\frac{1}{4}$
S213T	$3\frac{1}{2}$	$8\frac{15}{32}$			$\frac{3}{4}$	$6\frac{3}{8}$					$8\frac{7}{8}$		$9\frac{3}{32}$		
213T 215T	–	$10\frac{13}{16}$	$1\frac{3}{8}$	$3\frac{3}{8}$	1	$8\frac{5}{16}$	$3\frac{1}{8}$	$7\frac{1}{4}$	$8\frac{1}{2}$	$\frac{1}{4}$	9	$2\frac{1}{4}$	$11\frac{3}{32}$	$\frac{1}{2}$-13	$\frac{5}{16}$
254TC 256TC	–	$13\frac{1}{4}$	$1\frac{5}{8}$	4	$1\frac{1}{4}$	$11\frac{5}{8}$	$3\frac{3}{4}$	$7\frac{1}{4}$	$8\frac{1}{2}$	$\frac{1}{4}$	$9\frac{5}{8}$	–	$12\frac{7}{8}$	$\frac{1}{2}$-13	$\frac{3}{8}$

▲ Blue shading denotes dimensions established by NEMA standard MG1, others are unique to LEESON, and will vary with each manufacturer.



MODEL B813-8100
(Basic Unit Components)
SINGLE REDUCTION

BASIC SINGLE REDUCTION UNIT (B-STYLE)

ITEM # DESCRIPTION

1 HOUSING
2 PIPE PLUG
3 VENT PLUG
4 SPLASH GUARD
5 INPUT CAP
6 O-RING
7 HEX HEAD CAP SCREW
8 INPUT OIL SEAL
9 INPUT BEARING (cup and cone for 842 and larger units)
10 INPUT BEARING (cup and cone for 842 and larger units)
*11 RETAINING SCREW
12 INPUT WORM SHAFT
13 OUTPUT COVER - OPEN
14 OUTPUT COVER - CLOSED
15 O-RING
16 OUTPUT COVER SHIM (as required)
17 OUTPUT OIL SEAL
18 OUTPUT BEARING (18A. CONE, 18B. CUP)
19 HEX HEAD CAP SCREW
♣20 OUTPUT SHAFT - SINGLE
♣21 OUTPUT SHAFT - DOUBLE
22 GEAR SPACER
23 GEAR KEY (only used on size 826 and larger units)
♣24 OUTPUT GEAR
*25 INPUT COVER
26 KEY - OUTPUT EXTENSION
27 KEY - INPUT EXTENSION
28 NAMEPLATE

QUILL MOTOR FLANGE UNIT (BMQ-STYLE)

40 QUILL MOTOR FLANGE
41 INPUT OIL SEAL
42 HEX HEAD CAP SCREW (flange to housing)
43 RETAINING RING - SHAFT
*44 RETAINING RING - HOUSING
45 QUILL INPUT SHAFT
46 KEY - INPUT
47 HEX HEAD CAP SCREW (motor to flange)

HOLLOW OUTPUT SHAFT UNIT (H-STYLE)

51 OUTPUT COVER
52 OUTPUT OIL SEAL
53 OUTPUT BEARING (53A. CONE, 53B. CUP)
54 GEAR SPACER
♣55 OUTPUT SHAFT
56 SETSCREW
57 GEAR KEY (only used on size 826 and larger units)
♣58 OUTPUT GEAR
59 OUTPUT KEY

LONG MOTOR FLANGE AND COUPLING KIT (BM-STYLE)

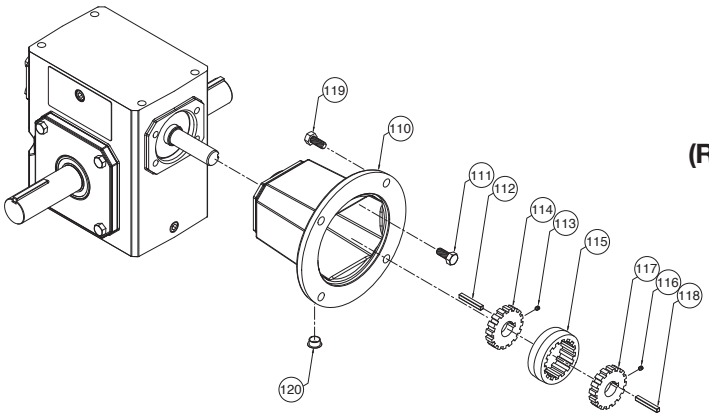
110 "C" FACE MOTOR FLANGE
111 HEX HEAD CAP SCREW (flange to housing)
112 COUPLING KEY - REDUCER SHAFT
113 SETSCREW - REDUCER SHAFT
114 COUPLING GEAR - REDUCER SHAFT
115 COUPLING SLEEVE
116 SETSCREW - MOTOR SHAFT
117 COUPLING GEAR - MOTOR SHAFT
118 COUPLING KEY - MOTOR SHAFT
119 HEX HEAD CAP SCREW (motor to flange)
120 PLASTIC PLUG

VERTICAL SHAFT REQUIRED PARTS

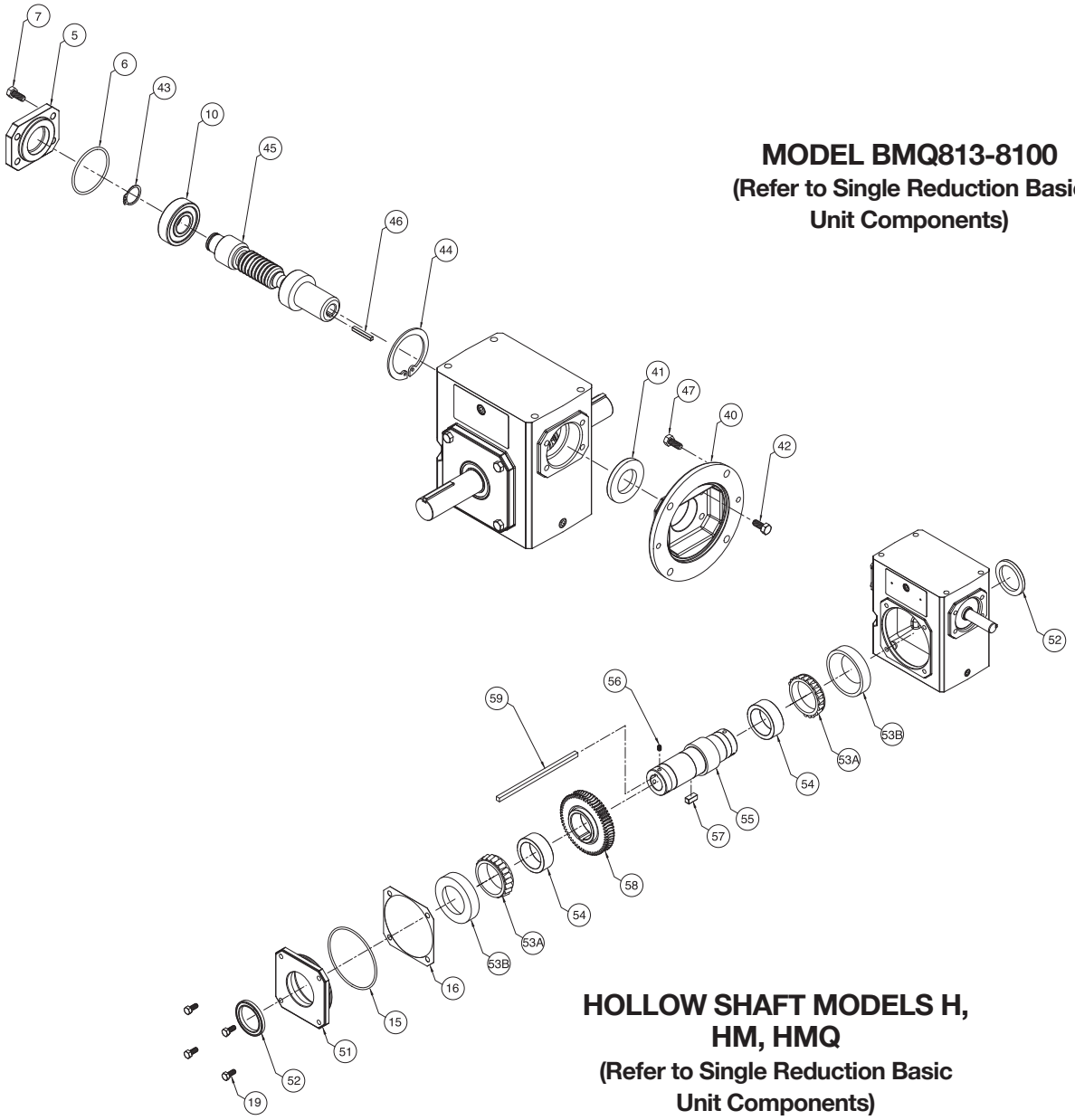
(supplied only when mounting position involves a vertical shaft)

*129 OUTPUT COVER - CLOSED
*130 OUTPUT COVER - OPEN
*131 OUTPUT BEARING GREASE RETAINER
132 GREASE FITTING
133 SEALED BALL BEARING (only used on size 818 thru 826 units)
♦134 INPUT COVER
♦136 INPUT BEARING GREASE RETAINER

* ONLY USED ON SIZE 842 AND LARGER UNITS
♦ ONLY USED ON SIZE 830 AND LARGER UNITS
♣ SUPPLIED ONLY AS OUTPUT ASSEMBLY ON 813 THROUGH 824 UNITS

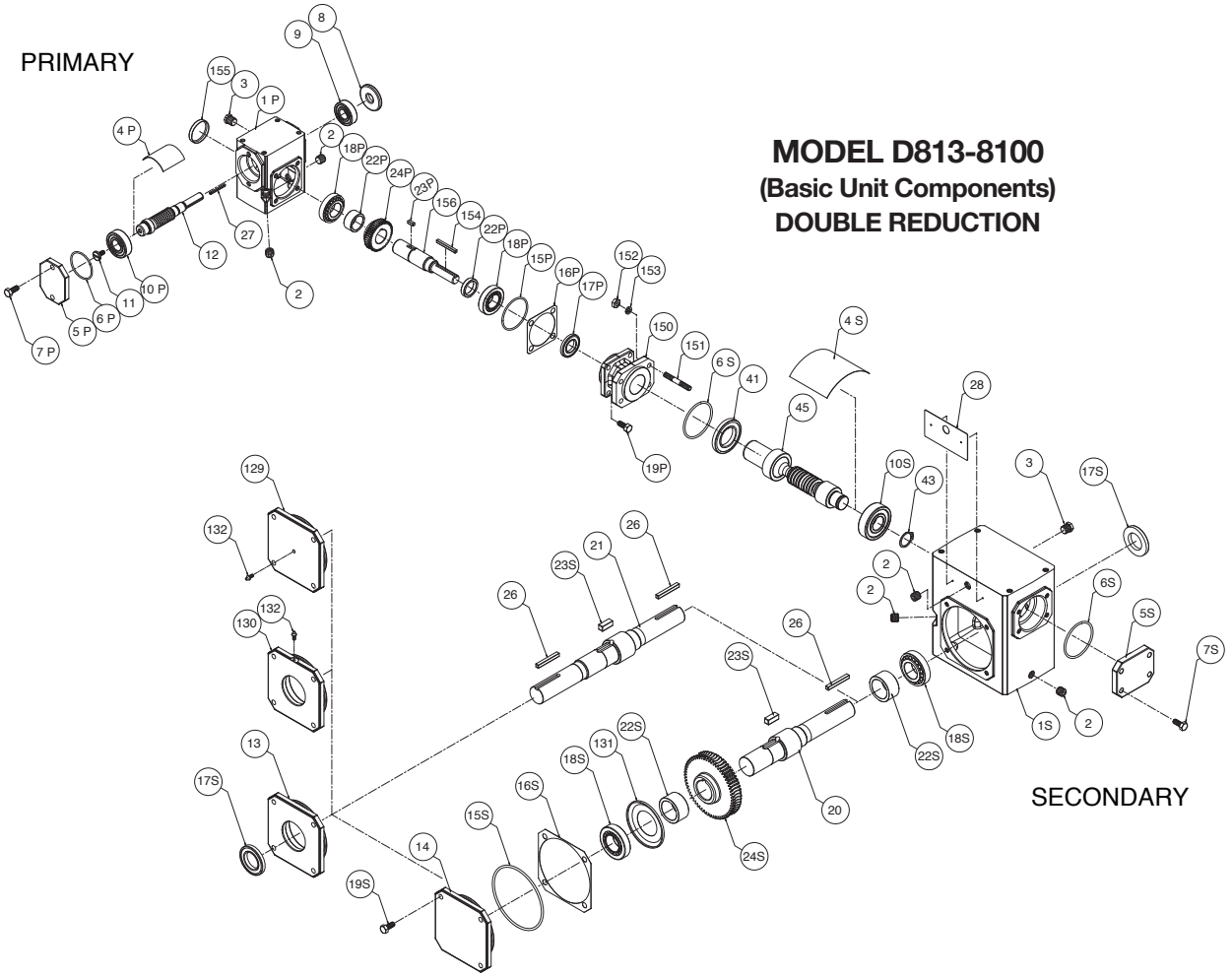


MODEL BM813-8100
(Refer to Single Reduction Basic Unit Components)



MODEL BMQ813-8100
(Refer to Single Reduction Basic Unit Components)

HOLLOW SHAFT MODELS H, HM, HMQ
(Refer to Single Reduction Basic Unit Components)



DOUBLE REDUCTION UNIT (D-STYLE)

ITEM # DESCRIPTION

1 HOUSING
2 PIPE PLUG
3 VENT PLUG
4 SPLASH GUARD
5 INPUT CAP
6 O-RING
7 HEX HEAD CAP SCREW
8 INPUT OIL SEAL
9 INPUT BEARING (cup and cone for 842 and larger units)
10 INPUT BEARING (cup and cone for 842 and larger units)
11 RETAINING SCREW
12 INPUT WORM SHAFT
13 OUTPUT COVER - OPEN
14 OUTPUT COVER - CLOSED
15 O-RING
16 OUTPUT COVER SHIM (as required)
17 OUTPUT OIL SEAL
18 OUTPUT BEARING (18A. CONE, 18B. CUP)
19 HEX HEAD CAP SCREW
♣20 OUTPUT SHAFT - SINGLE
♣21 OUTPUT SHAFT - DOUBLE
22 GEAR SPACER
23 GEAR KEY (only used on size 826 and larger units)
♣24 OUTPUT GEAR
26 KEY - OUTPUT EXTENSION
27 KEY - INPUT EXTENSION
28 NAMEPLATE
41 INPUT OIL SEAL
43 RETAINING RING - SHAFT
45 QUILL INPUT SHAFT
150 DOUBLE REDUCTION ADAPTER
151 STUD
152 HEX NUT
153 LOCK WASHER
154 PRIMARY SOLID OUTPUT KEY
155 EXPANSION PLUG
156 PRIMARY SOLID OUTPUT SHAFT

QUILL MOTOR FLANGE UNIT (DMQ-STYLE)

40 QUILL MOTOR FLANGE
41 INPUT OIL SEAL
42 HEX HEAD CAP SCREW (flange to housing)
43 RETAINING RING - SHAFT
*44 RETAINING RING - HOUSING
45 QUILL INPUT SHAFT
46 KEY - INPUT
47 HEX HEAD CAP SCREW (motor to flange)

HOLLOW OUTPUT SHAFT UNIT (DH-STYLE)

51 OUTPUT COVER
52 OUTPUT OIL SEAL
53 OUTPUT BEARING (53A. CONE, 53B. CUP)
54 GEAR SPACER
♣55 OUTPUT SHAFT
56 SETSCREW
57 GEAR KEY (only used on size 826 and larger units)
♣58 OUTPUT GEAR
59 OUTPUT KEY

LONG MOTOR FLANGE AND COUPLING KIT (DM-STYLE)

110 "C" FACE MOTOR FLANGE
42 HEX HEAD CAP SCREW (flange to housing)
112 COUPLING KEY - REDUCER SHAFT
113 SETSCREW - REDUCER SHAFT
114 COUPLING GEAR - REDUCER SHAFT
115 COUPLING SLEEVE
116 SETSCREW - MOTOR SHAFT
117 COUPLING GEAR - MOTOR SHAFT
118 COUPLING KEY - MOTOR SHAFT
47 HEX HEAD CAP SCREW (motor to flange)
120 PLASTIC PLUG

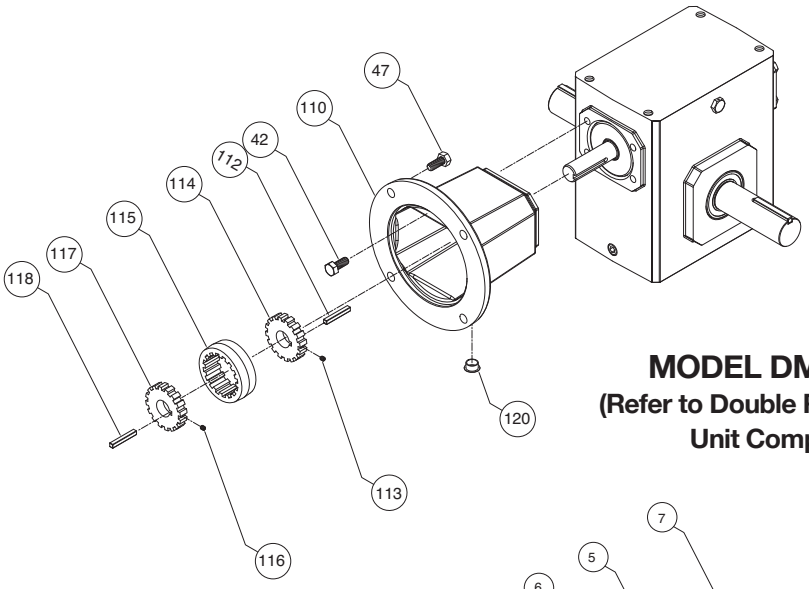
VERTICAL SHAFT REQUIRED PARTS

(supplied only when mounting position involves a vertical shaft)

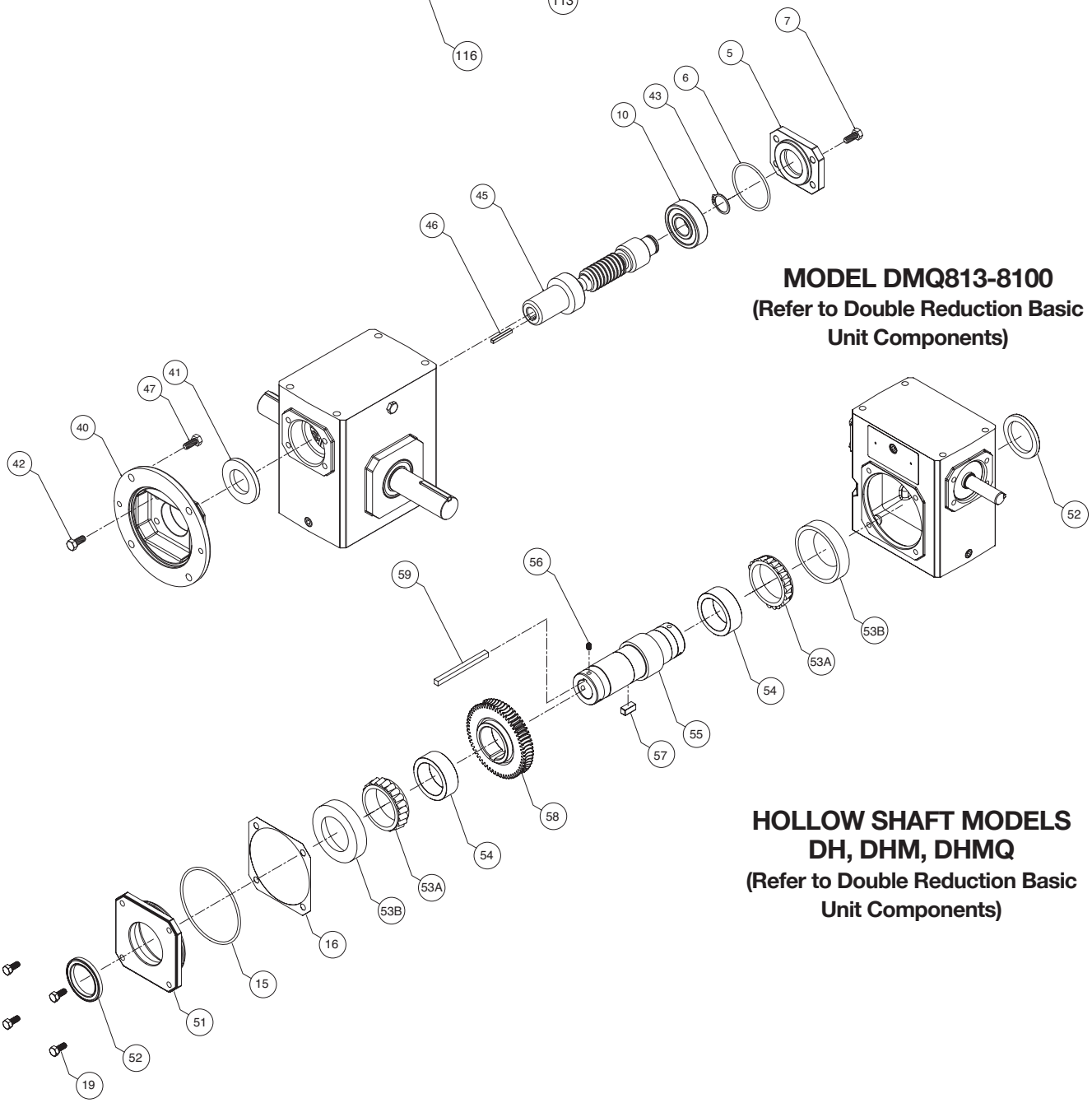
*129 OUTPUT COVER - CLOSED
*130 OUTPUT COVER - OPEN
*131 OUTPUT BEARING GREASE RETAINER
132 GREASE FITTING
133 SEALED BALL BEARING (only used on size 818 thru 826 units)
♦134 INPUT COVER
♦136 INPUT BEARING GREASE RETAINER

* ONLY USED ON SIZE 842 AND LARGER UNITS
♦ ONLY USED ON SIZE 830 AND LARGER UNITS
♣ SUPPLIED ONLY AS OUTPUT ASSEMBLY ON 813 THROUGH 824 UNITS

P - PRIMARY
S - SECONDARY



MODEL DM813-8100
(Refer to Double Reduction Basic Unit Components)

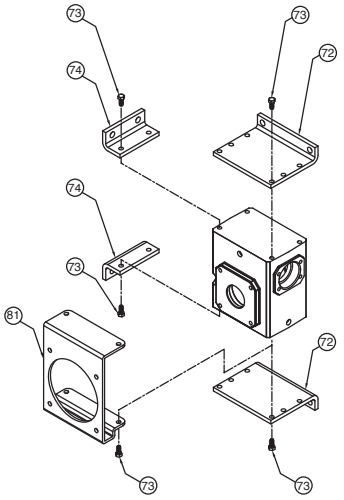


MODEL DMQ813-8100
(Refer to Double Reduction Basic Unit Components)

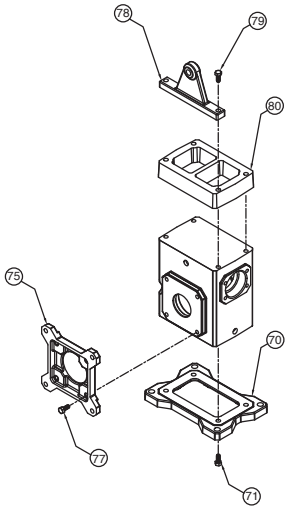
HOLLOW SHAFT MODELS DH, DHM, DHMQ
(Refer to Double Reduction Basic Unit Components)

CAST IRON GR SERIES | CAST IRON NH SERIES | ALUMINUM EL SERIES

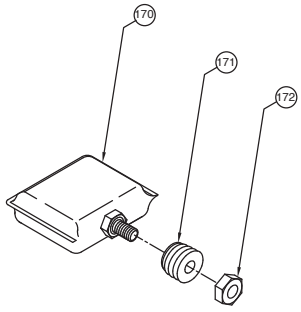
STEEL MOUNTING ACCESSORIES



CAST MOUNTING ACCESSORIES



ENVIROSEAL



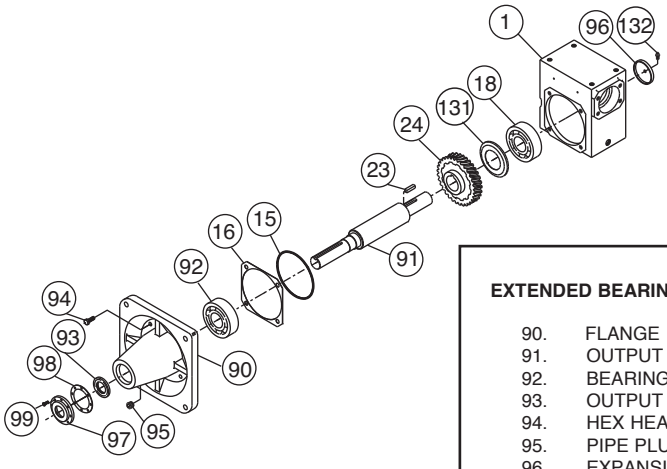
MOUNTING BRACKET OPTIONS

70	HORIZONTAL MOUNTING BASE
71	CAP SCREW
72	HIGH AND LOW V-BRACKETS
73	HEX HEAD CAP SCREW
74	"J" MOUNT BRACKET
75	"F" OUTPUT FLANGE (CAST)
77	HEX HEAD CAP SCREW
78	TORQUE BRACKET
79	HEX HEAD CAP SCREW
80	RISER BLOCK
81	"FB" OUTPUT FLANGE (bent steel - only available thru size 826, excluding 815 units)

INTERNAL PRESSURE COMPENSATION CHAMBER ASSEMBLY

170	INTERNAL PRESSURE COMPENSATION CHAMBER
171	INTERNAL PRESSURE COMPENSATION CHAMBER STEM PLUG
172	INTERNAL PRESSURE COMPENSATION CHAMBER STEM NUT

EXTENDED BEARING UNIT



EXTENDED BEARING UNIT

90.	FLANGE
91.	OUTPUT SHAFT
92.	BEARING
93.	OUTPUT OIL SEAL
94.	HEX HEAD CAP SCREW
95.	PIPE PLUG
96.	EXPANSION PLUG
*97.	FLANGE COVER
*98.	GASKET
*99.	HEX HEAD CAP SCREW

*ONLY USED ON SIZE 5-1/4" CENTER DISTANCE AND LARGER UNITS

Notes

U.L., CSA, ISO AND OTHER STANDARDS & APPROVALS – MOTORS

UNDERWRITERS LABORATORIES INC.

1. All motor models listed with prefix "C" have U.L. component recognition (without thermal overload). File Number E57948, Guide Number PRGY2.
2. All units have U.L. recognized Class B, F or H insulation systems unless otherwise noted. File Number E55555, Guide Number OBJY2.
3. Single phase motors with a model number prefix of "A" or "M" (automatic or manual protectors) have U.L. recognized protector winding combinations and component recognition. File Number E57955, Guide Number XEWR2.
4. Three phase motors with a model number prefix of "A" or "M" (automatic or manual protectors) have U.L. recognized protector winding combinations plus have capability of providing U.L. recognized primary single phasing which is included in our U.L. file E57955, Guide Number XEWR2.
5. Explosion-Proof, single and three phase for 56, 143T and 145T frames: File Number E75276, Guide Number PTDR.

   Explosion-Proof motors 182T and larger: File Number E12044, Guide Number PTDR.

   Explosion-Proof motors DC motors 48 frame: File Number E75276, Guide Number PTDR..
6. Permanent Magnet DC motors except PZ and P300 gearmotors are recognized components under File Number E57948, Guide Number PRGY2.
7. PZ and P300 Permanent Magnet DC gearmotors: File number E49849 or E49747, Guide Number PRGY2.
8. Speedmaster SCR Drives, Component Recognition, File E132235, Guide Number NMMS2, except catalog numbers 174902 and 174903.
9. Speedmaster SCR Drives, catalog numbers 174902 and 174903. File Number E154901, Guide Number NMFT2.
10. Speedmaster AC Adjustable Speed Drives, File Number E161242. Canadian UL covered by File Number E161242 also, Guide Number NMMS.

CANADIAN STANDARDS ASSOCIATION

1. Motor construction for all single and three phase NEMA 42 through S254T frame, IEC/metric 63 through 90L frame, and all sub-fractional horsepower motors: Report Number L33543, Guide Number 260-0-0..
2. Motor construction for all steel or cast iron three phase NEMA 182T through 447T frame and IEC/metric 100L through 250M frame motors: Report Number LR62104.
3. Thermally protected single phase motors through 7½ HP, Report Number LR33543.
4. All Farm Duty motors 1/3 HP through 7½ HP, Report Number LR33543
5. Explosion proof single and three phase for 56, 143T and 145T frames: File Number LR47667.

   Explosion-Proof motors 182T and larger: File Number LR21839 and LR47504.

   Explosion-Proof DC motors 48 frame: File Number LR701080.
6. Permanent Magnet DC motors are listed under File Number LR33543.
7. Multi-Speed Motors, steel or cast iron, 182T through 447T frames are listed under file number LR33543.
8. Speedmaster SCR Drives, catalog numbers 174902 and 174903. File Number LR75790.

MOTOR EFFICIENCY VERIFICATION

Energy Efficiency Verification - Full load efficiency ratings of three phase, single speed, NEMA/EEMAC Design A or B squirrel cage induction motors, 1 through 200 HP, 230, 460 or 575 volts, 60 Hz, in totally enclosed and open, drip-proof enclosures for non-hazardous applications, CSA Report Number EEV 78720-1. Tested to CSA 390 (IEEE 112B) Standards. The Grafton testing facility is qualified for CSA energy efficiency performance testing of polyphase induction motors. The Grafton Testing Facility is NVLAB recognized for energy efficiency testing of electric motors to EPACT requirements of the Department of Energy.

ISO QUALITY CERTIFICATION

Grafton and Saukville, Wisconsin administrative, design and manufacturing facility, ISO 9001, Certificate Number RvC #93-102. EN29001, BS5750: Part 1 and ANSI/ASQC Q91-19.

Black River Falls, Wisconsin manufacturing facility, ISO 9002, Certificate Number RvC #93-090.

Mississauga (Toronto), Ontario, administrative, distribution facility, ISO 9002, Certificate Number QMI #003027.

Hanover, Ontario, manufacturing facility, ISO 9002, Certificate Number QMI #003028.

BAKING INDUSTRY SANITATION STANDARDS COMMITTEE

WASHGUARD® II, stainless steel washdown duty motors, NEMA frames 56, 143T, 145T, 182T and 184T are certified to Standard No. 29 for Electric Motors and Accessory Equipment, authorization number 769. The WBMQ Series of gear reducers are BISSC certified to Standard No. 29 for Electric Motors and Accessory Equipment, authorization number 941.

SAUDI ARABIAN STANDARDS ORGANIZATION

SCCP Ref. No.: R-100157

The CE Mark

CE is an acronym for the French phrase *"Conformite Europeene"* and is similar to the UL or CSA marks of North America. However, unlike UL or CSA which require independent laboratory testing, the CE mark can be applied by the motor manufacturer through "self certifying" that its products are designed to the appropriate standards. The European Union has issued 24 directives related to the **CE** mark. Three Directives apply to electric motors.

Low Voltage Directive (73/23/EEC) This directive applies to electrical equipment operating in the voltage range of 50-1000 volts AC or 75-1500 volts DC. Virtually all LEESON motors (except low voltage DC) are included in this directive.

Based on our testing to the applicable electrical and mechanical standards EN60034 and IEC 34, LEESON certifies conformity to this directive. All three phase 50 Hz stock motors comply with the nameplate designations, lead markings and connection diagrams required. A "Declaration of Conformity" accompanies these motors and a CE label is applied.

Machinery Directive (89/3392/EEC) This directive applies to machinery that may contain certain motors. This is an issue with equipment manufacturers and requires the use of a motor meeting the Low Voltage Directive and requires a "Declaration of Incorporation" document which means that only the motor complies with the requirements of the Low Voltage Directive. A CE label is applied to the motor but it remains the responsibility of the equipment manufacturer to obtain certification for the finished product.

Electromagnetic Compatibility (EMC) Directive (89/336/EEC) This directive addresses the final product and is again a concern for the equipment manufacturer. Since this Directive addresses electromagnetic interference (EMI) concerns, it does not affect three phase AC motors because they do not produce EMI. DC motors, however, do produce EMI. How much of the "noise" is emitted outside the machine depends on a host of factors. LEESON's Engineering Department can assist OEM's in applying DC motors in machinery destined for Europe and requiring certification to the EMC Directive.

CE CONFORMITE EUROPEENE

The following **⚠ WARNING** ***and*** **⚠ CAUTION** ***information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your GROVE GEAR product:***

Read **ALL** instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

⚠ WARNING

- Written authorization from GROVE GEAR is required to operate or use reducers in man lift or people moving devices.
- Check to make certain application does not exceed the allowable load capacities published in the current catalog.
- Buyer shall be solely responsible for determining the adequacy of the product for any and all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
- For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.
- Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.
- Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application of power.
- Reducers are not to be considered fail safe or self-locking devices. If these features are required, a properly sized, independent holding device should be utilized. Reducers should not be used as a brake.
- Any brakes that are used in conjunction with a reducer must be sized or positioned in such a way so as to not subject the reducer to loads beyond the catalog rating.
- Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and no other associated attachments or motors.
- Use of an oil with an EP additive on units with backstops may prevent proper operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.
- Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and/or shaft breakage from bending fatigue, if not sized properly.

⚠ CAUTION

- Test run unit to verify operation. If the unit tested is a prototype, that unit must be of current production.
- If the speed reducer cannot be located in a clear and dry area with access to adequate cooling air supply, then precautions must be taken to avoid the ingestion of contaminants such as water and the reduction in cooling ability due to exterior contaminants.
- Mounting bolts should be routinely checked to ensure that the unit is firmly anchored for proper operation.

In the event of the resale of any of the goods, in whatever form, Resellers/Buyers will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such sale:

> The manufacturer makes no warranties or representations, express or implied, by operation of law or otherwise, as to the merchantability or fitness for a particular purpose of the goods sold hereunder. Buyer acknowledges that it alone has determined that the goods purchased hereunder will suitably meet the requirements of their intended use. In no event will the manufacturer be liable for consequential, incidental or other damages. Even if the repair or replacement remedy shall be deemed to have failed of its essential purpose under Section 2-719 of the Uniform Commercial Code, the manufacturer shall have no liability to Buyer for consequential damages.

Resellers/Buyers agree to also include this entire document including the warnings and cautions above in a conspicuous place and in a conspicuous manner in writing to instruct users on the safe usage of the product.

This information should be read together with all other printed information supplied by GROVE GEAR.

REGAL TERMS AND CONDITIONS OF SALE

ALL QUOTATIONS ARE OFFERED AND ALL PURCHASE ORDERS ARE ACCEPTED BY SELLER SUBJECT ONLY TO THESE TERMS AND CONDITIONS

1. DEFINITIONS: *"Buyer"* means the entity to which Seller is selling Products or Services under a Contract. • *"Contract"* means the agreement between Buyer and Seller governing the sale of Products and/or Services by Seller to Buyer. These Terms and Conditions, the Quotation (if one is issued by Seller), any purchase order acknowledgement (if one is issued by Seller), and Buyer's purchase order (except to the extent that it conflicts with these Terms and Conditions, the Quotation, and/or the order acknowledgement) constitute the Contract. • *"Products"* means the equipment, parts, materials, supplies, and other goods that Seller has agreed to supply under the Contract. References in these Terms and Conditions to the purchase and sale of Products may mean, where applicable, the licensing of Software loaded on or provided with the Products. • *"Quotation"* means Seller's statement identifying the Products and Services, together with any quantity, price, delivery schedule, and/or other terms and conditions (in addition to or different from these Terms and Conditions), offered by Seller for sale to Buyer. A Quotation that incorporates these Terms and Conditions by reference shall be deemed to include these Terms and Conditions, whether or not Seller provides a complete copy of these Terms and Conditions to Buyer with the Quotation, with a purchase order acknowledgement, or with an invoice. Where there is a conflict between these Terms and Conditions and other provisions of the Quotation, the latter shall control. • *"Services"* means the services that Seller has agreed to provide under the Contract. • *"Software"* means software loaded on or provided with the Products. • *"Seller"* means the Regal entity – whether Regal Beloit Corporation ("RBC") or an RBC subsidiary – supplying Products and/or providing Services under the Contract. • *"Terms and Conditions"* means these "Terms and Conditions of Sale."

2. CONTRACT FORMATION: No agreement or understanding, oral or written, purporting to modify these Terms and Conditions shall be binding on Seller unless it is made in writing, specifically stating that it is a modification of these Terms and Conditions and it is signed by Seller's authorized representative. No course of dealing, usage of trade, or course of performance shall be relevant to explain or supplement any of these Terms and Conditions. If these Terms and Conditions are deemed an offer, Buyer's acceptance of Seller's offer is expressly limited to acceptance of these Terms and Conditions. Fulfillment of Buyer's order does not constitute acceptance of any of Buyer's terms and conditions and does not modify or amend these Terms and Conditions. Buyer's purchase order for the purchase of Products and/or for the performance of Services shall constitute Buyer's assent to these Terms and Conditions. Any terms and conditions contained in Buyer's purchase order or other form of communication from Buyer that are additional to or different from these Terms and Conditions, shall be deemed rejected by Seller, unless expressly accepted in writing by Seller's authorized representative. Alternatively, if these Terms and Conditions are deemed to be a response to, an acceptance of, or a written confirmation of, Buyer's offer, whether provided in the form of a purchase order or otherwise, Seller's acceptance is expressly conditioned upon Buyer's assent to these Terms and Conditions. Buyer's acceptance of Products tendered to Buyer by Seller shall constitute Buyer's express assent to all of the terms and conditions contained in these Terms and Conditions. All proposals, negotiations and representations, if any, made prior to or with reference hereto are hereby superseded by these Terms and Conditions. References in this Section to "these Terms and Conditions" shall be deemed to mean these Terms and Conditions and Seller's Quotation, if Seller has issued a Quotation.

3. ACCEPTANCE OF PURCHASE ORDERS: No Buyer purchase order shall be binding on Seller until accepted in writing by Seller, and Seller shall have no liability to Buyer with respect to purchase orders that are not accepted. Shipment against a purchase order shall be deemed to constitute Seller's acceptance thereof, subject to these Terms and Conditions. All purchase orders shall be subject to these Terms and Conditions, whether or not the purchase orders so state. Purchase orders accepted by Seller may not be cancelled or modified by Buyer without the prior written consent of Seller.

4. QUOTATIONS: Quotations shall expire and shall be void thirty (30) days from date of the Quotation, unless otherwise specified in the Quotation. The Quotation may be modified or withdrawn by Seller at any time before Seller's receipt of Buyer's conforming acceptance.

5. PRICES; PRICE CHANGES:
(a) Products. The price of the Products sold pursuant to the Contract shall be as set forth in the Quotation. If price is not specified in the Quotation, price shall be based upon Seller's prices in effect at the time of shipment. Published prices are for Products of Seller's current standard design and constructed of standard materials. Variation from the standard design and/or materials requires special pricing. Seller reserves the right at any time, and without incurring any obligation, to discontinue the manufacture of any model, to withdraw products from sale, to make changes in design, and/or to add improvements to products. Price also shall be based on freight rates in effect at the time of shipment. Where applicable, in the event of an increase in the applicable freight rates before the shipment of Products, such changes will be for the account of Buyer. Price advances, discounts, extras and other terms and conditions are subject to change without notice. Unless otherwise provided in the Quotation, price is based on delivery in accordance with the "Delivery" section below. Prices include Seller's standard packing. **(b) Services.** Services prices are based on normal business hours (8 AM to 5 PM Monday through Friday). Overtime and Saturday hours will be billed at one and one half (1.5) times the normal business hour hourly rate. Sunday hours will be billed at two (2) times the normal business hours hourly rate; holiday hours will be billed at three (3) times the normal business hours hourly rate.

6. TAXES, DUTIES AND FEES: Seller shall be responsible for taxes measured on Seller's net income based upon performance of, or payment for, work under the Contract ("Seller Taxes"). Buyer shall be responsible for all other taxes, duties, fees or other charges of any kind (including, but not limited to any manufacturer's tax, retailers' occupation tax, use tax, sales tax, excise tax, duty, custom, inspection or testing fee, value added tax, or any other tax, fee or charge of any nature whatsoever) imposed by any governmental authority against Buyer, Seller or Seller's suppliers and/or contractors, based upon the Contract between Seller and Buyer. In the event Seller is required to pay any such tax, fee or charge, regardless whether such tax, fee or charge is imposed before or after Seller's delivery of the Products and/or Buyer's payment under the Contract, Buyer shall reimburse Seller therefor. In lieu of such reimbursement, Buyer shall provide Seller, at the time the order is submitted, with an exemption certificate or other document acceptable to the authority imposing such tax, fee or charge. If Seller's prices include any taxes, duties or fees (other than Seller Taxes), any change in such taxes, duties and/or fees shall be the basis for a price adjustment.

7. TERMS OF PAYMENT:
(a) Terms. Terms of payment are cash in full, without set-off or discount, in U.S. dollars, and by wire transfer, no later than thirty (30) days from date of invoice. **(b) Payment Default.** If Buyer defaults in any payment when due, or in the event that any voluntary or involuntary bankruptcy or insolvency proceedings involving Buyer are initiated by or against Buyer, then the whole Contract price shall immediately become due and payable upon demand, or Seller, at its option and without prejudice to its other lawful remedies, may defer delivery or cancel the Contract. Where delivery is deferred and Seller does not demand immediate payment of the full Contract price, pro-rata payments shall become due as shipments are made. **(c) Buyer Financial Condition.** If, during the period of performance of the Contract, the financial condition of Buyer is determined by Seller not to justify the terms of payment specified, Seller may demand full or partial payment in advance before proceeding with the work, or satisfactory security or guarantees that invoices will be promptly paid when due, or, at its option, without prejudice to other lawful remedies, may defer delivery or cancel the Contract. **(d) Delay.** If delivery is delayed by Buyer, which delay must be consented to by Seller, Seller may store the Products in accordance with subsection 8(e) "Storage" below and Seller may submit a new estimate of cost for completion based on prevailing conditions. Payments shall become due from the date on which Seller is prepared to deliver the Products and storage shall be the Buyer's risk and expense as provided in subsection 8(e) "Storage" below. If manufacture is delayed by Buyer for any cause, a partial payment based upon the proportion of the order completed shall become due from the date on which Seller is notified of the delay.**(e) Late Payment Charge.** Buyer shall pay a late payment charge on all amounts not paid in full when due at the rate of one and one half percent (1.5%) per month or at the maximum legally permissible rate, whichever is lower. **(f) Exceptions.** Supplement A to these Terms and Conditions lists Seller business units for which payment terms vary from payment terms set forth in this Section 7.

8. DELIVERY; TITLE TRANSFER; RISK OF LOSS/DAMAGE:
(a) Delivery – U.S. Buyer. For sales in the U.S. that do not involve export from the U.S., Seller shall deliver Products to Buyer EXW Seller's U.S. point of shipment (Incoterms® 2010). The point of shipment shall be the shipping dock of Seller's factory, warehouse or other facility that Seller designates as its discretion as point of shipment from time to time. **(b) Sales Involving Exports from U.S.** *(1) Delivery – U.S. Buyer; Subsequent Drop Shipment to Location Outside U.S.* For sales in the U.S. to a U.S. Buyer, that involve drop shipment at Buyer's request and/or on Buyer's behalf, to a location outside the U.S. Seller shall deliver the Products to Buyer EXW Seller's U.S. point of shipment (Incoterms® 2010). The point of shipment shall be the shipping dock of Seller's factory, warehouse or other facility that Seller designates at its discretion as its point of shipment from time to time. Buyer is responsible for all transportation charges incurred after delivery of the Products to the carrier or Buyer at the point of shipment and shall reimburse Seller for any transit insurance or freight pre-paid for the Products by Seller. Buyer shall bear the risk of loss and/or damage in transportation. Buyer is responsible for filing any export documents required for export from the U.S. *(2) Delivery – Non-U.S. Buyer; Routed Export Transactions.* For sales in the U.S. to a non-U.S. Buyer, Seller shall deliver Products to Buyer's freight forwarder EXW Seller's U.S. point of shipment (Incoterms® 2010). The point of shipment shall be the shipping dock of Seller's factory, warehouse or other facility that Seller designates at its discretion as its point of shipment from time to time. In a "Routed Export Transaction," as defined in the U.S. Census regulations, 15 CFR Section 30.3, where Buyer is a non-U.S. entity, Buyer shall authorize Buyer's designated freight forwarder or Seller to facilitate the export of the Products from the U.S. and to prepare and file export documentation with respect to such export transaction (hereafter, to "Facilitate the Export"). If Buyer authorizes its designated freight forwarder to Facilitate the Export, Buyer's freight forwarder shall provide Seller with a copy of the final export documentation and proof of filing. If Buyer authorizes Seller to Facilitate the Export, Buyer shall cause Buyer's freight forwarder to provide Seller the information needed by Seller to Facilitate the Export. Buyer shall give timely notice to Seller identifying whom it has designated to Facilitate the Export. **(c) Delivery Dates.** Delivery dates are approximate, are not guaranteed and are based upon prompt receipt by Seller from Buyer of all necessary shipping and other information. Seller may deliver in advance of the delivery schedule. Seller reserves the right to make delivery in installments, with all installments to be separately invoiced and paid for by Buyer when due per invoice, without regard to subsequent deliveries. Delivery of the Products to a commercial carrier at the shipping point shall constitute delivery to Buyer. **(d) Title Transfer.** Title to Products shall pass to Buyer upon the earlier of delivery of the Products to the carrier or Buyer at the point of shipment in accordance with subsection (a) above, except that, for Routed Export Transactions, title shall transfer to Buyer upon delivery to Buyer's designated freight forwarder. Subject to applicable law, Seller, upon notice to Buyer, may retain title to the Products until such time as Seller receives payment in full from Buyer. Title to Software shall not pass to Buyer and is subject to the applicable license. **(e) Risk of Loss/Damage.** Risk of loss and/or damage shall pass to Buyer upon delivery in accordance with subsection (a) above, except that, for Routed Export Transactions, risk of loss and/or damage shall pass upon delivery of the Products to Buyer's designated freight forwarder. **(f) Delivery by Seller's Carrier.** Where the parties agree that delivery shall be made at a location other than Seller's point of shipment, where Seller will deliver using its carrier or Seller's privately owned or leased trucks, unloading at the agreed location shall constitute delivery to Buyer. Freight and handling charges by Seller may not reflect actual freight charges prepaid to the carrier by Seller due to incentive discounts earned by Seller based upon Seller's aggregate volume of freight tendered to a carrier or when a carrier must be used which charges a rate which is different than the rate upon which Seller's freight and handling charges were based. When shipments are delivered in Seller's privately owned or leased trucks, Buyer will be charged an amount approximating the prevailing common carrier rate. **(g) Storage.** In the event that Buyer is unable to accept delivery of the Products at time of shipment, Seller shall invoice Buyer for the full purchase price as if shipment had been made and: (i) if Seller is able to store such Products in its own facilities, Buyer will pay Seller the reasonable handling and storage charges for the period of such storage, or (ii) if Seller is unable to store such goods at its own facility, Seller reserves the right to arrange handling and storage in a suitable bonded warehouse for Buyer at Buyer's expense. In cases where handling and storage become necessary, it shall be Buyer's responsibility to notify Seller when shipment is to be made. Seller will make necessary arrangements for shipment at Buyer's expense.

9. EXCUSABLE DELAYS; FORCE MAJEURE: (a) Excuse of Performance. Seller shall not be liable for any ordinary, incidental, or consequential loss or damage as a result of Seller's delay in or failure of delivery, or installation of Products or performance of Services due to (i) any cause beyond Seller's reasonable control, (ii) an act of God, act of Buyer, embargo or other government act, authority, regulation or request, fire, theft, accident, strike, slowdown or other labor disturbance, war, armed conflict, act or threat of terrorism, riot, epidemic, delay in transportation, or (iii) inability to obtain necessary labor, materials, components, or facilities. Should any of the aforementioned events occur, Seller, at its option, may cancel Buyer's order with respect to any undelivered Products or incomplete Services or extend the delivery date for a period equal to the time lost because of delay. Notice of such election shall be given promptly to Buyer. In the event Seller elects to so cancel the Contract, Seller shall be released of and from all liability for failure to deliver the Products or to perform the Services, including, but not limited to, any and all claims on behalf of Buyer for lost profits, or any other claim of any nature which Buyer might have. If shipping or progress of the work is delayed or interrupted by Buyer, directly or indirectly, Buyer shall pay Seller for all additional charges resulting therefrom. **(b) Allocation.** If Seller determines that its ability to meet the demand for products, including the Products, or to obtain labor, materials, components or facilities is hindered, limited or made impracticable due to causes set forth in subsection (a) above, Seller may allocate its available supply of products, including the Products, among itself and its purchasers on such basis as Seller determines to be equitable without liability for any failure of performance which may result therefrom.

10. LIMITED WARRANTY.
(a) Scope and Period.
(1) Products. Seller warrants that the Products shall be delivered free from defects in material, workmanship and title and shall conform to Seller's specification agreed upon in a written and signed agreement by Buyer and Seller, if applicable, for the Products. This warranty shall expire twelve (12) months from first use of the Product or eighteen (18) months from date of manufacture of the Product, whichever occurs first. *(2) Repaired or Replaced Products or Parts of Products.* Seller warrants that the repaired or replaced Products or parts of Products shall be delivered free from defects in material, workmanship and title. In the case of repaired or replaced Products or parts of Products comprising warranty remedies for Products, this warranty shall expire upon expiration of the warranty period applicable to the Products originally supplied by Seller. In the case of other repaired or replaced Products or parts of Products, this warranty shall expire twelve (12) months from the date of repair or manufacture of the Product s or parts of the Products. *(3) Services.* Seller warrants that the Services shall be performed in a competent and diligent manner in accordance with any mutually agreed specification. This warranty shall expire ninety (90) days from the date of completion of such Services. *(4) Software.* Seller warrants that the Software shall execute, at time of delivery, in accordance with the specification agreed upon in a written and signed agreement by Buyer (as licensee) and Seller (as licensor) when properly installed in the Products. The warranty shall expire six (6) months from date of manufacture of the first Product in which the Software is loaded. *(5) Applica-bility.* This warranty shall apply to any Products and/or Software bought, acquired, and/or used by an entity that, or person who, acquires the Products and/or Software from Buyer (a "Transferee"), except that any claim made against Seller pursuant to this warranty shall be made by Buyer only. Seller shall not be bound by this Section 10 to satisfy a claim under this Section made against Seller by a Transferee, whether such Transferee is a direct or indirect Transferee of Buyer, Buyer shall provide any Transferee of a Product or Software written conspicuous notice of Sections 10 and 11 hereof. *(6) Exceptions.* Supplement B to these Terms and Conditions lists Seller Products, parts, Services and Software for which Seller's warranties vary from the warranties set forth in this subsection 10(a).
(b) Remedies.
(1) Products. If, prior to expiration of the warranty period set forth in subsection 10(a)(1), above, any Products shall be proved to Seller's satisfaction to be defective or nonconforming with the warranty set forth therein, Seller will repair or replace such defective Products or components thereof, FCA Seller's factory, warehouse or other facility that Seller designates at its discretion as point of shipment from time to time (Incoterms® 2010), or will refund or provide Buyer with a credit in the amount of the purchase price paid therefor by Buyer, at Seller's sole option. Buyer's exclusive remedy and Seller's sole obligation under this warranty shall be limited to such repair or replacement, FCA factory, warehouse or other facility that Seller designates at its discretion as point of shipment from time to time (Incoterms® 2010), or refund or credit by Seller, and shall be conditioned upon Seller's receiving written notice of any defect and/or nonconformance within a reasonable period of time, but in no event more than thirty (30) days, after it was discovered or by reasonable care should have been discovered. All claims not made in writing and received by Seller within such thirty (30) day period shall be deemed waived. In no event shall Seller's liability for such defective or nonconforming Products exceed the purchase price paid by Buyer for such Products. With prior approval from Seller, Buyer shall return the alleged defective Product or part, freight prepaid, for Seller's inspection, and no other Products shall be returned to any Seller office, factory, warehouse, authorized service center or other facility, without Seller's written consent. *(2) Replacement Products and Parts of Products.* If prior to the expiration of the applicable warranty period set forth in subsection 10(a)(2) above, any replacement Products and/or parts of Products shall be proved to Seller's satisfaction to be defective or nonconforming

with the warranty set forth therein, the remedy set forth in subsection 10(b)(2) above shall apply to such replacement Products and/or parts of Products. *(3) Services.* If, prior to expiration of the warranty period set forth in subsection 10(a)(3), above, any Services shall be proved to Seller's satisfaction to be nonconforming with the warranty set forth therein, Seller will re-perform such nonconforming Services. If the Services cannot be re-performed, Seller, at its option, shall refund or credit monies paid by Buyer for such nonconforming Services. *(4) Software.* If, prior to expiration of the warranty period set forth in subsection 10(a)(4) above, , (i) Buyer provides, in writing, a complete description of the claimed nonconformance in the Software, and (ii) the Software is proven to Seller's satisfaction to be so nonconforming with the warranty set forth therein, Seller will correct the nonconformance by, at its option: (i) modifying or making available to Buyer instructions for modifying the program causing such nonconformance, or (ii) making available a corrected or replacement program FCA Seller's factory, warehouse or other facility that Seller designates at its discretion as point of shipment from time to time (Incoterms® 2010).

(c) Exclusions - The warranties set forth in this Section 10 do not cover:

(1) shipping expenses to and from Seller's office, factory, warehouse, authorized service center or other destination designated by Seller for repair or replacement of defective Products or any tax, duty, custom, inspection or testing fee, or any other charge of any nature related thereto; *(2) costs of removing defective Products from,* and/or disassembling, equipment in which Products are assembled or reinstalling Products and/or reassembling such equipment, or testing repaired or replaced Products and/or the equipment; *(3) field service travel and living costs and expenses; (4) Products subjected to abuse, neglect, negligence, misuse, misapplication, accident, damages by circumstances beyond Seller's control,* improper installation (if by anyone other than Seller), improper operation (including, but not limited to, operation in excess of rated capacity or otherwise not in accordance with installation, maintenance, or operating instructions or requirements) improper maintenance, improper storage, and/or any other than normal use or service; *(5) Products maintained, serviced, repaired or altered by anyone other than Seller* or Seller's authorized service agencies; *(6) Products and/or parts not manufactured by Seller;* for Products furnished by Seller, but manufactured by others, Seller will assign to Buyer the written warranty, if any, of the manufacturer, if assignment is reasonably practicable; however, Seller does not adopt or guarantee or represent that the manufacturer will comply with any of the terms of the warranty of such manufacturer; but, in no event shall Seller's obligations be greater than those provided under Seller's warranty set forth in this Section 10; and/or *(7) failures of the Software to be interruption-free or error-free* or to meet Buyer's or any other party's requirements; and, problems caused by use of the Software in conjunction with third-party software, hardware, or products.

(d) DISCLAIMER: THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO SELLER IN SPECIFICATIONS, DRAWINGS, OR OTHERWISE AND WHETHER OR NOT SELLER'S PRODUCTS ARE SPECIFICIALLY DESIGNED AND/OR MANUFACTURED BY SELLER FOR BUYER'S USE OR PURPOSE. NO EMPLOYEE, REPRESENTATIVE, OR AGENT OF SELLER OTHER THAN AN OFFICER OF SELLER IS AUTHORIZED TO ALTER OR MODIFY ANY PROVISION OF THIS SECTION 10 OR TO MAKE ANY GUARANTEE, WARRANTY, OR REPRESENTATION, EXPRESS OR IMPLIED, ORALLY OR IN WRITING, WHICH IS CONTRARY TO THE FOREGOING. Except where Buyer and Seller agree in a written and signed agreement upon the specifications applicable to the Products, Software, and/or Services, any description of the Products, Software, and/or Services, whether in writing or made orally by Seller or Seller's agents, specifications, samples, models, bulletins, drawings, diagrams, engineering sheets or similar materials used in connection with Buyer's order are for the sole purpose of identifying the Products and shall not be construed as an express or implied warranty. Any suggestions by Seller or Seller's agents regarding use, application or suitability of the Products shall not be construed as an express or implied warranty unless confirmed to be such in writing by Seller's authorized officer.

11. LIMITATIONS OF REMEDY AND LIABILITY:

(a) Breach of Warranty Claims. Buyer's only remedy for breach of any warranty under the Contract, other than the warranty provided under Section 13 "Intellectual Property Indemnity," shall be the applicable remedy set forth in Section 10 "Limited Warranty" above. Seller's total liability for any and all breach of warranty claims under the Contract shall not exceed the purchase price allocable to the Product, Software or Service or part thereof which gives rise to the claim. **(b) Other Claims.** Seller's liability for any claim other than a breach of warranty claim under Section 10 "Limited Warranty," whether in contract, negligence, tort, strict liability, indemnity or otherwise for any loss or damage arising out of, connected with, or resulting from the Contract or the performance or breach thereof, or from the design, manufacture, sale, delivery, resale, repair, replacement, installation, technical direction of installation, inspection, operation or use of any Products covered by or furnished under the Contract or from Services rendered under the Contract, shall in no case (except as provided in Section 13 "Intellectual Property Indemnity") exceed five percent (5%) of the purchase price allocable to the Products or part thereof or Services giving rise to the claim. **(c) Consequential Damage Disclaimer.** SELLER SHALL NOT BE LIABLE FOR AND DISCLAIMS ALL CONSEQUENTIAL, INCIDENTAL, CONTINGENT, SPECIAL OR PUNITIVE DAMAGES WHATSOEVER. Seller shall not be liable for lost profits or revenues, loss of use of the Products, Software or any related equipment or systems, cost of capital, cost of substitute products, cost of facilities or services, business interruption, downtime, shutdown, or slowdown costs, any other types of economic loss, penalties, special or punitive damages, and claims of Buyer's customers for any such damages. **(d) Expiration of Claims.** All claims against Seller arising out of or related to the Contract or the performance or breach thereof shall expire unless made and presented to Seller in writing by Buyer before expiration of the applicable warranty period. **(e) Precedence.** The limitations of this Section shall apply regardless of whether a claim is based in contract, tort (including negligence), warranty, strict liability, intellectual property, or otherwise, and shall take precedence over any conflicting terms and conditions, except where the limitations of liability of such conflicting terms limit Seller's liability further.

12. INDEMNITY:

(a) Third party claims. Each of Buyer and Seller (each an "Indemnified Party" and an "Indemnifying Party") shall indemnify the other party from and against claims brought by a third party, for bodily injury or damage to the third party's tangible property, to the extent such injury and/or damage is caused by the negligence of the Indemnifying Party, provided that the Indemnified Party gives the Indemnifying Party prompt notice of any such claim and all necessary information and assistance so that the Indemnifying Party, at its option, may defend or settle such claim and the Indemnified Party does not take any adverse posi¬tion in connection with such claim. In the event that the injury or damage is caused by joint or concurrent negligence of Buyer and Seller, the loss or expense shall be borne by each party in proportion to its degree of negligence. For purposes of Seller's indemnity obligations hereunder, Products shall not be considered third party property and the facility in which a Product or Software is used and/or the Services are performed shall not be considered third party property. **(b) Indemnity by Buyer for Third Party Warranty Claims.** If Buyer supplies Products or Services to a third party, uses Products or Services at a facility owned by a third party, and/or transfers Products and/or Software to a third party, Buyer shall indemnify and defend Seller from and against any and all claims by, and liability to, any such third party in excess of the limitations set forth in Sections 10 "Limited Warranty" and 11 "Limitations of Remedy and Liabilities." For purposes of this subsection (b), "Seller" means Seller, its affiliates, suppliers, contractors, licensors and their employees.

13. INTELLECTUAL PROPERTY INDEMNITY: Seller warrants that, to the best of its knowledge, Products, Services and/or Software furnished hereunder, and any part thereof, (each a "Delivered Item") shall be delivered free of any rightful claim of any third party not affiliated with Buyer for infringement of any U.S. patent, any trademark registered in the U.S. Patent and Trademark Office and/or any copyright registered in the U.S. Copyright Office. Seller will, at its own expense, defend or settle any suits that may be instituted against Buyer for alleged infringement by the Delivered Item of any U.S. patent, any trademark registered in the U.S. Patent and Trademark Office and/or any copyright registered in the U.S. Copyright Office provided that: **(a)** such alleged infringement consists of the use of the Delivered Item for (i) any of the purposes for which Buyer informed Seller such Delivered Items would be used, or (ii) if Buyer did not so inform Seller, any of the purposes for which Buyer reasonably believed such Delivered Items would be used; **(b)** Buyer shall have made all payments for such Delivered Items then due hereunder; **(c)** Buyer shall give Seller immediate notice in writing of any such suit and transmit to Seller immediately upon receipt of all processes and papers served upon Buyer; **(d)** Buyer does not take any position adverse to Seller in connection with such claim; and **(e)** Buyer shall permit Seller through Seller's counsel, either in the name of Buyer or in the name of Seller, to defend such suit(s) and give all needed information, assistance and authority to enable Seller to do so.

In case of a final award of damages in any such suit, Seller will pay such award but will not be responsible for any compromise or settlement made without its written consent. In case the Delivered Item itself is in such suit held to infringe any valid patent issued in the United States and/or a trademark and/or copyright registered in the United States, and its use is enjoined, or in the event of a settlement or compromise approved by Seller which shall preclude future use of the Delivered Item, Seller shall, at its own expense and at its sole option, either: **(a)** procure rights to continue using such Delivered Item; **(b)** modify the Delivered Item to render it non-infringing; **(c)** replace the Delivered Item with a non-infringing Product and/or Software; or **(d)** refund the purchase price paid by Buyer for the De-livered Item after return of the Delivered Item to Seller (less reasonable depreciation for any period of use). Notwithstanding the foregoing, Seller shall not be held responsible for infringement of claims of any patents covering the use of the Delivered Item in combination with other goods or materials not furnished by Seller.

The foregoing states the entire liability of Seller for intellectual property infringement, and IN NO EVENT SHALL SELLER BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES ATTRIBUTABLE TO AN INTELLECTUAL PROPERTY INFRINGEMENT. Buyer, at its own expense, shall defend Seller against, and/or settle, **(a)** any patent, trademark, copyright or other intellectual property infringement claim pertaining to a Delivered Item furnished by Seller to Buyer manufactured in accordance with designs, drawings or other descriptions proposed or furnished by Buyer; and **(b)** any claim against Seller of contributory infringement resulting from the use or resale by Buyer of a Delivered Item sold hereunder. Buyer shall indemnify Seller for any award against Seller or settlement by Seller regarding any such claims and attorneys' fees and defense costs incurred in defense of such claims.

14. SOFTWARE LICENSE:

(a) License Grant: Seller grants Buyer a nonexclusive, royalty-free, perpetual, limited license to use the Software in the U.S. and solely in conjunction with (a) the operation of the Products purchased and sold under the Contract and/or other product meeting Seller's specifications; and (b) any other purpose agreed upon in a written and signed agreement between Buyer and Seller. **(b) Scope of License:** Upon Seller's prior written approval, Buyer may make a reasonable number of copies of Software as necessary for backup, configuration, installation, and restoration of the Products. Also upon Seller's prior written approval, Buyer may authorize a third-party contractor or service provider to exercise these rights on Buyer's behalf and for Buyer's benefit. Buyer may transfer possession of Software and its media to another party only in conjunction with the transfer of the Products on which the Software is loaded and only upon agreement of the other party to the terms and conditions of the Contract. Upon such transfer, Buyer shall destroy all Buyer's copies of Software and related documentation. All licenses and grants pursuant to the Contract shall immediately terminate once Buyer no longer rightfully owns or possesses the Products. No other rights under this license are granted. Upon Seller's request, Buyer shall provide Seller with written notice of any such transfer providing the name, address, and contact information of the subsequent Buyer within 15 days of such transfer. **(c) Use Restrictions:** Buyer shall not (a) copy, display, transfer, adapt, modify, or distribute in any form the Software except as set forth in the Contract or in Seller documentation provided by Seller to Buyer with the Software; (b) reverse engineer, disassemble, decompile, or otherwise translate the Software's object code, unless expressly permitted by applicable law without the possibility of contractual waiver; or (c) sublicense or lease the Software or any copy thereof except with the transfer of the Products on which the Software is loaded. Except as provided under the terms of Seller's standard escrow agreement between Seller and Buyer, if applicable, Buyer shall not to make available to any party, without prior written consent from Seller or its authorized agent, source code for the Software. Buyer shall not, directly or indirectly, export or re-export, or knowingly permit the export or re-export of, the Products, or any technical information about the Products, to any country for which the United States Export Administration Act, any regulation thereunder, or any similar United States law or regulation, requires an export license or other United States Government approval, unless Buyer obtains the appropriate export license and obtains written approval from Seller. **(d) Maintenance and Support:** Seller may offer to Buyer the option to purchase from Seller annual Software maintenance and support services under the terms and conditions of Seller's then-standard maintenance and support agreement. Buyer may renew this maintenance term at Seller's then-current maintenance rates. In the event Buyer purchases additional Software licenses, maintenance fees for such licenses shall be prorated to be coterminous with Buyer's existing maintenance period. In no event shall Seller be responsible for providing maintenance services for a period during which maintenance coverage is lapsed.

15. SECURITY AGREEMENT AND FINANCING STATEMENTS: As security for payment of the purchase price under the Contract, Buyer hereby irrevocably grants Seller a security interest in the Products purchased by Buyer, together with all accessories, attachments and replacement parts and all substitutions, replacements and proceeds thereof to secure payment of the purchase price and of all monies which may be due under the Contract. Buyer hereby authorizes Seller to file all financing statements, any amendments and continuations thereof, or any other documents necessary or reasonably required, for the perfection and protection of a security interest under applicable law, and to deliver notice to prior holders of security interests, of Seller's security interest in the Products to protect its interest.

16. INSURANCE: Until payment in full of the purchase price, Buyer shall maintain insurance covering all Products sold by Seller to Buyer in such amounts and against such risks as is customary by com-panies engaged in the same or similar business and similarly located, and shall, upon Seller's request, furnish evidence of such insurance satisfactory to Seller.

17. DRAWINGS; OTHER DESIGN DATA: All specifications, drawings, designs, data, information, ideas, methods, tools, gages, dies, fixtures, patterns and/or inventions made, conceived, developed or acquired by Seller in connection with procuring and/or executing the Contract will vest in and inure to Seller's sole benefit notwithstanding any charges therefor which may have been or may be imposed by Seller on Buyer. Buyer shall not give, loan, exhibit, sell or transfer to any person who is not a Buyer employee and authorized to receive such information, or to any organization or entity, any drawing, photograph or specification furnished by Seller or reproduction thereof which may enable such person, organization or entity to furnish similar products or parts therefor.

18. RETURN OF PRODUCTS: No Product or part shall be returned to Seller without written authorization and shipping instructions first having been obtained from Seller.

19 ASSIGNMENT AND SUBCONTRACTING: None of Buyer's rights under the Contract shall be assigned by Buyer to any other person, whether by operation of law or otherwise, without Seller's prior written approval. Seller may, without the necessity of obtaining Buyer's prior written consent, assign the Contract or subcontract the production of all or any portion of the Products and/or performance of the Services.

20. CANCELLATION: No purchase order submitted to Seller may be cancelled by Buyer without the prior written consent of Seller, which consent will at all times be conditioned on Buyer's agreement to pay Seller's cancellation charge. For a finished Product that, in Seller's judgment, is readily resalable to others, the cancellation charge shall be 15% of the invoice price of the Product. For all other cancellations, the cancellation charge shall amount to all cost and expenses incurred by Seller and arising out of or in connection with Buyer's purchase order plus reasonable profit. In no event shall the cancellation charge be less than 10% of the invoice price of the Product or more than the invoice price.

21. NUCLEAR USE DISCLAIMER: Products sold by Seller are not intended for use in connection with any nuclear facility or activity. If so used, Seller disclaims all liability for any nuclear damage, injury or contamination, and Buyer shall indemnify and hold Seller, its officers, agents, employees, successors, assigns and customers harmless from and against any and all losses, damages or expenses of whatever form or nature (including attorneys' fees and other costs of defending any action) which they or any of them may sustain or incur, whether as a result of breach of contract, warranty, tort (including negligence) or otherwise, by reason of such use.

22. GOVERNING LAW; VENUE: These Terms and Conditions and the Contract shall be governed by and construed in accordance with the laws of the State of Wisconsin. Seller and Buyer irrevocably submit to the exclusive jurisdiction of the state courts located in Rock County, State of Wisconsin and the federal courts located in the State of Wisconsin, and Seller and Buyer waive any objection to venue or forum non conveniens, for the resolution of any dispute relating to these Terms and Conditions or the Contract. The rights and obligations of Seller and Buyer shall not be governed by the provisions of the United Nations Convention on Contracts for the Internal Sale of Goods.

23. EXPORT/IMPORT: Buyer shall comply, in the receipt and use of the Products and the Software, with all applicable import and export control laws, regulations, orders and requirements of the jurisdictions in which the Seller and Buyer are established or from which Products and Software are provided. Buyer shall not transfer, release, import, or export Products and/or or Software in violation of such applicable laws, regulations or other legal requirements. Buyer shall provide a completed end-user certification in a form satisfactory to Seller upon Seller's request.

24. ATTORNEYS' FEES: Buyer agrees to pay all of Seller's costs and expenses of collection and related litigation, including but not limited to attorneys' fees and costs.

25. SALVATORY CLAUSE: The invalidity, in whole or in part, of any of the provisions of these Terms and Conditions, shall not affect the enforceability of any of the other provisions thereof.

26. APPLICABILITY: These Terms and Conditions as stated herein are applicable as of the date of this printing and until such time as changed by Seller.Regal STCS Rev 8-13

For the full version of the Terms and Conditions of Sales with Supplements A and B - Visit http://www.regalbeloit.com/what-we-do/products-brands/

Regal STCS Rev 8-13

Notes

District Sales Offices

Please contact your nearest GROVE GEAR District Sales Office, they can provide complete information including price and availability.

United States

ARKANSAS, Little Rock
District Mgr.,
Kevin Springstead
800/444-7609

CALIFORNIA,
Los Angeles
Bob Schwing
323/278-7979

CALIFORNIA,
San Francisco
District Mgr.,
Dave Richardson
925/371-8125

COLORADO, Denver
District Mgr.,
Kevin Springstead
800/444-7609

NEW ENGLAND
/ Metro Boston, MA
District Mgr.,
Dave Manning
888/479-7875

FLORIDA, Tampa
District Mgr.,
Bill Taylor
813/740-2571

GEORGIA, Atlanta
District Mgr.,
Walter Brooks
770/933-0453

ILLINOIS, Chicago
Co District Mgrs.,
Milke Miller,
Robert Sheppard
630/458-9511

INDIANA, Indianapolis
District Mgr.,
Matt Simko
800/331-2911

IOWA, Des Moines
District Mgr.,
John Marshalla
952/935-8271

KANSAS, Kansas City
District Mgr.,
Pat Donnelly
913/599-6983

MARYLAND, Baltimore
District Mgr.,
Craig Brisbane
570/325-3684

MICHIGAN, Grand Rapids
District Mgr.,
Greg Norris
616/249-8430

MINNESOTA, Minneapolis
District Mgr.,
John Marshalla
952/935-8271

MISSOURI, St. Louis
District Mgrs.,
Pat & Ken Anvender
314/714-1460

NEW JERSEY/METRO NEW
YORK/LONG ISLAND
(Plainfield, NJ 18229)
Contact:
Dan Brisbane
866/505-8796

NEW YORK, Syracuse
District Mgr.,
Chris Brisbane
866/505-8796

NORTH CAROLINA,
Charlotte
District Mgr.,
Doug Landgraf
803/396-8200

OHIO, Cincinnati
District Mgr.,
Ken Simko
513/755-1000

PENNSYLVANIA, Allentown/
Philadelphia
District Mgr.,
Craig Brisbane
570/325-3684

TEXAS, Dallas
District Mgr.,
Kevin Springstead
800/444-7609

TEXAS, Houston
Contact
Donnie Heckler
800/444-7609

UTAH, Salt Lake City
District Mgr.,
Kevin Springstead
800/444-7609

WASHINGTON, Seattle
District Mgr.,
Amorette Gent
206/767-2780

WISCONSIN, Milwaukee
District Mgr.,
Leslie Rasmussen
262/752-0322

Regal Beloit Canada

ALBERTA, Edmonton
Branch Mgr.,
Mike Strenkowski
780/437-3380

BRITISH COLUMBIA,
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