

MEET THE NEW **marathon**[®]

WAUSAU, WISCONSIN, USA



MOTORS AND DRIVES STANDARD PRODUCT

2025 | CATALOG

EXPERIENCE SERVICE LIKE NEVER BEFORE MEET THE NEW MARATHON TEAM

Powered By WEG



With more than a century of experience, we bring unparalleled knowledge to every partnership, ensuring tailored solutions that meet the unique demands of your industry.:

- **Proudly North American Manufactured:** Quality products built with pride through North American Manufacturing.
- **More Stock Catalog products available:** Our diverse inventory is designed to cater to a wide range of needs, combining high performance with exceptional durability for long-term value.
- **Nationwide Inventory Locations:** Strategically placed across the country for faster delivery.
- **US-Based Customer Support:** Real people, real solutions, just a call away.

We're more than motors; we're your *trusted ally* in powering your success.

WWW.MARATHONELECTRIC.COM

marathon[®]

SOLUTIONS CLOSER THAN YOU THINK



CONTACT US TODAY



833-697-3203

**Do you want to send
us an email ?**

Orders | industrialmotororders@marathonelectric.com

Quotes | IndustrialMotorQuotes@marathonelectric.com

Technical Support | ind.motorstechnicalsupport@marathonelectric.com

Warranty Questions | industrialwarranty@marathonelectric.com

Parts | Parts.Orders@marathonelectric.com

General Questions | ind.motorinquiries@marathonelectric.com

Generator Support | Generatorinquiries@marathonelectric.com

At Marathon Electric, we power progress by keeping your operations running smoothly with dependable industrial motor solutions. From expert advice to quick turnaround on orders, our dedicated team is just one contact away, ready to help with motors over NEMA®*180 frame series and higher.

PERFORMANCE FOR THE LONG RUN



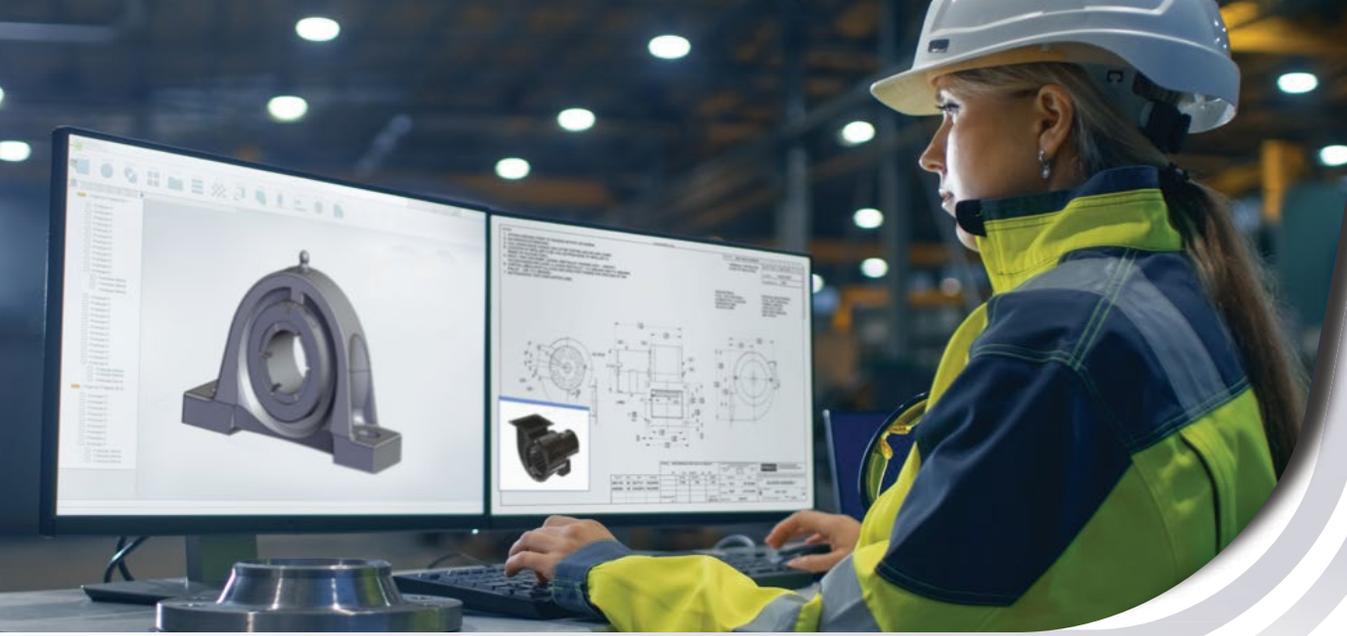
30%

**MORE STOCK
RATINGS FROM
OUR STANDARD
OFFERING**

OUR ALL NEW CATALOG IS
EASY TO USE AND HELPS
YOU SELECT

THE RIGHT MOTOR FASTER.

Now offering more motor solutions,
more motor applications. Finding the
right motor is simplified.



E-TOOLS MATCHED TO THE WAY YOU WORK

Our comprehensive product offering is viewable online or on mobile devices. On our website, you can compare products and find Marathon® brand distributors near you. Our website provides easy access to all the information you need, whether you're behind a desk or in the field.



**PRODUCT
COMPARISON**



**MOTOR
DRAWINGS**



**COMPETITOR
CROSS
REFERENCES**



**DISTRIBUTOR
LOCATORS**



**MOBILE FRIENDLY
SITE**





MODIFICATIONS AT THE WAREHOUSE ENSURE **CUSTOM** SOLUTIONS **FASTER**

THE RIGHT MOTOR
THE OPTIMAL FIT
THE PERFECT SOLUTION

MORE CHOICES FROM ONE LEADING BRAND

ENSURE CUSTOM SOLUTIONS FASTER.

We understand that no motor is perfect for every application. That's why we've expanded our modification offerings on a variety of models. Some modifications can be modified and shipped the same day, while others may take a day or two, but we can ensure the motor solution that you need will be ready to work.

YOU'LL HAVE QUESTIONS. WE'LL HAVE ANSWERS.

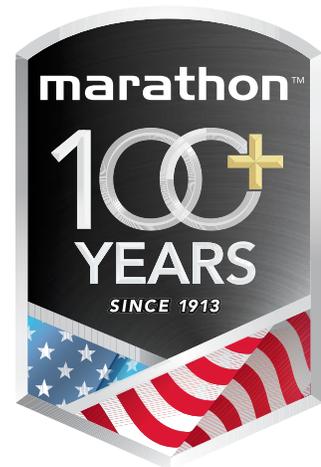
As you review the industrial motors from this expanded offering, know that we're ready to assist. Our customer service professionals are here to guide you. Your local field representative is available to help you find the right solution for your application.





marathon®

FROM THE BEGINNING,
WE ARE LEADING
**INNOVATION
WITH
PURPOSE.**



**BUILDING OUR BRANDS
OVER 100 YEARS OF
DEDICATION AND
TEAM WORK**

| | | | | | |
|---|--|--|--|---|--|
| <p>1913</p> <p>Marathon®* Company Founded.</p> | <p>1960</p> <p>1/20 HP through 3500 HP motors Introduced 95% of the motors installed.</p> | <p>1976</p> <p>First Energy Efficient Polyphase HP motors.</p> | <p>1981</p> <p>First two-speed motors, solid state switch with UL®* approval.</p> | <p>1986</p> <p>Marathon XRI® product line introduced - leading the industry with NEMA Premium®*.</p> | <p>1996</p> <p>BlackMAX® Motor was introduced to the market</p> |
| <p>1997</p> <p>MAX GUARD® insulation system introduced.</p> | <p>2000</p> <p>Blue Chip Series® Severe Duty Explosion Proof motor named Plant Engineering magazine product finalist.</p> | <p>2002</p> <p>First true world class motor, IEC®* Globetrotter®, introduced.</p> | <p>2010</p> <p>Permanent Magnet AC Motor introduced.</p> | <p>2012</p> <p>Simplified "Marathon" becomes a flagship brand.</p> | |
| <p>2013</p> <p>Celebration of 100 years of the Marathon brand.</p> | <p>2019</p> <p>Build a Manufacturing plant on Monterrey, Mexico. 250,000 Sq.Ft.</p> | <p>2020</p> <p>Medium Voltage and ANEMA Endurance Series® Motors.</p> | <p>2024</p> <p>Marathon Electric is acquired by WEG Group.</p> | | |



*See back cover page for attribution.

TABLE OF CONTENTS

| | |
|--|--------------|
| INTRODUCTION | 2-7 |
| TABLE OF CONTENTS | 8-11 |
| GENERAL INFORMATION | 12-15 |
| – How to Read the Nameplate | 12 |
| – How to Read the Model Number | 13 |
| – Ordering, Cancellations and Returns | 14 |
| – Operation, Maintenance and Storage Procedures | 14 |
| – Service and Warranty | 15 |
| APPLICATION INFORMATION | 16-23 |
| – Agency Information | 16 |
| – Bearings, Efficiency, Electrical Starting Method, Enclosure and Method of Cooling | 17 |
| – Hazardous Duty® Motors | 18 |
| – North American and European Installations | 18 |
| – Degrees of Protection the First and Second Numbers | 19 |
| – Marathon® Hazardous Duty Motor Area Classification Chart | 20 |
| – Insulation Systems, Mounting, Service Factor Ratings, Overload Protection, Phase/Power Supply, Rotation, Speed/RPM | 20-21 |
| – Terminologies | 22-23 |
| – Formulas and Conversion Factors | 23 |
| VARIABLE SPEED INFORMATION | 24-27 |
| – Guidelines for general purpose motors on VFD | 24 |
| – Application Considerations | 24-27 |
| GENERAL PURPOSE MOTORS | 28-31 |
| – Single-phase, Dripproof Motors Overview | 28 |
| – Rigid Base | 29 |
| – C-Face Footless | 29 |
| – C-Face Footed | 29 |
| – Single-phase, Totally Enclosed Motors Overview | 30 |
| – Rigid Base | 31 |
| – C-Face Footed (Rigid base) | 31 |
| GLOBETROTTER® GENERAL PURPOSE MOTORS | 32-44 |
| – Three-phase, Dripproof Motors Overview | 32 |
| – Rigid Base | 33-35 |
| – C-Face Rigid Base | 36 |
| – C-Face Footless | 37 |
| – Three-phase, Cast Iron, General Purpose Motors Overview | 38 |
| – Three-phase, Totally Enclosed Motors | |
| – Rigid Base | 39-42 |
| – C-Face Footless | 43 |
| – C-Face Footed (Rigid Base) | 43-44 |
| – C-Face Footed (Rigid Base), BCP, F3 - Top Mounted Conduit Box | 44 |
| ALUMINUM GENERAL PURPOSE MOTORS | 45-46 |
| – Three-phase, Totally Enclosed Motors | |
| – Rigid Base | 45 |
| – C-Face Rigid Base | 46 |
| – C-Face Footless | 46 |
| XRI®* SEVERE DUTY / BLUE CHIP® XRI® SD & AUTOMOTIVE DUTY MOTORS | 47-55 |
| – TEFC Cooling Tower, Single speed, Three-phase Motors | 47 |
| – TEAO Cooling Tower, Single speed Three-phase Motors | 48 |
| – Blue chip® XRI-SD and XRI-841 Motors Overview | 49 |
| – Globetrotter vs XRI-SD vs XRI-841 Motors Comparison Chart | 50 |
| – NEMA Premium®*, XRI Motors, Three-phase, Totally Enclosed | |
| – Rigid Base | 51-54 |
| – C-Face Footed (Rigid Base) | 55 |
| XRI-841 / AUTOMOTIVE DUTY MOTORS | 56-60 |
| – NEMA Premium, XRI, Three-phase, Totally Enclosed | |
| – Rigid Base | 56-59 |
| – C-Face Footless, Vertical Shaft Down, BCP | 60 |
| HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS | 61-65 |
| – Hazardous Duty Explosion Proof Motors Overview | 61 |
| – Hazardous Duty Div I Class I and II, Groups C & D, F & G, XRI®, Severe Duty, NEMA Premium Efficiency, Three-phase | |
| – Rigid Base | 62-64 |
| – C-Face Footed (Rigid Base) | 65 |
| – C-Face Footless | 65 |

*See back cover page for attribution.

TABLE OF CONTENTS

| | |
|---|--------------|
| INVERTER (VECTOR) DUTY MOTORS | 66-75 |
| – Inverter Duty Motors Overview | 66 |
| – MICROMAX® 20:1 Constant Torque, Totally Enclosed, Three-phase Motors | |
| – C-Face Footed (Rigid Base) | 67 |
| – MICROMAX PLUS 1000:1 Constant Torque, Totally Enclosed, Three-phase Motors with Encoder | |
| – C-Face Footed (Rigid Base) | 67 |
| – Black MAX® 1000:1 Constant Torque, Totally Enclosed, Three-phase Motors | |
| – Rigid Base and C-Face Footed (Rigid Base) | 68-69 |
| – Blue MAX® 2000:1 Constant Torque, Totally Enclosed, Three-phase Motors | |
| – Rigid Base and C-Face Footed (Rigid Base) | 70-73 |
| – Blue MAX 2000:1 Hazardous duty® Explosion Proof, Three-phase Motors, With Encoder Class I and II, Groups C & D, F & G | |
| – C-Face Footed (Rigid Base) | 74 |
| – Blue MAX 2000:1 Brake Motors Constant Torque, TENV, Three-phase Motors | |
| – C-Face Footed (Rigid Base) | 75 |
| BLACKMAX®-PM™ MOTORS | 76-77 |
| – BlackMAX®-PM Permanent Magnet AC Motors Overview | 76 |
| – BlackMAX®-PM Permanent Magnet AC Motors TENV and TEFC, Three-phase Motors | |
| – C-Face Footed (Rigid Base) | 77 |
| TERRAMAX® IEC (METRIC) FRAME MOTORS | 78-85 |
| – TerraMAX IEC Motors Overview | 78 |
| – IEC® Totally Enclosed | |
| – B3 Rigid Base | 79-81 |
| – B5 "FF" (D-Flange) – Footless | 81 |
| – B14 "FT" (C-Face) – Footless | 82 |
| – B35 "FF" (D-Flange) – Footed | 83 |
| – B34 "FT" (C-Face) – Footed | 84 |
| – IEC® Totally Enclosed, Brake Motor | |
| – B3 Rigid Base | 85 |
| HVAC - FAN MOTORS | 86-88 |
| – HVAC - Fan Motors Overview | 86-87 |
| – Multi-speed / 2-Speed Motors Three-phase - Variable and Constant Torque | 88 |
| – 1- Winding, Variable Torque, DP, Rigid Base | 88 |
| – 2- Winding, Variable Torque, DP, Rigid Base | 88 |
| – 1- Winding, Variable Torque, TEFC, Rigid Base | 88 |
| – 1- Winding, Constant Torque, TEFC, Rigid Base | 88 |
| BRAKE MOTORS | 89-90 |
| – Three-phase, Dripproof | 89 |
| – Three-phase, Totally Enclosed | |
| – Rigid Base | 90 |
| – C-Face Footless | 90 |
| – C-Face Footed (Rigid Base) | 90 |
| AGRICULTURAL DUTY MOTORS | 91-97 |
| – Farm Duty / Agriculture, High Torque Motors, Single-phase, TEFC Motors | |
| – Rigid Base | 91 |
| – C-Face Footed (Rigid Base) | 91 |
| – Farm Rated Motors, Extra High Torque, Single-phase, TEFC, Rigid Base & Rigid Base with C-Face Motors | |
| – C-Face Footed (Round Body) | 91 |
| – Farm Duty / Agriculture, Extra High Torque Chore Motors, Single-phase, TEFC, Rigid Base Motors | |
| – Rigid base | 92 |
| – C-Face Footed (Rigid Base) | 92 |
| – Crop Dryer, Dripproof/Air Over, Rigid Base Motors | |
| – Single-phase, Open/ Air Over Rigid Base | 93 |
| – Single-phase, TEAO Rigid Base | 93 |
| – Single-phase, TEFC rigid base | 93 |
| – Crop Dryer Three-phase, Open/Air, Rigid Base | |
| – Three-phase, Open/Air /DPAO | 94 |
| – Three-phase, Totally Enclosed Air Over /TEAO Rigid Base | 94 |
| – Crop Dryer/ Centrifugal Fan Motors, Single-phase Rigid Base Motors | |
| – Single-phase, TEFC, Rigid Base | 95 |
| – Feather Picker Motors | |
| – Three-Phase, TEFC, Rigid Base | 95 |
| – Grain Dryer/ Centrifugal Fan Motors, Rigid Base Motors | |
| – Single-phase, TEFC, Rigid Base | 96 |
| – Three-phase, Dripproof, Rigid Base | 96 |
| – Three-phase, TEFC, Rigid Base | 96 |

TABLE OF CONTENTS

| | |
|---|----|
| - Tobacco Barn Motors | 97 |
| - Single-phase, DPAO, Rigid Base | |
| - Catfish Pond Motors | 97 |
| - Three-phase, Totally Enclosed, Air over/ TEAO, Rigid Base | |

POWERWASH™ MOTORS 100-114

| | |
|---|---------|
| - PowerWash™ Motors Overview | 100 |
| - PowerWash™ Motors Broad Product Range | 101 |
| - PowerWash™ PowerWash XT™, PowerWash™ SXT, PowerWash™ SXT Plus, PowerWash™ EXT Comparison Chart | 102 |
| - PowerWash™ XT Motor Model Parts | 103 |
| - PowerWash™ XT Epoxy Painted | |
| - Single-phase, TEFC, Rigid Base, Featuring Electronic Solid State Encapsulated Switch | 104 |
| - Three-phase, TEFC, Rigid Base | 105 |
| - Three-phase, TEFC, C-Face Footless | 105 |
| - Three-phase, TEFC, C-Face Footed (Rigid Base) | 105 |
| - Close Coupled Pump, JM, Rigid Base | 106 |
| - PowerWash™ SXT- All Stainless Motor Model Parts | 107 |
| - PowerWash™ SXT- All Stainless Motors | |
| - TEFC, C-Face Footed / Rigid | 108 |
| - PowerWash™ SXT Plus - All Stainless Motors Three-phase Motors Model Parts and Overview | 109-110 |
| - PowerWash™ SXT Plus - Three-phase Motors | |
| - C-Face Footed (Rigid Base) | 111 |
| - C-Face Footless | 111 |
| - C-Face Footed (Rigid Base) JM Pump | 111 |
| - PowerWash™ EXT All-Stainless Motors, Three-phase NEMA Premium®* Model Parts and Overview | 112-113 |
| - PowerWash™ EXT Three-phase -Encapsulated All stainless Standard & NEMA Premium Ratings | |
| - C-Face Footed (Rigid Base) | 114 |
| - Q-Car™ Replacement- PowerWash™ SXT-EXT Motors | 114 |

PUMP MOTORS 115-124

| | |
|--|---------|
| - Close-Coupled Pump Motors | |
| - JM Motors, Single-phase, Dripproof, C-Face Footed (Rigid Base) | 115 |
| - JM Motors, Single-phase, Totally Enclosed, C-Face Footed (Rigid Base) | 115 |
| - JP Motors, Single-phase, Dripproof, C-Face Footed (Rigid Base) | 116 |
| - JM Motors, Three-phase, Dripproof, C-Face Footless (Vertical) and C-Face Footed (Rigid Base) | 117-118 |
| - JM Motors, Three-phase, TEFC, C-Face Footed (Rigid Base) | 119-120 |
| - JP Motors, Three-phase, Dripproof, C-Face Footless (Vertical) and C-Face Footed (Rigid Base) | 121-122 |
| - JP Motors, Three-phase, TEFC, C-Face Footed (Rigid Base) | 123-124 |
| - Fire Pump Motors | |
| - Three-phase, ODP, Rigid Base, Epact Efficiency | 125-126 |
| - Three-phase, TEFC, Rigid Base, Epact Efficiency | 127-128 |
| - Vertical Solid Shaft P-Base Motors | |
| - Three-phase, Dripproof | 129-130 |
| - Three-phase, Totally Enclosed | 131-132 |
| - Pool Pump Motors | |
| - D-Flange Footless, Single-phase | 133 |
| - D-Flange Footless Three-phase | 133 |
| - C - Face Footed Single-phase | 133-134 |
| - C-Face Footed -Three-phase | 134 |

DEFINITE PURPOSE MOTORS 135-146

| | |
|--|-----|
| - Centrifugal Fan, Single-phase, Dripproof, Rigid Base Motors | 135 |
| - Aggregate Duty - Blue Chip Series® Nema Premium XRI®, Totally Enclosed, Three-phase, Rigid Base, High Torque Motors | 136 |
| - Air Compressor, Single-phase, Dripproof, Rigid Base Motors | 137 |
| - Cooling Tower, Two-Speed-One winding, Variable Torque Motors | |
| - Blue Chip Series® Severe Duty, XRI, Three-phase, Totally Enclosed, Rigid Base | 138 |
| - Multi-speed: Two-Speed, One-winding, Variable Torque Motors Three-phase, Dripproof, Rigid Base Motors | 139 |
| - Multi-speed: Two-Speed, Two-winding, Variable Torque Motors Three-phase, Dripproof, Rigid Base Motors | 139 |
| - XRI® KILN Duty Motors Blue Chip Series® Severe Duty, TEAO, Rigid Base, Three-phase Motors | 140 |
| - 50 Hertz, Single-phase Motors, Rigid Base Motors | |
| - ODP, Rigid Base | 141 |
| - TEFC, Rigid Base | 141 |
| - 50 Hertz, Three-phase Motors, RIGID Base Motors | |
| - ODP, Rigid Base | 142 |
| - TEFC, Rigid Base | 142 |
| - TEFC, C-Face Footless | 142 |
| - Elevator Motors | |
| - Submersible Hydraulic Duty, ODP Rigid Base | 143 |
| - Dry Hydraulic Duty, Three-phase, Dripproof, Rigid Base, 80 Starts Per Hour | 144 |
| - Dry Hydraulic Duty, Three-phase, Dripproof, Rigid Base, 120 Starts Per Hour | 145 |
| - Roller Table Motors | |
| - IEC®-Totally Enclosed Non Vented | 146 |

TABLE OF CONTENTS

| | |
|---|------------------|
| ENDURANCE SERIES® MOTORS | 148-155 |
| - Endurance Series Motors Overview | 148 |
| - IEC®* Totally Enclosed Fan Cooled General Purpose IEC Motors | |
| - IEC TEFC, Low Voltage | 149 |
| - IEC TEFC, Medium Voltage | 150 |
| - IEC Weather Protected Type 1 General Purpose IEC Motors | |
| - IEC WPI, Medium Voltage | 151 |
| - IEC Weather Protected Type 2 General Purpose IEC Motors | |
| - IEC WP2, Medium Voltage | 152 |
| - IEC Totally Enclosed Air-To-Air Cooled General Purpose IEC Motors | |
| - IEC TEAAC, Medium Voltage | 153 |
| - Build up Options Chart | 154 - 155 |
| CONTROLMAX™ AC/DC CONTROLS | 156 - 200 |
| - CONTROLMAX™ AC/DC Controls Overview | 156 |
| - Cross reference CM3™ & CM5™ | 157-165 |
| - Ac Drives Accessories/kits Cross reference CM3™ & CM5™ | 166-168 |
| - Series Drives CM3™ | 169-170 |
| - Normal Duty (ND)/Heavy duty (HD) | 170 |
| - Accessories/Kits - CM3™ Series Drives | 171 |
| - Option Cards - CM3™ Series Drives | 172 |
| - Technical Data - CM3™ Series Drives | 173-174 |
| - Series Drives CM5™ | 175-198 |
| - Normal Duty (ND)/Heavy duty (HD) IP20 Finger Safe Enclosure | 175-179 |
| - NEMA 4X / IP66 Washdown VFD W/O Disconnect Switch | 177-178 |
| - NEMA 4X / IP66 Washdown VFD with Disconnect Switch | 178-179 |
| - IP20 Dynamic Braking Resistors - 100% Braking Torque at 20% Duty Cycle (12 Seconds Max. Braking Time) NEMA®-1 Enclosure | 179-180 |
| - IP20 Dynamic Braking Resistors - 100% Braking Torque at 50% Duty Cycle (30 Seconds Max. Braking Time) NEMA®-1 Enclosure | 180-181 |
| - NEMA 4X / (IP66) Dynamic Braking Resistors - 100% Braking Torque at 20% Duty Cycle (12 Seconds Max. Braking Time) - NEMA1 Enclosure | 182 |
| - Accessories/kits - CM5™ Series Drives | 183-184 |
| - Option cards - CM5™ Series | 185 |
| - Technical data - CM5™ Series | 186-187 |
| - Series Standards CM5™ Series Standards | 188 |
| - Series Brake Resistors - Estimating the Braking resistor CM5™ | 189-190 |
| - Series Brake Resistors CM5™ | 191-192 |
| - CONTROLMAX® DC Adjustable Speed Drives | |
| - SCR Thyristor Controls - Enclosed SCR | 193 |
| - SCR Thyristor & PWM Controls | |
| - Open Chassis SCR | 194 |
| - Regenerative SCR - Four Quadrant - Full Wave | 194 |
| - PWM - Enclosed | 194 |
| - PWM & SCR - Open Chassis | 194 |
| - SCR - 4 Quadrant - Chassis - Regenerative Controls - Open Chassis | 195 |
| - Low Voltage Regenerative 4 Quadrant Controls - Open Chassis | 196 |
| - DC Adjustable Speed drives Low Voltage Open Chassis DC in & DC Output | 197 |
| - Low Voltage Adjustable Speed Controllers SCR Controls - Enclosed | 197 |
| - DC Adjustable Low Voltage Controls Four Quadrant Control - Open Chassis | 198 |
| - Dual Mode - Dual Speed Controllers Four Quadrant Control Open Chassis | 198 |
| - AC adjustable Speed Drives - Low voltage AC drives Controls | 199 |
| - AC Adjustable Speed Drives | 200 |
| MODIFICATIONS | 204-211 |
| ACCESSORY KITS | 213-226 |
| FOOTNOTES | 227 |
| WARNINGS AND CAUTIONS - ELECTRICAL AND MECHANICAL | 228-230 |
| DIMENSIONAL DRAWINGS | 231-237 |
| IEC QUICK REFERENCE DIMENSIONAL CHART | 238 |
| NEMA QUICK REFERENCE DIMENSIONAL CHART | 239 |

GENERAL INFORMATION

MARATHON® MOTORS

Since 1913, the Marathon name has been recognized for engineering excellence, custom-designed products and an extensive product line of industrial quality motors. Available in all popular enclosures from 1 1/2 HP through 3500 HP and in a variety of mounting configurations. The unique design of Marathon motors provides more options to add accessories such as; blowers, brakes and encoders, to our motors. Our state-of-the-art lab facilities are equipped and staffed with the finest resources available to ensure successful utilization of our products. "Performance matched solutions™" to all leading brands of PWM drives, we have what it takes to be a leader in understanding the interaction of drives that are applied with AC induction motors.

HOW TO READ THE NAMEPLATE

The nameplate is the key to selecting the proper replacement motor.

WEBSITE AND E-COMMERCE

Information can be accessed instantly, any time of the day on our website. Marathon motor customers can also contact their sales representative for information.

THE FOLLOWING INFORMATION CAN BE FOUND ON OUR WEBSITE

- Stock availability
- Order status
- Shipping information
- Invoice information
- Product features and performance data
- Contact information

Motor Specifications
(Example)

| NEMA PREMIUM | | marathon® XRI®-841 IEEE-841 | | | | | | | | | | Energy Verified Only Energie Verifie Seulement EEV 102077 | |
|--------------|---|--------------------------------|----------|---------|----------|-----|-----------|----------|----------|-----|-----------------------------|--|--|
| IEEE841 | MODEL | AN254THFCD9026BB | | | | | | | | SER | | | |
| GM-7E-TA | CAT. NO. | W546A | Fr. 254T | ENCL TE | PH | 3 | IP | 55 | IC | MTG | F1/F2 | | |
| | DES. | B | CODE | INSL | RISE | SF | 1.15 | AMB | 40 | ALT | 1000 | 3300 FT | |
| SEVERE DUTY | VOLTS | Hz | HP | KW | Cos φ | RPM | NOM. EFF. | FL. AMPS | DUTY COM | | | | |
| | 480 | 60 | 15 | 11 | 82(0.82) | 177 | 92.4 | 18.8 | TF | | | | |
| MARINE DUTY | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">2</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">3</div> </div> <p style="text-align: center;">LINE</p> | | | | | | | | | | | | |
| IEEE45 | SHAFT END BRG | LR2025 | | | | | | | | | | | |
| USCG | OPP END BRG | 6209 | | | | | | | | | | | |
| API RP14F | YOM | 2019 | | | | | | | | | | | |
| FORD EM-1 | UL LISTED / UL CERTIFIED FOR CANADA - CLASS I, GROUP A, B, C, D DIV.2 / ZONE 2 | | | | | | | | | | IEC 60034-1 | | |
| | GROUP IIA, IIB, IIC; TEMPERATURE CODE T3 @ 1.0 SF OR T2B @ 1.15 SF ON | | | | | | | | | | IEC 60034-5 | | |
| | SINE - WAVE POWER OR T2D @ 1.0 SF ON PWM TYPE VFD POWER | | | | | | | | | | Wt (lbs / kg) 7657 / 347 | | |
| | ASSEMBLED IN MEXICO | | | | | | | | | | | | |

CSA Mark - Certified by the Canadian Standards Association

CSA file #

Underwriters Laboratories, Inc. UL Listed Component Mark

UL file #

CE (Conformité Européenne) Marking
This mark signifies the motor complies with the European Low Voltage Directive.

CE file #

CC# - Compliance Certification Number as per assigned by the Department of Energy. Motors meeting EPAAct efficiencies or higher will have this number.

Agency symbols

1. **DATE CODE** - The month and year manufactured
2. **MODEL** - The ID number
3. **SER.** - Serial number
4. **PART NO.** - Customer part number
5. **FRAME** - The size & mounting
6. **ENCL** - Enclosure (e.g. TEFC)
7. **PH** - Electrical phase usually 1 or 3
8. **IP** - International Protection rating of the enclosure to solids and liquids as defined by IEC 60034-5 and NEMA MG1
9. **IC** - Inherit Cooling
10. **MTG.** - Mounting
11. **DES.** - Code by NEMA®* or IEC®*
12. **CODE** - NEMA locked-rotor KVA
13. **INS CL** - Insulation class
14. **RISE** - The temperature rise over ambient expressed in °C when the motor operates at nameplated HP or KW
15. **S.F.** - Percentage of the rated horsepower the motor can safely operate at Example: 1.15 SF (115% of rated HP)
16. **MAX AMB** - The allowable surrounding air temperature
17. **ALTITUDE** - The allowable altitude
18. **VOLTS** - Voltage rating of the motor at the operating frequency
19. **HZ** - Input frequency of the power supply, usually 50 or 60 HZ
20. **HP** - Rated horsepower the motor will produce
21. **KW** - Rated output in watts
22. **PF / COS** - Power Factor / Cosine is the ratio of actual power to the apparent power
23. **RPM** - Full load speed at rated frequency
24. **NOM EFF** - Average efficiency
25. **F.L. AMPS** - The rated load current expressed in amps at nameplated horsepower with nameplate voltage and frequency
26. **DUTY** - Time rating under load
27. **TYPE** - Electrical type
28. **SHAFT END BEARING** - Manufacturer drive end bearing number
29. **OPP. END BEARING** - Manufacturer opposite drive end bearing number
30. **MTH/YR MFG.** - Month and year motor was manufactured
31. **WT/LBS** - Motor weight in pounds
32. **WT/KG** - Motor weight in kilograms

GENERAL INFORMATION

HOW TO READ THE MODEL NUMBER

Each Marathon® motor carries a model number that can be used to define some of the motor's physical and electrical characteristics.

Example: 2QA215TBDRA7076ALL

This is a breakdown of the model on the nameplate:

| | | | | | | | | | | |
|----------|----------|----------|-------------|----------|----------|----------|----------|-------------|-----------|-----------|
| 2 | Q | A | 215T | B | D | R | A | 7076 | AL | L |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

This is a breakdown of the model in the catalog:

| | | | | | |
|-------------|----------|----------|----------|----------|-------------|
| 215T | B | D | R | A | 7076 |
| 4 | 5 | 6 | 7 | 8 | 9 |

| 1. DATE CODE | | |
|---|--|--|
| Year of Manufacture (Not shown in catalog listings) | | |

| 2. THERMAL PROTECTION | | |
|--|--|---|
| (Not shown in catalog listings) | | |
| | UL®* Recognized Motor Protector <u>Combination</u> | UL Recognized Motor <u>Construction</u> |
| Automatic Reset | Automatic Reset | Automatic Reset |
| Q | Yes | Yes |
| S | No | No |
| U | No | Yes |
| W | # | Yes |
| Manual Reset | Manual Reset | Manual Reset |
| P | Yes | Yes |
| Z | No | Yes |
| X | No | No |
| None | None | None |
| V | No | Yes |
| # Motor protector combination is U.L. Recognized only if motor is used in direct drive fan duty application, and is under locked rotor condition, or is running under no-load condition. | | |

| 3. DATE CODE | | |
|---|--|--|
| Manufacturer (Not shown in catalog listings.) | | |

| 4. NEMA® FRAME SIZE | | |
|---|--|--|
| (Integral motors - T and U designate standard shaft, TS and US designate short shaft) | | |

| 5. ELECTRICAL TYPE | |
|---------------------------------|----------------------------------|
| (Not shown in catalog listings) | |
| Single-phase | |
| A | Permanent split capacitor |
| B | Capacitor start, capacitor run |
| C | Capacitor start, induction run |
| N | Split phase start, capacitor run |
| S | Split phase |

| Three-phase | |
|--------------|-------------------------------------|
| T | Three-phase |
| H | Inverter Duty/IEEE841 Inverter Duty |
| V | Medium Voltage |
| DC Power | |
| E | Permanent Magnet DC |
| 6. ENCLOSURE | |
| D | Dripproof |
| E | Explosion proof, non-ventilated |
| F | Totally enclosed, fan cooled |
| G | Explosion proof, fan cooled |
| O | Open |
| P | Partial |
| S | Semi-enclosed |
| T | Totally enclosed, non-ventilated |
| V | Wash Down, non-ventilated |
| W | Wash Down, fan cooled |

| 7. FRAME CONSTRUCTION | |
|-----------------------|--------------------------------------|
| Integral | |
| L | Aluminum (Full Frame) |
| Y | Aluminum (Full Frame) |
| Z | Aluminum (High Mount Down Frame) |
| H | Aluminum - Sourced |
| R | Rolled Steel (Full Frame) |
| W | Rolled Steel (Full Frame) |
| X | Rolled Steel (High Mount Down Frame) |
| B | Rolled Steel - Sourced |
| S | Cast Iron (Full Frame) |
| N | Cast Iron (Full Frame) |
| P | Cast Iron (High Mount Down Frame) |
| C | Cast Iron - Sourced |
| D | Stainless Steel |

| 8. STYLE LETTER | |
|-----------------------------------|--|
| (A, B, C, etc. indicate redesign) | |

| 9. SEQUENCE NUMBER | |
|--------------------|--|
|--------------------|--|

| 10. MINOR MODIFICATION LETTER(S) | |
|---|--|
| Fractional - 1 letter; Integral - 2 letters | |

| 11. MANUFACTURING CODE | |
|--|--|
| A code for the factory where the motor was manufactured. | |

*See back cover page for attribution.

GENERAL INFORMATION

ORDERING INFORMATION

When ordering, please include the model number, catalog number, description of the motor, quantity, shipping and billing instructions. For pricing of non-stock motors, or if you need assistance in selecting the proper motor, please contact your nearest Marathon sales representative or local Marathon Motor distributor. **All prices and data are subject to change without notice.**

CANCELLATIONS AND RETURNS

Stock product can be returned for credit as defined herein. Equipment must be in original packaging, unused in "as shipped" condition and is **limited to products currently maintained in stock inventory.** The quantity returned can't exceed normal stock quantity level. All motors returned must have date codes no older than 8 months from date of manufacture. The minimum restocking charge is 20% of the original net purchase price. Modified and build to order motors cannot be returned for credit. Return freight charges are the responsibility of the customer returning the motor for credit. **No returns will be accepted without prior authorization.**

NON-STOCK PRODUCT CANCELLATION POLICY

Cancellation charges for non-stock orders received and entered will be determined based on the percentage of completion in the engineering and manufacturing process, accounting for all costs plus a reasonable profit. Marathon's determination of the cancellation charges shall be conclusive.

DISCOUNTS AND MULTIPLIERS

Except as noted, all prices in this catalog are list prices. 200 and 575 volt 3 phase ratings utilize the same list price as 230/460 volt. NEMA®* short shaft (TS) utilize the same list price as standard shaft (T). Contact Marathon Motors for special bearing systems, including all requirements for sleeve or roller bearing. For your discount and multiplier, contact your local sales representative or local Marathon motor distributor.

MODIFICATION/ACCESSORIES

See the Modification/Accessories sections for more information on modifications to create special motor variations.

SERVICE

For service on any Marathon motor, contact your nearest Marathon authorized service station. For a complete listing of all domestic and foreign service stations, refer to our website.

STOCK, NON-STOCK AND BUILD UP MODELS

Standard motors listed in this catalog, as indicated with a check mark (✓) next to the catalog number, are normally in stock. There is no minimum order quantity or minimum billing charge associated with stock motors, unless stated otherwise in your quotation or agreement with Marathon Motors.

Production of all build-up models may be subject to minimum order quantities or minimum order values. Please refer to factory for more details.

Other options may be available, please review current quotes and/or consult factory for current rules and offers. Build-up motors must be thoroughly described and with all application details at time of order, and/or associated with a formal quotation issued by Marathon. Inclusion of product features for similar motors documented in this catalog should not be assumed.

OPERATION AND MAINTENANCE

For information on operation and maintenance, please consult the manual or card shipped with your new motor. Additional copies of "Installation, Operation & Maintenance Instructions" (brochure SB181) are available upon request or through our website.

STORAGE PROCEDURES

In the event that long-term storage of motors is required, Marathon recommends the following precautions and procedures. This information is also contained in "Installation, Operation and Maintenance Instructions" (SB181).

A. Keep motors clean

1. Store indoors
2. Keep covered to eliminate airborne dust and dirt.
3. Cover openings for ventilation, conduit connections, etc. to prevent entry of rodents, snakes, birds and insects.

B. Keep motors dry

1. Store in a dry area indoors.
2. Temperature swings should be minimal to prevent condensation.
3. Space heaters are recommended to prevent condensation.
4. Treat unpainted flanges, shafts and fittings with a rust inhibitor.
5. Check insulation resistance before putting motor into service.

C. Keep bearings lubricated

1. Once per month, rotate shaft several turns to distribute grease in bearings.
2. If unit has been stored more than one year, add grease before start-up (refer to lubrication procedure).

DIMENSION DRAWINGS

See our website or request certified drawings through your Marathon sales engineer, representative or local Marathon motor distributor.

Our complete terms and condition of sale are available on our website. See back cover for the website link.

*See back cover page for attribution.

GENERAL INFORMATION

WARRANTY

Marathon® Motors warrants motors to be free from defects in materials and workmanship and to conform to Marathon's written specifications. For a copy of our Standard Terms and Conditions of Sale, please visit our website.

| Motor Type | Warranty Period from date of Installation** | Warranty Period from date of Invoice** |
|---|---|--|
| Standard warranty for any product not shown below | 12 | 18 |
| Medium voltage | 12 | 18 |
| EPAct compliant (aluminum, steel & cast iron frame) | 24 | 30 |
| Blue Max® motor, Black Max® motor, and MICROMAX™ motor inverter duty | 36 | 42 |
| All NEMA Premium®* incl . ODP, Blue Chip Series motor, Severe duty, Explosion proof, etc. | 36 | 42 |
| Blue Chip Series® motor IEEE-841, Powerwash (EXT models only), Black Max PM | 60 | 66 |

**Warranty period shown is in months, and is valid for whichever period expires first.

Note: Brake discs are considered a normal maintenance item and are not covered under warranty.

For more information on our warranty policy, refer to the "Terms and Conditions of Sale" posted on our website. See back cover for website link.

SUBMITTAL DATA

Mechanical and electrical submittal data is available on many stock catalog motors through our website by following the three steps listed on the next page. All other submittal data is available upon request when accompanied by a purchase order for the specified motor, subject to the following additional charges.

SUBMITTAL CHARGE SCHEDULE

| Type | Elements | Net/ea |
|---------------------------------------|--|-----------------------------------|
| BASIC (.PDF Format) | Nameplate data | No Charge |
| | Motor characteristics | |
| | Performance data | |
| | Outline drawing | |
| | External connection diagram | |
| | Add for .dxf or .dwg format | \$50 |
| BASIC-PLUS (.PDF format) | All "BASIC" elements, tailored to specific order | \$150 |
| | "Cut sheets" of installed accessories | |
| | Add for .dxf or .dwg format | \$20 |
| ADDITIONAL ITEMS (.pdf formats) | Speed/Torque curve | \$100 |
| | Torque capability curve | \$100 |
| | Certificate of conformance | \$200 |
| | Thermal damage curve (182T-326T frame) | \$1000 + cost of additional motor |
| | Thermal damage curve (364T-6805 frame) | \$3000 + cost of additional motor |

***Does not imply re-testing

APPLICATION INFORMATION

AGENCY LISTINGS UL®* AND CSA®*

Marathon® Fire Pump motors, Hazardous locations motors (Division 1 “Explosion proof”, some Division 2 motors), and some Nonhazardous (i.e. Ordinary) locations motors are UL Listed. Other motor types are UL Recognized, including models with inherent overheating protection as noted (i.e. thermally protected models). Marathon motors are also CSA®* certified for Hazardous Locations (Division 1 “Explosion proof”, some Division 2 motors), as well as for non-hazardous (Ordinary) locations.

AC MOTORS

| Non-Explosion Proof | Note 1 | Note 2 |
|--|--|---------|
| NEMA®* 182-449 FRAME | E542721 (Recognized motors, Listed motors) | LR2025 |
| NEMA 500 and 5000 Frame | — | LR2025 |
| IEC®* 112-315 Frame | E542721 (Recognized motors, Listed motors) | LR2025* |
| Thermally Protected motors | E542722 | LR2025 |
| Insulation Systems | E37900 | LR2025 |
| N. America Division 1/ Zone 1 | Note 1 | Note 2 |
| NEMA 182-326 Frame | E12044 | LR47504 |
| NEMA 364-449 | E12044 | LR21839 |
| Fire Pump Motors | Note 1 | Note 2 |
| NEMA 182-510 Frame ODP | EX5190 | LR2025 |
| NEMA 182-5011 Frame TEFC | EX5190 | LR2025 |
| IEC 112-355 Frame TEFC | EX5190 | LR2025 |
| N. America Division 2/ Zone 2 | Note 1 | Note 2 |
| NEMA 182-449, 5000 Frame, totally enclosed, 3 Phase AC Induction | — | LR21839 |
| NEMA 182-286 Frame, IEC 112-180 Frame, PMAC | — | LR21839 |
| NEMA 213-449 Frame, TEFC, Sourced | E12044 | — |
| ATEX Zone 1/ Zone 2 / Zone 21/ Zone 22 | Certificate No. | |
| IEC 112-355 Frame, TEFC, Sourced | DEMKO 17 ATEX 1836X (Zone 2, Zone 22) DEMKO 18 ATEX 1982X (Zone 1, Zone 21) | |
| IECEx Zone 1/ Zone 2 / Zone 21/ Zone 22 | Certificate No. | |
| IEC 112-355 Frame, TEFC, Sourced | IECEx UL 17.0014X (Zone 1, 2, 21, 22) | |

Notes:

Note 1 - UL Certifications available online at www.ul.com, select "find a product certification" link and use "UL Product iQ" and search by UL file number.*

Note 2 - CSA Certifications available online at www.csagroup.org/services-industries/product-listing/, enter desired CSA File No. using six digit numerical format (e.g. 002025, 021839, etc.)

* - Does not include coverage for use of VFD

CONFORMITY EUROPEAN (CE)

CE®* marking on the nameplates of Marathon motors is available upon request for most motors rated 600V or less. We do not apply the CE marking to explosion proof motors. The European “Low Voltage” Directive applies to electric motors. Contact a Marathon representative for details.

Non-explosion proof MICROMAX™, Black Max® and Blue Max® (TENV and TEFC) standard (catalog) models have the CE mark on the nameplate.

ATMOSPHERES EXPLOSIBLES (ATEX DIRECTIVE)

Mandatory by law, the European Union (EU) Directive 2014/34/EU requires that electric motors for use in potentially explosive atmospheres carry the CE mark, notified body identifier, Ex symbol, equipment group and category, plus the date code. See “European Installations” for additional details, located on the next page.

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

Marathon motors are manufactured in accordance with all applicable areas of NEMA®* standards in MG1-2021. When applied in accordance with the “Guidelines for the application of Three-phase motors on variable frequency drives”, **Marathon motors are in full compliance with NEMA MG1-2021, Part 31, Section 31.4.4.2**, as pertaining to voltage spikes. 460-volt motors must withstand voltage spikes of up to 1431 volts; 575-volt motors must withstand spikes of up to 1789 volts. See “Insulation Systems” for additional detail on this subject.

COMMITMENT TO ROHS AND WEEE EUROPEAN DIRECTIVES

European Directive 2002/95/EC “Restriction of Use of Certain Hazardous Substances” (RoHS) and Directive 2002/96/EC “Directives on Waste Electrical and Electronic Equipment” (WEEE) were enacted to control the amount of certain hazardous substances contained in products shipped into the E.U. Restricted substances include lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers.

The scope of products covered, affecting motors, are:

- Small and large household appliances
- IT and telecommunications equipment
- Consumer equipment
- And more

The Directives do not currently apply to medical devices, monitoring and control instruments, spare parts for the repair reuse of electrical and electronic equipment placed on the market before July 1, 2006 and most military and state security equipment.

Marathon Motors has worked closely with suppliers to assure that product falling within the scope of these Directives meets the specified levels of these substances. The Directives took effect July 1st, 2006; however, many products were converted in May and June.



*See back cover page for attribution.

APPLICATION INFORMATION

BEARINGS

| Frame size | Standard type shield ball | Comments |
|-------------|---------------------------|------------------------|
| 182 - 184T | Sealed Ball | |
| 182 - 444T | Double Shield Ball | |
| 284 - 449TS | Single Shield Ball | |
| 445T - 6805 | Double Shield Ball | Direct - coupled loads |
| 445T - 6805 | Roller (DE)/Ball | Belted loads |

Note: Belting data must be provided on all belted applications.

Download the Form SB0395E Belting Data Form.

To Find more about guidelines for belted Applications consult the form SB528.

Standard horizontal motors can be mounted in a vertical shaft down orientation (except brakemotors). Contact a factory representative for shaft-up mounting arrangements, or submit a belt & chain submittal form to quote.

Motors for use in vertical shaft up or shaft down configurations must be reviewed by engineering before ordering.

Marathon® motors use Mobil POLYREX EM®* grease, a specially formulated bearing grease designed for electric motors. POLYREX EM provides superior lubricity, durability and resists corrosion, rust and washout.

Maximum safe mechanical speed capability is a function of bearing size, type and grease selection, as well as rotor balance specifications. Consult the "Maximum Safe Mechanical Speed Limits" chart in the "Overspeed Capability" section. Note that these values do not imply maximum constant horsepower RPM.

EFFICIENCY

The efficiency of a motor is the ratio of its useful power output to its total power input and is usually expressed in a percentage. Marathon motors are available with standard, high efficient EAct, and **NEMA Premium®*** efficient ratings. Standard efficiency motors may only be used on applications that are exempt from legislated efficiencies. The high efficient motor line is in compliance with the Energy Policy Act of 1992 (EAct) and/or Canadian efficiencies as set by Natural Resources Canada (NRCAN). The Energy Independence and Security Act of 2007 (**EISA07**) law on December 19, 2010, requiring current EAct-compliant motors to meet NEMA Premium efficiencies, and most EAct-exempt motors to meet EAct levels. XRI® Premium efficient motors in this catalog meet NEMA Premium unless otherwise noted.

The XRI® motor line is a premium efficiency line, which exceeds mandated efficiencies of EAct and /or NRCAN. Unless otherwise noted, XRI premium efficient motors in this catalog meet NEMA Premium the newly promoted efficiency levels by NEMA and the Consortium for Energy Efficiency (CEE).

ELECTRICAL TYPE/STARTING METHOD

Motors in this catalog are capacitor start, split phase, permanent split capacitor, Three-phase, PMAC Capacitor start motors have high starting torque, high breakdown torque, and relatively low starting current. Split phase motors have medium starting torque and medium starting current. Permanent split capacitor motors have low starting torque and low starting current. Three-phase motors have high starting, extra breakdown torque, and typically very low starting current. Single-phase motors cannot be applied on variable frequency drives with Three-phase output. PMAC which must incorporate a PM-Drive

ENCLOSURE AND METHOD OF COOLING

Marathon motors are available in various enclosures; Dripproof (DP), Dripproof Force Ventilated (DPFV), Totally Enclosed Fan Cooled (TEFC), Totally Enclosed Non-Ventilated (TENV), Totally Enclosed (TEAO) and Totally Enclosed Blower Cooled (TEBC). Application conditions will determine the type of motor enclosure required.

Dripproof motors have open enclosures and are suitable for indoor use and in relatively clean atmospheres. Dripproof motors have ventilating openings constructed so that drops of liquid or solid particles falling on the machine at an angle of not greater than 15 degrees from the vertical cannot enter the machine.

Totally enclosed motors are suitable for use in humid environments or dusty, contaminated atmospheres. Totally enclosed non-ventilated motors are NOT cooled by external means. Totally enclosed fan cooled motors are cooled by external means that are part of the motor but not in the internal workings of the motor. Totally enclosed air over motors are sufficiently cooled by external means, provided by the customer.

NEMA® FRAME DESIGNATION

Motor dimensions and frame assignment numbers are interrelated by NEMA standards.

MEDIUM MOTORS

Frame sizes for medium motors are three or four digits, followed by various letters - for example, 213TC.

The first two digits of the frame number equal four times the D dimension in inches (the distance between the centerline of the shaft and bottom of motor's feet). When that product is not a whole number, the next higher whole number is used.

For example, a 213T series frame has a D dimension equal to 5 25 inches ' 4 x 5.25 = 21. The third (and fourth when applicable) digit is obtained from the value of 2F in inches by referring to the columns headed 0 to 1 5 in NEMA MG 1 -1 993, Table 11 -1 .

For example, a 213T frame has a 2F dimension equal to 5.50 inches. Going to Table 11 -1 , the third digit is 3.

The letters T, U, HP, HPH, JM, JP, LP, LPH and VP and VPH fill the position immediately following the three or four digits in the frame size.

T - Currently used as part of the frame designation for which standard dimensions have been established. 213T.

U - Previously used as part of the frame designation for which standard dimensions have been established. U frame motors are no longer included in the NEMA MG 1 Standard. 284U.

JM and JP - close-coupled pump (CCP) motor having antifriction bearings and special NEMA defined dimensions.

Unique features include a C-Face style mounting bracket, special stepped shaft with a drilled & tapped hole, and a locked drive-end bearing 213JM.

HP, HPH, LP, LPH and VP - vertical solid-shaft motors with special NEMA defined dimensions. 445HP.

The following letters may appear next in the frame size.

S or R - S defines a standard short shaft and appears only with 284T (324U) and larger frame assignments. 286TS. R defines a motor with its drive end shaft tapered and extended per NEMA dimensions 213TR.

C, D, P or PH - the letters C and D define a C-Face bracket and a D-Flange respectively. P and H define vertical hollow-shaft

motors having specific NEMA defined dimensions. 213TC.

FC or FD - these letters define a C-Face bracket or a D-Flange on the end opposite the normal drive shaft (F for fan end for example). (405TSCFC), Y or Z - the letter Y represents special mounting dimensions (either bracket face or foot pattern) and Z represents special shaft dimensions and can denote a standard or special double shaft extension. 326TZ.

For clarity for double shafts see the following dimensions:

PREFIX LETTERS

Motor manufacturers may use any letter as a prefix to the frame number, but such a letter will have no reference to standard mounting dimensions. Marathon typically uses the letters G, K and L to differentiate frames with the same frame number but different overall lengths ("C" dimension).

HAZARDOUS DUTY® MOTORS

Hazardous Duty motors are totally enclosed (fan-cooled, non-ventilated, or explosion proof) motors designed for applications in hazardous atmospheres containing flammable gases, flammable liquid-produced vapors (Class I), or combustible dust (Class II).

NORTH AMERICAN INSTALLATIONS

North American standards for electric motors generally fall into one of two divisions. Division 1 Explosion Proof motors are UL®* Listed in accordance with NFPA Class I (Flammable gases, vapors, liquids) or Class II (Combustible Dusts) and Groups (gases, vapors, liquids, or dusts), depending upon the atmosphere. Division 2 motors are either CSA®* Certified or UL Listed and are marked similar to Division 1 equipment. Marathon's Division 1 motors, as well as Division 2 motors, are certified for both sine-wave and Inverter duty applications.

EUROPEAN INSTALLATIONS

Motors for hazardous locations in Europe must meet a different set of standards and require different markings than those of North America. CENELEC sets the standards for equipment in hazardous locations for Europe. Motors for use in explosive atmospheres in Europe are often referred to as flameproof or increased Safety (Zone 1) or non-sparking or increased safety (Zone 2) motors. These motors must comply with the ATEX Directive. The ATEX Directive covers all electrical equipment used in explosive atmospheres. To ensure compliance with the Directive, equipment must meet the essential ATEX requirements and carry the CE®* mark on the nameplate. Other information required on the nameplate includes the Ex symbol, group & category, Ex protection method, gas group, and temperature code, example (II 3 G Ex IIC T3 Gc).

Additional details located on next page. See Tables.

NEMA Double End Extensions - Dimensions (all values in inches)

| Frame | T | | TM | | TS | | U | | UM | | US | |
|---------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|
| | Diameter | Length |
| Size | (U or FU) | (N-W) or (FU-FW) |
| 182-184 | 1 1/8 | 2 3/4 | 7/8 | 2 1/4 | - | - | 7/8 | 2 1/4 | - | - | - | - |
| 213-215 | 1 3/8 | 2 3/8 | 1 1/8 | 2 3/4 | - | - | 1 1/8 | 3 | 7/8 | 2 1/4 | - | - |
| 254-256 | 1 5/8 | 4 | 1 3/8 | 3 3/8 | - | - | 1 3/8 | 3 3/4 | 1 1/8 | 3 | - | - |
| 284-286 | 1 7/8 | 4 5/8 | 1 5/8 | 4 | 1 5/8 | 3 1/4 | 1 5/8 | 4 7/8 | 1 3/8 | 3 3/4 | - | - |
| 324-326 | 2 1/8 | 5 1/4 | 1 7/8 | 4 5/8 | 1 7/8 | 3 1/4 | 1 7/8 | 5 5/8 | 1 5/8 | 4 7/8 | 1 5/8 | 3 1/4 |
| 364-365 | 2 3/8 | 5 7/8 | 1 7/8 | 4 5/8 | 1 7/8 | 3 1/4 | 2 1/8 | 6 3/8 | 1 7/8 | 5 5/8 | 1 7/8 | 3 3/4 |
| 404-405 | 2 7/8 | 7 1/4 | 2 1/8 | 5 1/4 | 2 1/8 | 4 1/4 | 2 3/4 | 7 1/8 | 1 7/8 | 6 3/8 | 2 1/8 | 4 1/4 |
| 444-449 | 3 3/8 | 8 1/2 | 2 3/8 | 5 7/8 | 2 3/8 | 4 3/4 | 2 7/8 | 8 5/8 | 2 1/8 | 7 1/8 | 2 1/8 | 4 1/4 |

APPLICATION INFORMATION

DEGREES OF PROTECTION THE FIRST & SECOND NUMBERS

Indices of protection of electrical equipment enclosures in accordance with NEMA MG-1, IEC 60034-5, and IEC 60529

| IEC | NEMA | First # | Basic Description/ Definition Solids & Dusts | Second # | Basic Description Definition (Note 1) Water |
|-------|---|---------------|--|----------|---|
| IP00 | Open | 0 | Non-Protected Machine | 0 | Non-Protected Machine |
| IP12 | Drip-proof | 1 (Note 2) | Machine protected against solid objects greater than 1.968 in. (50 mm) | 1 | Machine protected against dripping water; Dripping water (vertically falling drops) shall have no harmful effect. |
| IP22 | Drip-proof Guarded | 2 (Note 2) | Machine protected against solid objects greater than 0.4724 in. (12 mm) | 2 | Machine protected against dripping water when tilted up to 15°; Vertically dripping water shall have no harmful effect when the machine is tilted at any angle up to 15° from its normal position. |
| IP23 | Weather Protected 1 | 2 (Note 2) | Machine protected against solid objects greater than 0.4724 in. (12 mm) | 3 | Machine protected against spraying water; Water falling as a spray at an angle up to 60° from the vertical shall have no harmful effect. |
| IP24 | Weather Protected 2 | 2 (Note 2) | Machine protected against solid objects greater than 0.4724 in. (12 mm) | 4 | Machine protected against splashing water; Water splashing against the machine from any direction shall have no harmful effect. |
| IP44 | Totally Enclosed Guarded (Typically TEFC) | 4 (Note 2) | Machine protected against solid objects greater than 0.0394 in. (1 mm) | 4 | Machine protected against splashing water; Water splashing against the machine from any direction shall have no harmful effect. |
| IP54 | Totally Enclosed Severe Duty | 5 (Note 3) | Dust-protected machine; Ingress of dust is not totally prevented but dust does not enter in sufficient quantity to interfere with satisfactory operation of the machine. | 4 | Machine protected against splashing water; Water splashing against the machine from any direction shall have no harmful effect. |
| IP55 | Waterproof (TE severe duty w/ Forsheda® seals) | 5 (Note 3) | Dust-protected machine; Ingress of dust is not totally prevented but dust does not enter in sufficient quantity to interfere with satisfactory operation of the machine. | 5 | Machine protected against water jets; Water projected by a nozzle against the machine from any direction shall have no harmful effect. |
| IP56 | Waterproof (TE severe duty, Inpro® Seals both ends, waterproof conduit box) | 5 (Note 3) | Dust-protected machine; Ingress of dust is not totally prevented but dust does not enter in sufficient quantity to interfere with satisfactory operation of the machine. | 6 | Machine protected against heavy seas; Water from heavy seas or water projected in powerful jets shall not enter the machine in harmful quantities. |
| IP66 | Protected from total dust ingress | 6 (Note 3) | Dust-tight machine; No ingress of dust | 6 | Machine protected against heavy seas; Water from heavy seas or water projected in powerful jets shall not enter the machine in harmful quantities. |
| IP67 | Protected from total dust ingress | 6 (Note 3) | Dust-tight machine; No ingress of dust | 7 | Machine protected against the effects of Immersion for 30-Min duration Ingress of water in the machine in a harmful quantity shall not be possible when the machine is immersed in water under stated conditions of pressure and time. (Example Machine in a 30 ft Column of Water) |
| IP68 | Protected from total dust ingress | 6 (Note 3) | Dust-tight machine; No ingress of dust | 8 | Machine protected against continuous submersion (Note 2); The machine is suitable for continuous submersion in water under conditions which shall be specified by the manufacturer. |
| IP69K | Protected from total dust ingress | 6 (Note 3) | Dust-tight machine; No ingress of dust | 9K | High Pressure and High Temperature water jet; The IP69K rating means a piece of equipment can withstand intensive cleaning with high-pressure, high-temperature jets |

Blue Shade is for "Most Commonly Used"

NOTES FOR FIRST

- The brief description given in column 2 in this table should not be used to specify the type of protection.
- Machines assigned a first characteristic numeral 1, 2, 3, or 4 will exclude both regularly or irregularly shaped solid objects provided that three normally perpendicular dimensions of the object exceed the appropriate figure in column "Definition."
- The degree of protection against dust defined by this standard is a general one. When the nature of the dust (dimensions of particles, their nature, for instance fibrous particles) is specified, test conditions should be determined by agreement between manufacturer and user.

NOTES FOR SECOND# —

- The brief description given in column 2 in this table should not be used to specify the type of protection.
- Normally, this means that the machine is hermetically sealed. However, with certain types of machines it can mean that water can enter but only in such a manner that it produces no harmful effect.

Example of an IP55 machine

IP : Degree of protection

5 : Machine protected against dust and accidental contact.

Test result: no dust enters in harmful quantities, no risk of direct contact with rotating parts. The test will last for 2 hours.

5 : Machine protected against jets of water from all directions from hoses at 3 m distance with a flow rate of 12.5 l/min at 0.3 bar.

The test will last for 3 minutes. Test result: no damage from water projected onto the machine

APPLICATION INFORMATION

MARATHON® HAZARDOUS DUTY MOTOR AREA CLASSIFICATION CHART

| NORTH AMERICAN CLASS I HAZARDOUS LOCATIONS (Flammable Gases, Vapors or Mists) | | CLASS II AREA CLASSIFICATION (Combustible Dusts) | |
|--|---------------------------|---|---------------------------|
| Division 1 Explosion Proof | Division 2 TEFC & TENV | Division 1 Explosion Proof | Division 2 TEFC & TENV |
| Group A ① | Group A | | |
| Group B ① | Group B | | |
| Group C | Group C | | |
| Group D | Group D | | |
| - | - | Group E ① | |
| - | - | Group F | Group F (#) |
| - | - | Group G | Group G (#) |

① Group is not available as a Marathon motor.

(#) Contact factory representative for availability.

Note: Catalog Division 1 motors are nameplated Class I, Group C, D, Class II Group F, G, with T3C Temperature Code. These motors can be additionally nameplated as "Zone 1 Group IIB" for applications in North America using the Zone marking scheme.

Note: Catalog Division 2 motors are nameplated Class I, Group A, B, C, D, Div 2/Zone 2 Group IIA, IIB, IIC, T3 @ 1.0SF and T2B @ 1.15SF on sine-wave power, T2D @ 1.0SF on PWM Type VFD. Contact factory representative for availability of other Temperature Codes

Note: Contact factory representative for motors for use in potentially explosive atmospheres in Europe (ATEX Certification) or Global (IECEX Certification)

INSULATION SYSTEMS

Class B

General Purpose motors that employ Class B insulation systems have a total temperature rating of 130°C and maximum allowable temperature rise of 80°C at 1.0 S.F.

Class F

Motors with a Class F system have a total temperature rating of 155°C, with a maximum temperature rise of 105°C at 1.0 S.F. Many Marathon® motor designs utilize a Class F system but limit temperature rise to no higher than "B" rise, providing thermal "headroom" for longer insulation life.

Class H

Class H insulated motors have a total temperature rating of 180°C and maximum allowable temperature rise of 125°C. All Marathon motors that employ a Class H system are designed to operate between "B" and "F" rise, giving the user a generous thermal cushion.

CR²⁰⁰

Corona Resistant, 200° rated magnet wire is utilized in numerous general purpose and inverter duty motor designs to extend insulation life under the rigors of steep fronted voltage spikes, common with today's IGBT inverters. Refer to page 17 for product lines that employ the use of CR200 magnet wire.

Motors with the CR²⁰⁰ insulation system can be operated at up to 475 feet from the drive on 460 volt systems, at 3 KHz carrier frequency. For other voltages and/or carrier frequency combinations, contact a factory representative.



MAX GUARD® INSULATION

All PMAC- Black Max®, Blue Max®, Blue Chip Series®, XRI® Severe Duty and XRI-841 (IEEE841) motors feature the MAX GUARD® insulation system, either in conjunction with Class F or Class H materials. Combining corona-resistant magnet wire (CR²⁰⁰) with our patented "low stress" winding configuration and uncompromising quality standards.

MAX GUARD motors deliver long, dependable motor life under the adverse thermal and dielectric stresses imposed by IGBT-based variable frequency drives.

MAX GUARD motors surpass the requirements of NEMA® MG1-2021, Part 31, Section 4.4.2. 460 Volt (or lower) motors equipped with MAX GUARD insulation can be operated at any distance from the drive and at any carrier frequency. 575 Volt motors can be operated at up to 650 feet cable length at 3 KHz.



*See back cover page for attribution.

APPLICATION INFORMATION

MOUNTING

Most Marathon motors are designed for horizontal mounting (shaft parallel with ground), unless designed otherwise, such as Vertical P base motors. As a general rule, a horizontal motor can also be mounted in a vertical shaft down orientation. Horizontal motors should never be mounted in a vertical shaft up orientation without consulting your application engineer, as this practice can cause damage to the motor, which is not covered under warranty. Brakemotors should not be mounted vertically (up or down), unless the brake has been specifically designed for such.

NEMA SERVICE FACTOR RATINGS

Service factor is defined as the permissible amount of overload a motor will handle within its insulation class without overheating. When voltage and frequency are maintained at nameplate rated values, the motor may be overloaded up to the horsepower obtained by multiplying the rated horsepower by the service factor shown on the nameplate. As a note, locked rotor torque, locked rotor current and the breakdown torque are unchanged.

Service factor is used in order to accommodate inaccuracy predicting system horsepower needs, to lengthen insulation life by lowering winding temperature at rated load, to handle intermittent or occasional overloads, to compensate for low or unbalanced supply voltages, and to allow use of non-sinusoidal power supply at rated load.

Several cautions must be observed when using a service factor. Operation at service factor load will usually reduce the speed, life, and efficiency. The service factor is established for operation at rated voltage, frequency, ambient, and sea level. Any changes to one or more of these may cause problems with the motor overheating.

The table below lists the NEMA service factors for Single-phase, phase, dripproof motors. Totally enclosed and explosion proof motors 1.0 service factor except where noted.

| HP | 3600 | 1800 | 1200 | 900 |
|----------|------|------|------|------|
| 1 | 1.25 | 1.15 | 1.15 | 1.15 |
| 1.5 & up | 1.15 | 1.15 | 1.15 | 1.15 |

OVERLOAD PROTECTION

There are many choices for motor overload protection and it will depend on end-user's application and expectations and costs: thermocouples, thermistors, winding and bearing detectors, and more. A manual overload must be physically reset to restart the motor. An automatic thermal overload will stop the motor when it is overloaded or overheated and restart it after the motor has cooled down. None means the motor has no protection. Thermostats are embedded in the winding and connected to the motor starter control circuit. Marathon motors are normally provided with one closed thermostat per phase.

CAUTION! A motor with an automatic reset protector must not be used where automatic restarting (after motor cool-down) would endanger personnel or equipment. Such application should use a

manual reset protector.

PAYBACK ANALYSIS

How To Calculate Savings Saving electrical energy reduces the power bill. However, a sensible energy cost savings evaluation must equate the energy savings with the extra cost usually associated with a premium efficient motor.

Where:

HP = load on the motor

EffA = efficiency of motor A at HP

EffB = efficiency of motor B at HP

EffA < EffB

Hours = hours of operation under load

\$/KWh = average cost of electricity per kilowatt hr.

Operating load and time substantially affect savings. A motor loaded to half its rated load uses only half the full load input power and the savings can be only half as great. A motor operated on a two shift, five-day schedule uses twice as much power as the same motor operating on one shift. Meaningful calculations must reflect an effort to incorporate typical average values for these variables.

HOW TO CALCULATE PAYBACK

Once the annual savings are known, the time needed for the savings to cover the motor price premium can be calculated as follows:

$$\text{Payback Period (years)} = \frac{\text{Price B} - \text{Price A}}{\text{Yearly Savings}}$$

A more complex analysis may take into account life cycle costs and return on investment. Your local electric utility may have a demand side energy management (DSM) program which pays cash incentives or rebates for the purchase of motors whose nominal efficiency meets or exceeds a level specified by the utility. The Payback Period equation must be modified to take into account rebates.

$$\text{Payback Period (years)} = \frac{\text{Price B} - \text{Price A} - \text{Rebate}}{\text{Yearly Savings}}$$

Most Marathon motors have efficiency ratings which should qualify for a rebate from participating utilities. Check with your local utility for details on their specific program.

PHASE/POWER SUPPLY

Is the power supply Three-phase or Single-phase? Most home farm applications require Single-phase motors, while most factories, large commercial and industrial users require three-phase motors. Single-phase motors can be used on Three-phase systems. Three-phase motors, however, cannot be operated from phase systems. Motor damage will result.

ROTATION

Most motors in this catalog are reversible by electrical reconnection or by physical orientation. The standard rotation from the factory for a Single-phase Marathon motor is counterclockwise, when viewing the opposite shaft end of the motor.

SPEED/RPM

3600, 1800, and 1200 are the most common 60HZ synchronous speeds with full load speed equivalents of 3450, 1725, and 1150.

APPLICATION INFORMATION

TERMINOLOGIES—

Ambient Temperature – Temperature of the medium, such as air, water or earth, into which the heat of the equipment is dissipated.

Across The Line Start – A method of motor starting that applies full line voltage to the motor. The motor is connected directly to the power source.

Base Speed – Nameplate rating where the motor will develop rated HP at rated load and voltage. With AC systems, it is commonly the point where 60 Hz is applied to the induction motor.

Bearings – Parts that assist objects rotation.

Bearing Current Protection (BCP) – usually consists of a Shaft Grounding Ring that gives electric current a low- resistance path between the shaft and frame. Rather than arcing through the bearings, currents flow harmlessly through the ring.

Breakaway Torque – The torque required to start a machine from standstill.

Breakdown Torque (BDT) – The maximum torque that an AC motor will develop with rated voltage applied at rated frequency while rotating.

Cogging – A condition in which a motor does not rotate smoothly but “steps” or “jerks” from one position to another during shaft revolution. Cogging is most pronounced at low motor speeds and can cause objectionable vibrations in the driven machine.

Continuous Duty – The continuous rating is the maximum constant load that can be carried continuously without exceeding established temperature rise limitations under prescribed conditions of load and within the limitations of established standards.

Definite Purpose Motor – Any motor design, listed and offered in standard ratings with standard operating characteristics and mechanical construction, for use under service conditions other than usual or for use on a particular type of application (NEMA®*).

Duty Cycle – The relationship between the operating and resting times or repeatable operation at different loads and/or speeds.

Efficiency – Ratio of power output to power input indicated as a percentage. In motors, it is the effectiveness with which a motor converts electrical power into mechanical power.

Frequency – Number of cycles per second of alternating current 60HZ used primarily in North America, 50HZ normally used overseas.

Full Load Torque (FLT) – The torque necessary to produce rated horsepower at full load speed.

General Purpose Motor – This motor has a continuous duty rating and NEMA A or B design, listed and offered in standard ratings with standard operating characteristics and mechanical construction for use under usual service conditions without restriction to a particular application or type of application (NEMA).

Hazardous duty – A duty performed under circumstances in which an accident could result in serious injury or death.

Inertia – A measure of a body’s resistance to changes in velocity, whether the body is at rest or moving at a constant velocity. The velocity can be either linear or rotational. The moment of inertia (WK^2) is the product of the weight (W) of an object and the square of the radius of gyration (K^2). The radius of gyration is a measure of

how the mass of the object is distributed about the axis of rotation. WK^2 is usually expressed in units of lb-ft².

Inrush Current – The initial surge of current into the windings. Inrush current can be up to ten times higher than the continuously needed current because there is low initial resistance.

Intermittent Duty – A motor that never reaches equilibrium temperature, but is permitted to cool down (to ambient temperature) between operations. For example, a crane, hoist or machine tool motor is often rated for 15, 30 or 60 minute duty.

Inverter duty – Refers to a motor whose speed is controlled by an inverter, or VFD (variable frequency drive). The difference between an inverter-duty motor and a standard motor is in the construction. These motors are specifically designed to operate at low speeds and not overheat.

Load Sharing – An application condition in which two or more similar-sized AC Induction motors are mechanically connected to each other and powered from the same inverter. Optimum load sharing is achieved with higher slip (NEMA Design B or C) motors.

Locked Rotor Current (LRA) – Steady state current taken from the line with the rotor at standstill, at rated voltage and frequency. This is the current when starting the motor and load across the line.

Locked Rotor Torque (LRT) – The minimum torque that a motor will develop at rest for all angular positions of the rotor, with rated voltage applied at rated frequency.

Max Guard™ – Is an Insulation System to provide long, reliable service life under the stresses of today’s fast switching IGBT-based drives.

No Load (Conditions) – The state of a machine rotating at normal speed under rated conditions, but when no output is required from it.

Overload protection – Safety mechanisms that activate or “trip” motor operations in the event of a motor overheating/overloading. There are two types of protectors – automatic resets and manual resets depending on choice of the application engineer of the motor to ensure safety in an application.

Part Winding Start (PWS) – A method of reduced voltage starting that applies power to only one set of windings, then to the other set as the motor comes up to speed.

Power Factor – Power factor is the ratio of real power (kW) to total kVA, or the ratio of actual power (W) to apparent power (volt-amperes).

Reactance – The opposition to the flow of current made by an induction coil or a capacitor. Performance data expresses stator reactance as X1 and rotor reactance as X2.

Resistance – The opposition to voltage or current in an electrical circuit. Performance data expresses stator resistance as R1 and rotor resistance as R2.

Rotor – The rotating member of a machine with a shaft.

Service Factor (SF) – When used on a motor nameplate, a number which indicates how much above the nameplate rating a motor can be loaded intermittently without causing serious degradation (i.e. a motor with 1.15 SF can produce 15% greater torque than one with

*See back cover page for attribution.

APPLICATION INFORMATION

1.0 SF, within temperature constraints).

Squirrel Cage Induction Motor – When used on a motor nameplate, a number which indicates how much above the nameplate rating a motor can be loaded without causing serious degradation (i.e. a motor with 1.15 SF can produce 15% greater torque than one with 1.0 SF, within temperature constraints).

Shock Load – The load seen by a clutch, brake or motor in a system that transmits high peak loads. This type of load is present in crushers, separators, grinders, conveyors, winches and cranes.

Slip – The difference between the speed of the rotating magnetic field (synchronous speed) and mechanical rotational Speed (rotor speed) of AC induction motors. Usually expressed as a percentage of synchronous speed.

Special Purpose Motor – A motor with special operating characteristics, special mechanical construction, or both, designed for a particular application and not falling within the definition of a general purpose or definite purpose motor (NEMA®*).

Speed Range – The minimum and maximum speeds at which a motor must operate under constant or variable torque load conditions. A 50:1 speed range for a motor with top speed of 1800 RPM means the motor must operate as low as 36 RPM and still operate within specifications.

Starting Torque – The torque exerted by the motor during the starting period.

Stator – The stationary portion of the magnetic circuit and the associated windings and leads of a rotating machine.

Synchronous Speed – The speed of an AC induction motor’s rotating magnetic field. It is determined by the frequency applied to the stator and the number of magnetic poles present in each phase of the stator windings. Mathematically, it is expressed as Sync Speed (RPM) = 120 x Applied Frequency (Hz)/Number of Poles per phase.

Torque – A turning force applied to a shaft, tending to cause rotation. Torque is normally measured in “pound-feet” and is equal to the force applied times the radius through which it acts.

Torque-to-Inertia Ratio – The rated motor torque divided by its rotor inertia. Helps determine a motor’s ability to accelerate loads and/or respond to commands from a drive to change speed or direction.

Voltage Drop – The reduction in voltage level from the source to the load caused by conductor resistance.

Wye Start Delta Run (YD) – A method of reduced voltage starting that first connects a motor in a wye to reduce voltage, then reconnects the motor in a delta to provide full line voltage.

FORMULAS & CONVERSION FACTORS

| | |
|--|---|
| Horsepower (HP) | = (Torque (lb-ft) x RPM) / 5252 |
| Horsepower (HP) | = (Torque (lb-in) x RPM) / 63025 |
| Torque (lb-ft) | = (HP x 5252) / RPM |
| Torque (lb-in) | = (HP x 63025) / RPM |
| Efficiency | = Power Out / Power In |
| Synchronous RPM | = 120 x Frequency / # Poles |
| Ohms | = Volts / Amperes (R = E/I) |
| Amperes | = Volts / Ohms (I = E/R) |
| Volts | = Amperes x Ohms (E = IR) |
| Static Torque (T) | = F x R (lb-ft) F = Force (lb) R = pulley or drum radius (ft) |
| Pound-feet (torque) | = .7376 x Newton-meters |
| Newton-meters (torque) | = 1.3558 x lb-ft |
| Power (HP) | = Torque (lb-ft) x 2π x RPM / 33000 |
| Temperature (Celsius) | = 5/9 x (F° – 32) |
| Temperature (Fahrenheit) | = (9/5 x C°) + 32 |
| 1 Kilowatt (KW) | = 1.341 Horsepower |
| 1 Horsepower | = 746 watts (.746 KW) |
| Brake Torque | = (5252 x P / N) x SF P = HP N = RPM SF = 1.4 |
| Use 2.0 to 2.5 SF for cranes and hoists (consult crane manufacturer or end-user). | |

*See back cover page for attribution.

VARIABLE SPEED OPERATION

Guidelines for application of general purpose, Three-phase, single speed motors on variable frequency drives meets NEMA®* MG1-2006 part 30 and part 31 section 4.4.2.⁽³⁾ Unless stated otherwise, motor nameplates do NOT include listed speed range.

| Enclosure | Efficiency | Variable Torque | NEMA Motors | | | | | | | | |
|-----------------|--------------------------|--|-------------|-----------|---------------------|---------|---------------------|----------|----------|----------|----------|
| | | | All Frames | 182-215 | | 254-286 | | 324-365 | | 404-449 | |
| | | | All Poles | 2-Pole | 4&6 Pole | 2-Pole | 4&6 Pole | 2-Pole | 4&6 Pole | 2-Pole | 4&6 Pole |
| ODP | Standard (EPAAct exempt) | 10:1 | 2:1 | 2:1 | Contact Engineering | | | | | | |
| | EPAAct compliant | 10:1 | 2:1 | 2:1 | 2:1 | 2:1 | Contact Engineering | | | | |
| | NEMA Premium®* | 10:1 | 10:1 | 10:1 | 10:1 | 10:1 | 10:1 | 10:1 | 10:1 | 2:1 | 2:1 |
| TEFC | Standard (EPAAct exempt) | 10:1 | 2:1 | 2:1 | Contact Engineering | | | | | | |
| | EPAAct compliant | 10:1 | 2:1 | 10:1 | 2:1 | 10:1 | 2:1 | 2:1 | 2:1 | 2:1 | 2:1 |
| | NEMA Premium | 10:1 | 2:1 | 20:1 | 2:1 | 20:1 | 2:1 | 20:1 (1) | 2:1 | 20:1 (1) | |
| TENV | EPAAct compliant | 10:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 |
| | NEMA Premium | 10:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 | 1000:1 |
| Washdown TEFC | Standard (EPAAct exempt) | 10:1 | 10:1 (2) | 10:1 (2) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | EPAAct compliant | 10:1 | 10:1 (2) | 10:1 (2) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | NEMA Premium | 10:1 | 10:1 (2) | 10:1 (2) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Washdown TENV | Standard (EPAAct exempt) | 10:1 | 1000:1 | 1000:1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | EPAAct compliant | 10:1 | 1000:1 | 1000:1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | NEMA Premium | 10:1 | 1000:1 | 1000:1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Explosion Proof | All efficiency levels | Explosion Proof motors must be properly nameplated with inverter duty information prior to use on VFD. See Marathon® motor catalog pages for specific rating capabilities. Motors with automatic overload protectors cannot be used on VFDs. | | | | | | | | | |
| IEC®* Motors | | All Frames | 100-225 | 250-315 | | | | | | | |
| All enclosures | All efficiency levels | 10:1 | Up to 10:1 | Up to 2:1 | | | | | | | |

Notes:
 (1) 324-449T, 4 & 6 Pole XRI® motors are rated for 20:1 C.T. with fan modification; otherwise rated for 2:1 C.T. continuous duty, or 20:1 C.T. 60 minute duty at lowest RPM.
 (2) Washdown TEFC motors are rated for 10:1 C.T. 60 minute duty or 2:1 C.T. continuous duty at lowest RPM.
 (3) NEMA Part 30 equates to Inverter Rated and NEMA Part 31 equates to Inverter Duty/Vector Duty

APPLICATION NOTES.

Bearing Current Mitigation

Marathon recommends that any motors used with variable frequency drives be equipped with suitable means to protect the motor bearings from shaft currents caused by common mode voltages inherent with operation on a non-sinusoidal power supply. Marathon offers several options for motors in non-classified (non-hazardous) locations, including ground brushes, insulated bearings and non-contact shaft grounding rings. For more information on ground brushes and bearing currents, see the VARIABLE SPEED OPERATION section. For installation cost and available options, see the MOD CENTRAL section.

Restricted Use

DO NOT APPLY THE FOLLOWING MOTORS ON VARIABLE FREQUENCY DRIVES: Single-phase motors, motors with inherent overload protection or automatic overloads, Multi-speed motors, motors with 1.0 service factor on sine wave power.

Hazardous Locations

Hazardous Locations Consult with your sales representative or contractor when applying motors and drives into hazardous locations, either Division/Zone 1 or Division/Zone 2 areas.

MAXIMUM CABLE LENGTHS FROM THE MOTOR TO DRIVE

| Product Description | 3 Khz Carrier Frequency (Phase to Phase) [□] | | |
|---|---|-----------|----------|
| | 230 Volt | 460 Volt | 575 Volt |
| 182-326 NEMA, 100-225 IEC frames | 600 ft. | 125 ft. | 40 ft. |
| 364-5013 NEMA, 250-315 IEC frames | 1000 ft. | 225 ft. | 60 ft. |
| Motors with CR200 corona resistant magnet wire Motors with MAX GUARD® insulation system Form-wound low voltage motors | 1500 ft. | 475 ft. | 140 ft. |
| Motors with MAX GUARD insulation system | Unlimited | Unlimited | 650 ft. |
| Form-wound low voltage motors | Unlimited | Unlimited | 650 ft. |

STANDARD MOTOR INSULATION SYSTEMS

| Cr200 Corona-Resistant Magnet Wire | Max Guard® Insulation System [□] |
|--|---|
| microMAX™ inverter duty | Black Max® Vector duty motor - All product Blue Max® Vector duty motor - All products |
| 4-in-1® Three-phase, C-face with removable base Standard Three-phase stock brakemotors | Powerwash® motor - Three-phase Blue Chip Series® XRI® severe duty motor |
| XRI SD and XRI IEEE 841 | XRI SD and XRI-841 motor (IEEE841 compliant) Automotive duty "T" Frame |
| MAX + | Automotive duty "T" Frame Blue Chip Series / Hazardous Explosion Proof, XRI® Premium Efficiency Motor Globetrotter® IEC metric motors |

[□]Higher carrier frequencies require shorter cable length to obtain normal (50Khrs) insulation life.

*See back cover page for attribution.

VARIABLE SPEED OPERATION

VARIABLE SPEED INFORMATION

Marathon® Vector duty and Inverter duty motors, unless otherwise stated, are rated for continuous operation in a 40°C ambient and for altitudes up to 3300 feet (1000 meters) above sea level. Special application considerations, such as high or low ambient, intermittent ratings, high altitude, duty cycle rated, rated, extended constant horsepower range, special base speed, voltage or frequency, or any other special requirements, should be reviewed by a factory representative.

It is the responsibility of the startup personnel during commissioning of the VFD/motor system to properly tune the drive to the motor for the specific application. The correct voltage boost and volts/hertz settings are application dependent and unique to each motor design. Procedures for these adjustments should be in your VFD user manual. Many Vector Duty and Inverter Duty motors in this catalog are equipped with thermostats; warranty coverage may be denied if they are not properly utilized.

WARNING! Power factor correction capacitors should never be installed between the drive and the motor.

INVERTER DUTY OR INVERTER RATED

“Inverter Duty” (often called “Inverter Rated”) motors are suitable for use with Variable Frequency Drives, as long as operation is within the application guidelines published in this catalog. In general, Marathon Three-phase, general purpose, Design B motors are considered “Inverter Duty,” and meet or exceed the requirements of NEMA®* MG1, Part 30. As required under Federal law, these motors comply with EPCAct efficiencies when operating from utility power.



Many Marathon motor product lines have been enhanced to facilitate reliable operation on today’s variable speed drives, including wider constant torque speed range (up to 20:1) and improved insulation systems that withstand voltage spikes common with variable frequency operation.

Inverter Duty (Rated) motors are most often used in 10:1 speed range, variable torque or constant torque applications. A vector control is usually required for operation beyond 10:1 CT.

Refer to “Guidelines for Application of General Purpose, Single Speed Three-phase Motors on Variable Frequency Drives” in this section of this catalog for the allowable speed range and cable length restrictions (from VFD to motor). Additional detail regarding a specific product’s capabilities is available on its catalog page, or by consulting your application engineer.

VECTOR DUTY

“Vector Duty” describes a class of motors that are used in conjunction with Open- (without encoder) or Closed-Loop (with encoder) Vector controls, that provide enhanced performance under low speed operating conditions, or in cases where torque (rather than speed) must be controlled.

“Vector Duty” motors can be applied to Volts/Hertz (scalar) drives as well.

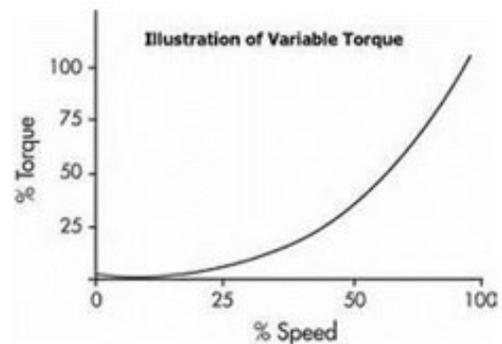
The Marathon “MAX” family, consisting of Blue Max®, Black Max® and microMAX™ motors, have been specifically designed for optimal operation on vector or volts/hertz controls. These motors feature a wide constant torque (up to 2000:1) and/or constant horsepower (up to 4:1) speed range and are performance-matched to all current technology IGBT drives.

*See back cover page for attribution.

Vector Duty motors meet or exceed the requirements of NEMA MG1, Part 31 and are equipped with an enhanced MAX GUARD® or CR200. Consult the catalog page for each product’s capabilities and features. As these motors are specifically designed for operation through an inverter, they are exempt from EPCAct and EISA legislation. Model numbers contain the letter “H” in the “Electrical Type” field. See “HOWTO READ THE MODEL NUMBER”.

VARIABLE TORQUE LOADS

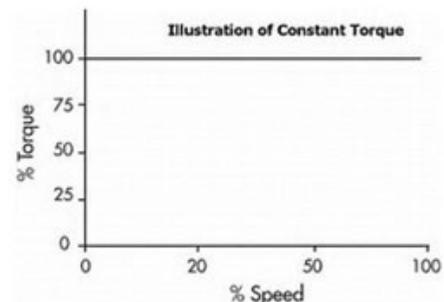
Some applications include Pumps, Fans, and Blowers. Torque varies as the square of the speed, and horsepower as the cube of the speed. Operation below base speed significantly lightens the load on the motor. While most variable torque applications do not require the motor to operate below half speed, the motor is fully capable of operation to zero speed. Operation above base speed significantly adds to the load on the motor; therefore, a factory representative must review applications requiring variable torque above base speed. Refer to the application chart found on the Variable Speed Operation chart for use of general purpose Three-phase motors on variable frequency drives. Marathon microMAX, Black Max or Blue Max motors are not necessarily required for operation in variable torque loads. A bypass circuit is often employed in variable torque applications. If this device is intended to be used, selection of a NEMA Design B motor is recommended, to withstand the inrush current during across-the-line starting.



CONSTANT TORQUE LOADS

Applications include conveyors, elevators, hoists, extruders, positive displacement pumps, mixers and converting equipment. Torque remains constant throughout the range of operation, and extra care should be taken in the proper application of motors, especially at very low speeds. Most constant torque applications don’t require operation below 10:1 (i.e. 6 Hz operation on a 60 Hz motor), but an increasing number of applications historically reserved or servo and/or stepper systems are being served with motors capable of operation beyond 20:1, up to 2000:1 (zero speed, constant torque). Refer to the application chart found on the Variable Speed Operation chart for use of general purpose Three-phase motors on variable frequency drives.

CONSTANT TORQUE LOADS (CONT'D.)



VARIABLE SPEED OPERATION

Applications requiring greater than 20:1 C.T. are ideal for microMAX, Black Max or Blue Max motors. These motors provide full rated torque within their listed speed range, without exceeding a Class F temperature rating while under inverter power (many operate at Class B). Ratings in this catalog have been developed, based on extensive testing on IGBT inverters, set at a minimum 3 KHz (or equivalent) carrier frequency.

Marathon® vector duty and inverter duty motors are designed for operation at 150% of rated load for one minute, up to the base speed of the motor (overload capability declines to 100% as the motor reaches maximum constant HP speed). These motors accommodate constant horsepower operation to 1-1/2 to 2 times base speed, subject to the motor's maximum safe mechanical speed limit. Refer to the maximum safe mechanical speed chart, as well as the performance section for each motor's capability.

Motors rated for zero RPM continuous duty (1000:1 or 2000:1) must be powered by vector drives to produce rated torque without overheating. Optimum zero speed and low-speed full torque performance may require a closed loop vector drive (with encoder feedback).

CONSTANT HORSEPOWER LOADS

Applications include coil winders, band saws, grinders, and turret lathes. Operation requires the motor to deliver the same horsepower rating, regardless of shaft speed. Torque increases at low speed and decreases at higher speed. Most general purpose motors can deliver constant horsepower up to 1 1/2 times base speed (consult a factory representative to verify performance). However, many constant HP applications require operation to twice base speed, and some, such as coil winders, up to 4 times base speed. MICROMAX, Black Max and Blue Max motors are designed for 1 1/2 to 2 times base speed, and the wide CHP motors, contact a Marathon distributor for higher than 2 times base speed.

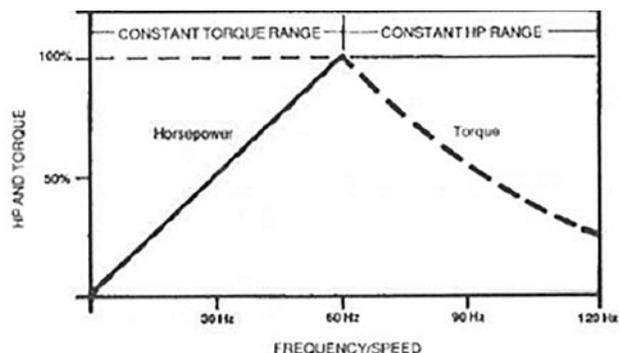


Figure 1 – Conventional VF Installation

BEARING CURRENTS

As stated NEMA* MG1-31.4.4.3, to protect a motor from inverter-sourced shaft voltages, either both bearings must be insulated or the motor shaft must be effectively grounded. Marathon offers several effective means to protect the bearings from inverter sourced EDM (electrical discharge machining). A shaft grounding device is standard in Blue Max motors, in frame sizes 444T and larger. Insulating the motor bearings will not prevent damage to bearings of a connected load, and insulated couplings should be employed to protect the load. Adding a ground brush to a motor with insulated bearings will divert motor shaft currents and help protect the bearings of the connected load.



THE MARATHON SOLUTION TO BEARING CURRENTS

A variety of Marathon products have the BCP device. Models are noted with a -P type catalog number, or a "P" footnote features a current mitigation device.

MOTOR GROUNDING

Frames and accessories of all motors must be grounded in accordance with the National Electric Code (NEC) Article 430. Refer to NEC Article 250 for general information on grounding. Proper grounding of inverter-driven motors is essential to protect personnel and livestock from inverter-sourced common mode voltages, which may reach hazardous levels on the frame of ungrounded or poorly grounded motors.

LOW INPUT VOLTAGE

If, due to lower utility supply voltage, the input voltage from the VFD to the motor is lower than the motor's rated voltage, de-rating of the motor's base frequency, horsepower, full load RPM, and constant HP RPM is required. The revised values can be calculated by multiplying by the ratio of the voltage change. For example, to operate a 460 volt motor from an inverter fed by 50 or 60 HZ, 400 volt utility power, the multiplier is 400/460 or 0.87.

The VFD can be reprogrammed to match the new base point values, allowing the motor to provide rated torque at rated current from the new base speed down to its original minimum constant torque speed. The motor's CHP range will begin at the new base frequency and will be shortened by the same ratio as described above.

OVERSPEED CAPABILITY

Maximum safe mechanical speed capability is a function of bearing size and type, lubrication, rotor balancing technique and specifications, air gap, enclosure, frame construction and connection to the driven load. In addition, consideration must be given to ambient noise levels, as operation above base speed will increase motor noise and vibration, and reduce bearing life. Under no circumstances should bearing hub temperature exceed 100°C. Belted loads should not exceed 60 Hz operating RPM by more than 25% (NEMA* "TS" shafts are not suitable for belted loads). Due to external cooling fans, TEFC (and Explosion Proof Fan Cooled) motors are limited to 4000 RPM maximum speed.

Marathon® Motors, through extensive testing in our state-of-the-art laboratory and in actual field experience, has developed a number of high speed motors whose maximum safe mechanical speed exceeds the values in the table below. The following table depicts maximum safe speed limits for continuous operation, direct-coupled, non-explosion proof motors, and does not imply constant horsepower capability. Please consult a factory representative for requirements beyond those listed, or for intermittent duty motors.

Additional detail regarding a specific product's capabilities is available on its catalog page, or by consulting your application engineer.

VARIABLE SPEED OPERATION

MAXIMUM SAFE MECHANICAL SPEED LIMITS (ODP, TENV, DPFV OR TEBC ENCLOSURES) 60 HZ BASE FREQUENCY

| Frame Size | 2-Pole | 4, 6 or 8-Pole |
|------------|--------|----------------|
| 182-184 | 7200 | 5400 |
| 213-256 | 5400 | 4200 |
| 284-286 | 5400 | 3600 |
| 324-326 | 4000 | 3600 |
| 364-365 | 4000 | 2800 |
| 404-449 | 3600 | 2800 |
| 5000 Fr | N/A | CALL |
| 6800 Fr | N/A | CALL |

HIGH SPEED OPERATION

When motors are run at speeds above base speed, mechanical limitations can develop. Critical areas of concern include bearing life, rotor integrity, balance, fan integrity (on self-cooled motors), and breakdown.

As the motor's speed crosses into constant horsepower operating range, the motor's breakdown torque (BDT) begins to decrease since the inverter voltage cannot be raised above the supply voltage even though the frequency is still increasing. Don't hesitate to get in touch with us for help reviewing your application when applying motors over the nominal maximum speed rating.

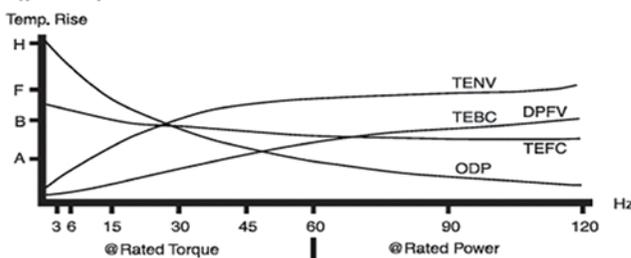
OTHER APPLICATION CONSIDERATION

For proper selection, the following should be considered:

- Horsepower or torque requirements at various speeds.
- Desired speed range of the load and motor.
- Acceleration and deceleration rate requirements of the process being controlled.
- Starting requirements including the frequency of starting and a description of the load (reflected inertia at the motor, load torque during starting).
- Whether the application is a continuous process or duty cycle of starts, stops and speed changes.
- A general description of the type of application including the environment in which the VFD system components must operate (determines motor enclosure and/or explosion proof classification).
- Description of the available electrical power supply and wiring.
- Special performance requirements, if any.
- Whether the drive will be configured with a by-pass circuit. In case of its deployment, the motor will operate like its fixed speed counterpart and may require a NEMA B design which limits in-rush current, or selection of a larger motor starter or other protective circuitry.
- Load sharing
- Mounting and other mechanical considerations

Additional detail regarding a specific product's capabilities is available on its catalog page, or by consulting your application engineer.

Typical Temperature Rise Of Various Enclosures



• *See back cover page for attribution.

GENERAL PURPOSE MOTORS
SINGLE PHASE ODP MOTORS
STANDARD AND PREMIUM EFFICIENCY

marathon®

For use where exposure to water, dust and dirt exists. Ideally suited for use on pumps, compressors, fans, conveyors, and other industrial equipment.

Specifications

115/208 & 230V - Rigid mount - 1 HP - 10 HP

182T through 215T frame

C-FACE Motors - 3 HP - 7 1/2 HP -184TC - 215TC

Features

- Durable rolled steel construction
- NEMA®* Design B performance
- Meets or exceeds NEMA service factors
- Double shielded ball bearings
- Continuous duty
- Thermally protected ratings
- UL®* Recognized component listing
- and CSA®* Certified



*See back cover page for attribution.

GENERAL PURPOSE MOTORS

SINGLE-PHASE, (NEMA®* SERVICE FACTOR), DRIPPROOF

FEATURES

- Heavy gauge steel frame and base
- Ball bearings
- Capacitor start / capacitor run designs
- Capacitor start / induction run designs as noted
- Service factor, as noted
- UL®* Recognized and CSA®* certified



RIGID BASE

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|-------|-----------|----------|--------------|-------|--------------|-----|----------|------------|
| 1 | 1200 | 115/230 | 182T | NONE | I141A | 182TCDW17084 | | 15.6/7.8 | 83 | 14.19 | 2, 13, 18 |
| | 1800 | 115/208-230 | 182T | NONE | - | 131515.00 | √ | 24.5/13-12.4 | 59 | 13.19 | 2, 13, 18 |
| 2 | 1800 | 115/208-230 | 182T | MANUAL | - | 131536.00 | √ | 24.5/13-12.4 | 66 | 13.19 | 2, 13, 19 |
| | 1800 | 115/208-230 | 182T | AUTO | - | 131535.00 | | 24.5/13-12.4 | 66 | 13.19 | 2, 13, 20 |
| 3 | 3600 | 115/208-230 | 182T | NONE | - | 131636.00 | √ | 28/15.2-14 | 77 | 14.18 | 1, 13, 18 |
| | 1800 | 115/208-230 | 184T | NONE | - | 131534.00 | √ | 33.8/18-16.9 | 78 | 14.19 | 2, 13, 19 |
| | 1800 | 115/230 | 184T | MANUAL | - | 131561.00 | ¶ | 33.8/16.9 | 79 | 14.19 | 2, 13, 19 |
| | 1800 | 115/230 | 184T | AUTO | - | 131530.00 | | 33.8/16.9 | 72 | 14.19 | 2, 13, 19 |
| | 1200 | 230 | 215T | NONE | I144 | 215TBDW7079 | ¶ | 16.0 | 134 | 18.05 | 1, 13, 18 |
| 5 | 3600 | 208-230 | 184T | NONE | - | 131616.00 | √ | 24.0-22.0 | 87 | 14.69 | 1, 13, 18 |
| | 1800 | 208-230 | 184T | NONE | - | 131537.00 | √ | 23.0-21.0 | 86 | 14.69 | 1, 13, 18 |
| | 1800 | 208 | 184T | NONE | - | 131560.00 | √ | 23.2 | 85 | 14.69 | 1, 13, 18 |
| | 1800 | 208-230 | 184T | MANUAL | - | 131622.00 | √ | 23.0-21.0 | 85 | 14.69 | 2, 13, 18 |
| 7 1/2 | 3600 | 208-230 | 184T | TSTAT | - | 132044.00 | √ | 34.0-31.0 | 110 | 16.69 | 2, 13, 19 |
| | 3600 | 208-230 | 213T | NONE | - | 140680.00 | | 33.5-30.5 | 0 | 18.04 | 1, 13, 18 |
| 10 | 1800 | 230 | 215T | NONE | - | 140155.00 | √ | 40.5 | 116 | 17.26 | 1, 13, 18 |
| | 3600 | 208-230 | 215T | NONE | - | 140681.00 | √ | 41.5-37.0 | 126 | 18.05 | 2, 13, 19 |
| | 1800 | 230 | 215T | NONE | - | 141430.00 | √ | 39.0 | 159 | 14.79 | 2, 13, 20 |

FEATURES

- Heavy gauge steel frame and base
- Ball bearings mechanically locked on shaft end
- Capacitor start / capacitor run designs
- Capacitor start / induction run designs as noted



C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|---------|-------|-----------|----------|-----------|-------|-----------|-----|----------|------------|
| 3 | 1800 | 115/230 | 184TC | NONE | - | 131544.00 | ¶ | 33.8/16.9 | 76 | 14.20 | 2, 13, 18 |
| 5 | 3600 | 208-230 | 184TC | NONE | - | 131777.00 | | 23.0-22.2 | 73 | 14.70 | 1, 13, 18 |
| | 1800 | 208-230 | 184TC | NONE | - | 131539.00 | | 23.0-21.0 | 84 | 14.70 | 1, 13, 18 |

FEATURES

- Heavy gauge steel frame and base
- Capacitor start / capacitor run designs
- Capacitor start / induction run designs as noted



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|-----------|----------|-----------|-------|-----------|-----|----------|------------|
| 3 | 1800 | 208-230 | 184TC | MANUAL | - | 131853.00 | | 14.6-13.8 | 100 | 13.20 | 1, 13, 18 |
| | 1800 | 115/230 | 184TC | MANUAL | - | 131629.00 | √ | 33.8/16.9 | 69 | 14.20 | 2, 13, 18 |
| 5 | 3600 | 208-230 | 184TC | NONE | - | 131781.00 | ¶ | 23.0-22.2 | 73 | 14.70 | 1, 13, 18 |
| | 1800 | 208-230 | 184TC | MANUAL | - | 131630.00 | √ | 23.0-21.0 | 80 | 14.70 | 1, 13, 18 |
| 7 1/2 | 3600 | 208-230 | 184TC | TSTAT | - | 132043.00 | √ | 34.0-31.0 | 112 | 16.70 | 1, 13, 18 |
| | 1800 | 230 | 215TC | NONE | - | 140806.00 | √ | 36.0 | 120 | 17.26 | 1, 13, 18 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue have efficiency levels that meet the USA efficiency legislations.

*See back cover page for attribution.

SINGLE PHASE TEFC MOTORS

marathon®

STANDARD AND PREMIUM EFFICIENCY

For use where exposure to water, dust and dirt exists. Ideally suited for use on pumps, compressors, fans, conveyors, and other industrial equipment.

Standard and Premium Efficiency General Purpose
115/208 - 230 Volt

Rigid Mount - 2 HP - 10 HP - 182T through 215T frame
C Face Motors - 3 HP - 10 HP - 184TC through 215TC

Features

- Durable rolled steel construction
- NEMA® Design B performance
- Meets or exceeds NEMA service factors
- Double shielded ball bearings
- Continuous duty
- Thermally protected ratings
- UL® recognized component listing and CSA® Certified



*See back cover page for attribution.

GENERAL PURPOSE MOTORS

SINGLE-PHASE, TOTALLY ENCLOSED

FEATURES

- Heavy gauge steel constructions
- Ball bearings
- Capacitor start / capacitor run designs
- Service factor, as noted
- UL®* Recognized and CSA®* certified



RIGID BASE

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|-------|-----------|----------|--------------|-------|----------------|-----|----------|---------------|
| 2 | 1800 | 115/208-230 | 182T | NONE | I212 | 182TBFR5326 | | 20.0/10.8-10.0 | 53 | 15.65 | F, 1, 18 |
| | 1800 | 115/208-230 | 182T | NONE | - | 131509.00 | √ | 24.8/13-12.4 | 68 | 14.46 | 1, 13, 17 |
| 3 | 3600 | 115/208-230 | 182T | NONE | I206 | 182TBFR5301 | | 24.6/13.9-12.3 | 57 | 15.81 | 1, 13, 17 |
| | 3600 | 115/208-230 | 182T | NONE | - | 131637.00 | √ | 26.8/14.4-13.4 | 81 | 14.96 | 2, 13, 18 |
| | 1800 | 115/208-230 | 184T | NONE | - | 131533.00 | √ | 33.6/18-16.8 | 86 | 16.46 | 1, 13, 17 |
| | 1800 | 208-230 | 184T | MANUAL | - | 131855.00 | | 14.4-13.6 | 88 | 14.96 | 2, 13, 18 |
| | 1800 | 115/208-230 | 184T | NONE | I213A | 184TBFW17044 | √ | 28.4/14.8-14.2 | 72 | 14.96 | 1, 13, 14, 17 |
| 5 | 3600 | 208-230 | 184T | NONE | I223A | 184TBFW7701 | √ | 22.0-19.8 | 90 | 16.49 | 1, 13, 14, 17 |
| | 3600 | 230 | 184T | NONE | - | 131549.00 | √ | 19.8 | 96 | 16.96 | 2, 13, 18 |
| | 3600 | 230 | 184T | MANUAL | - | 132042.00 | √ | 19.8 | 103 | 16.97 | 2, 13, 18 |
| | 1800 | 230 | 184T | NONE | - | 131538.00 | √ | 23.0 | 98 | 17.46 | 2, 13, 17 |
| | 1800 | 208-230 | 184T | MANUAL | - | 131856.00 | √ | 23.0-21.0 | 85 | 15.96 | 2, 13, 17 |
| | 1800 | 208-230 | 184T | NONE | I214A | 184TBFW7726 | √ | 21.5-19.5 | 103 | 17.46 | 1, 13, 14, 18 |
| | 1800 | 208-230 | 213T | NONE | I216 | 213TBFW7026 | √ | 24.5-22.0 | 106 | 18.73 | 1, 14, 17 |
| 7 1/2 | 3600 | 208-230 | 213T | NONE | I224 | 213TBFW7001 | √ | 36.0-32.0 | 112 | 20.23 | 1, 14, 17 |
| | 3600 | 208-230 | 213T | NONE | - | 140684.00 | √ | 36.0-32.0 | 113 | 18.34 | 2, 13, 17 |
| | 1800 | 230 | 215T | NONE | - | 141428.00 | √ | 30.5 | 172 | 21.09 | 2, 13, 18 |
| | 1800 | 208-230 | 215T | NONE | I215 | 215TBFW7026 | √ | 35.0-30.0 | 133 | 21.48 | 1, 14, 17, F |
| 10 | 3600 | 208-230 | 215T | NONE | I225 | 215TBFW7001 | | 44.0-41.5 | 141 | 20.23 | 1, 14, 17, F |
| | 3600 | 208-230 | 215T | NONE | - | 140685.00 | √ | 44.0-41.5 | 145 | 19.84 | 2, 13, 17 |
| | 1800 | 230 | 215T | NONE | - | 140581.00 | √ | 40.0 | 212 | 20.71 | 2, 13, 18 |
| | 1800 | 230 | 215T | NONE | I217 | 215TBFW7027 | √ | 41.5 | 144 | 21.48 | 1, 14, 17 |

FEATURES

- Ball bearings mechanically locked on shaft end
- Suitable for horizontal or vertical mounting
- Capacitor start / capacitor run designs
- Capacitor start / induction run designs as noted
- Will accept brake kits, see accessory section (except as noted)
- Heavy gauge steel constructions
- Service factor, as noted
- UL Recognized and CSA certified



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|-------|-----------|----------|--------------|-------|--------------|-----|----------|---------------|
| 3 | 1800 | 230 | 184TC | MANUAL | - | 131857.00 | √ | 12.8 | 107 | 17.61 | 2, 13, 18 |
| | 1800 | 115/208-230 | 184TC | MANUAL | - | 131631.00 | √ | 33.6/18-16.8 | 87 | 16.47 | 1, 13, 17 |
| 5 | 3600 | 230 | 184TC | MANUAL | - | 131632.00 | √ | 19.8 | 106 | 16.97 | 2, 13, 18 |
| | 1800 | 230 | 184TC | MANUAL | - | 131633.00 | √ | 23.0 | 107 | 16.97 | 2, 13, 17 |
| 7 1/2 | 3600 | 208-230 | 213TC | NONE | I324 | 213TBFBD7009 | √ | 36.0-32.0 | 150 | 19.07 | 2, 13, 17 |
| | 1800 | 230 | 215TC | NONE | - | 141429.00 | | 30.5 | 171 | 21.82 | 2, 13, 18, 24 |
| 10 | 3600 | 208-230 | 215TC | NONE | - | 140695.00 | √ | 44.0-41.5 | 152 | 20.57 | 2, 13, 17, 24 |
| | 1800 | 230 | 215TC | NONE | - | 140678.00 | √ | 40.0 | 159 | 20.71 | 2, 13, 18, 24 |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue have efficiency levels that meet the USA efficiency legislations.

*See back cover page for attribution.

GLOBETROTTER[®] MOTORS

THREE PHASE, DP, TEFC

marathon[®]

For use where exposure to water, dust and corrosives exists. Ideally suited for use on pumps, compressors, fans, blowers, conveyors, machine tools and other industrial applications.

Features

- Inverter-rated
- Class F insulation system
- Shielded ball bearings for direct coupled applications
- 182T-365T models steel frame
- 404T-449T models cast iron frame
- Dynamically balanced rotors
- Torques exceed NEMA[®]* performance standards
- UL[®]* Recognized component listing and CSA[®]* Certified



*See back cover page for attribution.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, DRIPPROOF

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- NEMA Premium models are in compliance with EISA2007
- Bearing Current Protection™ (BCP), as noted
- 182T-365T models steel frame (exceptions highlighted in blue)
- 404T-449T models cast iron frame
- Inverter duty 10:1 variable torque and 2:1 constant torque, 1.0 SF
- 1.15 service factor
- Class F insulation
- Standard assembly F1, reversible to F2 assembly
- Dual frame mounting holes
- UL®* Recognized, CSA®* certified, CE®* mark
- Three year warranty



RIGID BASE

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-------|------|-------------|-------|-----------|------------------|--------------|-------|-----------|-----------|-----|----------|------------|-------------|
| 1 1/2 | 1200 | 208-230/460 | 182T | | GT0005A | 182TTDBD6076 | √ | 86.5 | 4.2/2.1 | 69 | 12.25 | | A160A |
| | 900 | 230/460 | 184T | | GT00103 | 184TTDBD6101 | | 77.0 | 5/2.5 | 79 | 13.25 | | A160A |
| 2 | 1200 | 208-230/460 | 184T | | GT0008A | 184TTDBD6076 | √ | 87.5 | 5.4/2.7 | 79 | 13.25 | | A160A |
| | 1200 | 208-230/460 | 184T | | GT0008A-P | 184TTDBD6078 | | 87.5 | 5.4/2.7 | 79 | 13.25 | P | A160A |
| 3 | 900 | 230/460 | 213T | | GT00105 | 213TTDBD6101 | √ | 86.5 | 6.8/3.4 | 136 | 17.52 | | A161A |
| | 1800 | 200 | 182T | | GT0810 | 182TTDBD6039 | √ | 89.5 | 9.2 | 75 | 12.25 | | A160A |
| | 1800 | 208-230/460 | 182T | | GT0010A | 182TTDBD6026 | √ | 89.5 | 6.8/3.4 | 64 | 12.25 | | A160A |
| | 1800 | 208-230/460 | 182T | | GT0010A-P | 182TTDBD6070 | √ | 89.5 | 6.8/3.4 | 69 | 12.25 | P | A160A |
| | 1800 | 208-230/460 | 182T | TSTAT | GT6024 | 182TTDBD6428 | ¶ | 89.5 | 6.8/3.4 | 65 | 12.25 | TS | A160A |
| | 1800 | 575 | 182T | | GT0110 | 182TTDBD6030 | √ | 89.5 | 3.2 | 64 | 12.25 | | A160A |
| | 1200 | 230/460 | 213T | | GT0011A | 213TTDBD6076 | √ | 88.5 | 7.2/3.6 | 115 | 17.52 | | A161A |
| | 3600 | 200 | 182T | | GT0812 | 182TTDBD6000 | | 86.5 | 15.2 | 55 | 13.72 | | A160A |
| | 3600 | 208-230/460 | 182T | | GT0012A | 182TTDBD6001 | √ | 86.5 | 13.2/6.6 | 55 | 12.25 | | A160A |
| | 3600 | 230/460 | 182T | | GT0012A-P | 182TTDBD6002 | ¶ | 86.5 | 13.2/6.6 | 85 | 12.25 | P | A160A |
| 5 | 3600 | 575 | 182T | | GT0112 | 182TTDBD6005 | ¶ | 86.5 | 5.3 | 58 | 12.25 | | A160A |
| | 1800 | 208-230/460 | 184T | | GT0013A | 184TTDBD6026 | √ | 89.5 | 10.4/5.2 | 77 | 13.25 | | A160A |
| | 1800 | 230/460 | 184T | | GT0013A-P | 184TTDBD6070 | √ | 89.5 | 10.4/5.2 | 84 | 13.25 | P | A160A |
| | 1800 | 208-230/460 | 184T | TSTAT | GT6030 | 184TTDBD6428 | ¶ | 89.5 | 10.4/5.2 | 84 | 13.25 | TS | A160A |
| | 1800 | 230/460 | 184T | | GT2313 | 184TTDBD6034 | ¶ | 89.5 | 12.6/6.3 | 79 | 13.25 | | A160A |
| | 1800 | 200 | 184T | | GT0813 | 184TTDBD6039 | √ | 89.5 | 15.2 | 86 | 13.25 | | A160A |
| | 1800 | 575 | 184T | | GT0113 | 184TTDBD6030 | √ | 89.5 | 5.3 | 90 | 13.25 | | A160A |
| | 1200 | 230/460 | 215T | | GT0014A | 215TTDBD6076 | √ | 89.5 | 11/5.5 | 128 | 17.52 | | A161A |
| | 1200 | 230/460 | 215T | | GT0014A-P | 215TTDBD6077 | | 89.5 | 11/5.5 | 138 | 17.52 | P | A161A |
| | 900 | 230/460 | 254T | | GT00109 | 254TTDBD6101 | | 88.5 | 11.2/5.6 | 275 | 22.64 | | A163A |
| 7 1/2 | 3600 | 200 | 184T | | GT0815 | 184TTDBD6000 | | 88.5 | 21.2 | 98 | 13.25 | | A160A |
| | 3600 | 208-230/460 | 184T | | GT0015A | 184TTDBD6001 | √ | 88.5 | 16.4/8.2 | 64 | 13.25 | | A160A |
| | 3600 | 208-230/460 | 184T | | GT0015A-P | 184TTDBD6002 | ¶ | 88.5 | 16.4/8.2 | 98 | 13.25 | P | A160A |
| | 3600 | 208-230/460 | 184T | TSTAT | GT6033 | 184TTDBD6006 | | 88.5 | 16.4/8.2 | 70 | 17.52 | TS | A160A |
| | 3600 | 575 | 184T | | GT0115 | 184TTDBD6005 | ¶ | 88.5 | 7.4 | 76 | 13.25 | | A160A |
| | 1800 | 200 | 213T | | GT0816 | 213TTDBD6039 | √ | 91.0 | 22.8 | 126 | 17.52 | | A161A |
| | 1800 | 208-230/460 | 213T | | GT0016A | 213TTDBD6026 | √ | 91.0 | 16.8/8.4 | 122 | 17.52 | | A161A |
| | 1800 | 230/460 | 213T | | GT0016A-P | 213TTDBD6070 | √ | 91.0 | 16.8/8.4 | 121 | 17.52 | P | A161A |
| | 1800 | 230/460 | 213T | | GT2316 | 213TTDBD6034 | ¶ | 91.0 | 19.8/9.9 | 135 | 17.52 | | A161A |
| | 1800 | 575 | 213T | | GT0116 | 213TTDBD6030 | √ | 91.0 | 7.9 | 123 | 17.52 | | A161A |
| 10 | 1200 | 230/460 | 254T | | GT0057 | 254TTDBD6076 | √ | 90.2 | 17.6/8.8 | 205 | 22.64 | | A163A |
| | 900 | 230/460 | 256T | | GT00111 | 256TTDBD6101 | | 89.5 | 17.6/8.8 | 254 | 24.22 | | A163A |
| | 3600 | 200 | 215T | | GT0818 | 213TTDBD6000 | | 89.5 | 27.8 | 125 | 17.52 | | A161 |
| | 3600 | 230/460 | 213T | | GT0018A | 213TTDBD6001 | √ | 89.5 | 22/11 | 125 | 17.52 | | A161 |
| | 1800 | 200 | 215T | | GT0819 | 215TTDBD6039 | √ | 91.7 | 29.2 | 140 | 17.52 | | A161 |
| | 1800 | 208-230/460 | 215T | | GT0019A | 215TTDBD6026 | √ | 91.7 | 23.4/11.7 | 143 | 17.52 | | A161 |
| | 1800 | 208-230/460 | 215T | | GT0019A-P | 215TTDBD6070 | √ | 91.7 | 23.4/11.7 | 136 | 17.52 | P | A161 |
| | 1800 | 575 | 215T | | GT0119 | 215TTDBD6030 | √ | 91.7 | 10.2 | 143 | 17.52 | | A161 |
| | 1200 | 208-230/460 | 256T | | GT0058 | 256TTDBD6076 | √ | 91.7 | 24.4/12.2 | 254 | 24.22 | | A163A |
| | 900 | 230/460 | 284T | | GT00113 | 284TTDBD6101 | | 90.2 | 26.2/13.1 | 350 | 25.71 | YD | A165A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

Continued on next page.

*See back cover page for attribution.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, DRIPPROOF

RIGID BASE

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|----|------|-------------|-------|-----------|-----------------|---------------|-------|-----------|-----------|------|----------|------------|-------------|
| 15 | 3600 | 200 | 215T | | GT0821 | 215TTDBD6000 | | 90.2 | 41.5 | 128 | 17.52 | | A161 |
| | 3600 | 208-230/460 | 215T | | GT0021A | 215TTDBD6001 | √ | 90.2 | 29.8/14.9 | 128 | 17.52 | | A161 |
| | 3600 | 575 | 215T | | GT0121 | 215TTDBD6005 | | 90.2 | 14.4 | 128 | 17.52 | | A161 |
| | 1800 | 200 | 254T | | GT0859 | 254TTDBD6039 | ¶ | 93.0 | 43.5 | 300 | 22.64 | | A163A |
| | 1800 | 230/460 | 254T | | GT0059 | 254TTDBD6026 | √ | 93.0 | 32/16 | 271 | 22.64 | | A163A |
| | 1800 | 230/460 | 254T | | GT0059-P | 254TTDBD6070 | √ | 93.0 | 32/16 | 275 | 22.64 | P | A163A |
| | 1800 | 575 | 254T | | GT0159 | 254TTDBD6030 | ¶ | 93.0 | 15.1 | 289 | 22.64 | | A163A |
| | 1200 | 230/460 | 284T | | GT0060 | 284TTDBD6076 | √ | 91.7 | 35/17.5 | 318 | 25.71 | YD | A165A |
| | 900 | 230/460 | 286T | | GT00115 | 286TTDBD6101 | | 90.2 | 35/17.6 | 371 | 27.09 | YD | A165A |
| 20 | 3600 | 200 | 254T | | GT0861 | 254TTDBD6000 | | 91.0 | 55 | 315 | 22.64 | | A162A |
| | 3600 | 230/460 | 254T | | GT0061 | 254TTDBD6001 | √ | 91.0 | 45/22.5 | 289 | 22.64 | | A162A |
| | 3600 | 575 | 254T | | GT0161 | 254TTDBD6005 | | 91.0 | 19.2 | 315 | 22.64 | | A162A |
| | 1800 | 200 | 256T | | GT0862 | 256TTDBD6039 | √ | 93.0 | 56 | 320 | 24.22 | | A163A |
| | 1800 | 230/460 | 256T | | GT0062 | 256TTDBD6026 | √ | 93.0 | 45/22.4 | 313 | 24.22 | | A163A |
| | 1800 | 230/460 | 256T | | GT0062-P | 256TTDBD6070 | ¶ | 93.0 | 45/22.4 | 289 | 24.22 | P | A163A |
| | 1800 | 575 | 256T | | GT0162 | 256TTDBD6030 | ¶ | 93.0 | 19.5 | 313 | 24.22 | | A163A |
| | 1200 | 230/460 | 286T | | GT0063 | 286TTDBD6076 | √ | 92.4 | 48.5/24.3 | 362 | 27.09 | YD | A165A |
| 25 | 3600 | 230/460 | 256T | | GT0064 | 256TTDBD6001 | √ | 91.7 | 58/29 | 232 | 24.22 | | A162A |
| | 1800 | 230/460 | 284T | | GT0065 | 284TTDBD6026 | √ | 93.6 | 61/30.5 | 329 | 25.71 | YD | A165A |
| | 1800 | 230/460 | 284T | | GT0065-P | 284TTDBD6070 | √ | 93.6 | 61/30.5 | 383 | 25.71 | P, YD | A165A |
| | 1800 | 230/460 | 284TS | | GT0066 | 284TSTDBD6026 | | 93.6 | 61/30.5 | 324 | 24.34 | YD | A165A |
| | 1800 | 575 | 284T | | GT0165 | 284TTDBD6030 | √ | 93.6 | 25.2 | 280 | 25.71 | | A165A |
| | 1200 | 230/460 | 324T | | GT0068 | 324TTDBD6076 | √ | 93.0 | 63/31.5 | 430 | 28.55 | YD | A167A |
| 30 | 3600 | 230/460 | 284TS | | GT0069 | 284TSTDBD6001 | √ | 91.7 | 71.5/36 | 315 | 24.34 | YD | A164A |
| | 1800 | 230/460 | 286T | | GT0067 | 286TTDBD6026 | √ | 94.1 | 73/36.5 | 362 | 27.09 | YD | A165A |
| | 1800 | 230/460 | 286T | | GT0067-P | 286TTDBD6070 | √ | 94.1 | 73/36.5 | 425 | 27.09 | P, YD | A165A |
| | 1800 | 230/460 | 286TS | | GT0070 | 286TSTDBD6026 | √ | 94.1 | 73/36.5 | 366 | 25.72 | YD | A165A |
| | 1800 | 575 | 286T | | GT0167 | 286TTDBD6030 | √ | 94.1 | 29.2 | 430 | 27.09 | | A165A |
| | 1200 | 230/460 | 326T | | GT0071 | 326TTDBD6076 | √ | 93.6 | 74/37 | 530 | 29.73 | YD | A167A |
| 40 | 3600 | 230/460 | 286TS | | GT0072 | 286TSTDBD6001 | √ | 92.4 | 86/43 | 348 | 25.72 | YD | A164A |
| | 1800 | 230/460 | 324T | | GT0073 | 324TTDBD6026 | √ | 94.1 | 87.5/43.5 | 501 | 28.55 | YD | A167A |
| | 1800 | 230/460 | 324TS | | GT0074 | 324TSTDBD6026 | √ | 94.1 | 87.5/43.5 | 452 | 27.05 | YD | A167A |
| | 1800 | 575 | 324T | | GT0173 | 324TTDBD6030 | ¶ | 94.1 | 38 | 512 | 28.55 | | A167A |
| | 1200 | 230/460 | 364T | | GT0075 | 364TTDBD6086 | √ | 94.1 | 90/45 | 673 | 31.69 | YD | A169A |
| 50 | 3600 | 230/460 | 324TS | | GT0076 | 324TSTDBD6001 | √ | 93.0 | 112/56 | 459 | 27.05 | YD | A166A |
| | 1800 | 230/460 | 326T | | GT0077 | 326TTDBD6026 | √ | 94.5 | 114/57 | 556 | 29.73 | YD | A167A |
| | 1800 | 230/460 | 326T | | GT0077-P | 326TTDBD6070 | √ | 94.5 | 114/57 | 551 | 29.73 | P, YD | A167A |
| | 1800 | 230/460 | 326TS | | GT0078 | 326TSTDBD6026 | √ | 94.5 | 114/57 | 512 | 28.23 | YD | A167A |
| | 1800 | 575 | 326T | | GT0177 | 326TTDBD6030 | ¶ | 94.5 | 47 | 575 | 29.73 | | A167A |
| | 1200 | 230/460 | 365T | | GT0079 | 365TTDBD6086 | √ | 94.1 | 116/58 | 756 | 33.27 | YD | A169A |
| 60 | 3600 | 230/460 | 326TS | | GT0080 | 326TSTDBD6001 | √ | 93.6 | 136/68 | 523 | 28.23 | YD | A166A |
| | 1800 | 230/460 | 364T | | GT0081 | 364TTDBD6060 | √ | 95.0 | 139/69.5 | 677 | 31.69 | YD | A169A |
| | 1800 | 230/460 | 364TS | | GT0082 | 364TSTDBD6060 | √ | 95.0 | 139/69.5 | 738 | 29.57 | YD | A169A |
| | 1800 | 575 | 364T | | GT0181 | 364TTDBD6030 | √ | 95.0 | 56 | 305 | 31.69 | | A169A |
| | 1200 | 230/460 | 404T | | GT0041A | 404TTDCCD6086 | √ | 94.5 | 142/71 | 1147 | 37.20 | YD | A415A |
| 75 | 3600 | 230/460 | 364TS | | GT0083 | 364TSTDBD6001 | √ | 93.6 | 166/83 | 706 | 29.57 | YD | A168A |
| | 1800 | 230/460 | 365T | | GT0084 | 365TTDBD6060 | √ | 95.0 | 166/83 | 781 | 33.27 | YD | A169A |
| | 1800 | 230/460 | 365TS | | GT0085 | 365TSTDBD6060 | √ | 95.0 | 166/83 | 776 | 31.14 | YD | A169A |
| | 1800 | 230/460 | 365TS | | GT0085-P | 365TSTDBD6061 | | 95 | 166/83 | 835 | 31.14 | P, YD | A169A |
| | 1800 | 575 | 365T | | GT0184 | 365TTDBD6030 | √ | 95.0 | 68.5 | 384 | 33.27 | | A169A |
| | 1200 | 230/460 | 405T | | GT0044A | 405TTDCCD6081 | √ | 94.5 | 170/85 | 1268 | 38.78 | YD | A415A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

Continued on next page.

GLOBETROTTER® GENERAL PURPOSE MOTORS

THREE-PHASE, DRIPPROOF

RIGID BASE

| HP | RPM | VOLTS | FRAME | OVER LOAD | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-----|------|---------|-------|-----------|------------------|---------------|-------|-----------|----------|------|----------|------------|-------------|
| 100 | 3600 | 230/460 | 365TS | | GT0086 | 365TSTDBD6001 | √ | 93.6 | 210/105 | 728 | 31.14 | YD | A168A |
| | 1800 | 230/460 | 404T | | GT0046A | 404TTDCCD6060 | √ | 95.4 | 210/105 | 1219 | 37.20 | YD | A415A |
| | 1800 | 230/460 | 404TS | | GT0093A | 404TSTDCD6060 | √ | 95.4 | 210/105 | 1211 | 33.86 | YD | A415A |
| | 1800 | 575 | 404T | | GT0146 | 404TTDCCD6030 | ¶ | 95.4 | 91 | 553 | 37.20 | | A415A |
| | 1200 | 230/460 | 444T | | GT0047A | 444TTDCCD6077 | √ | 95.0 | 211/106 | 1500 | 44.57 | YD | A417A |
| 125 | 3600 | 460 | 404TS | | GT0048A | 404TSTDCD6001 | √ | 95.0 | 136 | 1065 | 33.86 | PW | A414A |
| | 1800 | 460 | 405T | | GT0049A | 405TTDCCD6060 | √ | 95.4 | 138 | 1303 | 38.78 | PW | A415A |
| | 1800 | 460 | 405T | | GT0049A-P | 405TTDCCD6061 | √ | 95.4 | 138 | 1303 | 38.78 | PW | A415A |
| | 1800 | 460 | 405TS | | GT0088 | 405TSTDCD6060 | √ | 95.4 | 138 | 1305 | 35.44 | PW | A415A |
| | 1800 | 575 | 405TS | | GT0149 | 405TTDCCD6030 | √ | 95.4 | 113 | 591 | 35.44 | | A415A |
| | 1200 | 460 | 445T | | GT0050A | 445TTDCCD6076 | √ | 95.0 | 140 | 1753 | 44.57 | PW | A417A |
| 150 | 3600 | 460 | 405TS | | GT0051A | 405TSTDCD6007 | √ | 94.1 | 167 | 1149 | 35.44 | PW | A414A |
| | 1800 | 460 | 444T | | GT0052A | 444TTDCCD6060 | √ | 95.8 | 170 | 1786 | 44.57 | PW | A417A |
| | 1800 | 460 | 444T | | GT0052A-P | 444TTDCCD6061 | | 95.8 | 170 | 1786 | 44.57 | PW | A417A |
| | 1800 | 460 | 444TS | | GT0089 | 444TSTDCD6060 | √ | 95.8 | 170 | 1739 | 40.83 | PW | A417A |
| | 1800 | 575 | 444T | | GT0152 | 444TTDCCD6030 | ¶ | 95.8 | 134 | 880 | 44.57 | | A417A |
| | 1200 | 460 | 447T | | GT0053A | 447TTDCCD6077 | √ | 95.4 | 175 | 2021 | 49.69 | PW | A417A |
| 200 | 3600 | 460 | 444TS | | GT0054A | 444TSTDCD6003 | √ | 95.0 | 197 | 1947 | 40.83 | PW | A416A |
| | 1800 | 460 | 445T | | GT0055A | 445TTDCCD6060 | √ | 95.8 | 203 | 2017 | 44.57 | PW | A417A |
| | 1800 | 460 | 445T | | GT0055A-P | 445TTDCCD6061 | | 95.8 | 203 | 2017 | 44.57 | PW | A417A |
| | 1800 | 460 | 445TS | | GT0090 | 445TSTDCD6060 | √ | 95.8 | 203 | 1958 | 40.83 | PW | A417A |
| | 1800 | 575 | 445TS | | GT0155 | 445TTDCCD6030 | ¶ | 95.8 | 178 | 915 | 40.83 | | A417A |
| | 1200 | 460 | 449T | | GT00016 | 449TTDCCD6077 | √ | 95.4 | 230 | 2227 | 49.69 | RB, PW | N/A |
| 250 | 1200 | 460 | 449T | | GT0056A | 449TTDCCD6076 | √ | 95.4 | 210 | 2227 | 49.69 | PW | A417A |
| | 3600 | 460 | 445TS | | GT00017 | 445TSTDCD6001 | √ | 95.0 | 262 | 1787 | 40.83 | YD | A416A |
| | 1800 | 460 | 447T | | GT00018 | 447TTDCCD6026 | √ | 95.8 | 272 | 2241 | 49.69 | YD | A417A |
| | 1800 | 460 | 447T | | GT00020 | 447TTDCCD6033 | √ | 95.8 | 272 | 2238 | 49.69 | RB, YD | N/A |
| | 1200 | 460 | 447T | | GT00021 | 447TTDCCD6086 | √ | 95.8 | 280 | 2450 | 49.69 | YD | A417A |
| | 1200 | 460 | 447T | | GT00022 | 447TTDCCD6076 | | 95.8 | 280 | 2450 | 49.69 | RB, YD | N/A |
| 300 | 3600 | 460 | 447TS | | GT00023 | 447TSTDCD6002 | √ | 95.4 | 323 | 2200 | 45.95 | YD | A416A |
| | 1800 | 460 | 447T | | GT00024 | 447TTDCCD6060 | √ | 95.8 | 338 | 2508 | 49.69 | YD | A417A |
| | 1800 | 460 | 447TS | | GT00025 | 447TSTDCD6060 | √ | 95.8 | 338 | 2046 | 45.95 | YD | A417A |
| | 1200 | 460 | 449T | | GT00027 | 449TTDCCD6086 | √ | 95.8 | 354 | 2462 | 49.69 | YD | A417A |
| 350 | 3600 | 460 | 447TS | | GT00029 | 447TSTDCD6003 | ¶ | 95.4 | 387 | 2341 | 45.95 | YD | A416A |
| | 1800 | 460 | 447TS | | GT00032 | 447TSTDCD6040 | √ | 95.8 | 409 | 2510 | 45.95 | YD | A417A |
| 400 | 3600 | 460 | 449TS | | GT00036 | 449TSTDCD6001 | √ | 95.8 | 453 | 2384 | 45.95 | YD | A416A |
| | 1800 | 460 | 449T | | GT00037 | 449TTDCCD6060 | √ | 95.8 | 478 | 2574 | 49.69 | YD | A417A |
| | 1800 | 460 | 449TS | | GT00039 | 449TSTDCD6060 | √ | 95.8 | 478 | 2550 | 45.95 | YD | A417A |
| 450 | 3600 | 460 | 449TS | | GT00041 | 449TSTDCD6002 | √ | 96.5 | 520 | 2384 | 45.95 | YD | A416A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, DRIPPROOF



C-FACE RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|--------|-----------------|---------------|-------|-----------|----------------|------|----------|------------|
| 3 | 1800 | 230/460 | 182TC | GT0210 | 182TTDBD6028 | √ | 89.5 | 8.6-8/4 | 80 | 13.00 | |
| | 1800 | 208-230/460 | 182TC | GT0210-P | 182TTDBD6069 | | 89.5 | 8.6-8/4 | 70 | 13.00 | |
| 5 | 3600 | 230/460 | 182TC | GT0212 | 182TTDBD6003 | √ | 86.5 | 13.2/6.6 | 65 | 13.00 | |
| | 1800 | 230/460 | 184TC | GT0213 | 184TTDBD6028 | √ | 89.5 | 13.2/6.6 | 98 | 14.00 | |
| | 1800 | 230/460 | 184TC | GT0213-P | 184TTDBD6069 | | 89.5 | 13.2/6.6 | 92 | 14.00 | |
| 7 1/2 | 3600 | 230/460 | 184TC | GT0215 | 184TTDBD6003 | √ | 88.5 | 18.4/9.2 | 77 | 14.00 | |
| | 1800 | 208-230/460 | 213TC | GT0216-P | 213TTDBD6069 | ¶ | 91.0 | 21.2-19.8/9.9 | 135 | 19.04 | |
| 10 | 1800 | 230/460 | 213TC | GT0216 | 213TTDBD6028 | √ | 91.0 | 19.8/9.9 | 135 | 19.04 | |
| | 3600 | 230/460 | 213TC | GT0218 | 213TTDBD6003 | √ | 89.5 | 24.2/12.1 | 123 | 19.04 | |
| | 1800 | 230/460 | 215TC | GT0219 | 215TTDBD6028 | √ | 91.7 | 25.4/12.7 | 151 | 19.04 | |
| 15 | 1800 | 208-230/460 | 215TC | GT0219-P | 215TTDBD6069 | ¶ | 91.7 | 27.8-25.4/12.7 | 149 | 19.04 | |
| | 3600 | 230/460 | 215TC | GT0221 | 215TTDBD6003 | √ | 90.2 | 36.0/18.0 | 131 | 19.04 | |
| | 1800 | 230/460 | 254TC | GT0259 | 254TTDBD6028 | √ | 93.0 | 37.5/18.8 | 284 | 23.14 | |
| 20 | 1800 | 208-230/460 | 254TC | GT0259-P | 254TTDBD6069 | ¶ | 93.0 | 40.5-37.5/18.8 | 0 | 23.14 | |
| | 3600 | 208-230/460 | 254TC | GT0261 | 254TTDBD6003 | | 91.0 | 51.5-48.0/24.0 | 315 | 23.14 | |
| | 1800 | 230/460 | 256TC | GT0262 | 256TTDBD6028 | √ | 93.0 | 48.5/24.3 | 254 | 24.72 | |
| 25 | 1800 | 208-230/460 | 256TC | GT0262-P | 256TTDBD6069 | | 93.0 | 53.0-48.5/24.3 | 254 | 24.72 | |
| | 3600 | 230/460 | 256TC | GT0264 | 256TTDBD6003 | √ | 91.7 | 59.5/29.7 | 275 | 24.72 | |
| | 1800 | 230/460 | 284TC | GT0265-P | 284TTDBD6069 | ¶ | 93.6 | 63.0/31.5 | 290 | 25.71 | YD |
| 30 | 1800 | 230/460 | 284TC | GT0265 | 284TTDBD6028 | ¶ | 93.6 | 63.0/31.5 | 400 | 25.71 | YD |
| | 1800 | 230/460 | 284TSC | GT0266 | 284TSTDBD6028 | | 93.6 | 63.0/31.5 | 329 | 24.34 | YD |
| | 3600 | 230/460 | 284TSC | GT0269 | 284TSTDBD6003 | | 91.7 | 71.5/35.5 | 350 | 24.34 | YD |
| 40 | 1800 | 230/460 | 286TC | GT0267 | 286TTDBD6028 | ¶ | 94.1 | 73.0/36.5 | 365 | 27.09 | YD |
| | 1800 | 208-230/460 | 286TC | GT0267-P | 286TTDBD6069 | | 94.1 | 78.0-73.0/36.5 | 425 | 27.09 | YD |
| | 1800 | 230/460 | 286TSC | GT0270 | 286TSTDBD6028 | √ | 94.1 | 73.0/36.5 | 467 | 25.72 | YD |
| 50 | 3600 | 208-230/460 | 286TSC | GT0272 | 286TSTDBD6003 | | 92.4 | 102-93.0/46.5 | 425 | 25.72 | YD |
| | 1800 | 230/460 | 324TC | GT0273 | 324TTDBD6028 | ¶ | 94.1 | 95.5/47.5 | 455 | 28.55 | YD |
| | 1800 | 575 | 324TC | GT2173 | 324TTDBD6035 | | 94.1 | 38.0 | 455 | 28.55 | |
| 60 | 3600 | 208-230/460 | 324TSC | GT0276 | 324TSTDBD6003 | | 93.0 | 127-115/57.5 | 459 | 27.05 | YD |
| | 1800 | 230/460 | 326TC | GT0277 | 326TTDBD6028 | √ | 94.5 | 118/59.0 | 677 | 29.73 | YD |
| | 1800 | 230/460 | 326TSC | GT0278 | 326TSTDBD6028 | | 94.5 | 118/59.0 | 588 | 28.23 | YD |
| 75 | 1800 | 575 | 326TC | GT2177 | 326TTDBD6035 | | 94.5 | 47.0 | 610 | 29.73 | |
| | 3600 | 208-230/460 | 326TSC | GT0280 | 326TSTDBD6003 | | 93.6 | 151-136/68.0 | 523 | 28.23 | YD |
| | 1800 | 230/460 | 364TC | GT0281 | 364TTDBD6028 | √ | 95.0 | 138/69.0 | 792 | 31.69 | YD |
| 100 | 1800 | 230/460 | 364TSC | GT0282 | 364TSTDBD6028 | | 95.0 | 138/69.0 | 792 | 31.69 | YD |
| | 3600 | 208-230/460 | 364TSC | GT0283 | 364TSTDBD6003 | √ | 93.6 | 192-172/86.0 | 710 | 31.69 | YD |
| | 1800 | 230/460 | 365TC | GT0284 | 365TTDBD6028 | √ | 95.0 | 171/85.5 | 781 | 33.27 | YD |
| 125 | 1800 | 230/460 | 365TSC | GT0285 | 365TSTDBD6028 | √ | 95.0 | 171/85.5 | 862 | 33.27 | YD |
| | 3600 | 208-230/460 | 365TSC | GT0286 | 365TSTDBD6003 | | 93.6 | 250-228/114 | 725 | 33.27 | YD |
| | 1800 | 230/460 | 404TC | GT0246 | 404TTDCD6028 | √ | 95.4 | 250-228/114 | 1219 | 37.20 | YD |
| 150 | 1800 | 230/460 | 404TSC | GT0293 | 404TSTDCD6028 | √ | 95.4 | 230/115 | 1340 | 33.86 | YD |
| | 3600 | 460 | 404TSC | GT0248 | 404TSTDCD6003 | √ | 94.1 | 139 | 1065 | 33.86 | PW |
| | 1800 | 460 | 405TSC | GT0288 | 405TSTDCD6028 | √ | 95.4 | 142 | 780 | 35.44 | PW |
| 200 | 3600 | 460 | 405TSC | GT0251 | 405TSTDCD6003 | √ | 94.1 | 165 | 1149 | 35.44 | PW |
| | 1800 | 460 | 444TSC | GT0289 | 444TSTDCD6028 | √ | 95.8 | 168 | 1996 | 40.63 | PW |
| 200 | 1800 | 460 | 445TSC | GT0290 | 445TSTDCD6028 | | 95.8 | 223 | 2200 | 40.63 | PW |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, DRIPPROOF

C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|--------|---------------|---------------|-------|-----------|----------------|-----|----------|------------|
| 3 | 1800 | 230/460 | 182TC | GT0310 | 182TTDBD6029 | √ | 89.5 | 8.0/4.0 | 68 | 13.0 | |
| 5 | 3600 | 230/460 | 182TC | GT0312 | 182TTDBD6004 | √ | 86.5 | 13.2/6.6 | 60 | 13.0 | |
| | 1800 | 230/460 | 184TC | GT0313 | 184TTDBD6029 | √ | 89.5 | 13.2/6.6 | 120 | 14.00 | |
| 7 1/2 | 3600 | 230/460 | 184TC | GT0315 | 184TTDBD6004 | √ | 88.5 | 18.4/9.2 | 120 | 14.00 | |
| | 1800 | 230/460 | 213TC | GT0316 | 213TTDBD6029 | | 91 | 19.8/9.9 | 133 | 19.04 | |
| | 1200 | 230/460 | 254TC | GT0317 | 254TTDBD6081 | | 90.2 | 20.2/10.1 | 230 | 22.96 | |
| 10 | 3600 | 230/460 | 213TC | GT0318 | 213TTDBD6004 | √ | 89.5 | 24.2/12.1 | 113 | 19.04 | |
| | 1800 | 230/460 | 215TC | GT0319 | 215TTDBD6034 | | 91.7 | 25.2/12.6 | 144 | 19.95 | |
| | 1200 | 208-230/460 | 256TC | GT0320 | 256TTDBD6081 | | 91.7 | 27.8-25.6/12.8 | 285 | 24.54 | |
| 15 | 3600 | 230/460 | 215TC | GT0321 | 215TTDBD6004 | | 90.2 | 36.0/18.0 | 127 | 19.04 | |
| | 1800 | 208-230/460 | 254TC | GT0359 | 254TTDBD6029 | √ | 93 | 40.5-37.5/18.8 | 127 | 19.95 | |
| | 1200 | 230/460 | 284TC | GT0360 | 284TTDBD6081 | ¶ | 91.7 | 41.0/20.6 | 127 | 25.61 | YD |
| 20 | 3600 | 230/460 | 254TC | GT0361 | 254TTDBD6004 | √ | 91 | 48.0/24.0 | 296 | 22.64 | |
| | 1800 | 230/460 | 256TC | GT0362 | 256TTDBD6029 | √ | 93 | 48.5/24.3 | 256 | 22.64 | |
| 25 | 3600 | 208-230/460 | 256TC | GT0364 | 256TTDBD6004 | √ | 91.7 | 64.0-59.5/29.7 | 298 | 25.71 | |
| | 1800 | 208-230/460 | 284TC | GT0365 | 284TTDBD6029 | √ | 93.6 | 68.0-63.0/31.5 | 329 | 25.71 | YD |
| 30 | 3600 | 230/460 | 284TSC | GT0369 | 284TSTDBD6004 | √ | 91.7 | 71.5/35.5 | 412 | 24.34 | YD |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

GLOBETROTTER® TOTALLY ENCLOSED MOTORS

THREE-PHASE, CAST IRON, GENERAL PURPOSE

For reliable performance in heavy-duty industrial applications, nothing beats the Marathon® Globetrotter. With their cast iron construction and 1.15 service factor, they are ideal to get the Job done.

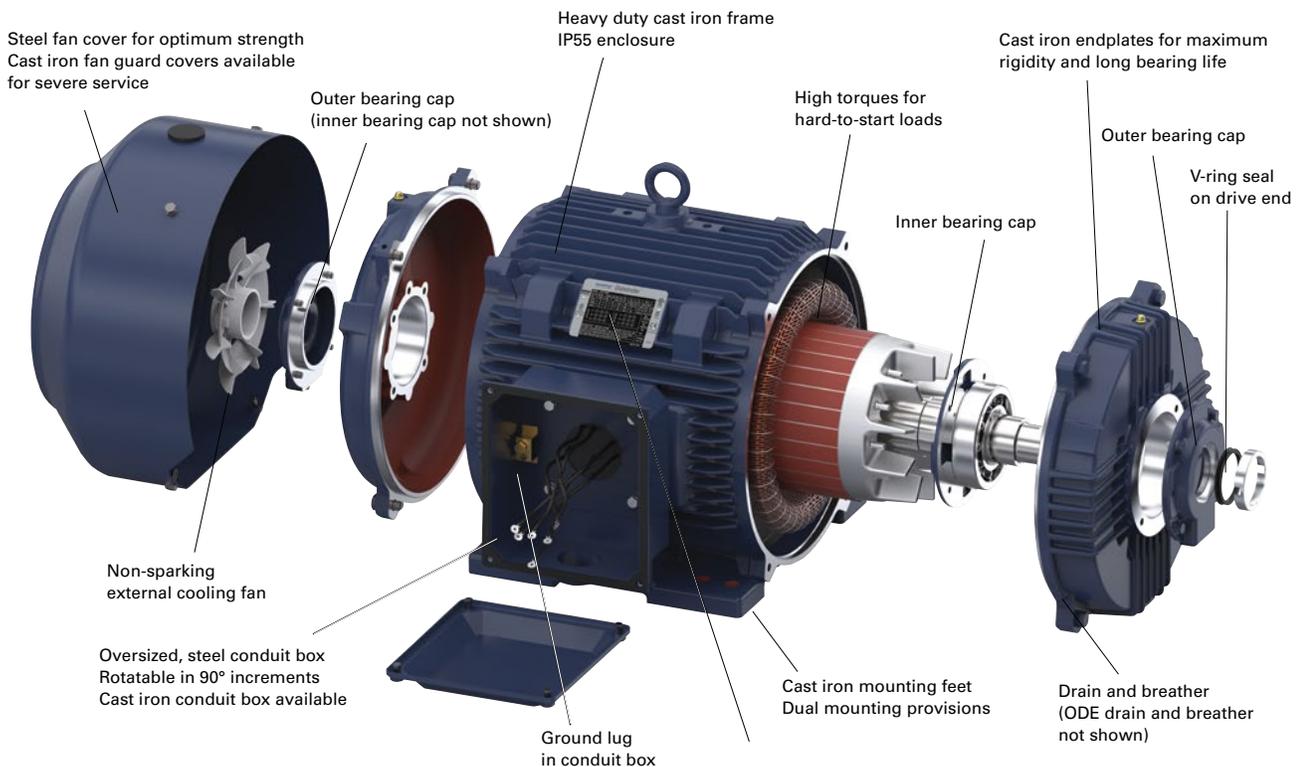
The totally enclosed cast iron Globetrotter motors include:

- IP55 protection
- Division 2/ Zone 2, Class I (gases), Groups A, B, C, D
- Dual frame mounting holes
- F1 to F2 mounting capability

Additional Features

- Enhanced quality from a dependable product
- Ability to stock interchangeable parts and modifications

| marathon™ Globetrotter™ | | | | | | | | | | |
|---|-------------|-------|------|--------------|------|-----------|-----------|----------------|-------|------|
| MODEL | 254TFFC0001 | | | | | | | | | |
| CAT. NO. | GT1021A | FRAME | 254T | ENCL. TFC | PH | 3 | IP | 55 | IC | 41 |
| DES. B. | CODE | G | INSL | F7 | RISE | CLB | SF | 1.15 | AMB | 40°C |
| ALT 10000 M / 3300 FT | | | | | | | | | | |
| VOLTS | Hz | HP | KW | Cos φ | RPM | NOM. EFF. | FL. AMPS | DUTY | CONT. | |
| 230/480 | 60 | 15 | 11.2 | 0.87 | 3545 | 91 | 35.5/17.8 | TYPE TFC | | |
| 190/380 | 50 | 10 | 7.5 | 0.85 | 2955 | 90.2 | 29.6/14.6 | SHAFT END | | |
| BRG 6309-22/C3 | | | | | | | | | | |
| NEMA Premium | | | | | | | | | | |
| LOW VOLTAGE | | | | | | | | | | |
| L1 | T1 | T6 | T7 | HIGH VOLTAGE | | | | | | |
| L2 | T2 | T4 | T8 | L1 | T1 | T6 | T8 | OPP. END | | |
| L3 | T3 | T5 | T9 | L2 | T2 | T4 | T7 | BRG 6309-22/C3 | | |
| L3 | T3 | T5 | T9 | L3 | T3 | T5 | T9 | YOM | | |
| SUITABLE FOR 208V 60HZ 1.0SF 3ØA P/M VFD 20-1VT 2-1CT 1.0SF | | | | | | | | | | |
| UL LISTED / UL CERTIFIED FOR CANADA - CLASS I, GROUP A, B, C, D, DIV 2 / ZONE 2 | | | | | | | | | | |
| GROUP IIA, IIB, IIC, TEMPERATURE CODE T3 @ 1.0 SF OR T2B @ 1.15 SF ON | | | | | | | | | | |
| SINE - WAVE POWER OR T2D @ 1.0 SF ON P/M TYPE VFD POWER | | | | | | | | | | |
| Wt (lbs/kg) 393 / 178 | | | | | | | | | | |
| INVERTER RATED | | | | | | | | | | |
| ASSEMBLED IN MEXICO | | | | | | | | | | |



GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- NEMA Premium models are in compliance with EISA 2007
- Cast iron frame material, as noted
- Rolled steel C-face models are Hazardous Duty® Division 2
- Hazardous Duty Division 2 UL certification nameplate, as noted
- Division 2 / Zone 2 Class 1 (gases), Groups A, B, C, D
- IP55 enclosure on cast iron frames, as noted
- Inverter duty 10:1 variable torque and 10:1 constant torque, 1.0 SF
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Meets temperature code T2B
- Class F Insulation
- Standard assembly F1, reversible to F2 assembly
- For C-Face, D-Flange, or cast iron upgrade kits, see accessory section
- UL®* Recognized, CSA®* certified, CE®* mark
- Three year warranty



RIGID BASE

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-------|------|---------|-------|------|------------------|---------------|--------------|-----------|-------------|-----|----------|------------|-------------|
| 1 | 900 | 230/460 | 182T | Y | GT10101 | 182TTFCD6101 | | 75.5 | 4.0/2.0 | 76 | 15.08 | 75 | A420 |
| | 1200 | 230/460 | 182T | Y | GT1005A | 182TTFCD6076 | √ | 87.5 | 4.6/2.3 | 93 | 15.08 | 75 | A420 |
| | 1200 | 230/460 | 182T | Y | GT10102 | 182TTFCD6101 | | 87.5 | 4.6/2.3 | 92 | 12.68 | 75, N | A420 |
| | 1200 | 230/460 | 182T | N | GT1505 | 182TTFBD6080 | √ | 87.5 | 4.6/2.3 | 80 | 15.10 | 75 | A401 |
| | 1200 | 575 | 182T | Y | GT1105A | 182TTFCD6080 | ¶ | 87.5 | 1.8 | 93 | 15.08 | 75 | A420 |
| | 900 | 230/460 | 184T | Y | GT10103 | 184TTFCD6101 | √ | 78.5 | 5.2/2.6 | 105 | 16.08 | 75 | A420 |
| 1 1/2 | 900 | 230/460 | 184T | N | GT15103 | 184TTFBD6101 | ¶ | 78.5 | 5.0/2.5 | 70 | 16.10 | 75 | A401 |
| | 1200 | 230/460 | 184T | Y | GT1008A | 184TTFCD6076 | √ | 88.5 | 6.2/3.1 | 110 | 16.08 | 75 | A420 |
| | 1200 | 230/460 | 184T | N | GT1508 | 184TTFBD6080 | ¶ | 88.5 | 6.2/3.1 | 88 | 16.10 | 75 | A401 |
| | 1200 | 575 | 184T | Y | GT1108A | 184TTFCD6080 | ¶ | 88.5 | 2.5 | 86 | 16.08 | 75 | A420 |
| | 900 | 230/460 | 213T | Y | GT10105 | 213TTFCD6101 | | 84.0 | 6.4/3.2 | 133 | 18.53 | 75 | A421 |
| | 3 | 3600 | 200 | 182T | N | GT1859 | 182TTFBD6000 | | 86.5 | 9.2 | 73 | 15.10 | 75 |
| 3600 | | 230/460 | 182T | Y | GT1009A | 182TTFCD6001 | √ | 86.5 | 8.0/4.0 | 79 | 15.08 | 75, A | A420 |
| 3600 | | 230/460 | 182T | N | GT1509 | 182TTFBD6002 | √ | 86.5 | 8.0/4.0 | 60 | 15.10 | 75 | A401 |
| 3600 | | 575 | 182T | Y | GT1109A | 182TTFCD6005 | ¶ | 86.5 | 3.2 | 79 | 15.08 | 75 | A420 |
| 1800 | | 200 | 182T | N | GT1860 | 182TTFBD6039 | ¶ | 89.5 | 9.6 | 69 | 15.10 | 75 | A401 |
| 1800 | | 200/400 | 182T | Y | GT1810 | 182TTFCD6039 | √ | 89.5 | 9.5/4.7 | 102 | 15.08 | 75 | A420 |
| 1800 | | 230/460 | 182T | Y | GT1010A | 182TTFCD6026 | √ | 89.5 | 8.6-8.3/4.1 | 94 | 15.08 | 75 | A420 |
| 1800 | | 230/460 | 182T | Y | GT1010A-P | 182TTFCD6070 | √ | 89.5 | 8.3/4.1 | 98 | 15.08 | P, 75 | A420 |
| 1800 | | 230/460 | 182T | N | GT1510 | 182TTFBD6027 | √ | 89.5 | 8.3/4.1 | 80 | 15.10 | 75 | A401 |
| 1800 | | 230/460 | 182T | N | GT1510-P | 182TTFBD6070 | √ | 89.5 | 8.3/4.1 | 77 | 15.10 | P, 75 | A401 |
| 1800 | | 575 | 182T | Y | GT1110A | 182TTFCD6030 | √ | 89.5 | 3.3 | 86 | 15.08 | 75 | A420 |
| 1200 | | 230/460 | 213T | Y | GT1011A | 213TTFCD6076 | √ | 89.5 | 8.6/4.3 | 157 | 18.53 | 75 | A421 |
| 1200 | | 230/460 | 213T | N | GT1511 | 213TTFBD6080 | √ | 89.5 | 8.6/4.3 | 149 | 18.35 | 75 | A171 |
| 1200 | | 575 | 213T | Y | GT1111A | 213TTFCD6080 | √ | 89.5 | 3.4 | 130 | 18.53 | 75 | A421 |
| 900 | | 230/460 | 215T | Y | GT10107 | 215TTFCD6101 | √ | 85.5 | 9.2/4.6 | 200 | 20.03 | 75 | A421 |
| 5 | 3600 | 200 | 184T | N | GT1862 | 184TTFBD6000 | ¶ | 88.5 | 14.3 | 78 | 16.10 | 75 | A401 |
| | 3600 | 230/460 | 184T | Y | GT1012A | 184TTFCD6001 | √ | 88.5 | 12.4/6.2 | 94 | 16.08 | 75, A | A420 |
| | 3600 | 230/460 | 184T | N | GT1512 | 184TTFBD6002 | √ | 88.5 | 12.4/6.2 | 74 | 16.10 | 75 | A401 |
| | 3600 | 575 | 184T | Y | GT1112A | 184TTFCD6005 | √ | 88.5 | 5.0 | 82 | 16.08 | 75 | A420 |
| | 1800 | 200 | 184T | N | GT1863 | 184TTFBD6039 | √ | 89.5 | 15.2 | 93 | 16.10 | 75 | A401 |
| | 1800 | 200/400 | 184T | Y | GT1813 | 184TTFCD6039 | ¶ | 89.5 | 15.2/7.6 | 117 | 16.08 | 75 | A420 |
| | 1800 | 230/460 | 184T | Y | GT1013A | 184TTFCD6026 | √ | 89.5 | 13.2/6.6 | 99 | 16.08 | 75, A | A420 |
| | 1800 | 230/460 | 184T | Y | GT1013A-P | 184TTFCD6070 | √ | 89.5 | 13.2/6.6 | 115 | 16.08 | P, 75 | A420 |
| | 1800 | 230/460 | 184T | N | GT1513 | 184TTFBD6027 | √ | 89.5 | 13.2/6.6 | 92 | 16.10 | 75 | A401 |
| | 1800 | 230/460 | 184T | N | GT1513-P | 184TTFBD6070 | | 89.5 | 13.2/6.6 | 103 | 16.10 | P, 75 | A401 |
| | 1800 | 575 | 184T | Y | GT1113A | 184TTFCD6030 | √ | 89.5 | 5.3 | 99 | 16.08 | 75 | A420 |
| | 1200 | 230/460 | 215T | Y | GT1014A | 215TTFCD6076 | √ | 89.5 | 13.6/6.8 | 146 | 20.03 | 75 | A421 |
| | 1200 | 230*460 | 215T | y | GT1014A-P | 215TTFCD6077 | √ | 89.5 | 13.6/6.8 | 146 | 20.03 | 75 | A421 |

√ Available ¶ Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

Continued on next page.

*See back cover page for attribution.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-------|---------|---------|-------|------------------|------------------|---------------|--------------|----------------|----------------|-------|----------|------------|-------------|
| 5 | 1200 | 230/460 | 215T | N | GT1514 | 215TTFBD6080 | √ | 89.5 | 13.6/6.8 | 170 | 19.85 | 75 | A171 |
| | 1200 | 575 | 215T | Y | GT1114A | 215TTFCD6080 | ¶ | 89.5 | 5.5 | 146 | 20.03 | 75 | A421 |
| | 900 | 230/460 | 254T | Y | GT10109 | 254TTFCD6101 | | 86.5 | 14.2/7.1 | 250 | 24.15 | 75 | A173A |
| 7 1/2 | 3600 | 200 | 213T | N | GT1865 | 213TTFBD6000 | √ | 89.5 | 21.2 | 150 | 18.35 | 75 | A171 |
| | 3600 | 230/460 | 213T | N | GT1515 | 213TTFBD6002 | √ | 89.5 | 18.4/9.2 | 100 | 18.35 | 75 | A171 |
| | 3600 | 230/460 | 213T | Y | GT1015A | 213TTFCD6001 | √ | 89.5 | 18.4/9.2 | 135 | 18.53 | 75, A | A421 |
| | 3600 | 575 | 213T | Y | GT1115A | 213TTFCD6005 | ¶ | 89.5 | 7.4 | 135 | 18.53 | 75 | A421 |
| | 1800 | 200 | 213T | Y | GT1816 | 213TTFCD6039 | ¶ | 91.7 | 21.9 | 194 | 18.53 | 75 | A421 |
| | 1800 | 200 | 213T | N | GT1866 | 213TTFBD6039 | √ | 91.7 | 21.9 | 150 | 18.35 | 75 | A171 |
| | 1800 | 230/460 | 213T | Y | GT1016A | 213TTFCD6026 | √ | 91.7 | 20.6-19.5/9.5 | 171 | 18.53 | 75 | A421 |
| | 1800 | 230/460 | 213T | Y | GT1016A-P | 213TTFCD6070 | √ | 91.7 | 19.0/9.5 | 206 | 18.53 | P, 75 | A421 |
| | 1800 | 230/460 | 213T | N | GT1516 | 213TTFBD6027 | √ | 91.7 | 19.0/9.5 | 150 | 18.35 | 75 | A171 |
| | 1800 | 230/460 | 213T | N | GT1516-P | 213TTFBD6070 | √ | 93.3 | 19/9.5 | 150 | 18.35 | P, 75 | A171 |
| | 1800 | 575 | 213T | Y | GT1116A | 213TTFCD6030 | √ | 91.7 | 7.6 | 152 | 18.53 | 75 | A421 |
| | 1200 | 230/460 | 254T | Y | GT1017A | 254TTFCD6076 | √ | 91.0 | 19.8/9.9 | 247 | 24.15 | 75 | A173A |
| | 1200 | 575 | 254T | Y | GT1117A | 254TTFCD6080 | ¶ | 91.0 | 7.9 | 247 | 24.15 | 75 | A173A |
| | 900 | 230/460 | 256T | Y | GT10111 | 256TTFCD6101 | √ | 86.5 | 21.0/10.5 | 250 | 25.89 | 75 | A173A |
| | 10 | 3600 | 200 | 215T | N | GT1868 | 215TTFBD6000 | | 90.2 | 27.2 | 162 | 19.85 | 75 |
| 3600 | | 230/460 | 215T | Y | GT1018A | 215TTFCD6001 | √ | 90.2 | 23.6/11.8 | 152 | 20.03 | 75 | A421 |
| 3600 | | 230/460 | 215T | N | GT1518 | 215TTFBD6002 | √ | 90.2 | 23.6/11.8 | 200 | 19.85 | 75 | A171 |
| 3600 | | 575 | 215T | Y | GT1118A | 215TTFCD6005 | ¶ | 90.2 | 9.5 | 152 | 18.53 | 75 | A421 |
| 1800 | | 200 | 215T | Y | GT1819 | 215TTFCD6039 | | 91.7 | 28.8 | 183 | 20.03 | 75 | A421 |
| 1800 | | 200 | 215T | N | GT1869 | 215TTFBD6039 | | 91.7 | 28.8 | 162 | 19.85 | 75 | A171 |
| 1800 | | 230/460 | 215T | Y | GT1019A | 215TTFCD6026 | √ | 91.7 | 27.3-25.0/12.5 | 165 | 20.30 | 75 | A421 |
| 1800 | | 230/460 | 215T | Y | GT1019A-P | 215TTFCD6070 | √ | 91.7 | 27.3-25.0/12.5 | 192 | 20.03 | P, 75 | A421 |
| 1800 | | 230/460 | 215T | N | GT1519 | 215TTFBD6027 | √ | 91.7 | 27.3-25.0/12.5 | 162 | 19.85 | 75 | A171 |
| 1800 | | 230/460 | 215T | N | GT1519-P | 215TTFBD6070 | √ | 91.7 | 27.3-25.0/12.5 | 162 | 19.85 | P, 75 | A171 |
| 1800 | | 575 | 215T | Y | GT1119A | 215TTFCD6030 | √ | 91.7 | 10.0 | 148 | 20.03 | 75 | A421 |
| 1200 | | 230/460 | 256T | Y | GT1020A | 256TTFCD6076 | √ | 91.0 | 25.8/12.9 | 265 | 25.89 | 75 | A173A |
| 1200 | | 230/460 | 256T | Y | GT1020A-P | 256TTFCD6077 | ¶ | 91.0 | 25.8/12.9 | 265 | 25.89 | 75 | A173A |
| 1200 | | 575 | 256T | Y | GT1120A | 256TTFCD6080 | ¶ | 91.0 | 10.3 | 324 | 25.89 | 75 | A173A |
| 900 | | 230/460 | 284T | Y | GT10113 | 284TTFCD6101 | ¶ | 89.5 | 27.6/13.8 | 425 | 26.65 | 75 | A175A |
| 15 | 3600 | 230/460 | 215T | Y | GT10114 | 215TTFCD16001 | √ | 91.0 | 35.5/17.8 | 150 | 20.03 | 75 | A421 |
| | 3600 | 230/460 | 254T | Y | GT1021A | 254TTFCD6001 | √ | 91.0 | 35.5/17.8 | 301 | 24.15 | 75 | A173A |
| | 3600 | 575 | 254T | Y | GT1121A | 254TTFCD6005 | ¶ | 91.0 | 14.3 | 293 | 24.15 | 75 | A173A |
| | 1800 | 200 | 254T | Y | GT1822 | 254TTFCD6039 | ¶ | 92.4 | 43.5 | 229 | 24.15 | 75 | A173A |
| | 1800 | 230/460 | 254T | Y | GT1022A | 254TTFCD6026 | √ | 92.4 | 40.0-37.5/18.8 | 271 | 24.15 | 75 | A173A |
| | 1800 | 230/460 | 254T | Y | GT1022A-P | 254TTFCD6070 | √ | 92.4 | 37.5/18.8 | 318 | 24.15 | P, 75 | A173A |
| | 1800 | 575 | 254T | Y | GT1122A | 254TTFCD6030 | √ | 92.4 | 15.1 | 260 | 24.15 | 75 | A173A |
| | 1200 | 230/460 | 284T | Y | GT1023A | 284TTFCD6076 | √ | 91.7 | 40.0/20.0 | 412 | 26.65 | YD | A175A |
| | 1200 | 230/460 | 284T | Y | GT1023A-P | 284TTFCD6079 | ¶ | 91.7 | 40.0/20.0 | 412 | 26.65 | YD | A175A |
| | 1200 | 575 | 284T | Y | GT1123A | 284TTFCD6080 | ¶ | 91.7 | 16.0 | 525 | 26.65 | | A175A |
| | 900 | 230/460 | 286T | Y | GT10115 | 286TTFCD6106 | √ | 89.5 | 40.0/20.0 | 530 | 28.14 | | A175A |
| | 3600 | 230/460 | 256T | Y | GT1024A | 256TTFCD6001 | √ | 91.0 | 47.5/23.7 | 265 | 25.89 | 75 | A173A |
| | 3600 | 575 | 256T | Y | GT1124A | 256TTFCD6005 | ¶ | 91.0 | 19.0 | 322 | 25.89 | 75 | A173A |
| | 1800 | 200/400 | 256T | Y | GT1825 | 256TTFCD6039 | √ | 93.0 | 55.5/27.8 | 335 | 25.89 | 75 | A173A |
| | 1800 | 230/460 | 256T | Y | GT1025A | 256TTFCD6026 | √ | 93.0 | 53.0-48.5/24.2 | 315 | 25.89 | 75 | A173A |
| 1800 | 230/460 | 256T | Y | GT1025A-P | 256TTFCD6070 | √ | 93.0 | 48.5/24.2 | 361 | 25.89 | P, 75 | A173A | |
| 1800 | 575 | 256T | Y | GT1125A | 256TTFCD6030 | √ | 93.0 | 19.4 | 335 | 25.89 | 75 | A173A | |
| 1200 | 230/460 | 286T | Y | GT1026A | 286TTFCD6076 | √ | 91.7 | 56.0-52.0/26.0 | 386 | 28.14 | YD | A175A | |
| 1200 | 230/460 | 286T | Y | GT1026A-P | 286TTFCD6077 | ¶ | 91.7 | 56.0-52.0/26.0 | 386 | 28.14 | YD | A175A | |
| 1200 | 575 | 286T | Y | GT1126A | 286TTFCD6080 | ¶ | 91.7 | 20.8 | 549 | 28.14 | | A175A | |
| 900 | 230/460 | 324T | Y | GT10117 | 324TTFCD6101 | ¶ | 90.2 | 54.0/27.0 | 607 | 29.69 | | A177A | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

Continued on next page.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|------|------|---------|---------|-------|------------------|----------------|---------------|-----------|----------------|-----------|----------|------------|-------------|
| 25 | 3600 | 230/460 | 284TS | Y | GT1027A | 284TSTFCD6001 | √ | 91.7 | 60.0/30.0 | 386 | 25.28 | YD | A175A |
| | 3600 | 575 | 284TS | Y | GT1127A | 284TSTFCD6005 | ¶ | 91.7 | 24.0 | 500 | 25.28 | | A175A |
| | 1800 | 230/460 | 284T | Y | GT1028A | 284TTFCD6026 | √ | 93.6 | 65.0-60.0/30.0 | 399 | 26.65 | YD | A175A |
| | 1800 | 230/460 | 284T | Y | GT1028A-P | 284TTFCD6070 | √ | 93.6 | 60.0/30.0 | 492 | 26.65 | P, YD | A175A |
| | 1800 | 230/460 | 284TS | Y | GT1057 | 284TSTFCD6026 | ¶ | 93.6 | 60.0/30.0 | 186 | 25.28 | YD | A175A |
| | 1800 | 575 | 284T | Y | GT1128A | 284TTFCD6030 | √ | 93.6 | 24.0 | 395 | 26.65 | | A175A |
| | 1200 | 230/460 | 324T | Y | GT1029A | 324TTFCD6076 | √ | 93.0 | 64.0/32.0 | 516 | 29.69 | YD | A177A |
| | 1200 | 230/460 | 324T | Y | GT1029A-P | 324TTFCD6087 | ¶ | 93.0 | 64.0/32.0 | 516 | 29.69 | YD | A177A |
| | 1200 | 575 | 324T | Y | GT1129A | 324TTFCD6080 | ¶ | 93.0 | 25.6 | 516 | 29.69 | | A177A |
| 30 | 3600 | 230/460 | 286TS | Y | GT1030A | 286TSTFCD6001 | √ | 91.7 | 71.0/35.5 | 353 | 26.77 | YD | A175A |
| | 3600 | 575 | 286TS | Y | GT1130A | 286TSTFCD6005 | ¶ | 91.7 | 28.5 | 432 | 26.77 | | A175A |
| | 1800 | 230/460 | 286T | Y | GT1031A | 286TTFCD6026 | √ | 93.6 | 78.0-71.0/35.5 | 437 | 28.14 | YD | A175A |
| | 1800 | 230/460 | 286T | Y | GT1031A-P | 286TTFCD6070 | √ | 93.6 | 71.0/35.5 | 407 | 28.14 | P, YD | A175A |
| | 1800 | 230/460 | 286TS | Y | GT1058 | 286TSTFCD6026 | ¶ | 93.6 | 71.0/35.5 | 410 | 26.77 | YD | A175A |
| | 1800 | 575 | 286T | Y | GT1131A | 286TTFCD6030 | √ | 93.6 | 28.4 | 487 | 28.14 | | A175A |
| | 1200 | 230/460 | 326T | Y | GT1032A | 326TTFCD6076 | √ | 93.0 | 76.0/38.0 | 1136 | 31.19 | YD | A177A |
| | 1200 | 575 | 326T | Y | GT1132A | 326TTFCD6080 | ¶ | 93.0 | 30.5 | 670 | 31.19 | | A177A |
| | 40 | 3600 | 230/460 | 324TS | Y | GT1033A | 324TSTFCD6001 | √ | 92.4 | 92.0/46.0 | 512 | 28.19 | YD |
| 3600 | | 575 | 324TS | Y | GT1133A | 324TSTFCD6005 | ¶ | 92.4 | 37.0 | 690 | 28.19 | | A177A |
| 1800 | | 230/460 | 324T | Y | GT1034A | 324TTFCD6026 | √ | 94.1 | 95.0/47.5 | 624 | 29.69 | YD | A177A |
| 1800 | | 230/460 | 324T | Y | GT1034A-P | 324TTFCD6070 | √ | 94.1 | 95.0/47.5 | 609 | 29.69 | P, YD | A177A |
| 1800 | | 230/460 | 324TS | Y | GT1059 | 324TSTFCD6026 | √ | 94.1 | 95.0/47.5 | 558 | 28.19 | YD | A177A |
| 1800 | | 575 | 324T | Y | GT1134A | 324TTFCD6030 | √ | 94.1 | 38.0 | 560 | 29.69 | | A177A |
| 1200 | | 230/460 | 364T | Y | GT1035A | 364TTFCD6086 | √ | 94.1 | 96.0/48.0 | 849 | 33.32 | YD | A179A |
| 1200 | | 575 | 364T | Y | GT1135A | 364TTFCD6080 | √ | 94.1 | 38.5 | 831 | 33.32 | | A179A |
| 50 | | 3600 | 230/460 | 326TS | Y | GT1036A | 326TSTFCD6001 | √ | 94.1 | 113/56.5 | 580 | 28.19 | YD |
| | 3600 | 575 | 326TS | Y | GT1136A | 326TSTFCD6005 | ¶ | 94.1 | 45.0 | 640 | 29.69 | | A177A |
| | 1800 | 230/460 | 326T | Y | GT1037A | 326TTFCD6026 | √ | 94.5 | 117/58.5 | 611 | 31.19 | YD | A177A |
| | 1800 | 230/460 | 326T | Y | GT1037A-P | 326TTFCD6070 | √ | 94.5 | 117/58.5 | 680 | 31.19 | P, YD | A177A |
| | 1800 | 230/460 | 326TS | Y | GT1060 | 326TSTFCD6026 | √ | 94.5 | 117/58.5 | 609 | 29.69 | YD | A177A |
| | 1800 | 575 | 326T | Y | GT1137A | 326TTFCD6030 | √ | 94.5 | 47.0 | 617 | 31.19 | | A177A |
| | 1200 | 230/460 | 365T | Y | GT1038A | 365TTFCD6086 | √ | 94.1 | 121/60.5 | 878 | 34.30 | YD | A179A |
| | 1200 | 575 | 365T | Y | GT1138A | 365TTFCD6080 | ¶ | 94.1 | 48.5 | 1100 | 34.30 | | A179A |
| | 60 | 3600 | 230/460 | 364TS | Y | GT1039A | 364TSTFCD6001 | √ | 93.6 | 135/67.5 | 897 | 31.19 | YD |
| 3600 | | 575 | 364TS | Y | GT1139A | 364TSTFCD6005 | ¶ | 93.6 | 54.0 | 776 | 31.19 | | A179A |
| 1800 | | 230/460 | 364T | Y | GT1040A | 364TTFCD6036 | √ | 95.0 | 136/68.0 | 831 | 33.32 | YD | A179A |
| 1800 | | 230/460 | 364T | Y | GT1040A-P | 364TTFCD6037 | ¶ | 95.0 | 136/68.0 | 831 | 33.32 | YD | A179A |
| 1800 | | 230/460 | 364TS | Y | GT1061 | 364TSTFCD6036 | √ | 95.0 | 136/68.0 | 807 | 31.19 | YD | A179A |
| 1800 | | 575 | 364T | Y | GT1140A | 364TTFCD6040 | √ | 95.0 | 54.5 | 807 | 33.32 | | A179A |
| 1200 | | 230/460 | 404T | Y | GT1041A | 404TTFCD6086 | √ | 94.5 | 143/71.5 | 1131 | 38.77 | YD | A425A |
| 1200 | | 575 | 404T | Y | GT1141A | 404TTFCD6080 | √ | 94.5 | 57.0 | 1217 | 38.77 | | A425A |
| 75 | | 3600 | 230/460 | 365TS | Y | GT1042A | 365TSTFCD6001 | √ | 94.5 | 168/84.0 | 950 | 32.17 | YD |
| | 3600 | 575 | 365TS | Y | GT1142A | 365TSTFCD6002 | √ | 94.5 | 67.0 | 933 | 32.17 | | A179A |
| | 1800 | 230/460 | 365T | Y | GT1043A | 365TTFCD6036 | √ | 95.5 | 170/85.0 | 915 | 34.30 | YD | A179A |
| | 1800 | 230/460 | 365T | Y | GT1043A-P | 365TTFCD6037 | ¶ | 95.5 | 170/85.0 | 915 | 34.30 | YD | A179A |
| | 1800 | 230/460 | 365TS | Y | GT1062 | 365TSTFCD6036 | √ | 95.5 | 170/85.0 | 908 | 32.17 | YD | A179A |
| | 1800 | 575 | 365T | Y | GT1143A | 365TTFCD6040 | √ | 95.5 | 68.0 | 922 | 34.30 | | A179A |
| | 1200 | 230/460 | 405T | Y | GT1044A | 405TTFCD6086 | √ | 94.5 | 178/89.0 | 1303 | 38.77 | YD | A425A |
| | 1800 | 230/460 | 365T | Y | GT1043A-P | 365TTFCD6037 | ¶ | 95.5 | 170/85.0 | 915 | 34.30 | YD | A179A |
| | 1200 | 575 | 405T | Y | GT1144A | 405TTFCD6080 | √ | 94.5 | 71.0 | 1200 | 38.77 | | A425A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

Continued on next page.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-----|------|---------|-------|------|------------------|--------------|-------|-----------|----------|------|----------|------------|-------------|
| 100 | 3600 | 230/460 | 405TS | Y | GT1045A | 405STFC6001 | √ | 94.5 | 222/111 | 1039 | 35.77 | YD | A424A |
| | 3600 | 575 | 405TS | Y | GT1145A | 405STFC6005 | √ | 94.5 | 89.0 | 1129 | 35.77 | | A424A |
| | 1800 | 230/460 | 405T | Y | GT1046A | 405TFC6036 | √ | 95.4 | 226/113 | 1202 | 38.77 | YD | A425A |
| | 1800 | 230/460 | 405T | Y | GT1046A-P | 405TFC6037 | √ | 95.4 | 226/113 | 1325 | 38.77 | P, YD | A425A |
| | 1800 | 230/460 | 405TS | Y | GT1063 | 405STFC6036 | √ | 95.4 | 226/113 | 1270 | 35.77 | YD | A425A |
| | 1800 | 575 | 405T | Y | GT1146A | 405TFC6040 | √ | 95.4 | 90.5 | 1292 | 38.77 | | A425A |
| | 1200 | 230/460 | 444T | Y | GT1047A | 444TFC6086 | √ | 95.0 | 229/115 | 1764 | 46.71 | YD | A427A |
| | 1200 | 230/460 | 444T | Y | GT1047A-P | 444TFC6077 | ¶ | 95.0 | 229/115 | 1764 | 46.71 | YD | A427A |
| | 1200 | 575 | 444T | Y | GT1147A | 444TFC6080 | √ | 95.0 | 91.5 | 1850 | 46.71 | | A427A |
| 125 | 3600 | 460 | 444TS | Y | GT1048A | 444STFC6001 | | 95.0 | 138 | 1566 | 42.96 | PW | A426A |
| | 3600 | 575 | 444TS | Y | GT1148A | 444STFC16002 | ¶ | 95.0 | 110 | 1667 | 42.96 | | A426A |
| | 1800 | 460 | 444T | Y | GT1049A | 444TFC6036 | √ | 95.4 | 140 | 1705 | 46.71 | PW | A427A |
| | 1800 | 460 | 444T | Y | GT1049A-P | 444TFC6037 | √ | 95.4 | 140 | 1705 | 46.71 | PW | A427A |
| | 1800 | 460 | 444TS | Y | GT1064 | 444STFC6036 | √ | 95.4 | 140 | 1909 | 42.96 | PW | A427A |
| | 1800 | 575 | 444T | Y | GT1149A | 444TFC6044 | √ | 95.4 | 112 | 1566 | 46.71 | | A427A |
| | 1200 | 460 | 445T | Y | GT1050A | 445TFC6086 | √ | 95.0 | 143 | 1852 | 46.71 | PW | A427A |
| | 1200 | 575 | 445T | Y | GT1150A | 445TFC6080 | √ | 95.0 | 114 | 1852 | 46.71 | | A427A |
| | 3600 | 460 | 445TS | Y | GT1051A | 445STFC6001 | √ | 95.0 | 161 | 1786 | 42.96 | PW | A426A |
| 150 | 3600 | 575 | 445TS | Y | GT1151A | 445STFC6005 | √ | 95.0 | 128 | 1881 | 42.96 | | A426A |
| | 1800 | 460 | 445T | Y | GT1052A | 445TFC6036 | √ | 95.8 | 169 | 1764 | 46.71 | PW | A427A |
| | 1800 | 460 | 445T | Y | GT1052A-P | 445TFC6038 | √ | 95.8 | 169 | 1950 | 46.71 | P, PW | A427A |
| | 1800 | 460 | 445TS | Y | GT1065 | 445STFC6036 | √ | 95.8 | 169 | 1742 | 42.96 | PW | A425A |
| | 1800 | 575 | 445T | Y | GT1152A | 445TFC6037 | √ | 95.8 | 135 | 1874 | 46.71 | | A427A |
| | 1200 | 460 | 445T | Y | GT10135 | 445TFC6088 | √ | 95.8 | 171 | 1895 | 51.08 | PW, RB | A427A |
| | 1200 | 460 | 447T | Y | GT1053A | 447TFC6087 | √ | 95.8 | 171 | 2452 | 55.21 | PW | A427A |
| | 1200 | 575 | 447T | Y | GT1153A | 447TFC6080 | √ | 95.8 | 136 | 2500 | 55.21 | | A427A |
| | 3600 | 460 | 447TS | Y | GT1054A | 447STFC6004 | √ | 95.4 | 217 | 2311 | 51.46 | PW | A426A |
| 200 | 3600 | 575 | 447TS | Y | GT1154A | 447STFC6005 | √ | 95.4 | 174 | 2328 | 51.46 | | A426A |
| | 1800 | 460 | 447T | Y | GT1055A | 447TFC6038 | √ | 96.5 | 219 | 2300 | 55.21 | PW | A427A |
| | 1800 | 460 | 447T | Y | GT1055A-P | 447TFC6037 | ¶ | 96.5 | 219 | 2300 | 55.21 | PW | A427A |
| | 1800 | 460 | 447TS | Y | GT1066 | 447STFC6038 | √ | 96.5 | 219 | 2275 | 51.46 | PW | A427A |
| | 1800 | 575 | 447T | Y | GT1155A | 447TFC6039 | √ | 96.5 | 175 | 990 | 55.21 | | A427A |
| | 1200 | 460 | 449T | Y | GT1056A | 449TFC6088 | √ | 95.8 | 230 | 2494 | 55.21 | PW | A427A |
| | 1200 | 460 | 449T | Y | GT1056A-P | 449TFC6087 | ¶ | 95.8 | 230 | 2494 | 55.21 | PW | A427A |
| | 1200 | 575 | 449T | Y | GT1156A | 449TFC6080 | √ | 95.8 | 184 | 2370 | 55.21 | | A427A |
| | 3600 | 460 | 449TS | Y | GT1068 | 449STFC6005 | √ | 95.8 | 266 | 2458 | 51.46 | PW | A426A |
| 250 | 1800 | 460 | 449T | Y | GT1069 | 449TFC6026 | √ | 96.2 | 272 | 2500 | 55.21 | PW | A427A |
| | 1800 | 460 | 449T | Y | GT1070 | 449TFC6038 | √ | 96.2 | 272 | 2520 | 55.21 | RB, PW | A427A |
| | 1200 | 460 | 449T | Y | GT10138 | 449TFC6086 | √ | 95.8 | 285 | 2745 | 55.21 | RB | A427A |
| | 1200 | 460 | 449T | Y | GT1071 | 449TFC6076 | √ | 95.8 | 285 | 2745 | 55.21 | PW | A427A |
| | 3600 | 460 | 449TS | Y | GT1072 | 449STFC6006 | √ | 95.8 | 320 | 2495 | 51.46 | PW | A426A |
| 300 | 1800 | 460 | 449T | Y | GT1073 | 449TFC6027 | √ | 96.2 | 332 | 2680 | 55.21 | PW | A427A |
| | 1800 | 460 | 449T | Y | GT1073-P | 449TFC16374 | √ | 96.2 | 332 | 2700 | 55.21 | P, PW | A427A |
| | 1200 | 460 | 449T | Y | GT1075 | 449TFC6077 | √ | 95.8 | 342 | 2995 | 59.15 | PW | A427A |
| | 1200 | 460 | 449T | Y | GT1076 | 449TFC6390 | | 95.8 | 342 | 2995 | 59.15 | RB | A427A |
| 350 | 3600 | 460 | 449TS | Y | GT1077 | 449STFC6003 | √ | 95.8 | 373 | 2739 | 51.46 | PW | A426A |
| | 1800 | 460 | 449T | Y | GT1078 | 449TFC6036 | √ | 96.2 | 390 | 2770 | 55.21 | PW | A427A |
| | 1800 | 460 | 449T | Y | GT1079 | 449TFC16333 | | 96.2 | 390 | 3125 | 55.21 | RB, PW | A427A |
| 400 | 3600 | 460 | 449TS | Y | GT1083 | 449STFC6004 | √ | 95.8 | 327 | 2960 | 55.40 | PW | A426A |
| | 1800 | 460 | 449T | Y | GT1084 | 449TFC16375 | √ | 96.2 | 440 | 3258 | 59.15 | PW | A427A |
| | 1800 | 460 | 449T | Y | GT1085 | 449TFC16334 | √ | 96.2 | 440 | 3125 | 59.15 | RB, PW | A427A |
| 450 | 1800 | 460 | 449T | Y | E292 | 449TFS6065 | √ | 96.5 | 515 | 3645 | 56.79 | | A623 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED



C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|------|----------------|---------------|-------|-----------|----------------|-----|----------|------------|
| 1 1/2 | 1200 | 230/460 | 182TC | N | GT1305A | 182TTFBD6079 | √ | 87.5 | 4.6/2.3 | 91 | 15.85 | |
| 2 | 1200 | 230/460 | 184TC | N | GT1308A | 184TTFBD6079 | ¶ | 88.5 | 6.2/3.1 | 94 | 16.85 | |
| 3 | 3600 | 230/460 | 182TC | N | GT1309A | 182TTFBD6004 | √ | 86.5 | 8.0/4.0 | 83 | 15.85 | |
| | 1800 | 230/460 | 182TC | N | GT13195 | 182TTFBD16029 | √ | 89.5 | 8.0/4.0 | 87 | 14.62 | |
| | 1800 | 230/460 | 182TC | N | GT1310A | 182TTFBD6029 | √ | 89.5 | 8.0/4.0 | 87 | 15.85 | |
| | 1800 | 575 | 182TC | N | GT1910 | 182TTFBD6044 | ¶ | 89.5 | 3.6 | 87 | 15.85 | |
| | 1200 | 230/460 | 213TC | N | GT1311A | 213TTFBD6079 | ¶ | 89.5 | 8.6/4.3 | 136 | 19.10 | |
| 5 | 3600 | 230/460 | 184TC | N | GT1312A | 184TTFBD6004 | √ | 88.5 | 12.4/6.2 | 95 | 16.85 | |
| | 1800 | 230/460 | 184TC | N | GT1313A | 184TTFBD6029 | √ | 89.5 | 13.2/6.6 | 110 | 16.85 | |
| | 1200 | 230/460 | 215TC | N | GT1314A | 215TTFBD6079 | √ | 89.5 | 13.6/6.8 | 145 | 20.70 | |
| 7 1/2 | 3600 | 230/460 | 184TC | N | GT13192 | 184TTFBD6005 | √ | 89.5 | 17.6/8.8 | 120 | 16.85 | |
| | 3600 | 230/460 | 213TC | N | GT1315A | 213TTFBD6004 | √ | 89.5 | 18.4/9.2 | 119 | 19.10 | |
| | 1800 | 230/460 | 213TC | N | GT1316A | 213TTFBD6029 | √ | 91.7 | 19.0/9.5 | 153 | 19.10 | |
| 10 | 3600 | 230/460 | 215TC | N | GT1318A | 215TTFBD6004 | √ | 90.2 | 23.6/11.8 | 155 | 20.70 | |
| | 1800 | 230/460 | 215TC | N | GT1319A | 215TTFBD6029 | √ | 91.7 | 27.3-25.0/12.5 | 165 | 20.70 | |
| 15 | 3600 | 230/460 | 215TC | N | GT1317A | 215TTFBD6005 | √ | 91.7 | 35.0/17.4 | 150 | 20.70 | |
| | 1800 | 230/460 | 254TC | Y | GT1322 | 254TTFCD6042 | ¶ | 92.4 | 37.5/18.8 | 318 | 24.65 | |
| 20 | 1800 | 230/460 | 256TC | Y | GT1325 | 256TTFCD6042 | ¶ | 93.0 | 48.5/24.2 | 330 | 26.39 | |
| 40 | 1800 | 230/460 | 324TC | Y | GT1334 | 324TTFCD6039 | ¶ | 94.1 | 95.0/47.5 | 624 | 29.69 | YD |



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|------|------------------|--------------|-------|-----------|----------------|-----|----------|------------|
| 1 1/2 | 1200 | 230/460 | 182TC | N | GT1205A | 182TTFBD6078 | √ | 87.5 | 4.6/2.3 | 91 | 15.85 | |
| 2 | 1200 | 230/460 | 184TC | N | GT1208A | 184TTFBD6078 | √ | 88.5 | 6.2/3.1 | 104 | 16.85 | |
| 3 | 3600 | 230/460 | 182TC | N | GT1209A | 182TTFBD6003 | √ | 86.5 | 8.0/4.0 | 83 | 15.85 | |
| | 3600 | 575 | 182TC | N | GT1409A | 182TTFBD6007 | ¶ | 86.5 | 3.2 | 83 | 15.85 | |
| | 1800 | 230/460 | 182TC | N | GT1210A | 182TTFBD6028 | √ | 89.5 | 8.0/4.0 | 105 | 15.85 | |
| | 1800 | 230/460 | 182TC | N | GT1210A-P | 182TTFBD6030 | ¶ | 89.5 | 8.0/4.0 | 105 | 15.85 | |
| | 1800 | 575 | 182TC | N | GT1410A | 182TTFBD6032 | ¶ | 89.5 | 3.2 | 108 | 15.85 | |
| | 1200 | 230/460 | 213TC | N | GT1211A | 213TTFBD6078 | √ | 89.5 | 8.6/4.3 | 164 | 19.10 | |
| 5 | 3600 | 230/460 | 184TC | N | GT1212A | 184TTFBD6003 | √ | 88.5 | 12.4/6.2 | 97 | 16.85 | |
| | 3600 | 575 | 184TC | N | GT1412A | 184TTFBD6007 | ¶ | 88.5 | 5.0 | 97 | 16.85 | |
| | 1800 | 230/460 | 184TC | N | GT1213A | 184TTFBD6028 | √ | 89.5 | 13.2/6.6 | 105 | 16.85 | |
| | 1800 | 230/460 | 184TC | N | GT1213A-P | 184TTFBD6030 | ¶ | 89.5 | 13.2/6.6 | 105 | 16.85 | |
| | 1800 | 575 | 184TC | N | GT1413A | 184TTFBD6032 | √ | 89.5 | 5.2 | 105 | 16.85 | |
| | 1200 | 230/460 | 215TC | N | GT1214A | 215TTFBD6078 | √ | 89.5 | 13.6/6.8 | 185 | 20.70 | |
| 7 1/2 | 3600 | 230/460 | 213TC | N | GT1215A | 213TTFBD6003 | √ | 89.5 | 18.4/9.2 | 136 | 19.10 | |
| | 3600 | 575 | 213TC | N | GT1415A | 213TTFBD6007 | ¶ | 89.5 | 7.4 | 138 | 19.10 | |
| | 1800 | 230/460 | 213TC | N | GT1216A | 213TTFBD6028 | √ | 91.7 | 19.9/9.5 | 158 | 19.10 | |
| | 1800 | 230/460 | 213TC | N | GT1216A-P | 213TTFBD6030 | √ | 91.7 | 19.9/9.5 | 158 | 19.10 | |
| | 1800 | 575 | 213TC | N | GT1416A | 213TTFBD6032 | ¶ | 91.7 | 7.6 | 157 | 19.10 | |
| | 1200 | 230/460 | 254TC | Y | GT1217A | 254TTFCD6078 | ¶ | 91.0 | 19.8/9.9 | 315 | 24.65 | |
| 10 | 3600 | 230/460 | 215TC | N | GT1218A | 215TTFBD6003 | √ | 90.2 | 23.6/11.8 | 155 | 20.70 | |
| | 3600 | 230/460 | 215TC | N | GT1218A-P | 215TTFBD6010 | √ | 90.2 | 23.6/11.8 | 155 | 20.70 | |
| | 3600 | 575 | 215TC | N | GT1418A | 215TTFBD6007 | ¶ | 90.2 | 10.0 | 172 | 20.70 | |
| | 1800 | 230/460 | 215TC | N | GT1219A | 215TTFBD6028 | √ | 91.7 | 27.3-25.0/12.5 | 175 | 20.70 | |
| | 1800 | 230/460 | 215TC | N | GT1219A-P | 215TTFBD6030 | ¶ | 91.7 | 27.3-25.0/12.5 | 175 | 20.70 | |
| | 1800 | 575 | 215TC | N | GT1419A | 215TTFBD6032 | ¶ | 91.7 | 10.0 | 186 | 20.70 | |
| | 1200 | 230/460 | 256TC | Y | GT1220A | 256TTFCD6078 | √ | 91.0 | 25.8/12.9 | 345 | 26.39 | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

Continued on next page.

GLOBETROTTER GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED

C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|---------|--------|------|------------------|---------------|-------|-----------|-----------|------|----------|------------|
| 15 | 3600 | 230/460 | 215TC | N | GT12174 | 215TTFBD6001 | √ | 91.7 | 35.0/17.4 | 158 | 20.70 | |
| | 3600 | 230/460 | 254TC | Y | GT1221A | 254TTFCD6003 | √ | 91.0 | 35.5/17.8 | 336 | 24.65 | |
| | 3600 | 575 | 254TC | Y | GT1421A | 254TTFCD6007 | √ | 91.0 | 14.0 | 336 | 24.65 | |
| | 1800 | 230/460 | 254TC | Y | GT1222A | 254TTFCD6028 | √ | 92.4 | 37.5/18.8 | 311 | 24.65 | |
| | 1800 | 575 | 254TC | Y | GT1422A | 254TTFCD6032 | √ | 92.4 | 15.0 | 325 | 24.65 | |
| 20 | 1200 | 230/460 | 284TC | Y | GT1223 | 284TTFCD6078 | √ | 91.7 | 40.0/20.0 | 450 | 26.65 | YD |
| | 3600 | 230/460 | 256TC | Y | GT1224A | 256TTFCD6003 | √ | 91.0 | 47.5/23.7 | 330 | 26.39 | |
| | 1800 | 230/460 | 256TC | Y | GT1225A | 256TTFCD6028 | √ | 93.0 | 48.5/24.2 | 330 | 26.39 | |
| | 1800 | 230/460 | 256TC | Y | GT1225A-P | 256TTFCD6029 | √ | 93.0 | 48.5/24.2 | 293 | 26.39 | |
| 25 | 1200 | 230/460 | 286TC | Y | GT1226 | 286TTFCD6078 | √ | 91.7 | 52.0/26.0 | 530 | 28.14 | YD |
| | 3600 | 230/460 | 284TSC | | GT1227A | 284TSTFCD6003 | √ | 91.7 | 60.0/30.0 | 293 | 25.28 | YD |
| | 3600 | 230/460 | 284TC | | GT12127 | 284TTFCD6001 | √ | 91.7 | 60.0/30.0 | 385 | 25.28 | YD |
| | 1800 | 230/460 | 284TC | Y | GT1228A | 284TTFCD6028 | √ | 93.6 | 60.0/30.0 | 500 | 26.65 | YD |
| 30 | 1200 | 230/460 | 324TC | Y | GT1229 | 324TTFCD6078 | √ | 93.0 | 64.0/32.0 | 645 | 29.69 | YD |
| | 3600 | 230/460 | 286TC | Y | GT12130 | 286TTFCD6001 | √ | 91.7 | 71.0/35.5 | 353 | 28.14 | YD |
| | 3600 | 230/460 | 286TSC | Y | GT1230A | 286TSTFCD6003 | √ | 91.7 | 71.0/35.5 | 500 | 26.77 | YD |
| | 1800 | 230/460 | 286TC | Y | GT1231A | 286TTFCD6028 | √ | 93.6 | 71.0/35.5 | 504 | 28.14 | YD |
| 40 | 1800 | 230/460 | 286TC | Y | GT1231A-P | 286TSTFCD6031 | √ | 93.6 | 71.0/35.5 | 441 | 28.14 | YD |
| | 1200 | 230/460 | 326TC | Y | GT1232 | 326TTFCD6078 | √ | 93.0 | 76.0/38.0 | 730 | 31.19 | YD |
| | 3600 | 230/460 | 324TSC | Y | GT1233A | 324TSTFCD6003 | √ | 92.4 | 92.0/46.0 | 675 | 28.19 | YD |
| | 1800 | 230/460 | 324TC | Y | GT1234A | 324TTFCD6028 | √ | 94.1 | 95.0/47.5 | 750 | 29.69 | YD |
| 50 | 1800 | 230/460 | 324TC | Y | GT1234A-P | 324TTFCD6029 | √ | 94.1 | 95.0/47.5 | 646 | 29.69 | YD |
| | 1800 | 230/460 | 324TSC | Y | GT1259 | 324TSTFCD6028 | √ | 94.1 | 95.0/47.5 | 558 | 28.19 | YD |
| | 1200 | 230/460 | 364TC | Y | GT1235 | 364TTFCD6078 | √ | 94.1 | 96.0/48.0 | 900 | 33.32 | YD |
| | 3600 | 230/460 | 326TSC | Y | GT1236A | 326TSTFCD6003 | √ | 94.1 | 113/56.5 | 725 | 29.69 | YD |
| 60 | 1800 | 230/460 | 326TC | Y | GT1237A | 326TTFCD6028 | √ | 94.5 | 117/58.5 | 775 | 31.19 | YD |
| | 1800 | 230/460 | 326TC | Y | GT1237A-P | 326TTFCD6029 | √ | 94.5 | 117/58.5 | 701 | 31.19 | YD |
| | 1800 | 230/460 | 326TSC | Y | GT1260 | 326TSTFCD6028 | √ | 94.5 | 117/58.5 | 609 | 29.69 | YD |
| | 1200 | 230/460 | 365TC | Y | GT1238 | 365TTFCD6078 | √ | 94.1 | 121/60.5 | 1040 | 34.30 | YD |
| 75 | 3600 | 230/460 | 364TSC | Y | GT1239A | 364TSTFCD6003 | √ | 93.6 | 135/67.5 | 925 | 31.19 | YD |
| | 1800 | 230/460 | 364TC | Y | GT1240A | 364TTFCD6038 | √ | 95.0 | 138/69.0 | 1000 | 33.32 | YD |
| | 1800 | 230/460 | 364TSC | Y | GT1261 | 364TSTFCD6038 | √ | 95.0 | 138/69.0 | 1000 | 31.19 | YD |
| | 1200 | 230/460 | 404TC | Y | GT1241 | 404TTFCD6078 | √ | 94.5 | 143/71.5 | 1360 | 38.77 | YD |
| 100 | 3600 | 230/460 | 365TSC | Y | GT1242A | 365TSTFCD6003 | √ | 94.5 | 168/84.0 | 1025 | 32.17 | YD |
| | 1800 | 230/460 | 365TC | Y | GT1243A | 365TTFCD6038 | √ | 95.4 | 171/85.5 | 1100 | 34.30 | YD |
| | 1800 | 230/460 | 365TC | Y | GT1243A-P | 365TTFCD6039 | √ | 95.4 | 170/85.0 | 937 | 34.30 | YD |
| | 1800 | 230/460 | 365TSC | Y | GT1262 | 365TSTFCD6038 | √ | 95.4 | 172/86.0 | 908 | 32.17 | YD |
| 125 | 1200 | 230/460 | 405TC | Y | GT1244 | 405TTFCD6078 | √ | 94.5 | 178/89.0 | 1450 | 38.77 | YD |
| | 3600 | 230/460 | 405TSC | Y | GT1245A | 405TSTFCD6003 | √ | 94.5 | 222/111 | 1250 | 35.77 | YD |
| | 1800 | 230/460 | 405TC | Y | GT1246A | 405TTFCD6038 | √ | 95.4 | 226/113 | 1375 | 38.77 | YD |
| | 1800 | 230/460 | 405TSC | Y | GT1263 | 405TSTFCD6038 | √ | 95.4 | 226/113 | 1191 | 35.77 | YD |
| 125 | 1800 | 460 | 444TSC | Y | GT1247 | 444TTFCD6078 | √ | 95.0 | 229/115 | 1764 | 46.71 | YD |
| 125 | 1800 | 460 | 444TSC | Y | GT1264 | 444TSTFCD6038 | √ | 95.4 | 140 | 1720 | 42.96 | PW |

C-FACE FOOTED (RIGID BASE) BCP, F3 - TOP MOUNTED CONDUIT BOX

| HP | RPM | VOLTS | FRAME | IP55 | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|-------|------|----------------|--------------|-------|-----------|----------------|-----|----------|------------|
| 3 | 3600 | 230/460 | 182TC | N | GT12309 | 182TTFBD6015 | √ | 86.5 | 7.6/3.8 | 83 | 15.75 | |
| | 1800 | 230/460 | 182TC | N | GT12310 | 182TTFBD6035 | √ | 89.5 | 7.8/3.9 | 105 | 15.75 | |
| 5 | 3600 | 230/460 | 184TC | N | GT12312 | 184TTFBD6015 | √ | 88.5 | 13.4/6.7 | 97 | 16.73 | |
| | 1800 | 230/460 | 184TC | N | GT12313 | 184TTFBD6035 | √ | 89.5 | 12.4/6.2 | 105 | 16.73 | |
| 7 1/2 | 3600 | 230/460 | 213TC | N | GT12315 | 213TTFBD6015 | √ | 89.5 | 18.4/9.2 | 136 | 19.12 | |
| | 1800 | 230/460 | 213TC | N | GT12316 | 213TTFBD6035 | √ | 91.7 | 19.0/9.5 | 158 | 19.12 | |
| 10 | 3600 | 230/460 | 215TC | N | GT12318 | 215TTFBD6015 | √ | 90.2 | 23.6/11.8 | 155 | 20.62 | |
| | 1800 | 208-230/460 | 215TC | N | GT12319 | 215TTFBD6035 | √ | 91.7 | 27.3-25.0/12.5 | 150 | 20.62 | |

√: Available √: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

ALUMINUM GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED

APPLICATIONS

For use where exposure to water, dust and corrosives exists. Ideally suited for use on pumps, compressors, fans, blowers, conveyors, machine tools and other industrial applications.



FEATURES

- **IP43 Ingress Protection**
- **NEMA Premium models are in compliance with EISA 2007**
- 182T to 286T frame
- Cast Aluminum Frame with cast iron end brackets
- Steel conduit box with steel fan guard
- Nameplated for 60 & 50HZ
- Inverter Rated - Any Inverter or VFD Brand
- Inverter duty 4:1 constant torque and 10:1 variable torque, 1.0 SF
- MAX Guard® Class F Insulation
- 1.25 service factor (SF) on sinewave, 1.0 service factor on IGBT power
- Standard assembly F1, reversible to F2 assembly
- For C-Face, D-Flange, kits available, see accessory section
- UL®* Recognized, CSA®* certified, CE®* mark
- Three year warranty



RIGID BASE (ALUMINUM FRAME)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | FOOT NOTES |
|-----|------|---------|-------|----------|-----------|-------|-----------|-----------|-----|------------|
| 1.5 | 1200 | 230/460 | 182T | | LM33561 | | 87.5 | 5.2/2.6 | 73 | AL |
| | 900 | 230/460 | 184T | | LM33562 | | 78.9 | 5.7/2.85 | 85 | AL |
| 2 | 1200 | 230/460 | 184T | | LM33563 | √ | 88.5 | 6.4/3.2 | 80 | AL |
| | 900 | 230/460 | 213T | | LM34145 | √ | 86.5 | 10.0/5.0 | 142 | AL |
| 3 | 3600 | 230/460 | 182T | | LM33564 | | 86.5 | 7.8/3.9 | 83 | AL |
| | 1800 | 230/460 | 182T | | LM33486 | | 89.5 | 7.8/3.9 | 77 | AL |
| | 1200 | 230/460 | 213T | | LM16030 | | 89.5 | 8.8/4.4 | 98 | AL |
| 5 | 900 | 230/460 | 215T | | LM34304 | | 86.5 | 10.2/5.1 | 160 | AL |
| | 3600 | 230/460 | 184T | | LM33565 | | 88.5 | 12/6 | 89 | AL |
| | 1800 | 230/460 | 184T | | LM33487 | | 89.5 | 12.6/6.3 | 85 | AL |
| | 1200 | 230/460 | 215T | | LM16033 | | 89.5 | 13.8/6.9 | 138 | AL |
| 7.5 | 900 | 230/460 | 254T | | LM32803 | √ | 87.5 | 15/7.5 | 187 | AL |
| | 3600 | 230/460 | 213T | | LM28968 | | 90.2 | 17.8/8.9 | 98 | AL |
| | 1800 | 230/460 | 213T | | LM16029 | | 91.7 | 19.2/9.6 | 102 | AL |
| | 1200 | 230/460 | 254T | | LM15672 | | 91 | 19.8/9.9 | 209 | AL |
| 10 | 900 | 230/460 | 256T | | LM32807 | | 86.5 | 23/11.5 | 265 | AL |
| | 3600 | 230/460 | 215T | | LM16031 | | 91.7 | 23.6/11.8 | 185 | AL |
| | 1800 | 230/460 | 215T | | LM16032 | | 91.7 | 25/12.5 | 160 | AL |
| | 1200 | 230/460 | 256T | | LM15675 | | 91 | 26.2/13.1 | 294 | AL |
| 15 | 3600 | 230/460 | 254T | | LM15670 | | 91.7 | 35/17.5 | 215 | AL |
| | 1800 | 230/460 | 254T | | LM15671 | √ | 92.4 | 37.5/18.8 | 209 | AL |
| 20 | 3600 | 230/460 | 256T | | LM15673 | √ | 92.4 | 47/23.4 | 325 | AL |
| | 1800 | 230/460 | 256T | | LM15674 | √ | 93 | 48/24.1 | 295 | AL |
| 25 | 3600 | 230/460 | 284TS | | LM13960 | | 92.4 | 56/28 | 385 | AL |
| | 1800 | 230/460 | 284T | | LM13961 | | 93.6 | 64/32 | 495 | AL |
| 30 | 3600 | 230/460 | 286T | | LM32813 | | 92.4 | 66/33 | 438 | AL |
| | 1800 | 230/460 | 286T | | LM13964 | | 93.6 | 75/37.5 | 426 | AL |

√: Available √: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

ALUMINUM GENERAL PURPOSE MOTORS

THREE-PHASE, TOTALLY ENCLOSED



C-FACE RIGID BASE (ALUMINUM FRAME)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | FOOT NOTES |
|-----|------|---------|--------|----------|-----------|-------|-----------|------------|-----|------------|
| 1 | 900 | 230/460 | 182TC | - | LM33566 | | 75.5 | 4.2/2.1 | 77 | AL |
| 1.5 | 1200 | 230/460 | 182TC | - | LM33567 | ¶ | 87.5 | 5.2/2.6 | 95 | AL |
| | 900 | 230/460 | 184TC | - | LM32827 | | 86.5 | 15/7.5 | 133 | AL |
| 2 | 1200 | 230/460 | 184TC | - | LM33569 | ¶ | 88.5 | 6.4/3.2 | 88 | AL |
| | 900 | 230/460 | 213TC | - | LM34174 | | 86.5 | 458/73 | 147 | AL |
| 3 | 3600 | 230/460 | 182TC | - | LM33570 | | 86.5 | 7.8/3.9 | 95 | AL |
| | 1800 | 230/460 | 182TC | - | LM33485 | | 89.5 | 7.8/3.9 | 67 | AL |
| | 1200 | 230/460 | 213TC | - | LM16744 | | 89.5 | 8.8/4.4 | 131 | AL |
| | 900 | 230/460 | 215TC | - | LM32834 | | 84 | 10.6/5.3 | 152 | AL |
| 5 | 3600 | 230/460 | 184TC | - | LM33571 | | 88.5 | 12/6 | 104 | AL |
| | 1800 | 230/460 | 184TC | - | LM33484 | | 89.5 | 12.6/6.3 | 85 | AL |
| | 1200 | 230/460 | 215TC | - | LM16748 | | 89.5 | 13.8/6.9 | 150 | AL |
| | 900 | 230/460 | 254TC | - | LM32836 | | 87.5 | 15/7.5 | 244 | AL |
| 7.5 | 3600 | 230/460 | 213TC | - | LM16750 | | 90.2 | 17.8/8.9 | 148 | AL |
| | 1800 | 230/460 | 213TC | - | LM16752 | | 91.7 | 19.2/9.6 | 141 | AL |
| | 1200 | 230/460 | 254TC | - | LM16753 | | 91 | 19.8/9.9 | 235 | AL |
| | 900 | 230/460 | 256TC | - | LM32839 | | 86.5 | 23/11.5 | 203 | AL |
| 10 | 3600 | 230/460 | 215TC | - | LM16755 | | 91.7 | 23.6/11.8 | 150 | AL |
| | 1800 | 230/460 | 215TC | - | LM16757 | √ | 91.7 | 25/12.5 | 150 | AL |
| | 1200 | 230/460 | 256TC | - | LM16759 | | 91 | 26.2/13.1 | 248 | AL |
| 15 | 3600 | 230/460 | 254TC | - | LM16761 | | 91.7 | 35/17.5 | 213 | AL |
| | 1800 | 230/460 | 254TC | - | LM16762 | √ | 92.4 | 37.5/18.8 | 250 | AL |
| 20 | 3600 | 230/460 | 256TC | - | LM16766 | | 92.4 | 51-47/23.4 | 285 | AL |
| | 1800 | 230/460 | 256TC | - | LM16767 | | 93 | 48/24.1 | 288 | AL |
| 25 | 3600 | 230/460 | 284TSC | - | LM16770 | | 92.4 | 56/28 | 280 | AL |
| | 1800 | 230/460 | 284TC | - | LM16772 | √ | 93.6 | 64/32 | 280 | AL |
| | 1800 | 230/460 | 284TSC | - | LM32654 | √ | 93.6 | 65/32.5 | 282 | AL |
| 30 | 3600 | 230/460 | 286TSC | - | LM16773 | | 92.4 | 66/33 | 416 | AL |
| | 1800 | 230/460 | 286TC | - | LM16774 | | 93.6 | 75/37.5 | 361 | AL |
| | 1800 | 230/460 | 286TSC | - | LM32842 | | 93.6 | 75/37.5 | 432 | AL |

C-FACE FOOTLESS (ALUMINUM FRAME)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | FOOT NOTES |
|-----|------|---------|-------|----------|-----------|-------|-----------|-----------|-----|------------|
| 3 | 1800 | 230/460 | 182TC | - | LM33573 | | 89.5 | 7.8/3.9 | 67 | AL |
| 5 | 1800 | 230/460 | 184TC | - | LM33575 | | 89.5 | 12.6/6.3 | 85 | AL |
| 7.5 | 1800 | 230/460 | 213TC | - | LM16826 | | 91.7 | 19.2/9.6 | 141 | AL |
| 10 | 1800 | 230/460 | 215TC | - | LM34166 | | 91.7 | 25/12.5 | 150 | AL |
| 15 | 1800 | 230/460 | 254TC | - | LM16828 | | 92.4 | 37.5/18.8 | 250 | AL |
| 20 | 1800 | 230/460 | 256TC | - | LM16829 | | 93 | 48/24.1 | 288 | AL |

XRI-SEVERE DUTY MOTORS

TEFC COOLING TOWER: SINGLE-SPEED, THREE-PHASE

FEATURES

- 100% cast iron construction for rigidity and reduced vibration
- Internal and external epoxy paint
- MAX GUARD® motor Class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Rated 60/50 hertz, 190/380 or 380 volt at next lower horsepower
- Extended grease tubes, regreasable in service
- T-drains provided for effective drainage (Installed in both endshields)
- Suitable for shaft down mounting
- Shaft slinger
- Forsheda®** seals on both ends
- Ball bearings
- Actual test and vibration data supplied with each motor
- UL®** recognized (through 5011) and CSA®** certified
- Suitable for 10:1 VT and CT (as noted) on VFD
- Three year warranty



RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF | FL. AMPS | WT. | "C" DIM. |
|-------|------|---------|-------|--------------|---------------|-------|----------------|----------|-----------|------|----------|
| 3 | 1800 | 230/460 | 182T | U867B | 182TTFCD6557 | √ | 10:1 | 89.5 | 8.0/4.0 | 145 | 15.20 |
| 5 | 1800 | 230/460 | 184T | U868B | 184TTFCD6555 | ¶ | 10:1 | 89.5 | 13.0/6.5 | 128 | 16.20 |
| 7 1/2 | 1800 | 230/460 | 213T | U869C | 213TTFCD6550 | √ | 10:1 | 91.7 | 19.0/9.5 | 226 | 18.53 |
| | 1800 | 230/460 | 213T | U869B | 213TTFND6550 | ¶ | 20:1 | 91.7 | 19.2/9.6 | 226 | 19.63 |
| 10 | 1800 | 230/460 | 215T | U870C | 215TTFCD6546 | ¶ | 10:1 | 91.7 | 25.0/12.5 | 245 | 20.03 |
| 15 | 1800 | 230/460 | 254T | U871B | 254TTFCD16568 | √ | 10:1 | 92.4 | 37.5/18.8 | 349 | 24.15 |
| 20 | 1800 | 230/460 | 256T | U872B | 256TTFCD16574 | √ | 10:1 | 93.0 | 48.5/24.2 | 375 | 25.89 |
| 25 | 1800 | 230/460 | 284T | U873B | 284TTFCD6832 | √ | 10:1 | 93.6 | 60.0/30.0 | 440 | 26.64 |
| 25 | 1800 | 230/460 | 284T | U873A | 284TTFNA16832 | ¶ | 10:1 | 93.6 | 62.0/31.0 | 468 | 26.63 |
| 30 | 1800 | 230/460 | 286T | U874B | 286TTFCD16572 | √ | 10:1 | 93.6 | 71.0/35.5 | 503 | 28.14 |
| 30 | 1800 | 230/460 | 286T | U874A | 286TTFNA16572 | ¶ | 10:1 | 94.1 | 73.0/36.5 | 487 | 28.13 |
| 40 | 1800 | 230/460 | 324T | U875B | 324TTFCD6837 | ¶ | 2:1 | 94.1 | 95.0/47.5 | 567 | 29.85 |
| 50 | 1800 | 230/460 | 326T | U876B | 326TTFCD16574 | √ | 2:1 | 94.5 | 117/58.5 | 644 | 31.35 |
| 60 | 1800 | 230/460 | 364T | U877B | 364TTFCD6558 | | 2:1 | 95.0 | 136/68.0 | 1078 | 33.40 |
| 75 | 1800 | 230/460 | 365T | U878B | 365TTFCD16827 | | 2:1 | 95.5 | 170/85.0 | 1169 | 34.40 |
| 100 | 1800 | 230/460 | 405T | U879B | 405TTFCD16834 | √ | 2:1 | 95.4 | 226/113 | 1458 | 38.88 |
| 125 | 1800 | 460 | 444T | U880B | 444TTFCD16549 | | 2:1 | 95.4 | 140 | 1990 | 46.83 |
| 150 | 1800 | 460 | 445T | U881B | 445TTFCD16866 | √ | 2:1 | 95.8 | 169 | 2343 | 46.83 |
| 200 | 1800 | 460 | 445T | U882B | 445TTFCD16852 | | 2:1 | 96.5 | 219 | 2556 | 51.20 |
| 250 | 1800 | 460 | 449T | U884B | 449TTFCD36649 | √ | 2:1 | 96.2 | 272 | 2409 | 55.33 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.
 Specifications are subject to change without notice.

*See back cover page for attribution.

XRI-SEVERE DUTY MOTORS

TEAO COOLING TOWER: SINGLE-SPEED, THREE-PHASE

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- Bearing Current Protection (BCP)
- 100% cast iron construction for rigidity and reduced vibration
- Internal and external epoxy paint
- MAX GUARD® motor Class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Rated 60/50 hertz, 190/380 or 380 volt at next lower horsepower
- Extended grease tubes, regreasable in service
- T-drains provided for effective drainage (Installed in both endshields)
- Suitable for all angle mounting
- Inpro/Seal®* quality VBX®* bearing isolators
- Ball bearings
- Actual test and vibration data supplied with each motor
- UL®* Recognized and CSA®* certified
- Suitable for 10:1 VT and 20:1 CT on VFD
- Three year warranty



RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF | FL. AMPS | WT. |
|-------|------|---------|----------|---------------|---------------|-------|----------------|----------|-----------|------|
| 3 | 1800 | 230/460 | 182T | U1867A | 182TTTCD16571 | √ | 10:1 | 89.5 | 8.0/4.0 | 200 |
| | 1200 | 230/460 | 213T | U1852 | 213TTTCD6580 | | 10:1 | 89.5 | 8.6/4.3 | 102 |
| 5 | 1800 | 230/460 | 184T | U1868A | 184TTTCD16545 | √ | 10:1 | 89.5 | 13.0/6.5 | 225 |
| | 1800 | 230/460 | 184T | U1868 | 184TTTN16545 | ¶ | 20:1 | 90.2 | 12.4/6.2 | 144 |
| | 1200 | 230/460 | 215T | U1853 | 215TTTCD6580 | | 10:1 | 89.5 | 13.6/6.8 | 176 |
| 7 1/2 | 1800 | 230/460 | 213T | U1869B | 213TTTCD16539 | √ | 10:1 | 91.7 | 19.0/9.5 | 210 |
| | 1200 | 230/460 | 254T | U1854 | 254TTTCD6580 | | 10:1 | 91.0 | 22.0/11.0 | 247 |
| 10 | 1800 | 230/460 | 215T | U1870B | 215TTTCD16541 | √ | 10:1 | 91.7 | 25.0/12.5 | 331 |
| | 1200 | 230/460 | 256T | U1855 | 256TTTCD6580 | | 10:1 | 91.0 | 27.0/13.5 | 265 |
| 15 | 1800 | 230/460 | 254T | U1871A | 254TTTCD16545 | | 10:1 | 92.4 | 37.5/18.8 | 357 |
| | 1200 | 230/460 | 284T | U1856 | 284TTTCD6580 | | 10:1 | 91.7 | 40.0/20.0 | 412 |
| 20 | 1800 | 230/460 | 256T | U1872A | 256TTTCD16544 | √ | 10:1 | 93.0 | 48.5/24.2 | 463 |
| | 1200 | 230/460 | 286T | U1857 | 286TTTCD6580 | | 10:1 | 91.7 | 52.0/26.0 | 385 |
| 25 | 1800 | 230/460 | 284T | U1873A | 284TTTCD16540 | √ | 10:1 | 93.6 | 60.0/30.0 | 490 |
| | 1200 | 230/460 | 324T | U1858 | 324TTTCD6580 | | 10:1 | 93.0 | 62.0/31.0 | 516 |
| 30 | 1800 | 230/460 | 286T | U1874A | 286TTTCD16541 | √ | 10:1 | 93.6 | 71.0/35.5 | 613 |
| | 1200 | 230/460 | 326T | U1859 | 326TTTCD6580 | | 10:1 | 93.0 | 77.0/38.5 | 758 |
| 40 | 1800 | 230/460 | 324T | U1875A | 324TTTCD16535 | | 2:1 | 94.1 | 95.0/47.5 | 775 |
| | 1200 | 230/460 | 364T | U1860 | 364TTTCD6580 | | 2:1 | 94.1 | 104/52.0 | 849 |
| 50 | 1800 | 230/460 | 326T | U1876A | 326TTTCD16533 | | 2:1 | 94.5 | 117/58.5 | 850 |
| | 1200 | 230/460 | 365T | U1861 | 365TTTCD6580 | | 2:1 | 94.1 | 125/62.5 | 878 |
| 60 | 1800 | 230/460 | 364T | U1877A | 364TTTCD16534 | √ | 2:1 | 95.0 | 136/68.0 | 980 |
| | 1200 | 230/460 | 404T | U1862 | 404TTTCD6580 | | 2:1 | 94.5 | 150/75.0 | 1131 |
| 75 | 1800 | 230/460 | 365T | U1878A | 365TTTCD16536 | | 2:1 | 95.5 | 170/85.0 | 930 |
| | 1200 | 230/460 | 405T | U1863 | 405TTTCD6580 | | 2:1 | 95.0 | 177/88.5 | 1175 |
| 100 | 1800 | 230/460 | 405T | U1879A | 405TTTCD16537 | √ | 2:1 | 95.4 | 226/113 | 1162 |
| | 1200 | 230/460 | 444T | U1864 | 444TTTCD6580 | | 2:1 | 95.0 | 230/115 | 1764 |
| 125 | 1800 | 460 | 444T | U1880A | 444TTTCD16535 | √ | 2:1 | 95.4 | 140 | 1650 |
| | 1200 | 460 | 445T | U1865 | 445TTTCD6580 | | 2:1 | 95.0 | 143 | 1852 |
| 150 | 1800 | 460 | 445T | U1881A | 445TTTCD16536 | | 2:1 | 95.8 | 169 | 1670 |
| | 1200 | 460 | 445T | U1866 | 445TTTCD16580 | | 2:1 | 95.8 | 171 | 1895 |
| 200 | 1800 | 460 | 445T | U1882A | 445TTTCD16537 | √ | 2:1 | 96.5 | 219 | 2042 |
| | 1200 | 460 | 447/449T | U1883 | 449TTTCD6580 | | 2:1 | 95.8 | 230 | 2494 |
| 250 | 1800 | 460 | 447/449T | U1884A | 449TTTCD16539 | √ | 2:1 | 96.2 | 272 | 2409 |
| | 1200 | 460 | 447/449T | U1885 | 449TTTCD16580 | | 2:1 | 95.8 | 284 | 2745 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

*See back cover page for attribution.

BLUE CHIP® XRI®-SD AND BLUE CHIP® XRI®-841 MOTORS

DESIGNED FOR EXTREME APPLICATIONS

marathon®

Guaranteed efficiencies offer an extra Return On your Investment (ROI) when using these premium efficiency motors on high cycle or long run applications.

Features

- Available stock ready to ship
- 1 HP to 400 HP
- Meets or exceeds NEMA Premium®* efficiencies
- MAX GUARD® motor Class H insulation system
- Precision balanced to .08"/sec
- Extended grease tubes, regreasable in service
- Corrosion resistant bronze sintered drain and breather



*See back cover page for attribution.

GLOBETROTTER® MOTOR VERSUS BLUE CHIP® XRI®-SD MOTOR AND BLUE CHIP® XRI®-841 MOTOR



| Specifications | Features | Globetrotter TEFC Motors | Blue chip XRI-Severe Duty Motor | Blue Chip XRI-IEEE841 Motor |
|----------------------------|--|--------------------------|---------------------------------|-----------------------------|
| Enclosures | Totally Enclosed Fan Cooled (TEFC) | • | • | • |
| | Totally Enclosed Non-Ventilated (TENV) | • | • | • |
| | Open dripproof | • | | |
| Voltage | 200 volt | • | | |
| | 230/460 volt through 100 HP; 460 volts 125 HP and larger | • | • | |
| | 460 volt (three lead) | | • | • |
| Service Factor (sine wave) | 575 volt (three lead) | • | • | • |
| | 1.15 | • | • | • |
| Inverter Duty | 1.25 though 40 HP (with nameplate mod) | • | • | • |
| | 10:1 variable torque | • | • | • |
| | Up to 10:1 constant torque | • | • | • |
| | Up to 20:1 constant torque | • | • | • |
| Insulation System | Provisions to add hollow shaft encoder (TEFC only) | • | • | • |
| | Class F, Non-hygroscopic system 184T-449T | • | | |
| | Class H, Non-hygroscopic system | | • | • |
| Balance | Max Guard® motor | | • | • |
| | Special balance average 0.08 in/sec | | • | • |
| Bearings & Lubrication | Shielded ball bearings, C-3 fit with premium Mobil Polyrex® EM grease (-30°C to +150°C) | • | • | • |
| | Open Bearings | • | | |
| | Open Bearings (Roller Bearings only) | | • | • |
| | Zerk fittings | • | • | • |
| Bearing Caps | Extended grease tubes for regreasing without disassembly | • | • | • |
| | 182T and larger | | • | • |
| | 254T and larger (Open Dripproof) | • | | |
| Construction | 324T and larger (Totally Enclosed) | • | | |
| | Rolled Steel | • | | |
| Conduit Box | Cast Iron | • | • | • |
| | Steel 182T-449T, NPT threaded, cast iron 5000 frame | • | | |
| Leads | Cast iron, oversized, fully gasketed | | • | • |
| | Lead lugs 364T and larger | | • | • |
| Fan Guard (TEFC) | Permanently marked leads with lead separator | | • | • |
| | Steel | • | | |
| Fan (External) | Cast iron | • | • | • |
| | Non-sparking polypropylene (TEFC) | • | • | • |
| Drains | Corrosion resistant bronze sintered drain and breather | | • | • |
| | Drilled and tapped hole | • | | |
| Epoxy Finish | Internal and external corrosion resistant epoxy | | • | • |
| Hardware | Corrosion resistant zinc dichromate plated hex head hardware | | • | • |
| | Listing provisions, 182T and larger | • | • | • |
| IP Code | IP21 (Open Dripproof) | • | | |
| | IP43 (Rolled Steel) | • | | |
| | IP55 (Cast Iron) | • | • ¹ | |
| | IP56 | | | • |
| Ground | Ground lug provision in conduit box | • | • | • |
| | External grounding provision | | | • |
| Nameplate | Stainless steel - includes NEMA®* nominal efficiency and power factor | • | • | • |
| | AFBMA®* bearing identification plate | | • | • |
| Seals | V-Ring (Forsheda) seal on drive end | • | • | |
| | Inpro/ Seal®* VBX®* bearing isolators on drive end of TENV and both ends of TEFC | | | • |
| Marine Duty | Meets IEEE45 and USCG | | • | • |
| | Meets API RP14F for offshore platforms | | | • |
| Division 2 Hazardous Duty | CSA®* Certification nameplate, Class I Groups A,B,C,D, Temperature Code T2B | • | • | • |
| Motor Testing | Actual short commercial test data plus max. vibration test supplied with each motor | | • | |
| | Actual short commercial test data plus 2 additional vibration tests supplied with each motor | | | • |
| Agency Listings | UL®* recognized | • | • | • |
| | CSA certified | • | • | • |
| | CE®* mark | • | • | • |
| Warranty | 36 mo. From date of first use, 42 mo. From date of invoice | • | • | |
| | 60 mo. From date of first use, 66 mo. From date of invoice | | | • |
| | Optional extended warranties are available | • | • | • |

*See back cover page for attribution.

1 = Except as Noted

BLUE CHIP® XRI®-SEVERE DUTY / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®*, XRI®, THREE-PHASE, TOTALLY ENCLOSED

APPLICATIONS

Chemical plants, paper mills, refineries, mines, food processing, foundries, and other severe duty environments where long life and ultra-high efficiency are desired. Guaranteed efficiencies offer an extra return on your Investment when using these premium efficiency motors on high cycle or long run applications.

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- NEMA Premium models are in compliance with EISA 2007
- Meets Ford®* EM1 automotive duty specification
- Meets IEEE45 USCG Marine Duty, IP55 construction
- 100% cast iron construction for rigidity and reduced vibration
- Provisions to add stub shaft for an encoder (182T-449T, TEFC only)
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Suitable for use on a VFD, 10:1 variable torque and constant torque as noted
- MAX GUARD® motor Class H insulation system
- BCP (-P) models are not Hazardous Duty® motors certified for Division 2 locations
- Hazardous Duty motor Division 2 CSA certification nameplate
- Division 2 / Zone 2 Class I (gases), Groups A, B, C, D
- Meets temperature code T2B
- Precision balanced to .08"/sec
- Internal and external epoxy paint
- Bearing caps (both ends)
- Extended grease tubes, regreasable in service
- Corrosion resistant bronze sintered drain and breather
- Constant torque speed range is listed in CT speed range column
- Actual test and vibration data supplied with each motor
- UL®* Recognized (through 5011) and CSA®* certified and CE®* mark
- Silicone-free Construction



Models through 40Hp are capable of

- 1.25 service factor (sinewave only)
- 50Hz at same HP, 1.0 service factor (sinewave only)
- Any nameplate changes are subject to modification charges (see MOD central section)
- Contact your sales representative for optional nameplate markings on 50 HP and larger

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-------|------|---------|-------|--------------|---------------|-------|----------------|-----------|-----------|-----|----------|------------|-------------|
| 1 1/2 | 1200 | 230/460 | 182T | E465A | 182TTTCD6578 | | 10:1 | 87.5 | 4.6/2.3 | 106 | 12.82 | N,75 | A641A |
| | 1200 | 460 | 182T | E632A | 182TTTCD6576 | ¶ | 10:1 | 87.5 | 2.3 | 109 | 12.82 | N,75 | A641A |
| | 1200 | 460 | 182T | E380B | 182TTFC616584 | ¶ | 10:1 | 87.5 | 2.3 | 118 | 15.20 | 75 | A641A |
| 2 | 1200 | 230/460 | 184T | E468A | 184TTTCD6582 | √ | 10:1 | 88.5 | 6.0/3.0 | 124 | 13.62 | N,75 | A641A |
| | 1200 | 460 | 184T | E633A | 184TTTCD6576 | √ | 10:1 | 88.5 | 3.0 | 102 | 13.82 | N,75 | A641A |
| | 1200 | 460 | 184T | E388B | 184TTFC6576 | | 10:1 | 88.5 | 3.0 | 129 | 16.20 | 75 | A641A |
| 3 | 3600 | 230/460 | 182T | E390A | 182TTFC6501 | ¶ | 10:1 | 86.5 | 8.0/4.0 | 97 | 15.20 | 75 | A641A |
| | 3600 | 460 | 182T | E601A | 182TTTCD6501 | √ | 2:1 | 89.5 | 3.5 | 103 | 12.74 | N,75 | A641A |
| | 3600 | 575 | 182T | E392A | 182TTFC6505 | ¶ | 2:1 | 86.5 | 3.2 | 100 | 15.20 | 75 | A641A |
| | 3600 | 575 | 182T | E853A | 182TTTCD6505 | | 2:1 | 89.5 | 2.8 | 103 | 13.82 | N,75 | A641A |
| | 1800 | 230/460 | 182T | E470A | 182TTTCD6538 | √ | 10:1 | 89.5 | 7.8/3.9 | 112 | 13.82 | N,75 | A641A |
| | 1800 | 460 | 182T | E616A | 182TTTCD6526 | √ | 10:1 | 89.5 | 3.9 | 112 | 13.82 | N,75 | A641A |
| | 1800 | 575 | 182T | E669A | 182TTTCD6530 | ¶ | 10:1 | 89.5 | 3.1 | 120 | 13.82 | N,75 | A641A |
| 5 | 1200 | 230/460 | 213T | E471B | 213TTFC6594 | √ | 20:1 | 89.5 | 8.6/4.3 | 179 | 18.53 | A,75 | A646A |
| | 1200 | 460 | 213T | E634B | 213TTFC6576 | √ | 20:1 | 89.5 | 4.3 | 179 | 18.53 | A,75 | A646A |
| | 3600 | 230/460 | 184T | E472A | 184TTFC6810 | √ | 20:1 | 88.5 | 12.0/6.0 | 103 | 16.20 | 75 | A641A |
| | 3600 | 460 | 184T | E602A | 184TTFC6501 | √ | 10:1 | 88.5 | 6.0 | 106 | 16.20 | 75 | A641A |
| | 3600 | 575 | 184T | E655A | 184TTFC6505 | ¶ | 2:1 | 88.5 | 4.8 | 111 | 16.20 | 75 | A641A |
| | 1800 | 230/460 | 184T | E473A | 184TTFC6844 | √ | 20:1 | 89.5 | 13.0/6.5 | 126 | 16.20 | 75 | A641A |
| | 1800 | 460 | 184T | E617A | 184TTFC6526 | √ | 20:1 | 89.5 | 6.5 | 118 | 16.20 | 75 | A641A |
| 5 | 1800 | 575 | 184T | E670A | 184TTFC6530 | ¶ | 10:1 | 89.5 | 5.2 | 118 | 16.20 | 75 | A641A |
| | 1200 | 230/460 | 215T | E474B | 215TTFC6881 | √ | 20:1 | 89.5 | 13.6/6.8 | 209 | 20.03 | 75 | A646A |
| | 1200 | 460 | 215T | E635B | 215TTFC6576 | √ | 20:1 | 89.5 | 6.8 | 203 | 20.03 | 75 | A646A |
| | 1200 | 575 | 215T | E683B | 215TTFC6580 | ¶ | 10:1 | 89.5 | 5.5 | 194 | 20.03 | 75 | A646A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Continued on next page.

*See back cover page for attribution.

BLUE CHIP® XRI®-SEVERE DUTY / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®*, XRI®, THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-------|------|---------|--------------|----------------|---------------|-------|----------------|-----------|-----------|-------|----------|------------|-------------|
| 7 1/2 | 3600 | 230/460 | 213T | E475B | 213TTTCD6502 | √ | 2:1 | 91.0 | 17.4/8.7 | 176 | 15.97 | N,75 | A646A |
| | 3600 | 460 | 213T | E396B | 213TTFCD6501 | ¶ | 20:1 | 89.5 | 9.0 | 156 | 18.53 | 75 | A646A |
| | 3600 | 460 | 213T | E603B | 213TTTCD6501 | √ | 2:1 | 91.0 | 8.7 | 176 | 15.97 | N,75 | A646A |
| | 3600 | 575 | 213T | E656B | 213TTTCD6505 | ¶ | 2:1 | 91.0 | 7.0 | 188 | 15.97 | N,75 | A646A |
| | 1800 | 230/460 | 213T | E476B | 213TTFCD6531 | √ | 20:1 | 91.7 | 19.0/9.5 | 197 | 18.53 | 75 | A646A |
| | 1800 | 460 | 213T | E618B | 213TTFCD6526 | √ | 20:1 | 91.7 | 9.5 | 205 | 18.53 | 75 | A646A |
| | 1800 | 575 | 213T | E671B | 213TTFCD6530 | ¶ | 10:1 | 91.7 | 7.6 | 201 | 18.53 | 75 | A646A |
| | 1200 | 230/460 | 254T | E477A | 254TTFCD6590 | √ | 10:1 | 91.0 | 19.8/9.9 | 299 | 24.15 | 75 | A284A |
| | 1200 | 460 | 254T | E636A | 254TTFCD6576 | √ | 10:1 | 91.0 | 9.9 | 299 | 24.15 | 75 | A284A |
| 1200 | 575 | 254T | E684A | 254TTFCD6578 | ¶ | 10:1 | 91.0 | 7.9 | 297 | 24.15 | 75 | A284A | |
| 10 | 3600 | 230/460 | 215T | E478B | 215TTFCD6807 | √ | 20:1 | 90.2 | 23.6/11.8 | 210 | 20.03 | 75 | A646A |
| | 3600 | 460 | 215T | E604B | 215TTFCD6501 | √ | 20:1 | 90.2 | 11.8 | 227 | 20.03 | 75 | A646A |
| | 3600 | 575 | 215T | E657B | 215TTFCD6505 | | 2:1 | 90.2 | 9.5 | 195 | 20.03 | 75 | A646A |
| | 1800 | 230/460 | 215T | E479B | 215TTFCD6527 | √ | 20:1 | 91.7 | 25.0/12.5 | 228 | 20.03 | 75 | A646A |
| | 1800 | 230/460 | 215T | E479B-P | 215TTFCD16847 | ¶ | 10:1 | 91.7 | 25.0/12.5 | 212 | 20.03 | P,75 | A646A |
| | 1800 | 460 | 215T | E619B | 215TTFCD6526 | √ | 20:1 | 91.7 | 12.5 | 212 | 20.03 | 75 | A646A |
| | 1800 | 575 | 215T | E672B | 215TTFCD6530 | ¶ | 10:1 | 91.7 | 10.0 | 216 | 20.03 | 75 | A646A |
| | 1200 | 230/460 | 256T | E480A | 256TTFCD6596 | √ | 10:1 | 91.0 | 25.8/12.9 | 319 | 25.89 | 75 | A284A |
| | 1200 | 460 | 256T | E637A | 256TTFCD6576 | √ | 10:1 | 91.0 | 12.9 | 344 | 25.89 | 75 | A284A |
| 1200 | 575 | 256T | E685A | 256TTFCD6578 | | 10:1 | 91.0 | 10.3 | 317 | 25.89 | 75 | A284A | |
| 15 | 3600 | 230/460 | 254T | E481A | 254TTFCD6515 | √ | 20:1 | 91.0 | 35.5/17.8 | 335 | 24.15 | 75 | A284A |
| | 3600 | 460 | 254T | E605A | 254TTFCD6501 | √ | 20:1 | 91.0 | 17.8 | 333 | 24.15 | 75 | A284A |
| | 3600 | 575 | 254T | E658A | 254TTFCD6503 | ¶ | 2:1 | 91.0 | 14.3 | 335 | 24.15 | 75 | A284A |
| | 1800 | 230/460 | 254T | E482A | 254TTFCD6529 | √ | 10:1 | 92.4 | 36.5/18.4 | 345 | 24.15 | 75 | A284A |
| | 1800 | 460 | 254T | E620A | 254TTFCD6526 | √ | 20:1 | 92.4 | 18.4 | 347 | 24.15 | 75 | A284A |
| | 1800 | 460 | 254T | E620A-P | 254TTFCD16838 | ¶ | 10:1 | 92.4 | 18.4 | 347 | 24.15 | P,75 | A284A |
| | 1800 | 575 | 254T | E673A | 254TTFCD6528 | √ | 10:1 | 92.4 | 14.7 | 327 | 24.15 | 75 | A284A |
| | 1200 | 230/460 | 284T | E483A | 284TTFCD6876 | √ | 10:1 | 91.7 | 40.0/20.0 | 479 | 26.64 | | A618A |
| | 1200 | 460 | 284T | E638A | 284TTFCD6576 | √ | 10:1 | 91.7 | 20.0 | 479 | 26.64 | | A618A |
| 1200 | 575 | 284T | E694A | 284TTFCD6580 | | 10:1 | 91.7 | 16.0 | 479 | 26.64 | | A618A | |
| 20 | 3600 | 230/460 | 256T | E484A | 256TTFCD6523 | √ | 2:1 | 91.0 | 47.0/23.5 | 345 | 25.89 | 75 | A284A |
| | 3600 | 460 | 256T | E606A | 256TTFCD6501 | √ | 2:1 | 91.0 | 23.5 | 375 | 25.89 | 75 | A284A |
| | 3600 | 575 | 256T | E659A | 256TTFCD6503 | | 2:1 | 91.0 | 19.0 | 375 | 25.89 | 75 | A284A |
| | 1800 | 230/460 | 256T | E485A | 256TTFCD6529 | √ | 10:1 | 93.0 | 48.5/24.2 | 355 | 25.89 | 75 | A284A |
| | 1800 | 460 | 256T | E621A | 256TTFCD6526 | √ | 20:1 | 93.0 | 24.2 | 425 | 25.89 | 75 | A284A |
| | 1800 | 460 | 256T | E621A-P | 256TTFCD16855 | √ | 10:1 | 93.0 | 24.2 | 425 | 25.89 | P,75 | A284A |
| | 1800 | 575 | 256T | E674A | 256TTFCD6528 | ¶ | 10:1 | 93.0 | 19.4 | 425 | 25.89 | 75 | A284A |
| | 1200 | 230/460 | 286T | E486A | 286TTFCD6876 | √ | 10:1 | 91.7 | 52.0/26.0 | 479 | 28.14 | | A618A |
| | 1200 | 460 | 286T | E639A | 286TTFCD6576 | √ | 10:1 | 91.7 | 26.0 | 490 | 28.14 | | A618A |
| 1200 | 575 | 286T | E695A | 286TTFCD6580 | | 10:1 | 91.7 | 20.8 | 450 | 28.14 | | A618A | |
| 25 | 3600 | 230/460 | 284TS | E487A | 284STFCD6807 | √ | 2:1 | 91.7 | 60.0/30.0 | 450 | 25.27 | | A618A |
| | 3600 | 460 | 284TS | E607A | 284STFCD6501 | √ | 2:1 | 91.7 | 30.0 | 440 | 25.27 | | A618A |
| | 3600 | 575 | 284TS | E660A | 284STFCD6502 | | 2:1 | 91.7 | 24.0 | 481 | 25.27 | | A618A |
| | 1800 | 230/460 | 284T | E488A | 284TTFCD6837 | √ | 10:1 | 93.6 | 60.0/30.0 | 494 | 26.64 | | A618A |
| | 1800 | 230/460 | 284T | E1228 | 284TTFCD6635 | √ | 10:1 | 93.6 | 60.0/30.0 | 483 | 26.64 | RB | A618A |
| | 1800 | 460 | 284T | E622A | 284TTFCD6526 | √ | 10:1 | 93.6 | 30.0 | 486 | 26.64 | | A618A |
| | 1800 | 460 | 284T | E622A-P | 284TTFCD16851 | ¶ | 20:1 | 93.6 | 30.0 | 486 | 26.64 | P | A618A |
| | 1800 | 575 | 284T | E675A | 284TTFCD6527 | ¶ | 20:1 | 93.6 | 24.0 | 432 | 26.64 | | A618A |
| | 1200 | 460 | 324T | E640A | 324TTFCD6576 | √ | 20:1 | 93.0 | 32.0 | 620 | 29.85 | | A177A |
| 1200 | 460 | 324T | E1229 | 324TTFCD6685 | √ | 2:1 | 93.0 | 32.0 | 620 | 29.85 | RB | A177A | |
| 1200 | 575 | 324T | E696A | 324TTFCD6577 | | 20:1 | 93.0 | 25.6 | 675 | 29.85 | | A177A | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

*See back cover page for attribution.

Continued on next page.

BLUE CHIP® XRI®-SEVERE DUTY / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®*, XRI®, THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|----|------|---------|-------|----------------|---------------|-------|----------------|-----------|-----------|------|----------|------------|-------------|
| 30 | 3600 | 230/460 | 286TS | E490A | 286TSTFCD6804 | √ | 2:1 | 91.7 | 71.0/35.5 | 450 | 26.77 | | A618A |
| | 3600 | 460 | 286TS | E608A | 286TSTFCD6501 | ¶ | 2:1 | 91.7 | 35.5 | 450 | 26.77 | | A618A |
| | 1800 | 230/460 | 286T | E491A | 286TTFCD6570 | √ | 2:1 | 93.6 | 71.0/35.5 | 529 | 28.14 | | A618A |
| | 1800 | 230/460 | 286T | E1231 | 286TTFCD6635 | √ | 2:1 | 93.6 | 71.0/35.5 | 529 | 28.14 | RB | A618A |
| | 1800 | 460 | 286T | E623A | 286TTFCD6526 | √ | 2:1 | 93.6 | 35.5 | 527 | 28.14 | | A618A |
| | 1800 | 460 | 286T | E623A-P | 286TTFCD16847 | | 10:1 | 93.6 | 35.5 | 530 | 28.14 | P | A618A |
| | 1800 | 575 | 286T | E676A | 286TTFCD6527 | √ | 2:1 | 93.6 | 28.4 | 525 | 28.14 | | A618A |
| | 1200 | 460 | 326T | E641A | 326TTFCD6576 | √ | 20:1 | 93.0 | 38.0 | 658 | 31.35 | | A177A |
| | 1200 | 460 | 326T | E1232 | 326TTFCD6685 | √ | 2:1 | 93.0 | 38.0 | 658 | 31.35 | RB | A177A |
| | 1200 | 575 | 326T | E400A | 326TTFCD6580 | √ | 2:1 | 93.0 | 30.5 | 658 | 31.35 | | A177A |
| 40 | 3600 | 460 | 324TS | E609A | 324TSTFCD6501 | √ | 2:1 | 92.4 | 46.0 | 600 | 28.35 | | A177A |
| | 3600 | 575 | 324TS | E662A | 324TSTFCD6505 | | 2:1 | 92.4 | 37.0 | 452 | 28.35 | | A177A |
| | 1800 | 460 | 324T | E624A | 324TTFCD6526 | √ | 20:1 | 94.1 | 47.5 | 702 | 29.85 | | A177A |
| | 1800 | 460 | 324T | E624A-P | 324TTFCD16860 | ¶ | 2:1 | 94.1 | 47.5 | 657 | 29.85 | P | A177A |
| | 1800 | 460 | 324T | E1234 | 324TTFCD6635 | √ | 2:1 | 94.1 | 47.5 | 708 | 29.85 | RB | A177A |
| | 1800 | 575 | 324T | E677A | 324TTFCD6527 | ¶ | 20:1 | 94.1 | 38.0 | 670 | 29.85 | | A177A |
| | 1200 | 460 | 364T | E642B | 364TTFCD16584 | √ | 2:1 | 94.1 | 48.0 | 882 | 33.40 | | A179A |
| | 1200 | 460 | 364T | E1235 | 364TTFCD6685 | √ | 2:1 | 94.1 | 48.0 | 882 | 33.40 | RB | A179A |
| | 1200 | 575 | 364T | E401B | 364TTFCD16585 | √ | 2:1 | 94.1 | 38.5 | 882 | 33.40 | | A179A |
| | 3600 | 460 | 326TS | E610A | 326TSTFCD6501 | √ | 2:1 | 94.1 | 56.5 | 695 | 29.85 | | A177A |
| 50 | 3600 | 575 | 326TS | E663A | 326TSTFCD6502 | | 2:1 | 94.1 | 45.0 | 725 | 29.85 | | A177A |
| | 1800 | 460 | 326T | E625A | 326TTFCD6526 | √ | 2:1 | 94.5 | 58.5 | 716 | 31.35 | | A177A |
| | 1800 | 460 | 326T | E625A-P | 326TTFCD16844 | √ | 2:1 | 94.5 | 58.5 | 730 | 31.35 | P | A177A |
| | 1800 | 460 | 326T | E1237 | 326TTFCD6635 | ¶ | 2:1 | 94.5 | 58.5 | 730 | 31.35 | RB | A177A |
| | 1800 | 460 | 326TS | E453A | 326TSTFCD6536 | ¶ | 10:1 | 94.5 | 58.5 | 765 | 29.85 | | A177A |
| | 1800 | 575 | 326T | E678A | 326TTFCD6527 | ¶ | 2:1 | 94.5 | 47.0 | 730 | 31.35 | | A177A |
| | 1200 | 460 | 365T | E643B | 365TTFCD16591 | √ | 10:1 | 94.1 | 60.5 | 987 | 34.40 | | A179A |
| | 1200 | 460 | 365T | E1238 | 365TTFCD6685 | ¶ | 2:1 | 94.1 | 60.5 | 987 | 34.40 | RB | A179A |
| | 1200 | 575 | 365T | E402B | 365TTFCD16592 | √ | 2:1 | 94.1 | 48.5 | 1001 | 34.40 | | A179A |
| | 3600 | 460 | 364TS | E611A | 364TSTFCD6501 | √ | 2:1 | 93.6 | 68.5 | 830 | 33.27 | | A179A |
| 60 | 3600 | 575 | 364TS | E664A | 364TSTFCD6505 | √ | 2:1 | 93.6 | 55.0 | 900 | 33.27 | | A179A |
| | 1800 | 460 | 364T | E626A | 364TTFCD6536 | √ | 10:1 | 95.0 | 68.0 | 932 | 33.40 | | A179A |
| | 1800 | 460 | 364T | E626A-P | 364TTFCD16833 | √ | 10:1 | 95.0 | 68.0 | 900 | 33.40 | P | A179A |
| | 1800 | 460 | 364T | E1240 | 364TTFCD6635 | √ | 2:1 | 95.0 | 68.0 | 948 | 33.40 | RB | A179A |
| | 1800 | 460 | 364T | E1240-P | 364TTFCD6535 | | 2:1 | 95.0 | 68.0 | 805 | 33.40 | P, RB | A179A |
| | 1800 | 460 | 364TS | E454A | 364TSTFCD6526 | √ | 20:1 | 95.0 | 68.0 | 980 | 33.27 | | A179A |
| | 1800 | 575 | 364T | E679A | 364TTFCD6537 | ¶ | 20:1 | 95.0 | 54.5 | 980 | 33.40 | | A179A |
| | 1200 | 460 | 404T | E644A | 404TTFCD6586 | √ | 20:1 | 94.5 | 71.5 | 1200 | 38.88 | | A425A |
| | 1200 | 460 | 404T | E1241 | 404TTFCD6685 | √ | 2:1 | 94.5 | 71.5 | 1215 | 38.88 | RB | A425A |
| | 1200 | 575 | 404T | E403A | 404TTFCD6592 | | 2:1 | 94.5 | 57.0 | 1200 | 38.88 | | A425A |
| 75 | 3600 | 460 | 365TS | E612A | 365TSTFCD6501 | √ | 2:1 | 94.1 | 84.0 | 939 | 34.27 | | A179A |
| | 3600 | 575 | 365TS | E665A | 365TSTFCD6502 | | 2:1 | 94.5 | 67.0 | 939 | 34.27 | | A179A |
| | 1800 | 460 | 365T | E627A | 365TTFCD6536 | √ | 10:1 | 95.5 | 85.0 | 979 | 34.40 | | A179A |
| | 1800 | 460 | 365T | E627A-P | 365TTFCD16862 | √ | 2:1 | 95.5 | 85.0 | 1064 | 34.40 | P | A179A |
| | 1800 | 460 | 365T | E1243 | 365TTFCD6635 | √ | 2:1 | 95.5 | 85.0 | 1064 | 34.40 | RB | A179A |
| | 1800 | 460 | 365TS | E455A | 365TSTFCD6526 | √ | 2:1 | 95.5 | 85.0 | 1028 | 34.27 | | A179A |
| | 1800 | 575 | 365T | E680A | 365TTFCD6537 | | 10:1 | 95.5 | 68.0 | 1028 | 34.40 | | A179A |
| | 1200 | 460 | 405T | E645A | 405TTFCD6586 | √ | 2:1 | 94.5 | 89.0 | 1306 | 38.88 | | A425A |
| | 1200 | 460 | 405T | E1244 | 405TTFCD6685 | √ | 2:1 | 94.5 | 89.0 | 1306 | 38.88 | RB | A425A |
| | 1200 | 575 | 405T | E404A | 405TTFCD6587 | | 20:1 | 94.5 | 71.0 | 1295 | 38.88 | | A425A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

*See back cover page for attribution.

Continued on next page.

BLUE CHIP® XRI®-SEVERE DUTY / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®*, XRI®, THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|------|------|-------|--------------|----------------|---------------|-------|----------------|-----------|----------|-------|----------|------------|-------------|
| 100 | 3600 | 460 | 405TS | E613A | 405STFC6501 | √ | 2:1 | 94.5 | 111 | 1185 | 35.88 | | A424A |
| | 3600 | 575 | 405TS | E493A | 405STFC6502 | | 2:1 | 94.5 | 89.0 | 1146 | 35.88 | | A424A |
| | 1800 | 460 | 405T | E628A | 405TTFCD6536 | √ | 2:1 | 95.4 | 113 | 1325 | 38.88 | | A425A |
| | 1800 | 460 | 405T | E628A-P | 405TTFCD16865 | √ | 2:1 | 95.4 | 113 | 1295 | 38.88 | P | A425A |
| | 1800 | 460 | 405T | E1246 | 405TTFCD6635 | √ | 2:1 | 95.4 | 113 | 1295 | 38.77 | RB | A425A |
| | 1800 | 460 | 405TS | E456A | 405STFC6526 | ¶ | 2:1 | 95.4 | 113 | 1295 | 35.88 | | A427A |
| | 1800 | 575 | 405T | E681A | 405TTFCD6538 | ¶ | 2:1 | 95.4 | 90.5 | 1295 | 38.88 | | A425A |
| | 1200 | 460 | 444T | E646B | 444TTFCD16581 | √ | 2:1 | 95.0 | 115 | 1864 | 46.83 | | A427A |
| | 1200 | 460 | 444T | E1247 | 444TTFCD6685 | √ | 2:1 | 95.0 | 115 | 1864 | 46.71 | RB | A427A |
| 1200 | 575 | 444T | E405B | 444TTFCD16582 | | 2:1 | 95.0 | 91.5 | 1859 | 46.71 | | A427A | |
| 125 | 3600 | 460 | 444TS | E614A | 444STFC6501 | √ | 2:1 | 95.0 | 138 | 1680 | 43.08 | | A426A |
| | 3600 | 575 | 444TS | E494A | 444STFC6505 | √ | 2:1 | 95.0 | 110 | 1761 | 43.08 | | A426A |
| | 1800 | 460 | 444T | E629A | 444TTFCD6536 | √ | 2:1 | 95.4 | 140 | 1707 | 46.83 | | A427A |
| | 1800 | 460 | 444T | E629A-P | 444TTFCD16574 | | 2:1 | 95.4 | 140 | 1707 | 46.83 | P | A427A |
| | 1800 | 460 | 444T | E1249 | 444TTFCD6635 | √ | 2:1 | 95.4 | 140 | 1867 | 46.83 | RB | A427A |
| | 1800 | 460 | 444TS | E457A | 444STFC6526 | ¶ | 2:1 | 95.4 | 140 | 1707 | 43.08 | | A427A |
| | 1800 | 575 | 444T | E697A | 444TTFCD6540 | ¶ | 2:1 | 95.4 | 112 | 1707 | 46.83 | | A427A |
| | 1200 | 460 | 445T | E647A | 445TTFCD6586 | ¶ | 2:1 | 95.0 | 143 | 1961 | 46.83 | | A427A |
| | 1200 | 460 | 445T | E1250 | 445TTFCD6685 | √ | 2:1 | 95.0 | 143 | 1950 | 46.83 | RB | A427A |
| 1200 | 575 | 445T | E406A | 445TTFCD6590 | | 2:1 | 95.0 | 114 | 1961 | 46.83 | | A427A | |
| 150 | 3600 | 460 | 445TS | E615A | 445STFC6501 | √ | 2:1 | 95.0 | 161 | 1909 | 43.08 | | A426A |
| | 3600 | 575 | 445TS | E495A | 445STFC6502 | | 2:1 | 95.0 | 128 | 1909 | 43.08 | | A426A |
| | 1800 | 460 | 445T | E630A | 445TTFCD6536 | √ | 2:1 | 95.8 | 169 | 1900 | 46.83 | | A427A |
| | 1800 | 460 | 445T | E1252 | 445TTFCD6635 | √ | 2:1 | 95.8 | 169 | 1867 | 46.83 | RB | A427A |
| | 1800 | 460 | 445TS | E458A | 445STFC6526 | ¶ | 2:1 | 95.8 | 169 | 1900 | 43.08 | | A427A |
| | 1800 | 575 | 445T | E682A | 445TTFCD6537 | | 2:1 | 95.8 | 135 | 1900 | 46.83 | | A427A |
| | 1200 | 460 | 445T | E448A | 445TTFCD6587 | √ | 2:1 | 95.8 | 171 | 2429 | 51.20 | RB | A427A |
| | 1200 | 575 | 445T | E407A | 445TTFCD6591 | √ | 2:1 | 95.8 | 136 | 2483 | 51.20 | | A427A |
| | 1200 | 575 | 447T | E1353 | 447TTFCD6680 | √ | 2:1 | 95.8 | 136 | 2483 | 51.20 | RB | A427A |
| 200 | 3600 | 460 | 445TS | E449A | 445STFC6505 | √ | 2:1 | 95.4 | 217 | 2278 | 47.45 | A | A426A |
| | 3600 | 575 | 445TS | E496A | 445STFC6506 | | 2:1 | 95.4 | 174 | 2303 | 47.45 | A | A426A |
| | 1800 | 460 | 445T | E631A | 445TTFCD6538 | √ | 2:1 | 96.5 | 219 | 2276 | 51.20 | RB | A427A |
| | 1800 | 460 | 445TS | E459A | 445STFC6528 | ¶ | 2:1 | 96.5 | 219 | 2257 | 47.45 | | A427A |
| | 1800 | 460 | 449T | E770A | 449TTFCD6530 | ¶ | 2:1 | 96.5 | 219 | 2309 | 55.33 | | A427A |
| | 1800 | 460 | 449T | E854A | 449TTFCD6540 | ¶ | 2:1 | 96.5 | 219 | 2310 | 55.33 | RB | A427A |
| | 1800 | 575 | 449T | E856A | 449TTFCD6564 | √ | 2:1 | 96.5 | 175 | 2310 | 55.33 | RB | A427A |
| | 1200 | 460 | 449T | E773A | 449TTFCD6578 | √ | 2:1 | 95.8 | 230 | 2568 | 55.33 | | A427A |
| | 1200 | 460 | 449T | E687A | 449TTFCD6588 | √ | 2:1 | 95.8 | 230 | 2570 | 55.33 | RB | A427A |
| 1200 | 575 | 449T | E408A | 449TTFCD6582 | | 2:1 | 95.8 | 184 | 2570 | 55.33 | RB | A427A | |
| 250 | 3600 | 460 | 449TS | E699A | 449STFC6503 | √ | 2:1 | 95.8 | 266 | 2458 | 51.58 | | A426A |
| | 1800 | 460 | 449T | E771A | 449TTFCD6528 | √ | 2:1 | 96.2 | 272 | 2638 | 55.33 | | A427A |
| | 1800 | 460 | 449T | E690A | 449TTFCD6538 | √ | 2:1 | 96.2 | 272 | 2770 | 55.33 | RB | A427A |
| | 1200 | 460 | 449T | E774A | 449TTFCD6577 | ¶ | 2:1 | 95.8 | 285 | 2213 | 55.33 | | A427A |
| 300 | 3600 | 460 | 449TS | E698A | 449STFC6502 | √ | 2:1 | 95.8 | 320 | 2549 | 51.58 | | A426A |
| | 1800 | 460 | 449T | E772A | 449TTFCD6527 | ¶ | 2:1 | 96.2 | 332 | 2840 | 55.33 | | A427A |
| | 1800 | 460 | 449T | E691A | 449TTFCD6537 | √ | 2:1 | 96.2 | 332 | 2473 | 55.33 | RB | A427A |
| | 1800 | 575 | 449T | E345A | 449TTFCD16534 | √ | 2:1 | 96.2 | 266 | 2978 | 55.33 | | A427A |
| | 1200 | 460 | 449T | E360 | 449TTFCD6576 | √ | 2:1 | 95.8 | 342 | 3154 | 59.27 | 13 | A427A |
| 350 | 3600 | 460 | 449TS | E769A | 449STFC6501 | √ | 2:1 | 95.8 | 373 | 2621 | 51.58 | | A426A |
| | 1800 | 460 | 449T | E692A | 449TTFCD6536 | √ | 2:1 | 96.2 | 390 | 2860 | 55.33 | RB | A427A |
| 400 | 3600 | 460 | 449TS | E369A | 449STFC6500 | | 2:1 | 95.8 | 427 | 2996 | 55.51 | 13 | A426A |
| | 1800 | 460 | 449T | E776A | 449TTFCD16553 | √ | NA | 96.5 | 440 | 3154 | 59.27 | 13 | A427A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

*See back cover page for attribution.

BLUE CHIP® XRI®-SEVERE DUTY / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®, XRI®, THREE-PHASE, TOTALLY ENCLOSED

C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|-------------|--------------|-------|----------------|-----------|-----------|------|----------|------------|
| 1 1/2 | 1200 | 230/460 | 182TC | E025 | 182TTFCD6588 | √ | 10:1 | 87.5 | 4.6/2.3 | 106 | 15.95 | |
| 2 | 1200 | 230/460 | 184TC | E028 | 184TTFCD6588 | | 10:1 | 88.5 | 6.0/3.0 | 125 | 16.95 | |
| 3 | 1800 | 230/460 | 182TC | E030 | 182TTFCD6540 | √ | 10:1 | 89.5 | 8.0/4.0 | 153 | 15.95 | |
| | 1200 | 230/460 | 213TC | E031 | 213TTFCD6588 | | 10:1 | 89.5 | 8.6/4.3 | 221 | 19.28 | A |
| 5 | 1800 | 230/460 | 184TC | E033 | 184TTFCD6540 | √ | 10:1 | 89.5 | 13.0/6.5 | 105 | 16.95 | |
| | 1200 | 230/460 | 215TC | E034 | 215TTFCD6588 | | 10:1 | 89.5 | 13.6/6.8 | 225 | 20.78 | |
| 7 1/2 | 1800 | 230/460 | 213TC | E036 | 213TTFCD6540 | √ | 10:1 | 91.7 | 19.0/9.5 | 221 | 19.28 | |
| | 1200 | 230/460 | 254TC | E037 | 254TTFCD6588 | | 10:1 | 91.0 | 19.8/9.9 | 367 | 24.65 | |
| 10 | 1800 | 230/460 | 215TC | E039 | 215TTFCD6540 | √ | 10:1 | 91.7 | 25.0/12.5 | 237 | 20.78 | |
| | 1200 | 230/460 | 256TC | E040 | 256TTFCD6588 | | 10:1 | 91.0 | 25.8/12.9 | 367 | 26.39 | |
| 15 | 1800 | 230/460 | 254TC | E042 | 254TTFCD6540 | √ | 10:1 | 92.4 | 36.5/18.4 | 367 | 24.65 | |
| | 1200 | 230/460 | 284TC | E043 | 284TTFCD6588 | | 10:1 | 91.7 | 40.0/20.0 | 502 | 26.64 | |
| 20 | 1800 | 230/460 | 256TC | E045 | 256TTFCD6540 | √ | 10:1 | 93.0 | 48.5/24.2 | 367 | 26.39 | |
| | 1200 | 230/460 | 286TC | E046 | 286TTFCD6588 | | 10:1 | 91.7 | 52.0/26.0 | 620 | 28.14 | |
| 25 | 1800 | 230/460 | 284TC | E048 | 284TTFCD6540 | √ | 10:1 | 93.6 | 60.0/30.0 | 502 | 26.64 | |
| | 1200 | 460 | 324TC | E049 | 324TTFCD6588 | | 2:1 | 93.0 | 32.0 | 730 | 29.85 | |
| 30 | 1800 | 230/460 | 286TC | E051 | 286TTFCD6540 | √ | 2:1 | 93.6 | 71.0/35.5 | 620 | 28.14 | |
| | 1200 | 460 | 326TC | E052 | 326TTFCD6588 | √ | 2:1 | 93.0 | 38.0 | 730 | 31.35 | |
| 40 | 1800 | 460 | 324TC | E054 | 324TTFCD6540 | √ | 2:1 | 94.1 | 47.5 | 780 | 29.85 | |
| | 1200 | 460 | 364TC | E055 | 364TTFCD6588 | √ | 2:1 | 94.1 | 48.0 | 955 | 33.40 | |
| 50 | 1800 | 460 | 326TC | E057 | 326TTFCD6540 | √ | 2:1 | 94.5 | 58.5 | 780 | 31.35 | |
| | 1200 | 460 | 365TC | E058 | 365TTFCD6588 | | 2:1 | 94.1 | 60.5 | 1010 | 34.40 | |
| 60 | 1800 | 460 | 364TC | E060 | 364TTFCD6540 | √ | 2:1 | 95.0 | 68.0 | 940 | 33.40 | |
| | 1200 | 460 | 404TC | E061 | 404TTFCD6588 | | 2:1 | 94.5 | 71.5 | 1220 | 38.88 | |
| 75 | 1800 | 460 | 365TC | E063 | 365TTFCD6540 | √ | 2:1 | 95.5 | 85.0 | 1120 | 34.40 | |
| | 1200 | 460 | 405TC | E064 | 405TTFCD6588 | | 2:1 | 94.5 | 89.0 | 1320 | 38.88 | |
| 100 | 1800 | 460 | 405TC | E066 | 405TTFCD6540 | √ | 2:1 | 95.4 | 113 | 1340 | 38.88 | |
| | 1200 | 460 | 444TC | E067 | 444TTFCD6588 | | 2:1 | 95.0 | 115 | 2020 | 46.83 | |

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.
 Specifications are subject to change without notice.

*See back cover page for attribution.

BLUE CHIP® XRI®-841 / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®, XRI®, THREE-PHASE, TOTALLY ENCLOSED

APPLICATIONS

For extreme applications in the process industries such as chemical plants, pulp and paper mills, refineries, above-ground mines, food processing, foundries, and other severe duty environments where long life and ultra-high efficiency are required. Guaranteed efficiencies offer an extra return on your investment when using these premium efficiency motors on high cycle or long run time applications

FEATURES

- Meets or exceeds NEMA Premium efficiencies
- NEMA Premium models are in compliance with EISA 2007
- Meets IEEE-841 standard for severe duty motor applications
- Meets GM 7E-TA® and exceed Ford® EM1 specifications
- Meets IEEE45 USCG Marine Duty, IP56 construction
- 100% cast iron construction for rigidity and reduced vibration
- Inpro/Seal® VBX® bearing isolators
- Provisions to add stub shaft for an encoder (182T-449T, TEFC only)
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Suitable for use on a VFD, 10:1 variable torque and constant torque as noted
- BCP (-P) models are not Hazardous Duty® motors certified for Division 2 locations
- Hazardous Duty™ Division 2 CSA certification nameplate
- Division 2 / Zone 2 Class I (gases), Groups A, B, C, D
- Meets temperature code T2B
- MAX GUARD® motor Class H insulation system
- Internal and external epoxy paint
- Bearing caps (both ends)
- Extended grease tubes, regreasable in service
- Corrosion resistant bronze sintered drain and breather
- Actual test and vibration data supplied with each motor
- UL® Recognized (through 5011) and CSA® certified and CE® mark
- Silicone-free Construction



Models through 40 HP are capable of

- 1.25 service factor (sinewave only)
- 50Hz at same HP, 1.0 service factor (sinewave only)
- Any nameplate changes are subject to modification charges (see MOD central section)
- Contact your sales representative for optional nameplate markings on 50 HP and larger.

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-------|------|-------|-------|----------------|---------------|-------|----------------|-----------|----------|-----|----------|------------|-------------|
| 1 | 900 | 460 | 182T | W504A | 182THFCD19101 | √ | 10:1 | 75.5 | 2.0 | 90 | 15.20 | 75 | A182B |
| | 1200 | 460 | 182T | W509A | 182THTCD9076 | | 2:1 | 87.5 | 2.3 | 111 | 12.82 | N,75 | A182B |
| 1 1/2 | 1200 | 460 | 182T | W509A-P | 182THTCD9077 | | 2:1 | 87.5 | 2.3 | 113 | 12.82 | N,P,75 | A182B |
| | 900 | 460 | 184T | W510A | 184THFCD9101 | | 2:1 | 78.5 | 2.5 | 97 | 16.20 | 75 | A182B |
| 2 | 1200 | 460 | 184T | W515A | 184THTCD9076 | ¶ | 2:1 | 88.5 | 3.0 | 124 | 13.82 | N,75 | A182B |
| | 1200 | 460 | 184T | W515A-P | 184THTCD9077 | | 2:1 | 88.5 | 3.0 | 126 | 13.82 | N,P,75 | A182B |
| | 900 | 460 | 213T | W516A | 213THFCD9101 | | 2:1 | 84.0 | 3.2 | 150 | 18.53 | 75 | A183B |
| 3 | 3600 | 460 | 182T | W517A | 182THTCD9001 | ¶ | 2:1 | 89.5 | 3.5 | 100 | 13.82 | N,75 | A182B |
| | 3600 | 460 | 182T | W517A-P | 182THTCD9002 | ¶ | 2:1 | 89.5 | 3.5 | 105 | 13.82 | N,P,75 | A182B |
| | 1800 | 460 | 182T | W519A | 182THTCD9026 | √ | 2:1 | 89.5 | 3.9 | 109 | 13.82 | N,75 | A182B |
| | 1800 | 460 | 182T | W519A-P | 182THTCD9037 | ¶ | 2:1 | 89.5 | 3.9 | 144 | 13.82 | N,P,75 | A182B |
| | 1800 | 575 | 182T | W520A | 182THTCD19033 | √ | 2:1 | 89.5 | 3.1 | 109 | 13.82 | N,75 | A182B |
| | 1200 | 460 | 213T | W521B | 213THFCD9076 | ¶ | 2:1 | 89.5 | 4.3 | 184 | 18.53 | 75 | A183B |
| | 1200 | 460 | 213T | W521B-P | 213THFCD9077 | | 2:1 | 89.5 | 4.3 | 212 | 18.53 | P,75 | A183B |
| | 900 | 460 | 215T | W522B | 215THFCD9101 | √ | 2:1 | 85.5 | 4.6 | 167 | 20.03 | 75 | A183B |
| 5 | 3600 | 460 | 184T | W523A | 184THFCD9001 | √ | 2:1 | 88.5 | 6.0 | 101 | 16.20 | 75 | A182B |
| | 3600 | 460 | 184T | W523A-P | 184THFCD9002 | | 2:1 | 88.5 | 6.0 | 100 | 16.20 | P,75 | A182B |
| | 3600 | 575 | 184T | W524A | 184THFCD19006 | | 2:1 | 88.5 | 4.8 | 102 | 16.20 | 75 | A182B |
| | 1800 | 460 | 184T | W525A | 184THFCD9026 | √ | 2:1 | 89.5 | 6.5 | 109 | 16.20 | 75 | A182B |
| | 1800 | 460 | 184T | W525A-P | 184THFCD9037 | ¶ | 2:1 | 89.5 | 6.5 | 116 | 16.20 | P,75 | A182B |
| | 1800 | 575 | 184T | W526A | 184THFCD9030 | ¶ | 2:1 | 89.5 | 5.2 | 118 | 16.20 | 75 | A182B |
| | 1200 | 460 | 215T | W527B | 215THFCD9076 | ¶ | 2:1 | 89.5 | 6.8 | 178 | 20.03 | 75 | A183B |
| | 1200 | 460 | 215T | W527B-P | 215THFCD9077 | | 2:1 | 89.5 | 6.8 | 222 | 20.03 | P,75 | A183B |
| | 1200 | 575 | 215T | W528B | 215THFCD19077 | | 2:1 | 89.5 | 5.5 | 222 | 20.03 | 75 | A183B |
| | 900 | 460 | 254T | W529A | 254THFCD9101 | √ | 2:1 | 86.5 | 7.1 | 332 | 24.15 | 75 | A184A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

Continued on next page.

*See back cover page for attribution.

BLUE CHIP® XRI®-841 / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®*, XRI®, THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-------|------|-------|----------------|----------------|---------------|-------|----------------|-----------|----------|-------|----------|------------|-------------|
| 7 1/2 | 3600 | 460 | 213T | W530B | 213THTCD9001 | √ | 2:1 | 91.7 | 8.6 | 204 | 17.47 | N,75 | A183B |
| | 3600 | 460 | 213T | W530B-P | 213THTCD9002 | | 2:1 | 91.7 | 8.6 | 204 | 17.47 | N,P,75 | A183B |
| | 3600 | 575 | 213T | W531A | 213THTCD19005 | ¶ | 2:1 | 91.7 | 6.9 | 204 | 17.47 | N,75 | A183B |
| | 1800 | 460 | 213T | W532B | 213THFCD9026 | √ | 2:1 | 91.7 | 9.5 | 215 | 18.53 | 75 | A183B |
| | 1800 | 460 | 213T | W532B-P | 213THFCD9037 | √ | 2:1 | 91.7 | 9.5 | 213 | 18.53 | P,75 | A183B |
| | 1800 | 575 | 213T | W533B | 213THFCD9030 | ¶ | 2:1 | 91.7 | 7.6 | 207 | 18.53 | 75 | A183B |
| | 1200 | 460 | 254T | W534A | 254THFCD9076 | √ | 2:1 | 91.0 | 9.9 | 299 | 24.15 | 75 | A184A |
| | 1200 | 460 | 254T | W534A-P | 254THFCD9077 | | 2:1 | 91.0 | 9.9 | 310 | 24.15 | P,75 | A184A |
| | 900 | 460 | 256T | W536A | 256THFCD9101 | | 2:1 | 86.5 | 10.5 | 386 | 25.89 | 75 | A184A |
| 10 | 3600 | 460 | 215T | W537B | 215THFCD9001 | √ | 2:1 | 90.2 | 11.8 | 200 | 20.03 | 75 | A183B |
| | 3600 | 460 | 215T | W537B-P | 215THFCD9002 | √ | 2:1 | 90.2 | 11.8 | 222 | 20.03 | P,75 | A183B |
| | 3600 | 575 | 215T | W538B | 215THFCD19006 | | 2:1 | 90.2 | 9.5 | 200 | 20.03 | 75 | A183B |
| | 1800 | 460 | 215T | W539B | 215THFCD9026 | √ | 2:1 | 91.7 | 12.5 | 216 | 20.03 | 75 | A183B |
| | 1800 | 460 | 215T | W539B-P | 215THFCD9037 | √ | 2:1 | 91.7 | 12.5 | 229 | 20.03 | P,75 | A183B |
| | 1800 | 575 | 215T | W540B | 215THFCD19033 | | 2:1 | 91.7 | 10.0 | 216 | 20.03 | 75 | A183B |
| | 1200 | 460 | 256T | W541A | 256THFCD9076 | | 2:1 | 91.0 | 12.9 | 319 | 25.89 | 75 | A184A |
| | 1200 | 460 | 256T | W541A-P | 256THFCD9077 | √ | 2:1 | 91.0 | 12.9 | 386 | 25.89 | P,75 | A184A |
| | 1200 | 575 | 256T | W542A | 256THFCD19081 | √ | 2:1 | 91.0 | 10.3 | 317 | 25.89 | 75 | A184A |
| | 900 | 460 | 284T | W543A | 284THFCD19102 | √ | 2:1 | 89.5 | 13.8 | 500 | 26.64 | | A186A |
| 15 | 3600 | 460 | 254T | W544A | 254THFCD9001 | √ | 2:1 | 91.0 | 17.8 | 296 | 24.15 | 75 | A184A |
| | 3600 | 460 | 254T | W544A-P | 254THFCD9002 | √ | 2:1 | 91.0 | 17.8 | 310 | 24.15 | P,75 | A184A |
| | 3600 | 575 | 254T | W545A | 254THFCD9005 | √ | 2:1 | 91.0 | 14.3 | 296 | 24.15 | 75 | A184A |
| | 1800 | 460 | 254T | W546A | 254THFCD9026 | √ | 2:1 | 92.4 | 18.4 | 293 | 24.15 | 75 | A184A |
| | 1800 | 460 | 254T | W546A-P | 254THFCD19065 | ¶ | 2:1 | 92.4 | 18.4 | 315 | 24.15 | P,75 | A184A |
| | 1800 | 575 | 254T | W547A | 254THFCD9030 | | 2:1 | 92.4 | 15.1 | 310 | 24.15 | 75 | A184A |
| | 1200 | 460 | 284T | W548A | 284THFCD9076 | √ | 2:1 | 91.7 | 20.0 | 427 | 26.64 | | A186A |
| | 1200 | 460 | 284T | W548A-P | 284THFCD9077 | ¶ | 2:1 | 91.7 | 20.0 | 438 | 26.64 | P | A186A |
| | 1200 | 575 | 284T | W549A | 284THFCD19084 | | 2:1 | 91.7 | 16.0 | 427 | 26.64 | | A186A |
| | 900 | 460 | 286T | W550A | 286THFCD19101 | √ | 2:1 | 89.5 | 20.0 | 479 | 28.14 | | A186A |
| 20 | 3600 | 460 | 256T | W551A | 256THFCD9001 | √ | 2:1 | 91.0 | 23.5 | 338 | 25.89 | 75 | A184A |
| | 3600 | 460 | 256T | W551A-P | 256THFCD9002 | | 2:1 | 91.0 | 23.7 | 349 | 25.89 | P,75 | A184A |
| | 3600 | 575 | 256T | W552A | 256THFCD9005 | | 2:1 | 91.0 | 18.8 | 338 | 25.89 | 75 | A184A |
| | 1800 | 460 | 256T | W553A | 256THFCD9026 | √ | 2:1 | 93.0 | 24.2 | 322 | 25.89 | 75 | A184A |
| | 1800 | 460 | 256T | W553A-P | 256THFCD19056 | √ | 2:1 | 93.0 | 24.2 | 344 | 25.89 | P,75 | A184A |
| | 1800 | 575 | 256T | W554A | 256THFCD19033 | | 2:1 | 93.0 | 19.4 | 320 | 25.89 | 75 | A184A |
| | 1200 | 460 | 286T | W555A | 286THFCD9076 | √ | 2:1 | 91.7 | 26.0 | 489 | 28.14 | | A186A |
| | 1200 | 460 | 286T | W555A-P | 286THFCD9077 | | 2:1 | 91.7 | 26.0 | 489 | 28.14 | P | A186A |
| | 1200 | 575 | 286T | W556A | 286THFCD19077 | ¶ | 2:1 | 91.7 | 20.8 | 432 | 28.14 | | A186A |
| | 900 | 460 | 324T | W557A | 324THFCD9101 | √ | 2:1 | 90.2 | 27.0 | 605 | 29.85 | | A187A |
| 25 | 3600 | 460 | 284TS | W558A | 284TSHFCD9001 | √ | 2:1 | 91.7 | 30.0 | 370 | 25.27 | | A186A |
| | 3600 | 460 | 284TS | W558A-P | 284TSHFCD9002 | | 2:1 | 91.7 | 30.0 | 391 | 25.27 | P | A186A |
| | 3600 | 575 | 284TS | W559A | 284TSHFCD9005 | | 2:1 | 91.7 | 24.0 | 386 | 25.27 | | A186A |
| | 1800 | 460 | 284T | W560A | 284THFCD9026 | √ | 2:1 | 93.6 | 30.0 | 441 | 26.64 | | A186A |
| | 1800 | 460 | 284T | W560A-P | 284THFCD19048 | √ | 2:1 | 93.6 | 30.0 | 493 | 26.64 | P | A186A |
| | 1800 | 575 | 284T | W561A | 284THFCD19033 | ¶ | 2:1 | 93.6 | 24.0 | 441 | 26.64 | | A186A |
| | 1200 | 460 | 324T | W562A | 324THFCD9076 | √ | 2:1 | 93.0 | 32.0 | 600 | 29.85 | | A187A |
| | 1200 | 460 | 324T | W562A-P | 324THFCD9077 | ¶ | 2:1 | 93.0 | 32.0 | 625 | 29.85 | P | A187A |
| | 1200 | 575 | 324T | W563A | 324THFCD9080 | √ | 2:1 | 93.0 | 24.0 | 601 | 29.85 | | A187A |
| | 900 | 460 | 326T | W564A | 326THFCD9101 | √ | 2:1 | 90.2 | 33.5 | 757 | 31.35 | | A187A |
| 30 | 3600 | 460 | 286TS | W565A | 286TSHFCD9001 | √ | 2:1 | 91.7 | 35.5 | 397 | 26.77 | | A186A |
| | 3600 | 460 | 286TS | W565A-P | 286TSHFCD9002 | | 2:1 | 91.7 | 35.5 | 467 | 26.77 | P | A186A |
| | 3600 | 575 | 286TS | W566A | 286TSHFCD9005 | | 2:1 | 91.7 | 28.5 | 397 | 26.77 | | A186A |
| | 1800 | 460 | 286T | W567A | 286THFCD9026 | √ | 2:1 | 93.6 | 35.5 | 469 | 28.14 | | A186A |
| 1800 | 460 | 286T | W567A-P | 286THFCD19066 | √ | 2:1 | 93.6 | 35.5 | 531 | 28.14 | P | A186A | |

Continued on next page.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

*See back cover page for attribution.

BLUE CHIP® XRI®-841 / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®, XRI®, THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|------|------|-------|----------------|----------------|----------------|-------|----------------|-----------|----------|-------|----------|------------|-------------|
| 30 | 1800 | 575 | 286T | W568A | 286THFCD19033 | √ | 2:1 | 93.6 | 28.4 | 467 | 28.14 | | A186A |
| | 1200 | 460 | 326T | W569A | 326THFCD9076 | √ | 2:1 | 93.0 | 38.0 | 647 | 31.35 | | A187A |
| | 1200 | 460 | 326T | W569A-P | 326THFCD9077 | √ | 2:1 | 93.0 | 38.0 | 685 | 31.35 | P | A187A |
| | 1200 | 575 | 326T | W643A | 326THFCD19078 | | 2:1 | 93.0 | 30.5 | 645 | 31.35 | | A187A |
| | 900 | 460 | 364T | W570A | 364THFCD9101 | √ | 2:1 | 91.7 | 39.0 | 730 | 33.40 | | A188A |
| 40 | 3600 | 460 | 324TS | W571A | 324TSHFCD9001 | ¶ | 2:1 | 92.4 | 46.0 | 595 | 28.35 | | A187A |
| | 3600 | 460 | 324TS | W571A-P | 324TSHFCD9002 | | 2:1 | 92.4 | 46.0 | 616 | 28.35 | P | A187A |
| | 3600 | 575 | 324TS | W572A | 324TSHFCD9005 | √ | 2:1 | 92.4 | 37.0 | 595 | 28.35 | | A187A |
| | 1800 | 460 | 324T | W573A | 324THFCD9026 | √ | 2:1 | 94.1 | 47.5 | 657 | 29.85 | | A187A |
| | 1800 | 460 | 324T | W573A-P | 324THFCD19058 | √ | 2:1 | 94.1 | 47.5 | 687 | 29.85 | P | A187A |
| | 1800 | 575 | 324T | W574A | 324THFCD19033 | | 2:1 | 94.1 | 38.0 | 657 | 29.85 | | A187A |
| | 1200 | 460 | 364T | W575B | 364THFCD19087 | √ | 2:1 | 94.1 | 38.0 | 887 | 33.40 | | A188A |
| | 1200 | 460 | 364T | W575B-P | 364THFCD9077 | √ | 2:1 | 94.1 | 38.0 | 918 | 33.40 | P | A188A |
| | 1200 | 575 | 364T | W639A | 364THFCD19077 | √ | 2:1 | 94.1 | 38.5 | 887 | 33.40 | | A188A |
| | 900 | 460 | 365T | W576A | 365THFCD19101 | | 2:1 | 91.7 | 51.5 | 1001 | 34.40 | | A188A |
| | 3600 | 460 | 326TS | W577A | 326TSHFCD9001 | ¶ | 2:1 | 94.1 | 56.5 | 690 | 29.85 | | A187A |
| 3600 | 460 | 326TS | W577A-P | 326TSHFCD9002 | | 2:1 | 94.1 | 56.5 | 702 | 29.85 | P | A187A | |
| 3600 | 575 | 326TS | W578A | 326TSHFCD9005 | ¶ | 2:1 | 94.1 | 46.0 | 690 | 29.85 | | A187A | |
| 50 | 1800 | 460 | 326T | W580A | 326THFCD9026 | √ | 2:1 | 94.5 | 58.5 | 730 | 31.35 | | A187A |
| | 1800 | 460 | 326T | W580A-P | 326THFCD19071 | √ | 2:1 | 94.5 | 58.5 | 744 | 31.35 | P | A187A |
| | 1800 | 460 | 326TS | W579A | 326TSHFCD9036 | √ | 2:1 | 94.5 | 58.5 | 728 | 29.85 | | A187A |
| | 1800 | 575 | 326T | W581A | 326THFCD19033 | | 2:1 | 94.5 | 47.0 | 730 | 31.35 | | A187A |
| | 1200 | 460 | 365T | W582B | 365THFCD19086 | √ | 2:1 | 94.1 | 60.5 | 974 | 34.40 | | A188A |
| | 1200 | 460 | 365T | W582B-P | 365THFCD9077 | √ | 2:1 | 94.1 | 60.5 | 1001 | 34.40 | P | A188A |
| | 1200 | 575 | 365T | W640A | 365THFCD19077 | ¶ | 2:1 | 94.1 | 48.5 | 974 | 34.40 | | A188A |
| | 900 | 460 | 404T | W583A | 404THFCD9101 | ¶ | 2:1 | 92.4 | 62.0 | 1338 | 38.88 | | A190A |
| | 3600 | 460 | 364TS | W584A | 364TSHFCD9001 | √ | 2:1 | 93.6 | 67.5 | 833 | 33.27 | | A188A |
| | 3600 | 460 | 364TS | W584A-P | 364TSHFCD9002 | | 2:1 | 93.6 | 67.5 | 886 | 33.27 | P | A188A |
| 3600 | 575 | 364TS | W585A | 364TSHFCD9005 | √ | 2:1 | 93.6 | 54.0 | 833 | 33.27 | | A188A | |
| 60 | 1800 | 460 | 364T | W587A | 364THFCD9036 | √ | 2:1 | 95.0 | 68.0 | 878 | 33.40 | | A188A |
| | 1800 | 460 | 364T | W587A-P | 364THFCD19061 | √ | 2:1 | 95.0 | 68.0 | 944 | 33.40 | P | A188A |
| | 1800 | 460 | 364TS | W586A | 364TSHFCD9026 | | 2:1 | 95.0 | 68.0 | 875 | 33.40 | | A188A |
| | 1800 | 575 | 364T | W588A | 364THFCD19033 | | 2:1 | 95.0 | 54.5 | 875 | 33.40 | | A188A |
| | 1200 | 460 | 404T | W589A | 404THFCD9086 | ¶ | 2:1 | 94.5 | 71.5 | 1292 | 38.88 | | A190A |
| | 1200 | 460 | 404T | W589A-P | 404THFCD9077 | √ | 2:1 | 94.5 | 71.5 | 1195 | 38.88 | P | A190A |
| | 900 | 460 | 405T | W590A | 405THFCD19101 | √ | 2:1 | 92.4 | 74.5 | 1328 | 38.88 | | A190A |
| | 3600 | 460 | 365TS | W591A | 365TSHFCD9001 | ¶ | 2:1 | 94.5 | 84.0 | 900 | 34.27 | | A188A |
| | 3600 | 460 | 365TS | W591A-P | 365TSHFCD9002 | | 2:1 | 94.5 | 84.0 | 1047 | 34.27 | P | A188A |
| | 3600 | 575 | 365TS | W592A | 365TSHFCD19002 | √ | 2:1 | 94.5 | 67.0 | 900 | 34.27 | | A188A |
| 75 | 1800 | 460 | 365T | W594A | 365THFCD9036 | √ | 2:1 | 95.5 | 85.0 | 988 | 34.40 | | A188A |
| | 1800 | 460 | 365T | W594A-P | 365THFCD19065 | √ | 2:1 | 95.5 | 85.0 | 1063 | 34.40 | P | A188A |
| | 1800 | 460 | 365TS | W593B | 365TSHFCD19034 | ¶ | 2:1 | 95.5 | 85.0 | 981 | 34.27 | | A188A |
| | 1800 | 575 | 365T | W595A | 365THFCD9044 | | 2:1 | 95.5 | 68.0 | 988 | 34.40 | | A188A |
| | 1200 | 460 | 405T | W596A | 405THFCD9086 | ¶ | 2:1 | 94.5 | 89.0 | 1292 | 38.88 | | A190A |
| | 1200 | 460 | 405T | W596A-P | 405THFCD9077 | √ | 2:1 | 94.5 | 89.0 | 1338 | 38.88 | P | A190A |
| | 1200 | 575 | 405T | W686 | 405THFS19081 | | 2:1 | 94.5 | 72.0 | 1297 | 37.14 | | A190 |
| | 900 | 460 | 444T | W597A | 444THFCD9101 | | 2:1 | 93.6 | 92.0 | 1867 | 46.83 | | A194A |
| | 3600 | 460 | 405TS | W598A | 405TSHFCD9001 | ¶ | 2:1 | 94.5 | 111 | 1125 | 35.88 | | A191A |
| | 3600 | 460 | 405TS | W598A-P | 405TSHFCD9002 | | 2:1 | 94.5 | 111 | 1190 | 35.88 | P | A191A |
| 100 | 1800 | 460 | 405T | W600A | 405THFCD9036 | √ | 2:1 | 95.4 | 113 | 1283 | 38.88 | | A190A |
| | 1800 | 460 | 405T | W600A-P | 405THFCD19327 | √ | 2:1 | 95.4 | 113 | 1349 | 38.88 | P | A190A |
| | 1800 | 460 | 405TS | W599A | 405TSHFCD9026 | √ | 2:1 | 95.4 | 113 | 1257 | 35.88 | | A190A |
| | 1800 | 575 | 405T | W601A | 405THFCD9040 | ¶ | 2:1 | 95.4 | 90.5 | 1295 | 38.88 | | A190A |
| | 1200 | 460 | 444T | W636A | 444THFCD19081 | √ | 2:1 | 95.0 | 115 | 1830 | 46.83 | | A194A |
| | 1200 | 460 | 444T | W636A-P | 444THFCD9077 | √ | 2:1 | 95.0 | 115 | 1932 | 46.83 | P | A194A |
| | 900 | 460 | 445T | W603A | 445THFCD9106 | √ | 2:1 | 93.6 | 123 | 2048 | 46.83 | | A194A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

*See back cover page for attribution.

Continued on next page.

BLUE CHIP® XRI®-841 / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®, XRI®, THREE-PHASE, TOTALLY ENCLOSED

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|------|------|-------|-------|----------------|----------------|---------------|----------------|-----------|----------|------|----------|------------|-------------|
| 125 | 3600 | 460 | 444TS | W604B | 444TSHFCD19002 | √ | 2:1 | 95.0 | 138 | 1649 | 43.08 | | A195A |
| | 3600 | 460 | 444TS | W604B-P | 444TSHFCD9002 | √ | 2:1 | 95.0 | 138 | 1761 | 43.08 | P | A195A |
| | 1800 | 460 | 444T | W606A | 444THFCD9036 | √ | 2:1 | 95.4 | 140 | 1676 | 46.83 | | A194A |
| | 1800 | 460 | 444T | W606A-P | 444THFCD19044 | √ | 2:1 | 95.4 | 140 | 1707 | 46.83 | P | A194A |
| | 1800 | 575 | 444T | W607A | 444THFCD9040 | ¶ | 2:1 | 95.4 | 112 | 1707 | 46.83 | | A194A |
| | 1200 | 460 | 445T | W608A | 445THFCD9086 | ¶ | 2:1 | 95.0 | 143 | 1932 | 46.83 | | A194A |
| | 1200 | 460 | 445T | W608A-P | 445THFCD9077 | | 2:1 | 95.0 | 143 | 1867 | 46.83 | P | A194A |
| | 900 | 460 | 445T | W609A | 445THFCD9102 | | 2:1 | 94.1 | 162 | 2432 | 51.20 | | A194A |
| 150 | 3600 | 460 | 445TS | W610A | 445TSHFCD9001 | ¶ | 2:1 | 95.0 | 161 | 1870 | 43.08 | | A195A |
| | 3600 | 460 | 445TS | W610A-P | 445TSHFCD9002 | | 2:1 | 95.0 | 161 | 1825 | 43.08 | P | A195A |
| | 1800 | 460 | 445T | W612A | 445THFCD9036 | ¶ | 2:1 | 95.8 | 169 | 1857 | 46.83 | | A194A |
| | 1800 | 460 | 445T | W612A-P | 445THFCD19071 | √ | 2:1 | 95.8 | 169 | 1900 | 46.83 | P | A194A |
| | 1800 | 460 | 445T | W620 | 445THFCD19038 | ¶ | 2:1 | 95.8 | 169 | 1857 | 46.83 | RB | A194A |
| | 1800 | 460 | 445TS | W611A | 445TSHFCD9026 | √ | 2:1 | 95.8 | 169 | 1835 | 43.08 | | A194A |
| | 1800 | 575 | 445T | W613A | 445THFCD9037 | | 2:1 | 95.8 | 135 | 1900 | 46.83 | | A194A |
| | 1800 | 575 | 445T | W641A | 445THFCD19033 | √ | 2:1 | 95.8 | 135 | 1900 | 46.83 | RB | A194A |
| | 1200 | 460 | 445T | W614A | 445THFCD9087 | | 2:1 | 95.8 | 171 | 2404 | 51.20 | RB | A194A |
| | 1200 | 460 | 445T | W614A-P | 445THFCD9078 | | 2:1 | 95.8 | 171 | 2432 | 51.20 | P, RB | A194A |
| 200 | 900 | 460 | 449T | W615A | 449THFCD9101 | | 2:1 | 94.1 | 192 | 2568 | 55.33 | | A194A |
| | 3600 | 460 | 445TS | W616A | 445TSHFCD9005 | √ | 2:1 | 95.4 | 217 | 2303 | 47.45 | A | A195A |
| | 3600 | 460 | 445TS | W616A-P | 445TSHFCD9003 | | 2:1 | 95.4 | 217 | 2303 | 47.45 | A,P | A195A |
| | 1800 | 460 | 445T | W618A | 445THFCD9038 | √ | 2:1 | 96.5 | 219 | 2276 | 51.20 | RB | A194A |
| | 1800 | 460 | 445T | W618A-P | 445THFCD19070 | | 2:1 | 96.5 | 219 | 2276 | 51.20 | P, RB | A194A |
| | 1800 | 460 | 445TS | W617A | 445TSHFCD9028 | | 2:1 | 96.5 | 219 | 2231 | 51.20 | | A194A |
| | 1800 | 460 | 449T | W619A | 449THFCD9030 | ¶ | 2:1 | 96.5 | 219 | 2309 | 55.33 | | A194A |
| | 1800 | 460 | 449T | W619A-P | 449THFCD9037 | | 2:1 | 96.5 | 219 | 2399 | 55.33 | P | A194A |
| | 1800 | 575 | 445T | W642A | 445THFCD19034 | ¶ | 2:1 | 96.5 | 175 | 2309 | 51.20 | RB | A194A |
| | 1200 | 460 | 449T | W621A | 449THFCD19092 | √ | 2:1 | 95.8 | 230 | 2568 | 55.33 | | A194A |
| | 1200 | 460 | 449T | W621A-P | 449THFCD9077 | | 2:1 | 95.8 | 230 | 2568 | 55.33 | P | A194A |
| | 1200 | 460 | 449T | W622A | 449THFCD9088 | ¶ | 2:1 | 95.8 | 230 | 2570 | 55.33 | RB | A194A |
| | 1200 | 460 | 449T | W622A-P | 449THFCD9807 | | 2:1 | 95.8 | 230 | 2599 | 55.33 | P, RB | A194A |
| | 1200 | 575 | 449T | W630A | 449THFCD19079 | | 2:1 | 95.8 | 184 | 2570 | 55.33 | RB | A194A |
| 250 | 3600 | 460 | 449TS | W624A | 449TSHFCD9003 | | 2:1 | 95.8 | 266 | 2471 | 55.51 | | A195A |
| | 3600 | 460 | 449TS | W624A-P | 449TSHFCD9004 | | 2:1 | 95.8 | 266 | 2491 | 55.51 | P | A195A |
| | 1800 | 460 | 449T | W626A | 449THFCD9028 | ¶ | 2:1 | 96.2 | 272 | 2612 | 55.33 | | A194A |
| | 1800 | 460 | 449T | W626A-P | 449THFCD19342 | √ | 2:1 | 96.2 | 272 | 2612 | 55.33 | P | A194A |
| | 1200 | 460 | 449T | W629A | 449THFCD19091 | ¶ | 2:1 | 95.8 | 285 | 2710 | 55.33 | RB | A194A |
| | 300 | 3600 | 460 | 449TS | W631A | 449TSHFCD9002 | | 2:1 | 95.8 | 320 | 2996 | 55.51 | |
| 3600 | | 460 | 449TS | W631A-P | 449TSHFCD9018 | | 2:1 | 95.8 | 320 | 2996 | 55.51 | P | A195A |
| 1800 | | 460 | 449T | W632A | 449THFCD9027 | √ | 2:1 | 96.2 | 332 | 2780 | 55.33 | | A194A |
| 1800 | | 460 | 449T | W632A-P | 449THFCD9070 | | 2:1 | 96.2 | 332 | 2361 | 55.33 | P | A194A |
| 1200 | | 460 | 449T | W657 | 449THFCD9078 | √ | 2:1 | 95.8 | 342 | 3200 | 59.27 | 13 | A194A |
| 350 | 3600 | 460 | 449TS | W634A | 449TSHFCD9001 | | 2:1 | 95.8 | 373 | 2635 | 55.51 | | A195A |
| | 3600 | 460 | 449TS | W634A-P | 449TSHFCD9021 | | 2:1 | 95.8 | 373 | 2996 | 55.51 | P | A195A |
| | 1800 | 460 | 449T | W635A | 449THFCD9036 | √ | 2:1 | 96.2 | 390 | 2834 | 55.33 | RB | A194A |
| | 1800 | 460 | 449T | W635A-P | 449THFCD9071 | | 2:1 | 96.2 | 390 | 2361 | 55.33 | P, RB | A194A |
| 400 | 3600 | 460 | 449TS | W659 | 449TSHFCD9000 | | 2:1 | 95.8 | 427 | 3230 | 55.51 | 13 | A195A |
| | 3600 | 460 | 449TS | W659A-P | 449TSHFCD9023 | | 2:1 | 95.8 | 427 | 2996 | 55.51 | P, 13 | A195A |
| | 1800 | 460 | 449T | W660 | 449THFCD9026 | | 2:1 | 96.5 | 440 | 3154 | 59.27 | 13 | A194A |
| | 1800 | 460 | 449T | W660A-P | 449THFCD9061 | | 2:1 | 96.2 | 442 | 3199 | 59.27 | P, 13 | A194A |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

*See back cover page for attribution.

BLUE CHIP® XRI®-841 / AUTOMOTIVE DUTY MOTORS

NEMA PREMIUM®*, XRI®, THREE-PHASE, TOTALLY ENCLOSED

C-FACE ROUND, VERTICAL SHAFT DOWN, BCP

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------|---------|---------------|---------------|-------|----------------|-----------|-----------|------|----------|------------|
| 3 | 3600 | 460 | 182TCV | W017-P | 182THTCD9010 | √ | 2:1 | 89.5 | 3.5 | 105 | 14.56 | P |
| | 1800 | 460 | 182TCV | W019-P | 182THFCD9040 | | 2:1 | 89.5 | 4.0 | 112 | 16.95 | P |
| 5 | 1800 | 460 | 184TCV | W025-P | 184THFCD9040 | √ | 2:1 | 89.5 | 6.5 | 120 | 16.95 | P |
| 7 1/2 | 3600 | 460 | 213TCV | W030-P | 213THTCD9010 | √ | 2:1 | 91.7 | 8.6 | 204 | 18.22 | P |
| | 1800 | 460 | 213TCV | W032-P | 213THFCD9040 | ¶ | 2:1 | 91.7 | 9.5 | 200 | 19.28 | P |
| 10 | 3600 | 460 | 215TCV | W037-P | 215THFCD9010 | √ | 2:1 | 90.2 | 11.8 | 216 | 20.78 | P |
| | 1800 | 460 | 215TCV | W039-P | 215THFCD9040 | | 2:1 | 91.7 | 12.5 | 210 | 20.78 | P |
| 15 | 3600 | 460 | 254TCV | W044-P | 254THFCD9010 | √ | 2:1 | 91.0 | 17.8 | 310 | 24.65 | P |
| | 1800 | 460 | 254TCV | W046-P | 254THFCD9040 | ¶ | 2:1 | 92.4 | 18.4 | 361 | 24.65 | P |
| 20 | 1800 | 460 | 256TCV | W053-P | 256THFCD9040 | | 2:1 | 93.0 | 24.2 | 455 | 26.39 | P |
| 25 | 1800 | 460 | 284TCV | W060-P | 284THFCD9040 | √ | 2:1 | 93.6 | 30.0 | 575 | 28.14 | P |
| 30 | 1800 | 460 | 286TCV | W067-P | 286THFCD9040 | √ | 2:1 | 93.6 | 35.5 | 600 | 28.14 | P |
| 40 | 1800 | 460 | 324TCV | W073-P | 324THFCD9040 | √ | 2:1 | 94.1 | 47.5 | 650 | 31.35 | P |
| 50 | 1800 | 460 | 326TCV | W080-P | 326THFCD9040 | ¶ | 2:1 | 94.5 | 58.5 | 775 | 31.35 | P |
| 60 | 1800 | 460 | 364TCV | W087-P | 364THFCD9040 | √ | 2:1 | 95.0 | 68.0 | 910 | 33.40 | P |
| 75 | 1800 | 460 | 365TCV | W094-P | 365THFCD9040 | √ | 2:1 | 95.5 | 85.0 | 1050 | 34.40 | P |
| 100 | 1800 | 460 | 405TCV | W100-P | 405THFCD9042 | √ | 2:1 | 95.4 | 113 | 1363 | 38.88 | P |
| 125 | 1800 | 460 | 444TCV | W106-P | 444THFCD9042 | √ | 2:1 | 95.4 | 140 | 2375 | 44.83 | P |
| 150 | 1800 | 460 | 445TCV | W112-P | 445THFCD9040 | √ | 2:1 | 95.8 | 169 | 2375 | 46.83 | P |
| 200 | 1800 | 460 | 445TSCV | W117-P | 445TSHFCD9042 | √ | 2:1 | 96.5 | 219 | 2225 | 43.08 | P |
| | 1800 | 460 | 445TCV | W118-P | 445THFCD9042 | | 2:1 | 96.5 | 219 | 2375 | 46.83 | P |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 Blue shaded areas are cast iron frames.

*See back cover page for attribution.

BLUE CHIP® HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS

HIGH PERFORMANCE & HIGH EFFICIENCY

marathon®

Features

- Three phase motors
- Premium efficient models
- IP54 Ingress Protection
- Severe Duty 182T to 449T Frames
- Double shielded ball bearings
- Class F thermostats
- NEMA®* 1.0 or 1.15 service factor
- UL®* listed file no. E12044, CSA certified under file LR21839 ®*

Applications

- Used in severe duty environments that you may find in foundries, pulp, paper mills, waste management facilities, above ground mines, refineries or other applications that demand corrosion protection for long motor life and dependability
- Please check and verify national and local codes. Always consult a NFPA local authority and electrician for installing / before installing and connecting motors



*See back cover page for attribution.



BLUE CHIP® HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS CLASS I AND II, GROUPS C & D, F & G , BLUE CHIP XRI®-SEVERE DUTY, NEMA PREMIUM®* EFFICIENCY, THREE-PHASE

APPLICATIONS

For use on fans, blowers, pumps, conveyors, machine tools and other equipment installed in hazardous environments as defined by the motor's explosion proof class and group rating. Consult the National Electric Code and your local regulations for the proper selection of motors in hazardous locations.

FEATURES

- Meets NEMA Premium efficiencies
- NEMA Premium models are in compliance with EISA 2007
- Blue Chip® series, 100% cast iron construction for rigidity and reduced vibration
- 1.15 service factor on sinewave, (except as noted) or 1.0 service factor on IBGT power
- 10:1 variable torque, see CT Speed Range column for constant torque.
- MAX GUARD® motor Class F insulation system
- External surface treated with epoxy paint
- Internal and external surfaces treated with epoxy paint
- Normally closed thermostats (must be connected to control circuit)
- Nameplated 60/50 Hz, 190/380 volts, at next lower HP, as noted
- UL®* Listed file no. E12044
- CSA®* certified file no. LR47504
- 50° C as Noted

SEE MOD CENTRAL FOR:

- Ball bearings (except as noted)



RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | TEMP CODE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|---------|----------------|--------------|-------------|----------------|-----------|-----------|----------|----------|----------|---------------|
| 1 1/2 | 1200 | 230/460 | 182T | U040A | 182TTGN6576 | √ | 10:1 | T3B | 87.5 | 4.4/2.2 | 139 | 15.87 | 13,68 |
| | 1200 | 230/460 | 182T | U040B | 182TTGCD6576 | | 10:1 | T3C | 87.5 | 4.6/2.3 | 158 | 15.87 | 13,17,68,69 |
| 2 | 1200 | 230/460 | 184T | U041A | 184TTGN6576 | | 10:1 | T3B | 88.5 | 6.0/3.0 | 163 | 17.87 | 13,68 |
| | 3600 | 230/460 | 182T | U060A | 182TTGN6501 | √ | 10:1 | T3B | 87.5 | 7.6/3.8 | 144 | 15.87 | 13,68 |
| 3 | 3600 | 230/460 | 182T | U060B | 182TTGCD6501 | | 10:1 | T3C | 86.5 | 8.0/4.0 | 126 | 15.87 | 13,17,68,69 |
| | 1800 | 230/460 | 182T | U004A | 182TTGN6526 | √ | 10:1 | T3B | 90.2 | 8.0/4.0 | 145 | 15.87 | 13,68,69 |
| | 1800 | 230/460 | 182T | U004B | 182TTGCD6526 | | 10:1 | T3C | 89.5 | 8.0/4.0 | 147 | 15.87 | 13,17,68,69 |
| | 1800 | 230/460 | 182T | U989-P | 182TTGN6541 | | 10:1 | T3B | 90.2 | 8.0/4.0 | 147 | 15.87 | P,13,68 |
| | 1800 | 230/460 | 182T | U004B-P | 182TTGCD6541 | √ | 10:1 | T3C | 89.5 | 8.0/4.0 | 148 | 15.87 | P,13,17,68,69 |
| | 1800 | 575 | 182T | U023A | 182TTGN6530 | ¶ | 10:1 | T3B | 90.2 | 3.2 | 139 | 15.87 | 13 |
| | 1800 | 575 | 182T | U023B | 182TTGCD6530 | | 10:1 | T3C | 89.5 | 3.2 | 141 | 15.87 | 13,17,69 |
| | 1200 | 230/460 | 213T | U042A | 213TTGN6576 | √ | 10:1 | T3B | 89.5 | 8.8/4.4 | 216 | 19.63 | 13,68 |
| | 1200 | 230/460 | 213T | U042B | 213TTGCD6576 | | NA | T3C | 89.5 | 8.6/4.3 | 240 | 22.63 | 13,17,68,69 |
| | 5 | 3600 | 230/460 | 184T | U061A | 184TTGN6501 | √ | 10:1 | T3B | 88.5 | 11.8/5.9 | 167 | 17.87 |
| 3600 | | 230/460 | 184T | U061B | 184TTGCD6501 | | 10:1 | T3C | 88.5 | 12.0/6.0 | 140 | 17.87 | 13,17,68,69 |
| 1800 | | 230/460 | 184T | U005A | 184TTGN6526 | √ | 10:1 | T3B | 90.2 | 12.4/6.2 | 166 | 17.87 | 13,68 |
| 1800 | | 230/460 | 184T | U005B | 184TTGCD6526 | | 10:1 | T3C | 89.5 | 13.0/6.5 | 158 | 17.87 | 13,17,68,69 |
| 1800 | | 230/460 | 184T | U990-P | 184TTGN6544 | | 10:1 | T3B | 90.2 | 12.4/6.2 | 158 | 17.87 | P,13,68 |
| 1800 | | 230/460 | 184T | U005B-P | 184TTGCD6544 | √ | 10:1 | T3C | 89.5 | 13.0/6.5 | 156 | 17.87 | P,13,17,68,69 |
| 1800 | | 575 | 184T | U024A | 184TTGN6530 | ¶ | 10:1 | T3B | 90.2 | 5.0 | 129 | 17.87 | 13 |
| 1200 | | 230/460 | 215T | U043B | 215TTGND6576 | √ | 10:1 | T3B | 89.5 | 13.8/6.9 | 206 | 22.63 | 13,68 |
| 7 1/2 | 3600 | 230/460 | 213T | U062B | 213TTGND6501 | √ | 10:1 | T3C | 89.5 | 18.2/9.1 | 220 | 19.63 | 13,68 |
| | 3600 | 230/460 | 213T | U062C | 213TTGCD6501 | | 10:1 | T3C | 89.5 | 18.0/9.0 | 216 | 19.63 | 13,17,68,69 |
| | 1800 | 230/460 | 213T | U006B | 213TTGND6526 | √ | 10:1 | T3B | 91.7 | 19.2/9.6 | 366 | 19.63 | 13,68 |
| | 1800 | 230/460 | 213T | U006C | 213TTGCD6526 | | 10:1 | T3C | 91.7 | 19.0/9.5 | 228 | 19.63 | 13,68,69 |
| | 1800 | 230/460 | 213T | U991B | 213TTGND6540 | √ | 10:1 | T3B | 91.7 | 19.2/9.6 | 235 | 19.63 | 13,68 |
| | 1800 | 230/460 | 213T | U991C | 213TTGCD6540 | | 10:1 | T3B | 91.7 | 19.0/9.5 | 230 | 0.00 | 13,68 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
Blue shaded areas are cast iron frames.

Continued on next page.

BLUE CHIP® HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS CLASS I AND II, GROUPS C & D, F & G , BLUE CHIP XRI®-SEVERE DUTY, NEMA PREMIUM®* EFFICIENCY, THREE-PHASE

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | TEMP CODE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|---------|----------------|----------------|--------------|----------------|-----------|-----------|-----------|-----------|----------|---------------|
| 7 1/2 | 1800 | 208-230/460 | 213T | U991B-P | 213TTGND16548 | ¶ | 10:1 | T3B | 91.7 | 19.0/9.5 | 235 | 19.63 | P,13,68,69 |
| | 1800 | 230/460 | 213T | U006C-P | 213TTGCD16548 | | 10:1 | T3C | 91.7 | 19.0/9.5 | 258 | 19.63 | P,13,68,69 |
| | 1800 | 575 | 213T | U025B | 213TTGND16537 | ¶ | 10:1 | T3B | 91.7 | 7.7 | 234 | 19.63 | 13 |
| | 1800 | 575 | 213T | U025C | 213TTGCD16537 | | 10:1 | T3C | 91.7 | 7.6 | 241 | 19.63 | 13,69 |
| | 1200 | 230/460 | 254T | E500 | 254TTGN6576 | √ | 10:1 | T3B | 91.0 | 19.8/9.9 | 345 | 23.65 | 13,68 |
| 10 | 3600 | 230/460 | 215T | U063B | 215TTGND6501 | √ | 10:1 | T3B | 90.2 | 23.8/11.9 | 252 | 19.63 | 13,68 |
| | 3600 | 230/460 | 215T | U063C | 215TTGCD6501 | | NA | T3C | 90.2 | 23.6/11.8 | 240 | 19.63 | 13,17,68,69 |
| | 1800 | 230/460 | 215T | U007B | 215TTGND6526 | √ | 10:1 | T3B | 91.7 | 26.6/13.3 | 257 | 22.63 | 13,68 |
| | 1800 | 230/460 | 215T | U007C | 215TTGCD6526 | | 10:1 | T3C | 91.7 | 25.0/12.5 | 258 | 22.63 | 13,17,68,69 |
| | 1800 | 230/460 | 215T | U007B-P | 215TTGND16527 | | 10:1 | T3B | 91.7 | 26.6/13.3 | 257 | 22.63 | P,13,68 |
| | 1800 | 230/460 | 215T | U007C-P | 215TTGCD16539 | | 10:1 | T3C | 91.7 | 25.0/12.5 | 210 | 22.63 | P,13,17,68,69 |
| | 1800 | 230/460 | 215T | U992B | 215TTGND6539 | ¶ | 2:1 | T3B | 91.7 | 26.6/13.3 | 264 | 22.63 | 13,68 |
| | 1800 | 575 | 215T | U026B | 215TTGND16532 | √ | 10:1 | T3B | 91.7 | 10.7 | 220 | 22.63 | 13 |
| | 1800 | 575 | 215T | U026C | 215TTGCD16532 | | 10:1 | T3C | 91.7 | 10.0 | 258 | 22.63 | 13,17,69 |
| | 1200 | 230/460 | 256T | E501 | 256TTGN6576 | ¶ | 10:1 | T3B | 91.0 | 26.2/13.1 | 360 | 25.40 | 13,68 |
| | 3600 | 230/460 | 254T | E502 | 254TTGN6507 | √ | 10:1 | T3B | 91.7 | 35.0/17.5 | 357 | 23.65 | 13,68 |
| | 15 | 3600 | 230/460 | 254T | E502A | 254TTGCD6507 | | 10:1 | T3C | 91.0 | 35.5/17.8 | 359 | 23.52 |
| 1800 | | 230/460 | 254T | E503 | 254TTGN6531 | √ | 10:1 | T3B | 92.4 | 37.5/18.8 | 385 | 23.65 | 13,68 |
| 1800 | | 230/460 | 254T | E503A | 254TTGCD6531 | | 10:1 | T3C | 92.4 | 36.5/18.4 | 385 | 23.52 | 13,17,68,69 |
| 1800 | | 230/460 | 254T | E503-P | 254TTGN16549 | √ | 10:1 | T3B | 92.4 | 36.5/18.4 | 372 | 23.52 | P,13,68 |
| 1800 | | 230/460 | 254T | E503A-P | 254TTGCD16549 | | 10:1 | T3C | 92.4 | 36.5/18.4 | 377 | 23.52 | P,13,17,68,69 |
| 1800 | | 575 | 254T | U027A | 254TTGN16541 | ¶ | 10:1 | T3B | 92.4 | 15.1 | 369 | 23.65 | 13 |
| 1200 | | 230/460 | 284T | E504 | 284TTGN6576 | √ | 10:1 | T3B | 91.7 | 41.0/20.4 | 536 | 24.89 | 13,68 |
| 1200 | | 230/460 | 284T | E504A | 284TTGCD6576 | | 10:1 | T3C | 91.7 | 40.0/20.0 | 513 | 26.34 | 13,17,68,69 |
| 3600 | | 230/460 | 256T | E505 | 256TTGN16509 | √ | 10:1 | T3B | 92.4 | 47.0/23.4 | 397 | 25.40 | 13,68 |
| 3600 | | 230/460 | 256T | E505A | 256TTGCD6501 | | 10:1 | T3C | 91.0 | 47.5/23.7 | 369 | 25.27 | 13,17,68,69 |
| 20 | 1800 | 230/460 | 256T | E506 | 256TTGN6531 | √ | 10:1 | T3B | 93.0 | 48.0/24.1 | 409 | 25.40 | 13,68 |
| | 1800 | 230/460 | 256T | E506A | 256TTGCD6526 | | NA | T3C | 93.0 | 48.5/24.2 | 369 | 25.27 | 13,17,68,69 |
| | 1800 | 230/460 | 256T | E506-P | 256TTGN16552 | √ | 10:1 | T3B | 93.0 | 48.5/24.2 | 403 | 25.27 | P,13,68 |
| | 1800 | 230/460 | 256T | E506A-P | 256TTGCD16552 | | 10:1 | T3C | 93.0 | 48.5/24.2 | 369 | 25.27 | P,13,17,68,69 |
| | 1800 | 575 | 256T | U028A | 256TTGN16540 | ¶ | 2:1 | T3B | 93.0 | 19.5 | 428 | 25.40 | 13 |
| | 1200 | 230/460 | 286T | E507 | 286TTGN16577 | √ | 10:1 | T3B | 91.7 | 53.5/26.8 | 593 | 26.39 | 13 |
| | 1200 | 230/460 | 286T | E507A | 286TTGCD16577 | | 10:1 | T3C | 91.7 | 51.0/25.5 | 604 | 27.69 | 13 |
| | 3600 | 230/460 | 284TS | E546 | 284TSTGN6503 | √ | 10:1 | T3B | 93.0 | 57.5/28.8 | 412 | 24.97 | 13,68 |
| | 3600 | 230/460 | 284TS | E546A | 284TSTGCD6503 | | 10:1 | T3B | 91.7 | 60.0/30.0 | 460 | 24.97 | 13,68 |
| | 1800 | 230/460 | 284T | E547 | 284TTGN6533 | √ | 10:1 | T3B | 93.6 | 62.0/31.0 | 536 | 24.89 | 13,68 |
| 25 | 1800 | 230/460 | 284T | E547A | 284TTGCD6533 | | 10:1 | T3C | 93.6 | 60.0/30.0 | 561 | 26.34 | 13,17,68,69 |
| | 1800 | 230/460 | 284T | E547-P | 284TTGN16550 | √ | 10:1 | T3B | 93.6 | 60.0/30.0 | 539 | 26.34 | P,13,68 |
| | 1800 | 230/460 | 284T | E547A-P | 284TTGCD16550 | | 10:1 | T3C | 93.6 | 60.0/30.0 | 600 | 26.34 | P,13,17,68,69 |
| | 1800 | 230/460 | 284TS | U076A | 284TSTGN16531 | √ | 10:1 | T3B | 93.6 | 62.0/31.0 | 489 | 24.97 | 13,68 |
| | 1800 | 230/460 | 284TS | U076B | 284TSTGCD16531 | | 10:1 | T3C | 93.6 | 60.0/30.0 | 489 | 24.97 | 13,17,68,69 |
| | 1800 | 575 | 284T | U029A | 284TTGN16539 | | 2:1 | T3B | 93.6 | 24.8 | 553 | 26.39 | 13 |
| | 1200 | 230/460 | 324T | U048A | 324TTGS16577 | ¶ | 10:1 | T3B | 93.0 | 65.0/32.5 | 737 | 28.87 | 13,68 |
| | 3600 | 230/460 | 286TS | E563 | 286TSTGN6501 | | 10:1 | T3B | 93.0 | 67.0/33.5 | 487 | 26.47 | 13,68 |
| | 1800 | 230/460 | 286T | E564 | 286TTGN6537 | ¶ | 10:1 | T3B | 94.1 | 73.0/36.5 | 588 | 26.39 | 13,68 |
| | 1800 | 230/460 | 286T | E564A | 286TTGCD6526 | | 10:1 | T3C | 93.6 | 71.0/35.5 | 656 | 27.84 | 13,17,68,69 |
| 30 | 1800 | 230/460 | 286T | E564-P | 286TTGN16546 | √ | 10:1 | T3B | 94.1 | 71.0/35.5 | 590 | 27.84 | P,13,68 |
| | 1800 | 230/460 | 286T | E564A-P | 286TTGCD16546 | | 10:1 | T3C | 93.6 | 71.0/35.5 | 613 | 27.84 | P,13,17,68,69 |
| | 1800 | 230/460 | 286TS | U077A | 286TSTGN16531 | | 2:1 | T3B | 94.1 | 73.0/36.5 | 523 | 26.47 | 13,68 |
| | 1800 | 575 | 286T | U030A | 286TTGN16533 | √ | 10:1 | T3B | 94.1 | 29.2 | 482 | 26.39 | 13 |
| | 1800 | 575 | 286T | U030B | 286TTGCD16533 | | 10:1 | T3C | 93.6 | 28.4 | 550 | 27.84 | 13,17,69 |
| | 1200 | 230/460 | 326T | E565 | 326TTGS6578 | ¶ | 10:1 | T3C | 93.0 | 77.0/38.5 | 900 | 30.37 | 13,17,68,69 |
| | 3600 | 230/460 | 324TS | E566 | 324TSTGS6501 | √ | 10:1 | T3C | 93.6 | 94.0/47.0 | 734 | 28.87 | 13,17,68,69 |
| | 1800 | 230/460 | 324T | E567 | 324TTGS6529 | √ | 10:1 | T3C | 94.1 | 95.0/47.5 | 759 | 30.37 | 13,17,68,69 |
| 40 | 1800 | 230/460 | 324T | E567-P | 324TTGS16541 | √ | 10:1 | T3C | 94.1 | 95.0/47.5 | 775 | 30.37 | P,13,17,68,69 |
| | 1800 | 230/460 | 324TS | U078A | 324TSTGS16531 | ¶ | 10:1 | T3C | 94.1 | 95.0/47.5 | 770 | 28.87 | 13,17,68,69 |
| | 1800 | 575 | 324T | U031A | 324TTGS16535 | ¶ | 10:1 | T3C | 94.1 | 38.0 | 768 | 30.37 | 13,17,69 |
| | 1200 | 230/460 | 364T | E568A | 364TTGS16577 | ¶ | 10:1 | T3C | 94.1 | 100/50.0 | 1042 | 31.50 | 13,17,68,69 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

*See back cover page for attribution.

BLUE CHIP® HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS

CLASS I AND II, GROUPS C & D, F & G , BLUE CHIP XRI®-SEVERE DUTY, NEMA PREMIUM®* EFFICIENCY, THREE-PHASE

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | TEMP CODE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|---------|----------|---------------|---------------|--------------|----------------|-----------|-----------|----------|------|----------|---------------|
| 50 | 3600 | 230/460 | 326TS | E569 | 326TSTGS6501 | √ | 10:1 | T3C | 94.5 | 118/59.0 | 831 | 30.37 | 13,17,68,69 |
| | 1800 | 230/460 | 326T | E570 | 326TTGS6532 | √ | 2:1 | T3C | 94.5 | 123/61.5 | 791 | 30.37 | 13,17,68,69 |
| | 1800 | 230/460 | 326T | E570-P | 326TTGS16546 | √ | 2:1 | T3C | 94.5 | 123/61.5 | 810 | 30.37 | P,13,17,68,69 |
| | 1800 | 230/460 | 326TS | U079A | 326TSTGS16532 | ¶ | NA | T3C | 94.5 | 120/60.0 | 797 | 28.87 | 13,17,68,69 |
| | 1800 | 575 | 326T | U032A | 326TTGS16539 | ¶ | 2:1 | T3C | 94.5 | 49.0 | 800 | 30.37 | 13,17,69 |
| | 1200 | 230/460 | 365T | E571 | 365TTGS16577 | √ | 2:1 | T3C | 94.5 | 123/61.5 | 1099 | 32.50 | 13,17,69 |
| 60 | 3600 | 230/460 | 364TS | E572 | 364TSTGS6506 | ¶ | 2:1 | T3C | 94.5 | 134/67.0 | 1033 | 29.38 | 13,17,69 |
| | 1800 | 230/460 | 364T | E573A | 364TTGS16536 | √ | 10:1 | T3C | 95.0 | 138/69.0 | 1076 | 31.50 | 13,17,68,69 |
| | 1800 | 230/460 | 364TS | U080A | 364TSTGS16531 | | 2:1 | T3B | 95.0 | 138/69.0 | 1145 | 29.38 | 13,17,68 |
| | 1800 | 575 | 364T | U033A | 364TTGS16537 | ¶ | 2:1 | T3C | 95.0 | 56.0 | 1110 | 31.50 | 13,17,69 |
| | 1200 | 230/460 | 404T | E574 | 404TTGS6588 | √ | 10:1 | T3C | 94.5 | 144/72.0 | 1295 | 35.62 | 13,17,69 |
| 75 | 3600 | 230/460 | 365TS | E575 | 365TSTGS16503 | ¶ | 10:1 | T3B | 94.1 | 169/84.5 | 1097 | 30.38 | 13,68 |
| | 1800 | 230/460 | 365T | E576A | 365TTGS16540 | √ | 2:1 | T3C | 95.4 | 174/87.0 | 1150 | 32.50 | 13,17,68,69 |
| | 1800 | 230/460 | 365TS | U081A | 365TSTGS16532 | | 2:1 | T3B | 95.4 | 174/87.0 | 1180 | 30.38 | 13,68 |
| | 1800 | 575 | 365T | U034A | 365TTGS16032 | | 2:1 | T3B | 95.4 | 69 | 1180 | 32.50 | 13,17 |
| | 1200 | 230/460 | 405T | E577 | 405TTGS6589 | ¶ | 2:1 | T3B | 94.5 | 180/90.0 | 1388 | 37.12 | 13 |
| 100 | 3600 | 230/460 | 405TS | E578 | 405TSTGS6503 | ¶ | 10:1 | T3B | 94.5 | 216/108 | 1349 | 34.12 | 13 |
| | 1800 | 230/460 | 405T | E594 | 405TTGS6548 | √ | 2:1 | T3C | 95.4 | 226/113 | 1479 | 37.12 | 13,68 |
| | 1800 | 230/460 | 405TS | U082A | 405TSTGS16531 | ¶ | 2:1 | T3B | 95.4 | 226/113 | 1410 | 34.12 | 13,68 |
| | 1800 | 575 | 405T | U035A | 405TTGS16539 | ¶ | 2:1 | T3C | 95.4 | 90.5 | 1408 | 37.12 | 13 |
| | 1200 | 230/460 | 444T | E580A | 444TTGN16580 | ¶ | 2:1 | T3C | 95.0 | 248/124 | 2020 | 41.35 | 13,68 |
| 125 | 3600 | 460 | 444TS | U073A | 444TSTGN16502 | √ | 10:1 | T3B | 95.4 | 139 | 2088 | 36.70 | 13,68 |
| | 1800 | 460 | 444T | E582A | 444TTGN16532 | ¶ | 10:1 | T3B | 95.8 | 143 | 2122 | 41.35 | 13,68 |
| | 1800 | 460 | 444TS | U083A | 444TSTGN16531 | ¶ | 10:1 | T3B | 95.8 | 143 | 2064 | 37.60 | 13,68 |
| | 1800 | 575 | 444T | U036A | 444TTGN16533 | ¶ | 10:1 | T3B | 95.8 | 114 | 2113 | 41.35 | 13 |
| | 1200 | 460 | 445T | E583 | 445TTGN6597 | ¶ | 2:1 | T3B | 95.0 | 155 | 2200 | 43.25 | RB,13 |
| | 3600 | 460 | 445TS | E584 | 445TSTGN16505 | ¶ | 10:1 | T3B | 95.8 | 168 | 2264 | 39.60 | 13 |
| 150 | 1800 | 460 | 445T | E585 | 445TTGN6542 | ¶ | 10:1 | T3B | 95.8 | 172 | 2173 | 43.35 | 13,68 |
| | 1800 | 460 | 445TS | U084A | 445TSTGN16531 | ¶ | 10:1 | T3B | 95.8 | 172 | 2200 | 39.60 | 13,68 |
| | 1800 | 575 | 445T | U037A | 445TTGN16544 | | 2:1 | T3B | 95.8 | 138 | 2152 | 43.35 | 13 |
| | 1200 | 460 | 445T | U090A | 445TTGN16588 | ¶ | 10:1 | T3B | 95.8 | 181 | 2526 | 43.35 | RB,13,68 |
| | 3600 | 460 | 445TS | U075A | 445TSTGN16506 | | 2:1 | T3B | 95.4 | 224 | 2360 | 39.59 | 13,68 |
| 200 | 1800 | 460 | 445T | E588 | 445TTGN6538 | ¶ | 2:1 | T3B | 96.2 | 224 | 2500 | 43.19 | 13,68 |
| | 1800 | 575 | 445T | U038A | 445TTGN16543 | ¶ | 2:1 | T3B | 96.2 | 179 | 2485 | 43.35 | 13 |
| | 1200 | 460 | 449T | U091A | 449TTGS16585 | ¶ | 10:1 | T3B | 95.8 | 240 | 3066 | 51.85 | RB,13,68 |
| | 3600 | 460 | 449TS | E595A | 449TSTGS16506 | | 10:1 | T3B | 95.8 | 270 | 2750 | 48.19 | 13,17,68 |
| 250 | 1800 | 460 | 449T | E591 | 449TTGS16537 | ¶ | 10:1 | T3B | 96.5 | 285 | 3012 | 51.85 | RB,13 |
| | 300 | 1800 | 460 | 447/449T | E596 | 449TTGS16554 | ¶ | 2:1 | T3B | 96.5 | 339 | 3240 | 51.85 |
| 350 | 1800 | 460 | 447/449T | H504A | 449TTGS16557 | √ | 2:1 | T3B | 96.2 | 395 | 3300 | 51.85 | RB,13,17 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

*See back cover page for attribution.

BLUE CHIP® HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS CLASS I AND II, GROUPS C & D, F & G , BLUE CHIP XRI®-SEVERE DUTY, NEMA PREMIUM®* EFFICIENCY, THREE-PHASE

C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | TEMP CODE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|--------|--------------|--------------|-------|----------------|-----------|-----------|-----------|-----|----------|-------------|
| 3 | 3600 | 230/460 | 182TC | C372 | 182TTGCD6505 | | 10:1 | T3C | 86.5 | 8.0/4.0 | 115 | 16.62 | 13,68,69 |
| | 3600 | 230/460 | 182TC | C372A | 825125.00 | | 10:1 | T3B | 87.5 | 7.6/3.8 | 95 | 16.62 | 13,68 |
| | 1800 | 230/460 | 182TC | C364A | 182TTGN6569 | √ | 10:1 | T3B | 90.2 | 8.0/4.0 | 172 | 16.63 | P,13,68 |
| | 1800 | 230/460 | 182TC | C364B | 182TTGCD6569 | | 10:1 | T3C | 89.5 | 8.0/4.0 | 145 | 16.62 | 13,17,68,69 |
| | 1800 | 575 | 182TC | C368A | 182TTGN6536 | √ | 10:1 | T3B | 90.2 | 3.2 | 119 | 16.63 | P,13 |
| | 1800 | 575 | 182TC | C368B | 182TTGCD6536 | | 10:1 | T3C | 89.5 | 3.2 | 151 | 16.62 | 13,17,69 |
| 5 | 3600 | 230/460 | 184TC | C373 | 184TTGCD6505 | | 10:1 | T3C | 88.5 | 12.0/6.0 | 135 | 18.62 | 13,68,69 |
| | 3600 | 230/460 | 184TC | C373A | 825127.00 | | 10:1 | T3B | 88.5 | 11.8/5.9 | 168 | 18.62 | 13 |
| | 1800 | 230/460 | 184TC | C365A | 184TTGN6575 | √ | 10:1 | T3B | 90.2 | 12.4/6.2 | 174 | 18.63 | 13,68 |
| | 1800 | 230/460 | 184TC | C365B | 184TTGCD6575 | | 10:1 | T3C | 89.5 | 13.0/6.5 | 168 | 16.62 | 13,17,68,69 |
| | 1800 | 575 | 184TC | C369A | 184TTGN6537 | ¶ | 10:1 | T3B | 90.2 | 5.0 | 147 | 18.63 | 13 |
| 7 1/2 | 3600 | 230/460 | 213TC | C374 | 213TTGCD6505 | | 10:1 | T3C | 89.5 | 18.0/9.0 | 146 | 20.45 | 13,17,68,69 |
| | 3600 | 230/460 | 213TC | C374A | 825072.00 | √ | 10:1 | T3B | 90.2 | 19.0/9.5 | 221 | 20.45 | 13,68 |
| | 1800 | 230/460 | 213TC | C366B | 213TTGND6528 | √ | 10:1 | T3B | 91.7 | 19.2/9.6 | 256 | 20.45 | 13,68 |
| | 1800 | 230/460 | 213TC | C366C | 213TTGCD6528 | | 10:1 | T3C | 91.7 | 19.0/9.5 | 249 | 20.45 | 13,68,69 |
| | 1800 | 575 | 213TC | C370B | 213TTGND6536 | | 10:1 | T3B | 91.7 | 7.7 | 243 | 20.45 | 13 |
| 10 | 3600 | 230/460 | 215TC | C377 | 215TTGCD6505 | | 10:1 | T3C | 90.2 | 23.6/11.8 | 190 | 23.45 | 13,17,68,69 |
| | 3600 | 230/460 | 215TC | C377A | 825074.00 | | 10:1 | T3B | 91.7 | 23.6/11.8 | 160 | 23.45 | 13,68 |
| | 1800 | 230/460 | 215TC | C367B | 215TTGND6528 | √ | 2:1 | T3B | 91.7 | 26.6/13.3 | 268 | 23.45 | 13,68 |
| | 1800 | 230/460 | 215TC | C367C | 215TTGCD6528 | | 10:1 | T3C | 91.7 | 25.0/12.5 | 230 | 23.45 | 13,17,68,69 |
| | 1800 | 575 | 215TC | C371A | 215TTGN16534 | | 2:1 | T3B | 91.7 | 10.0 | 280 | 23.45 | 13 |
| 15 | 3600 | 230/460 | 254TC | C378 | 254TTGCD6505 | | 10:1 | T3C | 91.0 | 35.5/17.8 | 435 | 23.93 | 13,17,68,69 |
| | 3600 | 230/460 | 254TC | C378A | 825076.00 | | 10:1 | T3B | 91.7 | 35.0/17.5 | 245 | 23.93 | 13,68 |
| | 1800 | 230/460 | 254TC | C379 | 254TTGCD6528 | | 10:1 | T3C | 92.4 | 37.5/18.8 | 435 | 23.93 | 13,17,68,69 |
| | 1800 | 230/460 | 254TC | C379A | 825077.00 | | 10:1 | T3B | 92.4 | 37.5/18.8 | 246 | 23.93 | 13,68 |
| 20 | 3600 | 230/460 | 256TC | C500 | 256TTGCD6505 | | 10:1 | T3C | 91.0 | 47.5/23.7 | 435 | 25.68 | 13,17,68,69 |
| | 3600 | 230/460 | 256TC | C500A | 825078.00 | | 10:1 | T3B | 92.4 | 47.0/23.4 | 271 | 25.68 | 13,68 |
| | 1800 | 230/460 | 256TC | C501A | 825079.00 | ¶ | 10:1 | T3B | 93.0 | 48.0/24.1 | 273 | 25.68 | 13,68 |
| 25 | 3600 | 230/460 | 284TSC | C502 | 284TTGCD6505 | | 10:1 | T3C | 91.7 | 58.5/29.2 | 460 | 26.33 | 13,17,68,69 |
| | 3600 | 230/460 | 284TSC | C502A | 825080.00 | | 10:1 | T3B | 93.0 | 57.5/28.8 | 373 | 26.33 | 13,68 |
| | 1800 | 230/460 | 284TC | C503 | 284TTGCD6528 | | 10:1 | T3C | 93.6 | 60.0/30.0 | 575 | 26.33 | 13,17,68,69 |
| | 1800 | 230/460 | 284TC | C503A | 825081.00 | | 10:1 | T3B | 93.6 | 62.0/31.0 | 375 | 26.33 | 13,68 |
| 30 | 1800 | 230/460 | 286TC | C504 | 286TTGCD6528 | | 10:1 | T3C | 93.6 | 71.0/35.5 | 600 | 27.84 | 13,17,68,69 |
| | 1800 | 230/460 | 286TC | C504A | 825082.00 | | 10:1 | T3B | 94.1 | 73.0/36.5 | 395 | 27.84 | 13,68 |

C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | TEMP CODE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|--------------|---------------|-------|----------------|-----------|-----------|-----------|-----|----------|-------------|
| 3 | 3600 | 230/460 | 182TC | C303B | 182TTGN16003 | √ | 10:1 | T3B | 87.5 | 7.6/3.8 | 165 | 18.63 | 13,17,68,69 |
| | 3600 | 230/460 | 182TC | C303C | 182TTGCD16003 | | 10:1 | T3C | 86.5 | 8.0/4.0 | 165 | 18.63 | 13,17,68,69 |
| | 1800 | 230/460 | 182TC | C323A | 182TTGN4068 | √ | 10:1 | T3B | 90.2 | 8.0/4.0 | 164 | 18.63 | 13,17,68,69 |
| | 1800 | 230/460 | 182TC | C323B | 182TTGCD4068 | | 10:1 | T3C | 89.5 | 8.0/4.0 | 151 | 18.63 | 13,17,68,69 |
| 5 | 3600 | 230/460 | 184TC | C304B | 184TTGN16004 | √ | 10:1 | T3B | 88.5 | 12.4/6.2 | 175 | 18.63 | 13,17,68,69 |
| | 3600 | 230/460 | 184TC | C304C | 184TTGCD16004 | | 10:1 | T3C | 88.5 | 12.0/6.0 | 155 | 18.63 | 13,17,68,69 |
| | 1800 | 230/460 | 184TC | C324B | 184TTGN16027 | √ | NA | T3B | 90.2 | 12.4/6.2 | 220 | 18.63 | 13,17,68 |
| | 1800 | 230/460 | 184TC | C324C | 184TTGCD16027 | | 10:1 | T3C | 89.5 | 13.0/6.5 | 165 | 18.63 | 13,17,68,69 |
| 7 1/2 | 3600 | 230/460 | 213TC | C305B | 213TTGND16001 | √ | 10:1 | T3B | 89.5 | 18.2/9.1 | 245 | 23.45 | 13,17,68 |
| | 1800 | 230/460 | 213TC | C325C | 213TTGND16027 | | NA | T3B | 91.7 | 19.2/9.6 | 261 | 23.45 | 13,17,68 |
| | 1800 | 230/460 | 213TC | C325D | 213TTGCD16027 | | 10:1 | T3C | 91.7 | 19.0/9.5 | 245 | 18.63 | 13,68,69 |
| 10 | 3600 | 230/460 | 215TC | C306B | 215TTGND16006 | | 10:1 | T3B | 90.2 | 23.8/11.9 | 260 | 23.45 | 13,17,68 |
| | 1800 | 230/460 | 215TC | C326B | 215TTGND16029 | ¶ | NA | T3B | 91.7 | 26.6/13.3 | 266 | 23.45 | 13,17,68 |
| | 1800 | 230/460 | 215TC | C326C | 215TTGCD16029 | | 10:1 | T3C | 91.7 | 25.0/12.5 | 280 | 18.63 | 13,17,68,69 |
| 15 | 3600 | 230/460 | 254TC | C307B | 254TTGN16524 | | 2:1 | T3B | 91.0 | 36.0/18.0 | 376 | 25.77 | 13,17,68 |
| | 1800 | 230/460 | 254TC | C327B | 254TTGN16034 | √ | 10:1 | T3B | 92.4 | 37.5/18.8 | 399 | 25.77 | 13,17,68 |
| | 1800 | 230/460 | 254TC | C327C | 254TTGCD16034 | | 10:1 | T3C | 92.4 | 36.5/18.4 | 424 | 18.63 | 13,17,68,69 |
| 20 | 3600 | 230/460 | 256TC | C308B | 256TTGN16004 | √ | 10:1 | T3B | 92.4 | 47.0/23.4 | 436 | 25.77 | 13,68 |
| | 3600 | 230/460 | 256TC | C308C | 256TTGCD16004 | | 10:1 | T3C | 91.0 | 47.5/23.7 | 357 | 18.63 | 13,17,68,69 |
| | 1800 | 230/460 | 256TC | C328B | 256TTGN16034 | | 2:1 | T3B | 93.0 | 48.0/24.1 | 441 | 25.77 | 13,17,68 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

*See page 30 for efficiency

INVERTER DUTY MOTORS

LONG, DEPENDABLE MOTOR LIFE

marathon®

Features

- Ideally suited for IGBT inverters
- Inverter duty insulation system
- Over temperature protection
- BlueMax® 2000 models - 2000:1 speed range
- Provisions for encoder mounting
- MicroMax® models include a 1024 a PPR encoder
- Drip-proof and totally enclosed models available
- Precision balanced rotor assemblies

Applications

- Constant torque conveyors and machine tools or variable torque (pumps and fans) applications within the stated speed range of the motor



INVERTER (VECTOR) DUTY: MICROMAX MOTORS

20:1 CONSTANT TORQUE, TOTALLY ENCLOSED, THREE-PHASE

APPLICATIONS

Designed for direct replacement of PMDC or any other variable speed application where up to 1000:1 constant torque speed range is required. Typical uses include: machine tools, conveyers, packaging machines, batching machines, and printing equipment.

FEATURES

- Designed to replace PMDC motors (when used with VFD)
- Class H insulation with CR²⁰⁰ corona resistant magnet wire
- Removable rigid base, as noted
- Continuous duty at 40°C ambient
- Top mounted conduit boxes as found on PMDC motors
- Eliminates brush and commutator maintenance
- UL[®]* recognized and CSA[®]* certified
- Three year warranty



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | FOOT NOTES |
|-------|------|---------|-------|----------|--------------|-------|-----------|-----------|-----|----------|-----------|------------|------------|
| 3 | 1800 | 230/460 | 182TC | Y1999 | 182THFW7729 | √ | 87.5 | 8.4/4.2 | 64 | 13.97 | TEFC | 2.0 | 6 |
| | 1800 | 230/460 | 182TC | Y999 | 182THFR7729 | | 87.5 | 8.4/4.2 | 86 | 16.19 | TEFC | 2.0 | |
| 5 | 1800 | 230/460 | 184TC | Y1372 | 184THFW7726 | √ | 87.5 | 13/6.5 | 92 | 13.97 | TEFC | 2.0 | 6 |
| | 1800 | 230/460 | 184TC | Y372 | 184THFR7726 | | 88.5 | 13.4/6.7 | 94 | 16.69 | TEFC | 2.0 | |
| 7 1/2 | 1800 | 230/460 | 213TC | Y994A | 213THFBD7726 | | 90.6 | 19/9.5 | 180 | 20.97 | TEFC | 2.0 | |
| | 1800 | 230/460 | 213TC | Y994 | 213THFW7726 | | 89.5 | 21.4/10.7 | 128 | 20.97 | TEFC | 2.0 | |
| | 1800 | 575 | 213TC | Y995A | 213THFBD7736 | | 90.6 | 7.6 | 175 | 20.97 | TEFC | 2.0 | |
| | 1800 | 575 | 213TC | Y995 | 213THFW7736 | | 89.5 | 8.6 | 128 | 20.97 | TEFC | 2.0 | |
| | 1800 | 230/460 | 215TC | Y996A | 215THFBD7726 | √ | 91.0 | 26.6/13.3 | 190 | 20.97 | TEFC | 2.0 | |
| 10 | 1800 | 230/460 | 215TC | Y996 | 215THFW7726 | | 91.0 | 27.6/13.8 | 157 | 22.22 | TEFC | 2.0 | |
| | 1800 | 575 | 215TC | Y997A | 215THFBD7736 | | 91.0 | 10.7 | 200 | 20.97 | TEFC | 2.0 | |
| | 1800 | 575 | 215TC | Y997 | 215THFW7736 | | 91.0 | 11.1 | 157 | 22.22 | TEFC | 2.0 | |

INVERTER (VECTOR) DUTY: MICROMAX PLUS MOTORS

1000:1 CONSTANT TORQUE, TOTALLY ENCLOSED, THREE-PHASE, WITH ENCODER

APPLICATIONS

The MICROMAX[®] PLUS incorporates low rotor inertia for fast starts, stops, and reversals. Coupled with an encoder makes this useful in applications traditionally served encoder on by servo systems.

ADDITIONAL FEATURES

- Integrated Dynapar[®]* HS20 1024 ppr encoder
- Class F insulation with CR²⁰⁰ corona resistant magnet wire
- Constant torque operation from 0 to base speed on vector drive
- Continuous duty at 40°C ambient
- Optimized for operation on IGBT inverter
- UL recognized, CSA certified, and CE[®]* mark
- Three year warranty



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | FOOT NOTES |
|----|------|---------|-------|----------|--------------|-------|-----------|----------|-----|----------|-----------|------------|------------|
| 3 | 1800 | 230/460 | 182TC | Y286A | 182THTY17041 | √ | 87.5 | 9.6/4.8 | 80 | 16.19 | TENV | 2.0 | 6, AL |
| | 1800 | 230/460 | 182TC | Y286 | 182HTL17041 | | 88.5 | 8.4/4.2 | 95 | 17.19 | TENV | 2.0 | 6, AL |
| 5 | 1800 | 230/460 | 184TC | Y287A | 184THTY17038 | √ | 89.5 | 13.4/6.7 | 93 | 17.69 | TENV | 2.0 | 6, AL |
| | 1800 | 230/460 | 184TC | Y287 | 184HTL17038 | | 89.5 | 14.0/7.0 | 112 | 19.19 | TENV | 2.0 | 6, AL |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

INVERTER (VECTOR) DUTY: BLACK MAX® MOTORS

1000:1 CONSTANT TORQUE, TENV, THREE-PHASE

APPLICATIONS

Designed for inverter or vector applications where up to a 1000:1 constant torque speed range is required. Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps compressors, textile processing, and other industrial machinery installed in dusty or dirty environments.

FEATURES

- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on vector drive
- Continuous duty at 40°C ambient
- Optimized for operation with IGBT inverter (NEMA®* Design A)
- Normally closed thermostats (one per phase, Class F)
- Ball bearings
- Field reversible to F2
- Encoder and brake provisions included on opposite drive end, (maximum 10 lb-ft brake, see modifications and/or accessory kits sections)
- UL®* recognized, CSA®* certified, and CE®* mark
- Three year warranty



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLSOURE | BASE SPEED | LOW VOLTAGE DRIVE OPTION | HIGH VOLTAGE DRIVE OPTION | FOOT NOTES |
|-------|------|---------|-------|----------|--------------|-------|-----------|-----------|-----|----------|-----------|------------|--------------------------|---------------------------|------------|
| 2 | 1200 | 230/460 | 184TC | Y540 | 184THTL7776 | √ | 82.5 | 6.6/3.3 | 88 | 17.35 | TENV | 2.0 | 174609.00M | 174623.00M | AL |
| 3 | 1800 | 230/460 | 182TC | Y541 | 182THTL7726 | | 85.5 | 8.4/4.2 | 95 | 17.80 | TENV | 2.0 | 174611.00M | 174675.00M | AL |
| | 1800 | 575 | 182TC | Y558 | 182THTL7736 | | 85.5 | 3.4 | 95 | 17.80 | TENV | 2.0 | - | 174632.00M | AL |
| | 1200 | 230/460 | 213TC | Y542 | 213THTL7776 | √ | 82.5 | 9.4/4.7 | 118 | 19.04 | TENV | 2.0 | 174611.00M | 176124.00M | AL |
| 5 | 1800 | 230/460 | 184TC | Y543 | 184THTL7726 | | 89.5 | 14.0/7.0 | 110 | 19.35 | TENV | 2.0 | 174615.00M | 176148.00M | AL |
| | 1800 | 575 | 184TC | Y559 | 184THTL7736 | | 89.5 | 5.6 | 110 | 19.35 | TENV | 2.0 | - | 174634.00M | AL |
| | 1200 | 230/460 | 215TC | Y544 | 215THTL7776 | √ | 84.0 | 15.4/7.7 | 146 | 21.53 | TENV | 2.0 | 174615.00M | 176148.00M | AL |
| 7 1/2 | 1800 | 230/460 | 213TC | Y545 | 213THTL7726 | √ | 90.2 | 21/10.5 | 135 | 20.96 | TENV | 2.0 | 174616.00M | 176148.00M | AL |
| | 1800 | 575 | 213TC | Y560 | 213THTL7736 | | 90.2 | 8.4 | 146 | 20.96 | TENV | 2.0 | - | 174636.00M | AL |
| | 1200 | 230/460 | 254TC | Y546 | 254THTL5776 | √ | 87.5 | 22.0/11.0 | 223 | 25.37 | TENV | 2.0 | 174616.00M | 176148.00M | AL |
| 10 | 1800 | 230/460 | 215TC | Y547 | 215THTL7726 | √ | 90.2 | 27/13.5 | 183 | 23.46 | TENV | 2.0 | 174617.00M | 176148.00M | AL |
| | 1800 | 575 | 215TC | Y561 | 215THTL7736 | √ | 90.2 | 10.8 | 219 | 23.46 | TENV | 2.0 | - | 174636.00M | AL |
| | 1200 | 230/460 | 256TC | Y548 | 256THTL5776 | √ | 89.5 | 28.0/14.0 | 229 | 26.87 | TENV | 2.0 | 174617.00M | 176148.00M | AL |
| 15 | 1800 | 230/460 | 254TC | Y549 | 254THTL5726 | √ | 91.7 | 40.0/20.0 | 229 | 27.91 | TENV | 2.0 | 174618.00M | 174628.00M | AL,H |
| | 1800 | 575 | 254TC | Y562 | 254THTL5736 | | 91.7 | 16.0 | 260 | 27.91 | TENV | 2.0 | - | 174637.00M | AL |
| 20 | 1800 | 230/460 | 256TC | Y552 | 256THTNA7026 | | 93.6 | 52.0/26.0 | 300 | 27.13 | TENV | 2.0 | 174619.00M | 176151.00M | |
| | 1800 | 575 | 256TC | Y563 | 256THTNA7036 | | 93.6 | 20.8 | 300 | 27.13 | TENV | 2.0 | - | 174638.00M | |
| 25 | 1800 | 230/460 | 284TC | Y553 | 284THTNA7026 | | 93.6 | 62.0/31.0 | 379 | 27.50 | TENV | 2.0 | 174619.00M | 176151.00M | |
| | 1800 | 575 | 284TC | Y567 | 284THTNA7036 | | 93.6 | 24.8 | 379 | 27.50 | TENV | 2.0 | - | 174639.00M | |
| 30 | 1800 | 230/460 | 286TC | Y393 | 286THTNA7026 | | 94.5 | 74.0/37.0 | 575 | 29.00 | TENV | 2.0 | 186064.00M | 176152.00M | |
| | 1800 | 575 | 286TC | Y394 | 286THTNA7036 | | 94.5 | 29.6 | 575 | 29.00 | TENV | 2.0 | - | 174599.00M | |

√: Available √: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Blue shaded areas are cast iron frames.

*See back cover page for attribution.

INVERTER (VECTOR) DUTY: BLACK MAX® MOTORS

1000:1 CONSTANT TORQUE, TENV, THREE-PHASE

APPLICATIONS.

Designed for inverter or vector applications where up to a 1000:1 constant torque speed range is required. Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps compressors, textile processing, and other industrial machinery installed in dusty or dirty environments.

FEATURES

- MAX GUARD® Class H insulation system (Except when noted).
- Constant torque operation from 0 to base speed on vector drive
- Continuous duty at 40°C ambient
- Optimized for operation with IGBT inverter (NEMA®* Design A)
- Normally closed thermostats (one per phase, Class F)
- Ball bearings
- Field reversible to F2 (except as noted)
- Encoder and brake provisions included on opposite drive end, (maximum 10 lb-ft brake, see modifications and/or accessory kits sections)
- UL®* recognized, CSA®* certified, and CE®* mark
- Three year warranty



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLSURE | BASE SPEED | LOW VOLTAGE DRIVE OPTION | HIGH VOLTAGE DRIVE OPTION | FOOT NOTES |
|-----|------|---------|-------|----------|--------------|-------|-----------|-----------|-----|----------|----------|------------|--------------------------|---------------------------|------------|
| 2 | 1200 | 230/460 | 184TC | Y540A | 184THTHD7776 | | 85.5 | 6.6/3.3 | 88 | 16.82 | TENV | 2.0 | 174609.00M | 174623.00M | AL |
| 3 | 1800 | 230/460 | 182TC | Y541A | 182THTY7726 | √ | 87.5 | 8.2/4.1 | 77 | 16.19 | TENV | 2.0 | 174611.00M | 174675.00M | AL,F,IP43 |
| | 1800 | 575 | 182TC | Y558A | 182THTY7736 | √ | 87.5 | 3.3 | 89 | 16.19 | TENV | 2.0 | - | 174632.00M | AL,F,IP43 |
| | 1200 | 230/460 | 213TC | Y542A | 213THTHD7776 | | 88.5 | 9.6/4.8 | 105 | 18.95 | TENV | 2.0 | 174611.00M | 176124.00M | AL |
| 5 | 1800 | 230/460 | 184TC | Y543A | 184THTY7726 | √ | 89.5 | 13.4/6.7 | 92 | 17.69 | TENV | 2.0 | 174615.00M | 176148.00M | AL,F,IP43 |
| | 1800 | 575 | 184TC | Y559A | 184THTY7736 | √ | 89.5 | 5.4 | 96 | 17.69 | TENV | 2.0 | - | 174634.00M | AL,F,IP43 |
| | 1200 | 230/460 | 215TC | Y544A | 215THTHD7776 | | 88.0 | 15/7.5 | 146 | 18.95 | TENV | 2.0 | 174615.00M | 176148.00M | AL |
| 7.5 | 1800 | 230/460 | 213TC | Y545A | 213THTHD7726 | | 90.6 | 20.0/10.0 | 144 | 18.95 | TENV | 2.0 | 174616.00M | 176146.00M | AL |
| | 1800 | 575 | 213TC | Y560A | 213THTHD7736 | | 90.6 | 8.0 | 144 | 18.95 | TENV | 2.0 | - | 174636.00M | AL |
| | 1200 | 230/460 | 254TC | Y546A | 254THTHD5776 | | 89.5 | 20.8/10.4 | 223 | 23.58 | TENV | 2.0 | 174616.00M | 176148.00M | AL |
| 10 | 1800 | 230/460 | 215TC | Y547A | 215THTHD7726 | | 91.7 | 25/12.5 | 219 | 20.45 | TENV | 2.0 | 174617.00M | 176148.00M | AL |
| | 1800 | 575 | 215TC | Y561A | 215THTHD7736 | | 91.7 | 10.0 | 218 | 20.45 | TENV | 2.0 | - | 174636.00M | AL |
| | 1200 | 230/460 | 256TC | Y548A | 256THTHD5776 | | 89.5 | 26.8/13.4 | 229 | 25.31 | TENV | 2.0 | 174617.00M | 176148.00M | AL |
| 15 | 1800 | 230/460 | 254TC | Y549A | 254THTHD5726 | | 92.9 | 35/17.5 | 260 | 23.58 | TENV | 2.0 | 174618.00M | 174628.00M | AL |
| | 1800 | 575 | 254TC | Y562A | 254THTHD5736 | | 92.9 | 14.0 | 260 | 23.58 | TENV | 2.0 | - | 174637.00M | AL |
| 20 | 1800 | 230/460 | 256TC | Y552A | 256THTCD7026 | √ | 93.6 | 49/24.5 | 340 | 25.31 | TENV | 2.0 | 174619.00M | 176151.00M | |
| | 1800 | 575 | 256TC | Y563A | 256THTCD7036 | √ | 93.6 | 19.6 | 340 | 25.31 | TENV | 2.0 | - | 174638.00M | |
| 25 | 1800 | 230/460 | 284TC | Y553A | 284THTCD7026 | √ | 93.6 | 59/29.5 | 445 | 27.00 | TENV | 2.0 | 174619.00M | 176151.00M | |
| | 1800 | 575 | 284TC | Y567A | 284THTCD7036 | √ | 93.6 | 23.6 | 430 | 27.00 | TENV | 2.0 | - | 174639.00M | |
| 30 | 1800 | 230/460 | 286TC | Y393A | 286THTCD7026 | √ | 93.8 | 74.0/37.0 | 475 | 28.50 | TENV | 2.0 | 186064.00M | 176152.00M | |
| | 1800 | 575 | 286TC | Y394A | 286THTCD7036 | | 93.8 | 29.6 | 475 | 28.50 | TENV | 2.0 | - | 174599.00M | |

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Blue shaded areas are cast iron frames.

*See back cover page for attribution.

CLASSIC (VECTOR) DUTY: BLUE MAX[®] 2000 MOTORS

2000:1 CONSTANT TORQUE, TOTALLY ENCLOSED, THREE-PHASE

APPLICATIONS:

Designed for inverter or vector applications where up to a 2000:1 constant torque speed range is required. Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps compressors, textile processing, and other industrial machinery installed in dusty or dirty environments where cast iron construction is required.

FEATURES

- MAX GUARD[®] Class H insulation system
- Constant torque operation from 0 to base speed on vector drive, including TEFC (On volts/hertz drives, TEFC motors are limited to 20:1 constant torque)
- Optimized for operation with IGBT inverter
- Bearing current protection (BCP), mounted internally
- C-Face foot mount through 100 HP, as noted
- Normally closed thermostats (one per phase, Class F)
- Continuous duty at 40° C ambient
- 1.0 service factor ("B" rise on TEBC motors)



RIGID BASE AND C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLSOURE | BASE SPEED | LOW VOLTAGE DRIVE OPTION | HIGH VOLTAGE DRIVE OPTION | FOOT NOTES |
|-------|------|---------|-------|----------|--------------|-------|-----------|-------------|------|----------|------------|------------|--------------------------|---------------------------|------------|
| 3 | 1800 | 230/460 | 182TC | Y527 | 182HTN8028 | | 90.2 | 8.0/4.0 | 113 | 19.05 | TENV | 2.0 | 174611.00M | 174675.00M | |
| 5 | 1800 | 230/460 | 184TC | Y564 | 184HTS8028 | | 88.5 | 13.4/6.7 | 122 | 18.10 | TENV | 2.0 | 174615.00M | 176148.00M | |
| 7 1/2 | 1800 | 230/460 | 213TC | Y595 | 213THFS8028 | | 88.5 | 19.4/9.7 | 192 | 22.25 | TEFC | 2.0 | 174616.00M | 176146.00M | |
| | 1800 | 230/460 | 213TC | Y565 | 213HTS8038 | | 90.2 | 21/10.5 | 212 | 21.55 | TENV | 2.0 | 174616.00M | 176148.00M | |
| 10 | 1800 | 230/460 | 215TC | Y596 | 215THFS8029 | | 90.2 | 25.4/12.7 | 252 | 23.75 | TEFC | 2.0 | 174617.00M | 176148.00M | |
| | 1800 | 230/460 | 215TC | Y566 | 215HTS8038 | | 91.0 | 26.0/13.0 | 272 | 22.80 | TENV | 2.0 | 174617.00M | 176148.00M | |
| 15 | 1800 | 230/460 | 254TC | Y597 | 254THFNA8038 | | 90.2 | 37/18.5 | 350 | 23.80 | TEFC | 2.0 | 174618.00M | 174628.00M | |
| | 1800 | 230/460 | 254TC | Y509 | 254THTNA8058 | | 93.0 | 40.5/20.2 | 334 | 23.80 | TENV | 2.0 | 174618.00M | 174628.00M | |
| 20 | 1200 | 230/460 | 284TC | Y395 | 284THFPA8086 | | 88.5 | 40.0/20.0 | 500 | 29.82 | TEBC-AXIAL | 2.0 | 174618.00M | 174628.00M | BP |
| | 1800 | 230/460 | 256TC | Y598 | 256THFNA8038 | | 91.0 | 52.0/26.0 | 377 | 25.55 | TEFC | 2.0 | 174619.00M | 176151.00M | |
| 25 | 1800 | 230/460 | 286TC | Y510 | 256THTNA8038 | | 93.6 | 52.0/26.0 | 425 | 27.13 | TENV | 2.0 | 174619.00M | 176151.00M | |
| | 1200 | 230/460 | 286TC | Y582 | 286THFPA8086 | | 87.5 | 52.5/26.2 | 660 | 31.32 | TEBC-AXIAL | 2.0 | 174619.00M | 176151.00M | BP |
| 30 | 1800 | 230/460 | 284T | Y569 | 284THFPA8028 | √ | 91.7 | 63/31.5 | 393 | 29.82 | TEFC | 2.0 | 174619.00M | 176152.00M | |
| | 1800 | 230/460 | 284TC | Y511 | 284THFPA8038 | √ | 91.7 | 63/31.5 | 470 | 29.82 | TEBC-AXIAL | 2.0 | 174619.00M | 176152.00M | BP |
| 40 | 1200 | 230/460 | 324TC | Y583 | 324THFPA8086 | | 91.7 | 67/33.5 | 633 | 40.41 | TEBC-AXIAL | 2.0 | 174619.00M | 176152.00M | BP |
| | 1800 | 230/460 | 286T | Y570 | 286THFNA8028 | √ | 93.0 | 77/38.5 | 497 | 31.14 | TEFC | 2.0 | 186064.00M | 176152.00M | |
| 50 | 1800 | 230/460 | 286TC | Y512 | 286THFPA8038 | √ | 91.0 | 74.0/37.0 | 520 | 38.98 | TEBC-AXIAL | 2.0 | 186064.00M | 176152.00M | BP |
| | 1200 | 230/460 | 326TC | Y584 | 326THFPA8086 | | 89.5 | 80.5/40.0 | 627 | 41.91 | TEBC-AXIAL | 2.0 | 186064.00M | 176152.00M | BP |
| 60 | 1800 | 230/460 | 324T | Y571 | 324THFPA8028 | | 91.7 | 100.0/50.0 | 545 | 32.27 | TEFC | 2.0 | 186065.00M | 174992.00M | |
| | 1800 | 230/460 | 324TC | Y513 | 324THFPA8038 | √ | 91.7 | 100.0/50.0 | 608 | 40.41 | TEBC-AXIAL | 2.0 | 186065.00M | 174992.00M | BP |
| 75 | 1200 | 230/460 | 364TC | Y585 | 364THFS8391 | | 91.0 | 107/53.5 | 1011 | 42.67 | TEBC-AXIAL | 2.0 | 186065.00M | 174992.00M | BP |
| | 1800 | 230/460 | 326T | Y572 | 326THFS8028 | √ | 93.0 | 123/61.5 | 765 | 33.59 | TEFC | 2.0 | 186066.00M | 174711.00M | |
| 100 | 1800 | 230/460 | 326TC | Y514 | 326THFPA8038 | √ | 93.0 | 120.0/60.0 | 686 | 41.91 | TEBC-AXIAL | 2.0 | 186066.00M | 174711.00M | BP |
| | 1200 | 230/460 | 365TC | Y586 | 365THFS8380 | | 93.0 | 130.0/65.0 | 1081 | 43.67 | TEBC-AXIAL | 2.0 | 186066.00M | 174711.00M | BP |
| 150 | 1800 | 230/460 | 364T | Y573 | 364THFS8036 | √ | 92.4 | 146.0/73.0 | 965 | 34.03 | TEFC | 2.0 | 186002.00M | 174711.00M | |
| | 1200 | 230/460 | 364TC | Y515 | 364THFS8046 | √ | 92.4 | 146.0/73.0 | 1062 | 42.67 | TEBC-AXIAL | 2.0 | 186002.00M | 174711.00M | BP |
| 200 | 1800 | 230/460 | 404TC | Y587 | 404THFS8092 | | 92.4 | 142.0/71.0 | 1350 | 48.22 | TEBC-AXIAL | 2.0 | 186002.00M | 174711.00M | BP |
| | 1200 | 230/460 | 365T | Y574 | 365THFS8036 | √ | 94.1 | 184.0/92.0 | 1061 | 35.03 | TEFC | 2.0 | 186067.00M | 186057.00M | |
| 250 | 1800 | 230/460 | 365TC | Y516 | 365THFS8046 | √ | 93.0 | 180.0/90.0 | 1026 | 38.04 | TEBC-AXIAL | 2.0 | 186067.00M | 186057.00M | BP |
| | 1200 | 230/460 | 405TC | Y588 | 405THFS8378 | √ | 94.1 | 180.0/90.0 | 1387 | 48.46 | TEBC-AXIAL | 2.0 | 186067.00M | 186057.00M | BP |
| 300 | 1800 | 230/460 | 405T | Y575 | 405THFS8036 | √ | 94.5 | 230.0/115.0 | 1308 | 40.43 | TEFC | 2.0 | - | 186060.00M | |
| | 1200 | 230/460 | 405TC | Y517 | 405THFS8046 | √ | 94.5 | 230.0/115.0 | 1529 | 48.46 | TEBC-AXIAL | 2.0 | - | 186060.00M | BP |
| 350 | 1800 | 230/460 | 444TC | Y589 | 444THFN8384 | √ | 94.5 | 250.0/125.0 | 2120 | 56.28 | TEBC-AXIAL | 2.0 | - | 186060.00M | BP |

Continued on next page.

√: Available 1- Stocked components, Ready to build
Blue shaded areas are cast iron frames.

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

CLASSIC (VECTOR) DUTY: BLUE MAX® 2000 MOTORS

2000:1 CONSTANT TORQUE, TOTALLY ENCLOSED, THREE-PHASE

RIGID BASE AND C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLSOURE | BASE SPEED | LOW VOLTAGE DRIVE OPTION | HIGH VOLTAGE DRIVE OPTION | FOOT NOTES |
|-----|------|-------|----------|----------|-------------|-------|-----------|----------|------|----------|------------|------------|--------------------------|---------------------------|------------|
| 125 | 1800 | 460 | 444T | Y576 | 444THFN8036 | | 94.5 | 143.0 | 2053 | 45.54 | TEFC | 2.0 | - | 186060.00M | |
| | 1800 | 460 | 444T | Y518 | 444THFN8046 | √ | 95.0 | 138.0 | 2010 | 56.28 | TEBC-AXIAL | 2.0 | - | 186060.00M | BP |
| 150 | 1800 | 460 | 445T | Y577 | 445THFN8036 | √ | 94.5 | 170.0 | 2247 | 45.54 | TEFC | 2.0 | - | 186060.00M | |
| | 1800 | 460 | 445T | Y519 | 445THFN8046 | √ | 94.5 | 170.0 | 2310 | 56.28 | TEBC-AXIAL | 2.0 | - | 186060.00M | BP |
| 200 | 1800 | 460 | 445T | Y578 | 445THFN8040 | | 95.0 | 230.0 | 2388 | 45.54 | TEFC | 2.0 | - | - | |
| | 1800 | 460 | 445T | Y520 | 445THFN8050 | √ | 95.0 | 230.0 | 2430 | 56.28 | TEBC-AXIAL | 2.0 | - | - | BP |
| 250 | 1800 | 460 | 449T | Y579 | 449THFS8036 | | 95.0 | 280.0 | 2900 | 28.25 | TEFC | 2.0 | - | - | |
| | 1800 | 460 | 449T | Y531 | 449THFS8046 | √ | 95.0 | 295.0 | 2991 | 67.02 | TEBC-AXIAL | 2.0 | - | - | BP |
| 300 | 1800 | 460 | 449T | Y580 | 449THFS8037 | √ | 95.4 | 330.0 | 3077 | 28.25 | TEFC | 2.0 | - | - | |
| | 1800 | 460 | 447/449T | Y532 | 449THFS8047 | √ | 95.4 | 327.0 | 2950 | 67.02 | TEBC-AXIAL | 2.0 | - | - | BP |
| 350 | 1800 | 460 | 449T | Y533 | 449THFS8048 | √ | 95.4 | 385.0 | 3099 | 67.02 | TEBC-AXIAL | 2.0 | - | - | BP |

√: Available √: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.

INVERTER (VECTOR) DUTY: BLUE MAX® 2000 MOTORS

2000:1 CONSTANT TORQUE, TOTALLY ENCLOSED, THREE-PHASE

APPLICATIONS:

Designed for inverter or vector applications where up to a 2000:1 constant torque speed range is required. Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps compressors, textile processing, and other industrial machinery installed in dusty or dirty environments where cast iron construction is required.

FEATURES

- MAX GUARD® Class H insulation system
- Constant torque operation from 0 to base speed on vector drive, including TEFC (On volts/hertz drives, TEFC motors are limited to 20:1 constant torque)
- Optimized for operation with IGBT inverter
- Bearing current protection (BCP), mounted internally
- C-Face foot mount through 100 HP, as noted
- Normally closed thermostats (one per phase, Class F)
- Continuous duty at 40° C ambient
- 1.0 service factor ("B" rise on TEBC motors)



- Blue Chip Series® quality, cast iron frame and brackets
- Ball bearings (roller bearing available 360 frame & larger)
- Field reversible to F2
- Encoder provisions included on opposite drive end (see modification and/or accessory kits sections)
- UL®* Recognized, CSA®* Certified, and CE®* Mark
- Three year warranty

RIGID BASE AND C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | LOW VOLTAGE DRIVE OPTION | HIGH VOLTAGE DRIVE OPTION | FOOT NOTES |
|-----|------|---------|-------|----------|-------------|-------|-----------|-------------|------|----------|------------|------------|--------------------------|---------------------------|------------|
| 3 | 1800 | 230/460 | 182TC | Y527A | 182THTC8028 | | 89.5 | 8.0/4.0 | 127 | 15.81 | TENV | 2.0 | 174611.00M | 174675.00M | |
| 5 | 1800 | 230/460 | 184TC | Y564A | 184THTC8028 | | 89.5 | 13/6.5 | 133 | 16.81 | TENV | 2.0 | 174615.00M | 174676.00M | |
| 7.5 | 1800 | 230/460 | 213TC | Y595A | 213THFC8028 | | 90.6 | 19/9.5 | 180 | 21.47 | TEFC | 2.0 | 174616.00M | 176146.00M | |
| 7.5 | 1800 | 230/460 | 213TC | Y565A | 213THTC8038 | | 90.6 | 20.0/10.0 | 310 | 18.95 | TENV | 2.0 | 174616.00M | 176146.00M | |
| 10 | 1800 | 230/460 | 215TC | Y596A | 215THFC8029 | | 90.6 | 24.0/12.0 | 190 | 22.97 | TEFC | 1.5 | 174617.00M | 176148.00M | |
| 10 | 1800 | 230/460 | 215TC | Y566A | 215THTC8038 | | 91.7 | 25/12.5 | 325 | 20.45 | TENV | 2.0 | 174617.00M | 176148.00M | |
| 15 | 1800 | 230/460 | 254TC | Y597A | 254THFC8038 | | 91.5 | 35/17.5 | 300 | 26.85 | TEFC | 1.5 | 174618.00M | 174628.00M | |
| 15 | 1800 | 230/460 | 254TC | Y509A | 254THTC8058 | | 92.9 | 35/17.5 | 280 | 23.56 | TENV | 2.0 | 174618.00M | 174628.00M | |
| 15 | 1200 | 230/460 | 284TC | Y395A | 284THFC8086 | | 91.0 | 39/19.5 | 375 | 33.77 | TEBC-AXIAL | 1.5 | 174618.00M | 174628.00M | BP |
| 20 | 1800 | 230/460 | 256TC | Y598A | 256THFC8038 | | 92.0 | 46.0/23.0 | 335 | 28.58 | TEFC | 1.5 | 174619.00M | 176151.00M | |
| 20 | 1800 | 230/460 | 256TC | Y510A | 256THTC8038 | | 93.6 | 49/24.5 | 340 | 25.31 | TENV | 2.0 | 174619.00M | 176151.00M | |
| 20 | 1200 | 230/460 | 286TC | Y582A | 286THFC8086 | | 91.4 | 51/25.5 | 435 | 35.27 | TEBC-AXIAL | 1.5 | 174619.00M | 176151.00M | BP |
| 25 | 1800 | 230/460 | 284T | Y569A | 284THFC8028 | | 92.7 | 57/28.5 | 390 | 28.83 | TEFC | 1.5 | 174619.00M | 176151.00M | |
| 25 | 1800 | 230/460 | 284TC | Y511A | 284THFC8038 | | 92.7 | 57/28.5 | 417 | 33.77 | TEBC-AXIAL | 1.5 | 174619.00M | 176151.00M | BP |
| 25 | 1200 | 230/460 | 324TC | Y583A | 324THFC8086 | | 92.4 | 61/30.5 | 575 | 36.45 | TEBC-AXIAL | 1.5 | 174619.00M | 176151.00M | BP |
| 30 | 1800 | 230/460 | 286T | Y570A | 286THFC8028 | | 93.6 | 70.5/35.5 | 450 | 30.33 | TEFC | 2.0 | 186064.00M | 176152.00M | |
| 30 | 1800 | 230/460 | 286TC | Y512A | 286THFC8038 | | 93.6 | 70.5/35.5 | 451 | 35.27 | TEBC-AXIAL | 1.5 | 186064.00M | 176152.00M | BP |
| 30 | 1200 | 230/460 | 326TC | Y584A | 326THFC8086 | | 92.4 | 72.0/36.0 | 630 | 37.95 | TEBC-AXIAL | 1.5 | 186064.00M | 176152.00M | BP |
| 40 | 1800 | 230/460 | 324T | Y571A | 324THFC8028 | | 92.4 | 89/44.5 | 610 | 32.04 | TEFC | 1.5 | 186065.00M | 174992.00M | |
| 40 | 1800 | 230/460 | 324TC | Y513A | 324THFC8038 | | 92.4 | 89/44.5 | 610 | 36.45 | TEBC-AXIAL | 1.5 | 186065.00M | 174992.00M | BP |
| 40 | 1200 | 230/460 | 364TC | Y585A | 364THFC8391 | | 93.3 | 91/45.5 | 900 | 39.71 | TEBC-AXIAL | 1.5 | 186065.00M | 174992.00M | BP |
| 50 | 1800 | 230/460 | 326T | Y572A | 326THFC8028 | | 93.0 | 111/55.5 | 616 | 33.54 | TEFC | 1.5 | 186066.00M | 174711.00M | |
| 50 | 1800 | 230/460 | 326TC | Y514A | 326THFC8038 | | 93.0 | 111/55.5 | 625 | 37.95 | TEBC-AXIAL | 1.5 | 186066.00M | 174711.00M | BP |
| 50 | 1200 | 230/460 | 365TC | Y586A | 365THFC8380 | | 93.3 | 114.0/57.0 | 920 | 40.71 | TEBC-AXIAL | 1.5 | 186066.00M | 174711.00M | BP |
| 60 | 1800 | 230/460 | 364T | Y573A | 364THFC8036 | | 95.0 | 135/67.5 | 850 | 35.61 | TEFC | 2.0 | 186002.00M | 174711.00M | |
| 60 | 1800 | 230/460 | 364TC | Y515A | 364THFC8046 | | 95.0 | 135/67.5 | 875 | 39.71 | TEBC-AXIAL | 1.5 | 186002.00M | 174711.00M | BP |
| 60 | 1200 | 230/460 | 404TC | Y587A | 404THFC8092 | | 94.1 | 143/71.5 | 1190 | 46.13 | TEBC-AXIAL | 1.5 | 186002.00M | 174711.00M | BP |
| 75 | 1800 | 230/460 | 365T | Y574A | 365THFC8036 | C/A | 95.5 | 170.0/85.0 | 980 | 36.59 | TEFC | 2.0 | 186067.00M | 186056.00M | |
| 75 | 1800 | 230/460 | 365TC | Y516A | 365THFC8046 | C/A | 95.5 | 170.0/85.0 | 970 | 40.71 | TEBC-AXIAL | 2.0 | 186067.00M | 186056.00M | BP |
| 75 | 1200 | 230/460 | 405TC | Y588A | 405THFC8378 | C/A | 94.1 | 174.0/87.0 | 1280 | 46.13 | TEBC-AXIAL | 1.5 | 186067.00M | 186056.00M | BP |
| 100 | 1800 | 230/460 | 405T | Y575A | 405THFC8036 | C/A | 95.4 | 224.0/112.0 | 1275 | 41.06 | TEFC | 1.5 | - | 186060.00M | |
| 100 | 1800 | 230/460 | 405TC | Y517A | 405THFC8046 | C/A | 95.4 | 224.0/112.0 | 1265 | 46.13 | TEBC-AXIAL | 1.5 | - | 186060.00M | BP |
| 100 | 1200 | 230/460 | 444TC | Y589A | 444THFC8384 | C/A | 95.0 | 228.0/114.0 | 1730 | 53.80 | TEBC-AXIAL | 1.5 | - | 186060.00M | BP |
| 125 | 1800 | 460 | 444T | Y576A | 444THFC8036 | C/A | 95.0 | 135.0 | 1650 | 49.01 | TEFC | 1.5 | - | 186060.00M | BP |

Continued on next page.

√: Available 1- Stocked components, Ready to build
Blue shaded areas are cast iron frames.

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

INVERTER (VECTOR) DUTY: BLUE MAX® 2000 MOTORS

2000:1 CONSTANT TORQUE, TOTALLY ENCLOSED, THREE-PHASE

RIGID BASE AND C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | LOW VOLTAGE DRIVE OPTION | HIGH VOLTAGE DRIVE OPTION | FOOT NOTES |
|-----|------|-------|----------|----------|--------------|-------|-----------|----------|------|----------|------------|------------|--------------------------|---------------------------|------------|
| 125 | 1800 | 460 | 444T | Y518A | 444THFCD8046 | C/A | 95.0 | 135.0 | 1595 | 53.80 | TEBC-AXIAL | 1.5 | - | 186060.00M | |
| 150 | 1800 | 460 | 445T | Y577A | 445THFCD8036 | C/A | 95.4 | 161.0 | 1887 | 49.01 | TEFC | 1.5 | - | 186067.00M | BP |
| 150 | 1800 | 460 | 445T | Y519A | 445THFCD8046 | C/A | 95.4 | 161.0 | 1820 | 53.80 | TEBC-AXIAL | 1.5 | - | 186067.00M | |
| 200 | 1800 | 460 | 445T | Y578A | 445THFCD8040 | C/A | 95.4 | 214.0 | 2204 | 53.38 | TEFC | 1.5 | - | - | BP |
| 200 | 1800 | 460 | 445T | Y520A | 445THFCD8050 | C/A | 95.4 | 214.0 | 2120 | 58.17 | TEBC-AXIAL | 1.5 | - | - | |
| 250 | 1800 | 460 | 449T | Y579A | 449THFCD8036 | C/A | 95.8 | 265.0 | 2593 | 57.52 | TEFC | 1.5 | - | - | BP |
| 250 | 1800 | 460 | 449T | Y531A | 449THFCD8046 | C/A | 95.8 | 265.0 | 2523 | 62.30 | TEBC-AXIAL | 1.5 | - | - | |
| 300 | 1800 | 460 | 449T | Y580A | 449THFCD8037 | C/A | 95.8 | 318.0 | 2800 | 57.52 | TEFC | 1.5 | - | - | BP |
| 300 | 1800 | 460 | 447/449T | Y532A | 449THFCD8047 | C/A | 95.8 | 318.0 | 2766 | 62.30 | TEBC-AXIAL | 1.5 | - | - | |
| 350 | 1800 | 460 | 449T | Y533A | 449THFCD8048 | C/A | 95.8 | 370.0 | 2898 | 66.30 | TEBC-AXIAL | 1.5 | - | - | BP |

√: Available ¶: Stocked components, Ready to build
Blue shaded areas are cast iron frames.

Blank: Build Up rating, subject to lead time

INVERTER (VECTOR) DUTY: BLUE MAX® 2000 HAZARDOUS DUTY® EXPLOSION PROOF MOTORS

2000:1 CONSTANT TORQUE, EXPLOSION PROOF, THREE-PHASE, WITH ENCODER CLASS I AND II, GROUPS C & D, F & G

APPLICATIONS:

Designed for industrial applications with vector drives where up to a 2000:1 constant torque speed range and/or precise speed or torque regulation is required, including positioning equipment. Used in dirty, dusty or caustic environments where cast iron construction is required, and installed in hazardous environments as defined by the motor's explosion proof class and group rating. Consult the National Electrical Code and your local regulations for the proper selection of motors in hazardous locations.



FEATURES

- Meets temperature code T3B
- BEI®* H38 explosion proof encoder 1024 ppr, Class I Groups C & D, Class II Groups E, F, G included
- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on vector drive
- Continuous duty at 40°C ambient
- Optimized for operation with IGBT inverter (NEMA®* design A)
- Normally closed thermostats (one per phase, Class F)
- Ball bearings
- Cast iron frame and brackets
- F1 standard, NOT field reversible to F2
- UL®* Listed file no. E12044
- CSA®* certified file no. LR47504
- Three year warranty



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | FOOT NOTES |
|-----|------|---------|-------|----------|--------------|-------|-----------|-----------|-----|----------|-----------|------------|------------|
| 3 | 1800 | 230/460 | 182TC | Y980 | 182THES8048 | √ | 86.5 | 8.2/4.1 | 117 | 24.82 | EPNV | 2.0 | |
| 5 | 1800 | 230/460 | 213TC | Y981 | 213THES8053 | √ | 90.2 | 13/6.5 | 240 | 26.17 | EPNV | 1.5 | |
| 7.5 | 1800 | 230/460 | 254TC | Y982 | 254THEN8058 | √ | 91.7 | 22.0/11.0 | 344 | 30.20 | EPNV | 2.0 | |
| 10 | 1800 | 230/460 | 254TC | Y983 | 254THEN8059 | √ | 91.7 | 27/13.5 | 376 | 30.20 | EPNV | 2.0 | |
| 15 | 1800 | 230/460 | 256TC | Y984 | 256THEN17031 | √ | 93.0 | 36.0/18.0 | 432 | 31.95 | EPNV | 2.0 | |
| 20 | 1800 | 230/460 | 284TC | Y985 | 284THEN8032 | √ | 93.6 | 53/26.5 | 555 | 33.16 | EPNV | 1.5 | |

C-FACE FOOTED (RIGID BASE) MADE IN MEXICO

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | FOOT NOTES |
|-----|------|---------|-------|----------|--------------|-------|-----------|----------|-----|----------|-----------|------------|------------|
| 3 | 1800 | 230/460 | 182TC | Y980A | 182THECD8048 | | 89.5 | 8.0/4.0 | 117 | 24.82 | EPNV | 2.0 | |
| 5 | 1800 | 230/460 | 213TC | Y981A | 213THECD8053 | | 89.5 | 13/6.5 | 241 | 26.17 | EPNV | 1.5 | |
| 7.5 | 1800 | 230/460 | 254TC | Y982A | 254THECD8058 | | 91.7 | 19/9.5 | 344 | 30.20 | EPNV | 2.0 | |
| 10 | 1800 | 230/460 | 254TC | Y983A | 254THECD8059 | | 91.7 | 25/12.5 | 391 | 30.20 | EPNV | 2.0 | |
| 15 | 1800 | 230/460 | 256TC | Y984A | 256THECD8059 | | 92.9 | 35/17.5 | 435 | 31.95 | EPNV | 2.0 | H |
| 20 | 1800 | 230/460 | 284TC | Y985A | 284THECD8032 | | 93.0 | 47/23.5 | 555 | 33.16 | EPNV | 1.5 | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Blue shaded areas are cast iron frames.

*See back cover page for attribution.

INVERTER (VECTOR) DUTY: BLUE MAX® 2000 BRAKE MOTORS

2000:1 CONSTANT TORQUE, TENV, THREE-PHASE

APPLICATIONS: Designed for vector applications where up to a 2000:1 constant torque speed range is required. For use on conveyors, machine tools, cranes, hoists, and other industrial machinery requiring quick stop and/or holding torque.

FEATURES

- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on vector drive
- Optimized for operation with IGBT inverter (NEMA® design A)
- Normally closed thermostats (one per phase, Class F)
- Ball bearings
- Will accept encoder through Mod Central
- Stearns® brakes, 56 series through 15 Lb-Ft, 87 series, 25 Lb-Ft and larger
- Includes 140% rated spring-set self-adjusting NEMA 2 disk brake (Brake coil voltage matches motor)
- Universal mounting up to 15 Lb-Ft, (see comment below and Mod Central for vertical mounting)
- Horizontal mounting (see comment below and Mod Central for vertical mounting)
- UL® recognized, CSA® certified, and CE® mark
- Three year warranty (brake disks are exempt)



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | TORQUE RATING (LB/FT) | 230V VFD CAT# | 460V OR 575V VFD CAT# | FOOT NOTE |
|-----|------|---------|-------|----------|--------------|-------|-----------|-----------|-----|----------|-----------|------------|-----------------------|---------------|-----------------------|-----------|
| 3 | 1800 | 230/460 | 182TC | Y988 | 182THTS8048 | √ | 84.0 | 8.2/4.1 | 118 | 19.67 | TENV | 2.0 | 15 | 174611.00M | 174675.00M | IP43 |
| 5 | 1800 | 230/460 | 184TC | Y989 | 184THTS8056 | √ | 88.5 | 13.4/6.7 | 161 | 25.58 | TENV | 2.0 | 25 | 174615.00M | 176148.00M | IP43 |
| 7.5 | 1800 | 230/460 | 213TC | Y990 | 213THTS8071 | √ | 90.2 | 21/10.5 | 256 | 27.58 | TENV | 2.0 | 35 | 174616.00M | 176148.00M | IP43 |
| 10 | 1800 | 230/460 | 215TC | Y991 | 215THTS8071 | √ | 91.0 | 26.0/13.0 | 302 | 28.83 | TENV | 2.0 | 50 | 174617.00M | 176148.00M | IP43 |
| 15 | 1800 | 230/460 | 254TC | Y992 | 254THTNA8071 | √ | 93.0 | 40.5/20.2 | 384 | 31.53 | TENV | 2.0 | 75 | 174618.00M | 174628.00M | IP43 |
| 20 | 1800 | 230/460 | 256TC | Y993 | 256THTNA8071 | √ | 93.6 | 52.0/26.0 | 485 | 35.68 | TENV | 2.0 | 105 | 174619.00M | 176151.00M | IP43 |

C-FACE FOOTED (RIGID BASE) MADE IN MEXICO

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | ENCLASURE | BASE SPEED | TORQUE RATING (LB/FT) | 230V VFD CAT# | 460V OR 575V VFD CAT# | FOOT NOTE |
|-----|------|---------|-------|----------|--------------|-------|-----------|-----------|-----|----------|-----------|------------|-----------------------|---------------|-----------------------|-----------|
| 3 | 1800 | 230/460 | 182TC | Y988A | 182THTCD8048 | | 89.5 | 8.0/4.0 | 195 | 18.85 | TENV | 2.0 | 15 | 174611.00M | 174675.00M | H |
| 5 | 1800 | 230/460 | 184TC | Y989A | 184THTCD8056 | | 89.5 | 13/6.5 | 120 | 23.15 | TENV | 2.0 | 25 | 174615.00M | 174676.00M | H |
| 7.5 | 1800 | 230/460 | 213TC | Y990A | 213THTCD8071 | | 90.6 | 20.0/10.0 | 185 | 24.42 | TENV | 2.0 | 35 | 174616.00M | 176146.00M | H |
| 10 | 1800 | 230/460 | 215TC | Y991B | 215THTCD8071 | | 91.7 | 25/12.5 | 211 | 26.92 | TENV | 2.0 | 50 | 174617.00M | 176148.00M | H |
| 15 | 1800 | 230/460 | 254TC | Y992A | 254THTCD8071 | | 92.9 | 35/17.5 | 290 | 30.55 | TENV | 2.0 | 75 | 174618.00M | 174628.00M | H |
| 20 | 1800 | 230/460 | 256TC | Y993A | 256THTCD8071 | | 93.6 | 49/24.5 | 355 | 32.28 | TENV | 2.0 | 105 | 174619.00M | 176151.00M | H |

1024 PPR ENCODERS THROUGH MOD CENTRAL

| BRAND | MODEL | CAT. NO. | KIT NUMBER | STOCK | "BRAKE FITS MOTOR CAT. NO." | WT. |
|------------|-------|----------|---------------------|-------|-----------------------------|-----|
| Avtron* | AV56 | A749 | KIT AV561024BRK-182 | √ | Y988A | 4 |
| | | A750 | KIT AV851024BRK-184 | √ | Y989A | 5 |
| | AV85 | A751 | KIT AV851024BRK-210 | √ | Y990A, Y991B | 8 |
| | | A752 | KIT AV851024BRK-250 | √ | Y992A, Y993A | 8 |
| Northstar* | ST56 | A789 | KIT ST561024-182NV | √ | Y988A | 4 |
| | | A790 | KIT ST851024-184NV | √ | Y989A | 8 |
| | ST85 | A791 | KIT ST851024-210NV | √ | Y990A, Y991B | 8 |
| | | A792 | KIT ST851024-250NV | √ | Y992A, Y993A | 8 |

√: Available √- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Blue shaded areas are cast iron frames.

*See back cover page for attribution.

MARATHON® BLACKMAX®-PM PERMANENT MAGNET AC MOTOR

marathon®

THE NEXT STEP IN ELECTRIC MOTOR
EFFICIENCY

Why choose a Permanent Magnet Motor over Induction Motors?

- In an induction motor, the current is induced into the rotor from the field (stator) through the air gap and conducted through aluminum bars, typically die cast into the rotor lamination slots
- By the use of permanent magnets embedded within the rotor, 180-280 frame PMAC motors provide increased efficiency

Delivering high efficiency levels of up to IE4

The motor's efficiency profile remains flatter than the profile of an equivalent induction motor as the speed and load decline, allowing the user to capture even greater energy savings when the motor is operated at the application's ideal speed

Applications

- Constant torque conveyors and machine tools or variable torque (pumps and fans)
- Data centers
- Blowers
- Compressors
- Elevator applications
- General industrial applications



MARATHON® BLACKMAX®-PM AC MOTORS

TENV AND TEFC THREE-PHASE INDUSTRIAL, CAST IRON FRAME (NEMA 182-286T FRAME MODELS)

FEATURES

- Permanent magnet AC motors requires an AC inverter for operation
- Marathon drive available easy selection
- IP54 (IP43 Rolled Steel) as standard with IP55 and IP56 as optional
- Bearing Current Protection BCP (SGR) inside stock motors
- Ultra Efficient™ Premium-Plus exceeds NEMA Premium®* (IE4)
- Class H MAX GUARD® insulation system (Cast Iron Frames only)
- Class F MAX GUARD insulation system in Rolled Steel Frames
- Available in Cast Iron & Rolled Steel construction
- Severe Duty, TEFC, TENV and TEBC are available
- Provisions for encoder mounting
- Precision balanced rotor assemblies
- Normally closed thermostats (One per phase, Class F)
- High power density, low weight design
- Optional terminal block, Consult Factory
- UL®*, CSA®* and CE®*
- Five year warranty



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | NEMA FRAME | TORQUE (LB-FT) | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | LOW VOLTAGE DRIVE OPTION (CAT#) | HIGH VOLTAGE DRIVE OPTION (CAT#) | FOOT NOTES |
|-------|------|---------|------------|----------------|---------------|---------------|-------|-----------|-----------|-----|----------|---------------------------------|----------------------------------|------------|
| 3 | 1800 | 230/460 | 182TC | 8.8 | SY006A | 182TPNSB10237 | √ | 92.9 | 6.8/3.4 | 137 | 17.50 | 186086.00M | 186090.00M | N |
| | 1800 | 230/460 | 182TC | 8.8 | SY066 | 182TPFRB10194 | √ | 91.4 | 6.6/3.3 | 110 | 16.42 | 186086.00M | 186090.00M | |
| | 1200 | 230/460 | 182TC | 13.1 | SY036 | 182TPFRB10181 | √ | 93.0 | 7.0/3.5 | 116 | 16.42 | 186086.00M | 186090.00M | |
| 5 | 1800 | 230/460 | 184TC | 14.6 | SY007A | 184TPNSB10236 | √ | 94.9 | 11.6/5.8 | 140 | 17.50 | 174615.00M | 186091.00M | |
| | 1800 | 230/460 | 184TC | 14.6 | SY067 | 184TPFRB10214 | √ | 93.9 | 11.7/5.8 | 130 | 16.42 | 174615.00M | 186091.00M | |
| 7 1/2 | 1800 | 230/460 | 213TC | 21.9 | SY008A | 213TPNSB10234 | √ | 94.3 | 18.6/9.3 | 190 | 20.41 | 174616.00M | 176146.00M | N |
| | 1800 | 230/460 | 213TC | 21.9 | SY068 | 213TPFRB10230 | √ | 94.1 | 16.6/8.3 | 125 | 19.47 | 174616.00M | 176146.00M | |
| 10 | 1800 | 230/460 | 215TC | 29.2 | SY009A | 215TPNSB10235 | √ | 93.9 | 24.6/12.3 | 208 | 20.41 | 174617.00M | 176148.00M | N |
| | 1800 | 230/460 | 215TC | 29.2 | SY069 | 215TPFRB10219 | √ | 94.5 | 24.7/12.4 | 139 | 20.97 | 174617.00M | 176148.00M | |
| 15 | 1800 | 460 | 254TC | 43.8 | SY010 | 254TPFSA10088 | √ | 94.0 | 18.0 | 392 | 25.68 | - | 174628.00M | |
| 20 | 1800 | 460 | 256TC | 58.4 | SY011 | 256TPFSA10087 | √ | 94.5 | 24.0 | 386 | 25.68 | - | 176151.00M | |
| 25 | 1800 | 460 | 284TC | 72.9 | SY012 | 284TPFSA10112 | √ | 94.5 | 30.0 | 408 | 26.21 | - | 176151.00M | |
| 30 | 1800 | 460 | 286TC | 87.5 | SY013 | 286TPFSA10090 | √ | 95.4 | 35.5 | 456 | 27.71 | - | 176152.00M | |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
Blue shaded areas are cast iron frames.

*See back cover page for attribution.

PERFORMANCE MATCH SOLUTIONS™
WE HAVE THE DRIVE YOU NEED.



TERRAMAX[®] IEC MOTORS

marathon[®]

IEC[®]* GLOBAL STANDARD MOTORS
DELIVERING A WORLD OF OPPORTUNITY

Features

- IP55 Enclosure Protection
- Dual Frame Mounting Holes
- Horizontal Foot Mounting Position F3 Top Mounted Conduit Box
- IEC 112 and larger frame size
- Meets IE3 European and NEMA Premium[®]* efficiencies
- Cast Iron frame construction
- Wye Start-Delta Run on 160 Frame and larger
- Bearing caps on 160 Frame and larger
- 10:1 variable torque, constant torque speed range as noted
- 1.15 Service Factor on 60 Hz sine wave, 1.0 SF or VFD
- Top Mounted/Oversized gasketed terminal box
- UL[®]* Listed, UL Certified for Canada and CE^{*} mark

Applications

- Fans
- Pumps
- Compressors
- Conveyors
- Other equipment requiring IEC[®]* dimensions and electrical standards



*See back cover page for attribution.

TERRAMAX® IEC®* (METRIC) FRAME MOTORS

TOTALLY ENCLOSED

APPLICATIONS

For use on fans, pumps, compressors, conveyors, and other equipment requiring IEC dimensions and electrical standards. The TerraMAX® motor is not only designed to International standards, but meets NEMA®* performance and efficiency standards making it suitable for requirements worldwide.



FEATURES

- Meets IE3 European and NEMA Premium®* efficiencies
- Cast Iron frame construction
- Nameplated 60/50 Hz at next lower HP
- IP55 weatherproof enclosure
- Wye Start-Delta Run on 160 frame and larger, as noted
- Bearing caps on 160 frame and larger
- 10:1 variable torque, constant torque speed range
- 1.15 service factor on 60 Hz sine wave, 1.0 SF or VFD
- Top mounted/oversized gasketed terminal box
- Meets IEEE45, IEC60092 & USCG CFR46 Marine Duty
- IEC design "N" with NEMA "B" torques
- Terminal blocks, stud type, zero creepage
- B5 and B14 flange mounting kits

IP55



- Meets IEC 34 electrical standards
- Meets IEC 72 dimensions and tolerances
- UL®* Listed, UL Certified for Canada, & CE®* Mark
- Three Year Warranty

B3 RIGID BASE

| HP - kW | RPM 60/50HZ | VOLTS 60HZ | VOLTS 50HZ | IEC FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | 60HZ FL. AMPS | WT. | IEC "L" DIM (mm) | FOOT NOTES | B5/FF FLANGE |
|-----------|-------------|------------|------------|-----------|--------------|--------------------|-------|----------------|-----------|---------------|-----|------------------|------------|--------------|
| 3-2.2 | 1200/1000 | 230/460 | 200/400 | 112M | R323B | TCA2P23AE211GAA009 | √ | 2:1 | 89.5 | 8.8/4.4 | 127 | 399 | | A555C |
| | 1200/1000 | 575 | 480 | 112M | R423 | TCA2P23AP211GAA009 | √ | 2:1 | 89.5 | 3.3 | 127 | 399 | | A555C |
| 4-3 | 1200/1000 | 230/460 | 200/400 | 132S | R353B | TCA0033AE211GAA009 | √ | 2:1 | 89.5 | 11.6/5.8 | 76 | 465 | | A550A |
| | 1200/1000 | 575 | 480 | 132S | R453 | TCA0033AP211GAA009 | √ | 2:1 | 89.5 | 4.9 | 76 | 465 | | A550A |
| 5 1/2-4.1 | 3600/3000 | 230/460 | 200/400 | 112M | R324B | TCA0041AE211GAA009 | √ | 2:1 | 89.5 | 12.4/6.2 | 116 | 399 | | A555C |
| | 3600/3000 | 575 | 480 | 112M | R424B | TCA0041AP211GAA009 | √ | 2:1 | 89.5 | 5.0 | 53 | 399 | | A555C |
| | 1800/1500 | 230/460 | 200/400 | 112M | R325B | TCA0042AE211GAA009 | √ | 2:1 | 91.7 | 13.8/6.9 | 122 | 399 | | A555C |
| | 1800/1500 | 575 | 480 | 112M | R425B | TCA0042AP211GAA009 | √ | 2:1 | 91.7 | 5.5 | 57 | 399 | | A555C |
| | 1200/1000 | 230/460 | 200/400 | 132M | R326B | TCA0043AE211GAA009 | √ | 2:1 | 91.0 | 16.2/8.1 | 86 | 503 | | A550A |
| | 1200/1000 | 575 | 480 | 132M | R426 | TCA0043AP211GAA009 | √ | 2:1 | 91.0 | 5.7 | 86 | 503 | | A550A |
| | 3600/3000 | 230/460 | 200/400 | 132S | R327B | TCA5P51AE211GAA009 | √ | 2:1 | 89.5 | 17.6/8.8 | 167 | 465 | | A550A |
| 7 1/2-5.5 | 3600/3000 | 575 | 480 | 132S | R427B | TCA5P51AP211GAA009 | √ | 2:1 | 89.5 | 7.1 | 76 | 465 | | A550A |
| | 1800/1500 | 230/460 | 200/400 | 132S | R328B | TCA5P52AE211GAA009 | √ | 2:1 | 91.7 | 19.6/9.8 | 179 | 465 | | A550A |
| | 1800/1500 | 575 | 480 | 132S | R428B | TCA5P52AP211GAA009 | √ | 2:1 | 91.7 | 7.9 | 92 | 465 | | A550A |
| | 1200/1000 | 230/460 | 200/400 | 132M | R329B | TCA5P53AE211GAA009 | √ | 2:1 | 91.0 | 20.8/10.4 | 220 | 503 | | A550A |
| | 1200/1000 | 575 | 480 | 132M | R429 | TCA5P53AP211GAA009 | √ | 2:1 | 91.0 | 8.2 | 220 | 503 | | A550A |
| 10-7.5 | 3600/3000 | 230/460 | 200/400 | 132S | R330B | TCA7P51AE211GAA009 | √ | 2:1 | 90.2 | 23.8/11.9 | 187 | 465 | | A550A |
| | 3600/3000 | 575 | 480 | 132S | R430B | TCA7P51AP211GAA009 | √ | 2:1 | 90.2 | 9.5 | 85 | 465 | | A550A |
| | 1800/1500 | 230/460 | 200/400 | 132M | R331B | TCA7P52AE211GAA009 | √ | 2:1 | 91.7 | 25.4/12.7 | 217 | 503 | | A550A |
| | 1800/1500 | 575 | 480 | 132M | R431B | TCA7P52AP211GAA009 | √ | 2:1 | 91.7 | 10.2 | 98 | 503 | | A550A |
| | 1200/1000 | 230/460 | 200/400 | 160M | R332B | TCA7P53AE211GAA009 | √ | 2:1 | 91.0 | 26.4/13.2 | 143 | 622 | YD | A551A |
| | 1200/1000 | 575 | 480 | 160M | R432 | TCA7P53AP211GAA009 | √ | 2:1 | 91.0 | 11.3 | 143 | 622 | | A551A |

Continued on next page.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

*See back cover page for attribution.

TERRAMAX® IEC®* (METRIC) FRAME MOTORS

TOTALLY ENCLOSED

B3 RIGID BASE

| HP - kW | RPM 60/50HZ | VOLTS 60HZ | VOLTS 50HZ | IEC FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | 60HZ F.L. AMPS | WT. | IEC "L" DIM (mm) | FOOT NOTES | B5/FF FLANGE |
|---------|----------------|---------------|---------------|--------------|--------------|--------------------|-------|----------------------|--------------|-------------------|------|---------------------|---------------|-----------------|
| 15-11 | 3600/3000 | 230/460 | 200/400 | 160M | R333B | TCA0111AE211GAA009 | √ | 2:1 | 91.0 | 34.0/16.9 | 310 | 622 | YD | A551A |
| | 3600/3000 | 575 | 480 | 160M | R433 | TCA0111AP211GAA009 | √ | 2:1 | 91.0 | 13.5 | 141 | 622 | | A551A |
| | 1800/1500 | 230/460 | 200/400 | 160M | R334B | TCA0112AE211GAA009 | √ | 2:1 | 92.4 | 37.5/18.7 | 326 | 622 | YD | A551A |
| | 1800/1500 | 575 | 480 | 160M | R434 | TCA0112AP211GAA009 | √ | 2:1 | 92.4 | 15.0 | 148 | 622 | | A551A |
| | 1200/1000 | 230/460 | 200/400 | 160L | R335B | TCA0113AE211GAA009 | √ | 2:1 | 91.7 | 38.0/19.1 | 172 | 666 | YD | A551A |
| | 1200/1000 | 575 | 480 | 160L | R435 | TCA0113AP211GAA009 | √ | 2:1 | 91.7 | 15.3 | 415 | 666 | | A551A |
| 20-15 | 3600/3000 | 230/460 | 200/400 | 160M | R336B | TCA0151AE211GAA009 | √ | 2:1 | 91.0 | 45.5/22.8 | 146 | 622 | YD | A551A |
| | 3600/3000 | 575 | 480 | 160M | R436 | TCA0151AP211GAA009 | √ | 2:1 | 91.0 | 18.3 | 146 | 622 | | A551A |
| | 1800/1500 | 230/460 | 200/400 | 160L | R337B | TCA0152AE211GAA009 | √ | 2:1 | 93.0 | 50.0/25.0 | 163 | 666 | YD | A551A |
| | 1800/1500 | 575 | 480 | 160L | R437 | TCA0152AP211GAA009 | √ | 2:1 | 93.0 | 20.1 | 163 | 666 | | A551A |
| | 1200/1000 | 230/460 | 200/400 | 180L | R338B | TCA0153AE211GAA009 | √ | 2:1 | 91.7 | 53.5/26.7 | 216 | 750 | YD | A552A |
| | 1200/1000 | 575 | 480 | 180L | R438 | TCA0153AP211GAA009 | √ | 2:1 | 91.7 | 21.4 | 415 | 750 | | A552A |
| 25-18.5 | 3600/3000 | 230/460 | 200/400 | 160L | R339B | TCA18P1AE211GAA009 | √ | 2:1 | 91.7 | 56.0/28.0 | 166 | 666 | YD | A551A |
| | 3600/3000 | 575 | 480 | 160L | R439 | TCA18P1AP211GAA009 | √ | 2:1 | 91.7 | 22.5 | 166 | 666 | | A551A |
| | 1800/1500 | 230/460 | 200/400 | 180M | R340B | TCA18P2AE211GAA009 | √ | 2:1 | 93.6 | 62.0/31.0 | 509 | 712 | YD | A552A |
| | 1800/1500 | 575 | 480 | 180M | R440 | TCA18P2AP211GAA009 | √ | 2:1 | 93.6 | 24.8 | 231 | 712 | | A552A |
| | 1200/1000 | 230/460 | 200/400 | 200L | R341B | TCA18P3AE211GAA009 | √ | 2:1 | 93.0 | 64.0/32.0 | 628 | 769 | YD | A553A |
| | 1200/1000 | 575 | 480 | 200L | R441 | TCA18P3AP211GAA009 | √ | 2:1 | 93.0 | 25.6 | 415 | 769 | | A553A |
| 30-22 | 3600/3000 | 230/460 | 200/400 | 180M | R342B | TCA0221AE211GAA009 | √ | 2:1 | 91.7 | 68.0/34.0 | 199 | 712 | YD | A552A |
| | 3600/3000 | 575 | 480 | 180M | R442 | TCA0221AP211GAA009 | √ | 2:1 | 91.7 | 27.2 | 199 | 712 | | A552A |
| | 1800/1500 | 230/460 | 200/400 | 180L | R343B | TCA0222AE211GAA009 | √ | 2:1 | 93.6 | 72.0/36.0 | 250 | 750 | YD | A552A |
| | 1800/1500 | 575 | 480 | 180L | R443 | TCA0222AP211GAA009 | √ | 2:1 | 93.6 | 28.8 | 250 | 750 | | A552A |
| | 1200/1000 | 230/460 | 200/400 | 200L | R344B | TCA0223AE211GAA009 | √ | 2:1 | 93.0 | 76.0/38.0 | 661 | 769 | YD | A553A |
| | 1200/1000 | 575 | 480 | 200L | R444 | TCA0223AP211GAA009 | √ | 2:1 | 93.0 | 30.5 | 415 | 769 | | A553A |
| 40-30 | 3600/3000 | 230/460 | 200/400 | 200L | R345B | TCA0301AE211GAA009 | √ | 2:1 | 92.4 | 92.0/46.0 | 269 | 769 | YD | A553A |
| | 3600/3000 | 575 | 480 | 200L | R445 | TCA0301AP211GAA009 | √ | 2:1 | 92.4 | 37.0 | 572 | 769 | | A553A |
| | 1800/1500 | 230/460 | 200/400 | 200L | R346B | TCA0302AE211GAA009 | √ | 2:1 | 94.1 | 94.0/47.0 | 300 | 769 | YD | A553A |
| | 1800/1500 | 575 | 480 | 200L | R446 | TCA0302AP211GAA009 | √ | 2:1 | 94.1 | 37.5 | 300 | 769 | | A553A |
| | 1200/1000 | 230/460 | 200/400 | 225M | R347B | TCA0303AE211GAA009 | √ | 2:1 | 94.1 | 100/50.0 | 424 | 862 | YD | A580A |
| | 1200/1000 | 575 | 480 | 225M | R447 | TCA0303AP211GAA009 | √ | 2:1 | 94.1 | 40.0 | 415 | 862 | | A580A |
| 50-37 | 3600/3000 | 230/460 | 200/400 | 200L | R348B | TCA0371AE211GAA009 | √ | 2:1 | 93.0 | 112/56.0 | 296 | 769 | YD | A553A |
| | 3600/3000 | 575 | 480 | 200L | R448 | TCA0371AP211GAA009 | √ | 2:1 | 93.0 | 45.0 | 296 | 769 | | A553A |
| | 1800/1500 | 230/460 | 200/400 | 225S | R349B | TCA0372AE211GAA009 | √ | 2:1 | 94.5 | 118/59.0 | 415 | 837 | YD | A580A |
| | 1800/1500 | 460 | 400 | 225S | R1349 | TCA0372AD211GAA009 | √ | 2:1 | 94.5 | 59.0 | 415 | 837 | | A580A |
| 50-37 | 1800/1500 | 575 | 480 | 225S | R449 | TCA0372AP211GAA009 | √ | 2:1 | 94.5 | 47.0 | 415 | 837 | | A580A |
| | 1200/1000 | 230/460 | 200/400 | 250M | R350B | TCA0373AE211GAA009 | √ | 2:1 | 94.1 | 124/62.0 | 1144 | 941 | YD | A594A |
| | 1200/1000 | 575 | 480 | 250M | R450 | TCA0373AP211GAA009 | √ | 2:1 | 94.1 | 49.5 | 415 | 941 | | A594A |
| 60-45 | 3600/3000 | 230/460 | 200/400 | 225M | R500A | TCA0451AE211GAA009 | √ | 2:1 | 93.6 | 138/69.0 | 406 | 832 | YD | A580A |
| | 1800/1500 | 230/460 | 200/400 | 225M | R501A | TCA0452AE211GAA009 | √ | 2:1 | 95.0 | 142/71.0 | 455 | 862 | YD | A580A |
| | 1200/1000 | 230/460 | 200/400 | 280S | R502A | TCA0453AE211GAA009 | √ | 2:1 | 94.5 | 146/73.0 | 638 | 1060 | YD | A596A |
| 75-55 | 3600/3000 | 230/460 | 200/400 | 250M | R503A | TCA0551AE211GAA009 | √ | 2:1 | 93.6 | 166/83.0 | 515 | 941 | YD | A594A |
| | 1800/1500 | 230/460 | 200/400 | 250M | R504A | TCA0552AE211GAA009 | √ | 2:1 | 95.4 | 174/87.0 | 590 | 941 | YD | A594A |
| | 1200/1000 | 230/460 | 200/400 | 280M | R505A | TCA0553AE211GAA009 | √ | 2:1 | 94.5 | 174/87.0 | 679 | 1111 | YD | A596A |
| 100-75 | 3600/3000 | 230/460 | 200/400 | 280S | R506A | TCA0751AE211GAA009 | √ | 2:1 | 94.1 | 222/111 | 737 | 1060 | YD | A595 |
| | 1800/1500 | 230/460 | 200/400 | 280S | R507A | TCA0752AE211GAA009 | √ | 2:1 | 95.4 | 230/115 | 757 | 1060 | YD | A596A |
| | 1200/1000 | 230/460 | 200/400 | 315S | R508A | TCA0753AE211GAA009 | √ | 2:1 | 95.0 | 246/123 | 821 | 1206 | YD | A598A |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Continued on next page.

*See back cover page for attribution.

TERRAMAX® IEC®* (METRIC) FRAME MOTORS

TOTALLY ENCLOSED

B5 "FF" (D-FLANGE) - FOOTLESS

| HP - kW | RPM 60/50HZ | VOLTS 60HZ | VOLTS 50HZ | IEC FRAME | CAT. NO. | ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | 60HZ F.L. AMPS | WT. | IEC "L" DIM (mm) | FOOT NOTES |
|-----------|----------------|---------------|---------------|--------------|-------------|--------------------|-------|----------------------|--------------|-------------------|-----|---------------------|---------------|
| 4-3 | 1200 | 230/460 | 200/400 | 132S | R253 | TCA0033AE221GAA009 | √ | 2:1 | 89.5 | 11.6/5.8 | 76 | 465 | |
| 5 1/2-4.1 | 3600 | 230/460 | 200/400 | 112M | R224 | TCA0041AE221GAA009 | √ | 2:1 | 89.5 | 12.4/6.2 | 116 | 399 | |
| | 1800 | 230/460 | 200/400 | 112M | R225 | TCA0042AE221GAA009 | √ | 2:1 | 91.7 | 13.8/6.9 | 126 | 399 | |
| | 1200 | 230/460 | 200/400 | 132M | R226 | TCA0043AE221GAA009 | √ | 2:1 | 91.0 | 16.2/8.1 | 189 | 503 | |
| 7 1/2-5.5 | 3600 | 230/460 | 200/400 | 132S | R227 | TCA5P51AE221GAA009 | √ | 2:1 | 89.5 | 17.6/8.8 | 76 | 465 | |
| | 1800 | 230/460 | 200/400 | 132S | R228 | TCA5P52AE221GAA009 | √ | 2:1 | 91.7 | 19.6/9.8 | 202 | 465 | |
| | 1200 | 230/460 | 200/400 | 132M | R229 | TCA5P53AE221GAA009 | √ | 2:1 | 91.0 | 20.8/10.4 | 100 | 503 | |
| 10-7.5 | 3600 | 230/460 | 200/400 | 132S | R230 | TCA7P51AE221GAA009 | √ | 2:1 | 90.2 | 23.8/11.9 | 85 | 465 | |
| | 1800 | 230/460 | 200/400 | 132M | R231 | TCA7P52AE221GAA009 | √ | 2:1 | 91.7 | 25.4/12.7 | 216 | 503 | |
| | 1200 | 230/460 | 200/400 | 160M | R232 | TCA7P53AE221GAA009 | √ | 2:1 | 91.0 | 26.4/13.2 | 143 | 622 | YD |
| 15-11 | 3600 | 230/460 | 200/400 | 160M | R233 | TCA0111AE221GAA009 | √ | 2:1 | 91.0 | 34.0/16.9 | 141 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160M | R234 | TCA0112AE221GAA009 | √ | 2:1 | 92.4 | 37.5/18.7 | 148 | 622 | YD |
| | 1200 | 230/460 | 200/400 | 160L | R235 | TCA0113AE221GAA009 | √ | 2:1 | 91.7 | 38.0/19.1 | 172 | 666 | YD |
| 20-15 | 3600 | 230/460 | 200/400 | 160M | R236 | TCA0151AE221GAA009 | √ | 2:1 | 91.0 | 45.5/22.8 | 324 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160L | R237 | TCA0152AE221GAA009 | √ | 2:1 | 93.0 | 50.0/25.0 | 359 | 666 | YD |
| | 1200 | 230/460 | 200/400 | 180L | R238 | TCA0153AE221GAA009 | √ | 2:1 | 91.7 | 53.5/26.7 | 216 | 750 | YD |
| 25-18.5 | 3600 | 230/460 | 200/400 | 160L | R239 | TCA18P1AE221GAA009 | √ | 2:1 | 91.7 | 56.0/28.0 | 365 | 666 | YD |
| | 1800 | 230/460 | 200/400 | 180M | R240 | TCA18P2AE221GAA009 | √ | 2:1 | 93.6 | 62.0/31.0 | 231 | 712 | YD |
| 30-22 | 3600 | 230/460 | 200/400 | 180M | R242 | TCA0221AE221GAA009 | √ | 2:1 | 91.7 | 68.0/34.0 | 199 | 712 | YD |
| | 1800 | 230/460 | 200/400 | 180L | R243 | TCA0222AE221GAA009 | √ | 2:1 | 93.6 | 72.0/36.0 | 250 | 750 | YD |

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

*See back cover page for attribution.

TERRAMAX® IEC®* (METRIC) FRAME MOTORS

TOTALLY ENCLOSED, B14 MOUNTING

B14 "FT" (C-FACE) - FOOTLESS

| HP - kW | RPM 60/50HZ | VOLTS 60HZ | VOLTS 50HZ | IEC FRAME | CAT. NO. | ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | 60HZ FL. AMPS | WT. | IEC "L" DIM (mm) | FOOT NOTES |
|-----------|----------------|---------------|---------------|--------------|-------------|--------------------|-------|----------------------|--------------|------------------|-----|---------------------|---------------|
| 3-2.2 | 1200 | 230/460 | 200/400 | 112L | R623 | TCA2P23AE271GAA009 | √ | 2:1 | 89.5 | 8.8/4.4 | 128 | 399 | |
| 4-3 | 1200 | 230/460 | 200/400 | 132S | R653 | TCA0033AE271GAA009 | √ | 2:1 | 89.5 | 11.6/5.8 | 76 | 465 | |
| 5 1/2-4.1 | 3600 | 230/460 | 200/400 | 112M | R624 | TCA0041AE271GAA009 | √ | 2:1 | 89.5 | 12.4/6.2 | 53 | 399 | |
| | 1800 | 230/460 | 200/400 | 112M | R625 | TCA0042AE271GAA009 | √ | 2:1 | 91.7 | 13.8/6.9 | 57 | 399 | |
| | 1200 | 230/460 | 200/400 | 132M | R626 | TCA0043AE271GAA009 | √ | 2:1 | 91.0 | 16.2/8.1 | 190 | 503 | |
| 7 1/2-5.5 | 3600 | 230/460 | 200/400 | 132S | R627 | TCA5P51AE271GAA009 | √ | 2:1 | 89.5 | 17.6/8.8 | 76 | 465 | |
| | 1800 | 230/460 | 200/400 | 132S | R628 | TCA5P52AE271GAA009 | √ | 2:1 | 91.7 | 19.6/9.8 | 92 | 465 | |
| | 1200 | 230/460 | 200/400 | 132M | R629 | TCA5P53AE271GAA009 | √ | 2:1 | 91.0 | 20.8/10.4 | 100 | 503 | |
| 10-7.5 | 3600 | 230/460 | 200/400 | 132S | R630 | TCA7P51AE271GAA009 | √ | 2:1 | 90.2 | 23.8/11.9 | 85 | 465 | |
| | 1800 | 230/460 | 200/400 | 132M | R631 | TCA7P52AE271GAA009 | √ | 2:1 | 91.7 | 25.4/12.7 | 98 | 503 | |
| | 1200 | 230/460 | 200/400 | 160M | R632 | TCA7P53AE271GAA009 | √ | 2:1 | 91.0 | 26.4/13.2 | 143 | 622 | YD |
| 15-11 | 3600 | 230/460 | 200/400 | 160M | R633 | TCA0111AE271GAA009 | √ | 2:1 | 91.0 | 34.0/16.9 | 141 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160M | R634 | TCA0112AE271GAA009 | √ | 2:1 | 92.4 | 37.5/18.7 | 326 | 622 | YD |
| | 1200 | 230/460 | 200/400 | 160L | R635 | TCA0113AE271GAA009 | √ | 2:1 | 91.7 | 38.0/19.1 | 172 | 666 | YD |
| 20-15 | 3600 | 230/460 | 200/400 | 160M | R636 | TCA0151AE271GAA009 | √ | 2:1 | 91.0 | 45.5/22.8 | 146 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160L | R637 | TCA0152AE271GAA009 | √ | 2:1 | 93.0 | 50.0/25.0 | 163 | 666 | YD |
| 25-18.5 | 3600 | 230/460 | 200/400 | 160L | R639 | TCA18P1AE271GAA009 | √ | 2:1 | 91.7 | 56.0/28.0 | 166 | 666 | YD |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

TERRAMAX® IEC®* (METRIC) FRAME MOTORS

TOTALLY ENCLOSED, B35 MOUNTING

B35 "FF" (D-FLANGE) - FOOTED

| HP - kW | RPM 60/50HZ | VOLTS 60HZ | VOLTS 50HZ | IEC FRAME | CAT. NO. | ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | 60HZ F.L. AMPS | WT. | IEC "L" DIM (mm) | FOOT NOTES |
|-----------|-------------|------------|------------|-----------|-------------|--------------------|-------|----------------|-----------|----------------|------|------------------|------------|
| 4-3 | 1200 | 230/460 | 200/400 | 132S | R853 | TCA0033AE231GAA009 | √ | 2:1 | 89.5 | 11.6/5.8 | 174 | 465 | |
| 5 1/2-4.1 | 3600 | 230/460 | 200/400 | 112M | R824 | TCA0041AE231GAA009 | √ | 2:1 | 89.5 | 12.4/6.2 | 121 | 399 | |
| | 1800 | 230/460 | 200/400 | 112M | R825 | TCA0042AE231GAA009 | √ | 2:1 | 91.7 | 13.8/6.9 | 130 | 399 | |
| | 1200 | 230/460 | 200/400 | 132M | R826 | TCA0043AE231GAA009 | √ | 2:1 | 91.0 | 16.2/8.1 | 196 | 503 | |
| 7 1/2-5.5 | 3600 | 230/460 | 200/400 | 132S | R827 | TCA5P51AE231GAA009 | √ | 2:1 | 89.5 | 17.6/8.8 | 174 | 465 | |
| | 1800 | 230/460 | 200/400 | 132S | R828 | TCA5P52AE231GAA009 | √ | 2:1 | 91.7 | 19.6/9.8 | 209 | 465 | |
| | 1200 | 230/460 | 200/400 | 132M | R829 | TCA5P53AE231GAA009 | √ | 2:1 | 91.0 | 20.8/10.4 | 227 | 503 | |
| 10-7.5 | 3600 | 230/460 | 200/400 | 132S | R830 | TCA7P51AE231GAA009 | √ | 2:1 | 90.2 | 23.8/11.9 | 194 | 465 | |
| | 1800 | 230/460 | 200/400 | 132M | R831 | TCA7P52AE231GAA009 | √ | 2:1 | 91.7 | 25.4/12.7 | 223 | 503 | |
| | 1200 | 230/460 | 200/400 | 160M | R832 | TCA7P53AE231GAA009 | √ | 2:1 | 91.0 | 26.4/13.2 | 331 | 622 | YD |
| 15-11 | 3600 | 230/460 | 200/400 | 160M | R833 | TCA0111AE231GAA009 | √ | 2:1 | 91.0 | 34.0/16.9 | 326 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160M | R834 | TCA0112AE231GAA009 | √ | 2:1 | 92.4 | 37.5/18.7 | 342 | 622 | YD |
| | 1200 | 230/460 | 200/400 | 160L | R835 | TCA0113AE231GAA009 | √ | 2:1 | 91.7 | 38.0/19.1 | 395 | 666 | YD |
| 20-15 | 3600 | 230/460 | 200/400 | 160M | R836 | TCA0151AE231GAA009 | √ | 2:1 | 91.0 | 45.5/22.8 | 337 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160L | R837 | TCA0152AE231GAA009 | √ | 2:1 | 93.0 | 50.0/25.0 | 375 | 666 | YD |
| | 1200 | 230/460 | 200/400 | 180L | R838 | TCA0153AE231GAA009 | √ | 2:1 | 91.7 | 53.5/26.7 | 498 | 750 | YD |
| 25-18.5 | 3600 | 230/460 | 200/400 | 160L | R839 | TCA18P1AE231GAA009 | √ | 2:1 | 91.7 | 56.0/28.0 | 381 | 666 | YD |
| | 1800 | 230/460 | 200/400 | 180M | R840 | TCA18P2AE231GAA009 | √ | 2:1 | 93.6 | 62.0/31.0 | 531 | 712 | YD |
| | 1200 | 230/460 | 200/400 | 200L | R841 | TCA18P3AE231GAA009 | √ | 2:1 | 93.0 | 64.0/32.0 | 297 | 769 | YD |
| 30-22 | 3600 | 230/460 | 200/400 | 180M | R842 | TCA0221AE231GAA009 | √ | 2:1 | 91.7 | 68.0/34.0 | 209 | 712 | YD |
| | 1800 | 230/460 | 200/400 | 180L | R843 | TCA0222AE231GAA009 | √ | 2:1 | 93.6 | 72.0/36.0 | 573 | 750 | YD |
| | 1200 | 230/460 | 200/400 | 200L | R844 | TCA0223AE231GAA009 | √ | 2:1 | 93.0 | 76.0/38.0 | 688 | 769 | YD |
| 40-30 | 3600 | 230/460 | 200/400 | 200L | R845 | TCA0301AE231GAA009 | √ | 2:1 | 92.4 | 92.0/46.0 | 620 | 769 | YD |
| | 1800 | 230/460 | 200/400 | 200L | R846 | TCA0302AE231GAA009 | √ | 2:1 | 94.1 | 94.0/47.0 | 312 | 769 | YD |
| | 1200 | 230/460 | 200/400 | 225M | R847 | TCA0303AE231GAA009 | √ | 2:1 | 94.1 | 100/50.0 | 964 | 862 | YD |
| 50-37 | 3600 | 230/460 | 200/400 | 200L | R848 | TCA0371AE231GAA009 | √ | 2:1 | 93.0 | 112/56.0 | 679 | 769 | YD |
| | 1800 | 230/460 | 200/400 | 225S | R849 | TCA0372AE231GAA009 | √ | 2:1 | 94.5 | 118/59.0 | 944 | 837 | YD |
| | 1200 | 230/460 | 200/400 | 250M | R850 | TCA0373AE231GAA009 | √ | 2:1 | 94.1 | 124/62.0 | 1180 | 941 | YD |
| 60-45 | 3600 | 230/460 | 200/400 | 225M | R854 | TCA0451AE231GAA009 | √ | 2:1 | 93.6 | 138/69.0 | 924 | 832 | YD |
| | 1800 | 230/460 | 200/400 | 225M | R855 | TCA0452AE231GAA009 | √ | 2:1 | 95.0 | 142/71.0 | 1032 | 862 | YD |
| | 1200 | 230/460 | 200/400 | 280S | R856 | TCA0453AE231GAA009 | √ | 2:1 | 94.5 | 146/73.0 | 1451 | 1060 | YD |
| 75-55 | 3600 | 230/460 | 200/400 | 250M | R857 | TCA0551AE231GAA009 | √ | 2:1 | 93.6 | 166/83.0 | 1171 | 941 | YD |
| | 1800 | 230/460 | 200/400 | 250M | R858 | TCA0552AE231GAA009 | √ | 2:1 | 95.4 | 174/87.0 | 1336 | 941 | YD |
| | 1200 | 230/460 | 200/400 | 280M | R859 | TCA0553AE231GAA009 | √ | 2:1 | 94.5 | 174/87.0 | 699 | 1111 | YD |
| 100-75 | 3600 | 230/460 | 200/400 | 280S | R860 | TCA0751AE231GAA009 | √ | 2:1 | 94.1 | 222/111 | 757 | 1060 | YD |
| | 1800 | 230/460 | 200/400 | 280S | R861 | TCA0752AE231GAA009 | √ | 2:1 | 95.4 | 230/115 | 777 | 1060 | YD |
| | 1200 | 230/460 | 200/400 | 315S | R862 | TCA0753AE231GAA009 | √ | 2:1 | 95.0 | 246/123 | 785 | 1206 | YD |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

TERRAMAX® IEC®* (METRIC) FRAME MOTORS

TOTALLY ENCLOSED, B34 MOUNTING

B34 "FT" (C-FACE) - FOOTED

| HP - kW | RPM 60/50HZ | VOLTS 60HZ | VOLTS 50HZ | IEC FRAME | CAT. NO. | ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | 60HZ FL. AMPS | WT.. | IEC "L" DIM (mm) | FOOT NOTES |
|-----------|----------------|---------------|---------------|--------------|-------------|--------------------|-------|----------------------|--------------|------------------|------|---------------------|---------------|
| 4-3 | 1200 | 230/460 | 200/400 | 132S | R953 | TCA0033AE251GAA009 | √ | 2:1 | 89.5 | 11.6/5.8 | 77 | 465 | |
| 5 1/2-4.1 | 3600 | 230/460 | 200/400 | 112M | R924 | TCA0041AE251GAA009 | √ | 2:1 | 89.5 | 12.4/6.2 | 54 | 399 | |
| | 1800 | 230/460 | 200/400 | 112M | R925 | TCA0042AE251GAA009 | √ | 2:1 | 91.7 | 13.8/6.9 | 58 | 399 | |
| | 1200 | 230/460 | 200/400 | 132M | R926 | TCA0043AE251GAA009 | √ | 2:1 | 91.0 | 16.2/8.1 | 87 | 503 | |
| 7 1/2-5.5 | 3600 | 230/460 | 200/400 | 132S | R927 | TCA5P51AE251GAA009 | √ | 2:1 | 89.5 | 17.6/8.8 | 77 | 465 | |
| | 1800 | 230/460 | 200/400 | 132S | R928 | TCA5P52AE251GAA009 | √ | 2:1 | 91.7 | 19.6/9.8 | 93 | 465 | |
| | 1200 | 230/460 | 200/400 | 132M | R929 | TCA5P53AE251GAA009 | √ | 2:1 | 91.0 | 20.8/10.4 | 101 | 503 | |
| 10-7.5 | 3600 | 230/460 | 200/400 | 132S | R930 | TCA7P51AE251GAA009 | √ | 2:1 | 90.2 | 23.8/11.9 | 189 | 465 | |
| | 1800 | 230/460 | 200/400 | 132M | R931 | TCA7P52AE251GAA009 | √ | 2:1 | 91.7 | 25.4/12.7 | 99 | 503 | |
| | 1200 | 230/460 | 200/400 | 160M | R932 | TCA7P53AE251GAA009 | √ | 2:1 | 91.0 | 26.4/13.2 | 146 | 622 | YD |
| 15-11 | 3600 | 230/460 | 200/400 | 160M | R933 | TCA0111AE251GAA009 | √ | 2:1 | 91.0 | 34.0/16.9 | 144 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160M | R934 | TCA0112AE251GAA009 | √ | 2:1 | 92.4 | 37.5/18.7 | 151 | 622 | YD |
| | 1200 | 230/460 | 200/400 | 160L | R935 | TCA0113AE251GAA009 | √ | 2:1 | 91.7 | 38.0/19.1 | 175 | 666 | YD |
| 20-15 | 3600 | 230/460 | 200/400 | 160M | R936 | TCA0151AE251GAA009 | √ | 2:1 | 91.0 | 45.5/22.8 | 149 | 622 | YD |
| | 1800 | 230/460 | 200/400 | 160L | R937 | TCA0152AE251GAA009 | √ | 2:1 | 93.0 | 50.0/25.0 | 166 | 666 | YD |
| 25-18.5 | 3600 | 230/460 | 200/400 | 160L | R939 | TCA18P1AE251GAA009 | √ | 2:1 | 91.7 | 56.0/28.0 | 169 | 666 | YD |

√: Available ¶- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

TERRAMAX® IEC®* (METRIC) FRAME MOTORS

TOTALLY ENCLOSED, BRAKE MOTOR

APPLICATIONS

These motors meet North American performance standards, premium energy efficiency mandates and have a 1.15 service factor. Typically used for replacement on machine tools, textile tools, textile machinery and other equipment with metric dimensions, but requires the high torque and performance of motors designed for use in North America.

FEATURES

- **Meets IE3 European and NEMA Premium®* efficiencies**
- Cast Iron frame construction
- 60/50 Hz interchangeability
- 230 volt brake coil
- IP55 enclosure protection
- B3 mounting
- B5 & B14 flange kits available
- UL®* Listed, UL Certified for Canada, & CE®* Mark
- Three Year Warranty



IP55



B3 RIGID BASE

| HP - kW | RPM 60/50HZ | VOLTS 60HZ | VOLTS 50HZ | IEC FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | 60HZ FL. AMPS | WT. | IEC "L" DIM (mm) | FOOT NOTES | B5/FF FLANGE |
|---------|----------------|---------------|---------------|--------------|--------------|-------------|-------|----------------------|--------------|------------------|-----|---------------------|---------------|-----------------|
| | 1800 | 230/460 | 74 | 112M | R1025 | 112MTFC6636 | √ | 2:1 | 89.5 | 13.8/6.9 | 58 | 399 | | A554B |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

*See back cover page for attribution.

HVAC - FAN MOTORS

SINGLE AND THREE PHASE

marathon®

Features

- Various voltages and mounting types available
- Single and three phase fan duty motors
- Rigid base, resilient base, pedestal base, belly band mount and extended thru-bolt mount types
- Drip-proof, TEFC, TEAO and DPAO designs
- General purpose duty
- Agricultural duty
- UL®* recognized and CSA®* certified



Multi-speed Features

- Two-Speed, single and dual winding (1-WDG & 2-WDG) designs
- ODP & TEFC Designs
- Ball bearing designs
- Single voltage designs

Applications

- Ideally suited for a variety of fan applications requiring the motor to either be mounted in or out of the air stream for proper ventilation. Some motors have an epoxy finish for harsh applications and other motors have a baked on enamel finish
- Industrial, commercial and agricultural fan motors available. Drip-proof motors are intended for use in environments that are relatively clean and dry

*See back cover page for attribution.



One-winding designs versus the two-winding designs has a significant cost shown in price books, this will always be the case. The one-winding design will have an optimized design on the high speed only. It will generally stay on the same diameter of that of a single speed motor.

- I.e.: 1-wdg, 4/8 pole, 2/4 pole, 6/12 pole
- I.e.: 2-wdg, 4/8 pole, 2/4 pole, 6/12 pole
- I.e.: 2-wdg, 2/8 pole, 4/6 pole, 6/8 pole

Example 1: High Speed – 10HP and 1800RPM or 4 Poles. Remember the number of poles is calculated $(120 \cdot 60) / 1800 = 4$ Poles)

Next, you can calculate the Low Speed based on knowing what the speed the customer wants, say 900RPM or 8 Poles. Now you can take $(4/8)^2$ for VTQ to determine the Low HP or $(4/8)$ for CTQ to determine the Low HP.

Your answers should be for VTQ.

Low HP - 10HP $(4/8)^2 = 2.5$ HP, CTQ Low

HP - 10HP $(4/8) = 5$ HP.

- Variable torque (VTQ) motors are typically used on applications such as fans, blowers and centrifugal pumps
- Constant torque (CTQ) motors are typically used on mixers, compressors, conveyors, extractors, feeders and laundry machinery
- Constant horsepower (CHP) motors are typically used on machine tools such as drills, lathes, punch presses and milling machines

HVAC - FAN MOTORS

MULTI-SPEED / 2-SPEED

THREE-PHASE - VARIABLE AND CONSTANT TORQUE



FEATURES

- Two-Speed, single winding (1-WDG & 2-WDG) designs
- DP & TEFC Designs
- Ball bearing designs
- Single voltage designs
- Single voltage designs, note 200-230V means same electrical connection not 200 through a range to 230V
- Drip-proof motors are intended for use in environments that are relatively clean and dry

1-WINDING, VARIABLE TORQUE, DP, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | Service Factor | "C" DIM. | FOOT NOTES |
|----------|----------|---------|-------|----------|-------------|-------|-----------|-----------|-----|----------------|----------|------------|
| 5/1.25 | 1800/900 | 460 | 184T | Y1487 | 184TTDW7209 | | 85.5 | 6.9 | 80 | 1.15 | 14.72 | 13 |
| 7.5/1.88 | 1800/900 | 200-230 | 213T | Y488 | 213TTDW7202 | ¶ | 86.5 | 21.6-19.8 | 110 | 1.15 | 17.30 | |
| 10/2.5 | 1800/900 | 460 | 215T | Y491 | 215TTDW7201 | ¶ | 86.5 | 12.5 | 106 | 1.15 | 17.30 | |
| 15/3.75 | 1800/900 | 460 | 256T | Y492 | 256TTDX7207 | ¶ | 87.5 | 18.4 | 217 | 1.15 | 22.32 | |

ADDITIONAL FEATURES

- Economical two-winding design

2-WINDING, VARIABLE TORQUE, DP, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | Service Factor | "C" DIM. | FOOT NOTES |
|---------|-----------|---------|-------|----------|-------------|-------|-----------|-----------|-----|----------------|----------|------------|
| 5/2.22 | 1800/1200 | 460 | 215T | Y415 | 215TTDW7203 | ¶ | 85.5 | 6.5 | 106 | 1.15 | 17.30 | |
| 7.5/1.9 | 1800/900 | 460 | 254T | Y470 | 254TTDX7201 | ¶ | 85.5 | 10.5 | 135 | 1.15 | 20.57 | |
| 7.5/3.3 | 1800/1200 | 200-230 | 254T | Y456 | 254TTDX7278 | √ | 87.5 | 20.8-18.4 | 175 | 1.15 | 22.32 | |
| | 1800/1200 | 460 | 254T | Y418 | 254TTDX7208 | ¶ | 84.0 | 10.0 | 154 | 1.15 | 20.57 | |
| 10/2.5 | 1800/900 | 460 | 256T | Y471 | 256TTDX7253 | ¶ | 86.5 | 12.9 | 145 | 1.15 | 22.32 | |
| 10/4.4 | 1800/1200 | 200-230 | 256T | Y457 | 256TTDX7263 | ¶ | 88.5 | 28-26 | 214 | 1.15 | 22.32 | |
| | 1800/1200 | 460 | 256T | Y458 | 256TTDX7264 | ¶ | 87.5 | 12.0 | 214 | 1.15 | 22.32 | |
| 15/3.8 | 1800/900 | 460 | 284T | Y472 | 284TTDP7205 | ¶ | 88.5 | 18.0 | 300 | 1.15 | 23.49 | |

HVAC - FAN MOTORS

MULTI-SPEED / 2-SPEED

1-WINDING, CONSTANT TORQUE, TEFC, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | Service Factor | "C" DIM." | FOOT NOTES |
|-------|----------|-------|-------|----------|-----------|-------|-----------|-----------|-----|----------------|-----------|------------|
| 2 / 1 | 1800/900 | 460 | 184T | - | 131471.00 | | 80.0 | 2.9 - 2.9 | 72 | 1.0 | 13.96 | |

1-WINDING, CONSTANT TORQUE, TEFC, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | Service Factor | "C" DIM." | FOOT NOTES |
|-------|----------|-----------|-------|----------|-----------|-------|-----------|-----------|-----|----------------|-----------|------------|
| 2 / 1 | 1800/900 | 208 - 230 | 184T | - | 131473.00 | | 80.0 | 5.8 - 5.7 | 72 | 1.0 | 13.96 | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

BRAKE MOTORS

THREE-PHASE, DRIPPROOF



FEATURES

- Meets or exceeds NEMA Premium®* efficiencies.
- NEMA Premium models are in compliance with EISA 2007
- Stearns® brakes, 56,000 series through 25 Lb-Ft, 87,000 series above 35 Lb-Ft and larger
- Brake has manual wear adjustment up to 25 lb-ft. for longer pad life
- Brake leads are terminated at the brake
- Universal mounting up to 15 Lb-Ft, for larger brakes, see mod section
- CR²⁰⁰ corona resistant magnet wire and motor can be operated 10:1 variable torque (2:1 constant torque as noted)
- 1.15 service factor

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT.. | "C" DIM | BRAKE RATING (LB/FT) | FOOT NOTES |
|-------|------|---------|-------|-------------|---------------|-------|-----------|----------------|------|---------|----------------------|------------|
| 3 | 1800 | 230/460 | 182T | K566 | 182TTDBD6341 | √ | 89.5 | 8.0/4.0 | 70 | 18.03 | 15 | 99, FT |
| | 1800 | 230/460 | 182TC | K580 | 182TTDBD6040 | √ | 89.5 | 8.0/4.0 | 70 | 19.08 | 15 | 99, CFL |
| | 1800 | 230/460 | 182TC | C434 | 182TTDBD6034 | | 89.5 | 8.6-8.0/4.0 | 70 | 21.10 | 15 | 99, CFT |
| 5 | 1800 | 230/460 | 184TC | K582 | 184TTDBD6040 | √ | 89.5 | 12.6/6.3 | 85 | 20.08 | 25 | 99, CFL |
| 7 1/2 | 1800 | 230/460 | 213TC | C438 | 213TTDBD16038 | | 91.0 | 21.2-19.8/9.9 | 135 | 26.57 | 35 | 99, CFT |
| 10 | 1800 | 230/460 | 215T | K572 | 215TTDBD6341 | | 91.7 | 27.8-25.4/12.7 | 140 | 26.33 | 50 | FT |

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

*See back cover page for attribution.

BRAKE MOTORS

THREE-PHASE, TOTALLY ENCLOSED

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies.
- NEMA Premium models are in compliance with EISA 2007
- Stearns® brakes, 56,000 series through 25 Lb-Ft, 87,000 series above 35 Lb-Ft and larger
- Brake has manual wear adjustment up to 25 lb-ft. for longer pad life
- Brake leads are terminated at the brake
- Universal mounting up to 15 Lb-Ft, for larger brakes, see mod section
- CR²⁰⁰ corona resistant magnet wire and motor can be operated 10:1 variable torque (2:1 constant torque as noted)
- 1.15 service factor, 1.0 service factor where foot noted



RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM | BRAKE RATING (LB/FT) | FOOT NOTES |
|-------|------|---------|-------|-------------|--------------|-------|-----------|----------------|-----|---------|----------------------|------------|
| 3 | 1800 | 230/460 | 182T | K445 | 182TTFBD6341 | √ | 89.5 | 8.3/4.15 | 93 | 20.35 | 15 | 99 |
| 5 | 1800 | 230/460 | 184T | K447 | 184TTFBD6341 | √ | 89.5 | 13.2/6.6 | 104 | 21.35 | 25 | 99 |
| 7 1/2 | 1800 | 230/460 | 213T | K448 | 213TTFBD6341 | √ | 91.7 | 20.4-19.0/9.5 | 223 | 23.85 | 45 | 99 |
| 10 | 1800 | 230/460 | 215T | K449 | 215TTFBD6341 | √ | 91.7 | 27.6-25.0/12.5 | 241 | 25.35 | 45 | |

C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM | BRAKE RATING (LB/FT) | FOOT NOTES |
|-------|------|---------|-------|-------------|--------------|-------|-----------|-----------|-----|---------|----------------------|------------|
| 3 | 1800 | 230/460 | 182TC | K478 | 182TTFBD6040 | √ | 89.5 | 8.3/4.15 | 105 | 19.08 | 15 | 99 |
| 5 | 1800 | 230/460 | 184TC | K480 | 184TTFBD6040 | √ | 89.5 | 13.2/6.6 | 104 | 20.08 | 25 | 99 |
| 7 1/2 | 1800 | 230/460 | 213TC | K481 | 213TTFBD6040 | √ | 91.7 | 19.0/9.5 | 223 | 24.62 | 45 | 99 |
| 10 | 1800 | 230/460 | 215TC | K482 | 215TTFBD6040 | √ | 91.7 | 25.0/12.5 | 241 | 26.12 | 45 | 99 |

C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM | BRAKE RATING (LB/FT) | FOOT NOTES |
|-------|------|-------------|-------|--------------|---------------|-------|-----------|----------------|-----|---------|----------------------|------------|
| 3 | 1800 | 230/460 | 182TC | C409 | 182TTFBD6034 | √ | 89.5 | 8.3/4.15 | 90 | 21.10 | 15 | 99 |
| | 1800 | 230/460 | 182TC | C405 | 182TTTL7034 | √ | 89.5 | 7.8/3.9 | 143 | 18.85 | 15 | AL,N,99 |
| 5 | 1800 | 230/460 | 184TC | C411 | 184TTFBD6041 | √ | 89.5 | 13.2/6.6 | 97 | 22.10 | 25 | 99 |
| | 1800 | 230/460 | 184TC | C406 | 184TTTL7041 | √ | 89.5 | 12.4/6.2 | 145 | 19.85 | 25 | AL,N,17,99 |
| 7 1/2 | 1800 | 230/460 | 213TC | C412 | 213TTFBD16038 | √ | 91.7 | 19.0/9.5 | 216 | 24.62 | 45 | 99 |
| | 1800 | 230/460 | 213TC | C407A | 213TTTL16038 | √ | 91.7 | 19.0/9.5 | 246 | 24.42 | 35 | AL,N,17,99 |
| 10 | 1800 | 208-230/460 | 215TC | C413 | 215TTFBD16050 | √ | 91.7 | 27.6-25.0/12.5 | 228 | 26.12 | 45 | 99 |
| | 1800 | 230/460 | 215TC | C408A | 215TTTLD16027 | √ | 91.7 | 25.0/12.5 | 257 | 26.92 | 50 | AL,N,17,99 |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

FARM DUTY / AGRICULTURE, HIGH TORQUE MOTORS

SINGLE-PHASE, TEFC

FEATURES

- Shaft end mechanically locked on C-face models
- Ball bearings
- 1.15 service factor (except as noted)
- Capacitor start design for high starting torque
- Capacitor start/capacitor run design for higher efficiency, as noted
- Low temperature manual reset thermal protector
- Totally enclosed and fully gasketed construction for dirty environments
- Condensate drains
- Shaft slinger
- UL[®]* recognized and CSA[®]* certified



RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|-------|----------|-----------|-------|-----------|----------------|-----|----------|------------|
| 2 | 1800 | 115/208-230 | 182T | - | 131541.00 | √ | 72.0 | 24.8/13.0-12.4 | 65 | 14.46 | |
| 3 | 1800 | 230 | 184T | - | 131542.00 | √ | 75.5 | 19.0 | 86 | 16.46 | |
| 5 | 1800 | 230 | 184T | - | 131543.00 | √ | 82.5 | 20.5 | 98 | 17.46 | |
| 7 1/2 | 1800 | 230 | 215T | - | 140707.00 | √ | 85.5 | 32.0 | 157 | 20.21 | |
| 10 | 1800 | 230 | 215T | - | 140706.00 | √ | 86.5 | 40.0 | 155 | 20.71 | |



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------|-------|----------|-----------|-------|-----------|----------|-----|----------|------------|
| 3 | 1800 | 230 | 184TC | - | 131994.00 | | 75.5 | 19.0 | 107 | 16.47 | |
| 5 | 1800 | 230 | 184TC | - | 131995.00 | √ | 82.5 | 20.5 | 100 | 17.47 | |

FARM RATED[®] MOTORS

EXTRA HIGH TORQUE, SINGLE-PHASE, TEFC C-FACE ROUND BODY

FEATURES

- High starting torque
- 1.00 service factor (except as noted)
- Ball bearings
- Class B or F insulation, as noted
- Reversible
- Removable condensate drain plugs
- Manual reset thermal protector
- All parts are corrosion resistant
- UL recognized and CSA certified



C-FACE (ROUND BODY)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------|-------|----------|-----------|-------|-----------|----------|-----|----------|------------|
| 3 | 1800 | 230 | 184TC | - | 131603.00 | √ | 75.5 | 19.0 | 107 | 16.44 | F, 2, 13 |
| 5 | 1800 | 230 | 184TC | - | 131602.00 | | 82.5 | 20.5 | 107 | 17.44 | F, 1, 13 |

√: Available √- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Blue shaded areas are cast iron frames.

*See back cover page for attribution.

FARM DUTY / AGRICULTURE, EXTRA-HIGH TORQUE CHORE MOTOR

SINGLE-PHASE, TEFC, RIGID BASE



FEATURES

- Class F insulation
- 1.15 Service factor (except as noted)
- Ball bearings
- 300% and greater starting torque for hard-to-start applications
- Totally enclosed and fully gasketed for dirty environments
- 213/215TZ models have 1-1/8" shaft, 182TZ model has 7/8" shaft
- Manual reset thermal protector
- Condensate drains
- Shaft slinger
- UL®* recognized and CSA®* certified

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|-------|----------|-----------|-------|-----------|----------------|-----|----------|------------|
| 2 | 1800 | 115/208-230 | 182T | - | 131541.00 | √ | 72.0 | 24.8/13.0-12.4 | 65 | 14.46 | |
| 3 | 1800 | 230 | 184T | - | 131542.00 | √ | 75.5 | 19.0 | 86 | 16.46 | |
| 5 | 1800 | 230 | 215T | - | 141433.00 | | 82.5 | 22.6 | 125 | 18.71 | |
| | 1800 | 230 | 215TZ | - | 141432.00 | | 82.5 | 22.6 | 153 | 18.71 | |
| 7 1/2 | 1800 | 230 | 215T | - | 141434.00 | √ | 85.5 | 30.5 | 152 | 21.09 | |
| | 1800 | 230 | 215TZ | - | 141427.00 | √ | 85.5 | 30.5 | 159 | 21.09 | |
| 10 | 1800 | 230 | 215T | - | 140414.00 | √ | 86.5 | 40.0 | 156 | 20.71 | |

C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------|-------|----------|-----------|-------|-----------|-----------|-------|----------|------------|
| 3 | 1800 | 230 | 184TC | - | 131994.00 | | 75.5 | 19.0 | 105.0 | 16.47 | |
| 5 | 1800 | 230 | 184TC | - | 131995.00 | √ | 82.5 | 20.5 | 105.0 | 17.47 | |

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Blue shaded areas are cast iron frames.

*See back cover page for attribution.

CROP DRYER, Single-phase MOTORS

DRIPPROOF/AIR OVER, RIGID BASE

APPLICATIONS

Crop dryers with air over/fan on shaft designs.

FEATURES

- Double sealed ball bearings
- Continuous duty
- Class F insulation system
- Thermostats for thermal overload protection (auto reset protector on Z304)
- 34" long leads for ease of installation
- Keyed shafts with 1/4"-20 UNC tapped hole in end
- Capacitors included, shipped loose on catalog Z307 and Z308, mounted on all other models
- Extra nameplate included, loose, for remote mounting



SINGLE-PHASE OPEN/AIR OVER RIGID BASE

| HP | RPM | VOLTS | FRAME | OVERLOAD | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|--------|------|-------|--------|----------|----------|-----------|-------|-----------|------------|-----|----------|------------|
| 5-7 | 3600 | 230 | 182TZ | TSTAT | - | 131847.00 | √ | 81.0 | 26.8-35.27 | 94 | 16.44 | |
| 7.5-10 | 3600 | 230 | 182TZ | TSTAT | - | 131848.00 | √ | 82.5 | 31.0-42.0 | 98 | 16.44 | |
| | 3600 | 230 | 184TZ | TSTAT | - | 132637.00 | | 82.5 | 31.0-40.0 | 98 | 16.82 | |
| 10-15 | 3600 | 230 | 215TVZ | TSTAT | - | 141084.00 | | 84.0 | 40.0-59.0 | 159 | 20.08 | |
| | 3600 | 230 | 215TZ | TSTAT | - | 140640.00 | √ | 85.0 | 39.5-61.5 | 162 | 20.42 | |
| | 3600 | 230 | 215TZ | TSTAT | - | 141385.00 | | 84.5 | 40.4-57.5 | 162 | 20.85 | |
| 16 | 1800 | 230 | 256TZ | NONE | - | 851034.00 | √ | 91.0 | 70.0-61.0 | 308 | 28.65 | |



SINGLE-PHASE TEAO RIGID BASE

| HP | RPM | VOLTS | FRAME | OVERLOAD | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----------|------|-------|-------|----------|----------|-----------|-------|-----------|-----------|-----|----------|------------|
| 5-7 | 3600 | 230 | 182TZ | TSTAT | - | 132391.00 | | 83.0 | 20.8-28.6 | 98 | 17.44 | |
| 7.5-10.5 | 3600 | 230 | 182TZ | TSTAT | - | 132392.00 | | 85.5 | 30.0-38.0 | 108 | 17.44 | |
| 10-15 | 3600 | 230 | 215TZ | TSTAT | - | 141220.00 | | 82.5 | 45.8-68.5 | 136 | 18.17 | |



SINGLE-PHASE TEFC RIGID BASE

| HP | RPM | VOLTS | FRAME | OVERLOAD | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|---------|-------|----------|----------|-----------|-------|-----------|-----------|-----|----------|------------|
| 10 | 1800 | 230 | 215TZ | None | - | 141311.00 | √ | 86.5 | 40.0 | 192 | 21.72 | |
| 15 | 1800 | 208-230 | 256TZ | None | - | 851150.00 | √ | 89.0 | 64.5-58.0 | 308 | 28.91 | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Blue shaded areas are cast iron frames.
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

CROP DRYER, Three-phase MOTORS

OPEN/AIR OVER, RIGID BASE



APPLICATIONS

Crop dryers with air over/fan on shaft designs where Three-phase power is available.

FEATURES

- Ball bearings
- Thermostats for thermal overload protection
- 34" long leads exit elbow connector in bracket
- Keyed shafts with 1/4"-20 UNC tapped hole in end
- Extra nameplate included, loose, for remote mounting
- Continuous duty
- Class F insulation

THREE-PHASE OPEN/AIR OVER / DPAO

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|------|------|---------|-------|----------------|--------------|-------|-----------|----------|-----|----------|------------|
| 5-7 | 3600 | 230/460 | 184TZ | B131849 | 182TTDBD6014 | | 86.5 | 12.6/6.3 | 100 | 13.00 | |
| 7-10 | 3600 | 230/460 | 184TZ | B131850 | 184TTDBD6014 | √ | 88.5 | 17.8/8.9 | 107 | 14.00 | |



THREE-PHASE TOTALLY ENCLOSED AIR OVER / TEAO RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | OVER LOAD | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|------|------|-------------|-------|----------|------------------|-------|-----------|-----------|----------------------------------|-----|----------|------------|
| 5-7 | 3600 | 208-230/460 | 184TZ | - | 132393.00 | | TSTATS | 89.5 | 13.1-16.5/8.3 18.3-16.5/8.25 | 100 | 13.00 | |
| 7-10 | 3600 | 208-230/460 | 184TZ | - | 132394.00 | | TSTATS | 85.5 | 19.7-24.8/12.4 28.1-24.8/12.4 | 107 | 14.00 | |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Catalog numbers (Cat No.) and Model numbers highlighted in bold blue are premium efficient.

CROP DRYER CENTRIFUGAL FAN

SINGLE-PHASE, TEFC, RIGID BASE



FEATURES

- Capacitor start/capacitor run design for high starting torque and low amps
- Ball bearings, mechanically locked on shaft end
- Heavy gauge steel frame and base
- 1.15 service factor (unless otherwise noted)
- UL®* recognized and CSA®* certified
- Thermostats for thermal overload protection
- Shaft 1" longer than NEMA®* standard for extra clearance

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | F.L. AMPS | SERVICE FACTOR | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|----------|-----------|-------|-----------|----------------|-----|----------|------------|
| 3 | 1800 | 208-230 | 182T | | 132640.00 | √ | 14.4-13.4 | 1.15 | 81 | 14.96 | |
| 5 | 1800 | 230 | 184TZ | | 132639.00 | | 23.0 | 1.00 | 104 | 18.46 | |
| 7 1/2 | 1800 | 230 | 215TZ | | 141392.00 | | 30.0 | 1.00 | 159 | 22.97 | |
| 10 | 3600 | 208-230 | 215T | | 141394.00 | | 44.0-41.5 | 1.00 | 145 | 19.84 | |
| | 1800 | 230 | 215TZ | | 141393.00 | √ | 40.0 | 1.00 | 158 | 22.97 | |

FEATHER PICKER MOTOR

THREE-PHASE, TEFC, RIGID BASE



FEATURES

- Stainless steel shaft
- Epoxy painted for corrosion protection
- Washdown duty features including shaft seals
- USDA approved food-safe paint
- UL®* recognized and CSA®* certified
- Extra high breakdown torques
- F3 conduit box

RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | SERVICE FACTOR | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------------|-------|----------|-----------|-------|-----------|-----------|----------------|-----|----------|------------|
| 2 | 1200 | 208-230/460 | 182Tz | | 132246.00 | √ | 88.5 | 6.4/3.2 | 1.15 | 85 | 14.96 | |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

*See back cover page for attribution.

GRAIN DRYER / CENTRIFUGAL FAN MOTORS

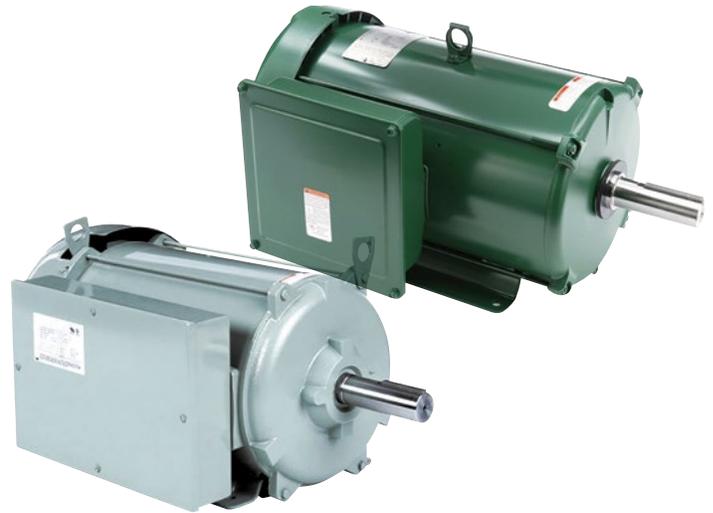
SINGLE AND THREE-PHASE, RIGID BASE

FEATURES

- NEMA Premium[®]* and EPA^{act} efficiency
- Rodent screens (ODP only)
- Re-greasable bearings
- Cast Iron construction
- 1" longer shaft than NEMA standard
- Inverter duty insulation system
- UL[®]* Recognized and CSA [®]*certified

ADDITIONAL FEATURES

- Shaft seals both ends
- Epoxy painted
- Normally Closed T-stats



SINGLE-PHASE, (TEFC), RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|----------|-----------|-------|-----------|-----------|-----|----------|------------|
| 7 1/2 | 1800 | 230 | 215TZ | - | 141437.00 | | 85.5 | 30.5 | 172 | 22.47 | |
| 10 | 1800 | 230 | 215TZ | - | 141311.00 | √ | 86.5 | 40.0 | 192 | 21.72 | |
| 15 | 1800 | 208-230 | 256TZ | | 851150.00 | √ | 89.0 | 64.5-58.0 | 308 | 28.65 | |

THREE-PHASE, DRIPPROOF, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|---------|-------|-------------|---------------|-------|-----------|-----------|-----|----------|------------|
| 10 | 1800 | 230/460 | 215TZ | Y313 | 215TTDBD6327 | √ | 91.7 | 25.4/12.7 | 136 | 18.31 | |
| 15 | 1800 | 230/460 | 254TZ | Y315 | 254TTDBD6327 | | 93.0 | 37.5/18.8 | 320 | 23.31 | |
| | 1800 | 230/460 | 254TZ | Y316 | 254TTDCCD6327 | | 93.0 | 37.5/18.8 | 332 | 23.64 | |
| 20 | 1800 | 230/460 | 256TZ | Y318 | 256TTDCCD6327 | | 93.0 | 48.5/24.3 | 384 | 25.22 | |
| | 1800 | 230/460 | 256TZ | Y317 | 256TTDBD6327 | | 93.0 | 48.5/24.3 | 325 | 24.88 | |
| 25 | 1800 | 230/460 | 284TZ | Y320 | 284TTDCCD6327 | | 93.6 | 62.5/31 | 479 | 26.71 | |
| 25 | 1800 | 230/460 | 284TZ | Y319 | 284TTDBD6327 | | 93.6 | 62.5/31.0 | 310 | 26.60 | |
| 30 | 1800 | 230/460 | 286TZ | Y322 | 286TTDCCD6327 | | 94.1 | 73/36.5 | 494 | 28.09 | |
| | 1800 | 230/460 | 286TZ | Y321 | 286TTDBD6327 | √ | 94.1 | 73.0/36.5 | 416 | 27.98 | |

THREE-PHASE, TEFC, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|-------------|--------------|-------|-----------|-----------|-----|----------|------------|
| 3 | 1800 | 230/460 | 182TZ | Y007 | 182TTFCD6327 | | 89.5 | 8.0/4.0 | 100 | 16.20 | |
| 5 | 1800 | 230/460 | 184TZ | Y009 | 184TTFCD6327 | | 89.5 | 13.0/6.5 | 107 | 17.20 | |
| 7 1/2 | 1800 | 230/460 | 213TZ | Y011 | 213TTFCD6327 | | 91.7 | 19.0/9.5 | 120 | 19.53 | |
| 10 | 1800 | 230/460 | 215TZ | Y013 | 215TTFCD6327 | | 91.7 | 25.0/12.5 | 320 | 21.03 | |
| 15 | 1800 | 230/460 | 254TZ | Y015 | 254TTFCD6327 | | 92.4 | 37.5/18.8 | 325 | 25.15 | |
| 20 | 1800 | 230/460 | 256TZ | Y017 | 256TTFCD6327 | | 93.0 | 48.5/24.2 | 310 | 26.89 | |
| 25 | 1800 | 230/460 | 284TZ | Y019 | 284TTFCD6327 | | 93.6 | 60.0/30.0 | 412 | 27.64 | |
| 30 | 1800 | 230/460 | 286TZ | Y021 | 286TTFCD6327 | | 93.6 | 71.0/35.5 | 495 | 29.14 | |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Blue shaded areas are cast iron frames.
Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

*See back cover page for attribution.

TOBACCO BARN MOTORS

FEATURES

- Drip-proof airover designs
- Class H insulation for high ambient conditions
- 80° C ambient rated
- 120 inch leads
- Oversized double sealed bearings
- 1/4-20 tapped hole at end of shaft



SINGLE-PHASE - DPAO - RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------|--------|----------|-----------|-------|-----------|-----------|-----|----------|------------|
| 7 1/2 | 1800 | 230 | 215TVZ | - | 140830.00 | √ | 84.0 | 34.5 | 125 | 18.04 | |
| 10 | 1800 | 230 | 215TVZ | - | 140816.00 | √ | 82.5 | 44.0 | 150 | 20.65 | |

√: Available √: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

CATFISH POND MOTORS

APPLICATIONS

Designed for outdoor pond aeration applications

FEATURES

- High torque designs
- Epoxy painted for corrosion protection
- Double sealed ball bearings
- Drain holes provided to purge condensation



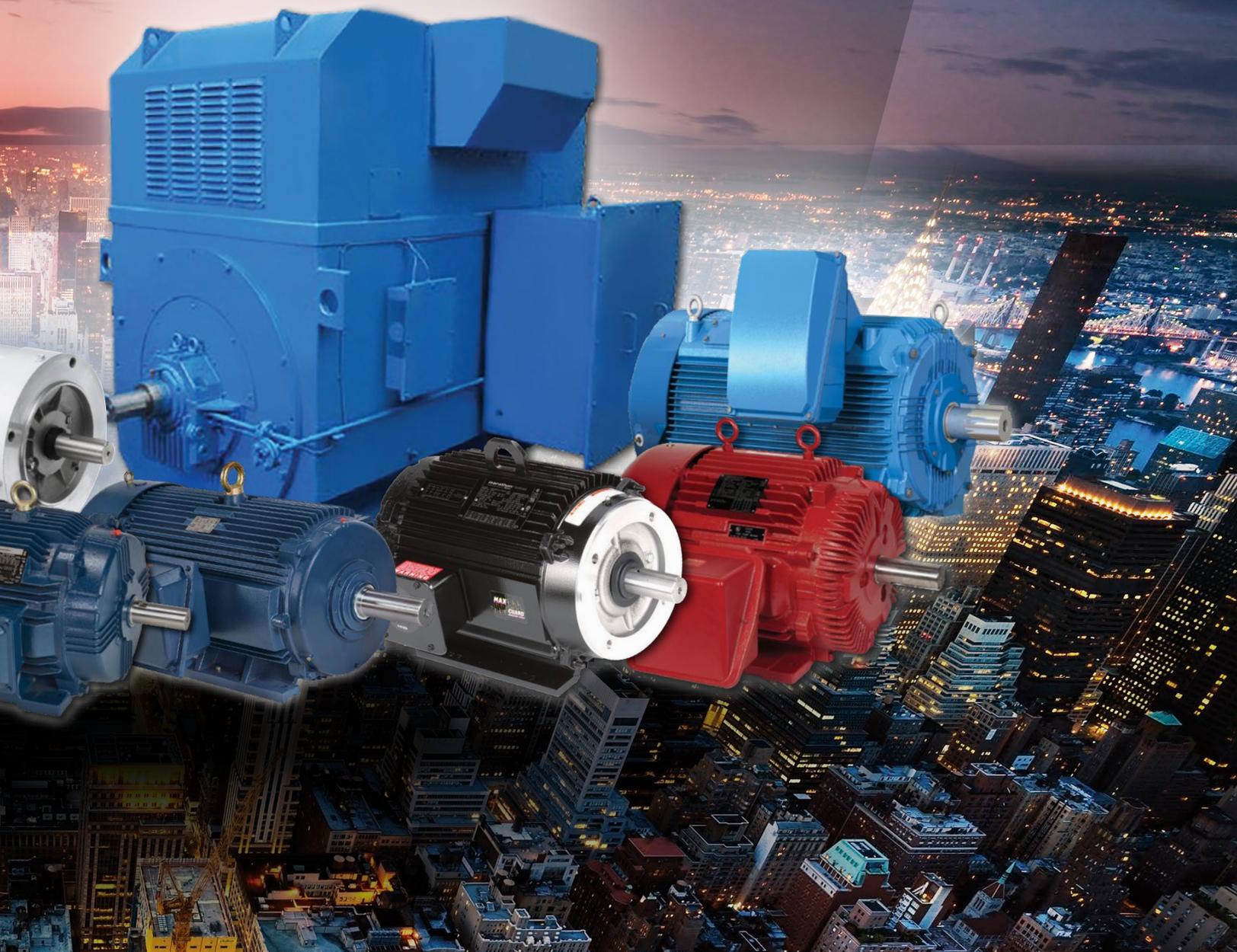
THREE-PHASE TOTALLY ENCLOSED AIR OVER / TEAO RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | OVER LOAD | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------|-------|----------|---------------------------|-------|-----------|-----------|-----------|-----|----------|------------|
| 10 | 1800 | 230 | 215TC | - | 140833.00 | | MANUAL | 91.7 | 26.8/13.4 | 182 | 19.71 | |

marathon®



**More than a 100 years of
Manufacturing Excellence**



POWERWASH™ MOTORS

FOR SHEDDING WATER NOTHING BEATS POWERWASH™

marathon®

Designed to meet the demanding washdown conditions that you may find in food processing plants, chemical processing, pharmaceutical plants and the beverage and brewing industries.



Features

- USDA-approved white epoxy finish
- Stainless steel motors
- Encapsulated stainless steel motors available
- NEMA®* flange motors
- Single Phase & Three Phase and wash down duty motors
- Rigid base and C face mount types
- BISSC approved designs
- Double lip contact seals and v-ring seals used for shaft seals
- PowerWash™ - Encapsulated and premium efficient models
- Washdown brakemotors and pump motors available
- Marathon Inverted Rated Insulated System (MAX Guard)
- UL®* recognized and CSA®* certified



*See back cover page for attribution.

POWERWASH® MOTORS

BROAD PRODUCT RANGE



POWERWASH XT

Enhanced performance in wet, humid areas

FEATURES

- Our original moisture-shedding motor
- Durable USDA-approved white epoxy finish
- Stainless steel shaft, conduit box cover, nameplate, fan guard
- Drains for all mounting orientations
- Meets IP55 enclosure protection



POWERWASH SXT

Stainless Steel exterior for tough demanding wash down applications

FEATURES

- All exterior components of 300-Series stainless steel, including motor frame, endshield and conduit box castings
- Moisture resistant sealant between frame and endbells
- Full-face nameplate is laser-etched on the motor frame
- Four locations for T-drains provided on each endshield
- Meets IP55 enclosure protection



POWERWASH SXT PLUS

Maximum service in critically clean or corrosive environments

FEATURES

- All exterior components of 300-Series stainless steel
- Endshields o-ring sealed to frame
- Meets IP56 enclosure protection
- (SGRs) shaft grounding rings
- Laser etched full face nameplate



POWERWASH EXT

Fully encapsulated motors designed for extreme washdown conditions

FEATURES

- Fully encapsulated stainless steel motor
- All exterior components are 300-Series stainless steel
- (SGRs) shaft grounding rings
- Meets IP69 enclosure protection
- 360° rotatable conduit box
- Full face nameplate is laser etched

THE MOTORS THAT STAND UP TO POWERWASH™

MARATHON® POWERWASH® MOTORS FEATURES AT A GLANCE



| FEATURE | Powerwash XT | Powerwash SXT | Powerwash SXT Plus | Powerwash EXT |
|---|--------------|---------------|--------------------|------------------------------------|
| SEALING ADVANTAGES | | | | |
| Complete motor encapsulation | | | | ■ |
| Interior corrosion protection | ■ | ■ | ■ | ■ |
| Motor breather plugs/drain plugs | ■ | ■ | ■ | Not needed for total encapsulation |
| Shaft seals on both ends of TEFC motors | ■ | ■ | ■ | ■ |
| Two-piece shaft seal | | | | ■ |
| Viton®* seals between endbells and frame | | | ■ | ■ |
| O-ring sealed openings | | | ■ | ■ |
| Potted lead entrance | | | | ■ |
| INSTALLATION AND MAINTENANCE | | | | |
| Color-coded leads | | | | ■ |
| Non-wicking lead wires | | | | ■ |
| Sealed bearings | ■ | ■ | ■ | ■ |
| Internally locked shaft-end bearing | ■ | ■ | ■ | ■ |
| Screw-on conduit box cover | | | | ■ |
| 360° rotatable conduit box | | | | ■ |
| Q-Car™ rotor cartridge change-out | | | | ■ |
| CERTIFICATIONS | | | | |
| Nameplate permanently etched in frame | | ■ | ■ | ■ |
| 60Hz and 50Hz data on nameplate | ■ | ■ | ■ | ■ |
| CE®* mark on nameplate | ■ | ■ | ■ | ■ |
| Standard motors built with Inverter-rated insulation system and marked on nameplate (1 HP and higher) | ■ | ■ | ■ | ■ |
| IP Ratings | IP55 | IP55 | IP56 | IP69 |
| UL®*, CSA®* Listed | ■ | ■ | ■ | ■ |
| BISCC approved | | | ■ | ■ |
| SPECIAL CONSIDERATIONS | | | | |
| Pump motor designs | ■ | | | |
| Local inventory support | ■ | ■ | ■ | ■ |

POWERWASH EXT HANDLES THE HARSHTEST WASHDOWN ENVIRONMENTS.

1. Poultry processing plants.
2. Cheese processing plants.
3. Water bottling plants.
4. Conveying for bottling industry for breweries.
5. Chemical processing plants.
6. Pharmaceutical plants.
7. Brewery equipment.
8. Seafood processing plants.

*See back cover page for attribution.

POWERWASH® MOTORS ARE BUILT TO HANDLE HIGH-PRESSURE WASHDOWNS!*

POWERWASH XT MODEL SHOWN

Stainless-steel or white polypropylene fan guard on all Washguard motor frames.

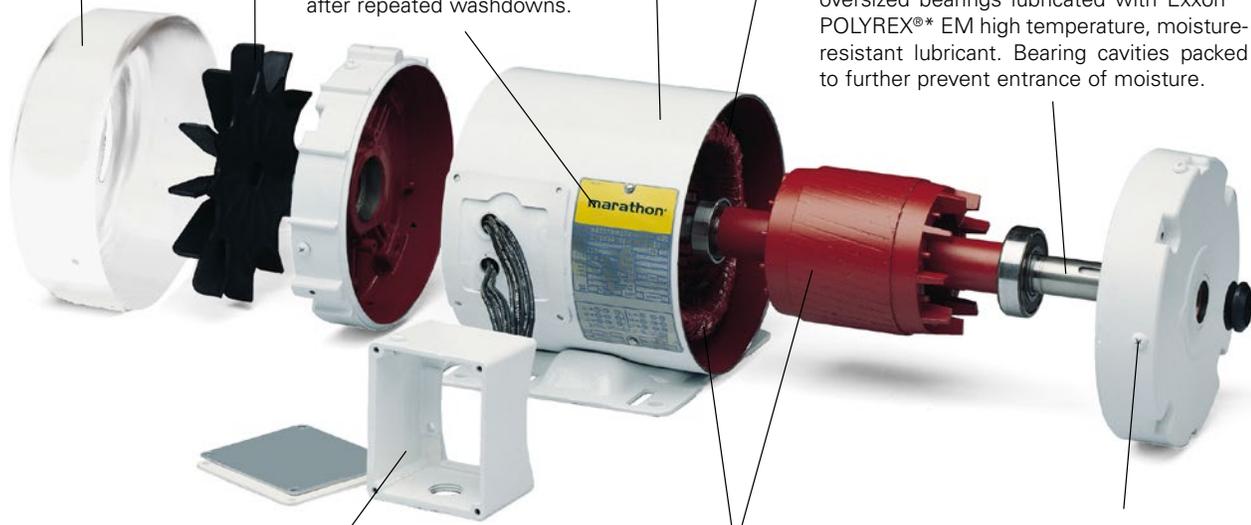
USDA-approved, white epoxy finish for superior protection and resistance to caustic cleaning solutions.

Encapsulated starting switch (single-phase Powerwash motors) uses a patented, field-proven design that is immune to moisture, shock and vibration. No moving parts or exposed contacts to become corroded or inoperable.

Composite fan is chemically-inert and static-free. Fan is positively positioned on shaft on TEFC designs only.

Stainless-steel, "full-fact" nameplate includes information on motor efficiency and connections. Readable even after repeated washdowns.

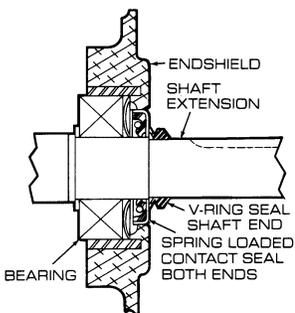
Moisture-resistant shaft system includes 303 stainless-steel shaft and lubricated, spring-loaded contact seals in each endshield. Patented V-ring Forsheda®* seal on shaft end to deflect water (see inset). Double-sealed, oversized bearings lubricated with Exxon®* POLYREX®* EM high temperature, moisture-resistant lubricant. Bearing cavities packed to further prevent entrance of moisture.



Cast, oversized conduit box with tough, high-temperature nitrile gaskets and stainless-steel cover and hardware. Oversized design with threaded entrance. All machined fits are sealed and nylon gaskets are used under bolt heads.

Interior coatings protect against moisture and corrosion. Frame, base, endshields, rotor, and interior components are protected by enamel and polyester compounds of outstanding adhesion and resistance to moisture, acids, alkalis, and oils. High temperature, moisture resistant MaxGuard® insulation system assures long life on inverter service. Windings are immersed and cured in polyester insulating compound.

Four condensate drains in each endshield (at three, six, nine, and twelve o'clock) purge condensate and water which may enter the motor.



Contact seal and V-ring seal prevent water from high pressure washdown.

Also excellent for applications requiring a motor that is "tropicalized"!

*See back cover page for attribution.

POWERWASH® MOTORS

SINGLE-PHASE, POWERWASH XT EPOXY PAINTED

FEATURES

- Ingress Protection Code is IP55
- Encapsulated electronic starting switch is impervious to moisture
- Capacitor start induction run design for high starting torque unless otherwise noted
- Class F insulation
- 1.15 service factor
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each endshield
- Stainless steel conduit box cover, nameplate, fan guard (TEFC) and hardware
- Cast oversized conduit box with high temperature nitrile gaskets and threaded entrance
- Plugged drain holes in each endshield for all angle mounting
- Internal corrosion resistant coatings on frame, base, endshields, rotor and stator
- USDA-approved, white epoxy RUST-OLEUM®* paint
- UL®* recognized, CSA®* certified and CE®* mark



SINGLE-PHASE - TEFC - RIGID BASE - FEATURING ELECTRONIC SOLID STATE ENCAPSULATED SWITCH

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------------|-------|------------|-------------|-------|-----------|---------------|-----|----------|------------|
| 2 | 1800 | 115/208-230 | 182T | 131571.00M | 182TCWW7026 | √ | 71 | 25.2/12.6-2.6 | 63 | 13.46 | |

Specifications are subject to change without notice.

√: Available 1: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

POWERWASH® MOTORS

THREE-PHASE, POWERWASH XT EPOXY PAINTED

FEATURES

- Ingress Protection Code is IP55
- 10:1 variable torque, constant torque speed range as listed below
- Maxguard™ inverter duty class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each endshield (Drive end only on TENV motors)
- Stainless steel conduit box cover, nameplate, fan guard (TEFC only) and hardware
- Cast oversized conduit box with high temperature nitrile gaskets and threaded entrance
- Plugged drain holes in each endshield for all angle mounting
- Internal corrosion resistant coatings on frame, base, endshields, rotor and stator
- USDA-approved, white epoxy RUST-OLEUM®* paint
- UL®* recognized, CSA®* certified and CE®* mark



TEFC - RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE* | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|---------|-------|-------------------|--------------|-------|-----------------|-----------|--------------------------|-----|----------|------------|
| 3 | 3600 | 230/460 | 182T | 132388.00M | 182TTWW16003 | | 10:1 | 86.5 | 8.2-7.4/3.7&9.0/4.5 | 85 | 13.96 | |
| | 1800 | 230/460 | 182T | 132196.00M | 182TTWW6027 | √ | 10:1 | 89.5 | 7.8/3.9 | 76 | 14.46 | |
| 5 | 3600 | 230/460 | 184T | 132202.00M | 184TTWW6004 | √ | 10:1 | 88.5 | 12.0/6.0 | 87 | 14.96 | |
| | 1800 | 230/460 | 184T | 132197.00M | 184TTWW6027 | √ | 10:1 | 89.5 | 12.6/6.3 | 94 | 14.96 | |
| 7.5 | 3600 | 230/460 | 184T | 132306.00M | 184TTWW6003 | √ | 10:1 | 90.1 | 17.6/8.8&15.0/7.5 | 103 | 15.96 | |
| | 1800 | 230/460 | 213T | 140819.00M | 213TTWRD6027 | √ | 10:1 | 91.7 | 20.8-19.6/9.8&16.6/8.3 | 137 | 18.04 | |
| | 3600 | 230/460 | 213T | 132204.00M | 213TTWW16002 | √ | 10:1 | 90.1 | 17.6/8.8&15.0/7.5 | 133 | 16.59 | |
| 10 | 1800 | 230/460 | 215T | 140820.00M | 215TTWRD6027 | √ | 10:1 | 91.7 | 14.0-26.4/13.2&27.4/13.7 | 165 | 19.54 | |

TEFC C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE* | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|---------|-------|-------------------|---------------|-------|-----------------|-----------|---------------------|-------|----------|------------|
| 3 | 1800 | 230/460 | 182TC | 132439.00M | 182TTWW16026 | √ | 10:1 | 89.5 | 7.8/3.9&6.6/3.3 | 79 | 14.47 | |
| 5 | 1800 | 230/460 | 184TC | 132440.00M | 184TTWW16026 | √ | 10:1 | 89.5 | 12.6/6.3&10.0/5.0 | 108 | 14.97 | |
| 5 | 3600 | 230/460 | 184TC | 132441.00M | 184TTWW16004 | √ | 10:1 | 88.5 | 12.0/6.0&9.2/4.6 | 70.0 | 14.97 | |
| 7.5 | 3600 | 230/460 | 213TC | 141267.00M | 213TTWWD16003 | √ | 10:1 | 89.5 | 18.6/9.3&16.0/8.0 | 126.0 | 18.77 | |
| | 1800 | 230/460 | 213TC | 141266.00M | 213TTWWD16028 | √ | 10:1 | 91.7 | 19.6/9.8&16.6/8.3 | 162 | 18.77 | |
| 10 | 3600 | 230/460 | 215TC | 141269.00M | 215TTWW16002 | √ | 10:1 | 91.7 | 23.6/11.8&22.0/11.0 | 171 | 21.83 | |
| | 1800 | 230/460 | 215TC | 141268.00M | 215TTWWD16027 | √ | 10:1 | 91.7 | 26.4/13.2&27.4/13.7 | 174 | 20.27 | |
| 15 | 3600 | 230/460 | 215TC | 141357.00M | 215TTWWD16006 | √ | 10:1 | 91.0 | 35.0/17.6&29.0/14.5 | 152 | 20.27 | |

TEFC C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE* | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|---------|-------------------|--------------|-------|-----------------|-----------|--------------------------|-----|----------|------------|
| 1 1/2 | 1200 | 230/460 | 182TC | 132563.00M | 182TTWW16087 | √ | 10:1 | 87.5 | 6.0/3.0&5.2/2.6 | 80 | 14.97 | |
| 3 | 3600 | 230/460 | 182TC | 132199.00M | 182TTWW16002 | √ | 10:1 | 86.5 | 7.4/3.7&9.0/4.5 | 65 | 14.97 | |
| | 1800 | 230/460 | 182TC | 132198.00M | 182TTWW6026 | √ | 10:1 | 89.5 | 7.8/3.9 | 76 | 14.47 | |
| 5 | 1800 | 575 | 182/4TC | 132265.00M | 182TTWW16031 | | 10:1 | 89.5 | 5.1 | 85 | 14.97 | |
| | 3600 | 230/460 | 184TC | 132200.00M | 184TTWW6001 | √ | 10:1 | 88.5 | 12.0/6.0&9.2/4.6 | 115 | 14.97 | |
| | 1800 | 230/460 | 184TC | 132201.00M | 184TTWW6026 | √ | 10:1 | 89.5 | 12.6/6.3&10.0/5.0 | 88 | 14.97 | |
| 7.5 | 3600 | 230/460 | 184TC | 132205.00M | 184TTWW16002 | √ | 10:1 | 90.1 | 17.6/8.8&15.0/7.5 | 120 | 15.97 | |
| | 1800 | 230/460 | 213TC | 140822.00M | 213TTWR6026 | √ | 10:1 | 91.7 | 21.6/10.8&24.8/12.4 | 157 | 18.71 | |
| | 3600 | 230/460 | 213TC | 141120.00M | 213TTWRD6002 | √ | 10:1 | 89.5 | 19.7-18.6/9.3&16.0/8.0 | 126 | 18.77 | |
| 10 | 1800 | 230/460 | 215TC | 140821.00M | 215TTWRD6026 | √ | 10:1 | 91.7 | 14.0-26.4/13.2&27.4/13.7 | 174 | 20.27 | |
| | 3600 | 230/460 | 215TC | 140823.00M | 215TTWW16003 | √ | 10:1 | 91.7 | 23.6/11.8&22.0/11.0 | 172 | 21.83 | |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

* Requires nameplate modification.

*See back cover page for attribution.

POWERWASH® MOTORS

THREE-PHASE, POWERWASH XT EPOXY PAINTED

APPLICATION

- Designed for continuous duty service on close-coupled pumps using NEMA®* JM mounting provisions.



CLOSE COUPLED PUMP, JM, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE* | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|---------|-------|-------------------|---------------|-------|-----------------|-----------|---------------------|-----|----------|------------|
| 3 | 1800 | 230/460 | 182JM | 132442.00M | 182TTWW16027 | √ | 10:1 | 89.5 | 7.8/3.9&6.6/3.3 | 76 | 16.13 | |
| | 3600 | 230/460 | 184JM | 132443.00M | 184TTWW16005 | √ | 10:1 | 88.5 | 12.0/6.0&9.2/4.6 | 95 | 16.63 | |
| 5.0 | 1800 | 230/460 | 184JM | 132444.00M | 184TTWW16027 | √ | 10:1 | 89.5 | 12.6/6.3&10.0/5.0 | 80 | 16.63 | |
| | 3600 | 230/460 | 184JM | 132446.00M | 184TTWW16006 | √ | 10:1 | 90.1 | 17.6/8.8&15.0/7.5 | 76 | 17.63 | |
| 7.5 | 1800 | 230/460 | 213JM | 141270.00M | 213TTWWD16026 | √ | 10:1 | 91.7 | 19.6/9.8&16.6/8.3 | 220 | 19.90 | |
| | 3600 | 230/460 | 215JM | 141271.00M | 215TTWWD16005 | √ | 10:1 | 90.2 | 23.6/11.8&22.0/11.0 | 140 | 21.40 | |
| 10 | 1800 | 230/460 | 215JM | 141272.00M | 215TTWWD16026 | √ | 10:1 | 91.7 | 26.4/13.2&27.4/13.7 | 160 | 21.40 | |
| | 3600 | 230/460 | 215JM | 141358.00M | 215TTWWD16007 | √ | 10:1 | 91.0 | 35.0/17.6&29.0/14.5 | 165 | 21.40 | |

√: Available 1|- Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 * Requires nameplate modification.

*See back cover page for attribution.

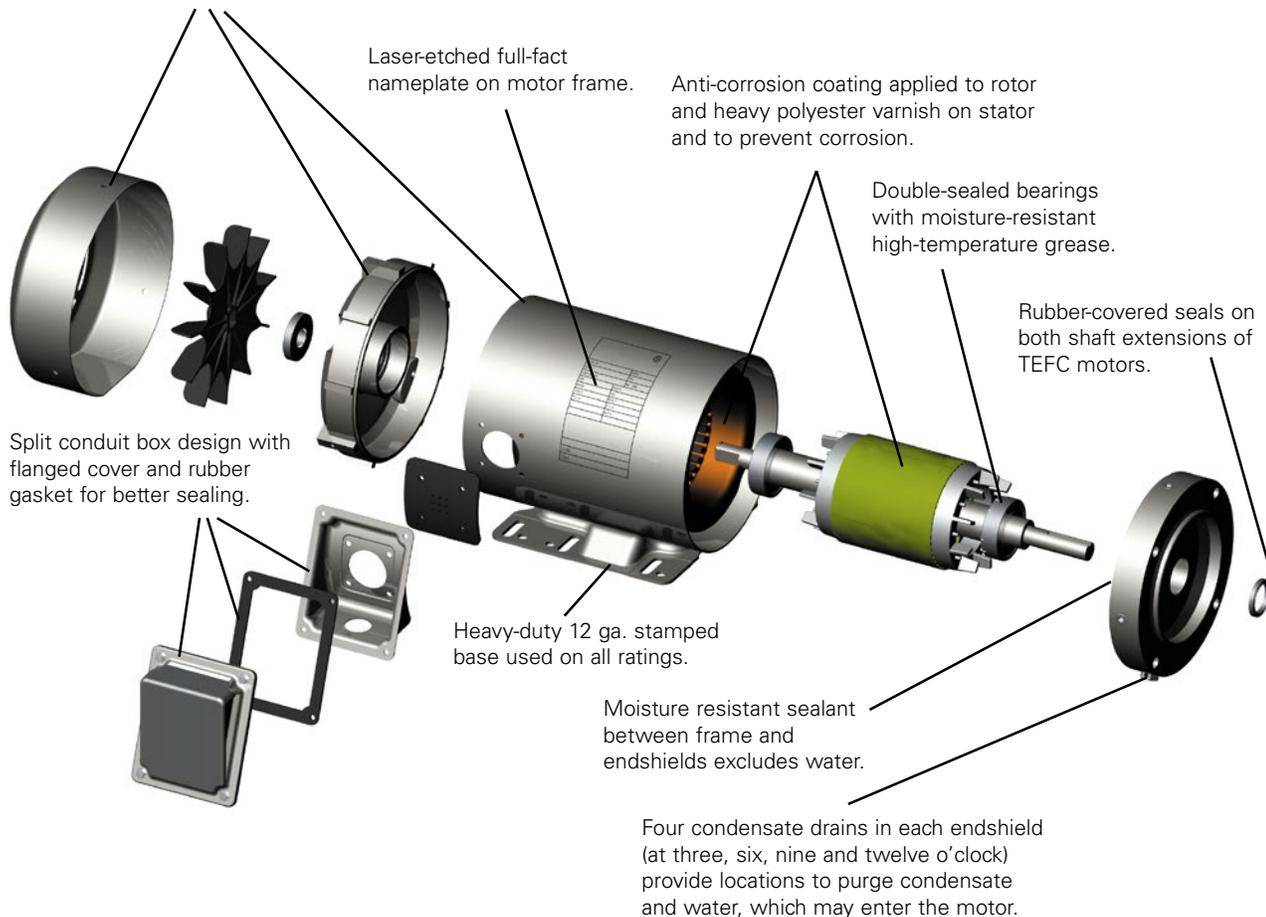
POWERWASH® MOTORS

POWERWASH SXT - ALL STAINLESS MOTORS

Designed for long life in demanding washdown applications. Powerwash SXT Stainless Extremely Tough!

Built with all stainless steel external components to prevent corrosion and well sealed against moisture and condensation to protect internal components, the SXT all-stainless steel motors are able to withstand the severe washdown environments found in the food processing, chemical processing, and beverage industries.

300-Series stainless steel exterior components – frame, base, endshields, shaft extension, fan guard, hardware, conduit box and cover – for maximum corrosion resistance.



POWERWASH® MOTORS

THREE-PHASE, POWERWASH SXT- ALL STAINLESS

FEATURES

- Inverter speed range as listed below
- MAXguard™ inverter duty class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each endshield (Drive end only on TENV motors)
- 100% stainless steel construction
- Laser etched nameplate
- Oversized conduit box with high temperature nitrile gaskets and threaded entrance
- Plugged drain holes in each endshield for all angle mounting
- Internal anti-corrosion coating applied
- UL®* recognized, CSA®* certified and CE®* mark



IP55



TEFC C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|-------------|-------|-------------------|-----------|-------|-------------|-----------|--------------------------|-----|----------|------------|
| 3 | 3600 | 230/460 | 182TC | 194000.00M | 194000.00 | √ | 10:1 VT | 86.5 | 6.9/3.45&5.6/2.8 | 80 | 16.97 | |
| | 1800 | 230/460 | 182TC | 194001.00M | 194001.00 | √ | 10:1 VT | 89.5 | 7.2/3.6&6.0/3.0 | 117 | 16.97 | |
| 5 | 3600 | 230/460 | 184TC | 194002.00M | 194002.00 | √ | 10:1 VT | 88.5 | 11.0/5.5&8.0/4.0 | 120 | 16.97 | |
| | 1800 | 230/460 | 184TC | 194003.00M | 194003.00 | √ | 10:1 VT | 89.5 | 12.4/6.2&9.2/4.6 | 143 | 16.97 | |
| | 3600 | 575 | 184TC | 194104.00M | 194104.00 | | 10:1 VT | 88.5 | 4.4 | 143 | 18.14 | |
| | 1800 | 575 | 184TC | 194105.00M | 194105.00 | | 10:1 VT | 89.5 | 5.0 | 140 | 18.14 | |
| 7.5 | 3600 | 230/460 | 213TC | 194004.00M | 194004.00 | √ | 10:1 VT | 89.5 | 17.4/8.7&14.2/7.1 | 156 | 21.57 | |
| | 1800 | 230/460 | 213TC | 194005.00M | 194005.00 | √ | 10:1 VT | 91.7 | 19.4/9.7&16.6/8.3 | 185 | 21.57 | |
| | 1800 | 575 | 213TC | 194106.00M | 194106.00 | | 10:1 VT | 91.7 | 7.8 | 185 | 21.57 | |
| 10 | 3600 | 230/460 | 215TC | 194006.00M | 194006.00 | √ | 10:1 VT | 90.2 | 22.8/11.4&20.8/10.4 | 176 | 21.57 | |
| | 1800 | 230/460 | 215TC | 194007.00M | 194007.00 | √ | 10:1 VT | 91.7 | 25.2/12.6&23.0/11.5 | 207 | 21.57 | |
| 15 | 3600 | 208-230/460 | 254TC | 194008.00M | 194008.00 | √ | 4:1 CT | 91.0 | 38.0-34.5/17.2&27.6/13.8 | 303 | 23.65 | |
| | 1800 | 208-230/460 | 254TC | 194009.00M | 194009.00 | √ | 4:1 CT | 92.4 | 38.0-35.5/17.8&30.0/15.1 | 307 | 23.65 | |
| 20 | 3600 | 208-230/460 | 256TC | 194010.00M | 194010.00 | √ | 4:1 CT | 91.0 | 50.5-45.0/22.5&41.0/20.5 | 375 | 25.00 | |
| | 1800 | 208-230/460 | 256TC | 194011.00M | 194011.00 | √ | 2:1 CT | 93.0 | 52.0-47.0/23.6&43.0/21.4 | 358 | 25.00 | |
| 25 | 3600 | 208-230/460 | 284TC | 194012.00M | 194012.00 | √ | 2:1 CT | 91.7 | 63.0-56.5/28.3&54.5/27.3 | 414 | 26.97 | |
| | 1800 | 208-230/460 | 284TC | 194013.00M | 194013.00 | √ | 2:1 CT | 93.6 | 65.0-57.5/28.8&57/28.5 | 425 | 26.97 | |
| 30 | 3600 | 208-230/460 | 286TC | 194014.00M | 194014.00 | √ | 2:1 CT | 91.7 | 76.0-68.0/34.0&69.0/34.5 | 425 | 27.95 | |
| | 1800 | 208-230/460 | 286TC | 194015.00M | 194015.00 | √ | 2:1 CT | 93.6 | 76.0-68.0/34.0&69.0/34.5 | 475 | 27.95 | |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

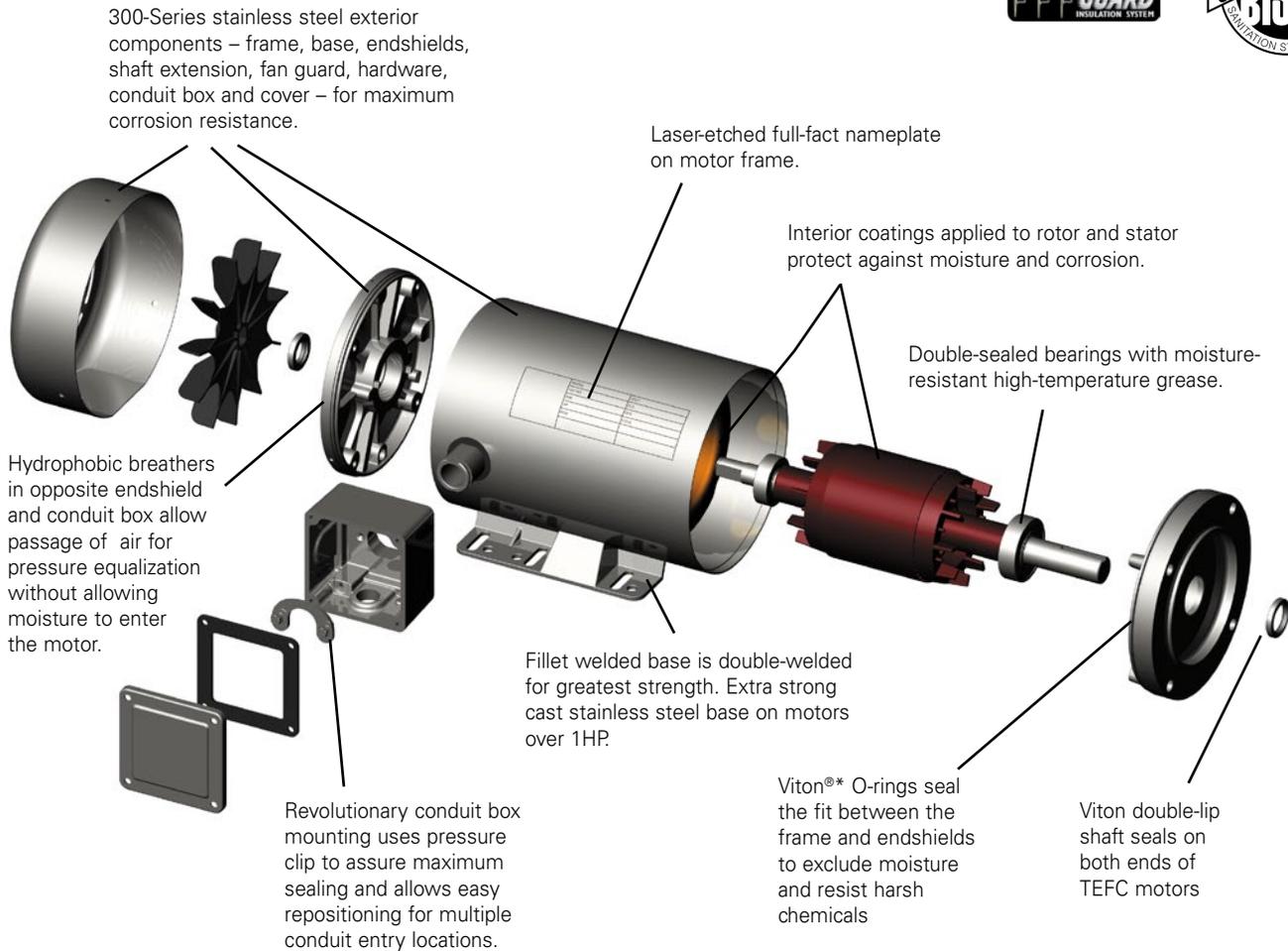
* Requires nameplate modification.

*See back cover page for attribution.

POWERWASH® MOTORS

POWERWASH SXT PLUS

PREMIUM - ALL STAINLESS
THREE-PHASE



*See back cover page for attribution.

POWERWASH® MOTORS

POWERWASH SXT PLUS - THREE-PHASE

PREMIUM ALL STAINLESS

GENERAL SPECIFICATIONS:

Designed specifically to meet the demanding sanitation requirements of the pharmaceutical, food processing and beverage industries. These motors are also ideal in clean room and severe chemical-processing applications involving frequent washdown with nitric acid and caustic lye.

MECHANICAL PROTECTION FEATURES:

- All exterior components are 300-series stainless steel
- Nothing on the motor's exterior is painted or coated in any way
- All sealing components are Viton®* for superior chemical resistance
- Full fact nameplate is laser etched on the motor frame – no separately attached nameplate to trap dirt or contaminants
- Endshields are O-ring sealed to the frame
- Double lip shaft seals on both ends of TEFC motors (shaft end only on TENV motors)
- Removable hydrophobic breathers in opposite shaft endbell and conduit box equalize pressure without allowing moisture to enter
- Exterior fastener use minimized reducing the number of entry points for moisture. There are no holes in the frame for attaching a nameplate. Bearing lock screws are located inside the motor and the conduit box mounted screws have been eliminated
- Double-sealed bearings are pre-lubricated with moisture-resistant high-temperature grease for long life
- Interior coatings applied to rotor and stator protect against corrosion
- New conduit box mounting system provides optimum sealing
- Ease to clean construction is BISSC Certified for bakery applications



ELECTRICAL PERFORMANCE AND PROTECTION FEATURES:

- Powerwash motor efficiencies meet EPACKT® mandates for non-exempt motors when tested without shaft seals.
- Windings are immersed and cured in polyester insulating varnish for extra moisture-resistance
- Marathon® motors exclusive MAXGuard™ Inverter-Rated Insulation System provides extra protection and long life, especially in inverter-driven applications

STANDARDS AND APPROVALS:

- Three-phase motors are UL®* component recognized – file number E57948, guide number PRGY2
- CSA®** Energy Efficiency Verification Program, report number EEV 78720-1
- Construction is CSA Certified for safety report number LR33543 and listed under BISSC authorization number 769

*See back cover page for attribution.

POWERWASH® MOTORS

THREE-PHASE - POWERWASH SXT PLUS ALL STAINLESS

FEATURES

- Suitable for use on VFD 10:1 variable torque, 10:1 (TEFC) or 1000:1 (TENV) constant torque, 1.0 service factor
- MAX GUARD® Class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Double sealed ball bearings with moisture resistant, high temperature grease
- 300 series stainless steel external construction: frame, end- shields, shaft, conduit box, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator
- 100% paint-free construction
- Viton®* o-rings, shaft seals, and gaskets for superior sealing against chemicals
- Hydrophobic breather in OP endshield and conduit box equalize air pressure
- Nameplate information laser etched on frame
- BISSC certified for baking industry
- UL®** recognized, CSA®** certified and CE®** mark



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|---------|-------|-------------------|--------------|-------|----------------|-----------|---------------------|-----|----------|------------|
| 1.5 | 1200 | 230/460 | 182TC | 132565.00M | 182TTWD16076 | √ | 10:1 | 87.5 | 6.45/3.2&5.6/2.8 | 91 | 14.77 | |
| | 3600 | 230/460 | 182TC | 132203.00M | 182TTWD16001 | √ | 10:1 | 86.5 | 8.8/4.4&10.7/5.35 | 85 | 14.27 | |
| 3 | 1800 | 230/460 | 182TC | 132206.00M | 182TTWD6031 | √ | 10:1 | 89.5 | 8.8/4.4 | 90 | 14.77 | |
| | 3600 | 575 | 184TC | 132267.00M | 184TTWW16007 | √ | 10:1 | 88.5 | 4.8 | 103 | 14.97 | |
| 5 | 3600 | 230/460 | 184TC | 132207.00M | 184TTWD16002 | | 10:1 | 88.5 | 14.8/7.4&17.3/8.65 | 100 | 15.27 | |
| | 1800 | 230/460 | 184TC | 132208.00M | 184TTWD6031 | √ | 10:1 | 89.5 | 14.4/7.2 | 101 | 15.77 | |
| | 3600 | 230/460 | 213TC | 140825.00M | 213TTWD16002 | √ | 10:1 | 90.2 | 20.0/10.0&16.6/8.3 | 168 | 18.69 | |
| 7.5 | 1800 | 230/460 | 213TC | 140826.00M | 213TTWDD6031 | √ | 10:1 | 91.7 | 21.8/10.9 | 173 | 18.69 | |
| | 3600 | 230/460 | 215TC | 140827.00M | 215TTWD16002 | √ | 10:1 | 91.7 | 26.0/13.0&24.8/12.4 | 182 | 18.69 | |
| 10 | 1800 | 230/460 | 215TC | 140828.00M | 215TTWDD6031 | √ | 10:1 | 91.7 | 29.6/14.8 | 203 | 18.69 | |

C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|---------|-------|-------------------|--------------|-------|----------------|-----------|-------------------|-----|----------|------------|
| 3 | 1800 | 230/460 | 182TC | 132447.00M | 182TTWD16026 | √ | 10:1 | 89.5 | 8.8/4.4&7.45/3.7 | 65 | 14.77 | |
| 5 | 1800 | 230/460 | 184TC | 132448.00M | 184TTWD16032 | √ | 10:1 | 89.5 | 14.4/7.2&11.2/5.6 | 75 | 15.77 | |
| | 3600 | 230/460 | 184TC | 132449.00M | 184TTWD16004 | √ | 10:1 | 88.5 | 13.6/6.8 | 97 | 15.27 | |

C-FACE FOOTED (RIGID) JM PUMP

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|------|------|---------|-------|-------------------|---------------|-------|----------------|-----------|---------------------|-----|----------|------------|
| 3 | 1800 | 230/460 | 182JM | 132450.00M | 182TTWD16027 | √ | 10:1 | 89.5 | 8.8/4.4&7.45/3.7 | 86 | 14.8 | |
| 5 | 3600 | 230/460 | 184JM | 132451.00M | 184TTWD16003 | √ | 10:1 | 88.5 | 13.6/6.8&10.2/5.1 | 100 | 15.27 | |
| | 1800 | 230/460 | 184JM | 132452.00M | 184TTWD16033 | √ | 10:1 | 87.5 | 14.8/7.4&11.6/5.8 | 88 | 14.77 | |
| 7.5 | 3600 | 230/460 | 213JM | N160 | 213TTWD14002 | √ | 10:1 | 88.5 | 18.4/9.2&15.0/7.5 | 200 | 19.81 | |
| | 1800 | 230/460 | 213JM | 141273.00M | 213TTWDD16026 | √ | 10:1 | 89.5 | 22.0/11.0&18.0/9.0 | 157 | 19.81 | |
| | 3600 | 230/460 | 213JM | 141274.00M | 213TTWD16003 | √ | 10:1 | 89.5 | 18.6/9.3&16.0/8.0 | 170 | 19.81 | |
| 10.0 | 3600 | 230/460 | 215JM | 141275.00M | 215TTWD16003 | √ | 10:1 | 90.2 | 26.8/13.4&25.0/12.5 | 182 | 18.69 | |
| | 1800 | 230/460 | 215JM | 141276.00M | 215TTWD16026 | √ | 10:1 | 91.7 | 29.6/14.8&30.5/15.2 | 200 | 18.69 | |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.
 * Requires nameplate modification.

*See back cover page for attribution.

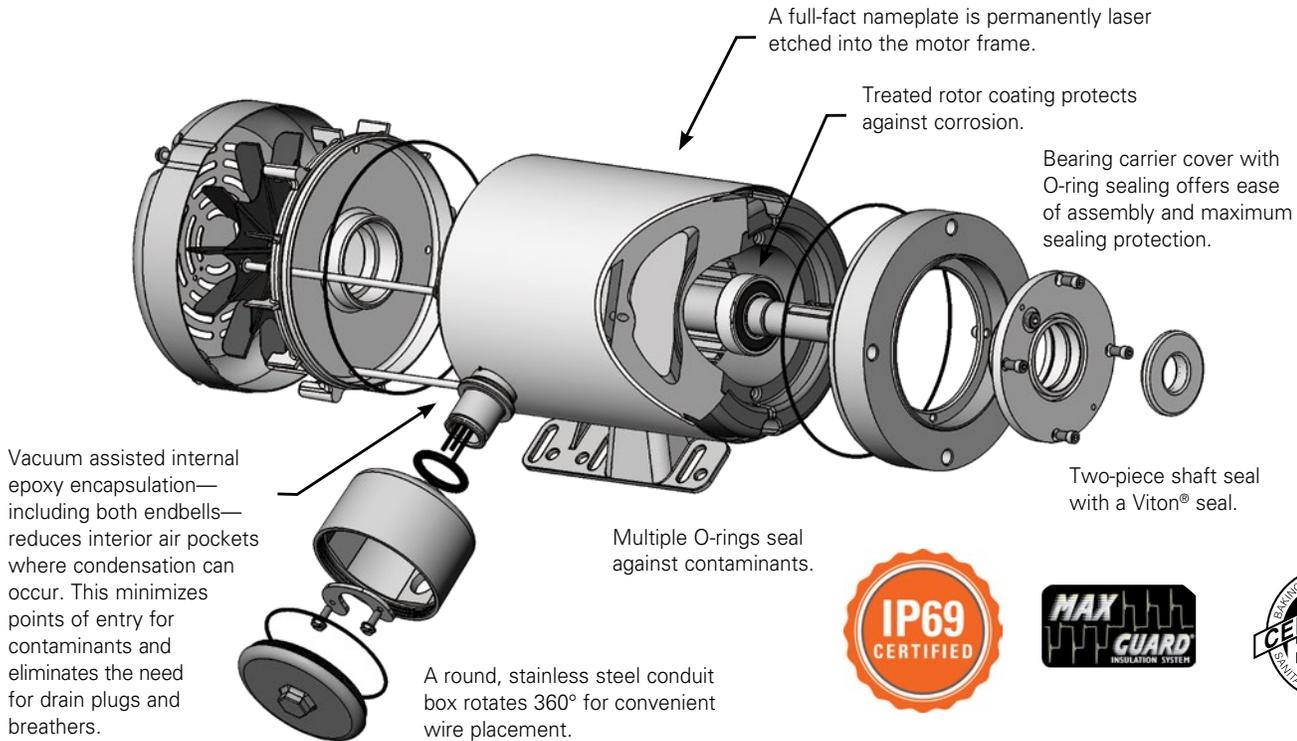
POWERWASH® MOTORS

POWERWASH EXT-ENCAPSULATED ALL STAINLESS MOTORS

THREE-PHASE, NEMA®* PREMIUM
TEFC MOTOR DESIGN SHOWN

It's what's inside that keeps what's outside- out.

300 Series stainless steel components include the frame, base, conduit box cover, endshields and bearing carrier cover. It's the perfect motor design for extreme washdown conditions.



*See back cover page for attribution.

POWERWASH® MOTORS

POWERWASH EXT ALL STAINLESS

THREE-PHASE, NEMA PREMIUM®* RATINGS

GENERAL SPECIFICATIONS

These revolutionary designed stainless steel motors are built using our “Voice of the customer” design criteria to withstand extreme washdown and sanitation requirements of the food processing, pharmaceutical, packaging and beverage industries. Our innovative hydro sealed system “HS2” protects from the “outside-in” by reducing entrance points of contaminants and eliminates the need for drain plugs and breathers. This proven process also minimizes exterior hardware, which may trap application elements. Our unique Q-Car™ rotor cartridge seal system, “Q-Car”, gives quick access to the interior of the motor should the need arise. 300-series stainless steel used on all exterior surface gives ideal protection against severe chemical-processing applications and frequent washdown processes using salt water, nitric acids and solvents.



MECHANICAL PROTECTION FEATURES

- Easily removed Q-Car rotor cartridge for easy bearing replacement. Disassembles by removing four bolts saving you time and money
- Full-face nameplate permanently laser etched into motor frame will never be separated from motor
- Double-sealed ball bearings with high temperature grease
- Two-piece shaft seal resists water for improved performance in vertical installations. Provides three points of protection on both ends of the motor
- Colored, non-wicking leads for easy connection and installation
- Chemical and abrasion resistant lead markers
- 360° rotatable round conduit box for convenient wire placement
- Conduit box lead hole location rotatable on TEFC designs
- NEMA Premium efficiency - 3 HP and above
- IP69 certified enclosure protection

ELECTRICAL PERFORMANCE AND PROTECTION FEATURES

- Fully encapsulated internal epoxy encapsulation—including both endbells— reduces air pockets where condensation can occur. Points of entry for contaminants are minimized, and drain plugs and breathers are eliminated.
- Our exclusive IRIS® inverter rated insulation system provides extra protection and long life, especially when used in applications driven by an inverter
- 10:1 constant torque operation

STANDARDS AND APPROVALS

- Motors are UL®* component recognized – file number E57948, guide number PRGY2
- CSA®* Energy Efficiency Verification Program, report number EEV 78720-1
- Construction is CSA Certified for safety, report number LR33543 and listed under BISSC authorization number 7690,0625
- IP69 Certified IEC60529
- IP69K tested per DIN 40050-9

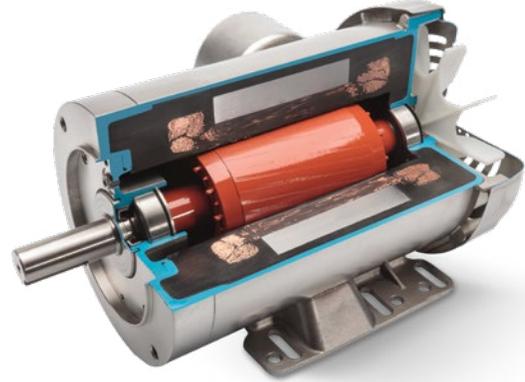
*See back cover page for attribution.

POWERWASH® MOTORS

THREE-PHASE - POWERWASH EXT ENCAPSULATED ALL STAINLESS STANDARD & NEMA PREMIUM®* RATINGS

FEATURES

- IP69 certified enclosure protection
- Fully encapsulated internal epoxy encapsulation reduces points of entry for contaminants and eliminates need for drain plugs and breathers
- Two-piece shaft seal technology provides three points of protection on both ends of the motor
- Easily removed Q-Car™ rotor cartridge makes bearing replacement ultra simple
- 360° rotatable round conduit box for convenient wire placement
- Colored, non-wicking, chemical and abrasion-resistant leads for easy connection and installation
- UL®** recognized, CSA®** certified and CE®** mark



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|-------------------|---------------|-------|----------------|-----------|-----------|-----|----------|------------|
| 3 | 3600 | 230/460 | 182T | 132646.00M | 184TTWD16008 | √ | 10:1 | 86.5 | 7.6/3.8 | 85 | 15.78 | - |
| | 1800 | 230/460 | 182T | 132647.00M | 184TTWD16038 | √ | 10:1 | 89.5 | 7.8/3.9 | 90 | 15.78 | - |
| 5 | 3600 | 230/460 | 184T | 132648.00M | 184TTWD16009 | √ | 10:1 | 88.5 | 12.4/6.2 | 103 | 15.78 | - |
| | 1800 | 230/460 | 184T | 132649.00M | 184TTWD16039 | √ | 10:1 | 89.5 | 12.6/6.3 | 103 | 15.78 | - |
| 7 1/2 | 3600 | 230/460 | 213T | 141409.00M | 215TTWDD16001 | √ | 10:1 | 89.5 | 18.6/9.3 | 168 | 19.18 | - |
| | 1800 | 230/460 | 213T | 141410.00M | 213TTWDD16027 | √ | 10:1 | 91.7 | 19.2/9.6 | 173 | 19.18 | - |
| 10 | 3600 | 230/460 | 215T | 141411.00M | 215TTWDD16003 | √ | 10:1 | 90.2 | 23.6/11.8 | 182 | 19.18 | - |
| | 1800 | 230/460 | 215T | 141412.00M | 215TTWDD16026 | √ | 10:1 | 91.7 | 26.4/13.2 | 203 | 19.18 | - |

Q-CAR™ ACCESSORY KITS - POWERWASH SXT-EXT MOTORS

Kit makes replacing worn bearings ultra simple. No special tools, no damaged seals.

FEATURES

- The kit ensures a perfectly fitted and watertight bearing with no additional machining required in a matter of minutes
- Maintains factory IP69 rating
- Easily replaced in the field reducing costly downtime



| KIT # | Where Used | KIT DESCRIPTION | STOCK | WT. |
|-----------|------------|--|-------|-----|
| 176332.00 | 132646.00 | Q-CAR KIT - TEFC Design, 3HP, 3600RPM, 184TC | | 36 |
| 176333.00 | 132647.00 | Q-CAR KIT - TEFC Design, 3HP, 1800RPM, 184TC | | 28 |
| 176334.00 | 132648.00 | Q-CAR KIT - TEFC Design, 5HP, 3600RPM, 184TC | | 37 |
| 176335.00 | 132649.00 | Q-CAR KIT - TEFC Design, 5HP, 1800RPM, 184TC | | 30 |
| 176336.00 | 141409.00 | Q-CAR KIT - TEFC Design, 7.5HP, 3600RPM, 213TC | | 45 |
| 176337.00 | 141410.00 | Q-CAR KIT - TEFC Design, 7.5HP, 1800RPM, 213TC | | 45 |
| 176338.00 | 141411.00 | Q-CAR KIT - TEFC Design, 10HP, 3600RPM, 215TC | | 50 |
| 176339.00 | 141412.00 | Q-CAR KIT - TEFC Design, 10HP, 1800RPM, 215TC | | 50 |

√ Available ¶ Stocked components, Ready to build Blank: Build Up rating, subject to lead time
Model numbers highlighted in bold blue are premium efficient.

*See back cover page for attribution.

CLOSE-COUPLED PUMP, JM MOTORS

SINGLE-PHASE, DRIPPROOF

APPLICATIONS

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in environments that are relatively clean and dry variable

FEATURES

- NEMA® JM pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Capacitor start design for high starting torque
- Capacitor start / capacitor run design for higher efficiency, as noted
- Continuous duty
- 1.15 service factor
- UL® recognized and CSA® certified



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|----------|------------------|-------|-----------|-----------|-----|----------|------------|
| 2 | 1800 | 115/230 | 182JM | Z405A | 182TCDW7074 | √ | 75.5 | 23.0/11.5 | 87 | 16.09 | 13 |
| 3 | 3600 | 115/230 | 182JM | Z406A | 182TCDW7318 | √ | 75.5 | 32.0/16.1 | 60 | 15.32 | 13 |
| | 1800 | 115/230 | 184JM | Z407A | 184TCDW7047 | √ | 75.5 | 33.5/16.8 | 78 | 17.59 | 13 |
| 5 | 3600 | 230 | 184JM | Z408A | 184TBDW17007 | √ | 80.0 | 22.0 | 80 | 16.32 | 1, 13 |
| | 1800 | 230 | 213JM | Z409 | 213TCDW7027 | √ | 78.5 | 28.0 | 115 | 19.92 | |
| 7 1/2 | 3600 | 230 | 213JM | Z410 | 213TCDW7002 | √ | 78.5 | 37.0 | 106 | 18.42 | |
| | 1800 | 230 | 215JM | Z411 | 215TBDW7029 | √ | 84.0 | 34.5 | 120 | 19.92 | 1 |
| 10 | 3600 | 230 | 215JM | Z412 | 215TCDW7002 | √ | 81.5 | 47.0 | 150 | 19.92 | |
| | 1800 | 230 | 215JM | Z413 | 215TBDW7027 | √ | 82.5 | 44.0 | 159 | 21.17 | 1 |

CLOSE-COUPLED PUMP, JM MOTORS

SINGLE-PHASE, TOTALLY ENCLOSED

APPLICATIONS

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in damp, dusty, or dirty environments.

FEATURES

- NEMA JM pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Capacitor start design for high starting torque
- Capacitor start / capacitor run design for higher efficiency, as noted
- Continuous duty
- 1.15 service factor
- UL recognized and CSA certified



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------|-------|----------|------------------|-------|-----------|----------|-----|----------|------------|
| 3 | 3600 | 230 | 184JM | | 132457.00 | | 80.0 | 14.0 | 82 | 18.59 | 18 |
| 5 | 3600 | 230 | 184JM | Z433 | 184TBFW7315 | √ | 82.5 | 19.8 | 89 | 18.59 | 13 |
| 7 1/2 | 3600 | 230 | 213JM | Z434 | 213TBFW7010 | | 81.5 | 32.0 | 90 | 20.59 | |
| 10 | 3600 | 230 | 215JM | Z435 | 215TBFW7010 | √ | 83.8 | 41.5 | 180 | 22.09 | 18 |

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

CLOSE-COUPLED PUMP, JP MOTORS

SINGLE-PHASE, DRIPPROOF

APPLICATIONS

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in environments that are relatively clean and dry variable

FEATURES

- NEMA®* JP pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Capacitor start design for high starting torque
- Capacitor start / capacitor run design for higher efficiency, as noted
- Continuous duty
- 1.15 service factor
- UL®* recognized and CSA®* certified



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|----------|------------------|-------|-----------|-----------|-----|----------|------------|
| 3 | 3600 | 115/230 | 182JP | Z425 | 182TCDR8005 | ¶ | 74.0 | 32.0/16.0 | 87 | 18.65 | 13 |
| 5 | 3600 | 230 | 184JP | Z427A | 184TBDW17011 | √ | 80.0 | 22.0 | 89 | 19.46 | 1, 13 |
| 7 1/2 | 3600 | 230 | 213JP | Z429 | 213TCDW7003 | √ | 78.5 | 37.0 | 118 | 22.29 | 95 |
| 10 | 3600 | 230 | 215JP | Z431 | 215TCDW7004 | √ | 81.5 | 47.0 | 135 | 23.79 | 95 |

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

CLOSE-COUPLED PUMP, JM MOTORS

THREE-PHASE, DRIPPROOF

APPLICATIONS

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in environments that are relatively clean and dry variable

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- Suitable for use on a VFD. 10:1 variable torque and constant torque as noted
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- NEMA®* JM pump shaft dimensions
- JMV frame for vertical mount without base (includes drip cover)
- Ball bearings, mechanically locked on shaft end
- Class F Insulation (except as noted)
- Dual rated motors are nameplated 60/50 hertz, 190/380 volts at next lower HP
- Standard assembly F1, reversible to F2 assembly (except as noted)
- UL®* recognized, CSA®* certified and CE®* marked.



C-FACE FOOTLESS (VERTICAL) AND C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|--------|------------------|------------------|-------|----------------|-----------|---------------|-----|----------|------------|
| 1 1/2 | 1200 | 230/460 | 182JM | GT0405A | 182TTDBD6082 | ¶ | 2:1 | 86.5 | 4.6/2.3 | 77 | 14.64 | A,68 |
| | 1200 | 575 | 182JM | GT0505A | 182TTDBD6092 | | 2:1 | 86.5 | 1.9 | 77 | 14.64 | A |
| 2 | 1200 | 230/460 | 184JM | GT0408A | 184TTDBD6082 | ¶ | 2:1 | 87.5 | 6.0/3.0 | 91 | 15.64 | 68 |
| | 1200 | 575 | 184JM | GT0508A | 184TTDBD6092 | | 2:1 | 87.5 | 2.4 | 91 | 15.64 | |
| 3 | 1800 | 230/460 | 182JM | GT0410A | 182TTDBD6032 | √ | 2:1 | 89.5 | 8.0/4.0 | 92 | 14.64 | A,68 |
| | 1800 | 208-230/460 | 182JM | GT0410A-P | 182TTDBD6072 | | 2:1 | 89.5 | 8.6-8.0/4.0 | 82 | 14.97 | A,68 |
| | 1800 | 208-230/460 | 182JMV | GT4110 | 182TTDBD6044 | √ | 2:1 | 89.5 | 8.6-8.0/4.0 | 70 | 16.64 | A,27,68 |
| | 1800 | 575 | 182JM | GT0510A | 182TTDBD6033 | | 2:1 | 89.5 | 3.2 | 92 | 16.64 | A |
| | 1200 | 230/460 | 213JM | GT0411A | 213TTDBD6082 | ¶ | 10:1 | 88.5 | 8.4/4.2 | 132 | 19.15 | 68 |
| | 1200 | 575 | 213JM | GT0511A | 213TTDBD6092 | | 2:1 | 88.5 | 3.4 | 130 | 19.15 | |
| 5 | 3600 | 230/460 | 182JMV | M316B | 182TTDW17008 | √ | NA | 86.5 | 12.4/6.2 | 95 | 14.95 | 13,27,68 |
| | 3600 | 230/460 | 182JM | GT0412A | 182TTDBD6007 | √ | 2:1 | 86.5 | 13.2/6.6 | 77 | 14.64 | A,68 |
| | 3600 | 230/460 | 182JMV | E153B | 182TTDW16021 | ¶ | NA | 86.5 | 12.4/6.2 | 46 | 14.95 | 13,27,68 |
| | 3600 | 575 | 182JM | GT0512A | 182TTDBD6008 | | 2:1 | 86.5 | 5.3 | 68 | 14.64 | A |
| | 1800 | 230/460 | 184JM | GT0413A | 184TTDBD6032 | √ | 2:1 | 89.5 | 13.2/6.6 | 70 | 15.64 | A,68 |
| | 1800 | 230/460 | 184JM | GT0413A-P | 184TTDBD6072 | | 2:1 | 89.5 | 13.2/6.6 | 92 | 15.97 | A,68 |
| | 1800 | 230/460 | 184JMV | GT4113 | 184TTDBD6044 | √ | 2:1 | 89.5 | 13.2/6.6 | 70 | 17.64 | A,27,68 |
| | 1800 | 575 | 184JM | GT0513A | 184TTDBD6033 | | 2:1 | 89.5 | 5.3 | 175 | 15.64 | A |
| | 1200 | 230/460 | 215JM | GT0414A | 215TTDBD6082 | | 4:1 | 89.5 | 13.8/6.9 | 112 | 19.15 | 68 |
| | 1200 | 575 | 215JM | GT0514A | 215TTDBD6092 | ¶ | 4:1 | 89.5 | 5.5 | 210 | 19.15 | |
| 7 1/2 | 3600 | 230/460 | 184JM | GT0415A | 184TTDBD6007 | √ | NA | 88.5 | 18.4/9.2 | 66 | 15.64 | A,68 |
| | 3600 | 208-230/460 | 184JM | GT0415A-P | 184TTDBD6009 | | NA | 88.5 | 19.6-18.4/9.2 | 100 | 15.97 | A,68 |
| | 3600 | 230/460 | 184JMV | E163B | 184TTDW16310 | √ | NA | 88.5 | 17.8/8.9 | 90 | 17.12 | A,13,27,68 |
| | 3600 | 575 | 184JM | GT0515A | 184TTDBD6008 | | NA | 88.5 | 7.4 | 72 | 15.64 | A |
| | 1800 | 200 | 213JMV | E167A | 213TTDWD16347 | ¶ | NA | 91.0 | 23.0 | 122 | 20.44 | 27 |
| | 1800 | 230/460 | 213JM | GT0416A | 213TTDBD6032 | √ | 2:1 | 91.0 | 19.8/9.9 | 136 | 19.15 | 68 |
| | 1800 | 230/460 | 213JM | GT0416A-P | 213TTDBD6072 | | 2:1 | 91.0 | 19.8/9.9 | 135 | 19.15 | 68 |
| | 1800 | 230/460 | 213JMV | E168A | 213TTDWD16333 | √ | NA | 91.0 | 20.0/10.0 | 122 | 20.44 | 27,68 |
| | 1800 | 230/460 | 213JMV | GT4116 | 213TTDBD6044 | √ | 2:1 | 91.0 | 19.8/9.9 | 128 | 20.87 | 27,68 |
| | 1800 | 575 | 213JM | GT0516A | 213TTDBD6033 | | 10:1 | 91.0 | 7.9 | 128 | 19.15 | |
| 10 | 1200 | 230/460 | 254JM | GT0457 | 254TTDBD6082 | ¶ | 10:1 | 90.2 | 20.2/10.1 | 221 | 24.41 | 68 |
| | 1200 | 575 | 254JM | GT0557 | 254TTDBD6092 | | 2:1 | 90.2 | 8.1 | 322 | 24.41 | |
| | 3600 | 230/460 | 213JM | GT0418A | 213TTDBD6007 | √ | NA | 89.5 | 24.2/12.1 | 107 | 19.15 | 68 |
| | 3600 | 575 | 213JM | GT0518A | 213TTDBD6008 | | NA | 89.5 | 9.7 | 100 | 19.15 | |
| | 1800 | 230/460 | 215JM | GT0419A | 215TTDBD6032 | √ | 10:1 | 91.7 | 25.4/12.7 | 185 | 19.15 | 68 |
| | 1800 | 230/460 | 215JM | GT0419A-P | 215TTDBD6072 | | NA | 91.7 | 25.4/12.7 | 140 | 19.15 | 68 |
| | 1800 | 230/460 | 215JMV | E178A | 215TTDWD16349 | ¶ | NA | 91.7 | 26.2/13.1 | 134 | 20.44 | BI,27,68 |
| | 1800 | 575 | 215JM | GT0519A | 215TTDBD6033 | | 10:1 | 91.7 | 10.2 | 186 | 19.15 | |
| | 1200 | 230/460 | 256JM | GT0458 | 256TTDBD6082 | ¶ | 2:1 | 91.7 | 25.6/12.8 | 267 | 25.99 | 68 |
| | 1200 | 575 | 256JM | GT0558 | 256TTDBD6092 | | 2:1 | 91.7 | 10.3 | 285 | 25.99 | |

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√- Available ¶- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Continued on next page.

*See back cover page for attribution.

CLOSE-COUPLED PUMP, JM MOTORS

THREE-PHASE, DRIPPROOF, C-FACE FOOTLESS (VERTICAL) AND C-FACE FOOTED (RIGID BASE)

C-FACE FOOTLESS (VERTICAL) AND C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|------|------|-------------|---------------|-----------------|------------------|-------|----------------|-----------|----------------|-------|----------|------------|
| 15 | 3600 | 230/460 | 215JM | GT0421A | 215TTDBD6007 | √ | NA | 90.2 | 36.0/18.0 | 135 | 19.15 | 68 |
| | 3600 | 230/460 | 215JMV | E183A | 215TTDWD4023 | √ | NA | 91.0 | 36.5/18.2 | 124 | 20.44 | 27,68 |
| | 3600 | 230/460 | 215JMV | GT4121 | 215TTDBD6014 | √ | NA | 90.2 | 36.0/18.0 | 125 | 20.87 | 27,68 |
| | 3600 | 575 | 215JM | GT0521A | 215TTDBD6008 | ¶ | 2:1 | 90.2 | 14.4 | 186 | 19.15 | |
| | 3600 | 575 | 215JMV | GT4221 | 215TTDBD6016 | | 2:1 | 90.2 | 14.4 | 125 | 20.87 | 27 |
| | 1800 | 230/460 | 254JM | GT0459 | 254TTDBD6032 | √ | 2:1 | 93.0 | 37.5/18.8 | 287 | 24.41 | 68 |
| | 1800 | 208-230/460 | 254JM | GT0459-P | 254TTDBD6072 | | 2:1 | 93.0 | 40.5-37.5/18.8 | 340 | 24.67 | 68 |
| | 1800 | 230/460 | 254JMV | E188A | 254TTDR16027 | √ | NA | 93.0 | 38.0/18.9 | 284 | 25.45 | BI,27,68 |
| | 1800 | 230/460 | 254JMV | GT4159 | 254TTDBD6044 | √ | 2:1 | 93.0 | 37.5/18.8 | 602 | 26.30 | 27,68 |
| | 1800 | 575 | 254JM | GT0559 | 254TTDBD6033 | | 2:1 | 93.0 | 15.1 | 243 | 24.41 | |
| | 1200 | 230/460 | 284JM | GT0460 | 284TTDBD6082 | ¶ | 2:1 | 91.7 | 41.0/20.6 | 411 | 26.58 | 68 |
| 1200 | 575 | 284JM | GT0560 | 284TTDBD6092 | | 2:1 | 91.7 | 16.5 | 353 | 26.58 | | |
| 20 | 3600 | 230/460 | 254JM | GT0461 | 254TTDBD6007 | √ | 2:1 | 91.0 | 48.0/24.0 | 275 | 24.41 | 68 |
| | 3600 | 575 | 254JM | GT0561 | 254TTDBD6008 | ¶ | 2:1 | 91.0 | 19.2 | 284 | 24.41 | |
| | 1800 | 230/460 | 256JM | GT0462 | 256TTDBD6032 | √ | 2:1 | 93.0 | 48.5/24.3 | 311 | 25.99 | 68 |
| | 1800 | 230/460 | 256JM | GT0462-P | 256TTDBD6072 | | 2:1 | 93.0 | 48.5/24.3 | 370 | 26.24 | 68 |
| | 1800 | 575 | 256JM | GT0562 | 256TTDBD6033 | ¶ | 2:1 | 93.0 | 19.5 | 290 | 25.99 | |
| | 1200 | 230/460 | 286JM | GT0463 | 286TTDBD6082 | ¶ | NA | 92.4 | 52.5/26.3 | 178 | 27.09 | 68 |
| 25 | 1200 | 575 | 286JM | GT0563 | 286TTDBD6092 | | NA | 92.4 | 21.1 | 390 | 27.09 | |
| | 3600 | 230/460 | 256JM | GT0464 | 256TTDBD6007 | √ | 2:1 | 91.7 | 59.5/29.7 | 291 | 25.99 | 68 |
| | 3600 | 575 | 256JM | GT0564 | 256TTDBD6008 | | NA | 91.7 | 23.8 | 302 | 25.99 | |
| | 1800 | 230/460 | 284JM | GT0465 | 284TTDBD6032 | √ | 2:1 | 93.6 | 63.0/31.5 | 359 | 26.58 | 68 |
| | 1800 | 230/460 | 284JM | GT0465-P | 284TTDBD6072 | | 2:1 | 93.6 | 62.5/31.0 | 300 | 26.78 | 68 |
| | 1800 | 575 | 284JM | GT0565 | 284TTDBD6033 | | 2:1 | 93.6 | 25.0 | 423 | 26.58 | |
| | 1200 | 230/460 | 324JM | GT0468 | 324TTDBD6082 | | 4:1 | 93.0 | 65.0/32.5 | 474 | 28.94 | 68 |
| 30 | 1200 | 575 | 324JM | GT0568 | 324TTDBD6092 | | 4:1 | 93.0 | 26.0 | 523 | 28.94 | |
| | 3600 | 230/460 | 284JM | GT0469 | 284TTDBD6007 | √ | NA | 91.7 | 71.5/35.5 | 357 | 26.58 | 68 |
| | 3600 | 575 | 284JM | GT0569 | 284TTDBD6008 | | NA | 91.7 | 28.6 | 357 | 26.58 | |
| | 1800 | 230/460 | 286JM | GT0467 | 286TTDBD6032 | √ | 2:1 | 94.1 | 73.0/36.5 | 397 | 27.09 | 68 |
| | 1800 | 230/460 | 286JM | GT0467-P | 286TTDBD6072 | | NA | 94.1 | 73.0/36.5 | 425 | 28.16 | 68 |
| | 1800 | 575 | 286JM | GT0567 | 286TTDBD6033 | | 2:1 | 94.1 | 29.2 | 545 | 27.09 | |
| | 1200 | 230/460 | 326JM | GT0471 | 326TTDBD6082 | ¶ | 2:1 | 93.6 | 75.0/37.5 | 625 | 30.12 | 68 |
| 40 | 1200 | 575 | 326JM | GT0571 | 326TTDBD6092 | | 2:1 | 93.6 | 30.0 | 734 | 30.12 | |
| | 3600 | 230/460 | 286JM | GT0472 | 286TTDBD6007 | √ | NA | 92.4 | 93.0/46.5 | 397 | 27.09 | 68 |
| | 3600 | 575 | 286JM | GT0572 | 286TTDBD6008 | ¶ | NA | 92.4 | 37.0 | 462 | 27.09 | |
| | 1800 | 230/460 | 324JM | GT0473 | 324TTDBD6032 | √ | 4:1 | 94.1 | 95.5/47.5 | 490 | 28.94 | 68 |
| 50 | 1800 | 575 | 324JM | GT0573 | 324TTDBD6033 | | 4:1 | 94.1 | 38.0 | 552 | 28.94 | |
| | 3600 | 230/460 | 324JM | GT0476 | 324TTDBD6007 | ¶ | 4:1 | 93.0 | 115/57.5 | 535 | 28.94 | 68 |
| | 3600 | 575 | 324JM | GT0576 | 324TTDBD6008 | | 4:1 | 93.0 | 46.0 | 657 | 28.94 | |
| | 1800 | 230/460 | 326JM | GT0477 | 326TTDBD6032 | ¶ | 4:1 | 94.5 | 118/59.0 | 542 | 30.12 | 68 |
| 1800 | 575 | 326JM | GT0577 | 326TTDBD6033 | | 4:1 | 94.5 | 47.0 | 604 | 30.12 | | |

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

CLOSE-COUPLED PUMP, JM MOTORS

THREE-PHASE, TOTALLY ENCLOSED

APPLICATIONS

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in damp, dusty, or dirty environments.

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- Division 2 / Zone 2 Class 1 (gases), Groups A, B, C, D (as noted)
- Suitable for use on a VFD. 10:1 variable torque and constant torque as noted
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- NEMA®* JM pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Class F Insulation
- Dual rated motors are nameplated 60/50 hertz, 190/380 volts at next lower HP
- Standard assembly F1, reversible to F2 assembly
- UL®* recognized, CSA®* certified and CE®* marked.



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | CT SPEED RANGE | IP | DIV II | NOM. EFF. | FL. AMPS | EST WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------------|----------------|------------------|------------------|-------|----------------|----|--------|-----------|----------------|---------|----------|------------|
| 1 1/2 | 1200 | 230/460 | 182JM | GT3105A | 182TTFBD6082 | ¶ | 10:1 | 43 | Y | 87.5 | 4.6/2.3 | 33 | 17.37 | A,68 |
| | 1200 | 575 | 182JM | GT3205A | 182TTFBD6092 | | 10:1 | 43 | Y | 87.5 | 1.8 | 104 | 17.37 | A |
| 2 | 1200 | 230/460 | 184JM | GT3108A | 184TTFBD6082 | ¶ | 10:1 | 43 | Y | 88.5 | 6.2/3.1 | 112 | 18.37 | A,68 |
| | 1200 | 575 | 184JM | GT3208A | 184TTFBD6092 | | 10:1 | 43 | Y | 88.5 | 2.5 | 112 | 18.37 | A |
| 3 | 3600 | 230/460 | 182JM | GT3109A | 182TTFBD6006 | √ | 10:1 | 43 | Y | 86.5 | 8.0/4.0 | 126 | 17.37 | A,68 |
| | 3600 | 575 | 182JM | GT3209A | 182TTFBD6008 | | 10:1 | 43 | Y | 86.5 | 3.2 | 126 | 17.37 | A |
| | 1800 | 230/460 | 182JM | GT3110A | 182TTFBD6031 | √ | 10:1 | 43 | Y | 89.5 | 8.3/4.2 | 75 | 17.37 | A,68 |
| | 1800 | 230/460 | 182JM | GT3110A-P | 182TTFBD6072 | | 10:1 | 43 | N | 89.5 | 8.3/4.2 | 90 | 17.37 | A,68 |
| | 1800 | 575 | 182JM | GT3210A | 182TTFBD6033 | | 10:1 | 43 | Y | 89.5 | 3.2 | 142 | 17.37 | A |
| | 1200 | 230/460 | 213JM | GT3111A | 213TTFBD6082 | ¶ | 10:1 | 43 | Y | 89.5 | 8.6/4.3 | 133 | 20.27 | 68 |
| | 1200 | 575 | 213JM | GT3211A | 213TTFBD6092 | | 10:1 | 43 | Y | 89.5 | 3.5 | 140 | 20.27 | |
| | 3600 | 230/460 | 184JM | GT3112A | 184TTFBD6006 | √ | 2:1 | 43 | Y | 88.5 | 12.4/6.2 | 90 | 18.37 | A,68 |
| 5 | 3600 | 575 | 184JM | GT3212A | 184TTFBD6008 | | 2:1 | 43 | Y | 88.5 | 5.0 | 90 | 18.37 | A |
| | 1800 | 230/460 | 184JM | GT3113A | 184TTFBD6031 | √ | 10:1 | 43 | Y | 89.5 | 13.2/6.6 | 114 | 18.37 | A,68 |
| | 1800 | 230/460 | 184JM | GT3113A-P | 184TTFBD6072 | | 10:1 | 43 | N | 89.5 | 13.2/6.6 | 107 | 18.37 | A,P,68 |
| | 1800 | 575 | 184JM | GT3213A | 184TTFBD6033 | | 10:1 | 43 | Y | 89.5 | 5.2 | 114 | 18.37 | A |
| | 1200 | 230/460 | 215JM | GT3114A | 215TTFBD6082 | ¶ | 10:1 | 43 | Y | 89.5 | 13.6/6.8 | 167 | 21.85 | 68 |
| | 1200 | 575 | 215JM | GT3214A | 215TTFBD6092 | | 10:1 | 43 | Y | 89.5 | 5.5 | 155 | 21.85 | |
| 7 1/2 | 3600 | 230/460 | 213JM | GT3115A | 213TTFBD6006 | √ | 2:1 | 43 | Y | 89.5 | 18.0/9.0 | 140 | 20.27 | 68 |
| | 3600 | 575 | 213JM | GT3215A | 213TTFBD6008 | ¶ | 2:1 | 43 | Y | 89.5 | 7.2 | 133 | 20.27 | |
| | 1800 | 230/460 | 213JM | GT3116A | 213TTFBD6031 | √ | 10:1 | 43 | Y | 91.7 | 19.0/9.5 | 163 | 20.27 | 68 |
| | 1800 | 230/460 | 213JM | GT3116A-P | 213TTFBD6072 | | 10:1 | 43 | N | 91.7 | 19.0/9.5 | 156 | 20.27 | P,68 |
| | 1800 | 575 | 213JM | GT3216A | 213TTFBD6033 | ¶ | 10:1 | 43 | Y | 91.7 | 7.6 | 162 | 20.27 | |
| | 1200 | 230/460 | 254JM | GT3117A | 254TTFCD6082 | ¶ | 10:1 | 55 | Y | 91.0 | 19.8/9.9 | 254 | 26.15 | 68 |
| 10 | 1200 | 575 | 254JM | GT3217A | 254TTFCD6092 | | 10:1 | 55 | Y | 91.0 | 7.9 | 254 | 26.15 | |
| | 3600 | 230/460 | 215JM | GT3118A | 215TTFBD6006 | √ | 2:1 | 43 | Y | 90.2 | 23.6/11.8 | 170 | 21.85 | 68 |
| | 3600 | 230/460 | 215JM | GT3118A-P | 215TTFBD6009 | √ | 2:1 | 43 | N | 90.2 | 23.6/11.8 | 160 | 21.85 | P,68 |
| | 3600 | 575 | 215JM | GT3218A | 215TTFBD6008 | ¶ | 2:1 | 43 | Y | 90.2 | 9.5 | 163 | 21.85 | |
| | 1800 | 230/460 | 215JM | GT3119A | 215TTFBD6031 | √ | 10:1 | 43 | Y | 91.7 | 25.0/12.5 | 185 | 21.85 | 68 |
| | 1800 | 208-230/460 | 215JM | GT3119A-P | 215TTFBD6072 | | 10:1 | 43 | N | 91.7 | 27.3-25.0/12.5 | 180 | 21.85 | P,68 |
| | 1800 | 575 | 215JM | GT3219A | 215TTFBD6033 | | 10:1 | 43 | Y | 91.7 | 10.0 | 171 | 21.85 | |
| | 1200 | 230/460 | 256JM | GT3120A | 256TTFCD6082 | ¶ | 10:1 | 55 | Y | 91.0 | 25.8/12.9 | 325 | 27.89 | 68 |
| 1200 | 575 | 256JM | GT3220A | 256TTFCD6092 | | 10:1 | 55 | Y | 91.0 | 10.3 | 316 | 27.89 | | |

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

Blue shaded areas are cast iron frames.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Continued on next page.

*See back cover page for attribution.

CLOSE-COUPLED PUMP, JM MOTORS

THREE-PHASE, TOTALLY ENCLOSED

C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | CT SPEED RANGE | IP | DIV II | NOM. EFF. | FL. AMPS | EST WT. | "C" DIM. | FOOT NOTES |
|------|------|---------|----------------|------------------|------------------|-------|----------------|----|--------|-----------|-----------|---------|----------|------------|
| 15 | 3600 | 230/460 | 215JM | GT31111 | 215TTFBD6020 | √ | 2:1 | 43 | Y | 91.7 | 35.0/17.4 | 190 | 21.85 | A,68 |
| | 3600 | 230/460 | 254JM | U344A | 254TTFL16008 | ¶ | NA | 43 | N | 91.0 | 36.0/18.0 | 302 | 25.52 | AL,68 |
| | 3600 | 230/460 | 254JM | GT3121A | 254TTFCD6006 | √ | 2:1 | 55 | Y | 91.0 | 35.5/17.8 | 251 | 26.15 | 68 |
| | 3600 | 575 | 254JM | GT3221A | 254TTFCD6008 | | 2:1 | 55 | Y | 91.0 | 14.3 | 295 | 26.15 | |
| | 1800 | 230/460 | 254JM | U348A | 254TTFL16045 | ¶ | NA | 43 | N | 92.4 | 37.5/18.8 | 251 | 25.52 | AL,68 |
| | 1800 | 230/460 | 254JM | GT3122A | 254TTFCD6031 | √ | 10:1 | 55 | Y | 92.4 | 36.5/18.4 | 309 | 26.15 | 68 |
| | 1800 | 230/460 | 254JM | GT3122A-P | 254TTFCD6072 | | 10:1 | 55 | N | 92.4 | 37.5/18.8 | 300 | 26.15 | P,68 |
| | 1800 | 575 | 254JM | GT3222A | 254TTFCD6033 | ¶ | 10:1 | 55 | Y | 92.4 | 14.7 | 309 | 26.15 | |
| | 1200 | 230/460 | 284JM | GT3123A | 284TTFCD6082 | ¶ | 10:1 | 55 | Y | 91.7 | 40.0/20.0 | 351 | 27.52 | 68 |
| 1200 | 575 | 284JM | GT3223A | 284TTFCD6092 | | 10:1 | 55 | Y | 91.7 | 16.0 | 413 | 27.52 | | |
| 20 | 3600 | 230/460 | 256JM | U351A | 256TTFL16004 | ¶ | NA | 43 | N | 92.4 | 47.0/23.4 | 272 | 27.27 | AL,68 |
| | 3600 | 230/460 | 256JM | GT3124A | 256TTFCD6006 | √ | 2:1 | 55 | Y | 91.0 | 47.0/23.5 | 269 | 27.89 | 68 |
| | 3600 | 575 | 256JM | GT3224A | 256TTFCD6008 | ¶ | 2:1 | 55 | Y | 91.0 | 18.8 | 312 | 27.89 | |
| | 1800 | 230/460 | 256JM | U354A | 256TTFL16042 | ¶ | NA | 43 | N | 93.0 | 48.0/24.1 | 230 | 27.27 | AL,68 |
| | 1800 | 230/460 | 256JM | GT3125A | 256TTFCD6031 | √ | 10:1 | 55 | Y | 93.0 | 48.5/24.2 | 291 | 27.89 | 68 |
| | 1800 | 230/460 | 256JM | GT3125A-P | 256TTFCD6072 | | 10:1 | 55 | N | 93.0 | 48.5/24.2 | 360 | 27.89 | P,68 |
| | 1800 | 575 | 256JM | GT3225A | 256TTFCD6033 | | 10:1 | 55 | Y | 93.0 | 19.4 | 360 | 27.89 | |
| | 1200 | 230/460 | 286JM | GT3126A | 286TTFCD6082 | | 10:1 | 55 | Y | 91.7 | 52.0/26.0 | 458 | 29.02 | 68 |
| | 1200 | 575 | 286JM | GT3226A | 286TTFCD6092 | | 10:1 | 55 | Y | 91.7 | 20.8 | 457 | 29.02 | |
| 25 | 3600 | 230/460 | 284JM | GT3127A | 284TTFCD6006 | √ | 2:1 | 55 | Y | 91.7 | 60.0/30.0 | 403 | 27.52 | 68 |
| | 3600 | 575 | 284JM | GT3227A | 284TTFCD6008 | | 2:1 | 55 | Y | 91.7 | 24.0 | 405 | 27.52 | |
| | 1800 | 230/460 | 284JM | GT3128A | 284TTFCD6032 | √ | 10:1 | 55 | Y | 93.6 | 60.0/30.0 | 342 | 27.52 | 68 |
| | 1800 | 230/460 | 284JM | GT3128A-P | 284TTFCD6072 | | 10:1 | 55 | N | 93.6 | 60.0/30.0 | 462 | 27.52 | P,68 |
| | 1800 | 575 | 284JM | GT3228A | 284TTFCD6033 | | 10:1 | 55 | Y | 93.6 | 24.0 | 404 | 27.52 | |
| | 1200 | 230/460 | 324JM | GT3129A | 324TTFCD6082 | | 2:1 | 55 | Y | 93.0 | 64.0/32.0 | 520 | 32.93 | 68 |
| | 1200 | 575 | 324JM | GT3229A | 324TTFCD6092 | | 2:1 | 55 | Y | 93.0 | 25.6 | 520 | 32.93 | |
| 30 | 3600 | 230/460 | 286JM | GT3130A | 286TTFCD6006 | √ | 2:1 | 55 | Y | 91.7 | 71.0/35.5 | 364 | 29.02 | 68 |
| | 3600 | 575 | 286JM | GT3230A | 286TTFCD6008 | ¶ | 2:1 | 55 | Y | 91.7 | 28.5 | 540 | 29.02 | |
| | 1800 | 230/460 | 286JM | GT3131A | 286TTFCD6032 | √ | 2:1 | 55 | Y | 93.6 | 71.0/35.5 | 437 | 29.02 | 68 |
| | 1800 | 230/460 | 286JM | GT3131A-P | 286TTFCD6072 | | 10:1 | 55 | N | 93.6 | 71.0/35.5 | 500 | 29.02 | P,68 |
| | 1800 | 575 | 286JM | GT3231A | 286TTFCD6033 | | 10:1 | 55 | Y | 93.6 | 28.4 | 500 | 29.02 | |
| | 1200 | 230/460 | 326JM | GT3132A | 326TTFCD6082 | ¶ | 2:1 | 55 | Y | 93.0 | 76.0/38.0 | 683 | 34.11 | 68 |
| | 1200 | 575 | 326JM | GT3232A | 326TTFCD6092 | | 2:1 | 55 | Y | 93.0 | 30.5 | 647 | 34.11 | |
| 40 | 3600 | 230/460 | 324JM | GT3133A | 324TTFCD6007 | √ | 2:1 | 55 | Y | 92.4 | 92.0/46.0 | 525 | 32.93 | 68 |
| | 3600 | 575 | 324JM | GT3233A | 324TTFCD6008 | ¶ | 2:1 | 55 | Y | 92.4 | 37.0 | 643 | 32.93 | |
| | 1800 | 230/460 | 324JM | GT3134A | 324TTFCD6031 | ¶ | 10:1 | 55 | Y | 94.1 | 95.0/47.5 | 259 | 32.93 | 68 |
| | 1800 | 575 | 324JM | GT3234A | 324TTFCD6033 | | 2:1 | 55 | Y | 94.1 | 38.0 | 571 | 32.93 | |
| 50 | 3600 | 230/460 | 326JM | GT3136A | 326TTFCD6007 | √ | 2:1 | 55 | Y | 94.1 | 113/56.5 | 595 | 34.11 | 68 |
| | 3600 | 575 | 326JM | GT3236A | 326TTFCD6008 | ¶ | 2:1 | 55 | Y | 94.1 | 45.0 | 732 | 34.11 | |
| | 1800 | 230/460 | 326JM | GT3137A | 326TTFCD6031 | ¶ | 2:1 | 55 | Y | 94.5 | 117/58.5 | 698 | 34.11 | 68 |
| | 1800 | 575 | 326JM | GT3237A | 326TTFCD6033 | | 2:1 | 55 | Y | 94.5 | 47.0 | 698 | 34.11 | |

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

CLOSE-COUPLED PUMP, JP MOTORS

THREE-PHASE, DRIPPROOF

APPLICATIONS

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in environments that are relatively clean and dry variable

FEATURES

- **Meets or exceeds NEMA Premium®* efficiencies**
- Suitable for use on a VFD. 10:1 variable torque and constant torque as noted
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- NEMA®* JP pump shaft dimensions
- JPV frame for vertical mount without base (includes drip cover)
- Ball bearings, mechanically locked on shaft end
- Class F Insulation (except as noted)
- Dual rated motors are nameplated 60/50 hertz, 190/380 volts at next lower HP
- Standard assembly F1, reversible to F2 assembly (except as noted)
- UL®* recognized, CSA®* certified and CE®* marked.



C-FACE FOOTED (RIGID BASE) AND C-FACE FOOTLESS (VERTICAL)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | "FL. AMPS" | "EST WT." | "C" DIM." | FOOT NOTES |
|-------|------|-------------|---------------|----------------|------------------|-------|----------------|-----------|-------------|-----------|-----------|------------|
| 1 1/2 | 1200 | 208-230/460 | 182JP | GT2405A | 182TTDBD6085 | | 2:1 | 86.5 | 4.8-4.6/2.3 | 44 | 17.70 | A,68 |
| | 1200 | 575 | 182JP | GT2505A | 182TTDBD6095 | | 2:1 | 86.5 | 1.9 | 44 | 17.70 | A |
| 2 | 1200 | 208-230/460 | 184JP | GT2408A | 184TTDBD6085 | | 2:1 | 87.5 | 6.4-6.0/3.0 | 76 | 18.70 | 68 |
| | 1200 | 575 | 184JP | GT2508A | 184TTDBD6095 | | 2:1 | 87.5 | 2.4 | 76 | 18.70 | |
| 3 | 1800 | 230/460 | 182JP | GT2410A | 182TTDBD6037 | √ | 2:1 | 89.5 | 8.0/4.0 | 80 | 17.70 | A,68 |
| | 1800 | 575 | 182JP | GT2510A | 182TTDBD6038 | | 2:1 | 89.5 | 3.2 | 81 | 17.70 | A |
| | 1200 | 230/460 | 213JP | GT2411A | 213TTDBD6085 | ¶ | 2:1 | 88.5 | 8.4/4.2 | 139 | 23.11 | 68 |
| | 1200 | 575 | 213JP | GT2511A | 213TTDBD6095 | | 2:1 | 88.5 | 3.4 | 135 | 23.11 | |
| 5 | 3600 | 230/460 | 182JP | GT2412A | 182TTDBD6012 | ¶ | 2:1 | 86.5 | 13.2/6.6 | 83 | 17.70 | A,68 |
| | 3600 | 575 | 182JP | GT2512A | 182TTDBD6013 | | 2:1 | 86.5 | 5.3 | 83 | 17.70 | A |
| | 3600 | 575 | 182JPV | GT4512 | 182TTDBD6019 | | 2:1 | 86.5 | 5.3 | 58 | 19.58 | A,27 |
| | 1800 | 230/460 | 184JP | GT2413A | 184TTDBD6037 | ¶ | 2:1 | 89.5 | 13.2/6.6 | 86 | 18.70 | A,68 |
| | 1800 | 575 | 184JP | GT2513A | 184TTDBD6038 | | 2:1 | 89.5 | 5.3 | 120 | 18.70 | A |
| | 1200 | 230/460 | 215JP | GT2414A | 215TTDBD6085 | ¶ | 10:1 | 89.5 | 13.8/6.9 | 158 | 23.11 | 68 |
| 7 1/2 | 1200 | 575 | 215JP | GT2514A | 215TTDBD6095 | | 4:1 | 89.5 | 5.5 | 120 | 23.11 | |
| | 3600 | 230/460 | 184JP | GT2415A | 184TTDBD6012 | √ | NA | 88.5 | 18.4/9.2 | 88 | 18.70 | A,68 |
| | 3600 | 575 | 184JP | GT2515A | 184TTDBD6013 | | NA | 88.5 | 7.4 | 80 | 18.70 | A |
| | 1800 | 230/460 | 213JP | GT2416A | 213TTDBD6037 | ¶ | 2:1 | 91.0 | 19.8/9.9 | 153 | 23.11 | 68 |
| | 1800 | 575 | 213JP | GT2516A | 213TTDBD6038 | | 2:1 | 91.0 | 7.9 | 230 | 23.11 | |
| | 1200 | 230/460 | 254JP | GT2457 | 254TTDBD6085 | | 10:1 | 90.2 | 20.2/10.1 | 289 | 27.32 | 68 |
| 10 | 1200 | 575 | 254JP | GT2557 | 254TTDBD6095 | | 2:1 | 90.2 | 8.1 | 289 | 27.32 | |
| | 3600 | 230/460 | 213JP | GT2418A | 213TTDBD6012 | √ | NA | 89.5 | 24.2/12.1 | 158 | 23.11 | 68 |
| | 3600 | 575 | 213JP | GT2518A | 213TTDBD6013 | | 2:1 | 89.5 | 9.7 | 156 | 23.11 | |
| | 1800 | 230/460 | 215JP | GT2419A | 215TTDBD6037 | ¶ | 10:1 | 91.7 | 25.4/12.7 | 153 | 23.11 | 68 |
| | 1800 | 575 | 215JP | GT2519A | 215TTDBD6038 | | 10:1 | 91.7 | 10.2 | 105 | 23.11 | |
| | 1200 | 230/460 | 256JP | GT2458 | 256TTDBD6085 | ¶ | 2:1 | 91.7 | 25.6/12.8 | 269 | 28.90 | 68 |
| 1200 | 575 | 256JP | GT2558 | 256TTDBD6095 | | 2:1 | 91.7 | 10.3 | 269 | 28.90 | | |

Continued on next page.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

CLOSE-COUPLED PUMP, JP MOTORS

THREE-PHASE, DRIPPROOF, C-FACE FOOTLESS (VERTICAL) AND C-FACE FOOTED (RIGID BASE)

C-FACE FOOTED (RIGID BASE) AND C-FACE FOOTLESS (VERTICAL)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | CT SPEED RANGE | NOM. EFF. | "FL. AMPS" | "EST WT." | "C" DIM." | FOOT NOTES |
|----|------|-------------|--------|----------------|------------------|-------|----------------|-----------|----------------|-----------|-----------|------------|
| 15 | 3600 | 230/460 | 215JP | GT2421A | 215TTDBD6012 | ¶ | NA | 90.2 | 36.0/18.0 | 165 | 23.11 | 68 |
| | 3600 | 575 | 215JP | GT2521A | 215TTDBD6013 | | 2:1 | 90.2 | 14.4 | 153 | 23.11 | |
| | 1800 | 208-230/460 | 254JPV | GT4459 | 254TTDBD6046 | √ | 2:1 | 93.0 | 40.5-37.5/18.8 | 290 | 29.21 | 27,68 |
| | 1800 | 230/460 | 254JPV | U210A | 254TTDR16028 | | NA | 93.0 | 38.0/18.9 | 290 | 27.92 | 27,68 |
| | 1800 | 230/460 | 254JP | GT2459 | 254TTDBD6037 | √ | 2:1 | 93.0 | 37.5/18.8 | 263 | 27.32 | 68 |
| | 1800 | 575 | 254JP | GT2559 | 254TTDBD6038 | | 2:1 | 93.0 | 15.1 | 309 | 27.32 | |
| | 1200 | 230/460 | 284JP | GT2460 | 284TTDBD6085 | | 2:1 | 91.7 | 41.0/20.6 | 420 | 29.53 | 68 |
| | 1200 | 575 | 284JP | GT2560 | 284TTDBD6095 | | 2:1 | 91.7 | 16.5 | 465 | 29.53 | |
| 20 | 3600 | 230/460 | 254JP | GT2461 | 254TTDBD6012 | ¶ | 2:1 | 91.0 | 48.0/24.0 | 232 | 27.32 | 68 |
| | 3600 | 575 | 254JP | GT2561 | 254TTDBD6013 | | 2:1 | 91.0 | 19.2 | 105 | 27.32 | |
| | 1800 | 230/460 | 256JP | GT2462 | 256TTDBD6037 | √ | 2:1 | 93.0 | 48.5/24.3 | 269 | 28.90 | 68 |
| | 1800 | 575 | 256JP | GT2562 | 256TTDBD6038 | ¶ | 2:1 | 93.0 | 19.5 | 304 | 28.90 | |
| | 1200 | 230/460 | 286JP | GT2463 | 286TTDBD6085 | ¶ | NA | 92.4 | 52.5/26.3 | 392 | 30.91 | 68 |
| | 1200 | 575 | 286JP | GT2563 | 286TTDBD6095 | | NA | 92.4 | 21.1 | 463 | 30.91 | |
| 25 | 3600 | 230/460 | 256JP | GT2464 | 256TTDBD6012 | √ | 2:1 | 91.7 | 59.5/29.7 | 249 | 28.90 | 68 |
| | 3600 | 575 | 256JP | GT2564 | 256TTDBD6013 | ¶ | NA | 91.7 | 23.8 | 313 | 28.90 | |
| | 1800 | 230/460 | 284JP | GT2465 | 284TTDBD6037 | √ | 2:1 | 93.6 | 63.0/31.5 | 426 | 29.53 | 68 |
| | 1800 | 575 | 284JP | GT2565 | 284TTDBD6038 | | 2:1 | 93.6 | 25.0 | 449 | 29.53 | |
| | 1200 | 230/460 | 324JP | GT2468 | 324TTDBD6085 | ¶ | 4:1 | 93.0 | 65.0/32.5 | 474 | 31.82 | 68 |
| | 1200 | 575 | 324JP | GT2568 | 324TTDBD6095 | | 4:1 | 93.0 | 26.0 | 535 | 31.82 | |
| 30 | 3600 | 230/460 | 284JP | GT2469 | 284TTDBD6012 | ¶ | NA | 91.7 | 71.5/35.5 | 426 | 29.53 | 68 |
| | 3600 | 575 | 284JP | GT2569 | 284TTDBD6013 | | NA | 91.7 | 28.6 | 403 | 29.53 | |
| | 1800 | 230/460 | 286JP | GT2467 | 286TTDBD6037 | ¶ | 2:1 | 94.1 | 73.0/36.5 | 485 | 30.91 | 68 |
| | 1800 | 575 | 286JP | GT2567 | 286TTDBD6038 | | 2:1 | 94.1 | 29.2 | 463 | 30.91 | |
| | 1200 | 208-230/460 | 326JP | GT2471 | 326TTDBD6085 | | 4:1 | 93.6 | 82.0-75.0/37.5 | 564 | 33.00 | 68 |
| | 1200 | 575 | 326JP | GT2571 | 326TTDBD6095 | | 2:1 | 93.6 | 30.0 | 560 | 33.00 | |
| 40 | 3600 | 230/460 | 286JP | GT2472 | 286TTDBD6012 | ¶ | NA | 92.4 | 93.0/46.5 | 340 | 30.91 | 68 |
| | 3600 | 575 | 286JP | GT2572 | 286TTDBD6013 | | NA | 92.4 | 37.0 | 455 | 30.91 | |
| | 1800 | 230/460 | 324JP | GT2473 | 324TTDBD6037 | √ | 4:1 | 94.1 | 95.5/47.5 | 539 | 31.82 | 68 |
| | 1800 | 575 | 324JP | GT2573 | 324TTDBD6038 | ¶ | 4:1 | 94.1 | 38.0 | 552 | 31.82 | |
| 50 | 3600 | 230/460 | 324JP | GT2476 | 324TTDBD6012 | √ | 2:1 | 93.0 | 115/57.5 | 226 | 31.82 | 68 |
| | 3600 | 575 | 324JP | GT2576 | 324TTDBD6013 | | 4:1 | 93.0 | 46.0 | 567 | 31.82 | |
| | 1800 | 230/460 | 326JP | GT2477 | 326TTDBD6037 | √ | 4:1 | 94.5 | 118/59.0 | 542 | 33.00 | 68 |
| | 1800 | 575 | 326JP | GT2577 | 326TTDBD6038 | | 4:1 | 94.5 | 47.0 | 700 | 33.00 | |

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

CLOSE-COUPLED PUMP, JP MOTORS

THREE-PHASE, TOTALLY ENCLOSED

APPLICATIONS

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in damp, dusty, or dirty environments.

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- Division 2 / Zone 2 Class 1 (gases), Groups A, B, C, D (as noted)
- Suitable for use on a VFD. 10:1 variable torque and constant torque as noted
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power (except as noted)
- NEMA®* JP pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Class F Insulation
- Dual rated motors are nameplated 60/50 hertz, 190/380 volts at next lower HP
- Standard assembly F1, reversible to F2 assembly (except as noted)
- UL®* recognized, CSA®* certified and CE®* marked.



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | IP | DIV II | NOM. EFF. | "FL. AMPS" | "EST WT." | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|----------------|--------------|-------|----------------|----|--------|-----------|------------|-----------|----------|------------|
| 1 1/2 | 1200 | 230/460 | 182JP | GT3405A | 182TTFBD6085 | | 10:1 | 43 | Y | 87.5 | 4.6/2.3 | 104 | 20.44 | A,68 |
| | 1200 | 575 | 182JP | GT3505A | 182TTFBD6095 | | 10:1 | 43 | Y | 87.5 | 1.8 | 104 | 20.44 | A |
| 2 | 1200 | 230/460 | 184JP | GT3408A | 184TTFBD6085 | | 10:1 | 43 | Y | 88.5 | 6.2/3.1 | 112 | 21.44 | A,68 |
| | 1200 | 575 | 184JP | GT3508A | 184TTFBD6095 | | 10:1 | 43 | Y | 88.5 | 2.5 | 112 | 21.44 | A |
| 3 | 3600 | 230/460 | 182JP | GT3409A | 182TTFBD6012 | ¶ | 10:1 | 43 | Y | 86.5 | 8.0/4.0 | 126 | 20.44 | A,68 |
| | 3600 | 575 | 182JP | GT3509A | 182TTFBD6013 | | 10:1 | 43 | Y | 86.5 | 3.2 | 126 | 20.44 | A |
| | 1800 | 230/460 | 182JP | GT3410A | 182TTFBD6037 | √ | 10:1 | 43 | Y | 89.5 | 8.3/4.2 | 142 | 20.44 | A,68 |
| | 1800 | 575 | 182JP | GT3510A | 182TTFBD6038 | | 10:1 | 43 | Y | 89.5 | 3.2 | 142 | 20.44 | A |
| | 1200 | 230/460 | 213JP | GT3411A | 213TTFBD6085 | √ | 10:1 | 43 | Y | 89.5 | 8.6/4.3 | 149 | 24.13 | 68 |
| | 1200 | 575 | 213JP | GT3511A | 213TTFBD6095 | | 10:1 | 43 | Y | 89.5 | 3.5 | 149 | 24.13 | |
| 5 | 3600 | 230/460 | 184JP | GT3412A | 184TTFBD6012 | √ | 2:1 | 43 | Y | 88.5 | 12.4/6.2 | 100 | 21.44 | A,68 |
| | 3600 | 575 | 184JP | GT3512A | 184TTFBD6013 | | 2:1 | 43 | Y | 88.5 | 5.0 | 100 | 21.44 | A |
| | 1800 | 230/460 | 184JP | GT3413A | 184TTFBD6037 | √ | 10:1 | 43 | Y | 89.5 | 13.2/6.6 | 97 | 21.44 | A,68 |
| | 1800 | 575 | 184JP | GT3513A | 184TTFBD6038 | | 10:1 | 43 | Y | 89.5 | 5.2 | 96 | 21.44 | A |
| | 1200 | 230/460 | 215JP | GT3414A | 215TTFBD6085 | √ | 10:1 | 43 | Y | 89.5 | 13.6/6.8 | 163 | 25.63 | 68 |
| | 1200 | 575 | 215JP | GT3514A | 215TTFBD6095 | | 10:1 | 43 | Y | 89.5 | 5.5 | 168 | 25.63 | |
| 7 1/2 | 3600 | 230/460 | 213JP | GT3415A | 213TTFBD6012 | √ | 2:1 | 43 | Y | 89.5 | 18.0/9.0 | 180 | 24.13 | 68 |
| | 3600 | 575 | 213JP | GT3515A | 213TTFBD6013 | ¶ | 2:1 | 43 | Y | 89.5 | 7.2 | 165 | 24.13 | |
| | 1800 | 230/460 | 213JP | GT3416A | 213TTFBD6037 | √ | 10:1 | 43 | Y | 91.7 | 19.0/9.5 | 167 | 24.13 | 68 |
| | 1800 | 575 | 213JP | GT3516A | 213TTFBD6038 | ¶ | 10:1 | 43 | Y | 91.7 | 7.6 | 167 | 24.13 | |
| | 1200 | 230/460 | 254JP | GT3417A | 254TTFCD6085 | ¶ | 10:1 | 55 | Y | 91.0 | 19.8/9.9 | 256 | 29.03 | 68 |
| | 1200 | 575 | 254JP | GT3517A | 254TTFCD6095 | | 10:1 | 55 | Y | 91.0 | 7.9 | 256 | 29.03 | |
| 10 | 3600 | 230/460 | 215JP | GT3418A | 215TTFBD6012 | √ | 2:1 | 43 | Y | 90.2 | 23.6/11.8 | 167 | 25.63 | 68 |
| | 3600 | 575 | 215JP | GT3518A | 215TTFBD6013 | | 2:1 | 43 | Y | 90.2 | 9.5 | 165 | 25.63 | |
| | 1800 | 230/460 | 215JP | GT3419A | 215TTFBD6037 | √ | 10:1 | 43 | Y | 91.7 | 25.0/12.5 | 167 | 25.63 | 68 |
| | 1800 | 575 | 215JP | GT3519A | 215TTFBD6038 | | 10:1 | 43 | Y | 91.7 | 10.0 | 180 | 25.63 | |
| | 1200 | 230/460 | 256JP | GT3420A | 256TTFCD6085 | √ | 10:1 | 55 | Y | 91.0 | 25.8/12.9 | 276 | 30.76 | 68 |
| | 1200 | 575 | 256JP | GT3520A | 256TTFCD6095 | ¶ | 10:1 | 55 | Y | 91.0 | 10.3 | 323 | 30.76 | |

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

Continued on next page.

CLOSE-COUPLED PUMP, JP MOTORS

THREE-PHASE, TOTALLY ENCLOSED

C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | IP | DIV II | NOM. EFF. | "FL. AMPS" | "EST WT." | "C" DIM. | FOOT NOTES |
|----|------|---------|-------|----------------|--------------|-------|----------------|----|--------|-----------|------------|-----------|----------|------------|
| 15 | 3600 | 230/460 | 254JP | GT3421A | 254TTFCD6012 | ¶ | 2:1 | 55 | Y | 91.0 | 35.5/17.8 | 320 | 29.03 | 68 |
| | 3600 | 575 | 254JP | GT3521A | 254TTFCD6013 | | 2:1 | 55 | Y | 91.0 | 14.3 | 319 | 29.03 | |
| | 1800 | 230/460 | 254JP | GT3422A | 254TTFCD6037 | √ | 10:1 | 55 | Y | 92.4 | 36.5/18.4 | 365 | 29.03 | 68 |
| | 1800 | 575 | 254JP | GT3522A | 254TTFCD6038 | | 10:1 | 55 | Y | 92.4 | 15.1 | 365 | 29.03 | |
| | 1200 | 230/460 | 284JP | GT3423A | 284TTFCD6085 | ¶ | 10:1 | 55 | Y | 91.7 | 40.0/20.0 | 351 | 30.40 | 68 |
| | 1200 | 575 | 284JP | GT3523A | 284TTFCD6095 | | 10:1 | 55 | Y | 91.7 | 16.0 | 415 | 30.40 | |
| 20 | 3600 | 230/460 | 256JP | GT3424A | 256TTFCD6012 | √ | 2:1 | 55 | Y | 91.0 | 47.0/23.5 | 276 | 30.76 | 68 |
| | 3600 | 575 | 256JP | GT3524A | 256TTFCD6013 | | 2:1 | 55 | Y | 91.0 | 19.0 | 386 | 30.76 | |
| | 1800 | 230/460 | 256JP | GT3425A | 256TTFCD6037 | √ | 10:1 | 55 | Y | 93.0 | 48.5/24.2 | 295 | 30.76 | 68 |
| | 1800 | 575 | 256JP | GT3525A | 256TTFCD6038 | | 10:1 | 55 | Y | 93.0 | 19.4 | 363 | 30.76 | |
| | 1200 | 230/460 | 286JP | GT3426A | 286TTFCD6085 | ¶ | 10:1 | 55 | Y | 91.7 | 52.0/26.0 | 458 | 31.90 | 68 |
| | 1200 | 575 | 286JP | GT3526A | 286TTFCD6095 | | 10:1 | 55 | Y | 91.7 | 20.8 | 463 | 31.90 | |
| 25 | 3600 | 230/460 | 284JP | GT3427A | 284TTFCD6012 | √ | 2:1 | 55 | Y | 91.7 | 60.0/30.0 | 342 | 30.40 | 68 |
| | 3600 | 575 | 284JP | GT3527A | 284TTFCD6013 | | 2:1 | 55 | Y | 91.7 | 24.0 | 342 | 30.40 | |
| | 1800 | 230/460 | 284JP | GT3428A | 284TTFCD6037 | √ | 10:1 | 55 | Y | 93.6 | 60.0/30.0 | 406 | 30.40 | 68 |
| | 1800 | 575 | 284JP | GT3528A | 284TTFCD6038 | | 10:1 | 55 | Y | 93.6 | 24.0 | 551 | 30.40 | |
| | 1200 | 230/460 | 324JP | GT3429A | 324TTFCD6085 | | 2:1 | 55 | Y | 93.0 | 64.0/32.0 | 525 | 32.82 | 68 |
| | 1200 | 575 | 324JP | GT3529A | 324TTFCD6095 | | 2:1 | 55 | Y | 93.0 | 25.6 | 525 | 32.82 | |
| 30 | 3600 | 230/460 | 286JP | GT3430A | 286TTFCD6012 | ¶ | 2:1 | 55 | Y | 91.7 | 71.0/35.5 | 368 | 31.90 | 68 |
| | 3600 | 575 | 286JP | GT3530A | 286TTFCD6013 | | 2:1 | 55 | Y | 91.7 | 28.5 | 432 | 31.90 | |
| | 1800 | 230/460 | 286JP | GT3431A | 286TTFCD6037 | √ | 2:1 | 55 | Y | 93.6 | 71.0/35.5 | 443 | 31.90 | 68 |
| | 1800 | 575 | 286JP | GT3531A | 286TTFCD6038 | | 10:1 | 55 | Y | 93.6 | 28.4 | 542 | 31.90 | |
| | 1200 | 230/460 | 326JP | GT3432A | 326TTFCD6085 | | 2:1 | 55 | Y | 93.0 | 76.0/38.0 | 630 | 34.31 | 68 |
| | 1200 | 575 | 326JP | GT3532A | 326TTFCD6095 | | 2:1 | 55 | Y | 93.0 | 30.5 | 651 | 34.31 | |
| 40 | 3600 | 230/460 | 324JP | GT3433A | 324TTFCD6012 | √ | 2:1 | 55 | Y | 92.4 | 92.0/46.0 | 520 | 32.82 | 68 |
| | 3600 | 575 | 324JP | GT3533A | 324TTFCD6013 | | 2:1 | 55 | Y | 92.4 | 37.0 | 527 | 32.82 | |
| | 1800 | 230/460 | 324JP | GT3434A | 324TTFCD6037 | √ | 10:1 | 55 | Y | 94.1 | 95.0/47.5 | 647 | 32.82 | 68 |
| | 1800 | 575 | 324JP | GT3534A | 324TTFCD6038 | ¶ | 2:1 | 55 | Y | 94.1 | 38.0 | 571 | 32.82 | |
| 50 | 3600 | 230/460 | 326JP | GT3436A | 326TTFCD6012 | ¶ | 2:1 | 55 | Y | 94.1 | 113/56.5 | 732 | 34.31 | 68 |
| | 3600 | 575 | 326JP | GT3536A | 326TTFCD6013 | | 2:1 | 55 | Y | 94.1 | 45.0 | 732 | 34.31 | |
| | 1800 | 230/460 | 326JP | GT3437A | 326TTFCD6037 | √ | 2:1 | 55 | Y | 94.5 | 117/58.5 | 698 | 34.31 | 68 |
| | 1800 | 575 | 326JP | GT3537A | 326TTFCD6038 | | 2:1 | 55 | Y | 94.5 | 47.0 | 698 | 34.31 | |

Blue shaded areas are cast iron frames.

√- Available ¶- Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

FIRE PUMP MOTORS

THREE-PHASE, ODP, RIGID BASE, EPACT EFFICIENCY

APPLICATIONS

For use on pumps designed for fire pump duty and installed per NFPA-20. These dripproof motors are intended for installation in relatively clean and dry environments.

FEATURES

- **UL®* file EX5190, CSA®* file LR2025 and CE®* mark**
- 50° C ambient
- Ball bearings
- 1.15 service factor (except as noted)
- Red paint on 25 HP through 250 HP
- NEMA®* design B, code G or less
- Will accept C-Face kits (except as noted), see accessories section for kits
- 230/460 and 460 Volt models rated for 50 HZ at next lower HP, 1.15 SF, as noted



- Single voltage motors have 12 leads and are suitable for wye-delta, across the line, or part winding start
- Dual voltage motors have 12 leads, suitable for wye-delta or across the line start on either voltage, or part winding start on low voltage

FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------------|-------|--------------|----------------|-------|-----------|----------------|-----|----------|------------|
| 25 | 3600 | 190/380-400 | 256T | U501A | 256TTDBD4020 | | 91.0 | 70.0/35.0-33.5 | 284 | 24.22 | |
| | 3600 | 230/460 | 256T | U500A | 256TTDBD4024 | √ | 91.0 | 58.0/29.0 | 229 | 24.22 | 68 |
| | 3600 | 575 | 256T | U1100 | 256TTDBD4008 | | 91.0 | 23.2 | 274 | 24.22 | |
| | 1800 | 190/380-400 | 284T | U1052 | 284TTDBD4047 | | 91.7 | 74.0/36.5-34.5 | 320 | 25.71 | |
| | 1800 | 230/460 | 284T | U552 | 284TTDBD4027 | √ | 91.7 | 61.0/30.5 | 378 | 25.71 | 68 |
| | 1800 | 575 | 284T | U1101 | 284TTDBD4035 | | 91.7 | 24.4 | 378 | 25.71 | |
| 30 | 3600 | 190/380-400 | 284TS | U1053 | 284TSTDBD4007 | | 91.0 | 87.0/43.5-41.0 | 374 | 24.34 | |
| | 3600 | 230/460 | 284TS | U553 | 284TSTDBD4002 | √ | 91.0 | 72.0/36.0 | 315 | 24.34 | 68 |
| | 3600 | 575 | 284TS | U1103 | 284TSTDBD4008 | | 91.0 | 28.8 | 374 | 24.34 | |
| | 1800 | 190/380-400 | 286T | U1054 | 286TTDBD14042 | | 92.4 | 87.0/43.0-41.0 | 366 | 27.09 | |
| | 1800 | 230/460 | 286T | U554 | 286TTDBD4041 | √ | 92.4 | 72.0/36.0 | 362 | 27.09 | 68 |
| | 1800 | 575 | 286T | U1104 | 286TTDBD4035 | | 92.4 | 28.8 | 424 | 27.09 | |
| 40 | 3600 | 190/380-400 | 286TS | U1155 | 286TSTDBD4023 | | 91.7 | 114/57.0-54.0 | 357 | 25.72 | |
| | 3600 | 230/460 | 286TS | U592 | 286TSTDBD4022 | √ | 91.7 | 94.0/47.0 | 362 | 25.72 | 68 |
| | 3600 | 575 | 286TS | U1106 | 286TSTDBD4008 | | 91.7 | 37.5 | 421 | 25.72 | |
| | 1800 | 190/380-400 | 324T | U511A | 324TTDCCD14049 | | 93.0 | 114/56.5-53.5 | 249 | 28.55 | |
| | 1800 | 230/460 | 324T | U510A | 324TTDCCD4038 | √ | 93.0 | 94.0/47.0 | 556 | 28.55 | 68 |
| | 1800 | 575 | 324T | U1107 | 324TTDCCD4035 | | 93.0 | 37.5 | 599 | 28.55 | |
| 50 | 3600 | 190/380-400 | 324TS | U513A | 324TSTDCD4007 | | 92.4 | 138/69.0-67.0 | 633 | 27.05 | |
| | 3600 | 230/460 | 324TS | U512A | 324TSTDCD4010 | √ | 92.4 | 114/57.0 | 547 | 27.05 | 68 |
| | 3600 | 575 | 324TS | U1109 | 324TSTDCD4008 | | 92.4 | 45.5 | 252 | 27.05 | |
| | 1800 | 190/380-400 | 326T | U515A | 326TTDCCD4344 | | 93.6 | 145/72.0-68.5 | 591 | 29.73 | |
| | 1800 | 230/460 | 326T | U514A | 326TTDCCD4345 | √ | 93.6 | 120/60.0 | 266 | 29.73 | 68 |
| | 1800 | 575 | 326T | U1110 | 326TTDCCD4035 | | 93.6 | 48 | 324 | 29.73 | |
| 60 | 3600 | 190/380-400 | 326TS | U517A | 326TSTDCD4022 | | 93.0 | 165/82.5-77.5 | 694 | 28.23 | |
| | 3600 | 230/460 | 326TS | U516A | 326TSTDCD4024 | √ | 93.0 | 136/68.0 | 611 | 28.23 | 68 |
| | 3600 | 575 | 326TS | U1112 | 326TSTDCD4008 | | 93.0 | 54.5 | 610 | 28.23 | |
| | 1800 | 190/380-400 | 364TS | U519A | 364TSTDCD4337 | | 93.6 | 167/83.5-80.0 | 839 | 29.57 | |
| | 1800 | 230/460 | 364TS | U518B | 364TSTDCD4333 | √ | 93.6 | 138/69.0 | 836 | 29.57 | 68 |
| | 1800 | 575 | 364TS | U1113 | 364TSTDCD4035 | | 93.6 | 55.0 | 846 | 29.57 | |

Continued on next page.

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

FIRE PUMP MOTORS

THREE-PHASE, ODP, RIGID BASE, EPACT EFFICIENCY

FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-----|------|-------------|-------|---------------|--------------|-------|-----------|-------------|------|----------|------------|
| 75 | 3600 | 230/460 | 364TS | U522B | 364TSTD4026 | √ | 93.0 | 170/85.0 | 800 | 29.57 | 68 |
| | 3600 | 575 | 364TS | U1115 | 364TSTD4008 | | 93.0 | 68.0 | 807 | 29.57 | |
| | 1800 | 190/380-400 | 365TS | U525B | 365TSTD4348 | | 94.1 | 205/103 | 416 | 29.57 | |
| | 3600 | 575 | 364TS | U1115 | 364TSTD4008 | | 93.0 | 68.0 | 807 | 29.57 | |
| | 1800 | 190/380-400 | 365TS | U525B | 365TSTD4348 | | 94.1 | 205/103 | 416 | 29.57 | |
| | 1800 | 230/460 | 365TS | U524A | 365TSTD4332 | | 94.1 | 170/85.0 | 416 | 29.57 | 68 |
| | 1800 | 575 | 365TS | U1116 | 365TSTD4035 | | 94.1 | 68.0 | 416 | 31.14 | |
| 100 | 3600 | 190/380-400 | 365TS | U1526A | 365TSTD4303 | | 93.0 | 276/138-132 | 927 | 31.10 | |
| | 3600 | 230/460 | 365TS | U526A | 365TSTD4025 | √ | 93.0 | 228/114 | 384 | 31.14 | 68 |
| | 3600 | 575 | 365TS | U1118 | 365TSTD4008 | | 93.0 | 91.0 | 919 | 31.14 | |
| | 1800 | 190/380 | 404TS | U1528B | 404TSTD4335 | | 94.1 | 274/137 | 2249 | 31.44 | |
| | 1800 | 230/460 | 404TS | U528B | 404TSTD4334 | √ | 94.1 | 226/113 | 1258 | 31.44 | 68 |
| | 1800 | 575 | 404TS | U1119A | 404TSTD4031 | | 94.1 | 90.5 | 1070 | 31.44 | |
| | 1500 | 415 | 404TS | U1428 | 404TSTD4029 | √ | 92.7 | 127 | 1075 | 31.44 | |
| 125 | 3600 | 380 | 404TS | U1530B | 404TSTD4009 | | 93.6 | 168 | 1143 | 31.44 | |
| | 3600 | 460 | 404TS | U530B | 404TSTD4018 | ¶ | 93.6 | 139 | 1165 | 31.44 | 68 |
| | 3600 | 575 | 404TS | U1121A | 404TSTD4002 | √ | 93.6 | 111 | 1070 | 31.44 | |
| | 1500 | 415 | 404TS | U1430 | 404TSTD4005 | | 93.0 | 155 | 1080 | 31.44 | |
| | 1800 | 200/400 | 405TS | U533 | 405TSTD4333 | | 94.5 | 331/166 | 1070 | 31.00 | |
| | 1800 | 380 | 405TS | U1532B | 405TSTD4335 | | 94.5 | 170 | 1417 | 31.44 | |
| | 1800 | 460 | 405TS | U532B | 405TSTD4334 | ¶ | 94.5 | 141 | 1428 | 31.44 | 68 |
| | 1800 | 575 | 405TS | U1122A | 405TSTD4031 | | 94.5 | 112 | 1428 | 31.44 | |
| | 1500 | 415 | 405TS | U1432 | 405TSTD4029 | √ | 93.0 | 157 | 1071 | 31.44 | |
| 150 | 3600 | 380 | 405TS | U1534B | 405TSTD4019 | | 93.6 | 200 | 1238 | 31.44 | |
| | 3600 | 460 | 405TS | U534B | 405TSTD4306 | √ | 93.6 | 165 | 1241 | 31.44 | 68 |
| | 3600 | 575 | 405TS | U1124A | 405TSTD4002 | | 93.6 | 132 | 1241 | 31.44 | |
| | 1800 | 380 | 444TS | U1535B | 444TSTD4038 | | 95.0 | 204 | 1771 | 36.47 | |
| | 1800 | 460 | 444TS | U535B | 444TSTD4333 | √ | 95.0 | 169 | 1771 | 36.47 | 68 |
| | 1800 | 575 | 444TS | U1125A | 444TSTD4031 | | 95.0 | 135 | 1771 | 36.47 | |
| 200 | 3600 | 380 | 444TS | U1536B | 444TSTD4014 | | 94.5 | 264 | 1728 | 36.47 | |
| | 3600 | 460 | 444TS | U536B | 444TSTD4011 | √ | 94.5 | 218 | 1728 | 36.47 | 68 |
| | 3600 | 575 | 444TS | U1127A | 444TSTD4002 | | 94.5 | 174 | 1728 | 36.47 | |
| | 1800 | 380 | 445TS | U1537B | 445TSTD4046 | | 95.0 | 270 | 2122 | 36.47 | |
| | 1800 | 460 | 445TS | U537C | 445TSTD4334 | | 95.0 | 223 | 2122 | 36.47 | 68 |
| | 1800 | 575 | 445TS | U1128A | 445TSTD4030 | | 95.0 | 178 | 2122 | 36.47 | |
| 250 | 3600 | 380 | 445TS | U1539B | 445TSTD4024 | | 94.5 | 329 | 1425 | 36.47 | |
| | 3600 | 460 | 445TS | U539C | 445TSTD4001 | | 94.5 | 272 | 1425 | 36.47 | 68 |
| | 3600 | 575 | 445TS | U1130A | 445TSTD4002 | ¶ | 94.5 | 217 | 1425 | 36.47 | |
| | 1800 | 380 | 445TS | U1540B | 445TSTD4065 | | 95.4 | 338 | 2262 | 36.47 | |
| | 1800 | 460 | 445TS | U540B | 445TSTD4027 | √ | 95.4 | 279 | 2262 | 36.47 | 68 |
| | 1800 | 575 | 445TS | U1131A | 445TSTD4031 | | 95.4 | 223 | 2262 | 36.47 | |
| 300 | 3600 | 460 | 447TS | U541 | 447TSTD4002 | ¶ | 95.0 | 322 | 2046 | 45.76 | 68 |
| | 1800 | 460 | 447TS | U542 | 447TSTD4026 | √ | 95.4 | 328 | 2714 | 45.76 | 68 |
| 350 | 3600 | 460 | 447TS | U543 | 447TSTD4003 | ¶ | 95.5 | 377 | 2046 | 45.76 | 68 |
| | 1800 | 460 | 447TS | U544 | 447TSTD4027 | | 95.5 | 385 | 2046 | 45.76 | 68 |
| 400 | 3600 | 460 | 447TS | U545 | 447TSTD4005 | | 95.6 | 429 | 2354 | 45.76 | 68 |
| | 1800 | 460 | 447TS | U546 | 447TSTD4028 | | 95.4 | 442 | 2354 | 45.76 | 68 |
| 450 | 3600 | 460 | 449TS | H818 | 449TSTD7001 | | 95.8 | 502 | 2544 | 45.76 | 68 |
| | 1800 | 460 | 449TS | H815A | 449TSTD14033 | √ | 95.8 | 505 | 2564 | 44.58 | 17, 68 |
| 500 | 3600 | 460 | 449TS | H819A | 449TSTD14005 | √ | 95.8 | 546 | 2620 | 44.58 | 68 |
| | 1800 | 460 | 449TS | H816 | 449TSTD7027 | √ | 95.8 | 560 | 2695 | 44.58 | 17, 68 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

FIRE PUMP MOTORS

THREE-PHASE, TEFC, RIGID BASE, EPACT EFFICIENCY

APPLICATIONS

For use on pumps designed for fire pump duty and installed per NFPA-20. Fire Pump motors are not recommended for use with variable frequency drives.

FEATURES

- UL®** file EX5190, CSA®** file LR2025 and CE®** mark
- 40° C ambient
- Ball bearings
- 1.15 service factor (except as noted)
- Red paint on 25 HP through 250 HP
- NEMA®* design B, code G or less
- Will accept C-Face kits (except as noted), see accessories section for kits
- 230/460 and 460 Volt models rated for 50 HZ at next lower HP, 1.15 SF, as noted
- Single voltage motors have 12 leads and are suitable for wye-delta, across the line, or part winding start
- Dual voltage motors have 12 leads, suitable for wye-delta or across the line start on either voltage, or part winding start on low voltage



FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-----|------|---------|-------|--------------|----------------|-------|-----------|-----------|------|----------|------------|-------------|
| 15 | 3600 | 230/460 | 254T | Y1608 | 254TTFPA14014 | | 90.2 | 35.0/17.5 | 262 | 23.47 | | A239 |
| | 1800 | 230/460 | 254T | Y1609 | 254TTFNA14336 | ¶ | 91.0 | 39.0/19.5 | 297 | 23.65 | | A284 |
| 20 | 3600 | 230/460 | 256T | Y1610 | 256TTFNA14022 | | 90.2 | 46.5/23.2 | 682 | 25.40 | | A284 |
| | 1800 | 230/460 | 256T | Y1611 | 256TTFNA14071 | | 91.0 | 50.0/25.0 | 331 | 25.27 | | A284 |
| 25 | 3600 | 230/460 | 284TS | Y1612 | 284TSTFPA14007 | | 91.0 | 59.0/29.5 | 378 | 24.93 | | A617 |
| | 1800 | 230/460 | 284T | Y1613 | 284TTFPA14055 | | 92.4 | 61.0/30.5 | 369 | 26.39 | | A617 |
| 30 | 3600 | 230/460 | 286TS | Y1614 | 286TSTFPA14006 | | 91.0 | 70.0/35.0 | 413 | 26.43 | | A617 |
| | 1800 | 230/460 | 286T | Y1615 | 286TTFNA14050 | | 92.4 | 72.0/36.0 | 484 | 27.71 | | A618 |
| 40 | 3600 | 230/460 | 324TS | Y1616 | 324TSTFPA14010 | | 91.7 | 92.0/46.0 | 531 | 27.47 | | A619 |
| | 1800 | 230/460 | 324T | Y1618 | 324TTFPA14071 | | 93.0 | 100/50.0 | 583 | 28.97 | | A619 |
| 50 | 3600 | 230/460 | 326TS | Y1619 | 326TSTFPA14013 | | 92.4 | 112/56.0 | 522 | 28.97 | | A619 |
| | 1800 | 230/460 | 326T | Y1621 | 326TTFNA14046 | | 93.0 | 122/61.0 | 681 | 30.38 | | A214 |
| 60 | 3600 | 230/460 | 364TS | Y1622 | 364TSTFPA14009 | | 93.0 | 138/69.0 | 815 | 29.38 | | A396 |
| | 1800 | 230/460 | 364T | Y1624 | 364TTFNA14064 | | 93.6 | 142/71.0 | 882 | 31.52 | | A395 |
| 75 | 3600 | 230/460 | 365TS | Y1625 | 365TSTFPA14009 | | 93.0 | 172/86.0 | 911 | 30.38 | | A396 |
| | 1800 | 230/460 | 365T | Y1627 | 365TTFNA14071 | | 94.1 | 176/88.0 | 990 | 32.52 | | A395 |
| 100 | 3600 | 230/460 | 405TS | Y1628 | 405TSTFPA14007 | | 94.1 | 224/112 | 1103 | 34.13 | | A226 |
| | 1800 | 230/460 | 405T | Y1630 | 405TTFNA14328 | | 94.5 | 224/112 | 1234 | 37.13 | | A223 |
| 125 | 3600 | 460 | 444TS | Y1631 | 444TSTFNA14004 | | 94.5 | 140 | 1818 | 39.60 | | A621 |
| | 1800 | 460 | 444T | Y1633 | 444TTFNA14048 | | 94.5 | 145 | 1798 | 43.35 | | A620 |
| 150 | 3600 | 460 | 445TS | Y1634 | 445TSTFNA14013 | | 94.5 | 165 | 1981 | 39.60 | | A621 |
| | 1800 | 460 | 445TS | Y1635 | 445TSTFNA14067 | | 95.0 | 170 | 1860 | 39.60 | | A621 |
| | 1800 | 460 | 445T | Y1636 | 445TTFNA14337 | | 95.0 | 170 | 2025 | 43.35 | | A620 |
| 200 | 3600 | 460 | 445TS | Y1637 | 445TSTFNA14014 | | 95.0 | 220 | 2108 | 39.60 | | A621 |
| | 1800 | 460 | 445TS | Y1638 | 445TSTFNA14066 | | 95.0 | 224 | 2164 | 39.60 | | A621 |
| 250 | 1800 | 460 | 445T | Y1639 | 445TTFNA14338 | | 95.0 | 224 | 1878 | 43.35 | | A620 |
| | 3600 | 460 | 449TS | Y1640 | 449TSTFNA14012 | | 95.4 | 270 | 2700 | 48.11 | | A624 |
| | 1800 | 460 | 449TS | Y1641 | 449TSTFNA14040 | | 95.4 | 285 | 2732 | 48.11 | | A624 |

Continued on next page.

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

FIRE PUMP MOTORS

THREE-PHASE, TEFC, RIGID BASE, EPACT EFFICIENCY

FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES | C-FACE KITS |
|-----|------|-------|-----------|--------------|---------------|-------|-----------|----------|------|----------|------------|-------------|
| 250 | 1800 | 460 | 449T | Y1642 | 449TTFS14055 | | 95.0 | 290 | 2550 | 51.86 | | A623 |
| 300 | 3600 | 460 | 447/449TS | Y1643 | 449TSTFS14013 | | 95.4 | 328 | 2902 | 47.88 | | A624 |
| | 1800 | 460 | 449TS | Y1644 | 449TSTFS14045 | | 95.4 | 335 | 2720 | 48.11 | | A624 |
| | 1800 | 460 | 449T | Y1645 | 449TTFS14057 | | 95.4 | 335 | 3041 | 51.86 | | A623 |
| 350 | 3600 | 460 | 449TS | Y1646 | 449TSTFS14010 | | 95.8 | 382 | 3088 | 47.88 | | A624 |
| | 1800 | 460 | 449TS | Y1647 | 449TSTFS14044 | | 95.4 | 400 | 2720 | 48.11 | | A624 |
| | 1800 | 460 | 449T | Y1648 | 449TTFS14056 | | 95.4 | 400 | 3202 | 51.86 | | A623 |
| 400 | 3600 | 460 | 5011S | Y1649 | -- | | 95.4 | 432 | 5500 | 67.19 | | |
| | 1800 | 460 | 5011L | Y1650 | -- | | 95.4 | 448 | 5500 | 67.19 | | |
| 450 | 3600 | 460 | 5011L | Y1651 | -- | | 95.4 | 515 | 5845 | 67.19 | | |
| | 1800 | 460 | 5011L | Y1652 | -- | | 95.4 | 495 | 5942 | 67.19 | | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

VERTICAL SOLID SHAFT P-BASE MOTORS

NEMA PREMIUM ®*, THREE-PHASE, DRIPPROOF

APPLICATIONS

For use on: Vertical end suction, short couple, centrifugal, non-clog, mix flow, turbine, and propeller pumps. HP type shafts, per NEMA®*MG-1 18.625. HPH and TCV type shafts, Single-phase, and other modifications such as adding screens are also available through special order. Contact your sales representative for more information.

FEATURES

- Meets or exceeds NEMA Premium®* efficiencies
- Normal and medium thrust
- Rolled steel frames are normal thrust. Cast iron frames are medium thrust
- Ball bearings and angular contact bearings for medium thrust applications
- Class F insulation
- 1.15 service factor
- Suitable for 230 volt part winding start through 100 HP (dual voltage motors)
- Heavy duty lifting lugs
- Drip cover/canopy cap included
- UL®* recognized, CSA®* certified
- UL Listed for Fire Pump applications (except as noted)



FOOTLESS (VERTICAL)

| HP | RPM | VOLTS | FRAME | "CAT. NO." | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | EST WT. | "C" DIM. | DOWN THRUST | BASE DIA. | FOOT NOTES |
|-------|------|---------|--------|--------------|---------------|-------|-----------|-----------|---------|----------|-------------|-----------|------------|
| 3 | 3600 | 230/460 | 182HPV | M800B | - | | 85.5 | | 113 | 14.00 | 260 | 9.88 | 98 |
| | 1800 | 230/460 | 182HPV | M801B | 182TTDR16072 | | 89.5 | 7.8/3.9 | 109 | 17.18 | 390 | 9.88 | 98 |
| | 1200 | 230/460 | 213HPV | M802B | 213TTDWD16089 | | 88.5 | 9.0/4.5 | 129 | 20.30 | 560 | 9.88 | 98 |
| 5 | 3600 | 230/460 | 182HPV | M803B | - | | 86.5 | | 121 | 17.68 | 310 | 9.88 | 98 |
| | 1800 | 230/460 | 184HPV | M804B | 184TTDR16009 | | 89.5 | 12.6/6.3 | 120 | 17.18 | 490 | 9.88 | 98 |
| | 1200 | 230/460 | 215HPV | M805B | 215TTDWD16091 | | 89.5 | 13.8/6.9 | 129 | 21.55 | 650 | 9.88 | 98 |
| 7 1/2 | 3600 | 230/460 | 184HPV | M806B | - | | 88.5 | | 128 | 16.91 | 380 | 9.88 | 98 |
| | 1800 | 230/460 | 213HPV | M807B | 213TTDWD16342 | | 91.0 | 20.0/10.0 | 123 | 20.30 | 560 | 9.88 | 98 |
| | 1200 | 230/460 | 254HPV | M808B | 254TTDX16086 | | 90.2 | 21.4/10.7 | 37 | 24.30 | 720 | 9.88 | 98 |
| | 900 | 230/460 | 254HPV | M708 | - | | 89.5 | 8.4/4.2 | 271 | 16.91 | 3000 | 9.88 | |
| 10 | 3600 | 230/460 | 213HPV | M809B | 213TTDWD16007 | | 89.5 | 24.2/12.1 | 140 | 21.01 | 450 | 9.88 | 98 |
| | 1800 | 230/460 | 215HPV | M810B | 215TTDWD16350 | | 91.7 | 26.2/13.1 | 123 | 20.30 | 560 | 9.88 | 98 |
| | 1200 | 230/460 | 256HPV | M711 | 256TTDN16082 | | 91.7 | 26.0/13.0 | 468 | 24.30 | 3000 | 9.88 | |
| | 900 | 230/460 | 284HPV | M712 | - | | 90.2 | 8.4/4.2 | 560 | 27.26 | 4125 | 9.88 | |
| 15 | 3600 | 230/460 | 215HPV | M813B | 215TTDWD14018 | | 90.2 | 36.5/18.2 | 129 | 21.55 | 520 | 9.88 | 98 |
| | 1800 | 230/460 | 254HPV | M814B | 254TTDX16054 | | 93.0 | 38.5/19.2 | 227 | 24.30 | 640 | 9.88 | 98 |
| | 1200 | 230/460 | 284HPV | M715 | 284TTDN16087 | | 91.7 | 41.0/20.4 | 570 | 27.06 | 1950 | 12.55 | |
| | 900 | 230/460 | 284HPV | M716 | - | | 90.2 | 8.4/4.2 | 590 | 28.76 | 4125 | 12.55 | |
| 20 | 3600 | 230/460 | 254HPV | M717 | - | | 91.0 | 47.0/23.5 | 326 | 24.30 | 640 | 9.88 | |
| | 1800 | 230/460 | 256HPV | M818B | 256TTDR16029 | | 93.6 | 49.0/24.5 | 281 | 24.30 | 640 | 9.88 | 98 |
| | 1800 | 230/460 | 256HPV | M718A | 256TTDN16067 | | 93.6 | 48.0/24.0 | 284 | 27.87 | 2400 | 9.88 | |
| | 1200 | 230/460 | 286HPV | M719 | 286TTDN16093 | | 92.4 | 52.0/26.0 | 562 | 29.56 | 3000 | 12.55 | |
| | 900 | 230/460 | 324HPV | M720 | 324TTDN16101 | | 91.0 | 60.0/30.0 | 465 | 30.56 | 4125 | 16.38 | |

Continued on next page.

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

VERTICAL SOLID SHAFT P-BASE MOTORS

THREE-PHASE, DRIPPROOF

FOOTLESS (VERTICAL)

| HP | RPM | VOLTS | FRAME | "CAT. NO." | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | EST WT. | "C" DIM. | DOWN THRUST | BASE DIA. | FOOT NOTES |
|-----|------|---------|--------|--------------|--------------|-------|-----------|-----------|---------|----------|-------------|-----------|------------|
| 25 | 3600 | 230/460 | 256HPV | M721A | 256TTDN16018 | | 91.7 | 58.0/29.0 | 357 | 27.84 | 1950 | 9.88 | |
| | 1800 | 230/460 | 284HPV | M722 | 284TTDN16063 | | 93.6 | 62.0/31.0 | 289 | 27.06 | 2625 | 12.55 | |
| | 1200 | 230/460 | 324HPV | M823B | 324TTDR16091 | | 93.0 | 65.0/32.5 | 588 | 30.06 | 1000 | 16.38 | 98 |
| | 1200 | 230/460 | 324HPV | M723 | 324TTDN16077 | | 93.0 | 65.0/32.5 | 601 | 31.93 | 3750 | 16.38 | |
| | 900 | 230/460 | 326HPV | M724 | 326TTDN16101 | | 91.0 | 73.0/36.5 | 531 | 31.93 | 4125 | 16.38 | |
| 30 | 3600 | 230/460 | 284HPV | M825B | 284TTDN16007 | | 93.6 | 68.0/34.0 | 292 | 27.06 | 2063 | 12.55 | |
| | 1800 | 230/460 | 286HPV | M726 | 286TTDN16330 | | 94.1 | 74.0/37.0 | 628 | 29.56 | 2625 | 12.55 | |
| | 1200 | 230/460 | 324HPV | M727 | 324TTDN16078 | | 93.6 | 77.0/38.5 | 354 | 33.44 | 3750 | 16.38 | |
| | 900 | 230/460 | 364HPV | M728 | 364TTDS16105 | | 91.7 | 82.0/41.0 | 700 | 29.00 | 4125 | 16.50 | |
| 40 | 3600 | 230/460 | 286HPV | M729 | 286TTDN16011 | | 93.6 | 90.0/45.0 | 602 | 28.56 | 2063 | 12.55 | |
| | 1800 | 230/460 | 324HPV | M730 | - | | 94.1 | | 784 | 28.06 | 3000 | 16.38 | |
| | 1200 | 230/460 | 364HPV | M731 | 364TTDS16088 | | 94.1 | 101/50.5 | 784 | 28.06 | 3750 | 16.50 | |
| | 900 | 230/460 | 365HPV | M732 | 365TTDS16101 | | 91.7 | 105/52.5 | 784 | 29.00 | 4125 | 16.50 | |
| 50 | 3600 | 230/460 | 324HPV | M733 | - | | 93.0 | 117/58.5 | 510 | 29.56 | 2250 | 16.38 | |
| | 1800 | 230/460 | 326HPV | M734 | 326TTDN16035 | | 94.5 | 124/62.0 | 615 | 30.56 | 3000 | 16.38 | |
| | 1200 | 230/460 | 365HPV | M735 | 365TTDS16086 | | 94.1 | 125/62.5 | 1040 | 29.00 | 3750 | 16.50 | |
| | 900 | 230/460 | 404HPV | M736 | 404TTDS16102 | | 92.4 | 65.0 | 1064 | 31.75 | 5250 | 16.50 | |
| 60 | 3600 | 230/460 | 326HPV | M737 | - | | 93.6 | | 645 | 30.56 | 2250 | 16.38 | |
| | 1800 | 230/460 | 364HPV | M738 | 364TTDS16052 | | 95.0 | 139/69.5 | 745 | 34.19 | 3000 | 16.50 | |
| | 1200 | 230/460 | 404HPV | M739 | 404TTDS16093 | | 95.0 | 146/73.0 | 1130 | 31.75 | 4500 | 16.50 | |
| | 900 | 230/460 | 405HPV | M740 | 405TTDS16102 | | 93.0 | 160/80.0 | 1889 | 31.75 | 5250 | 16.50 | |
| 75 | 3600 | 230/460 | 364HPV | M741 | 364TTDS16009 | | 94.5 | 170/85.0 | 733 | 29.00 | 2250 | 16.50 | |
| | 1800 | 230/460 | 365HPV | M742 | 365TTDS16072 | | 95.0 | 174/87.0 | 800 | 29.00 | 3000 | 16.50 | |
| | 1200 | 230/460 | 405HPV | M743 | 405TTDS16089 | | 95.0 | 180/90.0 | 1097 | 31.75 | 4500 | 16.50 | |
| | 900 | 460 | 444HPV | M744 | 444TTDN16101 | | 93.6 | 107 | 1548 | 36.02 | 6000 | 16.38 | |
| 100 | 3600 | 230/460 | 365HPV | M745 | 365TTDS16016 | | 94.1 | 230/115 | 784 | 29.00 | 2250 | 16.50 | |
| | 1800 | 230/460 | 404HPV | M746 | 404TTDS16332 | | 95.4 | 226/113 | 1162 | 35.64 | 3375 | 16.50 | |
| | 1200 | 230/460 | 444HPV | M747 | 444TTDN16078 | | 95.0 | 246/123 | 1548 | 36.02 | 5250 | 16.38 | |
| | 900 | 460 | 445HPV | M748 | 445TTDN16101 | | 94.1 | 135 | 1548 | 36.02 | 6000 | 16.38 | |
| 125 | 3600 | 460 | 404HPV | M749 | 404TTDS16010 | | 95.0 | 138 | 1009 | 31.75 | 2250 | 16.50 | |
| | 1800 | 460 | 405HPV | M750 | 405TTDS16070 | | 95.4 | 141 | 1400 | 31.75 | 3375 | 16.50 | |
| | 1200 | 460 | 445HPV | M751 | 445TTDN16080 | | 95.0 | 152 | 1548 | 36.02 | 5250 | 16.38 | |
| | 900 | 460 | 505HPV | M752 | 505UTDS16102 | | 94.5 | 170 | 1976 | 38.75 | 6000 | 20.00 | 98 |
| 150 | 3600 | 460 | 405HPV | M753 | 405TTDS16010 | | 95.0 | 165 | 1082 | 31.75 | 2250 | 16.50 | |
| | 1800 | 460 | 444HPV | M754 | 444TTDN16027 | | 95.8 | 172 | 1548 | 36.02 | 3375 | 16.38 | |
| | 1200 | 460 | 445HPV | M755 | 445TTDN16079 | | 95.4 | 178 | 1548 | 36.02 | 5250 | 16.38 | |
| | 900 | 460 | 505HPV | M756 | 505UTDS16103 | | 94.5 | 191 | 2148 | 38.75 | 6000 | 20.00 | 98 |
| 200 | 3600 | 460 | 444HPV | M757 | 444TTDN16003 | | 95.0 | 220 | 1548 | 36.02 | 2250 | 16.38 | |
| | 1800 | 460 | 445HPV | M758 | 445TTDN16031 | | 95.8 | 226 | 1548 | 36.02 | 3375 | 16.38 | |
| | 1200 | 460 | 505HPV | M759 | 505UTDS16076 | | 95.4 | 240 | 2140 | 38.75 | 5250 | 20.00 | 98 |
| | 900 | 460 | 505HPV | M760 | 505UTDS16101 | | 94.1 | 265 | 1960 | 38.75 | 6000 | 20.00 | 98 |
| 250 | 3600 | 460 | 445HPV | M761 | 445TTDN16002 | | 95.4 | 275 | 1446 | 36.02 | 2250 | 16.38 | |
| | 1800 | 460 | 445HPV | M762 | 445TTDN16032 | | 95.8 | 282 | 1548 | 36.02 | 3750 | 16.38 | |
| | 1200 | 460 | 508HPV | M763 | 508UTDS16078 | | 95.8 | 300 | 2318 | 38.75 | 5250 | 20.00 | 98 |

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

✓ Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

VERTICAL SOLID SHAFT P-BASE MOTORS

NEMA PREMIUM[®]*, THREE-PHASE, TOTALLY ENCLOSED

APPLICATIONS

For use on: Vertical end suction, short couple, centrifugal, non-clog, mix flow, turbine, and propeller pumps. HP type shafts, per NEMA[®] MG-1, 18.625. Totally enclosed fan cooled construction restricts the free exchange of ambient air inside the motor. Suitable for demanding applications in the process industries. HPH type shafts, severe duty features, explosion proof, and other modifications are also available through special order. Contact your sales representative for more information.



FEATURES

- Meets or exceeds NEMA Premium[®]* efficiencies
- Normal thrust
- Class F insulation
- 1.15 service factor
- Suitable for 230 volt part winding start through 100 HP (dual voltage motors)
- Heavy duty lifting lugs drip cover/canopy cap included over/canopy cap included
- UL[®]* recognized, CSA[®]* certified

FOOTLESS (VERTICAL)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | DOWN THRUST | BASE DIA. | FOOT NOTES |
|-------|------|---------|--------|--------------|---------------|-------|-----------|-----------|------|----------|-------------|-----------|------------|
| 3 | 3600 | 230/460 | 182HPV | M875B | 182TTFR16017 | | 87.5 | 7.6/3.8 | 109 | 18.05 | 260 | 9.88 | |
| | 1800 | 230/460 | 182HPV | M876B | 182TTFR16035 | | 89.5 | 8.0/4.0 | 0 | 18.05 | 390 | 9.88 | |
| | 1200 | 230/460 | 213HPV | M877B | 213TTFW16085 | | 89.5 | 8.8/4.4 | 172 | 22.66 | 560 | 9.88 | |
| 5 | 3600 | 230/460 | 184HPV | M787B | - | | 88.5 | 8.4/4.2 | #N/A | 20.05 | 390 | 9.88 | |
| | 1800 | 230/460 | 184HPV | M879B | 184TTFR16054 | | 90.2 | 12.4/6.2 | 160 | 20.05 | 490 | 9.88 | |
| | 1200 | 230/460 | 215HPV | M880B | 215TTFWD16084 | | 89.5 | 15.6/7.8 | 139 | 23.91 | 650 | 9.88 | |
| 7 1/2 | 3600 | 230/460 | 213HPV | M881B | 213TTFWD16016 | | 89.5 | 18.6/9.3 | 157 | 22.66 | 380 | 9.88 | |
| | 1800 | 230/460 | 213HPV | M882B | - | | 91.7 | 8.4/4.2 | #N/A | 22.66 | 490 | 9.88 | |
| | 1200 | 230/460 | 254HPV | M883B | 254TTFNA16088 | | 91.0 | 19.8/9.9 | 422 | 28.26 | 720 | 9.88 | |
| 10 | 3600 | 230/460 | 215HPV | M884B | 215TTFWD16017 | | 90.2 | 23.6/11.8 | 172 | 22.66 | 450 | 9.88 | |
| | 1800 | 230/460 | 215HPV | M885B | 215TTFWD16057 | | 91.7 | 26.4/13.2 | 158 | 23.91 | 560 | 9.88 | |
| | 1200 | 230/460 | 256HPV | M886B | 256TTFNA16099 | | 91.0 | 26.2/13.1 | 1059 | 28.26 | 720 | 9.88 | |
| 15 | 3600 | 230/460 | 254HPV | M888B | - | | 91.0 | | #N/A | 28.26 | 520 | 9.88 | |
| | 1800 | 230/460 | 254HPV | M889B | - | | 92.4 | | #N/A | 28.26 | 640 | 9.88 | |
| | 1800 | 230/460 | 284HPV | M890B | 284TTFPA16033 | | 92.4 | 36.0/18.0 | 400 | 28.88 | 800 | 9.88 | |
| 20 | 3600 | 230/460 | 256HPV | M892B | 256TTFNA16106 | | 91.0 | 48.0/24.0 | 413 | 28.26 | 520 | 9.88 | |
| | 1800 | 230/460 | 256HPV | M893B | 256TTFNA16031 | | 93.0 | 48.0/24.1 | 536 | 28.26 | 640 | 9.88 | |
| | 1200 | 230/460 | 286HPV | M894B | 286TTFNA16096 | | 92.1 | 53.5/26.7 | 438 | 30.84 | 800 | 9.88 | |
| 25 | 3600 | 230/460 | 284HPV | M896B | 284TTFNA16015 | | 93.6 | 56.0/28.1 | 542 | 30.84 | 550 | 9.88 | |
| | 1800 | 230/460 | 284HPV | M897B | 284TTFNA16131 | | 93.6 | 62.0/31.0 | 466 | 28.88 | 700 | 9.88 | |
| | 1200 | 230/460 | 324HPV | M898B | 324TTFFS16087 | | 93.0 | 65.0/32.5 | 778 | 35.62 | 1000 | 16.38 | |
| 30 | 3600 | 230/460 | 286HPV | M900B | 286TTFNA16021 | | 93.0 | 67.0/33.5 | 2834 | 27.38 | 550 | 9.88 | |
| | 1800 | 230/460 | 286HPV | M901B | 286TTFNA16341 | | 94.1 | 73.0/36.5 | 1846 | 27.38 | 700 | 9.88 | |
| | 1200 | 230/460 | 326HPV | M902B | 326TTFFS16377 | | 93.0 | 77.0/38.5 | 37 | 35.62 | 1000 | 16.38 | |
| 40 | 3600 | 230/460 | 324HPV | M904B | 324TTFFS16011 | | 93.0 | 94.0/47.0 | 742 | 35.62 | 600 | 16.38 | |
| | 1800 | 230/460 | 324HPV | M905B | 324TTFFS6041 | | 94.1 | 95.0/47.5 | 820 | 35.62 | 800 | 16.38 | |
| | 1200 | 230/460 | 364HPV | M906B | 364TTFFS16087 | | 94.1 | 100/50.0 | 934 | 37.61 | 1000 | 16.38 | |
| 50 | 3600 | 230/460 | 326HPV | M908B | - | | 93.0 | #N/A | #N/A | 34.59 | 700 | 16.38 | |
| | 1800 | 230/460 | 326HPV | M909B | 326TTFFS16037 | | 94.5 | 120/60.0 | 825 | 34.59 | 800 | 16.38 | |
| | 1200 | 230/460 | 365HPV | M910B | 365TTFFS16088 | | 94.5 | 123/61.5 | 1158 | 37.61 | 1000 | 16.38 | |
| 60 | 3600 | 230/460 | 364HPV | M912B | 364TTFFS16008 | | 94.5 | 134/67.0 | 1064 | 37.61 | 600 | 16.38 | |
| | 1800 | 230/460 | 364HPV | M913B | 364TTFFS6059 | | 95.0 | 140/70.0 | 1116 | 37.61 | 800 | 16.38 | |
| | 1200 | 230/460 | 404HPV | M914B | 404TTFFS16086 | | 94.5 | 144/72.0 | 1307 | 40.58 | 1400 | 16.38 | |
| 75 | 3600 | 230/460 | 365HPV | M916B | 365TTFFS16013 | | 94.5 | 168/84.0 | 1059 | 37.61 | 600 | 16.38 | |
| | 1800 | 230/460 | 365HPV | M917B | 365TTFFS16132 | | 95.4 | 172/86.0 | 1190 | 37.61 | 800 | 16.38 | |
| | 1200 | 230/460 | 405HPV | M918B | 405TTFFS16082 | | 94.5 | 180/90.0 | 1460 | 40.58 | 1400 | 16.38 | |

Continued on next page.

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

VERTICAL SOLID SHAFT P-BASE MOTORS

NEMA PREMIUM^{®*}, THREE-PHASE, TOTALLY ENCLOSED

FOOTLESS (VERTICAL)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | DOWN THRUST | BASE DIA. | FOOT NOTES |
|-----|------|---------|--------|--------------|--------------|-------|-----------|----------|------|----------|-------------|-----------|------------|
| 100 | 3600 | 230/460 | 405HPV | M920B | 405TTFS16004 | | 94.1 | 224/112 | 1362 | 40.58 | 600 | 16.38 | |
| | 1800 | 230/460 | 405HPV | M921B | 405TTFS16129 | | 95.4 | 226/113 | 1449 | 40.58 | 900 | 16.38 | |
| | 1200 | 230/460 | 444HPV | M922B | 444TTFN16081 | | 95.0 | 248/124 | 2110 | 43.50 | 1400 | 16.38 | |
| 125 | 3600 | 460 | 444HPV | M924B | 444TTFN16001 | | 95.0 | 142 | 2128 | 43.50 | 600 | 16.38 | |
| | 1800 | 460 | 444HPV | M925B | 444TTFN16045 | | 95.4 | 146 | 2122 | 43.50 | 1000 | 16.38 | |
| | 1200 | 460 | 445HPV | M926B | 445TTFN16091 | | 95.0 | 155 | 2276 | 43.50 | 1400 | 16.38 | |
| 150 | 3600 | 460 | 445HPV | M928B | 445TTFN16001 | | 95.8 | 168 | 2162 | 43.50 | 600 | 16.38 | |
| | 1800 | 460 | 445HPV | M929B | 445TTFN16361 | | 95.8 | 170 | 2298 | 43.50 | 1000 | 16.38 | |
| 200 | 1800 | 460 | 445HPV | M933B | 445TTFN16359 | | 96.2 | 226 | 2490 | 43.50 | 1000 | 16.38 | |

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

Continued on next page.

POOL PUMP MOTORS

SINGLE AND THREE-PHASE, DRIPPROOF



APPLICATIONS

Purex Hydrotech® East Side "L" Series and "C" Series commercial pump replacement motors.

FEATURES

- Class F insulation
- External Slinger

D-FLANGE FOOTLESS - SINGLE-PHASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|---------|--------|----------|-----------|-------|-----------|----------|-----|----------|------------|
| 5 | 3600 | 220/440 | 184TDZ | V214M2 | V214M2 | | 78.5 | 25.4 | 108 | 17.32 | |

D-FLANGE FOOTLESS - THREE-PHASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|--------|----------|-----------|-------|-----------|-----------|-----|----------|------------|
| 5 | 3600 | 220/440 | 182TDZ | R237M2A | R237M2A | | 86.5 | 13.0/6.5 | 48 | 14.32 | |
| | 3600 | 220/440 | 182TDZ | R237M2B | R237M2B | | 86.5 | 13.8/6.9 | 40 | 14.26 | |
| 7 1/2 | 3600 | 220/440 | 184TDZ | R232M2B | R232M2B | | 88.5 | 19.2/9.6 | 40 | 14.26 | |
| 10 | 3600 | 220/440 | 213TDZ | R338M2B | R338M2B | | 89.5 | 25.3/12.7 | 125 | 18.17 | |
| 15 | 3600 | 220/440 | 215TDZ | R339M2A | R339M2A | | 91.0 | 38.0/19.0 | 127 | 18.04 | |

POOL PUMP MOTORS

SINGLE AND THREE-PHASE, DRIPPROOF



APPLICATIONS

Pentair® pool pump replacement motors

FEATURES

- Class F insulation
- 303 Stainless Steel shaft extension

C-FACE FOOTED (RIGID BASE) - SINGLE-PHASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------|--------|----------|-----------|-------|-----------|----------|-----|----------|------------|
| 7 1/2 | 3600 | 230 | 213JMZ | CEQ750 | CEQ750 | | 88.5 | 34.0 | 84 | 19.92 | |

C-FACE FOOTED (RIGID BASE) - THREE-PHASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|--------|------------|------------|-------|-----------|-----------|-----|----------|------------|
| 5 | 3600 | 230/460 | 182JMZ | CEQK500V1 | CEQK500V1 | | 86.5 | 14.8/7.4 | 64 | 15.27 | |
| 7 1/2 | 3600 | 230/460 | 184JMZ | CEQK750V1 | CEQK750V1 | | 88.5 | 21.0/10.5 | 79 | 16.27 | |
| | 3600 | 230/460 | 213JMZ | CEQK1000 | CEQK1000 | | 90.2 | 25.6/12.8 | 105 | 19.78 | |
| 10 | 3600 | 230/460 | 213JMZ | CEQK1000V1 | CEQK1000V1 | | 89.5 | 27.6/13.8 | 85 | 19.80 | |
| | 3600 | 230/460 | 215JMZ | CEQK1500V1 | CEQK1500V1 | | 90.2 | 41.0/20.6 | 95 | 19.80 | |

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available †: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

Continued on next page.

POOL PUMP MOTORS

SINGLE AND THREE-PHASE, DRIPPROOF

APPLICATIONS

West Coast shaft pump replacement motors

FEATURES

- Oversized, locked shaft end bearing
- 1.15 service factor



C-FACE FOOTED (RIGID BASE)

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------|--------|----------|-----------|-------|-----------|-----------|-----|-------------|------------|
| 5 | 3600 | 230 | 184TCZ | P212M2 | P212M2 | | 78.5 | 25.4 | 101 | 21.02 | |
| | 1800 | 230 | 213TCZ | P312M2 | P312M2 | | 82.5 | 22.0 | 172 | 22.98 | |
| 7 1/2 | 1800 | 230 | 215TCZ | P313M2 | P313M2 | | 84 | 34.5 | 123 | 22.98 | |
| 10 | 3600 | 230 | 215TCZ | P321M2 | P321M2 | | 82.5 | 39.5 | 104 | 24.83 | |

CENTRIFUGAL FAN

SINGLE-PHASE, DRIPPROOF, RIGID BASE

APPLICATIONS

Direct drive centrifugal fans installed in relatively clean and dry applications

FEATURES

- Capacitor start/capacitor run design for high starting torque and low amps
- Ball bearings, mechanically locked on shaft end
- 84" leads, rodent screens
- Heavy gauge steel frame and base
- Shaft 1" longer than NEMA®* standard for extra clearance
- 1.15 service factor (unless otherwise noted)
- UL®* recognized and CSA®* certified



| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------|-------|----------|-------------|-------|-----------|-----------|-----|----------|------------|
| 10 | 1800 | 230 | 215TZ | Z126 | 215TBDW7362 | | 82.5 | 44.0 | 158 | 21.1 | 13 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

AGGREGATE DUTY - BLUE CHIP SERIES® CRUSHER MOTORS

NEMA PREMIUM®* XRI®, TOTALLY ENCLOSED,
THREE-PHASE, HIGH TORQUE

APPLICATIONS

Specifically designed for the aggregate industry crusher applications such as cone, jaw, and roller type impactors, pulverizers, etc.

FEATURES

- Meets or exceeds NEMA Premium efficiencies
- Blue Chip Series® quality, 100% cast iron construction for rigidity and reduced vibration
- 4140 high strength shaft material
- NEMA®* design C, extra high starting and breakdown torque design
- Roller bearing on drive end for belted loads
- IP55 rating, enclosure protection against dust and water jets
- Suitable for use on a VFD. 10:1 variable torque and 10:1 constant torque
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Suitable for across the line, wye-delta, part winding, or inverter start
- 80°C rise at rated load
- Class F insulation
- Axial surface seal (50 to 200HP) and Inpro® smart ring plus
- Rotating shaft seals, each end for the 250HP model
- External epoxy paint
- Brass drain and breather
- UL®* recognized and CSA®* certified



| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | NOM. EFF. | "FL. AMPS" | "EST WT." | "C" DIM." | "FOOT NOTES" |
|-----|------|---------|-------|--------------|------------|-------|----------------|-----------|------------|-----------|-----------|--------------|
| 50 | 1800 | 230/460 | 326T | Y818A | 326TTF6633 | √ | 4:1 | 94.5 | 118/59.0 | 683 | 33.86 | YD |
| | 1200 | 230/460 | 365T | Y840A | 365TTF6683 | √ | 4:1 | 94.1 | 120/60.0 | 1064 | 38.39 | YD |
| 60 | 1800 | 230/460 | 364T | Y819A | 364TTF6633 | √ | 4:1 | 95.0 | 138/69.0 | 421 | 36.61 | YD |
| | 1200 | 230/460 | 404T | Y850A | 404TTF6683 | √ | 4:1 | 94.5 | 144/72.0 | 558 | 42.72 | YD |
| 75 | 1800 | 230/460 | 365T | Y820A | 365TTF6633 | √ | 4:1 | 95.4 | 172/86.0 | 463 | 38.39 | YD |
| | 1200 | 230/460 | 405T | Y852A | 405TTF6683 | √ | 4:1 | 94.5 | 178/89.0 | 1455 | 42.72 | YD |
| 100 | 1800 | 230/460 | 405T | Y822B | 405TTF6633 | √ | 4:1 | 95.4 | 228/114 | 1462 | 42.72 | YD |
| | 1200 | 460 | 444T | Y851A | 444TTF6683 | √ | 4:1 | 95.0 | 114 | 2106 | 50.79 | YD |
| 125 | 1800 | 460 | 444T | Y824A | 444TTF6633 | √ | 4:1 | 95.4 | 140 | 2202 | 50.79 | YD |
| | 1200 | 460 | 445T | Y853A | 445TTF6683 | √ | 4:1 | 95.0 | 142 | 2346 | 50.79 | YD |
| 150 | 1800 | 460 | 445T | Y826B | 445TTF6633 | √ | 4:1 | 95.8 | 165 | 2200 | 50.79 | YD |
| | 1200 | 460 | 447T | Y854A | 447TTF6683 | √ | 4:1 | 95.8 | 170 | 2569 | 55.91 | YD |
| 200 | 1800 | 460 | 447T | Y828A | 447TTF6633 | √ | 4:1 | 96.2 | 225 | 2509 | 55.91 | YD |
| | 1200 | 460 | 449T | Y855B | 449TTF6683 | √ | 4:1 | 95.8 | 228 | 2652 | 55.91 | YD |
| 250 | 1800 | 460 | 449T | Y856A | 449TTF6633 | √ | 4:1 | 96.5 | 282 | 2924 | 52.06 | YD |

Blue shaded areas are cast iron frames.

Catalog numbers (Cat No.) highlighted in bold blue are premium efficient.

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

AIR COMPRESSOR MOTORS

SINGLE-PHASE, DRIPPROOF, RIGID BASE

APPLICATIONS

Specifically designed for air compressor, pump and fan and blower duty applications which require high break down torque and rugged mechanical constructions.

FEATURES

- Capacitor start/capacitor run design for low amps and high efficiency, as noted
- High starting and breakdown torque
- Heavy gauge steel frame and base
- Continuous duty at nameplate ratings
- Thermal protection, as noted
- UL®* recognized and CSA®* certified



| HP | RPM | VOLTS | FRAME | OVERLOAD | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|----------|----------|------------------|-------|-----------|-----------|-----|----------|------------|
| 7 1/2 | 3600 | 208-230 | 213T | NONE | | 140680.00 | | 88.5 | 37.5-34 | 115 | 18.14 | |
| | 1800 | 230 | 215T | NONE | | 140155.00 | √ | 81.5 | 40.5 | 116 | 17.26 | |
| 10 | 3600 | 208-230 | 215T | NONE | | 140681.00 | √ | 88.5 | 49-43 | 126 | 19.39 | |
| | 1800 | 230 | 215TZ | NONE | | 141430.00 | √ | 86.5 | 49 | 159 | 21.09 | |

COOLING TOWER, TWO-SPEED, ONE WINDING, VARIABLE TORQUE MOTORS

BLUE CHIP SERIES® SEVERE DUTY, XRI®
THREE-PHASE, TOTALLY ENCLOSED, RIGID BASE



APPLICATIONS

Cooling towers, fan and blowers, and other severe duty environments where long life and ultra-high efficiency are desired. Guaranteed efficiencies offer an extra return on your investment when using these premium efficiency motors on high cycle or long run applications. Replacement for two-speed Marley®* cooling tower motors.

FEATURES

- Blue Chip Series quality, 100% cast iron construction for rigidity and reduced vibration
- Internal and external epoxy paint
- Class F insulation
- 1.15 service factor
- Extended grease tubes, regreasable in service
- T-drains provided for effective drainage (Installed in both endshields)
- Shaft slinger
- Forsheda®* seals on both ends
- Actual test and vibration data supplied with each motor
- Ball bearings
- UL®* recognized and CSA®* certified
- Three year warranty
- Horizontal mounting only; consult engineering for vertical mounting

IP55

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----------|----------|-------|-------|----------|--------------|-------|-----------|-----------|------|----------|------------|
| 3/7.5 | 1800/900 | 460 | 184T | Y380A | 184TTFCD7290 | | 86.5 | 4.0 | 107 | 16.20 | |
| 5/1.25 | 1800/900 | 460 | 213T | Y381A | 213TTFCD7238 | | 89.5 | 6.2 | 173 | 18.53 | |
| 7.5/1.9 | 1800/900 | 460 | 215T | Y382A | 215TTFCD7290 | | 89.5 | 9.0 | 172 | 20.03 | |
| 10/2.5 | 1800/900 | 460 | 254T | Y383A | 254TTFCD7210 | | 90.2 | 12.3 | 259 | 24.15 | |
| 15/3.75 | 1800/900 | 460 | 256T | Y384A | 256TTFCD7250 | √ | 91.0 | 18.8 | 303 | 25.89 | |
| 20/5 | 1800/900 | 460 | 284T | Y385A | 284TTFCD7240 | | 91.0 | 24.8 | 433 | 26.64 | |
| 25/6.25 | 1800/900 | 460 | 286T | Y386A | 286TTFCD7260 | √ | 91.7 | 34.0 | 400 | 28.14 | |
| 30/7.5 | 1800/900 | 460 | 324T | Y387A | 324TTFCD7290 | | 92.4 | 38.0 | 620 | 29.85 | |
| 40/10 | 1800/900 | 460 | 326T | Y388A | 326TTFCD9210 | √ | 93.0 | 52.5 | 676 | 31.35 | |
| 50/12.5 | 1800/900 | 460 | 364T | Y389A | 364TTFCD9234 | | 93.0 | 59.5 | 890 | 33.40 | |
| 60/15 | 1800/900 | 460 | 365T | Y390A | 365TTFCD9230 | | 93.6 | 71.5 | 926 | 34.40 | |
| 75/18.75 | 1800/900 | 460 | 405T | Y391A | 405TTFCD7297 | | 94.1 | 83.0 | 1265 | 38.88 | |
| 100/25 | 1800/900 | 460 | 444T | Y392A | 444TTFCD7262 | | 94.1 | 110 | 1650 | 46.83 | |

Blue shaded areas are cast iron frames.

√: Available 1- Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

MULTI-SPEED: TWO-SPEED, ONE-WINDING, VARIABLE TORQUE MOTORS

THREE-PHASE, DRIPPROOF, RIGID BASE

APPLICATIONS

Commercial and industrial fans, blowers, pumps, and other machinery that have variable torque characteristics. Prolonged use at low speed can result in significant energy savings. Drip-proof motors are intended for use in environments that are relatively clean and dry.

FEATURES

- Ball bearings
- 1.15 service factor
- UL®* recognized and CSA®* certified



| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----------|----------|---------|-------|----------|---------------|-------|-----------|-----------|-----|----------|------------|
| 3/7.5 | 1800/900 | 200-230 | 182T | Y484B | 182TTDBD7412 | | 85.5 | 8.5-7.5 | 72 | 12.25 | |
| | 1800/900 | 460 | 182T | Y485B | 182TTDBD7203 | | 85.5 | 3.8 | 73 | 12.25 | |
| 5/1.25 | 1800/900 | 200-230 | 184T | Y486B | 184TTDBD7287 | ¶ | 86.5 | 14.0-13.0 | 79 | 13.25 | |
| 7.5/1.88 | 1800/900 | 460 | 213T | Y489A | 213TTDBD7201 | ¶ | 86 | 9.2 | 130 | 17.30 | |
| 10/2.5 | 1800/900 | 200-230 | 215T | Y490A | 215TTDBD17206 | | 86.5 | 28.4-25.5 | 170 | 17.30 | |
| | 1800/900 | 460 | 215T | Y491A | 215TTDBD7201 | | 87.5 | 12.5 | 140 | 17.30 | |
| 15/3.75 | 1800/900 | 460 | 256T | Y492A | 256TTDBD7207 | | 91.0 | 19.8 | 239 | 23.88 | |

MULTI-SPEED: TWO-SPEED, TWO-WINDING, VARIABLE TORQUE MOTORS

THREE-PHASE, DRIPPROOF, RIGID BASE

ADDITIONAL FEATURES

- Economical two-winding design



| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|---------|-----------|---------|-------|----------|--------------|-------|-----------|-----------|-----|----------|------------|
| 2/5 | 1800/900 | 460 | 182T | Y467B | 182TTDBD7411 | √ | 83.0 | 2.5 | 65 | 12.25 | |
| 2/8.8 | 1800/1200 | 200-230 | 182T | Y453B | 182TTDBD7413 | √ | 80.0 | 7.0-6.4 | 63 | 12.25 | |
| 2/9 | 1800/1200 | 460 | 182T | Y409B | 182TTDBD7211 | ¶ | 80.0 | 3.2 | 65 | 12.25 | |
| 3/7.5 | 1800/900 | 460 | 184T | Y468B | 184TTDBD7230 | | 83.5 | 3.8 | 74 | 13.25 | |
| 5/1.25 | 1800/1200 | 460 | 215T | Y469A | 215TTDBD7205 | | 85.0 | 6.3 | 136 | 17.30 | |
| 5/2.22 | 1800/1200 | 200-230 | 215T | Y455A | 215TTDBD7204 | | 87.5 | 14.5-14.0 | 145 | 17.30 | |
| 15/6.67 | 1800/900 | 460 | 284T | Y459A | 284TTDBD7221 | | 89.5 | 18.5 | 365 | 25.60 | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

XRI® KILN DUTY MOTORS

BLUE CHIP SERIES® SEVERE DUTY,
TEAO, RIGID BASE, THREE-PHASE



IP55



APPLICATIONS

Fans found in kilns and other high ambient environments where long life and high efficiency are desired. These TEAO motors must be mounted within the airstream for proper cooling. Suitable for use on variable frequency drives.

FEATURES

- Blue Chip Series quality, 100% cast iron construction for rigidity and reduced vibration
- Internal and external epoxy paint
- CR200 corona resistant magnet wire
- Class H insulation system
- Normally closed thermostats (one per phase, Class H)
- Heat stabilized ball bearings and high temperature grease
- Suitable for inverter use, 20:1 variable torque with 1.0 S.F. IN 90°C ambient
- Suitable for 90°C ambient at 1.15 S.F. or 100°C ambient at 1.0 S.F.
- Extended grease tubes, regreasable in service
- 8 foot leads
- UL®* recognized and CSA®* certified

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|-------|-------|----------|---------------|-------|-----------|----------|-----|----------|------------|
| 2 | 1200 | 460 | 184T | S504 | 184TTTS18577 | √ | 87.5 | 3.0 | 115 | 13.74 | |
| | 1800 | 460 | 182T | S506 | 182TTTS18532 | | 90.2 | 3.9 | 106 | 13.74 | 75 |
| 3 | 1200 | 460 | 213T | S507A | 213TTTCD18077 | √ | 89.5 | 4.3 | 175 | 15.97 | |
| | 1200 | 575 | 213T | S557A | 213TTTCD18078 | | 89.5 | 3.5 | 175 | 15.97 | |
| 5 | 1200 | 460 | 215T | S510 | 215TTTS17077 | √ | 87.5 | 6.9 | 196 | 17.19 | |
| | 1200 | 575 | 215T | S560A | 215TTTCD18078 | | 88.5 | 5.5 | 200 | 17.47 | |
| 7 1/2 | 1200 | 460 | 254T | S513 | 254TTTNA17077 | √ | 90.2 | 9.8 | 318 | 20.83 | |
| | 900 | 575 | 256T | S564A | 256TTTCD18601 | | 86.5 | 8.4 | 310 | 22.27 | |
| 10 | 1200 | 460 | 256T | S516 | 256TTTNA18578 | √ | 91.0 | 12.8 | 351 | 22.58 | |
| | 1200 | 575 | 256T | S566A | 256TTTCD18577 | | 91.0 | 10.2 | 425 | 22.27 | |
| | 900 | 460 | 284T | S517A | 284TTTCD18601 | | 88.5 | 13.8 | 475 | 23.34 | |
| | 900 | 575 | 284T | S567A | 284TTTCD18101 | | 88.5 | 11.0 | 457 | 23.34 | |
| 15 | 1800 | 460 | 254T | S518 | 254TTTNA18530 | √ | 92.4 | 18.2 | 276 | 20.83 | |
| | 1200 | 460 | 284T | S519A | 284TTTCD18578 | | 91.7 | 19.0 | 425 | 23.34 | |
| | 900 | 460 | 286T | S530 | 286TTTNA18602 | | 88.5 | 23.0 | 503 | 24.92 | |

Blue shaded areas are cast iron frames.

√: Available ¶: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

50 HERTZ, SINGLE-PHASE MOTORS

RIGID BASE

FEATURES

- Ball bearings
- 1.15 service factor (except as noted)
- Heavy gauge steel frame and base
- Class F insulation
- IP54 ingress protection on TEFC only
- Brake provisions available to add brake kit, TEFC only
- Higher efficient capacitor start / capacitor run designs (except as noted)
- Thermal Overload Protection, as indicated
- UL®* recognized, CSA®* certified, CE®* mark



IP54

ODP

| HP | RPM | VOLTS | FRAME | OVERLOAD | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------|-------|----------|----------|------------------|-------|-----------|-----------|-----|----------|------------|
| 3 | 1500 | 220 | 182T | NONE | --- | 131554.00 | | 76.0 | 16.8 | 83 | 14.69 | 2,13 |
| 5 | 1500 | 220 | 184T | NONE | --- | 131555.00 | | 80.0 | 23.2 | 98 | 15.69 | 13 |

TEFC

| HP | RPM | VOLTS | FRAME | OVERLOAD | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | F.L. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------|-------|----------|----------|------------------|-------|-----------|-----------|-----|----------|------------|
| 2 | 1500 | 220 | 182T | NONE | --- | 131556.00 | | 72.0 | 11.2 | 98 | 15.46 | 2,13,17 |
| 3 | 1500 | 220 | 184T | NONE | --- | 131557.00 | | 79.0 | 15.9 | 101 | 16.96 | 2,13,17 |
| | 1500 | 220 | 184T | MANUAL | --- | 131601.00 | | 75.5 | 15.9 | 101 | 16.96 | 2,13,17 |
| 5 | 3000 | 220 | 184T | NONE | --- | 131638.00 | | 81.5 | 20.5 | 101 | 17.46 | 13,17 |
| | 1500 | 220 | 184T | NONE | --- | 131578.00 | | 82.5 | 21.0 | 83 | 17.46 | 13,17 |

Specifications are subject to change without notice.

√: Available ¶: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

50 HERTZ, THREE-PHASE MOTORS

RIGID BASE



IP55



FEATURES

- Ball bearings
- 1.15 service factor (except as noted)
- Heavy gauge steel frame and base
- Class F insulation
- IP55 ingress protection on TEFC only
- Brake provisions available to add brake kit, TEFC only
- Thermal Overload Protection, as indicated
- UL®* recognized, CSA®* certified, CE®* mark

ODP, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|-------|------|---------|-------|----------|------------------|-------|-----------|-----------|-----|----------|------------|
| 3 | 1500 | 200/400 | 182T | H953A | 182TTDBD8026 | ¶ | 81.5 | 8.55/4.3 | 63 | 12.25 | F,YD |
| 5 | 1500 | 200/400 | 184T | H954A | 184TTDBD8026 | | 82.5 | 14.3/7.1 | 87 | 13.25 | F,YD |
| 7 1/2 | 1500 | 200/400 | 213T | H955A | 213TTDBD8026 | | 87.5 | 21.9/10.9 | 112 | 17.30 | F,YD |
| 10 | 1500 | 200/400 | 215T | H956A | 215TTDBD8026 | | 88.8 | 28.9/14.5 | 155 | 17.30 | F,YD |
| 15 | 1500 | 200/400 | 254T | H957A | 254TTDBD8026 | √ | 88.5 | 42.0/20.9 | 192 | 22.31 | F,YD |
| 20 | 1500 | 200/400 | 256T | H958 | 256TTDBD8026 | | 89.5 | 57.0/28.5 | 225 | 23.88 | F,YD |

TEFC, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------------|-------|----------|------------------|-------|-----------|--------------|-----|----------|------------|
| 3 | 3000 | 200/400 | 182T | H1022 | 182TTFBD8001 | | 82.5 | 8.4/4.8/4.2 | 61 | 15.10 | F,YD |
| | 1500 | 220/380/440 | 182T | H1023 | 182TTFBD8026 | √ | 82.5 | 7.8/4.5/3.9 | 68 | 15.10 | F,YD |
| 5 | 3000 | 200/400 | 184T | H1025 | 184TTFBD8001 | √ | 84.0 | 12.8/7.4/6.4 | 79 | 16.10 | F,YD |
| | 1500 | 220/380/440 | 184T | H1026 | 184TTFBD8026 | √ | 87.5 | 13.0/7.5/6.5 | 85 | 16.10 | F,YD |

TEFC, C-FACE FOOTLESS

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | FL. AMPS | WT. | "C" DIM. | FOOT NOTES |
|----|------|-------------|-------|----------|------------------|-------|-----------|--------------|-----|----------|------------|
| 3 | 3000 | 220/380/440 | 182TC | H1122 | 182TTFBD8003 | | 82.5 | 8.4/4.8/4.2 | 62 | 15.85 | F,YD |
| | 1500 | 220/380/440 | 182TC | H1123 | 182TTFBD8029 | | 82.5 | 7.75/4.5/3.9 | 66 | 15.87 | F,YD |
| 5 | 3000 | 220/380/440 | 184TC | H1125 | 184TTFBD8003 | | 84.0 | 12.8/7.4/6.4 | 78 | 16.85 | F,YD |
| | 1500 | 220/380/440 | 184TC | H1126 | 184TTFBD8029 | | 87.5 | 13.0/7.5/6.5 | 84 | 16.85 | F,YD |

Specifications are subject to change without notice.

√: Available ¶: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

ELEVATOR MOTORS

SUBMERSIBLE HYDRAULIC DUTY

APPLICATIONS

Hydraulic pump passenger, service, freight and low rise elevators, up to 6 floors at speeds up to 200 fpm.

FEATURES

- Intermittent duty
- Suitable for Wye-Delta starters
- 1.0 service factor and 70°C ambient rated
- UL®* recognized component listing and CSA®* approved
- Three bolt circles, 12 mounting holes, and face mounting to accept both the IMO®* and Allweiler®* pumps
- Normally closed thermostats
- Class F insulation
- Two stainless steel nameplates, one shipped separate for remote mount
- 10 foot long leads, spliced 40 inches from motor to prevent wicking on hydraulic fluid

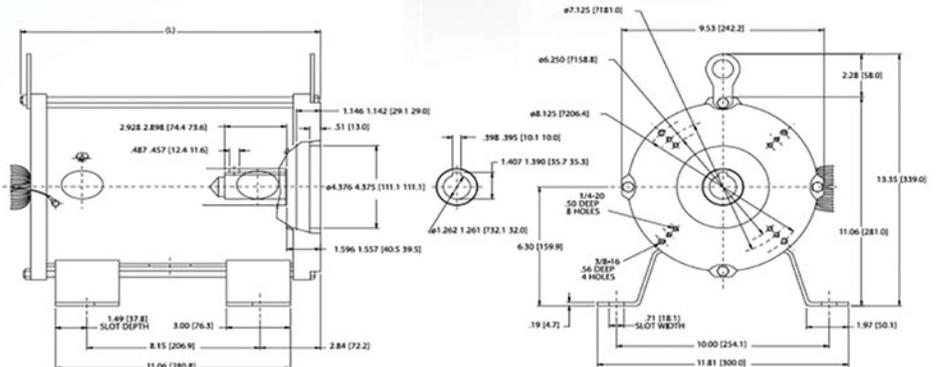


ODP, RIGID BASE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | FL. AMPS | KVA CODE** | LOCKED ROTOR AMPS | WT. | FOOT NOTES |
|----|------|---------|-------|----------|------------------|-------|-----------|-----------|------------|-------------------|-----|------------|
| 15 | 3600 | 200 | 160Z | --- | LM29656 | | 82.5 | 48.5 | F | 242 | 110 | |
| | 3600 | 230/460 | 160Z | --- | LM29657 | | 82.5 | 42.0/21.0 | F | 210/105 | 110 | |
| | 3600 | 575 | 160Z | --- | LM29658 | | 82.5 | 16.8 | F | 84 | 110 | |
| 20 | 3600 | 200 | 160Z | --- | LM29659 | | 85.5 | 58.5 | G | 329 | 112 | |
| | 3600 | 230/460 | 160Z | --- | LM29660 | | 85.5 | 51.0/25.5 | G | 286/143 | 112 | |
| | 3600 | 575 | 160Z | --- | LM29661 | | 85.5 | 20.4 | G | 114 | 112 | |
| 25 | 3600 | 200 | 160Z | --- | LM29662 | | 86.5 | 72.5 | G | 426 | 135 | |
| | 3600 | 230/460 | 160Z | --- | LM29663 | | 86.5 | 63/31.5 | G | 370/185 | 115 | |
| | 3600 | 575 | 160Z | --- | LM29664 | | 86.5 | 25.2 | G | 148 | 115 | |
| 30 | 3600 | 200 | 160Z | --- | LM29665 | | 86.5 | 87.5 | G | 495 | 119 | |
| | 3600 | 230/460 | 160Z | --- | LM29666 | | 86.5 | 76.0/38.0 | G | 430/215 | 129 | |
| | 3600 | 575 | 160Z | --- | LM29667 | | 86.5 | 30.5 | G | 172 | 119 | |
| 40 | 3600 | 200 | 160Z | --- | LM29668 | | 88.5 | 110 | G | 690 | 132 | |
| | 3600 | 230/460 | 160Z | --- | LM29669 | | 88.5 | 96.0/48.0 | G | 600/300 | 167 | |
| | 3600 | 575 | 160Z | --- | LM29670 | | 88.5 | 38.5 | G | 240 | 132 | |
| 50 | 3600 | 200 | 160Z | --- | LM29671 | | 89.5 | 133 | G | 865 | 143 | |
| | 3600 | 230/460 | 160Z | --- | LM29672 | | 89.5 | 116/58.0 | G | 752/376 | 188 | |
| | 3600 | 575 | 160Z | --- | LM29673 | | 89.5 | 46.5 | G | 292 | 171 | |

Used to adapt the Marathon® and Lincoln Motors™ Submersible Elevator motors to some IMO and Allweiler Pumps. Kit includes necessary through-bolts to mount this kit to these motors.

| MODEL NO | STOCK | DESC SYM | WT |
|----------|-------|----------|----|
| LM31777 | | A | 12 |



√ Available ¶ Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 *See back cover page for attribution.

ELEVATOR MOTORS DRY HYDRAULIC DUTY

THREE-PHASE, DRIPPROOF, RIGID BASE,
80 STARTS PER HOUR

APPLICATIONS

Hydraulic pump passenger, service, freight and low rise elevators, up to 6 floors at speeds up to 200 fpm.

FEATURES

- Dual Rated nameplates for 80 and 120 starts/hour
- Designed for belt driven pumps
- Wye Start / Delta Run
- Class F insulation
- 40°C Ambient
- F1 mounting
- Ball bearings with grease fittings and automatic relief
- UL®* recognized component listed and CSA®* approved
- Constructed for low noise and low vibration



80 STARTS PER HOUR

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL / ITEM NO. | STOCK | NOM. EFF. | 80 STARTS FL. AMPS | LOCKED ROTOR AMPS | WT. |
|----|------|---------|-------|----------|------------------|-------|-----------|--------------------|-------------------|-----|
| 15 | 3600 | 230/460 | 213T | - | LM30092 | | 85.5 | 35.5/17.8 | 162/81 | 149 |
| | 1800 | 200 | 215T | - | LM28867 | | 84.0 | 45.0 | 170 | 128 |
| | 1800 | 230/460 | 215T | - | LM28868 | | 84.0 | 39.0/19.6 | 148/74 | 124 |
| 20 | 3600 | 200 | 215T | - | LM30093 | | 88.5 | 53.0 | 267 | 135 |
| | 1800 | 230/460 | 215T | - | LM34240 | | 89.5 | 47.0/23.5 | 232/116 | 122 |
| | 1800 | 200 | 254T | - | LM28873 | ¶ | 88.5 | 59.0 | 267 | 203 |
| | 1800 | 230/460 | 254T | - | LM28874 | √ | 88.5 | 51.5/25.7 | 232/116 | 205 |
| 25 | 3600 | 200 | 254T | - | LM30095 | | 90.2 | 68.0 | 331 | 175 |
| | 3600 | 230/460 | 254T | - | LM30096 | | 90.2 | 59.0/29.5 | 288/144 | 158 |
| | 1800 | 200 | 256T | - | LM28879 | | 90.2 | 73.5 | 368 | 205 |
| | 1800 | 230/460 | 256T | - | LM28880 | | 90.2 | 64.0/32.0 | 320/160 | 233 |
| 30 | 3600 | 200 | 256T | - | LM30097 | | 90.2 | 80.0 | 418.6 | 235 |
| | 3600 | 230/460 | 256T | - | LM30098 | | 90.2 | 69.0/34.5 | 364/182 | 235 |
| | 1800 | 200 | 284T | - | LM29850 | | 90.2 | 84.0 | 391 | 300 |
| | 1800 | 230/460 | 284T | - | LM29851 | | 90.2 | 73.0/36.5 | 340/170 | 316 |
| 40 | 3600 | 200 | 284T | - | LM30099 | ¶ | 88.5 | 112 | 460 | 320 |
| | 3600 | 230/460 | 284T | - | LM30100 | √ | 88.5 | 97.0/48.5 | 400/200 | 279 |
| | 1800 | 200 | 286T | - | LM29852 | | 91.7 | 112 | 495 | 450 |
| | 1800 | 230/460 | 286T | - | LM29853 | | 91.7 | 97.0/48.5 | 430/215 | 367 |

Blue shaded areas are cast iron frames.

√: Available ¶: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

ELEVATOR MOTORS DRY HYDRAULIC DUTY

THREE-PHASE, DRIPPROOF, RIGID BASE,
120 STARTS PER HOUR

APPLICATIONS

Hydraulic pump passenger, service, freight and low rise elevators, up to 6 floors at speeds up to 200 fpm.

FEATURES

- Dual Rated nameplates for 80 and 120 starts/hour
- Designed for belt driven pumps
- Wye Start / Delta Run
- Class F insulation
- 40°C Ambient
- F1 mounting
- Ball bearings with grease fittings and automatic relief
- UL®* recognized component listed and CSA®* approved
- Constructed for low noise and low vibration



120 STARTS PER HOUR

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | 120 STARTS F.L. AMPS | LOCKED ROTOR AMPS | WT. | FOOT NOTES |
|----|------|---------|-------|----------|-----------|-------|-----------|----------------------|-------------------|-----|------------|
| 10 | 3600 | 230/460 | 213T | - | LM30092 | | 88.5 | 23.4/11.7 | 162/81 | 149 | |
| | 1800 | 200 | 215T | - | LM28867 | | 89.5 | 28.8 | 170 | 128 | |
| | 1800 | 230/460 | 215T | - | LM28868 | | 89.5 | 25.0/12.5 | 148/74 | 124 | |
| 15 | 3600 | 200 | 215T | - | LM30093 | | 90.2 | 39.0 | 267 | 135 | |
| | 3600 | 230/460 | 215T | - | LM34240 | | 91.0 | 36.5/18.2 | 232/116 | 122 | |
| | 1800 | 200 | 254T | - | LM28873 | ¶ | 91.0 | 44.0 | 267 | 203 | |
| 20 | 1800 | 230/460 | 254T | - | LM28874 | √ | 91.0 | 38.5/19.2 | 232/116 | 205 | |
| | 3600 | 200 | 254T | - | LM30095 | | 91.0 | 53.0 | 331 | 175 | |
| | 3600 | 230/460 | 254T | - | LM30096 | | 91.0 | 46.0/23.1 | 288/144 | 158 | |
| 25 | 1800 | 200 | 256T | - | LM28879 | | 91.0 | 60.0 | 368 | 205 | |
| | 1800 | 230/460 | 256T | - | LM28880 | | 91.0 | 52.0/26.0 | 320/160 | 233 | |
| | 3600 | 200 | 256T | - | LM30097 | | 91.0 | 66.5 | 419 | 235 | |
| 30 | 3600 | 230/460 | 256T | - | LM30098 | | 91.0 | 58.0/29.0 | 364/182 | 235 | |
| | 1800 | 230/460 | 284T | - | LM29851 | | 91.7 | 61.0/30.5 | 340/170 | 316 | |
| | 3600 | 200 | 284T | - | LM30099 | ¶ | 91.0 | 83.0 | 460 | 320 | |
| 30 | 3600 | 230/460 | 284T | - | LM30100 | √ | 91.0 | 72.0/36.0 | 400/200 | 279 | |
| | 1800 | 200 | 286T | - | LM29852 | | 92.4 | 83.0 | 495 | 450 | |
| | 1800 | 230/460 | 286T | - | LM29853 | | 92.4 | 72.0/36.0 | 430/215 | 367 | |

Blue shaded areas are cast iron frames.

√: Available ¶: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

ROLLER TABLE MOTORS

IEC® TOTALLY ENCLOSED NON VENTED

APPLICATIONS

Roller table motors are a unique non-ventilated design with “cast-in” cooling fins that extend radially from the diameter of the motor frame rather than the conventional axial cooling fin profile. That feature allows for improved water run off in an application where large amounts of water stream randomly in the steel making process. With active steel mill installations globally and in the USA, Marathon Electric has long been a supplier to mills for various motor applications but none are more rigorous than the roller table applications like Transfer Tables and Run Out Tables.



FEATURES

- IP56 enclosure
- Radial Fin Cast Iron frame construction
- Rotating labyrinth shaft seals to prevent water ingress at the shaft extension
- Inverter only 2000:1 constant torque with 2X base speed 1.0SF
- Conduit boxes are integral to the non drive end bearing bracket for ease of access
- Terminal blocks inside the conduit box for ease of wiring connections
- Fully gasketed, including “o” rings at the bearing bracket to frame interface
- Winding temperature sensors available as an option
- Brakes require F3 Conduit Box (Not ODE Box) are available as an option
- Encoders require F3 Conduit Box (Not ODE Box) are available as an option 40°C Ambient
- **NEMA®* Frames Available upon request.**

RIGID BASE

| HP-kW | RPM | HZ | VOLTS | IEC FRAME | CAT. NO. | MODEL NO. | STOCK | CT SPEED RANGE | FL. AMPS | WT. | IEC "L" DIM (IN) | FOOT NOTES |
|---------|------|----|-------|-----------|----------|-----------|-------|----------------|----------|-----|------------------|------------|
| 5-4.1 | 1200 | 60 | 460 | 132S | S701 | - | | 2000:1 CT | 7.0 | 260 | 26.00 | |
| | 1200 | 60 | 690 | 132S | S901 | - | | 2000:1 CT | 5.0 | 260 | 26.00 | |
| 7.5-5.5 | 1200 | 60 | 460 | 160M | S703 | - | | 2000:1 CT | 10.0 | 401 | 29.00 | |
| | 1200 | 60 | 690 | 160M | S903 | - | | 2000:1 CT | 7.0 | 401 | 29.00 | |
| 10-7.5 | 1800 | 60 | 460 | 132S | S704 | - | | 2000:1 CT | 13.0 | 310 | 26.00 | |
| | 1800 | 60 | 690 | 132S | S904 | - | | 2000:1 CT | 8.7 | 310 | 26.00 | |
| | 1200 | 60 | 460 | 180L | S705 | - | | 2000:1 CT | 13.1 | 442 | 29.00 | |
| | 1200 | 60 | 690 | 180L | S905 | - | | 2000:1 CT | 9.0 | 442 | 29.00 | |
| 15-11 | 1800 | 60 | 460 | 160M | S706 | - | | 2000:1 CT | 20.2 | 401 | 29.00 | |
| | 1800 | 60 | 690 | 160M | S906 | - | | 2000:1 CT | 13.5 | 401 | 29.00 | |
| | 1200 | 60 | 460 | 200L | S707 | - | | 2000:1 CT | 21.5 | 565 | 32.00 | |
| | 1200 | 60 | 690 | 200L | S907 | - | | 2000:1 CT | 14.5 | 565 | 32.00 | |
| 20-15 | 1800 | 60 | 460 | 180L | S708 | - | | 2000:1 CT | 21.5 | 442 | 29.00 | |
| | 1800 | 60 | 690 | 180L | S908 | - | | 2000:1 CT | 14.5 | 442 | 29.00 | |
| 25-18.5 | 1800 | 60 | 460 | 200L | S710 | - | | 2000:1 CT | 31.0 | 550 | 32.00 | |
| | 1800 | 60 | 690 | 200L | S910 | - | | 2000:1 CT | 21.0 | 550 | 32.00 | |
| 30-22 | 1800 | 60 | 460 | 200L | S712 | - | | 2000:1 CT | 37.0 | 575 | 32.00 | |
| | 1800 | 60 | 690 | 200L | S912 | - | | 2000:1 CT | 25.0 | 575 | 32.00 | |

Blue shaded areas are cast iron frames.

√: Available ¶: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

marathon[®]

ENDURANCE SERIES[®] Large AC Low and Medium Voltage Motors



AVAILABLE TO ORDER
**OVER 700 CONFIGURATIONS
OF MEDIUM VOLTAGE MOTORS**

ENDURANCE SERIES[®] MOTORS

marathon[®]

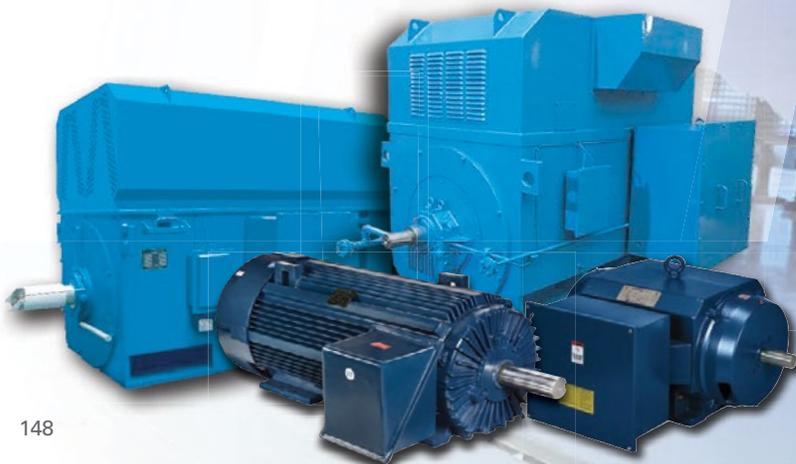
LARGE, ROBUST MOTORS FOR HEAVY DUTY AND EXTREME APPLICATIONS

Endurance Series motors are the right choice for applications demanding ruggedness and high reliability.

Features

- Oversized Conduit Box
- Braced End Turns
- Corrosion Protection
- Anti-Friction Bearings

Users recognize the value of Marathon motors and their ability to support a multitude of applications with high efficiency and longer performance. Every Marathon Endurance Series[™] Motor is backed by more than 100 years of manufacturing experience, plus state-of-the-art engineering and production, along with comprehensive service, starting in the earliest planning stages of your motor.



ENDURANCE SERIES® MOTORS

IEC®* TOTALLY ENCLOSED FAN COOLED

APPLICATIONS

General purpose use on compressors, pumps, conveyors, blowers and other machinery in dirty and dusty environments.

FEATURES

- Cast iron frame, brackets and conduit box, fabricated steel fan guard
- 1.15 Service Factor on sinewave, 1.0 Service Factor on IGBT power
- Provisions to add stub shaft for an encoder
- Internal & external epoxy paint
- MAX GUARD® Class F, VPI Insulation system
- Inverter Duty 10:1 Variable
- Extended grease tubes, regreasable in service
- Ball bearing construction, insulated NDE bearing
- 120V space heaters
- 100Ω Ohm Platinum winding RTD's (2/phase)
- 100Ω Ohm Platinum bearing RTD's (1/bearing)
- Three year warranty



IEC - TEFC - LOW VOLTAGE

| HP | RPM | VOLTS | FRAME | CATALOG NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | EST. SHIPPING WT. (LBS) | "C" DIM (IN) | FOOT NOTES |
|------|------|-------|-------|--------------|-------------|-------|-----------|----------|-------------------------|--------------|------------|
| 400 | 1800 | 460 | 355 | R9204 | 355HTFC6027 | | 96.2 | 437 | 4410 | 60.71 | NP |
| | 1200 | 460 | 355 | R9205 | 355HTFC6077 | | 95.8 | 465 | 4655 | 60.71 | NP, NE |
| 450 | 1800 | 460 | 355 | R9207 | 355HTFC6028 | | 96.2 | 492 | 4720 | 60.71 | NP |
| | 1200 | 460 | 355 | R9208 | 355HTFC6078 | | 95.8 | 523 | 4890 | 60.71 | NP, NE |
| 500 | 1800 | 460 | 355 | R9210 | 355HTFC6029 | | 96.2 | 546 | 4985 | 60.71 | NP |
| | 1200 | 460 | 355X | R9211 | 355HTFC6079 | | 95.0 | 586 | 6505 | 74.80 | NE |
| 600 | 1800 | 460 | 355X | R9212 | 355HTFC6030 | | 95.4 | 669 | 6295 | 74.80 | NE |
| | 1200 | 460 | 400 | R9213 | 400HTFC6076 | | 95.0 | 687 | 8670 | 79.72 | NE |
| 700 | 1800 | 460 | 400 | R9214 | 400HTFC6026 | | 95.4 | 771 | 7540 | 79.72 | NE |
| | 1200 | 460 | 400 | R9215 | 400HTFC6077 | | 95.0 | 802 | 8360 | 79.72 | NE |
| 800 | 1800 | 460 | 400 | R9216 | 400HTFC6027 | | 95.4 | 882 | 7630 | 79.72 | NE |
| | 1200 | 460 | 450 | R9217 | 450HTFC6076 | | 95.0 | 916 | 11115 | 94.49 | NE |
| 900 | 1800 | 460 | 400 | R9218 | 400HTFC6028 | | 95.4 | 992 | 7960 | 79.72 | NE |
| | 1200 | 460 | 450 | R9219 | 450HTFC6077 | | 95.0 | 1031 | 11574 | 94.49 | NE |
| 1000 | 1800 | 460 | 400 | R9220 | 400HTFC6029 | | 95.4 | 1102 | 8420 | 79.72 | NE |
| | 1200 | 460 | 450 | R9221 | 450HTFC6078 | | 95.0 | 1146 | 12080 | 94.49 | NE |

Specifications are subject to change without notice.

√ Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog number (Cat No.) highlighted bold blue have efficiency levels that meet PREMIUM NEMA MG1 Table 12-12 Blue shaded areas are cast iron frames

*See back cover page for attribution.

ENDURANCE SERIES® MOTORS

IEC®* TOTALLY ENCLOSED FAN COOLED

APPLICATIONS

General purpose use on compressors, pumps, conveyors, blowers and other machinery in dirty and dusty environments.

FEATURES

- Cast iron frame and brackets, fabricated steel conduit box and fan guard
- 1.15 Service Factor on sinewave, 1.0 Service Factor on IGBT power
- Form wound coil design, copper bar rotor design
- Internal & external epoxy paint
- Provisions to add stub shaft for an encoder
- MAX GUARD® Class F, VPI Insulation system
- Inverter Duty 10:1 Variable
- Extended grease tubes, regreasable in service
- Brass drain and breather
- UL®* Recognized
- Ball bearing construction, Insulated NDE bearing
- 120V space heaters
- 100 Ohm Platinum winding RTD's (2/phase)
- 100 Ohm Platinum bearing RTD's (1/bearing)
- Three year warranty



IEC - TEFC - MEDIUM VOLTAGE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | EST WT. | "C" DIM. | FOOT NOTES |
|------|------|-----------|-------|--------------|-------------|-------|-----------|-----------|---------|----------|------------|
| 350 | 1800 | 2300/4000 | 355 | R9301 | 355HVFC6026 | | 95.0 | 78.0/44.9 | 4189 | 72.24 | |
| | 1200 | 2300/4000 | 355 | R9302 | 355HVFC6077 | | 95.0 | 81.8/47.0 | 5622 | 72.24 | |
| 400 | 1800 | 2300/4000 | 355 | R9304 | 355HVFC6027 | | 95.0 | 89.6/51.5 | 4630 | 72.24 | |
| | 1200 | 2300/4000 | 400 | R9305 | 400HVFC6076 | | 95.0 | 91.3/52.5 | 6614 | 79.13 | |
| 450 | 1800 | 2300/4000 | 355 | R9307 | 355HVFC6028 | | 95.0 | 100/57.5 | 4891 | 72.24 | |
| | 1200 | 2300/4000 | 400 | R9308 | 400HVFC6077 | | 95.0 | 103/59.0 | 6848 | 79.13 | |
| 500 | 1800 | 2300/4000 | 355 | R9310 | 355HVFC6029 | | 95.0 | 111/64.0 | 5978 | 72.24 | |
| | 1200 | 2300/4000 | 400 | R9311 | 400HVFC6078 | | 95.0 | 113/65.5 | 6945 | 79.13 | |
| 600 | 1800 | 2300/4000 | 400 | R9313 | 400HVFC6026 | | 95.4 | 132/76.0 | 6460 | 79.13 | |
| | 1200 | 2300/4000 | 450 | R9314 | 450HVFC6076 | | 95.0 | 136/78.0 | 7936 | 87.40 | |
| 700 | 1800 | 2300/4000 | 400 | R9316 | 400HVFC6027 | | 95.4 | 154/88.5 | 6370 | 79.13 | |
| | 1200 | 2300/4000 | 450 | R9317 | 450HVFC6077 | | 95.0 | 158 | 9022 | 87.40 | |
| 800 | 1800 | 2300/4000 | 450 | R9319 | 450HVFC6026 | | 95.4 | 176/101 | 8261 | 85.83 | |
| | 1200 | 2300/4000 | 450 | R9320 | 450HVFC6078 | | 95.0 | 180/104 | 9022 | 87.40 | |
| 900 | 1800 | 2300/4000 | 450 | R9322 | 450HVFC6027 | | 95.4 | 198/114 | 9348 | 85.83 | |
| | 1200 | 4000 | 500 | R9323 | 500HVFC6076 | | 95.0 | 117 | 12826 | 94.88 | |
| 1000 | 1800 | 2300/4000 | 450 | R9325 | 450HVFC6028 | | 95.4 | 220/127 | 8696 | 85.83 | |
| | 1200 | 4000 | 500 | R9326 | 500HVFC6077 | | 95.0 | 130 | 12826 | 94.88 | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog number (Cat No.) highlighted bold blue have efficiency levels that meet NEMA PREMIUM MG1 Table 12-12, Table 20-B or Table 20-C Blue shaded areas are cast iron frames

*See back cover page for attribution.

ENDURANCE SERIES® MOTORS

IEC®* WEATHER PROTECTED TYPE 1

APPLICATIONS

Industrial Refrigeration Compressors for HVAC, Oil and Gas, Food and Beverage, Chemical processing, Medical and other process industries.

FEATURES

- Fabricated steel frame and conduit box, with cast iron brackets
- 1.15 Service Factor on sinewave, 1.0 Service Factor on IGBT power
- MAX GUARD®* Class F, VPI Insulation system
- Form wound coil design, copper bar rotor design
- Internal & external epoxy paint
- Inverter Duty 10:1 Variable
- Extended grease tubes, regreasable in service
- UL®* Recognized
- Ball bearing construction, Insulated NDE bearing
- 120V space heaters
- 100 Ohm Platinum winding RTD's (2/phase)
- 100 Ohm Platinum bearing RTD's (1/bearing)
- Three year warranty



IP23

MAX GUARD
INSULATION SYSTEM



IEC - WPI - MEDIUM VOLTAGE

| HP | RPM | VOLTS | FRAME | CATALOG NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | EST. WT. | "C" DIM (IN) | FOOT NOTES |
|------|------|-----------|-------|--------------|------------|-------|-----------|-----------|----------|--------------|------------|
| 350 | 1800 | 2300/4000 | 355 | R9401 | 355HVL6027 | | 91.7 | 83.1/47.8 | 4667 | 72.05 | 99,110,NE |
| | 1200 | 2300/4000 | 355 | R9402 | 355HVL6077 | | 92.4 | 84.4/48.6 | 4799 | 72.05 | NE |
| 400 | 1800 | 2300/4000 | 355 | R9404 | 355HVL6028 | | 91.7 | 92.8/53.4 | 4667 | 72.05 | 99,110,NE |
| | 1200 | 2300/4000 | 355 | R9405 | 355HVL6078 | | 92.4 | 95.4/54.8 | 5075 | 72.05 | NE |
| 450 | 1800 | 2300/4000 | 355 | R9407 | 355HVL6029 | | 94.5 | 101/58.3 | 4667 | 72.05 | 99,NE |
| | 1200 | 2300/4000 | 355 | R9408 | 355HVL6079 | | 93.6 | 106/60.9 | 5075 | 72.05 | NE |
| 500 | 1800 | 2300/4000 | 355 | R9410 | 355HVL6030 | | 93.0 | 113/65.0 | 4667 | 72.05 | NE |
| | 1200 | 2300/4000 | 400 | R9411 | 400HVL6076 | | 94.5 | 117/67.0 | 6140 | 77.95 | 99,NE |
| 600 | 1800 | 2300/4000 | 355 | R9413 | 355HVL6031 | | 93.0 | 139/79.8 | 4943 | 72.05 | NE |
| | 1200 | 2300/4000 | 400 | R9414 | 400HVL6077 | | 94.5 | 140/80.4 | 6448 | 77.95 | 99,NE |
| 700 | 1800 | 2300/4000 | 400 | R9416 | 400HVL6027 | | 94.6 | 159/91.6 | 6625 | 77.95 | 99,NE |
| | 1200 | 2300/4000 | 400 | R9417 | 400HVL6078 | | 94.5 | 163/93.8 | 6448 | 77.95 | NE |
| 800 | 1800 | 2300/4000 | 400 | R9419 | 400HVL6028 | | 95.0 | 177/102 | 6625 | 77.95 | NE |
| | 1200 | 2300/4000 | 450 | R9420 | 450HVL6076 | | 95.0 | 181/104 | 7870 | 83.66 | 99 |
| 900 | 1800 | 2300/4000 | 400 | R9422 | 400HVL6029 | | 95.0 | 197/113 | 6867 | 77.95 | NE |
| | 1200 | 2300/4000 | 450 | R9423 | 450HVL6077 | | 95.0 | 204/117 | 7870 | 83.66 | |
| 1000 | 1800 | 2300/4000 | 450 | R9425 | 450HVL6026 | | 95.8 | 217/125 | 8201 | 82.68 | 99 |
| | 1200 | 2300/4000 | 450 | R9426 | 450HVL6078 | | 95.4 | 221/127 | 9039 | 83.66 | |
| 1250 | 1800 | 2300/4000 | 450 | R9428 | 450HVL6027 | | 95.8 | 271/156 | 8201 | 82.68 | |
| | 1200 | 2300/4000 | 450 | R9429 | 450HVL6079 | | 95.4 | 279/160 | 9039 | 83.66 | |
| 1500 | 1800 | 2300/4000 | 450 | R9431 | 450HVL6028 | | 95.8 | 326/187 | 8532 | 82.68 | |
| | 1200 | 4000 | 500 | R9432 | 500HVL6076 | | 95.8 | 192 | 11757 | 89.17 | 99 |
| 1750 | 1800 | 4000 | 500 | R9434 | 500HVL6026 | | 96.2 | 223 | 11515 | 89.17 | |
| | 1200 | 4000 | 500 | R9435 | 500HVL6077 | | 95.4 | 224 | 11757 | 89.17 | |
| 2000 | 1800 | 4000 | 500 | R9437 | 500HVL6027 | | 96.2 | 254 | 11515 | 89.17 | |
| | 1200 | 4000 | 560 | R9438 | 560HVL6076 | | 95.4 | 259 | 15068 | 100.79 | 99 |
| 2250 | 1800 | 4000 | 500 | R9440 | 500HVL6028 | | 96.2 | 280 | 12617 | 89.17 | |
| | 1200 | 4000 | 560 | R9441 | 560HVL6077 | | 96.5 | 285 | 15642 | 100.79 | |
| 2500 | 1800 | 4000 | 560 | R9443 | 560HVL6026 | | 96.5 | 307 | 16391 | 98.82 | 99 |
| 3000 | 1800 | 4000 | 560 | R9446 | 560HVL6027 | | 96.5 | 364 | 16391 | 98.82 | 99,NE |
| 3500 | 1800 | 4000 | 560 | R9449 | 560HVL6028 | | 96.7 | 433 | 16391 | 98.82 | NE |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog number (Cat No.) highlighted bold blue have efficiency levels that meet NEMA PREMIUM MG1 Table 12-12, Table 20-B or Table 20-C

*See back cover page for attribution.

ENDURANCE SERIES® MOTORS

IEC®* WEATHER PROTECTED TYPE 2

APPLICATIONS

Industrial Refrigeration Compressors for HVAC, Oil and Gas, Food and Beverage, Chemical processing, Medical and other process industries.

FEATURES

- Fabricated steel frame and conduit box, with cast iron brackets
- 1.15 Service Factor on sinewave, 1.0 Service Factor on IGBT power
- MAX GUARD® Class F, VPI Insulation system
- Form wound coil design, copper bar rotor design
- Internal & external epoxy paint
- Inverter Duty 10:1 Variable
- Extended grease tubes, regreasable in service
- UL®* Recognized
- Ball bearing construction, Insulated NDE bearing
- 120V space heaters
- 100 Ohm Platinum winding RTD's (2/phase)
- 100 Ohm Platinum bearing RTD's (1/bearing)
- Three year warranty



IEC - WP11 - MEDIUM VOLTAGE

| HP | RPM | VOLTS | FRAME | CAT. NO. | MODEL NO. | STOCK | NOM. EFF. | F.L. AMPS | EST. WT. | "C" DIM. | FOOT NOTES |
|------|------|-----------|-------|--------------|-------------|-------|-----------|-----------|----------|----------|------------|
| 350 | 1800 | 2300/4000 | 355 | R9501 | 355HVMF6027 | | 91.7 | 83.1/47.8 | 5072 | 74.21 | 99,110,NE |
| | 1200 | 2300/4000 | 355 | R9502 | 355HVMF6078 | | 92.4 | 84.4/48.6 | 5182 | 74.21 | NE |
| 400 | 1800 | 2300/4000 | 355 | R9504 | 355HVMF6028 | | 91.7 | 92.8/53.4 | 5072 | 74.21 | 99,NE |
| | 1200 | 2300/4000 | 355 | R9505 | 355HVMF6079 | | 92.4 | 95.4/54.8 | 5479 | 74.21 | NE |
| 450 | 1800 | 2300/4000 | 355 | R9507 | 355HVMF6029 | | 94.5 | 101/58.3 | 5072 | 74.21 | 99,NE |
| | 1200 | 2300/4000 | 355 | R9508 | 355HVMF6080 | | 93.6 | 106/60.9 | 5479 | 74.21 | NE |
| 500 | 1800 | 2300/4000 | 355 | R9510 | 355HVMF6030 | | 93.0 | 113/65.0 | 5347 | 74.21 | NE |
| | 1200 | 2300/4000 | 400 | R9511 | 400HVMF6076 | | 94.5 | 117/67.0 | 6526 | 78.54 | 99,NE |
| 600 | 1800 | 2300/4000 | 355 | R9513 | 355HVMF6031 | | 93.0 | 139/79.8 | 5347 | 74.21 | NE |
| | 1200 | 2300/4000 | 400 | R9514 | 400HVMF6077 | | 94.5 | 140/80.4 | 6834 | 78.54 | 99,NE |
| 700 | 1800 | 2300/4000 | 400 | R9516 | 400HVMF6026 | | 94.6 | 159/91.6 | 7011 | 78.54 | 99,NE |
| | 1200 | 2300/4000 | 400 | R9517 | 400HVMF6078 | | 94.5 | 163/93.8 | 6834 | 78.54 | NE |
| 800 | 1800 | 2300/4000 | 400 | R9519 | 400HVMF6027 | | 95.0 | 177/102 | 7011 | 78.54 | NE |
| | 1200 | 2300/4000 | 450 | R9520 | 450HVMF6076 | | 95.0 | 181/104 | 8467 | 84.84 | 99 |
| 900 | 1800 | 2300/4000 | 400 | R9522 | 400HVMF6028 | | 95.0 | 197/113 | 7253 | 78.54 | NE |
| | 1200 | 2300/4000 | 450 | R9523 | 450HVMF6077 | | 95.0 | 204/117 | 8467 | 84.84 | |
| 1000 | 1800 | 2300/4000 | 450 | R9525 | 450HVMF6026 | | 95.8 | 217/125 | 8710 | 83.27 | |
| | 1200 | 2300/4000 | 450 | R9526 | 450HVMF6078 | | 95.4 | 221/127 | 9636 | 84.84 | |
| 1250 | 1800 | 2300/4000 | 450 | R9528 | 450HVMF6027 | | 95.8 | 271/156 | 8710 | 83.27 | |
| | 1200 | 2300/4000 | 450 | R9529 | 450HVMF6079 | | 95.4 | 279/160 | 9636 | 84.84 | |
| 1500 | 1800 | 2300/4000 | 450 | R9531 | 450HVMF6028 | | 95.8 | 326/187 | 9129 | 83.27 | |
| | 1200 | 4000 | 500 | R9532 | 500HVMF6076 | | 95.8 | 192 | 12368 | 90.94 | 99 |
| 1750 | 1800 | 4000 | 500 | R9534 | 500HVMF6026 | | 96.2 | 223 | 12125 | 90.94 | |
| | 1200 | 4000 | 500 | R9535 | 500HVMF6077 | | 95.4 | 224 | 12368 | 90.94 | |
| 2000 | 1800 | 4000 | 500 | R9537 | 500HVMF6027 | | 96.2 | 254 | 12125 | 90.94 | |
| | 1200 | 4000 | 560 | R9538 | 560HVMF6076 | | 95.4 | 259 | 15741 | 103.74 | 99 |
| 2250 | 1800 | 4000 | 500 | R9540 | 500HVMF6028 | | 96.2 | 280 | 13228 | 90.94 | |
| | 1200 | 4000 | 560 | R9541 | 560HVMF6077 | | 96.5 | 285 | 16314 | 103.74 | |
| 2500 | 1800 | 4000 | 560 | R9543 | 560HVMF6026 | | 96.5 | 307 | 17064 | 101.77 | 99 |
| | 1200 | 4000 | 560 | R9544 | 560HVMF6078 | | 96.5 | 317 | 16314 | 103.74 | |
| 3000 | 1800 | 4000 | 560 | R9546 | 560HVMF6027 | | 96.5 | 364 | 17064 | 101.77 | 99,NE |
| 3500 | 1800 | 4000 | 560 | R9549 | 560HVMF6028 | | 96.5 | 434 | 17064 | 101.77 | NE |

Specifications are subject to change without notice.

√: Available 1- Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog number (Cat No.) highlighted bold blue have efficiency levels that meet NEMA PREMIUM MG1 Table 12-12, Table 20-B or Table 20-C

*See back cover page for attribution.

ENDURANCE SERIES® MOTORS

IEC®* TOTALLY ENCLOSED AIR-TO-AIR COOLED

APPLICATIONS

Industrial Refrigeration Compressors for HVAC, Oil and Gas, Food and Beverage, Chemical processing, Medical and other process industries.

FEATURES

- Fabricated steel frame and conduit box, with cast iron brackets
- 1.15 Service Factor on sinewave, 1.0 Service Factor on IGBT power
- MAX GUARD® Class F, VPI Insulation system
- Form wound coil design, copper bar rotor design
- Internal & external epoxy paint
- Inverter Duty 10:1 Variable
- Extended grease tubes, regreasable in service
- UL®* Recognized
- Ball bearing construction, Insulated NDE bearing
- 120V space heaters
- 100 Ohm Platinum winding RTD's (2/phase)
- 100 Ohm Platinum bearing RTD's (1/bearing)
- Three year warranty



IEC - TEAAC - MEDIUM VOLTAGE

| HP | RPM | VOLTS | FRAME | CATALOG NO. | MODEL NO. | STOCK | NOM. EFF. | FL. AMPS | EST. WT. | "C" DIM (IN) | FOOT NOTES |
|------|------|-----------|-------|--------------|-------------|-------|-----------|-----------|----------|--------------|------------|
| 350 | 1800 | 2300/4000 | 355 | R9601 | 355HVVF6027 | | 93.0 | 81.0/46.6 | 5203 | 83.07 | 99,NE |
| | 1200 | 2300/4000 | 355 | R9602 | 355HVVF6077 | | 92.4 | 83.5/48.0 | 5611 | 83.07 | NE |
| 400 | 1800 | 2300/4000 | 355 | R9604 | 355HVVF6028 | | 93.6 | 90.9/52.3 | 5203 | 83.07 | 99,NE |
| | 1200 | 2300/4000 | 400 | R9605 | 400HVVF6076 | | 94.1 | 94.8/54.5 | 6845 | 87.99 | 99,NE |
| 450 | 1800 | 2300/4000 | 355 | R9607 | 355HVVF6029 | | 93.0 | 103/59.2 | 5478 | 83.07 | NE |
| | 1200 | 2300/4000 | 400 | R9608 | 400HVVF6077 | | 94.1 | 105/60.6 | 6845 | 87.99 | 99,NE |
| 500 | 1800 | 2300/4000 | 355 | R9610 | 355HVVF6030 | | 93.0 | 117/67.3 | 5478 | 83.07 | NE |
| | 1200 | 2300/4000 | 400 | R9611 | 400HVVF6078 | | 94.1 | 117/67.3 | 7154 | 87.99 | 99,NE |
| 600 | 1800 | 2300/4000 | 400 | R9613 | 400HVVF6026 | | 94.1 | 136/78.0 | 7330 | 87.99 | 99,NE |
| | 1200 | 2300/4000 | 400 | R9614 | 400HVVF6079 | | 94.1 | 140/80.8 | 7154 | 87.99 | NE |
| 700 | 1800 | 2300/4000 | 400 | R9616 | 400HVVF6027 | | 94.5 | 156/89.6 | 7330 | 87.99 | NE |
| | 1200 | 2300/4000 | 450 | R9617 | 450HVVF6076 | | 93.6 | 159/91.5 | 8918 | 95.67 | NE |
| 800 | 1800 | 2300/4000 | 400 | R9619 | 400HVVF6028 | | 94.5 | 176/101 | 7573 | 87.99 | NE |
| | 1200 | 2300/4000 | 450 | R9620 | 450HVVF6077 | | 94.1 | 183/105 | 8918 | 95.67 | NE |
| 900 | 1800 | 2300/4000 | 450 | R9622 | 450HVVF6026 | | 94.5 | 198/114 | 9215 | 94.09 | NE |
| | 1200 | 2300/4000 | 450 | R9623 | 450HVVF6078 | | 94.5 | 200/115 | 10086 | 95.67 | NE |
| 1000 | 1800 | 2300/4000 | 450 | R9625 | 450HVVF6027 | | 94.5 | 220/127 | 9215 | 94.09 | NE |
| | 1200 | 2300/4000 | 450 | R9626 | 450HVVF6079 | | 94.5 | 223/128 | 10086 | 95.67 | NE |
| 1250 | 1800 | 2300/4000 | 450 | R9628 | 450HVVF6028 | | 95.0 | 274/157 | 9546 | 94.09 | NE |
| | 1200 | 4000 | 500 | R9629 | 500HVVF6076 | | 95.0 | 161 | 13635 | 101.38 | |
| 1500 | 1800 | 4000 | 500 | R9631 | 500HVVF6026 | | 95.4 | 192 | 13360 | 101.38 | |
| | 1200 | 4000 | 500 | R9632 | 500HVVF6077 | | 95.0 | 196 | 13635 | 101.38 | |
| 1750 | 1800 | 4000 | 500 | R9634 | 500HVVF6027 | | 95.4 | 224 | 13360 | 101.38 | NE |
| | 1200 | 4000 | 560 | R9635 | 560HVVF6076 | | 95.0 | 231 | 17769 | 113.58 | 99,NE |

Specifications are subject to change without notice.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

Catalog number (Cat No.) highlighted bold blue have efficiency levels that meet NEMA PREMIUM MG1 Table 12-12, Table 20-B or Table 20-C

*See back cover page for attribution.

ENDURANCE SERIES® MOTORS

BUILD UP OPTIONS

| FEATURES | ODP | TEFC | WP11 | TEAAC | TEWAC |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Altitude/Ambient | | | | | |
| Altitude - Above 3300', up to 5000' | ■ | ■ | ■ | ■ | ■ |
| Ambient - Above 40°C, up to 60°C | ■ | ■ | ■ | ■ | ■ |
| Ambient - Below -25°C | | | CF | | |
| Balance | | | | | |
| Precision Balance | ■ | ■ | ■ | ■ | ■ |
| Special Balance | | | CF | | |
| Bearing | | | | | |
| Roller Bearing (DE)*** | CF | ■ | CF | CF | CF |
| Insulated Bearing (NDE)** | ■ | ■ | ■ | ■ | ■ |
| Oil Site Gauge | | | CF | | |
| Oil Sump Heater | | | CF | | |
| Sleeve Bearing | | | CF | | |
| Blowers | | | | | |
| Radial Blower | | | CF | | |
| Brackets | | | | | |
| FF-Flange - DE (IEC Frames Only) | ■ | ■ | ■ | ■ | ■ |
| NEMA** - C-Face - DE (NEMA Frames Only) | CF | ■ | CF | NA | NA |
| NEMA - D-Flange - DE (NEMA Frames Only) | ■ | ■ | ■ | NA | NA |
| Conduit Box | | | | | |
| Accessory Auxiliary Box | STD WITH ACCESSORIES |
| Cable Gland Installed | | | CF | | |
| Drain/Breather Installed | | | CF | | |
| Oversized Box | | | CF | | |
| Coupling | | | | | |
| Customer Half Coupling Installed | | | CF | | |
| Drain & Breathers | | | | | |
| Brass Drain & Breather | NA | ■ | NA | ■ | ■ |
| Stainless Steel Drain & Breather | NA | ■ | NA | ■ | ■ |
| Encoder/Tachometer | | | | | |
| Provisions (Tether Mount) | | | CF | | |
| Installed | | | CF | | |
| Frequency | | | | | |
| 60Hz to 50Hz Rerate | | | CF | | |
| Grease/Lubrication/Fittings | | | | | |
| High Temperature Grease | ■ | ■ | ■ | ■ | ■ |
| Low Temperature Grease | ■ | ■ | ■ | ■ | ■ |
| Oil Mist System | | | CF | | |
| Grounding | | | | | |
| Shaft Grounding Brush** | ■ | ■ | ■ | ■ | ■ |
| Shaft Grounding Ring** | ■ | ■ | ■ | ■ | ■ |
| Hardware | | | | | |
| Stainless Steel | | | CF | | |
| Leads | | | | | |
| Longer Leads (\$ per ft) | ■ | ■ | ■ | ■ | ■ |
| Special Terminal Requirement | | | CF | | |
| Low Noise | | | | | |
| Low Noise Abatement | | | CF | | |
| Mounting/Assembly-Terminal Box Location | | | | | |
| IEC** -Low Voltage | F3 | F3 | NA | NA | NA |
| IEC-Medium Voltage | F1 or F2 |
| NEMA** -Low Voltage & Medium Voltage | F1 or F2 | F1 or F2 or F3 | F1 or F2 | F1 or F2 | F1 or F2 |
| Nameplate/Markings | | | | | |
| Additional Data on Nameplate | ■ | ■ | ■ | ■ | ■ |
| Replacement Nameplate | ■ | ■ | ■ | ■ | ■ |
| Rotation Arrow | ■ | ■ | ■ | ■ | ■ |
| Separate Auxiliary Nameplate | ■ | ■ | ■ | ■ | ■ |

■ = Available CF = Consult Factory NA = Not Available

** - Not Available on Division 2 motors

*** - Not Available on 2 pole designs

*See back cover page for attribution.

ENDURANCE SERIES® MOTORS

BUILD UP OPTIONS

| FEATURES | ODP | TEFC | WP/II | TEAAC | TEWAC |
|---|-----|------|-------|-------|-------|
| Packaging | | | | | |
| Crating | | | CF | | |
| Export Packaging | | | CF | | |
| Paint | | | | | |
| Stock Marathon® Motor Color | ■ | ■ | ■ | ■ | ■ |
| Special Color | | | CF | | |
| Protection-Current and Voltage | | | | | |
| Current Transformer | | | CF | | |
| Potential Transformer | | | CF | | |
| Protection-Mechanical | | | | | |
| Accelerometer | ■ | ■ | ■ | ■ | ■ |
| Vibration Sensor Provision | ■ | ■ | ■ | ■ | ■ |
| Vibration Sensor Installed | ■ | ■ | ■ | ■ | ■ |
| Protection-Surge | | | | | |
| Lightning Arrestors | | | CF | | |
| Surge Capacitors | | | CF | | |
| Protection-Thermal | | | | | |
| Bearing Temperature Detectors (BTDs) 100Ω Platinum | ■ | ■ | ■ | ■ | ■ |
| Stator Temperature Detectors (RTDs) 100Ω Platinum | ■ | ■ | ■ | ■ | ■ |
| Thermistor Control Module | ■ | ■ | ■ | ■ | ■ |
| Thermistors-Winding | ■ | ■ | ■ | ■ | ■ |
| Thermostats (N/C) | ■ | ■ | ■ | ■ | ■ |
| Thermostats (N/C) - Hermetically Sealed | ■ | ■ | ■ | ■ | ■ |
| Service Factor | | | | | |
| Service Factor Rerate | | | CF | | |
| Shaft Modification | | | | | |
| Shaft Extension (Length, Keyway, Tapered, etc) | | | CF | | |
| Shaft Features (Internal Thread, Milled Flat, Material) | | | CF | | |
| Shaft Seals | | | | | |
| Labyrinth Seals | NA | ■ | NA | NA | NA |
| Radial Lip Seals | ■ | ■ | ■ | ■ | ■ |
| V-Ring Seals | ■ | ■ | ■ | ■ | ■ |
| Space Heater | | | | | |
| Space Heater-Standard (120V or 240V or 460V) | ■ | ■ | ■ | ■ | ■ |
| Space Heater-Silicone Free (120V or 240V) | ■ | ■ | ■ | ■ | ■ |
| Testing | | | | | |
| Unwitnessed - Complete Initial Test | ■ | ■ | ■ | ■ | ■ |
| Unwitnessed - Polarization Index Test | ■ | ■ | ■ | ■ | ■ |
| Unwitnessed - Sound Test | ■ | ■ | ■ | ■ | ■ |
| Unwitnessed - Vibration Test | ■ | ■ | ■ | ■ | ■ |
| Witnessed - Complete Initial Test | ■ | ■ | ■ | ■ | ■ |
| Witnessed - Sound Test | ■ | ■ | ■ | ■ | ■ |
| Witnessed - Vibration Test | ■ | ■ | ■ | ■ | ■ |
| Torques | | | | | |
| NEMA® Design A, C or D | | | CF | | |
| Torque - Special | | | CF | | |
| Voltage | | | | | |
| Low Voltage > 601V | | | CF | | |
| Medium Voltage > 4160V, but < 6900V | | | CF | | |
| Medium Voltage 6900V through 13.2KV | | | CF | | |
| Weatherproofing / Special Service | | | | | |
| Division 2 Hazardous Motor | | | CF | | |
| Tropical Anti-Fungus Treatment | ■ | ■ | ■ | ■ | ■ |
| WP/II Enclosure Options | | | | | |
| Filter-Galvanized | NA | NA | ■ | NA | NA |
| Filter-Stainless | NA | NA | ■ | NA | NA |
| Pressure Differential Switch | NA | NA | ■ | NA | NA |

■ = Available CF = Consult Factory NA = Not Available

** - Not Available on Division 2 motors

*** - Not Available on 2 pole designs

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES

Marathon CONTROLMAX AC drives With and W/O Brake Transistors vector drives with more versatile features and compact size.

- CM3 IP20 1/4 through 10 HP with voltages in 110-127V
- CM3 IP20 1/4 through 10 HP with voltages in 200-240V
- CM3 IP20 1/4 through 10 HP with voltages in 460-480V
- CM5 1/3 HP to 75 HP IP20 & IP31 with voltages in 200-240V
- CM5 1/3 HP to 175 HP IP20 & IP31 with voltages in 380-480V
- CM5 1 1/2 HP to 10 HP IP20 & IP31 with voltages in 500-600V

Marathon CONTROLMAX AC drives With and W/O Brake Transistors CM5 Series Drives are for use with an AC induction motor or PMAC motors adding more sophistication to your equipment.

- 1/3 to 175 HP IP20 and/or IP31.
- Wash Down Duty / IP66 - 1/3 HP to 25 HP with voltages in 200-240V
- IP66 - 1/2 HP to 50HP with voltages in 380-480V
- IP66 - 1 1/2 HP to 50HP with voltages in 500-600V

Marathon CONTROLMAX DC drives for use with SCR rated motors. Models range from sub-CONTROLMAX through 3 HP. In NEMA®* 1 = CONTROLMAX DC-4, NEMA 4/12 and NEMA 4X = CONTROLMAX DC-4X enclosures available.

Low voltage controls available through 120 amps @ 12/24V and 100 amps @ 36/48V.

*See back cover page for attribution.



MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|--|--------------|-------------------|--------------|---------------|-----------|------------------------|------------------|------------------------|------------------|
| 174603.00 | 174603.00M | CM3 | CM3 VECTOR 1PH, 0.25 OR 0.33HP 1.6A 110-127V IP20 | YES | NO | NO | 110-127 | IP20 | 0.33 | 1.6 | - | - |
| 174604.00 | 174604.00M | CM3 | CM3 VECTOR 1PH, 0.75HP 2.6A 110-127V IP20 | YES | NO | NO | 110-127 | IP20 | 0.75 | 2.6 | - | - |
| 174605.00 | 174605.00M | CM3 | CM3 VECTOR 1PH, 1HP 4.2A 110-127V IP20 | YES | NO | NO | 110-127 | IP20 | 1 | 4.2 | - | - |
| 174606.00 | 174606.00M | CM3 | CM3 VECTOR 1PH, 0.25/0.33HP 1.6A 200-240V IP20 | YES | NO | NO | 200-240 | IP20 | 0.25/0.33 | 1.6 | - | - |
| 174607.00 | 174607.00M | CM3 | CM3 VECTOR 1PH, 0.75HP 2.6A 200-240V IP20 | YES | NO | NO | 200-240 | IP20 | 0.75 | 2.6 | - | - |
| 176319.00 | 174607.00M | CM3 | CM3 VECTOR 1PH, 0.75HP 2.6A 200-240V IP20 | YES | NO | NO | 200-240 | IP20 | 0.75 | 2.6 | - | - |
| 174608.00 | 174608.00M | CM3 | CM3 VECTOR 1PH, 1HP 4.2A 200-240V IP20 | YES | NO | NO | 200-240 | IP20 | 1 | 4.2 | - | - |
| 174609.00 | 174609.00M | CM3 | CM3 VECTOR 3PH, 2HP 7.3A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 2 | 7.3 | - | - |
| 174610.00 | 174609.00M | CM3 | CM3 VECTOR 3PH, 2HP 7.3A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 2 | 7.3 | - | - |
| 176110.00 | 174609.00M | CM3 | CM3 VECTOR 3PH, 2HP 7.3A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 2 | 7.3 | - | - |
| 176138.00 | 174609.00M | CM3 | CM3 VECTOR 3PH, 2HP 7.3A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 2 | 7.3 | - | - |
| 174272.10 | 174609.00M | CM3 | CM3 VECTOR 3PH, 2HP 7.3A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 2 | 7.3 | - | - |
| 174611.00 | 174611.00M | CM3 | CM3 VECTOR 3PH, 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 3 | 10 | - | - |
| 176111.00 | 174611.00M | CM3 | CM3 VECTOR 3PH, 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 3 | 10 | - | - |
| 176317.00 | 174611.00M | CM3 | CM3 VECTOR 3PH, 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 3 | 10 | - | - |
| 174620.00 | 174620.00M | CM3 | CM3 VECTOR 3PH, 0.5HP 1.1A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 0.5 | 1.1 | - | - |
| 174621.00 | 174621.00M | CM3 | CM3 VECTOR 3PH, 1HP 1.8A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 1 | 1.8 | - | - |
| 174622.00 | 174622.00M | CM3 | CM3 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | - | - |
| 174623.00 | 174623.00M | CM3 | CM3 VECTOR 3PH, 2HP 3.5A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 2 | 3.5 | - | - |
| 174624.00 | 174624.00M | CM3 | CM3 VECTOR 3PH, 3HP 5.6A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 3 | 5.6 | - | - |
| 174625.00 | 174625.00M | CM3 | CM3 VECTOR 3PH, 5HP 8.3A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 5 | 8.3 | - | - |
| 174626.00 | 174626.00M | CM3 | CM3 VECTOR 3PH, 7.5HP 11A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 7.5 | 11 | - | - |
| 174627.00 | 174627.00M | CM3 | CM3 VECTOR 3PH, 10HP 14A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 10 | 14 | - | - |
| 174651.00 | 174651.00M | CM3 | CM3 VECTOR 1PH, 2HP 6.0A 110-127V IP20 | YES | NO | NO | 110-127 | IP20 | 2 | 6 | - | - |
| - | 184003.00M | CM3 | CM3 VECTOR 3PH, 5HP 15.2A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 5 | 15.2 | - | - |
| - | 184038.00M | CM3 | CM3 VECTOR 1PH, 2HP 7.3A 200-240V IP20 | YES | NO | NO | 200-240 | IP20 | 2 | 7.3 | - | - |
| - | 184040.00M | CM3 | CM3 VECTOR 3PH, 0.25/0.33HP 1.6A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 0.25/0.33 | 1.6 | - | - |
| - | 184041.00M | CM3 | CM3 VECTOR 3PH, 0.75HP 2.6A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 0.75 | 2.6 | - | - |
| - | 184042.00M | CM3 | CM3 VECTOR 3PH, 1HP 4.2A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 1 | 4.2 | - | - |
| 174540.00 | 174540.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 0.75HP 2.6A & HEAVY DUTY 0.75HP 2.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | YES | NO | 200-240 | IP66 | 0.75 | 2.6 | 0.75 | 2.6 |
| 174542.00 | 174542.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 0.5HP 1A & HEAVY DUTY 0.5HP 1A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 0.5 | 1 | 0.5 | 1 |

Continued on next page.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|---|--------------|-------------------|--------------|---------------|-----------|------------------------|------------------|------------------------|------------------|
| 174544.00 | 174544.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 15 | 24 | 15 | 24 |
| 174615.00 | 174615.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 5HP 16A & HEAVY DUTY 5HP 16A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 5 | 16 | 5 | 16 |
| 174616.00 | 174616.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 24A & HEAVY DUTY 7.5HP 24A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 7.5 | 24 | 7.5 | 24 |
| 174617.00 | 174617.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 10HP 28A & HEAVY DUTY 10HP 28A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 10 | 33 | 10 | 33 |
| 174618.00 | 174618.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 15HP 47A & HEAVY DUTY 15HP 47A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 15 | 47 | 15 | 47 |
| 174619.00 | 174619.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & HEAVY DUTY 20HP 56A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 20/25 | 70 | 20 | 56 |
| 174628.00 | 174628.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 15 | 24 | 15 | 24 |
| 174631.00 | 174631.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 1.5HP 1.7A & HEAVY DUTY 1.5HP 1.7A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 500-600 | IP66 | 1.5 | 1.7 | 1.5 | 1.7 |
| 174632.00 | 174632.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 3HP 4.3A & HEAVY DUTY 3HP 4.3A 500-600V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP20 | 3 | 4.3 | 3 | 4.3 |
| 174633.00 | 174632.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 3HP 4.3A & HEAVY DUTY 3HP 4.3A 500-600V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP20 | 3 | 4.3 | 3 | 4.3 |
| 174634.00 | 174634.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 7A & HEAVY DUTY 7.5HP 7A 500-600V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP20 | 7.5 | 7 | 7.5 | 7 |
| 174635.00 | 174634.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 7A & HEAVY DUTY 7.5HP 7A 500-600V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP20 | 7.5 | 7 | 7.5 | 7 |
| 174636.00 | 174636.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 10HP 12A & HEAVY DUTY 10HP 12A 500-600V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP20 | 10 | 12 | 10 | 12 |
| 174652.00 | 174652.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 0.75HP 2.6A & HEAVY DUTY 0.75HP 2.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 0.75 | 2.6 | 0.75 | 2.6 |
| 174655.00 | 174652.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 0.75HP 2.6A & HEAVY DUTY 0.75HP 2.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 0.75 | 2.6 | 0.75 | 2.6 |
| 174653.00 | 174653.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66, WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 1.5 | 4.3 | 1.5 | 4.3 |
| 174654.00 | 174653.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66, WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 1.5 | 4.3 | 1.5 | 4.3 |
| 174656.00 | 174653.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66, WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 1.5 | 4.3 | 1.5 | 4.3 |
| 174657.00 | 174658.00M | CM5 | CM5, VECTOR, 1PH OR 3PH, 2HP, 7.3A, 200-240V IP66, WASHDOWN, WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 2 | 7.3 | 2 | 7.3 |

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|--|--------------|-------------------|--------------|---------------|-----------|------------------------|------------------|------------------------|------------------|
| 174658.00 | 174658.00M | CM5 | CM5, VECTOR, 1PH OR 3PH, 2HP, 7.3A, 200-240V IP66, WASHDOWN, WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 2 | 7.3 | 2 | 7.3 |
| 174674.00 | 174657.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 2HP 7.3A 200-240V IP66, WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 2 | 7.3 | 2 | 7.3 |
| 174659.00 | 174659.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 3HP 10A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 3 | 10 | 3 | 10 |
| 174660.00 | 174660.00M | CM5 | CM5 VECTOR 3PH, 5HP 16A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP66 | 5 | 16 | 5 | 16 |
| 174661.00 | 174661.00M | CM5 | CM5 VECTOR 3PH, 7.5HP 24A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP66 | 7.5 | 24 | 7.5 | 24 |
| 174734.00 | 174661.00M | CM5 | CM5 VECTOR 3PH, 7.5HP 24A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP66 | 7.5 | 24 | 7.5 | 24 |
| 174662.00 | 174662.00M | CM5 | CM5 VECTOR 3PH, 10HP 33A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP66 | 10 | 33 | 10 | 33 |
| 174663.00 | 174663.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 1.7A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP66 | 1.5 | 1.7 | 1.5 | 1.7 |
| 174664.00 | 174664.00M | CM5 | CM5 VECTOR 3PH, 3HP 4.3A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP66 | 3 | 4.3 | 3 | 4.3 |
| 174665.00 | 174664.00M | CM5 | CM5 VECTOR 3PH, 3HP 4.3A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP66 | 3 | 4.3 | 3 | 4.3 |
| 174666.00 | 174667.00M | CM5 | CM5, VECTOR, 3PH, 7.5HP, 7A, 500-600V IP66, WASHDOWN, WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP66 | 7.5 | 7 | 7.5 | 7 |
| 174667.00 | 174667.00M | CM5 | CM5, VECTOR, 3PH, 7.5HP, 7A, 500-600V IP66, WASHDOWN, WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP66 | 7.5 | 7 | 7.5 | 7 |
| 174668.00 | 174668.00M | CM5 | CM5 VECTOR 3PH, 10HP 12A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP66 | 10 | 12 | 10 | 12 |
| 174671.00 | 174671.00M | CM5 | CM5 VECTOR 3PH, 0.5HP 1A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 0.5 | 1 | 0.5 | 1 |
| 174672.00 | 174672.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 1.5 | 2.6 | 1.5 | 2.6 |
| 174673.00 | 174672.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 1.5 | 2.6 | 1.5 | 2.6 |
| 174675.00 | 174675.00M | CM5 | CM5 VECTOR 3PH, 3HP 4.3A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 3 | 4.3 | 3 | 4.3 |
| 174676.00 | 174676.00M | CM5 | CM5 VECTOR 3PH, 5HP 6.5A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 5 | 6.5 | 5 | 6.5 |
| 174677.00 | 174677.00M | CM5 | CM5 VECTOR 3PH, 7.5HP 10A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 7.5 | 10 | 7.5 | 10 |
| 174699.00 | 174699.00M | CM5 | CM5 VECTOR 3PH, 15HP 47A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP66 | 15 | 47 | 15 | 42 |
| 174700.00 | 174700.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & 20HP 56A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP66 | 25 | 70 | 20 | 56 |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|--|--------------|-------------------|--------------|---------------|-----------|------------------------|------------------|------------------------|------------------|
| 174701.00 | 174701.00M | CM5 | CM5 VECTOR 3PH, 15HP 24A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 15 | 24 | 15 | 24 |
| 174702.00 | 174702.00M | CM5 | CM5 VECTOR 3PH, 25HP 31A 380-480V IP66, WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 25 | 31 | 25 | 31 |
| 174703.00 | 174702.00M | CM5 | CM5 VECTOR 3PH, 25HP 31A 380-480V IP66, WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 25 | 31 | 25 | 31 |
| 174704.00 | 174704.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A & HEAVY DUTY 30HP 39A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 30 | 45 | 30 | 39 |
| 174710.00 | 174711.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 50/60HP 77A & HEAVY DUTY 61A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 50/60 | 77 | 50 | 61 |
| 174711.00 | 174711.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 50/60HP 77A & HEAVY DUTY 61A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 50/60 | 77 | 50 | 61 |
| 174992.00 | 174992.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 40HP 58.5A & HEAVY DUTY 40HP 49A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 40 | 58.5 | 40 | 49 |
| 176105.00 | 176105.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.33HP 1.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.33 | 1.6 | 0.33 | 1.6 |
| 176133.00 | 176105.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.33HP 1.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.33 | 1.6 | 0.33 | 1.6 |
| 176106.00 | 176106.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.75 | 2.6 | 0.75 | 2.6 |
| 176107.00 | 176106.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.75 | 2.6 | 0.75 | 2.6 |
| 176134.00 | 176106.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.75 | 2.6 | 0.75 | 2.6 |
| 176135.00 | 176106.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.75 | 2.6 | 0.75 | 2.6 |
| 174268.00 | 176106.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.75 | 2.6 | 0.75 | 2.6 |
| 176114.00 | 176106.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.75 | 2.6 | 0.75 | 2.6 |
| 176116.00 | 176108.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 1.5 | 4.3 | 1.5 | 4.3 |
| 176113.00 | 176106.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.75 | 2.6 | 0.75 | 2.6 |
| 176108.00 | 176108.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 1.5 | 4.3 | 1.5 | 4.3 |

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|--|--------------|-------------------|--------------|---------------|------------------------|------------------------|------------------|------------------------|------------------|
| 176109.00 | 176108.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 1.5 | 4.3 | 1.5 | 4.3 |
| 176115.00 | 176108.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 1.5 | 4.3 | 1.5 | 4.3 |
| 176137.00 | 176108.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 1.5 | 4.3 | 1.5 | 4.3 |
| 174920.00 | 176108.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 1.5 | 4.3 | 1.5 | 4.3 |
| 176105.00 | 176105.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.33HP 1.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.33 | 1.6 | 0.33 | 1.6 |
| 176112.00 | 176105.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.33HP 1.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 0.33 | 1.6 | 0.33 | 1.6 |
| 176117.00 | 176117.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 2HP 7.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 2 | 7.3 | 2 | 7.3 |
| 176139.00 | 176118.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 3HP 10A HEAVY DUTY 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR. IF IP31 IS REQUIRED USE NEMA 1 KIT CM5-KN1E | NO | YES | NO | 200-240 | IP20 | 3 | 10 | 3 | 10 |
| 176118.00 | 176118.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 3HP 10A HEAVY DUTY 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR. IF IP31 IS REQUIRED USE NEMA 1 KIT CM5-KN1E | NO | YES | NO | 200-240 | IP20 | 3 | 10 | 3 | 10 |
| 174918.00 | 176118.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 3HP 10A HEAVY DUTY 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR. IF IP31 IS REQUIRED USE NEMA 1 KIT CM5-KN1E | NO | YES | NO | 200-240 | "IP20 OR NEMA 1 W/KIT" | 3 | 10 | 3 | 10 |
| 174934.00 | 176118.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 3HP 10A HEAVY DUTY 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR. IF IP31 IS REQUIRED USE NEMA 1 KIT CM5-KN1E | NO | YES | NO | 200-240 | IP20 | 3 | 10 | 3 | 10 |
| 176120.00 | 176120.00M | CM5 | CM5 VECTOR 3PH, 0.5HP 1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 0.5 | 1 | 0.5 | 1 |
| 176140.00 | 176120.00M | CM5 | CM5 VECTOR 3PH, 0.5HP 1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 0.5 | 1 | 0.5 | 1 |
| 176127.00 | 176120.00M | CM5 | CM5 VECTOR 3PH, 0.5HP 1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 0.5 | 1 | 0.5 | 1 |
| 176121.00 | 176121.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | 1.5 | 2.6 |
| 176123.00 | 176121.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | 1.5 | 2.6 |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|--|--------------|-------------------|--------------|---------------|-----------|------------------------|------------------|------------------------|------------------|
| 176142.00 | 176121.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | 1.5 | 2.6 |
| 176143.00 | 176121.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | 1.5 | 2.6 |
| 176122.00 | 176121.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | 1.5 | 2.6 |
| 176129.00 | 176121.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | 1.5 | 2.6 |
| 176130.00 | 176121.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1.5 | 2.6 | 1.5 | 2.6 |
| 176124.00 | 176124.00M | CM5 | CM5 VECTOR 3PH, 3HP 6.1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 3 | 6.1 | 3 | 6.1 |
| 176125.00 | 176124.00M | CM5 | CM5 VECTOR 3PH, 3HP 6.1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 3 | 6.1 | 3 | 6.1 |
| 176144.00 | 176124.00M | CM5 | CM5 VECTOR 3PH, 3HP 6.1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 3 | 6.1 | 3 | 6.1 |
| 176145.00 | 176124.00M | CM5 | CM5 VECTOR 3PH, 3HP 6.1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 3 | 6.1 | 3 | 6.1 |
| 176128.00 | 176128.00M | CM5 | CM5 VECTOR 3PH, 1HP 1.6A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1 | 1.6 | 1 | 1.6 |
| 176131.00 | 176124.00M | CM5 | CM5 VECTOR 3PH, 3HP 6.1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 3 | 6.1 | 3 | 6.1 |
| 176132.00 | 176124.00M | CM5 | CM5 VECTOR 3PH, 3HP 6.1A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 3 | 6.1 | 3 | 6.1 |
| 176136.00 | 176108.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | YES | NO | 200-240 | IP20 | 1.5 | 4.3 | 1.5 | 4.3 |
| 176128.00 | 176128.00M | CM5 | CM5 VECTOR 3PH, 1HP 1.6A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1 | 1.6 | 1 | 1.6 |
| 176141.00 | 176128.00M | CM5 | CM5 VECTOR 3PH, 1HP 1.6A 380-480V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | NO | NO | YES | 380-480 | IP20 | 1 | 1.6 | 1 | 1.6 |
| 176146.00 | 176146.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 10A HEAVY DUTY 7.5HP 10A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 7.5 | 10 | 7.5 | 10 |
| 176147.00 | 176146.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 10A HEAVY DUTY 7.5HP 10A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 7.5 | 10 | 7.5 | 10 |
| 176148.00 | 176148.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 10HP 16A HEAVY DUTY 10HP 16A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 10 | 16 | 10 | 16 |
| 176149.00 | 174628.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 15 | 24 | 15 | 24 |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|---|--------------|-------------------|--------------|---------------|------------------------|------------------------|------------------|------------------------|------------------|
| 174629.00 | 176151.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 20/25HP 31A HEAVY DUTY 20/25HP 31A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 20/25 | 31 | 20/25 | 31 |
| 174630.00 | 176151.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 20/25HP 31A HEAVY DUTY 20/25HP 31A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 20/25 | 31 | 20/25 | 31 |
| 176150.00 | 176151.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 20/25HP 31A HEAVY DUTY 20/25HP 31A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 20/25 | 31 | 20/25 | 31 |
| 176151.00 | 176151.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 20/25HP 31A HEAVY DUTY 20/25HP 31A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 20/25 | 31 | 20/25 | 31 |
| 174991.00 | 176152.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A HEAVY DUTY 30HP 39A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 30 | 45 | 30 | 39 |
| 176152.00 | 176152.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A HEAVY DUTY 30HP 39A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 30 | 45 | 30 | 39 |
| - | 186000.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 1.7A 500-600V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP20 | 1.5 | 1.7 | 1.5 | 1.7 |
| - | 186002.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 60HP 180A HEAVY DUTY 50HP 145A 200-240V IP20 WITH BRAKING TRANSISTOR, IF IP31 IS REQUIRED USE NEMA 1 KIT CM5-KN1B | NO | NO | YES | 200-240 | "IP20 OR NEMA 1 W/KIT" | 60 | 180 | 50 | 145 |
| - | 186003.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.33HP 1.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 0.33 | 1.6 | 0.33 | 1.6 |
| - | 186004.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 0.33HP 1.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | YES | NO | 200-240 | IP66 | 0.33 | 1.6 | 0.33 | 1.6 |
| - | 186005.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | YES | NO | 200-240 | IP66 | 1.5 | 4.3 | 1.5 | 4.3 |
| - | 186085.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 2HP 7.0A 200-240V IP20 | NO | YES | NO | 200-240 | IP20 | 2 | 7.0 | 2 | 7.0 |
| - | 186006.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 2HP 7.3A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | YES | NO | 200-240 | IP66 | 2 | 7.3 | 2 | 7.3 |
| - | 186007.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 3HP 10A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | YES | NO | 200-240 | IP66 | 3 | 10 | 3 | 10 |
| - | 186008.00M | CM5 | CM5 VECTOR 3PH, 5HP 16A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 200-240 | IP66 | 5 | 16 | 5 | 16 |
| - | 186009.00M | CM5 | CM5 VECTOR 3PH, 7.5HP 24A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 200-240 | IP66 | 7.5 | 24 | 7.5 | 24 |
| - | 186012.00M | CM5 | CM5 VECTOR 3PH, 10HP 33A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 200-240 | IP66 | 10 | 33 | 10 | 33 |
| - | 186013.00M | CM5 | CM5 VECTOR 3PH, 15HP 47A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 200-240 | IP66 | 15 | 47 | 15 | 47 |
| - | 186014.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & HEAVY DUTY 20HP 56A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 200-240 | IP66 | 25 | 70 | 20 | 56 |
| - | 186015.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A & HEAVY DUTY 30HP 39A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 30 | 45 | 30 | 39 |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|---|--------------|-------------------|--------------|---------------|------------------------|------------------------|------------------|------------------------|------------------|
| - | 186016.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 50HP 59.2A & 40HP 49A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 50 | 59.2 | 40 | 49 |
| - | 186017.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 50HP 59.2A & HEAVY DUTY 40HP 49A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 50 | 59.2 | 40 | 49 |
| - | 186018.00M | CM5 | CM5 VECTOR 3PH, 1HP 1.6A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 1 | 1.6 | 1 | 1.6 |
| - | 186019.00M | CM5 | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 1.5 | 2.6 | 1.5 | 2.6 |
| - | 186086.00M | CM5 | CM5 VECTOR 3PH, 3HP 9.6A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 3 | 9.6 | 3 | 9.6 |
| - | 186020.00M | CM5 | CM5 VECTOR 3PH, 3HP 4.3A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 3 | 4.3 | 3 | 4.3 |
| - | 186021.00M | CM5 | CM5 VECTOR 3PH, 5HP 6.5A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 5 | 6.5 | 5 | 6.5 |
| - | 186022.00M | CM5 | CM5 VECTOR 3PH, 7.5HP 10A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 7.5 | 10 | 7.5 | 10 |
| 174678.00 | 186023.00M | CM5 | CM5 VECTOR 3PH, 10HP 16A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP66 | 10 | 16 | 10 | 16 |
| 174546.00 | 174546.00M | CM5 | CM5 VECTOR 3PH, 10HP 16A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 10 | 16 | 10 | 16 |
| - | 186025.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 25HP 31A & HEAVY DUTY 25HP 31A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP66 | 25 | 31 | 25 | 31 |
| - | 186056.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 75HP 88A & HEAVY DUTY 60HP 73A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 75 | 88 | 60 | 73 |
| - | 186057.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 75HP 105A & HEAVY DUTY 75HP 88A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 75 | 105 | 75 | 88 |
| - | 186059.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 100/125HP 142A & HEAVY DUTY 100HP 115A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 100/125 | 142 | 100 | 115 |
| - | 186060.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 150HP 180A & HEAVY DUTY 125HP 142A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 150 | 180 | 125 | 142 |
| - | 186061.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 175HP 211A & HEAVY DUTY 150HP 180A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 175 | 211 | 150 | 180 |
| 174569.00 | 186063.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 25HP 77A & HEAVY DUTY 20HP 64A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | "IP20 OR NEMA 1 W/KIT" | 20/25 | 77 | 20 | 64 |
| - | 186064.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 30HP 88A OR HEAVY DUTY 25HP 75A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 30 | 88 | 25 | 75 |
| - | 186065.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 40HP 105A OR HEAVY DUTY 30HP 88A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 40 | 105 | 30 | 88 |
| - | 186066.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 50HP 145A OR HEAVY DUTY 40HP 115A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 50 | 145 | 40 | 115 |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES DRIVES CROSS REFERENCE

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | ITEM DESCRIPTION | 1-PH IN ONLY | 1-PH IN & 3-PH IN | 3-PH IN ONLY | INPUT VOLTAGE | IP RATING | (ND) HP 1 POWER RATING | AMPS FOR ND HP 1 | (HD) HP 2 POWER RATING | AMPS FOR HD HP 2 |
|----------------------|------------------|--------|--|--------------|-------------------|--------------|---------------|-----------|------------------------|------------------|------------------------|------------------|
| - | 186067.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 75HP 211A OR HEAVY DUTY 60HP 180A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 75 | 211 | 60 | 180 |
| - | 186069.00M | CM5 | CM5 VECTOR 1PH OR 3PH, 3HP 4.3A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 500-600 | IP66 | 3 | 4.3 | 3 | 4.3 |
| - | 186070.00M | CM5 | CM5 VECTOR 3PH, 7.5HP 7A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 500-600 | IP66 | 7.5 | 7 | 7.5 | 7 |
| - | 186072.00M | CM5 | CM5 VECTOR 3PH, 10HP 12A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | NO | NO | YES | 500-600 | IP66 | 10 | 12 | 10 | 12 |
| - | 186087.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 75HP 211A & HEAVY DUTY 60HP 180A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 75 | 211 | 60 | 180 |
| - | 186088.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 50HP 145A & HEAVY DUTY 40HP 115A 200-240V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 200-240 | IP20 | 50 | 145 | 40 | 115 |
| - | 186091.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 5HP 6.5A & HEAVY DUTY 5HP 6.5A 380-480V IP20 WITH BRAKE TRANSISTOR | NO | NO | YES | 380-480 | IP20 | 5 | 6.5 | 5 | 6.5 |
| - | 186092.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 150HP 180A & HEAVY DUTY 125HP 142A 380-480V IP20 | NO | NO | YES | 380-480 | IP20 | 150 | 180 | 125 | 142 |
| - | 186093.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 175HP 211A & HEAVY DUTY 150HP 180A 380-480V IP20 | NO | NO | YES | 380-480 | IP20 | 175 | 211 | 150 | 180 |
| - | 186094.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 125HP 142A & HEAVY DUTY 100HP 115A 380-480V IP20 | NO | NO | YES | 380-480 | IP20 | 100/125 | 142 | 100 | 115 |
| 174652.00 | 174652.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 0.75HP 2.6A & HEAVY DUTY 0.75HP 2.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 0.75 | 2.6 | 0.75 | 2.6 |
| 174653.00 | 174653.00M | CM5 | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66, WASHDOWN WITH BRAKE TRANSISTOR | NO | YES | NO | 200-240 | IP66 | 1.5 | 4.3 | 1.5 | 4.3 |
| - | 186090.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 3HP 4.3A & HEAVY DUTY 3HP 4.3A 380-480VAC, IP20 WITH BRAKE RESISTOR | NO | NO | YES | 380-480 | IP20 | 3 | 4.3 | 3 | 4.3 |
| - | 186107.00M | CM5 | CM5 VECTOR 3PH, NORMAL DUTY 60HP 180A & HEAVY DUTY 50HP 145A 200-240V IP20 | NO | NO | YES | 200-240 | IP20 | 60 | 180 | 50 | 145 |
| 174581.00 | 174581.00M | CM6 | CM6 VECTOR 3PH, NORMAL DUTY 75HP 88A AND HEAVY DUTY 60HP 56A 380-480V IP55 WITH DISCONNECT SWITCH | NO | NO | YES | 380-480 | IP55 | 75 | 88 | 60 | 56 |
| 174594.00 | 174594.00M | CM6 | CM6 VECTOR 3PH, NORMAL DUTY 50HP 53A AND HEAVY DUTY 40HP 44A 500-600V IP31 | NO | NO | YES | 500-600 | IP31 | 50 | 53 | 40 | 44 |
| 174599.00 | 174599.00M | CM6 | CM6 VECTOR 3PH NORMAL DUTY 40HP 44A AND HEAVY DUTY 30HP 36A 500-600V IP31 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP31 | 40 | 44 | 30 | 36 |
| 174637.00 | 174637.00M | CM6 | CM6 VECTOR 3PH, NORMAL DUTY 15HP 17A AND HEAVY DUTY 15HP 17A 500-600V IP31 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP31 | 15 | 17 | 15 | 17 |
| 174638.00 | 174638.00M | CM6 | CM6 VECTOR 3PH, NORMAL DUTY 20HP 22A AND HEAVY DUTY 20HP 19A 500-600V IP31 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP31 | 20 | 22 | 20 | 19 |
| 174639.00 | 174639.00M | CM6 | CM6 VECTOR 3PH, NORMAL DUTY 25HP 27A AND HEAVY DUTY 20HP 22A 500-600V IP31 WITH BRAKE TRANSISTOR | NO | NO | YES | 500-600 | IP31 | 25 | 27 | 20 | 22 |

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES AC DRIVES ACCESSORIES/KITS CROSS REFERENCE

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | SLOT | ITEM DESCRIPTION | APPROX. WGT (LBS) |
|----------------------|------------------|--------|-----------|--|-------------------|
| 174150.00 | 174150.00M | CM3 | 1 (UPPER) | CM3-KHMIR, KIT INCLUDES KEYPAD & 3,3 FT CABLE | 0.4 |
| 174356.00 | 174150.00M | CM3 | - | CM3-KHMIR, KIT INCLUDES KEYPAD & 3,3 FT CABLE | 0.4 |
| I5MADR000000S | 174150.00M | CM3 | - | CM3-KHMIR, KIT INCLUDES KEYPAD & 3,3 FT CABLE | 0.4 |
| 174370.00 | 174150.00M | CM3 | - | CM3-KHMIR, KIT INCLUDES KEYPAD & 3,3 FT CABLE | 0.4 |
| 174367.00 | 174367.00M | CM3 | - | CM3-CETH, COMM. MODULE; 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 1-RS485, 1-ETHERNET IP 100BASE TX RJ-45 PORT, 24VDC | 0.2 |
| - | 184016.00M | CM3 | 1 (UPPER) | CM3-CRS232, DRIVE KIT, RS-232 COMMUNICATION MODULE (MODBUS-RTU); 1 RS232 | 0.2 |
| - | 184017.00M | CM3 | 1 (UPPER) | CM3-CRS485, DRIVE KIT, RS-485 MODULE; 1 RS-485 INPUT (MODBUS RTU / BACNET MS/TP), 1 MINI USB FOR REMOTE KEYPAD | 0.2 |
| - | 184018.00M | CM3 | 1 (UPPER) | CM3-CCAN, DRIVES KIT, CANOPEN/DEVICENET COMM. MODULE; 1 CAN/DEVICENET, EXTERNAL 24VDC POWER | 0.2 |
| - | 184019.00M | CM3 | 1 (UPPER) | CM3-CPDP, DRIVES KIT, PROFIBUS DP COMMUNICATION MODULE; 1 PROFIBUS DP 9-PIN CONNECTOR | 0.2 |
| - | 184020.00M | CM3 | 1 (UPPER) | CM3-CUSB, DRIVES KIT, USB COMMUNICATION MODULE W/ 2-METER CABLE; 1 MINI USB | 0.2 |
| - | 184022.00M | CM3 | 1 (UPPER) | CM3-IOP, DRIVES KIT, POTENTIOMETER REFERENCE MODULE | 0.2 |
| - | 184023.00M | CM3 | 2 (LOWER) | CM3-IODR, DRIVES KIT, I/O EXPANSION MODULE; 4 DI, 3 DOR | 0.2 |
| - | 184024.00M | CM3 | 2 (LOWER) | CM3-IOAR, DRIVE KIT, I/O EXPANSION MODULE; 1 AI, 1 AO, 3 DOR, +10VDC | 0.2 |
| - | 184025.00M | CM3 | 2 (LOWER) | CM3-IOADR, DRIVE KIT, I/O EXPANSION MODULE: 1 NTC, 3RO AND 1 INFRARED INPUT. SIMPLE REMOTE CONTROL WITH BATTERY | 0.2 |
| - | 184026.00M | CM3 | 2 (LOWER) | CM3-IOADR-D, DRIVES KIT, I/O EXPANSION MODULE: 1 NTC, 3RO AND 1 INFRARED INPUT. COMPLETE REMOTE CONTROL WITH BATTERY AND DISPLAY | 0.2 |
| - | 184027.00M | CM3 | 2 (LOWER) | CM3-IOAENC, DRIVES KIT, I/O AND ENCODER MODULE; 1 AI, 2 AO, +10VDC, 1 INCREMENTAL ENCODER INPUT +5VDC | 0.2 |
| - | 184028.00M | CM3 | 2 (LOWER) | CM3-IODF, DRIVE KIT, I/O EXPANSION MODULE: 3 PULSE/FREQUENCY INPUT & 3 PULSE/ | 0.2 |
| - | 184054.00M | CM3 | - | CM3-MMF-UDRIVES, FLASH MEMORY MODULE | 0.2 |
| 174357 | 174357.00M | CM5 | - | CM5-CUSB, USB CARD, DRIVE KIT, COMM. MODULE; 1 USB, 1 RS485, 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 10VDC, 24VDC | 0.2 |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES AC DRIVES ACCESSORIES/KITS CROSS REFERENCE

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | SLOT | ITEM DESCRIPTION | APPROX. WGT (LBS) |
|----------------------|------------------|--------|------|--|-------------------|
| 174362 | 174362.00M | CM5 | - | CM5-IOS, COMES STD WITH ALL CM5 DRIVES, I/O MODULE; 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 1 RS485, 10VDC, 24VDC | 0.2 |
| 174363 | 174362.00M | CM5 | - | CM5-IOS, COMES STD WITH ALL CM5 DRIVES, I/O MODULE; 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 1 RS485, 10VDC, 24VDC | 0.2 |
| 174364 | 174364.00M | CM5 | - | CM5-CCAN, DRIVE KIT, COMM. MODULE; 1 CAN/DEVICENET, 1 RS485, 2 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 10VDC, 24VDC | 0.2 |
| 174365 | 174365.00M | CM5 | - | CM5-CEMB-TCP, DRIVE KIT, COMM. MODULE; 1-MODBUS TCP 100BASE TX RJ-45 PORT, 1-RS485, 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 24VDC | 0.2 |
| 174366 | 174366.00M | CM5 | - | CM5-CPDP2, DRIVE KIT, COMM. MODULE; 2 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 1 PROFIBUS DP, 1 RS485, 24VDC, DB9 CONNECTOR | 0.2 |
| 174368 | 174368.00M | CM5 | - | CM5-CEPN-IO, COMM. MODULE; 1-PROFINET I/O 100BASE TX RJ-45 PORT, 1-RS485, 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 24VDC | 0.2 |
| 174369 | 174369.00M | CM5 | - | CM5-CETH-IP, DRIVE KIT, COMM. MODULE; 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 1-RS485, 1-ETHERNET IP 100BASE TX RJ-45 PORT, 24VDC | 0.2 |
| - | 186026.00M | CM5 | - | CM5-IOD, DRIVE KIT, I/O MODULE; 8 DI, 1 AI, 1 AO, 1 DOR, 4 DOT, 1 RS485, 10VDC, 24VDC | 0.2 |
| - | 186027.00M | CM5 | - | CM5-IOAD, DRIVE KIT, I/O MODULE; 6 DI, 3 AI, 2 AO, 1 DOR, 3 DOT, 1 RS485, 10VDC, 24VDC | 0.2 |
| - | 186028.00M | CM5 | - | CM5-IOR-B, DRIVE KIT, I/O MODULE; 5 DI, 1 AI, 1 AO, 4 DOR, 1 DOT, 1 RS485, 10VDC, 24VDC | 0.2 |
| - | 186029.00M | CM5 | - | CM5-ENC, DRIVE KIT, ENCODER MODULE; QUAD INPUT A & B, 1 RS485, 5 DI, 1 AI, 1 AO, 3 DOR, 1 DOT, 24VDC | 0.2 |
| - | 186030.00M | CM5 | - | CM5-CRS232, DRIVE KIT, COMM. MODULE; 1 RS232, 1 RS485, 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 24VDC | 0.2 |
| - | 186031.00M | CM5 | - | CM5-CRS485-B, DRIVE KIT, COMM. MODULE; 2 RS485, 4 DI, 2 AI, 1 AO, 2 DOR, 1 DOT, 10VDC, 24VDC | 0.2 |
| - | 186032.00M | CM5 | - | CM5-CPDP2, DRIVE KIT, COMM. MODULE; 1-PROFIBUS DP & DP-V1 100BASE TX RJ-45 PORT, 1-RS485, 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 24VDC (TERMINAL BLOCK CONNECTOR) | 0.2 |
| - | 186033.00M | CM5 | - | CM5-SFY2, DRIVE KIT, SAFETY FUNCTION MODULE; SAFETORQUE OFF (STO) / STOP CATEGORY 0, SAFE STOP 1 | 1.8 |
| - | 186034.00M | CM5 | - | CM5-MMF, DRIVE KIT, FLASH MEMORY MODULE FOR SAVING AND RELOADING PROGRAM AND PARAMETERS TO / FROM THE DRIVE. | 0.2 |

*See back cover page for attribution.

Continued on next page.

MARATHON CONTROLMAX™ AC & DC CONTROLS

CM3™ & CM5™ SERIES AC DRIVES ACCESSORIES/KITS CROSS REFERENCE

| OLD CATALOG AC DRIVE | CONTROLMAX DRIVE | SERIES | SLOT | ITEM DESCRIPTION | APPROX. WGT (LBS) |
|----------------------|------------------|--------|------|--|-------------------|
| - | 186035.00M | CM5 | - | CM5-RHMIF, DRIVE KIT, REMOTE ADVANCED TEXT KEYPAD ENCLOSURE DOOR MOUNTING FRAME KIT | 0.5 |
| - | 186036.00M | CM5 | - | CM5-CCHMIR01M, DRIVE KIT, 3.3 FT (1 METER) REMOTE KEYPAD CABLE | 0.5 |
| - | 186037.00M | CM5 | - | CM5-CCHMIR02M, DRIVE KIT, 6.6 FT (2 METER) REMOTE KEYPAD CABLE | 0.7 |
| - | 186038.00M | CM5 | - | CM5-CCHMIR03M, DRIVE KIT, 9.9 FT (3 METER) REMOTE KEYPAD CABLE | 1.0 |
| - | 186039.00M | CM5 | - | CM5-CCHMIR05M, DRIVE KIT, 16 FT (5 METER) REMOTE KEYPAD CABLE | 1.2 |
| - | 186040.00M | CM5 | - | CM5-CCHMIR075M, DRIVE KIT, 25 FT (7.5 METER) REMOTE KEYPAD CABLE | 1.5 |
| - | 186041.00M | CM5 | - | CM5-CCHMIR010M, DRIVE KIT, 33 FT (10 METER) REMOTE KEYPAD CABLE | 2.0 |
| - | 186042.00M | CM5 | - | CM5-KN1A, DRIVE KIT, NEMA 1 KIT – FRAME SIZE A | 2.0 |
| - | 186043.00M | CM5 | - | CM5-KN1B, DRIVE KIT, NEMA 1 KIT – FRAME SIZE B | 3.0 |
| - | 186044.00M | CM5 | - | CM5-KN1C, DRIVE KIT, NEMA 1 KIT – FRAME SIZE C | 3.0 |
| - | 186045.00M | CM5 | - | CM5-KN1D, DRIVE KIT, NEMA 1 KIT – FRAME SIZE D | 3.0 |
| - | 186046.00M | CM5 | - | CM5-KN1E, DRIVE KIT, NEMA 1 KIT – FRAME SIZE E | 6.0 |
| - | 186047.00M | CM5 | - | CM5-KN1F, DRIVE KIT, NEMA 1 KIT – FRAME SIZE F | 12.0 |
| - | 186048.00M | CM5 | - | CM5-KN1G, DRIVE KIT, NEMA 1 KIT – FRAME SIZE G | 17.0 |
| - | 186049.00M | CM5 | - | CM5-KPCSA, DRIVE KIT, CABLE SHIELD CLAMP KIT FOR FRAME A | 1.0 |
| - | 186050.00M | CM5 | - | CM5-KPCSB, DRIVE KIT, CABLE SHIELD CLAMP KIT FOR FRAME B | 1.0 |
| - | 186051.00M | CM5 | - | CM5-KPCSC, DRIVE KIT, CABLE SHIELD CLAMP KIT FOR FRAME C | 1.1 |
| - | 186052.00M | CM5 | - | CM5-KPCSD, DRIVE KIT, CABLE SHIELD CLAMP KIT FOR FRAME D | 1.1 |
| - | 186053.00M | CM5 | - | CM5-KPCSE, DRIVE KIT, CABLE SHIELD CLAMP KIT FOR FRAME E | 6.0 |
| - | 186054.00M | CM5 | - | CM5-KPCSF, DRIVE KIT, CABLE SHIELD CLAMP KIT FOR FRAME F | 15.0 |
| - | 186055.00M | CM5 | - | CM5-KPCSG, DRIVE KIT, CABLE SHIELD CLAMP KIT FOR FRAME G | 18.0 |
| - | 186077.00M | CM5 | - | CM5-HMIR, DRIVE KIT, REMOTE NON-TEXT KEYPAD FOR MOUNTING THROUGH ENCLOSURE DOOR (MOUNTING FRAME) | 0.6 |
| - | 186079.00M | CM5 | - | CM5 REMOTE ADVANCED TEXT KEYPAD FOR MOUNTING THROUGH ENCLOSURE DOOR (MOUNTING FRAME KIT IS REQUIRED) | 0.4 |

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM3™ SERIES DRIVES

The CONTROLMAX CM3 series drive is a high-performance variable-speed (vfd) drive for three-phase induction motors. It is ideal for machines or equipment applications requiring precise control with easy setup and operation. The CM3 series features a compact size with contactor-style electrical connections (top in / bottom out). The vfd's performance can be scaled to match the application by selecting voltage vector control (vvw) or scalar control(v/f). The CM3 series includes a built-in operator interface (hmi) and SoftPLC with free wps programming software for custom-tailored control schemes. A variety of plug-in option modules for additional I/O and communications protocols may be added to provide extended capabilities, making the CM3 series a flexible and cost-effective solution for your variable speed requirements.



CM3 STANDARD FEATURES

- Listed under new UL61800-5-1.
 - Power Range:
 - Up to 2HP @ 3/230VAC with 1/110-127 Vac input
 - Up to 3HP @ 3/230VAC with 1/200-240 Vac input
 - Up to 5HP @ 3/230VAC with 3/200-240 Vac input
 - Up to 10HP @ 3/460VAC with 3/380-480 Vac input
 - Din rail or surface mounting with screws
 - Control mode: Scalar (V/Hz) or Voltage Vector (VWV)
 - Switching frequency: 2.5 to 15kHz
 - Overload capacity: 150% for 60 sec. every 10 min or 200% for 3 sec. every 10min.
 - Degree of protection: IP20
 - 460VAC Models available with and without dynamic braking chopper.
 - Conformal coated circuit board as per Class 3C2 in compliance with IEC 60721-3-3.
 - Built-in SoftPLC (PLC functionality).
 - Built-in 4 Digital inputs, 1 analog input, and one Form-C relay output.
- Two independent slots: one for communication and another to expand drive I/O capability.
 - Wide variety of communication options.
 - One year Warranty

CM3 APPLICATIONS:

- Centrifugal pumps
- Fans / Blowers
- Blenders / Mixers
- Centrifuges
- Compressors
- Conveyors
- Roller Tables
- Granulators
- Commercial Dryers
- Rotary Filters
- Grizzly Feeders

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| IP RATING | (ND) HP ¹ | IND AMPS ² | DRIVE VOLTAGE | CONTROLMAX Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE | DIMENSIONS HxWxD (IN.) | APPROX. WEIGHT (LBS.) | STOCK |
|---|----------------------|-----------------------|---------------|----------------------|--|-----------------------|------------------------|------------------|------------|-------------|------------------|------------------------|-----------------------|-------|
| Input Power Supply: Single-Phase 110-127 Vac | | | | | | | | | | | | | | |
| IP20 | 1/4 or 1/3 | 1.6 | 110-127 | 174603.00M | CM3, Vector, 1PH, 0.25 or 0.33HP, 1.6A, 110-127 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 3/4 | 2.6 | 110-127 | 174604.00M | CM3, Vector, 1PH, 0.75HP, 2.6A, 110-127 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 1 | 4.2 | 110-127 | 174605.00M | CM3, Vector, 1PH, 1HP, 4.2A, 110-127 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 2 | 6 | 110-127 | 174651.00M | CM3, Vector, 1PH, 2HP 6.0A, 110-127 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| Input Power Supply: Single-Phase 200-240 Vac⁴ | | | | | | | | | | | | | | |
| IP20 | 1/4 or 1/3 | 1.6 | 200-240 | 174606.00M | CM3, Vector, 1PH, 0.25/0.33HP, 1.6A, 200-240 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 3/4 | 2.6 | 200-240 | 174607.00M | CM3, Vector, 1PH, 0.75HP, 2.6A, 200-240V IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 1 | 4.2 | 200-240 | 174608.00M | CM3, Vector, 1PH, 1HP, 4.2A, 200-240 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 2 | 7.3 | 200-240 | 184038.00M | CM3, Vector, 1PH, 2HP, 7.3A, 200-240 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 3 | 10 | 200-240 | 174611.00M | CM3, Vector, 3PH, 3HP, 10A, 200-240 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM3™ SERIES DRIVES

NORMAL DUTY (ND) / HEAVY DUTY (HD)

| IP RATING | (ND) HP ¹ | IND AMPS ² | DRIVE VOLTAGE | CONTROLMAX Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE | DIMENSIONS HxWxD (IN.) | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------|-----------------------|---------------|----------------------|---|-----------------------|------------------------|------------------|------------|-------------|------------------|------------------------|-----------------------|-------|
| Input Power Supply: Three-Phase 200-240 Vac⁴ | | | | | | | | | | | | | | |
| IP20 | 1/4 or 1/3 | 1.6 | 200-240 | 184040.00M | CM3, Vector, 3PH, 0.25/0.33HP, 1.6A, 200-240 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 3/4 | 2.6 | 200-240 | 184041.00M | CM3, Vector, 3PH, 0.75HP, 2.6A, 200-240 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 1 | 4.2 | 200-240 | 184042.00M | CM3, Vector, 3PH, 1HP, 4.2A, 200-240 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 2 | 7.3 | 200-240 | 174609.00M | CM3, Vector, 3PH, 2HP, 7.3A, 200-240 V, IP20 | No | No | - | - | - | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 3 | 10 | 200-240 | 174611.00M | CM3, Vector, 3PH, 3HP, 10A, 200-240 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 5 | 15.2 | 200-240 | 184003.00M | CM3, Vector, 3PH, 5HP, 15.2A, 200-240 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| Input Power Supply: Three-Phase 380-480 Vac⁵ with dynamic Braking Transistor | | | | | | | | | | | | | | |
| IP20 | 1/2 | 1.1 | 380-480 | 174620.00M | CM3, Vector, 3PH, 0.5HP, 1.1A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 1 | 1.8 | 380-480 | 174621.00M | CM3, Vector, 3PH, 1HP, 1.8A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 1 1/2 | 2.6 | 380-480 | 174622.00M | CM3, Vector, 3PH, 1.5HP, 2.6A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 2 | 3.5 | 380-480 | 174623.00M | CM3, Vector, 3PH, 2HP, 3.5A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 3 | 5.6 | 380-480 | 174624.00M | CM3, Vector, 3PH, 3HP, 5.6A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 5 | 8.3 | 380-480 | 174625.00M | CM3, Vector, 3PH, 5HP, 8.3A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | C | 8.43 x 3.5 x 6.45 | 3.30 | √ |
| IP20 | 7 1/2 | 11 | 380-480 | 174626.00M | CM3, Vector, 3PH, 7.5HP, 11A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | C | 8.43 x 3.5 x 6.45 | 3.30 | √ |
| IP20 | 10 | 14 | 380-480 | 174627.00M | CM3, Vector, 3PH, 10HP, 14A, 380-480 V, IP20, With Brake Transistor | Yes | No | - | - | - | C | 8.43 x 3.5 x 6.45 | 3.30 | √ |

NOTES FOR CM3 DRIVES:

- 1) "HP" RATING BASED ON MARATHON'S 4-POLE GT MOTORS' "AVERAGE FLA VALUES." USE AS A GUIDE ONLY.
 - 2) MOTOR FLA MAY VARY WITH SPEED AND MANUFACTURER. ALWAYS COMPARE MOTOR FLA TO DRIVE OUTPUT CURRENT.
 - 3) "174611.00M" IS CAPABLE OF SINGLE-PHASE INPUT WITHOUT DERATING.
 - 4) ALL THE 230VAC DRIVES ARE RATED FOR MAX. AMBIENT TEMPERATURE OF 50°C WITHOUT DERATING.
 - 5) ALL THE 460VAC DRIVES ARE RATED FOR MAX. AMBIENT TEMPERATURE OF 40°C WITHOUT DERATING.
- DIMENSIONS ARE PROVIDED FOR ESTIMATING PURPOSES ONLY.

Dynamic Braking Resistors - 100% Braking Torque at 20% Duty Cycle

(12 Seconds Max. Braking Time) - NEMA1 Enclosure Three-Phase 460-480 Vac

| IP RATING | (ND) HP ¹ | IND AMPS ² | DRIVE VOLTAGE | CONTROLMAX Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE | DIMENSIONS HxWxD (IN.) | APPROX. WEIGHT (LBS.) | STOCK |
|-----------|----------------------|-----------------------|---------------|----------------------|---|-----------------------|------------------------|------------------|------------|-------------|------------------|------------------------|-----------------------|-------|
| IP20 | 1/2 | 1.1 | 400-480 | 174620.00M | CM3, Vector, 3PH, 0.5HP, 1.1A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-250-448 | 250 | 298 | A | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 1 | 1.8 | 400-480 | 174621.00M | CM3, Vector, 3PH, 1HP, 1.8A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-250-448 | 250 | 448 | A | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 1 1/2 | 2.6 | 400-480 | 174622.00M | CM3, Vector, 3PH, 1.5HP, 2.6A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-250-448 | 250 | 448 | A | 6.22 x 2.76 x 5.84 | 1.98 | √ |
| IP20 | 2 | 3.5 | 400-480 | 174623.00M | CM3, Vector, 3PH, 2HP, 3.5A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-250-448 | 250 | 448 | A | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 3 | 5.6 | 400-480 | 174624.00M | CM3, Vector, 3PH, 3HP, 5.6A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-100-1119 | 100 | 1119 | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 5 | 8.3 | 400-480 | 174625.00M | CM3, Vector, 3PH, 5HP, 8.3A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-50-2238 | 50 | 2238 | C | 8.43 x 3.5 x 6.45 | 3.3 | √ |
| IP20 | 7 1/2 | 11 | 400-480 | 174626.00M | CM3, Vector, 3PH, 7.5HP, 11A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-50-2238 | 50 | 2238 | C | 8.43 x 3.5 x 6.45 | 3.3 | √ |
| IP20 | 10 | 14 | 400-480 | 174627.00M | CM3, Vector, 3PH, 10HP, 14A, 380-480 V, IP20, With Brake Transistor | Yes | No | CFDB2-50-2238 | 50 | 2238 | C | 8.43 x 3.5 x 6.45 | 3.3 | √ |

NOTES FOR CM3 DRIVES:

- 1) "HP" RATING BASED ON MARATHON'S 4-POLE GT MOTORS' "AVERAGE FLA VALUES." USE AS A GUIDE ONLY.
 - 2) MOTOR FLA MAY VARY WITH SPEED AND MANUFACTURER. ALWAYS COMPARE MOTOR FLA TO DRIVE OUTPUT CURRENT.
 - 3) "174611.00M" IS CAPABLE OF SINGLE-PHASE INPUT WITHOUT DERATING.
 - 4) ALL THE 230VAC DRIVES ARE RATED FOR MAX. AMBIENT TEMPERATURE OF 50°C WITHOUT DERATING.
 - 5) ALL THE 460VAC DRIVES ARE RATED FOR MAX. AMBIENT TEMPERATURE OF 40°C WITHOUT DERATING.
- DIMENSIONS ARE PROVIDED FOR ESTIMATING PURPOSES ONLY.

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM3™ SERIES DRIVES - ACCESSORIES/KITS



| TYPE | CONTROLMAX™ CM3™ CATALOG # | SLOT | CONTROLMAX™ CM3™ AC DRIVE DESC. | APPROX. WT. (LBS.) | STOCK |
|---------------------------------------|----------------------------------|-----------|--|-----------------------|-------|
| COMMUNICATION MODULE ¹ | 184017.00M | 1 (UPPER) | CM3, RS-485 MODULE; 1 RS-485 INPUT (MODBUS RTU / BACNET MS/TP), 1 MINI USB FOR REMOTE KEYPAD | 0.2 | √ |
| | 184016.00M | 1 (UPPER) | CM3, RS-232 COMMUNICATION MODULE (MODBUS-RTU); 1 RS232 | 0.2 | √ |
| | 184018.00M | 1 (UPPER) | CM3, CANOPEN/DEVICENET COMM. MODULE; 1 CAN/DEVICENET, EXTERNAL 24VDC POWER | 0.2 | √ |
| | 184019.00M | 1 (UPPER) | CM3, PROFIBUS DP COMMUNICATION MODULE; 1 PROFIBUS DP 9-PIN CONNECTOR | 0.2 | √ |
| | 184020.00M | 1 (UPPER) | CM3, USB COMMUNICATION MODULE W/ 2-METER CABLE; 1 MINI USB | 0.2 | √ |
| | 174367.00M | 1 (UPPER) | CM3, DUAL PORT MODBUS TCP OR ETHERNET/IP COMMUNICATION MODULE | 0.2 | √ |
| REMOTE KEYPAD | 174150.00M | 1 (UPPER) | CM3, REMOTE KEYPAD; INCLUDES CM3-CRS485 AND 3-METER CABLE | 0.4 | √ |
| I/O EXPANSION MODULES ² | 184022.00M | 1 (UPPER) | CM3, POTENTIOMETER REFERENCE MODULE | 0.2 | √ |
| | 184024.00M | 2 (LOWER) | CM3, I/O EXPANSION MODULE; 1 AI, 1 AO, 3 DOR, +10VDC | 0.2 | √ |
| | 184023.00M | 2 (LOWER) | CM3, I/O EXPANSION MODULE; 4 DI, 3 DOR | 0.2 | √ |
| | 184027.00M | 2 (LOWER) | CM3, I/O AND ENCODER MODULE; 1 AI, 2 AO, +10VDC, 1 INCREMENTAL ENCODER INPUT +5VDC | 0.2 | √ |
| | 184025.00M | 2 (LOWER) | CM3, I/O EXPANSION MODULE: 1 NTC, 3RO AND 1 INFRARED INPUT. SIMPLE REMOTE CONTROL WITH BATTERY | 0.2 | √ |
| | 184026.00M | 2 (LOWER) | CM3, I/O EXPANSION MODULE: 1 NTC, 3RO AND 1 INFRARED INPUT. COMPLETE REMOTE CONTROL WITH BATTERY AND DISPLAY | 0.2 | √ |
| FLASH MEMORY MODULE | 184028.00M ³ | 2 (LOWER) | CM3, I/O EXPANSION MODULE: 3 PULSE/FREQUENCY INPUT & 3 PULSE/ FREQUENCY OUTPUT (10 HZ TO 3000 HZ) | 0.2 | √ |
| | 184054.00M | - | CM3, FLASH MEMORY MODULE | 0.2 | √ |

NOTES FRO CM3 DRIVE ACCESSORIES:

- 1) UP TO QTY. (1) I/O EXPANSION MODULE PLUS QTY. (1) COMMUNICATION MODULE CAN BE ADDED TO THE CFW320 VFD.
- 2) OPTION I/OS ARE IN ADDITION TO THE STANDARD CFW320 I/O, WHICH INCLUDES 4 DI, 1 AI, 1 DOR.
- 3) THE I/OS FOR "144028.00" MODULE ARE ONLY ACCESSIBLE THROUGH SOFTPLC APPLICATION.

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM3™ SERIES DRIVES - OPTION CARDS



OPTION CARD I/O TABLE⁶

| Marathon™ CONTROLMAX™ CM3™ Catalog # | Slots ⁵ | Inputs | | Outputs | | | | Potentiometer for speed reference | USB ⁴ | Infrared sensors and NTC ³ | Encoder input ² | Network communication | | |
|--|--------------------|--------|---------|-----------|--------|---------------|-----------|---|------------------|--|-------------------------------|-----------------------|-------|----------------------|
| | | ANALOG | DIGITAL | FREQUENCY | ANALOG | RELAY DIGITAL | FREQUENCY | | | | | RS485 | RS232 | OTHERS |
| 184017.00M | Upper slot | - | - | - | - | - | - | - | - | - | - | 1 | - | - |
| 184016.00M | | - | - | - | - | - | - | - | - | - | - | - | 1 | - |
| 184018.00M | | - | - | - | - | - | - | - | - | - | - | - | - | CANopen or DeviceNet |
| 184019.00M | | - | - | - | - | - | - | - | - | - | - | - | - | Profibus-DP |
| 184020.00M | | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 184022.00M | | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 174367.00M | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 184024.00M | Lower slot | 1 | - | - | 1 | 3 | - | - | - | - | - | - | - | - |
| 184023.00M1 | | - | 4 | - | - | 3 | - | - | - | - | - | - | - | - |
| 184027.00M | | 1 | - | - | 2 | - | - | - | - | - | 1 | - | - | - |
| 184025.00M | | 1 | - | - | - | 3 | - | - | - | 1 | - | - | - | - |
| 184026.00M | | - | - | - | - | 3 | - | - | - | 1 | - | - | - | - |
| 184028.00M ⁶ | | - | - | - | 3 | - | - | 3 | - | - | - | - | - | - |

Notes for CM3 option cards:

1) Configurable isolated digital inputs (npn or pnp).

2) Incremental encoder (A/A - B/B), power supply of +5V @ 100 mA for the encoder, maximum frequency of 400 kHz.

3) Remote control and battery included.

4) USB cable included.

5) It allows 1 plug-in module in the upper slot (network communication) and 1 plug-in module in the lower slot (input/output expansion).

6) The standard version of the CM3 already has 4 (configurable) PNP or NPN digital inputs, 1 analog input 0-10 V dc / 4-20 mA and 1 relay output 0.5 A / 250 V ac.

⁶See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM3™ SERIES DRIVES - TECHNICAL DATA



| | | | |
|------------------------------|---|---|---------------------------|
| Input AC Power Supply | Voltage | Single-phase | 110-127 Vac (+10%, -15%) |
| | | Single-phase or Three-phase | 200-240 Vac (+10%, -15%) |
| | | Three-phase | 380-480 Vac (+10%, -15%) |
| | Frequency | 50 / 60 Hz (Range: 48... 62Hz) | |
| | Phase Unbalance | ≤ 3% between line voltages | |
| | Overvoltages / transients | Category III (EN 61010 / IEC61800-5-1 / UL61800-5-1) | |
| | Typical efficiency | ≥ 97% | |
| Audible noise level | < 60 dB | | |
| Ambient | Operating ambient Temperature | *200V Line: from 32 °F to 122 °F (0 °C to 50 °C) 400V Line: from 32 °F to 104 °F (0 °C to 40 °C) For temperatures higher than specified above, it is necessary to apply 2% of current derating for each °C (1.1% for each °F), limited to an increase of 10 °C (18°F).* | |
| | | Humidity | 5 ... 95 % non-condensing |
| | Altitude | *1,000 meter w/o Derating 1,000 m to 4,000 m - 1% current derating for each 100 m above 1,000 m | |
| | | From 2,000 m to 4,000 meter above sea level – maximum voltage derating (127 V / 240 V / 480 V, according to the model) of 1.1% for each 100 m above 2,000 m | |
| | Pollution degree | 2 (according to EN 50178 and UL 508C), with non-conductive pollution. Condensation must not cause the conduction of the accumulated residues. | |
| | Conformal Coating | 3C2 (IEC 60721-3-3:2002) | |
| Vibration | Level 3M4 | | |
| Motor Control | Type of Control | V/F (Scalar) | |
| | | V/F (Quadratic) | |
| | | VVV: Voltage vector control | |
| | Modulation | PWM SVM (Space Vector Modulation) | |
| Output Frequency | 0 to 400 Hz, resolution 0.1 Hz | | |
| Performance | Speed Control | *V/F Control: Speed regulation: 1% of the rated speed (with sleep compensation) Speed variation range: 1:20* | |
| | | *Vector control (VVV): Speed regulation: 1% of the rated speed Speed variation range: 1:30* | |
| Inputs¹ | Analog | *1 isolated input: 0 to 10 V or 0 to 20 mA or 4 to 20 mA Linearity error ≤ 0.25% Impedance: 100 kΩ for voltage input, 500 Ω for current input Programmable functions Voltage on the inputs: 30 V dc* | |
| | Digital | *4 isolated inputs. Programmable functions: - Active high (PNP): maximum low level of 10 V dc minimum high level 20 V dc - Active low (NPN): maximum low level of 5 V dc minimum high level of 10 V dc Maximum input voltage of 30 V dc Input current: 11 mA Max input current: 20 mA* | |
| Outputs¹ | Relay | 1 relays with NO/NC contact Maximum voltage: 250 V ac Maximum current: 0.5 A Programmable functions | |
| | Power Supply | 10 V dc power supply maximum capacity: 50 mA | |
| Safety | Protection | *Overcurrent/phase-phase short circuit in the output Under/overvoltage at the power supply Motor overload Overtemperature in the power module (IGBTs) External fault/alarm Programming error* | |
| Keypad (HMI) | Built-in | *4 keys: run/stop, increment, decrement and setting LCD display Indication accuracy: - Current: 10% of the rated current - Speed resolution: 0.1 Hz* | |
| Communication | Communication networks or accessibility | Modbus-TCP, RS485 (Modbus RTU / BACnet), RS232, CANopen, DeviceNet, Ethernet, Profibus-DP or USB Port (with plug-in modules) | |
| Protection Rating | IP20 | Frames A, B & C | |

NOTES For CM3 Drives:

1) Available as a drive built-in I/Os.

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC DRIVES

CM3™ SERIES DRIVES - TECHNICAL DATA



| | | |
|---|--|--|
| SAFETY STANDARDS | UL61800-5-1 - ADJUSTABLE SPEED ELECTRICAL POWER DRIVE SYSTEMS - PART 5-1: SAFETY REQUIREMENTS - ELECTRICAL, THERMAL AND ENERGY. | |
| | EN 61800-5-1 - SAFETY REQUIREMENTS ELECTRICAL, THERMAL AND ENERGY | |
| | EN 50178 - ELECTRONIC EQUIPMENT FOR USE IN POWER INSTALLATIONS | |
| | "EN 60204-1 - SAFETY OF MACHINERY. ELECTRICAL EQUIPMENT OF MACHINES. PART 1: GENERAL REQUIREMENTS NOTE: THE FINAL ASSEMBLER OF THE MACHINE IS RESPONSIBLE FOR INSTALLING A SAFETY STOP DEVICE AND A SUPPLY DISCONNECTING DEVICE" | |
| | EN 60146 (IEC 146) - SEMICONDUCTOR CONVERTERS | |
| | EN 61800-2 - ADJUSTABLE SPEED ELECTRICAL POWER DRIVE SYSTEMS - PART 2: GENERAL REQUIREMENTS - RATING SPECIFICATIONS FOR LOW VOLTAGE ADJUSTABLE FREQUENCY AC POWER DRIVE SYSTEMS | |
| ELECTROMAGNETIC COMPATIBILITY STANDARDS (EMC) | EN 61800-3 - ADJUSTABLE SPEED ELECTRICAL POWER DRIVE SYSTEMS - PART 3: EMC PRODUCT STANDARD INCLUDING SPECIFIC TEST METHODS MAXIMUM VOLTAGE: 30 VDC | |
| | CISPR 11 - INDUSTRIAL, SCIENTIFIC AND MEDICAL (ISM) RADIO-FREQUENCY EQUIPMENT - ELECTROMAGNETIC DISTURBANCE CHARACTERISTICS - LIMITS AND METHODS OF MEASUREMENT | |
| | EN 61000-4-2 - ELECTROMAGNETIC COMPATIBILITY (EMC) - PART 4: TESTING AND MEASUREMENT TECHNIQUES - SEC. 2: ELECTROSTATIC DISCHARGE IMMUNITY TEST | |
| | EN 61000-4-3 - ELECTROMAGNETIC COMPATIBILITY (EMC) - PART 4: TESTING AND MEASUREMENT TECHNIQUES - SEC. 3: RADIATED, RADIO-FREQUENCY, ELECTROMAGNETIC FIELD IMMUNITY TEST | |
| | EN 61000-4-4 - ELECTROMAGNETIC COMPATIBILITY (EMC) - PART 4: TESTING AND MEASUREMENT TECHNIQUES - SEC. 4: ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST | |
| | EN 61000-4-5 - ELECTROMAGNETIC COMPATIBILITY (EMC) - PART 4: TESTING AND MEASUREMENT TECHNIQUES - SEC. 5: SURGE IMMUNITY TEST | |
| | EN 61000-4-6 - ELECTROMAGNETIC COMPATIBILITY (EMC) - PART 4: TESTING AND MEASUREMENT TECHNIQUES - SEC. 6: IMMUNITY TO CONDUCTED DISTURBANCES, INDUCED BY RADIO-FREQUENCY FIELDS | |
| MECHANICAL STANDARDS | EN 60529 - DEGREES OF PROTECTION PROVIDED BY ENCLOSURES (IP CODE) | |
| | UL 50 - ENCLOSURES FOR ELECTRICAL EQUIPMENT | |
| | IEC 60721-3-3 - CLASSIFICATION OF ENVIRONMENTAL CONDITIONS - PART 3: CLASSIFICATION OF GROUPS OF ENVIRONMENTAL PARAMETERS AND THEIR SEVERITIES - SECTION 3: STATIONARY USE AT WEATHER PROTECTED LOCATIONS LEVEL | |
| ECODESIGN STANDARDS | IEC 61800-9-2 PARTS 1 & 2 - "ADJUSTABLE SPEED ELECTRICAL POWER DRIVE SYSTEMS - ECODESIGN FOR POWER DRIVE SYSTEMS, MOTOR STARTERS, POWER ELECTRONICS AND THEIR DRIVEN APPLICATIONS" | |
| FUNCTIONAL SAFETY STANDARDS | EN 61800-5-2 - ADJUSTABLE SPEED ELECTRICAL POWER DRIVE SYSTEMS - PART 5-2: SAFETY REQUIREMENTS - FUNCTIONAL | |
| | EN ISO 13849-1 - SAFETY OF MACHINERY - SAFETY-RELATED PARTS OF CONTROL SYSTEMS - PART 1: GENERAL PRINCIPLES FOR DESIGN | |
| | EN 62061 - SAFETY OF MACHINERY - FUNCTIONAL SAFETY OF SAFETY-RELATED CONTROL SYSTEMS | |
| | IEC 61508 PARTS 1-7 - FUNCTIONAL SAFETY OF ELECTRICAL/ELECTRONIC/PROGRAMMABLE ELECTRONIC SAFETY-RELATED SYSTEMS | |
| | EN 60204-1 - SAFETY OF MACHINERY - ELECTRICAL EQUIPMENT OF MACHINES - PART 1: GENERAL REQUIREMENTS | |
| CERTIFICATIONS | CULUS | CERTIFICATE NUMBER : UL-US-2214688-0; REPORT REFERENCE: E184430-20220408 |
| | CE | EUROPEAN COMMUNITY |
| | UKCA | UNITED KINGDOM |
| | EAC | RUSSIA |
| | C-TICK | AUSTRIA & NEW ZEALAND |

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

The CONTROLMAX™ CM5™ series drive has advanced technology plug and play options, developed for fast commissioning, providing great flexibility and competitive advantage while offering excellent performance and reliability. Designed for exclusively industrial or professional use, perfect for OEM, system integrators, panel installers and End Users providing great benefit from the added value. With the CM5 drives offer more features. The power range of CM5-IP20 drive is extended to 75HP @ 230VAC and 175HP @ 460VAC. The CM5 drive also is also available in IP66/ NEMA4X Washdown enclosure which is rated for indoor and outdoor installation in direct sunlight.



CM5 STANDARD FEATURES

- Same programming as other Marathon VFDs
- Built-in SoftPLC.
- Scalar, Vector Control (Sensorless and closed loop with encoder feedback) & VVW PM (suitable for fan, Pump and compressor).
- IP20 & NEMA1 (with NEMA1 kit) Enclosure.
- NEMA 4X (IP66) Washdown Enclosure with and without disconnect switch, suitable for indoor and outdoor use (in direct sunlight).
- 200-240V, 380-480V or 500-600 input voltage.
- Heavy Duty rated - 150% current overload capacity.
- 0 to 500 Hz output frequency.
- 2.5 to 15 kHz adjustable switching frequency (5 kHz standard)
- One programmable transistor output.
- One isolated programmable analog input (0-10V, 0/4-20mA).
- Optional Safe Torque off Module.
- WLP and WPS compatible.
- **One year warranty.**

CM5 APPLICATIONS:

- Pumps
- Commercial dryers
- Fans/ventilators
- Extruders
- Blowers
- General machinery
- Conveyors
- Agitators
- Rollout tables
- Any washdown
- Mixers/Blenders (for NEMA4X/IP66)

NORMAL DUTY (ND) / HEAVY DUTY (HD) CM5™ - IP20 FINGER SAFE ENCLOSURE

| IP RATING | NORMAL DUTY VT ¹ (ND) HP ² | ND AMPS ³ | HEAVY DUTY CT (HD) HP | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) [*] | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|--|----------------------|-----------------------|----------------------|---------------|--------------------------|--|-----------------------|-------------------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| Input Power Supply: Single or Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP20 | 0.33 | 1.6 | 0.33 | 1.6 | 200-240 | 176105.00M | CM5 VECTOR 1PH OR 3PH, 0.33HP 1.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | No | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 0.75 | 2.6 | 0.75 | 2.6 | 200-240 | 176106.00M | CM5 VECTOR 1PH OR 3PH, 0.75HP 2.6A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | No | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 1.5 | 4.3 | 1.5 | 4.3 | 200-240 | 176108.00M | CM5 VECTOR 1PH OR 3PH, 1.5HP 4.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | No | No | - | - | - | B | 7.9 x 4.0 x 6.3 | 2.65 | √ |
| IP20 | 2 | 7.3 | 2 | 7.3 | 200-240 | 176117.00M | CM5 VECTOR 1PH OR 3PH, 2HP 7.3A 200-240V IP20. FOR CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | Yes | No | - | - | - | B | 7.9 x 4.0 x 6.3 | 2.65 | √ |
| IP20 | 3 | 10.0 | 3 | 10.0 | 200-240 | 176118.00M | CM5 VECTOR 1PH OR 3PH, NORMAL DUTY 3HP 10A HEAVY DUTY 3HP 10A 200-240V IP20 WITH BRAKE TRANSISTOR. IF IP31 IS REQUIRED USE NEMA 1 KIT CM5-KN1E | Yes | No | - | - | - | B | 7.9 x 4.0 x 6.3 | 1.76 | √ |
| Input Power Supply: Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP20 | 2 | 7.0 | 2 | 7.0 | 200-240 | 186085.00M | CM5 VECTOR 1PH or 3PH, 2HP 7.0A 200-240V IP20 | No | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 3 | 9.6 | 3 | 9.6 | 200-240 | 186086.00M | CM5 VECTOR 3PH, 3HP 9.6A 200-240V IP20 | No | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 5 | 16 | 5 | 16 | 200-240 | 174615.00M | CM5 VECTOR 3PH, NORMAL DUTY 5HP 16A & HEAVY DUTY 5HP 16A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 7.5 | 24 | 7.5 | 24 | 200-240 | 174616.00M | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 24A & HEAVY DUTY 7.5HP 24A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 10 | 33 | 10 | 33 | 200-240 | 174617.00M | CM5 VECTOR 3PH, NORMAL DUTY 10HP 28A & HEAVY DUTY 10HP 28A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP20 | 15 | 47 | 15 | 47 | 200-240 | 174618.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 47A & HEAVY DUTY 15HP 47A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

NORMAL DUTY (ND) / HEAVY DUTY (HD) CM5™ - IP20 FINGER SAFE ENCLOSURE

| IP RATING | NORMAL DUTY V ^T (ND) HP ² | ND AMPS ³ | HEAVY DUTY CT ¹ (HD) HP | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) ⁴ | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁵ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|---|----------------------|------------------------------------|----------------------|---------------|--------------------------|---|-----------------------|-------------------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| IP20 | 25* | 70* | 20 | 56 | 200-240 | 174619.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & HEAVY DUTY 20HP 56A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | E | 5 x 26.5 x 13 | 22.05 | √ |
| IP20 | 25 | 77 | 20 | 64 | 200-240 | 186063.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 77A & HEAVY DUTY 20HP 64A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 30 | 88 | 25 | 75 | 200-240 | 186064.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 88A or HEAVY DUTY 25HP 75A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 40 | 105 | 30 | 88 | 200-240 | 186065.00M | CM5 VECTOR 3PH, NORMAL DUTY 40HP 105A or HEAVY DUTY 30HP 88A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 50 | 145 | 40 | 115 | 200-240 | 186066.00M | CM5 VECTOR 3PH, NORMAL DUTY 50HP 145A or HEAVY DUTY 40HP 115A 200-240V IP20 | No | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 60 | 180 | 50 | 145 | 200-240 | 186107.00M | CM5 VECTOR 3PH, NORMAL DUTY 60HP 180A & HEAVY DUTY 50HP 145A 200-240V IP20 | No | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 75 | 211 | 60 | 180 | 200-240 | 186087.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 211A & HEAVY DUTY 60HP 180A 200-240V IP20 | No | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 50 | 145 | 40 | 115 | 200-240 | 186088.00M | CM5 VECTOR 3PH, NORMAL DUTY 50HP 145A & HEAVY DUTY 40HP 115A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 60 | 180 | 50 | 145 | 200-240 | 186002.00M | CM5 VECTOR 3PH, NORMAL DUTY 60HP 180A HEAVY DUTY 50HP 145A 200-240V IP20 WITH Braking Transistor, if IP31 is required use NEMA 1 Kit CM5-KN1B | Yes | No | - | - | - | G | 26.6 x 13.2 x 14.1 | 114.6 | √ |
| IP20 | 75 | 211 | 60 | 180 | 200-240 | 186067.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 211A or HEAVY DUTY 60HP 180A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| Input Power Supply: Three-Phase 380-480 Vac | | | | | | | | | | | | | | | | |
| IP20 | 0.5 | 1.0 | 0.5 | 1.0 | 380-480 | 176120.00M | CM5 VECTOR 3PH, 0.5HP 1A 380-480V IP20. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | No | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 1 | 1.6 | 1 | 1.6 | 380-480 | 176128.00M | CM5 VECTOR 3PH, 1HP 1.6A 380-480V IP20. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | No | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 3 | 6.1 | 3 | 6.1 | 380-480 | 176124.00M | CM5 VECTOR 3PH, 3HP 6.1A 380-480V IP20. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | No | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 1.5 | 2.6 | 1.5 | 2.6 | 380-480 | 176121.00M | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | Yes | No | - | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 3 | 4.3 | 3 | 4.3 | 380-480 | 186090.00M | CM5 VECTOR 3PH, NORMAL DUTY 3HP 4.3A & HEAVY DUTY 3HP 4.3A 380-480VAC, IP20 WITH BRAKE RESISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP20 | 5 | 6.5 | 5 | 6.5 | 380-480 | 186091.00M | CM5 VECTOR 3PH, NORMAL DUTY 5HP 6.5A & HEAVY DUTY 5HP 6.5A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 7.9 x 4.0 x 6.3 | 2.6 | √ |
| IP20 | 7.5 | 10 | 7.5 | 10 | 380-480 | 176146.00M | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 10A HEAVY DUTY 7.5HP 10A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 10 | 16 | 10 | 16 | 380-480 | 176148.00M | CM5 VECTOR 3PH, NORMAL DUTY 10HP 16A HEAVY DUTY 10HP 16A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 15 | 24 | 15 | 24 | 380-480 | 174628.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP20 | 20/25 | 31 | 20/25 | 31 | 380-480 | 176151.00M | CM5 VECTOR 3PH, NORMAL DUTY 20/25HP 31A HEAVY DUTY 20/25HP 31A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP20 | 30* | 45* | 30 | 39 | 380-480 | 176152.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A HEAVY DUTY 30HP 39A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | E | 10 x 28 x 16 | 22.1 | √ |
| IP20 | 40* | 58.5* | 40 | 49 | 380-480 | 174992.00M | CM5 VECTOR 3PH, NORMAL DUTY 40HP 58.5A & HEAVY DUTY 40HP 49A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | E | 10 x 28 x 16 | 22.05 | √ |
| IP20 | 50/60 | 77 | 50 | 61 | 380-480 | 174711.00M | CM5 VECTOR 3PH, NORMAL DUTY 50/60HP 77A & HEAVY DUTY 61A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | D | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 75 | 88 | 60 | 73 | 380-480 | 186056.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 88A & HEAVY DUTY 60HP 73A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 75 | 105 | 75 | 88 | 380-480 | 186057.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 105A & HEAVY DUTY 75HP 88A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 100/125 | 142 | 100 | 115 | 380-480 | 186094.00M | CM5 VECTOR 3PH, NORMAL DUTY 125HP 142A & HEAVY DUTY 100HP 115A 380-480V IP20 | No | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 150 | 180 | 125 | 142 | 380-480 | 186092.00M | CM5 VECTOR 3PH, NORMAL DUTY 150HP 180A & HEAVY DUTY 125HP 142A 380-480V IP20 | No | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 175 | 211 | 150 | 180 | 380-480 | 186093.00M | CM5 VECTOR 3PH, NORMAL DUTY 175HP 211A & HEAVY DUTY 150HP 180A 380-480V IP20 | No | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 100/125 | 142 | 100 | 115 | 380-480 | 186059.00M | CM5 VECTOR 3PH, NORMAL DUTY 100/125HP 142A & HEAVY DUTY 100HP 115A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 150 | 180 | 125 | 142 | 380-480 | 186060.00M | CM5 VECTOR 3PH, NORMAL DUTY 150HP 180A & HEAVY DUTY 125HP 142A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 175 | 211 | 150 | 180 | 380-480 | 186061.00M | CM5 VECTOR 3PH, NORMAL DUTY 175HP 211A & HEAVY DUTY 150HP 180A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |

Continued on next page.

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

NORMAL DUTY (ND) / HEAVY DUTY (HD) CM5™ - IP20 FINGER SAFE ENCLOSURE

| IP RATING | NORMAL DUTY VT ¹ (ND) HP ² | ND AMPS ³ | HEAVY DUTY CT ¹ (HD) HP | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) ⁴ | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ² | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|--|----------------------|------------------------------------|----------------------|---------------|--------------------------|--|-----------------------|-------------------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| Input Power Supply: Three-Phase 500-600 Vac | | | | | | | | | | | | | | | | |
| IP20 | 1.5 | 1.7 | 1.5 | 1.7 | 500-600 | 186000.00M | CM5 VECTOR 3PH, 1.5HP 1.7A 500-600V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 3 | 4.3 | 3 | 4.3 | 500-600 | 174632.00M | CM5 VECTOR 3PH, NORMAL DUTY 3HP 4.3A & HEAVY DUTY 3HP 4.3A 500-600V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 7.5 | 7.0 | 7.5 | 7.0 | 500-600 | 174634.00M | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 7A & HEAVY DUTY 7.5HP 7A 500-600V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 10 | 12.0 | 10 | 12.0 | 500-600 | 174636.00M | CM5 VECTOR 3PH, NORMAL DUTY 10HP 12A & HEAVY DUTY 10HP 12A 500-600V IP20 WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |

NOTES For CM5 Drives:

1) ND (Normal Duty) / VT (Variable Torque): 110% Overload / 60 Sec; HD (Heavy Duty) / CT (Constant Torque): 150% Overload / 60 Sec;

2) "HP" rating based on Marathon Electric motors "average FLA values". Use as a guide only.

3) Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of drive.

4) Frame Size A to D are rated for 50°C.

* Frame Size-E is rated for 40°C if used as Normal Duty (ND/VT) & 50°C if used as heavy Duty (HD/CT).

Frame-F is rated for 40°C.

Frame-G is rated for 45°C.

CM5 Frame-F & G VFDs have built in Dual DC Bus Chokes.

Dimensions are provided for estimating purposes only.

CM5™ - NEMA 4X / IP66 WASHDOWN VFD W/O DISCONNECT SWITCH

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ² | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|--|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| Input Power Supply: Single or Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP66 | 0.33 | 1.6 | 0.33 | 1.6 | 200-240 | 186003.00M | CM5 VECTOR 1PH or 3PH, 0.33HP 1.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 0.75 | 2.6 | 0.75 | 2.6 | 200-240 | 174652.00M | CM5 VECTOR 1PH or 3PH, NORMAL DUTY 0.75HP 2.6A & HEAVY DUTY 0.75HP 2.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 1.5 | 4.3 | 1.5 | 4.3 | 200-240 | 174653.00M | CM5 VECTOR 1PH or 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66, WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 2 | 7.3 | 2 | 7.3 | 200-240 | 174657.00M | CM5 VECTOR 1PH or 3PH, 2HP 7.3A 200-240V IP66, WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 3 | 10 | 3 | 10 | 200-240 | 174659.00M | CM5 VECTOR 1PH or 3PH, 3HP 10A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| Input Power Supply: Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP66 | 5 | 16 | 5 | 16 | 200-240 | 174660.00M | CM5 VECTOR 3PH, 5HP 16A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 7.5 | 24 | 7.5 | 24 | 200-240 | 174661.00M | CM5 VECTOR 3PH, 7.5HP 24A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 10 | 33 | 10 | 33 | 200-240 | 174662.00M | CM5 VECTOR 3PH, 10HP 33A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 15 | 47 | 15 | 47 | 200-240 | 174699.00M | CM5 VECTOR 3PH, 15HP 47A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 18.7x12.6x11.4 | 45 | √ |
| IP66 | 25 | 70 | 20 | 56 | 200-240 | 174700.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & 20HP 56A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 18.7x12.6x11.4 | 45 | √ |
| Input Power Supply: Three-Phase 380-480 Vac | | | | | | | | | | | | | | | | |
| IP66 | 0.5 | 1 | 0.5 | 1 | 380-480 | 174671.00M | CM5 VECTOR 3PH, 0.5HP 1A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 1 | 1.6 | 1 | 1.6 | 380-480 | 174672.00M | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 9.9 | 22 | √ |
| IP66 | 1.5 | 2.6 | 1.5 | 2.6 | 380-480 | 174673.00M | | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 3 | 4.3 | 3 | 4.3 | 380-480 | 174675.00M | CM5 VECTOR 3PH, 3HP 4.3A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 5 | 6.5 | 5 | 6.5 | 380-480 | 174676.00M | CM5 VECTOR 3PH, 5HP 6.5A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 7.5 | 10 | 7.5 | 10 | 380-480 | 174677.00M | CM5 VECTOR 3PH, 7.5HP 10A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 10 | 16 | 10 | 16 | 380-480 | 186023.00M | CM5 VECTOR 3PH, 10HP 16A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 22 | √ |
| IP66 | 15 | 24 | 15 | 24 | 380-480 | 174701.00M | CM5 VECTOR 3PH, 15HP 24A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 25 | 31 | 25 | 31 | 380-480 | 174702.00M | CM5 VECTOR 3PH, 25HP 31A 380-480V IP66, WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 30 | 45 | 30 | 39 | 380-480 | 174704.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A & HEAVY DUTY 30HP 39A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 18.7x12.6x11.4 | 45 | √ |
| IP66 | 50 | 59.2 | 40 | 49 | 380-480 | 186016.00M | CM5 VECTOR 3PH, NORMAL DUTY 50HP 59.2A & 40HP 49A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | C | 18.7 x 12.6 x 11.4 | 45 | √ |

Input Power Supply: Three-Phase 500-600 Vac

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

CM5™ - NEMA 4X / IP66 WASHDOWN VFD W/O DISCONNECT SWITCH

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|-----------|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|--|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| IP66 | 1.5 | 1.7 | 1.5 | 1.7 | 500-600 | 174663.00M | CM5 VECTOR 3PH, 1.5HP 1.7A 500-600V IP66 WASH-DOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 3 | 4.3 | 3 | 4.3 | 500-600 | 174664.00M | CM5 VECTOR 3PH, 3HP 4.3A 500-600V IP66 WASH-DOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 7.5 | 7 | 7.5 | 7 | 500-600 | 174666.00M | | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 10 | 12 | 10 | 12 | 500-600 | 174668.00M | CM5 VECTOR 3PH, 10HP 12A 500-600V IP66 WASH-DOWN WITH BRAKE TRANSISTOR | Yes | No | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |

NOTES:

- 1) ND (Normal Duty) / VT (Variable Torque): 110% Overload / 60 Sec; HD (Heavy Duty) / CT (Constant Torque): 150% Overload / 60 Sec;
- 2) "HP" rating based on Marathon Electric motors "average FLA values". Use as a guide only.
- 3) Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of drive.
- 4) Frame Size A, B & C are rated for 40°C ambient temperature. Dimensions are provided for estimating purposes only.

CM5™ - NEMA 4X / IP66 WASHDOWN VFD WITH DISCONNECT SWITCH

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|---|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| Input Power Supply: Single or Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP66 | 0.33 | 1.6 | 0.33 | 1.6 | 200-240 | 186004.00M | CM5 VECTOR 1PH or 3PH, 0.33HP 1.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 0.75 | 2.6 | 0.75 | 2.6 | 200-240 | 174540.00M | CM5 VECTOR 1PH or 3PH, NORMAL DUTY 0.75HP 2.6A & HEAVY DUTY 0.75HP 2.6A 200-240V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 9.9 | 22 | √ |
| IP66 | 1.5 | 4.3 | 1.5 | 4.3 | 200-240 | 186005.00M | CM5 VECTOR 1PH or 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 2 | 7.3 | 2 | 7.3 | 200-240 | 186006.00M | CM5 VECTOR 1PH or 3PH, 2HP 7.3A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 3 | 10 | 3 | 10 | 200-240 | 186007.00M | CM5 VECTOR 1PH or 3PH, 3HP 10A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| Input Power Supply: Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP66 | 5 | 16 | 5 | 16 | 200-240 | 186008.00M | CM5 VECTOR 3PH, 5HP 16A 200-240V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 7.5 | 24 | 8 | 24 | 200-240 | 186009.00M | CM5 VECTOR 3PH, 7.5HP 24A 200-240V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 10 | 33 | 10 | 33 | 200-240 | 186012.00M | CM5 VECTOR 3PH, 10HP 33A 200-240V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | B | 13.4 x 8.5 x 8.9 | 26.5 | √ |
| IP66 | 15 | 47 | 15 | 47 | 200-240 | 186013.00M | CM5 VECTOR 3PH, 15HP 47A 200-240V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | C | 18.7 x 12.6 x 11.4 | 45 | √ |
| IP66 | 25 | 70 | 20 | 56 | 200-240 | 186014.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & HEAVY DUTY 20HP 56A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | C | 18.7 x 12.6 x 11.4 | 45 | √ |
| Input Power Supply: Three-Phase 380-480 Vac | | | | | | | | | | | | | | | | |
| IP66 | 0.5 | 1 | 0.5 | 1 | 380-480 | 174542.00M | CM5 VECTOR 3PH, NORMAL DUTY 0.5HP 1A & HEAVY DUTY 0.5HP 1A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 9.9 | 22 | √ |
| IP66 | 1 | 1.6 | 1 | 1.6 | 380-480 | 186018.00M | CM5 VECTOR 3PH, 1HP 1.6A 380-480V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 1.5 | 2.6 | 1.5 | 2.6 | 380-480 | 186019.00M | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 3 | 4.3 | 3 | 4.3 | 380-480 | 186020.00M | CM5 VECTOR 3PH, 3HP 4.3A 380-480V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 5 | 6.5 | 5 | 6.5 | 380-480 | 186021.00M | CM5 VECTOR 3PH, 5HP 6.5A 380-480V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 7.5 | 10 | 7.5 | 10 | 380-480 | 186022.00M | CM5 VECTOR 3PH, 7.5HP 10A 380-480V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP66 | 10 | 16 | 10 | 16 | 380-480 | 174546.00M | CM5 VECTOR 3PH, 10HP 16A 380-480V IP66 WASH-DOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | B | 13.4 x 8.5 x 8.9 | 22 | √ |
| IP66 | 15 | 24 | 15 | 24 | 380-480 | 174544.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | B | 13.4 x 8.5 x 9.9 | 26.5 | √ |
| IP66 | 25 | 31 | 25 | 31 | 380-480 | 186025.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 31A & HEAVY DUTY 25HP 31A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | B | 13.4 x 8.5 x 8.9 | 22 | √ |

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

CM5™ - NEMA 4X / IP66 WASHDOWN VFD WITH DISCONNECT SWITCH

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|---|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| IP66 | 30 | 45 | 30 | 39 | 380-480 | 186015.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A & HEAVY DUTY 30HP 39A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | C | 18.7 x 12.6 x 11.4 | 45 | √ |
| IP66 | 50 | 59.2 | 40 | 49 | 380-480 | 186017.00M | CM5 VECTOR 3PH, NORMAL DUTY 50HP 59.2A & HEAVY DUTY 40HP 49A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | C | 18.7 x 12.6 x 11.4 | 45 | √ |
| Input Power Supply: Three-Phase 500-600 Vac | | | | | | | | | | | | | | | | |
| IP66 | 1.5 | 1.7 | 1.5 | 1.7 | 500-600 | 174631.00M | CM5 VECTOR 3PH, NORMAL DUTY 1.5HP 1.7A & HEAVY DUTY 1.5HP 1.7A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | B | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP66 | 3 | 4.3 | 3 | 4.3 | 500-600 | 186069.00M | CM5 VECTOR 1PH or 3PH, 3HP 4.3A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP66 | 7.5 | 7 | 7.5 | 7 | 500-600 | 186070.00M | CM5 VECTOR 3PH, 7.5HP 7A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP66 | 10 | 12 | 10 | 12 | 500-600 | 186072.00M | CM5 VECTOR 3PH, 10HP 12A 500-600V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | - | - | - | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |

NOTES:

- 1) ND (Normal Duty) / VT (Variable Torque): 110% Overload / 60 Sec; HD (Heavy Duty) / CT (Constant Torque): 150% Overload / 60 Sec;
- 2) "HP" rating based on Marathon Electric motors "average FLA values". Use as a guide only.
- 3) Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of drive.
- 4) Frame Size A, B & C are rated for 40°C ambient temperature. Dimensions are provided for estimating purposes only.

BRAKING RESISTORS FOR CM5™

CM5™ IP20 DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 20% DUTY CYCLE (12 SECONDS MAX. BRAKING TIME)

IF NEMA1 ENCLOSURE IS REQUIRED SEE KITS

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|--|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| Input Power Supply: Single or Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP 20 | 2 | 7.0 | 2 | 7.0 | 200-240 | 176117.00M | CM5 VECTOR 1PH or 3PH, 2HP 7.3A 200-240V IP20. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | Yes | No | CFDB2-63-448 | 63 | 500 | B | 7.9 x 4.0 x 6.3 | 2.65 | √ |
| IP 20 | 3 | 9.6 | 3 | 9.6 | 200-240 | 176118.00M | CM5 Vector 1PH or 3PH, Normal Duty 3HP 10A Heavy Duty 3HP 10A 200-240V IP20 With Brake Transistor. If IP31 is required use NEMA 1 Kit CM5-KN1E | Yes | No | CFDB2-38-746 | 38 | 920 | B | 7.9 x 4.0 x 6.3 | 1.76 | √ |
| IP 20 | 5 | 16 | 5 | 16 | 200-240 | 174615.00M | CM5 VECTOR 3PH, NORMAL DUTY 5HP 16A & HEAVY DUTY 5HP 16A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-26-1119 | 26 | 1119 | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP 20 | 7.5 | 24 | 7.5 | 24 | 200-240 | 174616.00M | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 24A & HEAVY DUTY 7.5HP 24A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-19-1492 | 19 | 1492 | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP 20 | 10 | 33 | 10 | 33 | 200-240 | 174617.00M | CM5 VECTOR 3PH, NORMAL DUTY 10HP 28A & HEAVY DUTY 10HP 28A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-10-2984 | 9.6 | 2984 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP 20 | 15 | 47 | 15 | 47 | 200-240 | 174618.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 47A & HEAVY DUTY 15HP 47A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-10-2984 | 9.6 | 2984 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP 20 | 25* | 70* | 20 | 56 | 200-240 | 174619.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & HEAVY DUTY 20HP 56A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-7-4476 | 6.3 | 4476 | E | 5 x 26.5 x 13 | 22.05 | √ |
| IP 20 | 25 | 77 | 20 | 64 | 200-240 | 186063.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 77A & HEAVY DUTY 20HP 64A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-8-3730 | 15 | 8952 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP 20 | 30 | 88 | 25 | 75 | 200-240 | 186064.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 88A or HEAVY DUTY 25HP 75A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-8-3730 | 7.5 | 4214 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP 20 | 40 | 105 | 30 | 88 | 200-240 | 186065.00M | CM5 VECTOR 3PH, NORMAL DUTY 40HP 105A or HEAVY DUTY 30HP 88A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-5-5968 | 4.9 | 6590 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP 20 | 50 | 145 | 40 | 115 | 200-240 | 186088.00M | CM5 VECTOR 3PH, NORMAL DUTY 50HP 145A & HEAVY DUTY 40HP 115A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-3-11190 | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP 20 | 60 | 180 | 50 | 145 | 200-240 | 186002.00M | CM5 VECTOR 3PH, NORMAL DUTY 60HP 180A HEAVY DUTY 50HP 145A 200-240V IP20 WITH Braking Transistor. If IP31 is required use NEMA 1 Kit CM5-KN1B | Yes | No | CFDB2-3-11190 | 2.7 | 12150 | G | 26.6 x 13.2 x 14.1 | 114.6 | √ |
| IP 20 | 75 | 211 | 60 | 180 | 200-240 | 186067.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 211A or HEAVY DUTY 60HP 180A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-3-11190 | 2.7 | 12150 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| Input Power Supply: Three-Phase 380-480 Vac | | | | | | | | | | | | | | | | |
| IP 20 | 2.0 | 2.6 | 1.5 | 2.6 | 380-480 | 176121.00M | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | Yes | No | CFDB2-150-746 | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

BRAKING RESISTORS FOR CM5™

CM5™ IP20 DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 20% DUTY CYCLE (12 SECONDS MAX. BRAKING TIME)
IF NEMA1 ENCLOSURE IS REQUIRED SEE KITS

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|-----------|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|--|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| IP 20 | 3 | 4.3 | 3 | 4.3 | 380-480 | 186090.00M | CM5 VECTOR 3PH, NORMAL DUTY 3HP 4.3A & HEAVY DUTY 3HP 4.3A 380-480VAC, IP20 WITH BRAKE RESISTOR | Yes | No | CFDB2-150-746 | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP 20 | 5 | 6.5 | 5 | 6.5 | 380-480 | 186091.00M | CM5 VECTOR 3PH, NORMAL DUTY 5HP 6.5A & HEAVY DUTY 5HP 6.5A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-150-746 | 150 | 843 | B | 7.9 x 4.0 x 6.3 | 2.6 | √ |
| IP 20 | 7.5 | 10 | 7.5 | 10 | 380-480 | 176146.00M | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 10A HEAVY DUTY 7.5HP 10A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-75-1492 | 75 | 1815 | B | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP 20 | 10 | 16 | 10 | 16 | 380-480 | 176148.00M | CM5 VECTOR 3PH, NORMAL DUTY 10HP 16A HEAVY DUTY 10HP 16A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-50-2238 | 50 | 2560 | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP 20 | 15 | 24 | 15 | 24 | 380-480 | 174628.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-25-4476 | 25 | 5120 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP 20 | 20 | 31 | 20/25 | 31 | 380-480 | 176151.00M | CM5 VECTOR 3PH, NORMAL DUTY 20/25HP 31A HEAVY DUTY 20/25HP 31A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-19-5968 | 19 | 6703 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP 20 | 25/30 | 45 | 30 | 39 | 380-480 | 176152.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A HEAVY DUTY 30HP 39A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-10-11190 | 10 | 12800 | E | 10 x 28 x 16 | 22.1 | √ |
| IP 20 | 40 | 58.5 | 40 | 49 | 380-480 | 174992.00M | CM5 VECTOR 3PH, NORMAL DUTY 40HP 58.5A & HEAVY DUTY 40HP 49A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-10-11190 | - | - | E | 10 x 28 x 16 | 22.05 | √ |
| IP 20 | 50/60 | 77 | 50 | 61 | 380-480 | 174711.00M | CM5 VECTOR 3PH, NORMAL DUTY 50/60HP 77A & HEAVY DUTY 61A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-15-8952 | 15 | 10002 | D | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP 20 | 60/75 | 88 | 60 | 73 | 380-480 | 186056.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 88A & HEAVY DUTY 60HP 73A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-15-8952 | 15 | 10002 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP 20 | 75 | 105 | 75 | 88 | 380-480 | 186057.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 105A & HEAVY DUTY 75HP 88A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-10-11190 | 10 | 12800 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP 20 | 100/125 | 142 | 100 | 115 | 380-480 | 186059.00M | CM5 VECTOR 3PH, NORMAL DUTY 100/125HP 142A & HEAVY DUTY 100HP 115A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-5-22380 | 5 | 25600 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP 20 | 150 | 180 | 125 | 142 | 380-480 | 186060.00M | CM5 VECTOR 3PH, NORMAL DUTY 150HP 180A & HEAVY DUTY 125HP 142A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-5-22380 | 5 | 25600 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP 20 | 175 | 211 | 150 | 180 | 380-480 | 186061.00M | CM5 VECTOR 3PH, NORMAL DUTY 175HP 211A & HEAVY DUTY 150HP 180A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB2-5-22380 | 5 | 25600 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |

NOTES:

- 1) ND (Normal Duty) / VT (Variable Torque): 110% Overload / 60 Sec; HD (Heavy Duty) / CT (Constant Torque): 150% Overload / 60 Sec;
- 2) "HP" rating based on Marathon Electric motors "average FLA values". Use as a guide only.
- 3) Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of drive.
- 4) Frame Size A, B & C are rated for 40°C ambient temperature. Dimensions are provided for estimating purposes only.

BRAKING RESISTORS FOR CM5™

CM5™ IP20 DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 50% DUTY CYCLE (30 SECONDS MAX. BRAKING TIME) - NEMA1 ENCLOSURE

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HXWXD | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|--|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| Input Power Supply: Single or Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP20 | 2 | 7.0 | 2 | 7.0 | 200-240 | 176117.00M | CM5 VECTOR 1PH or 3PH, 2HP 7.3A 200-240V IP20. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | Yes | No | CFDB5-63-1119 | 63 | 500 | B | 7.9 x 4.0 x 6.3 | 2.65 | √ |
| IP20 | 3 | 9.6 | 3 | 9.6 | 200-240 | 176118.00M | CM5 Vector 1PH or 3PH, Normal Duty 3HP 10A Heavy Duty 3HP 10A 200-240V IP20 With Brake Transistor. If IP31 is required use NEMA 1 Kit CM5-KN1E | Yes | No | CFDB5-38-1865 | 38 | 920 | B | 7.9 x 4.0 x 6.3 | 1.76 | √ |
| IP20 | 5 | 16 | 5 | 16 | 200-240 | 174615.00M | CM5 VECTOR 3PH, NORMAL DUTY 5HP 16A & HEAVY DUTY 5HP 16A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-26-2798 | 26 | 1119 | B | 8.08 x 2.76 x 6.24 | 2.95 | √ |
| IP20 | 7.5 | 24 | 7.5 | 24 | 200-240 | 174616.00M | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 24A & HEAVY DUTY 7.5HP 24A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-19-3730 | 19 | 1492 | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 10 | 33 | 10 | 33 | 200-240 | 174617.00M | CM5 VECTOR 3PH, NORMAL DUTY 10HP 28A & HEAVY DUTY 10HP 28A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-10-7460 | 9.6 | 2984 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP20 | 15 | 47 | 15 | 47 | 200-240 | 174618.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 47A & HEAVY DUTY 15HP 47A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-10-7460 | 9.6 | 2984 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP20 | 25* | 70* | 20 | 56 | 200-240 | 174619.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & HEAVY DUTY 20HP 56A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-7-11190 | 6.3 | 4476 | E | 5 x 26.5 x 13 | 22.05 | √ |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

BRAKING RESISTORS FOR CM5™

CM5™ IP20 DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 50% DUTY CYCLE (30 SECONDS MAX. BRAKING TIME) - NEMA1 ENCLOSURE

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WATTS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HxWxD | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|---|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| IP20 | 25 | 77 | 20 | 64 | 200-240 | 186063.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 77A & HEAVY DUTY 20HP 64A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-8-9325 | 15 | 8952 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 30 | 88 | 25 | 75 | 200-240 | 186064.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 88A or HEAVY DUTY 25HP 75A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-8-9325 | 7.5 | 4214 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 40 | 105 | 30 | 88 | 200-240 | 186065.00M | CM5 VECTOR 3PH, NORMAL DUTY 40HP 105A or HEAVY DUTY 30HP 88A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-4-18650 | 4.9 | 6590 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 50 | 145 | 40 | 115 | 200-240 | 186088.00M | CM5 VECTOR 3PH, NORMAL DUTY 50HP 145A & HEAVY DUTY 40HP 115A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-3-27975 | - | - | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 60 | 180 | 50 | 145 | 200-240 | 186002.00M | CM5 VECTOR 3PH, NORMAL DUTY 60HP 180A HEAVY DUTY 50HP 145A 200-240V IP20 WITH Braking Transistor, if IP31 is required use NEMA 1 Kit CM5-KN1B | Yes | No | CFDB5-3-27975 | 2.7 | 12150 | G | 26.6 x 13.2 x 14.1 | 114.6 | √ |
| IP20 | 75 | 211 | 60 | 180 | 200-240 | 186067.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 211A or HEAVY DUTY 60HP 180A 200-240V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-3-27975 | 2.7 | 12150 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| Input Power Supply: Three-Phase 380-480 Vac | | | | | | | | | | | | | | | | |
| IP20 | 2.0 | 2.6 | 1.5 | 2.6 | 380-480 | 176121.00M | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP20 WITH BRAKE TRANSISTOR. For CAN OPEN & MODBUS (NEED ADD'L KIT - SEE KIT SECTION) | Yes | No | CFDB5-150-1865 | - | - | A | 7.5 x 3.0 x 5.9 | 1.76 | √ |
| IP20 | 3 | 4.3 | 3 | 4.3 | 380-480 | 186090.00M | CM5 VECTOR 3PH, NORMAL DUTY 3HP 4.3A & HEAVY DUTY 3HP 4.3A 380-480VAC, IP20 WITH BRAKE RESISTOR | Yes | No | CFDB5-150-1865 | - | - | A | 10.4 x 6.5 x 8.9 | 22 | √ |
| IP20 | 5 | 6.5 | 5 | 6.5 | 380-480 | 186091.00M | CM5 VECTOR 3PH, NORMAL DUTY 5HP 6.5A & HEAVY DUTY 5HP 6.5A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-150-1865 | 150 | 843 | B | 7.9 x 4.0 x 6.3 | 2.6 | √ |
| IP20 | 7.5 | 10 | 7.5 | 10 | 380-480 | 176146.00M | CM5 VECTOR 3PH, NORMAL DUTY 7.5HP 10A HEAVY DUTY 7.5HP 10A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-75-3730 | 75 | 1815 | B | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 10 | 16 | 10 | 16 | 380-480 | 176148.00M | CM5 VECTOR 3PH, NORMAL DUTY 10HP 16A HEAVY DUTY 10HP 16A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-38-7460 | 50 | 2560 | C | 8.3 x 5.3 x 6.5 | 4.4 | √ |
| IP20 | 15 | 24 | 15 | 24 | 380-480 | 174628.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-30-9325 | 25 | 5120 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP20 | 20 | 31 | 20/25 | 31 | 380-480 | 176151.00M | CM5 VECTOR 3PH, NORMAL DUTY 20/25HP 31A HEAVY DUTY 20/25HP 31A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-25-11190 | 19 | 6703 | D | 12.1 x 7.1 x 6.6 | 9.48 | √ |
| IP20 | 25/30 | 45 | 30 | 39 | 380-480 | 176152.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A HEAVY DUTY 30HP 39A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-10-27975 | 10 | 12800 | E | 10 x 28 x 16 | 22.1 | √ |
| IP20 | 40 | 58.5 | 40 | 49 | 380-480 | 174992.00M | CM5 VECTOR 3PH, NORMAL DUTY 40HP 58.5A & HEAVY DUTY 40HP 49A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-10-27975 | - | - | E | 10 x 28 x 16 | 22.05 | √ |
| IP20 | 50/60 | 77 | 50 | 61 | 380-480 | 174711.00M | CM5 VECTOR 3PH, NORMAL DUTY 50/60HP 77A & HEAVY DUTY 61A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-15-22380 | 15 | 10002 | D | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 60/75 | 88 | 60 | 73 | 380-480 | 186056.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 88A & HEAVY DUTY 60HP 73A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-15-22380 | 15 | 10002 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 75 | 105 | 75 | 88 | 380-480 | 186057.00M | CM5 VECTOR 3PH, NORMAL DUTY 75HP 105A & HEAVY DUTY 75HP 88A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-8-46625 | 10 | 12800 | F | 21.6 x 11.8 x 10 | 57.3 | √ |
| IP20 | 100/125 | 142 | 100 | 115 | 380-480 | 186059.00M | CM5 VECTOR 3PH, NORMAL DUTY 100/125HP 142A & HEAVY DUTY 100HP 115A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-5-74600 | 5 | 25600 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 150 | 180 | 125 | 142 | 380-480 | 186060.00M | CM5 VECTOR 3PH, NORMAL DUTY 150HP 180A & HEAVY DUTY 125HP 142A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-5-74600 | 5 | 25600 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |
| IP20 | 175 | 211 | 150 | 180 | 380-480 | 186061.00M | CM5 VECTOR 3PH, NORMAL DUTY 175HP 211A & HEAVY DUTY 150HP 180A 380-480V IP20 WITH BRAKE TRANSISTOR | Yes | No | CFDB5-5-74600 | 5 | 25600 | G | 26.6 x 13.2 x 12.4 | 114.6 | √ |

NOTES:

- 1) ND (Normal Duty) / VT (Variable Torque): 110% Overload / 60 Sec; HD (Heavy Duty) / CT (Constant Torque): 150% Overload / 60 Sec;
- 2) "HP" rating based on Marathon Electric motors "average FLA values". Use as a guide only.
- 3) Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of drive.
- 4) Frame Size A, B & C are rated for 40°C ambient temperature. Dimensions are provided for estimating purposes only.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES

BRAKING RESISTORS FOR CM5™

DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 20% DUTY CYCLE (12 SECONDS MAX. BRAKING TIME) - NEMA1 ENCLOSURE

| IP RATING | Normal Duty (ND) HP ¹ | ND AMPS ² | HEAVY DUTY (HD) HP ¹ | HD AMPS ³ | DRIVE VOLTAGE | CONTROLMAX CM5 Catalog # | ITEM DESCRIPTION | BRAKE TRANSISTOR (DB) | DISCONNECT SWITCH (DS) | BRAKE RESISTOR CATALOG # | RATED OHMS | RATED WAITS | DRIVE FRAME SIZE ⁴ | DIMENSIONS (IN.) HxWxD | APPROX. WEIGHT (LBS.) | STOCK |
|--|----------------------------------|----------------------|---------------------------------|----------------------|---------------|--------------------------|--|-----------------------|------------------------|--------------------------|------------|-------------|-------------------------------|------------------------|-----------------------|-------|
| Input Power Supply: Single or Three-Phase 200-240 Vac | | | | | | | | | | | | | | | | |
| IP66 | 0.33 | 1.6 | 0.33 | 1.6 | 200-240 | 186004.00M | CM5 VECTOR 1PH or 3PH, 0.33HP 1.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-190-149 | 190 | 167 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 0.75 | 2.6 | 0.75 | 2.6 | 200-240 | 174540.00M | CM5 VECTOR 1PH or 3PH, NORMAL DUTY 0.75HP 2.6A & HEAVY DUTY 0.75HP 2.6A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-190-149 | 190 | 149 | A | 10.4 x 6.5 x 9.9 | 22 | ✓ |
| IP66 | 1.5 | 4.3 | 1.5 | 4.3 | 200-240 | 186005.00M | CM5 VECTOR 1PH or 3PH, NORMAL DUTY 1.5HP 4.3A & HEAVY DUTY 1.5HP 4.3A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-190-149 | 190 | 167 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 2 | 7.3 | 2 | 7.3 | 200-240 | 186006.00M | CM5 VECTOR 1PH or 3PH, 2HP 7.3A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-63-448 | 63 | 500 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 3 | 10 | 3 | 10 | 200-240 | 186007.00M | CM5 VECTOR 1PH or 3PH, 3HP 10A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-38-746 | 38 | 920 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 5 | 16 | 5 | 16 | 200-240 | 186008.00M | CM5 VECTOR 3PH, 5HP 16A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-26-1119 | 26 | 1170 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 7.5 | 24 | 7.5 | 24 | 200-240 | 186009.00M | CM5 VECTOR 3PH, 7.5HP 24A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-19-1492 | 19 | 1676 | B | 13.4 x 8.5 x 8.9 | 26.5 | ✓ |
| IP66 | 10 | 33 | 10 | 33 | 200-240 | 186012.00M | CM5 VECTOR 3PH, 10HP 33A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-10-2984 | 9.6 | 3387 | B | 13.4 x 8.5 x 8.9 | 26.5 | ✓ |
| IP66 | 15 | 47 | 15 | 47 | 200-240 | 186013.00M | CM5 VECTOR 3PH, 15HP 47A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-10-2984 | 9.6 | 3387 | C | 18.7 x 12.6 x 11.4 | 45 | ✓ |
| IP66 | 25 | 70 | 20 | 56 | 200-240 | 186014.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 70A & HEAVY DUTY 20HP 56A 200-240V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-7-4476 | 6.3 | 4476 | C | 18.7 x 12.6 x 11.4 | 45 | ✓ |
| Input Power Supply: Three-Phase 380-480 Vac | | | | | | | | | | | | | | | | |
| IP66 | 0.5 | 1 | 0.5 | 1 | 380-480 | 174542.00M | CM5 VECTOR 3PH, NORMAL DUTY 0.5HP 1A & HEAVY DUTY 0.5HP 1A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-150-746 | 150 | 746 | A | 10.4 x 6.5 x 9.9 | 22 | ✓ |
| IP66 | 1 | 1.6 | 1 | 1.6 | 380-480 | 186018.00M | CM5 VECTOR 3PH, 1HP 1.6A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-150-746 | 150 | 843 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 2 | 2.6 | 2 | 2.6 | 380-480 | 186019.00M | CM5 VECTOR 3PH, 1.5HP 2.6A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-150-746 | 150 | 843 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 3 | 4.3 | 3 | 4.3 | 380-480 | 186020.00M | CM5 VECTOR 3PH, 3HP 4.3A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-150-746 | 150 | 843 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 5 | 6.5 | 5 | 6.5 | 380-480 | 186021.00M | CM5 VECTOR 3PH, 5HP 6.5A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-150-746 | 150 | 843 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 7.5 | 10 | 7.5 | 10 | 380-480 | 186022.00M | CM5 VECTOR 3PH, 7.5HP 10A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-75-1492 | 75 | 1815 | A | 10.4 x 6.5 x 8.9 | 22 | ✓ |
| IP66 | 10 | 16 | 10 | 16 | 380-480 | 174546.00M | CM5 VECTOR 3PH, 10HP 16A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-50-2238 | 50 | 2560 | B | 13.4 x 8.5 x 8.9 | 22 | ✓ |
| IP66 | 15 | 24 | 15 | 24 | 380-480 | 174544.00M | CM5 VECTOR 3PH, NORMAL DUTY 15HP 24A & HEAVY DUTY 15HP 24A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-25-4476 | 25 | 4476 | B | 13.4 x 8.5 x 9.9 | 26.5 | ✓ |
| IP66 | 25 | 31 | 25 | 31 | 380-480 | 186025.00M | CM5 VECTOR 3PH, NORMAL DUTY 25HP 31A & HEAVY DUTY 25HP 31A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-19-5968 | 19 | 6703 | B | 13.4 x 8.5 x 8.9 | 22 | ✓ |
| IP66 | 30 | 45 | 30 | 39 | 380-480 | 186015.00M | CM5 VECTOR 3PH, NORMAL DUTY 30HP 45A & HEAVY DUTY 30HP 39A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-10-11190 | 10 | 12800 | C | 18.7 x 12.6 x 11.4 | 45 | ✓ |
| IP66 | 50 | 59.2 | 50 | 49 | 380-480 | 186017.00M | CM5 VECTOR 3PH, NORMAL DUTY 50HP 59.2A & HEAVY DUTY 40HP 49A 380-480V IP66 WASHDOWN WITH BRAKE TRANSISTOR & DISCONNECT SWITCH | Yes | Yes | CFDB2-10-11190 | 10 | 12800 | C | 18.7 x 12.6 x 11.4 | 45 | ✓ |

NOTES:

- 1) ND (Normal Duty) / VT (Variable Torque): 110% Overload / 60 Sec; HD (Heavy Duty) / CT (Constant Torque): 150% Overload / 60 Sec;
- 2) "HP" rating based on Marathon Electric motors "average FLA values". Use as a guide only.
- 3) Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of drive.
- 4) Frame Size A, B & C are rated for 40°C ambient temperature. Dimensions are provided for estimating purposes only.

*See back cover page for attribution.

Continued on next page.

MARATHON CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES - ACCESSORIES/KITS

| TYPE | CONTROLMAX CM5 CATALOG # | NOTES | ITEM DESCRIPTION | APPRX. SHPG. WT. (LBS.) | STOCK |
|---|--------------------------------|-------|---|----------------------------------|-------|
| I/O | 174362.00M | 1 | CM5, I/O MODULE; 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 1 RS485, 10VDC, 24VDC | 0.2 | √ |
| I/O | 186026.00M | | CM5, I/O MODULE; 8 DI, 1 AI, 1 AO, 1 DOR, 4 DOT, 1 RS485, 10VDC, 24VDC | 0.2 | √ |
| I/O | 186027.00M | | CM5, I/O MODULE; 6 DI, 3 AI, 2 AO, 1 DOR, 3 DOT, 1 RS485, 10VDC, 24VDC | 0.2 | √ |
| I/O | 186028.00M | | CM5, I/O MODULE; 5 DI, 1 AI, 1 AO, 4 DOR, 1 DOT, 1 RS485, 10VDC, 24VDC | 0.2 | √ |
| ENCODER INPUT | 186029.00M | | CM5, ENCODER MODULE; QUAD INPUT A & B, 1 RS485, 5 DI, 1 AI, 1 AO, 3 DOR, 1 DOT, 24VDC | 0.2 | √ |
| USB CARD | 174357.00M | | CM5, COMM. MODULE; 1 USB, 1 RS485, 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 10VDC, 24VDC | 0.2 | √ |
| RS232 CARD | 186030.00M | | CM5, COMM. MODULE; 1 RS232, 1 RS485, 4 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 24VDC | 0.2 | √ |
| RS485 CARD | 186031.00M | | CM5, COMM. MODULE; 2 RS485, 4 DI, 2 AI, 1 AO, 2 DOR, 1 DOT, 10VDC, 24VDC | 0.2 | √ |
| CANOPEN CARD | 174364.00M | | CM5, COMM. MODULE; 1 CAN/DEVICENET, 1 RS485, 2 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 10VDC, 24VDC | 0.2 | √ |
| PROFIBUS DP CARD | 174366.00M | | CM5, COMM. MODULE; 2 DI, 1 AI, 1 AO, 1 DOR, 1 DOT, 1 PROFIBUS DP, 1 RS485, 24VDC (DB9 CONNECTOR) | 0.2 | √ |
| PROFIBUS DP & DP-V1 MODULE | 186032.00M | | CM5, COMM. MODULE; 1-PROFIBUS DP & DP-V1 100BASE TX RJ-45 PORT, 1-RS485, 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 24VDC (TERMINAL BLOCK CONNECTOR) | 0.2 | √ |
| MODBUSTCP COMM. MODULE | 174365.00M | | CM5, COMM. MODULE; 1-MODBUSTCP 100BASE TX RJ-45 PORT, 1-RS485, 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 24VDC | 0.2 | √ |
| PROFINET I/O COMM. MODULE | 174368.00M | | CM5, COMM. MODULE; 1-PROFINET I/O 100BASE TX RJ-45 PORT, 1-RS485, 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 24VDC | 0.2 | √ |
| ETHERNET IP COMM. MODULE | 174369.00M | | CM5, COMM. MODULE; 2-DI, 1-AI, 1-AO, 1-DOR, 1-DOT, 1-RS485, 1-ETHERNET IP 100BASE TX RJ-45 PORT, 24VDC | 0.2 | √ |
| STO MODULE | 186033.00M | 2 | CM5, SAFETY FUNCTION MODULE; SAFE TORQUE OFF (STO) / STOP CATEGORY 0, SAFE STOP 1 TIME CONTROLLED (SS1-T) / STOP CATEGORY 1; SAFETY CATEGORY: SIL 3, PL E | 1.8 | √ |
| FLASH MEMORY MODULE | 186034.00M | | CM5, FLASH MEMORY MODULE FOR SAVING AND RELOADING PROGRAM AND PARAMETERS TO / FROM THE DRIVE. | 0.2 | √ |
| REMOTE KEYPAD - NON TEXT | 186077.00M | 3 | CM5, REMOTE NON-TEXT KEYPAD FOR MOUNTING THROUGH ENCLOSURE DOOR (MOUNTING FRAME KIT IS NOT REQUIRED). | 0.6 | √ |
| REMOTE KEYPAD - ADVANCED TEXT | 186079.00M | 4 | CM5, REMOTE ADVANCED TEXT KEYPAD FOR MOUNTING THROUGH ENCLOSURE DOOR (MOUNTING FRAME KIT IS REQUIRED). | 0.4 | √ |
| REMOTE KEYPAD - ADVANCED TEXT FRAME KIT | 186035.00M | | CM5, REMOTE ADVANCED TEXT KEYPAD ENCLOSURE DOOR MOUNTING FRAME KIT | 0.5 | √ |
| HMI CABLE 1M | 186036.00M | | CM5, 3.3 FT (1 METER) REMOTE KEYPAD CABLE | 0.5 | √ |
| HMI CABLE 2M | 186037.00M | | CM5, 6.6 FT (2 METER) REMOTE KEYPAD CABLE | 0.7 | √ |
| HMI CABLE 3M | 186038.00M | | CM5, 9.9 FT (3 METER) REMOTE KEYPAD CABLE | 1.0 | √ |
| HMI CABLE 5M | 186039.00M | | CM5, 16 FT (5 METER) REMOTE KEYPAD CABLE | 1.2 | √ |
| HMI CABLE 7.5M | 186040.00M | | CM5, 25 FT (7.5 METER) REMOTE KEYPAD CABLE | 1.5 | √ |
| HMI CABLE 10M | 186041.00M | | CM5, 33 FT (10 METER) REMOTE KEYPAD CABLE | 2.0 | √ |

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES - ACCESSORIES/KITS

| TYPE | CONTROLMAX CM5 CATALOG # | NOTES | ITEM DESCRIPTION | APPRX. SHPG. WT. (LBS.) | STOCK |
|---------------------------|--------------------------------|-------|---|----------------------------------|-------|
| NEMA1 CONDUIT KIT | 186042.00M | | CM5, NEMA 1 KIT – FRAME SIZE A | 2.0 | √ |
| NEMA1 CONDUIT KIT | 186043.00M | | CM5, NEMA 1 KIT – FRAME SIZE B | 3.0 | √ |
| NEMA1 CONDUIT KIT | 186044.00M | | CM5, NEMA 1 KIT – FRAME SIZE C | 3.0 | √ |
| NEMA1 CONDUIT KIT | 186045.00M | | CM5, NEMA 1 KIT – FRAME SIZE D | 3.0 | √ |
| NEMA1 CONDUIT KIT | 186046.00M | | CM5, NEMA 1 KIT – FRAME SIZE E | 6.0 | √ |
| NEMA1 CONDUIT KIT | 186047.00M | | CM5, NEMA 1 KIT – FRAME SIZE F | 12.0 | √ |
| NEMA1 CONDUIT KIT | 186048.00M | | CM5, NEMA 1 KIT – FRAME SIZE G | 17.0 | √ |
| CABLE SHIELD CLAMP KIT | 186049.00M | | CM5, CABLE SHIELD CLAMP KIT FOR FRAME A | 1.0 | √ |
| CABLE SHIELD CLAMP KIT | 186050.00M | | CM5, CABLE SHIELD CLAMP KIT FOR FRAME B | 1.0 | √ |
| CABLE SHIELD CLAMP KIT | 186051.00M | | CM5, CABLE SHIELD CLAMP KIT FOR FRAME C | 1.1 | √ |
| CABLE SHIELD CLAMP KIT | 186052.00M | | CM5, CABLE SHIELD CLAMP KIT FOR FRAME D | 1.1 | √ |
| CABLE SHIELD CLAMP KIT | 186053.00M | | CM5, CABLE SHIELD CLAMP KIT FOR FRAME E | 6.0 | √ |
| CABLE SHIELD CLAMP KIT | 186054.00M | | CM5, CABLE SHIELD CLAMP KIT FOR FRAME F | 15.0 | √ |
| CABLE SHIELD CLAMP KIT | 186055.00M | | CM5, CABLE SHIELD CLAMP KIT FOR FRAME G | 18.0 | √ |
| CABLE SHIELD CLAMP KIT | | | CABLE SHIELD CLAMP KIT FOR FRAME G | 18.0 | \$180 |

NOTES:

- 1) The "CM5-IO5" module is included as standard with CM5-IP20 & IP66 Drives.
 - 2) For CM5-IP20, Frame-A to E VFDs, the NEMA1 Kit top cover to protect the VFD from falling dust can not be used if the "CM5-SFY2 or STO Module" is installed on the drive.
 - 3) The "CM5-HMIR" Remote Keypad (Non-Text) requires Qty. (1) CM5-CCHIR0xM cable. ("x" represents the cable length in meters)
 - 4) The "HMI-01" remote Keypad (Advanced Text) requires Qty. (1) CM5-RHMIF & Qty. (1) CM5-CCHIR0xM cable. ("x" represents the cable length in meters).
- This keypad only works with 230VAC & 460VAC, CM5-G2 (Generation-2) drives.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES -OPTION CARDS

| CM5 Option Module | CM5™ Catalog # Option Module | Notes | DI ¹ | AI | AO | DOR | DOT | Infrared | Encoder | USB | RS232 | RS485 | CANopen / DeviceNet | Profibus-DP / DP V1 | Modbus TCP | ProfiNet I/O | EtherNet I/P |
|---------------------|---------------------------------|-------|-----------------|----|----|-----|-----|----------|---------|-----|-------|-------|------------------------|------------------------|---------------|-----------------|-----------------|
| CM5-IOS | 174362.00M | 1 | 4 | 1 | 1 | 1 | 1 | | | | | 1 | | | | | |
| CM5-IOD | 186026.00M | | 8 | 1 | 1 | 1 | 4 | | | | | 1 | | | | | |
| CM5-IOAD | 186027.00M | | 6 | 3 | 2 | 1 | 3 | | | | | 1 | | | | | |
| CM5-IOR / CM5-IOR-B | 186028.00M | | 5 | 1 | 1 | 4 | 1 | 1 | | | | 1 | | | | | |
| CM5-ENC | 186029.00M | | 5 | 1 | 1 | 3 | 1 | | 1 | | | 1 | | | | | |
| CM5-CUSB | 174357.00M | | 4 | 1 | 1 | 1 | 1 | | | 1 | | 1 | | | | | |
| CM5-CRS232 | 186030.00M | | 4 | 1 | 1 | 1 | 1 | | | | 1 | 1 | | | | | |
| CM5-CRS485-B | 186031.00M | | 4 | 2 | 1 | 2 | 1 | | | | | 2 | | | | | |
| CM5-CCAN | 174364.00M | | 2 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | | | | |
| CM5-CPDP | 174366.00M | | 2 | 1 | 1 | 1 | 1 | | | | | 1 | | 1 | | | |
| CM5-CPDP2 | 186032.00M | | 2 | 1 | 1 | 1 | 1 | | | | | 1 | | 1 | | | |
| CM5-CEMB-TCP | 174365.00M | | 2 | 1 | 1 | 1 | 1 | | | | | 1 | | | 1 | | |
| CM5-CEPN-HO | 174368.00M | | 2 | 1 | 1 | 1 | 1 | | | | | 1 | | | | 1 | |
| CM5-CETH-IP | 174369.00M | | 2 | 1 | 1 | 1 | 1 | | | | | 1 | | | | | 1 |

NOTES:

1) The CM5™ SERIES DRIVES VFD comes standard with "CM5-IOS" Module.
 To use any of the above listed optional modules, the CM5-IOS module needs to be removed from the drive.
 In that case, the number of I/Os will depend on the I/O or communication module being used.
 CM5 needs plug in modules in order for the drive to work RS485 is standard

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES - TECHNICAL DATA

| | | |
|------------------------|---|---|
| Power rating | Power supply | Tolerance: -15 to +10% |
| | | Frequency: 50/60 Hz (48 Hz to 62 Hz) |
| | | Phase imbalance: ≤3% of the rated phase-phase input voltage |
| | | Transient voltages and over voltages according to Category III (EN 61010/UL 508C) |
| | | Maximum of 10 (line) connections per hour (1 every 6 minutes) |
| | | Typical efficiency: ≥97% |
| Control | Method | "V/F (scalar) VWV: voltage vector control Vector without encoder (sensorless) and closed loop vector with encoder PM VWV: voltage vector control for permanent magnet motors" |
| | Output frequency | 0 to 500 Hz, resolution of 0.015 Hz |
| Performance | V/F Control | "Speed regulation: 1% of the rated speed (with slip compensation) Speed variation range: 1:20" |
| | Vector control (VWV) | "Speed regulation: 1% of the rated speed Speed variation range: 1:30" |
| | Sensorless | "Speed regulation: 0.5% of the rated speed Speed variation range: 1:100" |
| | Vector control with Encoder | "Speed regulation: 0.1% of the rated speed Speed variation range: 1:100" |
| | PM VWV Control | "Regulation: 0.1 % of the rated speed Speed variation range: 1:20" |
| Environment conditions | Temperature around the CM5 | "14°F to 122°F (-10 °C to 50 °C) - IP20 (sizes A to E) 14°F to 104°F (-10 °C to 40 °C) - IP20 (sizes A to E) when installed side by side 14°F to 104°F (-10 °C to 40 °C) - NEMA 1 (sizes A to E) 14°F to 104°F (-10 °C to 40 °C) - IP20, NEMA 1 (size F) 14°F to 113°F (-10 °C to 45 °C) - IP20, NEMA 1 (size G) 14°F to 104°F (-10 °C to 40 °C) - IP66 (sizes A & B) For CM5-IP20-Frame A to E & CM5-IP66-Frame A & B, when operating temperatures are above the specification, it is necessary to apply 2% of current derating for each Celsius degree (°C), limited to an increase of 10 °C. For CM5-IP20-Frame F & G, when operating temperatures are above the specification, it is necessary to apply 1% of current derating for each Celsius degree (°C) up to 50 °C, and 2% up to 60 °C (maximum)." |
| | Aggressive environments | Protection Class 3C2 - Standard coating on the internal circuits, according to IEC 60721-3-3 (standard model) |
| | | Protection Class 3C3 - Extra coating - optional, according to IEC 60721-3-3 (optional) |
| | Air relative humidity | 5% to 95% non-condensing |
| | Altitude | "Up to 1,000 m (maximum altitude under normal conditions) 1,000 to 4,000 m: current derating of 1% for each 100 m above 1,000 m of altitude" |
| Pollution degree | "2 (EN 50178 and UL 508C), with non-conductive pollution Condensation must not cause conduction of the accumulated residues" | |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES - TECHNICAL DATA

| | | |
|------------------------------|------------------------------|--|
| Inputs1) | Analog | "1 isolated input. Levels: (0 to 10) V or (0 to 20) mA or (4 to 20) mA Linearity error $\leq 0.25\%$ Impedance: 100 k Ω for voltage input, 500 Ω for current input Programmable functions, including PTC input Maximum voltage accepted in the inputs: 30 V dc" |
| | Digital | "4 isolated inputs Programmable functions: Active high (PNP): maximum low level of 15 V dc; minimum high level of 20 V dc Active low (NPN): maximum low level of 5 V dc; minimum high level of 9 V dc Maximum input voltage of 30 V dc Input current: 4.5 mA Maximum input current: 5.5 mA" |
| Outputs1) | Analog | "1 isolated output. Levels (0 to 10) V or (0 to 20) mA or (4 to 20) mA Linearity error $\leq 0.25\%$ Programmable functions RL ≥ 10 k Ω (0 to 10 V) or RL ≤ 500 Ω (0 to 20 mA / 4 to 20 mA)" |
| | Relay | "1 relay with NO/NC contact Maximum voltage: 240 V ac Maximum current of 0.5 A Programmable functions" |
| | Transistor | "1 isolated open sink digital output (using as reference the 24 V dc power supply) Maximum current of 150 mA (maximum capacity of the 24 V dc power supply)2) Programmable functions" |
| | Power supply | "24 V dc power supply. Maximum capacity: 150 mA2) Power supply of 10 V dc. Maximum capacity: 2 mA" |
| Communication | Selectable plug-in | "Standard Communication: One RS485 (Modbus RTU / BACnet) Port. Optional: CANopen, DeviceNet, Profibus-DP, EtherNet/IP, Modbus-TCP, PROFINET IO, USB, RS485 (two Ports) and RS232 port" |
| Safety | Protection | "Phase-phase overcurrent/short circuit in the output Phase-ground overcurrent/short circuit in the output Undervoltage/overvoltage in the power Overtemperature of the heatsink Motor overload Overload on the power module (IGBTs) External fault / alarm Programming error" |
| Operating interface (keypad) | "Standard (built in the CM5) | "9 keys: Run/Stop, Increment, Decrement, Direction of rotation, Jog, Local/Remote, Back/Esc and Enter/Menu LCD Display It allows accessing/changing all the parameters Accuracy of the indications: Current: 5% of the rated current Speed resolution: 0.1 Hz" |
| Protection degree | IP20 | Sizes A, B, C, D, E, F and G |
| | NEMA1 | Sizes A, B, C, D, E, F and G with NEMA1 kit |
| | IP66/NEMA4X (Indoor/Outdoor) | Sizes A and B |

NOTES:

1) The number and/or types of analog/digital inputs/outputs may vary according to the plug-in module (accessory) used.

In the table above, the standard plug-in module (CM5-IOS) was taken into account.

For further information, refer to the CM5 user manual.

2) The maximum capacity of 150 mA considers the load of the 24 V power supply plus the transistor output, that is, the sum of the consumption of both must not exceed 150 mA.

MARATHON® CONTROLMAX™ AC DRIVES

CM5™ SERIES DRIVES - STANDARDS



| | |
|---|---|
| Safety standards | UL 508C - Power conversion equipment |
| | UL 840 - Insulation coordination including clearances and creepage distances for electrical equipment |
| | EN 61800-5-1 - Safety requirements electrical, thermal and energy |
| | EN 50178 - Electronic equipment for use in power installations |
| | EN 60204-1 - Safety of machinery. Electrical equipment of machines. Part 1: general requirements Note: In order to have a machine in accordance with this standard, the manufacturer of the machine is responsible for installing an emergency stop device and a device for disconnection from the power line |
| | EN 60146 (IEC 146) - Semiconductor converters |
| | EN 61800-2 - Adjustable speed electrical power drive systems - Part 2: general requirements - Rating specifications for low voltage adjustable frequency AC power drive systems |
| Electromagnetic compatibility standards | EN 61800-3 - Adjustable speed electrical power drive systems - Part 3: EMC product standard including specific test methods |
| | EN 55011 - Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment |
| | CISPR 11 - Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement |
| | EN 61000-4-2 - Electromagnetic compatibility (EMC) - Part 4: testing and measurement techniques - Section 2: electrostatic discharge immunity test |
| | EN 61000-4-3 - Electromagnetic compatibility - Part 4: testing and measurement techniques - Section 3: radiated, radio-frequency, electromagnetic field immunity test |
| | EN 61000-4-4 - Electromagnetic compatibility - Part 4: testing and measurement techniques - Section 4: electrical fast transient/burst immunity test |
| | EN 61000-4-5 - Electromagnetic compatibility - Part 4: testing and measurement techniques - Section 5: surge immunity test |
| | EN 61000-4-6 - Electromagnetic compatibility - Part 4: testing and measurement techniques - Section 6: immunity to conducted disturbances, induced by radio-frequency fields |
| Mechanical construction standards | EN 60529 - Degrees of protection provided by enclosures (IP code) |
| | UL 50 - Enclosures for electrical equipment |
| | IEC60721-3-3 - Classification of environmental conditions - part 3: classification of groups of environmental parameters and their severities - Section 3: stationary use at weather protected locations level 3M4. |

*See back cover page for attribution.

MARATHON CONTROLMAX™ AC DRIVES

BRAKE RESISTORS FOR CM3 & CM5™ SERIES DRIVES

BRAKING RESISTOR SIZING

This technical note describes how sizing a braking resistor for dynamic braking operation. Remember that this is a general guide and the braking resistor manufacturer should be contacted in order to guarantee the correct resistor selection (thermal characteristics).

OVERVIEW

In many applications, being able to stop safely and precisely is as important as being able to start and accelerate quickly. Whenever a motor is abruptly stopped or forced to slow down faster than it would normally stop, the motor acts like a generator by converting mechanical power from the shaft into electrical power. A means must exist to deal with this extra energy returning from the motor.

When a variable frequency drive is used to stop a motor, usually the Dynamic Braking provides the means for dissipating the motor regenerative energy into an external resistor. Dynamic Braking operates anytime the VFD experiences regenerative currents, that is, any motor with a high inertia or a motor that is required to decelerate rapidly. A VFD with Dynamic Braking option needs only the external braking resistor connected to it and the function enabled.

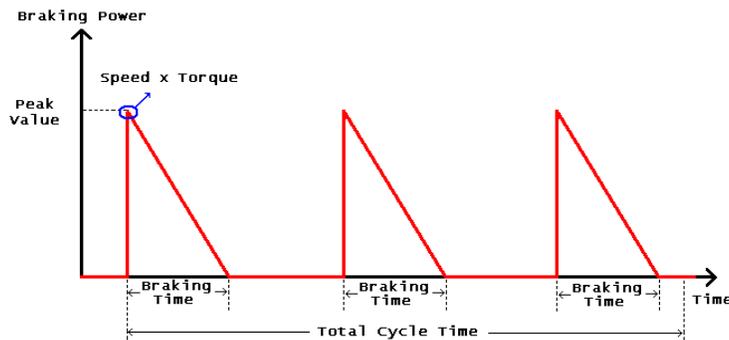
PULSED RESISTOR BRAKING

During deceleration, the motor changes to generator operation and supplies energy back to the inverter. As brake energy cannot be fed back to the supply via the normal diode bridge, it may cause voltage in the DC link to become excessively high when added to existing supply voltage. This excessive voltage may cause a drive overvoltage trip. In order to prevent the DC bus voltage rising excessively, a possibility is to lead the braking energy to a resistor connected to the DC bus. The braking resistor is added and removed from the circuit by an IGBT. When the DC link reaches a predefined limit the IGBT is switched on by the control logic. The resistor is placed across the DC link.

Excess energy is dissipated by the resistor, reducing bus voltage. When DC link voltage is reduced to a safe level the IGBT is switched off, removing the resistor from the DC link.

SIZING THE BRAKING RESISTOR

The recommended way of selecting a braking resistor is to supply the braking resistor manufacturer with the following data: resistor value (this value is informed in the Marathon Electric VFD user's guide, in ohms), braking time (time to decelerate the load), and the application braking duty cycle (similar to the one shown below).



ESTIMATING THE BRAKING RESISTOR

Input Data

- $n \rightarrow$ Motor speed variation (initial braking speed – final braking speed) [rpm]
- $J_t \rightarrow$ Total inertia (motor + load) [kgm²]
- $t_B \rightarrow$ Braking time [s]
- $T_t \rightarrow$ Total cycle time [s]

MARATHON® CONTROLMAX™ AC DRIVES

BRAKE RESISTORS FOR CM3 & CM5™ SERIES DRIVES

Speed Variation ($\Delta\omega$ [rps])

$$\Delta\omega = \frac{2 \cdot \pi \cdot n}{60} \quad ; \quad \text{where } \pi \cong 3.14159$$

Braking Torque (C [N.m])

$$C = \frac{J_t \cdot \Delta\omega}{t_B}$$

Average Braking Power (P_{Ba} [W])

$$P_{Ba} = \frac{C \cdot \Delta\omega}{2}$$

Effective Braking Resistor Power (P_{Bef} [W])

Consider the most severe period of time with its respective braking time (in case of having more than one braking in the total period of time, consider the total sum of brakings):

$$P_{Bef} = \sqrt{\frac{P_{Ba}^2 \cdot (t_{B1} + t_{B2} + t_{B3} + \dots)}{T_t}}$$

Instantaneous Braking Resistor Power (P_{Bi} [W])

In case of having long times between two consecutive brakings, the resistor shall be sized according to its instantaneous power, since the braking time (t_B) is shorter than twenty (20) seconds:

$$P_{Bi} = 0,5 \cdot P_{Ba}$$

EXAMPLE

$$\text{Input Data} \begin{cases} n_i = 1500 \text{ rpm (braking initial speed)} \\ n_f = 0 \text{ rpm (braking final speed)} \\ t_B = 10 \text{ s (twice / min)} \\ J_t = 20 \text{ kgm}^2 \end{cases}$$

$$\Rightarrow n = 1500 - 0 = 1500 \text{ rpm}$$

$$\Rightarrow \Delta\omega = \frac{2 \cdot \pi \cdot n}{60} = \frac{2 \cdot \pi \cdot 1500}{60} = 157.1$$

$$\Rightarrow C = \frac{J_t \cdot \Delta\omega}{t_B} = \frac{20 \cdot 157.1}{10} = 314.2 \text{ Nm}$$

$$\Rightarrow P_{Ba} = \frac{C \cdot \Delta\omega}{2} = 24680 \text{ W}$$

As we have two decelerations per minute, and considering the most severe 10 minutes:

$$\Rightarrow P_{Bef} = \sqrt{\frac{P_{Ba}^2 \cdot t_B + \dots}{T_t}} = \sqrt{\frac{(24680)^2 \cdot 2 \cdot 10 \cdot 10}{600}} = 14250 \text{ W}$$

Thus, the braking resistor power should be of at least 15kW.

*See back cover page for attribution.

MARATHON® CONTROLMAX™ AC DRIVES

BRAKE RESISTORS FOR CM3 & CM5™ SERIES DRIVES

| MARATHON™ CONTROLMAX™ AC DRIVES (20% DUTY) CAT# | MARATHON™ CONTROLMAX™ AC DRIVES - BRAKING RESISTOR CATALOG NUMBER (DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 20% DUTY CYCLE (12 SECONDS MAX. BRAKING TIME) - NEMA1 ENCLOSURE | RATED OHMS | RATED WATTS | DIMENSIONS | MARATHON™ CONTROLMAX™ AC DRIVES (50% DUTY) CAT# | MARATHON™ CONTROLMAX™ AC DRIVES - BRAKING RESISTOR CATALOG NUMBER (DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 50% DUTY CYCLE (30 SECONDS MAX. BRAKING TIME) - NEMA1 ENCLOSURE | RATED OHMS | RATED WATTS | DIMENSIONS |
|---|---|------------|-------------|---------------|---|---|------------|-------------|---------------|
| 185000.00M | CFDB2-63-448 | 63 | 500 | 5 X 12 X 7 | NA | NA | NA | NA | NA |
| 185000.00M | CFDB2-63-448 | 63 | 500 | 5 X 12 X 7 | NA | NA | NA | NA | NA |
| 185001.00M | CFDB2-250-448 | 250 | 512 | 5 X 12 X 7 | NA | NA | NA | NA | NA |
| 185001.00M | CFDB2-250-448 | 250 | 512 | 5 X 12 X 7 | NA | NA | NA | NA | NA |
| 185001.00M | CFDB2-250-448 | 250 | 512 | 5 X 12 X 7 | NA | NA | NA | NA | NA |
| 185001.00M | CFDB2-250-448 | 250 | 512 | 5 X 12 X 7 | NA | NA | NA | NA | NA |
| 185002.00M | CFDB2-100-1119 | 100 | 1280 | 5 X 12 X 13 | NA | NA | NA | NA | NA |
| 185002.00M | CFDB2-100-1119 | 100 | 1280 | 5 X 12 X 13 | NA | NA | NA | NA | NA |
| 185002.00M | CFDB2-100-1119 | 100 | 1280 | 5 X 12 X 13 | NA | NA | NA | NA | NA |
| 185003.00M | CFDB2-50-2238 | 50 | 2560 | 5 X 19 X 13 | NA | NA | NA | NA | NA |
| 185003.00M | CFDB2-50-2238 | 50 | 2560 | 5 X 19 X 13 | NA | NA | NA | NA | NA |
| 185003.00M | CFDB2-50-2238 | 50 | 2560 | 5 X 19 X 13 | NA | NA | NA | NA | NA |
| 185000.00M | CFDB2-63-448 | 63 | 500 | 5 X 12 X 7 | 185021.00M | CFDB5-63-1119 | 63 | 500 | 5 X 12 X 7 |
| 185004.00M | CFDB2-38-746 | 38 | 920 | 5 X 12 X 10 | 185022.00M | CFDB5-38-1865 | 38 | 920 | 5 X 12 X 10 |
| 185005.00M | CFDB2-26-1119 | 26 | 1170 | 5 X 12 X 13 | 185023.00M | CFDB5-26-2798 | 26 | 1170 | 5 X 12 X 13 |
| 185006.00M | CFDB2-19-1492 | 19 | 1676 | 5 X 12 X 16 | 185024.00M | CFDB5-19-3730 | 19 | 1676 | 5 X 12 X 16 |
| 185007.00M | CFDB2-13-2238 | 12.6 | 2580 | 5 X 19 X 10 | 185025.00M | CFDB5-13-5595 | 12.6 | 2580 | 5 X 19 X 10 |
| 185008.00M | CFDB2-10-2984 | 9.6 | 3387 | 5 X 19 X 10 | 185026.00M | CFDB5-10-7460 | 9.6 | 3387 | 5 X 19 X 10 |
| 185008.00M | CFDB2-10-2984 | 9.6 | 3387 | 5 X 19 X 10 | 185026.00M | CFDB5-10-7460 | 9.6 | 3387 | 5 X 19 X 10 |
| 185009.00M | CFDB2-7-4476 | 6.3 | 5001 | 5 X 26.5 X 13 | 185027.00M | CFDB5-7-11190 | 6.3 | 5001 | 5 X 26.5 X 13 |
| 185010.00M | CFDB2-8-3730 | 7.5 | 4214 | 5 X 19 X 13 | 185028.00M | CFDB5-8-9325 | 7.5 | 4214 | 5 X 19 X 13 |
| 185010.00M | CFDB2-8-3730 | 7.5 | 4214 | 5 X 19 X 13 | 185028.00M | CFDB5-8-9325 | 7.5 | 4214 | 5 X 19 X 13 |
| 185011.00M | CFDB2-5-5968 | 4.9 | 6590 | 5 X 26.5 X 16 | 185029.00M | CFDB5-4-18650 | 4.9 | 6590 | 5 X 26.5 X 16 |
| 185012.00M | CFDB2-3-11190 | 2.7 | 12150 | 10 X 28 X 13 | 185030.00M | CFDB5-3-27975 | 2.7 | 12150 | 10 X 28 X 13 |
| 185012.00M | CFDB2-3-11190 | 2.7 | 12150 | 10 X 28 X 13 | 185030.00M | CFDB5-3-27975 | 2.7 | 12150 | 10 X 28 X 13 |
| 185012.00M | CFDB2-3-11190 | 2.7 | 12150 | 10 X 28 X 13 | 185030.00M | CFDB5-3-27975 | 2.7 | 12150 | 10 X 28 X 13 |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | 185031.00M | CFDB5-150-1865 | 150 | 843 | 5 X 12 X 10 |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | 185031.00M | CFDB5-150-1865 | 150 | 843 | 5 X 12 X 10 |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | 185031.00M | CFDB5-150-1865 | 150 | 843 | 5 X 12 X 10 |
| 185014.00M | CFDB2-75-1492 | 75 | 1815 | 5 X 12 X 16 | 185032.00M | CFDB5-75-3730 | 75 | 1815 | 5 X 12 X 16 |
| 185003.00M | CFDB2-50-2238 | 50 | 2560 | 5 X 19 X 13 | 185033.00M | CFDB5-38-7460 | 50 | 2560 | 5 X 19 X 13 |
| 185003.00M | CFDB2-50-2238 | 50 | 2560 | 5 X 19 X 13 | 185033.00M | CFDB5-38-7460 | 50 | 2560 | 5 X 19 X 13 |
| 185015.00M | CFDB2-25-4476 | 25 | 5120 | 5 X 26.5 X 13 | 185034.00M | CFDB5-30-9325 | 25 | 5120 | 5 X 26.5 X 13 |
| 185016.00M | CFDB2-19-5968 | 19 | 6703 | 5 X 26.5 X 16 | 185035.00M | CFDB5-25-11190 | 19 | 6703 | 5 X 26.5 X 16 |
| 185017.00M | CFDB2-10-11190 | 10 | 12800 | 10 X 28 X 16 | 185036.00M | CFDB5-10-27975 | 10 | 12800 | 10 X 28 X 16 |
| 185017.00M | CFDB2-10-11190 | 10 | 12800 | 10 X 28 X 16 | 185036.00M | CFDB5-10-27975 | 10 | 12800 | 10 X 28 X 16 |

*See back cover page for attribution.

Continued on next page.

MARATHON® CONTROLMAX™ AC DRIVES

BRAKE RESISTORS FOR CM3 & CM5™ SERIES DRIVES

| MARATHON™ CONTROLMAX™ AC DRIVES (20% DUTY) CAT# | MARATHON™ CONTROLMAX™ AC DRIVES - BRAKING RESISTOR CATALOG NUMBER (DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 20% DUTY CYCLE (12 SECONDS MAX. BRAKING TIME) - NEMA1 ENCLOSURE | RATED OHMS | RATED WATTS | DIMENSIONS | MARATHON™ CONTROLMAX™ AC DRIVES (50% DUTY) CAT# | MARATHON™ CONTROLMAX™ AC DRIVES - BRAKING RESISTOR CATALOG NUMBER (DYNAMIC BRAKING RESISTORS - 100% BRAKING TORQUE AT 50% DUTY CYCLE (30 SECONDS MAX. BRAKING TIME) - NEMA1 ENCLOSURE | RATED OHMS | RATED WATTS | DIMENSIONS |
|---|---|------------|-------------|---------------|---|---|------------|-------------|--------------|
| 1850018.00M | CFDB2-15-8952 | 15 | 10002 | 10 X 28 X 13 | 185037.00M | CFDB5-15-22380 | 15 | 10002 | 10 X 28 X 13 |
| 1850018.00M | CFDB2-15-8952 | 15 | 10002 | 10 X 28 X 13 | 185037.00M | CFDB5-15-22380 | 15 | 10002 | 10 X 28 X 13 |
| 185017.00M | CFDB2-10-11190 | 10 | 12800 | 10 X 28 X 16 | 185038.00M | CFDB5-8-46625 | 10 | 12800 | 10 X 28 X 16 |
| 185019.00M | CFDB2-5-22380 | 5 | 25600 | 24 X 30 X 18 | 185039.00M | CFDB5-5-74600 | 5 | 25600 | 24 X 30 X 18 |
| 185019.00M | CFDB2-5-22380 | 5 | 25600 | 24 X 30 X 18 | 185039.00M | CFDB5-5-74600 | 5 | 25600 | 24 X 30 X 18 |
| 185019.00M | CFDB2-5-22380 | 5 | 25600 | 24 X 30 X 18 | 185039.00M | CFDB5-5-74600 | 5 | 25600 | 24 X 30 X 18 |
| 185020.00M | CFDB2-190-149 | 190 | 167 | 5 X 12 X 5 | NA | NA | NA | NA | NA |
| 185020.00M | CFDB2-190-149 | 190 | 167 | 5 X 12 X 5 | NA | NA | NA | NA | NA |
| 185020.00M | CFDB2-190-149 | 190 | 167 | 5 X 12 X 5 | NA | NA | NA | NA | NA |
| 185000.00M | CFDB2-63-448 | 63 | 500 | 5 X 12 X 7 | NA | NA | NA | NA | NA |
| 185004.00M | CFDB2-38-746 | 38 | 920 | 5 X 12 X 10 | NA | NA | NA | NA | NA |
| 185005.00M | CFDB2-26-1119 | 26 | 1170 | 5 X 12 X 13 | NA | NA | NA | NA | NA |
| 185006.00M | CFDB2-19-1492 | 19 | 1676 | 5 X 12 X 16 | NA | NA | NA | NA | NA |
| 185007.00M | CFDB2-13-2238 | 12.6 | 2580 | 5 X 19 X 10 | NA | NA | NA | NA | NA |
| 185008.00M | CFDB2-10-2984 | 9.6 | 3387 | 5 X 19 X 10 | NA | NA | NA | NA | NA |
| 185008.00M | CFDB2-10-2984 | 9.6 | 3387 | 5 X 19 X 10 | NA | NA | NA | NA | NA |
| 185009.00M | CFDB2-7-4476 | 6.3 | 5000 | 5 X 26.5 X 13 | NA | NA | NA | NA | NA |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | NA | NA | NA | NA | NA |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | NA | NA | NA | NA | NA |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | NA | NA | NA | NA | NA |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | NA | NA | NA | NA | NA |
| 185013.00M | CFDB2-150-746 | 150 | 843 | 5 X 12 X 10 | NA | NA | NA | NA | NA |
| 185014.00M | CFDB2-75-1492 | 75 | 1815 | 5 X 12 X 16 | NA | NA | NA | NA | NA |
| 185003.00M | CFDB2-50-2238 | 50 | 2560 | 5 X 19 X 13 | NA | NA | NA | NA | NA |
| 185003.00M | CFDB2-50-2238 | 50 | 2560 | 5 X 19 X 13 | NA | NA | NA | NA | NA |
| 185015.00M | CFDB2-25-4476 | 25 | 5120 | 5 X 26.5 X 13 | NA | NA | NA | NA | NA |
| 185016.00M | CFDB2-19-5968 | 19 | 6703 | 5 X 26.5 X 16 | NA | NA | NA | NA | NA |
| 185017.00M | CFDB2-10-11190 | 10 | 12800 | 10 X 28 X 16 | NA | NA | NA | NA | NA |
| 185017.00M | CFDB2-10-11190 | 10 | 12800 | 10 X 28 X 16 | NA | NA | NA | NA | NA |

*See back cover page for attribution.

MARATHON® CONTROLMAX™ DC DRIVES

DC ADJUSTABLE SPEED DRIVES
SCR THYRISTOR & PWM CONTROLS



PWM AND SCR CONTROLS GENERAL SPECIFICATIONS

- General purpose for permanent magnet or shunt wound DC motors
- NEMA®* 4X and 4/12 suitable for washdown applications
- Dual voltage capable on most designs – see HP range
- AC Line Voltage: 115 / 230 VAC, ±10%, 50/60 Hz, 1Ø
- DC 90 volt or 180 volt output
- Adjustable minimum and maximum speed
- Speed pot included on chassis controls
- Adjustable IR compensation
- Heat sinks required as noted
- PWM controls provide quieter operation, lower motor temperature and greater motor overload capacity

REGENERATIVE CONTROLS GENERAL SPECIFICATIONS

- Four quadrant controls for precise motion control
- NEMA 4X or chassis style
- Motoring and braking torque regulation ¼ HP through 2 HP

ENCLOSED SCR

| DESCRIPTION | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | HP RANGE | | WT | FOOT NOTES |
|---|------------------|-------|-------------|----------|----------|----|------------|
| | | | | 115V | 230V | | |
| NEMA 1 General Purpose | | | | | | | |
| — Non-Reversing | 174307.00 | √ | 10 | 1/8 to 1 | 1/4 to 2 | 5 | □ |
| — Reversing with dynamic braking | 174308.00 | √ | 10 | 1/8 to 1 | 1/4 to 2 | 5 | □ |
| — Heat Sink | 174316.00 | √ | — | — | — | 1 | |
| NEMA 4X Washdown – Dust-Tight | | | | | | | |
| — Non-Reversing, Plastic Enclosure | 174102.00 | √ | 10 | 1/8 to 1 | 1/4 to 2 | 6 | |
| — Non-Reversing, Plastic Enclosure with Signal Follower | 174103.00 | √ | 10 | 1/8 to 1 | 1/4 to 2 | 7 | |
| — Reversing, Plastic Enclosure | 174107.00 | √ | 10 | 1/8 to 1 | 1/4 to 2 | 7 | ** |
| NEMA 4 | | | | | | | |
| — Non-Reversing 3HP | 174709.00 | √ | 15 | — | 3 | 8 | |

□ Chassis heat sink (174314.00) is required when the amp draw of the motor exceeds 5 amps.

** Drive does not have dynamic braking. Motor shaft must be at zero speed before reversing.

√: Available 1: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

MARATHON® CONTROLMAX™ DC DRIVES

DC ADJUSTABLE SPEED DRIVES SCR THYRISTOR & PWM CONTROLS

OPEN CHASSIS SCR - HAS FIELD SUPPLY FOR SHUNT WOUND MOTORS.

| DESCRIPTION | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | HP RANGE | | WT | FOOT NOTES |
|--------------------------------------|------------------|-------|-------------|----------|----------|----|------------|
| | | | | 115V | 230V | | |
| Chassis with Speed Pot Non-Reversing | 174311.00 | √ | 10 | 1/8 to 1 | 1/4 to 2 | 1 | □ |
| Chassis Heat Sink | 174314.00 | √ | — | — | — | 1 | |



REGENERATIVE SCR - FOUR QUADRANT - FULL WAVE - REVERSIBLE AND HAS REGENERATIVE BRAKING.

| DESCRIPTION | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | HP RANGE | | WT | FOOT NOTES |
|-----------------------------|------------------|-------|-------------|----------|----------|----|------------|
| | | | | 115V | 230V | | |
| NEMA®* 4X Washdown | 175720.00 | √ | 10 | 1/4 to 1 | 1/2 to 2 | 8 | □ |
| Open Chassis with Speed Pot | 175721.00 | √ | 10 | 1/4 to 1 | 1/2 to 2 | 2 | □ |
| Chassis Heat Sink | 175722.00 | √ | — | — | — | 2 | |



PWM - ENCLOSED

| DESCRIPTION | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | HP RANGE | | WT | FOOT NOTES |
|--------------------------------------|------------------|-------|-------------|-------------|-------------|----|------------|
| | | | | 115V | 230V | | |
| NEMA 1 General Purpose | | | | | | | |
| — SCR Non-Reversing | M1740005.00 | √ | 3 | 1/40 to 1/8 | 1/40 to 1/4 | 5 | |
| — SCR Reversing With Dynamic Braking | M1740006.00 | √ | 3 | 1/40 to 1/8 | 1/40 to 1/4 | 5 | |
| — PWM Non-Reversing | M1740008.00 | √ | 3 | 1/40 to 1/8 | 1/40 to 1/4 | 2 | |



PWM & SCR - OPEN CHASSIS

| DESCRIPTION | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | HP RANGE | | WT | FOOT NOTES |
|---|------------------|-------|-------------|-------------|-------------|----|------------|
| | | | | 115V | 230V | | |
| Open Chassis SCR Type | | | | | | | |
| — Chassis with Speed Pot, Non-Reversing | M1740007.00 | √ | 1.5 | 1/40 to 1/8 | 1/40 to 1/4 | 1 | |
| Open Chassis PWM Type | | | | | | | |
| — Chassis with Speed Pot, Non-Reversing | M1740009.00 | √ | 2 | 1/40 to 1/8 | — | 1 | |



□ Chassis heat sink (174314.00) is required when the amp draw of the motor exceeds 5 amps.

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

MARATHON® CONTROLMAX™ DC DRIVES

DC ADJUSTABLE SPEED DRIVES

SCR - 4 QUADRANT - CHASSIS - REGENERATIVE CONTROLS

FEATURES

- Industry standard footprint - Allows for replacing competitive drives
- Microprocessor-based design - Allows for customer programming
- Fully regenerative - 4-Quadrant allows for quick braking
- Multiple operation modes - speed, torque, cycling and positioning
- 3-Wire / Stopping modes - Inhibit (braking) and Enable (coasting) can be used for frequent starting and stopping



SPECIFICATIONS

- AC Line Voltage: 115 / 230 VAC, ±10%, 50/60 Hz, 1Ø
- Field Voltage with 115 VAC Line (230 VAC Line): 50/100 (100/200) VDC
- Maximum Field Amperage: 0.74 Amps
- Acceleration Time Range: 0.1 - 15 seconds
- Deceleration Time Range: 0.1 - 15 seconds
- Regenerative braking and reversing
- Analog Signal Range: 0 ± 10 VDC, 4 - 20 mA
- Input Impedance (COM to SIG1, SIG2): >100K Ω
- Form Factor: 1.37 at base speed
- Tachogenerator Feedback Range: 0 to 7 - 50 VDC / 1000 RPM
- Load Regulation:
 - Armature Feedback: 1.0% of base speed or better
 - Tach Feedback: 0.1% of base speed or better
- Armature Feedback: 50:1
- Tach Feedback: 60:1
- Ambient Temperature Range: 10°C - 50°C

OPEN CHASSIS

| MODEL / ITEM NO. | STOCK | MAX CURRENT (ADC) | INPUT VOLTAGE (VAC) | OUTPUT VOLTAGE (VDC) | HP RANGE | FIELD/SHUNT SUPPLY (VDC) | WT | BRAKING | REVERSING | ISOLATION | FOOT NOTES |
|------------------|-------|-------------------|---------------------|----------------------|------------|--------------------------|----|---------|-----------|-----------|------------|
| 174062.00 | √ | 1.5 | 115 | 0-90 | 1/50 - 1/8 | YES | 5 | YES | YES | YES | |
| | | | 230 | 0-90 | 1/50 - 1/8 | | | | | | |
| | | | | 0-180 | 1/25 - 1/4 | | | | | | |
| 174064.00 | √ | 11 | 115 | 0-90 | 1/8 - 1 | YES | 5 | YES | YES | YES | □ |
| | | | 230 | 0-90 | 1/8 - 1 | | | | | | |
| | | | | 0-180 | 1/4 - 2 | | | | | | |
| 174314.00 | √ | Chassis Heat Sink | | | | — | 1 | — | — | — | |

□ Chassis heat sink (174314.00) is required when the amp draw of the motor exceeds 5 amps.

√: Available ¶: Stocked components, Ready to build
 *See back cover page for attribution.

Blank: Build Up rating, subject to lead time

MARATHON® CONTROLMAX™ DC DRIVES

DC ADJUSTABLE SPEED DRIVES

LOW VOLTAGE REGENERATIVE 4 QUADRANT CONTROLS

FEATURES

- Industry standard footprint - Allows for replacing competitive drives
- Microprocessor-based design - Allows for customer programming
- Fully regenerative - 4-Quadrant allows for quick braking
- Torque mode - Can be used for speed control or torque control
- Stopping modes - Inhibit (braking) can be used for N.O. or N.C. operation
- Can be used for frequent starting and stopping
- Bidirectional (Wigwag) mode - Can be set so that the potentiometer determines both speed and direction



SPECIFICATIONS

- AC Line Voltage: 115 / 230 VAC, $\pm 10\%$, 50/60 Hz, 1 \emptyset
- Acceleration Time Range: 0.5 - 20 seconds
- Deceleration Time Range: 0.5 - 20 seconds
- Regenerative braking and reversing
- Analog Signal Range: 0 \pm 10 VDC
- Input Impedance (COM to SIG1): >100K Ω
- Form Factor: 1.37 at base speed
- Load Regulation: 1.0% of base speed or better
- Speed Range 50:1
- Ambient Temperature Range: 10°C - 50°C

OPEN CHASSIS

| MODEL / ITEM NO. | STOCK | MAX CURRENT (ADC) | INPUT VOLTAGE (VAC) | OUTPUT VOLTAGE (VDC) | HP RANGE | FIELD/SHUNT SUPPLY (VDC) | WT | BRAKING | REVERSING | ISOLATION | FOOT NOTES |
|------------------|-------|-------------------|---------------------|----------------------|------------|--------------------------|----|---------|-----------|-----------|------------|
| 174065.00 | √ | 1.5 | 115 | 0-90 | 1/50 - 1/8 | NO | 5 | YES | YES | NO | |
| | | | 230 | 0-90 | 1/50 - 1/8 | | | | | | |
| | | | | 0-180 | 1/25 - 1/4 | | | | | | |
| 174066.00 | √ | 11 | 115 | 0-90 | 1/8 - 1 | NO | 5 | YES | YES | NO | □ |
| | | | 230 | 0-90 | 1/8 - 1 | | | | | | |
| | | | | 0-180 | 1/4 - 2 | | | | | | |
| 174314.00 | √ | Chassis Heat Sink | | | | — | 1 | — | — | — | |

□ Chassis heat sink (174314.00) is required when the amp draw of the motor exceeds 5 amps.

MARATHON® CONTROLMAX™ DC DRIVES

DC ADJUSTABLE SPEED DRIVES

LOW VOLTAGE OPEN CHASSIS DC IN & DC OUTPUT CONTROLS

15 SERIES GENERAL SPECIFICATIONS

- 0-90 / 0-180 volts DC
- Adjustable min. and max. speed
- Adjustable IR compensation
- Fixed acceleration - 5 seconds
- 5K ohm speed potentiometer included
- 25:1 speed range and 1% speed regulation



NEMA 4/12
Non-Reversing

174695.00

174694.00

| DESCRIPTION | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | HP RANGE | | WT |
|---|------------------|-------|-------------|----------|------|----|
| | | | | 115V | 230V | |
| NEMA** 4X DC CONTROL. Non-Reversing | 174696.00 | √ | 3 | 1/3 | 2/3 | 1 |
| 15 Series DC DRIVE Vertical Chassis Control | 174695.00 | √ | 2 | 1/6 | 1/6 | 1 |
| 15 Series DC DRIVE Horizontal Chassis Control | 174694.00 | √ | 2 | 1/6 | 1/6 | 1 |

LOW VOLTAGE ADJUSTABLE SPEED CONTROLLERS

GENERAL SPECIFICATIONS

- Chassis type design
- DC input / DC output
- Speed potentiometer shipped loose
- High efficient designs increase battery life

FEATURES

- 40:1 speed range
- Holds speed control as battery discharges
- Adjustable min. and max. speeds
- IR compensation
- 200% current limit overload protection
- Inhibit pins provide optional start-stop
- Power on LED indicator



SCR CONTROLS - ENCLOSED

| INPUT VOLTAGE (VDC) | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | DIMENSIONS (INCHES) | | | WT |
|---------------------|------------------|-------|-------------|---------------------|-------|--------|----|
| | | | | LENGTH | WIDTH | HEIGHT | |
| 12/24 | 175290.00 | √ | 16 | 6.90 | 4.44 | 2.19 | 2 |
| 12/24 | 175291.00 | √ | 60 | 7.78 | 6.90 | 3.25 | 4 |
| 36/48 | 175292.00 | √ | 60 | 7.78 | 6.90 | 3.25 | 4 |

MARATHON® CONTROLMAX™ DC DRIVES

DC ADJUSTABLE SPEED DRIVES

LOW VOLTAGE OPEN CHASSIS DC IN & DC OUTPUT CONTROLS

GENERAL SPECIFICATIONS

- Chassis type design
- DC input / DC output
- Speed potentiometer shipped loose
- High efficiency designs increase battery life

FEATURES

- Accepts switch closure for reversing and braking
- Built-in temperature sensor
- On board trim pots for calibration, speed and forward and reverse settings
- Sleep mode feature
- Built-in short circuit protection
- 1.01 Form factor



FOUR QUADRANT CONTROL - OPEN CHASSIS

| INPUT VOLTAGE (VDC) | MODEL / ITEM NO. | STOCK | OUTPUT AMPS | DIMENSIONS (INCHES) | | | WT |
|---------------------|------------------|-------|-------------|---------------------|-------|--------|----|
| | | | | LENGTH | WIDTH | HEIGHT | |
| 12/24 | 174298.00 | √ | 120 | 6.90 | 5.00 | 2.50 | 3 |
| 36/48 | 174299.00 | √ | 100 | 6.90 | 5.00 | 2.50 | 3 |

DUAL MODE - DUAL SPEED CONTROLLERS

FEATURES

- SCR control is designed to run two DC motors at the same time in either independent mode or slave/master mode
- AC Line Voltage: 115 / 230 VAC, ±10%, 50/60 Hz, 1Ø with jumper
- Selectable 90/180 VDC output
- Jumper selectable speed and torque mode
- Two trim pots each for the minimum speed, maximum speed, IR compensation, current limit and acceleration/deceleration
- Comes standard with two potentiometers



FOUR QUADRANT CONTROL - OPEN CHASSIS

| HP | STOCK | INPUT VOLTAGE | OUTPUT AMPS | OUTPUT VOLTAGE | MODEL / ITEM NO. | WT | FOOT NOTES |
|-------------------|-------|---------------|-------------|----------------|------------------|----|------------|
| 1 HP @ 90 VDC | √ | 115 | 10 | 0-90 | 174422.00 | 3 | □ |
| 2 HP @ 180 VDC | √ | 230 | 10 | 0-180 | | | |
| Chassis Heat Sink | √ | | | | 174314.00 | 1 | |

- Chassis heat sink (174314.00) is required when the amp draw of the motor exceeds 5 amps.

MARATHON® CONTROLMAX™ DC TO AC

AC ADJUSTABLE SPEED DRIVES LOW VOLTAGE AC DRIVE CONTROLS



GENERAL SPECIFICATIONS

The drives, volts/hertz-type AC drives, are as simple to set-up and calibrate as an SCR-type DC drive. Compact chassis design maintains industry standard mounting hole locations.

FEATURES FOR CHASSIS AND ENCLOSED UNITS

- Compact size – (4.30" x 3.70")
- Output voltage on dual voltage models is jumper selectable and has voltage doubler
- Acceleration and deceleration trim pots
- Torque, maximum speed and torque limit trim pots
- Torque 'foldback' feature – Allows up to 200% torque for short periods
- 16kHz switching frequency, with option to change between 4 and 16kHz
- Adjustable torque boost for startup – Up to 200%
- Color-coded on-board LEDs for power, fault and torque limit
- Easy start/stop and direction control with enable and direction terminal connections
- Accepts speed reference from 0-5VDC isolated signal
- Speed potentiometer shipped loose
- Plug-in Process Control Module (PCM) kit available to accept 0-5 VDC, 0-10 VDC or 4-20mA input

SPECIAL FEATURES OF THE NEMA® 4X DRIVE:

- NEMA®* 4X enclosure
- Jumper selectable DC injection braking or coast to stop
- Brake time and current are adjustable
- Built-in isolation card to accept a speed reference signal
- Min speed adjustment
- Auto or manual restart after power loss

| PARAMETER | SPECIFICATIONS FOR ALL CONTROLMAX MODELS | FOOT NOTES |
|---------------------------------------|---|------------|
| Max load | 150% for 5 minutes | |
| Output frequency | 0-120Hz | |
| Output type | 6 step PWM | |
| Switching frequency | 4-16kHz range with 16kHz as factory default | * |
| Speed regulation and range | ±3% of base speed; up to 50:1 | |
| On-board adjustable trim pots | Max speed, accel, decel, boost & torque limit | |
| Adjustable maximum frequency range | 32-120Hz | |
| Adjustable accel and decel time range | 1-12 seconds | |
| Torque boost range | 0-200% | |
| LED indicators | Power (green), Fault (red), Torque Limit (yellow) | ‡ |
| Instantaneous over-current trip time | 3 µsec | |
| Analog reference input and impedance | 0-5VDC isolated, ~100Kohm | |
| Plug-in PCM isolator card input | 0-5 VDC, 0-10VDC, 4-20mA | |
| Ambient temperature range | 0-40°C | |
| Weight (Chassis Models) | 1.2 lbs. | |
| Vibration (>50Hz) | 0.5G max (20-50Hz); 0.1G max | |
| Approvals | UL®*, cUL®* | |

* Plug-in capacitor kit (175325.00) for field adjustments to less than 16khz

‡ Faults are Over-Voltage, Under-Voltage and Instantaneous Over Current Trip Specifications are subject to change without notice.

*See back cover page for attribution.

MARATHON CONTROLMAX™ DC TO AC

AC ADJUSTABLE SPEED DRIVES

LOW VOLTAGE AC DRIVE CONTROLS

SINGLE-PHASE INPUT / SINGLE OR THREE-PHASE OUTPUT

| HP | INPUT VOLTAGE 1Ø | OUTPUT AMPS | OUTPUT VOLTAGE 1 OR 3Ø | MODEL / ITEM NO. | STOCK | WT |
|-----|---------------------|-------------|---------------------------|------------------|-------|----|
| 1/4 | 115 | 2.4 | 115 | 175320.00 | √ | 3 |
| 1/2 | 230 | 2.4 | 230 | 175321.00 | √ | 3 |
| 1/2 | 115/230 | 2.4 | 230 | 175310.00 | √ | 3 |
| 1/2 | 115 | 4.0 | 115 | 175322.00 | √ | 4 |
| 1 | 230 | 4.0 | 230 | 175323.00 | √ | 4 |
| 1 | 115/230 | 4.0 | 230 | 175311.00 | √ | 4 |



CONTROLMAX AC DRIVES - ACCESSORIES

| HP | MODEL / ITEM NO. | STOCK | WT | FOOT NOTES |
|------------------------------------|------------------|-------|----|------------|
| Process Control Module (PCM) Kit * | 175324.00 | √ | 2 | * |
| Carrier Frequency Capacitor Kit | 175325.00 | √ | 1 | |



* PCM Kit is for use with chassis drives only.



SPECIALS ARE OUR **SPECIALTY**

CUSTOM MOTORS

Marathon® is a leading designer and manufacturer of application-specific AC and DC motors on integral horsepower sizes. We offer a database of over 5,000 custom designs, experienced application and design engineering teams, to ensure the best, most cost-effective custom motor solution.

CUSTOM MULTI-SPEED & LOW-SPEED MOTORS

Marathon® utilizes specially designed and standard components to make almost any imaginable NEMA® frame. We pride ourselves on fast turnaround times on highly customized motors.

marathon®



MARATHON ELECTRIC CANADA-HANOVER FACILITY

Whether you need a modified stock motor or custom motor built to your specifications, WE CAN HELP!

LEVEL OF SERVICE

Speed of Response

Friendly and knowledgeable on-site staff available to offer quick assistance and provide quotes.

Speed of Delivery

Average lead time is approximately 2 weeks with standard parts; we also offer 3-5 day expedited option. Please confirm with factory.. One of the fastest in the custom-built market.

Quality

High quality materials used and extensive on-site testing conducted (Winding Resistance, Hipot & Surge), to build long lasting motors.

Technical Support

On-site staff available to handle unique requirements and find the right custom solution for your application.

Canada Built Option

One of a kind facility offering "Made in Canada" option for motors.



MARATHON PLATFORMS OFFERED

- Globetrotter® Motors
- Blue Chip Series® Motors
- IEEE841 Motors
- Marathon Pump Motors
- TerraMAX® IEC®* Motors
- Powerwash™ Motors
- Black Max® Motors
- Blue Max® Motors
- Severe Duty Motors
- Fire Pump Motors
- XRI® Motors
- And much more...

*The following trademarks are not owned or under the control of WEG S.A. or any of its affiliates: IEC is a trademark of International Electrotechnical Commission.

CUSTOM SOLUTIONS WHEN YOU NEED THEM...



Steel Mill Roller



Custom Brakemotor



**Stainless Steel
Brakemotor**



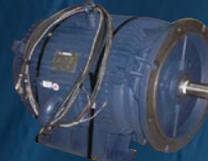
**Internal Threaded Shaft
Severe Duty**



**Public Transit Special
Frame**



Pulp Dryer



**1000V Mine
Transportation Motor**



**Double Shaft with D Flange
& 10' Leads**



**Custom Flange
Mounting**



NEMA®* to IEC®*



Custom Fabrication



**Winding/Bearing RTD's
w/ Aux. Thermostat Box**

CAPABILITIES

Custom Winding

- Hand wound motors
- Industrial models 180T to 215T NEMA frame rolled steel
- Industrial Models Up to 449T NEMA frame cast iron
- Industrial Models Up to 350 HP, 3 phase AC (TEFC/ODP)
- Single and multi-speed designs
- Constant torque and variable torque designs
- Low speed offering in 8, 10 & 12 pole
- Custom voltage designs

Stock Modification

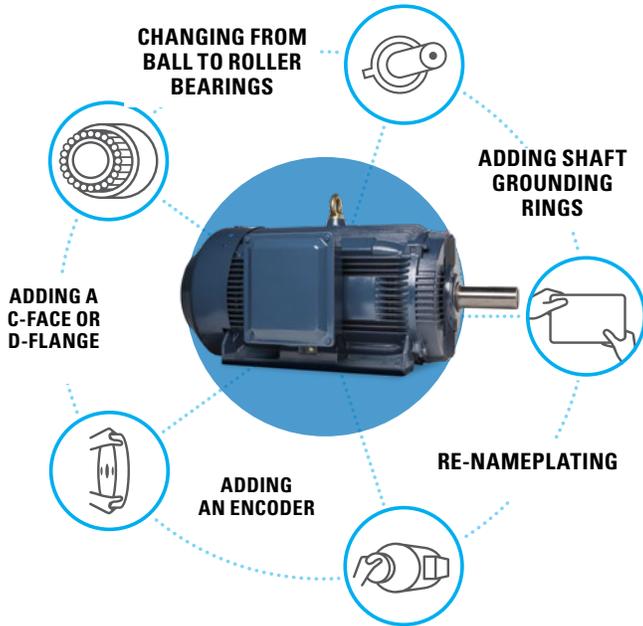
- Industrial models 180T to 449T NEMA frame sizes
- IEC motor modifications
- Severe duty modifications
- Shaft modifications
- Bearing upgrades
- Flanges
- Brakes
- Encoders
- Space heaters
- Thermostats and PTC thermistors
- And much more...

Contact us for more information on our offerings. See back page for our contact details.

*The following trademarks are not owned or under the control of WEG S.A. or any of its Affiliates: IEC is a trademark of International Electrotechnical Commission; NEMA is a trademark or tradename of National Electrical Manufacturers Association.

MODIFICATIONS AT THE WAREHOUSE ENSURE CUSTOM SOLUTIONS FASTER.

There is no one size motor that fits all applications. That's why we've expanded our modifications offering on most models. Some modifications can be made and shipped same day while others take a day or two, but the line-ready motor solution you need will be ready to work.



HOW TO ORDER

First determine whether you need a kit to perform the modification, if you do not need a kit, then refer to the price supplement which includes all supplies needed to perform that modification. If a kit is needed, refer to the price supplement to see what the cost of labor is to install the kit. The kit list price and the motor list price are not included. You must add the net price of the motor and kit to the net price of the modification(s) to calculate the total price of the modified motor.

For example, to add a C-Face kit and thermostats to catalog motor E473A, you would calculate the total price as follows:

| | LIST PRICE (USD) | MULT. SYMBOL |
|---|--------------------|--------------|
| B176240.00 (A420) | current list price | MOD |
| Modification MOD2J, add C-Face to 182T-184T frame motor | current list price | MOD |
| Modification MOD14E, add thermostats to 182T-184T frame motor | current list price | MOD |
| TOTAL | TOTAL | |

Note: Ask your sales representative for a price supplement.

Take the sum of the kit and modification list prices times your Mod Center multiplier of MOD to find the total net price for the modification. Add your net price of E473A to the net adder for the kit and modifications to get the total modification price.

MOD CENTRAL

Marathon® offers the capability to modify stock motors in a matter of days to meet our customer's special needs. MOD CENTRAL is centrally located in Marathon Electric distribution center in Plainfield, Indiana. This state-of-the-art facility stocks a vast array of motors and accessories along with a staff of skilled technicians who provide the highest quality of service. If you need motor modifications on 20 motors or less and want to avoid special engineering and manufacturing schedules, call your local sales representative and take advantage of our MOD CENTRAL Motor Modification Program.

LEAD-TIME

All lead-times indicated are subject to availability of the stock motors and parts at the time of order placement. If a stock motor is shipped from a remote warehouse to Indianapolis for modification, the cost of the inbound freight will be added to the price of the modified motor and the delivery of the modified motor will be extended by the inbound transit time. (Lead-times in working days are calculated from normal business hours excluding holidays and weekends and do not include the day the purchase order is received.) Large quantities may require additional lead-time.

MOD CENTRAL HOURS

The Modification Center is open from 7:00 a.m. to 5:00 p.m. CST Monday through Friday.

FREIGHT TERMS

Standard terms and conditions apply.

EXCEPTIONS

Some modifications do not apply to explosion proof motors.

DISCOUNT MULTIPLIER

Discount symbol MOD applies to all list prices, except where noted.

CANCELLATION POLICY

If a Mod Central order is cancelled after the motor is modified but before it ships, a cancellation charge of double the modification charge will be invoiced to the customer. Any Mod Central order cancelled before modifications are completed is subject to a cancellation charge of 25% of the total modification charges for that item.

ONCE SHIPPED, MODIFIED MOTORS MAY NOT BE RETURNED FOR CREDIT OR RESTOCKING

The warranty terms and conditions of sale is available through our websites, please see backcover page for the full link, Please contact the nearest Marathon regional office or applicable Seller product catalog or seller for more information regarding duration of warranty period.

MOD CENTRAL - MOTOR MODIFICATIONS

| MODIFICATION DESCRIPTION | REQUIRES KIT | MODIFICATION | PRODUCT | FRAME | LEAD-TIME** |
|---|--------------|--------------|-----------------|-------------|-------------|
| Altitude/Ambient | | | | | |
| AC motor altitude or ambient re-rating | | MOD7 | All Non-EXP | 182T-449T | 2 |
| AC motor altitude or ambient re-rating | | MOD7 | Explosion Proof | 182T-449T | 2 |
| Assembly (see Mounting) | | | | | |
| Bearings | | | | | |
| Convert ball to roller (drive end) | Yes | MOD18 | DP | 284T-449T | 3 |
| Convert ball to roller (drive end) | Yes | MOD18 | TEFC | 213T-449T | 3 |
| Convert roller to ball (drive end) | Yes | MOD18 | DP | 404T-449T | 3 |
| Convert roller to ball (drive end) | Yes | MOD18 | TEFC | 324T-449T | 2 |
| Inpro Seal (drive end) | | MOD34 | TEFC | 254T-449T | Call |
| Sealed bearing | | MOD18 | All Non-EXP | 182T-449T | Call |
| Insulated bearing(s) | | MOD18 | Non Div 1 or 2 | 182T-449T | Call |
| Blowers | | | | | |
| Axial blower | Yes | MOD19 | TEFC | 213T-449T | 3 |
| Brackets | | | | | |
| C-Face non-explosion proof | Yes | MOD2 | All Non-EXP | 182T-449T | 2 |
| C-Face explosion proof | Yes | MOD2 | Explosion Proof | 254T-449T | Call |
| C-Face IEEE 841 | Yes | MOD2 | All Non-EXP | 182T-449T | 2 |
| D-Flange | Yes | MOD17 | All Non-EXP | 182T-449T | 2 |
| D-Flange IEEE 841 | Yes | MOD17 | All Non-EXP | 324T-449T | 2 |
| B14 FT flange (IEC C-face) | Yes | MOD55 | IEC | 112-160 | 2 |
| B5 FF flange (IEC D-flange) | Yes | MOD55 | IEC | 112-315 | 2 |
| Brake Motors | | | | | |
| Brake motors-Three-phase | Yes | MOD3 | TEFC | 182TC-145TC | 3 |
| Brake motors-inverter duty | Yes | MOD3 | TENV | 182TC-326TC | 3 |
| Electrical modifications-brake coil | | MOD3 | Brake Motors | 182TC-256TC | 10 |
| Vertical brake mounting (shaft up or shaft down) | Yes | MOD3 | All brakes | 213T-256T | 3 |
| Conduit Box | | | | | |
| Rotate conduit box lead opening | | MOD56 | All Non-EXP | 182T-449T | 2 |
| Convert to cast iron | Yes | MOD56 | All Non-EXP | 182T-326T | 2 |
| Conduit box gasket upgrade | | MOD56 | All Non-EXP | 182T-449T | |
| Auxiliary box (condulet) | Yes | MOD56 | All Non-EXP | 182T-449T | Call |
| Drains | | | | | |
| Condensation drain holes | | MOD21 | All | 182T-449T | 2 |
| Brass drain & breather | | MOD21 | All Non-EXP | 182T-449T | 2 |
| Stainless steel drain & breather | | MOD21 | All Non-EXP | 182T-449T | 2 |
| Drip Covers | | | | | |
| Canopy cover | Yes | MOD4 | ODP,TEFC | 182T-449T | 2 |
| Encoders | | | | | |
| Avtron®* AV56 - Black Max® motor / Blue Max® motor | Yes | MOD22 | TENV,TEFC | 182T-449T | 2 |
| Avtron HS25A & HS35A | Yes | MOD22 | TENV, TEBC | 182T-449T | 2 |
| Avtron M56/M85 - Black Max motor / Blue Max brake motors | Yes | MOD24 | TENV | 182T-256T | 2 |
| Northstar®* SL56 - Black Max motor / Blue Max motor | Yes | MOD22 | TENV,TEFC | 182T-449T | 2 |
| Northstar SL56/SL85 - Blue Max brake motors | Yes | MOD24 | TENV | 182T-256T | 2 |
| Dynapar®* HS20, HS35R, & HSD38 - Black Max motor / Blue Max motor | Yes | MOD22 | TENV,TEFC,TEBC | 182T-449T | 2 |
| BEI®* HS35 - Black Max motor / Blue Max motor | Yes | MOD31 | TENV,TEFC,TEBC | 182T-449T | 2 |
| Stub shaft (XRI®-SD & XRI-841,TEFC motors only) | Yes | MOD42 | TEFC | 182T-449T | 2 |
| Fan & Fan Guard | | | | | |
| Oversized fan (see Inverter Duty modification) | | MOD43 | TEFC | 213T-449T | 2 |
| Fan removal | | MOD44 | All Non-Exp | 182T-449T | 2 |
| Poly fan guard | Yes | MOD44 | All Non-Exp | 182T-449T | 2 |
| Fan cover | | MOD44 | All Non-Exp | 182T-449T | 2 |
| Vane axial | | MOD43 | All Non-Exp | 182T-449T | 4 |
| Frequency | | | | | |
| Frequency re-rate 60 Hz to 50 Hz | | MOD7 | All | 182-449T | 1 |
| Grease/Fittings | | | | | |
| Grease relief fittings | | MOD15 | All Non-Exp | 182T-449T | 2 |
| Zerk fittings (cast iron motors) | | MOD15 | All Non-Exp | 182T-449T | 2 |
| Low temperature grease | | MOD15 | All | 182-449T | 2 |
| High temperature grease | | MOD15 | All | 182-449T | 2 |

**Lead-time days does not include the day order is received.

MOD CENTRAL - MOTOR MODIFICATIONS

| MODIFICATION DESCRIPTION | REQUIRES KIT | MODIFICATION | PRODUCT | FRAME | LEAD-TIME** |
|--|--------------|--------------|-----------------|-------------|-------------|
| Grounding | | | | | |
| Conduit box grounding lug | | MOD20 | All | 182T-215T | 2 |
| On-frame grounding (cast iron motors) | | MOD20 | All | 182T-449T | 2 |
| Shaft grounding ring | Yes | MOD20 | Call | 182T-449T | 2 |
| Inverter Duty Motors | | | | | |
| Variable torque with thermostats (R140) | | MOD25 | All | 182T-449T | 2 |
| Constant torque with thermostats (R142) | | MOD26 | All | 182T-449T | 2 |
| Constant torque (R164, Oversized Fan) | | MOD43 | All | 182T-449T | 2 |
| Leads | | | | | |
| Reconnect leads | | MOD9 | All Non-Exp | 182T-449T | 1 |
| Reconnect leads Explosion proof | | MOD40 | Explosion Proof | 182T-449T | 1 |
| Terminal lugs | | MOD0 | All | 182T-326T | 2 |
| Terminal block | | MOD57 | All Non-Exp | 182T-449T | 2 |
| Remark leads | | MOD33 | All | 182T-449T | 2 |
| Longer leads - up to 24" | | MOD33 | All Non-Exp | 182T-449T | 2 |
| Mounting/Assembly (Example: F1 to F2) | | | | | |
| Convert to floor, top, ceiling, or wall | | MOD1 | All Non-Exp | 182T-449T | 2 |
| Convert to floor, top, ceiling, or wall | | MOD39 | Explosion Proof | 182T-449T | 2 |
| Adjustable bases | Yes | MOD39 | All | 182T-449T | 2 |
| Transition bases | Yes | MOD39 | All | 182T-449T | 2 |
| Add Stamped Steel Base | | MOD32 | All Non-Exp | 182T-215T | 2 |
| Nameplates/Markings | | | | | |
| Additional data on nameplate | | MOD7 | All | 182T-449T | 1 |
| CE** Marking | | MOD7 | All | 182T-326T | 2 |
| Private Label | | MOD7 | All | 182T-449T | 1 |
| Rotation arrow | | MOD7 | Single-phase | 182T-326T | 1 |
| Separate nameplate for customer data | | MOD7 | All | 182T-449T | 2 |
| Stainless steel nameplate | | MOD7 | All | 182T-449T | 1 |
| Packaging | | | | | |
| Heat treated pallet | | MOD29 | All | 182T-449T | 3 |
| Heat treated pallet (IEC) | | MOD29 | All | 112-315 | 3 |
| Paint | | | | | |
| Repaint to a Marathon® motor stock color | | MOD8 | All | 182T-449T | 2-3 |
| Screens | | | | | |
| Rodent screens | | MOD0 | ODP | 364T-449T | Call |
| Service Factor | | | | | |
| AC motor service factor re-rating | | MOD7 | All Non-EXP | 182T-449T | 1 |
| Severe Duty Construction | | | | | |
| Cast iron fan cover and conduit box | | MOD16 | All Non-EXP | 182T-449T | 2 |
| Shaft Grounding Ring (see Grounding) | | | | | |
| Shaft Modifications | | | | | |
| Drill & tap hole | | MOD42 | All | 182T-449T | 3 |
| TS shaft | | MOD42 | All | 284T-449T | 3 |
| Mill flat on shaft | | MOD0 | All | 182T-184T | 3 |
| Steps on shaft | | MOD0 | All | 182T-449T | Call |
| Remove non-reverse ratchet (VHS) | | MOD75 | All | 213TP-449TP | 2 |
| Space Heaters | | | | | |
| Non explosion proof | | MOD12 | All Non-EXP | 182T-449T | 2 |
| Explosion proof | | MOD41 | Explosion Proof | 182T-449T | 1 |
| IEC** frames | | MOD12 | IEC | 112-250 | 2 |
| Terminal Blocks | | | | | |
| Terminal block | | MOD0 | All Non-EXP | 180-449T | Call |
| Thermal Protection | | | | | |
| Thermostats-windings | | MOD14 | All | 182T-449T | 2 |
| Thermostats-windings (IEC) | | MOD14 | All | 112-315 | 2 |
| Thermistors-windings | | MOD14 | All | 182T-449T | 2 |
| Thermistors-windings (IEC) | | MOD14 | All | 112-315 | 2 |
| Thermistors (including control module) | | MOD14 | All Non-EXP | 182T-449T | 2 |
| Thermistors (including control module) (IEC) | | MOD14 | All | 112-315 | 2 |
| Thermocouples - winding or bearing | | MOD0 | All Non-EXP | 182T-449T | 2 |
| RTD's - winding | | MOD14 | All | 182T-449T | 3 |
| Tests | | | | | |
| PPa-P-Level 1 | | MOD90A | All | 182T-449T | 2 |
| Weatherproofing/Special Service | | | | | |
| Tropical anti-fungus treatment | | MOD5 | All | 182T-449T | 2 |
| Division 2 motors (CSA certified) | | MOD49 | Blue Chip®/XRI® | 182T-449T | Call |

**Lead-time days does not include the day order is received.

MOD CENTRAL - MOTOR MODIFICATIONS

ALTITUDE / AMBIENT - MOD7

The rating of standard motors assumes operation at sea level. Listed motors are suitable for operation at altitudes up to 3,300 feet in a maximum ambient temperature of 40°C. The ambient temperature is the temperature of the cooling medium surrounding the motor. All standard motors are suitable for operation over the range of -15°C to 40°C ambient per NEMA** MG-1.

AC MOTOR ALTITUDE OR AMBIENT RE-RATING

Re-Rating of a non-explosion proof motor can be done by evaluating the performance data and possibly changing the service factor. Contact your local sales representative for motor capabilities prior to motor selection and modification.

BEARINGS - MOD18

Most standard motors use anti-friction deep groove Conrad type ball bearing, sized for the loads to be expected in industrial applications. Roller bearings are used on the drive end to handle heavy or overhung (radial) shaft loads.

BALL TO ROLLER BEARING

Roller bearings have the capability to handle higher radial loads than ball bearings, but must have minimum radial loads to operate correctly. They are not suitable for direct-coupled loads. (Marathon recommends that belting data is reviewed by Engineering prior to any motor to roller bearing.) This option includes replacing only the standard drive end bearing with a roller bearing and locking the opposite bearing axially. Available only on TEFC Blue Chip Series® and Blue Chip Series XRI® motors. Lead-time is 3 days.

ROLLER TO BALL BEARING

Larger horsepower motors are stocked standard with a roller bearing on the drive end. For direct-coupled applications, a ball bearing must be installed on the drive end. Lead-time is 2 days.

SEALED BEARING

This modification provides the option of replacing the standard bearings in the AC motors with sealed bearings and replacing the grease fitting with plugs. May not be suitable for belted applications. 250-449 frame, 3600RPM, no sealed bearing option. 250-445, 1800RPM and below, non contact sealed only. 48-215, All RPM's are available for sealed bearings. Consult your sales representative for full application details. Call for lead-time.

INSULATED BEARING

Insulated bearings are used to reduce the transmission of shaft currents. In accordance with NEMA MG1-31.4.4.3, both bearings must be insulated to protect inverter driven motors from inverter-sourced shaft voltages. The connected load must also be insulated from the motor shaft to prevent damage to it's bearings. Per UL, insulated bearings may not be installed in Division 1 or Division 2 hazardous locations. Division 2 will be removed from XRI-Severe Duty and IEEE 841 motors when this modification is performed. Call for lead-time.

BLOWERS - MOD19

Low rotational speeds, common in many vector drive applications, cause additional heat within the motor. As a result, these motors are designed as TENV or TEBC. The Marathon® brand is available with two types of blower units, depending upon the application requirements. The axial blower is available on XRI® and XRI-Severe Duty motors.

AXIAL BLOWER

Most TEBC requirements are satisfied with a Marathon® axial blower. The blower motor and fan are in the same (horizontal) plane as the motor drive shaft. Lead-time is 3 days.

C-FACE BRACKETS - MOD2

The addition of a C-Face kit to a standard foot mount (rigid base) motor, results in a non-NEMA "BA" dimension in 182-256 Frames due to NEMA's establishment of two distinct "BA" dimensions for each of the affected frame sizes: one for the rigid base motors and another for C-Face/Rigid base motors. No motor manufacturer can meet both prescribed dimensions on reworked motors. The following table identifies the "BA" dimensions (defined as the distance from the center of the front hole to the shaft shoulder) for 182T-256T and TC frames:

| NEMA FRAME | FOOT MOUNT* | C-FACE |
|------------|-------------|--------|
| 182T-184T | 2.75" | 3.50" |
| 213T-215T | 3.50" | 4.25" |
| 254T-256T | 4.25" | 4.75" |

D-FLANGE BRACKETS - MOD17

Add a D-Flange Kit to rigid base, cast iron motor. Available on Blue Chip Series motor 254T-365T and Dripproof 284T-286T ("TTDP" and "TTDC" designs. Addition of D-Flange Kit results in non-NEMA "BA" dimension of 254T-256T. Lead-time is 2 days.

IEC BRACKETS - MOD55

B14 FT FLANGE (IEC C-Face)

IEC mounting arrangement with the motor flange at the drive end similar to a NEMA C-Face motor. Modification includes motor disassembly and installation of a FT Flange to a Globetrotter® motor. Lead-time is 2 days.

B5 FF FLANGE (IEC D-Flange)

IEC** mounting arrangement with the motor flange at the drive end similar to a D-Flange. Modification includes motor disassembly and installation of a FF Flange to Globetrotter® motor. Lead-time is 2 days.

BRAKE MOTORS - MOD3

Spring-set, electrically released mechanical disc brakes are available for stopping and/or holding the load. The Marathon® motor brakes are suitable for any angle mounting. Price of modification includes brake kit and installation.

** For normal (140%) torque rating, do not apply on motors larger than 2HP. Reduced braking torque and/or longer stopping times can result from applying an undersized brake on higher HP motors.

BRAKE ADDITION - TEFC

This modification includes the addition of a 3, 6 or 10 Lb-Ft brake to single or Three-phase, TEFC motors. Operating voltages are 115/208-230, motors. Operating voltages are 115/208-230, 208-230/460, and 575 volts. Lead-time is 3 days.

BRAKE ADDITION - INVERTER DUTY

This modification includes the addition of a 6 or 10 Lb-Ft brake to Black Max® or Blue Max® Vector Duty motors. Operating voltages are 115/208-230, 208-230/460 or 575 volts. Lead-time is 3 days.

BRAKE COIL VOLTAGE (Stearns® brakes only)

Brake coil changes allow for operation of brakes at various voltages on 50 or 60 Hertz AC power supplies. Available coil voltages at 50 HZ are 110, 220, 415 and 110/220 volts. Coil voltages at 60 Hz are 115, 200, 575, and 200/400 volts. Coil voltages at 60/50 HZ are 230/190, 460/380 and 208-230/460-190/380 volts. External brake coil lead connections will be brought out from the brake. Specify brake lead location, brake coil voltage and supply frequency at time of order. Lead-time is 10 days.

*See back cover page for attribution.

MOD CENTRAL - MOTOR MODIFICATIONS

| MOD NUMBER | BRAKE RATING | BRAKE SERIES |
|------------|--------------|--------------|
| 182T-213T | 3 Ft/Lb | 56,000 |
| | 6 Ft/Lb | |
| | 10 Ft/Lb | |
| | 15 Ft/Lb | |
| 254T-256T | 25 Ft/Lb | 87,000 |
| | 35 Ft/Lb | |
| | 50 Ft/Lb | |
| | 75 Ft/Lb | |
| | 105 Ft/Lb | |

VERTICAL MODIFICATION KIT (Stearns 87,000 brake series)

Includes required hardware to accommodate vertical above (shaft down) or vertical below (shaft up) mounting.

CONDUIT BOX - MOD56

Standard conduit box construction is based on the individual product description, e.g. severe duty motors always have a cast iron conduit box, while some standard duty motors come with stamped steel and others cast iron. Conduit boxes meet or exceed NEC 430.12 requirements for volume. Termination of protective or monitoring devices can be provided in a separate auxiliary conduit box or conduit. Auxiliary conduit boxes are not available on explosion proof motors.

ROTATE CONDUIT BOX LEAD OPENING

Standard motors have lead opening facing down toward motor base. Modifications include rotating the conduit box so the lead opening is facing the desired direction. Specify lead opening location facing conduit box. Available on non-explosion proof motors. Lead-time is 2 days.

CONVERT TO CAST IRON

Replacement of steel conduit box with a cast iron conduit box. This modification is available on non-explosion proof cast iron motors as Marathon's explosion proof integral stock motors come standard with a cast iron conduit box. Lead-time is 2 days.

AUXILIARY BOX (Condulet)

A condulet can be added to the main motor conduit box for routing of accessory leads. Available on ODP and TEFC (non-explosion proof motors). Call for lead-time.

CONNECTIONS - MOD0

Motor connections consist of special cords, plugs, and switches added to a Single-phase motor.

DRAINS - MOD21

Standard duty motors include a weep hole as standard, while severe duty and explosion proof motors include a brass drain/ breather as standard. These are located in the drive end bracket at the lowest point.

CONDENSATION DRAIN HOLES

Additional drilled holes will be made in both end brackets of TEFC motors. Not available on explosion proof motors. Lead-time is 2 days.

BRASS DRAIN & BREATHER

Combination self-draining and breather plugs are available on TEFC motors. Not available on explosion proof motors. Lead-time is 2 days.

STAINLESS STEEL DRAIN & BREATHER

Combination self-draining and breather plugs are available on TEFC motors. Not available on explosion proof motors. Lead-time is 2 days.

DRIP COVERS - MOD4 (Mult. Symbol S4)

Drip covers can be furnished on standard motors for extra protection from dripping liquids and falling objects when the motor is mounted in the vertical shaft down position. These covers are recommended on all open

dripproof and totally enclosed motors for vertical shaft down operation. These covers have no vertical lifting provisions provided.

CANOPY COVER - MOD4 (OPD and TEFC Motors)

Modification includes installation of a sheet metal drip cover to the motor for vertical shaft down mounting. Available on rolled steel Dripproof motors through 256T frame and select TEFC motors. Lead-time is 2 days.

ENCODERS - MOD22, AND MOD24

These electrical devices sense rotor speed and direction providing feedback to a control device. An encoder is a feedback device that translates mechanical motion into electrical signal. A cable is connected from the encoder to the variable frequency drive to provide this feedback. Various mechanical provisions on the motor are required to attach the encoder. These may C-Face on the non-drive end of the motor and special shaft extension. Various resolutions are available. All encoders offered have quadrature signal with line driver output.

Encoders can be mounted on Black Max® and Blue Max® 2000 Vector Duty motors, TENV 182 through 286T Frame, TEFC construction in 284T through 449T Frame.

STUB SHAFT - MOD42

Add Stub Shaft to Fan Cooled XRI®-SD, XRI-841 motors (182-449 Frames) to accommodate addition of encoder on opposite drive end of motor. Lead-time is 2 days.

FAN - MOD43, AND MOD44

The Marathon® XRI® Severe Duty and IEEE841 motors have non-sparking fans made with, high-temperature, reinforced corrosion resistant plastic that is impervious to chemical attack and has been specially designed for motor applications. All motors utilize bi-directional cooling fans.

OVERSIZED FAN (Inverter Duty) - See MOD43 Inverter Duty

FAN REMOVAL - MOD44

TEFC to TEAO. Convert a motor from totally enclosed, fan cooled construction to totally enclosed, air-over by removing fan cover, fan, and cutting off the fan end shaft. The modified motor must be mounted in the air stream of the driven fan for cooling purposes. The customer is responsible for providing adequate airflow over the motor. Lead-time is 2 days.

VANE AXIAL FAN - MOD43

The modification can be done on rigid or C-Face mount, TEFC, TENV, EPFC, EPNV, or DP enclosures. Motors will be modified for Vane Axial fan applications. All motors will get an additional nameplate and 42" extended leads. TEFC models will have the fan and fan guard removed and enclosure changed to TEAO. A minimum airstream velocity of 3000' per minute is required. Lead-time is 4 days.

FREQUENCY - MOD7

Most motors commonly operate on 60 hertz (HZ) within North America. However, 50 hertz systems are common in other countries.

FREQUENCY RE-RATE 60 HZ TO 50 HZ

Marathon® standard motors rated at 60 HZ may be operated at 50 HZ at reduced voltage and horsepower or service factor. A label containing specific re-rating information will be attached to the motor. Frame size is subject to change. Lead-time is 1 day.

GREASE/FITTINGS - MOD15

Standard grease is Exxon® Polyrex® EM with a bearing operating temperature range of -30° to +150°C for ball and roller bearings. Devices for installing grease into the motors, such as zerk fittings, are available.

GREASE RELIEF FITTINGS - MOD15

Install standard grease relief fitting on motor. Grease relief fittings serve

*See back cover page for attribution.

MOD CENTRAL - MOTOR MODIFICATIONS

as an outlet to equalize pressure in the motor. Not available on explosion proof motors. Lead-time is 2 days.

ZERK FITTINGS (Cast Iron Motors) - MOD15

Replace standard grease plugs on motors with zerk XRI® Severe Duty and IEEE841 motors come with zerk fittings as standard equipment. Not available on explosion proof motors. Lead-time is 2 days.

LOW TEMPERATURE GREASE WITH SEALED BEARING(S)- MOD15

Bearing grease may be changed to allow for a lower operation range. The motor bearings and end bells are purged and repacked with beacon 325 grease or equivalent with a temperature range of -60°C to +120°C. Call for lead-time.

HIGH TEMPERATURE GREASE WITH SEALED BEARING(S)- MOD15

Bearing grease may be changed to allow for a higher operating range. The motor bearings and end bells are purged and repacked with Dow Corning® DC44M grease or equivalent with a temperature range of -40° to +204°C. Call for lead-time.

GROUNDING - MOD20

All motors 48 to 449T Frame have grounding provisions per NEMA® and NEC Standards. Explosion proof motors are permitted to have a frame ground, but electrical ground in conduit box must also be connected.

CONDUIT BOX GROUNDING LUG

Add clamp-type grounding lug in the conduit box. Lead-time is 2 days.

ON-FRAME GROUNDING (Cast Iron Motors)

Addition of drilled and tapped hole on conduit box side of frame with installation of ground lug. Available on non-explosion proof cast iron ratings only. Lead time is 2 days.

BEARING CURRENT PROTECTION - BCP

BCP is a shaft current mitigation system utilizing shaft ground rings for MODS. They are recommended (NEMA®* MG1 31.4.4.3) as an effective means of bearing protection for motors operated from inverter power. One ring is adequate to bleed down inverter-sourced shaft voltages, thereby protecting both bearings for motors as large as 5011 frame.

BCP may not be installed on motors used in Division 1 or Division 2 hazardous locations or motors with a modified shaft. Does not fit all motor types. Lead-time is 2 days.

INVERTER DUTY - MOD25, MOD26, AND MOD43

“Inverter Duty” describes a class of motors that are capable of operation from a variable frequency drive. Many general purpose motors are suitable for most variable torque and some limited constant torque applications.

These motors do not have provisions for mounting encoders, but are suitable for use with volts/hertz or open loop vector controls. As required under USA Federal law, these motors comply with EPAAct efficiencies when operating from utility power. Lead-time is 2 days.

INV. DUTY (LEADTIME 2 DAYS)

| MOD # | APPL. | MTR. TYPE | MOD |
|-------|-----------------|---------------------|--|
| 25 | Variable Torque | Any | Add Thermostats, re-nameplate |
| 26 | 10:1 CT | EPAAct TEFC NEMA | Oversized fan, Add Thermostats, re-nameplate |
| | 20:1 CT | NEMA Premium®* TEFC | |
| 43 | 10:1 CT | EPAAct TEFC NEMA | Oversized fan, re-nameplate |
| | 20:1 CT | NEMA Premium®* TEFC | |

Operation of motor on VFD exempts motor from EPAAct mandated efficiency levels.

LEADS - MOD9, MOD24, AND MOD33

All motors are provided with standard leads of ample length for easy connection in the conduit box to the power leads. Lead size and material are dependent upon the class of insulation system in the motor and the current capacity required.

RECONNECTION - MOD9

Reconnect dual voltage 9-lead or 12-lead motors to a 3-lead single voltage. Connection is made inside the motor frame. Specify desired voltage when ordering. On Single-phase motors, specify rotation. Lead-time is 1 day. *Part Winding Start and Star-delta connections are excluded.

REMARK LEADS - MOD33

Using cloth markers, remark leads with numbers or letters. Please specify markings. Lead-time is 2 days.

LONGER LEADS - MOD24

Extend leads up to two feet longer than standard by splicing. Splice will be visible in conduit box. Not available on explosion proof motors. Lead-time is 2 days.

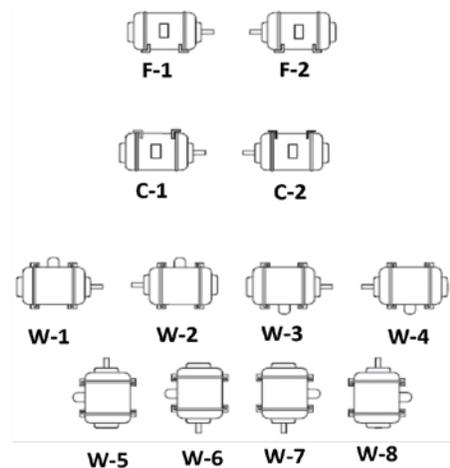
MOUNTING/ASSEMBLY - MOD1, AND MOD39

Motors listed are horizontal, foot mounted. Many stock motors can be furnished in assembly positions as illustrated. Modification may include repositioning of vents, baffles, drains, and conduit box. Also end brackets are assembled and grease fittings are properly installed for operation with the motor in the position shown. No attempt is made to locate fittings on any particular side of the motor. Horizontal ball bearing motor assemblies W5, W6, W7, and W8 are not suitable for external thrusts in excess of rotor weight and half-coupling. Cast Iron ODP and TEFC, 360 and larger, are not suitable for vertical operation. Consult Engineering for TEFC Build Up. Lead-time is 2 days.

CONVERT TO FLOOR, CEILING, OR WALL MOUNT - MOD1

Convert standard F1 mount to F2, W1, W2, W3, W4, W5, W6, W7, W8, C1, or C2 mount. The mounting symbol is required when ordering to indicate the proper mounting. Lead-time is 2 days.

Example: Motor will be modified F1 to wall mounting W3



*See back cover page for attribution.

MOD CENTRAL - MOTOR MODIFICATIONS

ADJUSTABLE MOTOR BASES - MOD39

Adjustable bases are a convenient means for adjusting belt tension or may be used as mounting plates. Adjustable motor bases are bolted to fixed base of motor prior to shipping. NEMA® 215T and smaller bases feature one adjusting screw. Bases on NEMA 254T and larger feature two adjusting screws. Bases are not suitable for vertical mounting. Lead-time is 2 days.

NAMEPLATES/MARKINGS - MOD7

Nameplate material is mylar or stainless steel depending on motor design and enclosure.

ADDITIONAL DATA ON NAMEPLATE

Motors can be re-nameplated for alternate ratings. Changes in horsepower, altitude, ambient, voltage, frequency, etc. Lead-time is 1 day.

CE® MARK

CE® compliant mark can be provided for all non-explosion proof NEMA frame motors. Many stock motors already contain the CE mark. Lead-time is 2 days.

ROTATION ARROW - MOD7

All motors utilize bi-directional cooling fans. Specify rotation facing shaft extension on order entry form. Available on Single-phase only. Lead-time is 1 day.

STAINLESS STEEL NAMEPLATE

Replace existing Mylar® nameplate with 304 stainless steel nameplate. Lead-time is 1 day.

SEPARATE NAMEPLATE FOR CUSTOMER DATA

A separate customer nameplate can be furnished. Information contained must be submitted at time of order. These additional nameplates cannot be supplied with CSA® or UL® Listings unless installed to motor in a Marathon Electric facility. Lead-time is 2 days.

PACKAGING - MOD29 HEAT TREATED PALLETS

ISPM-15 requires the use of heat-treated wooden packaging materials when shipping into all foreign countries (a temporary exemption exists for Canada). Modification includes replacement of wooden pallet with heat-treated pallet. Does not include export crating for ocean freight (contact factory for export packaging cost).

PAINT - MOD8

The standard paint finish is a two-coat paint system. The first coat is a rust-inhibitive primer applied to protect the castings during storage and manufacturing. The second coat is a powder coat on 48-140 frame, enamel on non-sever duty motors, or a 2-part epoxy on severe duty 180-5000 frame motors. Special paints and color options are available if compatible and reviewed by application engineering. Paint chips and material safety data sheets are required.

REPAINT TO A MARATHON® STOCK MOTOR COLOR

Repaint motor to another Marathon stock motor paint color. Colors include: Marathon Blue Chip Series® blue, PowerWash™ white, farm duty black, Fire Pump red, light gray, or dark gray. Specify color on order. Lead-time on enamel paint is 2 days. Epoxy paint requires a 3 day lead-time.

SCREENS - MOD0

Corrosion resistant screens can be furnished over the air intake intake and discharge openings of cast iron dripproof motors. Dripproof motors equipped with these screens conform to the dripproof guarded definition appearing in NEMA® MG-1, Part 1. Call for lead-time.

SERVICE FACTOR - MOD7

A multiplier that may be applied to the rated horsepower of a motor, which indicates a permissible horsepower loading at rated voltage and frequency. Lead-time is 1 day.

AC MOTOR SERVICE FACTOR RE-RATING

When a 1.15 Service Factor or higher is required, please refer to the list adder. Frame size is subject to change. Not available on explosion proof motors. Lead-time is 1 day.

SEVERE DUTY CONSTRUCTION - MOD16

This modification starts with a Marathon® Blue Chip Series® motor totally enclosed cast iron frame motor and reworks it to all cast iron construction. With additional enhancements, the motor is prepared for a severe or harsh industrial environment. (USA domestic built product only) Remove polypropylene fan cover and sheet metal conduit box from the motor and replace with cast iron fan cover, threaded and gasketed conduit box, apply epoxy finish to motor exterior, and add brass drain and breather. Lead-time is 2 days.

SHAFT MODIFICATION - MOD0, AND MOD42

Motors are furnished with a single straight shaft with sled runner keyway and a rectangular key. For motors in frames 143T through 449T, a long shaft for V-Belt drive is supplied. 2-Pole motors in frames 324 through 449 and certain other 4-Pole ratings are furnished with short shafts for direct connections. Modifications are for existing shafts only. Not applicable if a new shaft is required.

DRILL & TAP HOLE - MOD42

Drilled radially or in the end of the shaft. Drilled and tapped in the end of the shaft. Lead-time is 3 days.

TS SHAFT - MOD42

Convert "T" frame shaft to a "TS" Frame shaft. Modify motor by reducing the shaft, adding new keyway, and shortening the shaft length to the NEMA "TS" dimension. Lead-time is 3 days.

MILL FLAT ON SHAFT - MOD0

Mill a flat on the drive end shaft extension. Provide detail of flat with the order. Lead-time is 3 days.

STEPS ON SHAFT - MOD0

One to three reductions in shaft diameter. Customer to specify number of reductions at time of order. Call for lead-time.

SPACE HEATERS - MOD12 AND MOD41

Space heaters are used to prevent the build-up of condensation on the windings of the motor when the motor is not operating. Space heaters are typically installed on the end-turns of the coils.

SPACE HEATERS - ODP & TEFC - MOD12

Space heaters can be furnished on dripproof and totally enclosed motors. Heater leads are normally brought out to the motor conduit box. Heater voltage is available in three voltages for 60 Hz operation of 115, 230, or 460 volt, Single-phase. Space heaters are sized per NEMA® standards. Lead-time is 2 days.

SPACE HEATERS - IEC FRAMES - MOD12

Space heaters can be furnished on IEC® motors. Heater leads are normally brought out to the main terminal box. Heater voltage is available in two voltages for 50 Hz operation. Lead-time is 2 days.

SPACE HEATERS - EXPLOSION PROOF - MOD41

Space heaters can be furnished on explosion proof motors. Heater leads are normally brought out to the motor conduit box. Heater voltage is available in three voltages for 60 Hz operation of 115, 230, or 460 volt, single-phase. Space heaters are sized per NEMA standards. Lead-time is 2 days.

TERMINAL BLOCKS - MOD57

Conduit box mounted terminal blocks provide for a convenient termination of power leads. The terminal blocks are sized for the proper amperage and voltage of the motor. The Globetrotter® IEC motor has IEC terminal blocks as standard.

MOD CENTRAL - MOTOR MODIFICATIONS

TERMINAL BLOCK

Install terminal blocks in conduit box of NEMA motor with lead connection. Customer to advise on lead connection. Call for lead-time. Contact factory to verify capability.

THERMAL PROTECTION - MOD14, MOD37

Thermal protection are built in protective devices that prevent motor overheating. They work either by interrupting the power supply when the motor overheats or by incorporating a pilot device that opens the holding circuit of a magnetic starter or energizes an alarm bell or warning light.

THERMOSTATS - WINDINGS - MOD14

Thermostats are mounted on the stator winding and are temperature-sensing only, with normally closed snap action contacts. These devices are installed on the end-turns of the motor winding. Their purpose is to activate a warning device or shut down the motor upon exceeding winding temperatures. The standard arrangement is the addition of 2 or 3 thermostats to the winding end-turns, connected in series with the leads brought out to the main motor conduit box. Class I Groups C & D/ Class I Groups F & G Explosion Proof motors have hermetically sealed thermostats as standard. Lead-time is 2 days.

THERMISTORS - WINDING

Thermistors are small, non-linear resistance devices placed on the stator windings. As the critical temperature is reached, the resistance of the thermistor changes radically, causing operation of a control relay. The standard arrangement is Q-3 positive temperature coefficient (PTC) type on winding end-turns with leads brought out to the main motor conduit box. On IEC motors the leads are brought into a condulet adjacent to the main conduit box and includes a terminal block. As standard, 3 Texas Instruments thermistors are furnished, one per phase. Lead-time is 2 days.

RTDS - WINDINGS

RTDs are precision wire-wound resistors with calibrated temperature-resistance characteristics. The standard arrangement is the addition of a 100 ohm platinum RTD attached to the windings with the leads brought out to the main motor conduit box. These devices are used in conjunction with customer supplied instruments. Lead-time is 3 days.

WEATHERPROOFING/SPECIAL SERVICE MOD5, MOD49, MOD58

Weatherproofing or special service provides additional protection to windings and mechanical parts as well as special greases or modifications per industry specifications such as NEMA, IEEE, or automotive. Call for lead-time.

TROPICAL ANTI-FUNGUS TREATMENT - MOD5

Windings and mechanical parts coated with polyurethane for superior protection to resist tropical environments. Notavailable on brake motors. Lead-time is 2 days.

BRAND F EM-1 MOTORS - MOD48

Modify Blue Chip Series® XRI® Severe Duty motor to meet FordMotor's EM-1 T-Frame automotive specification. Modification requires adding ABMA®* bearing numbers and plugging second set of mounting holes on applicable frames. Lead-time is 2 days.

HAZARDOUS DUTY® SERVICE DIVISION 2 HAZARDOUS MOTORS - MOD49

The Division 2 hazardous modification incorporates a new fan, fan guard, and nameplate on most TEFC motors. The nameplate will say "CSA Certified, Group I, Division 2 Groups A, B, C, and D, Temperature Code. XRI-SD and IEEE841 motors have the Division 2 statement on the nameplate as standard. (See chart below) Call for lead-time.

| NEMA | SERVICE FACTOR | POWER | FREQUENCY | TEMP |
|----------|----------------|----------|-----------|------|
| 182-449T | 1.0 | SineWave | 50-60Hz | T3 |
| 182-449T | 1.0 | PWM | 3-120Hz | T2D |
| 182-449T | 1.5 | SineWave | 60Hz | T2B |

*See back cover page for attribution.

THE RIGHT PART FOR THE RIGHT MOTOR



We know how important it is to have
the original parts for your OEM replacement.

ACCESSORY KITS

Complete kits with hardware necessary for converting Marathon® stock rigid base motors to “C-Face” mounting with rigid base.

Excludes Blue Chip Series® XRI® Dripproof stock motors, see below



C-FACE KITS - DRIPPROOF

| CAT. NO. | FRAME | KIT / ITEM NO. | WHERE USED (MODELS CONTAINING) | WT. | FOOT NOTES | STOCK |
|----------|--------------|------------------|--|-----|------------|-------|
| A160 | 182T-184T | KIT 180TCD-WD | TTDB (2,4 and 6 pole) | 11 | 75 | √ |
| A666 | 182T-184T | KIT 175691 | TTDW | 4 | 75 | √ |
| A161 | 213T-215T | KIT 210TCD-WD | TTDB or TTDBD (2, 4 and 6 pole) | 14 | 75 | |
| A602 | 213T-215T | KIT 175066 | U268, U269, U763, U764, U765, and U766 | 18 | 75 | |
| A606 | 213T-215T | KIT 210TCDW | TTDW, TTDWD, TBDW, or TCDW | 13 | 75 | |
| A162 | 254T-256T | KIT 250TCD2-WD | TTDB (2 pole only) | 37 | 75 | |
| A162A | 254T-256T | B176066.00 | TTDBD (2 pole only) | 39 | 75 | √ |
| A163 | 254T-256T | KIT 250TCD-WD | TTDB (4 and 6 pole only) | 38 | 75 | √ |
| A163A | 254T-256T | B176067.00 | TTDBD (4 and 6 pole only) | 38 | 75 | |
| A610 | 284T-286T/TS | KIT 280TCDP | TTDP or TSTD | 30 | 75 | |
| A164 | 284TS-286TS | KIT 280TCD2-WD | TSTDCA (2 pole only) | 69 | 75 | |
| A164A | 284TS-286TS | B176068.00 | TSTDDB (2 pole only) | 76 | 75 | √ |
| A626 | 284T-286T | KIT 175058 | U256, U257, U771, U772, U773, and U774 | 32 | 75 | |
| A165 | 284T-286T | KIT 280TCD-WD | TTDCA (4 and 6 pole only) | 69 | 75 | √ |
| A165A | 284T-286T | B176069.00 | TTDBD (4 and 6 pole only) | 75 | 75 | |
| A213 | 324-326T/TS | KIT 320TCDR | TTDR (2,4 and 6 pole) | 53 | | |
| A166 | 324TS-326TS | KIT 320TCD2-WD | TSTDCA (2 pole only) | 97 | | √ |
| A166A | 324TS-326TS | B176070.00 | TSTDDB (2 pole only) | 91 | | |
| A613 | 324-326T/TS | KIT 320TCDP | TTDC/P or TSTD/P | 43 | | √ |
| A167 | 324T-326T | KIT 320TCD-WD | TTDCA (4 and 6 pole only) | 98 | | |
| A167A | 324T-326T | B176071.00 | TTDBD (4 and 6 pole only) | 86 | | √ |
| A627 | 324T-326T | KIT 175059 | U775, U776, U777, U778, U798 and U799 | 41 | | |
| A168 | 364TS-365TS | KIT 360TCD2-WD | TSTDCA (2 pole only) | 145 | | |
| A168A | 364TS-365TS | B176072.00 | TSTDDB (2 pole only) | 102 | | |
| A219 | 364TS-365TS | KIT 360TSCDS | TSTD/S | 62 | | √ |
| A628 | 364T-365T | KIT 175060 | U779, U782, U783, U784, U927, and U928 | 25 | | |
| A169A | 364T-365T | B176073.00 | TTDBD (4 and 6 pole only) | 105 | | |
| A225 | 404TS-405TS | KIT 400TSCDS | U250 and U251 | 89 | | √ |
| A414A | 404TS-405TS | B176074.00 | TSTDCA (2 pole only) | 103 | | |
| A225 | 404TS-405TS | KIT 400TSCDS | TSTD/S | 89 | | √ |
| A415A | 404T-405T | B176075.00 | TTDCA (4 and 6 pole only) | 140 | | |
| A231 | 444TS-445TS | KIT 440TSCDS | TSTD/S | 119 | | |
| A416 | 444TS-445TS | KIT 444/5TCD2-WD | TSTDCA (2 pole only) | 173 | | |
| A416A | 444TS-449TS | B176076.00 | TSTDCA (2 pole only) | 179 | | |
| A417 | 444T-445T | KIT 444/5TCD-WD | TTDC (4 and 6 pole only) | 144 | | |
| A417A | 444T-449T | B176077.00 | TTDCA (4 and 6 pole only) | 192 | | √ |
| A419 | 447T-449T | KIT 447/9TCD-WD | TTDC (6 pole only) | 134 | | |

ACCESSORY KITS

Complete kits with hardware necessary for converting Marathon® stock rigid base motors to “C-Face” mounting with rigid base. Includes Globetrotter®, XRI® (AS NOTED), and severe duty motors.

Excludes Blue Chip Series® XRI® IEEE-841 stock motors, available on the next page.



C-FACE KITS - TOTALLY ENCLOSED

| CAT. NO. | FRAME | KIT / ITEM NO. | WHERE USED (MODELS CONTAINING) | WT. | FOOT NOTES | STOCK |
|----------|--------------|----------------|--|-----|------------|-------|
| A170 | 182T-184T | KIT 180TCF-WD | TTFBA (Globetrotter motor) | 11 | 75 | |
| A420 | 182T-184T | B176240.00 | TTFCD (Globetrotter motor) | 33 | 75 | √ |
| A641 | 182T-184T | KIT 180TCN8.5 | TTFN (8-1/2" AK) | 40 | 75 | |
| A644 | 182T-184T | KIT 180CF8.5-1 | TTTL/S, TCFL/R, TTFC/L/R/S or THTS (Standard 8-1/2" AK dim.) | 11 | 75 | |
| A645 | 182T-184T | KIT 180CF4.5-1 | TTFC (Not XRI)/L/R/S (Non-Std. 4-1/2" AK dim.) | 14 | 75 | |
| A666 | 182T-184T | KIT 175691 | TCFW, TBFW, TTFW | 4 | 75 | √ |
| A171 | 213T-215T | KIT 210TCF-WD | TTFBA of TTFBD (Globetrotter motor) | 13 | 75 | √ |
| A421A | 213T-215T | B176229.00 | TTFCD (Globetrotter motor) | 20 | 75 | √ |
| A206 | 213T-215T | KIT 210TCFS | TTFC (Not XRI)/S, THFS, TTTS and THTS (except 213/5TTFC4075) | 17 | 75 | |
| A609 | 213T-215T | KIT 210TCFW | TBFW, TTFW | 17 | 75 | |
| A646 | 213T-215T | KIT 210TCN | TTFN or TTFND | 10 | 75 | √ |
| A652 | 213T-215T | KIT 175068 | Use on models 213TTFC4076 and 215TTFC4076 | 17 | 75 | |
| A667 | 213T-215T | KIT 175844 | XRI-NEMA Premium models containing TTFW1 | 4 | 75 | √ |
| A172 | 254T-256T | KIT 250TCF2-WD | TTFCA (2 pole only) (Globetrotter motor) | 30 | 75 | |
| A173 | 254T-256T | KIT 250TCF-WD | TTFCA (4 and 6 pole only) (Globetrotter motor) | 33 | 75 | |
| A173A | 254T-256T | B176026.00 | TTFCD (Globetrotter motor) | 49 | 75 | √ |
| A1209 | 254T-256T | KIT 250TCFL-R | TTFL1 and THTL1 (current frame design) (254TTFL14076) | 21 | 75 | |
| A284 | 254T-256T | KIT 250TCFNA | TTFNA, and THTNA | 35 | 75 | |
| A175A | 284T-286T/TS | B176028.00 | TTFCD (Globetrotter motor) | 55 | | √ |
| A615 | 284T-286T/TS | KIT 280TCFN | TTFN or TSTFN | 52 | | √ |
| A617 | 284T-286T/TS | KIT 280TCFPA | TTFPA, THFPA, and TSTFPA | 45 | | |
| A618 | 284T-286T/TS | KIT 280TCFNA | TTFNA, THFNA, or TSTFNA | 55 | | |
| A174 | 284TS-286TS | KIT 280TCF2-WD | TSTFCA (2 pole only)(Globetrotter motor) | 45 | | |
| A175 | 284T-286T | KIT 280TCF-WD | TTFC (4 and 6 pole)(Globetrotter motor) | 41 | | |
| A654 | 284T-286T | KIT 175061 | Use on model numbers 284TTFC4076 and 286TTFC4076 | 31 | | |
| A177A | 324T-326T/TS | B176030.00 | TTFCD (Globetrotter motor) | 68 | | √ |
| A214 | 324T-326T/TS | KIT 320TCFS | TTFS, THFS, or TSTFS | 73 | | |
| A614 | 324T-326T/TS | KIT 320TCFP | TTFC (Not XRI)/P, THFP, TSTFP or TSTFC | 50 | | |
| A619 | 324T-326T/TS | KIT 320TCFPA | TTFPA, THFPA, AND TSTFPA | 57 | | |
| A176 | 324TS-326TS | KIT 320TCF2-WD | TSTFCA (2 pole only)(Globetrotter motor) | 57 | | |
| A177 | 324T-326T | KIT 320TCF-WD | TTFCA (4 and 6 pole only) (Globetrotter motor) | 55 | | |
| A179A | 364T-365T/TS | B176032.00 | TTFCD (Globetrotter motor) | 100 | | √ |
| A178 | 364TS-365TS | KIT 360TCF2-WD | TSTFCA (2 pole only)(Globetrotter motor) | 93 | | |
| A396 | 364TS-365TS | KIT 360TSCFSR | TSTFS or TSHFS | 99 | | |
| A179 | 364T-365T | KIT 360TCF-WD | TTFCA (4 and 6 pole only)(Globetrotter motor) | 72 | | |
| A217 | 364T-365T | KIT 360TCFS | TTFC (Not XRI) | 105 | | |
| A395 | 364T-365T | KIT 360TCFSR | TTFS or THFS | 114 | | |

ACCESSORY KITS



C-FACE KITS - TOTALLY ENCLOSED

| CAT. NO. | FRAME | KIT / ITEM NO. | WHERE USED (MODELS CONTAINING) | WT. | FOOT NOTES | STOCK |
|----------|-------------|------------------|--|-----|------------|-------|
| A424 | 404TS-405TS | KIT 400TCF2-WD | TSTFC (2 pole only) (Globetrotter motor) | 106 | | |
| A424A | 404TS-405TS | B176034.00 | TSTFCD (2 pole only) (Globetrotter motor) | 100 | | √ |
| A223 | 404T-405T | KIT 400TCFS | TTFS or THFS | 125 | | |
| A425 | 404T-405T | KIT 400TCF-WD | TTFC (4 and 6 pole only) (Globetrotter motor) | 200 | | |
| A425A | 404T-405T | B176035.00 | TTFCD (4 and 6 pole only) (Globetrotter motor) | 120 | | √ |
| A426 | 444TS-445TS | KIT 444/5TCF2-WD | TSTFC (2 pole only) (Globetrotter motor) | 103 | | |
| A621 | 444TS-445TS | KIT 440TSCFN | TSTFN or TSHFN | 200 | | |
| A427 | 444T-445T | KIT 444/5TCF-WD | TTFC (4 and 6 pole only) (Globetrotter motor) | 158 | | |
| A620 | 444T-445T | KIT 440TCFN | TTFN or THFN | 205 | | |
| A426A | 444TS-449TS | B176036.00 | TSTFCD (2 pole only) (Globetrotter motor) | 150 | | √ |
| A428 | 447/9TS | KIT 447/9TCF2-WD | TSTFC (2 pole only) (Globetrotter motor) | 122 | | |
| A427A | 444T-449T | B176037.00 | TTFCD (4 and 6 pole only) (Globetrotter motor) | 137 | | √ |
| A623 | 447/449T | KIT 449TCFS | TTFS or THFS with ball bearings | 200 | | √ |

Complete kits with hardware and Inpro/Seal[®]* necessary for converting Marathon[®] stock IEEE-841 rigid base motors to "C-Face" mounting with rigid base.



C-FACE KITS - BLUE CHIP SERIES[®] XRI[®] IEEE-841 MOTORS

| CAT. NO. | FRAME | KIT / ITEM NO. | WHERE USED (MODELS CONTAINING) | WT. | FOOT NOTES | STOCK |
|----------|-------------|-------------------|--------------------------------|-----|------------|-------|
| A182 | 182-184T | KIT 180TCFS-841 | THTS or THFS | 13 | 75 | √ |
| A182A | 182-184T | KIT 180TCFN-841 | THTN OR THFN | 38 | 75 | |
| A182B | 182-184T | KIT 180TCFCD-841 | THFCD | 15 | 75 | |
| A183 | 213-215T | KIT 210TCFS-841 | THTS or THFS | 16 | 75 | √ |
| A183A | 213-215T | KIT 210TCFN-841 | THTN OR THFN | 20 | 75 | |
| A183B | 213-215T | KIT 210TCFCD-841 | THFCD | 20 | 75 | |
| A184 | 254-256T | KIT 250TCFNA-841 | THFNA | 35 | 75 | |
| A184A | 254-256T | KIT 250TCFCD-841 | THFCD | 30 | 75 | |
| A186A | 284-286T/TS | KIT 280TCFCD-841 | THFCD | 41 | | |
| A187 | 324-326T/TS | KIT 320TCFS-841 | THFS | 89 | | |
| A187A | 324-326T/TS | KIT 320TCFCD-841 | THFCD | 55 | | |
| A188 | 364-365T | KIT 360TCFSR-841 | THFS | 90 | | |
| A188A | 364-365T/TS | KIT 360TCFCD-841 | THFCD | 70 | | |
| A190 | 404-405T | KIT 400TCFS-841 | THFS | 129 | | |
| A190A | 404-405T | KIT 400TCFCD-841 | THFCD | 96 | | |
| A191 | 404-405TS | KIT 400TSCFS-841 | TSHFS | 118 | | |
| A191A | 404-405TS | KIT 400TSCFCD-841 | THFCD | 93 | | √ |
| A192 | 444-445T | KIT 440TCFS-841 | THFS | 175 | | |
| A193 | 444-445TS | KIT 440TSCFS-841 | TSHFS | 108 | | |
| A194 | 444-445T | KIT 440TCFN-841 | THFN | 201 | | |
| A194A | 444-445T | KIT 440TCFCD-841 | THFCD | 128 | | |
| A195 | 444-445TS | KIT 440TSCFN-841 | TSHFN | 199 | | |
| A195A | 444-445TS | KIT 440TSCFCD-841 | THFCD | 118 | | √ |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time
 *See back cover page for attribution.

ACCESSORY KITS

D-FLANGE KITS

Complete kits with hardware necessary for converting Marathon® stock rigid base motors to D-Flange mounting with rigid base.

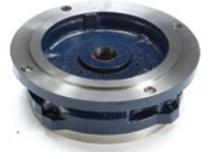


ODP

| CAT. NO. | FRAME | KIT / ITEM NO. | WHERE USED (MODELS CONTAINING) | WT. | STOCK |
|----------|-----------|----------------|--------------------------------|-----|-------|
| A670 | 324/326T | B176201.00 | TTDBD | 86 | √ |
| A671 | 324/326TS | B176202.00 | TTDBD | 91 | √ |
| A672 | 364/365T | B176203.00 | TTDBD | 105 | √ |
| A673 | 364/365TS | B176204.00 | TTDBD | 102 | √ |

TEFC

| CAT. NO. | FRAME | KIT / ITEM NO. | WHERE USED (MODELS CONTAINING) | WT. | FOOT NOTES | STOCK |
|----------|-------------|-------------------|--|-----|------------|-------|
| A541 | 182-184T | KIT 180TDFCD | GLOBETROTTER® (TTFCD) | 22 | 97 | |
| A542 | 213-215T | KIT 210TDFCD | GLOBETROTTER (TTFCD) | 22 | 97 | |
| A648 | 254/256T | KIT 250TDFNA | TFNA | 49 | 97 | |
| A543 | 254-256T | KIT 250TDFCD | GLOBETROTTER (TTFCD) | 52 | 97 | √ |
| A675 | 254/256T | B176205.00 | XRI-SD (TTFCD) | 86 | 97 | √ |
| A656 | 284/286T | KIT 280TDFNA | TFNA | 60 | 97 | |
| A651 | 284/286T/TS | KIT 651R | TTFP, TTFC (EPAAct), TSTFP or TSTFC (EPAAct) | 38 | 97 | |
| A544 | 284-286T/TS | KIT 280TDFCD | GLOBETROTTER (TTFCD) | 58 | 97 | √ |
| A676 | 284/286T/TS | B176206.00 | XRI®-SD (TTFCD) | 91 | 97 | √ |
| A658 | 324/326T/TS | KIT 320TDFS | TTFS, TSTFS | 50 | 97 | √ |
| A677 | 324/326T/TS | B176194.00 | TTFCD | 91 | 97 | √ |
| A475 | 324/326T/TS | KIT 320TDFCD-841 | XRI-841 (FCD) | 80 | 97 | √ |
| A678 | 364/365T/TS | B176207.00 | TTFCD | 105 | | √ |
| A476 | 364/365T/TS | KIT 360TDFCD-841 | XRI-841 (FCD) | 85 | | √ |
| A679 | 404-405TS | KIT 400TSDFCD | TTFCD | 106 | | √ |
| A477 | 404-405TS | KIT 400TSDFCD-841 | XRI-841 (FCD) | 125 | | √ |
| A546 | 404-405T | KIT 400TDFCD | TTFCD | 108 | | |
| A478 | 404-405T | KIT 400TDFCD-841 | XRI-841 (FCD) | 130 | | √ |
| A547 | 444-449TS | KIT 440TSDFCD | TTFCD | 117 | | √ |
| A479 | 444-449TS | KIT 440TSDFCD-841 | XRI-841 (FCD) | 145 | | √ |
| A548 | 444-449T | KIT 440TDFCD | TTFCD | 121 | | √ |
| A480 | 444-449T | KIT 440TDFCD-841 | XRI-841 (FCD) | 150 | | √ |



C-FACE TO D-FLANGE KITS - TEFC

Complete kits with hardware necessary for converting Marathon stock C-Face rigid base motors to D-Flange mounting with rigid base.



| CAT. NO. | FRAME | KIT / ITEM NO. | WHERE USED (MODELS CONTAINING) | WT. | STOCK |
|----------|-------------|----------------|--------------------------------|-----|-------|
| A630 | 182TC-184TC | KIT 180TDFR | TFR | 17 | |
| A632 | 324TC-326TC | KIT 320TDFP | TTFP | 60 | √ |

ACCESSORY KITS

IEC®* MOUNTING KITS

Complete kits with hardware necessary for converting Marathon® IEC stock motors to B5 or B14 mountings.



FLANGE MOUNTING KITS FOR CAST IRON FRAME, TERRAMAX® IEC NEMA PREMIUM®* (IE3) MOTORS ONLY

| FRAME | POLE | FLANGE | CAT. NO. | KIT / ITEM NO. | BOLT CIRCLE "MM" | WT. | STOCK |
|-------|-------|--------|----------|----------------|------------------|-----|-------|
| 100 | ALL | FF/B5 | A554B | KIT B175810 | 215 | 11 | √ |
| | ALL | FT/B14 | A581B | KIT B175817 | 130 | 9 | √ |
| 112 | ALL | FF/B5 | A555C | KIT B175827 | 215 | 20 | √ |
| | ALL | FT/B14 | A582C | KIT B175832 | 130 | 12 | √ |
| 132 | ALL | FF/B5 | A550A | KIT B175828 | 265 | 52 | √ |
| | ALL | FT/B14 | A589A | KIT B175833 | 165 | 19 | √ |
| 160 | ALL | FF/B5 | A551A | KIT B175829 | 300 | 37 | √ |
| | ALL | FT/B14 | A590A | KIT B175834 | 215 | 37 | √ |
| 180 | ALL | FF/B5 | A552A | KIT B175830 | 300 | 46 | √ |
| 200 | ALL | FF/B5 | A553A | KIT B175831 | 350 | 58 | √ |
| 225 | ALL | FF/B5 | A580A | KIT B175995 | 400 | 64 | √ |
| 250 | ALL | FF/B5 | A594A | KIT B175619 | 400 | 101 | √ |
| 280 | 2 | FF/B5 | A595 | KIT B175839 | 500 | 109 | √ |
| | 4 & 6 | FF/B5 | A596A | KIT B175835 | 500 | 109 | √ |
| 315 | 2 | FF/B5 | A597 | KIT B175837 | 600 | 129 | |
| | 4 & 6 | FF/B5 | A598A | KIT B175836 | 600 | 129 | √ |



FLANGE MOUNTING KITS FOR CAST IRON FRAME, GLOBETROTTER® IEC NEMA PREMIUM (IE3) MOTORS ONLY

| FRAME | POLE | FLANGE | CAT. NO. | KIT / ITEM NO. | BOLT CIRCLE "MM" | WT. | STOCK |
|-------|-------|--------|----------|----------------|------------------|-----|-------|
| 100 | ALL | FF/B5 | A554A | KIT 175810 | 215 | 16 | √ |
| | ALL | FT/B14 | A581A | KIT 175817 | 130 | 10 | √ |
| 112 | | FT/B14 | A582B | KIT 175832 | 130 | 13 | √ |
| | 6 | FF/B5 | A554A | KIT 175810 | 215 | 33 | √ |
| | | FT/B14 | A581A | KIT 175817 | 130 | 13 | √ |
| | | FF/B5 | A550 | KIT 175828 | 265 | 20 | √ |
| 132 | | FT/B14 | A589 | KIT 175833 | 165 | 16 | |
| | 4 & 6 | FF/B5 | A556A | KIT 175812 | 265 | 20 | |
| | | FT/B14 | A583A | KIT 175819 | 165 | 16 | |
| 160 | 2 | FF/B5 | A551 | KIT 175829 | 300 | 33 | |
| | | FT/B14 | A590 | KIT 175834 | 215 | 30 | |
| | 4 & 6 | FF/B5 | A557 | KIT 175990 | 300 | 33 | |
| 180 | | FT/B14 | A584 | KIT 175991 | 215 | 30 | √ |
| | 2 | FF/B5 | A552 | KIT 175830 | 300 | 41 | √ |
| 200 | 4 & 6 | | A558 | KIT 175890 | 300 | 41 | |
| | 2 | FF/B5 | A553 | KIT 175831 | 350 | 61 | |
| 225 | 4 & 6 | | A559 | KIT 175994 | 350 | 61 | |
| | ALL | FF/B5 | A580 | KIT 175995 | 400 | 59 | |
| 250 | ALL | FF/B5 | A580 | KIT 175995 | 400 | 76 | |
| | ALL | FF/B5 | A594 | KIT 175619 | 400 | 165 | |

IEC BRAKE MOTOR FLANGES

| FRAME | FLANGE | CAT. NO. | KIT / ITEM NO. | WT. | STOCK |
|-------|--------------------|----------|----------------|-----|-------|
| 100L | B5 "FF" (D-Flange) | - | 176179.00 | | √ |
| | B14 "FT" (C-Face) | - | 176183.00 | | √ |
| 112M | B5 "FF" (D-Flange) | - | 176180.00 | | √ |
| | B14 "FT" (C-Face) | - | 176184.00 | | √ |

These flange kits can only be used with the IEC brakemotors

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

ACCESSORY KITS

| MOTOR HP | BRAKEMOTOR SHAFT RPM | | |
|----------|----------------------|--------------|--------------|
| | LB-FT @ 3600 | LB-FT @ 1800 | LB-FT @ 1200 |
| 1 | 3 | 6 | 6 |
| 1 1/2 | 6 | 10 | 10 |
| 2 | 6 | 10 | 15 |
| 3 | 10 | 15 | 25 |
| 5 | 15 | 25 | 35 |
| 7 1/2 | 25 | 35 | 50 |
| 10 | 25 | 50 | 70 |
| 15 | 35 | 75 | 105 |
| 20 | 50 | 105 | - |

STEARNS 56,000 SERIES BRAKE KITS - INVERTER DUTY TENV BLACK MAX® AND BLUE MAX® MOTORS

For normal (140%) torque rating, do not apply on motors larger than 2 HP. Reduced braking torque and/or longer stopping times can result from applying an undersized brake on higher HP motors.

These brake kits fit on both the Black Max and Blue Max TENV motors. These can also be used together with the Double C-Face SL56 encoder to make a closed loop inverter brake motor.



| TORQUE RATING (Lb/Ft) | 115/208-230 VOLT | | | 208-230/460 VOLT | | | 575 VOLT | | | WT. ALL |
|-----------------------|------------------|------------------|-------|------------------|---------------|-------|----------|------------------|-------|---------|
| | CAT. NO. | KIT NO. | STOCK | CAT. NO. | KIT NO. | STOCK | CAT. NO. | KIT NO. | STOCK | |
| 6 | A317M | KIT BM6BRK115R1 | √ | A312M | KIT BM6BRKR1 | √ | A315M | KIT BM6BRK575R1 | √ | 7 |
| 10 | A318M | KIT BM10BRK115R1 | √ | A313M | KIT BM10BRKR1 | √ | A316M | KIT BM10BRK575R1 | √ | 7 |

VERTICAL MODIFICATION KIT (STEARNS 87,000 SERIES)

Includes required hardware to accommodate vertical above (shaft down) or vertical below (shaft up) mounting.

| TORQUE RATING (Lb/Ft) | MOUNTING | | CAT. NO. | STOCK | KIT NO. | WT. ALL |
|-----------------------|--------------|------------|----------|-------|----------------|---------|
| | SHAFT UP | SHAFT DOWN | | | | |
| 25,35 | Not required | Required | A157M | √ | KIT VRT87BRKR1 | 3 |
| 50,75,105 | Required | Required | | | | |



DOUBLE C-FACE COUPLER BRAKES

Includes a 5/8" sleeve

| TORQUE RATING (Lb/Ft) | ENCLOSURE NEMA 2, IP-23 208-230/460V | | | ENCLOSURE NEMA 4, IP-54 208-230/460V | | | ENCLOSURE NEMA 4X, IP-55 208-230/460V | | | WT. ALL |
|-----------------------|--------------------------------------|-----------------|-------|--------------------------------------|-----------------|-------|---------------------------------------|-----------------|-------|---------|
| | CAT. NO. | KIT NO. | STOCK | CAT. NO. | KIT NO. | STOCK | CAT. NO. | KIT NO. | STOCK | |
| 3 | A903M | KIT 903A | √ | A906M | KIT 906A | | A909M | KIT 909A | √ | 12 |
| 6 | A904M | KIT 904A | √ | A907M | KIT 907A | √ | A910M | KIT 910A | √ | 12 |
| 10 | A905M | KIT 905A | √ | A908M | KIT 908A | √ | A911M | KIT 911A | √ | 12 |
| 15 | A912A | KIT BK15-22-230 | √ | A912B | KIT BK15-54-230 | | A912C | KIT BK15-55-230 | | 16 |
| 25 | A913A | KIT BK25-22-230 | √ | A913B | KIT BK25-54-230 | | A913C | KIT BK25-55-230 | | 58 |
| 35 | A914A | KIT BK35-22-230 | | A914B | KIT BK35-54-230 | | A914C | KIT BK35-55-230 | | 60 |
| 50 | A915A | KIT BK50-22-230 | √ | A915B | KIT BK50-54-230 | | A915C | KIT BK50-55-230 | | 62 |



BISSC RATED BRAKES

To be used on "Powerwash" products

| TORQUE RATING (Lb/Ft) | ENCLOSURE NEMA 2, IP-23 208-230/460V | | | ENCLOSURE NEMA 4, IP-54 208-230/460V | | | ENCLOSURE NEMA 4X, IP-55 208-230/460V | | | WT. ALL |
|-----------------------|--------------------------------------|---------|-------|--------------------------------------|---------|-------|---------------------------------------|--------------------|-------|---------|
| | CAT. NO. | KIT NO. | STOCK | CAT. NO. | KIT NO. | STOCK | CAT. NO. | KIT NO. | STOCK | |
| 15 | - | - | - | - | - | - | A916 | KIT BRK15-55-WD230 | | |
| 25 | - | - | - | - | - | - | A917 | KIT BRK25-55-WD230 | | |
| 35 | - | - | - | - | - | - | A918 | KIT BRK35-55-WD230 | | |
| 50 | - | - | - | - | - | - | A919 | KIT BRK50-55-WD230 | | |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

ACCESSORY KITS

FAN GUARD KITS

Fits standard Globetrotter motors.

Mounts with four screws into the end bracket.

Kit includes: fan guard, mounting screws, washers, and instructions.



| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | ENCLOSURE | WT. |
|----------|----------------|-------|-------------|-----------|-----|
| A972 | B176237.00 | √ | 182/184T | TTFCD | 3 |
| A973 | B176238.00 | √ | 213/215T | TTFCD | 3 |
| A974 | B176239.00 | √ | 254/256T | TTFCD | 3 |
| A976 | B176243.00 | √ | 182/184T | TTFCD | 20 |
| A977 | B176273.00 | √ | 213/215T | TTFCD | 25 |
| A978 | B176274.00 | √ | 254/256T | TTFCD | 38 |
| A979 | B176275.00 | √ | 284/286T/TS | TTFCD | 40 |
| A980 | B176196.00 | | 324/326T/TS | TTFCD | 55 |
| A981 | B176197.00 | | 364/365T/TS | TTFCD | 105 |
| A982 | B176198.00 | | 404/405T/TS | TTFCD | 175 |
| A983 | B176199.00 | √ | 444/445T/TS | TTFCD | 225 |
| A984 | B176200.00 | √ | 447/449T/TS | TTFCD | 250 |

ACCESSORY KITS



DRIP COVER KITS

Mounts with two screws into the end bracket. Kit includes: drip cover, mounting screws, washers, and instructions. Contact Marathon Electric to determine compatibility with motor. For vertical shaft down applications.

| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | ENCLOSURE | WT. |
|----------|----------------|-------|-------------|---|-----|
| A201 | KIT 201 | √ | 182/184T | ODP | 3 |
| A662 | KIT 175614 | | 182/184T | ODP (TTDW) | 2 |
| A081 | B176277.00 | √ | 182/184T | ODP (TTDBD) | 12 |
| A198 | KIT 198 | | 213/215T | ODP (TTDW) | 5 |
| A082 | B176222.00 | √ | 213/215T | ODP (TTDBD) | 12 |
| - | 175305.00 | | 213/215T | Marathon® ROLLED STEEL 2 POLE motors only | 5 |
| A311 | KIT 311 | √ | 254/256T | ODP (TTDX) Rigid Base | 8 |
| A083 | B176223.00 | √ | 254/256T | ODP (TTDBD) | 60 |
| A084 | B176224.00 | √ | 284/286T/TS | ODP (TTDBD) | 39 |
| A085 | B176225.00 | √ | 324/326T/TS | ODP (TTDBD) | 38 |
| A086 | B176226.00 | √ | 364/365T/TS | ODP (TTDBD) | 55 |
| A087 | B176227.00 | √ | 404/405T/TS | ODP (TTDBD) | 76 |
| A088 | B176228.00 | √ | 444/449T/TS | ODP (TTDBD) | 75 |
| A197 | KIT 197 | √ | 182/184T | TEFC (4-IN-1) | 3 |
| A091 | B176241.00 | | 182/184T | TEFC (TTFBD & TTFCD) | 60 |
| A199 | KIT 199 | √ | 213/215T | TEFC (4-IN-1) | 5 |
| A092 | B176214.00 | √ | 213/215T | TEFC (TTFBD & TTFCD) | 4 |
| A093 | B176215.00 | √ | 254/256T | TEFC (TTFCD) | 39 |
| A095 | B176217.00 | √ | 324/326T/TS | TEFC (TTFCD) | 55 |
| A096 | B176218.00 | √ | 364/365T/TS | TEFC (TTFCD) | 76 |
| A097 | B176219.00 | √ | 404/405T/TS | TEFC (TTFCD) | 75 |
| A098 | B176220.00 | √ | 444/445T/TS | TEFC (TTFCD) | 115 |
| A099 | B176221.00 | √ | 447/449T/TS | TEFC (TTFCD) | 91 |

Note: Kit 234, the mounting holes have a 4.80 bolt circle.

LINT-COVER / DRIP-COVER KIT

Fits standard Globetrotter® and Blue Chip Series® motors. Threaded conduit box and gaskets.

TEFC MOTORS - MARATHON® MOTORS ONLY

| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | WHERE USED (MODELS CONTAINING) | WT. |
|----------|----------------|-------|-------------|--|-----|
| - | 175695.00 | √ | 182-215T | ALSO ON S213T SKUS'S WITH CAT #'s 131454 AND HIGHER OR WITH A G PREFIX | 4 |
| - | 176044.60 | √ | 213/215T | Wattsaver® and "G15" Series Motors | 4 |
| - | 176046.60 | √ | 284/286T/TS | Wattsaver® and "G15" Series Motors | 16 |

ACCESSORY KITS

CONDUIT BOX KITS

Fits standard Globetrotter® and Blue Chip Series® motors. Threaded conduit box and gaskets.



CAST IRON

| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | ENCLOSURE | WT. |
|----------|----------------|-------|-------------|----------------------------|-----|
| A720 | KIT 180/210CB | | 182-215T | TTFS, TTFN or TTFND | |
| A933 | B176242.00 | √ | 182/184T | TTFCD | |
| A934 | B176276.00 | √ | 213/215T | TTFCD | |
| A935 | B176209.00 | √ | 254/256T | TTFCD | |
| A936 | B176210.00 | √ | 284/286T/TS | TTFCD | |
| A730 | KIT 320CB | | 324/326T/TS | TTFS, TTFN, TTFP, or TTFPA | |
| A937 | B176211.00 | √ | 324/326T/TS | TTFCD | |
| A119 | KIT 364-445CB | | 364/445T/TS | TTFS, TTFN | |
| A938 | B176212.00 | √ | 364/365T/TS | TTFCD | |
| A939 | B176213.00 | √ | 404/449T/TS | TTFCD | |

Includes conduit box, plug, cover, gaskets and mounting hardware. Two 1/2-NPT tapped lead holes, one hole is plugged models.

CAST ALUMINUM

| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | ENCLOSURE | WT. |
|----------|----------------|-------|----------|--|-----|
| - | 17584700 | | 213/215T | Motors with the letter "M" after the date code | 11 |

Q-CAR™ REPLACEMENT KITS

Fits Powerwash EXT Motors. Used to change out the Rotor and Shaft assemblies with FRESH Bearings. The Q-Car rotor cartridge kit makes replacing worn bearings ultra simple. Allows for quick access to the motor interior.



| CAT. NO. | KIT / ITEM NO. | STOCK | FITS MODEL NO. / (CAT NO) | WT. |
|------------|----------------|-------|---------------------------|-----|
| 176332.00M | 176332.00 | √ | 132646.00 / (132646.00M) | 36 |
| 176333.00M | 176333.00 | √ | 132647.00 / (132647.00M) | 28 |
| 176334.00M | 176334.00 | √ | 132648.00 / (132648.00M) | 37 |
| 176335.00M | 176335.00 | √ | 132649.00 / (132649.00M) | 30 |
| 176336.00M | 176336.00 | √ | 140409.00 / (140409.00M) | 28 |
| 176337.00M | 176337.00 | √ | 141410.00 / (141410.00M) | 55 |
| 176338.00M | 176338.00 | √ | 141411.00 / (141411.00M) | 50 |
| 176339.00M | 176339.00 | √ | 141412.00 / (141412.00M) | 60 |

TERMINAL BLOCK KITS

Terminal blocks provide for a convenient termination for power leads, and are sized for the proper amperage and voltage of the motor. These kits fit NEMA®* TEFC, TENV, and ODP motors equipped with cast iron conduit boxes. Available on 182 to 449 frames.



| FRAME | CAT. NO. | KIT / ITEM NO. | STOCK | WHERE USED | WT. | FIGURE |
|---------|----------|----------------------|-------|-----------------------|-----|--------|
| 180-210 | A1000 | KIT 180-210 TERM BLK | | DOMESTIC MODELS | 2 | 1 |
| 180-210 | - | 175668.60 | √ | SERIES 15 / 17 MODELS | 2 | 2 |
| 180-210 | A1193 | KIT B175668 | √ | TEFC FCD MODELS | 2 | 2 |
| 250-320 | A1001 | KIT 250-320 TERM BLK | | DOMESTIC MODELS | 3 | 1 |
| 250-280 | - | 175667.60 | | SERIES 15 / 17 MODELS | 3 | 2 |
| 250-280 | A1194 | KIT B175667 | √ | TEFC FCD MODELS | 3 | 2 |
| 320-360 | A1195 | KIT B175666 | √ | TEFC FCD MODELS | 4 | 2 |
| 360 | A1002 | KIT 360 TERM BLK | | DOMESTIC MODELS | 5 | 1 |
| 404/405 | A1196 | KIT B175665 | √ | TEFC FCD MODELS | 5 | 2 |
| 404-445 | A1003 | KIT 400-445 TERM BLK | | DOMESTIC MODELS | 7 | 1 |
| 400/440 | - | 175665.60 | | SERIES 15 / 17 MODELS | 5 | 2 |
| 447/449 | A1004 | KIT 447/9 TERM BLK | | DOMESTIC MODELS | 10 | 1 |
| 444/449 | A1197 | KIT B175629 | √ | TEFC FCD MODELS | 5 | 2 |

√: Available

⌚: Stocked components, Ready to build

Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

ACCESSORY KITS

SEVERE DUTY - UPGRADE TO CAST IRON FAN COVER / CONDUIT BOX

Fits standard Blue Chip Series® motors to achieve all cast iron construction.

Components include fan guard and threaded conduit box.



| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | WHERE USED | WT. |
|----------|----------------|-------|-----------|--|-----|
| A721 | KIT 210R | | 213T-215T | THFS, THTS, TTFC (Not XRI), TTFS, TTTS | 19 |
| A724 | KIT 250RFNA | √ | 254T-256T | TFNA, TFCA (Not XRI), THTNA, or THFNA | 34 |

ROLLER BEARING CONVERSION KITS

For conversion of ball bearing on drive end to roller bearing (for belted applications).

CONFIRM KIT SELECTION WITH CUSTOMER SERVICE/ENGINEERING



| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | ENCLOSURE | BEARING SIZE | WHERE USED (MODELS CONTAINING) | WT. |
|----------|--------------------|-------|-----------|-------------|--------------|-----------------------------------|-----|
| A1052 | KIT 280BRDCD-NU311 | √ | 284-6T | ODP | 311 | TTDBD | 12 |
| A1053 | KIT 320BRDCD-NU312 | √ | 324-6T | ODP | 312 | TTDBD | 18 |
| A1054 | KIT 360BRDCD-NU314 | √ | 364-5T | ODP | 314 | TTDBD | 21 |
| A1055 | KIT 400BRDCD-NU316 | | 404-5T | ODP | 316 | TTDCD | 26 |
| A1056 | KIT 440BRDCD-NU319 | | 444-9T | ODP | 319 | TTDCD | 29 |
| A1060 | KIT 210BRFGT-NU308 | √ | 213-5T | TEFC | 308 | TTFCD - GT CAT NUMBERS ONLY | 40 |
| A1061 | KIT 250BRFGT-NU309 | √ | 254-6T | TEFC | 309 | TTFCD - GT CAT NUMBERS ONLY | 55 |
| A1062 | KIT 280BRFGT-NU311 | √ | 284-6T | TEFC | 311 | TTFCD - GT CAT NUMBERS ONLY | 70 |
| A1070 | KIT 210BRFCD-NU308 | | 213-5T | TEFC | 308 | TTFCD - SD & 841 CAT NUMBERS ONLY | 10 |
| A1071 | KIT 250BRFCD-NU309 | | 254-6T | TEFC | 309 | TTFCD - SD & 841 CAT NUMBERS ONLY | 12 |
| A1072 | KIT 280BRFCD-NU311 | | 284-6T | TEFC | 311 | TTFCD - SD & 841 CAT NUMBERS ONLY | 16 |
| A1073 | KIT 320BRFCD-NU312 | | 324-6T | TEFC | 312 | TTFCD - ALL CAT NUMBERS ONLY | 17 |
| A1074 | KIT 360BRFCD-NU313 | | 364-5T | TEFC | 313 | TTFCD - ALL CAT NUMBERS ONLY | 19 |
| A755 | KIT 360BRFSR-314 | | 364T-365T | TEFC & TEBC | 314 | TTFS, THFS | 14 |
| A756 | KIT 400BRFS-316 | | 404T-405T | TEFC & TEBC | 316 | TTFS, THFS | 19 |
| A759 | KIT 440BRFN | | 444T-445T | TEFC & TEBC | 318 | TTFN, THFN | 26 |
| A758 | KIT 449BRFS | | 447T-449T | TEFC & TEBC | 319 | TTFS, THFS | 25 |

BALL BEARING CONVERSION KITS

For conversion of roller bearing on drive end to ball bearing (for direct-coupled applications).

CONFIRM KIT SELECTION WITH CUSTOMER SERVICE/ENGINEERING



| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | ENCLOSURE | WHERE USED (MODELS CONTAINING) | WT. |
|----------|--------------------|-------|-------------|-----------|--------------------------------|-----|
| A1085 | KIT 400RBDCD-NU316 | √ | 404-5T | ODP | TTDCD | 30 |
| A1086 | KIT 440RBDCD-NU319 | √ | 444-9T | ODP | TTDCD | 35 |
| A1093 | KIT 320RBFCD-NU312 | √ | 324-6T | TEFC | TTFCD - ALL CAT NUMBERS ONLY | 20 |
| A1094 | KIT 360RBFCD-NU313 | √ | 364-5T | TEFC | TTFCD - ALL CAT NUMBERS ONLY | 25 |
| A1095 | KIT 400RBFCD-NU316 | √ | 404-5T | TEFC | TTFCD - ALL CAT NUMBERS ONLY | 30 |
| A1096 | KIT 440RBFCD-NU319 | √ | 444-9T | TEFC | TTFCD - ALL CAT NUMBERS ONLY | 35 |
| A760 | KIT 440BBFN | √ | 444T-445T | TEFC | TTFN, THFN | 160 |
| A795 | KIT L449BBFS-322 | | L447F-L449T | TEFC | TTFS | 190 |

ACCESSORY KITS

AXIAL BLOWER KITS

For installation on Marathon Blue Chip Series® XRI® Totally Enclosed and Severe Duty motors (excluding Explosion Proof).



| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | WT. | BLOWER VOLTS AND PHASE | WHERE USED (MODELS CONTAINING) |
|----------|----------------------|-------|-----------------|-----|------------------------|---|
| A695 | KIT 32TEBC | | 324T/TS-326T/TS | 200 | 230/460V, 3Ø | TTFS |
| A697 | KIT 40TEBC | | 404T/TS-405T/TS | 242 | 230/460V, 3Ø | TTFS |
| A698 | KIT 44TEBC-313 | | 444TS-449TS | 401 | 230/460V, 3Ø | A 6313 bearing on opposite shaft end |
| A699 | KIT 44TEBC-316 | | 444T-449T | 401 | 230/460V, 3Ø | A 6316 bearing on opposite shaft end (excludes roller bearing) |
| A796 | KIT L449TEBC | | L447F-L449T | 272 | 230/460V, 3Ø | With L447/449 Frames |
| | KIT 449TEBCAXNOFRK | | 449 | 100 | 230/460,3Ø | TEBC Axial No Fracket |
| | KIT 449TEBCRADNOFRK | | 449 | 200 | | TEBC Radial No Fracket |
| | KIT 5000TEBCRADNOFRK | | 5000 | 200 | | Radial No Fracket |
| A1680 | 4900030-KIT 511678 | | - | | | BLOWER KIT, 1HP 1800RPM 230/460V CAST IRON (FOR FAN 511678) |
| A1681 | 4900670-KIT 92070 | | - | | | BLOWER KIT, 2HP 1800RPM 230/460V ROLLED STEEL (FOR FAN 92070) |
| A1679 | 4900670-KIT 92078 | | - | | | BLOWER KIT, 2HP 1800RPM 230/460V ROLLED STEEL (FOR FAN 92078-500) |
| A049 | KIT RBA4900640 | | 449TC | 256 | | TEBC 400-5000 FRAME |
| | KIT 5000TEBCAXNOFRK | | 5000 | 150 | | 5000 TEBC AXIAL BLOWER KIT WITH NO FRACKET |

These kits are used for converting motors to totally enclosed blower cooled motors. Cooling per MG1.6 (IC46). The kits are designed for inverter and vector drive applications where continuous cooling is required regardless of motor shaft speed. The kit is mounted on the back of the motor after removing the fan guard and fan. Modifying the shaft is not required.



| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | WT. | BLOWER VOLTS AND PHASE | WHERE USED (MODELS CONTAINING) |
|----------|----------------|-------|-----------------|-----|------------------------|---|
| - | 175895.00 | √ | 182T-184T | 4 | 115V, 1Ø | Rolled steel, TEFC motors with the letter "M" after the date code |
| - | 175674.00 | | 182T-184T | 10 | 115V, 1Ø | Cast iron, TEFC models with 150, G150 & 170 Series numbers |
| - | 175676.00 | | 254T-256T | 17 | 115V, 1Ø | Cast iron, TEFC models with 150, G150 & 170 Series numbers |
| - | 175677.00 | √ | 284T/TS-286T/TS | 24 | 115V, 1Ø | Cast iron, TEFC models with 150, G150 & 170 Series numbers |
| - | 175678.00 | | 324T/TS-326T/TS | 28 | 115V, 1Ø | Cast iron, TEFC models with 150, G150 & 170 Series numbers |
| - | 175879.00 | | 364T/TS-365T/TS | 35 | 230/460V, 3Ø | Cast iron, TEFC models with 150, G150 & 170 Series numbers |

SHAFT GROUNDING ACCESSORIES

Shaft grounding: Shaft grounding is recommended (NEMA® MG1 31.4.4.3) as an effective means of bearing protection for motors operated from inverter power. One grounding device is adequate to bleed down inverter-sourced shaft voltages, thereby protecting both bearings for motors as large as 6085 frame.

FILAMENT BRUSH

Add to existing ODP or TEFC models

| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | WT. | COMMENTS |
|----------|----------------|-------|-------------|-----|---------------------|
| A103 | KIT 103 | | 182-449T/TS | 1 | Drive end mount |
| A116 | KIT 116 | | 182-449T/TS | 1 | Non-drive end mount |
| A109 | KIT 109 | √ | 182-449T/TS | 1 | Replacement brush |



SILVER GRAPHITE BRUSH

Add to existing TEFC models

| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | WT. | COMMENTS |
|----------|----------------|-------|-------------|-----|-------------------------------------|
| A123 | KIT BCP-HC22 | √ | 182-449T/TS | 5 | Requires stub shaft kit - TEFC only |

STUB SHAFT KITS

Fits TEFC motors to allow the addition of 1" bore hollow shaft encoders or BCP grounding, to the motor opposite drive end.

| CAT. NO. | KIT / ITEM NO. | STOCK | FRAME | WT. | WHERE USED (MODELS CONTAINING) |
|----------|----------------------|-------|-----------------|-----|---|
| A121 | KIT STUBSHFT 140-280 | √ | 143T-286T/TS | 3 | GLOBETROTTER FBD & FCD |
| A122 | KIT STUBSHFT 320-500 | √ | 324T/TS-449T/TS | 3 | GLOBETROTTER FBD & FCD |
| A798 | KIT STUBSHFT 1X.37IN | √ | 182T-449T/TS | 3 | TEFC SEVERE DUTY AND IEEE-841, FOR BCP ADDITION |
| A807 | KIT STUBSHAFT 1IN | √ | 182T-449T/TS | 3 | FAN COOLED SEVERE DUTY AND IEEE-841 |



WARNING:

Encoders to be used in Division 1 or Division 2 Hazardous (Classified) Locations shall have agency certifications equivalent to the motor and be nameplated for the Class(es), Group(s), and Temperature Code required for the application. Motor modifications using a stub shaft may result in removal of Div 2 classification

√: Available 1/-: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

ACCESSORY KITS

BCP KIT:

Kit includes grounding ring, adhesive mounting hardware and instructions (for domestic produced products only).



BCP UNIVERSAL KIT:

Kit includes grounding ring, all mounting hardware needed to mount to any standard drive end bracket and instructions.

BCP UNIVERSAL SPLIT RING KIT

Kit is designed to allow BCP mounting without uncoupling the motor. Kit includes grounding ring, all mounting hardware needed to mount to any standard drive end bracket and instructions. Shaft ground rings fit these NEMA®* frame shaft extensions listed below, they are designed to mount on the shaft end. For larger frames, please contact Marathon® Motors.

NEMA®* RINGS

| BCP KIT | | | | BCP UNIVERSAL KIT | | | | BCP UNIVERSAL SPLIT RING KIT | | | |
|-----------|----------|-------|-----|-------------------|----------|-------|-----|------------------------------|----------|-------|-----|
| FRAME | CAT. NO. | STOCK | WT. | KIT / ITEM NO. | CAT. NO. | STOCK | WT. | KIT / ITEM NO. | CAT. NO. | STOCK | WT. |
| 182-184T | A500-20 | | 1 | KIT SGR-1.125-UK | A499-3 | √ | 5 | KIT SGR-1.125-1A4-UK | A495-3 | √ | 5 |
| 180JM/JP | A500-23 | | 1 | — | — | — | — | — | — | — | — |
| 213-215T | A500-26 | | 1 | KIT SGR-1.375-UK | A499-4 | √ | 5 | KIT SGR-1.375-1A4-UK | A495-4 | √ | 5 |
| 254-256T | A500-32 | | 1 | KIT SGR-1.625-UK | A499-5 | √ | 5 | KIT SGR-1.625-1A4-UK | A495-5 | √ | 5 |
| 250JM/JP | | | — | — | — | — | — | — | — | — | — |
| 284-286T | A500-38 | | 1 | KIT SGR-1.875-UK | A499-6 | √ | 5 | KIT SGR-1.875-1A4-UK | A495-6 | √ | 5 |
| 284-286TS | A500-32 | | 1 | KIT SGR-1.625-UK | A499-5 | √ | 5 | KIT SGR-1.625-1A4-UK | A495-5 | √ | 5 |
| 324-326T | A500-44 | | 1 | KIT SGR-2.125-UK | A499-7 | √ | 7 | KIT SGR-2.125-1A4-UK | A495-7 | √ | 7 |
| 324-326TS | A500-38 | | 1 | KIT SGR-1.875-UK | A499-6 | √ | 5 | KIT SGR-1.875-1A4-UK | A495-6 | √ | 5 |
| 320JM/JP | A500-50 | | 1 | — | — | — | — | — | — | — | — |
| 364-365T | A500-50 | | 1 | KIT SGR-2.375-UK | A499-8 | √ | 7 | KIT SGR-2.375-1A4-UK | A495-8 | √ | 7 |
| 364-365TS | A500-38 | | 1 | KIT SGR-1.875-UK | A499-6 | √ | 5 | KIT SGR-1.875-1A4-UK | A495-6 | √ | 5 |
| 360JP | A500-53 | | 1 | — | — | — | — | — | — | — | — |
| 404-405T | A500-62 | | 1 | KIT SGR-2.875-UK | A499-9 | √ | 7 | KIT SGR-2.875-1A4-UK | A495-9 | √ | 7 |
| 404-405TS | A500-44 | | 1 | KIT SGR-2.125-UK | A499-7 | √ | 7 | KIT SGR-2.125-1A4-UK | A495-7 | √ | 7 |
| 444-445T | A500-74 | | 1 | KIT SGR-3.375-UK | A499-10 | √ | 7 | KIT SGR-3.375-1A4-UK | A495-10 | √ | 7 |
| 444-445TS | A500-50 | | 1 | KIT SGR-2.375-UK | A499-8 | √ | 7 | KIT SGR-2.375-1A4-UK | A495-8 | √ | 7 |
| 447/449T | A500-74 | | 1 | KIT SGR-3.375-UK | A499-10 | √ | 7 | KIT SGR-3.375-1A4-UK | A495-10 | √ | 7 |
| 447/449TS | A500-50 | | 1 | KIT SGR-2.375-UK | A499-8 | √ | 7 | KIT SGR-2.375-1A4-UK | A495-8 | √ | 7 |
| 5000LS | A500-62 | | 1 | — | — | — | — | KIT SGR-4.875-1A4-UK | A495-14 | √ | 7 |

IEC®* RINGS

| BCP UNIVERSAL RING KIT | | | | |
|------------------------|----------------|----------|-------|-----|
| FRAME | KIT / ITEM NO. | CAT. NO. | STOCK | WT. |
| 100L, 112M | KIT BCP-28-UK | A498-1 | √ | 5 |
| 132S, 132M | KIT BCP-38-UK | A498-2 | √ | 5 |
| 160M, 160L | KIT BCP-42-UK | A498-3 | √ | 5 |
| 180M, 180L | KIT BCP-48-UK | A498-4 | √ | 5 |
| 200L | KIT BCP-55-UK | A498-5 | √ | 7 |
| 225S, 225M | KIT BCP-60-UK | A498-6 | √ | 7 |
| 250M | KIT BCP-65-UK | A498-7 | √ | 7 |
| 70 mm Shaft Dia. | KIT BCP-70-UK | A498-8 | √ | 7 |
| 280S, 280M | KIT BCP-75-UK | A498-9 | √ | 7 |
| 315S, 315M, 315L | KIT BCP-80-UK | A498-10 | √ | 7 |
| 85 mm Shaft Dia. | KIT BCP-85-UK | A498-11 | √ | 10 |
| 90 mm Shaft Dia. | KIT BCP-90-UK | A498-12 | √ | 10 |
| 335L/M, 355L/M | KIT BCP-95-UK | A498-13 | √ | 10 |
| 100 mm Shaft Dia. | KIT BCP-100-UK | A498-14 | √ | 10 |
| 110 mm Shaft Dia. | KIT BCP-110-UK | A498-15 | √ | 10 |
| 120 mm Shaft Dia. | KIT BCP-120-UK | A498-16 | √ | 10 |

ACCESSORY KITS

ENCODER KITS AND ACCESSORIES FOR BLACK MAX®, BLUE MAX®, GLOBETROTTER®, XRI®-SD AND XRI-841 MOTORS



Installation of encoder kits on Globetrotter, XRI Severe Duty or XRI IEEE-841 TEFC motors requires installation of a stub shaft kit.

| FRAME | BRAND / MODEL | PPR | CAT. NO. | KIT / ITEM NO. | WT. | NOTES | CONNECTOR | STOCK |
|-----------------------------|----------------|--------------------|---|--------------------|---|--|------------------|-------|
| TENV 182-286 (5/8" bore) | Avtron®* HS25A | 1024 | A746 | KIT HS25A1024-NV | 4 | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| | | 2048 | A747 | KIT HS25A2048-NV | | | | √ |
| | Avtron HS35X | 1024 | A1018 | KIT HS35X1024 | 4 | Shaft Mount, 5-30 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| | | 2048 | A1020 | KIT HS35X2048 | | Shaft Mount, 5-30 VDC, with 10 pin connector/mate | | √ |
| | | 1024 | A1022 | KIT HS35X1024B | | Shaft Mount, 5-30 VDC, with 10 pin connector/mate, Dynapar Phasing | | √ |
| | | 2048 | A1023 | KIT HS35X2048B | | Shaft Mount, 5-30 VDC, with 10 pin connector/mate, Dynapar Phasing | | √ |
| | Avtron HS35A | 1024 | A736 | KIT HS35A1024-NV | 4 | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| | | | A779A | KIT HS35A/B1024-NV | | Shaft Mount, 5-26 VDC, with 10 pin connector/mate (REPLACES BEI A779) | | √ |
| | | 2048 | A739 | KIT HS35A2048-NV | 4 | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| | A780A | KIT HS35A/B2048-NV | Shaft Mount, 5-26 VDC, with 10 pin connector/mate (REPLACES BEI A780) | √ | | | | |
| | Avtron HS35M | 1024 | A742 | KIT HS35M1024 | 4 | Shaft Mount, 5-24 VDC, with EPIC connector/mate | 10 pin EPIC/mate | √ |
| | Avtron HS45 | 1024 | A753A | KIT HS451024-NV | 10 | Shaft Mount, 5-24 VDC, with EPIC connector/mate | | √ |
| | Avtron AV56 | 512 | A713 | KIT AV56512-NV | 5 | Modular Mount, 5-24 VDC, with EPIC connector/mate, Double C-Face | √ | |
| | | 1024 | A793A | KIT AV561024-NV | | Modular Mount, 5-24 VDC, with EPIC connector/mate, Double C-Face | √ | |
| | Dynapar®* HS20 | 1024 | A687 | KIT HS201024-NV | 3 | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| | Dynapar HS35R | 1024 | A772 | KIT HS351024-NV | 3 | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| 2048 | | A776 | KIT HS352048-NV | √ | | | | |
| NorthStar®* HSD35 | 1024 | A711 | KIT HSD351024-NV | 4 | Shaft Mount, 5-26 VDC, with EPIC connector/mate | 10 pin EPIC/mate | √ | |
| | 512 | A785 | KIT LKSR512 | 5 | Modular Mount, 5-15 VDC, with EPIC connector/mate | | √ | |
| | 1024 | A763 | KIT LKSR02 | | Modular Mount, 5-15 VDC, with EPIC connector/mate | | √ | |
| 1024 | A786 | KIT LKSR-CFACE | Modular Mount, 5-15 VDC, with EPIC connector/mate, Double C-Face | | √ | | | |
| TEFC 182-449 (1" bore) | Avtron HS35X | 1024 | A1018 | KIT HS35X1024 | 4 | Shaft Mount, 5-30 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| | | 2048 | A1020 | KIT HS35X2048 | | Shaft Mount, 5-30 VDC, with 10 pin connector/mate | | √ |
| | | 1024 | A1022 | KIT HS35X1024B | | Shaft Mount, 5-30 VDC, with 10 pin connector/mate, Dynapar Phasing | | √ |
| | | 2048 | A1023 | KIT HS35X2048B | | Shaft Mount, 5-30 VDC, with 10 pin connector/mate, Dynapar Phasing | | √ |
| | Avtron HS35A | 1024 | A737 | KIT HS35A1024-FC | 4 | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| | | | A783A | KIT HS35A/B1024-FC | | Shaft Mount, 5-26 VDC, with 10 pin connector/mate (REPLACE BEI A783) | | √ |
| | | 2048 | A740 | KIT HS35A2048-FC | | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | | √ |
| | A784A | KIT HS35A/B2048-FC | Shaft Mount, 5-26 VDC, with 10 pin connector/mate (REPLACE BEI A784) | √ | | | | |
| | Avtron HS35M | 1024 | A742 | KIT HS35M1024 | 4 | Shaft Mount, 5-24 VDC, with EPIC connector/mate | 10 pin EPIC/mate | √ |
| | | 2048 | A744 | KIT HS35M2048 | | Shaft Mount, 5-24 VDC, with EPIC connector/mate | | √ |
| | Avtron HS45 | 1024 | A754A | KIT HS451024-FC | 10 | Shaft Mount, 5-24 VDC, with EPIC connector/mate | √ | |
| | Dynapar HS35R | 1024 | A774 | KIT HS351024-FC | 3 | Shaft Mount, 5-26 VDC, with 10 pin connector/mate | 10 pin MS/mate | √ |
| 2048 | | A777 | KIT HS352048-FC | √ | | | | |
| NorthStar HSD35 | 1024 | A712 | KIT HSD351024-FC | 4 | Shaft Mount, 5-26 VDC, with EPIC connector/mate | 10 pin EPIC/mate | √ | |
| TEBC 284-449 (1" bore) | Avtron HS35X | 1024 | A1019 | KIT HS35X1024-BC | 4 | Shaft Mount, 5-30 VDC | 18" Cable | √ |
| | | 2048 | A1021 | KIT HS35X2048-BC | | Shaft Mount, 5-30 VDC | | √ |
| | Avtron HS35A | 1024 | A738 | KIT HS35A1024-BC | 3 | Shaft Mount, 5-26 VDC | √ | |
| | Avtron AV56 | 1024 | A794A | KIT AV561024-BC | 4 | Shaft Mount, 5-24 VDC | 36" Cable | √ |
| | Dynapar HS35R | 1024 | A775 | KIT HS351024-BC | 3 | Shaft Mount, 5-26 VDC | 18" Cable | √ |
| | | 2048 | A778 | KIT HS352048-BC | | Shaft Mount, 5-26 VDC | | √ |
| | NorthStar ST56 | 1024 | A764 | KIT LKSR03 | 5 | Modular Mount, 5-15 VDC | √ | |
| | ALL | | A801 | KIT ENCB0X | 2 | Encoder Conduit Box (required for all TEBC encoders) | N/A | √ |
| Brake Motors 182-256 | Avtron AV56 | A749A | KIT AV561024BRK-182 | 4 | Fits Blue Max Brakemotors (Y988) | 10 pin EPIC/mate | √ | |
| | | A750A | KIT AV851024BRK-184 | | Fits Blue Max Brakemotors (Y989) | | √ | |
| | Avtron AV85 | A751A | KIT AV851024BRK-210 | 8 | Fits Blue Max Brakemotors (Y990, Y991) | | √ | |
| | | A752A | KIT AV851024BRK-250 | | Fits Blue Max Brakemotors (Y992, Y993) | | √ | |
| | | A786 | KIT LKSR-CFACE | | Fits Blue Max Brakemotors (Y986, Y987) | | √ | |
| | NorthStar ST56 | A789A | KIT ST561024-182NV | 5 | Fits Blue Max Brakemotors (Y988) | | √ | |
| | | A790A | KIT ST851024-184NV | | Fits Blue Max Brakemotors (Y989) | | √ | |
| | NorthStar ST85 | A791A | KIT ST851024-210NV | 8 | Fits Blue Max Brakemotors (Y990, Y991) | | √ | |
| A792A | | KIT ST851024-250NV | Fits Blue Max Brakemotors (Y992, Y993) | | √ | | | |
| | | | | | | | | |
| N/A | N/A | N/A | A688-10 | KIT A688-10 | 3 | 10' cable and pre-wired 10-pin connector for all 10 pin (MS) connectors | 10 pin MS mate | √ |
| | | | A688-20 | KIT A688-20 | 3 | 20' cable and pre-wired 10-pin connector for all 10 pin (MS) connectors | | √ |
| | | | A688-25 | KIT A688-25 | 4 | 25' cable and pre-wired 10-pin connector for all 10 pin (MS) connectors | | √ |
| | | | A688-30 | KIT A688-30 | 4 | 30' cable and pre-wired 10-pin connector for all 10 pin (MS) connectors | | √ |
| | | | A688-50 | KIT A688-50 | 5 | 50' cable and pre-wired 10-pin connector for all 10 pin (MS) connectors | | √ |
| | | | A688-60 | KIT A688-60 | 5 | 60' cable and pre-wired 10-pin connector for all 10 pin (MS) connectors | | √ |
| | | | A688-100 | KIT A688-100 | 10 | 100' cable and pre-wired 10-pin connector for all 10 pin (MS) connectors | | √ |
| A690-15 | KIT A690-15 | 3 | 15 feet bulk cable, no connectors | N/A | √ | | | |

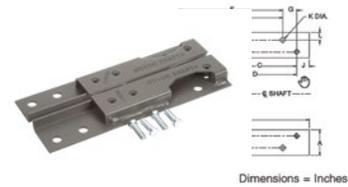
√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

ACCESSORY KITS

TRANSITION BASES

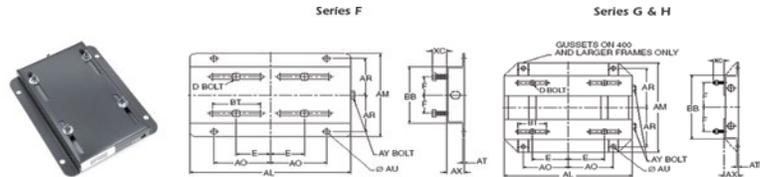
Convert "T" frame ratings to "U" frame based dimensions and shaft heights. Shaft dimensions may vary from actual "U" frame specifications.



| CAT. NO. | KIT NO. | STOCK | CONVERTS | | A | B | HGT | C | D | E | F | G | H | J | K | L | M | N (THREAD) | WT. |
|----------|----------|-------|----------|--------|---------|--------|-----|--------|--------|--------|--------|-------|-------|-------|-------|--------|-----|---------------|-----|
| | | | FROM | TO | | | | | | | | | | | | | | | |
| 1814T | KIT 180U | √ | 143/5T | 182/4 | 2 1/4 | 7 1/2 | 1 | 4 | 5 | 4 1/2 | 5 1/2 | 1/2 | 3 3/4 | 1 | 7/16 | 1/2 | 1 | 5/16-8 | 2 |
| 2118T | KIT 210U | √ | 182/4T | 213/5 | 1 3/4 | 9 1/2 | 3/4 | 4 1/2 | 5 1/2 | 5 1/2 | 7 | 1 | 4 1/4 | 1 | 7/16 | 7/16 | 1/2 | 3/8-16 | 3 |
| 25U21T | KIT 250U | √ | 213/5T | 254/6U | 2 7/16 | 12 3/4 | 1 | 5 1/2 | 7 | 8 1/4 | 10 | 1 1/8 | 5 | 1 | 9/16 | 5/8 | 3/4 | 3/8-16 | 5 |
| 28U25T | KIT 280U | √ | 254/6T | 284/6U | 2 3/4 | 14 1/4 | 3/4 | 8 1/4 | 10 | 9 1/2 | 11 | 1 3/8 | 5 1/2 | 1 1/4 | 9/16 | 15/16 | 1/2 | 1/2-13 | 8 |
| 32U28T | KIT 320U | √ | 284/6T | 324/6U | 3 1/4 | 15 3/4 | 1 | 9 1/2 | 11 | 10 1/2 | 12 | 1 1/2 | 6 1/4 | 1 1/2 | 11/16 | 15/16 | 3/4 | 1/2-13 | 10 |
| 36U32T | KIT 360U | √ | 324/6T | 364/5U | 3 11/16 | 16 1/2 | 1 | 10 1/2 | 12 | 11 1/4 | 12 1/4 | 1 3/4 | 7 | 1 3/4 | 11/16 | 1 3/16 | 3/4 | 5/8-11 | 13 |
| 40U36T | KIT 400U | √ | 364/5T | 404/5U | 4 1/4 | 18 5/8 | 1 | 11 1/4 | 12 1/4 | 12 1/4 | 13 3/4 | 2 | 8 | 2 | 13/16 | 1 1/4 | 1 | 5/8-11 | 22 |
| 44U40T | KIT 440U | √ | 404/5T | 444/5U | 4 1/4 | 21 5/8 | 1 | 12 1/4 | 13 3/4 | 14 1/2 | 16 1/2 | 2 1/4 | 9 | 2 | 13/16 | 1 1/4 | 1 | 3/4-10 | 24 |

ADJUSTABLE MOTOR BASES (SLIDE BASES)

Used to adjust tension during motor installation. Made with heavy duty steel construction with single screw adjustment for 143T-215T Frame and double screw adjustment for 254T Frame and larger.



| SERIES | FRAME | CAT. NO. | KIT NO. | STOCK | AL | AM | AX | BB | E | F | AO | AR | AU | BT | AT | XC | D BOLT | AY BOLT | WT. |
|--------|-------|----------|-----------|-------|--------|--------|-------|--------|-------|--------|-------|--------|-----|-------|-------|--------|-------------|---------|-----|
| F | 182 | 182A | KIT 182SB | √ | 12 3/4 | 9 1/2 | 1 1/2 | 6 1/2 | 3 3/4 | 2 1/4 | 4 1/2 | 4 1/4 | 1/2 | 3 | 0.134 | 1 1/2 | 3/8x1 3/4 | 1/2x6 | 9 |
| G | 182 | 182B2 | 41018202 | | 12 3/4 | 9 1/2 | 1 1/2 | 6 1/2 | 3 3/4 | 2 1/4 | 4 1/2 | 4 1/4 | 1/2 | 3 | 0.134 | 1 1/2 | 3/8x1 3/4 | 1/2x6 | 9 |
| F | 184 | 184A | KIT 184SB | √ | 12 3/4 | 10 1/2 | 1 1/2 | 7 1/2 | 3 3/4 | 2 3/4 | 4 1/2 | 4 3/4 | 1/2 | 3 | 0.134 | 1 1/2 | 3/8s 1 3/4 | 1/2x6 | 9 |
| G | 184 | 184B2 | 41018402 | | 12 3/4 | 10 1/2 | 1 1/2 | 7 1/2 | 3 3/4 | 2 3/4 | 4 1/2 | 4 3/4 | 1/2 | 3 | 0.134 | 1 1/2 | 3/8s 1 3/4 | 1/2x6 | 9 |
| F | 213 | 213A | KIT 213SB | √ | 15 | 11 | 1 3/4 | 7 1/2 | 4 1/4 | 2 3/4 | 5 1/4 | 4 3/4 | 1/2 | 3 1/2 | 0.164 | 1 1/2 | 3/8x1 3/4 | 1/2x6 | 13 |
| G | 213 | 213B2 | 41021302 | | 15 | 11 | 1 3/4 | 7 1/2 | 4 1/4 | 2 3/4 | 5 1/4 | 4 3/4 | 1/2 | 3 1/2 | 0.164 | 1 1/2 | 3/8x1 3/4 | 1/2x6 | 13 |
| F | 215 | 215A | KIT 215SB | √ | 15 | 12 1/2 | 1 3/4 | 9 | 4 1/4 | 3 1/2 | 5 1/4 | 5 1/2 | 1/2 | 3 1/2 | 0.164 | 1 1/2 | 3/8x1 3/4 | 1/2x6 | 15 |
| G | 215 | 215B2 | 41021502 | | 15 | 12 1/2 | 1 3/4 | 9 | 4 1/4 | 3 1/2 | 5 1/4 | 5 1/2 | 1/2 | 3 1/2 | 0.164 | 1 1/2 | 3/8x1 3/4 | 1/2x6 | 15 |
| G | 254 | 254B2 | KIT 254SB | √ | 17 3/4 | 15 1/8 | 2 | 10 3/4 | 5 | 4 1/8 | 6 1/4 | 6 5/8 | 5/8 | 4 | 3/16 | 1 7/16 | 1 1/2x1 3/4 | 5/8x6 | 17 |
| G | 256 | 256B2 | KIT 256SB | √ | 17 3/4 | 16 7/8 | 2 | 12 1/2 | 5 | 5 | 6 1/4 | 7 1/2 | 5/8 | 4 | 3/16 | 1 7/16 | 1 1/2x1 3/4 | 5/8x6 | 18 |
| G | 284 | 284B2 | KIT 284SB | √ | 19 3/4 | 16 7/8 | 2 | 12 1/2 | 5 1/2 | 4 3/4 | 7 | 7 1/2 | 5/8 | 4 1/2 | 3/16 | 2 1/2 | 1/2x2 | 5/8x6 | 21 |
| G | 286 | 286B2 | KIT 286SB | √ | 19 3/4 | 18 3/8 | 2 | 14 | 5 1/2 | 5 1/2 | 7 | 8 1/4 | 5/8 | 4 1/2 | 3/16 | 2 1/2 | 1/2x2 | 5/8x6 | 22 |
| G | 324 | 324B2 | KIT 324SB | √ | 22 3/4 | 19 1/4 | 2 1/2 | 14 | 6 1/4 | 5 1/4 | 8 | 8 1/2 | 3/4 | 5 1/4 | 3/16 | 2 3/16 | 5/8x2 1/2 | 3/4x9 | 31 |
| G | 326 | 326B2 | KIT 326SB | √ | 22 3/4 | 20 3/4 | 2 1/2 | 15 1/2 | 6 1/4 | 6 | 8 | 9 1/4 | 3/4 | 5 1/4 | 3/16 | 2 3/16 | 5/8x2 1/2 | 3/4x9 | 32 |
| G | 364 | 364B2 | KIT 364SB | √ | 25 1/2 | 20 1/2 | 2 1/2 | 15 1/2 | 7 | 5 5/8 | 9 | 9 1/8 | 3/4 | 6 | 1/4 | 2 1/16 | 5/8x2 1/2 | 3/4x9 | 44 |
| G | 365 | 365B2 | KIT 365SB | √ | 25 1/2 | 21 1/2 | 2 1/2 | 16 1/2 | 7 | 6 1/8 | 9 | 9 5/8 | 3/4 | 6 | 1/4 | 2 1/16 | 5/8x2 1/2 | 3/4x9 | 45 |
| H | 404 | 404B2 | KIT 404SB | √ | 28 3/4 | 22 3/8 | 3 | 16 1/2 | 8 | 6 1/8 | 10 | 9 7/8 | 7/8 | 7 | 1/4 | 2 1/2 | 3/4x3 | 3/4x11 | 60 |
| H | 405 | 405B2 | KIT 405SB | √ | 28 3/4 | 23 7/8 | 3 | 18 | 8 | 6 7/8 | 10 | 10 5/8 | 7/8 | 7 | 1/4 | 2 1/2 | 3/4x3 | 3/4x11 | 61 |
| H | 444 | 444B2 | KIT 444SB | √ | 31 1/4 | 24 5/8 | 3 | 19 1/4 | 9 | 7 1/4 | 11 | 11 | 7/8 | 7 1/2 | 1/4 | 2 1/2 | 3/4x3 | 3/4x11 | 67 |
| H | 445 | 445B2 | KIT 445SB | √ | 31 1/4 | 26 5/8 | 3 | 21 1/4 | 9 | 8 1/4 | 11 | 12 | 7/8 | 7 1/2 | 1/4 | 2 1/2 | 3/4x3 | 3/4x11 | 69 |
| H | 447 | 447B2 | KIT 447SB | √ | 31 1/4 | 30 1/8 | 3 | 24 3/4 | 9 | 10 | 11 | 13 3/4 | 7/8 | 7 1/2 | 5/16 | 3 | 3/4x3 1/2 | 3/4x11 | 92 |
| H | 449 | 449B2 | KIT 449SB | √ | 31 1/4 | 35 1/8 | 3 | 29 3/4 | 9 | 12 1/2 | 11 | 16 1/4 | 7/8 | 7 1/2 | 5/16 | 3 | 3/4x3 1/2 | 3/4x11 | 95 |

√: Available ¶: Stocked components, Ready to build Blank: Build Up rating, subject to lead time

*See back cover page for attribution.

FOOTNOTES

| | |
|-----|--|
| 1 | Capacitor start/capacitor run design for reduced amperage |
| 2 | Capacitor start induction run design |
| 4 | Sleeve bearing |
| 6 | Bolt-on removable base for footless mounting option |
| 12 | With rigid base |
| 13 | F1 Mounting only, cannot reassemble to F2 |
| 14 | Will accept flange kit, see accessory section |
| 15 | Fixed CW rotation, viewing opposite shaft (or lead end) of motor |
| 16 | Fixed CCW rotation, viewing opposite shaft (or lead end) of motor |
| 17 | 1.0 service factor |
| 18 | 1.15 service factor |
| 19 | 1.25 service factor |
| 24 | Motor will NOT accept a brake kit |
| 25 | Motor will NOT accept C-face kit |
| 27 | Drip cover included |
| 29 | End bracket weep holes with removable plugs, remove bottom plug after installation |
| 40 | Space heaters and 100 ohm platinum stator RTDs included |
| 45 | 60° C ambient |
| 46 | 65° C ambient |
| 47 | Connected for CCW rotation (U.S. standard) facing opposite shaft end. Reversible by reconnection of leads |
| 48 | Connected for CW rotation (Canadian standard) facing opposite shaft end. Reversible by reconnection of leads |
| 50 | Designed for 50 Hz operation |
| 54 | 30 minute duty cycle, not rated for continuous duty |
| 57 | Open construction |
| 58 | Capacitor supplied with motor |
| 59 | TEAO construction |
| 60 | Foot locating set screws on frame, 90° apart |
| 68 | Rated 60/50 hertz, 190/380 or 380 volt at next lower horsepower |
| 69 | 50°C Ambient |
| 70 | Not nameplated 50 hz |
| 72 | Usable on 200/208 volts at 1.0 service factor |
| 75 | C-Face addition may result in non-NEMA "BA" dim. For new "BA" dim consult chart found in modification section |
| 76 | C-Face addition results in non-NEMA "AH" dim (+1.2" than NEMA). |
| 77 | Frame is drilled with 3 sets of footholes, 5010, 5011, and 5012 as standard. 5009 frame drilling available as build-up |
| 78 | Frame is drilled with two sets of footholes, 5012 and 5013 standard |
| 79 | Ball bearings on both ends suitable for direct connection. For belted applications, refer to customer service |
| 82 | Welded rigid base |
| 85 | Not tach adaptable |
| 89 | Threaded NPT opening in conduit box |
| 90 | Not UL Recognized |
| 91 | Suitable for use on VFD at 208 volt |
| 95 | Will not accept drip cover kit |
| 97 | D-Flange addition results in non-NEMA® "BA" dim (+1/2" than NEMA) & non-NEMA shaft ext (-1/2" than NEMA). |
| 98 | Not UL Listed for fire pump applications |
| 99 | Suitable for 2:1 CT operation |
| 126 | 1.0 service factor at 50 HZ |
| 132 | 184T base, 4.5" shaft height |

| | |
|-----|---|
| 143 | 303 stainless steel shaft |
| 144 | Open dripproof |
| 2:1 | Suitable for 2:1 CT operation; consult MOD section for fan change pricing to upgrade to 10:1 CT |
| A | NEMA® design A |
| B | NEMA design B |
| C | NEMA design C |
| d | Will become build-up item when current stock is gone |
| F | Class F Insulation |
| H | Class H insulation |
| I | Reduced HP @ 120 HZ |
| N | Totally enclosed, non-ventilated |
| P | BCP (Bearing Current Protection) |
| S | Steel frame construction |
| V | Suitable for 10:1 CT 60 minute duty, otherwise 2:1 CT |
| X | XRI® motor, ultra high efficiency design |
| AH | Conforms to GM 7EH and satisfies Ford® EM-1 and GM 7EQ |
| AL | Aluminum frame construction |
| AQ | Conforms to GM 7EQ and satisfies Fiat Chrysler® NPEM-100, and Ford EM-1 |
| BI | Class B insulation |
| BP | Separate power supply required for blower motor |
| CD | Suitable for Group C |
| CF | Consult factory for accessory kit and/or modification selection |
| CFT | CFace Rigid Footed |
| CFL | CFace Footless |
| CT | Suitable for 20:1 CT on vector drive, continuous duty or 2000:1 |
| F2 | F2 conduit box location |
| FT | Rigid Base (Footed) |
| NE | Exempt from NEMA Premium® efficiency requirement |
| NP | Does not meet NEMA Premium efficiency |
| NS | Single shielded ball bearings |
| PW | Part winding start capability |
| RB | Roller bearing on shaft end for belted load only |
| SH | Space heaters |
| SL | Sound level exceeds standard |
| TS | Normally closed thermostats installed |
| VB | Vibration not met |
| YD | 12 Leads for WYE-DELTA, part winding on low voltage, or across-the-line starting |

WARNINGS AND CAUTIONS - ELECTRICAL

SAFETY

Safety is emphasized throughout this catalog. These are safety alert symbols and signal words. They alert the user to potential personal injury hazards. Obey all safety messages to avoid possible injury, death, or damage to equipment and other property.

⚠ WARNING WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury. Failure to follow the instructions and precautions listed below could result in personal injury or damage to equipment.

⚠ CAUTION CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. Failure to follow the instructions and precautions listed below could result in personal injury or damage to equipment.

IMPORTANT INFORMATION. PLEASE READ CAREFULLY.

This catalog is not intended to provide operational instructions. Appropriate instructions provided with the motor and precautions attached to the motor should be read carefully prior to installation, operation and/or maintenance of the equipment. Injury to personnel or motor failure may be caused by improper installation, maintenance or operation.

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 Marathon® product:

WARNING!

- Disconnect power and lock out driven equipment before working on a motor.
- Keep hands and clothing away from moving parts.
- The lifting support on the motor is not to be used to lift the entire machine. Only the motor attached directly to the support may be safely lifted by the support.
- Install and ground per local and national codes.
- Discharge all capacitors before servicing a Single-phase motor.
- Misapplication of a motor in hazardous environments can cause fire or an explosion and result in serious injury. Only the end user, local authority having jurisdiction, and/or insurance underwriter are qualified to identify the appropriate class(es), group(s), division(s), and temperature code(s) that applies(y) in a hazardous environment. Our personnel cannot evaluate or recommend what motors may be suitable for use in hazardous environments. If a motor is name plated for hazardous locations, do not operate the motor without all of the grease and drain plugs installed.
- Never attempt to measure the temperature rise of a motor by touch. Temperature rise must be measured by thermometer, resistance, embedded detector or thermocouple.
- Motors with automatic reset thermal protectors will automatically restart when the protector temperature drops sufficiently. Do not use motors with automatic reset thermal protectors in applications where automatic restart will be hazardous to personnel or equipment.
- Motors with manual reset thermal protectors may start unexpectedly after the protector trips when the surrounding air is at +20° Fahrenheit or lower. If the manual reset protector trips, disconnect motor from its power supply. After the protector cools (five minutes or more), it can be reset and power may be applied to the motor.
- Connect all protective device leads, marked P1, P2, etc., per instructions supplied with the motor.
- Operation of a motor at other than its nameplate rating may result in fire, damage to equipment or serious injury to personnel.
- 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.

WARNINGS AND CAUTIONS - ELECTRICAL

CAUTION!

- Consult qualified personnel with questions and all electrical repairs must be performed by trained and qualified personnel only.
- For motors nameplated as “belted duty only,” do not operate the motor without belts properly installed.
- Motors and/or driven equipment should not be operated faster than their rated speed.
- For inverter applications, follow the inverter manufacturer’s installation guidelines.

Make sure the motor is properly secured and aligned before 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 WARRANTY 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 Marathon® Motors.

For more information contact: See back cover for the contact details.

WARNINGS AND CAUTIONS - MECHANICAL

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury. Failure to follow the instructions and precautions listed below could result in personal injury or damage to equipment.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. Failure to follow the instructions and precautions listed below could result in personal injury or damage to equipment.

IMPORTANT INFORMATION. PLEASE READ CAREFULLY.

The following information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your 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 Marathon 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.

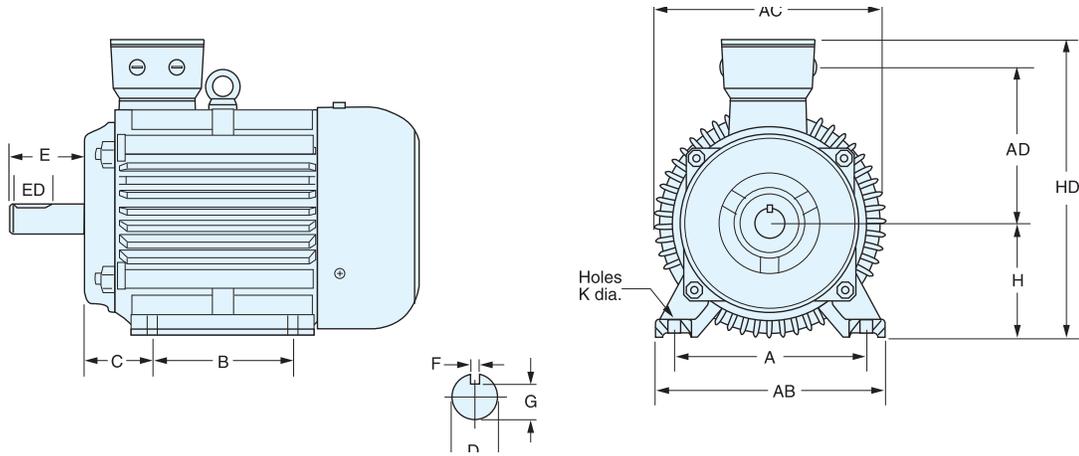
In the event of the resale of any of the goods, in whatever form, Resellers/Buyers will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such sale:

THE MANUFACTURER MAKES NO WARRANTY 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 Marathon.

DIMENSIONAL DRAWINGS

AC METRIC (IEC®) MOTORS B3 FOOT-MOUNTED

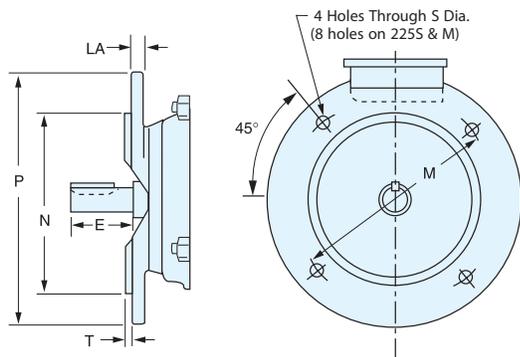


METRIC (IEC) FRAME DIMENSIONS (MILLIMETERS)

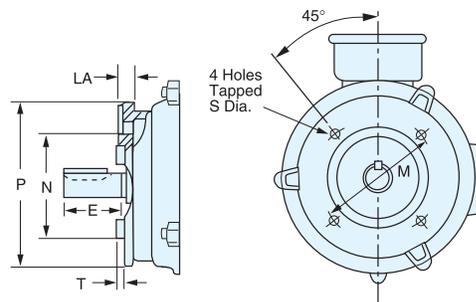
| FRAME | MOUNTING | | | | | | SHAFT | | | | | GENERAL | | | B5 (FF) FLANGE | | | | | B14 (FT) FACE | | | | | | | |
|--------|----------|-----|-----|-----|-----|----|--------|----------|--------|--------|----------|----------|-----|-----|----------------|-----|-----|-----|----|---------------|----|-----|-----|-----|-----|-----|----|
| | A | B | C | H | AB | K | D | E | F | G | ED | DH | AC | AD | HD | M | N | P | S | T | LA | M | N | P | S | T | LA |
| DF100L | 160 | 140 | 63 | 100 | 205 | 12 | 28 | 60 | 8 | 24.0 | 40 | M10 x 22 | 205 | 130 | 270 | 215 | 180 | 250 | 15 | 4.0 | 11 | 130 | 110 | 160 | M8 | 3.5 | 14 |
| DF112M | 190 | 140 | 70 | 112 | 230 | 12 | 28 | 60 | 8 | 24.0 | 40 | M10 x 22 | 240 | 150 | 300 | 215 | 180 | 250 | 15 | 4.0 | 12 | 130 | 110 | 160 | M8 | 3.5 | 11 |
| DF132S | 216 | 140 | 89 | 132 | 270 | 12 | 38 | 80 | 10 | 33.0 | 56 | M12 x 28 | 275 | 180 | 345 | 265 | 230 | 300 | 15 | 4.0 | 12 | 165 | 130 | 200 | M10 | 3.5 | 14 |
| DF132M | 216 | 178 | 89 | 132 | 270 | 12 | 38 | 80 | 10 | 33.0 | 56 | M12 x 28 | 275 | 180 | 345 | 265 | 230 | 300 | 15 | 4.0 | 12 | 165 | 130 | 200 | M10 | 3.5 | 14 |
| DF160M | 254 | 210 | 108 | 160 | 320 | 15 | 42 | 110 | 12 | 37.0 | 80 | M16 x 36 | 330 | 210 | 420 | 300 | 250 | 350 | 19 | 5.0 | 13 | 215 | 180 | 250 | M12 | 4.0 | 13 |
| DF160L | 254 | 254 | 108 | 160 | 320 | 15 | 42 | 110 | 12 | 37.0 | 80 | M16 x 36 | 330 | 210 | 420 | 300 | 250 | 350 | 19 | 5.0 | 13 | 215 | 180 | 250 | M12 | 4.0 | 13 |
| DF180M | 279 | 241 | 121 | 180 | 355 | 15 | 48 | 110 | 14 | 42.5 | 80 | M16 x 36 | 360 | 236 | 455 | 300 | 250 | 350 | 19 | 5.0 | 15 | - | - | - | - | - | - |
| DF180L | 279 | 279 | 121 | 180 | 355 | 15 | 48 | 110 | 14 | 42.5 | 80 | M16 x 36 | 360 | 236 | 455 | 300 | 250 | 350 | 19 | 5.0 | 15 | - | - | - | - | - | - |
| DF200L | 318 | 305 | 133 | 200 | 395 | 19 | 55 | 110 | 16 | 49.0 | 100 | M20 x 42 | 420 | 260 | 505 | 350 | 300 | 400 | 19 | 5.0 | 18 | - | - | - | - | - | - |
| DF225S | 356 | 286 | 149 | 225 | 435 | 19 | 55•/60 | 110•/140 | 16•/18 | 49•/53 | 100•/125 | M20 x 42 | 450 | 275 | 580 | 400 | 350 | 450 | 19 | 5.0 | 18 | - | - | - | - | - | - |
| DF225M | 356 | 311 | 149 | 225 | 435 | 19 | 55•/60 | 110•/140 | 16•/18 | 49•/53 | 100•/125 | M20 x 42 | 450 | 275 | 580 | 400 | 350 | 450 | 19 | 5.0 | 18 | - | - | - | - | - | - |
| DF250M | 406 | 349 | 168 | 250 | | 24 | 60•/65 | 140•/140 | 18•/18 | 53•/58 | 125•/125 | M20 x 42 | 508 | 300 | 625 | - | - | - | - | - | - | - | - | - | - | - | - |

♦ 2 Pole Dimensions

For overall length dimensions for our IEC motors, please refer to our IEC motor section of this catalog. Frames DF100L through DF132M, conduit box is located in the center of the frame.



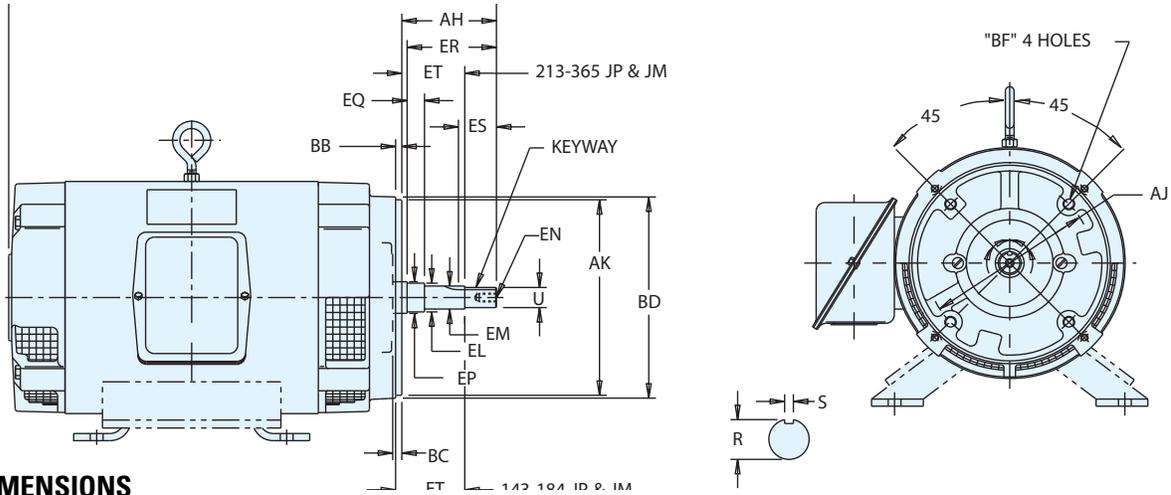
B5 FLANGE



B14 FLANGE

DIMENSIONAL DRAWINGS

DEFINITE PURPOSE - CLOSE COUPLED PUMP MOTORS



TYPE JM DIMENSIONS

| FRAME | U | AH | AJ | AK | BB | BD Max. | BF | | | EL | EM | Tap Size | EN | | EP Min. | EQ | ER Min. | Keyseat | | | |
|-------|--------|-------|-------|--------|-------|---------|-----|-------------|------------------|-------|--------|----------|----------------------|------------------|---------|-------|---------|---------|---------|-------|-------|
| | | | | | | | No. | BF Tap Size | Bolt Pen. Allow. | | | | Tap Drill Depth Max. | Bolt Pen. Allow. | | | | R | ES Min. | S | ET |
| 182 | 0.8745 | 4.13 | 5.89 | 4.500 | 0.16 | 6.62 | 4 | 3/8-16 | 0.56 | 1.250 | 1.0000 | 3/8-16 | 1.12 | 0.75 | 1.250 | 0.640 | 4.25 | 0.771 | 1.65 | 0.190 | 2.890 |
| 184JM | 0.8740 | 4.09 | 5.86 | 4.497 | 0.125 | | | | | 1.248 | 0.9995 | | | | | 0.610 | | 0.756 | | 0.188 | 2.860 |
| 213 | 0.8750 | 4.25 | 7.265 | 8.500 | 0.312 | 9.00 | 4 | 1/2-13 | 0.75 | 1.250 | 1.0000 | 3/8-16 | 1.12 | 0.75 | 1.750 | 0.640 | 4.25 | 0.771 | 1.65 | 0.190 | 2.890 |
| 215JM | 0.8745 | | 7.235 | 8.497 | 0.250 | | | | | 1.248 | 0.9995 | | | | | 0.610 | | 0.756 | | 0.188 | 2.860 |
| 254 | 1.2495 | 5.25 | 7.250 | 8.500 | 0.312 | 10.00 | 4 | 1/2-13 | 0.75 | 1.750 | 1.3750 | 1/2-13 | 1.50 | 1.00 | 1.750 | 0.640 | 5.25 | 1.112 | 2.53 | 0.252 | 3.015 |
| 256JM | 1.2490 | | | 8.497 | 0.250 | | | | | 1.748 | 1.3745 | | | | | 0.610 | | 1.097 | | 0.250 | 2.985 |
| 284 | 1.2495 | 5.281 | 11.00 | 12.500 | 0.312 | 14.00 | 4 | 5/8-11 | 0.94 | 1.750 | 1.3750 | 1/2-13 | 1.50 | 1.00 | 2.125 | 0.645 | 5.25 | 1.112 | 2.53 | 0.252 | 3.020 |
| 286JM | 1.2490 | 5.219 | | 12.495 | 0.250 | | | | | 1.748 | 1.3745 | | | | | 0.605 | | 1.097 | | 0.250 | 2.980 |
| 324 | 1.2495 | 5.281 | 11.00 | 12.500 | 0.312 | 14.00 | 4 | 5/8-11 | 0.94 | 1.750 | 1.3750 | 1/2-13 | 1.50 | 1.00 | 2.125 | 0.645 | 5.25 | 1.112 | 2.53 | 0.252 | 3.020 |
| 326JM | 1.2490 | 5.219 | | 12.495 | 0.250 | | | | | 1.478 | 1.3745 | | | | | 0.605 | | 1.097 | | 0.250 | 2.980 |

TYPE JP DIMENSIONS

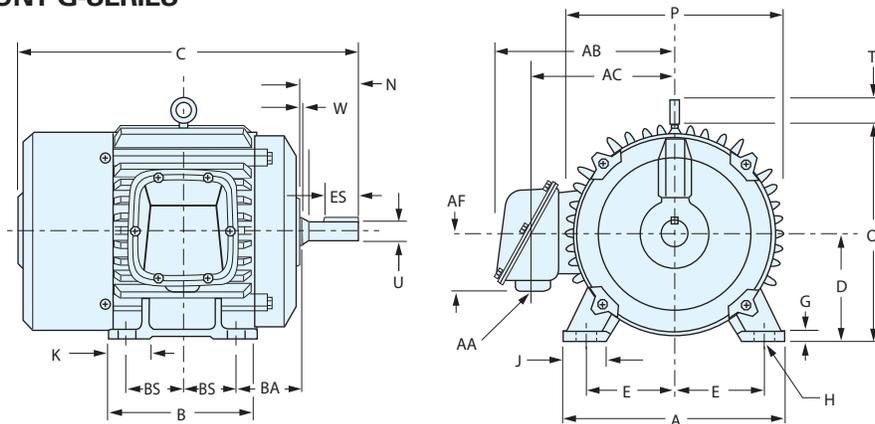
| FRAME | U | AH | AJ | AK | BB | BD Max. | BF | | | EL | EM | Tap Size | EN | | EP Min. | EQ | ER Min. | Keyseat | | | |
|-------|--------|-------|-------|--------|-------|---------|-----|-------------|------------------|-------|--------|----------|----------------------|------------------|---------|-------|---------|---------|---------|-------|-------|
| | | | | | | | No. | BF Tap Size | Bolt Pen. Allow. | | | | Tap Drill Depth Max. | Bolt Pen. Allow. | | | | R | ES Min. | S | ET |
| 182 | 0.8745 | 7.21 | 5.890 | 4.500 | 0.156 | 6.62 | 4 | 3/8-16 | 0.56 | 1.250 | 1.0000 | 3/8-16 | 1.12 | 0.75 | 1.250 | 1.578 | 7.312 | 0.771 | 1.65 | 0.190 | 5.952 |
| 184JP | 0.8740 | 7.15 | 5.860 | 4.497 | 0.100 | | | | | 1.248 | 0.9995 | | | | | 1.548 | | 0.756 | | 0.188 | 5.922 |
| 213 | 1.2495 | 8.12 | 7.250 | 8.500 | 0.312 | 9.00 | 4 | 1/2-13 | 0.75 | 1.750 | 1.3750 | 1/2-13 | 1.50 | 1.00 | 1.750 | 2.390 | 8.125 | 1.112 | 2.53 | 0.252 | 5.890 |
| 215JP | 1.2490 | | | 8.497 | 0.250 | | | | | 1.748 | 1.3745 | | | | | 2.360 | | 1.097 | | 0.250 | 5.860 |
| 254 | 1.2495 | 8.156 | 7.250 | 8.500 | 0.312 | 10.00 | 4 | 1/2-13 | 0.75 | 1.750 | 1.3750 | 1/2-13 | 1.50 | 1.00 | 1.750 | 2.390 | 8.125 | 1.112 | 2.53 | 0.252 | 5.890 |
| 256JP | 1.2490 | 8.094 | | 8.497 | 0.250 | | | | | 1.748 | 1.3745 | | | | | 2.360 | | 1.097 | | 0.250 | 5.855 |
| 284 | 1.2495 | 8.156 | 11.00 | 12.500 | 0.312 | 14.00 | 4 | 5/8-11 | 0.94 | 1.750 | 1.3750 | 1/2-13 | 1.50 | 1.00 | 2.125 | 2.390 | 8.125 | 1.112 | 2.53 | 0.252 | 5.895 |
| 286JP | 1.2490 | 8.094 | | 12.495 | 0.250 | | | | | 1.748 | 1.3745 | | | | | 2.360 | | 1.097 | | 0.250 | 5.860 |
| 324JP | 1.2495 | 8.12 | 11.00 | 12.500 | 0.312 | 14.00 | 4 | 5/8-11 | 0.94 | 1.750 | 1.3750 | 1/2-13 | 1.50 | 1.00 | 2.125 | 2.395 | 8.125 | 1.112 | 2.53 | 0.252 | 5.895 |
| 326JP | 1.2490 | | | 12.495 | 0.250 | | | | | 1.748 | 1.3745 | | | | | 2.355 | | 1.097 | | 0.250 | 5.855 |
| 364JP | 1.6245 | 8.12 | 11.00 | 12.500 | 0.312 | 14.00 | 4 | 5/8-11 | 0.94 | 2.125 | 1.7500 | 1/2-13 | 1.50 | 1.00 | 2.500 | 2.395 | 8.125 | 1.416 | 2.53 | 0.377 | 5.895 |
| 365JP | 1.6240 | | | 12.495 | 0.250 | | | | | 2.13 | 1.7495 | | | | | 2.355 | | 1.401 | | 0.375 | 5.855 |

All dimensions are measured in inches. For "C" dimensions, refer to the appropriate catalog page. Certified drawings are available upon request, contact Marathon Electric for details.

DIMENSIONAL DRAWINGS

NEMA®* EXPLOSION PROOF

RIGID MOUNT G-SERIES



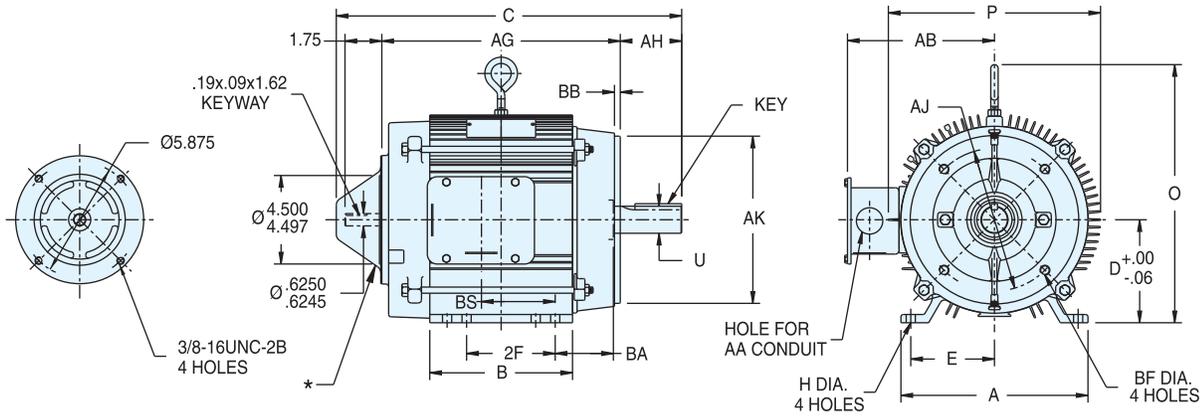
NEMA EXPLOSION-PROOF, RIGID MOUNT DIMENSIONS (INCHES)

| FRAME | A | B | D | E | 2F♦ | G | H | J | K | N | O | P | T | U | N-W | ES | AA | AB | AC | AF | BA | BS | KEY | C Dim | | | |
|-------|-------|-------|-------|------|-------|------|-----------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 182T | 8.88 | 7.75 | — | 3.75 | 6.75 | 0.45 | 0.41-0.46 | 1.56 | — | 2.78 | 9.36 | 9.76 | 2.62 | 1.125 | 2.75 | 1.75 | 0.75 | 9.73 | 7.13 | — | 2.75 | 3.37 | 0.25 | 17.12 | | | |
| 184T | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 213T | 10.38 | 8.50 | 5.19 | 4.25 | 7.00 | 0.60 | 0.44 | 1.87 | — | 3.41 | 10.60 | 11.50 | 2.62 | 1.375 | 3.38 | 2.38 | 0.75 | 10.94 | 8.32 | 2.55 | 3.50 | 3.50 | 0.31 | 20.18 | | | |
| 215T | | | 5.25 | | | | | | | | | | | | | | | | | | | | | | | | |
| 254T | 12.12 | 10.25 | 6.19 | 5.00 | 8.25 | 0.55 | 0.53-0.58 | 2.08 | — | 4.19 | 14.07 | 14.12 | — | 1.625 | 4.00 | 2.88 | 1.25 | 13.67 | 10.65 | 3.12 | 4.25 | 4.12 | 0.38 | 23.52 | | | |
| 256T | | | 6.25 | | | | | | | | | | | | | | | | | | | 10.00 | | 5.00 | 5.00 | 5.00 | |
| 284T | 13.00 | 11.50 | 6.94 | 5.50 | 9.50 | 0.88 | 0.53-0.58 | 2.50 | 2.50 | 4.81 | 14.74 | 15.50 | 3.25 | 1.875 | 4.62 | 3.25 | 1.50 | 15.33 | 11.44 | 5.38 | 4.75 | 4.75 | 0.50 | 26.30 | | | |
| 284TS | | | | | | | | | | | | | | 1.625 | | 1.88 | | | | | | 0.38 | 24.94 | | | | |
| 286T | | | | | | | | | | | | | | 4.81 | | 1.875 | | | | | | 3.25 | 0.50 | 27.80 | | | |
| 286TS | | | | | | | | | | | | | | 3.44 | | 1.625 | | | | | | 1.88 | 0.38 | 26.44 | | | |
| 324T | 15.75 | 13.00 | 7.94 | 6.25 | 10.50 | 0.86 | 0.66-0.71 | 3.50 | — | 5.50 | 17.10 | 16.00 | 3.25 | 2.125 | 5.25 | 3.88 | 2.00 | 16.50 | 12.64 | 5.38 | 5.25 | 5.25 | 0.50 | 28.87 | | | |
| 324TS | | | | | | | | | | | | | | 4.00 | 3.75 | 2.00 | | | | | | 0.38 | 27.37 | | | | |
| 326T | | | | | | | | | | | | | | 5.50 | 2.125 | 5.25 | | | | | | 3.88 | 0.50 | 30.37 | | | |
| 326TS | | | | | | | | | | | | | | 4.00 | 1.875 | 3.75 | | | | | | 2.00 | 0.38 | 28.87 | | | |
| 364T | 17.75 | 13.25 | 8.94 | 7.00 | 11.25 | 1.12 | 0.66-0.71 | 4.00 | 3.25 | 6.12 | 19.00 | 20.00 | 3.62 | 2.375 | 5.88 | 4.24 | 2.50 | 19.75 | 14.50 | 5.38 | 5.88 | 5.62 | 0.62 | 31.50 | | | |
| 364TS | | | | | | | | | | | | | | 4.00 | 3.75 | | | | | | | 0.38 | | 29.38 | | | |
| 365T | | | | | | | | | | | | | | 6.12 | 2.375 | | | | | | | 5.88 | | 0.38 | 32.50 | | |
| 365TS | | | | | | | | | | | | | | 4.00 | 1.875 | | | | | | | 3.75 | | 0.38 | 30.38 | | |
| 405T | 19.25 | 16.25 | — | 8.00 | 13.75 | 1.12 | 0.81-0.86 | 4.25 | 3.75 | 7.50 | 20.87 | 21.75 | 3.62 | 2.875 | 7.25 | 5.62 | 2.50 | 21.50 | 16.38 | 5.38 | 6.62 | 6.88 | 0.75 | 37.12 | | | |
| 405TS | | | | | | | | | | 4.50 | | | | 2.125 | 4.25 | 2.75 | | | | | | 0.50 | 34.12 | | | | |
| 444T | 21.50 | 18.00 | 10.94 | 9.00 | 14.50 | 1.25 | 0.81-0.86 | 3.75 | 4.50 | 8.75 | 23.12 | 24.25 | 3.62 | 3.375 | 8.50 | 6.88 | 2.50 | 22.75 | 17.50 | 5.38 | 7.50 | 7.25 | 0.88 | 41.25 | | | |
| 444TS | | | | | 5.00 | | | | | 2.375 | | | | 4.75 | 3.00 | 0.62 | | | | | | 37.50 | | | | | |
| 445T | | | | | 8.75 | | | | | 2.375 | | | | 8.50 | 6.88 | 0.38 | | | | | | 43.19 | | | | | |
| 445TS | | 5.00 | 2.375 | 4.75 | 3.00 | 0.62 | | | 39.44 | | | | | | | | | | | | | | | | | | |
| 449T | | 28.25 | — | — | 25.00 | 1.25 | | | — | — | 9.88 | 8.75 | 24.19 | 26.31 | 0.77 | 3.375 | 8.50 | 6.88 | 3.00 | 27.24 | | 20.06 | 6.18 | — | 8.25 | 0.88 | 51.69 |
| 449TS | | | | | | | | | | | | 5.00 | | | | 2.375 | 4.75 | 3.00 | | | | | | | 0.62 | 47.97 | |

♦ 182-4T and 213-5T frames have eight-hole bases. 449T and TS frames have six-hole bases. Others have four-hole bases.

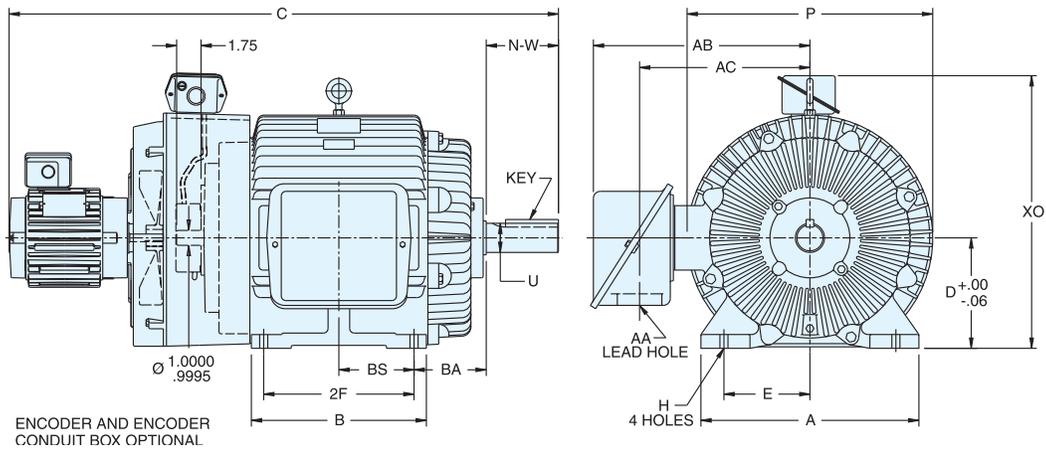
DIMENSIONAL DRAWINGS

BLACKMAX® INVERTER DUTY MOTORS



TENV, C-FACE, RIGID BASE DIMENSIONS (INCHES)

| FRAME | D | E | 2F | H | O MAX. | P MAX | U | AA | AB MAX | AG MAX | AH | AJ | AK | BA | BB | BF | BS | KEY |
|-------|------|------|-------|------|--------|-------|-------|------|--------|--------|------|-------|-------|------|------|--------|------|------------------|
| 182TC | 4.50 | 3.75 | 4.50 | .41 | 9.36 | 9.76 | 1.125 | 1.09 | 8.08 | 11.75 | 2.62 | 7.250 | 8.50 | 3.50 | .27 | 1/2-13 | 2.25 | .25 x .25 x 1.75 |
| 184TC | 4.50 | 3.75 | 5.50 | .41 | 9.36 | 9.76 | 1.125 | 1.09 | 8.08 | 12.75 | 2.62 | 7.250 | 8.50 | 3.50 | .27 | 1/2-13 | 2.75 | .25 x .25 x 1.75 |
| 213TC | 5.25 | 4.25 | 5.50 | .44 | 10.97 | 11.50 | 1.375 | 1.09 | 9.31 | 15.12 | 3.12 | 7.250 | 8.50 | 4.25 | .27 | 1/2-13 | 3.50 | .31 x .31 x 2.38 |
| 215TC | 5.25 | 4.25 | 7.00 | .44 | 10.97 | 11.50 | 1.375 | 1.09 | 9.31 | 17.31 | 3.12 | 7.250 | 8.50 | 4.25 | .27 | 1/2-13 | 6.18 | .31 x .31 x 2.38 |
| 254TC | 6.25 | 5.00 | 8.25 | .53 | 14.09 | 14.27 | 1.625 | 1.25 | 9.83 | 19.06 | 3.75 | 7.250 | 8.50 | 4.75 | .27 | 1/2-13 | 6.31 | .38 x .38 x 2.88 |
| 256TC | 6.25 | 5.00 | 10.00 | .56 | 14.09 | 14.27 | 1.625 | 1.25 | 11.08 | 18.82 | 3.75 | 7.250 | 8.50 | 4.75 | .27 | 1/2-13 | 5.00 | .38 x .38 x 2.88 |
| 284TC | 7.00 | 5.50 | 9.50 | 0.56 | 14.16 | 14.32 | 1.875 | 1.50 | 12.31 | 20.57 | 4.38 | 9.000 | 10.50 | 4.75 | 0.27 | 1/2-13 | 5.50 | .50 x .50 x 3.25 |



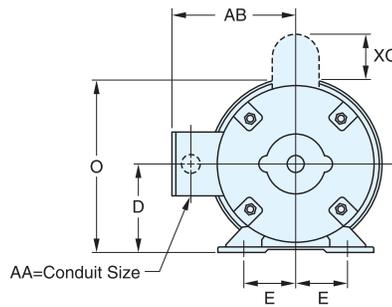
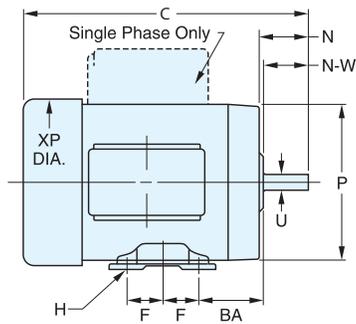
TEBC, TOTALLY ENCLOSED BLOWER COOLED, RIGID BASE DIMENSIONS (INCHES)

| FRAME | D | E | 2F | H | O MAX. | P MAX | U | AA | AB MAX | AC MAX | BA | BS | FU | N-W | KEY |
|-------|-------|------|-------|------|--------|-------|------|------|--------|--------|------|------|------|------|------------------|
| 324T | 8.00 | 6.25 | 10.50 | 0.66 | 16.00 | 15.88 | 2.12 | 2.00 | 13.69 | 10.69 | 5.25 | 5.25 | 1.00 | 5.25 | .50 x .50 x 3.88 |
| 326T | 8.00 | 6.25 | 12.00 | 0.66 | 16.00 | 15.88 | 2.12 | 2.00 | 13.69 | 10.69 | 5.25 | 6.00 | 1.00 | 5.25 | .50 x .50 x 3.88 |
| 364T | 9.00 | 7.00 | 11.25 | 0.66 | 19.00 | 20.00 | 2.38 | 3.62 | 17.85 | 14.56 | 5.88 | 5.62 | 1.00 | 5.88 | .62 x .62 x 4.25 |
| 365T | 9.00 | 7.00 | 12.25 | 0.66 | 19.00 | 20.00 | 2.38 | 3.62 | 17.85 | 14.56 | 5.88 | 6.12 | 1.00 | 5.88 | .62 x .62 x 4.25 |
| 404T | 10.00 | 8.00 | 12.25 | 0.81 | 20.88 | 21.75 | 2.88 | 3.62 | 18.75 | 14.75 | 6.62 | 6.12 | 1.00 | 7.25 | .75 x .75 x 5.62 |
| 405T | 10.00 | 8.00 | 13.75 | 0.81 | 20.88 | 21.75 | 2.88 | 3.62 | 19.75 | 16.25 | 6.62 | 6.88 | 1.00 | 7.25 | .75 x .75 x 5.62 |
| 444T | 11.00 | 9.00 | 14.50 | 0.81 | 24.19 | 25.31 | 3.38 | 3.62 | 20.94 | 17.38 | 7.50 | 7.25 | 1.00 | 8.50 | .88 x .88 x 6.88 |
| 445T | 11.00 | 9.00 | 16.50 | 0.81 | 24.19 | 26.31 | 3.38 | 3.62 | 20.94 | 17.38 | 7.50 | 8.25 | 1.00 | 8.50 | .88 x .88 x 6.88 |
| 449T | 11.00 | 9.00 | 25.00 | 0.81 | 24.22 | 26.31 | 3.38 | 4.62 | 25.90 | 19.31 | 7.50 | 1.78 | 1.00 | 8.50 | .88 x .88 x 6.88 |

DIMENSIONAL DRAWINGS

NEMA®* STEEL FRAME MOTORS

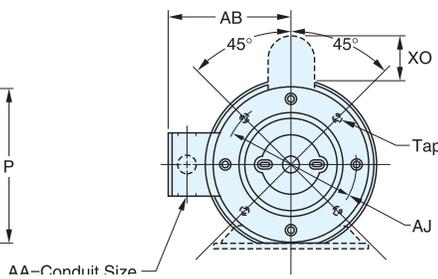
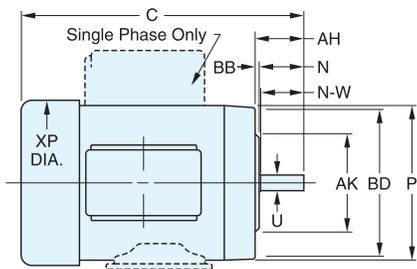
RIGID MOUNT



The condensed dimensions shown on these pages are for general reference only and are not for construction. The overall length or "C" dimension for each catalog item is included in this catalog.

Certified drawings of all ratings are available for construction purposes.

C - FACE



NEMA SHAFT AND KEYWAY DIMENSIONS* (INCHES)

| NEMA SHAFT (U) | KEYWAY DIMENSIONS | | NEMA SHAFT (U) | KEYWAY DIMENSIONS | |
|----------------|-------------------|------|----------------|-------------------|-----|
| | (R) | (S) | | (R) | (S) |
| 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 STEEL FRAME DIMENSIONS (INCHES)

| Frame | D | E | F | H | N | O | P | U | N-W | AA | AB | AH | AJ | AK | BA | BB | BD | XO | XP | TAP ** | KEY |
|-------|-------|-------|-------|--------|-------|--------|---------|-------|-------|-----|---------|-------|-------|-------|-------|-----|-------|-------|----------|----------|------|
| 182T | 4 1/2 | 3 3/4 | 2 3/4 | 1 3/32 | 2 7/8 | 8 3/4 | 8 19/32 | 1 1/8 | 2 3/4 | 3/4 | 6 7/16 | 2 5/8 | 7 1/4 | 8 1/2 | 2 3/4 | 1/4 | 8 7/8 | 2 1/4 | 9 7/32 | 1/2 - 13 | 1/4 |
| 184T | | | 2 3/4 | | | | | | | | | | | | | | | | | | |
| 213T | 5 3/4 | 4 1/4 | 2 3/4 | 13/32 | — | 10 5/8 | 9 21/32 | 1 3/8 | 3 3/8 | 3/4 | 7 19/32 | 3 3/8 | 7 1/4 | 8 1/2 | 3 1/2 | 1/4 | 8 5/8 | 2 1/4 | 10 13/16 | 1/2 - 13 | 5/16 |
| 215T | | | 3 1/2 | | | | | | | | | | | | | | | | | | |

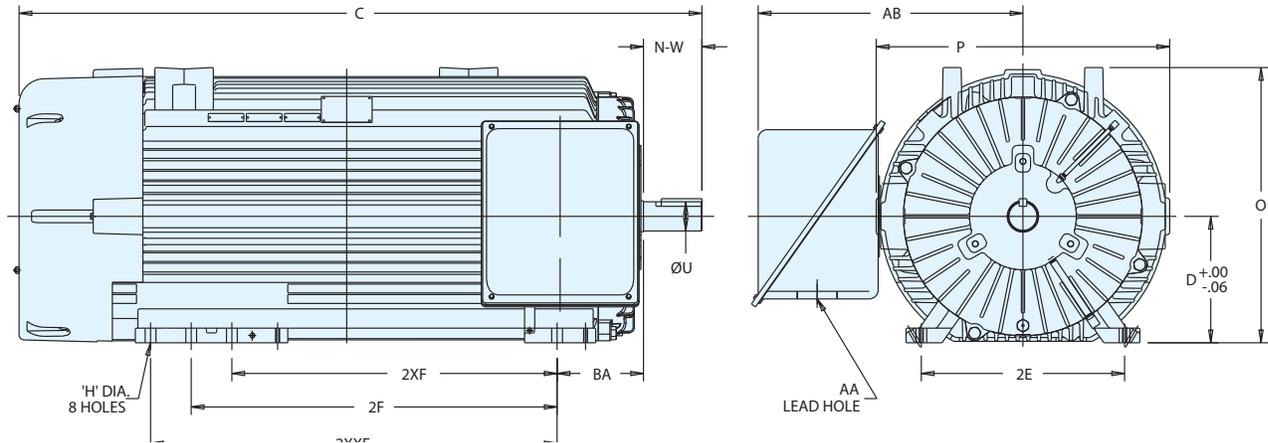
■ 143-5TC NEMA C face BA dimension is 2 3/4". 182-4TC NEMA C face BA dimension is 3 1/2". 213-5TC NEMA C face BA dimension is 4 1/4".

**326TC and smaller have 4 mounting holes in NEMA C face, 364TC and larger have 8 mounting holes.

Blue shading denotes dimensions established by NEMA standard MG1, others are unique to Marathon, and will vary with each manufacturer.

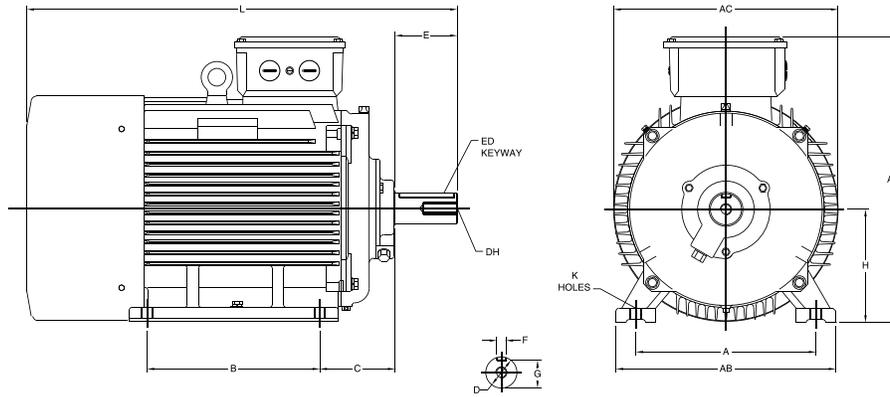
DIMENSIONAL DRAWINGS

5000 FRAME MOTORS



| FRAME | H | BA | 2XF | 2F | 2XXF | N-W | U | AB (MAX.) | P (MAX.) | O (MAX.) | D | 2E | AA |
|--------|-------|------|-------|-------|-------|-------|-------|-----------|----------|----------|--------|-------|----------|
| 5010LS | 1.062 | 8.50 | 32.00 | — | — | 5.75 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5011LS | 1.062 | 8.50 | — | 36.00 | — | 5.75 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5012LS | 1.062 | 8.50 | — | — | 40.00 | 5.75 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5013LS | 1.062 | 8.50 | 45.00 | — | — | 5.75 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5010LX | 1.062 | 8.50 | 32.00 | — | — | 12.00 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5011LX | 1.062 | 8.50 | — | 36.00 | — | 12.00 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5012LX | 1.062 | 8.50 | — | — | 40.00 | 12.00 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5013LX | 1.062 | 8.50 | 45.00 | — | — | 12.00 | 2.875 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.874 | | | | 12.410 | | |
| 5010L | 1.062 | 8.50 | 32.00 | — | — | 9.50 | 4.000 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 3.999 | | | | 12.410 | | |
| 5011L | 1.062 | 8.50 | — | 36.00 | — | 9.50 | 4.000 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 3.999 | | | | 12.410 | | |
| 5012L | 1.062 | 8.50 | — | — | 40.00 | 9.50 | 4.000 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 3.999 | | | | 12.410 | | |
| 5013L | 1.062 | 8.50 | 45.00 | — | — | 9.50 | 4.000 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 3.999 | | | | 12.410 | | |
| 5010S | 1.062 | 8.50 | 32.00 | — | — | 5.75 | 2.625 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.624 | | | | 12.410 | | |
| 5011S | 1.062 | 8.50 | — | 36.00 | — | 5.75 | 2.625 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.624 | | | | 12.410 | | |
| 5012S | 1.062 | 8.50 | — | — | 40.00 | 5.75 | 2.625 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.624 | | | | 12.410 | | |
| 5013S | 1.062 | 8.50 | 45.00 | — | — | 5.75 | 2.625 | 26.05 | 28.88 | 27.08 | 12.470 | 20.00 | 4.00 NPT |
| | 1.077 | | | | | | 2.624 | | | | 12.410 | | |

All dimensions are measured in inches. For "C" dimensions, refer to the appropriate catalog page. Certified drawings are available upon request - contact Marathon Electric for details.

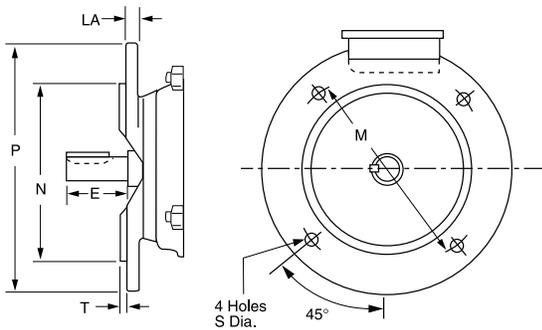


IEC FRAME DIMENSIONS (MILLIMETERS)

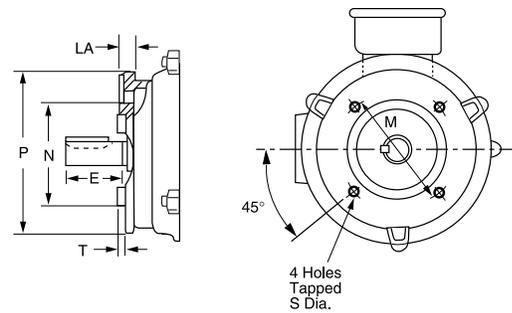
| FRAME | MOUNTING | | | | | | SHAFT | | | | | | GENERAL | | | B5 (FF) FLANGE | | | | | | B14 (FT) FACE | | | | | | | |
|-----------|----------|-----|-----|-----|-----|----|-------|------|-----|------|------|----------|---------|-----|-----|----------------|-----|-----|----|-----|------|----------------------------------|-----|-----|-----|-----|----|--|--|
| | A | B | C | H | AB | K | D | E | F | G | ED | DH | AC | AD | HD | M | N | P | S | T | LA | M | N | P | S | T | LA | | |
| 100L | 160 | 140 | 63 | 100 | 205 | 12 | 28 | 60 | 8 | 24.0 | 40 | M10 x 22 | 215 | 178 | 278 | 215 | 180 | 250 | 15 | 4.0 | 11 | 130 | 110 | 160 | M8 | 3.5 | 14 | | |
| 112M | 190 | 140 | 70 | 112 | 245 | 12 | 28 | 60 | 8 | 24.0 | 40 | M10 x 22 | 220 | 190 | 302 | 215 | 180 | 250 | 15 | 4.0 | 12 | 130 | 110 | 160 | M8 | 3.5 | 11 | | |
| 132S | 216 | 140 | 89 | 132 | 280 | 12 | 38 | 80 | 10 | 33.0 | 56 | M12 x 28 | 275 | 210 | 342 | 265 | 230 | 300 | 15 | 4.0 | 12 | 165 | 130 | 200 | M10 | 3.5 | 14 | | |
| 132M | 216 | 178 | 89 | 132 | 280 | 12 | 38 | 80 | 10 | 33.0 | 56 | M12 x 28 | 275 | 210 | 342 | 265 | 230 | 300 | 15 | 4.0 | 12 | 165 | 130 | 200 | M10 | 3.5 | 14 | | |
| 160M | 254 | 210 | 108 | 160 | 325 | 15 | 42 | 110 | 12 | 37.0 | 80 | M16 x 36 | 325 | 254 | 414 | 300 | 250 | 350 | 19 | 5.0 | 13 | 215 | 180 | 250 | M12 | 4.0 | 13 | | |
| 160L | 254 | 254 | 108 | 160 | 325 | 15 | 42 | 110 | 12 | 37.0 | 80 | M16 x 36 | 325 | 254 | 414 | 300 | 250 | 350 | 19 | 5.0 | 13 | 215 | 180 | 250 | M12 | 4.0 | 13 | | |
| 180M | 279 | 241 | 121 | 180 | 335 | 15 | 48 | 110 | 14 | 42.5 | 80 | M16 x 36 | 360 | 310 | 490 | 300 | 250 | 350 | 19 | 5.0 | 15 | NOT DEFINED BY IEC 72 | | | | | | | |
| 180L | 279 | 279 | 121 | 180 | 335 | 15 | 48 | 110 | 14 | 42.5 | 80 | M16 x 36 | 360 | 310 | 490 | 300 | 250 | 350 | 19 | 5.0 | 15 | | | | | | | | |
| 200L | 318 | 305 | 133 | 200 | 395 | 19 | 55 | 110 | 16 | 49.0 | 100 | M20 x 42 | 400 | 340 | 540 | 350 | 300 | 400 | 19 | 5.0 | 19.5 | | | | | | | | |
| 225S 2P | 356 | 286 | 149 | 225 | 435 | 19 | 55* | 110* | 16* | 49* | 100* | M20 x 42 | 445 | 414 | 639 | 400 | 350 | 450 | 19 | 5.0 | 21.0 | | | | | | | | |
| 225S 4,6P | 356 | 286 | 149 | 225 | 435 | 19 | 60 | 140 | 18 | 53 | 125 | M20 x 42 | 445 | 414 | 639 | 400 | 350 | 450 | 19 | 5.0 | 21.0 | | | | | | | | |
| 225M 2P | 356 | 311 | 149 | 225 | 435 | 19 | 55* | 110* | 16* | 49* | 100* | M20 x 42 | 445 | 414 | 639 | 400 | 350 | 450 | 19 | 5.0 | 21.0 | | | | | | | | |
| 225M 4,6P | 356 | 311 | 149 | 225 | 435 | 19 | 60 | 140 | 18 | 53 | 125 | M20 x 42 | 445 | 414 | 639 | 400 | 350 | 450 | 19 | 5.0 | 21.0 | | | | | | | | |
| 250M 2P | 406 | 349 | 168 | 250 | 490 | 24 | 60* | 140 | 18 | 53* | 125 | M20 x 42 | 500 | 440 | 690 | 400 | 350 | 450 | 19 | 5.0 | 21.0 | | | | | | | | |
| 250M 4,6P | 406 | 349 | 168 | 250 | 490 | 24 | 65 | 140 | 18 | 58 | 125 | M20 x 42 | 500 | 440 | 690 | 400 | 350 | 450 | 19 | 5.0 | 21.0 | | | | | | | | |

* 2 Pole Dimensions

1mm = .03937", 1" = 25.4mm



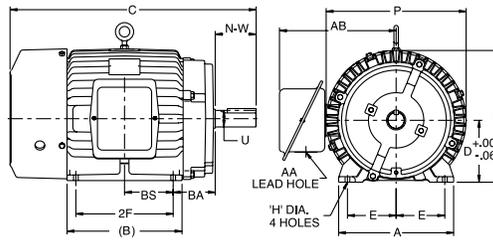
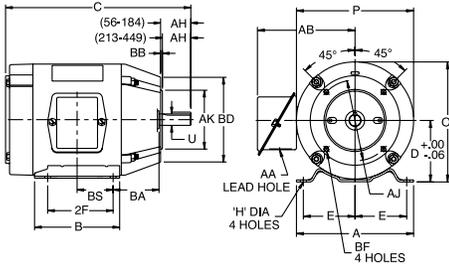
FF Flange B5 Mount



FT Face B14 Mount

NEMA®* QUICK REFERENCE DIMENSIONAL CHART

Typical Rigid Base Motor



Contact your Marathon sales rep.
for "AB", "O", & "P" Dim.

Refer to your Marathon catalog for "C" Dim.

| NEMA C-Face | BA Dim. |
|-------------|---------|
| 182-4TC | 3-1/2 |
| 213-5TC | 4-1/4 |
| 254-6TC | 4-3/4 |

| FRAME | D | E | 2F | H | U | N-W | AA | AH | AJ | AK | BA | BB (MIN) | BD (MAX) | BF |
|-------|-------|------|-------|-----|-------|------|-------|------|--------|--------|------|----------|----------|--------|
| 182 | 4.50 | 3.75 | 4.50 | .41 | .8750 | 2.25 | 3/4 | 2.12 | 5.875 | 4.500 | 2.75 | .13 | 6.50 | 3/8-16 |
| 184 | 4.50 | 3.75 | 5.50 | .41 | .8750 | 2.25 | 3/4 | 2.12 | 5.875 | 4.500 | 2.75 | .13 | 6.50 | 3/8-16 |
| 182T | 4.50 | 3.75 | 4.50 | .41 | 1.125 | 2.75 | 3/4 | 2.62 | 7.250 | 8.500 | 2.75 | .25 | 9.00 | 1/2-13 |
| 184T | 4.50 | 3.75 | 5.50 | .41 | 1.125 | 2.75 | 3/4 | 2.62 | 7.250 | 8.500 | 2.75 | .25 | 9.00 | 1/2-13 |
| 213 | 5.25 | 4.25 | 5.50 | .41 | 1.125 | 3.00 | 1 | 2.75 | 7.250 | 8.500 | 3.50 | .25 | 9.00 | 1/2-13 |
| 215 | 5.25 | 4.25 | 7.00 | .41 | 1.125 | 3.00 | 1 | 2.75 | 7.250 | 8.500 | 3.50 | .25 | 9.00 | 1/2-13 |
| 213T | 5.25 | 4.25 | 5.50 | .41 | 1.375 | 3.38 | 1 | 3.12 | 7.250 | 8.500 | 3.50 | .25 | 9.00 | 1/2-13 |
| 215T | 5.25 | 4.25 | 7.00 | .41 | 1.375 | 3.38 | 1 | 3.12 | 7.250 | 8.500 | 3.50 | .25 | 9.00 | 1/2-13 |
| 254U | 6.25 | 5.00 | 8.25 | .53 | 1.375 | 3.75 | 1-1/4 | 3.50 | 7.250 | 8.500 | 4.25 | .25 | 10.00 | 1/2-13 |
| 256U | 6.25 | 5.00 | 10.00 | .53 | 1.375 | 3.75 | 1-1/4 | 3.50 | 7.250 | 8.500 | 4.25 | .25 | 10.00 | 1/2-13 |
| 254T | 6.25 | 5.00 | 8.25 | .53 | 1.625 | 4.00 | 1-1/4 | 3.75 | 7.250 | 8.500 | 4.25 | .25 | 10.00 | 1/2-13 |
| 256T | 6.25 | 5.00 | 10.00 | .53 | 1.625 | 4.00 | 1-1/4 | 3.75 | 7.250 | 8.500 | 4.25 | .25 | 10.00 | 1/2-13 |
| 284U | 7.00 | 5.50 | 9.50 | .53 | 1.625 | 4.88 | 1-1/2 | 4.62 | 9.000 | 10.500 | 4.75 | .25 | 11.25 | 1/2-13 |
| 286U | 7.00 | 5.50 | 11.00 | .53 | 1.625 | 4.88 | 1-1/2 | 4.62 | 9.000 | 10.500 | 4.75 | .25 | 11.25 | 1/2-13 |
| 284T | 7.00 | 5.50 | 9.50 | .53 | 1.875 | 4.62 | 1-1/2 | 4.38 | 9.000 | 10.500 | 4.75 | .25 | 11.25 | 1/2-13 |
| 286T | 7.00 | 5.50 | 11.00 | .53 | 1.875 | 4.62 | 1-1/2 | 4.38 | 9.000 | 10.500 | 4.75 | .25 | 11.25 | 1/2-13 |
| 284TS | 7.00 | 5.50 | 9.50 | .53 | 1.625 | 3.25 | 1-1/2 | 3.00 | 9.000 | 10.500 | 4.75 | .25 | 11.25 | 1/2-13 |
| 286TS | 7.00 | 5.50 | 11.00 | .53 | 1.625 | 3.25 | 1-1/2 | 3.00 | 9.000 | 10.500 | 4.75 | .25 | 11.25 | 1/2-13 |
| 324U | 8.00 | 6.25 | 10.50 | .66 | 1.875 | 5.62 | 2 | 5.38 | 11.000 | 12.500 | 5.25 | .25 | 14.00 | 5/8-11 |
| 326U | 8.00 | 6.25 | 12.00 | .66 | 1.875 | 5.62 | 2 | 5.38 | 11.000 | 12.500 | 5.25 | .25 | 14.00 | 5/8-11 |
| 324T | 8.00 | 6.25 | 10.50 | .66 | 2.125 | 5.25 | 2 | 5.00 | 11.000 | 12.500 | 5.25 | .25 | 14.00 | 5/8-11 |
| 326T | 8.00 | 6.25 | 12.00 | .66 | 2.125 | 5.25 | 2 | 5.00 | 11.000 | 12.500 | 5.25 | .25 | 14.00 | 5/8-11 |
| 324TS | 8.00 | 6.25 | 10.50 | .66 | 1.875 | 3.75 | 2 | 3.50 | 11.000 | 12.500 | 5.25 | .25 | 14.00 | 5/8-11 |
| 326TS | 8.00 | 6.25 | 12.00 | .66 | 1.875 | 3.75 | 2 | 3.50 | 11.000 | 12.500 | 5.25 | .25 | 14.00 | 5/8-11 |
| 364U | 9.00 | 7.00 | 11.25 | .66 | 2.125 | 6.38 | 2-1/2 | 6.12 | 11.000 | 12.500 | 5.88 | .25 | 14.00 | 5/8-11 |
| 365U | 9.00 | 7.00 | 12.25 | .66 | 2.125 | 6.38 | 2-1/2 | 6.12 | 11.000 | 12.500 | 5.88 | .25 | 14.00 | 5/8-11 |
| 364T | 9.00 | 7.00 | 11.25 | .66 | 2.375 | 5.88 | 2-1/2 | 5.62 | 11.000 | 12.500 | 5.88 | .25 | 14.00 | 5/8-11 |
| 365T | 9.00 | 7.00 | 12.25 | .66 | 2.375 | 5.88 | 2-1/2 | 5.62 | 11.000 | 12.500 | 5.88 | .25 | 14.00 | 5/8-11 |
| 364TS | 9.00 | 7.00 | 11.25 | .66 | 1.875 | 3.75 | 2-1/2 | 3.50 | 11.000 | 12.500 | 5.88 | .25 | 14.00 | 5/8-11 |
| 365TS | 9.00 | 7.00 | 12.25 | .66 | 1.875 | 3.75 | 2-1/2 | 3.50 | 11.000 | 12.500 | 5.88 | .25 | 14.00 | 5/8-11 |
| 404U | 10.00 | 8.00 | 12.25 | .81 | 2.375 | 7.12 | 3 | 6.88 | 11.000 | 12.500 | 6.62 | .25 | 15.50 | 5/8-11 |
| 405U | 10.00 | 8.00 | 13.75 | .81 | 2.375 | 7.12 | 3 | 6.88 | 11.000 | 12.500 | 6.62 | .25 | 15.50 | 5/8-11 |
| 404T | 10.00 | 8.00 | 12.25 | .81 | 2.875 | 7.25 | 3 | 7.00 | 11.000 | 12.500 | 6.62 | .25 | 15.50 | 5/8-11 |
| 405T | 10.00 | 8.00 | 13.75 | .81 | 2.875 | 7.25 | 3 | 7.00 | 11.000 | 12.500 | 6.62 | .25 | 15.50 | 5/8-11 |
| 404TS | 10.00 | 8.00 | 12.25 | .81 | 2.125 | 4.25 | 3 | 4.00 | 11.000 | 12.500 | 6.62 | .25 | 15.50 | 5/8-11 |
| 405TS | 10.00 | 8.00 | 13.75 | .81 | 2.125 | 4.25 | 3 | 4.00 | 11.000 | 12.500 | 6.62 | .25 | 15.50 | 5/8-11 |
| 444U | 11.00 | 9.00 | 14.50 | .81 | 2.875 | 8.62 | 3 | 8.38 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 445U | 11.00 | 9.00 | 16.50 | .81 | 2.875 | 8.62 | 3 | 8.38 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 444T | 11.00 | 9.00 | 14.50 | .81 | 3.375 | 8.50 | 3 | 8.25 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 445T | 11.00 | 9.00 | 16.50 | .81 | 3.375 | 8.50 | 3 | 8.25 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 444TS | 11.00 | 9.00 | 14.50 | .81 | 2.375 | 4.75 | 3 | 4.50 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 445TS | 11.00 | 9.00 | 16.50 | .81 | 2.375 | 4.75 | 3 | 4.50 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 447T | 11.00 | 9.00 | 20.00 | .81 | 3.375 | 8.50 | 3 | 8.25 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 449T | 11.00 | 9.00 | 25.00 | .81 | 3.375 | 8.50 | 3 | 8.25 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 447TS | 11.00 | 9.00 | 20.00 | .81 | 2.375 | 4.75 | 4 NPT | 4.50 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |
| 449TS | 11.00 | 9.00 | 25.00 | .81 | 2.375 | 4.75 | 4 NPT | 4.50 | 14.000 | 16.000 | 7.50 | .25 | 18.00 | 5/8-11 |

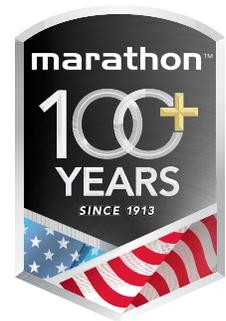


Marathon Electric LLC

100 East Randolph Street
Wausau, WI 54402-8003
Phone: 715-675-3359
Fax: 715-675-8026
www.marathonelectric.com



Sign up to stay updated
with our Industrial motors
news
<http://eepurl.com/iOBkAQ>



The proper selection and application of products and components, including assuring that the product is safe for its intended use, are the responsibility of the customer.

To view our Standard Terms and Conditions of Sale, please visit <https://www.marathonelectric.com> (which may redirect to other website locations based on product family).

The following trademarks or tradenames are owned by or under the control of a thirdparty and are not owned by Marathon Electric LLC: AFBMA, American Bearing Manufacturer's Association; AEGIS, Electro Static Technology; Avtron, Avtron Manufacturing; BEI, Sensata Technologies; Bently-Nevada, Baker Hughes Company; CE, mandatory mark of European Unions; CSA, CSA Group; Dynapar, Danaher Corporation; Exxon Polyrex, Beacon 325 and Mobil Polyrex, Exxon Mobil Corporation; Dow Corning, Dow Silicons Corporation; Ford, Ford Motor Company; Forsheda, Trelleborg Forsheda Sweden AB; General Motors and GM, General Motors Company; IEC, International Electrotechnical Commission; Inpro/Seal and VBX, Dover Corporation; Marley, SPX; Purex Hydrotech; Pentair; Mylar, Du Pont De Nemours and Company Corporation; NEMA and NEMA Premium, National Electrical Manufacturers Association; Northstar, Danaher Corporation; Rust-oleum, Rust-oleum Corporation; UL, Underwriters Laboratories; Viton, Chemours Company.

"Marathon" is not indicative of legal entity. Refer to product purchase documentation for the applicable legal entity. Marathon, Blue Chip Series, Black MAX, Blue MAX, Max Guard, Endurance Series, Globetrotter, Hazardous Duty, MICROMAX, TerraMAX, Wash Down, ControlMAX, PowerWASH and XRI are trademarks of WEG S.A. or one of its affiliated companies.

©2024, 2025 Marathon Electric LLC, All Rights Reserved.

Marketing Form MM-CT2505E-R63 • Form# MB0147E