TOSHIBA

Motors, Drives, Controls & Automation

# 2025 Industrial Catalog



Motors



Drives



Controls & Automation










# Toshiba

## Committed to People, Committed to the Future.

At Toshiba, we commit to raising the quality of life for people around the world, ensuring progress that is in harmony with our planet.

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# About Toshiba International Corporation

Toshiba International Corporation (TIC), based in Houston, Texas, is a member of the Toshiba America Inc. (TAI) Group, a wholly owned subsidiary of Toshiba Corporation. The Motors & Drives Division is a trusted global supplier of low and medium voltage motors, adjustable speed drives, controls, industrial automation solutions, and comprehensive after-market services. We service all industrial markets including oil & gas, power generation, mining, aggregates, HVAC, water/wastewater, pulp & paper, food & beverage, and more.





Toshiba products are renowned for their superior quality, performance, and durability, built to handle the toughest applications across diverse environments. Backed by comprehensive U.S.-based support at every stage – from design and manufacturing to post installation assistance – Toshiba delivers reliable solutions. Additionally, our readily available inventory enables us to minimize downtime during critical shutdowns. For more information about Toshiba, visit www.toshiba.com/tic.

## Disclaimer:

Toshiba has made every effort necessary to ensure the accuracy of the contents in this catalog. However, Toshiba cannot be held liable for errors made from changing models/catalog numbers, or typographical and pictorial errors that may have resulted during the compilation of this catalog. All product data and dimensions provided shall be used for reference only. The weights listed in this catalog are estimated and cannot be guaranteed. Prices are subject to change at any given time without notice.

Toshiba cannot assume responsibility for the selection, installation, operation, and maintenance of our products. Only the purchaser, end user, or a qualified underwriter should identify and select the appropriate product that meets the requirements of the intended application.

# General Product Warranty

## Toshiba General Product Warranty:

Unless a different warranty is stated herein, affixed to the Goods by the manufacturer or Toshiba, or is specified in writing in any maintenance or operating instructions pertaining to such Goods, Toshiba warrants that the Goods sold by Toshiba to Purchaser will be free from defects in materials and workmanship. This warranty shall expire eighteen (18) months after the date on which the Goods are delivered by Toshiba to the initial purchaser or twelve (12) months after the Goods are first placed in operation, whichever period shall first expire. If the Goods fail to conform to the foregoing warranty, Toshiba shall, at its sole discretion, repair, replace or update, free of charge, or refund the purchase price paid for any such nonconforming Goods; provided Purchaser (1) promptly notifies Toshiba in writing of the nonconformity, (2) furnishes Toshiba satisfactory proof thereof, and (3) if requested by Toshiba, returns the nonconforming equipment, part or software to Toshiba and pays all expenses incurred in connection with such return. The repaired, replacement or equipment, part or software, shall be delivered, free of charge, to Purchaser, FCA Toshiba designated facility or at Toshiba's option, FCA a Toshiba authorized service shop, not loaded on truck or other carrier (Incoterms® 2020). Purchaser shall pay all costs following such delivery, including, without limitation, all handling, transportation, assembly, installation, insurance, testing, and inspection charges. The warranty excludes (1) normal wear and tear; (2) Goods that have not been properly stored, assembled, installed, serviced, maintained, operated, or used within the limits of rated capacity and normal usage; (3) Goods not used in accordance with current operating and maintenance instructions furnished by Toshiba, and (4) Goods that have been altered or modified in any manner without the written consent of Toshiba. **THE FOREGOING OBLIGATION TO REPAIR, REPLACE, UPDATE OR REFUND THE PURCHASE PRICE PAID FOR THE GOODS SHALL BE THE SOLE AND EXCLUSIVE REMEDY OF PURCHASER, ITS CUSTOMERS AND USERS OF THE GOODS FOR THE BREACH OF THE FOREGOING WARRANTY. TOSHIBA SHALL HAVE NO OBLIGATION TO DISASSEMBLE ANY NONCONFORMING GOODS OR TO INSTALL ANY REPAIRED OR REPLACEMENT PART, EQUIPMENT OR SOFTWARE OR TO PAY ANY COSTS INCURRED IN CONNECTION WITH SUCH DISASSEMBLY OR INSTALLATION. THERE ARE NO OTHER WARRANTIES AND TOSHIBA HEREBY EXPRESSLY DISCLAIMS ALL OTHER EXPRESS, STATUTORY AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

## Additional Product Specific Warranty:

Please contact Toshiba or your Toshiba Sales Representative.

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# TOSHIBA TRAINING



## Training Programs for Your Industrial Needs

Toshiba offers a wide range of courses designed to address the needs of both new and experienced personnel. These include classes addressing fundamentals of adjustable speed drives and motors, including electronic and electrical theory, as well as classes on commissioning and maintenance for adjustable speed drives and solid-state starters. In-person training combines classroom presentations, demonstrations and hands-on exercises to provide students with a collaborative learning environment.

**Product, Application and Field Service Training**

- Motor and Drive Theory Analysis
- ASD, Motor, and Control Products
- Application-Specific Courses
- Installation, Connections and Programming
- Commissioning and Maintenance
- Product Testing, Troubleshoot and Repair
- Toshiba Factory Training Certification

## Online

Need some product insight? Virtual webinars covering a wide range of topics for motors, ASDs and controls can help with this. Visit our training page to learn more: www.toshiba.com/tic/tools-resources/training

## In-person

Ready to take a deeper dive? Multi-day in-person classes at a Toshiba training facility that include presentations, demonstrations and hands-on learning are a great way to increase your knowledge base. Classes are available in Houston, Texas or Edmonton, Alberta, Canada. Choose from scheduled classes shown on the Field Service Training Calendar (www.toshiba.com/tic/tools-resources/training).

## Customer Site

Logistically impossible to schedule large groups for in-person classes? Toshiba can assist with on-site training opportunities at your location. To request information or to schedule on-site training, please contact us at TIC-Service@toshiba.com.

# Available Classes

## In-Person

### ADJUSTABLE SPEED DRIVES

#### AS3 Troubleshooting & Repair*

Course Certificate

This five-day course provides a working knowledge of Toshiba's AS3 Adjustable Speed Drive (ASD) with comprehensive and hands-on learning teaching methods. Attendees will develop the skills and knowledge to commission, troubleshoot and repair along with preventive maintenance of the equipment using electrical schematics, installation and operation manuals and approved testing methods.

**Course Audience:** Toshiba Field Service Engineers/Technicians, TIC Authorized Service Providers, I&E Technicians and Electricians.

**Prerequisites:** Successful completion of the Basic Motors & Drives and the Basic Electronics & Electricity Courses.

**Tuition:** $4,500 per person

#### Plus Pack Troubleshooting & Repair*

Course Certificate

This five-day course provides a working knowledge of Toshiba's HX7+D Adjustable Speed Drive (ASD) with comprehensive and hands-on learning teaching methods. Attendees will develop the skills and knowledge to commission, troubleshoot and repair along with preventive maintenance of the equipment using electrical schematics, installation and operation manuals and approved testing methods.

**Course Audience:** Toshiba Field Service Engineers/Technicians, TIC Authorized Service Providers, I&E Technicians and Electricians.

**Prerequisites:** Successful completion of the Basic Motors & Drives and the Basic Electronics & Electricity Courses plus working knowledge/experience of working with adjustable speed drives

**Tuition:** $5,600 per person

**Safety requirements:*

*1. NFPA 70E – Electrical Safety and Arc Flash Training (or country of operation equivalent)*

*2. CPR and AED training from either American Heart Association or American Red Cross (or country of operation equivalent)*

*3. OSHA 10 – hold a current OSHA 10-hour course card (or country of operation equivalent)*

#### W7/HX7 Troubleshooting & Repair*

Course Certificate

This five-day course provides a working knowledge of Toshiba's W7 and HX7 Adjustable Speed Drives (ASD) with comprehensive and hands-on learning teaching methods. Attendees will develop the skills and knowledge to commission, troubleshoot and repair along with preventive maintenance of the equipment using electrical schematics, installation and operation manuals and approved testing methods.

**Course Audience:** Toshiba Field Service Engineers/Technicians, TIC Authorized Service Providers, I&E Technicians and Electricians.

**Prerequisites:** Successful completion of the Basic Motors & Drives and the Basic Electronics & Electricity Courses.

**Tuition:** $4,500 per person

#### G9/H9/P9/Q9/AS1 Troubleshooting & Repair*

Course Certificate

This five-day course provides a working knowledge of Toshiba's G9, H9, Q9, P9, and AS1 Adjustable Speed Drives (ASD) with comprehensive and hands-on learning teaching methods. Attendees will develop the skills and knowledge to commission, troubleshoot and repair along with preventive maintenance of the equipment using electrical schematics, installation and operation manuals and approved testing methods.

**Course Audience:** Toshiba Field Service Engineers/Technicians, TIC Authorized Service Providers, I&E Technicians and Electricians.

**Prerequisites:** Successful completion of the Basic Motors & Drives and the Basic Electronics & Electricity Courses.

**Tuition:** $4,500 per person

# Available Classes (Cont.)

### Service Introduction to Medium Voltage Drives
Course Certificate

This three-day course provides a combination of instructor-led presentations and hands-on lab exercises are used to cover the operation, maintenance, and basic troubleshooting processes associated with the T300MVi®/MV2®/MTX®/MTX2® Adjustable Speed Drives.

**Course Audience:** Distributors, Sales Representatives, Customers, End User Technicians and Operators

**Prerequisites**: None

**Tuition:** $4,500 per person

## MOTORS

### Motor Basics
Course Certificate

Gain basic knowledge of the electric motors including how to evaluate and identify the common types of motors, mechanical considerations, as well as application basics that will explain the compatibility of the motor with the user application. Motor manufacturing plant tour included.

**Course Audience:** Distributors, Sales Representatives, Customers, End User Technicians and Operators

**Prerequisites**: None

**Tuition:** None

### Intermediate Motor Training
Course Certificate

Gain a more advanced knowledge of the electric motors including motor performance, power supply, motor testing and how to startup and maximize motor life.

**Course Audience:** Distributors, Sales Representatives, Customers, End User Technicians and Operators

**Prerequisites**: None

**Tuition:** None

## Online

### Basic Electricity and Electronics
Course Certificate

Self-paced course provides knowledge of basic electrical theory. Topics include Ohm's Law, AC and DC Current and Voltages, Power, Power Factor, Frequency, Phase Relationships, Transformers, Electrical Distribution Systems, Electrical Components, Power Supplies, Relays and Contactors, Timers, and Temperature Detectors.

**Course Audience:** Students who want to enhance and/or want to refresh their skills in understanding basic electrical knowledge of industrial power applications.

**Prerequisites:** None

**Tuition:** $825 per person

### Basic Motors & Adjustable Speed Drives
Course Certificate

Self-paced course provides knowledge of basic motor and Adjustable Speed Drive (ASD) theory with application emphasis on Pulse Width Modulation (PWM) drives. Students will cover information about items such as magnetism, electromagnetic induction, EMF, Ohm's law, AC Induction Motors, Volts per Hertz curves, Bridge Rectifiers, Capacitor Banks, and IGBT Inverters.

**Course Audience:** Students who are new and/or wanting to refresh their skills in understanding basic motors and adjustable speed drives in industrial power applications.

**Prerequisites**: None

**Tuition:** $825 per person

# PRODUCT WARRANTY

## Low Voltage Motor and Adjustable Speed Drives Package

## Extended Warranty Program

Toshiba International Corporation's standard warranty applies with respect to all low voltage motors ("LVM") and low voltage adjustable speed drives (each such drive, an "ASD") purchased from Toshiba unless 1) Toshiba has offered a different warranty that has been accepted by its customer in writing or 2) a Toshiba customer has purchased a LVM-ASD package and met all of the requirements set forth herein in accordance with the provisions below.

## Extended Package Warranties

Extended Package Warranties (as such term is hereinafter defined) may apply to LVMs and certain ASDs purchased for use together (a "Package") by North American customers, including authorized Toshiba distributors (each, a "Customer"), subject to the limitations set forth herein 1,2. The Extended Package Warranty shall apply only to parts and labor.

When a LVM and ASD are purchased (whether separately or together) and used together, the warranty period applicable to the ASD will be extended to match the LVM's warranty period up to a maximum of three years ("Extended Package Warranty")3. Except as otherwise provided herein, the Customer purchasing the LVM and/or ASD should submit the request form on the following page ("Request Form") to either the Toshiba LVM Motor or ASD Marketing department within sixty (60) days of the date of its invoice from Toshiba.

For Packages shipped from stock of an authorized Toshiba distributor ("Distributor") or purchased by a Distributor on separate purchase orders, the Distributor must request approval of an Extended Package Warranty by submitting the Request Form to either the Toshiba LVM Motor or ASD Marketing department within sixty (60) days of the date of such Distributor's invoice to its customer.

When only one component of a Package (i.e. either the LVM or ASD) was purchased from a Distributor, and the other component was purchased directly from Toshiba or from another Toshiba-authorized source of supply, the Distributor is responsible for completing applicable portions of the Request Form and providing this to its customer, who must submit a complete Request Form to either the Toshiba LVM or ASD Marketing Department at the applicable email address below within sixty (60) days of the date of such Distributor's invoice to its customer. The applicable product manager(s) will then conduct a specific case-by-case evaluation with respect to approval of an Extended Package Warranty.

## ASD & Controls Extended Warranty — Adders (Cont.)

Extended warranties are also available from Toshiba as adders. The extended warranty must be on the same purchase order with the covered equipment. The adders are listed below:

| Two-Year Warranty | | Three-Year Warranty | | Four-Year Warranty | | Five-Year Warranty | |
|---|---|---|---|---|---|---|---|
| Parts Only | 2% | Parts Only | 5% | Parts Only | 8% | Parts Only | 16% |
| Parts & Labor | 4% | Parts & Labor | 10% | Parts & Labor | 16% | Parts & Labor | 32% |

Example: If total equipment price is $30,000 and a four-year parts labor warranty is required, multiply $30,000 by 0.16, which equals $4,800. Added to the original amount, the total order would equal $34,800.

For Toshiba's Standard Terms and Conditions of Sale, please refer to our website at https://www.toshiba.com/tic/cms_files/TCofSale.pdf for more details.

# PRODUCT WARRANTY

## Medium Voltage Motor, Drives and Controls Package

## Extended Warranty Program

Toshiba International Corporation's standard warranty applies with respect to all medium voltage motors ("MVM"), medium voltage drives (each such drive, a "MVD") and/or medium voltage controls ("Controls") purchased from Toshiba International Corporation ("TIC") unless 1) TIC has offered a different warranty that has been accepted by its customer in writing or 2) a TIC customer has purchased an MVM-MVD, MVM-Controls or MVM-MVD-Controls package and met all of the requirements set forth herein in accordance with the provisions below.

## Extended Package Warranties

Extended Package Warranties (as such term is hereinafter defined) may apply to MVMs, MVDs and/or Controls purchased from TIC for use together (a "Package") by TIC customers, including authorized TIC distributors (each, a "Customer"), subject to the limitations set forth herein. The Extended Package Warranty shall apply only to parts and labor.

When an MVM, MVD and/or Controls are purchased (whether separately or together) and used together, the warranty period applicable to the MVD and/or Controls, as applicable will be extended as follows ("Extended Package Warranty").

| Package | Extended Warranty Period for Each Product |
|---|---|
| MVM-MVD | 3 Years |
| MVM-Controls | 2 Years |
| MVM-MVD-Controls | 3 Years |

ASD, Control, and Motor Products TIC-Service@toshiba.com

For Toshiba's Standard Terms and Conditions of Sale, please refer to our website at https://www.toshiba.com/tic/cms_files/TCofSale.pdf for more details.

# Toshiba Motors

## MOTORS BUILT TO WITHSTAND VIRTUALLY ANY INDUSTRY AND APPLICATION

Toshiba is a leading manufacturer of low voltage motors from ½ to 800 HP and 230 to 575 V and medium voltage motors from 100 to 50,000 HP and 2,300 to 13,800 V. Known for their quality, performance, and reliability, Toshiba motors are a preferred choice in the most demanding applications. With decades of experience, our US-based support team is a knowledgeable partner in providing customer-centric solutions. The large installed base across diverse industries demonstrates customers' confidence in Toshiba motors and service.



# General Purpose TEFC

## EQP Global® SD Motor Series

The Toshiba EQP Global® Severe Duty (SD) motor series is engineered to excel in a wide range of general-purpose industrial applications. It features a robust, totally enclosed fan cooled (TEFC) design with premium construction. The series is designed for durability, boasting IP54 and IP55 ratings that effectively protects against moisture and contaminants, making it ideal for severe environments. Its heavy-duty cast-iron frame, brackets, and t-box contribute to long-lasting performance and reliability. Overall, the EQP Global Severe Duty series delivers exceptional performance and reliability as a high-quality motor choice for industrial needs.

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty
- NEMA Premium® Efficiency
- 60 Hz: 230/460, 460, or 575 V (where applicable)
- 50 Hz: 190/380 or 380 V
- Three-Phase
- Dual Frequency 50/ 60 Hz Design
- 1.15 Service Factor
- Footed, C-Face Footed, C-Face Footless, & Top Mount Design
- NEMA Design B
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP54 or IP55 Protection
- Cast Iron Frame, Bearing Brackets & Conduit Box
- Multi-Mount Capabilities on Most Frames (See Appendix C)
- Multiple Drain Provisions for Horizontal & Vertical Mounting
- Oversized 300 Series Bearings
- 100% No-Load Commercial Test per IEEE 112 on All Motors
- See Appendix D for ASD and Division 2 Capabilities

**Applications:**

- Pumps
- Fans
- Compressors
- Conveyors
- Mixers
- Material Handling



# Totally Enclosed Fan Cooled

## EQP Global® SD

### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 0.5 to 800 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM
**(50 Hz):** 3000, 1500, 1000, or 750 RPM

**Volt (60 Hz):** 230/460, 460, or 575 V
**(50 Hz):** 190/380 or 380 V, 143T Through S447T

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 56 through 5811US

**Construction:** Cast Iron Frame, Bearing Brackets & Conduit Box

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs)

**Environment:** Severe Duty, Suitable for Use in Class I Division 2 Hazardous Locations

For EQP Global® Motors in frames 140 through 440, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.5 | 1800 | 230/460 | 56 | 53 | 1/24FNSR31H-P | 1.4/0.7 | 84.0 | 1, 9, 18, 21 | MTPFCP | $511 |
| 0.5 | 1800 | 575 | 56 | 53 | 1/24FNSC31H-P | 0.6 | 84.0 | 1,18, 21 | MTPFCP | $511 |
| 0.5 | 1200 | 230/460 | 56 | 52 | 1/26SDSR31H-P | 1.8/0.9 | 81.5 | 1, 9, 18, 21 | MTPFCP | $545 |
| 0.5 | 1200 | 575 | 56 | 52 | 1/26SDSC31H-P | 0.7 | 81.5 | 1,18, 21 | MTPFCP | $545 |
| 0.75 | 3600 | 230/460 | 56 | 48 | 3/42SDSR31H-P | 2.2/1.1 | 77.0 | 1, 9, 18, 21 | MTPFCP | $492 |
| 0.75 | 3600 | 575 | 56 | 48 | 3/42SDSC31H-P | 0.9 | 77.0 | 1,18, 21 | MTPFCP | $492 |
| 0.75 | 1800 | 230/460 | 56 | 53 | 3/44SDSR31H-P | 2.4/1.2 | 85.8 | 1, 9, 18, 21 | MTPFCP | $539 |
| 0.75 | 1800 | 575 | 56 | 53 | 3/44SDSC31H-P | 0.9 | 85.8 | 1,18, 21 | MTPFCP | $539 |
| 0.75 | 1200 | 230/460 | 56 | 52 | 3/46SDSR31H-P | 2.6/1.3 | 82.8 | 1, 9, 18 | MTPFCP | $547 |
| 0.75 | 1200 | 575 | 56 | 52 | 3/46SDSC31H-P | 1.1 | 82.8 | 1, 18 | MTPFCP | $547 |
| 0.75 | 1200 | 230/460 | 143T | 52 | 3/46SDSR41A-P | 2.8/1.4 | 80.0 | 1, 9, 18 | MTPFCP | $548 |
| 0.75 | 1200 | 575 | 143T | 52 | 3/46SDSC41A-P | 1.1 | 81.5 | 1, 18 | MTPFCP | $548 |
| 0.75 | 900 | 230/460 | 145T | 62 | 3/48SDSR41A-P | 3.2/1.6 | 74.0 | 1, 9, 18 | MTPFCP | $986 |
| 0.75 | 900 | 575 | 145T | 62 | 3/48SDSC41A-P | 1.3 | 74.7 | 1, 18 | MTPFCP | $986 |
| 1 | 3600 | 230/460 | 56 | 48 | 0012SDSR41H-P | 2.8/1.4 | 77.0 | 1, 9, 18, 21 | MTPFCP | $586 |
| 1 | 3600 | 575 | 56 | 48 | 0012SDSC41H-P | 1.1 | 77.0 | 1,18, 21 | MTPFCP | $586 |
| 1 | 1800 | 230/460 | 56 | 53 | 0014SDSR41H-P | 3.4/1.7 | 85.5 | 1, 9, 18 | MTPFCP | $622 |
| 1 | 1800 | 230/460 | 143T | 53 | 0014SDSR41A-P | 3.4/1.7 | 85.5 | 1, 9, 18 | MTPFCP | $464 |
| 1 | 1800 | 575 | 56 | 53 | 0014SDSC41H-P | 1.3 | 85.5 | 1,18 | MTPFCP | $622 |
| 1 | 1800 | 575 | 143T | 53 | 0014SDSC41A-P | 1.3 | 85.5 | 1, 18 | MTPFCP | $464 |
| 1 | 1200 | 230/460 | 56 | 56 | 0016SDSR41H-P | 3.4/1.7 | 82.5 | 1, 9, 18 | MTPFCP | $683 |
| 1 | 1200 | 230/460 | 145T | 56 | 0016SDSR41A-P | 3.6/1.8 | 82.5 | 1, 9, 18 | MTPFCP | $576 |
| 1 | 1200 | 575 | 56 | 56 | 0016SDSC41H-P | 1.3 | 82.5 | 1,18 | MTPFCP | $683 |
| 1 | 1200 | 575 | 145T | 56 | 0016SDSC41A-P | 1.5 | 82.5 | 1, 18 | MTPFCP | $576 |
| 1 | 900 | 230/460 | 182T | 93 | 0018SDSR41A-P | 3.4/1.7 | 75.5 | 1, 9, 18 | MTPFCP | $1,016 |
| 1 | 900 | 575 | 182T | 93 | 0018SDSC41A-P | 1.4 | 75.5 | 1, 18 | MTPFCP | $1,016 |
| 1.5 | 3600 | 230/460 | 56 | 50 | Y152SDSR41H-P | 3.8/1.9 | 84.0 | 1, 9, 18 | MTPFCP | $648 |
| 1.5 | 3600 | 230/460 | 143T | 57 | Y152SDSR41A-P | 4.0/2.0 | 84.0 | 1, 9, 18 | MTPFCP | $505 |

# Totally Enclosed Fan Cooled
## EQP Global® SD
### NEMA Premium® Efficiency



EQP Global SD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 3600 | 575 | 56 | 50 | Y152SDSC41H-P | 1.6 | 84.0 | 1,18 | MTPFCP | $648 |
| 1.5 | 3600 | 575 | 143T | 57 | Y152SDSC41A-P | 1.6 | 84.0 | 1, 18 | MTPFCP | $505 |
| 1.5 | 1800 | 230/460 | 56 | 55 | Y154SDSR41H-P | 4.6/2.3 | 86.5 | 1, 9, 18 | MTPFCP | $652 |
| 1.5 | 1800 | 230/460 | 145T | 60 | Y154SDSR41A-P | 4.8/2.4 | 86.5 | 1, 9, 18 | MTPFCP | $510 |
| 1.5 | 1800 | 575 | 56 | 55 | Y154SDSC41H-P | 1.8 | 86.5 | 1,18 | MTPFCP | $652 |
| 1.5 | 1800 | 575 | 145T | 59 | Y154SDSC41A-P | 1.9 | 86.5 | 1, 18 | MTPFCP | $510 |
| 1.5 | 1200 | 230/460 | 182T | 99 | Y156SDSR41A-P | 5.0/2.5 | 87.5 | 1, 9, 18 | MTPFCP | $615 |
| 1.5 | 1200 | 575 | L56/L56H | 77 | Y156SDSC41H-P | 2.1 | 87.5 | 1,18 | MTPFCP | $948 |
| 1.5 | 1200 | 575 | 182T | 99 | Y156SDSC41A-P | 2.0 | 87.5 | 1, 18 | MTPFCP | $615 |
| 1.5 | 900 | 230/460 | 184T | 110 | Y158SDSR41A-P | 5.2/2.6 | 78.5 | 1, 9, 18 | MTPFCP | $1,169 |
| 1.5 | 900 | 575 | 184T | 110 | Y158SDSC41A-P | 2.1 | 78.5 | 1, 18 | MTPFCP | $1,169 |
| 2 | 3600 | 230/460 | 145T | 60 | 0022SDSR41A-P | 5.2/2.6 | 85.5 | 1, 9, 18 | MTPFCP | $612 |
| 2 | 3600 | 230/460 | 56 | 53 | 0022SDSR41H-P | 5.2/2.6 | 85.5 | 1, 9, 18 | MTPFCP | $673 |
| 2 | 3600 | 575 | 145T | 60 | 0022SDSC41A-P | 2.1 | 85.5 | 1, 18 | MTPFCP | $612 |
| 2 | 3600 | 575 | 56 | 53 | 0022SDSC41H-P | 2.1 | 85.5 | 1,18 | MTPFCP | $673 |
| 2 | 1800 | 230/460 | 56 | 58 | 0024SDSR41H-P | 6.0/3.0 | 86.5 | 1, 9, 18 | MTPFCP | $659 |
| 2 | 1800 | 230/460 | 145T | 62 | 0024SDSR41A-P | 6.0/3.0 | 86.5 | 1, 9, 18 | MTPFCP | $554 |
| 2 | 1800 | 575 | 56 | 58 | 0024SDSC41H-P | 2.4 | 86.5 | 1,18 | MTPFCP | $659 |
| 2 | 1800 | 575 | 145T | 62 | 0024SDSC41A-P | 2.4 | 86.5 | 1, 18 | MTPFCP | $554 |
| 2 | 1200 | 230/460 | 184T | 110 | 0026SDSR41A-P | 6.8/3.4 | 88.5 | 1, 9, 18 | MTPFCP | $713 |
| 2 | 1200 | 575 | 184T | 110 | 0026SDSC41A-P | 2.7 | 88.5 | 1, 18 | MTPFCP | $713 |
| 2 | 900 | 230/460 | 213T | 163 | 0028SDSR41A-P | 6.0/3.0 | 84.0 | 1, 9, 18 | MTPFCP | $1,535 |
| 2 | 900 | 575 | 213T | 163 | 0028SDSC41A-P | 2.5 | 84.0 | 1, 18 | MTPFCP | $1,535 |
| 3 | 3600 | 230/460 | 182T | 88 | 0032SDSR41A-P | 7.4/3.7 | 86.5 | 1, 9, 18 | MTPFCP | $647 |
| 3 | 3600 | 575 | 182T | 84 | 0032SDSC41A-P | 3.0 | 86.5 | 1, 18 | MTPFCP | $647 |
| 3 | 1800 | 230/460 | 182T | 92 | 0034SDSR41A-P | 8.0/4.0 | 89.5 | 1, 9, 18 | MTPFCP | $636 |
| 3 | 1800 | 575 | 182T | 99 | 0034SDSC41A-P | 3.2 | 89.5 | 1, 18 | MTPFCP | $636 |
| 3 | 1200 | 230/460 | 213T | 163 | 0036SDSR41A-P | 8.8/4.4 | 89.5 | 1, 9, 18 | MTPFCP | $906 |
| 3 | 1200 | 575 | 213T | 168 | 0036SDSC41A-P | 3.5 | 89.5 | 1, 18 | MTPFCP | $906 |
| 3 | 900 | 230/460 | 215T | 176 | 0038SDSR41A-P | 9.4/4.7 | 85.5 | 1, 9, 18 | MTPFCP | $1,931 |
| 3 | 900 | 575 | 215T | 176 | 0038SDSC41A-P | 3.7 | 85.5 | 1, 18 | MTPFCP | $1,931 |
| 5 | 3600 | 230/460 | 184T | 99 | 0052SDSR41A-P | 11.6/5.8 | 88.5 | 1, 9, 18 | MTPFCP | $802 |
| 5 | 3600 | 575 | 184T | 101 | 0052SDSC41A-P | 4.6 | 88.5 | 1, 18 | MTPFCP | $802 |
| 5 | 1800 | 230/460 | 184T | 110 | 0054SDSR41A-P | 12.8/6.4 | 89.5 | 1, 9, 18 | MTPFCP | $726 |
| 5 | 1800 | 575 | 184T | 110 | 0054SDSC41A-P | 5.2 | 89.5 | 1, 18 | MTPFCP | $726 |
| 5 | 1200 | 230/460 | 215T | 176 | 0056SDSR41A-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPFCP | $1,332 |
| 5 | 1200 | 575 | 215T | 179 | 0056SDSC41A-P | 5.5 | 89.5 | 1, 18 | MTPFCP | $1,332 |
| 5 | 900 | 230/460 | 254T | 274 | 0058SDSR41A-P | 15.0/7.5 | 86.5 | 1, 9, 18 | MTPFCP | $2,840 |
| 5 | 900 | 575 | 254T | 274 | 0058SDSC41A-P | 6.0 | 86.5 | 1, 18 | MTPFCP | $2,840 |
| 7.5 | 3600 | 230/460 | 213T | 168 | Y752SDSR41A-P | 18.0/9.0 | 89.5 | 1, 9, 18 | MTPFCP | $1,039 |
| 7.5 | 3600 | 575 | 213T | 172 | Y752SDSC41A-P | 7.2 | 89.5 | 1, 18 | MTPFCP | $1,039 |
| 7.5 | 1800 | 230/460 | 213T | 186 | Y754SDSR41A-P | 19.6/9.8 | 91.7 | 1, 9, 18 | MTPFCP | $1,039 |
| 7.5 | 1800 | 575 | 213T | 179 | Y754SDSC41A-P | 7.8 | 91.7 | 1, 18 | MTPFCP | $1,039 |
| 7.5 | 1200 | 230/460 | 254T | 281 | Y756SDSR41A-P | 19.8/9.9 | 91.0 | 1, 9, 18 | MTPFCP | $1,768 |
| 7.5 | 1200 | 575 | 254T | 274 | Y756SDSC41A-P | 8.2 | 91.0 | 1, 18 | MTPFCP | $1,768 |
| 7.5 | 900 | 230/460 | 256T | 292 | Y758SDSR41A-P | 23/11.5 | 86.5 | 1, 9, 18 | MTPFCP | $3,218 |
| 7.5 | 900 | 575 | 256T | 292 | Y758SDSC41A-P | 9.1 | 86.5 | 1, 18 | MTPFCP | $3,218 |
| 10 | 3600 | 230/460 | 215T | 183 | 0102SDSR41A-P | 24/11.8 | 90.2 | 1, 9, 18 | MTPFCP | $1,246 |

# Totally Enclosed Fan Cooled
## EQP Global® SD
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 3600 | 575 | 215T | 183 | 0102SDSC41A-P | 9.4 | 90.2 | 1, 18 | MTPFCP | $1,246 |
| 10 | 1800 | 230/460 | 215T | 203 | 0104SDSR41A-P | 26/13 | 91.7 | 1, 9, 18 | MTPFCP | $1,264 |
| 10 | 1800 | 575 | 215T | 203 | 0104SDSC41A-P | 10.4 | 91.7 | 1, 18 | MTPFCP | $1,264 |
| 10 | 1200 | 230/460 | 256T | 292 | 0106SDSR41A-P | 26/13.4 | 91.0 | 1, 9, 18 | MTPFCP | $2,160 |
| 10 | 1200 | 575 | 256T | 293 | 0106SDSC41A-P | 10.8 | 91.0 | 1, 18 | MTPFCP | $2,160 |
| 10 | 900 | 230/460 | 284T | 443 | 0108SDSR41A-P | 29/14.5 | 89.5 | 1, 9, 18 | MTPFCP | $4,184 |
| 10 | 900 | 575 | 284T | 443 | 0108SDSC41A-P | 11.6 | 89.5 | 1, 18 | MTPFCP | $4,184 |
| 15 | 3600 | 230/460 | 254T | 295 | 0152SDSR41A-P | 36/18 | 91.0 | 1, 9, 18 | MTPFCP | $1,714 |
| 15 | 3600 | 575 | 254T | 302 | 0152SDSC41A-P | 14.4 | 91.0 | 1, 18 | MTPFCP | $1,714 |
| 15 | 1800 | 230/460 | 254T | 315 | 0154SDSR41A-P | 38/19 | 92.4 | 1, 9, 18 | MTPFCP | $1,706 |
| 15 | 1800 | 575 | 254T | 317 | 0154SDSC41A-P | 15.2 | 92.4 | 1, 18 | MTPFCP | $1,706 |
| 15 | 1200 | 230/460 | 284T | 443 | 0156SDSR41A-P | 40/19.6 | 91.7 | 1, 9, 18 | MTPFCP | $3,029 |
| 15 | 1200 | 575 | 284T | 441 | 0156SDSC41A-P | 15.8 | 91.7 | 1, 18 | MTPFCP | $3,029 |
| 15 | 900 | 230/460 | 286T | 478 | 0158SDSR41A-P | 44/22 | 89.5 | 1, 9, 18 | MTPFCP | $5,082 |
| 15 | 900 | 575 | 286T | 478 | 0158SDSC41A-P | 17.5 | 89.5 | 1, 18 | MTPFCP | $5,082 |
| 20 | 3600 | 230/460 | 256T | 311 | 0202SDSR41A-P | 48/24 | 91.0 | 1, 9, 18 | MTPFCP | $2,220 |
| 20 | 3600 | 575 | 256T | 311 | 0202SDSC41A-P | 19.2 | 91.0 | 1, 18 | MTPFCP | $2,220 |
| 20 | 1800 | 230/460 | 256T | 355 | 0204SDSR41A-P | 50/25 | 93.0 | 1, 9, 18 | MTPFCP | $2,107 |
| 20 | 1800 | 575 | 256T | 353 | 0204SDSC41A-P | 20 | 93.0 | 1, 18 | MTPFCP | $2,107 |
| 20 | 1200 | 230/460 | 286T | 478 | 0206SDSR41A-P | 50/25 | 91.7 | 1, 9, 18 | MTPFCP | $3,548 |
| 20 | 1200 | 575 | 286T | 478 | 0206SDSC41A-P | 20 | 91.7 | 1, 18 | MTPFCP | $3,548 |
| 20 | 900 | 230/460 | 324T | 620 | 0208SDSR41A-P | 56/28 | 90.2 | 1, 9, 18 | MTPFCP | $6,068 |
| 20 | 900 | 575 | 324T | 620 | 0208SDSC41A-P | 22 | 90.2 | 1, 18 | MTPFCP | $6,068 |
| 25 | 3600 | 230/460 | 284TS | 485 | 0252SDSR41B-P | 58/29 | 91.7 | 1, 9, 18 | MTPFCP | $2,725 |
| 25 | 3600 | 575 | 284TS | 485 | 0252SDSC41B-P | 23 | 91.7 | 1, 18 | MTPFCP | $2,725 |
| 25 | 1800 | 230/460 | 284T | 492 | 0254SDSR41A-P | 62/31 | 93.6 | 1, 9, 18 | MTPFCP | $2,556 |
| 25 | 1800 | 230/460 | 284TS | 492 | 0254SDSR41B-P | 62/31 | 93.6 | 1, 9, 18 | MTPFCP | $2,556 |
| 25 | 1800 | 575 | 284T | 496 | 0254SDSC41A-P | 24 | 93.6 | 1, 18 | MTPFCP | $2,556 |
| 25 | 1800 | 575 | 284TS | 496 | 0254SDSC41B-P | 24 | 93.6 | 18 | MTPFCP | $2,556 |
| 25 | 1200 | 230/460 | 324T | 627 | 0256SDSR41A-P | 62/31 | 93.0 | 1, 9, 18 | MTPFCP | $4,306 |
| 25 | 1200 | 575 | 324T | 615 | 0256SDSC41A-P | 25 | 93.0 | 1, 18 | MTPFCP | $4,306 |
| 25 | 900 | 230/460 | 326T | 633 | 0258SDSR41A-P | 70/35 | 90.2 | 1, 9, 18 | MTPFCP | $7,068 |
| 25 | 900 | 575 | 326T | 633 | 0258SDSC41A-P | 27 | 90.2 | 1, 18 | MTPFCP | $7,068 |
| 30 | 3600 | 230/460 | 286TS | 497 | 0302SDSR41B-P | 70/35 | 91.7 | 1, 9, 18 | MTPFCP | $3,131 |
| 30 | 3600 | 575 | 286TS | 496 | 0302SDSC41B-P | 28 | 91.7 | 1, 18 | MTPFCP | $3,131 |
| 30 | 1800 | 230/460 | 286T | 531 | 0304SDSR41A-P | 72/36 | 93.6 | 1, 9, 18 | MTPFCP | $3,073 |
| 30 | 1800 | 230/460 | 286TS | 505 | 0304SDSR41B-P | 72/36 | 93.6 | 1, 9, 18 | MTPFCP | $3,073 |
| 30 | 1800 | 575 | 286T | 518 | 0304SDSC41A-P | 29 | 93.6 | 1, 18 | MTPFCP | $3,073 |
| 30 | 1800 | 575 | 286TS | 518 | 0304SDSC41B-P | 29 | 93.6 | 18 | MTPFCP | $3,073 |
| 30 | 1200 | 230/460 | 326T | 638 | 0306SDSR41A-P | 74/37 | 93.0 | 1, 9, 18 | MTPFCP | $5,257 |
| 30 | 1200 | 575 | 326T | 631 | 0306SDSC41A-P | 30 | 93.0 | 1, 18 | MTPFCP | $5,257 |
| 30 | 900 | 230/460 | 364T | 807 | 0308SDSR41A-P | 82/41 | 91.7 | 1, 9, 18 | MTPFCP | $9,504 |
| 30 | 900 | 575 | 364T | 807 | 0308SDSC41A-P | 33 | 91.7 | 1, 18 | MTPFCP | $9,504 |
| 40 | 3600 | 230/460 | 324TS | 640 | 0402SDSR41B-P | 94/47 | 92.4 | 1, 9, 18 | MTPFCP | $3,943 |
| 40 | 3600 | 575 | 324TS | 639 | 0402SDSC41B-P | 38 | 92.4 | 1, 18 | MTPFCP | $3,943 |
| 40 | 1800 | 230/460 | 324T | 669 | 0404SDSR41A-P | 96/48 | 94.1 | 1, 9, 18 | MTPFCP | $3,973 |
| 40 | 1800 | 230/460 | 324TS | 668 | 0404SDSR41B-P | 96/48 | 94.1 | 1, 9, 18 | MTPFCP | $3,973 |

# Totally Enclosed Fan Cooled

## EQP Global® SD

### NEMA Premium® Efficiency



EQP Global SD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | 1800 | 575 | 324T | 666 | 0404SDSC41A-P | 38 | 94.1 | 1, 18 | MTPFCP | $3,973 |
| 40 | 1800 | 575 | 324TS | 666 | 0404SDSC41B-P | 38 | 94.1 | 1, 18 | MTPFCP | $3,973 |
| 40 | 1200 | 230/460 | 364T | 811 | 0406SDSR41A-P | 96/48 | 94.1 | 1, 9, 18 | MTPFCP | $6,878 |
| 40 | 1200 | 575 | 364T | 802 | 0406SDSC41A-P | 38 | 94.1 | 1, 18 | MTPFCP | $6,878 |
| 40 | 900 | 230/460 | 365T | 834 | 0408SDSR41A-P | 108/54 | 91.7 | 1, 9, 18 | MTPFCP | $10,960 |
| 40 | 900 | 575 | 365T | 834 | 0408SDSC41A-P | 44 | 91.7 | 1, 18 | MTPFCP | $10,960 |
| 50 | 3600 | 230/460 | 326TS | 683 | 0502SDSR41B-P | 116/58 | 93.0 | 1, 9, 18 | MTPFCP | $5,467 |
| 50 | 3600 | 575 | 326TS | 683 | 0502SDSC41B-P | 46 | 93.0 | 1, 18 | MTPFCP | $5,467 |
| 50 | 1800 | 230/460 | 326T | 715 | 0504SDSR41A-P | 120/60 | 94.5 | 1, 9, 18 | MTPFCP | $4,845 |
| 50 | 1800 | 230/460 | 326TS | 714 | 0504SDSR41B-P | 120/60 | 94.5 | 1, 9, 18 | MTPFCP | $4,845 |
| 50 | 1800 | 575 | 326T | 716 | 0504SDSC41A-P | 48 | 94.5 | 1, 18 | MTPFCP | $4,845 |
| 50 | 1800 | 575 | 326TS | 716 | 0504SDSC41B-P | 48 | 94.5 | 1, 18 | MTPFCP | $4,845 |
| 50 | 1200 | 230/460 | 365T | 834 | 0506SDSR41A-P | 120/60 | 94.1 | 1, 9, 18 | MTPFCP | $8,029 |
| 50 | 1200 | 575 | 365T | 833 | 0506SDSC41A-P | 48 | 94.1 | 1, 18 | MTPFCP | $8,029 |
| 50 | 900 | 230/460 | 404T | 1259 | 0508SDSR41A-P | 158/79 | 93.6 | 18 | MTPFCP | $16,933 |
| 50 | 900 | 575 | 404T | 1259 | 0508SDSC41A-P | 63 | 93.6 | 18 | MTPFCP | $16,933 |
| 60 | 3600 | 230/460 | 364TS | 849 | 0602SDSR41B-P | 138/69 | 93.6 | 1, 9, 18 | MTPFCP | $6,737 |
| 60 | 3600 | 575 | 364TS | 853 | 0602SDSC41B-P | 55 | 93.6 | 1, 18 | MTPFCP | $6,737 |
| 60 | 1800 | 230/460 | 364T | 880 | 0604SDSR41A-P | 138/69 | 95.0 | 1, 9, 18 | MTPFCP | $6,828 |
| 60 | 1800 | 230/460 | 364TS | 875 | 0604SDSR41B-P | 138/69 | 95.0 | 1, 9, 18 | MTPFCP | $6,828 |
| 60 | 1800 | 575 | 364T | 895 | 0604SDSC41A-P | 55 | 95.0 | 1, 18 | MTPFCP | $6,828 |
| 60 | 1800 | 575 | 364TS | 895 | 0604SDSC41B-P | 55 | 95.0 | 1, 18 | MTPFCP | $6,828 |
| 60 | 1200 | 230/460 | 404T | 1259 | 0606SDSR41A-P | 146/73 | 94.5 | 1, 9, 18 | MTPFCP | $11,083 |
| 60 | 1200 | 575 | 404T | 1241 | 0606SDSC41A-P | 58 | 94.5 | 1, 18 | MTPFCP | $11,083 |
| 60 | 900 | 230/460 | 405T | 1319 | 0608SDSR41A-P | 196/98 | 93.6 | 1,18 | MTPFCP | $17,962 |
| 60 | 900 | 575 | 405T | 1374 | 0608SDSC41A-P | 75 | 93.6 | 1,18 | MTPFCP | $17,962 |
| 75 | 3600 | 230/460 | 365TS | 895 | 0752SDSR41B-P | 172/86 | 93.6 | 1, 9, 18 | MTPFCP | $8,484 |
| 75 | 3600 | 575 | 365TS | 895 | 0752SDSC41B-P | 69 | 93.6 | 1, 18 | MTPFCP | $8,484 |
| 75 | 1800 | 230/460 | 365T | 961 | 0754SDSR41A-P | 172/86 | 95.4 | 1, 9, 18 | MTPFCP | $8,796 |
| 75 | 1800 | 230/460 | 365TS | 961 | 0754SDSR41B-P | 172/86 | 95.4 | 1, 9, 18 | MTPFCP | $8,796 |
| 75 | 1800 | 575 | 365T | 979 | 0754SDSC41A-P | 69 | 95.4 | 1, 18 | MTPFCP | $8,796 |
| 75 | 1800 | 575 | 365TS | 979 | 0754SDSC41B-P | 69 | 95.4 | 1, 18 | MTPFCP | $8,796 |
| 75 | 1200 | 230/460 | 405T | 1374 | 0756SDSR41A-P | 182/91 | 94.5 | 1, 9, 18 | MTPFCP | $12,411 |
| 75 | 1200 | 575 | 405T | 1319 | 0756SDSC41A-P | 72 | 94.5 | 1, 18 | MTPFCP | $12,411 |
| 75 | 900 | 230/460 | S444T | 1786 | 0758SDSA41A | 184/92 | 94.5 | 18 | MXTFCG | $23,270 |
| 75 | 900 | 230/460 | S444T | 1786 | 0758SDSA41A-R | 184/92 | 94.5 | 2, 18 | MXTFCG | $23,270 |
| 75 | 900 | 575 | S444T | 1786 | 0758SDSC41A | 74 | 94.5 | 18 | MXTFCG | $23,270 |
| 75 | 900 | 575 | S444T | 1786 | 0758SDSC41A-R | 74 | 94.5 | 2, 18 | MXTFCG | $23,270 |
| 100 | 3600 | 230/460 | 405TS | 1305 | 1002SDSR41B-P | 224/112 | 94.1 | 1, 9, 18 | MTPFCP | $13,417 |
| 100 | 3600 | 575 | 405TS | 1305 | 1002SDSC41B-P | 90 | 94.1 | 1, 18 | MTPFCP | $13,417 |
| 100 | 1800 | 230/460 | 405T | 1367 | 1004SDSR41A-P | 230/115 | 95.4 | 1, 9, 18 | MTPFCP | $12,494 |
| 100 | 1800 | 230/460 | 405TS | 1367 | 1004SDSR41B-P | 230/115 | 95.4 | 1, 9, 18 | MTPFCP | $12,494 |
| 100 | 1800 | 230/460 | 405T | 1367 | 1004SDSR41A-PR | 230/115 | 95.4 | 1, 2, 9, 18 | MTPFCP | $12,494 |
| 100 | 1800 | 575 | 405T | 1367 | 1004SDSC41A-P | 93 | 95.4 | 1, 18 | MTPFCP | $12,494 |
| 100 | 1800 | 575 | 405T | 1367 | 1004SDSC41A-PR | 93 | 95.4 | 1, 2, 18 | MTPFCP | $12,494 |
| 100 | 1800 | 575 | 405TS | 1367 | 1004SDSC41B-P | 93 | 95.4 | 1, 18 | MTPFCP | $12,494 |
| 100 | 1200 | 230/460 | S444T | 2300 | 1006SDSA41A-PR | 237/119 | 95.4 | 1, 2, 18 | MTPFCP | $23,604 |

# Totally Enclosed Fan Cooled
## EQP Global® SD
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 1200 | 230/460 | S444T | 2300 | 1006SDSA41A-P | 237/119 | 95.4 | 1, 18 | MTPFCP | $23,604 |
| 100 | 1200 | 575 | S444T | 2300 | 1006SDSC41A-P | 94 | 95.4 | 1, 18 | MTPFCP | $23,604 |
| 100 | 1200 | 575 | S444T | 2300 | 1006SDSC41A-PR | 94 | 95.4 | 1, 2, 18 | MTPFCP | $23,604 |
| 100 | 900 | 230/460 | S445T | 2086 | 1008SDSA41A | 246/123 | 94.5 | 18 | MXTFCG | $25,658 |
| 100 | 900 | 230/460 | S445T | 2086 | 1008SDSA41A-R | 246/123 | 94.5 | 2, 18 | MXTFCG | $25,658 |
| 100 | 900 | 575 | S445T | 2086 | 1008SDSC41A | 98 | 94.5 | 18 | MXTFCG | $25,658 |
| 100 | 900 | 575 | S445T | 2086 | 1008SDSC41A-R | 98 | 94.5 | 2, 18 | MXTFCG | $25,658 |
| 125 | 3600 | 230/460 | S444TS | 1988 | 1252SDSA41B-P | 276/138 | 95.0 | 1, 18 | MTPFCP | $20,407 |
| 125 | 3600 | 575 | S444TS | 1940 | 1252SDSC41B-P | 111 | 95.0 | 1, 18 | MTPFCP | $20,407 |
| 125 | 1800 | 230/460 | S444T | 2500 | 1254SDSA41A-P | 284/142 | 95.4 | 1, 18 | MTPFCP | $16,734 |
| 125 | 1800 | 230/460 | S444T | 2500 | 1254SDSA41A-PR | 284/142 | 95.4 | 1, 2, 18 | MTPFCP | $16,734 |
| 125 | 1800 | 230/460 | S444TS | 2500 | 1254SDSA41B-P | 284/142 | 95.4 | 1, 18 | MTPFCP | $16,734 |
| 125 | 1800 | 575 | S444T | 2500 | 1254SDSC41A-P | 115 | 95.4 | 1, 18 | MTPFCP | $16,734 |
| 125 | 1800 | 575 | S444T | 2500 | 1254SDSC41A-PR | 115 | 95.4 | 1, 2, 18 | MTPFCP | $16,734 |
| 125 | 1800 | 575 | S444TS | 2500 | 1254SDSC41B-P | 115 | 95.4 | 1, 18 | MTPFCP | $16,734 |
| 125 | 1200 | 230/460 | S445T | 2300 | 1256SDSA41A-PR | 296/148 | 95.4 | 1, 2, 18 | MTPFCP | $25,144 |
| 125 | 1200 | 230/460 | S445T | 2300 | 1256SDSA41A-P | 296/148 | 95.4 | 1, 18 | MTPFCP | $25,144 |
| 125 | 1200 | 575 | S445T | 2300 | 1256SDSC41A-P | 118 | 95.4 | 1, 18 | MTPFCP | $25,144 |
| 125 | 1200 | 575 | S445T | 2300 | 1256SDSC41A-PR | 118 | 95.4 | 1, 2, 18 | MTPFCP | $25,144 |
| 125 | 900 | 460 | S447T | 3800 | 1258SDSB41A | 153 | 94.5 | 18 | MXTFCG | $29,486 |
| 125 | 900 | 460 | S447T | 3800 | 1258SDSB41A-R | 153 | 94.5 | 18 | MXTFCG | $29,486 |
| 125 | 900 | 575 | S447T | 3800 | 1258SDSC41A | 123 | 94.5 | 18 | MXTFCG | $29,486 |
| 125 | 900 | 575 | S447T | 3800 | 1258SDSC41A-R | 123 | 94.5 | 2, 18 | MXTFCG | $29,486 |
| 150 | 3600 | 230/460 | S445TS | 2300 | 1502SDSA41B-P | 332/166 | 95.0 | 1, 18 | MTPFCP | $21,648 |
| 150 | 3600 | 575 | S445TS | 2300 | 1502SDSC41B-P | 132 | 95.0 | 1, 18 | MTPFCP | $21,648 |
| 150 | 1800 | 230/460 | S445T | 2300 | 1504SDSA41A-P | 336/168 | 95.8 | 1, 18 | MTPFCP | $18,867 |
| 150 | 1800 | 230/460 | S445T | 2300 | 1504SDSA41A-PR | 336/168 | 95.8 | 1, 2, 18 | MTPFCP | $18,867 |
| 150 | 1800 | 230/460 | S445TS | 2300 | 1504SDSA41B-P | 336/168 | 95.8 | 1, 2, 18 | MTPFCP | $18,867 |
| 150 | 1800 | 575 | S445T | 2300 | 1504SDSC41A-P | 135 | 95.8 | 1, 18 | MTPFCP | $18,867 |
| 150 | 1800 | 575 | S445T | 2300 | 1504SDSC41A-PR | 135 | 95.8 | 1, 2, 18 | MTPFCP | $18,867 |
| 150 | 1800 | 575 | S445TS | 2300 | 1504SDSC41B-P | 135 | 95.8 | 1, 18 | MTPFCP | $18,867 |
| 150 | 1200 | 460 | S447T | 2500 | 1506SDSB41A-P | 177 | 95.8 | 1, 18 | MTPFCP | $28,489 |
| 150 | 1200 | 460 | S447T | 2500 | 1506SDSB41A-PR | 177 | 95.8 | 1, 2, 18 | MTPFCP | $28,489 |
| 150 | 1200 | 460 | S447TZ | 2659 | 1506SDSB41D-PR | 177 | 95.8 | 1, 2, 18 | MTPFCP | $29,201 |
| 150 | 1200 | 575 | S447T | 2500 | 1506SDSC41A-P | 142 | 95.8 | 1, 18 | MTPFCP | $28,489 |
| 150 | 1200 | 575 | S447T | 2500 | 1506SDSC41A-PR | 142 | 95.8 | 1, 2, 18 | MTPFCP | $28,489 |
| 150 | 1200 | 575 | S447TZ | 2659 | 1506SDSC41D-PR | 142 | 95.8 | 1, 2, 18 | MTPFCP | $29,201 |
| 150 | 900 | 460 | S449T | 2300 | 1508SDSB41A | 188 | 94.1 | 18 | MXTFCG | $40,914 |
| 150 | 900 | 460 | S449T | 2300 | 1508SDSB41A-R | 188 | 94.1 | 2, 18 | MXTFCG | $40,914 |
| 150 | 900 | 575 | S449T | 2300 | 1508SDSC41A | 150 | 94.1 | 18 | MXTFCG | $40,914 |
| 150 | 900 | 575 | S449T | 2300 | 1508SDSC41A-R | 150 | 94.1 | 2, 18 | MXTFCG | $40,914 |
| 200 | 3600 | 460 | S447TS | 3820 | 2002SDSB41B-P | 221 | 95.4 | 1, 18 | MTPFCP | $26,798 |
| 200 | 3600 | 575 | S447TS | 3820 | 2002SDSC41B-P | 177 | 95.4 | 1, 18 | MTPFCP | $26,798 |
| 200 | 1800 | 460 | S447T | 2500 | 2004SDSB41A-P | 231 | 96.2 | 1, 18 | MTPFCP | $22,677 |
| 200 | 1800 | 460 | S447T | 2500 | 2004SDSB41A-PR | 231 | 96.2 | 1, 2, 18 | MTPFCP | $22,677 |
| 200 | 1800 | 460 | S447TS | 2500 | 2004SDSB41B-P | 231 | 96.2 | 1, 18 | MTPFCP | $22,677 |
| 200 | 1800 | 460 | S447TZ | 2500 | 2004SDSB41D-PR | 231 | 96.2 | 1, 2, 18 | MTPFCP | $23,244 |

# Totally Enclosed Fan Cooled
## EQP Global® SD
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 200 | 1800 | 575 | S447T | 2500 | 2004SDSC41A-P | 185 | 96.2 | 1, 18 | MTPFCP | $22,677 |
| 200 | 1800 | 575 | S447T | 2500 | 2004SDSC41A-PR | 185 | 96.2 | 1, 2, 18 | MTPFCP | $22,677 |
| 200 | 1800 | 575 | S447TS | 2500 | 2004SDSC41B-P | 185 | 96.2 | 1, 18 | MTPFCP | $22,677 |
| 200 | 1800 | 575 | S447TZ | 2500 | 2004SDSC41D-PR | 185 | 96.2 | 1, 2, 18 | MTPFCP | $23,244 |
| 200 | 1200 | 460 | S449T | 3820 | 2006SDSB41A | 232 | 95.8 | 18 | MXTFCG | $29,966 |
| 200 | 1200 | 460 | S449T | 3820 | 2006SDSB41A-R | 232 | 95.8 | 2, 18 | MXTFCG | $29,966 |
| 200 | 1200 | 575 | S449T | 3820 | 2006SDSC41A | 186 | 95.8 | 18 | MXTFCG | $29,966 |
| 200 | 1200 | 575 | S449T | 3820 | 2006SDSC41A-R | 186 | 95.8 | 2, 18 | MXTFCG | $29,966 |
| 200 | 900 | 460 | S449T | 2300 | 2008SDSB41A | 252 | 94.5 | 18 | MXTFCG | $42,011 |
| 200 | 900 | 460 | S449T | 2300 | 2008SDSB41A-R | 252 | 94.5 | 2, 18 | MXTFCG | $42,011 |
| 200 | 900 | 575 | S449T | 2300 | 2008SDSC41A | 201 | 94.5 | 18 | MXTFCG | $42,011 |
| 200 | 900 | 575 | S449T | 2300 | 2008SDSC41A-R | 201 | 94.5 | 2, 18 | MXTFCG | $42,011 |
| 250 | 3600 | 575 | 5010USS | 3952 | B2501FLG8OMH | 220 | 95.8 | 5, 17 | MXTFCG | $39,281 |
| 250 | 3600 | 575 | 5010USS | 3952 | B2503FLG8OMH | 220 | 95.8 | 4, 17 | MXTFCG | $39,281 |
| 250 | 3600 | 460 | B449TS | 4000 | 2502SDSB41B | 274 | 95.8 | 18 | MXTFCG | $37,706 |
| 250 | 3600 | 575 | B449TS | 4000 | 2502SDSC41B | 219 | 95.8 | 18 | MXTFCG | $37,706 |
| 250 | 1800 | 460 | S449T | 2330 | 2504SDSB41A | 282 | 96.2 | 18 | MXTFCG | $32,553 |
| 250 | 1800 | 460 | S449T | 2330 | 2504SDSB41A-R | 282 | 96.2 | 2, 18 | MXTFCG | $32,553 |
| 250 | 1800 | 575 | S449T | 2330 | 2504SDSC41A | 226 | 96.2 | 18 | MXTFCG | $32,553 |
| 250 | 1800 | 575 | S449T | 2330 | 2504SDSC41A-R | 226 | 96.2 | 2, 18 | MXTFCG | $32,553 |
| 250 | 1200 | 460 | 5010US | 4200 | B2506FLG3BMH01 | 305 | 95.8 | | MXTFCG | $39,657 |
| 250 | 1200 | 575 | 5010US | 4200 | B2506FLG3OMH01 | 244 | 95.8 | | MXTFCG | $39,657 |
| 250 | 1200 | 460 | 5010UZ | 4200 | B2506FLF4BMH01 | 305 | 95.8 | 2 | MXTFCG | $40,907 |
| 250 | 1200 | 460 | S449T | 2330 | 2506SDSB41A | 294 | 95.8 | 18 | MXTFCG | $36,084 |
| 250 | 1200 | 460 | S449T | 2330 | 2506SDSB41A-R | 294 | 95.8 | 2, 18 | MXTFCG | $36,084 |
| 250 | 1200 | 575 | S449T | 2330 | 2506SDSC41A | 236 | 95.8 | 18 | MXTFCG | $36,084 |
| 250 | 1200 | 575 | S449T | 2330 | 2506SDSC41A-R | 236 | 95.8 | 2, 18 | MXTFCG | $36,084 |
| 250 | 900 | 460 | B449T | 4000 | 2508SDSB41A | 315 | 95.0 | 18 | MXTFCG | $44,011 |
| 250 | 900 | 460 | B449T | 4000 | 2508SDSB41A-R | 315 | 95.0 | 2, 18 | MXTFCG | $44,011 |
| 250 | 900 | 575 | B449T | 4000 | 2508SDSC41A | 256 | 95.0 | 18 | MXTFCG | $44,011 |
| 250 | 900 | 575 | B449T | 4000 | 2508SDSC41A-R | 256 | 95.0 | 2, 18 | MXTFCG | $44,011 |
| 300 | 3600 | 460 | 5010USS | 4200 | B3001FLG8BMH | 321 | 95.8 | 5 | MXTFCG | $45,672 |
| 300 | 3600 | 460 | 5010USS | 4200 | B3003FLG8BMH | 321 | 95.8 | 4 | MXTFCG | $45,672 |
| 300 | 3600 | 575 | 5010USS | 4200 | B3001FLG8OMH | 260 | 95.8 | 5 | MXTFCG | $45,672 |
| 300 | 3600 | 575 | 5010USS | 4200 | B3003FLG8OMH | 260 | 95.8 | 4 | MXTFCG | $45,672 |
| 300 | 3600 | 460 | B449TS | 4000 | 3002SDSB41B | 326 | 96.2 | 18 | MXTFCG | $44,452 |
| 300 | 3600 | 575 | B449TS | 4000 | 3002SDSC41B | 261 | 96.2 | 18 | MXTFCG | $44,452 |
| 300 | 1800 | 460 | 5010US | 4300 | B3004FLG3BMH01 | 330 | 96.5 | | MXTFCG | $38,887 |
| 300 | 1800 | 575 | 5010US | 4300 | B3004FLG3OMH01 | 264 | 96.5 | | MXTFCG | $38,887 |
| 300 | 1800 | 460 | 5010UZ | 4300 | B3004FLF4BMH01 | 330 | 96.5 | 2 | MXTFCG | $40,137 |
| 300 | 1800 | 575 | 5010UZ | 4300 | B3004FLF4OMH01 | 264 | 96.5 | 2 | MXTFCG | $40,137 |
| 300 | 1800 | 460 | S449T | 2330 | 3004SDSB41A | 345 | 96.2 | 18 | MXTFCG | $34,822 |
| 300 | 1800 | 460 | S449T | 2330 | 3004SDSB41A-R | 345 | 96.2 | 2, 18 | MXTFCG | $34,822 |
| 300 | 1800 | 575 | S449T | 2330 | 3004SDSC41A | 275 | 96.2 | 18 | MXTFCG | $34,822 |
| 300 | 1800 | 575 | S449T | 2330 | 3004SDSC41A-R | 275 | 96.2 | 2, 18 | MXTFCG | $34,822 |
| 300 | 1200 | 460 | 5010US | 4400 | B3006FLG3BMH01 | 379 | 96.2 | | MXTFCG | $50,806 |
| 300 | 1200 | 575 | 5010US | 4400 | B3006FLG3OMH | 290 | 96.2 | | MXTFCG | $50,806 |

# Totally Enclosed Fan Cooled
## EQP Global® SD
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 300 | 1200 | 460 | 5010UZ | 4400 | B3006FLF4BMH01 | 379 | 96.2 | 2 | MXTFCG | $52,056 |
| 300 | 1200 | 575 | 5010UZ | 4400 | B3006FLF4OMH01 | 290 | 96.2 | 2 | MXTFCG | $52,056 |
| 300 | 1200 | 460 | B449T | 4000 | 3006SDSB41A | 357 | 95.8 | 18 | MXTFCG | $46,898 |
| 300 | 1200 | 460 | B449T | 4000 | 3006SDSB41A-R | 357 | 95.8 | 2, 18 | MXTFCG | $46,898 |
| 300 | 1200 | 575 | B449T | 4000 | 3006SDSC41A | 285 | 95.8 | 18 | MXTFCG | $46,898 |
| 300 | 1200 | 575 | B449T | 4000 | 3006SDSC41A-R | 285 | 95.8 | 2, 18 | MXTFCG | $46,898 |
| 300 | 900 | 460 | 5810US | 6093 | F3008FLG3BMH | 388 | 94.5 | 18 | MXTFCG | $67,522 |
| 300 | 900 | 575 | 5810US | 6093 | F3008FLG3OMH | 305 | 95.0 | 18 | MXTFCG | $67,522 |
| 300 | 900 | 460 | 5810UZ | 6093 | F3008FLF4BMH | 388 | 94.5 | 2, 18 | MXTFCG | $55,094 |
| 300 | 900 | 575 | 5810UZ | 6093 | F3008FLF4OMH | 305 | 95.0 | 2, 18 | MXTFCG | $55,094 |
| 350 | 3600 | 460 | 5010USS | 3975 | B3503FLG8BMH | 380 | 95.8 | 4 | MXTFCG | $49,150 |
| 350 | 3600 | 575 | 5010USS | 3975 | B3503FLG8OMH | 304 | 95.8 | 4 | MXTFCG | $49,150 |
| 350 | 3600 | 460 | B449TS | 4000 | 3503SDSB41B | 380 | 95.8 | 4, 18 | MXTFCG | $46,820 |
| 350 | 3600 | 460 | B449TS | 4000 | 3501SDSB41B | 380 | 95.8 | 5,18 | MXTFCG | $46,820 |
| 350 | 3600 | 575 | B449TS | 4000 | 3503SDSC41B | 304 | 95.8 | 4, 18 | MXTFCG | $46,820 |
| 350 | 3600 | 575 | B449TS | 4000 | 3501SDSC41B | 304 | 95.8 | 5,18 | MXTFCG | $46,820 |
| 350 | 1800 | 460 | 5010US | 4200 | B3504FLG3BMH01 | 388 | 96.2 | | MXTFCG | $41,254 |
| 350 | 1800 | 575 | 5010US | 4200 | B3504FLG3OMH01 | 310 | 96.2 | | MXTFCG | $41,254 |
| 350 | 1800 | 460 | 5010UZ | 4200 | B3504FLF4BMH01 | 388 | 96.2 | 2 | MXTFCG | $42,504 |
| 350 | 1800 | 575 | 5010UZ | 4200 | B3504FLF4OMH | 310 | 96.2 | 2 | MXTFCG | $42,504 |
| 350 | 1200 | 460 | 5011US | 5000 | 3506FTAB41E-A | 415 | 95.8 | 18 | MXTFCG | $61,691 |
| 350 | 1200 | 460 | 5011UZ | 5000 | 3506FTAB41E-AR | 415 | 95.8 | 2, 18 | MXTFCG | $62,941 |
| 350 | 1200 | 460 | B449T | 4000 | 3506SDSB41A | 420 | 95.8 | 18 | MXTFCG | $49,445 |
| 350 | 1200 | 460 | B449T | 4000 | 3506SDSB41A-R | 420 | 95.8 | 2, 18 | MXTFCG | $49,445 |
| 350 | 1200 | 575 | 5011US | 5000 | 3506FTAC41E-A | 332 | 95.8 | 18 | MXTFCG | $61,691 |
| 350 | 1200 | 575 | 5011UZ | 5000 | 3506FTAC41G-AR | 332 | 95.8 | 2, 18 | MXTFCG | $62,941 |
| 350 | 1200 | 575 | B449T | 4000 | 3506SDSC41A | 336 | 95.8 | 18 | MXTFCG | $49,445 |
| 350 | 1200 | 575 | B449T | 4000 | 3506SDSC41A-R | 336 | 95.8 | 2, 18 | MXTFCG | $49,445 |
| 350 | 900 | 460 | 5810US | 6240 | F3508FLG3BMH | 444 | 95.4 | 18 | MXTFCG | $55,482 |
| 350 | 900 | 575 | 5810US | 6240 | F3508FLG3OMH | 355 | 95.4 | 18 | MXTFCG | $55,482 |
| 350 | 900 | 460 | 5810UZ | 6240 | F3508FLF4BMH | 444 | 95.4 | 2, 18 | MXTFCG | $55,482 |
| 350 | 900 | 575 | 5810UZ | 6240 | F3508FLF4OMH | 355 | 95.4 | 2, 18 | MXTFCG | $55,482 |
| 400 | 3600 | 460 | 5010USS | 4050 | B4001FLG8BMH | 434 | 95.8 | 5 | MXTFCG | $58,324 |
| 400 | 3600 | 460 | 5010USS | 4050 | B4003FLG8BMH | 434 | 95.8 | 4 | MXTFCG | $58,324 |
| 400 | 3600 | 575 | 5010USS | 4675 | B4001FLG8OMH | 350 | 95.8 | 5 | MXTFCG | $58,324 |
| 400 | 3600 | 575 | 5010USS | 4200 | B4003FLG8OMH | 350 | 95.0 | 4 | MXTFCG | $58,324 |
| 400 | 3600 | 460 | 5011USS | 5000 | 4003FTAB41F-A | 441 | 95.8 | 4, 18 | MXTFCG | $67,073 |
| 400 | 3600 | 460 | B449TS | 4000 | 4003SDSB41B | 435 | 95.8 | 4, 18, 19 | MXTFCG | $50,612 |
| 400 | 3600 | 460 | B449TS | 4000 | 4001SDSB41B | 435 | 95.8 | 4, 18 | MXTFCG | $50,612 |
| 400 | 3600 | 575 | 5011USS | 5000 | 4003FTAC41F-A | 352 | 95.8 | 4, 18 | MXTFCG | $67,073 |
| 400 | 3600 | 575 | B449TS | 4000 | 4003SDSC41B | 348 | 95.8 | 4, 18, 19 | MXTFCG | $50,612 |
| 400 | 3600 | 575 | B449TS | 4000 | 4001SDSC41B | 348 | 95.8 | 4, 18 | MXTFCG | $50,612 |
| 400 | 1800 | 460 | 5010US | 4200 | B4004FLG3BMH01 | 450 | 96.2 | | MXTFCG | $54,565 |
| 400 | 1800 | 575 | 5010US | 4200 | B4004FLG3OMH01 | 372 | 96.2 | | MXTFCG | $54,565 |
| 400 | 1800 | 460 | 5010UZ | 4200 | B4004FLF4BMH01 | 450 | 96.2 | 2 | MXTFCG | $55,815 |
| 400 | 1800 | 575 | 5010UZ | 4200 | B4004FLF4OMH01 | 372 | 96.2 | 2 | MXTFCG | $55,815 |
| 400 | 1800 | 460 | 5011US | 4200 | 4004FTAB41E-A | 446 | 96.2 | 18 | MXTFCG | $62,938 |

# Totally Enclosed Fan Cooled
## EQP Global® SD
### NEMA Premium® Efficiency



EQP Global SD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 1800 | 460 | 5011UZ | 5000 | 4004FTAB41E-AR | 446 | 96.2 | 2, 18 | MXTFCG | $64,188 |
| 400 | 1800 | 575 | 5011US | 4200 | 4004FTAC41E-A | 358 | 96.2 | 18 | MXTFCG | $62,938 |
| 400 | 1800 | 575 | 5011UZ | 5000 | 4004FTAC41G-AR | 358 | 96.2 | 2, 18 | MXTFCG | $64,188 |
| 400 | 1200 | 460 | 5010US | 4500 | F4006FLG3BMH | 480 | 95.4 | | MXTFCG | $60,902 |
| 400 | 1200 | 575 | 5010US | 4200 | F4006FLG3OMH | 385 | 95.4 | | MXTFCG | $60,902 |
| 400 | 1200 | 460 | 5010UZ | 4500 | F4006FLF4BMH | 480 | 95.4 | 2 | MXTFCG | $62,152 |
| 400 | 1200 | 575 | 5010UZ | 4200 | F4006FLF4OMH | 385 | 95.0 | 2 | MXTFCG | $62,152 |
| 400 | 1200 | 460 | 5011US | 4200 | 4006FTAB41E-A | 480 | 95.8 | | MXTFCG | $65,437 |
| 400 | 1200 | 575 | 5011US | 5000 | 4006FTAC41E-A | CF | 95.8 | | MXTFCG | $65,437 |
| 400 | 900 | 460 | 5810US | 6180 | F4008FLG3BMH | 503 | 95.4 | 18 | MXT40G | $67,522 |
| 450 | 3600 | 460 | 5010USS | 4200 | B4501FLG8BMH | 491 | 95.8 | 5 | MXTFCG | $65,623 |
| 450 | 3600 | 460 | 5010USS | 4200 | B4503FLG8BMH | 491 | 95.8 | 4 | MXTFCG | $65,623 |
| 450 | 3600 | 575 | 5010USS | 4200 | B4501FLG8OMH | 393 | 95.8 | 5 | MXTFCG | $65,623 |
| 450 | 3600 | 575 | 5010USS | 4200 | B4503FLG8OMH | 393 | 95.8 | 4 | MXTFCG | $65,623 |
| 450 | 3600 | 460 | 5011USS | 5000 | 4503FTAB41F-A | 494 | 95.8 | 4, 18 | MXTFCG | $75,466 |
| 450 | 3600 | 575 | 5011USS | 5000 | 4503FTAC41F-A | 396 | 95.8 | 4, 18 | MXTFCG | $75,466 |
| 450 | 1800 | 460 | 5011US | 4200 | 4504FTAB41E-A | 504 | 96.2 | 18 | MXTFCG | $67,142 |
| 450 | 1800 | 460 | 5011UZ | 4717 | 4504FTAB41E-AR | 504 | 96.2 | 2, 18 | MXTFCG | $74,964 |
| 450 | 1800 | 575 | 5011US | 4200 | 4504FTAC41E-A | 405 | 96.2 | 18 | MXTFCG | $67,142 |
| 450 | 1800 | 575 | 5011UZ | 4717 | 4504FTAC41G-AR | 404 | 96.2 | 2, 18 | MXTFCG | $74,964 |
| 450 | 1200 | 460 | 5810US | 6120 | F4506FLG3BMH | 533 | 95.4 | 18 | MXTFCG | $65,992 |
| 450 | 1200 | 575 | 5810US | 6120 | F4506FLG3OMH | 425 | 95.4 | 18 | MXTFCG | $65,992 |
| 450 | 1200 | 460 | 5810UZ | 6120 | F4506FLF4BMH | 533 | 95.4 | 2, 18 | MXTFCG | $67,242 |
| 450 | 1200 | 575 | 5810UZ | 5856 | F4506FLF4OMH | 425 | 95.4 | 2, 18 | MXTFCG | $67,242 |
| 500 | 3600 | 460 | 5010USS | 4200 | B5003FKG8BMH | 541 | 95.8 | 3, 4, 14, 20 | MXTFCG | $72,911 |
| 500 | 3600 | 460 | 5010USS | 4200 | B5001FKG8BMH | 541 | 95.8 | 3, 5, 14, 20 | MXTFCG | $72,911 |
| 500 | 3600 | 575 | 5010USS | 4200 | B5001FKG8OMH | 433 | 95.8 | 3, 5, 14, 20 | MXTFCG | $72,911 |
| 500 | 3600 | 575 | 5010USS | 4200 | B5003FKG8OMH | 433 | 95.8 | 3, 4, 14, 20 | MXTFCG | $72,911 |
| 500 | 3600 | 460 | 5011USS | 5000 | 5001FTAB41F-A | 549 | 95.8 | 4, 18 | MXTFCG | $83,847 |
| 500 | 3600 | 460 | 5011USS | 5000 | 5003FTAB41F-A | 549 | 95.8 | 4, 18 | MXTFCG | $83,847 |
| 500 | 3600 | 575 | 5011USS | 5000 | 5003FTAC41F-A | 439 | 95.8 | 4, 18 | MXTFCG | $83,847 |
| 500 | 1800 | 460 | 5011US | 4200 | 5004FTAB41E-A | 565 | 96.2 | 18 | MXTFCG | $74,235 |
| 500 | 1800 | 460 | 5011UZ | 4200 | 5004FTAB41G-AR | 565 | 96.2 | 2, 18 | MXTFCG | $82,884 |
| 500 | 1800 | 575 | 5011US | 4200 | 5004FTAC41E-A | 452 | 96.2 | 18 | MXTFCG | $74,235 |
| 500 | 1800 | 575 | 5011UZ | 4837 | 5004FTAC41G-AR | 452 | 96.2 | 2, 18 | MXTFCG | $82,884 |
| 500 | 1200 | 460 | 5810US | 6120 | F5006FLG3BMH | 591 | 95.4 | 18 | MXTFCG | $73,107 |
| 500 | 1200 | 575 | 5810US | 6120 | F5006FLG3OMH | 476 | 95.8 | 18 | MXTFCG | $73,107 |
| 500 | 1200 | 460 | 5810UZ | 6120 | F5006FLF4BMH | 591 | 95.4 | 2, 18 | MXTFCG | $74,357 |
| 500 | 1200 | 575 | 5810UZ | 6120 | F5006FLF4OMH | 476 | 95.8 | 2, 18 | MXTFCG | $74,357 |
| 600 | 3600 | 460 | 5810USS | 6120 | F6001FLG8BM | CF | CF | 4, 18 | MXTFCG | $89,775 |
| 600 | 3600 | 460 | 5811USS | 7000 | 6003FTAB11F-A | 683 | CF | 4, 18 | MXTFCG | $89,775 |
| 600 | 3600 | 575 | 5811USS | 7000 | 6003FTAC11F-A | 546 | CF | 4, 18 | MXTFCG | $89,775 |
| 600 | 1800 | 460 | 5810US | 6120 | F6004FLG3BMH | 673 | CF | 18 | MXTFCG | $79,869 |
| 600 | 1800 | 575 | 5810US | 6120 | F6004FLG3OMH | 554 | CF | 18 | MXTFCG | $79,869 |
| 600 | 1800 | 460 | 5810UZ | 6040 | F6004FLF4BMH | 672 | CF | 2, 18 | MXTFCG | $84,550 |
| 600 | 1800 | 575 | 5810UZ | 6040 | F6004FLF4OMH | 554 | CF | 2, 18 | MXTFCG | $84,550 |
| 600 | 1800 | 460 | 5811US | 7000 | 6004FTAB11E-A | 668 | CF | 2, 18 | MXTFCG | $91,850 |

# Totally Enclosed Fan Cooled
## EQP Global® SD
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 600 | 1800 | 575 | 5811US | 7000 | 6004FTAC11E-A | 535 | CF | 2, 18 | MXTFCG | $91,850 |
| 600 | 1200 | 460 | 5810US | 7800 | F6006FLG3BM | 724 | CF | 18 | MXTFCG | $89,775 |
| 600 | 1200 | 575 | 5810US | 7800 | F6006FLG3OM | 574 | CF | 18 | MXTFCG | $89,775 |
| 600 | 1200 | 460 | 5810UZ | 7800 | F6006FLF4BM | 724 | CF | 2, 18 | MXTFCG | $93,318 |
| 600 | 1200 | 575 | 5810UZ | 7800 | F6006FLF4OM | 574 | CF | 2, 18 | MXTFCG | $93,318 |
| 700 | 3600 | 460 | 5811USS | 6669 | 7003FTAB11F-A | 800 | CF | 4, 18 | MXTFCG | $96,354 |
| 700 | 3600 | 460 | 5811USS | 6669 | 7001FTAB11F-A | 800 | CF | 4, 18 | MXTFCG | $96,354 |
| 700 | 3600 | 575 | 5811USS | 6669 | 7003FTAC11F-A | 641 | CF | 4, 18 | MXTFCG | $96,354 |
| 700 | 3600 | 575 | 5811USS | 6669 | 7001FTAC11F-A | 641 | CF | 4, 18 | MXTFCG | $96,354 |
| 700 | 1800 | 460 | 5810US | 6120 | F7004FLG3BMH | 794 | CF | 18 | MXTFCG | $84,966 |
| 700 | 1800 | 575 | 5810US | 6120 | F7004FLG3OMH | 637 | CF | 18 | MXTFCG | $84,966 |
| 700 | 1800 | 460 | 5810UZ | 6120 | F7004FLF4BMH | 794 | CF | 2, 18 | MXTFCG | $86,216 |
| 700 | 1800 | 575 | 5810UZ | 6120 | F7004FLF4OMH | 637 | CF | 2, 18 | MXTFCG | $86,216 |
| 700 | 1800 | 460 | 5811US | 7000 | 7004FTAB11E-A | 779 | CF | 18 | MXTFCG | $99,357 |
| 700 | 1800 | 575 | 5811US | 7000 | 7004FTAC11E-A | 622 | CF | 18 | MXTFCG | $99,357 |
| 700 | 1200 | 460 | 5811US | 7000 | 7006FTAB11E-A | 858 | CF | 18 | MXTFCG | $103,169 |
| 700 | 1200 | 575 | 5811US | 7000 | 7006FTAC11E-A | 760 | CF | 18 | MXTFCG | $103,169 |
| 800 | 3600 | 460 | 5811USS | 6778 | 8003FTAB11F-AX | 884 | 87.5 | 3, 4, 18 | MXTFCG | $110,086 |
| 800 | 3600 | 575 | 5811USS | 6778 | 8003FTAC11F-AX | 716 | 87.5 | 3, 4, 18, 19 | MXTFCG | $110,086 |
| 800 | 1800 | 460 | 5811US | 7000 | 8004FTAB11E-A | 888 | 95.4 | 18 | MXTFCG | $101,643 |
| 800 | 1800 | 575 | 5811US | 7000 | 8004FTAC11E-A | 709 | 95.4 | 18 | MXTFCG | $101,643 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Totally Enclosed Fan Cooled

## EQP Global® SD C-Face

### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 0.5 to 75 HP

**Speed (60 Hz):** 3600, 1800, or 1200 RPM
**(50 Hz):** 3000, 1500, or 1000 RPM

**Volt (60 Hz):** 230/460 or 575 V
**(50 Hz):** 190/380 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 56C through 365TC

**Construction:** Cast Iron Frame, Bearing Brackets & Conduit Box

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31
(Voltage Withstand Capability of 2000 V in 0.1 µs)

For EQP Global® Motors in frames 140 through 360, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| C-Face Footed | | | | | | | | | | |
| 0.5 | 1800 | 230/460 | 56C | 53 | 1/24FNSR32H-P | 1.4/0.7 | 84.0 | 1, 9, 18, 21 | MTPFCP | $550 |
| 0.5 | 1800 | 575 | 56C | 53 | 1/24FNSC32H-P | 0.6 | 84.0 | 1,18, 21 | MTPFCP | $550 |
| 0.5 | 1200 | 230/460 | 56C | 52 | 1/26SDSR32H-P | 1.8/0.9 | 81.5 | 1, 9, 18, 21 | MTPFCP | $597 |
| 0.5 | 1200 | 575 | 56C | 52 | 1/26SDSC32H-P | 0.7 | 81.5 | 1,18, 21 | MTPFCP | $597 |
| 0.75 | 3600 | 230/460 | 56C | 48 | 3/42SDSR32H-P | 2.2/1.1 | 77.0 | 1, 9, 18, 21 | MTPFCP | $538 |
| 0.75 | 3600 | 575 | 56C | 48 | 3/42SDSC32H-P | 0.9 | 77.0 | 1,18, 21 | MTPFCP | $538 |
| 0.75 | 1800 | 230/460 | 56C | 53 | 3/44SDSR32H-P | 2.4/1.2 | 85.8 | 1, 9, 18, 21 | MTPFCP | $574 |
| 0.75 | 1800 | 575 | 56C | 53 | 3/44SDSC32H-P | 0.9 | 85.8 | 1,18, 21 | MTPFCP | $574 |
| 0.75 | 1200 | 230/460 | 56C | 52 | 3/46SDSR32H-P | 2.6/1.3 | 82.8 | 1, 9, 18 | MTPFCP | $603 |
| 0.75 | 1200 | 575 | 56C | 52 | 3/46SDSC32H-P | 1.1 | 82.8 | 1, 18 | MTPFCP | $603 |
| 0.75 | 1200 | 230/460 | 143TC | 66 | 3/46SDSR42A-P | 2.8/1.4 | 80.0 | 1, 9, 16, 18 | MTPFCP | $685 |
| 0.75 | 1200 | 575 | 143TC | 66 | 3/46SDSC42A-P | .9 | 81.5 | 1, 16, 18 | MTPFCP | $686 |
| 0.75 | 1200 | 230/460 | 143TC | 66 | 3/46SDSR47A-P | 2.8/1.4 | 80.0 | 1, 9, 18 | MTPFCP | $685 |
| 0.75 | 1200 | 575 | 143TC | 66 | 3/46SDSC47A-P | .9 | 81.5 | 1, 18 | MTPFCP | $686 |
| 1 | 3600 | 230/460 | 56C | 48 | 0012SDSR42H-P | 2.8/1.4 | 77.0 | 1, 9, 18, 21 | MTPFCP | $644 |
| 1 | 3600 | 575 | 56C | 48 | 0012SDSC42H-P | 1.1 | 77.0 | 1,18, 21 | MTPFCP | $644 |
| 1 | 1800 | 230/460 | 56C | 53 | 0014SDSR42H-P | 3.2/1.6 | 85.5 | 1, 9, 18 | MTPFCP | $685 |
| 1 | 1800 | 230/460 | 143TC | 63 | 0014SDSR42A-P | 3.4/1.7 | 85.5 | 1, 9, 16, 18 | MTPFCP | $598 |
| 1 | 1800 | 575 | 56C | 53 | 0014SDSC42H-P | 1.3 | 85.5 | 1, 18 | MTPFCP | $685 |
| 1 | 1800 | 575 | 143TC | 62 | 0014SDSC42A-P | 1.2 | 85.5 | 1, 16, 18 | MTPFCP | $598 |
| 1 | 1800 | 230/460 | 143TC | 64 | 0014SDSR47A-P | 3.4/1.7 | 85.5 | 1, 9, 18 | MTPFCP | $598 |
| 1 | 1800 | 575 | 143TC | 63 | 0014SDSC47A-P | 1.2 | 85.5 | 1, 18 | MTPFCP | $598 |
| 1 | 1200 | 230/460 | 56C | 56 | 0016SDSR42H-P | 3.4/1.7 | 82.5 | 1, 9, 18 | MTPFCP | $754 |
| 1 | 1200 | 230/460 | 145TC | 66 | 0016SDSR42A-P | 3.6/1.8 | 82.5 | 1, 9, 16, 18 | MTPFCP | $716 |
| 1 | 1200 | 575 | 56C | 56 | 0016SDSC42H-P | 1.3 | 82.5 | 1, 18 | MTPFCP | $754 |
| 1 | 1200 | 575 | 145TC | 64 | 0016SDSC42A-P | 1.5 | 82.5 | 1, 16, 18 | MTPFCP | $716 |
| 1 | 1200 | 230/460 | 145TC | 66 | 0016SDSR47A-P | 3.6/1.8 | 82.5 | 1, 9, 18 | MTPFCP | $716 |
| 1 | 1200 | 575 | 145TC | 64 | 0016SDSC47A-P | 1.5 | 82.5 | 1, 18 | MTPFCP | $716 |
| 1.5 | 3600 | 230/460 | 56C | 50 | Y152SDSR42H-P | 4.0/2.0 | 84.0 | 1, 9, 18 | MTPFCP | $709 |

# Totally Enclosed Fan Cooled

## EQP Global® SD C-Face

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 3600 | 230/460 | 143TC | 62 | Y152SDSR42A-P | 4.0/2.0 | 84.0 | 1, 9, 16, 18 | MTPFCP | $641 |
| 1.5 | 3600 | 575 | 56C | 50 | Y152SDSC42H-P | 1.6 | 84.0 | 1, 18 | MTPFCP | $709 |
| 1.5 | 3600 | 575 | 143TC | 60 | Y152SDSC42A-P | 1.6 | 84.0 | 1, 16, 18 | MTPFCP | $641 |
| 1.5 | 3600 | 230/460 | 143TC | 62 | Y152SDSR47A-P | 4.0/2.0 | 84.0 | 1, 9, 18 | MTPFCP | $641 |
| 1.5 | 3600 | 575 | 143TC | 60 | Y152SDSC47A-P | 1.6 | 84.0 | 1, 18 | MTPFCP | $641 |
| 1.5 | 1800 | 230/460 | 56C | 55 | Y154SDSR42H-P | 4.4/2.2 | 86.5 | 1, 9, 18 | MTPFCP | $717 |
| 1.5 | 1800 | 230/460 | 145TC | 64 | Y154SDSR42A-P | 4.8/2.4 | 86.5 | 1, 9, 16, 18 | MTPFCP | $646 |
| 1.5 | 1800 | 575 | 56C | 55 | Y154SDSC42H-P | 1.8 | 86.5 | 1, 18 | MTPFCP | $717 |
| 1.5 | 1800 | 575 | 145TC | 73 | Y154SDSC42A-P | 1.9 | 86.5 | 1, 16, 18 | MTPFCP | $646 |
| 1.5 | 1800 | 230/460 | 145TC | 66 | Y154SDSR47A-P | 4.8/2.4 | 86.5 | 1, 9, 18 | MTPFCP | $646 |
| 1.5 | 1800 | 575 | 145TC | 73 | Y154SDSC47A-P | 1.9 | 86.5 | 1, 18 | MTPFCP | $646 |
| 1.5 | 1200 | 230/460 | L56C | 77 | Y156SDSR42H-P | 5.4/2.7 | 87.5 | 1, 9, 18 | MTPFCP | $1,032 |
| 1.5 | 1200 | 230/460 | 182TC | 106 | Y156SDSR42A-P | 5.0/2.5 | 87.5 | 1, 9, 16, 18 | MTPFCP | $779 |
| 1.5 | 1200 | 575 | L56C | 77 | Y156SDSC42H-P | 2.2 | 87.5 | 1, 18 | MTPFCP | $1,032 |
| 1.5 | 1200 | 575 | 182TC | 106 | Y156SDSC42A-P | 2.0 | 87.5 | 1, 16, 18 | MTPFCP | $779 |
| 1.5 | 1200 | 230/460 | 182TC | 105 | Y156SDSR47A-P | 5.0/2.5 | 87.5 | 1, 9, 18 | MTPFCP | $779 |
| 1.5 | 1200 | 575 | 182TC | 106 | Y156SDSC47A-P | 2.0 | 87.5 | 1, 18 | MTPFCP | $779 |
| 2 | 3600 | 230/460 | 56C | 53 | 0022SDSR42H-P | 5.2/2.6 | 85.5 | 1, 9, 18 | MTPFCP | $730 |
| 2 | 3600 | 230/460 | 145TC | 66 | 0022SDSR42A-P | 5.2/2.6 | 85.5 | 1, 9, 16, 18 | MTPFCP | $754 |
| 2 | 3600 | 575 | 56C | 53 | 0022SDSC42H-P | 2.1 | 85.5 | 1, 18 | MTPFCP | $730 |
| 2 | 3600 | 575 | 145TC | 65 | 0022SDSC42A-P | 2.1 | 85.5 | 1, 16, 18 | MTPFCP | $754 |
| 2 | 3600 | 230/460 | 145TC | 66 | 0022SDSR47A-P | 5.2/2.6 | 85.5 | 1, 9, 18 | MTPFCP | $754 |
| 2 | 3600 | 575 | 145TC | 55 | 0022SDSC47A-P | 2.1 | 85.5 | 1, 18 | MTPFCP | $754 |
| 2 | 1800 | 230/460 | 56C | 58 | 0024SDSR42H-P | 6.0/3.0 | 86.5 | 1, 9, 18 | MTPFCP | $725 |
| 2 | 1800 | 230/460 | 145TC | 66 | 0024SDSR42A-P | 6.0/3.0 | 86.5 | 1, 9, 16, 18 | MTPFCP | $693 |
| 2 | 1800 | 575 | 56C | 58 | 0024SDSC42H-P | 2.4 | 86.5 | 1, 18 | MTPFCP | $725 |
| 2 | 1800 | 575 | 145TC | 66 | 0024SDSC42A-P | 2.4 | 86.5 | 1, 16, 18 | MTPFCP | $693 |
| 2 | 1800 | 230/460 | 145TC | 66 | 0024SDSR47A-P | 6.0/3.0 | 86.5 | 1, 9, 18 | MTPFCP | $693 |
| 2 | 1800 | 575 | 145TC | 66 | 0024SDSC47A-P | 2.4 | 86.5 | 1, 18 | MTPFCP | $693 |
| 2 | 1200 | 230/460 | 184TC | 119 | 0026SDSR42A-P | 6.8/3.4 | 88.5 | 1, 9, 16, 18 | MTPFCP | $882 |
| 2 | 1200 | 575 | 184TC | 118 | 0026SDSC42A-P | 2.7 | 88.5 | 1, 16, 18 | MTPFCP | $882 |
| 2 | 1200 | 230/460 | 184TC | 121 | 0026SDSR47A-P | 6.8/3.4 | 88.5 | 1, 9, 18 | MTPFCP | $882 |
| 2 | 1200 | 575 | 184TC | 119 | 0026SDSC47A-P | 2.7 | 88.5 | 1, 18 | MTPFCP | $882 |
| 3 | 3600 | 230/460 | 182TC | 97 | 0032SDSR42A-P | 7.4/3.7 | 86.5 | 1, 9, 16, 18 | MTPFCP | $813 |
| 3 | 3600 | 575 | 182TC | 97 | 0032SDSC42A-P | 3.0 | 86.5 | 1, 16, 18 | MTPFCP | $813 |
| 3 | 3600 | 230/460 | 182TC | 95 | 0032SDSR47A-P | 7.4/3.7 | 86.5 | 1, 9, 18 | MTPFCP | $813 |
| 3 | 3600 | 575 | 182TC | 97 | 0032SDSC47A-P | 3.0 | 86.5 | 1, 18 | MTPFCP | $813 |
| 3 | 1800 | 230/460 | 182TC | 104 | 0034SDSR42A-P | 8.0/4.0 | 89.5 | 1, 9, 16, 18 | MTPFCP | $801 |
| 3 | 1800 | 575 | 182TC | 108 | 0034SDSC42A-P | 3.2 | 89.5 | 1, 16, 18 | MTPFCP | $801 |
| 3 | 1800 | 230/460 | 182TC | 108 | 0034SDSR47A-P | 8.0/4.0 | 89.5 | 1, 9, 18 | MTPFCP | $801 |
| 3 | 1800 | 575 | 182TC | 108 | 0034SDSC47A-P | 3.2 | 89.5 | 1, 18 | MTPFCP | $801 |
| 3 | 1200 | 230/460 | 213TC | 172 | 0036SDSR42A-P | 8.8/4.4 | 89.5 | 1, 9, 16, 18 | MTPFCP | $1,129 |
| 3 | 1200 | 575 | 213TC | 172 | 0036SDSC42A-P | 3.5 | 89.5 | 1, 16, 18 | MTPFCP | $1,129 |
| 3 | 1200 | 230/460 | 213TC | 171 | 0036SDSR47A-P | 8.8/4.4 | 89.5 | 1, 9, 18 | MTPFCP | $1,129 |
| 3 | 1200 | 575 | 213TC | 172 | 0036SDSC47A-P | 3.5 | 89.5 | 1, 18 | MTPFCP | $1,129 |
| 5 | 3600 | 230/460 | 184TC | 110 | 0052SDSR42A-P | 11.6/5.8 | 88.5 | 1, 9, 16, 18 | MTPFCP | $976 |
| 5 | 3600 | 575 | 184TC | 110 | 0052SDSC42A-P | 4.6 | 88.5 | 1, 16, 18 | MTPFCP | $976 |
| 5 | 3600 | 230/460 | 184TC | 108 | 0052SDSR47A-P | 11.6/5.8 | 88.5 | 1, 9, 18 | MTPFCP | $976 |
| 5 | 3600 | 575 | 184TC | 110 | 0052SDSC47A-P | 4.6 | 88.5 | 1, 18 | MTPFCP | $976 |

# Totally Enclosed Fan Cooled
## EQP Global® SD C-Face
### NEMA Premium® Efficiency



EQP Global SD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 1800 | 230/460 | 184TC | 116 | 0054SDSR42A-P | 13.8/6.9 | 89.5 | 1, 9, 16, 18 | MTPFCP | $896 |
| 5 | 1800 | 575 | 184TC | 117 | 0054SDSC42A-P | 5.1 | 89.5 | 1, 16, 18 | MTPFCP | $896 |
| 5 | 1800 | 230/460 | 184TC | 119 | 0054SDSR47A-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPFCP | $896 |
| 5 | 1800 | 575 | 184TC | 117 | 0054SDSC47A-P | 5.1 | 89.5 | 1, 18 | MTPFCP | $896 |
| 5 | 1200 | 230/460 | 215TC | 187 | 0056SDSR42A-P | 13.8/6.9 | 89.5 | 1, 9, 16, 18 | MTPFCP | $1,578 |
| 5 | 1200 | 575 | 215TC | 206 | 0056SDSC42A-P | 5.5 | 89.5 | 1, 16, 18 | MTPFCP | $1,578 |
| 5 | 1200 | 230/460 | 215TC | 143 | 0056SDSR47A-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPFCP | $1,578 |
| 5 | 1200 | 575 | 215TC | 206 | 0056SDSC47A-P | 5.5 | 89.5 | 1, 18 | MTPFCP | $1,578 |
| 7.5 | 3600 | 230/460 | 213TC | 185 | Y752SDSR42A-P | 18.0/9.0 | 89.5 | 1, 9, 16, 18 | MTPFCP | $1,214 |
| 7.5 | 3600 | 575 | 213TC | 185 | Y752SDSC42A-P | 7.2 | 89.5 | 1, 16, 18 | MTPFCP | $1,214 |
| 7.5 | 3600 | 230/460 | 213TC | 179 | Y752SDSR47A-P | 18.0/9.0 | 89.5 | 1, 9, 18 | MTPFCP | $1,214 |
| 7.5 | 3600 | 575 | 213TC | 185 | Y752SDSC47A-P | 7.2 | 89.5 | 1, 18 | MTPFCP | $1,214 |
| 7.5 | 1800 | 230/460 | 213TC | 192 | Y754SDSR42A-P | 19.6/9.8 | 91.7 | 1, 9, 16, 18 | MTPFCP | $1,214 |
| 7.5 | 1800 | 575 | 213TC | 196 | Y754SDSC42A-P | 7.7 | 91.7 | 1, 16, 18 | MTPFCP | $1,214 |
| 7.5 | 1800 | 230/460 | 213TC | 196 | Y754SDSR47A-P | 19.6/9.8 | 91.7 | 1, 9, 18 | MTPFCP | $1,214 |
| 7.5 | 1800 | 575 | 213TC | 196 | Y754SDSC47A-P | 7.7 | 91.7 | 1, 18 | MTPFCP | $1,214 |
| 7.5 | 1200 | 230/460 | 254TC | 298 | Y756SDSR42A-P | 20.4/10.2 | 91.0 | 1, 9, 16, 18 | MTPFCP | $2,031 |
| 7.5 | 1200 | 575 | 254TC | 325 | Y756SDSC42A-P | 8.2 | 91.0 | 1, 16, 18 | MTPFCP | $2,031 |
| 7.5 | 1200 | 230/460 | 254TC | 288 | Y756SDSR47A-P | 20.4/10.2 | 91.0 | 1, 9, 18 | MTPFCP | $2,031 |
| 7.5 | 1200 | 575 | 254TC | 325 | Y756SDSC47A-P | 8.2 | 91.0 | 1, 18 | MTPFCP | $2,031 |
| 10 | 3600 | 230/460 | 215TC | 201 | 0102SDSR42A-P | 23.6/11.8 | 90.2 | 1, 9, 16, 18 | MTPFCP | $1,421 |
| 10 | 3600 | 575 | 215TC | 198 | 0102SDSC42A-P | 9.4 | 90.2 | 1, 16, 18 | MTPFCP | $1,421 |
| 10 | 3600 | 230/460 | 215TC | 196 | 0102SDSR47A-P | 23.6/11.8 | 90.2 | 1, 9, 18 | MTPFCP | $1,421 |
| 10 | 3600 | 575 | 215TC | 198 | 0102SDSC47A-P | 9.4 | 90.2 | 1, 18 | MTPFCP | $1,421 |
| 10 | 1800 | 230/460 | 215TC | 205 | 0104SDSR42A-P | 26/13 | 91.7 | 1, 9, 16, 18 | MTPFCP | $1,439 |
| 10 | 1800 | 575 | 215TC | 207 | 0104SDSC42A-P | 10.1 | 91.7 | 1, 16, 18 | MTPFCP | $1,439 |
| 10 | 1800 | 230/460 | 215TC | 207 | 0104SDSR47A-P | 26/13 | 91.7 | 1, 9, 18 | MTPFCP | $1,439 |
| 10 | 1800 | 575 | 215TC | 207 | 0104SDSC47A-P | 10.1 | 91.7 | 1, 18 | MTPFCP | $1,439 |
| 10 | 1200 | 230/460 | 256TC | 306 | 0106SDSR42A-P | 26.8/13.4 | 91.0 | 1, 9, 16, 18 | MTPFCP | $2,423 |
| 10 | 1200 | 575 | 256TC | 306 | 0106SDSC42A-P | 10.8 | 91.0 | 1, 16, 18 | MTPFCP | $2,423 |
| 10 | 1200 | 230/460 | 256TC | 306 | 0106SDSR47A-P | 26.8/13.4 | 91.0 | 1, 9, 18 | MTPFCP | $2,423 |
| 10 | 1200 | 575 | 256TC | 306 | 0106SDSC47A-P | 10.8 | 91.0 | 1, 18 | MTPFCP | $2,423 |
| 15 | 3600 | 230/460 | 254TC | 313 | 0152SDSR42A-P | 36/18 | 91.0 | 1, 9, 16, 18 | MTPFCP | $1,977 |
| 15 | 3600 | 575 | 254TC | 313 | 0152SDSC42A-P | 14.4 | 91.0 | 1, 16, 18 | MTPFCP | $1,977 |
| 15 | 3600 | 230/460 | 254TC | 309 | 0152SDSR47A-P | 36/18 | 91.0 | 1, 9, 18 | MTPFCP | $1,977 |
| 15 | 3600 | 575 | 254TC | 313 | 0152SDSC47A-P | 14.4 | 91.0 | 1, 18 | MTPFCP | $1,977 |
| 15 | 1800 | 230/460 | 254TC | 316 | 0154SDSR42A-P | 38/19 | 92.4 | 1, 9, 16, 18 | MTPFCP | $1,969 |
| 15 | 1800 | 575 | 254TC | 317 | 0154SDSC42A-P | 15.2 | 92.4 | 1, 16, 18 | MTPFCP | $1,969 |
| 15 | 1800 | 230/460 | 254TC | 326 | 0154SDSR47A-P | 38/19 | 92.4 | 1, 9, 18 | MTPFCP | $1,969 |
| 15 | 1800 | 575 | 254TC | 317 | 0154SDSC47A-P | 15.2 | 92.4 | 1, 18 | MTPFCP | $1,969 |
| 15 | 1200 | 230/460 | 284TC | 441 | 0156SDSR42A-P | 40/20 | 91.7 | 1, 9, 16, 18 | MTPFCP | $3,467 |
| 15 | 1200 | 575 | 284TC | 440 | 0156SDSC42A-P | 15.8 | 91.7 | 1, 16, 18 | MTPFCP | $3,467 |
| 20 | 3600 | 230/460 | 256TC | 331 | 0202SDSR42A-P | 48/24 | 91.0 | 1, 9, 16, 18 | MTPFCP | $2,483 |
| 20 | 3600 | 575 | 256TC | 331 | 0202SDSC42A-P | 19.2 | 91.0 | 1, 16, 18 | MTPFCP | $2,483 |
| 20 | 3600 | 230/460 | 256TC | 318 | 0202SDSR47A-P | 48/24 | 91.0 | 1, 9, 18 | MTPFCP | $2,483 |
| 20 | 3600 | 575 | 256TC | 331 | 0202SDSC47A-P | 19.2 | 91.0 | 1, 18 | MTPFCP | $2,483 |
| 20 | 1800 | 230/460 | 256TC | 359 | 0204SDSR42A-P | 50/25 | 93.0 | 1, 9, 16, 18 | MTPFCP | $2,370 |
| 20 | 1800 | 575 | 256TC | 362 | 0204SDSC42A-P | 20 | 93.0 | 1, 16, 18 | MTPFCP | $2,370 |
| 20 | 1800 | 230/460 | 256TC | 366 | 0204SDSR47A-P | 50/25 | 93.0 | 1, 9, 18 | MTPFCP | $2,370 |

# Totally Enclosed Fan Cooled

## EQP Global® SD C-Face

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 1800 | 575 | 256TC | 362 | 0204SDSC47A-P | 20 | 93.0 | 1, 18 | MTPFCP | $2,370 |
| 20 | 1200 | 230/460 | 286TC | 492 | 0206SDSR42A-P | 50/25 | 91.7 | 1, 9, 18 | MTPFCP | $3,986 |
| 20 | 1200 | 575 | 286TC | 492 | 0206SDSC42A-P | 20 | 91.7 | 1, 18 | MTPFCP | $3,986 |
| 25 | 3600 | 230/460 | 284TSC | 489 | 0252SDSR42B-P | 58/29 | 91.7 | 1, 9, 18 | MTPFCP | $3,163 |
| 25 | 3600 | 575 | 284TSC | 440 | 0252SDSC42B-P | 23 | 91.7 | 1, 18 | MTPFCP | $3,163 |
| 25 | 1800 | 230/460 | 284TC | 511 | 0254SDSR42A-P | 62/31 | 93.6 | 1, 9, 18 | MTPFCP | $2,994 |
| 25 | 1800 | 575 | 284TC | 514 | 0254SDSC42A-P | 24 | 93.6 | 1, 18 | MTPFCP | $2,994 |
| 25 | 1200 | 230/460 | 324TC | 639 | 0256SDSR42A-P | 62/31 | 93.0 | 1, 9, 18 | MTPFCP | $4,798 |
| 25 | 1200 | 575 | 324TC | 639 | 0256SDSC42A-P | 25 | 93.0 | 1, 18 | MTPFCP | $4,798 |
| 30 | 3600 | 230/460 | 286TSC | 509 | 0302SDSR42B-P | 70/35 | 91.7 | 1, 9, 18 | MTPFCP | $3,569 |
| 30 | 3600 | 575 | 286TSC | 485 | 0302SDSC42B-P | 28 | 91.7 | 1, 18 | MTPFCP | $3,569 |
| 30 | 1800 | 230/460 | 286TC | 536 | 0304SDSR42A-P | 72/36 | 93.6 | 1, 9, 18 | MTPFCP | $3,511 |
| 30 | 1800 | 575 | 286TC | 525 | 0304SDSC42A-P | 29 | 93.6 | 1, 18 | MTPFCP | $3,511 |
| 30 | 1200 | 230/460 | 326TC | 659 | 0306SDSR42A-P | 74/37 | 93.0 | 1, 9, 18 | MTPFCP | $5,749 |
| 30 | 1200 | 575 | 326TC | 659 | 0306SDSC42A-P | 29 | 93.6 | 1, 18 | MTPFCP | $5,749 |
| 40 | 3600 | 230/460 | 324TSC | 666 | 0402SDSR42B-P | 94/47 | 92.4 | 1, 9, 18 | MTPFCP | $4,435 |
| 40 | 3600 | 575 | 324TSC | 550 | 0402SDSC42B-P | 38 | 92.4 | 1, 18 | MTPFCP | $4,435 |
| 40 | 1800 | 230/460 | 324TC | 683 | 0404SDSR42A-P | 96/48 | 94.1 | 1, 9, 18 | MTPFCP | $4,465 |
| 40 | 1800 | 575 | 324TC | 690 | 0404SDSC42A-P | 38 | 94.1 | 1, 18 | MTPFCP | $4,465 |
| 40 | 1200 | 230/460 | 364TC | 820 | 0406SDSR42A-P | 96/48 | 94.1 | 1, 9, 18 | MTPFCP | $7,698 |
| 40 | 1200 | 575 | 364TC | 820 | 0406SDSC42A-P | 38 | 94.1 | 1, 18 | MTPFCP | $7,698 |
| 50 | 3600 | 230/460 | 326TSC | 690 | 0502SDSR42B-P | 116/58 | 93.0 | 1, 9, 18 | MTPFCP | $5,959 |
| 50 | 3600 | 575 | 326TSC | 690 | 0502SDSC42B-P | 46 | 93.0 | 1, 18 | MTPFCP | $5,959 |
| 50 | 1800 | 230/460 | 326TC | 737 | 0504SDSR42A-P | 120/60 | 94.5 | 1, 9, 18 | MTPFCP | $5,337 |
| 50 | 1800 | 575 | 326TC | 752 | 0504SDSC42A-P | 48 | 94.5 | 1, 18 | MTPFCP | $5,337 |
| 50 | 1200 | 230/460 | 365TC | 849 | 0506SDSR42A-P | 120/60 | 94.1 | 1, 9, 18 | MTPFCP | $8,849 |
| 50 | 1200 | 575 | 365TC | 849 | 0506SDSC42A-P | 48 | 94.1 | 1, 18 | MTPFCP | $8,849 |
| 60 | 3600 | 230/460 | 364TSC | 869 | 0602SDSR42B-P | 138/69 | 93.6 | 1, 9, 18 | MTPFCP | $7,557 |
| 60 | 3600 | 575 | 364TSC | 869 | 0602SDSC42B-P | 55 | 93.6 | 1, 18 | MTPFCP | $7,557 |
| 60 | 1800 | 230/460 | 364TC | 924 | 0604SDSR42A-P | 138/69 | 95.0 | 1, 9, 18 | MTPFCP | $7,648 |
| 60 | 1800 | 575 | 364TC | 904 | 0604SDSC42A-P | 55 | 95.0 | 1, 18 | MTPFCP | $7,648 |
| 75 | 3600 | 230/460 | 365TSC | 924 | 0752SDSR42B-P | 172/86 | 93.6 | 1, 9, 18 | MTPFCP | $9,304 |
| 75 | 3600 | 575 | 365TSC | 924 | 0752SDSC42B-P | 69 | 93.6 | 1, 18 | MTPFCP | $9,304 |
| 75 | 1800 | 230/460 | 365TC | 981 | 0754SDSR42A-P | 170/85 | 95.4 | 1, 9, 18 | MTPFCP | $9,616 |
| 75 | 1800 | 575 | 365TC | 981 | 0754SDSC42A-P | 69 | 95.4 | 1, 18 | MTPFCP | $9,616 |
| **C-Face Footless** | | | | | | | | | | |
| 0.5 | 1800 | 230/460 | 56C | 53 | 1/24FNSR34H-P | 1.4/0.7 | 84.0 | 1, 9, 18, 21 | MTPFCP | $556 |
| 0.5 | 1800 | 575 | 56C | 53 | 1/24FNSC34H-P | 0.6 | 84.0 | 1,18, 21 | MTPFCP | $556 |
| 0.5 | 1200 | 230/460 | 56C | 52 | 1/26SDSR34H-P | 1.8/0.9 | 81.5 | 1, 9, 18, 21 | MTPFCP | $598 |
| 0.5 | 1200 | 575 | 56C | 52 | 1/26SDSC34H-P | 0.7 | 81.5 | 1,18, 21 | MTPFCP | $598 |
| 0.75 | 3600 | 230/460 | 56C | 48 | 3/42SDSR34H-P | 2.2/1.1 | 77.0 | 1, 9, 18, 21 | MTPFCP | $559 |
| 0.75 | 3600 | 575 | 56C | 48 | 3/42SDSC34H-P | 0.9 | 77.0 | 1,18, 21 | MTPFCP | $559 |
| 0.75 | 1800 | 230/460 | 56C | 53 | 3/44SDSR34H-P | 2.4/1.2 | 85.8 | 1, 9, 18, 21 | MTPFCP | $579 |
| 0.75 | 1800 | 575 | 56C | 53 | 3/44SDSC34H-P | 0.9 | 85.8 | 1,18, 21 | MTPFCP | $579 |
| 0.75 | 1200 | 230/460 | 56C | 52 | 3/46SDSR34H-P | 2.6/1.3 | 82.8 | 1, 9, 18 | MTPFCP | $604 |
| 0.75 | 1200 | 575 | 56C | 52 | 3/46SDSC34H-P | 1.1 | 82.8 | 1, 18 | MTPFCP | $604 |
| 0.75 | 1200 | 230/460 | 143TC | 62 | 3/46SDSR44A-P | 2.8/1.4 | 80.0 | 1, 9, 16, 18 | MTPFCP | $754 |
| 0.75 | 1200 | 575 | 143TC | 62 | 3/46SDSC44A-P | .9 | 81.5 | 1, 16, 18 | MTPFCP | $754 |
| 1 | 3600 | 230/460 | 56C | 48 | 0012SDSR44H-P | 2.8/1.4 | 77.0 | 1, 9, 18, 21 | MTPFCP | $643 |

# Totally Enclosed Fan Cooled

## EQP Global® SD C-Face

### NEMA Premium® Efficiency



EQP Global SD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3600 | 575 | 56C | 48 | 0012SDSC44H-P | 1.1 | 77.0 | 1,18, 21 | MTPFCP | $643 |
| 1 | 1800 | 230/460 | 56C | 53 | 0014SDSR44H-P | 3.2/1.6 | 85.5 | 1, 9, 18 | MTPFCP | $688 |
| 1 | 1800 | 230/460 | 143TC | 61 | 0014SDSR44A-P | 3.4/1.7 | 85.5 | 1, 9 | MTPFCP | $658 |
| 1 | 1800 | 575 | 56C | 53 | 0014SDSC44H-P | 1.3 | 85.5 | 1,18 | MTPFCP | $688 |
| 1 | 1800 | 575 | 143TC | 62 | 0014SDSC44A-P | 1.2 | 85.5 | 1 | MTPFCP | $658 |
| 1 | 1200 | 230/460 | 56C | 56 | 0016SDSR44H-P | 3.4/1.7 | 82.5 | 1, 9 | MTPFCP | $756 |
| 1 | 1200 | 230/460 | 145TC | 66 | 0016SDSR44A-P | 3.6/1.8 | 82.5 | 1, 9 | MTPFCP | $788 |
| 1 | 1200 | 575 | 56C | 56 | 0016SDSC44H-P | 1.3 | 82.5 | 1 | MTPFCP | $756 |
| 1 | 1200 | 575 | 145TC | 66 | 0016SDSC44A-P | 1.5 | 82.5 | 1 | MTPFCP | $788 |
| 1.5 | 3600 | 230/460 | 56C | 50 | Y152SDSR44H-P | 4.0/2.0 | 84.0 | 1, 9 | MTPFCP | $712 |
| 1.5 | 3600 | 230/460 | 143TC | 60 | Y152SDSR44A-P | 4.0/2.0 | 84.0 | 1, 9 | MTPFCP | $705 |
| 1.5 | 3600 | 575 | 56C | 50 | Y152SDSC44H-P | 1.6 | 84.0 | 1 | MTPFCP | $712 |
| 1.5 | 3600 | 575 | 143TC | 60 | Y152SDSC44A-P | 1.6 | 84.0 | 1 | MTPFCP | $705 |
| 1.5 | 1800 | 230/460 | 56C | 55 | Y154SDSR44H-P | 4.4/2.2 | 86.5 | 1, 9 | MTPFCP | $720 |
| 1.5 | 1800 | 230/460 | 145TC | 64 | Y154SDSR44A-P | 4.8/2.4 | 86.5 | 1, 9 | MTPFCP | $711 |
| 1.5 | 1800 | 575 | 56C | 55 | Y154SDSC44H-P | 1.8 | 86.5 | 1 | MTPFCP | $720 |
| 1.5 | 1800 | 575 | 145TC | 64 | Y154SDSC44A-P | 1.9 | 86.5 | 1 | MTPFCP | $711 |
| 1.5 | 1200 | 230/460 | L56C | 77 | Y156SDSR44H-P | 5.4/2.7 | 87.5 | 1, 9 | MTPFCP | $1,038 |
| 1.5 | 1200 | 230/460 | 182TC | 101 | Y156SDSR44A-P | 5.0/2.5 | 87.5 | 1, 9 | MTPFCP | $857 |
| 1.5 | 1200 | 575 | L56C | 77 | Y156SDSC44H-P | 2.2 | 87.5 | 1 | MTPFCP | $1,038 |
| 1.5 | 1200 | 575 | 182TC | 101 | Y156SDSC44A-P | 2.0 | 87.5 | 1 | MTPFCP | $857 |
| 2 | 3600 | 230/460 | 56C | 53 | 0022SDSR44H-P | 5.2/2.6 | 85.5 | 1, 9 | MTPFCP | $745 |
| 2 | 3600 | 230/460 | 145TC | 62 | 0022SDSR44A-P | 5.2/2.6 | 85.5 | 1, 9 | MTPFCP | $829 |
| 2 | 3600 | 575 | 56C | 53 | 0022SDSC44H-P | 2.1 | 85.5 | 1 | MTPFCP | $745 |
| 2 | 3600 | 575 | 145TC | 55 | 0022SDSC44A-P | 2.1 | 85.5 | 1 | MTPFCP | $829 |
| 2 | 1800 | 230/460 | 56C | 58 | 0024SDSR44H-P | 6.0/3.0 | 86.5 | 1, 9 | MTPFCP | $728 |
| 2 | 1800 | 230/460 | 145TC | 65 | 0024SDSR44A-P | 6.0/3.0 | 86.5 | 1, 9 | MTPFCP | $762 |
| 2 | 1800 | 575 | 56C | 58 | 0024SDSC44H-P | 2.4 | 86.5 | 1 | MTPFCP | $728 |
| 2 | 1800 | 575 | 145TC | 68 | 0024SDSC44A-P | 2.4 | 86.5 | 1 | MTPFCP | $762 |
| 2 | 1200 | 230/460 | 184TC | 115 | 0026SDSR44A-P | 6.8/3.4 | 88.5 | 1, 9 | MTPFCP | $970 |
| 2 | 1200 | 575 | 184TC | 115 | 0026SDSC44A-P | 2.7 | 88.5 | 1 | MTPFCP | $970 |
| 3 | 3600 | 230/460 | 182TC | 95 | 0032SDSR44A-P | 7.4/3.7 | 86.5 | 1, 9 | MTPFCP | $894 |
| 3 | 3600 | 575 | 182TC | 95 | 0032SDSC44A-P | 3.0 | 86.5 | 1 | MTPFCP | $894 |
| 3 | 1800 | 230/460 | 182TC | 102 | 0034SDSR44A-P | 8.0/4.0 | 89.5 | 1, 9 | MTPFCP | $881 |
| 3 | 1800 | 575 | 182TC | 104 | 0034SDSC44A-P | 3.2 | 89.5 | 1 | MTPFCP | $881 |
| 3 | 1200 | 230/460 | 213TC | 165 | 0036SDSR44A-P | 8.8/4.4 | 89.5 | 1, 9 | MTPFCP | $1,242 |
| 3 | 1200 | 575 | 213TC | 165 | 0036SDSC44A-P | 3.5 | 89.5 | 1 | MTPFCP | $1,242 |
| 5 | 3600 | 230/460 | 184TC | 106 | 0052SDSR44A-P | 11.6/5.8 | 88.5 | 1, 9 | MTPFCP | $1,074 |
| 5 | 3600 | 575 | 184TC | 106 | 0052SDSC44A-P | 4.6 | 88.5 | 1 | MTPFCP | $1,074 |
| 5 | 1800 | 230/460 | 184TC | 108 | 0054SDSR44A-P | 13.8/6.9 | 89.5 | 1, 9 | MTPFCP | $986 |
| 5 | 1800 | 575 | 184TC | 115 | 0054SDSC44A-P | 5.1 | 89.5 | 1 | MTPFCP | $986 |
| 5 | 1200 | 230/460 | 215TC | 181 | 0056SDSR44A-P | 13.8/6.9 | 89.5 | 1, 9 | MTPFCP | $1,736 |
| 5 | 1200 | 575 | 215TC | 181 | 0056SDSC44A-P | 5.5 | 89.5 | 1 | MTPFCP | $1,736 |
| 7.5 | 3600 | 230/460 | 213TC | 176 | Y752SDSR44A-P | 18.0/9.0 | 89.5 | 1, 9 | MTPFCP | $1,335 |
| 7.5 | 3600 | 575 | 213TC | 155 | Y752SDSC44A-P | 7.2 | 89.5 | 1 | MTPFCP | $1,335 |
| 7.5 | 1800 | 230/460 | 213TC | 190 | Y754SDSR44A-P | 19.6/9.8 | 91.7 | 1, 9 | MTPFCP | $1,335 |
| 7.5 | 1800 | 575 | 213TC | 190 | Y754SDSC44A-P | 7.7 | 91.7 | 1 | MTPFCP | $1,335 |
| 7.5 | 1200 | 230/460 | 254TC | 276 | Y756SDSR44A-P | 20.4/10.2 | 91.0 | 1, 9 | MTPFCP | $2,234 |
| 7.5 | 1200 | 575 | 254TC | 276 | Y756SDSC44A-P | 8.2 | 91.0 | 1 | MTPFCP | $2,234 |

# Totally Enclosed Fan Cooled
## EQP Global® SD C-Face
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 3600 | 230/460 | 215TC | 185 | 0102SDSR44A-P | 23.6/11.8 | 90.2 | 1, 9 | MTPFCP | $1,563 |
| 10 | 3600 | 575 | 215TC | 185 | 0102SDSC44A-P | 9.4 | 90.2 | 1 | MTPFCP | $1,563 |
| 10 | 1800 | 230/460 | 215TC | 205 | 0104SDSR44A-P | 26/13 | 91.7 | 1, 9 | MTPFCP | $1,583 |
| 10 | 1800 | 575 | 215TC | 201 | 0104SDSC44A-P | 10.1 | 91.7 | 1 | MTPFCP | $1,583 |
| 10 | 1200 | 230/460 | 256TC | 295 | 0106SDSR44A-P | 26.8/13.4 | 91.0 | 1, 9 | MTPFCP | $2,665 |
| 10 | 1200 | 575 | 256TC | 295 | 0106SDSC44A-P | 10.8 | 91.0 | 1 | MTPFCP | $2,665 |
| 15 | 3600 | 230/460 | 254TC | 300 | 0152SDSR44A-P | 36/18 | 91.2 | 1, 9 | MTPFCP | $2,175 |
| 15 | 3600 | 575 | 254TC | 300 | 0152SDSC44A-P | 14.4 | 91.0 | 1 | MTPFCP | $2,175 |
| 15 | 1800 | 230/460 | 254TC | 322 | 0154SDSR44A-P | 38/19 | 92.4 | 1, 9 | MTPFCP | $2,166 |
| 15 | 1800 | 575 | 254TC | 304 | 0154SDSC44A-P | 15.2 | 92.4 | 1 | MTPFCP | $2,166 |
| 15 | 1200 | 230/460 | 284TC | 434 | 0156SDSR44A-P | 40/20 | 91.7 | 1, 9 | MTPFCP | $3,640 |
| 15 | 1200 | 575 | 284TC | 434 | 0156SDSC44A-P | 15.8 | 91.7 | 1 | MTPFCP | $3,640 |
| 20 | 3600 | 230/460 | 256TC | 313 | 0202SDSR44A-P | 48/24 | 91.0 | 1, 9 | MTPFCP | $2,731 |
| 20 | 3600 | 575 | 256TC | 313 | 0202SDSC44A-P | 19.2 | 91.0 | 1 | MTPFCP | $2,731 |
| 20 | 1800 | 230/460 | 256TC | 353 | 0204SDSR44A-P | 50/25 | 93.0 | 1, 9 | MTPFCP | $2,607 |
| 20 | 1800 | 575 | 256TC | 353 | 0204SDSC44A-P | 20 | 93.0 | 1 | MTPFCP | $2,607 |
| 20 | 1200 | 230/460 | 286TC | 478 | 0206SDSR44A-P | 50/25 | 91.7 | 1, 9 | MTPFCP | $4,185 |
| 20 | 1200 | 575 | 286TC | 478 | 0206SDSC44A-P | 20 | 91.7 | 1 | MTPFCP | $4,185 |
| 25 | 3600 | 230/460 | 284TSC | 474 | 0252SDSR44B-P | 58/29 | 91.7 | 1, 9 | MTPFCP | $3,321 |
| 25 | 3600 | 575 | 284TSC | 474 | 0252SDSC44B-P | 23 | 91.7 | 1 | MTPFCP | $3,321 |
| 25 | 1800 | 230/460 | 284TC | 489 | 0254SDSR44A-P | 62/31 | 93.6 | 1, 9 | MTPFCP | $3,144 |
| 25 | 1800 | 575 | 284TC | 489 | 0254SDSC44A-P | 24 | 93.6 | 1 | MTPFCP | $3,144 |
| 25 | 1200 | 230/460 | 324TC | 613 | 0256SDSR44A-P | 62/31 | 93.0 | 1, 9 | MTPFCP | $5,038 |
| 25 | 1200 | 575 | 324TC | 613 | 0256SDSC44A-P | 25 | 93.0 | 1 | MTPFCP | $5,038 |
| 30 | 3600 | 230/460 | 286TSC | 496 | 0302SDSR44B-P | 70/35 | 91.7 | 1, 9 | MTPFCP | $3,747 |
| 30 | 3600 | 575 | 286TSC | 496 | 0302SDSC44B-P | 28 | 91.7 | 1 | MTPFCP | $3,747 |
| 30 | 1800 | 230/460 | 286TC | 509 | 0304SDSR44A-P | 72/36 | 93.6 | 1, 9 | MTPFCP | $3,687 |
| 30 | 1800 | 575 | 286TC | 509 | 0304SDSC44A-P | 29 | 93.6 | 1 | MTPFCP | $3,687 |
| 30 | 1200 | 230/460 | 326TC | 633 | 0306SDSR44A-P | 74/37 | 93.0 | 1, 9 | MTPFCP | $6,036 |
| 30 | 1200 | 575 | 326TC | 633 | 0306SDSC44A-P | 30 | 93.0 | 1 | MTPFCP | $6,036 |
| 40 | 3600 | 230/460 | 324TSC | 642 | 0402SDSR44B-P | 94/47 | 92.4 | 1, 9 | MTPFCP | $4,657 |
| 40 | 3600 | 575 | 324TSC | 642 | 0402SDSC44B-P | 38 | 92.4 | 1 | MTPFCP | $4,657 |
| 40 | 1800 | 230/460 | 324TC | 668 | 0404SDSR44A-P | 96/48 | 94.1 | 1, 9 | MTPFCP | $4,688 |
| 40 | 1800 | 575 | 324TC | 668 | 0404SDSC44A-P | 38 | 94.1 | 1 | MTPFCP | $4,688 |
| 40 | 1200 | 230/460 | 364TC | 708 | 0406SDSR44A-P | 96/48 | 94.1 | 1, 9 | MTPFCP | $8,083 |
| 40 | 1200 | 575 | 364TC | 708 | 0406SDSC44A-P | 38 | 94.1 | 1 | MTPFCP | $8,083 |
| 50 | 3600 | 230/460 | 326TSC | 624 | 0502SDSR44B-P | 116/58 | 93.0 | 1, 9 | MTPFCP | $6,257 |
| 50 | 3600 | 575 | 326TSC | 624 | 0502SDSC44B-P | 46 | 93.0 | 1 | MTPFCP | $6,257 |
| 50 | 1800 | 230/460 | 326TC | 714 | 0504SDSR44A-P | 120/60 | 94.5 | 1, 9 | MTPFCP | $5,604 |
| 50 | 1800 | 575 | 326TC | 714 | 0504SDSC44A-P | 48 | 94.5 | 1 | MTPFCP | $5,604 |
| 50 | 1200 | 230/460 | 365TC | 757 | 0506SDSR44A-P | 120/60 | 94.1 | 1, 9 | MTPFCP | $9,291 |
| 50 | 1200 | 575 | 365TC | 757 | 0506SDSC44A-P | 48 | 94.1 | 1 | MTPFCP | $9,291 |
| 60 | 3600 | 230/460 | 364TSC | 833 | 0602SDSR44B-P | 138/69 | 93.6 | 1, 9 | MTPFCP | $7,935 |
| 60 | 3600 | 575 | 364TSC | 833 | 0602SDSC44B-P | 55 | 93.6 | 1 | MTPFCP | $7,935 |
| 60 | 1800 | 230/460 | 364TC | 880 | 0604SDSR44A-P | 138/69 | 95.0 | 1, 9 | MTPFCP | $8,030 |
| 60 | 1800 | 575 | 364TC | 880 | 0604SDSC44A-P | 55 | 95.0 | 1 | MTPFCP | $8,030 |
| 75 | 3600 | 230/460 | 365TSC | 814 | 0752SDSR44B-P | 172/86 | 93.6 | 1, 9 | MTPFCP | $9,769 |
| 75 | 3600 | 575 | 365TSC | 814 | 0752SDSC44B-P | 69 | 93.6 | 1 | MTPFCP | $9,769 |
| 75 | 1800 | 230/460 | 365TC | 959 | 0754SDSR44A-P | 170/85 | 95.4 | 1, 9 | MTPFCP | $10,097 |

# Totally Enclosed Fan Cooled
## EQP Global® SD C-Face
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 75 | 1800 | 575 | 365TC | 950 | 0754SDSC44A-P | 69 | 95.4 | 1 | MTPFCP | $10,097 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Totally Enclosed Fan Cooled
## EQP Global® SD Top Mount
### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 1 to 200 HP

**Speed (60 Hz):** 3600, 1800, or 1200 RPM
**(50 Hz):** 3000, 1500, or 1000 RPM

**Volt (60 Hz):** 230/460 or 575 V
**(50 Hz):** 190/380 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143T through S447T

**Construction:** Cast Iron Frame, Bearing Brackets & Conduit Box

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31
(Voltage Withstand Capability of 2000 V in 0.1 µs)

For EQP Global® Motors in frames 140 through 360, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1800 | 230/460 | 143T | 57 | 0014SDSR41A-P3 | 3.4/1.7 | 85.5 | 1, 9, 18 | MTPFCP | $480 |
| 1 | 1800 | 575 | 143T | 57 | 0014SDSC41A-P3 | 1.2 | 85.5 | 1, 18 | MTPFCP | $480 |
| 1 | 1200 | 230/460 | 145T | 56 | 0016SDSR41A-P3 | 3.6/1.8 | 82.5 | 1, 9, 18 | MTPFCP | $576 |
| 1 | 1200 | 575 | 145T | 56 | 0016SDSC41A-P3 | 1.5 | 82.5 | 1, 18 | MTPFCP | $576 |
| 1.5 | 3600 | 230/460 | 143T | 57 | Y152SDSR41A-P3 | 4.0/2.0 | 84.0 | 1, 9, 18 | MTPFCP | $523 |
| 1.5 | 3600 | 575 | 143T | 57 | Y152SDSC41A-P3 | 1.6 | 84.0 | 1, 18 | MTPFCP | $523 |
| 1.5 | 1800 | 230/460 | 145T | 59 | Y154SDSR41A-P3 | 4.8/2.4 | 86.5 | 1, 9, 18 | MTPFCP | $528 |
| 1.5 | 1800 | 575 | 145T | 59 | Y154SDSC41A-P3 | 1.9 | 86.5 | 1, 18 | MTPFCP | $528 |
| 1.5 | 1200 | 230/460 | 182T | 79 | Y156SDSR41A-P3 | 5.0/2.5 | 87.5 | 1, 9, 18 | MTPFCP | $637 |
| 1.5 | 1200 | 575 | 182T | 79 | Y156SDSC41A-P3 | 2.0 | 87.5 | 1, 18 | MTPFCP | $637 |
| 2 | 3600 | 230/460 | 145T | 59 | 0022SDSR41A-P3 | 5.2/2.6 | 85.5 | 1, 9, 18 | MTPFCP | $633 |
| 2 | 3600 | 575 | 145T | 59 | 0022SDSC41A-P3 | 2.1 | 85.5 | 1, 18 | MTPFCP | $633 |
| 2 | 1800 | 230/460 | 145T | 62 | 0024SDSR41A-P3 | 6.0/3.0 | 86.5 | 1, 9, 18 | MTPFCP | $573 |
| 2 | 1800 | 575 | 145T | 62 | 0024SDSC41A-P3 | 2.4 | 86.5 | 1, 18 | MTPFCP | $573 |
| 2 | 1200 | 230/460 | 184T | 93 | 0026SDSR41A-P3 | 6.8/3.4 | 88.5 | 1, 9, 18 | MTPFCP | $738 |
| 2 | 1200 | 575 | 184T | 93 | 0026SDSC41A-P3 | 2.7 | 88.5 | 1, 18 | MTPFCP | $738 |
| 3 | 3600 | 230/460 | 182T | 95 | 0032SDSR41A-P3 | 7.4/3.7 | 86.5 | 1, 9, 18 | MTPFCP | $670 |
| 3 | 3600 | 575 | 182T | 95 | 0032SDSC41A-P3 | 3.0 | 86.5 | 1, 18 | MTPFCP | $670 |
| 3 | 1800 | 230/460 | 182T | 108 | 0034SDSR41A-P3 | 8.0/4.0 | 89.5 | 1, 9, 18 | MTPFCP | $658 |
| 3 | 1800 | 575 | 182T | 108 | 0034SDSC41A-P3 | 3.2 | 89.5 | 1, 18 | MTPFCP | $658 |
| 3 | 1200 | 230/460 | 213T | 147 | 0036SDSR41A-P3 | 8.8/4.4 | 89.5 | 1, 9, 18 | MTPFCP | $938 |
| 3 | 1200 | 575 | 213T | 147 | 0036SDSC41A-P3 | 3.5 | 89.5 | 1, 18 | MTPFCP | $938 |
| 5 | 3600 | 230/460 | 184T | 108 | 0052SDSR41A-P3 | 11.6/5.8 | 88.5 | 1, 9, 18 | MTPFCP | $830 |
| 5 | 3600 | 575 | 184T | 108 | 0052SDSC41A-P3 | 4.6 | 88.5 | 1, 18 | MTPFCP | $830 |
| 5 | 1800 | 230/460 | 184T | 110 | 0054SDSR41A-P3 | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPFCP | $751 |
| 5 | 1800 | 575 | 184T | 110 | 0054SDSC41A-P3 | 5.1 | 89.5 | 1, 18 | MTPFCP | $751 |
| 5 | 1200 | 230/460 | 215T | 165 | 0056SDSR41A-P3 | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPFCP | $1,379 |
| 5 | 1200 | 575 | 215T | 165 | 0056SDSC41A-P3 | 5.5 | 89.5 | 1, 18 | MTPFCP | $1,379 |
| 7.5 | 3600 | 230/460 | 213T | 178 | Y752SDSR41A-P3 | 18.0/9.0 | 89.5 | 1, 9, 18 | MTPFCP | $1,075 |

# Totally Enclosed Fan Cooled

## EQP Global® SD Top Mount

### NEMA Premium® Efficiency



EQP Global® SD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 7.5 | 3600 | 575 | 213T | 178 | Y752SDSC41A-P3 | 7.2 | 89.5 | 1, 18 | MTPFCP | $1,075 |
| 7.5 | 1800 | 230/460 | 213T | 198 | Y754SDSR41A-P3 | 19.6/9.8 | 91.7 | 1, 9, 18 | MTPFCP | $1,075 |
| 7.5 | 1800 | 575 | 213T | 198 | Y754SDSC41A-P3 | 7.7 | 91.7 | 1, 18 | MTPFCP | $1,075 |
| 7.5 | 1200 | 230/460 | 254T | 252 | Y756SDSR41A-P3 | 20.4/10.2 | 91.0 | 1, 9, 18 | MTPFCP | $1,830 |
| 7.5 | 1200 | 575 | 254T | 252 | Y756SDSC41A-P3 | 8.2 | 91.0 | 1, 18 | MTPFCP | $1,830 |
| 10 | 3600 | 230/460 | 215T | 198 | 0102SDSR41A-P3 | 23.6/11.8 | 90.2 | 1, 9, 18 | MTPFCP | $1,290 |
| 10 | 3600 | 575 | 215T | 198 | 0102SDSC41A-P3 | 9.4 | 90.2 | 1, 18 | MTPFCP | $1,290 |
| 10 | 1800 | 230/460 | 215T | 209 | 0104SDSR41A-P3 | 26/13 | 91.7 | 1, 9, 18 | MTPFCP | $1,308 |
| 10 | 1800 | 575 | 215T | 209 | 0104SDSC41A-P3 | 10.1 | 91.7 | 1, 18 | MTPFCP | $1,308 |
| 10 | 1200 | 230/460 | 256T | 274 | 0106SDSR41A-P3 | 26.8/13.4 | 91.0 | 1, 9, 18 | MTPFCP | $2,236 |
| 10 | 1200 | 575 | 256T | 274 | 0106SDSC41A-P3 | 10.8 | 91.0 | 1, 18 | MTPFCP | $2,236 |
| 15 | 3600 | 230/460 | 254T | 325 | 0152SDSR41A-P3 | 36/18 | 91.0 | 1, 9, 18 | MTPFCP | $1,774 |
| 15 | 3600 | 575 | 254T | 326 | 0152SDSC41A-P3 | 14.4 | 91.0 | 1, 18 | MTPFCP | $1,774 |
| 15 | 1800 | 230/460 | 254T | 343 | 0154SDSR41A-P3 | 38/19 | 92.4 | 1, 9, 18 | MTPFCP | $1,766 |
| 15 | 1800 | 575 | 254T | 316 | 0154SDSC41A-P3 | 15.2 | 92.4 | 1, 18 | MTPFCP | $1,766 |
| 15 | 1200 | 230/460 | 284T | 364 | 0156SDSR41A-P3 | 40/20 | 91.7 | 1, 9, 18 | MTPFCP | $3,135 |
| 15 | 1200 | 575 | 284T | 364 | 0156SDSC41A-P3 | 15.8 | 91.7 | 1, 18 | MTPFCP | $3,135 |
| 20 | 3600 | 230/460 | 256T | 310 | 0202SDSR41A-P3 | 48/24 | 91.0 | 1, 9, 18 | MTPFCP | $2,298 |
| 20 | 3600 | 575 | 256T | 310 | 0202SDSC41A-P3 | 19.2 | 91.0 | 1, 18 | MTPFCP | $2,298 |
| 20 | 1800 | 230/460 | 256T | 380 | 0204SDSR41A-P3 | 50/25 | 93.0 | 1, 9, 18 | MTPFCP | $2,181 |
| 20 | 1800 | 575 | 256T | 381 | 0204SDSC41A-P3 | 20 | 93.0 | 1, 18 | MTPFCP | $2,181 |
| 20 | 1200 | 230/460 | 286T | 411 | 0206SDSR41A-P3 | 50/25 | 91.7 | 1, 9, 18 | MTPFCP | $3,672 |
| 20 | 1200 | 575 | 286T | 411 | 0206SDSC41A-P3 | 20 | 91.7 | 1, 18 | MTPFCP | $3,672 |
| 25 | 3600 | 230/460 | 284TS | 466 | 0252SDSR41B-P3 | 58/29 | 91.7 | 1, 9, 18 | MTPFCP | $2,820 |
| 25 | 3600 | 575 | 284TS | 466 | 0252SDSC41B-P3 | 23 | 91.7 | 1, 18 | MTPFCP | $2,820 |
| 25 | 1800 | 230/460 | 284T | 499 | 0254SDSR41A-P3 | 62/31 | 93.6 | 1, 9, 18 | MTPFCP | $2,645 |
| 25 | 1800 | 575 | 284T | 499 | 0254SDSC41A-P3 | 24 | 93.6 | 1, 18 | MTPFCP | $2,645 |
| 25 | 1200 | 230/460 | 324T | 545 | 0256SDSR41A-P3 | 62/31 | 93.0 | 1, 9, 18 | MTPFCP | $4,457 |
| 25 | 1200 | 575 | 324T | 545 | 0256SDSC41A-P3 | 25 | 93.0 | 1, 18 | MTPFCP | $4,457 |
| 30 | 3600 | 230/460 | 286TS | 495 | 0302SDSR41B-P3 | 70/35 | 91.7 | 1, 9, 18 | MTPFCP | $3,241 |
| 30 | 3600 | 575 | 286TS | 495 | 0302SDSC41B-P3 | 28 | 91.7 | 1, 18 | MTPFCP | $3,241 |
| 30 | 1800 | 230/460 | 286T | 504 | 0304SDSR41A-P3 | 72/36 | 93.6 | 1, 9, 18 | MTPFCP | $3,181 |
| 30 | 1800 | 575 | 286T | 517 | 0304SDSC41A-P3 | 29 | 93.6 | 1, 18 | MTPFCP | $3,181 |
| 30 | 1200 | 230/460 | 326T | 571 | 0306SDSR41A-P3 | 74/37 | 93.0 | 1, 9, 18 | MTPFCP | $5,441 |
| 30 | 1200 | 575 | 326T | 571 | 0306SDSC41A-P3 | 30 | 93.0 | 1, 18 | MTPFCP | $5,441 |
| 40 | 3600 | 230/460 | 324TS | 623 | 0402SDSR41B-P3 | 94/47 | 92.4 | 1, 9, 18 | MTPFCP | $4,081 |
| 40 | 3600 | 575 | 324TS | 623 | 0402SDSC41B-P3 | 38 | 92.4 | 1, 18 | MTPFCP | $4,081 |
| 40 | 1800 | 230/460 | 324T | 656 | 0404SDSR41A-P3 | 96/48 | 94.1 | 1, 9, 18 | MTPFCP | $4,112 |
| 40 | 1800 | 575 | 324T | 656 | 0404SDSC41A-P3 | 38 | 94.1 | 1, 18 | MTPFCP | $4,112 |
| 40 | 1200 | 230/460 | 364T | 708 | 0406SDSR41A-P3 | 96/48 | 94.1 | 1, 9, 18 | MTPFCP | $7,119 |
| 40 | 1200 | 575 | 364T | 708 | 0406SDSC41A-P3 | 38 | 94.1 | 1, 18 | MTPFCP | $7,119 |
| 50 | 3600 | 230/460 | 326TS | 653 | 0502SDSR41B-P3 | 116/58 | 93.0 | 1, 9, 18 | MTPFCP | $5,658 |
| 50 | 3600 | 575 | 326TS | 653 | 0502SDSC41B-P3 | 46 | 93.0 | 1, 18 | MTPFCP | $5,658 |
| 50 | 1800 | 230/460 | 326T | 711 | 0504SDSR41A-P3 | 120/60 | 94.5 | 1, 9, 18 | MTPFCP | $5,015 |
| 50 | 1800 | 575 | 326T | 711 | 0504SDSC41A-P3 | 48 | 94.5 | 1, 18 | MTPFCP | $5,015 |
| 50 | 1200 | 230/460 | 365T | 757 | 0506SDSR41A-P3 | 120/60 | 94.1 | 1, 9, 18 | MTPFCP | $8,310 |
| 50 | 1200 | 575 | 365T | 757 | 0506SDSC41A-P3 | 48 | 94.1 | 1, 18 | MTPFCP | $8,310 |
| 60 | 3600 | 230/460 | 364TS | 854 | 0602SDSR41B-P3 | 138/69 | 93.6 | 1, 9, 18 | MTPFCP | $6,973 |
| 60 | 3600 | 575 | 364TS | 854 | 0602SDSC41B-P3 | 55 | 93.6 | 1, 18 | MTPFCP | $6,973 |

# Totally Enclosed Fan Cooled
## EQP Global® SD Top Mount
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 1800 | 230/460 | 364T | 875 | 0604SDSR41A-P3 | 138/69 | 95.0 | 1, 9, 18 | MTPFCP | $7,067 |
| 60 | 1800 | 575 | 364T | 876 | 0604SDSC41A-P3 | 55 | 95.0 | 1, 18 | MTPFCP | $7,067 |
| 60 | 1200 | 230/460 | 404T | 1259 | 0606SDSR41A-PR3 | 152/76 | 94.5 | 1, 2, 9, 18 | MTPFCP | $11,638 |
| 60 | 1200 | 575 | 404T | 1241 | 0606SDSC41A-PR3 | 61 | 94.5 | 1, 2, 18 | MTPFCP | $11,638 |
| 75 | 3600 | 230/460 | 365TS | 887 | 0752SDSR41B-P3 | 172/86 | 93.6 | 1, 9, 18 | MTPFCP | $8,781 |
| 75 | 3600 | 575 | 365TS | 887 | 0752SDSC41B-P3 | 69 | 93.6 | 1, 18 | MTPFCP | $8,781 |
| 75 | 1800 | 230/460 | 365T | 964 | 0754SDSR41A-P3 | 170/85 | 95.4 | 1, 9, 18 | MTPFCP | $9,104 |
| 75 | 1800 | 575 | 365T | 964 | 0754SDSC41A-P3 | 69 | 95.4 | 1, 18 | MTPFCP | $9,104 |
| 75 | 1200 | 230/460 | 405T | 1374 | 0756SDSR41A-PR3 | 188/94 | 94.5 | 1, 2, 9, 18 | MTPFCP | $13,032 |
| 75 | 1200 | 575 | 405T | 1319 | 0756SDSC41A-PR3 | 75 | 94.5 | 1, 2, 18 | MTPFCP | $13,032 |
| 100 | 3600 | 230/460 | 405TS | 1305 | 1002SDSR41B-P3 | 226/113 | 94.1 | 1, 9, 18 | MTPFCP | $14,088 |
| 100 | 3600 | 575 | 405TS | 1305 | 1002SDSC41B-P3 | 73 | 94.1 | 1, 18 | MTPFCP | $14,088 |
| 100 | 1800 | 230/460 | 405T | 1367 | 1004SDSR41A-P3 | 232/116 | 95.4 | 1, 9, 18 | MTPFCP | $13,119 |
| 100 | 1800 | 230/460 | 405T | 1367 | 1004SDSR41A-PR3 | 232/116 | 95.4 | 1, 2, 9, 18 | MTPFCP | $13,119 |
| 100 | 1800 | 575 | 405T | 1367 | 1004SDSC41A-P3 | 93 | 95.4 | 1, 18 | MTPFCP | $13,119 |
| 100 | 1800 | 575 | 405T | 1367 | 1004SDSC41A-PR3 | 93 | 95.4 | 1, 2, 18 | MTPFCP | $13,119 |
| 125 | 3600 | 230/460 | S444TS | 1988 | 1252SDSA41B-P3 | 265/137.5 | 95.0 | 1, 18 | MTPFCP | $21,428 |
| 125 | 3600 | 575 | S444TS | 1940 | 1252SDSC41A-P3 | 110 | 95.0 | 1, 18 | MTPFCP | $21,428 |
| 125 | 1800 | 230/460 | S444T | 2500 | 1254SDSA41A-P3 | 284/142 | 95.4 | 1, 18 | MTPFCP | $17,571 |
| 125 | 1800 | 230/460 | S444T | 2500 | 1254SDSA41A-PR3 | 284/142 | 95.4 | 1, 2, 18 | MTPFCP | $17,571 |
| 125 | 1800 | 575 | S444T | 2500 | 1254SDSC41A-P3 | 115 | 95.4 | 1, 18 | MTPFCP | $17,571 |
| 125 | 1800 | 575 | S444T | 2500 | 1254SDSC41A-PR3 | 115 | 95.4 | 1, 2, 18 | MTPFCP | $17,571 |
| 150 | 3600 | 230/460 | S445TS | 2500 | 1502SDSA41B-P3 | 326/163 | 95.0 | 1, 18 | MTPFCP | $22,731 |
| 150 | 3600 | 575 | S445TS | 2500 | 1502SDSC41B-P3 | 131 | 95.0 | 1, 18 | MTPFCP | $22,731 |
| 150 | 1800 | 230/460 | S445T | 2500 | 1504SDSA41A-P3 | 336/168 | 95.8 | 1, 18 | MTPFCP | $19,811 |
| 150 | 1800 | 230/460 | S445T | 2500 | 1504SDSA41A-PR3 | 336/168 | 95.8 | 1, 2, 18 | MTPFCP | $19,811 |
| 150 | 1800 | 575 | S445T | 2500 | 1504SDSC41A-P3 | 135 | 95.8 | 1, 18 | MTPFCP | $19,811 |
| 150 | 1800 | 575 | S445T | 2500 | 1504SDSC41A-PR3 | 135 | 95.8 | 1, 2, 18 | MTPFCP | $19,811 |
| 200 | 3600 | 460 | S447TS | 3820 | 2002SDSB41B-P3 | 221 | 95.4 | 1, 18 | MTPFCP | $28,138 |
| 200 | 3600 | 575 | S447TS | 3820 | 2002SDSC41B-P3 | 177 | 95.4 | 1, 18 | MTPFCP | $28,138 |
| 200 | 1800 | 460 | S447T | 2500 | 2004SDSB41A-P3 | 229 | 96.2 | 1, 18 | MTPFCP | $23,811 |
| 200 | 1800 | 460 | S447T | 2500 | 2004SDSB41A-PR3 | 229 | 96.2 | 1, 2, 18 | MTPFCP | $23,811 |
| 200 | 1800 | 575 | S447T | 2500 | 2004SDSC41A-P3 | 184 | 96.2 | 1, 18 | MTPFCP | $23,811 |
| 200 | 1800 | 575 | S447T | 2500 | 2004SDSC41A-PR3 | 184 | 96.2 | 1, 2, 18 | MTPFCP | $23,811 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# General Purpose TEFC

## EQP Global® 840 Motor Series

The Toshiba EQP Global® 840 motor series serves as a cost-effective alternative to meet key features of the 841 specifications, specifically designed for the mill and chemical industries. It features a robust, totally enclosed fan cooled (TEFC) design with premium construction. The EQP Global 840 series has a double shaft sealed arrangement for frames 324-365T. Frames 404T and above feature labyrinth seals on both ends. These features provide an IP56 rating, protecting the motor against moisture and contaminants entering the enclosure. A complete heavy-duty cast-iron construction extends the motor's operational life and minimizes maintenance requirements, reducing downtime. The Toshiba EQP Global 840 motor series provides a reliable and durable solution for industrial applications.

EQP Global® 840

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty, Mill & Chemical
- NEMA Premium® Efficiency
- 60 Hz: 460 or 575 V
- 50 Hz: 380 V
- Three-Phase
- Dual Frequency 50/60 Hz Design
- 1.15 Service Factor
- Footed, C-Face Footed & C-Face Footless Design
- NEMA Design B
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP55 or IP56 Protection
- All Cast Iron Construction
- Multi-Mount Capabilities on Most Frames (See Appendix C)
- Multiple Drain Provisions for Horizontal & Vertical Mounting
- Double Shaft Seal Arrangement 324T-365T Frame (DE & ODE)
- Oversized 300 Series Bearings
- Labyrinth Seal 404T Frame & Larger (DE & ODE)
- 100% No-Load Commercial Test per IEEE 112 on All Motors
- See Appendix D for ASD and Division 2 Capabilities

**Applications:**

- Pumps
- Fans
- Compressors
- Conveyors
- Mixers
- Material Handling



# Totally Enclosed Fan Cooled
## EQP Global® 840
### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 0.75 to 500 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM
**(50 Hz)*:** 3000, 1500, 1000, or 750 RPM

**Volt (60 Hz):** 460 or 575 V
**(50 Hz):** 380 V, 143T through 5810USS

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143T through 5810UZ

**Construction:** All Cast Iron

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs)

For EQP Global® Motors in frames 140 through 440, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.75 | 1200 | 460 | 143T | 57 | 3/46XSSB41A-P | 1.4 | 80.0 | 1, 9, 18 | MTP840 | $610 |
| 0.75 | 1200 | 575 | 143T | 57 | 3/46XSSC41A-P | 1.1 | 81.5 | 1, 18 | MTP840 | $610 |
| 0.75 | 900 | 460 | 145T | 66 | 3/48XSSB41A-P | 1.6 | 74.0 | 1, 9, 18 | MTP840 | $1,064 |
| 0.75 | 900 | 575 | 145T | 66 | 3/48XSSC41A-P | 1.3 | 74.7 | 1, 18 | MTP840 | $1,064 |
| 1 | 1800 | 460 | 143T | 59 | 0014XSSB41A-P | 1.7 | 85.5 | 1, 9, 18 | MTP840 | $552 |
| 1 | 1800 | 575 | 143T | 59 | 0014XSSC41A-P | 1.3 | 85.5 | 1, 18 | MTP840 | $552 |
| 1 | 1200 | 460 | 145T | 66 | 0016XSSB41A-P | 1.8 | 82.5 | 1, 9, 18 | MTP840 | $690 |
| 1 | 1200 | 575 | 145T | 66 | 0016XSSC41A-P | 1.5 | 82.5 | 1, 18 | MTP840 | $690 |
| 1 | 900 | 460 | 182T | 99 | 0018XSSB41A-P | 1.7 | 75.5 | 1, 9, 18 | MTP840 | $1,097 |
| 1 | 900 | 575 | 182T | 99 | 0018XSSC41A-P | 1.4 | 75.5 | 1, 18 | MTP840 | $1,097 |
| 1.5 | 3600 | 460 | 143T | 62 | Y152XSSB41A-P | 2 | 84.0 | 1, 9, 18 | MTP840 | $616 |
| 1.5 | 3600 | 575 | 143T | 62 | Y152XSSC41A-P | 1.6 | 84.0 | 1, 18 | MTP840 | $616 |
| 1.5 | 1800 | 460 | 145T | 66 | Y154XSSB41A-P | 2.4 | 86.5 | 1, 9, 18 | MTP840 | $615 |
| 1.5 | 1800 | 575 | 145T | 66 | Y154XSSC41A-P | 1.9 | 86.5 | 1, 18 | MTP840 | $615 |
| 1.5 | 1200 | 460 | 182T | 106 | Y156XSSB41A-P | 2.5 | 87.5 | 1, 9, 18 | MTP840 | $735 |
| 1.5 | 1200 | 575 | 182T | 106 | Y156XSSC41A-P | 2 | 87.5 | 1, 18 | MTP840 | $735 |
| 1.5 | 900 | 460 | 184T | 126 | Y158XSSB41A-P | 2.6 | 78.5 | 1, 9, 18 | MTP840 | $1,262 |
| 1.5 | 900 | 575 | 184T | 126 | Y158XSSC41A-P | 2.1 | 78.5 | 1, 18 | MTP840 | $1,262 |
| 2 | 3600 | 460 | 145T | 64 | 0022XSSB41A-P | 2.6 | 85.5 | 1, 9, 18 | MTP840 | $695 |
| 2 | 3600 | 575 | 145T | 64 | 0022XSSC41A-P | 2.1 | 85.5 | 1, 18 | MTP840 | $695 |
| 2 | 1800 | 460 | 145T | 73 | 0024XSSB41A-P | 3 | 86.5 | 1, 9, 18 | MTP840 | $675 |
| 2 | 1800 | 575 | 145T | 73 | 0024XSSC41A-P | 2.4 | 86.5 | 1, 18 | MTP840 | $675 |
| 2 | 1200 | 460 | 184T | 126 | 0026XSSB41A-P | 3.4 | 88.5 | 1, 9, 18 | MTP840 | $820 |
| 2 | 1200 | 575 | 184T | 126 | 0026XSSC41A-P | 2.7 | 88.5 | 1, 18 | MTP840 | $820 |
| 2 | 900 | 460 | 213T | 163 | 0028XSSB41A-P | 3 | 84.0 | 1, 9, 18 | MTP840 | $1,658 |
| 2 | 900 | 575 | 213T | 163 | 0028XSSC41A-P | 2.5 | 84.0 | 1, 18 | MTP840 | $1,658 |
| 3 | 3600 | 460 | 182T | 95 | 0032XSSB41A-P | 3.7 | 86.5 | 1, 9, 18 | MTP840 | $757 |

# Totally Enclosed Fan Cooled

## EQP Global® 840

### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 3600 | 575 | 182T | 95 | 0032XSSC41A-P | 3 | 86.5 | 1, 18 | MTP840 | $757 |
| 3 | 1800 | 460 | 182T | 106 | 0034XSSB41A-P | 4 | 89.5 | 1, 9, 18 | MTP840 | $711 |
| 3 | 1800 | 575 | 182T | 106 | 0034XSSC41A-P | 3.2 | 89.5 | 1, 18 | MTP840 | $711 |
| 3 | 1200 | 460 | 213T | 174 | 0036XSSB41A-P | 4.4 | 89.5 | 1, 9, 18 | MTP840 | $1,002 |
| 3 | 1200 | 575 | 213T | 174 | 0036XSSC41A-P | 3.5 | 89.5 | 1, 18 | MTP840 | $1,002 |
| 3 | 900 | 460 | 215T | 176 | 0038XSSB41A-P | 4.7 | 85.5 | 1, 9, 18 | MTP840 | $2,085 |
| 3 | 900 | 575 | 215T | 176 | 0038XSSC41A-P | 3.7 | 85.5 | 1, 18 | MTP840 | $2,085 |
| 5 | 3600 | 460 | 184T | 104 | 0052XSSB41A-P | 5.8 | 88.5 | 1, 9, 18 | MTP840 | $937 |
| 5 | 3600 | 575 | 184T | 104 | 0052XSSC41A-P | 4.6 | 88.5 | 1, 18 | MTP840 | $937 |
| 5 | 1800 | 460 | 184T | 115 | 0054XSSB41A-P | 6.4 | 89.5 | 1, 9, 18 | MTP840 | $830 |
| 5 | 1800 | 575 | 184T | 115 | 0054XSSC41A-P | 5.2 | 89.5 | 1, 18 | MTP840 | $830 |
| 5 | 1200 | 460 | 215T | 190 | 0056XSSB41A-P | 6.9 | 89.5 | 1, 9, 18 | MTP840 | $1,411 |
| 5 | 1200 | 575 | 215T | 190 | 0056XSSC41A-P | 5.5 | 89.5 | 1, 18 | MTP840 | $1,411 |
| 5 | 900 | 460 | 254T | 264 | 0058XSSB41A-P | 7.5 | 86.5 | 1, 9, 18 | MTP840 | $3,067 |
| 5 | 900 | 575 | 254T | 264 | 0058XSSC41A-P | 6 | 86.5 | 1, 18 | MTP840 | $3,067 |
| 7.5 | 3600 | 460 | 213T | 174 | Y752XSSB41A-P | 9 | 89.5 | 1, 9, 18 | MTP840 | $1,212 |
| 7.5 | 3600 | 575 | 213T | 174 | Y752XSSC41A-P | 7.2 | 89.5 | 1, 18 | MTP840 | $1,212 |
| 7.5 | 1800 | 460 | 213T | 194 | Y754XSSB41A-P | 9.8 | 91.7 | 1, 9, 18 | MTP840 | $1,206 |
| 7.5 | 1800 | 575 | 213T | 194 | Y754XSSC41A-P | 7.8 | 91.7 | 1, 18 | MTP840 | $1,206 |
| 7.5 | 1200 | 460 | 254T | 289 | Y756XSSB41A-P | 9.9 | 91.0 | 1, 9, 18 | MTP840 | $2,018 |
| 7.5 | 1200 | 575 | 254T | 289 | Y756XSSC41A-P | 8.2 | 91.0 | 1, 18 | MTP840 | $2,018 |
| 7.5 | 900 | 460 | 256T | 273 | Y758XSSB41A-P | 11.5 | 86.5 | 1, 9, 18 | MTP840 | $3,475 |
| 7.5 | 900 | 575 | 256T | 273 | Y758XSSC41A-P | 9.1 | 86.5 | 1, 18 | MTP840 | $3,475 |
| 10 | 3600 | 460 | 215T | 194 | 0102XSSB41A-P | 11.8 | 90.2 | 1, 9, 18 | MTP840 | $1,423 |
| 10 | 3600 | 575 | 215T | 194 | 0102XSSC41A-P | 9.4 | 90.2 | 1, 18 | MTP840 | $1,423 |
| 10 | 1800 | 460 | 215T | 205 | 0104XSSB41A-P | 13 | 91.7 | 1, 9, 18 | MTP840 | $1,418 |
| 10 | 1800 | 575 | 215T | 205 | 0104XSSC41A-P | 10.4 | 91.7 | 1, 18 | MTP840 | $1,418 |
| 10 | 1200 | 460 | 256T | 309 | 0106XSSB41A-P | 13.4 | 91.0 | 1, 9, 18 | MTP840 | $2,478 |
| 10 | 1200 | 575 | 256T | 309 | 0106XSSC41A-P | 10.8 | 91.0 | 1, 18 | MTP840 | $2,478 |
| 10 | 900 | 460 | 284T | 403 | 0108XSSB41A-P | 14.5 | 89.5 | 1, 9, 18 | MTP840 | $4,519 |
| 10 | 900 | 575 | 284T | 403 | 0108XSSC41A-P | 11.6 | 89.5 | 1, 18 | MTP840 | $4,519 |
| 15 | 3600 | 460 | 254T | 304 | 0152XSSB41A-P | 18 | 91.0 | 1, 9, 18 | MTP840 | $1,950 |
| 15 | 3600 | 575 | 254T | 304 | 0152XSSC41A-P | 14.4 | 91.0 | 1, 18 | MTP840 | $1,950 |
| 15 | 1800 | 460 | 254T | 326 | 0154XSSB41A-P | 19 | 92.4 | 1, 9, 18 | MTP840 | $1,870 |
| 15 | 1800 | 575 | 254T | 326 | 0154XSSC41A-P | 15.2 | 92.4 | 1, 18 | MTP840 | $1,870 |
| 15 | 1200 | 460 | 284T | 452 | 0156XSSB41A-P | 19.6 | 91.7 | 1, 9, 18 | MTP840 | $3,293 |
| 15 | 1200 | 575 | 284T | 452 | 0156XSSC41A-P | 15.8 | 91.7 | 1, 18 | MTP840 | $3,293 |
| 15 | 900 | 460 | 286T | 436 | 0158XSSB41A-P | 22 | 89.5 | 1, 9, 18 | MTP840 | $5,489 |
| 15 | 900 | 575 | 286T | 436 | 0158XSSC41A-P | 17.5 | 89.5 | 1, 18 | MTP840 | $5,489 |
| 20 | 3600 | 460 | 256T | 326 | 0202XSSB41A-P | 24 | 91.0 | 1, 9, 18 | MTP840 | $2,357 |
| 20 | 3600 | 575 | 256T | 326 | 0202XSSC41A-P | 19.2 | 91.0 | 1, 18 | MTP840 | $2,357 |
| 20 | 1800 | 460 | 256T | 355 | 0204XSSB41A-P | 25 | 93.0 | 1, 9, 18 | MTP840 | $2,329 |
| 20 | 1800 | 575 | 256T | 355 | 0204XSSC41A-P | 20 | 93.0 | 1, 18 | MTP840 | $2,329 |
| 20 | 1200 | 460 | 286T | 492 | 0206XSSB41A-P | 25 | 91.7 | 1, 9, 18 | MTP840 | $3,876 |
| 20 | 1200 | 575 | 286T | 492 | 0206XSSC41A-P | 20 | 91.7 | 1, 18 | MTP840 | $3,876 |
| 20 | 900 | 460 | 324T | 585 | 0208XSSB41A-P | 28 | 90.2 | 1, 9, 18 | MTP840 | $6,553 |
| 20 | 900 | 575 | 324T | 585 | 0208XSSC41A-P | 22 | 90.2 | 1, 18 | MTP840 | $6,553 |
| 25 | 3600 | 460 | 284TS | 502 | 0252XSSB41B-P | 29 | 91.7 | 1, 9, 18 | MTP840 | $2,904 |

# Totally Enclosed Fan Cooled
## EQP Global® 840
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 3600 | 575 | 284TS | 502 | 0252XSSC41B-P | 23 | 91.7 | 1, 18 | MTP840 | $2,904 |
| 25 | 1800 | 460 | 284T | 464 | 0254XSSB41A-P | 31 | 93.6 | 1, 9, 18 | MTP840 | $2,818 |
| 25 | 1800 | 460 | 284TS | 458 | 0254XSSB41B-P | 31 | 93.8 | 1, 9, 18 | MTP840 | $2,818 |
| 25 | 1800 | 575 | 284T | 464 | 0254XSSC41A-P | 24 | 93.6 | 1, 18 | MTP840 | $2,818 |
| 25 | 1800 | 575 | 284TS | 458 | 0254XSSC41B-P | 24 | 93.6 | 1, 18 | MTP840 | $2,818 |
| 25 | 1200 | 460 | 324T | 655 | 0256XSSB41A-P | 31 | 93.0 | 1, 9, 18 | MTP840 | $4,700 |
| 25 | 1200 | 575 | 324T | 655 | 0256XSSC41A-P | 25 | 93.0 | 1, 18 | MTP840 | $4,700 |
| 25 | 900 | 460 | 326T | 612 | 0258XSSB41A-P | 35 | 90.2 | 1, 9, 18 | MTP840 | $7,633 |
| 25 | 900 | 575 | 326T | 612 | 0258XSSC41A-P | 27 | 90.2 | 1, 18 | MTP840 | $7,633 |
| 30 | 3600 | 460 | 286TS | 538 | 0302XSSB41B-P | 35 | 91.7 | 1, 9, 18 | MTP840 | $3,539 |
| 30 | 3600 | 575 | 286TS | 538 | 0302XSSC41B-P | 28 | 91.7 | 1, 18 | MTP840 | $3,539 |
| 30 | 1800 | 460 | 286T | 547 | 0304XSSB41A-P | 36 | 93.6 | 1, 9, 18 | MTP840 | $3,292 |
| 30 | 1800 | 460 | 286TS | 544 | 0304XSSB41B-P | 36 | 93.6 | 1, 9, 18 | MTP840 | $3,292 |
| 30 | 1800 | 575 | 286T | 547 | 0304XSSC41A-P | 29 | 93.6 | 1, 18 | MTP840 | $3,292 |
| 30 | 1800 | 575 | 286TS | 544 | 0304XSSC41B-P | 29 | 93.6 | 1, 18 | MTP840 | $3,292 |
| 30 | 1200 | 460 | 326T | 682 | 0306XSSB41A-P | 37 | 93.0 | 1, 9, 18 | MTP840 | $5,412 |
| 30 | 1200 | 575 | 326T | 682 | 0306XSSC41A-P | 30 | 93.0 | 1, 18 | MTP840 | $5,412 |
| 30 | 900 | 460 | 364T | 770 | 0308XSSB41A-P | 41 | 91.7 | 1, 9, 18 | MTP840 | $10,264 |
| 30 | 900 | 575 | 364T | 770 | 0308XSSC41A-P | 33 | 91.7 | 1, 18 | MTP840 | $10,264 |
| 40 | 3600 | 460 | 324TS | 681 | 0402XSSB41B-P | 47 | 92.4 | 1, 9, 18 | MTP840 | $4,459 |
| 40 | 3600 | 575 | 324TS | 681 | 0402XSSC41B-P | 38 | 92.4 | 1, 18 | MTP840 | $4,459 |
| 40 | 1800 | 460 | 324T | 699 | 0404XSSB41A-P | 48 | 94.1 | 1, 9, 18 | MTP840 | $4,284 |
| 40 | 1800 | 460 | 324TS | 695 | 0404XSSB41B-P | 48 | 94.1 | 1, 9, 18 | MTP840 | $4,284 |
| 40 | 1800 | 575 | 324T | 699 | 0404XSSC41A-P | 38 | 94.1 | 1, 18 | MTP840 | $4,284 |
| 40 | 1800 | 575 | 324TS | 695 | 0404XSSC41B-P | 38 | 94.1 | 1, 18 | MTP840 | $4,284 |
| 40 | 1200 | 460 | 364T | 759 | 0406XSSB41A-P | 48 | 94.1 | 1, 9, 18 | MTP840 | $7,335 |
| 40 | 1200 | 575 | 364T | 759 | 0406XSSC41A-P | 38 | 94.1 | 1, 18 | MTP840 | $7,335 |
| 40 | 900 | 460 | 365T | 766 | 0408XSSB41A-P | 54 | 91.7 | 1, 9, 18 | MTP840 | $11,837 |
| 40 | 900 | 575 | 365T | 766 | 0408XSSC41A-P | 44 | 91.7 | 1, 18 | MTP840 | $11,837 |
| 50 | 3600 | 460 | 326TS | 705 | 0502XSSB41B-P | 58 | 93.0 | 1, 9, 18 | MTP840 | $5,789 |
| 50 | 3600 | 575 | 326TS | 705 | 0502XSSC41B-P | 46 | 93.0 | 1, 18 | MTP840 | $5,789 |
| 50 | 1800 | 460 | 326T | 752 | 0504XSSB41A-P | 60 | 94.5 | 1, 9, 18 | MTP840 | $4,978 |
| 50 | 1800 | 460 | 326TS | 743 | 0504XSSB41B-P | 60 | 94.5 | 1, 9, 18 | MTP840 | $4,978 |
| 50 | 1800 | 575 | 326T | 752 | 0504XSSC41A-P | 48 | 94.5 | 1, 18 | MTP840 | $4,978 |
| 50 | 1800 | 575 | 326TS | 743 | 0504XSSC41B-P | 48 | 94.5 | 1, 18 | MTP840 | $4,978 |
| 50 | 1200 | 460 | 365T | 873 | 0506XSSB41A-P | 60 | 94.1 | 1, 9, 18 | MTP840 | $8,421 |
| 50 | 1200 | 575 | 365T | 873 | 0506XSSC41A-P | 48 | 94.1 | 1, 18 | MTP840 | $8,421 |
| 50 | 900 | 460 | 404T | 1304 | 0508XSSB41A-P | 79 | 93.6 | 1, 18 | MTP840 | $18,288 |
| 50 | 900 | 575 | 404T | 1304 | 0508XSSC41A-P | 63 | 93.6 | 1, 18 | MTP840 | $18,288 |
| 60 | 3600 | 460 | 364TS | 899 | 0602XSSB41B-P | 69 | 93.6 | 1, 9, 18 | MTP840 | $7,615 |
| 60 | 3600 | 575 | 364TS | 899 | 0602XSSC41B-P | 55 | 93.6 | 1, 18 | MTP840 | $7,615 |
| 60 | 1800 | 460 | 364T | 930 | 0604XSSB41A-P | 69 | 95.0 | 1, 9, 18 | MTP840 | $7,550 |
| 60 | 1800 | 460 | 364TS | 925 | 0604XSSB41B-P | 69 | 95.0 | 1, 9, 18 | MTP840 | $7,550 |
| 60 | 1800 | 575 | 364T | 930 | 0604XSSC41A-P | 55 | 95.0 | 1, 18 | MTP840 | $7,550 |
| 60 | 1800 | 575 | 364TS | 925 | 0604XSSC41B-P | 55 | 95.0 | 1, 18 | MTP840 | $7,550 |
| 60 | 1200 | 460 | 404T | 1300 | 0606XSSB41A-P | 73 | 94.5 | 1, 9, 18 | MTP840 | $11,970 |
| 60 | 1200 | 575 | 404T | 1300 | 0606XSSC41A-P | 58 | 94.5 | 1, 18 | MTP840 | $11,970 |
| 60 | 900 | 460 | 405T | 1495 | 0608XSSB41A-P | 98 | 93.6 | 1, 18 | MTP840 | $19,399 |

# Totally Enclosed Fan Cooled
## EQP Global® 840
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 900 | 575 | 405T | 1495 | 0608XSSC41A-P | 75 | 93.6 | 1,18 | MTP840 | $19,399 |
| 75 | 3600 | 460 | 365TS | 929 | 0752XSSB41B-P | 86 | 93.6 | 1, 9, 18 | MTP840 | $9,562 |
| 75 | 3600 | 575 | 365TS | 929 | 0752XSSC41B-P | 69 | 93.6 | 1, 18 | MTP840 | $9,562 |
| 75 | 1800 | 460 | 365T | 1005 | 0754XSSB41A-P | 86 | 95.4 | 1, 9, 18 | MTP840 | $9,060 |
| 75 | 1800 | 460 | 365TS | 996 | 0754XSSB41B-P | 86 | 95.4 | 1, 9, 18 | MTP840 | $9,060 |
| 75 | 1800 | 575 | 365T | 1005 | 0754XSSC41A-P | 69 | 95.4 | 1, 18 | MTP840 | $9,060 |
| 75 | 1800 | 575 | 365TS | 996 | 0754XSSC41B-P | 69 | 95.4 | 1, 18 | MTP840 | $9,060 |
| 75 | 1200 | 460 | 405T | 1419 | 0756XSSB41A-P | 91 | 94.5 | 1, 9, 18 | MTP840 | $13,404 |
| 75 | 1200 | 460 | 405T | 1495 | 0756XSSB41A-PR | 91 | 94.5 | 1, 2, 9, 18 | MTP840 | $16,148 |
| 75 | 1200 | 575 | 405T | 1419 | 0756XSSC41A-P | 72 | 94.5 | 1, 18 | MTP840 | $13,404 |
| 75 | 1200 | 575 | 405T | 1419 | 0756XSSC41A-PR | 72 | 94.5 | 1, 2, 18 | MTP840 | $16,148 |
| 75 | 900 | 460 | S444T | 1786 | 0758XSSB41A-R | 92 | 94.5 | 2, 18 | MXT40G | $25,248 |
| 75 | 900 | 460 | S444T | 1786 | 0758XSSB41A | 92 | 94.5 | 18 | MXT40G | $25,248 |
| 75 | 900 | 575 | S444T | 1786 | 0758XSSC41A | 74 | 94.5 | 18 | MXT40G | $25,248 |
| 75 | 900 | 575 | S444T | 1786 | 0758XSSC41A-R | 74 | 94.5 | 2, 18 | MXT40G | $25,248 |
| 100 | 3600 | 460 | 405TS | 1345 | 1002XSSB41B-P | 112 | 94.1 | 1, 9, 18 | MTP840 | $14,490 |
| 100 | 3600 | 575 | 405TS | 1345 | 1002XSSC41B-P | 90 | 94.1 | 1, 18 | MTP840 | $14,490 |
| 100 | 1800 | 460 | 405T | 1367 | 1004XSSB41A-P | 115 | 95.4 | 1, 9, 18 | MTP840 | $13,494 |
| 100 | 1800 | 460 | 405T | 1367 | 1004XSSB41A-PR | 115 | 95.4 | 1, 2, 9, 18 | MTP840 | $13,494 |
| 100 | 1800 | 460 | 405TS | 1367 | 1004XSSB41B-P | 115 | 95.4 | 1, 9, 18 | MTP840 | $13,494 |
| 100 | 1800 | 575 | 405T | 1367 | 1004XSSC41A-P | 93 | 95.4 | 1, 18 | MTP840 | $13,494 |
| 100 | 1800 | 575 | 405T | 1367 | 1004XSSC41A-PR | 93 | 95.4 | 1, 2, 18 | MTP840 | $13,494 |
| 100 | 1800 | 575 | 405TS | 1367 | 1004XSSC41B-P | 93 | 95.4 | 1, 18 | MTP840 | $13,494 |
| 100 | 1200 | 460 | S444T | 2300 | 1006XSSB41A-P | 119 | 95.4 | 1, 18 | MTP840 | $24,296 |
| 100 | 1200 | 460 | S444T | 2300 | 1006XSSB41A-PR | 119 | 95.4 | 1, 2, 18 | MTP840 | $24,296 |
| 100 | 1200 | 575 | S444T | 2300 | 1006XSSC41A-P | 94 | 95.4 | 1, 18 | MTP840 | $24,296 |
| 100 | 1200 | 575 | S444T | 2300 | 1006XSSC41A-PR | 94 | 95.4 | 1, 2, 18 | MTP840 | $24,296 |
| 100 | 900 | 460 | S445T | 2086 | 1008XSSB41A-R | 123 | 94.5 | 2, 18 | MXT40G | $27,839 |
| 100 | 900 | 575 | S445T | 2086 | 1008XSSC41A-R | 98 | 94.5 | 2, 18 | MXT40G | $27,839 |
| 125 | 3600 | 460 | S444TS | 2035 | 1252XSSB41B-P | 138 | 95.0 | 1, 18 | MTP840 | $21,738 |
| 125 | 3600 | 575 | S444TS | 2035 | 1252XSSC41B-P | 111 | 95.0 | 1, 18 | MTP840 | $21,738 |
| 125 | 1800 | 460 | S444T | 2300 | 1254XSSB41A-P | 142 | 95.4 | 1, 18 | MTP840 | $18,182 |
| 125 | 1800 | 460 | S444T | 2300 | 1254XSSB41A-PR | 142 | 95.4 | 1, 2, 18 | MTP840 | $18,182 |
| 125 | 1800 | 460 | S444TS | 2300 | 1254XSSB41B-P | 142 | 95.4 | 1, 18 | MTP840 | $18,182 |
| 125 | 1800 | 575 | S444T | 2300 | 1254XSSC41A-P | 115 | 95.4 | 1, 18 | MTP840 | $18,182 |
| 125 | 1800 | 575 | S444T | 2300 | 1254XSSC41A-PR | 115 | 95.4 | 1, 2, 18 | MTP840 | $18,182 |
| 125 | 1800 | 575 | S444TS | 2300 | 1254XSSC41B-P | 115 | 95.4 | 1, 18 | MTP840 | $18,182 |
| 125 | 1200 | 460 | S445T | 2300 | 1256XSSB41A-P | 148 | 95.4 | 1, 18 | MTP840 | $27,658 |
| 125 | 1200 | 460 | S445T | 2300 | 1256XSSB41A-PR | 148 | 95.4 | 1, 2, 18 | MTP840 | $27,658 |
| 125 | 1200 | 575 | S445T | 2300 | 1256XSSC41A-P | 118 | 95.4 | 1, 18 | MTP840 | $27,658 |
| 125 | 1200 | 575 | S445T | 2300 | 1256XSSC41A-PR | 118 | 95.4 | 1, 2, 18 | MTP840 | $27,658 |
| 125 | 900 | 460 | S447T | 2500 | 1258XSSB41A-R | 153 | 94.5 | 2, 18 | MXT40G | $32,432 |
| 125 | 900 | 460 | S447T | 2500 | 1258XSSB41A | 153 | 94.5 | 18 | MXT40G | $32,432 |
| 125 | 900 | 575 | S447T | 2500 | 1258XSSC41A-R | 123 | 94.5 | 2, 18 | MXT40G | $32,432 |
| 150 | 3600 | 460 | S445TS | 2300 | 1502XSSB41B-P | 166 | 95.0 | 1, 18 | MTP840 | $23,844 |
| 150 | 3600 | 575 | S445TS | 2300 | 1502XSSC41B-P | 132 | 95.0 | 1, 18 | MTP840 | $23,844 |
| 150 | 1800 | 460 | S445T | 2300 | 1504XSSB41A-P | 168 | 95.8 | 1, 18 | MTP840 | $20,422 |
| 150 | 1800 | 460 | S445T | 2300 | 1504XSSB41A-PR | 168 | 95.8 | 1, 2, 18 | MTP840 | $20,422 |

# Totally Enclosed Fan Cooled
## EQP Global® 840
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 1800 | 460 | S445TS | 2300 | 1504XSSB41B-P | 168 | 95.8 | 1, 18 | MTP840 | $20,422 |
| 150 | 1800 | 575 | S445T | 2300 | 1504XSSC41A-P | 135 | 95.8 | 1, 18 | MTP840 | $20,422 |
| 150 | 1800 | 575 | S445T | 2300 | 1504XSSC41A-PR | 135 | 95.8 | 1, 2, 18 | MTP840 | $20,422 |
| 150 | 1800 | 575 | S445TS | 2300 | 1504XSSC41B-P | 135 | 95.8 | 1, 18 | MTP840 | $20,422 |
| 150 | 1200 | 460 | S447T | 2500 | 1506XSSB41A-P | 177 | 95.8 | 1, 18 | MTP840 | $31,338 |
| 150 | 1200 | 460 | S447T | 2500 | 1506XSSB41A-PR | 177 | 95.8 | 1, 2, 18 | MTP840 | $31,338 |
| 150 | 1200 | 460 | S447TZ | 2659 | 1506XSSB41D-PR | 177 | 95.8 | 1, 2, 18 | MTP840 | $32,121 |
| 150 | 1200 | 575 | S447T | 2500 | 1506XSSC41A-P | 142 | 95.8 | 1, 18 | MTP840 | $31,338 |
| 150 | 1200 | 575 | S447T | 2500 | 1506XSSC41A-PR | 142 | 95.8 | 1, 2, 18 | MTP840 | $31,338 |
| 150 | 1200 | 575 | S447TZ | 2659 | 1506XSSC41D-PR | 142 | 95.8 | 1, 2, 18 | MTP840 | $32,121 |
| 150 | 900 | 460 | S449T | 3800 | 1508XSSB41A-R | 188 | 94.5 | 2, 18 | MXT40G | $44,391 |
| 150 | 900 | 575 | S449T | 3800 | 1508XSSC41A-R | 150 | 94.5 | 1, 2, 18 | MXT40G | $44,391 |
| 200 | 3600 | 460 | S447TS | 2500 | 2002XSSB41B-P | 221 | 95.4 | 1, 18 | MTP840 | $28,727 |
| 200 | 3600 | 575 | S447TS | 2301 | 2002XSSC41B-P | 177 | 95.4 | 1, 18 | MTP840 | $28,727 |
| 200 | 1800 | 460 | S447T | 2500 | 2004XSSB41A-P | 231 | 96.2 | 1, 18 | MTP840 | $24,840 |
| 200 | 1800 | 460 | S447T | 2500 | 2004XSSB41A-PR | 231 | 96.2 | 1, 2, 18 | MTP840 | $24,840 |
| 200 | 1800 | 460 | S447TS | 2500 | 2004XSSB41B-P | 231 | 96.2 | 1, 18 | MTP840 | $24,840 |
| 200 | 1800 | 575 | S447T | 2500 | 2004XSSC41A-P | 185 | 96.2 | 1, 18 | MTP840 | $24,840 |
| 200 | 1800 | 575 | S447T | 2500 | 2004XSSC41A-PR | 185 | 96.2 | 1, 2, 18 | MTP840 | $24,840 |
| 200 | 1800 | 575 | S447TS | 2500 | 2004XSSC41B-P | 185 | 96.2 | 1, 18 | MTP840 | $24,840 |
| 200 | 1200 | 460 | S449T | 3860 | 2006XSSB41A | 232 | 95.8 | 18 | MXT40G | $33,177 |
| 200 | 1200 | 460 | S449T | 3860 | 2006XSSB41A-R | 232 | 95.8 | 2, 18 | MXT40G | $33,177 |
| 200 | 1200 | 575 | S449T | 3860 | 2006XSSC41A | 186 | 95.8 | 18 | MXT40G | $33,177 |
| 200 | 1200 | 575 | S449T | 3860 | 2006XSSC41A-R | 186 | 95.8 | 2, 18 | MXT40G | $33,177 |
| 200 | 900 | 460 | S449T | 3860 | 2008XSSB41A | 252 | 94.5 | 18 | MXT40G | $45,582 |
| 200 | 900 | 460 | S449T | 3800 | 2008XSSB41A-R | 252 | 94.5 | 2, 18 | MXT40G | $45,582 |
| 200 | 900 | 575 | S449T | 3860 | 2008XSSC41A | 201 | 94.5 | 18 | MXT40G | $45,582 |
| 200 | 900 | 575 | S449T | 3800 | 2008XSSC41A-R | 201 | 94.5 | 2, 18 | MXT40G | $45,582 |
| 250 | 3600 | 460 | 5010USS | 4152 | B2501FLG3BMHD | 270 | 95.8 | 5 | MXT40G | $43,012 |
| 250 | 3600 | 460 | 5010USS | 4152 | B2503FLG3BMHD | 270 | 95.8 | 4 | MXT40G | $43,012 |
| 250 | 3600 | 575 | 5010USS | 4152 | B2501FLG3OMHD | 220 | 95.8 | 5 | MXT40G | $43,012 |
| 250 | 3600 | 575 | 5010USS | 4152 | B2503FLG3OMHD | 216 | 95.8 | 4 | MXT40G | $43,012 |
| 250 | 3600 | 460 | B449TS | 4015 | 2502XSSB41B | 273 | 95.8 | 18 | MXT40G | $41,289 |
| 250 | 3600 | 575 | B449TS | 4015 | 2502XSSC41B | 219 | 95.8 | 18 | MXT40G | $41,289 |
| 250 | 1800 | 460 | S449T | 3631 | 2504XSSB41A-R | 276 | 96.2 | 2, 18 | MXT40G | $34,026 |
| 250 | 1800 | 460 | S449T | 3608 | 2504XSSB41A | 276 | 96.2 | 18 | MXT40G | $34,026 |
| 250 | 1800 | 575 | S449T | 3860 | 2504XSSC41A-R | 221 | 96.2 | 2, 18 | MXT40G | $34,026 |
| 250 | 1800 | 575 | S449T | 3860 | 2504XSSC41A | 221 | 96.2 | 18 | MXT40G | $34,026 |
| 250 | 1200 | 460 | 5010US | 4193 | B2506FLG3BMHD | 300 | 95.8 | | MXT40G | $43,424 |
| 250 | 1200 | 575 | 5010US | 4193 | B2506FLG3OMHD | 240 | 95.8 | | MXT40G | $43,424 |
| 250 | 1200 | 460 | 5010UZ | 4549 | B2506FLF4BMHD | 295 | 96.2 | 2 | MXT40G | $44,793 |
| 250 | 1200 | 575 | 5010UZ | 4193 | B2506FLF4OSHD | 244 | 95.8 | 2 | MXT40G | $44,793 |
| 250 | 1200 | 460 | S449T | 3860 | 2506XSSB41A | 295 | 95.8 | 18 | MXT40G | $39,512 |
| 250 | 1200 | 460 | S449T | 3860 | 2506XSSB41A-R | 295 | 95.8 | 2, 18 | MXT40G | $39,512 |
| 250 | 1200 | 575 | S449T | 3860 | 2506XSSC41A | 236 | 95.8 | 18 | MXT40G | $39,512 |
| 250 | 1200 | 575 | S449T | 3860 | 2506XSSC41A-R | 236 | 95.8 | 2, 18 | MXT40G | $39,512 |
| 250 | 900 | 460 | B449T | 4060 | 2508XSSB41A-R | 316 | 94.5 | 2, 18 | MXT40G | $47,752 |
| 250 | 900 | 575 | B449T | 4060 | 2508XSSC41A-R | 253 | 94.5 | 2, 18 | MXT40G | $47,752 |

# Totally Enclosed Fan Cooled

## EQP Global® 840

### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 300 | 3600 | 460 | 5010USS | 3954 | B3001FLG8BMHD | 322 | 95.8 | 5 | MXT40G | $49,959 |
| 300 | 3600 | 460 | 5010USS | 3954 | B3003FLG8BMHD | 322 | 95.8 | 4 | MXT40G | $49,959 |
| 300 | 3600 | 575 | 5010USS | 4154 | B3001FLG8OMHD | 258 | 95.8 | 5 | MXT40G | $49,959 |
| 300 | 3600 | 575 | 5010USS | 4154 | B3003FLG8OMHD | 258 | 95.8 | 4 | MXT40G | $49,959 |
| 300 | 3600 | 460 | B449TS | 4015 | 3002XSSB41B | 326 | 95.8 | 18 | MXT40G | $48,781 |
| 300 | 3600 | 575 | B449TS | 4015 | 3002XSSC41B | 261 | 95.8 | 18 | MXT40G | $48,781 |
| 300 | 1800 | 460 | 5010US | 4501 | B3004FLG3BMHD | 329 | 96.5 | | MXT40G | $40,554 |
| 300 | 1800 | 575 | 5010US | 4501 | B3004FLG3OMHD | 264 | 96.2 | | MXT40G | $40,554 |
| 300 | 1800 | 460 | 5010UZ | 4564 | B3004FLF4BMHD | 329 | 96.5 | 2 | MXT40G | $43,951 |
| 300 | 1800 | 575 | 5010UZ | 4400 | B3004FLF4OMHD | 264 | 96.2 | 2 | MXT40G | $43,951 |
| 300 | 1800 | 460 | S449T | 3860 | 3004XSSB41A-R | 334 | 96.2 | 2, 18 | MXT40G | $38,130 |
| 300 | 1800 | 460 | S449T | 3860 | 3004XSSB41A | 330 | 96.2 | 2, 18 | MXT40G | $38,130 |
| 300 | 1800 | 575 | S449T | 3860 | 3004XSSC41A-R | 267 | 96.2 | 2, 18 | MXT40G | $38,130 |
| 300 | 1800 | 575 | S449T | 3860 | 3004XSSC41A | 267 | 96.2 | 2, 18 | MXT40G | $38,130 |
| 300 | 1200 | 460 | 5010US | 4232 | B3006FLG3BMHD | 362 | 96.2 | | MXT40G | $55,016 |
| 300 | 1200 | 575 | 5010US | 4232 | B3006FLG3OMHD | 290 | 96.2 | | MXT40G | $55,016 |
| 300 | 1200 | 460 | 5010UZ | 3967 | B3006FLF4BMHD | 362 | 96.2 | 2 | MXT40G | $56,139 |
| 300 | 1200 | 575 | 5010UZ | 4543 | B3006FLF4OMHD | 282 | 96.2 | 2 | MXT40G | $56,139 |
| 300 | 900 | 460 | 5810US | 5606 | F3008FLG3BMHD | 381 | 94.5 | 18 | MXT40G | $59,777 |
| 300 | 900 | 575 | 5810US | 7800 | B3008FLG3OMHD | 305 | 95.0 | 18 | MXT40G | $59,777 |
| 300 | 900 | 460 | 5810UZ | 7800 | F3008FLF4BMHD | 381 | 94.5 | 2, 18 | MXT40G | $59,777 |
| 300 | 900 | 575 | 5810UZ | 7800 | F3008FLF4OMHD | 310 | 95.0 | 2, 18 | MXT40G | $59,777 |
| 350 | 3600 | 460 | 5010USS | 4175 | B3503FLG8BMHD | 380 | 95.8 | 4 | MXT40G | $53,233 |
| 350 | 3600 | 575 | 5010USS | 4175 | B3503FLG8OMHD | 295 | 95.8 | 4 | MXT40G | $53,233 |
| 350 | 3600 | 460 | B449TS | 4015 | 3503XSSB41B | 380 | 95.8 | 18 | MXT40G | $50,566 |
| 350 | 3600 | 460 | B449TS | 4015 | 3501XSSB41B | 380 | 95.8 | 5, 18 | MXT40G | $50,566 |
| 350 | 3600 | 575 | B449TS | 4015 | 3503XSSC41B | 304 | 95.8 | 18 | MXT40G | $50,566 |
| 350 | 3600 | 575 | B449TS | 4015 | 3501XSSC41B | 304 | 95.8 | 5, 18 | MXT40G | $50,566 |
| 350 | 1800 | 460 | 5010US | 4492 | B3504FLG3BMHD | 388 | 96.2 | | MXT40G | $45,173 |
| 350 | 1800 | 575 | 5010US | 4321 | B3504FLG3OMHD | 308 | 96.2 | | MXT40G | $45,173 |
| 350 | 1800 | 460 | 5010UZ | 3909 | B3504FLF4BMHD | 380 | 96.2 | 2 | MXT40G | $46,542 |
| 350 | 1800 | 575 | 5010UZ | 3909 | B3504FLF4OMHD | 308 | 96.2 | 2 | MXT40G | $46,542 |
| 350 | 1200 | 460 | B449T | 4060 | 3506XSSB41A | 420 | 95.8 | 18 | MXT40G | $53,401 |
| 350 | 1200 | 460 | B449T | 4060 | 3506XSSB41A-R | 420 | 95.8 | 2, 18 | MXT40G | $53,401 |
| 350 | 1200 | 575 | B449T | 4060 | 3506XSSC41A | 336 | 95.8 | 18 | MXT40G | $53,401 |
| 350 | 1200 | 575 | B449T | 4060 | 3506XSSC41A-R | 336 | 95.8 | 2, 18 | MXT40G | $53,401 |
| 350 | 900 | 460 | 5810US | 7800 | F3508FLG3BMHD | 444 | 95.4 | 18 | MXT40G | $60,198 |
| 350 | 900 | 575 | 5810US | 7800 | F3508FLG3OMHD | 355 | 95.4 | 18 | MXT40G | $60,198 |
| 350 | 900 | 460 | 5810UZ | 7800 | F3508FLF4BMHD | 444 | 95.4 | 2, 18 | MXT40G | $60,198 |
| 350 | 900 | 575 | 5810UZ | 7800 | F3508FLF4OMHD | 355 | 95.4 | 2, 18 | MXT40G | $60,198 |
| 400 | 3600 | 460 | 5010USS | 4050 | B4001FLG8BMHD | 440 | 95.8 | 5 | MXT40G | $62,409 |
| 400 | 3600 | 460 | 5010USS | 4050 | B4003FLG8BMHD | 438 | 95.8 | 4 | MXT40G | $62,409 |
| 400 | 3600 | 575 | 5010USS | 4050 | B4001FLG8OMHD | 352 | 95.8 | 5 | MXT40G | $62,409 |
| 400 | 3600 | 575 | 5010USS | 4050 | B4003FLG8OMHD | 350 | 95.8 | 4 | MXT40G | $62,409 |
| 400 | 1800 | 460 | 5010US | 4563 | B4004FLG3BMHD | 449 | 96.2 | | MXT40G | $58,768 |
| 400 | 1800 | 575 | 5010US | 4563 | B4004FLG3OMHD | 358 | 96.2 | | MXT40G | $58,768 |
| 400 | 1800 | 460 | 5010UZ | 4625 | B4004FLF4BMHD | 449 | 96.2 | 2 | MXT40G | $59,899 |
| 400 | 1800 | 575 | 5010UZ | 4563 | B4004FLF4OMHD | 357 | 96.2 | 2 | MXT40G | $59,899 |

# Totally Enclosed Fan Cooled
## EQP Global® 840
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 1200 | 460 | 5010US | 4998 | F4006FLG3BMHD | 482 | 95.4 | | MXT40G | $65,092 |
| 400 | 1200 | 575 | 5010US | 4998 | F4006FLG3OMHD | 386 | 95.4 | | MXT40G | $65,092 |
| 400 | 1200 | 460 | 5010UZ | 5123 | F4006FLF4BMHD | 482 | 95.4 | 2 | MXT40G | $66,236 |
| 400 | 1200 | 575 | 5010UZ | 5123 | F4006FLF4OMHD | 386 | 95.4 | 2 | MXT40G | $66,236 |
| 400 | 900 | 460 | 5810US | 7800 | F4008FLG3BMHD | 503 | 95.4 | 18 | MXT40G | $72,238 |
| 400 | 900 | 575 | 5810US | 7800 | F4008FLG3OMHD | 379 | 95.4 | 18 | MXT40G | $72,238 |
| 400 | 900 | 460 | 5810UZ | 7800 | F4008FLF4BMHD | 514 | 95.3 | 2, 18 | MXT40G | $72,238 |
| 400 | 900 | 575 | 5810UZ | 7800 | F4008FLF4OMHD | 379 | 95.4 | 2, 18 | MXT40G | $72,238 |
| 450 | 3600 | 460 | 5010USS | 4837 | B4501FLG8BMHD | 493 | 95.8 | 5 | MXT40G | $69,708 |
| 450 | 3600 | 460 | 5010USS | 4837 | B4503FLG8BMHD | 494 | 95.8 | 4 | MXT40G | $69,708 |
| 450 | 3600 | 575 | 5010USS | 4837 | B4501FLG8OMHD | 394 | 95.8 | 5 | MXT40G | $69,708 |
| 450 | 3600 | 575 | 5010USS | 4837 | B4503FLG8OMHD | 394 | 95.8 | 4 | MXT40G | $69,708 |
| 450 | 1200 | 460 | 5810US | 6240 | F4506FLG3BMHD | 533 | 95.4 | 18 | MXT40G | $70,200 |
| 450 | 1200 | 575 | 5810US | 6240 | F4506FLG3OMHD | 425 | 95.4 | 18 | MXT40G | $70,200 |
| 450 | 1200 | 460 | 5810UZ | 6240 | F4506FLF4BMHD | 533 | 95.4 | 2, 18 | MXT40G | $71,325 |
| 450 | 1200 | 575 | 5810UZ | 6240 | F4506FLF4OMHD | 425 | 95.4 | 2, 18 | MXT40G | $71,325 |
| 500 | 3600 | 460 | 5010USS | 4837 | B5001FKG8BMHD | 541 | 95.8 | 3, 5, 14 ,20 | MXT40G | $76,995 |
| 500 | 3600 | 460 | 5010USS | 4837 | B5003FKG8BMHD | 549 | 95.8 | 3, 4, 14 ,20 | MXT40G | $76,995 |
| 500 | 3600 | 575 | 5010USS | 4837 | B5001FKG8OMHD | 439 | 95.8 | 3, 5, 14 ,20 | MXT40G | $76,995 |
| 500 | 3600 | 575 | 5010USS | 4837 | B5003FKG8OMHD | 439 | 95.8 | 3, 4, 14 ,20 | MXT40G | $76,995 |
| 500 | 1800 | 460 | 5011US | 5037 | 5004XSSB41E | 563 | 96.2 | 18 | MXT40G | $77,982 |
| 500 | 1800 | 460 | 5011UZ | 5037 | 5004XSSB41G-AR | 563 | 96.2 | 2, 18 | MXT40G | $88,286 |
| 500 | 1800 | 575 | 5011US | 5037 | 5004XSSC41E | 452 | 96.2 | 18 | MXT40G | $77,982 |
| 500 | 1800 | 575 | 5011UZ | 5037 | 5004XSSC41G-AR | 452 | 96.2 | 2, 18 | MXT40G | $88,286 |
| 500 | 1200 | 460 | 5810US | 6340 | F5006FLG3BMHD | 591 | 95.4 | 18 | MXT40G | $77,303 |
| 500 | 1200 | 575 | 5810US | 6120 | F5006FLG3OMHD | 476 | 95.8 | 18 | MXT40G | $77,303 |
| 500 | 1200 | 460 | 5810UZ | 6340 | F5006FLF4BMHD | 591 | 95.4 | 2, 18 | MXT40G | $78,440 |
| 500 | 1200 | 575 | 5810UZ | 6340 | F5006FLF4OMHD | 476 | 95.8 | 2, 18 | MXT40G | $78,440 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Totally Enclosed Fan Cooled

## EQP Global® 840 C-Face

### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 0.75 to 75 HP

**Speed (60 Hz):** 3600, 1800, or 1200 RPM

**Volt (60 Hz):** 460 or 575 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143TC through 365TC

**Construction:** All Cast Iron

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs)

For EQP Global® Motors in frames 140 through 360, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| C-Face Footed | | | | | | | | | | |
| 0.75 | 1200 | 460 | 143TC | 68 | 3/46XSSB42A-P | 1.4 | 80.0 | 1, 9, 16, 18 | MTP840 | $719 |
| 0.75 | 1200 | 575 | 143TC | 68 | 3/46XSSC42A-P | .9 | 81.5 | 1, 16, 18 | MTP840 | $719 |
| 0.75 | 1200 | 460 | 143TC | 68 | 3/46XSSB47A-P | 1.4 | 80.0 | 1, 9, 18 | MTP840 | $719 |
| 0.75 | 1200 | 575 | 143TC | 68 | 3/46XSSC47A-P | .9 | 81.5 | 1, 18 | MTP840 | $719 |
| 1 | 1800 | 460 | 143TC | 68 | 0014XSSB42A-P | 1.7 | 85.5 | 1, 9, 16, 18 | MTP840 | $661 |
| 1 | 1800 | 575 | 143TC | 71 | 0014XSSC42A-P | 1.2 | 85.5 | 1, 16, 18 | MTP840 | $661 |
| 1 | 1800 | 460 | 143TC | 71 | 0014XSSB47A-P | 1.7 | 85.5 | 1, 9, 18 | MTP840 | $661 |
| 1 | 1800 | 575 | 143TC | 71 | 0014XSSC47A-P | 1.2 | 85.5 | 1, 18 | MTP840 | $661 |
| 1 | 1200 | 460 | 145TC | 71 | 0016XSSB42A-P | 1.8 | 82.5 | 1, 9, 16, 18 | MTP840 | $799 |
| 1 | 1200 | 575 | 145TC | 71 | 0016XSSC42A-P | 1.5 | 82.5 | 1, 16, 18 | MTP840 | $799 |
| 1 | 1200 | 460 | 145TC | 73 | 0016XSSB47A-P | 1.8 | 82.5 | 1, 9, 18 | MTP840 | $799 |
| 1 | 1200 | 575 | 145TC | 71 | 0016XSSC47A-P | 1.5 | 82.5 | 1, 18 | MTP840 | $799 |
| 1.5 | 3600 | 460 | 143TC | 66 | Y152XSSB42A-P | 2.0 | 84.0 | 1, 9, 16, 18 | MTP840 | $725 |
| 1.5 | 3600 | 575 | 143TC | 60 | Y152XSSC42A-P | 1.6 | 84.0 | 1, 16, 18 | MTP840 | $725 |
| 1.5 | 3600 | 460 | 143TC | 66 | Y152XSSB47A-P | 2.0 | 84.0 | 1, 9, 18 | MTP840 | $725 |
| 1.5 | 3600 | 575 | 143TC | 60 | Y152XSSC47A-P | 1.6 | 84.0 | 1, 18 | MTP840 | $725 |
| 1.5 | 1800 | 460 | 145TC | 64 | Y154XSSB42A-P | 2.4 | 86.5 | 1, 9, 16, 18 | MTP840 | $724 |
| 1.5 | 1800 | 575 | 145TC | 71 | Y154XSSC42A-P | 1.9 | 86.5 | 1, 16, 18 | MTP840 | $724 |
| 1.5 | 1800 | 460 | 145TC | 71 | Y154XSSB47A-P | 2.4 | 86.5 | 1, 9, 18 | MTP840 | $724 |
| 1.5 | 1800 | 575 | 145TC | 71 | Y154XSSC47A-P | 1.9 | 86.5 | 1, 18 | MTP840 | $724 |
| 1.5 | 1200 | 460 | 182TC | 103 | Y156XSSB42A-P | 2.5 | 87.5 | 1, 9, 16, 18 | MTP840 | $866 |
| 1.5 | 1200 | 575 | 182TC | 79 | Y156XSSC42A-P | 2.0 | 87.5 | 1, 16, 18 | MTP840 | $866 |
| 1.5 | 1200 | 460 | 182TC | 79 | Y156XSSB47A-P | 2.5 | 87.5 | 1, 9, 18 | MTP840 | $866 |
| 1.5 | 1200 | 575 | 182TC | 79 | Y156XSSC47A-P | 2.0 | 87.5 | 1, 18 | MTP840 | $866 |
| 2 | 3600 | 460 | 145TC | 64 | 0022XSSB42A-P | 2.6 | 85.5 | 1, 9, 16, 18 | MTP840 | $804 |
| 2 | 3600 | 575 | 145TC | 68 | 0022XSSC42A-P | 2.1 | 85.5 | 1, 16, 18 | MTP840 | $804 |

# Totally Enclosed Fan Cooled
## EQP Global® 840 C-Face
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 3600 | 460 | 145TC | 64 | 0022XSSB47A-P | 2.6 | 85.5 | 1, 9, 18 | MTP840 | $804 |
| 2 | 3600 | 575 | 145TC | 68 | 0022XSSC47A-P | 2.1 | 85.5 | 1, 18 | MTP840 | $804 |
| 2 | 1800 | 460 | 145TC | 66 | 0024XSSB42A-P | 3.0 | 86.5 | 1, 9, 16, 18 | MTP840 | $784 |
| 2 | 1800 | 575 | 145TC | 73 | 0024XSSC42A-P | 2.4 | 86.5 | 1, 16, 18 | MTP840 | $784 |
| 2 | 1800 | 460 | 145TC | 75 | 0024XSSB47A-P | 3.0 | 86.5 | 1, 9, 18 | MTP840 | $784 |
| 2 | 1800 | 575 | 145TC | 68 | 0024XSSC47A-P | 2.4 | 86.5 | 1, 18 | MTP840 | $784 |
| 2 | 1200 | 460 | 184TC | 126 | 0026XSSB42A-P | 3.4 | 88.5 | 1, 9, 16, 18 | MTP840 | $951 |
| 2 | 1200 | 575 | 184TC | 126 | 0026XSSC42A-P | 2.7 | 88.5 | 1, 16, 18 | MTP840 | $951 |
| 2 | 1200 | 460 | 184TC | 126 | 0026XSSB47A-P | 3.4 | 88.5 | 1, 9, 18 | MTP840 | $951 |
| 2 | 1200 | 575 | 184TC | 126 | 0026XSSC47A-P | 2.7 | 88.5 | 1, 18 | MTP840 | $951 |
| 3 | 3600 | 460 | 182TC | 104 | 0032XSSB42A-P | 3.6 | 86.5 | 1, 9, 16, 18 | MTP840 | $888 |
| 3 | 3600 | 575 | 182TC | 112 | 0032XSSC42A-P | 3.0 | 86.5 | 1, 16, 18 | MTP840 | $888 |
| 3 | 3600 | 460 | 182TC | 99 | 0032XSSB47A-P | 3.6 | 86.5 | 1, 9, 18 | MTP840 | $888 |
| 3 | 3600 | 575 | 182TC | 99 | 0032XSSC47A-P | 3.0 | 86.5 | 1, 18 | MTP840 | $888 |
| 3 | 1800 | 460 | 182TC | 112 | 0034XSSB42A-P | 4.0 | 89.5 | 1, 9, 16, 18 | MTP840 | $842 |
| 3 | 1800 | 575 | 182TC | 111 | 0034XSSC42A-P | 3.2 | 89.5 | 1, 16, 18 | MTP840 | $842 |
| 3 | 1800 | 460 | 182TC | 115 | 0034XSSB47A-P | 4.0 | 89.5 | 1, 9, 18 | MTP840 | $842 |
| 3 | 1800 | 575 | 182TC | 111 | 0034XSSC47A-P | 3.2 | 89.5 | 1, 18 | MTP840 | $842 |
| 3 | 1200 | 460 | 213TC | 183 | 0036XSSB42A-P | 4.4 | 89.5 | 1, 9, 16, 18 | MTP840 | $1,177 |
| 3 | 1200 | 575 | 213TC | 168 | 0036XSSC42A-P | 3.5 | 89.5 | 1, 16, 18 | MTP840 | $1,177 |
| 3 | 1200 | 460 | 213TC | 183 | 0036XSSB47A-P | 4.4 | 89.5 | 1, 9, 18 | MTP840 | $1,177 |
| 3 | 1200 | 575 | 213TC | 168 | 0036XSSC47A-P | 3.5 | 89.5 | 1, 18 | MTP840 | $1,177 |
| 5 | 3600 | 460 | 184TC | 113 | 0052XSSB42A-P | 5.8 | 88.5 | 1, 9, 16, 18 | MTP840 | $1,068 |
| 5 | 3600 | 575 | 184TC | 125 | 0052XSSC42A-P | 4.6 | 88.5 | 1, 16, 18 | MTP840 | $1,068 |
| 5 | 3600 | 460 | 184TC | 117 | 0052XSSB47A-P | 5.8 | 88.5 | 1, 9, 18 | MTP840 | $1,068 |
| 5 | 3600 | 575 | 184TC | 125 | 0052XSSC47A-P | 4.6 | 88.5 | 1, 18 | MTP840 | $1,068 |
| 5 | 1800 | 460 | 184TC | 121 | 0054XSSB42A-P | 6.4 | 89.5 | 1, 9, 16, 18 | MTP840 | $961 |
| 5 | 1800 | 575 | 184TC | 124 | 0054XSSC42A-P | 5.1 | 89.5 | 1, 16, 18 | MTP840 | $961 |
| 5 | 1800 | 460 | 184TC | 127 | 0054XSSB47A-P | 6.4 | 89.5 | 1, 9, 18 | MTP840 | $961 |
| 5 | 1800 | 575 | 184TC | 115 | 0054XSSC47A-P | 5.1 | 89.5 | 1, 18 | MTP840 | $961 |
| 5 | 1200 | 460 | 215TC | 194 | 0056XSSB42A-P | 6.9 | 89.5 | 1, 9, 16, 18 | MTP840 | $1,586 |
| 5 | 1200 | 575 | 215TC | 194 | 0056XSSC42A-P | 5.5 | 89.5 | 1, 16, 18 | MTP840 | $1,586 |
| 5 | 1200 | 460 | 215TC | 194 | 0056XSSB47A-P | 6.9 | 89.5 | 1, 9, 18 | MTP840 | $1,586 |
| 5 | 1200 | 575 | 215TC | 194 | 0056XSSC47A-P | 5.5 | 89.5 | 1, 18 | MTP840 | $1,586 |
| 7.5 | 3600 | 460 | 213TC | 183 | Y752XSSB42A-P | 9.0 | 89.5 | 1, 9, 16, 18 | MTP840 | $1,387 |
| 7.5 | 3600 | 575 | 213TC | 209 | Y752XSSC42A-P | 7.2 | 89.5 | 1, 16, 18 | MTP840 | $1,387 |
| 7.5 | 3600 | 460 | 213TC | 183 | Y752XSSB47A-P | 9.0 | 89.5 | 1, 9, 18 | MTP840 | $1,387 |
| 7.5 | 3600 | 575 | 213TC | 209 | Y752XSSC47A-P | 7.2 | 89.5 | 1, 18 | MTP840 | $1,387 |
| 7.5 | 1800 | 460 | 213TC | 209 | Y754XSSB42A-P | 9.8 | 91.7 | 1, 9, 16, 18 | MTP840 | $1,381 |
| 7.5 | 1800 | 575 | 213TC | 203 | Y754XSSC42A-P | 7.7 | 91.7 | 1, 16, 18 | MTP840 | $1,381 |
| 7.5 | 1800 | 460 | 213TC | 203 | Y754XSSB47A-P | 9.8 | 91.7 | 1, 9, 18 | MTP840 | $1,381 |
| 7.5 | 1800 | 575 | 213TC | 203 | Y754XSSC47A-P | 7.7 | 91.7 | 1, 18 | MTP840 | $1,381 |
| 7.5 | 1200 | 460 | 254TC | 295 | Y756XSSB42A-P | 10.2 | 91.0 | 1, 9, 16, 18 | MTP840 | $2,281 |
| 7.5 | 1200 | 575 | 254TC | 298 | Y756XSSC42A-P | 8.2 | 91.0 | 1, 16, 18 | MTP840 | $2,281 |
| 7.5 | 1200 | 460 | 254TC | 295 | Y756XSSB47A-P | 10.2 | 91.0 | 1, 9, 18 | MTP840 | $2,281 |
| 7.5 | 1200 | 575 | 254TC | 298 | Y756XSSC47A-P | 8.2 | 91.0 | 1, 18 | MTP840 | $2,281 |
| 10 | 3600 | 460 | 215TC | 201 | 0102XSSB42A-P | 11.8 | 90.2 | 1, 9, 16, 18 | MTP840 | $1,598 |
| 10 | 3600 | 575 | 215TC | 210 | 0102XSSC42A-P | 9.4 | 90.2 | 1, 16, 18 | MTP840 | $1,598 |

# Totally Enclosed Fan Cooled
## EQP Global® 840 C-Face
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 3600 | 460 | 215TC | 198 | 0102XSSB47A-P | 11.8 | 90.2 | 1, 9, 18 | MTP840 | $1,598 |
| 10 | 3600 | 575 | 215TC | 210 | 0102XSSC47A-P | 9.4 | 90.2 | 1, 18 | MTP840 | $1,598 |
| 10 | 1800 | 460 | 215TC | 214 | 0104XSSB42A-P | 13.0 | 91.7 | 1, 9, 16, 18 | MTP840 | $1,593 |
| 10 | 1800 | 575 | 215TC | 214 | 0104XSSC42A-P | 10.1 | 91.7 | 1, 16, 18 | MTP840 | $1,593 |
| 10 | 1800 | 460 | 215TC | 216 | 0104XSSB47A-P | 13.0 | 91.7 | 1, 9, 18 | MTP840 | $1,593 |
| 10 | 1800 | 575 | 215TC | 213 | 0104XSSC47A-P | 10.1 | 91.7 | 1, 18 | MTP840 | $1,593 |
| 10 | 1200 | 460 | 256TC | 317 | 0106XSSB42A-P | 13.4 | 91.0 | 1, 9, 16, 18 | MTP840 | $2,741 |
| 10 | 1200 | 575 | 256TC | 347 | 0106XSSC42A-P | 10.1 | 91.7 | 1, 16, 18 | MTP840 | $2,741 |
| 10 | 1200 | 460 | 256TC | 317 | 0106XSSB47A-P | 13.4 | 91.0 | 1, 9, 18 | MTP840 | $2,741 |
| 10 | 1200 | 575 | 256TC | 347 | 0106XSSC47A-P | 10.8 | 91.0 | 1, 18 | MTP840 | $2,741 |
| 15 | 3600 | 460 | 254TC | 320 | 0152XSSB42A-P | 17.7 | 91.0 | 1, 9, 16, 18 | MTP840 | $2,213 |
| 15 | 3600 | 575 | 254TC | 315 | 0152XSSC42A-P | 14.4 | 91.0 | 1, 16, 18 | MTP840 | $2,213 |
| 15 | 3600 | 460 | 254TC | 320 | 0152XSSB47A-P | 17.7 | 91.0 | 1, 9, 18 | MTP840 | $2,213 |
| 15 | 3600 | 575 | 254TC | 315 | 0152XSSC47A-P | 14.4 | 91.0 | 1, 18 | MTP840 | $2,213 |
| 15 | 1800 | 460 | 254TC | 337 | 0154XSSB42A-P | 19.2 | 92.4 | 1, 9, 16, 18 | MTP840 | $2,133 |
| 15 | 1800 | 575 | 254TC | 331 | 0154XSSC42A-P | 15.2 | 92.4 | 1, 16, 18 | MTP840 | $2,133 |
| 15 | 1800 | 460 | 254TC | 335 | 0154XSSB47A-P | 19.2 | 92.4 | 1, 9, 18 | MTP840 | $2,133 |
| 15 | 1800 | 575 | 254TC | 322 | 0154XSSC47A-P | 15.2 | 92.4 | 1, 18 | MTP840 | $2,133 |
| 15 | 1200 | 460 | 284TC | 478 | 0156XSSB42A-P | 19.8 | 91.7 | 1, 9, 16, 18 | MTP840 | $3,731 |
| 15 | 1200 | 575 | 284TC | 474 | 0156XSSC42A-P | 15.8 | 91.7 | 1, 16, 18 | MTP840 | $3,731 |
| 20 | 3600 | 460 | 256TC | 333 | 0202XSSB42A-P | 23 | 91.0 | 1, 9, 16, 18 | MTP840 | $2,620 |
| 20 | 3600 | 575 | 256TC | 393 | 0202XSSC42A-P | 19.2 | 91.0 | 1, 16, 18 | MTP840 | $2,620 |
| 20 | 3600 | 460 | 256TC | 333 | 0202XSSB47A-P | 23 | 91.0 | 1, 9, 18 | MTP840 | $2,620 |
| 20 | 3600 | 575 | 256TC | 393 | 0202XSSC47A-P | 19.2 | 91.0 | 1, 18 | MTP840 | $2,620 |
| 20 | 1800 | 460 | 256TC | 384 | 0204XSSB42A-P | 25 | 93.0 | 1, 9, 16, 18 | MTP840 | $2,592 |
| 20 | 1800 | 575 | 256TC | 364 | 0204XSSC42A-P | 20 | 93.0 | 1, 16, 18 | MTP840 | $2,592 |
| 20 | 1800 | 460 | 256TC | 375 | 0204XSSB47A-P | 25 | 93.0 | 1, 9, 18 | MTP840 | $2,592 |
| 20 | 1800 | 575 | 256TC | 372 | 0204XSSC47A-P | 20 | 93.0 | 1, 18 | MTP840 | $2,592 |
| 20 | 1200 | 460 | 286TC | 514 | 0206XSSB42A-P | 25 | 91.7 | 1, 9, 16, 18 | MTP840 | $4,314 |
| 20 | 1200 | 575 | 286TC | 512 | 0206XSSC42A-P | 20 | 91.7 | 1, 16, 18 | MTP840 | $4,314 |
| 25 | 3600 | 460 | 284TSC | 516 | 0252XSSB42B-P | 29 | 91.7 | 1, 9, 18 | MTP840 | $3,342 |
| 25 | 3600 | 575 | 284TSC | 455 | 0252XSSC42B-P | 23 | 91.7 | 1, 18 | MTP840 | $3,342 |
| 25 | 1800 | 460 | 284TC | 538 | 0254XSSB42A-P | 31 | 93.6 | 1, 9, 16, 18 | MTP840 | $3,256 |
| 25 | 1800 | 575 | 284TC | 553 | 0254XSSC42A-P | 24 | 93.6 | 1, 16, 18 | MTP840 | $3,256 |
| 25 | 1200 | 460 | 324TC | 668 | 0256XSSB42A-P | 30 | 93.0 | 1, 9, 16, 18 | MTP840 | $5,192 |
| 25 | 1200 | 575 | 324TC | 668 | 0256XSSC42A-P | 25 | 93.0 | 1, 16, 18 | MTP840 | $5,192 |
| 30 | 3600 | 460 | 286TSC | 540 | 0302XSSB42B-P | 35 | 91.7 | 1, 9, 18 | MTP840 | $3,977 |
| 30 | 3600 | 575 | 286TSC | 498 | 0302XSSC42B-P | 28 | 91.7 | 1, 18 | MTP840 | $3,977 |
| 30 | 1800 | 460 | 286TC | 569 | 0304XSSB42A-P | 36 | 93.6 | 1, 9, 16, 18 | MTP840 | $3,730 |
| 30 | 1800 | 575 | 286TC | 549 | 0304XSSC42A-P | 29 | 93.6 | 1, 16, 18 | MTP840 | $3,730 |
| 30 | 1200 | 460 | 326TC | 697 | 0306XSSB42A-P | 37 | 93.0 | 1, 9, 16, 18 | MTP840 | $5,904 |
| 30 | 1200 | 575 | 326TC | 694 | 0306XSSC42A-P | 30 | 93.0 | 1, 16, 18 | MTP840 | $5,904 |
| 40 | 3600 | 460 | 324TSC | 692 | 0402XSSB42B-P | 47 | 92.4 | 1, 9, 18 | MTP840 | $4,951 |
| 40 | 3600 | 575 | 324TSC | 692 | 0402XSSC42B-P | 38 | 92.4 | 1, 18 | MTP840 | $4,951 |
| 40 | 1800 | 460 | 324TC | 723 | 0404XSSB42A-P | 47 | 94.1 | 1, 9, 16, 18 | MTP840 | $4,776 |
| 40 | 1800 | 575 | 324TC | 723 | 0404XSSC42A-P | 38 | 94.1 | 1, 16, 18 | MTP840 | $4,776 |
| 40 | 1200 | 460 | 364TC | 860 | 0406XSSB42A-P | 48 | 94.1 | 1, 9, 16, 18 | MTP840 | $8,155 |
| 40 | 1200 | 575 | 364TC | 860 | 0406XSSC42A-P | 38 | 94.1 | 1, 16, 18 | MTP840 | $8,155 |

# Totally Enclosed Fan Cooled
## EQP Global® 840 C-Face
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 3600 | 460 | 326TSC | 728 | 0502XSSB42B-P | 58 | 93.0 | 1, 9, 18 | MTP840 | $6,281 |
| 50 | 3600 | 575 | 326TSC | 728 | 0502XSSC42B-P | 46 | 93.0 | 1, 18 | MTP840 | $6,281 |
| 50 | 1800 | 460 | 326TC | 758 | 0504XSSB42A-P | 60 | 94.5 | 1, 9, 16, 18 | MTP840 | $5,420 |
| 50 | 1800 | 575 | 326TC | 758 | 0504XSSC42A-P | 48 | 94.5 | 1, 16, 18 | MTP840 | $5,420 |
| 50 | 1200 | 460 | 365TC | 897 | 0506XSSB42A-P | 60 | 94.1 | 1, 9, 16, 18 | MTP840 | $9,241 |
| 50 | 1200 | 575 | 365TC | 888 | 0506XSSC42A-P | 48 | 94.1 | 1, 16, 18 | MTP840 | $9,241 |
| 60 | 3600 | 460 | 364TSC | 763 | 0602XSSB42B-P | 69 | 93.6 | 1, 9, 18 | MTP840 | $8,435 |
| 60 | 3600 | 575 | 364TSC | 763 | 0602XSSC42B-P | 55 | 93.6 | 1, 18 | MTP840 | $8,435 |
| 60 | 1800 | 460 | 364TC | 941 | 0604XSSB42A-P | 69 | 95.0 | 1, 9, 16, 18 | MTP840 | $8,370 |
| 60 | 1800 | 575 | 364TC | 928 | 0604XSSC42A-P | 55 | 95.0 | 1, 16, 18 | MTP840 | $8,370 |
| 75 | 3600 | 460 | 365TSC | 944 | 0752XSSB42B-P | 86 | 93.6 | 1, 9, 18 | MTP840 | $10,382 |
| 75 | 3600 | 575 | 365TSC | 944 | 0752XSSC42B-P | 69 | 93.6 | 1, 18 | MTP840 | $10,382 |
| 75 | 1800 | 460 | 365TC | 1027 | 0754XSSB42A-P | 85 | 95.4 | 1, 9, 16, 18 | MTP840 | $9,880 |
| 75 | 1800 | 575 | 365TC | 966 | 0754XSSC42A-P | 69 | 95.4 | 1, 16, 18 | MTP840 | $9,880 |
| **C-Face Footless** | | | | | | | | | | |
| 0.75 | 1200 | 460 | 143TC | 68 | 3/46XSSB44A-P | 1.4 | 80.0 | 1, 9, 18 | MTP840 | $791 |
| 0.75 | 1200 | 575 | 143TC | 68 | 3/46XSSC44A-P | .9 | 81.5 | 1, 18 | MTP840 | $791 |
| 1 | 1800 | 460 | 143TC | 68 | 0014XSSB44A-P | 1.7 | 85.5 | 1, 9, 18 | MTP840 | $727 |
| 1 | 1800 | 575 | 143TC | 68 | 0014XSSC44A-P | 1.2 | 85.5 | 1, 18 | MTP840 | $727 |
| 1 | 1200 | 460 | 145TC | 68 | 0016XSSB44A-P | 1.8 | 82.5 | 1, 9, 18 | MTP840 | $879 |
| 1 | 1200 | 575 | 145TC | 68 | 0016XSSC44A-P | 1.5 | 82.5 | 1, 18 | MTP840 | $879 |
| 1.5 | 3600 | 460 | 143TC | 50 | Y152XSSB44A-P | 2.0 | 84.0 | 1, 9, 18 | MTP840 | $798 |
| 1.5 | 3600 | 575 | 143TC | 50 | Y152XSSC44A-P | 1.6 | 84.0 | 1, 18 | MTP840 | $798 |
| 1.5 | 1800 | 460 | 145TC | 68 | Y154XSSB44A-P | 2.4 | 86.5 | 1, 9, 18 | MTP840 | $796 |
| 1.5 | 1800 | 575 | 145TC | 68 | Y154XSSC44A-P | 1.9 | 86.5 | 1, 18 | MTP840 | $796 |
| 1.5 | 1200 | 460 | 182TC | 104 | Y156XSSB44A-P | 2.5 | 87.5 | 1, 9, 18 | MTP840 | $953 |
| 1.5 | 1200 | 575 | 182TC | 79 | Y156XSSC44A-P | 2.0 | 87.5 | 1, 18 | MTP840 | $953 |
| 2 | 3600 | 460 | 145TC | 64 | 0022XSSB44A-P | 2.6 | 85.5 | 1, 9, 18 | MTP840 | $884 |
| 2 | 3600 | 575 | 145TC | 53 | 0022XSSC44A-P | 2.1 | 85.5 | 1, 18 | MTP840 | $884 |
| 2 | 1800 | 460 | 145TC | 71 | 0024XSSB44A-P | 3.0 | 86.5 | 1, 9, 18 | MTP840 | $862 |
| 2 | 1800 | 575 | 145TC | 71 | 0024XSSC44A-P | 2.4 | 86.5 | 1, 18 | MTP840 | $862 |
| 2 | 1200 | 460 | 184TC | 118 | 0026XSSB44A-P | 3.4 | 88.5 | 1, 9, 18 | MTP840 | $1,046 |
| 2 | 1200 | 575 | 184TC | 93 | 0026XSSC44A-P | 2.7 | 88.5 | 1, 18 | MTP840 | $1,046 |
| 3 | 3600 | 460 | 182TC | 90 | 0032XSSB44A-P | 3.6 | 86.5 | 1, 9, 18 | MTP840 | $977 |
| 3 | 3600 | 575 | 182TC | 90 | 0032XSSC44A-P | 3.0 | 86.5 | 1, 18 | MTP840 | $977 |
| 3 | 1800 | 460 | 182TC | 112 | 0034XSSB44A-P | 4.0 | 89.5 | 1, 9, 18 | MTP840 | $926 |
| 3 | 1800 | 575 | 182TC | 112 | 0034XSSC44A-P | 3.2 | 89.5 | 1, 18 | MTP840 | $926 |
| 3 | 1200 | 460 | 213TC | 142 | 0036XSSB44A-P | 4.4 | 89.5 | 1, 9, 18 | MTP840 | $1,295 |
| 3 | 1200 | 575 | 213TC | 142 | 0036XSSC44A-P | 3.5 | 89.5 | 1, 18 | MTP840 | $1,295 |
| 5 | 3600 | 460 | 184TC | 110 | 0052XSSB44A-P | 5.8 | 88.5 | 1, 9, 18 | MTP840 | $1,175 |
| 5 | 3600 | 575 | 184TC | 110 | 0052XSSC44A-P | 4.6 | 88.5 | 1, 18 | MTP840 | $1,175 |
| 5 | 1800 | 460 | 184TC | 123 | 0054XSSB44A-P | 6.4 | 89.5 | 1, 9, 18 | MTP840 | $1,057 |
| 5 | 1800 | 575 | 184TC | 123 | 0054XSSC44A-P | 5.1 | 89.5 | 1, 18 | MTP840 | $1,057 |
| 5 | 1200 | 460 | 215TC | 192 | 0056XSSB44A-P | 6.9 | 89.5 | 1, 9, 18 | MTP840 | $1,745 |
| 5 | 1200 | 575 | 215TC | 165 | 0056XSSC44A-P | 5.5 | 89.5 | 1, 18 | MTP840 | $1,745 |
| 7.5 | 3600 | 460 | 213TC | 179 | Y752XSSB44A-P | 9.0 | 89.5 | 1, 9, 18 | MTP840 | $1,526 |
| 7.5 | 3600 | 575 | 213TC | 179 | Y752XSSC44A-P | 7.2 | 89.5 | 1, 18 | MTP840 | $1,526 |
| 7.5 | 1800 | 460 | 213TC | 209 | Y754XSSB44A-P | 9.8 | 91.7 | 1, 9, 18 | MTP840 | $1,519 |

# Totally Enclosed Fan Cooled
## EQP Global® 840 C-Face
### NEMA Premium® Efficiency



EQP Global® 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 7.5 | 1800 | 575 | 213TC | 209 | Y754XSSC44A-P | 7.7 | 91.7 | 1, 18 | MTP840 | $1,519 |
| 7.5 | 1200 | 460 | 254TC | 282 | Y756XSSB44A-P | 10.2 | 91.0 | 1, 9, 18 | MTP840 | $2,509 |
| 7.5 | 1200 | 575 | 254TC | 282 | Y756XSSC44A-P | 8.2 | 91.0 | 1, 18 | MTP840 | $2,509 |
| 10 | 3600 | 460 | 215TC | 196 | 0102XSSB44A-P | 11.8 | 90.2 | 1, 9, 18 | MTP840 | $1,758 |
| 10 | 3600 | 575 | 215TC | 196 | 0102XSSC44A-P | 9.4 | 90.2 | 1, 18 | MTP840 | $1,758 |
| 10 | 1800 | 460 | 215TC | 218 | 0104XSSB44A-P | 13.0 | 91.7 | 1, 9, 18 | MTP840 | $1,752 |
| 10 | 1800 | 575 | 215TC | 213 | 0104XSSC44A-P | 10.1 | 91.7 | 1, 18 | MTP840 | $1,752 |
| 10 | 1200 | 460 | 256TC | 304 | 0106XSSB44A-P | 13.4 | 91.0 | 1, 9, 18 | MTP840 | $3,015 |
| 10 | 1200 | 575 | 256TC | 304 | 0106XSSC44A-P | 10.8 | 91.0 | 1, 18 | MTP840 | $3,015 |
| 15 | 3600 | 460 | 254TC | 304 | 0152XSSB44A-P | 17.7 | 91.0 | 1, 9, 18 | MTP840 | $2,434 |
| 15 | 3600 | 575 | 254TC | 304 | 0152XSSC44A-P | 14.4 | 91.0 | 1, 18 | MTP840 | $2,434 |
| 15 | 1800 | 460 | 254TC | 324 | 0154XSSB44A-P | 19.2 | 92.4 | 1, 9, 18 | MTP840 | $2,346 |
| 15 | 1800 | 575 | 254TC | 322 | 0154XSSC44A-P | 15.2 | 92.4 | 1, 18 | MTP840 | $2,346 |
| 15 | 1200 | 460 | 284TC | 454 | 0156XSSB44A-P | 19.8 | 91.7 | 1, 9, 18 | MTP840 | $4,104 |
| 15 | 1200 | 575 | 284TC | 454 | 0156XSSC44A-P | 15.8 | 91.7 | 1, 18 | MTP840 | $4,104 |
| 20 | 3600 | 460 | 256TC | 324 | 0202XSSB44A-P | 23 | 91.0 | 1, 9, 18 | MTP840 | $2,882 |
| 20 | 3600 | 575 | 256TC | 324 | 0202XSSC44A-P | 19.2 | 91.0 | 1, 18 | MTP840 | $2,882 |
| 20 | 1800 | 460 | 256TC | 359 | 0204XSSB44A-P | 25 | 93.0 | 1, 9, 18 | MTP840 | $2,851 |
| 20 | 1800 | 575 | 256TC | 359 | 0204XSSC44A-P | 20 | 93.0 | 1, 18 | MTP840 | $2,851 |
| 20 | 1200 | 460 | 286TC | 489 | 0206XSSB44A-P | 25 | 91.7 | 1, 9, 18 | MTP840 | $4,745 |
| 20 | 1200 | 575 | 286TC | 489 | 0206XSSC44A-P | 20 | 91.7 | 1, 18 | MTP840 | $4,745 |
| 25 | 3600 | 460 | 284TSC | 496 | 0252XSSB44B-P | 29 | 91.7 | 1, 9, 18 | MTP840 | $3,676 |
| 25 | 3600 | 575 | 284TSC | 496 | 0252XSSC44B-P | 23 | 91.7 | 1, 18 | MTP840 | $3,676 |
| 25 | 1800 | 460 | 284TC | 514 | 0254XSSB44A-P | 31 | 93.6 | 1, 9, 18 | MTP840 | $3,419 |
| 25 | 1800 | 575 | 284TC | 514 | 0254XSSC44A-P | 24 | 93.6 | 1, 18 | MTP840 | $3,419 |
| 25 | 1200 | 460 | 324TC | 545 | 0256XSSB44A-P | 30 | 93.0 | 1, 9, 18 | MTP840 | $5,711 |
| 25 | 1200 | 575 | 324TC | 545 | 0256XSSC44A-P | 25 | 93.0 | 1, 18 | MTP840 | $5,711 |
| 30 | 3600 | 460 | 286TSC | 516 | 0302XSSB44B-P | 35 | 91.7 | 1, 9, 18 | MTP840 | $4,375 |
| 30 | 3600 | 575 | 286TSC | 516 | 0302XSSC44B-P | 28 | 91.7 | 1, 18 | MTP840 | $4,375 |
| 30 | 1800 | 460 | 286TC | 534 | 0304XSSB44A-P | 36 | 93.6 | 1, 9, 18 | MTP840 | $3,917 |
| 30 | 1800 | 575 | 286TC | 534 | 0304XSSC44A-P | 29 | 93.6 | 1, 18 | MTP840 | $3,917 |
| 30 | 1200 | 460 | 326TC | 571 | 0306XSSB44A-P | 37 | 93.0 | 1, 9, 18 | MTP840 | $6,494 |
| 30 | 1200 | 575 | 326TC | 571 | 0306XSSC44A-P | 30 | 93.0 | 1, 18 | MTP840 | $6,494 |
| 40 | 3600 | 460 | 324TSC | 589 | 0402XSSB44B-P | 47 | 92.4 | 1, 9, 18 | MTP840 | $5,446 |
| 40 | 3600 | 575 | 324TSC | 589 | 0402XSSC44B-P | 38 | 92.4 | 1, 18 | MTP840 | $5,446 |
| 40 | 1800 | 460 | 324TC | 723 | 0404XSSB44A-P | 47 | 94.1 | 1, 9, 18 | MTP840 | $5,015 |
| 40 | 1800 | 575 | 324TC | 723 | 0404XSSC44A-P | 38 | 94.1 | 1, 18 | MTP840 | $5,015 |
| 40 | 1200 | 460 | 364TC | 708 | 0406XSSB44A-P | 48 | 94.1 | 1, 9, 18 | MTP840 | $8,971 |
| 40 | 1200 | 575 | 364TC | 708 | 0406XSSC44A-P | 38 | 94.1 | 1, 18 | MTP840 | $8,971 |
| 50 | 3600 | 460 | 326TSC | 624 | 0502XSSB44B-P | 58 | 93.0 | 1, 9, 18 | MTP840 | $6,909 |
| 50 | 3600 | 575 | 326TSC | 624 | 0502XSSC44B-P | 46 | 93.0 | 1, 18 | MTP840 | $6,909 |
| 50 | 1800 | 460 | 326TC | 741 | 0504XSSB44A-P | 60 | 94.5 | 1, 9, 18 | MTP840 | $5,744 |
| 50 | 1800 | 575 | 326TC | 741 | 0504XSSC44A-P | 48 | 94.5 | 1, 18 | MTP840 | $5,744 |
| 50 | 1200 | 460 | 365TC | 757 | 0506XSSB44A-P | 60 | 94.1 | 1, 9, 18 | MTP840 | $10,165 |
| 50 | 1200 | 575 | 365TC | 757 | 0506XSSC44A-P | 48 | 94.1 | 1, 18 | MTP840 | $10,165 |
| 60 | 3600 | 460 | 364TSC | 763 | 0602XSSB44B-P | 69 | 93.6 | 1, 9, 18 | MTP840 | $9,279 |
| 60 | 3600 | 575 | 364TSC | 763 | 0602XSSC44B-P | 55 | 93.6 | 1, 18 | MTP840 | $9,279 |
| 60 | 1800 | 460 | 364TC | 911 | 0604XSSB44A-P | 69 | 95.0 | 1, 9, 18 | MTP840 | $8,789 |

# Totally Enclosed Fan Cooled
## EQP Global® 840 C-Face
### NEMA Premium® Efficiency



EQP Global 840

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 1800 | 575 | 364TC | 796 | 0604XSSC44A-P | 55 | 95.0 | 1, 18 | MTP840 | $8,789 |
| 75 | 3600 | 460 | 365TSC | 814 | 0752XSSB44B-P | 86 | 93.6 | 1, 9, 18 | MTP840 | $11,420 |
| 75 | 3600 | 575 | 365TSC | 814 | 0752XSSC44B-P | 69 | 93.6 | 1, 18 | MTP840 | $11,420 |
| 75 | 1800 | 460 | 365TC | 893 | 0754XSSB44A-P | 85 | 95.4 | 1, 9, 18 | MTP840 | $10,374 |
| 75 | 1800 | 575 | 365TC | 893 | 0754XSSC44A-P | 69 | 95.4 | 1, 18 | MTP840 | $10,374 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# General Purpose TEFC

## EQP Global® 841 Motor Series

The Toshiba EQP Global® 841 motor series is designed to meet and exceed the requirements of the petrochemical industry's 841 specifications. With a totally enclosed fan cooled (TEFC) design, its robust construction extends operating life and minimizes maintenance and downtime. The EQP Global 841 series includes enhanced features such as labyrinth seals on both ends, providing an IP56 rating that protects against moisture and contaminants entering the enclosure. With a complete heavy-duty cast-iron construction, these motors are well suited for severe environments. Manufactured with a commitment to quality, the EQP Global 841 series delivers exceptional performance and reliability in demanding applications.

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty, Petrochemical
- NEMA Premium® Efficiency
- 60 Hz: 460 or 575 V
- Three-Phase
- 1.15 Service Factor
- Footed, C-Face Footed & C-Face Footless Design
- NEMA Design B
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP56 Protection
- All Cast Iron Construction
- Multi-Mount Capabilities on All Frames (See Appendix C)
- Multiple Drain Provisions for Horizontal & Vertical Mounting
- Oversized 300 Series Bearings
- Labyrinth Seal on All Frames (DE & ODE)
- 100% No-Load Commercial Test & Vibration Test on All Motors
- See Appendix D for ASD and Division 2 Capabilities

**Applications:**

- Pumps
- Fans
- Compressors
- Conveyors
- Mixers
- Material Handling



# Totally Enclosed Fan Cooled
## EQP Global® 841
### NEMA Premium® Efficiency



CC027B

5 FIVE YEAR WARRANTY

### Product Scope:

**Horsepower:** 0.75 to 400 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM

**Volt (60 Hz):** 460 or 575 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143T through B449TS

**Construction:** All Cast Iron

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs)

For EQP Global® Motors in frames 140 through 440, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.75 | 1200 | 460 | 143T | 64 | 3/46XDSB41A-P | 1.4 | 80.0 | 1, 18 | MTP841 | $829 |
| 0.75 | 1200 | 575 | 143T | 64 | 3/46XDSC41A-P | 1.1 | 81.5 | 1, 18 | MTP841 | $829 |
| 0.75 | 900 | 460 | 145T | 66 | 3/48XDSB41A-P | 1.6 | 74.0 | 1, 18 | MTP841 | $1,171 |
| 0.75 | 900 | 575 | 145T | 66 | 3/48XDSC41A-P | 1.3 | 74.7 | 1, 18 | MTP841 | $1,171 |
| 1 | 1800 | 460 | 143T | 64 | 0014XDSB41A-P | 1.7 | 85.5 | 1, 18 | MTP841 | $714 |
| 1 | 1800 | 575 | 143T | 64 | 0014XDSC41A-P | 1.3 | 85.5 | 1, 18 | MTP841 | $714 |
| 1 | 1200 | 460 | 145T | 66 | 0016XDSB41A-P | 1.8 | 82.5 | 1, 18 | MTP841 | $885 |
| 1 | 1200 | 575 | 145T | 66 | 0016XDSC41A-P | 1.5 | 82.5 | 1, 18 | MTP841 | $885 |
| 1 | 900 | 460 | 182T | 108 | 0018XDSB41A-P | 1.7 | 75.5 | 1, 18 | MTP841 | $1,207 |
| 1 | 900 | 575 | 182T | 108 | 0018XDSC41A-P | 1.4 | 75.5 | 1, 18 | MTP841 | $1,207 |
| 1.5 | 3600 | 460 | 143T | 62 | Y152XDSB41A-P | 2 | 84.0 | 1, 18 | MTP841 | $764 |
| 1.5 | 3600 | 575 | 143T | 64 | Y152XDSC41A-P | 1.6 | 84.0 | 1, 18 | MTP841 | $764 |
| 1.5 | 1800 | 460 | 145T | 66 | Y154XDSB41A-P | 2.4 | 86.5 | 1, 18 | MTP841 | $793 |
| 1.5 | 1800 | 575 | 145T | 64 | Y154XDSC41A-P | 1.9 | 86.5 | 1, 18 | MTP841 | $793 |
| 1.5 | 1200 | 460 | 182T | 106 | Y156XDSB41A-P | 2.5 | 87.5 | 1, 18 | MTP841 | $1,092 |
| 1.5 | 1200 | 575 | 182T | 108 | Y156XDSC41A-P | 2 | 87.5 | 1, 18 | MTP841 | $1,092 |
| 1.5 | 900 | 460 | 184T | 126 | Y158XDSB41A-P | 2.6 | 78.5 | 1, 18 | MTP841 | $1,389 |
| 1.5 | 900 | 575 | 184T | 103 | Y158XDSC41A-P | 2.1 | 78.5 | 1, 18 | MTP841 | $1,389 |
| 2 | 3600 | 460 | 145T | 64 | 0022XDSB41A-P | 2.6 | 85.5 | 1, 18 | MTP841 | $915 |
| 2 | 3600 | 575 | 145T | 66 | 0022XDSC41A-P | 2.1 | 85.5 | 1, 18 | MTP841 | $915 |
| 2 | 1800 | 460 | 145T | 68 | 0024XDSB41A-P | 3 | 86.5 | 1, 18 | MTP841 | $871 |
| 2 | 1800 | 575 | 145T | 62 | 0024XDSC41A-P | 2.4 | 86.5 | 1, 18 | MTP841 | $871 |
| 2 | 1200 | 460 | 184T | 117 | 0026XDSB41A-P | 3.4 | 88.5 | 1, 18 | MTP841 | $1,117 |
| 2 | 1200 | 575 | 184T | 119 | 0026XDSC41A-P | 2.7 | 88.5 | 1, 18 | MTP841 | $1,117 |
| 2 | 900 | 460 | 213T | 174 | 0028XDSB41A-P | 3 | 84.0 | 1, 18 | MTP841 | $1,824 |
| 2 | 900 | 575 | 213T | 172 | 0028XDSC41A-P | 2.5 | 84.0 | 1, 18 | MTP841 | $1,824 |
| 3 | 3600 | 460 | 182T | 97 | 0032XDSB41A-P | 3.7 | 86.5 | 1, 18 | MTP841 | $1,123 |
| 3 | 3600 | 575 | 182T | 93 | 0032XDSC41A-P | 3 | 86.5 | 1, 18 | MTP841 | $1,123 |
| 3 | 1800 | 460 | 182T | 108 | 0034XDSB41A-P | 4 | 89.5 | 1, 18 | MTP841 | $1,054 |
| 3 | 1800 | 575 | 182T | 106 | 0034XDSC41A-P | 3.2 | 89.5 | 1, 18 | MTP841 | $1,054 |
| 3 | 1200 | 460 | 213T | 170 | 0036XDSB41A-P | 4.4 | 89.5 | 1, 18 | MTP841 | $1,364 |

# Totally Enclosed Fan Cooled
## EQP Global® 841
### NEMA Premium® Efficiency



EQP Global 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 1200 | 575 | 213T | 172 | 0036XDSC41A-P | 3.5 | 89.5 | 1, 18 | MTP841 | $1,364 |
| 3 | 900 | 460 | 215T | 176 | 0038XDSB41A-P | 4.7 | 85.5 | 1, 18 | MTP841 | $2,294 |
| 3 | 900 | 575 | 215T | 187 | 0038XDSC41A-P | 3.7 | 85.5 | 1, 18 | MTP841 | $2,294 |
| 5 | 3600 | 460 | 184T | 112 | 0052XDSB41A-P | 5.8 | 88.5 | 1, 18 | MTP841 | $1,273 |
| 5 | 3600 | 575 | 184T | 108 | 0052XDSC41A-P | 4.6 | 88.5 | 1, 18 | MTP841 | $1,273 |
| 5 | 1800 | 460 | 184T | 117 | 0054XDSB41A-P | 6.4 | 89.5 | 1, 18 | MTP841 | $1,129 |
| 5 | 1800 | 575 | 184T | 119 | 0054XDSC41A-P | 5.2 | 89.5 | 1, 18 | MTP841 | $1,129 |
| 5 | 1200 | 460 | 215T | 192 | 0056XDSB41A-P | 6.9 | 89.5 | 1, 18 | MTP841 | $1,964 |
| 5 | 1200 | 575 | 215T | 187 | 0056XDSC41A-P | 5.5 | 89.5 | 1, 18 | MTP841 | $1,964 |
| 5 | 900 | 460 | 254T | 264 | 0058XDSB41A-P | 7.5 | 86.5 | 1, 18 | MTP841 | $3,374 |
| 5 | 900 | 575 | 254T | 264 | 0058XDSC41A-P | 6 | 86.5 | 1, 18 | MTP841 | $3,374 |
| 7.5 | 3600 | 460 | 213T | 181 | Y752XDSB41A-P | 9 | 89.5 | 1, 18 | MTP841 | $1,543 |
| 7.5 | 3600 | 575 | 213T | 181 | Y752XDSC41A-P | 7.2 | 89.5 | 1, 18 | MTP841 | $1,543 |
| 7.5 | 1800 | 460 | 213T | 199 | Y754XDSB41A-P | 9.8 | 91.7 | 1, 18 | MTP841 | $1,532 |
| 7.5 | 1800 | 575 | 213T | 190 | Y754XDSC41A-P | 7.8 | 91.7 | 1, 18 | MTP841 | $1,532 |
| 7.5 | 1200 | 460 | 254T | 289 | Y756XDSB41A-P | 9.9 | 91.0 | 1, 18 | MTP841 | $2,553 |
| 7.5 | 1200 | 575 | 254T | 282 | Y756XDSC41A-P | 8.2 | 91.0 | 1, 18 | MTP841 | $2,553 |
| 7.5 | 900 | 460 | 256T | 273 | Y758XDSB41A-P | 11.5 | 86.5 | 1, 18 | MTP841 | $3,823 |
| 7.5 | 900 | 575 | 256T | 304 | Y758XDSC41A-P | 9.1 | 86.5 | 1, 18 | MTP841 | $3,823 |
| 10 | 3600 | 460 | 215T | 194 | 0102XDSB41A-P | 11.8 | 90.2 | 1, 18 | MTP841 | $1,801 |
| 10 | 3600 | 575 | 215T | 196 | 0102XDSC41A-P | 9.4 | 90.2 | 1, 18 | MTP841 | $1,801 |
| 10 | 1800 | 460 | 215T | 207 | 0104XDSB41A-P | 13 | 91.7 | 1, 18 | MTP841 | $1,845 |
| 10 | 1800 | 575 | 215T | 203 | 0104XDSC41A-P | 10.4 | 91.7 | 1, 18 | MTP841 | $1,845 |
| 10 | 1200 | 460 | 256T | 310 | 0106XDSB41A-P | 13.4 | 91.0 | 1, 18 | MTP841 | $3,118 |
| 10 | 1200 | 575 | 256T | 313 | 0106XDSC41A-P | 10.8 | 91.0 | 1, 18 | MTP841 | $3,118 |
| 10 | 900 | 460 | 284T | 403 | 0108XDSB41A-P | 14.5 | 89.5 | 1, 18 | MTP841 | $4,971 |
| 10 | 900 | 575 | 284T | 452 | 0108XDSC41A-P | 11.6 | 89.5 | 1, 18 | MTP841 | $4,971 |
| 15 | 3600 | 460 | 254T | 315 | 0152XDSB41A-P | 18 | 91.0 | 1, 18 | MTP841 | $2,478 |
| 15 | 3600 | 575 | 254T | 311 | 0152XDSC41A-P | 14.4 | 91.0 | 1, 18 | MTP841 | $2,478 |
| 15 | 1800 | 460 | 254T | 325 | 0154XDSB41A-P | 19 | 92.4 | 1, 18 | MTP841 | $2,434 |
| 15 | 1800 | 575 | 254T | 326 | 0154XDSC41A-P | 15.2 | 92.4 | 1, 18 | MTP841 | $2,434 |
| 15 | 1200 | 460 | 284T | 452 | 0156XDSB41A-P | 19.6 | 91.7 | 1, 18 | MTP841 | $4,139 |
| 15 | 1200 | 575 | 284T | 454 | 0156XDSC41A-P | 15.8 | 91.7 | 1, 18 | MTP841 | $4,139 |
| 15 | 900 | 460 | 286T | 436 | 0158XDSB41A-P | 22 | 89.5 | 1, 18 | MTP841 | $6,037 |
| 15 | 900 | 575 | 286T | 487 | 0158XDSC41A-P | 17.5 | 89.5 | 1, 18 | MTP841 | $6,037 |
| 20 | 3600 | 460 | 256T | 327 | 0202XDSB41A-P | 24 | 91.0 | 1, 18 | MTP841 | $3,065 |
| 20 | 3600 | 575 | 256T | 328 | 0202XDSC41A-P | 19.2 | 91.0 | 1, 18 | MTP841 | $3,065 |
| 20 | 1800 | 460 | 256T | 369 | 0204XDSB41A-P | 25 | 93.0 | 1, 18 | MTP841 | $3,029 |
| 20 | 1800 | 575 | 256T | 370 | 0204XDSC41A-P | 20 | 93.0 | 1, 18 | MTP841 | $3,029 |
| 20 | 1200 | 460 | 286T | 496 | 0206XDSB41A-P | 25 | 91.7 | 1, 18 | MTP841 | $5,043 |
| 20 | 1200 | 575 | 286T | 500 | 0206XDSC41A-P | 20 | 91.7 | 1, 18 | MTP841 | $5,043 |
| 20 | 900 | 460 | 324T | 585 | 0208XDSB41A-P | 28 | 90.2 | 1, 18 | MTP841 | $7,209 |
| 20 | 900 | 575 | 324T | 655 | 0208XDSC41A-P | 22 | 90.2 | 1, 18 | MTP841 | $7,209 |
| 25 | 3600 | 460 | 284TS | 510 | 0252XDSB41B-P | 29 | 91.7 | 1, 18 | MTP841 | $3,779 |
| 25 | 3600 | 575 | 284TS | 496 | 0252XDSC41B-P | 23 | 91.7 | 1, 18 | MTP841 | $3,779 |
| 25 | 1800 | 460 | 284T | 529 | 0254XDSB41A-P | 31 | 93.8 | 1, 18 | MTP841 | $3,607 |
| 25 | 1800 | 460 | 284TS | 529 | 0254XDSB41B-P | 24 | 93.6 | 1, 18 | MTP841 | $3,607 |
| 25 | 1800 | 575 | 284T | 531 | 0254XDSC41A-P | 31 | 93.6 | 1, 18 | MTP841 | $3,607 |

# Totally Enclosed Fan Cooled
## EQP Global® 841
### NEMA Premium® Efficiency



EQP Global 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 1800 | 575 | 284TS | 531 | 0254XDSC41B-P | 24 | 93.6 | 1, 18 | MTP841 | $3,607 |
| 25 | 1200 | 460 | 324T | 655 | 0256XDSB41A-P | 31 | 93.0 | 1, 18 | MTP841 | $6,112 |
| 25 | 1200 | 575 | 324T | 650 | 0256XDSC41A-P | 25 | 93.0 | 1, 18 | MTP841 | $6,112 |
| 25 | 900 | 460 | 326T | 612 | 0258XDSB41A-P | 35 | 90.2 | 1, 18 | MTP841 | $8,397 |
| 25 | 900 | 575 | 326T | 677 | 0258XDSC41A-P | 27 | 90.2 | 1, 18 | MTP841 | $8,397 |
| 30 | 3600 | 460 | 286TS | 529 | 0302XDSB41B-P | 35 | 91.7 | 1, 18 | MTP841 | $4,410 |
| 30 | 3600 | 575 | 286TS | 534 | 0302XDSC41B-P | 28 | 91.7 | 1, 18 | MTP841 | $4,410 |
| 30 | 1800 | 460 | 286T | 542 | 0304XDSB41A-P | 36 | 93.6 | 1, 18 | MTP841 | $4,195 |
| 30 | 1800 | 460 | 286TS | 529 | 0304XDSB41B-P | 36 | 93.6 | 1, 18 | MTP841 | $4,195 |
| 30 | 1800 | 575 | 286T | 536 | 0304XDSC41A-P | 29 | 93.6 | 1, 18 | MTP841 | $4,195 |
| 30 | 1800 | 575 | 286TS | 536 | 0304XDSC41B-P | 29 | 93.6 | 1, 18 | MTP841 | $4,195 |
| 30 | 1200 | 460 | 326T | 677 | 0306XDSB41A-P | 37 | 93.0 | 1, 18 | MTP841 | $7,039 |
| 30 | 1200 | 575 | 326T | 672 | 0306XDSC41A-P | 30 | 93.0 | 1, 18 | MTP841 | $7,039 |
| 30 | 900 | 460 | 364T | 836 | 0308XDSB41A-P | 41 | 91.7 | 1, 18 | MTP841 | $11,291 |
| 30 | 900 | 575 | 364T | 842 | 0308XDSC41A-P | 33 | 91.7 | 1, 18 | MTP841 | $11,291 |
| 40 | 3600 | 460 | 324TS | 679 | 0402XDSB41B-P | 47 | 92.4 | 1, 18 | MTP841 | $5,800 |
| 40 | 3600 | 575 | 324TS | 686 | 0402XDSC41B-P | 38 | 92.4 | 1, 18 | MTP841 | $5,800 |
| 40 | 1800 | 460 | 324T | 701 | 0404XDSB41A-P | 48 | 94.1 | 1, 18 | MTP841 | $5,575 |
| 40 | 1800 | 460 | 324TS | 701 | 0404XDSB41B-P | 48 | 94.1 | 1, 18 | MTP841 | $5,575 |
| 40 | 1800 | 575 | 324T | 703 | 0404XDSC41A-P | 38 | 94.1 | 1, 18 | MTP841 | $5,575 |
| 40 | 1800 | 575 | 324TS | 703 | 0404XDSC41B-P | 38 | 94.1 | 1, 18 | MTP841 | $5,575 |
| 40 | 1200 | 460 | 364T | 836 | 0406XDSB41A-P | 48 | 94.1 | 1, 18 | MTP841 | $9,542 |
| 40 | 1200 | 575 | 364T | 842 | 0406XDSC41A-P | 38 | 94.1 | 1, 18 | MTP841 | $9,542 |
| 40 | 900 | 460 | 365T | 873 | 0408XDSB41A-P | 54 | 91.7 | 1, 18 | MTP841 | $13,020 |
| 40 | 900 | 575 | 365T | 877 | 0408XDSC41A-P | 44 | 91.7 | 1, 18 | MTP841 | $13,020 |
| 50 | 3600 | 460 | 326TS | 705 | 0502XDSB41B-P | 58 | 93.0 | 1, 18 | MTP841 | $7,531 |
| 50 | 3600 | 575 | 326TS | 710 | 0502XDSC41B-P | 46 | 93.0 | 1, 18 | MTP841 | $7,531 |
| 50 | 1800 | 460 | 326T | 748 | 0504XDSB41A-P | 60 | 94.5 | 1, 18 | MTP841 | $6,845 |
| 50 | 1800 | 460 | 326TS | 743 | 0504XDSB41B-P | 60 | 94.5 | 1, 18 | MTP841 | $6,845 |
| 50 | 1800 | 575 | 326T | 765 | 0504XDSC41A-P | 48 | 94.5 | 1, 18 | MTP841 | $6,845 |
| 50 | 1800 | 575 | 326TS | 765 | 0504XDSC41B-P | 48 | 94.5 | 1, 18 | MTP841 | $6,845 |
| 50 | 1200 | 460 | 365T | 873 | 0506XDSB41A-P | 60 | 94.1 | 1, 18 | MTP841 | $10,956 |
| 50 | 1200 | 575 | 365T | 888 | 0506XDSC41A-P | 48 | 94.1 | 1, 18 | MTP841 | $10,956 |
| 50 | 900 | 460 | 404T | 1300 | 0508XDSB41A-P | 79 | 93.6 | 1, 18 | MTP841 | $20,116 |
| 50 | 900 | 575 | 404T | 1327 | 0508XDSC41A-P | 63 | 93.6 | 1, 18 | MTP841 | $20,116 |
| 60 | 3600 | 460 | 364TS | 908 | 0602XDSB41B-P | 69 | 93.6 | 1, 18 | MTP841 | $8,912 |
| 60 | 3600 | 575 | 364TS | 899 | 0602XDSC41B-P | 55 | 93.6 | 1, 18 | MTP841 | $8,912 |
| 60 | 1800 | 460 | 364T | 928 | 0604XDSB41A-P | 69 | 95.0 | 1, 18 | MTP841 | $8,837 |
| 60 | 1800 | 460 | 364TS | 917 | 0604XDSB41B-P | 69 | 95.0 | 1, 18 | MTP841 | $8,837 |
| 60 | 1800 | 575 | 364T | 916 | 0604XDSC41A-P | 55 | 95.0 | 1, 18 | MTP841 | $8,837 |
| 60 | 1800 | 575 | 364TS | 916 | 0604XDSC41B-P | 55 | 95.1 | 1, 18 | MTP841 | $8,837 |
| 60 | 1200 | 460 | 404T | 1320 | 0606XDSB41A-P | 73 | 94.5 | 1, 18 | MTP841 | $13,167 |
| 60 | 1200 | 575 | 404T | 1300 | 0606XDSC41A-P | 58 | 94.5 | 1, 18 | MTP841 | $13,167 |
| 60 | 900 | 460 | 405T | 1495 | 0608XDSB41A-P | 98 | 93.6 | 1, 18 | MTP841 | $21,339 |
| 60 | 900 | 575 | 405T | 1419 | 0608XDSC41A-P | 75 | 93.6 | 1, 18 | MTP841 | $21,339 |
| 75 | 3600 | 460 | 365TS | 928 | 0752XDSB41B-P | 86 | 93.6 | 1, 18 | MTP841 | $11,196 |
| 75 | 3600 | 575 | 365TS | 937 | 0752XDSC41B-P | 69 | 93.6 | 1, 18 | MTP841 | $11,196 |
| 75 | 1800 | 460 | 365T | 1012 | 0754XDSB41A-P | 86 | 95.4 | 1, 18 | MTP841 | $11,203 |

# Totally Enclosed Fan Cooled

## EQP Global® 841

### NEMA Premium® Efficiency



EQP Global 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 75 | 1800 | 460 | 365T | 1,012 | 0754XDSB41A-PR | 86 | 95.4 | 1, 18 | MTP841 | $11,203 |
| 75 | 1800 | 460 | 365TS | 990 | 0754XDSB41B-P | 86 | 95.4 | 1, 18 | MTP841 | $11,203 |
| 75 | 1800 | 575 | 365T | 1010 | 0754XDSC41A-P | 69 | 95.4 | 1, 18 | MTP841 | $11,203 |
| 75 | 1800 | 575 | 365TS | 1010 | 0754XDSC41B-P | 69 | 95.4 | 1, 18 | MTP841 | $11,203 |
| 75 | 1200 | 460 | 405T | 1456 | 0756XDSB41A-P | 91 | 94.5 | 1, 18 | MTP841 | $14,744 |
| 75 | 1200 | 575 | 405T | 1456 | 0756XDSC41A-P | 72 | 94.5 | 1, 18 | MTP841 | $14,744 |
| 75 | 900 | 460 | S444T | 2063 | 0758XDSB41A-R | 92 | 94.5 | 2, 18 | MXT41G | $28,157 |
| 75 | 900 | 460 | S444T | 1786 | 0758XDSB41A | 92 | 94.5 | 18 | MXT41G | $28,157 |
| 75 | 900 | 575 | S444T | 1786 | 0758XDSC41A-R | 74 | 94.5 | 18 | MXT41G | $28,157 |
| 100 | 3600 | 460 | 405TS | 1388 | 1002XDSB41B-P | 112 | 94.1 | 1, 18 | MTP841 | $15,939 |
| 100 | 3600 | 575 | 405TS | 1388 | 1002XDSC41B-P | 90 | 94.1 | 1, 18 | MTP841 | $15,939 |
| 100 | 1800 | 460 | 405T | 1367 | 1004XDSB41A-P | 115 | 95.4 | 1, 18 | MTP841 | $14,843 |
| 100 | 1800 | 460 | 405T | 1367 | 1004XDSB41A-PR | 115 | 95.4 | 1, 2, 18 | MTP841 | $14,843 |
| 100 | 1800 | 460 | 405TS | 1367 | 1004XDSB41B-P | 115 | 95.4 | 1, 18 | MTP841 | $14,843 |
| 100 | 1800 | 575 | 405T | 1367 | 1004XDSC41A-P | 93 | 95.4 | 1, 18 | MTP841 | $14,843 |
| 100 | 1800 | 575 | 405TS | 1367 | 1004XDSC41B-P | 93 | 95.4 | 1, 18 | MTP841 | $14,843 |
| 100 | 1800 | 575 | 405T | 1367 | 1004XDSC41A-PR | 93 | 95.4 | 1, 2, 18 | MTP841 | $14,843 |
| 100 | 1200 | 460 | S444T | 2300 | 1006XDSB41A-PR | 118 | 95.4 | 2, 18 | MTP841 | $24,987 |
| 100 | 1200 | 460 | S444T | 2300 | 1006XDSB41A-P | 118 | 95.4 | 18 | MTP841 | $24,987 |
| 100 | 1200 | 575 | S444T | 2300 | 1006XDSC41A-PR | 94 | 95.4 | 2, 18 | MTP841 | $24,987 |
| 100 | 1200 | 575 | S444T | 2300 | 1006XDSC41A-P | 94 | 95.4 | 1, 18 | MTP841 | $24,987 |
| 100 | 900 | 460 | S445T | 2086 | 1008XDSB41A-R | 123 | 94.5 | 18 | MXT41G | $31,046 |
| 100 | 900 | 575 | S445T | 2086 | 1008XDSC41A-R | 98 | 94.5 | 18 | MXT41G | $31,046 |
| 125 | 3600 | 460 | S444TS | 2035 | 1252XDSB41B-P | 138 | 95.0 | 1, 18 | MTP841 | $25,616 |
| 125 | 3600 | 575 | S444TS | 2352 | 1252XDSC41B-P | 111 | 95.0 | 1, 18 | MTP841 | $25,616 |
| 125 | 1800 | 460 | S444T | 1879 | 1254XDSB41A-P | 142 | 95.4 | 1, 18 | MTP841 | $21,005 |
| 125 | 1800 | 460 | S444T | 1879 | 1254XDSB41A-PR | 142 | 95.4 | 1, 2, 18 | MTP841 | $21,005 |
| 125 | 1800 | 460 | S444TS | 1879 | 1254XDSB41B-P | 142 | 95.4 | 1, 18 | MTP841 | $21,005 |
| 125 | 1800 | 575 | S444T | 1879 | 1254XDSC41A-P | 115 | 95.4 | 1, 18 | MTP841 | $21,005 |
| 125 | 1800 | 575 | S444T | 1879 | 1254XDSC41A-PR | 115 | 95.4 | 1, 2, 18 | MTP841 | $21,005 |
| 125 | 1800 | 575 | S444TS | 1879 | 1254XDSC41B-P | 115 | 95.4 | 1, 18 | MTP841 | $21,005 |
| 125 | 1200 | 460 | S445T | 2300 | 1256XDSB41A-P | 148 | 95.4 | 18 | MTP841 | $30,423 |
| 125 | 1200 | 460 | S445T | 2300 | 1256XDSB41A-PR | 148 | 95.4 | 1, 2, 18 | MTP841 | $30,423 |
| 125 | 1200 | 575 | S445T | 2300 | 1256XDSC41A-PR | 118 | 95.4 | 2, 18 | MTP841 | $30,423 |
| 125 | 1200 | 575 | S445T | 2300 | 1256XDSC41A-P | 118 | 95.4 | 18 | MTP841 | $30,423 |
| 125 | 900 | 460 | S447T | 2500 | 1258XDSB41A | 153 | 94.5 | 18 | MXT41G | $35,679 |
| 125 | 900 | 460 | S447T | 2500 | 1258XDSB41A-R | 153 | 94.5 | 2, 18 | MXT41G | $35,679 |
| 125 | 900 | 575 | S447T | 2500 | 1258XDSC41A | 123 | 94.5 | 18 | MXT41G | $35,679 |
| 125 | 900 | 575 | S447T | 2500 | 1258XDSC41A-R | 123 | 94.5 | 2, 18 | MXT41G | $35,679 |
| 150 | 3600 | 460 | S445TS | 2300 | 1502XDSB41B-P | 166 | 95.0 | 1, 18 | MTP841 | $27,173 |
| 150 | 3600 | 575 | S445TS | 2300 | 1502XDSC41B-P | 132 | 95.0 | 1, 18 | MTP841 | $27,173 |
| 150 | 1800 | 460 | S445T | 2300 | 1504XDSB41A-P | 168 | 95.8 | 1, 18 | MTP841 | $23,682 |
| 150 | 1800 | 460 | S445T | 2300 | 1504XDSB41A-PR | 168 | 95.8 | 1, 2, 18 | MTP841 | $23,682 |
| 150 | 1800 | 460 | S445TS | 2300 | 1504XDSB41B-P | 168 | 95.8 | 1, 18 | MTP841 | $23,682 |
| 150 | 1800 | 575 | S445T | 2300 | 1504XDSC41A-P | 135 | 95.8 | 1, 18 | MTP841 | $23,683 |
| 150 | 1800 | 575 | S445T | 2300 | 1504XDSC41A-PR | 135 | 95.8 | 1, 2, 18 | MTP841 | $23,682 |
| 150 | 1800 | 575 | S445TS | 2300 | 1504XDSC41B-P | 135 | 95.8 | 1, 18 | MTP841 | $23,682 |
| 150 | 1200 | 460 | S447T | 2500 | 1506XDSB41A-P | 177 | 95.8 | 2, 18 | MTP841 | $34,472 |

# Totally Enclosed Fan Cooled
## EQP Global® 841
### NEMA Premium® Efficiency



EQP Global® 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 1200 | 460 | S447T | 2500 | 1506XDSB41A-PR | 177 | 95.8 | 1, 2, 18 | MTP841 | $34,472 |
| 150 | 1200 | 460 | S447TZ | 2659 | 1506XDSB41D-PR | 177 | 95.8 | 1, 2, 18 | MTP841 | $35,334 |
| 150 | 1200 | 575 | S447T | 2500 | 1506XDSC41A-P | 177 | 95.8 | 18 | MTP841 | $34,472 |
| 150 | 1200 | 575 | S447T | 2500 | 1506XDSC41A-PR | 142 | 95.8 | 1, 2, 18 | MTP841 | $34,472 |
| 150 | 1200 | 575 | S447TZ | 2659 | 1506XDSC41D-PR | 142 | 95.8 | 1, 2, 18 | MTP841 | $35,334 |
| 150 | 900 | 460 | S449T | 3800 | 1508XDSB41A | 188 | 94.5 | 18 | MXT41G | $49,506 |
| 150 | 900 | 460 | S449T | 3800 | 1508XDSB41A-R | 188 | 94.5 | 2, 18 | MXT41G | $49,506 |
| 150 | 900 | 575 | S449T | 3800 | 1508XDSC41A | 150 | 94.5 | 18 | MXT41G | $49,506 |
| 150 | 900 | 575 | S449T | 3800 | 1508XDSC41A-R | 150 | 94.5 | 2, 18 | MXT41G | $49,506 |
| 200 | 3600 | 460 | S447TS | 2500 | 2002XDSB41B-P | 221 | 95.4 | 1, 18 | MTP841 | $33,638 |
| 200 | 3600 | 575 | S447TS | 2500 | 2002XDSC41B-P | 177 | 95.4 | 1, 18 | MTP841 | $33,638 |
| 200 | 1800 | 460 | S447T | 2500 | 2004XDSB41A-P | 230 | 96.2 | 1, 18 | MTP841 | $28,466 |
| 200 | 1800 | 460 | S447T | 2500 | 2004XDSB41A-PR | 230 | 96.2 | 1, 2, 18 | MTP841 | $28,466 |
| 200 | 1800 | 460 | S447TS | 2500 | 2004XDSB41B-P | 230 | 96.2 | 1, 18 | MTP841 | $28,466 |
| 200 | 1800 | 575 | S447T | 2500 | 2004XDSC41A-P | 185 | 96.2 | 1, 18 | MTP841 | $28,466 |
| 200 | 1800 | 575 | S447T | 2500 | 2004XDSC41A-PR | 185 | 96.2 | 1, 2, 18 | MTP841 | $28,466 |
| 200 | 1800 | 575 | S447TS | 2500 | 2004XDSC41B-P | 185 | 96.2 | 1, 18 | MTP841 | $28,466 |
| 200 | 1200 | 460 | S449T | 3860 | 2006XDSB41A | 231 | 95.8 | 18 | MXT41G | $36,822 |
| 200 | 1200 | 460 | S449T | 3860 | 2006XDSB41A-R | 231 | 95.8 | 18 | MXT41G | $36,822 |
| 200 | 1200 | 575 | S449T | 3860 | 2006XDSC41A | 185 | 95.8 | 18 | MXT41G | $36,822 |
| 200 | 1200 | 575 | S449T | 3860 | 2006XDSC41A-R | 185 | 95.8 | 18 | MXT41G | $36,822 |
| 200 | 900 | 460 | S449T | 3800 | 2008XDSB41A | 254 | 94.5 | 18 | MXT41G | $50,831 |
| 200 | 900 | 460 | S449T | 3800 | 2008XDSB41A-R | 246 | 94.5 | 2, 18 | MXT41G | $50,831 |
| 200 | 900 | 575 | S449T | 3800 | 2008XDSC41A | 201 | 94.5 | 18 | MXT41G | $50,831 |
| 200 | 900 | 575 | S449T | 3800 | 2008XDSC41A-R | 201 | 94.5 | 2, 18 | MXT41G | $50,831 |
| 250 | 3600 | 460 | B449TS | 4015 | 2502XDSB41B | 273 | 95.8 | 18 | MXT41G | $44,185 |
| 250 | 3600 | 575 | B449TS | 4015 | 2502XDSC41B | 218 | 95.8 | 18 | MXT41G | $44,185 |
| 250 | 1800 | 460 | S449T | 3800 | 2504XDSB41A | 282 | 96.2 | 18 | MXT41G | $36,423 |
| 250 | 1800 | 460 | S449T | 3800 | 2504XDSB41A-R | 282 | 96.2 | 2, 18 | MXT41G | $36,423 |
| 250 | 1800 | 575 | S449T | 3800 | 2504XDSC41A | 225 | 96.2 | 18 | MXT41G | $36,423 |
| 250 | 1800 | 575 | S449T | 3800 | 2504XDSC41A-R | 225 | 96.2 | 2, 18 | MXT41G | $36,423 |
| 250 | 1200 | 460 | S449T | 3800 | 2506XDSB41A | 294 | 95.8 | 18 | MXT41G | $43,021 |
| 250 | 1200 | 460 | S449T | 3800 | 2506XDSB41A-R | 294 | 95.8 | 18 | MXT41G | $43,021 |
| 250 | 1200 | 575 | S449T | 3800 | 2506XDSC41A | 235 | 95.8 | 18 | MXT41G | $43,021 |
| 250 | 1200 | 575 | S449T | 3800 | 2506XDSC41A-R | 235 | 95.8 | 18 | MXT41G | $43,021 |
| 250 | 900 | 460 | B449T | 4000 | 2508XDSB41A | 315 | 95.0 | 18 | MXT41G | $53,253 |
| 250 | 900 | 460 | B449T | 4000 | 2508XDSB41A-R | 256 | 95.0 | 18 | MXT41G | $53,253 |
| 250 | 900 | 575 | B449T | 4000 | 2508XDSC41A | 256 | 95.0 | 18 | MXT41G | $53,253 |
| 250 | 900 | 575 | B449T | 4000 | 2508XDSC41A-R | 256 | 95.0 | 2, 18 | MXT41G | $53,253 |
| 300 | 3600 | 460 | B449TS | 4015 | 3002XDSB41B | 326 | 96.2 | 18 | MXT41G | $52,272 |
| 300 | 3600 | 575 | B449TS | 4015 | 3002XDSC41B | 261 | 96.2 | 18 | MXT41G | $52,272 |
| 300 | 1800 | 460 | S449T | 3800 | 3004XDSB41A | 344 | 96.2 | 18 | MXT41G | $42,197 |
| 300 | 1800 | 460 | S449T | 3800 | 3004XDSB41A-R | 344 | 96.2 | 2, 18 | MXT41G | $42,197 |
| 300 | 1800 | 575 | S449T | 3800 | 3004XDSC41A | 275 | 96.2 | 18 | MXT41G | $42,197 |
| 300 | 1800 | 575 | S449T | 3800 | 3004XDSC41A-R | 275 | 96.2 | 2, 18 | MXT41G | $42,197 |
| 350 | 3600 | 460 | B449TS | 4015 | 3503XDSB41B | 379 | 95.8 | 18 | MXT41G | $55,623 |
| 350 | 3600 | 575 | B449TS | 4015 | 3503XDSC41B | 304 | 95.8 | 18 | MXT41G | $55,623 |
| 350 | 1200 | 460 | B449T | 4060 | 3506XDSB41A | 419 | 95.8 | 18 | MXT41G | $58,741 |

# Totally Enclosed Fan Cooled

## EQP Global® 841

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 350 | 1200 | 460 | B449T | 4060 | 3506XDSB41A-R | 419 | 95.8 | 18 | MXT41G | $58,741 |
| 350 | 1200 | 575 | B449T | 4060 | 3506XDSC41A | 335 | 95.8 | 18 | MXT41G | $58,741 |
| 350 | 1200 | 575 | B449T | 4060 | 3506XDSC41A-R | 335 | 95.8 | 18 | MXT41G | $58,741 |
| 400 | 3600 | 460 | B449TS | 4060 | 4003XDSB41B | 435 | 95.8 | 4, 18 | MXT41G | $60,127 |
| 400 | 3600 | 575 | B449TS | 4060 | 4003XDSC41B | 348 | 95.8 | 4, 18 | MXT41G | $60,127 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Totally Enclosed Fan Cooled
## EQP Global® 841 C-Face
### NEMA Premium® Efficiency

EQP Global 841



CC027B

NEMA Premium

**5** FIVE YEAR WARRANTY

### Product Scope:

**Horsepower:** 0.75 to 75 HP

**Speed (60 Hz):** 3600, 1800, or 1200 RPM

**Volt (60 Hz):** 460 or 575 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143TC through 365TC

**Construction:** All Cast Iron

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31
(Voltage Withstand Capability of 2000 V in 0.1 µs)

For EQP Global® Motors in frames 140 through 360, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| C-Face Footed | | | | | | | | | | |
| 0.75 | 1200 | 460 | 143TC | 52 | 3/46XDSB42A-P | 1.4 | 80.0 | 1, 16, 18 | MTP841 | $938 |
| 0.75 | 1200 | 575 | 143TC | 52 | 3/46XDSC42A-P | .9 | 81.5 | 1, 16, 18 | MTP841 | $938 |
| 0.75 | 1200 | 460 | 143TC | 52 | 3/46XDSB47A-P | 1.4 | 80.0 | 1, 18 | MTP841 | $938 |
| 0.75 | 1200 | 575 | 143TC | 52 | 3/46XDSC47A-P | .9 | 81.5 | 1, 18 | MTP841 | $938 |
| 1 | 1800 | 460 | 143TC | 68 | 0014XDSB42A-P | 1.7 | 85.5 | 1, 16, 18 | MTP841 | $823 |
| 1 | 1800 | 575 | 143TC | 62 | 0014XDSC42A-P | 1.2 | 85.5 | 1, 16, 18 | MTP841 | $823 |
| 1 | 1800 | 460 | 143TC | 71 | 0014XDSB47A-P | 1.7 | 85.5 | 1, 18 | MTP841 | $823 |
| 1 | 1800 | 575 | 143TC | 62 | 0014XDSC47A-P | 1.2 | 85.5 | 1, 18 | MTP841 | $823 |
| 1 | 1200 | 460 | 145TC | 71 | 0016XDSB42A-P | 1.8 | 82.5 | 1, 16, 18 | MTP841 | $994 |
| 1 | 1200 | 575 | 145TC | 73 | 0016XDSC42A-P | 1.5 | 82.5 | 1, 16, 18 | MTP841 | $994 |
| 1 | 1200 | 460 | 145TC | 73 | 0016XDSB47A-P | 1.8 | 82.5 | 1, 18 | MTP841 | $994 |
| 1 | 1200 | 575 | 145TC | 73 | 0016XDSC47A-P | 1.5 | 82.5 | 1, 18 | MTP841 | $994 |
| 1.5 | 3600 | 460 | 143TC | 66 | Y152XDSB42A-P | 2.0 | 84.0 | 1, 16, 18 | MTP841 | $873 |
| 1.5 | 3600 | 575 | 143TC | 66 | Y152XDSC42A-P | 1.6 | 84.0 | 1, 16, 18 | MTP841 | $873 |
| 1.5 | 3600 | 460 | 143TC | 66 | Y152XDSB47A-P | 2.0 | 84.0 | 1, 18 | MTP841 | $873 |
| 1.5 | 3600 | 575 | 143TC | 66 | Y152XDSC47A-P | 1.6 | 84.0 | 1, 18 | MTP841 | $873 |
| 1.5 | 1800 | 460 | 145TC | 73 | Y154XDSB42A-P | 2.4 | 86.5 | 1, 16, 18 | MTP841 | $902 |
| 1.5 | 1800 | 575 | 145TC | 73 | Y154XDSC42A-P | 1.9 | 86.5 | 1, 16, 18 | MTP841 | $902 |
| 1.5 | 1800 | 460 | 145TC | 71 | Y154XDSB47A-P | 2.4 | 86.5 | 1, 18 | MTP841 | $902 |
| 1.5 | 1800 | 575 | 145TC | 73 | Y154XDSC47A-P | 1.9 | 86.5 | 1, 18 | MTP841 | $902 |
| 1.5 | 1200 | 460 | 182TC | 112 | Y156XDSB42A-P | 2.5 | 87.5 | 1, 16, 18 | MTP841 | $1,223 |
| 1.5 | 1200 | 575 | 182TC | 112 | Y156XDSC42A-P | 2.0 | 87.5 | 1, 16, 18 | MTP841 | $1,223 |
| 1.5 | 1200 | 460 | 182TC | 112 | Y156XDSB47A-P | 2.5 | 87.5 | 1, 18 | MTP841 | $1,223 |
| 1.5 | 1200 | 575 | 182TC | 112 | Y156XDSC47A-P | 2.0 | 87.5 | 1, 18 | MTP841 | $1,223 |
| 2 | 3600 | 460 | 145TC | 68 | 0022XDSB42A-P | 2.6 | 85.5 | 1, 16, 18 | MTP841 | $1,024 |
| 2 | 3600 | 575 | 145TC | 75 | 0022XDSC42A-P | 2.1 | 85.5 | 1, 16, 18 | MTP841 | $1,024 |

# Totally Enclosed Fan Cooled

## EQP Global® 841 C-Face

### NEMA Premium® Efficiency



EQP Global 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 3600 | 460 | 145TC | 71 | 0022XDSB47A-P | 2.6 | 85.5 | 1, 18 | MTP841 | $1,024 |
| 2 | 3600 | 575 | 145TC | 75 | 0022XDSC47A-P | 2.1 | 85.5 | 1, 18 | MTP841 | $1,024 |
| 2 | 1800 | 460 | 145TC | 71 | 0024XDSB42A-P | 3.0 | 86.5 | 1, 16, 18 | MTP841 | $980 |
| 2 | 1800 | 575 | 145TC | 73 | 0024XDSC42A-P | 2.4 | 86.5 | 1, 16, 18 | MTP841 | $980 |
| 2 | 1800 | 460 | 145TC | 73 | 0024XDSB47A-P | 3.0 | 86.5 | 1, 18 | MTP841 | $980 |
| 2 | 1800 | 575 | 145TC | 73 | 0024XDSC47A-P | 2.4 | 86.5 | 1, 18 | MTP841 | $980 |
| 2 | 1200 | 460 | 184TC | 143 | 0026XDSB42A-P | 3.4 | 88.5 | 1, 16, 18 | MTP841 | $1,248 |
| 2 | 1200 | 575 | 184TC | 123 | 0026XDSC42A-P | 2.7 | 88.5 | 1, 16, 18 | MTP841 | $1,248 |
| 2 | 1200 | 460 | 184TC | 126 | 0026XDSB47A-P | 3.4 | 88.5 | 1, 18 | MTP841 | $1,248 |
| 2 | 1200 | 575 | 184TC | 123 | 0026XDSC47A-P | 2.7 | 88.5 | 1, 18 | MTP841 | $1,248 |
| 3 | 3600 | 460 | 182TC | 95 | 0032XDSB42A-P | 3.6 | 86.5 | 1, 16, 18 | MTP841 | $1,254 |
| 3 | 3600 | 575 | 182TC | 101 | 0032XDSC42A-P | 3.0 | 86.5 | 1, 16, 18 | MTP841 | $1,254 |
| 3 | 3600 | 460 | 182TC | 104 | 0032XDSB47A-P | 3.6 | 86.5 | 1, 18 | MTP841 | $1,254 |
| 3 | 3600 | 575 | 182TC | 101 | 0032XDSC47A-P | 3.0 | 86.5 | 1, 18 | MTP841 | $1,254 |
| 3 | 1800 | 460 | 182TC | 112 | 0034XDSB42A-P | 4.0 | 89.5 | 1, 16, 18 | MTP841 | $1,185 |
| 3 | 1800 | 575 | 182TC | 112 | 0034XDSC42A-P | 3.2 | 89.5 | 1, 16, 18 | MTP841 | $1,185 |
| 3 | 1800 | 460 | 182TC | 115 | 0034XDSB47A-P | 4.0 | 89.5 | 1, 18 | MTP841 | $1,185 |
| 3 | 1800 | 575 | 182TC | 112 | 0034XDSC47A-P | 3.2 | 89.5 | 1, 18 | MTP841 | $1,185 |
| 3 | 1200 | 460 | 213TC | 183 | 0036XDSB42A-P | 4.4 | 89.5 | 1, 16, 18 | MTP841 | $1,539 |
| 3 | 1200 | 575 | 213TC | 168 | 0036XDSC42A-P | 3.5 | 89.5 | 1, 16, 18 | MTP841 | $1,539 |
| 3 | 1200 | 460 | 213TC | 183 | 0036XDSB47A-P | 4.4 | 89.5 | 1, 18 | MTP841 | $1,539 |
| 3 | 1200 | 575 | 213TC | 168 | 0036XDSC47A-P | 3.5 | 89.5 | 1, 18 | MTP841 | $1,539 |
| 5 | 3600 | 460 | 184TC | 115 | 0052XDSB42A-P | 5.8 | 88.5 | 1, 16, 18 | MTP841 | $1,404 |
| 5 | 3600 | 575 | 184TC | 115 | 0052XDSC42A-P | 4.6 | 88.5 | 1, 16, 18 | MTP841 | $1,404 |
| 5 | 3600 | 460 | 184TC | 117 | 0052XDSB47A-P | 5.8 | 88.5 | 1, 18 | MTP841 | $1,404 |
| 5 | 3600 | 575 | 184TC | 115 | 0052XDSC47A-P | 4.6 | 88.5 | 1, 18 | MTP841 | $1,404 |
| 5 | 1800 | 460 | 184TC | 126 | 0054XDSB42A-P | 6.4 | 89.5 | 1, 16, 18 | MTP841 | $1,260 |
| 5 | 1800 | 575 | 184TC | 121 | 0054XDSC42A-P | 5.1 | 89.5 | 1, 16, 18 | MTP841 | $1,260 |
| 5 | 1800 | 460 | 184TC | 126 | 0054XDSB47A-P | 6.4 | 89.5 | 1, 18 | MTP841 | $1,260 |
| 5 | 1800 | 575 | 184TC | 121 | 0054XDSC47A-P | 5.1 | 89.5 | 1, 18 | MTP841 | $1,260 |
| 5 | 1200 | 460 | 215TC | 183 | 0056XDSB42A-P | 6.9 | 89.5 | 1, 16, 18 | MTP841 | $2,139 |
| 5 | 1200 | 575 | 215TC | 194 | 0056XDSC42A-P | 5.5 | 89.5 | 1, 16, 18 | MTP841 | $2,139 |
| 5 | 1200 | 460 | 215TC | 201 | 0056XDSB47A-P | 6.9 | 89.5 | 1, 18 | MTP841 | $2,139 |
| 5 | 1200 | 575 | 215TC | 194 | 0056XDSC47A-P | 5.5 | 89.5 | 1, 18 | MTP841 | $2,139 |
| 7.5 | 3600 | 460 | 213TC | 187 | Y752XDSB42A-P | 9.0 | 89.5 | 1, 16, 18 | MTP841 | $1,718 |
| 7.5 | 3600 | 575 | 213TC | 209 | Y752XDSC42A-P | 7.2 | 89.5 | 1, 16, 18 | MTP841 | $1,718 |
| 7.5 | 3600 | 460 | 213TC | 187 | Y752XDSB47A-P | 9.0 | 89.5 | 1, 18 | MTP841 | $1,718 |
| 7.5 | 3600 | 575 | 213TC | 209 | Y752XDSC47A-P | 7.2 | 89.5 | 1, 18 | MTP841 | $1,718 |
| 7.5 | 1800 | 460 | 213TC | 207 | Y754XDSB42A-P | 9.8 | 91.7 | 1, 16, 18 | MTP841 | $1,707 |
| 7.5 | 1800 | 575 | 213TC | 190 | Y754XDSC42A-P | 7.7 | 91.7 | 1, 16, 18 | MTP841 | $1,707 |
| 7.5 | 1800 | 460 | 213TC | 209 | Y754XDSB47A-P | 9.8 | 91.7 | 1, 18 | MTP841 | $1,707 |
| 7.5 | 1800 | 575 | 213TC | 190 | Y754XDSC47A-P | 7.7 | 91.7 | 1, 18 | MTP841 | $1,707 |
| 7.5 | 1200 | 460 | 254TC | 298 | Y756XDSB42A-P | 10.2 | 91.0 | 1, 16, 18 | MTP841 | $2,816 |
| 7.5 | 1200 | 575 | 254TC | 330 | Y756XDSC42A-P | 8.2 | 91.0 | 1, 16, 18 | MTP841 | $2,816 |
| 7.5 | 1200 | 460 | 254TC | 300 | Y756XDSB47A-P | 10.2 | 91.0 | 1, 18 | MTP841 | $2,816 |
| 7.5 | 1200 | 575 | 254TC | 330 | Y756XDSC47A-P | 8.2 | 91.0 | 1, 18 | MTP841 | $2,816 |
| 10 | 3600 | 460 | 215TC | 205 | 0102XDSB42A-P | 11.8 | 90.2 | 1, 16, 18 | MTP841 | $1,976 |
| 10 | 3600 | 575 | 215TC | 205 | 0102XDSC42A-P | 9.4 | 90.2 | 1, 16, 18 | MTP841 | $1,976 |
| 10 | 3600 | 460 | 215TC | 205 | 0102XDSB47A-P | 11.8 | 90.2 | 1, 18 | MTP841 | $1,976 |

# Totally Enclosed Fan Cooled

## EQP Global® 841 C-Face

### NEMA Premium® Efficiency



EQP Global 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 3600 | 575 | 215TC | 205 | 0102XDSC47A-P | 9.4 | 90.2 | 1, 18 | MTP841 | $1,976 |
| 10 | 1800 | 460 | 215TC | 218 | 0104XDSB42A-P | 13.0 | 91.7 | 1, 16, 18 | MTP841 | $2,020 |
| 10 | 1800 | 575 | 215TC | 218 | 0104XDSC42A-P | 10.1 | 91.7 | 1, 16, 18 | MTP841 | $2,020 |
| 10 | 1800 | 460 | 215TC | 216 | 0104XDSB47A-P | 13.0 | 91.7 | 1, 18 | MTP841 | $2,020 |
| 10 | 1800 | 575 | 215TC | 218 | 0104XDSC47A-P | 10.1 | 91.7 | 1, 18 | MTP841 | $2,020 |
| 10 | 1200 | 460 | 256TC | 317 | 0106XDSB42A-P | 13.4 | 91.0 | 1, 16, 18 | MTP841 | $3,381 |
| 10 | 1200 | 575 | 256TC | 317 | 0106XDSC42A-P | 10.8 | 91.0 | 1, 16, 18 | MTP841 | $3,381 |
| 10 | 1200 | 460 | 256TC | 320 | 0106XDSB47A-P | 13.4 | 91.0 | 1, 18 | MTP841 | $3,381 |
| 10 | 1200 | 575 | 256TC | 317 | 0106XDSC47A-P | 10.8 | 91.0 | 1, 18 | MTP841 | $3,381 |
| 15 | 3600 | 460 | 254TC | 324 | 0152XDSB42A-P | 17.7 | 91.0 | 1, 16, 18 | MTP841 | $2,741 |
| 15 | 3600 | 575 | 254TC | 322 | 0152XDSC42A-P | 14.4 | 91.0 | 1, 16, 18 | MTP841 | $2,741 |
| 15 | 3600 | 460 | 254TC | 324 | 0152XDSB47A-P | 17.7 | 91.0 | 1, 18 | MTP841 | $2,741 |
| 15 | 3600 | 575 | 254TC | 322 | 0152XDSC47A-P | 14.4 | 91.0 | 1, 18 | MTP841 | $2,741 |
| 15 | 1800 | 460 | 254TC | 340 | 0154XDSB42A-P | 19.2 | 92.4 | 1, 16, 18 | MTP841 | $2,697 |
| 15 | 1800 | 575 | 254TC | 335 | 0154XDSC42A-P | 15.2 | 92.4 | 1, 16, 18 | MTP841 | $2,697 |
| 15 | 1800 | 460 | 254TC | 348 | 0154XDSB47A-P | 19.2 | 92.4 | 1, 18 | MTP841 | $2,697 |
| 15 | 1800 | 575 | 254TC | 335 | 0154XDSC47A-P | 15.2 | 92.4 | 1, 18 | MTP841 | $2,697 |
| 15 | 1200 | 460 | 284TC | 487 | 0156XDSB42A-P | 19.8 | 91.7 | 1, 18 | MTP841 | $4,577 |
| 15 | 1200 | 575 | 284TC | 474 | 0156XDSC42A-P | 15.8 | 91.7 | 1, 18 | MTP841 | $4,577 |
| 20 | 3600 | 460 | 256TC | 333 | 0202XDSB42A-P | 23 | 91.0 | 1, 16, 18 | MTP841 | $3,328 |
| 20 | 3600 | 575 | 256TC | 333 | 0202XDSC42A-P | 19.2 | 91.0 | 1, 16, 18 | MTP841 | $3,328 |
| 20 | 3600 | 460 | 256TC | 340 | 0202XDSB47A-P | 23 | 91.0 | 1, 18 | MTP841 | $3,328 |
| 20 | 3600 | 575 | 256TC | 333 | 0202XDSC47A-P | 19.2 | 91.0 | 1, 18 | MTP841 | $3,328 |
| 20 | 1800 | 460 | 256TC | 371 | 0204XDSB42A-P | 25 | 93.0 | 1, 16, 18 | MTP841 | $3,292 |
| 20 | 1800 | 575 | 256TC | 375 | 0204XDSC42A-P | 20 | 93.0 | 1, 16, 18 | MTP841 | $3,292 |
| 20 | 1800 | 460 | 256TC | 377 | 0204XDSB47A-P | 25 | 93.0 | 1, 18 | MTP841 | $3,292 |
| 20 | 1800 | 575 | 256TC | 375 | 0204XDSC47A-P | 20 | 93.0 | 1, 18 | MTP841 | $3,292 |
| 20 | 1200 | 460 | 286TC | 518 | 0206XDSB42A-P | 25 | 91.7 | 1, 18 | MTP841 | $5,481 |
| 20 | 1200 | 575 | 286TC | 518 | 0206XDSC42A-P | 20 | 91.7 | 1, 18 | MTP841 | $5,481 |
| 25 | 3600 | 460 | 284TSC | 514 | 0252XDSB42B-P | 29 | 91.7 | 1, 18 | MTP841 | $4,217 |
| 25 | 3600 | 575 | 284TSC | 455 | 0252XDSC42B-P | 23 | 91.7 | 1, 18 | MTP841 | $4,217 |
| 25 | 1800 | 460 | 284TC | 540 | 0254XDSB42A-P | 31 | 93.6 | 1, 18 | MTP841 | $4,045 |
| 25 | 1800 | 575 | 284TC | 534 | 0254XDSC42A-P | 24 | 93.6 | 1, 18 | MTP841 | $4,045 |
| 25 | 1200 | 460 | 324TC | 679 | 0256XDSB42A-P | 30 | 93.0 | 1, 18 | MTP841 | $6,604 |
| 25 | 1200 | 575 | 324TC | 666 | 0256XDSC42A-P | 25 | 93.0 | 1, 18 | MTP841 | $6,604 |
| 30 | 3600 | 460 | 286TSC | 534 | 0302XDSB42B-P | 35 | 91.7 | 1, 18 | MTP841 | $4,848 |
| 30 | 3600 | 575 | 286TSC | 498 | 0302XDSC42B-P | 28 | 91.7 | 1, 18 | MTP841 | $4,848 |
| 30 | 1800 | 460 | 286TC | 558 | 0304XDSB42A-P | 36 | 93.6 | 1, 18 | MTP841 | $4,633 |
| 30 | 1800 | 575 | 286TC | 551 | 0304XDSC42A-P | 29 | 93.6 | 1, 18 | MTP841 | $4,633 |
| 30 | 1200 | 460 | 326TC | 694 | 0306XDSB42A-P | 37 | 93.0 | 1, 18 | MTP841 | $7,531 |
| 30 | 1200 | 575 | 326TC | 692 | 0306XDSC42A-P | 30 | 93.0 | 1, 18 | MTP841 | $7,531 |
| 40 | 3600 | 460 | 324TSC | 690 | 0402XDSB42B-P | 47 | 92.4 | 1, 18 | MTP841 | $6,292 |
| 40 | 3600 | 575 | 324TSC | 692 | 0402XDSC42B-P | 38 | 92.4 | 1, 18 | MTP841 | $6,292 |
| 40 | 1800 | 460 | 324TC | 716 | 0404XDSB42A-P | 47 | 94.1 | 1, 18 | MTP841 | $6,067 |
| 40 | 1800 | 575 | 324TC | 719 | 0404XDSC42A-P | 38 | 94.1 | 1, 18 | MTP841 | $6,067 |
| 40 | 1200 | 460 | 364TC | 862 | 0406XDSB42A-P | 48 | 94.1 | 1, 18 | MTP841 | $10,362 |
| 40 | 1200 | 575 | 364TC | 862 | 0406XDSC42A-P | 38 | 94.1 | 1, 18 | MTP841 | $10,362 |
| 50 | 3600 | 460 | 326TSC | 725 | 0502XDSB42B-P | 58 | 93.0 | 1, 18 | MTP841 | $8,023 |
| 50 | 3600 | 575 | 326TSC | 717 | 0502XDSC42B-P | 46 | 93.0 | 1, 18 | MTP841 | $8,023 |

# Totally Enclosed Fan Cooled
## EQP Global® 841 C-Face
### NEMA Premium® Efficiency



EQP Global® 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 1800 | 460 | 326TC | 767 | 0504XDSB42A-P | 60 | 94.5 | 1, 18 | MTP841 | $7,337 |
| 50 | 1800 | 575 | 326TC | 769 | 0504XDSC42A-P | 48 | 94.5 | 1, 18 | MTP841 | $7,337 |
| 50 | 1200 | 460 | 365TC | 895 | 0506XDSB42A-P | 60 | 94.1 | 1, 18 | MTP841 | $11,776 |
| 50 | 1200 | 575 | 365TC | 895 | 0506XDSC42A-P | 48 | 94.1 | 1, 18 | MTP841 | $11,776 |
| 60 | 3600 | 460 | 364TSC | 911 | 0602XDSB42B-P | 69 | 93.6 | 1, 18 | MTP841 | $9,732 |
| 60 | 3600 | 575 | 364TSC | 911 | 0602XDSC42B-P | 55 | 93.6 | 1, 18 | MTP841 | $9,732 |
| 60 | 1800 | 460 | 364TC | 928 | 0604XDSB42A-P | 69 | 95.0 | 1, 18 | MTP841 | $9,657 |
| 60 | 1800 | 575 | 364TC | 941 | 0604XDSC42A-P | 55 | 95.0 | 1, 18 | MTP841 | $9,657 |
| 75 | 3600 | 460 | 365TSC | 941 | 0752XDSB42B-P | 86 | 93.6 | 1, 18 | MTP841 | $12,016 |
| 75 | 3600 | 575 | 365TSC | 941 | 0752XDSC42B-P | 69 | 93.6 | 1, 18 | MTP841 | $12,016 |
| 75 | 1800 | 460 | 365TC | 1025 | 0754XDSB42A-P | 85 | 95.4 | 1, 18 | MTP841 | $12,023 |
| 75 | 1800 | 575 | 365TC | 1020 | 0754XDSC42A-P | 69 | 95.4 | 1, 18 | MTP841 | $12,023 |
| **C-Face Footless** | | | | | | | | | | |
| 0.75 | 1200 | 460 | 143TC | 71 | 3/46XDSB44A-P | 1.4 | 80.0 | 1, 18 | MTP841 | $1,032 |
| 0.75 | 1200 | 575 | 143TC | 71 | 3/46XDSC44A-P | .9 | 81.5 | 1, 18 | MTP841 | $1,032 |
| 1 | 1800 | 460 | 143TC | 71 | 0014XDSB44A-P | 1.7 | 85.5 | 1, 18 | MTP841 | $905 |
| 1 | 1800 | 575 | 143TC | 71 | 0014XDSC44A-P | 1.2 | 85.5 | 1, 18 | MTP841 | $905 |
| 1 | 1200 | 460 | 145TC | 68 | 0016XDSB44A-P | 1.8 | 82.5 | 1, 18 | MTP841 | $1,093 |
| 1 | 1200 | 575 | 145TC | 68 | 0016XDSC44A-P | 1.5 | 82.5 | 1, 18 | MTP841 | $1,093 |
| 1.5 | 3600 | 460 | 143TC | 68 | Y152XDSB44A-P | 2.0 | 84.0 | 1, 18 | MTP841 | $960 |
| 1.5 | 3600 | 575 | 143TC | 68 | Y152XDSC44A-P | 1.6 | 84.0 | 1, 18 | MTP841 | $960 |
| 1.5 | 1800 | 460 | 145TC | 68 | Y154XDSB44A-P | 2.4 | 86.5 | 1, 18 | MTP841 | $992 |
| 1.5 | 1800 | 575 | 145TC | 68 | Y154XDSC44A-P | 1.9 | 86.5 | 1, 18 | MTP841 | $992 |
| 1.5 | 1200 | 460 | 182TC | 103 | Y156XDSB44A-P | 2.5 | 87.5 | 1, 18 | MTP841 | $1,345 |
| 1.5 | 1200 | 575 | 182TC | 79 | Y156XDSC44A-P | 2.0 | 87.5 | 1, 18 | MTP841 | $1,345 |
| 2 | 3600 | 460 | 145TC | 64 | 0022XDSB44A-P | 2.6 | 85.5 | 1, 18 | MTP841 | $1,126 |
| 2 | 3600 | 575 | 145TC | 75 | 0022XDSC44A-P | 2.1 | 85.5 | 1, 18 | MTP841 | $1,126 |
| 2 | 1800 | 460 | 145TC | 75 | 0024XDSB44A-P | 3.0 | 86.5 | 1, 18 | MTP841 | $1,078 |
| 2 | 1800 | 575 | 145TC | 73 | 0024XDSC44A-P | 2.4 | 86.5 | 1, 18 | MTP841 | $1,078 |
| 2 | 1200 | 460 | 184TC | 126 | 0026XDSB44A-P | 3.4 | 88.5 | 1, 18 | MTP841 | $1,373 |
| 2 | 1200 | 575 | 184TC | 116 | 0026XDSC44A-P | 2.7 | 88.5 | 1, 18 | MTP841 | $1,373 |
| 3 | 3600 | 460 | 182TC | 97 | 0032XDSB44A-P | 3.6 | 86.5 | 1, 18 | MTP841 | $1,379 |
| 3 | 3600 | 575 | 182TC | 97 | 0032XDSC44A-P | 3.0 | 86.5 | 1, 18 | MTP841 | $1,379 |
| 3 | 1800 | 460 | 182TC | 112 | 0034XDSB44A-P | 4.0 | 89.5 | 1, 18 | MTP841 | $1,304 |
| 3 | 1800 | 575 | 182TC | 112 | 0034XDSC44A-P | 3.2 | 89.5 | 1, 18 | MTP841 | $1,304 |
| 3 | 1200 | 460 | 213TC | 142 | 0036XDSB44A-P | 4.4 | 89.5 | 1, 18 | MTP841 | $1,693 |
| 3 | 1200 | 575 | 213TC | 142 | 0036XDSC44A-P | 3.5 | 89.5 | 1, 18 | MTP841 | $1,693 |
| 5 | 3600 | 460 | 184TC | 110 | 0052XDSB44A-P | 5.8 | 88.5 | 1, 18 | MTP841 | $1,544 |
| 5 | 3600 | 575 | 184TC | 110 | 0052XDSC44A-P | 4.6 | 88.5 | 1, 18 | MTP841 | $1,544 |
| 5 | 1800 | 460 | 184TC | 121 | 0054XDSB44A-P | 6.4 | 89.5 | 1, 18 | MTP841 | $1,386 |
| 5 | 1800 | 575 | 184TC | 121 | 0054XDSC44A-P | 5.1 | 89.5 | 1, 18 | MTP841 | $1,386 |
| 5 | 1200 | 460 | 215TC | 190 | 0056XDSB44A-P | 6.9 | 89.5 | 1, 18 | MTP841 | $2,353 |
| 5 | 1200 | 575 | 215TC | 190 | 0056XDSC44A-P | 5.5 | 89.5 | 1, 18 | MTP841 | $2,353 |
| 7.5 | 3600 | 460 | 213TC | 155 | Y752XDSB44A-P | 9.0 | 89.5 | 1, 18 | MTP841 | $1,890 |
| 7.5 | 3600 | 575 | 213TC | 155 | Y752XDSC44A-P | 7.2 | 89.5 | 1, 18 | MTP841 | $1,890 |
| 7.5 | 1800 | 460 | 213TC | 203 | Y754XDSB44A-P | 9.8 | 91.7 | 1, 18 | MTP841 | $1,878 |
| 7.5 | 1800 | 575 | 213TC | 198 | Y754XDSC44A-P | 7.7 | 91.7 | 1, 18 | MTP841 | $1,878 |
| 7.5 | 1200 | 460 | 254TC | 252 | Y756XDSB44A-P | 10.2 | 91.0 | 1, 18 | MTP841 | $3,098 |

# Totally Enclosed Fan Cooled

## EQP Global® 841 C-Face

### NEMA Premium® Efficiency



EQP Global 841

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 7.5 | 1200 | 575 | 254TC | 252 | Y756XDSC44A-P | 8.2 | 91.0 | 1, 18 | MTP841 | $3,098 |
| 10 | 3600 | 460 | 215TC | 205 | 0102XDSB44A-P | 11.8 | 90.2 | 1, 18 | MTP841 | $2,174 |
| 10 | 3600 | 575 | 215TC | 205 | 0102XDSC44A-P | 9.4 | 90.2 | 1, 18 | MTP841 | $2,174 |
| 10 | 1800 | 460 | 215TC | 214 | 0104XDSB44A-P | 13.0 | 91.7 | 1, 18 | MTP841 | $2,222 |
| 10 | 1800 | 575 | 215TC | 214 | 0104XDSC44A-P | 10.1 | 91.7 | 1, 18 | MTP841 | $2,222 |
| 10 | 1200 | 460 | 256TC | 274 | 0106XDSB44A-P | 13.4 | 91.0 | 1, 18 | MTP841 | $3,719 |
| 10 | 1200 | 575 | 256TC | 274 | 0106XDSC44A-P | 10.8 | 91.0 | 1, 18 | MTP841 | $3,719 |
| 15 | 3600 | 460 | 254TC | 313 | 0152XDSB44A-P | 17.7 | 91.0 | 1, 18 | MTP841 | $3,015 |
| 15 | 3600 | 575 | 254TC | 313 | 0152XDSC44A-P | 14.4 | 91.0 | 1, 18 | MTP841 | $3,015 |
| 15 | 1800 | 460 | 254TC | 333 | 0154XDSB44A-P | 19.2 | 92.4 | 1, 18 | MTP841 | $2,967 |
| 15 | 1800 | 575 | 254TC | 1359 | 0154XDSC44A-P | 15.2 | 92.4 | 1, 18 | MTP841 | $2,967 |
| 15 | 1200 | 460 | 284TC | 454 | 0156XDSB44A-P | 19.8 | 91.7 | 1, 18 | MTP841 | $5,035 |
| 15 | 1200 | 575 | 284TC | 454 | 0156XDSC44A-P | 15.8 | 91.7 | 1, 18 | MTP841 | $5,035 |
| 20 | 3600 | 460 | 256TC | 331 | 0202XDSB44A-P | 23 | 91.0 | 1, 18 | MTP841 | $3,661 |
| 20 | 3600 | 575 | 256TC | 331 | 0202XDSC44A-P | 19.2 | 91.0 | 1, 18 | MTP841 | $3,661 |
| 20 | 1800 | 460 | 256TC | 368 | 0204XDSB44A-P | 25 | 93.0 | 1, 18 | MTP841 | $3,621 |
| 20 | 1800 | 575 | 256TC | 364 | 0204XDSC44A-P | 20 | 93.0 | 1, 18 | MTP841 | $3,621 |
| 20 | 1200 | 460 | 286TC | 489 | 0206XDSB44A-P | 25 | 91.7 | 1, 18 | MTP841 | $6,029 |
| 20 | 1200 | 575 | 286TC | 489 | 0206XDSC44A-P | 20 | 91.7 | 1, 18 | MTP841 | $6,029 |
| 25 | 3600 | 460 | 284TSC | 496 | 0252XDSB44B-P | 29 | 91.7 | 1, 18 | MTP841 | $4,639 |
| 25 | 3600 | 575 | 284TSC | 496 | 0252XDSC44B-P | 23 | 91.7 | 1, 18 | MTP841 | $4,639 |
| 25 | 1800 | 460 | 284TC | 516 | 0254XDSB44A-P | 31 | 93.6 | 1, 18 | MTP841 | $4,247 |
| 25 | 1800 | 575 | 284TC | 550 | 0254XDSC44A-P | 24 | 93.6 | 1, 18 | MTP841 | $4,247 |
| 25 | 1200 | 460 | 324TC | 653 | 0256XDSB44A-P | 30 | 93.0 | 1, 18 | MTP841 | $7,264 |
| 25 | 1200 | 575 | 324TC | 653 | 0256XDSC44A-P | 25 | 93.0 | 1, 18 | MTP841 | $7,264 |
| 30 | 3600 | 460 | 286TSC | 516 | 0302XDSB44B-P | 35 | 91.7 | 1, 18 | MTP841 | $5,333 |
| 30 | 3600 | 575 | 286TSC | 516 | 0302XDSC44B-P | 28 | 91.7 | 1, 18 | MTP841 | $5,333 |
| 30 | 1800 | 460 | 286TC | 531 | 0304XDSB44A-P | 36 | 93.6 | 1, 18 | MTP841 | $4,865 |
| 30 | 1800 | 575 | 286TC | 551 | 0304XDSC44A-P | 29 | 93.6 | 1, 18 | MTP841 | $4,865 |
| 30 | 1200 | 460 | 326TC | 571 | 0306XDSB44A-P | 37 | 93.0 | 1, 18 | MTP841 | $8,284 |
| 30 | 1200 | 575 | 326TC | 571 | 0306XDSC44A-P | 30 | 93.0 | 1, 18 | MTP841 | $8,284 |
| 40 | 3600 | 460 | 324TSC | 686 | 0402XDSB44B-P | 47 | 92.4 | 1, 18 | MTP841 | $6,921 |
| 40 | 3600 | 575 | 324TSC | 589 | 0402XDSC44B-P | 38 | 92.4 | 1, 18 | MTP841 | $6,921 |
| 40 | 1800 | 460 | 324TC | 723 | 0404XDSB44A-P | 47 | 94.1 | 1, 18 | MTP841 | $6,370 |
| 40 | 1800 | 575 | 324TC | 723 | 0404XDSC44A-P | 38 | 94.1 | 1, 18 | MTP841 | $6,370 |
| 40 | 1200 | 460 | 364TC | 708 | 0406XDSB44A-P | 48 | 94.1 | 1, 18 | MTP841 | $11,398 |
| 40 | 1200 | 575 | 364TC | 708 | 0406XDSC44A-P | 38 | 94.1 | 1, 18 | MTP841 | $11,398 |
| 50 | 3600 | 460 | 326TSC | 701 | 0502XDSB44B-P | 58 | 93.0 | 1, 18 | MTP841 | $8,825 |
| 50 | 3600 | 575 | 326TSC | 702 | 0502XDSC44B-P | 46 | 93.0 | 1, 18 | MTP841 | $8,825 |
| 50 | 1800 | 460 | 326TC | 758 | 0504XDSB44A-P | 60 | 94.5 | 1, 18 | MTP841 | $7,704 |
| 50 | 1800 | 575 | 326TC | 758 | 0504XDSC44A-P | 48 | 94.5 | 1, 18 | MTP841 | $7,704 |
| 50 | 1200 | 460 | 365TC | 757 | 0506XDSB44A-P | 60 | 94.1 | 1, 18 | MTP841 | $12,954 |
| 50 | 1200 | 575 | 365TC | 757 | 0506XDSC44A-P | 48 | 94.1 | 1, 18 | MTP841 | $12,954 |
| 60 | 3600 | 460 | 364TSC | 763 | 0602XDSB44B-P | 69 | 93.6 | 1, 18 | MTP841 | $10,705 |
| 60 | 3600 | 575 | 364TSC | 763 | 0602XDSC44B-P | 55 | 93.6 | 1, 18 | MTP841 | $10,705 |
| 60 | 1800 | 460 | 364TC | 796 | 0604XDSB44A-P | 69 | 95.0 | 1, 18 | MTP841 | $10,140 |
| 60 | 1800 | 575 | 364TC | 796 | 0604XDSC44A-P | 55 | 95.0 | 1, 18 | MTP841 | $10,140 |
| 75 | 3600 | 460 | 365TSC | 814 | 0752XDSB44B-P | 86 | 93.6 | 1, 18 | MTP841 | $13,218 |

# Totally Enclosed Fan Cooled
## EQP Global® 841 C-Face
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 75 | 3600 | 575 | 365TSC | 814 | 0752XDSC44B-P | 69 | 93.6 | 1, 18 | MTP841 | $13,218 |
| 75 | 1800 | 460 | 365TC | 893 | 0754XDSB44A-P | 85 | 95.4 | 1, 18 | MTP841 | $12,624 |
| 75 | 1800 | 575 | 365TC | 893 | 0754XDSC44A-P | 69 | 95.4 | 1, 18 | MTP841 | $12,624 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# General Purpose TEFC
## EQP Global® 661 Motor Series

**New Product**

Toshiba's totally enclosed fan cooled, NEMA Premium®, EQP Global 661 motor series is designed to meet and exceed the requirements of the petrochemical industry 661 specification and 841 Compliant. The robust design and premium construction extend operating life and aim to minimize maintenance and downtime. The EQP Global 661 series is equipped with a range of enhanced features, including labyrinth seals on both ends, which provide an IP56 rating that protects against moisture and contaminants entering the enclosure. The complete heavy-duty cast-iron construction makes it a preferred choice for severe environments. Oversized 300 series bearings on both ends enhance the bearing life and make it suitable for direct couple or belt drive systems. In addition, the low operating temperatures contribute to extending the insulation's durability and overall life. Manufactured with a commitment to quality, the EQP Global 661 series delivers exceptional performance and reliability in demanding applications such as petrochemical and chemical processing environments.

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty, Petrochemical
- NEMA Premium® Efficiency
- 60 Hz: 460 or 575 V
- Three-Phase
- 1.15 Service Factor
- NEMA Design B
- 661 Compliant
- 841 Compliant
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP56 Protection
- All Cast Iron Construction
- Multi-Mount Capabilities on All Frames (See Appendix C)
- Multiple Drain Provisions for Horizontal & Vertical Mounting
- Oversized 300 Series Bearings
- Labyrinth Seal on All Frames (DE & ODE)
- 100% No-Load Commercial Test & Vibration Test on All Motors
- See Appendix D for ASD and Division 2 Capabilities

**Applications:**

- Cooling Tower
- Heating Exchangers



# Totally Enclosed Fan Cooled
## EQP Global® 661
### NEMA Premium® Efficiency



CC027B

5 FIVE YEAR WARRANTY

### Product Scope:

**Horsepower:** 5 to 75 HP

**Speed (60 Hz):** 1800, 1200, or 900 RPM

**Volt (60 Hz):** 460 or 575 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 184T through 365T

**Construction:** All Cast Iron

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31
(Voltage Withstand Capability of 2000 V in 0.1 µs)

For EQP Global® Motors in frames 140 through 360, any modifications that must be done through production-only, must be priced using the "Production Price List" pricing, in the Low Voltage Modifications section of the catalog.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 1800 | 460 | 184T | 117 | 0054XDGB41A-PR | 6.4 | 89.5 | 1, 18 | MTP841 | $1,129 |
| 5 | 1800 | 575 | 184T | 119 | 0054XDGC41A-PR | 5.2 | 89.5 | 1, 18 | MTP841 | $1,129 |
| 5 | 1200 | 460 | 215T | 192 | 0056XDGB41A-PR | 6.9 | 89.5 | 1, 18 | MTP841 | $2,200 |
| 5 | 1200 | 575 | 215T | 187 | 0056XDGC41A-PR | 5.5 | 89.5 | 1, 18 | MTP841 | $2,200 |
| 5 | 900 | 460 | 254T | 264 | 0058XDGB41A-PR | 7.5 | 86.5 | 1, 18 | MTP841 | $3,779 |
| 5 | 900 | 575 | 254T | 264 | 0058XDGC41A-PR | 6 | 86.5 | 1, 18 | MTP841 | $3,779 |
| 7.5 | 1800 | 460 | 213T | 199 | Y754XDGB41A-PR | 9.8 | 91.7 | 1, 18 | MTP841 | $1,759 |
| 7.5 | 1800 | 575 | 213T | 190 | Y754XDGC41A-PR | 7.8 | 91.7 | 1, 18 | MTP841 | $1,759 |
| 7.5 | 1200 | 460 | 254T | 289 | Y756XDGB41A-PR | 9.9 | 91.0 | 1, 18 | MTP841 | $2,859 |
| 7.5 | 1200 | 575 | 254T | 282 | Y756XDGC41A-PR | 8.2 | 91.0 | 1, 18 | MTP841 | $2,859 |
| 7.5 | 900 | 460 | 256T | 273 | Y758XDGB41A-PR | 11.5 | 86.5 | 1, 18 | MTP841 | $4,244 |
| 7.5 | 900 | 575 | 256T | 304 | Y758XDGC41A-PR | 9.1 | 86.5 | 1, 18 | MTP841 | $4,244 |
| 10 | 1800 | 460 | 215T | 207 | 0104XDGB41A-PR | 13 | 91.7 | 1, 18 | MTP841 | $2,066 |
| 10 | 1800 | 575 | 215T | 203 | 0104XDGC41A-PR | 10.4 | 91.7 | 1, 18 | MTP841 | $2,066 |
| 10 | 1200 | 460 | 256T | 310 | 0106XDGB41A-PR | 13.4 | 91.0 | 1, 18 | MTP841 | $3,461 |
| 10 | 1200 | 575 | 256T | 313 | 0106XDGC41A-PR | 10.8 | 91.0 | 1, 18 | MTP841 | $3,461 |
| 10 | 900 | 460 | 284T | 403 | 0108XDGB41A-PR | 14.5 | 89.5 | 1, 18 | MTP841 | $5,518 |
| 10 | 900 | 575 | 284T | 452 | 0108XDGC41A-PR | 11.6 | 89.5 | 1, 18 | MTP841 | $5,518 |
| 15 | 1800 | 460 | 254T | 325 | 0154XDGB41A-PR | 19 | 92.4 | 1, 18 | MTP841 | $2,726 |
| 15 | 1800 | 575 | 254T | 326 | 0154XDGC41A-PR | 15.2 | 92.4 | 1, 18 | MTP841 | $2,726 |
| 15 | 1200 | 460 | 284T | 452 | 0156XDGB41A-PR | 19.6 | 91.7 | 1, 18 | MTP841 | $4,594 |
| 15 | 1200 | 575 | 284T | 454 | 0156XDGC41A-PR | 15.8 | 91.7 | 1, 18 | MTP841 | $4,594 |
| 15 | 900 | 460 | 286T | 436 | 0158XDGB41A-PR | 22 | 89.5 | 1, 18 | MTP841 | $6,580 |
| 15 | 900 | 575 | 286T | 487 | 0158XDGC41A-PR | 17.5 | 89.5 | 1, 18 | MTP841 | $6,580 |
| 20 | 1800 | 460 | 256T | 369 | 0204XDGB41A-PR | 25 | 93.0 | 1, 18 | MTP841 | $3,362 |
| 20 | 1800 | 575 | 256T | 370 | 0204XDGC41A-PR | 20 | 93.0 | 1, 18 | MTP841 | $3,362 |
| 20 | 1200 | 460 | 286T | 496 | 0206XDGB41A-PR | 25 | 91.7 | 1, 18 | MTP841 | $5,497 |

# Totally Enclosed Fan Cooled

## EQP Global® 661

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 1200 | 575 | 286T | 500 | 0206XDGC41A-PR | 20 | 91.7 | 1, 18 | MTP841 | $5,497 |
| 20 | 900 | 460 | 324T | 585 | 0208XDGB41A-PR | 28 | 90.2 | 1, 18 | MTP841 | $7,858 |
| 20 | 900 | 575 | 324T | 655 | 0208XDGC41A-PR | 22 | 90.2 | 1, 18 | MTP841 | $7,858 |
| 25 | 1800 | 460 | 284T | 529 | 0254XDGB41A-PR | 31 | 93.8 | 1, 18 | MTP841 | $4,004 |
| 25 | 1800 | 575 | 284T | 531 | 0254XDGC41A-PR | 31 | 93.6 | 1, 18 | MTP841 | $4,004 |
| 25 | 1200 | 460 | 324T | 655 | 0256XDGB41A-PR | 31 | 93.0 | 1, 18 | MTP841 | $6,662 |
| 25 | 1200 | 575 | 324T | 650 | 0256XDGC41A-PR | 25 | 93.0 | 1, 18 | MTP841 | $6,662 |
| 25 | 900 | 460 | 326T | 612 | 0258XDGB41A-PR | 35 | 90.2 | 1, 18 | MTP841 | $9,069 |
| 25 | 900 | 575 | 326T | 677 | 0258XDGC41A-PR | 27 | 90.2 | 1, 18 | MTP841 | $9,069 |
| 30 | 1800 | 460 | 286T | 542 | 0304XDGB41A-PR | 36 | 93.6 | 1, 18 | MTP841 | $4,573 |
| 30 | 1800 | 575 | 286T | 536 | 0304XDGC41A-PR | 29 | 93.6 | 1, 18 | MTP841 | $4,573 |
| 30 | 1200 | 460 | 326T | 677 | 0306XDGB41A-PR | 37 | 93.0 | 1, 18 | MTP841 | $7,602 |
| 30 | 1200 | 575 | 326T | 672 | 0306XDGC41A-PR | 30 | 93.0 | 1, 18 | MTP841 | $7,602 |
| 30 | 900 | 460 | 364T | 836 | 0308XDGB41A-PR | 41 | 91.7 | 1, 18 | MTP841 | $12,081 |
| 30 | 900 | 575 | 364T | 842 | 0308XDGC41A-PR | 33 | 91.7 | 1, 18 | MTP841 | $12,081 |
| 40 | 1800 | 460 | 324T | 701 | 0404XDGB41A-PR | 48 | 94.1 | 1, 18 | MTP841 | $6,077 |
| 40 | 1800 | 575 | 324T | 703 | 0404XDGC41A-PR | 38 | 94.1 | 1, 18 | MTP841 | $6,077 |
| 40 | 1200 | 460 | 364T | 836 | 0406XDGB41A-PR | 48 | 94.1 | 1, 18 | MTP841 | $10,210 |
| 40 | 1200 | 575 | 364T | 842 | 0406XDGC41A-PR | 38 | 94.1 | 1, 18 | MTP841 | $10,210 |
| 40 | 900 | 460 | 365T | 873 | 0408XDGB41A-PR | 54 | 91.7 | 1, 18 | MTP841 | $13,801 |
| 40 | 900 | 575 | 365T | 877 | 0408XDGC41A-PR | 44 | 91.7 | 1, 18 | MTP841 | $13,801 |
| 50 | 1800 | 460 | 326T | 748 | 0504XDGB41A-PR | 60 | 94.5 | 1, 18 | MTP841 | $7,393 |
| 50 | 1800 | 575 | 326T | 765 | 0504XDGC41A-PR | 48 | 94.5 | 1, 18 | MTP841 | $7,393 |
| 50 | 1200 | 460 | 365T | 873 | 0506XDGB41A-PR | 60 | 94.1 | 1, 18 | MTP841 | $11,613 |
| 50 | 1200 | 575 | 365T | 888 | 0506XDGC41A-PR | 48 | 94.1 | 1, 18 | MTP841 | $11,613 |
| 60 | 1800 | 460 | 364T | 928 | 0604XDGB41A-PR | 69 | 95.0 | 1, 18 | MTP841 | $9,456 |
| 60 | 1800 | 575 | 364T | 916 | 0604XDGC41A-PR | 55 | 95.0 | 1, 18 | MTP841 | $9,456 |
| 75 | 1800 | 460 | 365T | 1012 | 0754XDGB41A-PR | 86 | 95.4 | 1, 18 | MTP841 | $11,875 |
| 75 | 1800 | 575 | 365T | 1010 | 0754XDGC41A-PR | 69 | 95.4 | 1, 18 | MTP841 | $11,875 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Explosion Proof Motors

## Totally Enclosed Fan Cooled

Toshiba's EQP Global® Explosion Proof (XP) motor series is engineered to contain and manage internal explosions, effectively preventing the release of explosive gases and vapors into the environment. Built with a robust design and premium construction, these motors exceed UL and CSA standards for hazardous locations, enhancing operating life and minimizing maintenance and downtime. The EQP Global XP series is ideal for use in Class I, Division I, Group D, and Class II, Division 1, Groups E, F & G environments and has a temperature code rating of T3C (160˚C). With a steadfast commitment to quality, the EQP Global XP series delivers exceptional performance and reliability in demanding applications.

EQP Global® XP

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty
- NEMA Premium® Efficiency
- 60 Hz: 230/460, 460, or 575 V
- Three-Phase
- 60 Hz Design
- 1.15 Service Factor
- NEMA Design B
- Class I, Division 1, Group D, and Class II, Division 1, Groups E, F & G
- ASD-Turndown Capabilities
  - Frames 143T through 326T 20:1CT, 60:1VT, 1:1.5CHP
  - Frames 364T through N449T 10:1CT, 60:1VT, 1:1.5CHP
- T3C Temperature Code 160°C
- Class F Insulation
- IP56 Protection
- All Cast Iron Construction
- C-Flange Footed and Footless Available
- Non-Sparking Brass Shaft Slingers
- Normally-Closed Thermostats
- Ball Bearing is Available on All Frame Sizes
- Roller Bearing is Available on Frames 444T and Above
- Frames 143T through N449T UL Listed File No. E53559

**Applications:**

- Petrochemical & Gas
- Grain & Feed Mills
- Pharmaceuticals
- Pumps
- Fans
- Compressors
- Conveyors
- Material Handling
- UL & CSA Listed Hazardous Locations



# Totally Enclosed Fan Cooled

## EQP Global® XP

### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 1 to 350 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM

**Volt (60 Hz):** 230/460, 460, or 575 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143T through N449T

**Construction:** All Cast Iron

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs)

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1800 | 230/460 | 143T | 66 | 0014XPEA41A-P | 3.4/1.7 | 85.5 | 1, 18 | MTPXPP | $840 |
| 1 | 1800 | 575 | 143T | 66 | 0014XPEC41A-P | 1.3 | 85.5 | 1, 18 | MTPXPP | $840 |
| 1 | 1200 | 230/460 | 145T | 70 | 0016XPEA41A-P | 3.6/1.8 | 82.5 | 1, 18 | MTPXPP | $903 |
| 1 | 1200 | 575 | 145T | 70 | 0016XPEC41A-P | 1.5 | 82.5 | 1, 18 | MTPXPP | $903 |
| 1.5 | 3600 | 230/460 | 143T | 64 | Y152XPEA41A-P | 4.0/2.0 | 84.0 | 1, 18 | MTPXPP | $886 |
| 1.5 | 3600 | 575 | 143T | 64 | Y152XPEC41A-P | 1.6 | 84.0 | 1, 18 | MTPXPP | $886 |
| 1.5 | 1800 | 230/460 | 145T | 68 | Y154XPEA41A-P | 4.8/2.4 | 86.5 | 1, 18 | MTPXPP | $910 |
| 1.5 | 1800 | 575 | 145T | 68 | Y154XPEC41A-P | 1.9 | 86.5 | 1, 18 | MTPXPP | $910 |
| 1.5 | 1200 | 230/460 | 182T | 110 | Y156XPEA41A-P | 5.0/2.5 | 87.5 | 1, 18 | MTPXPP | $978 |
| 1.5 | 1200 | 575 | 182T | 110 | Y156XPEC41A-P | 2.0 | 87.5 | 1, 18 | MTPXPP | $978 |
| 2 | 3600 | 230/460 | 145T | 66 | 0022XPEA41A-P | 5.2/2.6 | 85.5 | 1, 18 | MTPXPP | $917 |
| 2 | 3600 | 575 | 145T | 66 | 0022XPEC41A-P | 2.1 | 85.5 | 1, 18 | MTPXPP | $917 |
| 2 | 1800 | 230/460 | 145T | 70 | 0024XPEA41A-P | 6.0/3.0 | 86.5 | 1, 18 | MTPXPP | $916 |
| 2 | 1800 | 575 | 145T | 70 | 0024XPEC41A-P | 2.4 | 86.5 | 1, 18 | MTPXPP | $916 |
| 2 | 1200 | 230/460 | 184T | 123 | 0026XPEA41A-P | 6.8/3.4 | 88.5 | 1, 18 | MTPXPP | $1,130 |
| 2 | 1200 | 575 | 184T | 123 | 0026XPEC41A-P | 2.7 | 88.5 | 1, 18 | MTPXPP | $1,130 |
| 3 | 3600 | 230/460 | 182T | 101 | 0032XPEA41A-P | 7.4/3.7 | 86.5 | 1, 18 | MTPXPP | $1,057 |
| 3 | 3600 | 575 | 182T | 101 | 0032XPEC41A-P | 3.0 | 86.5 | 1, 18 | MTPXPP | $1,057 |
| 3 | 1800 | 230/460 | 182T | 110 | 0034XPEA41A-P | 8.0/4.0 | 89.5 | 1, 18 | MTPXPP | $1,152 |
| 3 | 1800 | 575 | 182T | 110 | 0034XPEC41A-P | 3.2 | 89.5 | 1, 18 | MTPXPP | $1,152 |
| 3 | 1200 | 230/460 | 213T | 196 | 0036XPEA41A-P | 8.8/4.4 | 89.5 | 1, 18 | MTPXPP | $1,429 |
| 3 | 1200 | 575 | 213T | 196 | 0036XPEC41A-P | 3.5 | 89.5 | 1, 18 | MTPXPP | $1,429 |
| 5 | 3600 | 230/460 | 184T | 114 | 0052XPEA41A-P | 11.6/5.8 | 88.5 | 1, 18 | MTPXPP | $1,305 |
| 5 | 3600 | 575 | 184T | 114 | 0052XPEC41A-P | 4.6 | 88.5 | 1, 18 | MTPXPP | $1,305 |
| 5 | 1800 | 230/460 | 184T | 114 | 0054XPEA41A-P | 13.0/6.5 | 89.5 | 1, 18 | MTPXPP | $1,275 |
| 5 | 1800 | 575 | 184T | 114 | 0054XPEC41A-P | 5.2 | 89.5 | 1, 18 | MTPXPP | $1,275 |
| 5 | 1200 | 230/460 | 215T | 211 | 0056XPEA41A-P | 13.8/6.9 | 89.5 | 1, 18 | MTPXPP | $1,840 |
| 5 | 1200 | 575 | 215T | 211 | 0056XPEC41A-P | 5.5 | 89.5 | 1, 18 | MTPXPP | $1,840 |
| 7.5 | 3600 | 230/460 | 213T | 205 | Y752XPEA41A-P | 18.0/9.0 | 89.5 | 1, 18 | MTPXPP | $1,768 |

# Totally Enclosed Fan Cooled

## EQP Global® XP

### NEMA Premium® Efficiency



EQP Global XP

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 7.5 | 3600 | 575 | 213T | 205 | Y752XPEC41A-P | 7.2 | 89.5 | 1, 18 | MTPXPP | $1,768 |
| 7.5 | 1800 | 230/460 | 213T | 224 | Y754XPEA41A-P | 19.6/9.8 | 91.7 | 1, 18 | MTPXPP | $1,729 |
| 7.5 | 1800 | 575 | 213T | 224 | Y754XPEC41A-P | 7.8 | 91.7 | 1, 18 | MTPXPP | $1,729 |
| 7.5 | 1200 | 230/460 | 254T | 315 | Y756XPEA41A-P | 20.4/10.2 | 91.0 | 1, 18 | MTPXPP | $2,402 |
| 7.5 | 1200 | 575 | 254T | 315 | Y756XPEC41A-P | 8.2 | 91.0 | 1, 18 | MTPXPP | $2,402 |
| 10 | 3600 | 230/460 | 215T | 222 | 0102XPEA41A-P | 23.6/11.8 | 90.2 | 1, 18 | MTPXPP | $1,861 |
| 10 | 3600 | 575 | 215T | 222 | 0102XPEC41A-P | 9.4 | 90.2 | 1, 18 | MTPXPP | $1,861 |
| 10 | 1800 | 230/460 | 215T | 231 | 0104XPEA41A-P | 26.0/13.0 | 91.7 | 1, 18 | MTPXPP | $2,015 |
| 10 | 1800 | 575 | 215T | 231 | 0104XPEC41A-P | 10.4 | 91.7 | 1, 18 | MTPXPP | $2,015 |
| 10 | 1200 | 230/460 | 256T | 334 | 0106XPEA41A-P | 26.8/13.4 | 91.0 | 1, 18 | MTPXPP | $2,942 |
| 10 | 1200 | 575 | 256T | 334 | 0106XPEC41A-P | 10.8 | 91.0 | 1, 18 | MTPXPP | $2,942 |
| 15 | 3600 | 230/460 | 254T | 334 | 0152XPEA41A-P | 36/18 | 91.0 | 1, 18 | MTPXPP | $2,421 |
| 15 | 3600 | 575 | 254T | 334 | 0152XPEC41A-P | 14.4 | 91.0 | 1, 18 | MTPXPP | $2,421 |
| 15 | 1800 | 230/460 | 254T | 352 | 0154XPEA41A-P | 38/19 | 92.4 | 1, 18 | MTPXPP | $2,782 |
| 15 | 1800 | 575 | 254T | 352 | 0154XPEC41A-P | 15.2 | 91.7 | 1, 18 | MTPXPP | $2,782 |
| 15 | 1200 | 230/460 | 284T | 475 | 0156XPEA41A-P | 40/20 | 91.7 | 1, 18 | MTPXPP | $4,017 |
| 15 | 1200 | 575 | 284T | 475 | 0156XPEC41A-P | 15.8 | 91.0 | 1, 18 | MTPXPP | $4,017 |
| 20 | 3600 | 230/460 | 256T | 350 | 0202XPEA41A-P | 48/24 | 91.0 | 1, 18 | MTPXPP | $3,263 |
| 20 | 3600 | 575 | 256T | 350 | 0202XPEC41A-P | 19.2 | 91.0 | 1, 18 | MTPXPP | $3,263 |
| 20 | 1800 | 230/460 | 256T | 396 | 0204XPEA41A-P | 50/25 | 93.0 | 1, 18 | MTPXPP | $3,261 |
| 20 | 1800 | 575 | 256T | 396 | 0204XPEC41A-P | 20 | 93.0 | 1, 18 | MTPXPP | $3,261 |
| 20 | 1200 | 230/460 | 286T | 519 | 0206XPEA41A-P | 50/25 | 91.7 | 1, 18 | MTPXPP | $4,553 |
| 20 | 1200 | 575 | 286T | 519 | 0206XPEC41A-P | 20 | 91.7 | 1, 18 | MTPXPP | $4,553 |
| 25 | 3600 | 230/460 | 284TS | 504 | 0252XPEA41B-P | 58/29 | 91.7 | 1, 18 | MTPXPP | $3,835 |
| 25 | 3600 | 575 | 284TS | 504 | 0252XPEC41B-P | 23 | 91.7 | 1, 18 | MTPXPP | $3,835 |
| 25 | 1800 | 230/460 | 284T | 537 | 0254XPEA41A-P | 62/31 | 93.6 | 1, 18 | MTPXPP | $4,391 |
| 25 | 1800 | 575 | 284T | 537 | 0254XPEC41A-P | 24 | 93.6 | 1, 18 | MTPXPP | $4,391 |
| 25 | 1200 | 230/460 | 324T | 695 | 0256XPEA41A-P | 62/31 | 93.0 | 1, 18 | MTPXPP | $5,609 |
| 25 | 1200 | 575 | 324T | 695 | 0256XPEC41A-P | 25 | 93.0 | 1, 18 | MTPXPP | $5,609 |
| 30 | 3600 | 230/460 | 286TS | 506 | 0302XPEA41B-P | 70/35 | 91.7 | 1, 18 | MTPXPP | $4,528 |
| 30 | 3600 | 575 | 286TS | 506 | 0302XPEC41B-P | 28 | 91.7 | 1, 18 | MTPXPP | $4,528 |
| 30 | 1800 | 230/460 | 286T | 552 | 0304XPEA41A-P | 72/36 | 93.6 | 1, 18 | MTPXPP | $4,667 |
| 30 | 1800 | 230/460 | 286TS | 552 | 0304XPEA41B-P | 72/36 | 93.6 | 1, 18 | MTPXPP | $4,667 |
| 30 | 1800 | 575 | 286T | 552 | 0304XPEC41A-P | 29 | 93.6 | 1, 18 | MTPXPP | $4,667 |
| 30 | 1200 | 230/460 | 326T | 708 | 0306XPEA41A-P | 74/37 | 93.0 | 1, 18 | MTPXPP | $6,853 |
| 30 | 1200 | 575 | 326T | 708 | 0306XPEC41A-P | 30 | 93.0 | 1, 18 | MTPXPP | $6,853 |
| 40 | 3600 | 230/460 | 324TS | 673 | 0402XPEA41B-P | 94/47 | 92.4 | 1, 18 | MTPXPP | $6,385 |
| 40 | 3600 | 575 | 324TS | 673 | 0402XPEC41B-P | 38 | 92.4 | 1, 18 | MTPXPP | $6,385 |
| 40 | 1800 | 230/460 | 324T | 739 | 0404XPEA41A-P | 96/48 | 94.1 | 1, 18 | MTPXPP | $6,635 |
| 40 | 1800 | 575 | 324T | 739 | 0404XPEC41A-P | 38 | 94.1 | 1, 18 | MTPXPP | $6,635 |
| 40 | 1200 | 230/460 | 364T | 869 | 0406XPEA41A-P | 96/48 | 94.1 | 1, 18 | MTPXPP | $9,011 |
| 40 | 1200 | 575 | 364T | 869 | 0406XPEC41A-P | 38 | 94.1 | 1, 18 | MTPXPP | $9,011 |
| 50 | 3600 | 230/460 | 326TS | 746 | 0502XPEA41B-P | 116/58 | 93.0 | 1, 18 | MTPXPP | $8,009 |
| 50 | 3600 | 575 | 326TS | 746 | 0502XPEC41B-P | 46 | 93.0 | 1, 18 | MTPXPP | $8,009 |
| 50 | 1800 | 230/460 | 326T | 785 | 0504XPEA41A-P | 120/60 | 94.5 | 1, 18 | MTPXPP | $7,645 |
| 50 | 1800 | 575 | 326T | 785 | 0504XPEC41A-P | 48 | 94.5 | 1, 18 | MTPXPP | $7,645 |
| 50 | 1200 | 230/460 | 365T | 911 | 0506XPEA41A-P | 120/60 | 94.1 | 1, 18 | MTPXPP | $9,097 |
| 50 | 1200 | 575 | 365T | 911 | 0506XPEC41A-P | 48 | 94.1 | 1, 18 | MTPXPP | $9,097 |

# Totally Enclosed Fan Cooled
## EQP Global® XP
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 3600 | 230/460 | 364TS | 915 | 0602XPEA41B-P | 138/69 | 93.6 | 1, 18 | MTPXPP | $9,487 |
| 60 | 3600 | 575 | 364TS | 915 | 0602XPEC41B-P | 55 | 93.6 | 1, 18 | MTPXPP | $9,487 |
| 60 | 1800 | 230/460 | 364T | 953 | 0604XPEA41A-P | 138/69 | 95.0 | 1, 18 | MTPXPP | $9,459 |
| 60 | 1800 | 575 | 364T | 953 | 0604XPEC41A-P | 55 | 95.0 | 1, 18 | MTPXPP | $9,459 |
| 60 | 1200 | 460 | 404T | | 0606XPEA41A-P | 73 | 94.5 | 1, 18 | MXTXPP | $14,616 |
| 60 | 1200 | 575 | 404T | | 0606XPEC41A-P | 58 | 94.5 | 1, 18 | MXTXPP | $14,616 |
| 75 | 3600 | 230/460 | 365TS | 957 | 0752XPEA41B-P | 172/86 | 93.6 | 1, 18 | MTPXPP | $11,284 |
| 75 | 3600 | 575 | 365TS | 957 | 0752XPEC41B-P | 69 | 93.6 | 1, 18 | MTPXPP | $11,284 |
| 75 | 1800 | 230/460 | 365T | 1034 | 0754XPEA41A-P | 172/86 | 95.0 | 1, 18 | MTPXPP | $11,086 |
| 75 | 1800 | 575 | 365T | 1034 | 0754XPEC41A-P | 69 | 95.4 | 1, 18 | MTPXPP | $11,086 |
| 75 | 1200 | 230/460 | 405T | | 0756XPEA41A-P | 184/92 | 94.5 | 1, 18 | MXTXPP | $16,362 |
| 75 | 1200 | 575 | 405T | | 0756XPEC41A-P | 72 | 94.5 | 1, 18 | MXTXPP | $16,362 |
| 100 | 3600 | 230/460 | 405TS | | 1002XPEA41B-P | 224/112 | 94.1 | 1, 18 | MXTXPP | $17,532 |
| 100 | 3600 | 575 | 405TS | | 1002XPEC41B-P | 90 | 94.1 | 1, 18 | MXTXPP | $17,532 |
| 100 | 1800 | 230/460 | 405T | | 1004XPEA41A-P | 94 | 95.4 | 1, 18 | MXTXPP | $16,328 |
| 100 | 1800 | 575 | 405T | | 1004XPEC41A-P | 94 | 95.4 | 1, 18 | MXTXPP | $16,328 |
| 100 | 1200 | 230/460 | 444T | 2244 | B1006YLF4USH | 146/123 | 95.4 | 2, 18 | MXTXPP | $33,871 |
| 100 | 1200 | 575 | 444T | 2100 | B1006YLF4OSH | 99 | 95.4 | 2, 18 | MXTXPP | $33,871 |
| 125 | 3600 | 230/460 | 444TS | 2100 | B1251YLG3USH | 286/143 | 95.0 | 5, 18 | MXTXPP | $34,442 |
| 125 | 3600 | 230/460 | 444TS | 1831 | B1253YLG3USH | 286/143 | 95.0 | 4, 18 | MXTXPP | $34,442 |
| 125 | 3600 | 575 | 444TS | 1831 | B1251YLG3OSH | 116 | 95.0 | 5, 18 | MXTXPP | $34,442 |
| 125 | 3600 | 575 | 444TS | 1831 | B1253YLG3OSH | 116 | 95.0 | 4, 18 | MXTXPP | $34,442 |
| 125 | 1800 | 230/460 | 444T | 2230 | B1254YLF4USH | 288/144 | 95.4 | 2, 18 | MXTXPP | $30,048 |
| 125 | 1800 | 575 | 444T | 2230 | B1254YLF40SH | 116 | 95.8 | 2, 18 | MXTXPP | $30,048 |
| 150 | 3600 | 230/460 | 445TS | 2115 | B1501YLG3USH | 350/175 | 95.4 | 5, 18 | MXTXPP | $40,313 |
| 150 | 3600 | 230/460 | 445TS | 2115 | B1503YLG3USH | 350/175 | 95.4 | 4, 18 | MXTXPP | $40,313 |
| 150 | 3600 | 575 | 445TS | 2115 | B1501YLG3OSH | 140 | 95.4 | 5, 18 | MXTXPP | $40,313 |
| 150 | 3600 | 575 | 445TS | 2115 | B1503YLG3OSH | 140 | 95.4 | 4, 18 | MXTXPP | $40,313 |
| 150 | 1800 | 230/460 | 445T | 2356 | B1504YLF4USH | 354/177 | 95.7 | 2, 18 | MXTXPP | $35,522 |
| 150 | 1800 | 575 | 445T | 2164 | B1504YLF4OMH | 140 | 95.7 | 2, 18 | MXTXPP | $35,522 |
| 200 | 3600 | 460 | 447TS | 2445 | B2001YLG3BSH | 218 | 95.8 | 5 | MXTXPP | $49,194 |
| 200 | 3600 | 460 | 447TS | 2550 | B2003YLG3BSH | 218 | 95.8 | 4 | MXTXPP | $49,194 |
| 200 | 3600 | 575 | 447TS | 2445 | B2001YLG3OSH | 176 | 95.8 | 5 | MXTXPP | $49,194 |
| 200 | 3600 | 575 | 447TS | 2445 | B2003YLG3OSH | 176 | 95.8 | 4 | MXTXPP | $49,194 |
| 200 | 1200 | 460 | N449T | 3728 | 2006XPEB41A | 244 | 95.8 | 18 | MXTXPP | $45,372 |
| 200 | 1200 | 460 | N449T | 3700 | 2006XPEB41A-R | 244 | 95.8 | 2, 18 | MXTXPP | $46,572 |
| 200 | 1200 | 575 | N449T | 3700 | 2006XPEC41A | 198 | 95.8 | 18 | MXTXPP | $45,372 |
| 200 | 1200 | 575 | N449T | 3700 | 2006XPEC41A-R | 198 | 95.8 | 2, 18 | MXTXPP | $46,572 |
| 250 | 3600 | 460 | N449TS | 3500 | 2503XPEB41B | 274 | 95.8 | 4, 18 | MXTXPP | $55,986 |
| 250 | 3600 | 575 | N449TS | 3500 | 2503XPEC41B | 218 | 95.8 | 4, 18 | MXTXPP | $55,986 |
| 250 | 1800 | 460 | N449T | 4022 | 2504XPEB41A | 275 | 96.2 | 18 | MXTXPP | $48,625 |
| 250 | 1800 | 460 | N449T | 4000 | 2504XPEB41A-R | 275 | 96.2 | 2, 18 | MXTXPP | $49,875 |
| 250 | 1800 | 575 | N449T | 4000 | 2504XPEC41A | 220 | 96.2 | 18 | MXTXPP | $48,625 |
| 250 | 1800 | 575 | N449T | 4000 | 2504XPEC41A-R | 220 | 96.2 | 2, 18 | MXTXPP | $49,875 |
| 250 | 1200 | 460 | N449T | 3937 | 2506XPEB41A | 308 | 95.8 | 18 | MXTXPP | $51,679 |
| 250 | 1200 | 460 | N449T | 4000 | 2506XPEB41A-R | 308 | 95.8 | 2, 18 | MXTXPP | $52,929 |
| 250 | 1200 | 460 | N449TS | 4000 | 2506XPEB41B | 309 | 95.8 | 18 | MXTXPP | $51,679 |
| 250 | 1200 | 575 | N449T | 4000 | 2506XPEC41A | 242 | 95.8 | 18 | MXTXPP | $51,679 |

# Totally Enclosed Fan Cooled

## EQP Global® XP

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 250 | 1200 | 575 | N449T | 4000 | 2506XPEC41A-R | 242 | 95.8 | 2, 18 | MXTXPP | $52,929 |
| 250 | 1200 | 575 | N449TS | 4000 | 2506XPEC41B | 242 | 95.8 | 18 | MXTXPP | $51,679 |
| 300 | 3600 | 460 | N449TS | 3900 | 3003XPEB41B | 327 | 95.8 | 4, 18 | MXTXPP | $62,015 |
| 300 | 3600 | 575 | N449TS | 3900 | 3003XPEC41B | 260 | 95.8 | 4, 18 | MXTXPP | $62,015 |
| 300 | 1800 | 460 | N449T | 4058 | 3004XPEB41A | 331 | 96.2 | 6, 18 | MXTXPP | $51,807 |
| 300 | 1800 | 460 | N449T | 4000 | 3004XPEB41A-R | 331 | 96.2 | 2, 6, 18 | MXTXPP | $53,057 |
| 300 | 1800 | 575 | N449T | 4000 | 3004XPEC41A | 265 | 96.2 | 6, 18 | MXTXPP | $51,807 |
| 300 | 1800 | 575 | N449T | 4000 | 3004XPEC41A-R | 265 | 96.2 | 2, 6, 18 | MXTXPP | $53,057 |
| 300 | 1200 | 460 | N449T | 4000 | 3006XPEB41A | 374 | 95.8 | 18 | MXTXPP | $55,518 |
| 300 | 1200 | 460 | N449T | 4000 | 3006XPEB41A-R | 375 | 95.8 | 2, 18 | MXTXPP | $56,768 |
| 300 | 1200 | 575 | N449T | 4000 | 3006XPEC41A | 297 | 95.8 | 18 | MXTXPP | $55,518 |
| 300 | 1200 | 575 | N449T | 4000 | 3006XPEC41A-R | 297 | 95.8 | 2, 18 | MXTXPP | $56,768 |
| 350 | 3600 | 460 | N449TS | 3900 | 3503XPEB41B | 385 | 95.8 | 4, 18 | MXTXPP | $64,378 |
| 350 | 3600 | 575 | N449TS | 3900 | 3503XPEC41B | 310 | 95.8 | 4, 18 | MXTXPP | $64,378 |
| 350 | 1800 | 460 | N449T | 4119 | 3504XPEB41A | 388 | 96.2 | 18 | MXTXPP | $54,928 |
| 350 | 1800 | 460 | N449T | 4082 | 3504XPEB41A-R | 388 | 96.2 | 2, 18 | MXTXPP | $56,178 |
| 350 | 1800 | 575 | N449T | 4000 | 3504XPEC41A | 310 | 96.2 | 18 | MXTXPP | $54,928 |
| 350 | 1800 | 575 | N449T | 4000 | 3504XPEC41A-R | 310 | 96.2 | 2, 18 | MXTXPP | $56,178 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Totally Enclosed Fan Cooled
## EQP Global® XP C-Face
### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

**Product Scope:***

**Horsepower:** 1 to 75 HP

**Speed (60 Hz):** 3600, 1800, or 1200 RPM

**Volt (60 Hz):** 230/460 or 575 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143TC through 365TC

**Construction:** All Cast Iron

**Insulation:** Class F

* Contact Toshiba for additional C-Face capabilities.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| C-Face Footed | | | | | | | | | | |
| 1 | 1800 | 230/460 | 143TC | 68 | 0014XPEA42A-P | 3.4/1.7 | 85.5 | 1, 16, 18 | MTPXPP | $1,081 |
| 1 | 1800 | 575 | 143TC | 68 | 0014XPEC42A-P | 1.3 | 85.5 | 1, 16, 18 | MTPXPP | $1,081 |
| 1 | 1200 | 230/460 | 145TC | 73 | 0016XPEA42A-P | 3.6/1.8 | 82.5 | 1, 16, 18 | MTPXPP | $1,144 |
| 1 | 1200 | 575 | 145TC | 73 | 0016XPEC42A-P | 1.5 | 82.5 | 1, 16, 18 | MTPXPP | $1,144 |
| 1.5 | 3600 | 230/460 | 143TC | 68 | Y152XPEA42A-P | 4.0/2.0 | 84.0 | 1, 16, 18 | MTPXPP | $1,127 |
| 1.5 | 3600 | 575 | 143TC | 68 | Y152XPEC42A-P | 1.6 | 84.0 | 1, 16, 18 | MTPXPP | $1,127 |
| 1.5 | 1800 | 230/460 | 145TC | 70 | Y154XPEA42A-P | 4.8/2.4 | 86.5 | 1, 16, 18 | MTPXPP | $1,151 |
| 1.5 | 1800 | 575 | 145TC | 70 | Y154XPEC42A-P | 1.9 | 86.5 | 1, 16, 18 | MTPXPP | $1,151 |
| 1.5 | 1200 | 230/460 | 182TC | 112 | Y156XPEA42A-P | 5.0/2.5 | 87.5 | 1, 16, 18 | MTPXPP | $1,251 |
| 1.5 | 1200 | 575 | 182TC | 112 | Y156XPEC42A-P | 2.0 | 87.5 | 1, 16, 18 | MTPXPP | $1,251 |
| 2 | 3600 | 230/460 | 145TC | 70 | 0022XPEA42A-P | 5.2/2.6 | 85.5 | 1, 16, 18 | MTPXPP | $1,158 |
| 2 | 3600 | 575 | 145TC | 70 | 0022XPEC42A-P | 2.1 | 85.5 | 1, 16, 18 | MTPXPP | $1,158 |
| 2 | 1800 | 230/460 | 145TC | 70 | 0024XPEA42A-P | 6.0/3.0 | 86.5 | 1, 16, 18 | MTPXPP | $1,157 |
| 2 | 1800 | 575 | 145TC | 70 | 0024XPEC42A-P | 2.4 | 86.5 | 1, 16, 18 | MTPXPP | $1,157 |
| 2 | 1200 | 230/460 | 184TC | 125 | 0026XPEA42A-P | 6.8/3.4 | 88.5 | 1, 16, 18 | MTPXPP | $1,403 |
| 2 | 1200 | 575 | 184TC | 125 | 0026XPEC42A-P | 2.7 | 88.5 | 1, 16, 18 | MTPXPP | $1,403 |
| 3 | 3600 | 230/460 | 182TC | 106 | 0032XPEA42A-P | 7.4/3.7 | 86.5 | 1, 16, 18 | MTPXPP | $1,330 |
| 3 | 3600 | 575 | 182TC | 106 | 0032XPEC42A-P | 3.0 | 86.5 | 1, 16, 18 | MTPXPP | $1,330 |
| 3 | 1800 | 230/460 | 182TC | 114 | 0034XPEA42A-P | 8.0/4.0 | 89.5 | 1, 16, 18 | MTPXPP | $1,425 |
| 3 | 1800 | 575 | 182TC | 114 | 0034XPEC42A-P | 3.2 | 89.5 | 1, 16, 18 | MTPXPP | $1,425 |
| 3 | 1200 | 230/460 | 213TC | 202 | 0036XPEA42A-P | 8.8/4.4 | 89.5 | 1, 16, 18 | MTPXPP | $1,757 |
| 3 | 1200 | 575 | 213TC | 202 | 0036XPEC42A-P | 3.5 | 89.5 | 1, 16, 18 | MTPXPP | $1,757 |
| 5 | 3600 | 230/460 | 184TC | 117 | 0052XPEA42A-P | 11.6/5.8 | 88.5 | 1, 16, 18 | MTPXPP | $1,578 |
| 5 | 3600 | 575 | 184TC | 117 | 0052XPEC42A-P | 4.6 | 88.5 | 1, 16, 18 | MTPXPP | $1,578 |
| 5 | 1800 | 230/460 | 184TC | 121 | 0054XPEA42A-P | 13.0/6.5 | 89.5 | 1, 16, 18 | MTPXPP | $1,548 |
| 5 | 1800 | 575 | 184TC | 121 | 0054XPEC42A-P | 5.2 | 89.5 | 1, 16, 18 | MTPXPP | $1,548 |
| 5 | 1200 | 230/460 | 215TC | 218 | 0056XPEA42A-P | 13.8/6.9 | 89.5 | 1, 16, 18 | MTPXPP | $2,168 |
| 5 | 1200 | 575 | 215TC | 218 | 0056XPEC42A-P | 5.5 | 89.5 | 1, 16, 18 | MTPXPP | $2,168 |
| 7.5 | 3600 | 230/460 | 213TC | 205 | Y752XPEA42A-P | 18.0/9.0 | 89.5 | 1, 16, 18 | MTPXPP | $2,096 |

# Totally Enclosed Fan Cooled

## EQP Global® XP C-Face

### NEMA Premium® Efficiency



EQP Global XP

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 7.5 | 3600 | 575 | 213TC | 205 | Y752XPEC42A-P | 7.2 | 89.5 | 1, 16, 18 | MTPXPP | $2,096 |
| 7.5 | 1800 | 230/460 | 213TC | 227 | Y754XPEA42A-P | 19.6/9.8 | 91.7 | 1, 16, 18 | MTPXPP | $2,057 |
| 7.5 | 1800 | 575 | 213TC | 227 | Y754XPEC42A-P | 7.8 | 91.7 | 1, 16, 18 | MTPXPP | $2,057 |
| 7.5 | 1200 | 230/460 | 254TC | 321 | Y756XPEA42A-P | 20.4/10.2 | 91.0 | 1, 16, 18 | MTPXPP | $2,840 |
| 7.5 | 1200 | 575 | 254TC | 321 | Y756XPEC42A-P | 8.2 | 91.0 | 1, 16, 18 | MTPXPP | $2,840 |
| 10 | 3600 | 230/460 | 215TC | 222 | 0102XPEA42A-P | 23.6/11.8 | 90.2 | 1, 16, 18 | MTPXPP | $2,189 |
| 10 | 3600 | 575 | 215TC | 222 | 0102XPEC42A-P | 9.4 | 90.2 | 1, 16, 18 | MTPXPP | $2,189 |
| 10 | 1800 | 230/460 | 215TC | 238 | 0104XPEA42A-P | 26/13 | 91.7 | 1, 16, 18 | MTPXPP | $2,343 |
| 10 | 1800 | 575 | 215TC | 238 | 0104XPEC42A-P | 10.4 | 91.7 | 1, 16, 18 | MTPXPP | $2,343 |
| 10 | 1200 | 230/460 | 256TC | 341 | 0106XPEA42A-P | 26.8/13.4 | 91.0 | 1, 16, 18 | MTPXPP | $3,380 |
| 10 | 1200 | 575 | 256TC | 341 | 0106XPEC42A-P | 10.8 | 91.0 | 1, 16, 18 | MTPXPP | $3,380 |
| 15 | 3600 | 230/460 | 254TC | 334 | 0152XPEA42A-P | 36/18 | 91.0 | 1, 16, 18 | MTPXPP | $2,859 |
| 15 | 3600 | 575 | 254TC | 334 | 0152XPEC42A-P | 14.4 | 91.0 | 1, 16, 18 | MTPXPP | $2,859 |
| 15 | 1800 | 230/460 | 254TC | 359 | 0154XPEA42A-P | 38/19 | 92.4 | 1, 16, 18 | MTPXPP | $3,220 |
| 15 | 1800 | 575 | 254TC | 359 | 0154XPEC42A-P | 15.2 | 91.7 | 1, 16, 18 | MTPXPP | $3,220 |
| 15 | 1200 | 230/460 | 284TC | 480 | 0156XPEA42A-P | 40/20 | 91.7 | 1, 18 | MTPXPP | $4,783 |
| 15 | 1200 | 575 | 284TC | 480 | 0156XPEC42A-P | 15.8 | 91.0 | 1, 18 | MTPXPP | $4,783 |
| 20 | 3600 | 230/460 | 256TC | 356 | 0202XPEA42A-P | 48/24 | 91.0 | 1, 16, 18 | MTPXPP | $3,701 |
| 20 | 3600 | 575 | 256TC | 356 | 0202XPEC42A-P | 19.2 | 91.0 | 1, 16, 18 | MTPXPP | $3,701 |
| 20 | 1800 | 230/460 | 256TC | 398 | 0204XPEA42A-P | 50/25 | 93.0 | 1, 16, 18 | MTPXPP | $3,699 |
| 20 | 1800 | 575 | 256TC | 398 | 0204XPEC42A-P | 20 | 93.0 | 1, 16, 18 | MTPXPP | $3,699 |
| 20 | 1200 | 230/460 | 286TC | 519 | 0206XPEA42A-P | 50/25 | 91.7 | 1, 18 | MTPXPP | $5,319 |
| 20 | 1200 | 575 | 286TC | 519 | 0206XPEC42A-P | 20 | 91.7 | 1, 18 | MTPXPP | $5,319 |
| 25 | 3600 | 230/460 | 284TSC | 508 | 0252XPEA42B-P | 58/29 | 91.7 | 1, 18 | MTPXPP | $4,601 |
| 25 | 3600 | 575 | 284TSC | 508 | 0252XPEC42B-P | 23 | 91.7 | 1, 18 | MTPXPP | $4,601 |
| 25 | 1800 | 230/460 | 284TC | 532 | 0254XPEA42A-P | 62/31 | 93.6 | 1, 18 | MTPXPP | $5,157 |
| 25 | 1800 | 575 | 284TC | 532 | 0254XPEC42A-P | 24 | 93.6 | 1, 18 | MTPXPP | $5,157 |
| 25 | 1200 | 230/460 | 324TC | 706 | 0256XPEA42A-P | 62/31 | 93.0 | 1, 18 | MTPXPP | $6,484 |
| 25 | 1200 | 575 | 324TC | 706 | 0256XPEC42A-P | 25 | 93.0 | 1, 18 | MTPXPP | $6,484 |
| 30 | 3600 | 230/460 | 286TSC | 521 | 0302XPEA42B-P | 70/35 | 91.7 | 1, 18 | MTPXPP | $5,294 |
| 30 | 3600 | 575 | 286TSC | 521 | 0302XPEC42B-P | 28 | 91.7 | 1, 18 | MTPXPP | $5,294 |
| 30 | 1800 | 230/460 | 286TC | 559 | 0304XPEA42A-P | 72/36 | 93.6 | 1, 18 | MTPXPP | $5,433 |
| 30 | 1800 | 575 | 286TC | 559 | 0304XPEC42A-P | 29 | 93.6 | 1, 18 | MTPXPP | $5,433 |
| 30 | 1200 | 230/460 | 326TC | 722 | 0306XPEA42A-P | 74/37 | 93.0 | 1, 18 | MTPXPP | $7,728 |
| 30 | 1200 | 575 | 326TC | 722 | 0306XPEC42A-P | 30 | 93.0 | 1, 18 | MTPXPP | $7,728 |
| 40 | 3600 | 230/460 | 324TSC | 733 | 0402XPEA42B-P | 94/47 | 92.4 | 1, 18 | MTPXPP | $7,260 |
| 40 | 3600 | 575 | 324TSC | 733 | 0402XPEC42B-P | 37.6 | 92.4 | 1, 18 | MTPXPP | $7,260 |
| 40 | 1800 | 230/460 | 324TC | 757 | 0404XPEA42A-P | 96/48 | 94.1 | 1, 18 | MTPXPP | $7,510 |
| 40 | 1800 | 575 | 324TC | 757 | 0404XPEC42A-P | 38 | 94.1 | 1, 18 | MTPXPP | $7,510 |
| 40 | 1200 | 230/460 | 364TC | 889 | 0406XPEA42A-P | 96/48 | 94.1 | 1, 18 | MTPXPP | $9,995 |
| 40 | 1200 | 575 | 364TC | 889 | 0406XPEC42A-P | 38 | 94.1 | 1, 18 | MTPXPP | $9,995 |
| 50 | 3600 | 230/460 | 326TSC | 761 | 0502XPEA42B-P | 116/58 | 93.0 | 1, 18 | MTPXPP | $8,884 |
| 50 | 3600 | 575 | 326TSC | 761 | 0502XPEC42B-P | 46.4 | 93.0 | 1, 18 | MTPXPP | $8,884 |
| 50 | 1800 | 230/460 | 326TC | 792 | 0504XPEA42A-P | 120/60 | 94.5 | 1, 18 | MTPXPP | $8,520 |
| 50 | 1800 | 575 | 326TC | 792 | 0504XPEC42A-P | 48 | 94.5 | 1, 18 | MTPXPP | $8,520 |
| 50 | 1200 | 230/460 | 365TC | 931 | 0506XPEA42A-P | 120/60 | 94.1 | 1, 18 | MTPXPP | $10,081 |
| 50 | 1200 | 575 | 365TC | 931 | 0506XPEC42A-P | 48 | 94.1 | 1, 18 | MTPXPP | $10,081 |
| 60 | 3600 | 230/460 | 364TSC | 942 | 0602XPEA42B-P | 138/69 | 93.6 | 1, 18 | MTPXPP | $10,471 |

# Totally Enclosed Fan Cooled
## EQP Global® XP C-Face
### NEMA Premium® Efficiency



EQP Global® XP

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 3600 | 575 | 364TSC | 942 | 0602XPEC42B-P | 55 | 93.6 | 1, 18 | MTPXPP | $10,471 |
| 60 | 1800 | 230/460 | 364TC | 975 | 0604XPEA42A-P | 138/69 | 95.0 | 1, 18 | MTPXPP | $10,443 |
| 60 | 1800 | 575 | 364TC | 975 | 0604XPEC42A-P | 55 | 95.0 | 1, 18 | MTPXPP | $10,443 |
| 75 | 3600 | 230/460 | 365TSC | 984 | 0752XPEA42B-P | 172/86 | 93.6 | 1, 18 | MTPXPP | $12,268 |
| 75 | 3600 | 575 | 365TSC | 984 | 0752XPEC42B-P | 69 | 93.6 | 1, 18 | MTPXPP | $12,268 |
| 75 | 1800 | 230/460 | 365TC | 1052 | 0754XPEA42A-P | 169.2/84.6 | 95.0 | 1, 18 | MTPXPP | $12,070 |
| 75 | 1800 | 575 | 365TC | 1052 | 0754XPEC42A-P | 69 | 95.4 | 1, 18 | MTPXPP | $12,070 |
| C-Face Footless | | | | | | | | | | |
| 1 | 1800 | 230/460 | 143TC | 70 | 0014XPEA44A-P | 3.4/1.7 | 85.5 | 1 | MTPXPP | $1,189 |
| 1 | 1800 | 575 | 143TC | 70 | 0014XPEC44A-P | 1.3 | 85.5 | 1 | MTPXPP | $1,189 |
| 1 | 1200 | 230/460 | 145TC | 73 | 0016XPEA44A-P | 3.6/1.8 | 82.5 | 1 | MTPXPP | $1,258 |
| 1 | 1200 | 575 | 145TC | 73 | 0016XPEC44A-P | 1.5 | 82.5 | 1 | MTPXPP | $1,258 |
| 1.5 | 3600 | 230/460 | 143TC | 68 | Y152XPEA44A-P | 4.0/2.0 | 84.0 | 1 | MTPXPP | $1,240 |
| 1.5 | 3600 | 575 | 143TC | 68 | Y152XPEC44A-P | 1.6 | 84.0 | 1 | MTPXPP | $1,240 |
| 1.5 | 1800 | 230/460 | 145TC | 70 | Y154XPEA44A-P | 4.8/2.4 | 86.5 | 1 | MTPXPP | $1,266 |
| 1.5 | 1800 | 575 | 145TC | 70 | Y154XPEC44A-P | 1.9 | 86.5 | 1 | MTPXPP | $1,266 |
| 1.5 | 1200 | 230/460 | 182TC | 112 | Y156XPEA44A-P | 5.0/2.5 | 87.5 | 1 | MTPXPP | $1,376 |
| 1.5 | 1200 | 575 | 182TC | 112 | Y156XPEC44A-P | 2.0 | 87.5 | 1 | MTPXPP | $1,376 |
| 2 | 3600 | 230/460 | 145TC | 70 | 0022XPEA44A-P | 5.2/2.6 | 85.5 | 1 | MTPXPP | $1,274 |
| 2 | 3600 | 575 | 145TC | 70 | 0022XPEC44A-P | 2.1 | 85.5 | 1 | MTPXPP | $1,274 |
| 2 | 1800 | 230/460 | 145TC | 70 | 0024XPEA44A-P | 6.0/3.0 | 86.5 | 1 | MTPXPP | $1,273 |
| 2 | 1800 | 575 | 145TC | 70 | 0024XPEC44A-P | 2.4 | 86.5 | 1 | MTPXPP | $1,273 |
| 2 | 1200 | 230/460 | 184TC | 125 | 0026XPEA44A-P | 6.8/3.4 | 88.5 | 1 | MTPXPP | $1,543 |
| 2 | 1200 | 575 | 184TC | 125 | 0026XPEC44A-P | 2.7 | 88.5 | 1 | MTPXPP | $1,543 |
| 3 | 3600 | 230/460 | 182TC | 106 | 0032XPEA44A-P | 7.4/3.7 | 86.5 | 1 | MTPXPP | $1,463 |
| 3 | 3600 | 575 | 182TC | 106 | 0032XPEC44A-P | 3.0 | 86.5 | 1 | MTPXPP | $1,463 |
| 3 | 1800 | 230/460 | 182TC | 114 | 0034XPEA44A-P | 8.0/4.0 | 89.5 | 1 | MTPXPP | $1,568 |
| 3 | 1800 | 575 | 182TC | 114 | 0034XPEC44A-P | 3.2 | 89.5 | 1 | MTPXPP | $1,568 |
| 3 | 1200 | 230/460 | 213TC | 202 | 0036XPEA44A-P | 8.8/4.4 | 89.5 | 1 | MTPXPP | $1,933 |
| 3 | 1200 | 575 | 213TC | 202 | 0036XPEC44A-P | 3.5 | 89.5 | 1 | MTPXPP | $1,933 |
| 5 | 3600 | 230/460 | 184TC | 117 | 0052XPEA44A-P | 11.6/5.8 | 88.5 | 1 | MTPXPP | $1,736 |
| 5 | 3600 | 575 | 184TC | 117 | 0052XPEC44A-P | 4.6 | 88.5 | 1 | MTPXPP | $1,736 |
| 5 | 1800 | 230/460 | 184TC | 121 | 0054XPEA44A-P | 13.0/6.5 | 89.5 | 1 | MTPXPP | $1,703 |
| 5 | 1800 | 575 | 184TC | 121 | 0054XPEC44A-P | 5.2 | 89.5 | 1 | MTPXPP | $1,703 |
| 5 | 1200 | 230/460 | 215TC | 218 | 0056XPEA44A-P | 13.8/6.9 | 89.5 | 1 | MTPXPP | $2,385 |
| 5 | 1200 | 575 | 215TC | 218 | 0056XPEC44A-P | 5.5 | 89.5 | 1 | MTPXPP | $2,385 |
| 7.5 | 3600 | 230/460 | 213TC | 205 | Y752XPEA44A-P | 18.0/9.0 | 89.5 | 1 | MTPXPP | $2,306 |
| 7.5 | 3600 | 575 | 213TC | 205 | Y752XPEC44A-P | 7.2 | 89.5 | 1 | MTPXPP | $2,306 |
| 7.5 | 1800 | 230/460 | 213TC | 227 | Y754XPEA44A-P | 19.6/9.8 | 91.7 | 1 | MTPXPP | $2,263 |
| 7.5 | 1800 | 575 | 213TC | 227 | Y754XPEC44A-P | 7.8 | 91.7 | 1 | MTPXPP | $2,263 |
| 7.5 | 1200 | 230/460 | 254TC | 321 | Y756XPEA44A-P | 20.4/10.2 | 91.0 | 1 | MTPXPP | $3,124 |
| 7.5 | 1200 | 575 | 254TC | 321 | Y756XPEC44A-P | 8.2 | 91.0 | 1 | MTPXPP | $3,124 |
| 10 | 3600 | 230/460 | 215TC | 222 | 0102XPEA44A-P | 23.6/11.8 | 90.2 | 1 | MTPXPP | $2,408 |
| 10 | 3600 | 575 | 215TC | 222 | 0102XPEC44A-P | 9.4 | 90.2 | 1 | MTPXPP | $2,408 |
| 10 | 1800 | 230/460 | 215TC | 238 | 0104XPEA44A-P | 26/13 | 91.7 | 1 | MTPXPP | $2,577 |
| 10 | 1800 | 575 | 215TC | 238 | 0104XPEC44A-P | 10.4 | 91.7 | 1 | MTPXPP | $2,577 |
| 10 | 1200 | 230/460 | 256TC | 341 | 0106XPEA44A-P | 26.8/13.4 | 91.0 | 1 | MTPXPP | $3,718 |
| 10 | 1200 | 575 | 256TC | 341 | 0106XPEC44A-P | 10.8 | 91.0 | 1 | MTPXPP | $3,718 |

# Totally Enclosed Fan Cooled

## EQP Global® XP C-Face

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 3600 | 230/460 | 254TC | 334 | 0152XPEA44A-P | 36/18 | 91.0 | 1 | MTPXPP | $3,145 |
| 15 | 3600 | 575 | 254TC | 334 | 0152XPEC44A-P | 14.4 | 91.0 | 1 | MTPXPP | $3,145 |
| 15 | 1800 | 230/460 | 254TC | 359 | 0154XPEA44A-P | 38/19 | 92.4 | 1 | MTPXPP | $3,542 |
| 15 | 1800 | 575 | 254TC | 359 | 0154XPEC44A-P | 15.2 | 92.4 | 1 | MTPXPP | $3,542 |
| 20 | 3600 | 230/460 | 256TC | 356 | 0202XPEA44A-P | 48/24 | 91.0 | 1 | MTPXPP | $4,071 |
| 20 | 3600 | 575 | 256TC | 356 | 0202XPEC44A-P | 19.2 | 91.0 | 1 | MTPXPP | $4,071 |
| 20 | 1800 | 230/460 | 256TC | 398 | 0204XPEA44A-P | 50/25 | 93.0 | 1 | MTPXPP | $4,069 |
| 20 | 1800 | 575 | 256TC | 398 | 0204XPEC44A-P | 20 | 93.0 | 1 | MTPXPP | $4,069 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# IEC Motors

## Totally Enclosed Fan Cooled

Toshiba's EQP Global® IEC motor series is designed to meet international specifications and the requirements of IEC 60034. It combines a cost effective design with dual voltage options available in aluminum (frames 90S through 160M) and cast iron frames (80M, 180 through 225). It has a totally enclosed fan cooled (TEFC) frame suitable for indoor and outdoor use in severe-duty applications and boasts IE3 efficiency levels and winding PTC thermistors on frames larger than 160. The EQP Global IEC motor series is engineered to excel in a wide range of general-purpose industrial applications.

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty
- IE3 Efficiency
- 60 Hz: 80-132 Frame @ 460 VY and 160-225 Frame @ 460 VD
- 50 Hz: 80-132 Frame @ 220/230/240 VD or 380/400/415 VY and 160-225 Frame @ 380/400/415 VD
- Three-Phase
- Dual Frequency 50/60 Hz Design
- 1.0 Service Factor
- Horizontal & Vertical Footed C-Face (B34 Option, Horizontal & Vertical Footed D-Flange (B35) Option, Horizontal & Vertical Footless D-Flange (B5) Option, Horizontal & Vertical Footless C-Face (B14) Option
- Class F Insulation; Inverter Duty
- IP55 Protection
- Cast Iron Frame, Bearing Brackets & Conduit Box
- Fabricated Steel Fan Covers
- See Appendix for Efficiency Classes per IEC 60034-30
- 60:1 Variable Torque; 10:1 Constant Torque



# Totally Enclosed Fan Cooled
## EQP Global® IEC
### IE3 Efficiency



CC027B

**3** THREE YEAR WARRANTY

**Product Scope:**

| | |
|---|---|
| **Power:** | 0.75 to 45 kW |
| **Speed:** | |
| **(50 Hz)*** | 3000, 1500 or 1000 RPM |
| **(60 Hz):** | 3600, 1800 or 1200 RPM |
| **Volt:** | |
| **(50 Hz)*** | 230/400, 240/415, 220/380 or 400, 415, 380 V |
| **(60 Hz):** | 460 V |
| **Enclosure:** | Totally Enclosed Fan Cooled (IC411) |
| **Frame Size:** | 80M through 225S |
| **Construction:** | Aluminum Fin Type (90-160 Frame)<br>Cast Iron (80, 180-225 Frame) |
| **Insulation:** | Class F, Exceeds IEC 60034-25 (Inverter Duty)<br>(Voltage Withstand Capability of 2000 V in 0.1 µs) |
| **Environment:** | Suitable for Indoor or Outdoor Use in Severe Duty Applications |

*50/60 Hz Listed on Nameplate on .75 through 45 kw

| kW | Speed (RPM) | Volts | Frame | Weight (kg) | MODEL NUMBER | FL Amps | Nominal FL Efficiency | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| **Footed (B3)** | | | | | | | | | | |
| 0.75 | 3000 | 230/400 | 80M | 16 | X752SDMV7FS-P | 2.8/1.6 | 80.7 | 1, 9 | MTPIEC | $493 |
| 0.75 | 1500 | 230/400 | 80M | 20 | X754SDMV7FS-P | 3.1/1.8 | 82.5 | 1, 9 | MTPIEC | $507 |
| 0.75 | 1000 | 230/400 | 90L | 19.5 | X756SDMV7FS-PL | 3.7/2.1 | 78.9 | 1, 9 | MTPIEC | $580 |
| 1.1 | 3000 | 230/400 | 80M | 72 | Y112SDMV7FS-P | 3.8/2.2 | 82.7 | 1, 9 | MTPIEC | $550 |
| 1.1 | 1500 | 230/400 | 90L | 21 | Y114SDMV7FS-PL | 4.2/2.4 | 84.1 | 1, 9 | MTPIEC | $536 |
| 1.1 | 1000 | 230/400 | 90L | 28 | Y116SDMV7FS-PL | 4.9/2.8 | 81.0 | 1, 9 | MTPIEC | $677 |
| 1.5 | 3000 | 230/400 | 90L | 20 | Y152SDMV7FS-PL | 5.2/3 | 84.2 | 1, 9 | MTPIEC | $578 |
| 1.5 | 1500 | 230/400 | 90L | 21 | Y154SDMV7FS-PL | 5.9/3.4 | 85.3 | 1, 9 | MTPIEC | $609 |
| 1.5 | 1000 | 230/400 | 100L | 32 | Y156SDMV7FS-PL | 6.6/3.8 | 82.5 | 1, 9 | MTPIEC | $784 |
| 2.2 | 3000 | 230/400 | 90L | 22.8 | Y222SDMV7FS-PL | 7.5/4.3 | 85.9 | 1, 9 | MTPIEC | $712 |
| 2.2 | 1500 | 230/400 | 100L | 30 | Y224SDMV7FS-PL | 8.7/5.0 | 86.7 | 1, 9 | MTPIEC | $700 |
| 2.2 | 1000 | 230/400 | 112M | 46 | Y226SDMV7FS-PL | 8.5/4.9 | 84.3 | 1, 9 | MTPIEC | $997 |
| 3 | 3000 | 230/400 | 100L | 28 | 0032SDMV7FS-PL | 9.9/5.7 | 87.1 | 1, 9 | MTPIEC | $797 |
| 3 | 1500 | 230/400 | 100L | 30 | 0034SDMV7FS-PL | 11.1/6.4 | 87.7 | 1, 9 | MTPIEC | $768 |
| 3 | 1000 | 230/400 | 132S | 55 | 0036SDMV7FS-PL | 11.5/6.6 | 85.6 | 1, 9 | MTPIEC | $1,231 |
| 4 | 3000 | 230/400 | 112M | 34 | 0042SDMV7FS-PL | 12.3/7.1 | 88.1 | 1, 9 | MTPIEC | $882 |
| 4 | 1500 | 230/400 | 112M | 42 | 0044SDMV7FS-PL | 14.4/8.3 | 88.6 | 1, 9 | MTPIEC | $835 |
| 4 | 1000 | 230/400 | 132M | 62 | 0046SDMV7FS-PL | 15.1/8.7 | 86.8 | 1, 9 | MTPIEC | $1,465 |
| 5.5 | 3000 | 230/400 | 132S | 53 | Y552SDMV7FS-PL | 18.3/10.5 | 89.2 | 1, 9 | MTPIEC | $1,143 |
| 5.5 | 1500 | 230/400 | 132S | 62 | Y554SDMV7FS-PL | 19.5/11.2 | 89.6 | 1, 9 | MTPIEC | $1,143 |
| 5.5 | 1000 | 230/400 | 132M | 75 | Y556SDMV7FS-PL | 20/11.6 | 88.0 | 1, 9 | MTPIEC | $1,945 |
| 7.5 | 3000 | 230/400 | 132M | 61 | Y752SDMV7FS-PL | 25/14.3 | 90.1 | 1, 9 | MTPIEC | $1,371 |
| 7.5 | 1500 | 230/400 | 132M | 70 | Y754SDMV7FS-PL | 26/14.8 | 90.4 | 1, 9 | MTPIEC | $1,390 |
| 7.5 | 1000 | 400 | 160M | 95 | Y756SDMW7FS-PL | 15.4 | 89.1 | 1, 9 | MTPIEC | $2,376 |
| 11 | 3000 | 400 | 160M | 93 | 0112SDMW7FS-PL | 20 | 91.2 | 1, 9 | MTPIEC | $1,885 |

# Totally Enclosed Fan Cooled
## EQP Global® IEC
### IE3 Efficiency



| kW | Speed (RPM) | Volts | Frame | Weight (kg) | MODEL NUMBER | FL Amps | Nominal FL Efficiency | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 1500 | 400 | 160M | 102 | 0114SDMW7FS-PL | 22 | 91.4 | 1, 9 | MTPIEC | $1,877 |
| 11 | 1000 | 400 | 160L | 115 | 0116SDMW7FS-PL | 22 | 90.3 | 1, 9 | MTPIEC | $3,332 |
| 15 | 3000 | 400 | 160M | 103 | 0152SDMW7FS-PL | 28 | 91.9 | 1, 9 | MTPIEC | $2,442 |
| 15 | 1500 | 400 | 160L | 119 | 0154SDMW7FS-PL | 29 | 92.1 | 1, 9 | MTPIEC | $2,318 |
| 15 | 1000 | 400 | 180L | 193 | 0156SDMW7FS-P | 31 | 91.2 | 1, 9 | MTPIEC | $3,903 |
| 18.5 | 3000 | 400 | 160L | 116 | 0182SDMW7FS-PL | 33 | 92.4 | 1, 9 | MTPIEC | $2,998 |
| 18.5 | 1500 | 400 | 180M | 206 | 0184SDMW7FS-P | 36 | 92.6 | 1, 9 | MTPIEC | $2,812 |
| 18.5 | 1000 | 400 | 200L | 278 | 0186SDMW7FS-P | 35 | 91.7 | 1, 9 | MTPIEC | $4,737 |
| 22 | 3000 | 400 | 180M | 212 | 0222SDMW7FS-P | 39 | 92.7 | 1, 9 | MTPIEC | $3,444 |
| 22 | 1500 | 400 | 180L | 212 | 0224SDMW7FS-P | 41 | 93.0 | 1, 9 | MTPIEC | $3,380 |
| 22 | 1000 | 400 | 200L | 291 | 0226SDMW7FS-P | 42 | 92.2 | 1, 9 | MTPIEC | $5,783 |
| 30 | 3000 | 400 | 200L | 304 | 0302SDMW7FS-P | 53 | 93.3 | 1, 9 | MTPIEC | $4,337 |
| 30 | 1500 | 400 | 200L | 294 | 0304SDMW7FS-P | 57 | 93.6 | 1, 9 | MTPIEC | $4,370 |
| 30 | 1000 | 400 | 225S | 352 | 0306SDMW7FS-P | 59 | 92.9 | 1, 9 | MTPIEC | $7,566 |
| 37 | 3000 | 400 | 200L | 332 | 0372SDMW7FS-P | 67 | 93.7 | 1, 9 | MTPIEC | $6,014 |
| 37 | 1500 | 400 | 225S | 344 | 0374SDMW7FS-P | 68 | 93.9 | 1, 9 | MTPIEC | $5,330 |
| 45 | 3000 | 400 | 225S | 343 | 0452SDMW7FS-P | 82 | 94.0 | 1, 9 | MTPIEC | $7,411 |
| 45 | 1500 | 400 | 225S | 374 | 0454SDMW7FS-P | 82 | 94.2 | 1, 9 | MTPIEC | $7,511 |
| **Footed D-Flange (B35)** | | | | | | | | | | |
| 0.75 | 3000 | 230/400 | 80M | 15 | X752SDMV7GS-P | 2.8/1.6 | 80.7 | 1, 9 | MTPIEC | $518 |
| 0.75 | 1500 | 230/400 | 80M | 19.5 | X754SDMV7GS-P | 3.1/1.8 | 82.5 | 1, 9 | MTPIEC | $532 |
| 0.75 | 1000 | 230/400 | 90L | 19.5 | X756SDMV7GS-PL | 3.7/.2.1 | 78.9 | 1, 9 | MTPIEC | $609 |
| 1.1 | 3000 | 230/400 | 80M | 18 | Y112SDMV7GS-P | 3.7/2.1 | 82.7 | 1, 9 | MTPIEC | $578 |
| 1.1 | 1500 | 230/400 | 90L | 21 | Y114SDMV7GS-PL | 4.2/2.4 | 84.1 | 1, 9 | MTPIEC | $563 |
| 1.1 | 1000 | 230/400 | 90L | 28 | Y116SDMV7GS-PL | 4.9/2.8 | 81.0 | 1, 9 | MTPIEC | $711 |
| 1.5 | 3000 | 230/400 | 90L | 20 | Y152SDMV7GS-PL | 5.2/3 | 84.2 | 1, 9 | MTPIEC | $607 |
| 1.5 | 1500 | 230/400 | 90L | 22 | Y154SDMV7GS-PL | 5.9/3.4 | 85.3 | 1, 9 | MTPIEC | $639 |
| 1.5 | 1000 | 230/400 | 100L | 33 | Y156SDMV7GS-PL | 6.6/3.8 | 82.5 | 1, 9 | MTPIEC | $823 |
| 2.2 | 3000 | 230/400 | 90L | 22 | Y222SDMV7GS-PL | 7.5/4.3 | 85.9 | 1, 9 | MTPIEC | $748 |
| 2.2 | 1500 | 230/400 | 100L | 31 | Y224SDMV7GS-PL | 8.7/5.0 | 86.7 | 1, 9 | MTPIEC | $735 |
| 2.2 | 1000 | 230/400 | 112M | 46 | Y226SDMV7GS-PL | 8.5/4.9 | 84.3 | 1, 9 | MTPIEC | $1,047 |
| 3 | 3000 | 230/400 | 100L | 28 | 0032SDMV7GS-PL | 9.9/5.7 | 87.1 | 1, 9 | MTPIEC | $837 |
| 3 | 1500 | 230/400 | 100L | 33 | 0034SDMV7GS-PL | 11.1/6.4 | 87.7 | 1, 9 | MTPIEC | $806 |
| 3 | 1000 | 230/400 | 132S | 55 | 0036SDMV7GS-PL | 11.5/6.6 | 85.6 | 1, 9 | MTPIEC | $1,293 |
| 4 | 3000 | 230/400 | 112M | 34 | 0042SDMV7GS-PL | 12.3/7.1 | 88.1 | 1, 9 | MTPIEC | $926 |
| 4 | 1500 | 230/400 | 112M | 39 | 0044SDMV7GS-PL | 14.4/8.3 | 88.6 | 1, 9 | MTPIEC | $877 |
| 4 | 1000 | 230/400 | 132M | 61 | 0046SDMV7GS-PL | 15.1/8.7 | 86.8 | 1, 9 | MTPIEC | $1,538 |
| 5.5 | 3000 | 230/400 | 132S | 55 | Y552SDMV7GS-PL | 18.3/10.5 | 89.2 | 1, 9 | MTPIEC | $1,200 |
| 5.5 | 1500 | 230/400 | 132S | 62 | Y554SDMV7GS-PL | 19.5/11.2 | 89.6 | 1, 9 | MTPIEC | $1,200 |
| 5.5 | 1000 | 230/400 | 132M | 74 | Y556SDMV7GS-PL | 20/11.6 | 88.0 | 1, 9 | MTPIEC | $2,042 |
| 7.5 | 3000 | 230/400 | 132M | 61 | Y752SDMV7GS-PL | 25/14.3 | 90.1 | 1, 9 | MTPIEC | $1,440 |
| 7.5 | 1500 | 230/400 | 132M | 70 | Y754SDMV7GS-PL | 26/14.8 | 90.4 | 1, 9 | MTPIEC | $1,460 |
| 7.5 | 1000 | 400 | 160M | 97 | Y756SDMW7GS-PL | 15.4 | 89.1 | 1, 9 | MTPIEC | $2,495 |
| 11 | 3000 | 400 | 160M | 93 | 0112SDMW7GS-PL | 20 | 91.2 | 1, 9 | MTPIEC | $1,979 |
| 11 | 1500 | 400 | 160M | 102 | 0114SDMW7GS-PL | 22 | 91.4 | 1, 9 | MTPIEC | $1,971 |
| 11 | 1000 | 400 | 160L | 116 | 0116SDMW7GS-PL | 22 | 90.3 | 1, 9 | MTPIEC | $3,499 |
| 15 | 3000 | 400 | 160M | 103 | 0152SDMW7GS-PL | 28 | 91.9 | 1, 9 | MTPIEC | $2,564 |
| 15 | 1500 | 400 | 160L | 118 | 0154SDMW7GS-PL | 29 | 92.1 | 1, 9 | MTPIEC | $2,434 |
| 18.5 | 3000 | 400 | 160L | 116 | 0182SDMW7GS-PL | 33 | 92.4 | 1, 9 | MTPIEC | $3,148 |

# Totally Enclosed Fan Cooled
## EQP Global® IEC
### IE3 Efficiency



| kW | Speed (RPM) | Volts | Frame | Weight (kg) | MODEL NUMBER | FL Amps | Nominal FL Efficiency | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| **Footless D-Flange (B5)** | | | | | | | | | | |
| 0.75 | 3000 | 230/400 | 80M | 15 | X752SDMV7JS-P | 2.8/1.6 | 80.7 | 1, 9 | MTPIEC | $542 |
| 0.75 | 1500 | 230/400 | 80M | 19.5 | X754SDMV7JS-P | 3.1/1.8 | 82.5 | 1, 9 | MTPIEC | $558 |
| 0.75 | 1000 | 230/400 | 90L | 22.5 | X756SDMV7JS-PL | 3.7/2.1 | 78.9 | 1, 9 | MTPIEC | $638 |
| 1.1 | 3000 | 230/400 | 80M | 18 | Y112SDMV7JS-P | 3.7/2.1 | 82.7 | 1, 9 | MTPIEC | $605 |
| 1.1 | 1500 | 230/400 | 90L | 23 | Y114SDMV7JS-PL | 4.2/2.4 | 84.1 | 1, 9 | MTPIEC | $590 |
| 1.1 | 1000 | 230/400 | 90L | 28 | Y116SDMV7JS-PL | 4.9/2.8 | 81.0 | 1, 9 | MTPIEC | $745 |
| 1.5 | 3000 | 230/400 | 90L | 20 | Y152SDMV7JS-PL | 5.2/3 | 84.2 | 1, 9 | MTPIEC | $636 |
| 1.5 | 1500 | 230/400 | 90L | 22 | Y154SDMV7JS-PL | 5.9/3.4 | 85.3 | 1, 9 | MTPIEC | $670 |
| 1.5 | 1000 | 230/400 | 100L | 33 | Y156SDMV7JS-PL | 6.6/3.8 | 82.5 | 1, 9 | MTPIEC | $862 |
| 2.2 | 3000 | 230/400 | 90L | 22 | Y222SDMV7JS-PL | 7.5/4.3 | 85.9 | 1, 9 | MTPIEC | $783 |
| 2.2 | 1500 | 230/400 | 100L | 29 | Y224SDMV7JS-PL | 8.7/5.0 | 86.7 | 1, 9 | MTPIEC | $770 |
| 2.2 | 1000 | 230/400 | 112M | 46 | Y226SDMV7JS-PL | 8.5/4.9 | 84.3 | 1, 9 | MTPIEC | $1,097 |
| 3 | 3000 | 230/400 | 100L | 28 | 0032SDMV7JS-PL | 9.9/5.7 | 87.1 | 1, 9 | MTPIEC | $877 |
| 3 | 1500 | 230/400 | 100L | 30 | 0034SDMV7JS-PL | 11.1/6.4 | 87.7 | 1, 9 | MTPIEC | $845 |
| 3 | 1000 | 230/400 | 132S | 55 | 0036SDMV7JS-PL | 11.5/6.6 | 85.6 | 1, 9 | MTPIEC | $1,354 |
| 4 | 3000 | 230/400 | 112M | 34 | 0042SDMV7JS-PL | 12.3/7.1 | 88.1 | 1, 9 | MTPIEC | $970 |
| 4 | 1500 | 230/400 | 112M | 39 | 0044SDMV7JS-PL | 14.4/8.3 | 88.6 | 1, 9 | MTPIEC | $919 |
| 4 | 1000 | 230/400 | 132M | 61 | 0046SDMV7JS-PL | 15.1/8.7 | 86.8 | 1, 9 | MTPIEC | $1,612 |
| 5.5 | 3000 | 230/400 | 132S | 55 | Y552SDMV7JS-PL | 18.3/10.5 | 89.2 | 1, 9 | MTPIEC | $1,257 |
| 5.5 | 1500 | 230/400 | 132S | 62 | Y554SDMV7JS-PL | 19.5/11.2 | 89.6 | 1, 9 | MTPIEC | $1,257 |
| 5.5 | 1000 | 230/400 | 132M | 74 | Y556SDMV7JS-PL | 20/11.6 | 88.0 | 1, 9 | MTPIEC | $2,140 |
| 7.5 | 3000 | 230/400 | 132M | 61 | Y752SDMV7JS-PL | 25/14.3 | 90.1 | 1, 9 | MTPIEC | $1,508 |
| 7.5 | 1500 | 230/400 | 132M | 70 | Y754SDMV7JS-PL | 26/14.8 | 90.4 | 1, 9 | MTPIEC | $1,529 |
| 7.5 | 1000 | 400 | 160M | 97 | Y756SDMW7JS-PL | 15.4 | 89.1 | 1, 9 | MTPIEC | $2,614 |
| 11 | 3000 | 400 | 160M | 93 | 0112SDMW7JS-PL | 20 | 91.2 | 1, 9 | MTPIEC | $2,074 |
| 11 | 1500 | 400 | 160M | 102 | 0114SDMW7JS-PL | 22 | 91.4 | 1, 9 | MTPIEC | $2,065 |
| 11 | 1000 | 400 | 160L | 120 | 0116SDMW7JS-PL | 22 | 90.3 | 1, 9 | MTPIEC | $3,665 |
| 15 | 3000 | 400 | 160M | 103 | 0152SDMW7JS-PL | 28 | 91.9 | 1, 9 | MTPIEC | $2,686 |
| 15 | 1500 | 400 | 160L | 118 | 0154SDMW7JS-PL | 29 | 92.1 | 1, 9 | MTPIEC | $2,550 |
| 15 | 1000 | 400 | 180L | 192 | 0156SDMW7JS-P | 31 | 91.2 | 1, 9 | MTPIEC | $4,293 |
| 18.5 | 3000 | 400 | 160L | 116 | 0182SDMW7JS-PL | 33 | 92.4 | 1, 9 | MTPIEC | $3,298 |
| 18.5 | 1500 | 400 | 180M | 199 | 0184SDMW7JS-P | 36 | 92.6 | 1, 9 | MTPIEC | $3,093 |
| 18.5 | 1000 | 400 | 200L | 275 | 0186SDMW7JS-P | 35 | 91.7 | 1, 9 | MTPIEC | $5,211 |
| 22 | 3000 | 400 | 180M | 194 | 0222SDMW7JS-P | 39 | 92.7 | 1, 9 | MTPIEC | $3,788 |
| 22 | 1500 | 400 | 180L | 205 | 0224SDMW7JS-P | 41 | 93.0 | 1, 9 | MTPIEC | $3,718 |
| 22 | 1000 | 400 | 200L | 290 | 0226SDMW7JS-P | 42 | 92.2 | 1, 9 | MTPIEC | $6,361 |
| 30 | 3000 | 400 | 200L | 304 | 0302SDMW7JS-P | 53 | 93.3 | 1, 9 | MTPIEC | $4,771 |
| 30 | 1500 | 400 | 200L | 300 | 0304SDMW7JS-P | 57 | 93.6 | 1, 9 | MTPIEC | $4,807 |
| 30 | 1000 | 400 | 225S | 350 | 0306SDMW7JS-P | 59 | 92.9 | 1, 9 | MTPIEC | $8,323 |
| 37 | 3000 | 400 | 200L | 330 | 0372SDMW7JS-P | 67 | 93.7 | 1, 9 | MTPIEC | $6,615 |
| 37 | 1500 | 400 | 225S | 341 | 0374SDMW7JS-P | 68 | 93.9 | 1, 9 | MTPIEC | $5,863 |
| 45 | 3000 | 400 | 225S | 340 | 0452SDMW7JS-P | 82 | 94.0 | 1, 9 | MTPIEC | $8,152 |
| 45 | 1500 | 400 | 225S | 374 | 0454SDMW7JS-P | 82 | 94.2 | 1, 9 | MTPIEC | $8,262 |
| **Footed C-Face (B34)** | | | | | | | | | | |
| 0.75 | 3000 | 230/400 | 80M | 15 | X752SDMV7HS-P | 2.8/1.6 | 80.7 | 1, 9 | MTPIEC | $542 |
| 0.75 | 1500 | 230/400 | 80M | 19.5 | X754SDMV7HS-P | 3.1/1.8 | 82.5 | 1, 9 | MTPIEC | $558 |
| 0.75 | 1000 | 230/400 | 90L | 19.5 | X756SDMV7HS-PL | 3.7/2.1 | 78.9 | 1, 9 | MTPIEC | $638 |

# Totally Enclosed Fan Cooled
## EQP Global® IEC
### IE3 Efficiency



| kW | Speed (RPM) | Volts | Frame | Weight (kg) | MODEL NUMBER | FL Amps | Nominal FL Efficiency | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.1 | 3000 | 230/400 | 80M | 18 | Y112SDMV7HS-P | 3.7/2.1 | 82.7 | 1, 9 | MTPIEC | $605 |
| 1.1 | 1500 | 230/400 | 90L | 21 | Y114SDMV7HS-PL | 4.2/2.4 | 84.1 | 1, 9 | MTPIEC | $590 |
| 1.1 | 1000 | 230/400 | 90L | 28 | Y116SDMV7HS-PL | 4.9/2.8 | 81.0 | 1, 9 | MTPIEC | $745 |
| 1.5 | 3000 | 230/400 | 90L | 20 | Y152SDMV7HS-PL | 5.2/3 | 84.2 | 1, 9 | MTPIEC | $636 |
| 1.5 | 1500 | 230/400 | 90L | 22 | Y154SDMV7HS-PL | 5.9/3.4 | 85.3 | 1, 9 | MTPIEC | $670 |
| 1.5 | 1000 | 230/400 | 100L | 33 | Y156SDMV7HS-PL | 6.6/3.8 | 82.5 | 1, 9 | MTPIEC | $862 |
| 2.2 | 3000 | 230/400 | 90L | 22 | Y222SDMV7HS-PL | 7.5/4.3 | 85.9 | 1, 9 | MTPIEC | $783 |
| 2.2 | 1500 | 230/400 | 100L | 29 | Y224SDMV7HS-PL | 8.7/5.0 | 86.7 | 1, 9 | MTPIEC | $770 |
| 2.2 | 1000 | 230/400 | 112M | 46 | Y226SDMV7HS-PL | 8.5/4.9 | 84.3 | 1, 9 | MTPIEC | $1,097 |
| 3 | 3000 | 230/400 | 100L | 28 | 0032SDMV7HS-PL | 9.9/5.7 | 87.1 | 1, 9 | MTPIEC | $877 |
| 3 | 1500 | 230/400 | 100L | 30 | 0034SDMV7HS-PL | 11.1/6.4 | 87.7 | 1, 9 | MTPIEC | $845 |
| 3 | 1000 | 230/400 | 132S | 55 | 0036SDMV7HS-PL | 11.5/6.6 | 85.6 | 1, 9 | MTPIEC | $1,354 |
| 4 | 3000 | 230/400 | 112M | 34 | 0042SDMV7HS-PL | 12.3/7.1 | 88.1 | 1, 9 | MTPIEC | $970 |
| 4 | 1500 | 230/400 | 112M | 39 | 0044SDMV7HS-PL | 14.4/8.3 | 88.6 | 1, 9 | MTPIEC | $919 |
| 4 | 1000 | 230/400 | 132M | 61 | 0046SDMV7HS-PL | 15.1/8.7 | 86.8 | 1, 9 | MTPIEC | $1,612 |
| 5.5 | 3000 | 230/400 | 132S | 55 | Y552SDMV7HS-PL | 18.3/10.5 | 89.2 | 1, 9 | MTPIEC | $1,257 |
| 5.5 | 1500 | 230/400 | 132S | 62 | Y554SDMV7HS-PL | 19.5/11.2 | 89.6 | 1, 9 | MTPIEC | $1,257 |
| 5.5 | 1000 | 230/400 | 132M | 74 | Y556SDMV7HS-PL | 20/11.6 | 88.0 | 1, 9 | MTPIEC | $2,140 |
| 7.5 | 3000 | 230/400 | 132M | 61 | Y752SDMV7HS-PL | 25/14.3 | 90.1 | 1, 9 | MTPIEC | $1,508 |
| 7.5 | 1500 | 230/400 | 132M | 70 | Y754SDMV7HS-PL | 26/14.8 | 90.4 | 1, 9 | MTPIEC | $1,529 |
| 7.5 | 1000 | 400 | 160M | 97 | Y756SDMW7HS-PL | 15.4 | 89.1 | 1, 9 | MTPIEC | $2,614 |
| 11 | 3000 | 400 | 160M | 93 | 0112SDMW7HS-PL | 20 | 91.2 | 1, 9 | MTPIEC | $2,074 |
| 11 | 1500 | 400 | 160M | 102 | 0114SDMW7HS-PL | 22 | 91.4 | 1, 9 | MTPIEC | $2,065 |
| 11 | 1000 | 400 | 160L | 116 | 0116SDMW7HS-PL | 22 | 90.3 | 1, 9 | MTPIEC | $3,665 |
| 15 | 3000 | 400 | 160M | 103 | 0152SDMW7HS-PL | 28 | 91.9 | 1, 9 | MTPIEC | $2,686 |
| 15 | 1500 | 400 | 160L | 118 | 0154SDMW7HS-PL | 29 | 92.1 | 1, 9 | MTPIEC | $2,550 |
| 18.5 | 3000 | 400 | 160L | 116 | 0182SDMW7HS-PL | 33 | 92.4 | 1, 9 | MTPIEC | $3,298 |
| **Footless C-Face (B14)** | | | | | | | | | | |
| 0.75 | 3000 | 230/400 | 80M | 15 | X752SDMV7KS-P | 2.8/1.6 | 80.7 | 1, 9 | MTPIEC | $542 |
| 0.75 | 1500 | 230/400 | 80M | 19.5 | X754SDMV7KS-P | 3.1/1.8 | 82.5 | 1, 9 | MTPIEC | $558 |
| 0.75 | 1000 | 230/400 | 90L | 19.5 | X756SDMV7KS-PL | 3.7/2.1 | 78.9 | 1, 9 | MTPIEC | $638 |
| 1.1 | 3000 | 230/400 | 80M | 18 | Y112SDMV7KS-P | 3.7/2.1 | 82.7 | 1, 9 | MTPIEC | $605 |
| 1.1 | 1500 | 230/400 | 90L | 23 | Y114SDMV7KS-PL | 4.2/2.4 | 84.1 | 1, 9 | MTPIEC | $590 |
| 1.1 | 1000 | 230/400 | 90L | 28 | Y116SDMV7KS-PL | 4.9/2.8 | 81.0 | 1, 9 | MTPIEC | $745 |
| 1.5 | 3000 | 230/400 | 90L | 20 | Y152SDMV7KS-PL | 5.2/3 | 84.2 | 1, 9 | MTPIEC | $636 |
| 1.5 | 1500 | 230/400 | 90L | 22 | Y154SDMV7KS-PL | 5.9/3.4 | 85.3 | 1, 9 | MTPIEC | $670 |
| 1.5 | 1000 | 230/400 | 100L | 33 | Y156SDMV7KS-PL | 6.6/3.8 | 82.5 | 1, 9 | MTPIEC | $862 |
| 2.2 | 3000 | 230/400 | 90L | 22 | Y222SDMV7KS-PL | 7.5/4.3 | 85.9 | 1, 9 | MTPIEC | $783 |
| 2.2 | 1500 | 230/400 | 100L | 29 | Y224SDMV7KS-PL | 8.7/5.0 | 86.7 | 1, 9 | MTPIEC | $770 |
| 2.2 | 1000 | 230/400 | 112M | 46 | Y226SDMV7KS-PL | 8.5/4.9 | 84.3 | 1, 9 | MTPIEC | $1,097 |
| 3 | 3000 | 230/400 | 100L | 28 | 0032SDMV7KS-PL | 9.9/5.7 | 87.1 | 1, 9 | MTPIEC | $877 |
| 3 | 1500 | 230/400 | 100L | 30 | 0034SDMV7KS-PL | 11.1/6.4 | 87.7 | 1, 9 | MTPIEC | $845 |
| 3 | 1000 | 230/400 | 132S | 55 | 0036SDMV7KS-PL | 11.5/6.6 | 85.6 | 1, 9 | MTPIEC | $1,354 |
| 4 | 3000 | 230/400 | 112M | 34 | 0042SDMV7KS-PL | 12.3/7.1 | 88.1 | 1, 9 | MTPIEC | $970 |
| 4 | 1500 | 230/400 | 112M | 39 | 0044SDMV7KS-PL | 14.4/8.3 | 88.6 | 1, 9 | MTPIEC | $919 |
| 4 | 1000 | 230/400 | 132M | 61 | 0046SDMV7KS-PL | 15.1/8.7 | 86.8 | 1, 9 | MTPIEC | $1,612 |
| 5.5 | 3000 | 230/400 | 132S | 55 | Y552SDMV7KS-PL | 18.3/10.5 | 89.2 | 1, 9 | MTPIEC | $1,257 |
| 5.5 | 1500 | 230/400 | 132S | 62 | Y554SDMV7KS-PL | 19.5/11.2 | 89.6 | 1, 9 | MTPIEC | $1,257 |

# Totally Enclosed Fan Cooled

## EQP Global® IEC

### IE3 Efficiency



| kW | Speed (RPM) | Volts | Frame | Weight (kg) | MODEL NUMBER | FL Amps | Nominal FL Efficiency | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 5.5 | 1000 | 230/400 | 132M | 74 | Y556SDMV7KS-PL | 20/11.6 | 88.0 | 1, 9 | MTPIEC | $2,140 |
| 7.5 | 3000 | 230/400 | 132M | 61 | Y752SDMV7KS-PL | 25/14.3 | 90.1 | 1, 9 | MTPIEC | $1,508 |
| 7.5 | 1500 | 230/400 | 132M | 70 | Y754SDMV7KS-PL | 26/14.8 | 90.4 | 1, 9 | MTPIEC | $1,529 |
| 7.5 | 1000 | 400 | 160M | 97 | Y756SDMW7KS-PL | 15.4 | 89.1 | 1, 9 | MTPIEC | $2,614 |
| 11 | 3000 | 400 | 160M | 93 | 0112SDMW7KS-PL | 20 | 91.2 | 1, 9 | MTPIEC | $2,074 |
| 11 | 1500 | 400 | 160M | 102 | 0114SDMW7KS-PL | 22 | 91.4 | 1, 9 | MTPIEC | $2,065 |
| 11 | 1000 | 400 | 160L | 116 | 0116SDMW7KS-PL | 22 | 90.3 | 1, 9 | MTPIEC | $3,665 |
| 15 | 3000 | 400 | 160M | 103 | 0152SDMW7KS-PL | 28 | 91.9 | 1, 9 | MTPIEC | $2,686 |
| 15 | 1500 | 400 | 160L | 118 | 0154SDMW7KS-PL | 29 | 92.1 | 1, 9 | MTPIEC | $2,550 |
| 18.5 | 3000 | 400 | 160L | 116 | 0182SDMW7KS-PL | 33 | 92.4 | 1, 9 | MTPIEC | $3,298 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Definite Purpose Series

## Totally Enclosed Fan Cooled Close-Coupled Pump Motors

Toshiba's EQP Global® Close-Coupled Pump motor series is engineered to meet the demands of fluid handling applications. With a heavy duty flange design and oversized 300 series bearings, it provides robust support to the pump unit. The series boasts an IP55 rating for protection against moisture and contaminants, making it ideal for severe environments. Its heavy-duty cast-iron frame, bearing brackets, and conduit box construction augment durability.

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty
- NEMA Premium® Efficiency
- 60 Hz: 230/460 or 575 V
- 50 Hz: 190/380 V
- Three-Phase
- Dual Frequency 50/60 Hz Design
- 1.15 Service Factor
- Horizontal & Vertical with C Flange Option
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP55 Protection
- Cast Iron Frame, Bearing Brackets & Conduit Box
- Multi-Mount Capabilities on Most Frames (See Appendix C)
- Oversized 300 Series Bearing
- 100% No-Load Commercial Test per IEEE 112 on All Motors
- See Appendix D for ASD and Division 2 Capabilities
- Non-USMCA Qualified

**Applications:**

- Centrifugal Pump



# Totally Enclosed Fan Cooled
## Close-Coupled Pump
### NEMA Premium® Efficiency

EQP Global CCP




CC027B

NEMA Premium

**3** THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 1 to 75 HP

**Speed (60 Hz):** 3600, 1800, or 1200 RPM
**(50 Hz):** 3000, 1500, or 1000 RPM

**Volt* (60 Hz):** 230/460 or 575 V
**(50 Hz):** 190/380 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 143JM/JP through 326JM/365JP

**Construction:** Cast Iron Frame, Conduit Box & Bearing Brackets

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31
(Voltage Withstand Capability of 2000 V in 0.1 µs)

* Contact Toshiba for other voltages.

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | JM | | | | | |
| 1 | 1800 | 230/460 | 143JM | 64 | 0014SDJR41M-P | 3.4/1.7 | 85.5 | 1, 9, 18 | MTPCCP | $773 |
| 1 | 1800 | 575 | 143JM | 68 | 0014SDJC41M-P | 1.2 | 85.5 | 1, 18 | MTPCCP | $773 |
| 1 | 1200 | 230/460 | 145JM | 66 | 0016SDJR41M-P | 3.6/1.8 | 82.5 | 1, 9, 18 | MTPCCP | $891 |
| 1 | 1200 | 575 | 145JM | 56 | 0016SDJC41M-P | 1.5 | 82.5 | 1, 18 | MTPCCP | $891 |
| 1.5 | 3600 | 230/460 | 143JM | 59 | Y152SDJR41M-P | 4.0/2.0 | 84.0 | 1, 9, 18 | MTPCCP | $816 |
| 1.5 | 3600 | 575 | 143JM | 73 | Y152SDJC41M-P | 1.6 | 84.0 | 1, 18 | MTPCCP | $816 |
| 1.5 | 1800 | 230/460 | 145JM | 59 | Y154SDJR41M-P | 4.8/2.4 | 86.5 | 1, 9, 18 | MTPCCP | $821 |
| 1.5 | 1800 | 575 | 145JM | 70 | Y154SDJC41M-P | 1.9 | 86.5 | 1, 18 | MTPCCP | $821 |
| 1.5 | 1200 | 230/460 | 182JM | 110 | Y156SDJR41M-P | 5.0/2.5 | 87.5 | 1, 9, 18 | MTPCCP | $981 |
| 1.5 | 1200 | 575 | 182JM | 79 | Y156SDJC41M-P | 2.0 | 87.5 | 1, 18 | MTPCCP | $981 |
| 2 | 3600 | 230/460 | 145JM | 62 | 0022SDJR41M-P | 5.2/2.6 | 85.5 | 1, 9, 18 | MTPCCP | $929 |
| 2 | 3600 | 575 | 145JM | 55 | 0022SDJC41M-P | 2.1 | 85.5 | 1, 18 | MTPCCP | $929 |
| 2 | 1800 | 230/460 | 145JM | 66 | 0024SDJR41M-P | 6.0/3.0 | 86.5 | 1, 9, 18 | MTPCCP | $868 |
| 2 | 1800 | 575 | 145JM | 66 | 0024SDJC41M-P | 2.4 | 86.5 | 1, 18 | MTPCCP | $868 |
| 2 | 1200 | 230/460 | 184JM | 123 | 0026SDJR41M-P | 6.8/3.4 | 88.5 | 1, 9, 18 | MTPCCP | $1,087 |
| 2 | 1200 | 575 | 184JM | 93 | 0026SDJC41M-P | 2.7 | 88.5 | 1, 18 | MTPCCP | $1,087 |
| 3 | 3600 | 230/460 | 182JM | 99 | 0032SDJR41M-P | 7.4/3.7 | 86.5 | 1, 9, 18 | MTPCCP | $988 |
| 3 | 3600 | 575 | 182JM | 103 | 0032SDJC41M-P | 3.0 | 86.5 | 1, 18 | MTPCCP | $988 |
| 3 | 1800 | 230/460 | 182JM | 110 | 0034SDJR41M-P | 8.0/4.0 | 89.5 | 1, 9, 18 | MTPCCP | $976 |
| 3 | 1800 | 575 | 182JM | 112 | 0034SDJC41M-P | 3.2 | 89.5 | 1, 18 | MTPCCP | $976 |
| 3 | 1200 | 230/460 | 213JM | 183 | 0036SDJR41M-P | 8.8/4.4 | 89.5 | 1, 9, 18 | MTPCCP | $1,404 |
| 3 | 1200 | 575 | 213JM | 147 | 0036SDJC41M-P | 3.5 | 89.5 | 1, 18 | MTPCCP | $1,404 |
| 5 | 3600 | 230/460 | 184JM | 112 | 0052SDJR41M-P | 11.6/5.8 | 88.5 | 1, 9, 18 | MTPCCP | $1,151 |
| 5 | 3600 | 575 | 184JM | 119 | 0052SDJC41M-P | 4.6 | 88.5 | 1, 18 | MTPCCP | $1,151 |

# Totally Enclosed Fan Cooled
## Close-Coupled Pump
### NEMA Premium® Efficiency



EQP Global CCP

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 1800 | 230/460 | 184JM | 114 | 0054SDJR41M-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPCCP | $1,071 |
| 5 | 1800 | 575 | 184JM | 125 | 0054SDJC41M-P | 5.1 | 89.5 | 1, 18 | MTPCCP | $1,071 |
| 5 | 1200 | 230/460 | 215JM | 198 | 0056SDJR41M-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPCCP | $1,962 |
| 5 | 1200 | 575 | 215JM | 165 | 0056SDJC41M-P | 5.5 | 89.5 | 1, 18 | MTPCCP | $1,962 |
| 7.5 | 3600 | 230/460 | 213JM | 183 | Y752SDJR41M-P | 18.0/9.0 | 89.5 | 1, 9, 18 | MTPCCP | $1,421 |
| 7.5 | 3600 | 575 | 213JM | 181 | Y752SDJC41M-P | 7.2 | 89.5 | 1, 18 | MTPCCP | $1,421 |
| 7.5 | 1800 | 230/460 | 213JM | 211 | Y754SDJR41M-P | 19.6/9.8 | 91.7 | 1, 9, 18 | MTPCCP | $1,421 |
| 7.5 | 1800 | 575 | 213JM | 171 | Y754SDJC41M-P | 7.7 | 91.7 | 1, 18 | MTPCCP | $1,421 |
| 7.5 | 1200 | 230/460 | 254JM | 330 | Y756SDJR41M-P | 20.4/10.2 | 91.0 | 1, 9, 18 | MTPCCP | $2,525 |
| 7.5 | 1200 | 575 | 254JM | 312 | Y756SDJC41M-P | 8.2 | 91.0 | 1, 18 | MTPCCP | $2,525 |
| 10 | 3600 | 230/460 | 215JM | 200 | 0102SDJR41M-P | 23.6/11.8 | 90.2 | 1, 9, 18 | MTPCCP | $1,656 |
| 10 | 3600 | 575 | 215JM | 172 | 0102SDJC41M-P | 9.4 | 90.2 | 1, 18 | MTPCCP | $1,656 |
| 10 | 1800 | 230/460 | 215JM | 215 | 0104SDJR41M-P | 26/13 | 91.7 | 1, 9, 18 | MTPCCP | $1,677 |
| 10 | 1800 | 575 | 215JM | 186 | 0104SDJC41M-P | 10.1 | 91.7 | 1, 18 | MTPCCP | $1,677 |
| 10 | 1200 | 230/460 | 256JM | 348 | 0106SDJR41M-P | 26.8/13.4 | 91.0 | 1, 9, 18 | MTPCCP | $3,012 |
| 10 | 1200 | 575 | 256JM | 348 | 0106SDJC41M-P | 10.8 | 91.0 | 1, 18 | MTPCCP | $3,012 |
| 15 | 3600 | 230/460 | 254JM | 294 | 0152SDJR41M-P | 36/18 | 91.0 | 1, 9, 18 | MTPCCP | $2,304 |
| 15 | 3600 | 575 | 254JM | 295 | 0152SDJC41M-P | 14.4 | 91.0 | 1, 18 | MTPCCP | $2,304 |
| 15 | 1800 | 230/460 | 254JM | 354 | 0154SDJR41M-P | 38/19 | 92.4 | 1, 9, 18 | MTPCCP | $2,295 |
| 15 | 1800 | 575 | 254JM | 348 | 0154SDJC41M-P | 15.2 | 92.4 | 1, 18 | MTPCCP | $2,295 |
| 15 | 1200 | 230/460 | 284JM | 442 | 0156SDJR41M-P | 40/20 | 91.7 | 1, 9, 18 | MTPCCP | $4,310 |
| 15 | 1200 | 575 | 284JM | 442 | 0156SDJC41M-P | 15.8 | 91.7 | 1, 18 | MTPCCP | $4,310 |
| 20 | 3600 | 230/460 | 256JM | 310 | 0202SDJR41M-P | 48/24 | 91.0 | 1, 9, 18 | MTPCCP | $2,894 |
| 20 | 3600 | 575 | 256JM | 310 | 0202SDJC41M-P | 19.2 | 91.0 | 1, 18 | MTPCCP | $2,894 |
| 20 | 1800 | 230/460 | 256JM | 394 | 0204SDJR41M-P | 50/25 | 93.0 | 1, 9, 18 | MTPCCP | $2,762 |
| 20 | 1800 | 575 | 256JM | 389 | 0204SDJC41M-P | 20 | 93.0 | 1, 18 | MTPCCP | $2,762 |
| 20 | 1200 | 230/460 | 286JM | 477 | 0206SDJR41M-P | 50/25 | 91.7 | 1, 9, 18 | MTPCCP | $4,955 |
| 20 | 1200 | 575 | 286JM | 477 | 0206SDJC41M-P | 20 | 91.7 | 1, 18 | MTPCCP | $4,955 |
| 25 | 3600 | 230/460 | 284JM | 473 | 0252SDJR41M-P | 58/29 | 91.7 | 1, 9, 18 | MTPCCP | $3,686 |
| 25 | 3600 | 575 | 284JM | 473 | 0252SDJC41M-P | 23 | 91.7 | 1, 18 | MTPCCP | $3,686 |
| 25 | 1800 | 230/460 | 284JM | 532 | 0254SDJR41M-P | 62/31 | 93.6 | 1, 9, 18 | MTPCCP | $3,722 |
| 25 | 1800 | 575 | 284JM | 528 | 0254SDJC41M-P | 24 | 93.6 | 1, 18 | MTPCCP | $3,722 |
| 25 | 1200 | 230/460 | 324JM | 616 | 0256SDJR41M-P | 62/31 | 93.0 | 1, 9, 18 | MTPCCP | $5,592 |
| 25 | 1200 | 575 | 324JM | 592 | 0256SDJC41M-P | 25 | 93.0 | 1, 18 | MTPCCP | $5,592 |
| 30 | 3600 | 230/460 | 286JM | 497 | 0302SDJR41M-P | 70/35 | 91.7 | 1, 9, 18 | MTPCCP | $4,160 |
| 30 | 3600 | 575 | 286JM | 497 | 0302SDJC41M-P | 28 | 91.7 | 1, 18 | MTPCCP | $4,160 |
| 30 | 1800 | 230/460 | 286JM | 671 | 0304SDJR41M-P | 72/36 | 93.6 | 1, 9, 18 | MTPCCP | $4,365 |
| 30 | 1800 | 575 | 286JM | 548 | 0304SDJC41M-P | 29 | 93.6 | 1, 18 | MTPCCP | $4,365 |
| 30 | 1200 | 230/460 | 326JM | 634 | 0306SDJR41M-P | 74/37 | 93.0 | 1, 9, 18 | MTPCCP | $6,700 |
| 30 | 1200 | 575 | 326JM | 618 | 0306SDJC41M-P | 30 | 93.0 | 1, 18 | MTPCCP | $6,700 |
| 40 | 3600 | 230/460 | 324JM | 657 | 0402SDJR41M-P | 94/47 | 92.4 | 1, 9, 18 | MTPCCP | $5,169 |
| 40 | 3600 | 575 | 324JM | 658 | 0402SDJC41M-P | 38 | 92.4 | 1, 18 | MTPCCP | $5,169 |
| 40 | 1800 | 230/460 | 324JM | 671 | 0404SDJR41M-P | 96/48 | 94.1 | 1, 9, 18 | MTPCCP | $5,551 |
| 40 | 1800 | 575 | 324JM | 671 | 0404SDJC41M-P | 38 | 94.1 | 1, 18 | MTPCCP | $5,551 |
| 50 | 3600 | 230/460 | 326JM | 693 | 0502SDJR41M-P | 116/58 | 93.0 | 1, 9, 18 | MTPCCP | $6,945 |
| 50 | 3600 | 575 | 326JM | 693 | 0502SDJC41M-P | 46 | 93.0 | 1, 18 | MTPCCP | $6,945 |
| 50 | 1800 | 230/460 | 326JM | 722 | 0504SDJR41M-P | 120/60 | 94.5 | 1, 9, 18 | MTPCCP | $6,220 |
| 50 | 1800 | 575 | 326JM | 722 | 0504SDJC41M-P | 48 | 94.5 | 1, 18 | MTPCCP | $6,220 |

# Totally Enclosed Fan Cooled
## Close-Coupled Pump
### NEMA Premium® Efficiency



EQP Global CCP

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | JP | | | | | |
| 1 | 1800 | 230/460 | 143JP | 68 | 0014SDJR41P-P | 3.4/1.7 | 85.5 | 1, 9, 18 | MTPCCP | $773 |
| 1 | 1800 | 575 | 143JP | 68 | 0014SDJC41P-P | 1.2 | 85.5 | 1, 18 | MTPCCP | $773 |
| 1 | 1200 | 230/460 | 145JP | 422 | 0016SDJR41P-P | 3.6/1.8 | 82.5 | 1, 9, 18 | MTPCCP | $891 |
| 1 | 1200 | 575 | 145JP | 56 | 0016SDJC41P-P | 1.5 | 82.5 | 1, 18 | MTPCCP | $891 |
| 1.5 | 3600 | 230/460 | 143JP | 73 | Y152SDJR41P-P | 4.0/2.0 | 84.0 | 1, 9, 18 | MTPCCP | $816 |
| 1.5 | 3600 | 575 | 143JP | 73 | Y152SDJC41P-P | 1.6 | 84.0 | 1, 18 | MTPCCP | $816 |
| 1.5 | 1800 | 230/460 | 145JP | 70 | Y154SDJR41P-P | 4.8/2.4 | 86.5 | 1, 9, 18 | MTPCCP | $821 |
| 1.5 | 1800 | 575 | 145JP | 70 | Y154SDJC41P-P | 1.9 | 86.5 | 1, 18 | MTPCCP | $821 |
| 1.5 | 1200 | 230/460 | 182JP | 532 | Y156SDJR41P-P | 5.0/2.5 | 87.5 | 1, 9, 18 | MTPCCP | $981 |
| 1.5 | 1200 | 575 | 182JP | 79 | Y156SDJC41P-P | 2.0 | 87.5 | 1, 18 | MTPCCP | $981 |
| 2 | 3600 | 230/460 | 145JP | 75 | 0022SDJR41P-P | 5.2/2.6 | 85.5 | 1, 9, 18 | MTPCCP | $929 |
| 2 | 3600 | 575 | 145JP | 55 | 0022SDJC41P-P | 2.1 | 85.5 | 1, 18 | MTPCCP | $929 |
| 2 | 1800 | 230/460 | 145JP | 66 | 0024SDJR41P-P | 6.0/3.0 | 86.5 | 1, 9, 18 | MTPCCP | $868 |
| 2 | 1800 | 575 | 145JP | 66 | 0024SDJC41P-P | 2.4 | 86.5 | 1, 18 | MTPCCP | $868 |
| 2 | 1200 | 230/460 | 184JP | 391 | 0026SDJR41P-P | 6.8/3.4 | 88.5 | 1, 9, 18 | MTPCCP | $1,087 |
| 2 | 1200 | 575 | 184JP | 93 | 0026SDJC41P-P | 2.7 | 88.5 | 1, 18 | MTPCCP | $1,087 |
| 3 | 3600 | 230/460 | 182JP | 103 | 0032SDJR41P-P | 7.4/3.7 | 86.5 | 1, 9, 18 | MTPCCP | $988 |
| 3 | 3600 | 575 | 182JP | 103 | 0032SDJC41P-P | 3.0 | 86.5 | 1, 18 | MTPCCP | $988 |
| 3 | 1800 | 230/460 | 182JP | 112 | 0034SDJR41P-P | 8.0/4.0 | 89.5 | 1, 9, 18 | MTPCCP | $976 |
| 3 | 1800 | 575 | 182JP | 112 | 0034SDJC41P-P | 3.2 | 89.5 | 1, 18 | MTPCCP | $976 |
| 3 | 1200 | 230/460 | 213JP | 576 | 0036SDJR41P-P | 8.8/4.4 | 89.5 | 1, 9, 18 | MTPCCP | $1,404 |
| 3 | 1200 | 575 | 213JP | 147 | 0036SDJC41P-P | 3.5 | 89.5 | 1, 18 | MTPCCP | $1,404 |
| 5 | 3600 | 230/460 | 184JP | 119 | 0052SDJR41P-P | 11.6/5.8 | 88.5 | 1, 9, 18 | MTPCCP | $1,151 |
| 5 | 3600 | 575 | 184JP | 119 | 0052SDJC41P-P | 4.6 | 88.5 | 1, 18 | MTPCCP | $1,151 |
| 5 | 1800 | 230/460 | 184JP | 125 | 0054SDJR41P-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPCCP | $1,071 |
| 5 | 1800 | 575 | 184JP | 125 | 0054SDJC41P-P | 5.1 | 89.5 | 1, 18 | MTPCCP | $1,071 |
| 5 | 1200 | 230/460 | 215JP | 770 | 0056SDJR41P-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPCCP | $1,962 |
| 5 | 1200 | 575 | 215JP | 165 | 0056SDJC41P-P | 5.5 | 89.5 | 1, 18 | MTPCCP | $1,962 |
| 7.5 | 3600 | 230/460 | 213JP | 431 | Y752SDJR41P-P | 18.0/9 | 89.5 | 1, 9, 18 | MTPCCP | $1,421 |
| 7.5 | 3600 | 575 | 213JP | 155 | Y752SDJC41P-P | 7.2 | 89.5 | 1, 18 | MTPCCP | $1,421 |
| 7.5 | 1800 | 230/460 | 213JP | 805 | Y754SDJR41P-P | 19.6/9.8 | 91.7 | 1, 9, 18 | MTPCCP | $1,421 |
| 7.5 | 1800 | 575 | 213JP | 171 | Y754SDJC41P-P | 7.7 | 91.7 | 1, 18 | MTPCCP | $1,421 |
| 7.5 | 1200 | 230/460 | 254JP | 312 | Y756SDJR41P-P | 20.4/10.2 | 91.0 | 1, 9, 18 | MTPCCP | $2,525 |
| 7.5 | 1200 | 575 | 254JP | 312 | Y756SDJC41P-P | 8.2 | 91.0 | 1, 18 | MTPCCP | $2,525 |
| 10 | 3600 | 230/460 | 215JP | 466 | 0102SDJR41P-P | 23.6/11.8 | 90.2 | 1, 9, 18 | MTPCCP | $1,656 |
| 10 | 3600 | 575 | 215JP | 172 | 0102SDJC41P-P | 9.4 | 90.2 | 1, 18 | MTPCCP | $1,656 |
| 10 | 1800 | 230/460 | 215JP | 215 | 0104SDJR41P-P | 26/13 | 91.7 | 1, 9, 18 | MTPCCP | $1,677 |
| 10 | 1800 | 575 | 215JP | 186 | 0104SDJC41P-P | 10.1 | 91.7 | 1, 18 | MTPCCP | $1,677 |
| 10 | 1200 | 230/460 | 256JP | 347 | 0106SDJR41P-P | 26.8/13.4 | 91.0 | 1, 9, 18 | MTPCCP | $3,012 |
| 10 | 1200 | 575 | 256JP | 348 | 0106SDJC41P-P | 10.8 | 91.0 | 1, 18 | MTPCCP | $3,012 |
| 15 | 3600 | 230/460 | 254JP | 294 | 0152SDJR41P-P | 36/18 | 91.0 | 1, 9, 18 | MTPCCP | $2,304 |
| 15 | 3600 | 575 | 254JP | 295 | 0152SDJC41P-P | 14.4 | 91.0 | 1, 18 | MTPCCP | $2,304 |
| 15 | 1800 | 230/460 | 254JP | 429 | 0154SDJR41P-P | 38/19 | 92.4 | 1, 9, 18 | MTPCCP | $2,295 |
| 15 | 1800 | 575 | 254JP | 429 | 0154SDJC41P-P | 15.2 | 92.4 | 1, 18 | MTPCCP | $2,295 |
| 15 | 1200 | 230/460 | 284JP | 442 | 0156SDJR41P-P | 40/20 | 91.7 | 1, 9, 18 | MTPCCP | $4,310 |
| 15 | 1200 | 575 | 284JP | 442 | 0156SDJC41P-P | 15.8 | 91.7 | 1, 18 | MTPCCP | $4,310 |
| 20 | 3600 | 230/460 | 256JP | 310 | 0202SDJR41P-P | 48/24 | 91.0 | 1, 9, 18 | MTPCCP | $2,894 |

# Totally Enclosed Fan Cooled
## Close-Coupled Pump
### NEMA Premium® Efficiency



EQP Global CCP

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 3600 | 575 | 256JP | 310 | 0202SDJC41P-P | 19.2 | 91.0 | 1, 18 | MTPCCP | $2,894 |
| 20 | 1800 | 230/460 | 256JP | 389 | 0204SDJR41P-P | 50/25 | 93.0 | 1, 9, 18 | MTPCCP | $2,762 |
| 20 | 1800 | 575 | 256JP | 389 | 0204SDJC41P-P | 20 | 93.0 | 1, 18 | MTPCCP | $2,762 |
| 20 | 1200 | 230/460 | 286JP | 477 | 0206SDJR41P-P | 50/25 | 91.7 | 1, 9, 18 | MTPCCP | $4,955 |
| 20 | 1200 | 575 | 286JP | 477 | 0206SDJC41P-P | 20 | 91.7 | 1, 18 | MTPCCP | $4,955 |
| 25 | 3600 | 230/460 | 284JP | 473 | 0252SDJR41P-P | 58/29 | 91.7 | 1, 9, 18 | MTPCCP | $3,686 |
| 25 | 3600 | 575 | 284JP | 473 | 0252SDJC41P-P | 23 | 91.7 | 1, 18 | MTPCCP | $3,686 |
| 25 | 1800 | 230/460 | 284JP | 528 | 0254SDJR41P-P | 62/31 | 93.6 | 1, 9, 18 | MTPCCP | $3,722 |
| 25 | 1800 | 575 | 284JP | 528 | 0254SDJC41P-P | 24 | 93.6 | 1, 18 | MTPCCP | $3,722 |
| 25 | 1200 | 230/460 | 324JP | 591 | 0256SDJR41P-P | 62/31 | 93.0 | 1, 9, 18 | MTPCCP | $5,592 |
| 25 | 1200 | 575 | 324JP | 592 | 0256SDJC41P-P | 25 | 93.0 | 1, 18 | MTPCCP | $5,592 |
| 30 | 3600 | 230/460 | 286JP | 497 | 0302SDJR41P-P | 70/35 | 91.7 | 1, 9, 18 | MTPCCP | $4,160 |
| 30 | 3600 | 575 | 286JP | 497 | 0302SDJC41P-P | 28 | 91.7 | 1, 18 | MTPCCP | $4,160 |
| 30 | 1800 | 230/460 | 286JP | 548 | 0304SDJR41P-P | 72/36 | 93.6 | 1, 9, 18 | MTPCCP | $4,365 |
| 30 | 1800 | 575 | 286JP | 548 | 0304SDJC41P-P | 29 | 93.6 | 1, 18 | MTPCCP | $4,365 |
| 30 | 1200 | 230/460 | 326JP | 618 | 0306SDJR41P-P | 74/37 | 93.0 | 1, 9, 18 | MTPCCP | $6,700 |
| 30 | 1200 | 575 | 326JP | 618 | 0306SDJC41P-P | 30 | 93.0 | 1, 18 | MTPCCP | $6,700 |
| 40 | 3600 | 230/460 | 324JP | 657 | 0402SDJR41P-P | 94/47 | 92.4 | 1, 9, 18 | MTPCCP | $5,169 |
| 40 | 3600 | 575 | 324JP | 658 | 0402SDJC41P-P | 38 | 92.4 | 1, 18 | MTPCCP | $5,169 |
| 40 | 1800 | 230/460 | 324JP | 671 | 0404SDJR41P-P | 96/48 | 94.1 | 1, 9, 18 | MTPCCP | $5,551 |
| 40 | 1800 | 575 | 324JP | 671 | 0404SDJC41P-P | 38 | 94.1 | 1, 18 | MTPCCP | $5,551 |
| 40 | 1200 | 230/460 | 364JP | 809 | 0406SDJR41P-P | 96/48 | 94.1 | 1, 9, 18 | MTPCCP | $8,972 |
| 40 | 1200 | 575 | 364JP | 810 | 0406SDJC41P-P | 38 | 94.1 | 1, 18 | MTPCCP | $8,972 |
| 50 | 3600 | 230/460 | 326JP | 693 | 0502SDJR41P-P | 116/58 | 93.0 | 1, 9, 18 | MTPCCP | $6,945 |
| 50 | 3600 | 575 | 326JP | 693 | 0502SDJC41P-P | 46 | 93.0 | 1, 18 | MTPCCP | $6,945 |
| 50 | 1800 | 230/460 | 326JP | 721 | 0504SDJR41P-P | 120/60 | 94.5 | 1, 9, 18 | MTPCCP | $6,220 |
| 50 | 1800 | 575 | 326JP | 722 | 0504SDJC41P-P | 48 | 94.5 | 1, 18 | MTPCCP | $6,220 |
| 50 | 1200 | 230/460 | 365JP | 831 | 0506SDJR41P-P | 120/60 | 94.1 | 1, 9, 18 | MTPCCP | $10,313 |
| 50 | 1200 | 575 | 365JP | 832 | 0506SDJC41P-P | 48 | 94.1 | 1, 18 | MTPCCP | $10,313 |
| 60 | 3600 | 230/460 | 364JP | 627 | 0602SDJR41P-P | 138/69 | 93.6 | 1, 9, 18 | MTPCCP | $8,807 |
| 60 | 3600 | 575 | 364JP | 627 | 0602SDJC41P-P | 55 | 93.6 | 1, 18 | MTPCCP | $8,807 |
| 60 | 1800 | 230/460 | 364JP | 904 | 0604SDJR41P-P | 138/69 | 95.0 | 1, 9, 18 | MTPCCP | $8,913 |
| 60 | 1800 | 575 | 364JP | 904 | 0604SDJC41P-P | 55 | 95.0 | 1, 18 | MTPCCP | $8,913 |
| 75 | 3600 | 230/460 | 365JP | 932 | 0752SDJR41P-P | 172/86 | 93.6 | 1, 9, 18 | MTPCCP | $10,843 |
| 75 | 3600 | 575 | 365JP | 932 | 0752SDJC41P-P | 69 | 93.6 | 1, 18 | MTPCCP | $10,843 |
| 75 | 1800 | 230/460 | 365JP | 981 | 0754SDJR41P-P | 170/85 | 95.4 | 1, 9, 18 | MTPCCP | $11,207 |
| 75 | 1800 | 575 | 365JP | 981 | 0754SDJC41P-P | 69 | 95.4 | 1, 18 | MTPCCP | $11,207 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Definite Purpose Series

## Totally Enclosed Air Over EQP Global® Critical Cooling Motors

Toshiba's EQP Global® Critical Cooling motors have a proven history of delivering the quality and reliability required by data centers, hospitals, and other critical cooling operations. These motors are designed to operate in applications such as fan arrays where the motors are hard to access and require minimal maintenance for the product's lifetime. The use of insulated bearings on both ends of the motor optimizes performance and protection when used in variable speed drive applications. Toshiba motors continue to be a preferred option for users needing increased operational life and reduced maintenance costs.

**Standard Features:**

- Totally Enclosed Air Over Severe Duty
- NEMA Premium® Efficiency
- 60 Hz: 230/460 or 575 V
- 50 Hz: 190/380 V
- Three-Phase
- Dual-Frequency 50/60 Hz Design
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP56 Protection
- Cast Iron Frame, Bearing Brackets & Conduit Box
- Multi-Mount Capabilities on All Frames (See Appendix C)
- Epoxy Finished Paint
- Multiple Drain Provisions for Horizontal & Vertical Mounting
- See Appendix D for ASD and Division 2 Capabilities
- Non-USMCA Qualified

**Applications:**

- Fan Arrays
- Cooling Tower
- Heat Exchangers
- Evaporative Condensers
- Pumps



# Totally Enclosed Air Over
## EQP Global® Critical Cooling
### NEMA Premium® Efficiency



CC027B

**Product Scope:**

| | |
|---|---|
| **Horsepower:** | 1 to 30 HP |
| **Speed** | |
| **(60 Hz)*** | 3600 or 1800 RPM |
| **(50 Hz)*:** | 1500 or 1000 RPM |
| **Volt** | |
| **(60 Hz)*** | 230/460 or 575 V |
| **(50 Hz)*:** | 190/380 V |
| **Enclosure:** | Totally Enclosed Air Over |
| **Frame Size:** | 143T through 256T |
| **Construction:** | Cast Iron Frame, Bearing Brackets & Conduit Box |
| **Insulation:** | Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs) |
| **Environment:** | Severe Duty, Suitable for Use in Class I Division 2 Hazardous Locations |

*50/60 Hz Listed on Nameplate for 230/460 Designs

**3 THREE YEAR WARRANTY**

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1800 | 230/460 | 143T | 57 | 4OA001L1ZVS210 | - | - | | MTPFCP | $830 |
| 1 | 1800 | 575 | 143T | 60 | 4O5001L1ZVS210 | - | - | | MTPFCP | $830 |
| 1.5 | 3600 | 230/460 | 145T | 60 | 2OAY15L1ZVS210 | - | - | | MTPFCP | $913 |
| 1.5 | 3600 | 575 | 143T | 60 | 2O5Y15L1ZVS210 | - | - | | MTPFCP | $913 |
| 2 | 3600 | 230/460 | 145T | 55 | 2OA002L1ZVS210 | - | - | | MTPFCP | $950 |
| 2 | 3600 | 575 | 145T | 60 | 2O5002L1ZVS210 | - | - | | MTPFCP | $950 |
| 2 | 1800 | 230/460 | 145T | 62 | 4OA002L1ZVS210 | - | - | | MTPFCP | $960 |
| 2 | 1800 | 575 | 145T | 62 | 4O5002L1ZVS210 | - | - | | MTPFCP | $960 |
| 3 | 3600 | 230/460 | 182T | 86 | 2OA003L1ZVS210 | - | - | | MTPFCP | $1,190 |
| 3 | 3600 | 575 | 182T | 86 | 2O5003L1ZVS210 | - | - | | MTPFCP | $1,190 |
| 3 | 1800 | 230/460 | 182T | 97 | 4OA003L1ZVS210 | - | - | | MTPFCP | $1,171 |
| 3 | 1800 | 575 | 182T | 95 | 4O5003L1ZVS210 | - | - | | MTPFCP | $1,171 |
| 5 | 3600 | 230/460 | 184T | 97 | 2OA005L1ZVS210 | - | - | | MTPFCP | $1,387 |
| 5 | 3600 | 575 | 184T | 99 | 2O5005L1ZVS210 | - | - | | MTPFCP | $1,387 |
| 5 | 1800 | 230/460 | 184T | 105 | 4OA005L1ZVS210 | - | - | | MTPFCP | $1,296 |
| 5 | 1800 | 575 | 184T | 106 | 4O5005L1ZVS210 | - | - | | MTPFCP | $1,296 |
| 7.5 | 3600 | 230/460 | 213T | 165 | 2OAY75L1ZVS210 | - | - | | MTPFCP | $2,061 |
| 7.5 | 3600 | 575 | 213T | 163 | 2O5Y75L1ZVS210 | - | - | | MTPFCP | $2,061 |
| 7.5 | 1800 | 230/460 | 213T | 187 | 4OAY75L1ZVS210 | - | - | | MTPFCP | $2,030 |
| 7.5 | 1800 | 575 | 213T | 187 | 4O5Y75L1ZVS210 | - | - | | MTPFCP | $2,030 |
| 10 | 3600 | 230/460 | 215T | 183 | 2OA010L1ZVS210 | - | - | | MTPFCP | $2,246 |
| 10 | 3600 | 575 | 215T | 183 | 2O5010L1ZVS210 | - | - | | MTPFCP | $2,246 |
| 10 | 1800 | 230/460 | 215T | 198 | 4OA010L1ZVS210 | - | - | | MTPFCP | $2,131 |
| 10 | 1800 | 575 | 215T | 198 | 4O5010L1ZVS210 | - | - | | MTPFCP | $2,131 |
| 15 | 3600 | 230/460 | 254T | 302 | 2OA015L1ZVS210 | - | - | | MTPFCP | $3,464 |
| 15 | 3600 | 575 | 254T | 298 | 2O5015L1ZVS210 | - | - | | MTPFCP | $3,464 |
| 15 | 1800 | 230/460 | 254T | 306 | 4OA015L1ZVS210 | - | - | | MTPFCP | $3,403 |
| 15 | 1800 | 575 | 254T | 313 | 4O5015L1ZVS210 | - | - | | MTPFCP | $3,403 |

# Totally Enclosed Air Over
# EQP Global® Critical Cooling
## NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 3600 | 230/460 | 256T | - | 2OA020L1ZVS210 | - | - | | MTPFCP | $3,871 |
| 20 | 3600 | 575 | 256T | - | 2O5020L1ZVS210 | - | - | | MTPFCP | $3,871 |
| 20 | 1800 | 230/460 | 256T | 355 | 4OA020L1ZVS210 | - | - | | MTPFCP | $3,783 |
| 20 | 1800 | 575 | 256T | 355 | 4O5020L1ZVS210 | - | - | | MTPFCP | $3,783 |
| 25 | 3600 | 230/460 | 284TS | - | 2OA025L1ZVS210 | - | - | | MTPFCP | $4,835 |
| 25 | 1800 | 230/460 | 256T | - | 4OA025L1ZVS210 | - | - | | MTPFCP | $4,895 |
| 30 | 3600 | 230/460 | 286TS | - | 2OA030L1ZVS210 | - | - | | MTPFCP | $4,860 |
| 30 | 1800 | 230/460 | 256T | - | 4OA030L1ZVS210 | - | - | | MTPFCP | $4,955 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Definite Purpose Series

## Totally Enclosed Fan Cooled & Totally Enclosed Air Over EQP Global® Cooling Tower Motors

Toshiba's EQP Global® Cooling Tower motor series is specifically designed for the demanding environments of cooling tower applications, where heat and humidity prevail. With a robust design and premium construction, this series offers two enclosure options: totally enclosed fan cooled (TEFC) and totally enclosed air over (TEAO). The EQP Global® Cooling Tower series is equipped with a double seal arrangement, providing an IP56 rating, effectively shielding against moisture and contaminants, and providing reliable operation even in demanding conditions. Coated with a corrosion-resistant severe duty epoxy paint system, the motor can withstand severe operating conditions, including 100% humidity.

**Standard Features:**

- API 661 Compliant
- Totally Enclosed Fan Cooled or Totally Enclosed Air Over
- Severe Duty
- NEMA Premium® Efficiency
- 60 Hz: 230/460 or 575 V
- 50 Hz: 190/380 V
- Three-Phase
- Dual-Frequency 50/60 Hz Design
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP56 Protection
- Cast Iron Frame, Bearing Brackets & Conduit Box
- Multi-Mount Capabilities on All Frames (See Appendix C)
- Epoxy Finished Paint
- Multiple Drain Provisions for Horizontal & Vertical Mounting
- See Appendix D for ASD and Division 2 Capabilities
- Non-USMCA Qualified

**Applications:**

- Blowers
- Fans
- Cooling Tower
- Heat Exchangers
- Evaporative Condensers
- Pumps



# Totally Enclosed Fan Cooled & Totally Enclosed Air Over

## EQP Global® Cooling Tower

### NEMA Premium® Efficiency



CC027B

3 THREE YEAR WARRANTY

**Product Scope:**

| | |
|---|---|
| **Horsepower:** | 0.75 to 75 HP |
| **Speed (60 Hz)*** | 1800 or 1200 RPM |
| **(50 Hz)*:** | 1500 or 1000 RPM |
| **Volt (60 Hz)*** | 230/460 or 575 V |
| **(50 Hz)*:** | 190/380 V |
| **Enclosure:** | Totally Enclosed Fan Cooled or Totally Enclosed Air Over |
| **Frame Size:** | 143T through 365T |
| **Construction:** | Cast Iron Frame, Bearing Brackets & Conduit Box |
| **Insulation:** | Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs) |
| **Environment:** | Severe Duty, Suitable for Use in Class I Division 2 Hazardous Locations |

*50/60 Hz Listed on Nameplate for 230/460 Designs

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | TEFC | | | | | |
| 0.75 | 1200 | 230/460 | 143T | 60 | 3/46SDGR41A-P | 2.8/1.4 | 80.0 | 1, 9, 15, 18 | MTPFCT | $702 |
| 0.75 | 1200 | 575 | 143T | 60 | 3/46SDGC41A-P | .9 | 81.5 | 1, 15, 18 | MTPFCT | $702 |
| 1 | 1800 | 230/460 | 143T | 58 | 0014SDGR41A-P | 3.4/1.7 | 85.5 | 1, 9, 15, 18 | MTPFCT | $635 |
| 1 | 1800 | 575 | 143T | 58 | 0014SDGC41A-P | 1.2 | 85.5 | 1, 15, 18 | MTPFCT | $635 |
| 1 | 1200 | 230/460 | 145T | 62 | 0016SDGR41A-P | 3.6/1.8 | 82.5 | 1, 9, 15, 18 | MTPFCT | $794 |
| 1 | 1200 | 575 | 145T | 62 | 0016SDGC41A-P | 1.5 | 82.5 | 1, 15, 18 | MTPFCT | $794 |
| 1.5 | 1800 | 230/460 | 145T | 60 | Y154SDGR41A-P | 4.8/2.4 | 86.5 | 1, 9, 15, 18 | MTPFCT | $707 |
| 1.5 | 1800 | 575 | 145T | 59 | Y154SDGC41A-P | 1.9 | 86.5 | 1, 15, 18 | MTPFCT | $707 |
| 1.5 | 1200 | 230/460 | 182T | 99 | Y156SDGR41A-P | 5.0/2.5 | 87.5 | 1, 9, 15, 18 | MTPFCT | $845 |
| 1.5 | 1200 | 575 | 182T | 99 | Y156SDGC41A-P | 2.0 | 87.5 | 1, 15, 18 | MTPFCT | $845 |
| 2 | 1800 | 230/460 | 145T | 62 | 0024SDGR41A-P | 6.0/3.0 | 86.5 | 1, 9, 15, 18 | MTPFCT | $776 |
| 2 | 1800 | 575 | 145T | 62 | 0024SDGC41A-P | 2.4 | 86.5 | 1, 15, 18 | MTPFCT | $776 |
| 2 | 1200 | 230/460 | 184T | 110 | 0026SDGR41A-P | 6.8/3.4 | 88.5 | 1, 9, 15, 18 | MTPFCT | $943 |
| 2 | 1200 | 575 | 184T | 110 | 0026SDGC41A-P | 2.7 | 88.5 | 1, 15, 18 | MTPFCT | $943 |
| 3 | 1800 | 230/460 | 182T | 99 | 0034SDGR41A-P | 8.0/4.0 | 89.5 | 1, 9, 15, 18 | MTPFCT | $818 |
| 3 | 1800 | 575 | 182T | 99 | 0034SDGC41A-P | 3.2 | 89.5 | 1, 15, 18 | MTPFCT | $818 |
| 3 | 1200 | 230/460 | 213T | 163 | 0036SDGR41A-P | 8.8/4.4 | 89.5 | 1, 9, 15, 18 | MTPFCT | $1,152 |
| 3 | 1200 | 575 | 213T | 168 | 0036SDGC41A-P | 3.5 | 89.5 | 1, 15, 18 | MTPFCT | $1,152 |
| 5 | 1800 | 230/460 | 184T | 110 | 0054SDGR41A-P | 13.0/6.5 | 89.5 | 1, 9, 15, 18 | MTPFCT | $955 |
| 5 | 1800 | 575 | 184T | 110 | 0054SDGC41A-P | 5.1 | 89.5 | 1, 15, 18 | MTPFCT | $955 |
| 5 | 1200 | 230/460 | 215T | 176 | 0056SDGR41A-P | 13.8/6.9 | 89.5 | 1, 9, 15, 18 | MTPFCT | $1,623 |
| 5 | 1200 | 575 | 215T | 179 | 0056SDGC41A-P | 5.5 | 89.5 | 1, 15, 18 | MTPFCT | $1,623 |
| 7.5 | 1800 | 230/460 | 213T | 186 | Y754SDGR41A-P | 19.6/9.8 | 91.7 | 1, 9, 15, 18 | MTPFCT | $1,387 |
| 7.5 | 1800 | 575 | 213T | 179 | Y754SDGC41A-P | 7.7 | 91.7 | 1, 15, 18 | MTPFCT | $1,387 |
| 7.5 | 1200 | 230/460 | 254T | 281 | Y756SDGR41A-P | 20.4/10.2 | 91.0 | 1, 9, 15, 18 | MTPFCT | $2,321 |
| 7.5 | 1200 | 575 | 254T | 274 | Y756SDGC41A-P | 8.2 | 91.0 | 1, 15, 18 | MTPFCT | $2,321 |

# Totally Enclosed Fan Cooled & Totally Enclosed Air Over

## EQP Global® Cooling Tower

### NEMA Premium® Efficiency



EQP Global CT

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 1800 | 230/460 | 215T | 203 | 0104SDGR41A-P | 26/13 | 91.7 | 1, 9, 15, 18 | MTPFCT | $1,631 |
| 10 | 1800 | 575 | 215T | 203 | 0104SDGC41A-P | 10.1 | 91.7 | 1, 15, 18 | MTPFCT | $1,631 |
| 10 | 1200 | 230/460 | 256T | 292 | 0106SDGR41A-P | 26.8/13.4 | 91.0 | 1, 9, 15, 18 | MTPFCT | $2,850 |
| 10 | 1200 | 575 | 256T | 293 | 0106SDGC41A-P | 10.8 | 91.0 | 1, 15, 18 | MTPFCT | $2,850 |
| 15 | 1800 | 230/460 | 254T | 315 | 0154SDGR41A-P | 38/19 | 92.4 | 1, 9, 15, 18 | MTPFCT | $2,151 |
| 15 | 1800 | 575 | 254T | 317 | 0154SDGC41A-P | 15.2 | 92.4 | 1, 15, 18 | MTPFCT | $2,151 |
| 15 | 1200 | 230/460 | 284T | 443 | 0156SDGR41A-P | 39.2/19.6 | 91.7 | 1, 9, 15, 18 | MTPFCT | $3,787 |
| 15 | 1200 | 575 | 284T | 441 | 0156SDGC41A-P | 15.8 | 91.7 | 1, 15, 18 | MTPFCT | $3,787 |
| 20 | 1800 | 230/460 | 256T | 355 | 0204SDGR41A-P | 50/25 | 93.0 | 1, 9, 15, 18 | MTPFCT | $2,678 |
| 20 | 1800 | 575 | 256T | 353 | 0204SDGC41A-P | 20 | 93.0 | 1, 15, 18 | MTPFCT | $2,678 |
| 20 | 1200 | 230/460 | 286T | 478 | 0206SDGR41A-P | 50.8/25.4 | 91.7 | 1, 9, 15, 18 | MTPFCT | $4,457 |
| 20 | 1200 | 575 | 286T | 478 | 0206SDGC41A-P | 20 | 91.7 | 1, 15, 18 | MTPFCT | $4,457 |
| 25 | 1800 | 230/460 | 284T | 492 | 0254SDGR41A-P | 61/30.5 | 93.6 | 1, 9, 15, 18 | MTPFCT | $3,241 |
| 25 | 1800 | 575 | 284T | 492 | 0254SDGC41A-P | 24 | 93.6 | 1, 15, 18 | MTPFCT | $3,241 |
| 25 | 1200 | 230/460 | 324T | 627 | 0256SDGR41A-P | 62.4/31.2 | 93.0 | 1, 9, 15, 18 | MTPFCT | $5,405 |
| 25 | 1200 | 575 | 324T | 615 | 0256SDGC41A-P | 25 | 93.0 | 1, 15, 18 | MTPFCT | $5,405 |
| 30 | 1800 | 230/460 | 286T | 531 | 0304SDGR41A-P | 72.0/36 | 93.6 | 1, 9, 15, 18 | MTPFCT | $3,786 |
| 30 | 1800 | 575 | 286T | 505 | 0304SDGC41A-P | 29 | 93.6 | 1, 15, 18 | MTPFCT | $3,786 |
| 30 | 1200 | 230/460 | 326T | 638 | 0306SDGR41A-P | 74.4/37.2 | 93.0 | 1, 9, 15, 18 | MTPFCT | $6,224 |
| 30 | 1200 | 575 | 326T | 631 | 0306SDGC41A-P | 30 | 93.0 | 1, 15, 18 | MTPFCT | $6,224 |
| 40 | 1800 | 230/460 | 324T | 669 | 0404SDGR41A-P | 96/48 | 94.1 | 1, 9, 15, 18 | MTPFCT | $4,927 |
| 40 | 1800 | 575 | 324T | 666 | 0404SDGC41A-P | 38 | 94.1 | 1, 15, 18 | MTPFCT | $4,927 |
| 40 | 1200 | 230/460 | 364T | 811 | 0406SDGR41A-P | 96/48 | 94.1 | 1, 9, 15, 18 | MTPFCT | $8,435 |
| 40 | 1200 | 575 | 364T | 802 | 0406SDGC41A-P | 38 | 94.1 | 1, 15, 18 | MTPFCT | $8,435 |
| 50 | 1800 | 230/460 | 326T | 715 | 0504SDGR41A-P | 120/60 | 94.5 | 1, 9, 15, 18 | MTPFCT | $5,725 |
| 50 | 1800 | 575 | 326T | 716 | 0504SDGC41A-P | 48 | 94.5 | 1, 15, 18 | MTPFCT | $5,725 |
| 50 | 1200 | 230/460 | 365T | 834 | 0506SDGR41A-P | 120/60 | 94.1 | 1, 9, 15, 18 | MTPFCT | $9,684 |
| 50 | 1200 | 575 | 365T | 833 | 0506SDGC41A-P | 48 | 94.1 | 1, 15, 18 | MTPFCT | $9,684 |
| 60 | 1800 | 230/460 | 364T | 880 | 0604SDGR41A-P | 138/69 | 95.0 | 1, 9, 15, 18 | MTPFCT | $8,683 |
| 60 | 1800 | 575 | 364T | 895 | 0604SDGC41A-P | 55 | 95.0 | 1, 15, 18 | MTPFCT | $8,683 |
| 75 | 1800 | 230/460 | 365T | 961 | 0754SDGR41A-P | 172/86 | 95.4 | 1, 9, 15, 18 | MTPFCT | $10,419 |
| 75 | 1800 | 575 | 365T | 979 | 0754SDGC41A-P | 69 | 95.4 | 1, 15, 18 | MTPFCT | $10,419 |
| **TEAO** | | | | | | | | | | |
| 0.75 | 1200 | 230/460 | 143T | 60 | 3/46FAGR41A-P | 2.8/1.4 | 80.0 | 1, 9, 15, 18 | MTPFCT | $702 |
| 0.75 | 1200 | 575 | 143T | 60 | 3/46FAGC41A-P | .9 | 81.5 | 1, 15, 18 | MTPFCT | $702 |
| 1 | 1800 | 230/460 | 143T | 58 | 0014FAGR41A-P | 3.4/1.7 | | 1, 9, 15, 18 | MTPFCT | $635 |
| 1 | 1800 | 575 | 143T | 58 | 0014FAGC41A-P | 1.2 | | 1, 15, 18 | MTPFCT | $635 |
| 1 | 1200 | 230/460 | 145T | 62 | 0016FAGR41A-P | 3.6/1.8 | | 1, 9, 15, 18 | MTPFCT | $794 |
| 1 | 1200 | 575 | 145T | 62 | 0016FAGC41A-P | 1.5 | | 1, 15, 18 | MTPFCT | $794 |
| 1.5 | 1800 | 230/460 | 145T | 60 | Y154FAGR41A-P | 4.8/2.4 | | 1, 9, 15, 18 | MTPFCT | $707 |
| 1.5 | 1800 | 575 | 145T | 59 | Y154FAGC41A-P | 1.9 | | 1, 15, 18 | MTPFCT | $707 |
| 1.5 | 1200 | 230/460 | 182T | 99 | Y156FAGR41A-P | 5.0/2.5 | | 1, 9, 15, 18 | MTPFCT | $845 |
| 1.5 | 1200 | 575 | 182T | 99 | Y156FAGC41A-P | 2.0 | | 1, 15, 18 | MTPFCT | $845 |
| 2 | 1800 | 230/460 | 145T | 62 | 0024FAGR41A-P | 6.0/3.0 | | 1, 9, 15, 18 | MTPFCT | $776 |
| 2 | 1800 | 575 | 145T | 62 | 0024FAGC41A-P | 2.4 | | 1, 15, 18 | MTPFCT | $776 |
| 2 | 1200 | 230/460 | 184T | 110 | 0026FAGR41A-P | 6.8/3.4 | | 1, 9, 15, 18 | MTPFCT | $943 |
| 2 | 1200 | 575 | 184T | 110 | 0026FAGC41A-P | 3.2 | | 1, 15, 18 | MTPFCT | $943 |
| 3 | 1800 | 230/460 | 182T | 99 | 0034FAGR41A-P | 8.0/4.0 | | 1, 9, 15, 18 | MTPFCT | $818 |

# Totally Enclosed Fan Cooled & Totally Enclosed Air Over

## EQP Global® Cooling Tower

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 1800 | 575 | 182T | 99 | 0034FAGC41A-P | 3.2 | | 1, 15, 18 | MTPFCT | $818 |
| 3 | 1200 | 230/460 | 213T | 163 | 0036FAGR41A-P | 8.8/4.4 | | 1, 9, 15, 18 | MTPFCT | $1,152 |
| 3 | 1200 | 575 | 213T | 168 | 0036FAGC41A-P | 3.5 | | 1, 15, 18 | MTPFCT | $1,152 |
| 5 | 1800 | 230/460 | 184T | 110 | 0054FAGR41A-P | 13.0/6.5 | | 1, 9, 15, 18 | MTPFCT | $955 |
| 5 | 1800 | 575 | 184T | 110 | 0054FAGC41A-P | 5.1 | | 1, 15, 18 | MTPFCT | $955 |
| 5 | 1200 | 230/460 | 215T | 176 | 0056FAGR41A-P | 13.8/6.9 | | 1, 9, 15, 18 | MTPFCT | $1,623 |
| 5 | 1200 | 575 | 215T | 179 | 0056FAGC41A-P | 5.5 | | 1, 15, 18 | MTPFCT | $1,623 |
| 7.5 | 1800 | 230/460 | 213T | 186 | Y754FAGR41A-P | 19.6/9.8 | | 1, 9, 15, 18 | MTPFCT | $1,387 |
| 7.5 | 1800 | 575 | 213T | 179 | Y754FAGC41A-P | 7.7 | | 1, 15, 18 | MTPFCT | $1,387 |
| 7.5 | 1200 | 230/460 | 254T | 281 | Y756FAGR41A-P | 20.4/10.2 | | 1, 9, 15, 18 | MTPFCT | $2,321 |
| 7.5 | 1200 | 575 | 254T | 274 | Y756FAGC41A-P | 8.2 | | 1, 15, 18 | MTPFCT | $2,321 |
| 10 | 1800 | 230/460 | 215T | 203 | 0104FAGR41A-P | 26/13 | | 1, 9, 15, 18 | MTPFCT | $1,631 |
| 10 | 1800 | 575 | 215T | 203 | 0104FAGC41A-P | 10.1 | | 1, 15, 18 | MTPFCT | $1,631 |
| 10 | 1200 | 230/460 | 256T | 292 | 0106FAGR41A-P | 26.8/13.4 | | 1, 9, 15, 18 | MTPFCT | $2,850 |
| 10 | 1200 | 575 | 256T | 293 | 0106FAGC41A-P | 10.8 | | 1, 15, 18 | MTPFCT | $2,850 |
| 15 | 1800 | 230/460 | 254T | 315 | 0154FAGR41A-P | 38/19 | | 1, 9, 15, 18 | MTPFCT | $2,151 |
| 15 | 1800 | 575 | 254T | 317 | 0154FAGC41A-P | 15.2 | | 1, 15, 18 | MTPFCT | $2,151 |
| 15 | 1200 | 230/460 | 284T | 443 | 0156FAGR41A-P | 39.2/19.6 | | 1, 9, 15, 18 | MTPFCT | $3,787 |
| 15 | 1200 | 575 | 284T | 441 | 0156FAGC41A-P | 15.8 | | 1, 15, 18 | MTPFCT | $3,787 |
| 20 | 1800 | 230/460 | 256T | 355 | 0204FAGR41A-P | 50/25 | | 1, 9, 15, 18 | MTPFCT | $2,678 |
| 20 | 1800 | 575 | 256T | 353 | 0204FAGC41A-P | 20 | | 1, 15, 18 | MTPFCT | $2,678 |
| 20 | 1200 | 230/460 | 286T | 478 | 0206FAGR41A-P | 50.8/25.4 | | 1, 9, 15, 18 | MTPFCT | $4,457 |
| 20 | 1200 | 575 | 286T | 478 | 0206FAGC41A-P | 20 | | 1, 15, 18 | MTPFCT | $4,457 |
| 25 | 1800 | 230/460 | 284T | 492 | 0254FAGR41A-P | 61/30.5 | | 1, 9, 15, 18 | MTPFCT | $3,241 |
| 25 | 1800 | 575 | 284T | 492 | 0254FAGC41A-P | 24 | | 1, 15, 18 | MTPFCT | $3,241 |
| 25 | 1200 | 230/460 | 324T | 627 | 0256FAGR41A-P | 62.4/31.2 | | 1, 9, 15, 18 | MTPFCT | $5,405 |
| 25 | 1200 | 575 | 324T | 615 | 0256FAGC41A-P | 25 | | 1, 15, 18 | MTPFCT | $5,405 |
| 30 | 1800 | 230/460 | 286T | 531 | 0304FAGR41A-P | 72.8/36.4 | | 1, 9, 15, 18 | MTPFCT | $3,786 |
| 30 | 1800 | 575 | 286T | 505 | 0304FAGC41A-P | 29 | | 1, 15, 18 | MTPFCT | $3,786 |
| 30 | 1200 | 230/460 | 326T | 638 | 0306FAGR41A-P | 74.4/37.2 | | 1, 9, 15, 18 | MTPFCT | $6,224 |
| 30 | 1200 | 575 | 326T | 631 | 0306FAGC41A-P | 30 | | 1, 15, 18 | MTPFCT | $6,224 |
| 40 | 1800 | 230/460 | 324T | 669 | 0404FAGR41A-P | 96/48 | | 1, 9, 15, 18 | MTPFCT | $4,927 |
| 40 | 1800 | 575 | 324T | 666 | 0404FAGC41A-P | 38 | | 1, 15, 18 | MTPFCT | $4,927 |
| 40 | 1200 | 230/460 | 364T | 811 | 0406FAGR41A-P | 96/48 | | 1, 9, 15, 18 | MTPFCT | $8,435 |
| 40 | 1200 | 575 | 364T | 802 | 0406FAGC41A-P | 38 | | 1, 15, 18 | MTPFCT | $8,435 |
| 50 | 1800 | 230/460 | 326T | 715 | 0504FAGR41A-P | 120/60 | | 1, 9, 15, 18 | MTPFCT | $5,725 |
| 50 | 1800 | 575 | 326T | 716 | 0504FAGC41A-P | 48 | | 1, 15, 18 | MTPFCT | $5,725 |
| 50 | 1200 | 230/460 | 365T | 834 | 0506FAGR41A-P | 120/60 | | 1, 9, 15, 18 | MTPFCT | $9,684 |
| 50 | 1200 | 575 | 365T | 833 | 0506FAGC41A-P | 48 | | 1, 15, 18 | MTPFCT | $9,684 |
| 60 | 1800 | 230/460 | 364T | 880 | 0604FAGR41A-P | 138/69 | | 1, 9, 15, 18 | MTPFCT | $8,683 |
| 60 | 1800 | 575 | 364T | 895 | 0604FAGC41A-P | 55 | | 1, 15, 18 | MTPFCT | $8,683 |
| 75 | 1800 | 230/460 | 365T | 961 | 0754FAGR41A-P | 172/86 | | 1, 9, 15, 18 | MTPFCT | $10,419 |
| 75 | 1800 | 575 | 365T | 979 | 0754FAGC41A-P | 69 | | 1, 15, 18 | MTPFCT | $10,419 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Definite Purpose Series

## Totally Enclosed Fan Cooled Quarry Duty Motors

Toshiba's EQP Global® Quarry Duty motors are designed to thrive in the unforgiving conditions of cement, mining, and aggregate applications. Delivering exceptionally high torque during startup and increased load demand periods, the IP55-rated enclosure is protected against moisture and contaminants even in dirty, dusty, and humid environments, providing reliable performance. Enhanced by a 1.25 service factor on 360 frames and below, these motors are built to last. The robust construction of the heavy-duty cast-iron frame, brackets, and terminal box enhances its ruggedness. Manufactured with an unwavering commitment to quality, the EQP Global Quarry Duty series is a preferred choice for industries that demand durability in demanding applications.

EQP Global® QD

**Standard Features:**

- Totally Enclosed Fan Cooled
- Severe Duty
- High & NEMA Premium® Efficiency
- High Torque Design
- 60 Hz: 460 or 575 V
- Three-Phase
- 60 Hz Design
- 1.25 Service Factor (Frames 184T-365T)
- 1.15 Service Factor (Frames 405T - B587)*
- Class F Inverter Duty, Exceeds NEMA MG1 Part 31*
- IP55 & S/B587 is IP54
- Cast Iron Frame, Bearing Brackets & Conduit Box
- Multi-Mount Capabilities on Most Frames (See Appendix C)
- Polyurea Base Grease
- Open Regreasable Roller Bearings on Frames S444T and Larger
- Shaft Slinger or V-Ring Shaft on Drive End
- 4142 High Strength Shaft Steel on Frames S444T and Larger
- Hardware Grade 5 Frames 184T-S447T; Grade 8 on S/B449, 505UZ and S/B587
- Bearing Lock Nuts for Vertical Mounting on Frames 505 and Larger
- Load Side Locked Bearing on Frames 213T and Larger with Additional Bearing Lock Nuts on Frames S444T and Larger

*Exception: 750HP is rated for 1.0 SF

**Applications:**

- Ball & Rolling Mills
- Centrifuges
- Cone Crushers
- Conveyors
- Grinding Mills
- Hammer Mills
- Jaw Crushers
- Screens



# Totally Enclosed Fan Cooled
## Quarry Duty
### High & NEMA Premium® Efficiency

EQP Global QD



CC027B CC129B

NEMA Premium

3 THREE YEAR WARRANTY

### Product Scope:

**Horsepower:** 5 to 750 HP

**Speed (60 Hz):** 1800, 1200, or 900 RPM

**Volt (60 Hz):** 460 or 575 V

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** 184T through B587LL

**Construction:** Cast Iron Frame, Bearing Brackets & Conduit Box

**Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs)

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 1800 | 460 | 184T | 104 | 0054QDAB41A-P | 6.4 | 89.5 | 1, 6, 18, 21 | MTPQDP | $799 |
| 5 | 1800 | 575 | 184T | 104 | 0054QDAC41A-P | 5.2 | 89.5 | 1, 6, 18, 21 | MTPQDP | $799 |
| 5 | 1200 | 460 | 215T | 166 | 0056QDAB41A-P | 6.9 | 89.5 | 1, 6, 18, 21 | MTPQDP | $1,465 |
| 5 | 1200 | 575 | 215T | 166 | 0056QDAC41A-P | 6 | 89.5 | 1, 6, 18, 21 | MTPQDP | $1,465 |
| 7.5 | 1800 | 460 | 213T | 175 | Y754QDAB41A-P | 9.8 | 91.7 | 1, 6, 18, 21 | MTPQDP | $1,143 |
| 7.5 | 1800 | 575 | 213T | 175 | Y754QDAC41A-P | 8 | 91.7 | 1, 6, 18, 21 | MTPQDP | $1,143 |
| 7.5 | 1200 | 460 | 254T | 252 | Y756QDAB41A-P | 10.2 | 91.0 | 1, 6, 18, 21 | MTPQDP | $1,945 |
| 7.5 | 1200 | 575 | 254T | 252 | Y756QDAC41A-P | 8 | 91.0 | 1, 6, 18, 21 | MTPQDP | $1,945 |
| 10 | 1800 | 460 | 215T | 190 | 0104QDAB41A-P | 13.6 | 91.7 | 1, 6, 18, 21 | MTPQDP | $1,390 |
| 10 | 1800 | 575 | 215T | 190 | 0104QDAC41A-P | 11 | 91.7 | 1, 6, 18, 21 | MTPQDP | $1,390 |
| 10 | 1200 | 460 | 256T | 274 | 0106QDAB41A-P | 12.7 | 91.0 | 1, 6, 18, 21 | MTPQDP | $2,376 |
| 10 | 1200 | 575 | 256T | 274 | 0106QDAC41A-P | 10 | 91.0 | 1, 6, 18, 21 | MTPQDP | $2,376 |
| 15 | 1800 | 460 | 254T | 289 | 0154QDAB41A-P | 21 | 92.4 | 1, 6, 18, 21 | MTPQDP | $1,877 |
| 15 | 1800 | 575 | 254T | 289 | 0154QDAC41A-P | 18 | 92.4 | 1, 6, 18, 21 | MTPQDP | $1,877 |
| 15 | 1200 | 460 | 284T | 382 | 0156QDAB41A-P | 19.3 | 91.7 | 1, 6, 18, 21 | MTPQDP | $3,332 |
| 15 | 1200 | 575 | 284T | 382 | 0156QDAC41A-P | 15 | 91.7 | 1, 6, 18, 21 | MTPQDP | $3,332 |
| 20 | 1800 | 460 | 256T | 331 | 0204QDAB41A-P | 25 | 93.0 | 1, 6, 18, 21 | MTPQDP | $2,318 |
| 20 | 1800 | 575 | 256T | 331 | 0204QDAC41A-P | 20 | 93.0 | 1, 6, 18, 21 | MTPQDP | $2,318 |
| 20 | 1200 | 460 | 286T | 415 | 0206QDAB41A-P | 25 | 91.7 | 1, 6, 18, 21 | MTPQDP | $3,903 |
| 20 | 1200 | 575 | 286T | 188 | 0206QDAC41A-P | 20 | 91.7 | 1, 6, 18, 21 | MTPQDP | $3,903 |
| 25 | 1800 | 460 | 284T | 437 | 0254QDAB41A-P | 30 | 93.6 | 1, 6, 18, 21 | MTPQDP | $2,812 |
| 25 | 1800 | 575 | 284T | 437 | 0254QDAC41A-P | 24 | 93.6 | 1, 6, 18, 21 | MTPQDP | $2,812 |
| 25 | 1200 | 460 | 324T | 545 | 0256QDAB41A-P | 31 | 93.0 | 1, 6, 18, 21 | MTPQDP | $4,737 |
| 25 | 1200 | 575 | 324T | 545 | 0256QDAC41A-P | 25 | 93.0 | 1, 6, 18, 21 | MTPQDP | $4,737 |
| 30 | 1800 | 460 | 286T | 461 | 0304QDAB41A-P | 39 | 93.6 | 1, 6, 18, 21 | MTPQDP | $3,380 |
| 30 | 1800 | 575 | 286T | 461 | 0304QDAC41A-P | 31 | 93.6 | 1, 6, 18, 21 | MTPQDP | $3,380 |
| 30 | 1200 | 460 | 326T | 571 | 0306QDAB41A-P | 37 | 93.0 | 1, 6, 18, 21 | MTPQDP | $5,783 |
| 30 | 1200 | 575 | 326T | 571 | 0306QDAC41A-P | 30 | 93.0 | 1, 6, 18, 21 | MTPQDP | $5,783 |
| 40 | 1800 | 460 | 324T | 602 | 0404QDAB41A-P | 49 | 94.1 | 1, 6, 18, 21 | MTPQDP | $4,370 |

# Totally Enclosed Fan Cooled
## Quarry Duty
### High & NEMA Premium® Efficiency



EQP Global QD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | 1800 | 575 | 324T | 602 | 0404QDAC41A-P | 39 | 94.1 | 1, 6, 18, 21 | MTPQDP | $4,370 |
| 40 | 1200 | 460 | 364T | 728 | 0406QDAB41A-P | 48 | 94.1 | 1, 6, 18, 21 | MTPQDP | $7,566 |
| 40 | 1200 | 575 | 364T | 728 | 0406QDAC41A-P | 38 | 94.1 | 1, 6, 18, 21 | MTPQDP | $7,566 |
| 50 | 1800 | 460 | 326T | 651 | 0504QDAB41A-P | 62 | 94.5 | 1, 6, 18, 21 | MTPQDP | $5,330 |
| 50 | 1800 | 575 | 326T | 651 | 0504QDAC41A-P | 49 | 94.5 | 1, 6, 18, 21 | MTPQDP | $5,330 |
| 50 | 1200 | 460 | 365T | 768 | 0506QDAB41A-P | 60 | 94.1 | 1, 6, 18, 21 | MTPQDP | $8,832 |
| 50 | 1200 | 575 | 365T | 768 | 0506QDAC41A-P | 48 | 94.1 | 1, 6, 18, 21 | MTPQDP | $8,832 |
| 60 | 1800 | 460 | 364T | 818 | 0604QDAB41A-P | 70 | 95.0 | 1, 6, 18, 21 | MTPQDP | $7,511 |
| 60 | 1800 | 575 | 364T | 818 | 0604QDAC41A-P | 56 | 95.0 | 1, 6, 18, 21 | MTPQDP | $7,511 |
| 60 | 1200 | 460 | 404T | 1153 | 0606QDAB41A-P | 75 | 94.5 | 1, 6, 18 | MTPQDP | $12,192 |
| 60 | 1200 | 575 | 404T | 1153 | 0606QDAC41A-P | 160 | 94.5 | 1, 6, 18 | MTPQDP | $12,192 |
| 75 | 1800 | 460 | 365T | 902 | 0754QDAB41A-P | 87 | 95.4 | 1, 6, 18, 21 | MTPQDP | $9,676 |
| 75 | 1800 | 575 | 365T | 902 | 0754QDAC41A-P | 70 | 95.4 | 1, 6, 18, 21 | MTPQDP | $9,676 |
| 75 | 1200 | 460 | 405T | 1232 | 0756QDAB41A-P | 94 | 94.5 | 1, 6, 18 | MTPQDP | $13,653 |
| 75 | 1200 | 575 | 405T | 1232 | 0756QDAC41A-P | 75 | 94.5 | 1, 6, 18 | MTPQDP | $13,653 |
| 100 | 1800 | 460 | 405T | 1217 | 1004QDAB41A-P | 115 | 95.4 | 1, 6, 18 | MTPQDP | $13,744 |
| 100 | 1800 | 575 | 405T | 1217 | 1004QDAC41A-P | 93 | 95.4 | 1, 6, 18 | MTPQDP | $13,744 |
| 100 | 1200 | 460 | S444T | 2300 | 1006QDAB41A-PR | 121 | 95.8 | 1,2,6,18 | MTPQDP | $27,145 |
| 100 | 1200 | 575 | S444T | 2300 | 1006QDAC41A-PR | 97 | 95.8 | 1,2,6,18 | MTPQDP | $27,145 |
| 125 | 1800 | 460 | S444T | 2033 | 1254QDAB41A-PR | 142 | 95.4 | 1, 2, 6, 18 | MTPQDP | $19,245 |
| 125 | 1800 | 575 | S444T | 2033 | 1254QDAC41A-PR | 114 | 95.4 | 1, 2, 6, 18 | MTPQDP | $19,245 |
| 125 | 1200 | 460 | S445T | 2300 | 1256QDAB41A-PR | 154 | 95.8 | 1,2,6,18 | MTPQDP | $28,916 |
| 125 | 1200 | 575 | S445T | 2300 | 1256QDAC41A-PR | 123 | 95.8 | 1,2,6,18 | MTPQDP | $28,916 |
| 150 | 1800 | 460 | S445T | 2152 | 1504QDAB41A-P | 170 | 95.8 | 1, 2, 6, 18 | MTPQDP | $20,754 |
| 150 | 1800 | 460 | S445T | 2152 | 1504QDAB41A-PR | 170 | 95.8 | 1, 2, 6, 18 | MTPQDP | $20,754 |
| 150 | 1800 | 575 | S445T | 2152 | 1504QDAC41A-PR | 136 | 95.8 | 1, 2, 6, 18 | MTPQDP | $20,754 |
| 150 | 1200 | 460 | S447T | 2500 | 1506QDAB41A-PR | 184 | 96.2 | 1,2,6,18 | MTPQDP | $32,762 |
| 150 | 1200 | 575 | S447T | 2500 | 1506QDAC41A-PR | 147 | 96.2 | 1,2,6,18 | MTPQDP | $32,762 |
| 200 | 1800 | 460 | S447T | 2205 | 2004QDAB41A-P | 232 | 96.2 | 1, 2, 6, 18 | MTPQDP | $24,945 |
| 200 | 1800 | 460 | S447T | 2205 | 2004QDAB41A-PR | 232 | 96.2 | 1, 2, 6, 18 | MTPQDP | $24,945 |
| 200 | 1800 | 575 | S447T | 2205 | 2004QDAC41A-PR | 185 | 96.2 | 1, 2, 6, 18 | MTPQDP | $24,945 |
| 200 | 1200 | 460 | S449T | 2500 | 2006QDSB41A-R | 243 | 95.8 | 2, 6, 18 | MXTQDP | $30,932 |
| 200 | 1200 | 575 | S449T | 2500 | 2006QDSC41A-R | 194 | 95.8 | 2, 6, 18 | MXTQDP | $30,932 |
| 200 | 900 | 460 | S587LQ | 3900 | 2008QDSB41A-R | 282 | 94.5 | 2, 6, 18 | MXTQDP | $44,930 |
| 200 | 900 | 575 | S587LQ | 2700 | 2008QDSC41A-R | 227 | 94.5 | 2, 6, 18 | MXTQDP | $44,930 |
| 250 | 1800 | 460 | S449T | 2330 | 2504QDSB41A-R | 293 | 96.2 | 2,6,18 | MXTQDP | $31,811 |
| 250 | 1800 | 575 | S449T | 2330 | 2504QDSC41A-R | 236 | 96.2 | 2,6,18 | MXTQDP | $31,811 |
| 250 | 1200 | 460 | S587LQ | 4600 | 2506QDSB41A-R | 313 | 95.8 | 2, 6, 18 | MXTQDP | $44,549 |
| 250 | 1200 | 460 | S449T | 2500 | 2506QDSB41A-RF | 303 | 95.8 | 2, 6, 18 | MXTQDP | $36,190 |
| 250 | 1200 | 575 | S587LQ | 4600 | 2506QDSC41A-R | 250 | 96.2 | 2, 6, 18 | MXTQDP | $44,549 |
| 250 | 1200 | 575 | S449T | 2500 | 2506QDSC41A-RF | 242 | 95.8 | 2, 6, 18 | MXTQDP | $36,190 |
| 250 | 900 | 460 | S587LQ | 3919 | 2508QDSB41-R | 359 | 95.0 | 2, 6, 18 | MXTQDP | $49,356 |
| 250 | 900 | 575 | S587LQ | 2700 | 2508QDSC41-R | 290 | 95.0 | 2, 6, 18 | MXTQDP | $49,356 |
| 300 | 1800 | 460 | S587LQ | 2330 | 3004QDSB41A-R | 355 | 96.2 | 2, 6, 18 | MXTQDP | $41,310 |
| 300 | 1800 | 460 | S449T | 2330 | 3004QDSB41A-RF | 355 | 96.2 | 2,6,18 | MXTQDP | $39,952 |
| 300 | 1800 | 575 | S587LQ | 2330 | 3004QDSC41A-R | 284 | 96.2 | 2, 6, 18 | MXTQDP | $41,310 |
| 300 | 1800 | 575 | S449T | 2330 | 3004QDSC41A-RF | 284 | 96.2 | 2,6,18 | MXTQDP | $39,952 |
| 300 | 1200 | 460 | S587LQ | 4700 | 3006QDSB41A-R | 377 | 96.2 | 2, 6, 18 | MXTQDP | $47,445 |
| 300 | 1200 | 575 | S587LQ | 4700 | 3006QDSC41A-R | 301 | 96.2 | 2, 6, 18 | MXTQDP | $47,445 |
| 300 | 900 | 460 | 5810UZ | 6000 | F3008FLF4BMQ | 443 | 95.0 | 2 | MXTQDP | $53,174 |

# Totally Enclosed Fan Cooled
## Quarry Duty
### High & NEMA Premium® Efficiency



EQP Global QD

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 300 | 900 | 575 | 5810UZ | 6093 | F3008FLF4OMQ | 351 | 95.0 | 2 | MXTQDP | $53,174 |
| 300 | 900 | 460 | S587LQ | 6000 | 3008QDSB41A-R | 429 | 95.0 | 2, 18 | MXTQDP | $51,823 |
| 300 | 900 | 575 | S587LQ | 6093 | 3008QDSC41A-R | 349 | 95.0 | 2, 18 | MXTQDP | $51,823 |
| 350 | 1800 | 460 | S587LQ | 4500 | 3504QDSB41A-R | 400 | 96.2 | 2, 6, 18 | MXTQDP | $45,315 |
| 350 | 1800 | 575 | S587LQ | 4500 | 3504QDSC41A-R | 323 | 96.2 | 2, 6, 18 | MXTQDP | $45,315 |
| 350 | 1200 | 460 | S587LQ | 4800 | 3506QDSB41A-R | 443 | 96.2 | 2, 6, 18 | MXTQDP | $51,504 |
| 350 | 1200 | 460 | B449T | 4100 | 3506QDSB41A-RF | 429 | 95.8 | 2, 6, 18 | MXTQDP | $52,505 |
| 350 | 1200 | 575 | S587LQ | 4800 | 3506QDSC41A-R | 353 | 96.2 | 2, 6, 18 | MXTQDP | $51,504 |
| 350 | 1200 | 575 | B449T | 4100 | 3506QDSC41A-RF | 342 | 95.8 | 2, 6, 18 | MXTQDP | $52,505 |
| 350 | 900 | 460 | 5810UZ | 5950 | F3508FLF4BMQ | 488 | 93.6 | 2, 6 | MXTQDP | $59,889 |
| 350 | 900 | 575 | 5810UZ | 4200 | F3508FLF4OMQ | 410 | 93.6 | 2, 6, 18 | MXTQDP | $59,889 |
| 350 | 900 | 460 | S587LQ | 6000 | 3508QDSB41A-R | 514 | 95.0 | 2, 18 | MXTQDP | $58,392 |
| 350 | 900 | 460 | S587LQ | 6000 | 3508QDSB41A-R | 514 | 95.0 | 2, 18 | MXTQDP | $58,392 |
| 400 | 1800 | 460 | S587LQ | 4550 | 4004QDSB41A-R | 458 | 96.2 | 2, 6, 18 | MXTQDP | $48,260 |
| 400 | 1800 | 575 | S587LQ | 4500 | 4004QDSC41A-R | 371 | 96.2 | 2, 6, 18 | MXTQDP | $48,260 |
| 400 | 1200 | 460 | 5010UZ | 5081 | F4006FLF4BMQ | 510 | 95.2 | 2, 6 | MXTQDP | $51,456 |
| 400 | 1200 | 575 | 5010UZ | 4600 | F4006FLF4OMQ | 421 | 95.4 | 2, 6 | MXTQDP | $51,456 |
| 400 | 1200 | 460 | S587LQ | 4800 | 4006QDSB41A-R | 514 | 96.2 | 2, 6, 18 | MXTQDP | $54,852 |
| 400 | 1200 | 575 | S587LQ | 4800 | 4006QDSC41A-R | 413 | 96.2 | 2, 6, 18 | MXTQDP | $54,852 |
| 400 | 900 | 460 | S587LQ | 6000 | 4008QDSB41A-R | 565 | 95.0 | 2, 18 | MXTQDP | $66,587 |
| 400 | 900 | 575 | S587LQ | 6000 | 4008QDSC41A-R | 455 | 95.0 | 2, 18 | MXTQDP | $66,587 |
| 400 | 900 | 460 | 5810UZ | 6000 | F4008FLF4BMQ | 514 | 94.1 | 2 | MXTQDP | $68,259 |
| 400 | 900 | 575 | 5810UZ | 6093 | F4008FLF4OMQ | 449 | 95.0 | 2 | MXTQDP | $68,259 |
| 450 | 1800 | 460 | S587LQ | 4700 | 4504QDSB41A-R | 512 | 96.2 | 2, 6, 18 | MXTQDP | $51,397 |
| 450 | 1800 | 575 | S587LQ | 4700 | 4504QDSC41A-R | 412 | 96.2 | 2, 6, 18 | MXTQDP | $51,397 |
| 450 | 1200 | 460 | B587LL | 6100 | 4506QDSB41A-R | 564 | 96.2 | 2, 6, 18 | MXTQDP | $61,608 |
| 450 | 1200 | 575 | B587LL | 6100 | 4506QDSC41A-R | 450 | 96.2 | 2, 6, 18 | MXTQDP | $61,608 |
| 450 | 900 | 460 | B587LL | 6000 | 4508QDSB41A-R | 632 | 95.0 | 2, 18 | MXTQDP | $71,456 |
| 450 | 900 | 575 | B587LL | 6000 | 4508QDSC41A-R | 516 | 95.0 | 2, 18 | MXTQDP | $71,456 |
| 450 | 900 | 460 | 5810UZ | 6000 | F4508FLF4BMQ | 617 | 95.4 | 2 | MXTQDP | $73,289 |
| 450 | 900 | 575 | 5810UZ | 6093 | F4508FLF4OMQ | 543 | 95.0 | 2 | MXTQDP | $73,289 |
| 500 | 1800 | 460 | B587LL | 6000 | 5004QDSB41A-R | 557 | 96.2 | 2, 6, 18 | MXTQDP | $58,843 |
| 500 | 1800 | 575 | B587LL | 6000 | 5004QDSC41A-R | 470 | 96.2 | 2, 6, 18 | MXTQDP | $58,843 |
| 500 | 1200 | 460 | B587LL | 6200 | 5006QDSB41A-R | 635 | 96.2 | 2, 6, 18 | MXTQDP | $68,625 |
| 500 | 1200 | 575 | B587LL | 6200 | 5006QDSC41A-R | 502 | 96.2 | 2, 6,18 | MXTQDP | $68,625 |
| 600 | 1800 | 460 | B587LL | 6100 | 6004QDSB31A-R | 709 | | 2, 18 | MXTQDP | $62,667 |
| 600 | 1800 | 575 | B587LL | 6100 | 6004QDSC31A-R | 568 | | 2, 18 | MXTQDP | $62,667 |
| 600 | 1200 | 460 | B587LL | 6250 | 6006QDSB31A-R | 773 | | 2, 18 | MXTQDP | $79,918 |
| 600 | 1200 | 575 | B587LL | 6250 | 6006QDSC31A-R | 614 | | 2, 18 | MXTQDP | $79,918 |
| 700 | 1800 | 460 | B587LL | 6300 | 7004QDSB31A-R | 829 | | 2, 18 | MXTQDP | $74,520 |
| 700 | 1800 | 575 | B587LL | 6300 | 7004QDSC31A-R | 660 | | 2, 18 | MXTQDP | $74,520 |
| 750 | 1800 | 460 | B587LL | 6300 | 7504QDSB31A-R | 898 | | 2, 3, 18, 20 | MXTQDP | $77,500 |
| 750 | 1800 | 575 | B587LL | 6300 | 7504QDSC31A-R | 713 | | 2, 3, 18, 20 | MXTQDP | $77,500 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Definite Purpose Series

## Totally Enclosed Fan Cooled EQP Global® Brake Motors

Toshiba's EQP Global® Brake Motor series combines robust design and premium construction to meet the demands of holding-duty brake applications. Equipped with an IP55 rating, it shields against moisture and contaminants, making it ideal for severe environments. A corrosion-resistant paint system enhances durability. Whether used horizontally or vertically, this motor delivers exceptional performance and reliability in demanding applications.

**Standard Features:**

- Totally Enclosed Fan Cooled
- Holding Duty
- NEMA Premium® Efficiency
- 60 Hz: 230/460 or 575 V
- 50 Hz: 190/380 V
- Three-Phase
- Dual Frequency 50/ 60 Hz Design
- 1.15 Service Factor
- Class F Insulation; Inverter Duty, Exceeds NEMA MG1 Part 31
- IP55 Protection
- All Cast Iron Construction
- Multi-Mount Capabilities on Most Frames (See Appendix C)
- V-Ring Seal on Drive End
- Brake Ratings 15 lb. ft. and Below Suitable for Vertical Mounting
- See Appendix D for ASD Capabilities
- Non-USMCA Qualified

**Brake Options:**

- Solenoid Actuated Spring-Set Brakes
- Multiple Options for Brake Voltages
- Manual Release Lever on Rear of Brake Housing
- Wear Adjustment
- Static Torque Ratings from 3 to 125 lb. ft.
- Spring-Kits for 210 Frame and Larger Vertical Mountings

**Applications:**

- Conveyors
- Gear Reducers
- Material Handling
- Baggage Handling
- Carousels & Palletizing
- Holding Applications
- Packaging
- Door Operators
- Machine Tool



# Totally Enclosed Fan Cooled
## EQP Global® Brake
### NEMA Premium® Efficiency



CC027B

**Product Scope:**

| | |
|---|---|
| **Horsepower:** | 0.75 to 30 HP |
| **Speed (60 Hz) (50 Hz):** | 1800 or 1200 RPM 1500 or 1000 RPM |
| **Volt (60 Hz) (50 Hz):** | 230/460 or 575 V 190/380 V |
| **Enclosure:** | Totally Enclosed Fan Cooled |
| **Frame Size:** | 143T through 286T |
| **Construction:** | All Cast Iron |
| **Insulation:** | Class F Inverter Duty, Exceeds NEMA MG1 Part 31 (Voltage Withstand Capability of 2000 V in 0.1 µs) |
| **Brake Coil Voltage:** | Matches Motor Voltage |

**3 THREE YEAR WARRANTY**

| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.75 | 1200 | 230/460 | 143T | 66 | 3/46SDBA41A-P | 2.8/1.4 | 80.0 | 1, 9, 15, 18 | MTPBRK | $1,997 |
| 0.75 | 1200 | 575 | 143T | 66 | 3/46SDBC41A-P | .9 | 81.5 | 1, 15, 18 | MTPBRK | $1,998 |
| 1 | 1800 | 230/460 | 143T | 66 | 0014SDBA41A-P | 3.4/1.7 | 85.5 | 1, 9, 15, 18 | MTPBRK | $1,914 |
| 1 | 1800 | 575 | 143T | 66 | 0014SDBC41A-P | 1.2 | 85.5 | 1, 15, 18 | MTPBRK | $1,914 |
| 1 | 1200 | 230/460 | 145T | 75 | 0016SDBA41A-P | 3.6/1.8 | 82.5 | 1, 9, 15, 18 | MTPBRK | $2,126 |
| 1 | 1200 | 575 | 145T | 75 | 0016SDBC41A-P | 1.5 | 82.5 | 1, 15, 18 | MTPBRK | $2,126 |
| 1.5 | 1800 | 230/460 | 145T | 70 | Y154SDBA41A-P | 4.8/2.4 | 86.5 | 1, 9, 15, 18 | MTPBRK | $2,060 |
| 1.5 | 1800 | 575 | 145T | 70 | Y154SDBC41A-P | 1.9 | 86.5 | 1, 15, 18 | MTPBRK | $2,060 |
| 1.5 | 1200 | 230/460 | 182T | 94 | Y156SDBA41A-P | 5.0/2.5 | 87.5 | 1, 9, 15, 18 | MTPBRK | $2,165 |
| 1.5 | 1200 | 575 | 182T | 94 | Y156SDBC41A-P | 2.0 | 87.5 | 1, 15, 18 | MTPBRK | $2,165 |
| 2 | 1800 | 230/460 | 145T | 74 | 0024SDBA41A-P | 6.0/3.0 | 86.5 | 1, 9, 15, 18 | MTPBRK | $2,104 |
| 2 | 1800 | 575 | 145T | 74 | 0024SDBC41A-P | 2.4 | 86.5 | 1, 15, 18 | MTPBRK | $2,104 |
| 2 | 1200 | 230/460 | 184T | 113 | 0026SDBA41A-P | 6.8/3.4 | 88.5 | 1, 9, 15, 18 | MTPBRK | $2,563 |
| 2 | 1200 | 575 | 184T | 113 | 0026SDBC41A-P | 2.7 | 88.5 | 1, 15, 18 | MTPBRK | $2,563 |
| 3 | 1800 | 230/460 | 182T | 110 | 0034SDBA41A-P | 8.0/4.0 | 89.5 | 1, 9, 15, 18 | MTPBRK | $2,486 |
| 3 | 1800 | 575 | 182T | 110 | 0034SDBC41A-P | 3.2 | 89.5 | 1, 15, 18 | MTPBRK | $2,486 |
| 3 | 1200 | 230/460 | 213T | 189 | 0036SDBA41A-P | 8.8/4.4 | 89.5 | 1, 9, 18 | MTPBRK | $4,406 |
| 3 | 1200 | 575 | 213T | 189 | 0036SDBC41A-P | 3.5 | 89.5 | 1, 18 | MTPBRK | $4,406 |
| 5 | 1800 | 230/460 | 184T | 115 | 0054SDBA41A-P | 13.0/6.5 | 89.5 | 1, 9, 15, 18 | MTPBRK | $2,576 |
| 5 | 1800 | 575 | 184T | 115 | 0054SDBC41A-P | 5.1 | 89.5 | 1, 15, 18 | MTPBRK | $2,576 |
| 5 | 1200 | 230/460 | 215T | 206 | 0056SDBA41A-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPBRK | $4,832 |
| 5 | 1200 | 575 | 215T | 206 | 0056SDBC41A-P | 5.5 | 89.5 | 1, 18 | MTPBRK | $4,832 |
| 7.5 | 1800 | 230/460 | 213T | 217 | Y754SDBA41A-P | 19.6/9.8 | 91.7 | 1, 9, 18 | MTPBRK | $4,539 |
| 7.5 | 1800 | 575 | 213T | 217 | Y754SDBC41A-P | 7.7 | 91.7 | 1, 18 | MTPBRK | $4,539 |
| 7.5 | 1200 | 230/460 | 254T | 254 | Y756SDBA41A-P | 20.4/10.2 | 91.0 | 1, 9, 18 | MTPBRK | $5,768 |
| 7.5 | 1200 | 575 | 254T | 254 | Y756SDBC41A-P | 8.2 | 91.0 | 1, 18 | MTPBRK | $5,768 |
| 10 | 1800 | 230/460 | 215T | 232 | 0104SDBA41A-P | 26/13 | 91.7 | 1, 9, 18 | MTPBRK | $5,264 |
| 10 | 1800 | 575 | 215T | 232 | 0104SDBC41A-P | 10.1 | 91.7 | 1, 18 | MTPBRK | $5,264 |

# Totally Enclosed Fan Cooled

## EQP Global® Brake

### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 1200 | 230/460 | 256T | 327 | 0106SDBA41A-P | 26.8/13.4 | 91.0 | 1, 9, 18 | MTPBRK | $7,060 |
| 10 | 1200 | 575 | 256T | 327 | 0106SDBC41A-P | 10.8 | 91.0 | 1, 18 | MTPBRK | $7,060 |
| 15 | 1800 | 230/460 | 254T | 310 | 0154SDBA41A-P | 38/19 | 92.4 | 1, 9, 18 | MTPBRK | $6,606 |
| 15 | 1800 | 575 | 254T | 310 | 0154SDBC41A-P | 15.2 | 92.4 | 1, 18 | MTPBRK | $6,606 |
| 15 | 1200 | 230/460 | 284T | 408 | 0156SDBA41A-P | 39.2/19.6 | 91.7 | 1, 9, 18 | MTPBRK | $9,479 |
| 15 | 1200 | 575 | 284T | 408 | 0156SDBC41A-P | 15.8 | 91.7 | 1, 18 | MTPBRK | $9,479 |
| 20 | 1800 | 230/460 | 256T | 433 | 0204SDBA41A-P | 50/25 | 93.0 | 1, 9, 18 | MTPBRK | $8,557 |
| 20 | 1800 | 575 | 256T | 433 | 0204SDBC41A-P | 20 | 93.0 | 1, 18 | MTPBRK | $8,557 |
| 20 | 1200 | 230/460 | 286T | 650 | 0206SDBA41A-P | 50.8/25.4 | 91.7 | 1, 9, 18 | MTPBRK | $13,048 |
| 20 | 1200 | 575 | 286T | 650 | 0206SDBC41A-P | 20 | 91.7 | 1, 18 | MTPBRK | $13,048 |
| 25 | 1800 | 230/460 | 284T | 471 | 0254SDBA41A-P | 61/30.5 | 93.6 | 1, 9, 18 | MTPBRK | $10,150 |
| 25 | 1800 | 575 | 284T | 471 | 0254SDBC41A-P | 24 | 93.6 | 1, 18 | MTPBRK | $10,150 |
| 30 | 1800 | 230/460 | 286T | 635 | 0304SDBA41A-P | 72.8/36.4 | 93.6 | 1, 9, 18 | MTPBRK | $12,573 |
| 30 | 1800 | 575 | 286T | 635 | 0304SDBC41A-P | 29 | 93.6 | 1, 18 | MTPBRK | $12,573 |

# Totally Enclosed Fan Cooled
## EQP Global® Brake
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| **C-Face Footed** | | | | | | | | | | |
| 0.75 | 1200 | 230/460 | 143TC | 64 | 3/46SDBA42A-P | 2.8/1.4 | 80.0 | 1, 9, 15, 16, 18 | MTPBRK | $2,057 |
| 0.75 | 1200 | 575 | 143TC | 64 | 3/46SDBC42A-P | .9 | 81.5 | 1, 15, 16, 18 | MTPBRK | $2,058 |
| 1 | 1800 | 230/460 | 143TC | 74 | 0014SDBA42A-P | 3.4/1.7 | 85.5 | 1, 9, 15, 16, 18 | MTPBRK | $1,971 |
| 1 | 1800 | 575 | 143TC | 74 | 0014SDBC42A-P | 1.2 | 85.5 | 1, 15, 16, 18 | MTPBRK | $1,971 |
| 1 | 1200 | 230/460 | 145TC | 69 | 0016SDBA42A-P | 3.6/1.8 | 82.5 | 1, 9, 15, 16, 18 | MTPBRK | $2,190 |
| 1 | 1200 | 575 | 145TC | 69 | 0016SDBC42A-P | 1.5 | 82.5 | 1, 15, 16, 18 | MTPBRK | $2,190 |
| 1.5 | 1800 | 230/460 | 145TC | 69 | Y154SDBA42A-P | 4.8/2.4 | 86.5 | 1, 9, 15, 16, 18 | MTPBRK | $2,122 |
| 1.5 | 1800 | 575 | 145TC | 69 | Y154SDBC42A-P | 1.9 | 86.5 | 1, 15, 16, 18 | MTPBRK | $2,122 |
| 1.5 | 1200 | 230/460 | 182TC | 92 | Y156SDBA42A-P | 5.0/2.5 | 87.5 | 1, 9, 15, 16, 18 | MTPBRK | $2,230 |
| 1.5 | 1200 | 575 | 182TC | 92 | Y156SDBC42A-P | 2.0 | 87.5 | 1, 15, 16, 18 | MTPBRK | $2,230 |
| 2 | 1800 | 230/460 | 145TC | 74 | 0024SDBA42A-P | 6.0/3.0 | 86.5 | 1, 9, 15, 16, 18 | MTPBRK | $2,167 |
| 2 | 1800 | 575 | 145TC | 74 | 0024SDBC42A-P | 2.4 | 86.5 | 1, 15, 16, 18 | MTPBRK | $2,167 |
| 2 | 1200 | 230/460 | 184TC | 107 | 0026SDBA42A-P | 6.8/3.4 | 88.5 | 1, 9, 15, 16, 18 | MTPBRK | $2,640 |
| 2 | 1200 | 575 | 184TC | 107 | 0026SDBC42A-P | 2.7 | 88.5 | 1, 15, 16, 18 | MTPBRK | $2,640 |
| 3 | 1800 | 230/460 | 182TC | 136 | 0034SDBA42A-P | 8.0/4.0 | 89.5 | 1, 9, 15, 16, 18 | MTPBRK | $2,561 |
| 3 | 1800 | 575 | 182TC | 136 | 0034SDBC42A-P | 3.2 | 89.5 | 1, 15, 16, 18 | MTPBRK | $2,561 |
| 3 | 1200 | 230/460 | 213TC | 184 | 0036SDBA42A-P | 8.8/4.4 | 89.5 | 1, 9, 16, 18 | MTPBRK | $4,538 |
| 3 | 1200 | 575 | 213TC | 184 | 0036SDBC42A-P | 3.5 | 89.5 | 1, 16, 18 | MTPBRK | $4,538 |
| 5 | 1800 | 230/460 | 184TC | 115 | 0054SDBA42A-P | 13.0/6.5 | 89.5 | 1, 9, 15, 16, 18 | MTPBRK | $2,653 |
| 5 | 1800 | 575 | 184TC | 115 | 0054SDBC42A-P | 5.1 | 89.5 | 1, 15, 16, 18 | MTPBRK | $2,653 |
| 5 | 1200 | 230/460 | 215TC | 206 | 0056SDBA42A-P | 13.8/6.9 | 89.5 | 1, 9, 16, 18 | MTPBRK | $4,977 |
| 5 | 1200 | 575 | 215TC | 206 | 0056SDBC42A-P | 5.5 | 89.5 | 1, 16, 18 | MTPBRK | $4,977 |
| 7.5 | 1800 | 230/460 | 213TC | 272 | Y754SDBA42A-P | 19.6/9.8 | 91.7 | 1, 9, 16, 18 | MTPBRK | $4,675 |
| 7.5 | 1800 | 575 | 213TC | 272 | Y754SDBC42A-P | 7.7 | 91.7 | 1, 16, 18 | MTPBRK | $4,675 |
| 7.5 | 1200 | 230/460 | 254TC | 272 | Y756SDBA42A-P | 20.4/10.2 | 91.0 | 1, 9, 16, 18 | MTPBRK | $5,941 |
| 7.5 | 1200 | 575 | 254TC | 272 | Y756SDBC42A-P | 8.2 | 91.0 | 1, 16, 18 | MTPBRK | $5,941 |
| 10 | 1800 | 230/460 | 215TC | 227 | 0104SDBA42A-P | 26/13 | 91.7 | 1, 9, 16, 18 | MTPBRK | $5,422 |
| 10 | 1800 | 575 | 215TC | 227 | 0104SDBC42A-P | 10.1 | 91.7 | 1, 16, 18 | MTPBRK | $5,422 |
| 10 | 1200 | 230/460 | 256TC | 352 | 0106SDBA42A-P | 26.8/13.4 | 91.0 | 1, 9, 16, 18 | MTPBRK | $7,272 |
| 10 | 1200 | 575 | 256TC | 352 | 0106SDBC42A-P | 10.8 | 91.0 | 1, 16, 18 | MTPBRK | $7,272 |
| 15 | 1800 | 230/460 | 254TC | 402 | 0154SDBA42A-P | 38/19 | 92.4 | 1, 9, 16, 18 | MTPBRK | $6,804 |
| 15 | 1800 | 575 | 254TC | 402 | 0154SDBC42A-P | 15.2 | 92.4 | 1, 16, 18 | MTPBRK | $6,804 |
| 15 | 1200 | 230/460 | 284TC | 408 | 0156SDBA42A-P | 39.2/19.6 | 91.7 | 1, 9, 18 | MTPBRK | $9,763 |
| 15 | 1200 | 575 | 284TC | 408 | 0156SDBC42A-P | 15.8 | 91.7 | 1, 18 | MTPBRK | $9,763 |
| 20 | 1800 | 230/460 | 256TC | 330 | 0204SDBA42A-P | 50/25 | 93.0 | 1, 9, 16, 18 | MTPBRK | $8,814 |
| 20 | 1800 | 575 | 256TC | 330 | 0204SDBC42A-P | 20 | 93.0 | 1, 16, 18 | MTPBRK | $8,814 |
| 20 | 1200 | 230/460 | 286TC | 650 | 0206SDBA42A-P | 50.8/25.4 | 91.7 | 1, 9, 18 | MTPBRK | $13,439 |
| 20 | 1200 | 575 | 286TC | 650 | 0206SDBC42A-P | 20 | 91.7 | 1, 18 | MTPBRK | $13,439 |
| 25 | 1800 | 230/460 | 284TC | 489 | 0254SDBA42A-P | 61/30.5 | 93.6 | 1, 9, 18 | MTPBRK | $10,455 |
| 25 | 1800 | 575 | 284TC | 489 | 0254SDBC42A-P | 24 | 93.6 | 1, 18 | MTPBRK | $10,455 |
| 30 | 1800 | 230/460 | 286TC | 560 | 0304SDBA42A-P | 72.8/36.4 | 93.6 | 1, 9, 18 | MTPBRK | $12,950 |
| 30 | 1800 | 575 | 286TC | 560 | 0304SDBC42A-P | 29 | 93.6 | 1, 18 | MTPBRK | $12,950 |
| **C-Face Footless** | | | | | | | | | | |
| 0.75 | 1200 | 230/460 | 143TC | 64 | 3/46SDBA44A-P | 2.8/1.4 | 80.0 | 1, 9, 15, 18 | MTPBRK | $2,097 |
| 0.75 | 1200 | 575 | 143TC | 64 | 3/46SDBC44A-P | .9 | 81.5 | 1, 15, 18 | MTPBRK | $2,098 |
| 1 | 1800 | 230/460 | 143TC | 74 | 0014SDBA44A-P | 3.4/1.7 | 85.5 | 1, 9, 15, 18 | MTPBRK | $2,010 |
| 1 | 1800 | 575 | 143TC | 74 | 0014SDBC44A-P | 1.2 | 85.5 | 1, 15, 18 | MTPBRK | $2,010 |

# Totally Enclosed Fan Cooled
## EQP Global® Brake
### NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1200 | 230/460 | 145TC | 69 | 0016SDBA44A-P | 3.6/1.8 | 82.5 | 1, 9, 15, 18 | MTPBRK | $2,232 |
| 1 | 1200 | 575 | 145TC | 69 | 0016SDBC44A-P | 1.5 | 82.5 | 1, 15, 18 | MTPBRK | $2,232 |
| 1.5 | 1800 | 230/460 | 145TC | 69 | Y154SDBA44A-P | 4.8/2.4 | 86.5 | 1, 9, 15, 18 | MTPBRK | $2,163 |
| 1.5 | 1800 | 575 | 145TC | 69 | Y154SDBC44A-P | 1.9 | 86.5 | 1, 15, 18 | MTPBRK | $2,163 |
| 1.5 | 1200 | 230/460 | 182TC | 92 | Y156SDBA44A-P | 5.0/2.5 | 87.5 | 1, 9, 15, 18 | MTPBRK | $2,273 |
| 1.5 | 1200 | 575 | 182TC | 92 | Y156SDBC44A-P | 2.0 | 87.5 | 1, 15, 18 | MTPBRK | $2,273 |
| 2 | 1800 | 230/460 | 145TC | 74 | 0024SDBA44A-P | 6.0/3.0 | 86.5 | 1, 9, 15, 18 | MTPBRK | $2,209 |
| 2 | 1800 | 575 | 145TC | 74 | 0024SDBC44A-P | 2.4 | 86.5 | 1, 15, 18 | MTPBRK | $2,209 |
| 2 | 1200 | 230/460 | 184TC | 107 | 0026SDBA44A-P | 6.8/3.4 | 88.5 | 1, 9, 15, 18 | MTPBRK | $2,691 |
| 2 | 1200 | 575 | 184TC | 107 | 0026SDBC44A-P | 2.7 | 88.5 | 1, 15, 18 | MTPBRK | $2,691 |
| 3 | 1800 | 230/460 | 182TC | 136 | 0034SDBA44A-P | 8.0/4.0 | 89.5 | 1, 9, 15, 18 | MTPBRK | $2,610 |
| 3 | 1800 | 575 | 182TC | 136 | 0034SDBC44A-P | 3.2 | 89.5 | 1, 15, 18 | MTPBRK | $2,610 |
| 3 | 1200 | 230/460 | 213TC | 184 | 0036SDBA44A-P | 8.8/4.4 | 89.5 | 1, 9, 18 | MTPBRK | $4,626 |
| 3 | 1200 | 575 | 213TC | 184 | 0036SDBC44A-P | 3.5 | 89.5 | 1, 18 | MTPBRK | $4,626 |
| 5 | 1800 | 230/460 | 184TC | 115 | 0054SDBA44A-P | 13.0/6.5 | 89.5 | 1, 9, 15, 18 | MTPBRK | $2,705 |
| 5 | 1800 | 575 | 184TC | 115 | 0054SDBC44A-P | 5.1 | 89.5 | 1, 15, 18 | MTPBRK | $2,705 |
| 5 | 1200 | 230/460 | 215TC | 206 | 0056SDBA44A-P | 13.8/6.9 | 89.5 | 1, 9, 18 | MTPBRK | $5,074 |
| 5 | 1200 | 575 | 215TC | 206 | 0056SDBC44A-P | 5.5 | 89.5 | 1, 18 | MTPBRK | $5,074 |
| 7.5 | 1800 | 230/460 | 213TC | 272 | Y754SDBA44A-P | 19.6/9.8 | 91.7 | 1, 9, 18 | MTPBRK | $4,766 |
| 7.5 | 1800 | 575 | 213TC | 272 | Y754SDBC44A-P | 7.7 | 91.7 | 1, 18 | MTPBRK | $4,766 |
| 7.5 | 1200 | 230/460 | 254TC | 272 | Y756SDBA44A-P | 20.4/10.2 | 91.0 | 1, 9, 18 | MTPBRK | $6,056 |
| 7.5 | 1200 | 575 | 254TC | 272 | Y756SDBC44A-P | 8.2 | 91.0 | 1, 18 | MTPBRK | $6,056 |
| 10 | 1800 | 230/460 | 215TC | 227 | 0104SDBA44A-P | 26/13 | 91.7 | 1, 9, 18 | MTPBRK | $5,527 |
| 10 | 1800 | 575 | 215TC | 227 | 0104SDBC44A-P | 10.1 | 91.7 | 1, 18 | MTPBRK | $5,527 |
| 10 | 1200 | 230/460 | 256TC | 352 | 0106SDBA44A-P | 26.8/13.4 | 91.0 | 1, 9, 18 | MTPBRK | $7,413 |
| 10 | 1200 | 575 | 256TC | 352 | 0106SDBC44A-P | 10.8 | 91.0 | 1, 18 | MTPBRK | $7,413 |
| 15 | 1800 | 230/460 | 254TC | 402 | 0154SDBA44A-P | 38/19 | 92.4 | 1, 9, 18 | MTPBRK | $6,936 |
| 15 | 1800 | 575 | 254TC | 402 | 0154SDBC44A-P | 15.2 | 92.4 | 1, 18 | MTPBRK | $6,936 |
| 15 | 1200 | 230/460 | 284TC | 408 | 0156SDBA44A-P | 39.2/19.6 | 91.7 | 1, 9, 18 | MTPBRK | $9,953 |
| 15 | 1200 | 575 | 284TC | 408 | 0156SDBC44A-P | 15.8 | 91.7 | 1, 18 | MTPBRK | $9,953 |
| 20 | 1800 | 230/460 | 256TC | 330 | 0204SDBA44A-P | 50/25 | 93.0 | 1, 9, 18 | MTPBRK | $8,985 |
| 20 | 1800 | 575 | 256TC | 330 | 0204SDBC44A-P | 20 | 93.0 | 1, 18 | MTPBRK | $8,985 |
| 20 | 1200 | 230/460 | 286TC | 650 | 0206SDBA44A-P | 50.8/25.4 | 91.7 | 1, 9, 18 | MTPBRK | $13,700 |
| 20 | 1200 | 575 | 286TC | 650 | 0206SDBC44A-P | 20 | 91.7 | 1, 18 | MTPBRK | $13,700 |
| 25 | 1800 | 230/460 | 284TC | 489 | 0254SDBA44A-P | 61/30.5 | 93.6 | 1, 9, 18 | MTPBRK | $10,658 |
| 25 | 1800 | 575 | 284TC | 489 | 0254SDBC44A-P | 24 | 93.6 | 1, 18 | MTPBRK | $10,658 |
| 30 | 1800 | 230/460 | 286TC | 560 | 0304SDBA44A-P | 72.8/36.4 | 93.6 | 1, 9, 18 | MTPBRK | $13,202 |
| 30 | 1800 | 575 | 286TC | 560 | 0304SDBC44A-P | 29 | 93.6 | 1, 18 | MTPBRK | $13,202 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.

# Low Voltage Modifications

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### Handling Charge

The handling charge outlined below will be applied to each motor undergoing modifications, in addition to the requested modification costs.

| Option | | Handling Charge |
|---|---|---|
| Frame | 56/143/145 | $241 |
| | 182/184 | $241 |
| | 213/215 | $284 |
| | 254/256 | $284 |
| | 284/286 | $383 |
| | 324/326 | $383 |
| | 364/365 | $438 |
| | 404/405 | $728 |
| | 444/445 | $837 |
| | 447 | $837 |
| | 449/500 | $837 |
| | 5000/5800 | $1,065 |

To determine the total net price for modifications, first calculate the motor's net price by applying the appropriate discount to the motor's list price. Next, determine the modification's net price by adding the handling charge to the listed modification prices and then applying the MTRMOD discount. Finally, sum the motor's net price and the modification's net price to arrive at the total net price.

**Consult factory for modification availability on EQP Global IEC, EQP Global Brake, and EQP Global Cooling Tower products.**

## Altitude

Standard designs are built for operation up to 3,300 ft. (1000 m) above sea level at a maximum ambient temperature of 40°C. Altitudes over 3,300 ft. may affect frame size. Please contact Toshiba to confirm.

## Ambient Temperature

Toshiba motors are designed to operate in an ambient temperature range between -25° and 40°C (-13°F and 104°F). For operation in temperatures above or below the standard, contact Toshiba.

**Special Notes:**

- Non-standard ambient temperatures may affect frame size and insulation class. Please contact Toshiba to confirm.
- Maximum ambient for explosion proof motors when operated on adjustable speed drives is 50°C.

## Bearings

Special bearings and designs are available on a production basis. Standard bearings can be changed for specific application requirements. The following list additions apply.

### Sealed/Shielded Bearings

Open and totally enclosed general purpose motors on 250T frame and smaller contain shielded non-regreasable bearings as standard. Contact Toshiba to determine actual stock design bearing information.

| Option | | Sealed Bearings |
|---|---|---|
| Frame | 143/145 | $219 |
| | 182/184 | $219 |
| | 213/215 | $273 |
| | 254/256 | $273 |
| | 284/286 | $328 |
| | 324/326 | $328 |
| | 364/365 | $514 |
| | 404/405 | $820 |
| | 444/445 | $875 |
| | 447 | — |
| | 449/500 | — |
| | 5000/5800 | — |

**Special Notes:**

- Bearings are lubed for life and cannot be regreased.
- Shielded non-regreasable bearings come standard on all 140 through 250 frame motors, except for all 841 products.

### Insulated Bearings

Insulated bearings are typically applied in applications where shaft current concerns exist (i.e. applications involving the use of adjustable speed drives). Insulating the bearings helps to prevent electrical arcing (bearing fluting) and potential premature bearing failure.

Pricing below is for insulating the bearings on both end bells.

| Option | | Insulating Ball Bearings | Insulating Roller |
|---|---|---|---|
| Frame | 143/145 | $1,476 | — |
| | 182/184 | $2,122 | — |
| | 213/215 | $2,516 | — |
| | 254/256 | $2,892 | — |
| | 284/286 | $3,292 | — |
| | 324/326 | $3,359 | — |
| | 364/365 | $3,380 | — |
| | 404/405 | $3,609 | $6,978 (1) |
| | 444/445 | $3,938 | $7,289 (1) |
| | 447 | $3,938 | $7,289 (1) |
| | 449/500 | $4,375 | $7,960 (1) |
| | 5000 | $6,016 | $11,474 (1) |
| | 5800 | $6,525 | $12,500 (1) |

(1) Contact Toshiba for delivery. Availability of bearings may vary.

**Special Notes:**

- Insulating the bearings is recommended when shaft voltage exceeds 300 mV.
- It is up to the user to determine when insulated bearings are required, especially with the use of inverter-fed control. NEMA MG1 Part 31 suggests insulating the bearing(s) on all motors in 500 series frames and larger when inverter-fed.
- Toshiba suggests insulating both bearings on all frame sizes 440 and larger when used with adjustable speed drives.
- When insulated bearings are used on direct-coupled applications, the use of an insulated coupling and/or a shaft grounding brush is required in order to reduce the risk of driven equipment bearing damage. Grounding brushes are not suitable for Division 2 environments.
- Insulated bearings are not available on angular contact bearing construction.
- If bearing thermal devices are required with insulated bearings, a special version of the thermal device will be required. Contact Toshiba for availability and price of this thermal device.
- Hybrid (ceramic ball) bearings are utilized for frames 140-250. Insocoat bearings are utilized for frames 280 and above.

### Change Bearings

Cylindrical roller bearings are used in horizontal motors where high radial loads are present for an improved L-10 life, i.e. belted applications. Ball bearings are to be used in coupled applications.

| Option | | Roller Bearings | Ball Bearings |
|---|---|---|---|
| Frame | 143/145 | — | — |
| | 182/184 | — | — |
| | 213/215 | — | — |
| | 254/256 | $708 | — |
| | 284/286 | $926 | — |
| | 324/326 | $1,025 | — |
| | 364/365 | $1,090 | — |
| | 404/405 | $1,199 | — |
| | 444/445 | $1,550 | $1,225 |
| | 447 | $1,550 | $1,225 |
| | 449/500 | $1,775 | $1,435 |
| | 5000/5800 | — | $1,615 |

**Special Notes:**

- This is applicable only for 1800 RPM motors and slower.
- Roller bearing requests require that full belting/application details be provided prior to order acceptance.
- Adders above not available on explosion-proof product.
- Cast iron inner bearing cap required for roller bearings. All 841, 840 280 frame and larger, SD 400 frame and larger have cast iron bearing cap.

## Blowers

Toshiba motors are suitable for use with inverter-fed controllers. Turndown capability is a function of the product selected. See individual product page for specific information. When turndown requirements exceed product capability, the use of an auxiliary blower is required. Contact Toshiba for help with determining whether a blower is required for an application.

The National Electrical Code 430.126 (a)(4) requires that motors with external forced ventilation must have a form of thermal protection. See "Thermal Protection" section for the addition of thermal protection. This addition is not included in the blower adder.

| Option | | Blower |
|---|---|---|
| Frame | 143/145 | $2,189 |
| | 182/184 | $2,328 |
| | 213/215 | $2,571 |
| | 254/256 | $2,730 |
| | 284/286 | $3,137 |
| | 324/326 | $3,585 |
| | 364/365 | $4,553 |
| | 404/405 | $5,679 |
| | 444/445 | $6,995 |
| | 447 | $6,995 |
| | 449/500 | $7,279 |
| | 5010 | $7,618 |
| | 5810 | $18,125 |
| | 5011/5811 | Contact Toshiba |

**Special Notes:**

- Adders above are not available on explosion proof product.
- Blower standard voltages are as follows:
  - » 140 through 280 frames—single-phase 230 to 330 V and three-phase 230 to 330/400 to 575 V
  - » 320 through 449T frames—three-phase 230 to 330/400 to 575 V
  - » 500 frame and larger – three-phase 460 or 575 V (specify at time of order)
- Contact Toshiba for applications requiring line voltages over 575 V.
- Blowers are not suitable for Division 2 applications. Contact Toshiba for availability in Division 2 applications.

## Conduit Box Modifications

Toshiba's standard main conduit box on all motors is located in the F1 position, with the exception of oil well pump motors that have the main box located in the F2 position.

### Auxiliary Terminal Box

Termination of protective or monitoring devices can be provided in a separate auxiliary box (280T frame and larger) or a condulet mounted off the main terminal box (250T frame and below). All auxiliary boxes are mounted on the same side as the main terminal box unless otherwise specified.

| Option | | Condulet | Auxiliary Cast Iron Box |
|---|---|---|---|
| Frame | 56/143/145 | $383 | — |
| | 182/184 | $383 | — |
| | 213/215 | $383 | — |
| | 254/256 | $383 | — |
| | 284/286 | $450 | $766 |
| | 324/326 | $450 | $766 |
| | 364/365 | $450 | $766 |
| | 404/405 | — | $766 |
| | 444/445 | — | $766 |
| | 447 | — | $766 |
| | 449/500 | — | $766 |
| | 5000/5800 | — | $766 |

**Special Notes:**

- Adders above are not available on explosion proof product.
- Auxiliary conduit box is provided as standard with stator RTD adder on all motors.

### Cast Iron Main Box

Cast iron conduit boxes come standard on all explosion proof, EQP Global, and Quarry Duty products.

| Option | | Cast Iron Main Box |
|---|---|---|
| Frame | 56/143/145 | $123 |
| | 182/184 | $123 |
| | 213/215 | $149 |
| | 254/256 | $149 |
| | 284/286 | $219 |
| | 324/326 | $219 |
| | 364/365 | $328 |
| | 404/405 | $328 |
| | 444/445 | $602 |
| | 447 | $602 |
| | 449/500 | $656 |
| | 5000/5800 | $1,094 |

## Location

All motors are provided with the main terminal box in the F1 position, with the exception of oil well pump motors that have the main box located in the F2 position. For conduit box location in the F2 position, see adder below.

| Option | | F2 (Stock Modifications) | |
|---|---|---|---|
| | | ODP | TEFC |
| Frame | 56/143/145 | $65 | $65 |
| | 182/184 | $65 | $65 |
| | 213/215 | $95 | $95 |
| | 254/256 | $95 | $95 |
| | 284/286 | $110 | $110 |
| | 324/326 | $110 | $110 |
| | 364/365 | $165 | $165 |
| | 404/405 | $220 | $220 |
| | 444/445 | $330 | N/A |
| | S444/445 | — | $330 |
| | 447 | $330 | N/A |
| | S445/447 | — | $330 |
| | 449 | Production Only | $400 |
| | 505/507 | $400 | N/A |
| | N587 | — | $400 |
| | 5000/5800 | Production Only | $400 |

**Special Notes:**

- Not all motors are modifiable to F2 assembly.

## Remote-Mount Conduit Box

For applications requiring that the conduit box be located away from the motor, Toshiba is able to supply a remote-mount conduit box. The conduit box will be supplied with the main motor, but it will arrive unfastened. It includes a main terminal box and a threaded mounting plate on the motor and the conduit box.

| Option | | Cast Iron Conduit Box |
|---|---|---|
| Frame | 56/143/145 | $219 |
| | 182/184 | $219 |
| | 213/215 | $273 |
| | 254/256 | $273 |
| | 284/286 | $438 |
| | 324/326 | $438 |
| | 364/365 | $656 |
| | 404/405 | $656 |
| | 444/445 | $1,094 |
| | 447 | $1,094 |
| | 449/500 | $1,313 |
| | 5000/5800 | $1,750 |

**Special Note:**

- Adders above are not available on explosion proof product.
- Special motor lead length is not available.

## Couplings & Sheaves Mounted

Couplings and V-belt sheaves must be supplied (finished bored, balanced, and key-seated) to Toshiba's shaft dimensions before they can be mounted to the motor. An incoming identification number must be obtained from Toshiba, and coupling must be shipped at least three weeks in advance before scheduled motor shipment and must include the manufacturer's mounting instructions.

| Option | | Customer-Supplied Sheave/Coupling |
|---|---|---|
| Frame | 143/145 | $656 |
| | 182/184 | $656 |
| | 213/215 | $766 |
| | 254/256 | $875 |
| | 284/286 | $875 |
| | 324/326 | $875 |
| | 364/365 | $984 |
| | 404/405 | $984 |
| | 444/445 | $1,500 |
| | 447 | $2,100 |
| | 449/500 | $2,600 |
| | 5000/5800 | $2,750 |

**Special Note:**

- Incoming parts without a proper Toshiba identification number will not be accepted and will be instead returned to sender.

## Documentation

See "Software" modifications section.

## Dowel Pin Provisions

Dowel pin holes will be provided on both sides of the motor drive end. These are provided to ensure motor alignment is maintained after the motor is installed.

| Option | | Two Per Motor |
|---|---|---|
| Frame | 143/145 | $547 |
| | 182/184 | $547 |
| | 213/215 | $547 |
| | 254/256 | $656 |
| | 284/286 | $656 |
| | 324/326 | $766 |
| | 364/365 | $766 |
| | 404/405 | $930 |
| | 444/445 | $930 |
| | 447 | $984 |
| | 449/500 | $1,094 |
| | 5000/5800 | $1,313 |

**Special Note:**

- This feature comes as standard on TEFC frames S/B447/449, 5011, 5811, Durabull 5009/10/11 and 5809/10/11.

# Drains & Breathers

Standard horizontally-mounted totally enclosed fan cooled and open motors are provided with drain holes. Drain holes are located at the lowest point on the motor.

## Breathers

| Option | | Standard Breather (1) | UL Stainless Breather (2) | Standard Breather Conduit Box (3) |
|---|---|---|---|---|
| Frame | 56/143/145 | $219 | $273 | $273 |
| | 182/184 | $219 | $273 | $273 |
| | 213/215 | $219 | $273 | $273 |
| | 254/256 | $328 | $383 | $383 |
| | 284/286 | $328 | $383 | $383 |
| | 324/326 | $328 | $383 | $383 |
| | 364/365 | $328 | $438 | $438 |
| | 404/405 | $328 | $438 | $438 |
| | 444/445 | $328 | $438 | $438 |
| | 447 | $328 | $438 | $438 |
| | 449/500 | $328 | $438 | $438 |
| | 5000/5800 | $328 | $438 | $438 |

(1) EQP Global 840 and 841 440 frames and below motors have tapped holes fitted with stainless steel T-drains located at the lowest point in the face of each bearing bracket or on the lowest point of the frame. 500 frames and above have dual tapped holes fitted with automatic bronze drain and breathers as standard.
(2) Explosion proof motors have UL-listed stainless steel drain and breathers as standard (for horizontal-mounting only).
(3) Standard and stainless breathers are available for cast conduit boxes only (not available on explosion proof motors).

**Special Notes:**
- Additional breathers are not available on explosion proof product.

## Additional Drain Holes

| Option | | Drain Hole | Drain Hole Conduit Box (1) | Stainless T-Drain | Stainless T-Drain Conduit Box |
|---|---|---|---|---|---|
| Frame | 56/143/145 | $131 | $131 | $219 | $219 |
| | 182/184 | $131 | $131 | $219 | $219 |
| | 213/215 | $131 | $131 | $219 | $219 |
| | 254/256 | $131 | $131 | $328 | $328 |
| | 284/286 | $131 | $131 | $328 | $328 |
| | 324/326 | $131 | $131 | $328 | $328 |
| | 364/365 | $131 | $131 | $328 | $328 |
| | 404/405 | $131 | $131 | $328 | $328 |
| | 444/445 | $131 | $131 | $328 | $328 |
| | 447 | $131 | $131 | $328 | $328 |
| | 449/500 | $131 | $131 | $328 | $328 |
| | 5000/5800 | $131 | $131 | $328 | $328 |

(1) Conduit box drain holes are available on cast conduit boxes only.

**Special Notes:**
- Above adders not available on explosion proof product.
- All EQP Global® products are provided with additional plugged drain provisions in each bearing bracket for vertical mounting configurations. Plugs must be removed for proper drainage of moisture.

# Drip Covers

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. Standard drip covers are of fabricated steel ⅜" with lip.

| Option | | Drip Cover |
|---|---|---|
| Frame | 56/143/145 | $103 |
| | 182/184 | $114 |
| | 213/215 | $145 |
| | 254/256 | $208 |
| | 284/286 | $260 |
| | 324/326 | $341 |
| | 364/365 | $388 |
| | 404/405 | $445 |
| | 444/445 | $510 |
| | 447 | $510 |
| | 449/500 | $659 |
| | 5010/5800 | $963 |

**Special Notes:**
- The drip cover adder does not include vertical lifting provisions.
- Vertical lifting provisions available on all EQP Global® round body motors. See Vertical lifting provisions in "Stock" Modification Section.

# Enclosures

This section refers to additional specifications used to define the motor's enclosure. These adders may be required in order to provide a necessary additional degree of protection for normal operation in certain environments.

## Marine Duty

EQP 840 and 841 products through 449T frame are nameplated IEEE45 Marine Duty as standard for below deck application.

| Option | | Above Deck (1) | Below Deck (2) |
|---|---|---|---|
| Frame | 143/145 | $383 | — |
| | 182/184 | $383 | — |
| | 213/215 | $405 | — |
| | 254/256 | $438 | — |
| | 284/286 | $645 | — |
| | 324/326 | $700 | — |
| | 364/365 | $853 | — |
| | 404/405 | $1,083 | — |
| | 444/445 | $1,291 | — |
| | 447 | $1,542 | — |
| | 449/500 | $1,542 | $131 |
| | 5000/5800 | $1,914 | $131 |

(1) In the above-deck applications, the adder includes space heaters with leads terminating in the main terminal box and tropicalization in accordance with IEEE 45 requirements.
  - » IP56 Degree of protection is required
  - » Not available on EQP Global 840, 280 frames and below

(2) In the below-deck applications only, the nameplate changes.

## Classified-Class II Zone/Division 2 Locations

This modification is for applications which require motors to be installed in Class II Division 2 hazardous zones. Once modified, the motors will be certified for Class II Division 2, Groups F&G, T3B. Group E is not available.

| Option | | SD | 840 | 841 |
|---|---|---|---|---|
| Frame | 143/145 | Coming Soon | | |
| | 182/184 | | | |
| | 213/215 | | | |
| | 254/256 | | | |
| | 284/286 | | | |
| | 324/326 | | | |
| | 364/365 | | | |
| | 404/405 | | | |
| | 444/445 | | | |
| | 447 | | | |
| | 449/500 | | | |
| | 5000/5800 | | | |

**Special Note:**

- Motors will retain the original Class I Division 2 certification. Refer to Division 2 capabilities from Appendix D.
- Once modified, motors will no longer carry CSA certification.
- Motors may not be modified with shaft grounding devices (i.e. rings, brushes) in conjuction with this modification.

## Export Crating

Toshiba provides packaging options for different shipping requirements. Options include standard commercial packaging (for common, below-deck transport on ships) and containerized shipping. Both options are available at a net price of 8% of the motor's total sell price or a minimum of $350, whichever is greater.

## Fan Covers

Cast Iron fan covers are available for totally enclosed fan cooled enclosures.

| Option | | Cast Iron Fan Cover (1) |
|---|---|---|
| Frame | 56/143/145 | $90 |
| | 182/184 | $110 |
| | 213/215 | $140 |
| | 254/256 | $180 |
| | 284/286 | $260 |
| | 324/326 | $300 |
| | 364/365 | $485 |
| | 404/405 | $640 |
| | 444/445 | $1000 |
| | 447 | $1,500 |
| | 449 | $2,200 |
| | 500 | Contact Toshiba |
| | 5000/5800 | Contact Toshiba |

(1) This feature is standard on EQP Global 840, EQP Global 841, and Explosion Proof Motors.

## Flange-Mounting

Flanges can be ordered through production and are also available as kits. Contact Field Service for Spare Part Kits.

### Open Drip-Proof Motors

| Option | | C-Face Footed (1) |
|---|---|---|
| Frame | 143/145 | $208 (2) |
| | 182/184 | $236 (2) |
| | 213/215 | $295 |
| | 254/256 | $295 |
| | 284/286 | $438 |
| | 324/326 | $481 |
| | 364/365 | $875 |
| | 404/405 | $1,094 |
| | 444/445 | $1,586 |
| | 447 | $1,695 |
| | 449/500 | — |
| | 5000/5800 | — |

(1) Motors do not meet NEMA BA dimensions.

(2) Adders above are not available on EQPIII Open Drip-Proof product.

### Totally Enclosed Fan Cooled Motors

| Option | | C-Face Footed | | |
|---|---|---|---|---|
| | | SD | 840 | 841 |
| Frame | 56/143/145 | $168 (1,2) | $168 (1,2) | $329 (1,2) |
| | 182/184 | $277 (1,2) | $277 (1,2) | $352 (1,2) |
| | 213/215 | $277 (1,2) | $277 (1,2) | $411 (1,2) |
| | 254/256 | $406 (1,2) | $406 (1,2) | $462 (1,2) |
| | 284/286 | $451 | $451 | $664 |
| | 324/326 | $740 | $740 | $913 |
| | 364/365 | $1,113 | $1,113 | $1,237 |
| | 404/405 | $1,382 | $1,728 | $1,728 |
| | 444/445 | $1,765 | $1,977 | $1,977 |
| | 447 | $1,765 | $1,977 | $1,977 |
| | 449 | $2,207 | $2,472 | $2,472 |
| | 5000/5800 | $2,880 | $2,880 | - |

Base motors must have ball bearings on DE.

(1) Motors do not meet NEMA BA dimensions

(2) NEMA BA dimensions are available in Stock Catalog part numbers.

| Option | | D-Flange Footed | | |
|---|---|---|---|---|
| | | SD | 840 | 841 |
| Frame | 213/215 | $357 | $357 | $422 |
| | 254/256 | $480 | $480 | $581 |
| | 284/286 | $722 | $722 | $824 |
| | 324/326 | $886 | $886 | $1,123 |
| | 364/365 | $1,138 | $1,138 | $1,424 |
| | 404/405 | $2,026 | $2,399 | $2,399 |
| | 444/445 | $2,297 | $2,573 | $2,573 |
| | 447 | $2,297 | $2,573 | $2,573 |
| | 449 | $2,734 | $3,062 | $3,062 |
| | 5000/5800 | $3,740 | $3,740 | -- |

Base motors must have ball bearings on DE.

### Totally Enclosed Explosion Proof

| Option | | C-Face Footed |
|---|---|---|
| Frame | 143/145 | $241 (1) |
| | 182/184 | $273 (1) |
| | 213/215 | $328 (1) |
| | 254/256 | $438 (1) |
| | 284/286 | $766 |
| | 324/326 | $875 |
| | 364/365 | $984 |
| | 404/405 | — |
| | 444/445 | — |
| | 447 | — |
| | 449/500 | — |
| | 5000/5800 | — |

(1) Motors do not meet NEMA BA dimensions.

## Grounding Provisions

All motor frames 140T through 5800 have a CSA clamp-type grounding lug in the conduit box. All EQPIII/Global 840 and 841 motors are provided with a UL-approved clamp-type grounding lug in the conduit box.

### External Grounding Provisions on Motor Frame (Base)

All Global 841 motors have an additional grounding provision on the motor base as standard. The grounding provisions on the motor base are ¼" - 20" UNC tap for frames 140T through 250T, ⅜" - 16" UNC tap on frames 280T through 447T, and ½" - 13" UNC for frames larger than 447T.

| Option | | Base Grounding |
|---|---|---|
| Frame | 56/ 143/145 | $219 |
| | 182/184 | $219 |
| | 213/215 | $219 |
| | 254/256 | $219 |
| | 284/286 | $219 |
| | 324/326 | $219 |
| | 360 | $219 |
| | 364/365 | $219 |
| | 404/405 | $219 |
| | 444/445 | $219 |
| | 447 | $219 |
| | 449/500 | $219 |
| | 5000/5800 | $219 |

**Special Note:**

- External grounding provisions are available for explosion proof product but must be used as a supplementary ground connection in conjunction to the main equipment ground provision provided in the main terminal box.

### External Grounding Pad on Motor Frame

Apply the adder below for a special ground pad with two holes mounted on the motor frame. When placing the order, the hole and tap size must be provided.

| Option | | Frame Grounding |
|---|---|---|
| Frame | 56/ 143/145 | — |
| | 182/184 | — |
| | 213/215 | — |
| | 254/256 | — |
| | 284/286 | — |
| | 324/326 | $1,641 |
| | 364/365 | $1,641 |
| | 404/405 | $1,641 |
| | 444/445 | $1,641 |
| | 447 | $1,641 |
| | 449/500 | $1,641 |
| | 5000/5800 | $1,641 |

**Special Note:**

- Adders above are not available on explosion proof product.

## Hardware

Standard hardware is non-corrosive zinc dichromate. Stainless hardware fasteners (holding brackets, conduit box, fan cover, and inner caps) are available. Toshiba standard stainless hardware is 304 unless specified otherwise.

| Option | | 304 SS Hardware | 316 SS Hardware |
|---|---|---|---|
| Frame | 143/145 | $328 | $438 |
| | 182/184 | $328 | $438 |
| | 213/215 | $383 | $492 |
| | 254/256 | $438 | $547 |
| | 284/286 | $438 | $547 |
| | 324/326 | $711 | $875 |
| | 364/365 | $766 | $875 |
| | 404/405 | $875 | $1,094 |
| | 444/445 | $930 | $1,148 |
| | 447 | $984 | $1,203 |
| | 449/500 | $984 | $1,313 |
| | 5000/5800 | $1,094 | $1,531 |

**Special Note:**

- Adders above are not available on explosion proof product.
- Adders are not available on quarry duty product.

## Insulation Modifications

Insulation systems are divided into classes according to the thermal endurance by temperature rating. Standard motor insulation comes non-hygroscopic Class F (utilizing Class H components) and is dipped and baked in a Class H varnish. Unusual or severe applications may require special insulation systems or winding protection.

### Tropicalized Coating on Motor Windings and Internal Surface

This adder provides additional insulation coating as well as corrosion protection for all internal machined surfaces.

| Option | | Tropicalized Coating |
|---|---|---|
| Frame | 56/143/145 | $164 |
| | 182/184 | $164 |
| | 213/215 | $219 |
| | 254/256 | $328 |
| | 284/286 | $547 |
| | 324/326 | $766 |
| | 364/365 | $875 |
| | 404/405 | $1,203 |
| | 444/445 | $1,641 |
| | 447 | $2,406 |
| | 449/500 | $2,406 |
| | 5000/5800 | $2,734 |

**Special Note:**

- This comes standard on all 840 and all 841 motors.

### Fungus-Proof Coating on Motor Windings

Unwanted fungi may break down a motor's insulation system over time. The addition of the fungus-proof adder will protect motor windings from this type of problem.

| Option | | Fungus-Proof Coating |
|---|---|---|
| Frame | 56/143/145 | $109 |
| | 182/184 | $109 |
| | 213/215 | $164 |
| | 254/256 | $219 |
| | 284/286 | $328 |
| | 324/326 | $438 |
| | 364/365 | $547 |
| | 404/405 | $711 |
| | 444/445 | $930 |
| | 447 | $1,203 |
| | 449/500 | $1,203 |
| | 5000/5800 | $1,531 |

## Lead Terminals

Crimp-type lead lugs/ring terminals come standard on motors as follows:

1. 210 frame and larger on all EQP Global 840 products
2. All EQP Global 841 products
3. All other frames 280 and larger motors

### Crimp Lead Terminals

| Option | | Crimp |
|---|---|---|
| Frame | 56/143/145 | $109 |
| | 182/184 | $109 |
| | 213/215 | $153 |
| | 254/256 | $153 |
| | 284/286 | — |
| | 324/326 | — |
| | 364/365 | — |
| | 404/405 | — |
| | 444/445 | — |
| | 447 | — |
| | 449/500 | — |
| | 5000/5800 | — |

### Burndy Lugs/Two-Hole Terminals

| Option | | Burndy |
|---|---|---|
| Frame | 56/143/145 | — |
| | 182/184 | — |
| | 213/215 | — |
| | 254/256 | — |
| | 284/286 | $744 |
| | 324/326 | $744 |
| | 364/365 | $744 |
| | 404/405 | $744 |
| | 444/445 | $744 |
| | 447 | $744 |
| | 449/500 | $744 |
| | 5000/5800 | $744 |

## Lubrication

All bearings in motors with Class F insulation will be furnished with a lubricant that is capable of operating in ambient temperatures between –25˚ and 65˚C. Please note that it is not recommended to mix greases of different bases. The mixing of different types of thickeners may destroy the composition and physical properties of the grease.

### High Temperature Grease

This adder is for applications in which the ambient temperature is greater than 65˚C.

| Option | | High Temp. Grease |
|---|---|---|
| Frame | 143/145 | $109 |
| | 182/184 | $109 |
| | 213/215 | $109 |
| | 254/256 | $109 |
| | 284/286 | $109 |
| | 324/326 | $273 |
| | 364/365 | $273 |
| | 404/405 | $273 |
| | 444/445 | $273 |
| | 447 | $273 |
| | 449/500 | $273 |
| | 5000/5800 | $273 |

### Low Temperature Grease

This adder is for applications in which the ambient temperature ranges from -25˚ to -40˚C.

| Option | | Low Temp. Grease |
|---|---|---|
| Frame | 56/143/145 | $109 (1) |
| | 182/184 | $109 (1) |
| | 213/215 | $109 (1) |
| | 254/256 | $109 (1) |
| | 284/286 | $109 |
| | 324/326 | $273 |
| | 364/365 | $273 |
| | 404/405 | $273 |
| | 444/445 | $273 |
| | 447 | $273 |
| | 449/500 | $273 |
| | 5000/5800 | $273 |

(1) All sealed bearing design motors come standard with lithium-based grease, suitable for -40°C ambient.

**Special Note:**

- Not suitable for explosion proof motors.

### Special-Based Grease

This adder is for applications in which the customer specifies a grease other than the Toshiba standard. For other specific grease, contact Toshiba.

## Nameplate(s)

Standard nameplates are 304-grade stainless steel with engraved lettering. Additional nameplates for remote mounting and special markings are available. For requests other than what is listed below, contact Toshiba.

### Duplicate or Special Nameplate

| Option | | Re-Nameplate | Duplicate Nameplate | Special ID Tag |
|---|---|---|---|---|
| Frame | 56/143/145 | $150 | $150 | $150 |
| | 182/184 | $150 | $150 | $150 |
| | 213/215 | $150 | $150 | $150 |
| | 254/256 | $150 | $150 | $150 |
| | 284/286 | $150 | $150 | $150 |
| | 324/326 | $150 | $150 | $150 |
| | 364/365 | $150 | $150 | $150 |
| | 404/405 | $150 | $150 | $150 |
| | 444/445 | $150 | $150 | $150 |
| | 447 | $150 | $150 | $150 |
| | 449/500 | $150 | $150 | $150 |
| | 5000/5800 | $150 | $150 | $150 |

## Screens

Corrosion-resistant screens covering air inlets and outlets of open drip-proof motors are available. Motors equipped with screens will meet the NEMA guarded definition.

### Screens to an Open Drip-Proof Motor

| Option | | Corrosion-Resistant | Stainless Steel |
|---|---|---|---|
| Frame | 143/145 | $219 | $273 |
| | 182/184 | $273 | $328 |
| | 213/215 | $306 | $361 |
| | 254/256 | $361 | $416 |
| | 284/286 | $383 | $438 |
| | 324/326 | $438 | $547 |
| | 364/365 | $547 | $766 |
| | 404/405 | $766 | $1,094 |
| | 444/445 | $820 | $1,203 |
| | 447 | $875 | $1,258 |
| | 449/500 | $875 | $1,258 |
| | 5000/5800 | $1,094 | $1,641 |

**Special Note:**

- Corrosion-resistant screens come standard on oil well pump motors.

## Service Factor

Standard stock motors are designed for a 1.15 service factor unless otherwise noted. Higher service factors are available if requested. Inquiries for service factors above 1.15 should be submitted to Toshiba for review. In certain cases, a higher service factor will require an increase in frame size or a special design.

## Shaft Grounding Provisions

Shaft grounding provisions help to eliminate shaft currents that can be introduced into the motor through upstream controllers (i.e.: adjustable speed drives). These currents can potentially lead to premature failure of the bearings, commonly referred to as “fluting.”

| Option | | Shaft Grounding Brush | Aegis Grounding Ring (1) |
|---|---|---|---|
| Frame | 143/145 | - | $182 |
| | 182/184 | - | $208 |
| | 213/215 | - | $236 |
| | 254/256 | $1,367 | $290 |
| | 284/286 | $1,367 | $344 |
| | 324/326 | $1,477 | $398 |
| | 364/365 | $1,641 | $404 |
| | 404/405TS | $1,805 | $597 |
| | 404/405T | $1,805 | $798 |
| | 444/445TS | $2,187 | $861 |
| | 444/445T | $2,187 | $1,097 |
| | 447/449TS | $2,187 | $861 |
| | 447/449T | $2,187 | $1,097 |
| | 500 | $2,187 | $1,097 |
| | 5000/5800 | $2,734 | $1,486 |

(1) For motors with a c-flange, the shaft grounding ring to be installed on the opposite drive end.

**Special Notes:**

- Adders above do not include insulated bearings.
- Adders above are not available on explosion proof product.
- Insulating the bearings is recommended when the shaft voltage exceeds 300 mV.
- It is up to the user to determine when insulated bearings are required, especially with the use of an inverter-fed control. NEMA MG1 Part 31 suggests insulating the bearing(s) on all motors in 500 series frames and larger that are inverter-fed.
- Shaft grounding rings may be used to divert the current around the bearing with the use of Inverter-fed control.
- Toshiba recommends the non-drive end bearing be insulated on all frame sizes 440 and larger, when used with adjustable speed drives.
- Insulated bearings are not available on angular contact bearing construction.
- Where insulated bearings are used on direct coupled applications the use of insulated coupling and/or shaft grounding brush is required to reduce the risk of driven equipment bearing damage.
  - » Shaft grounding provisions are not suitable for Division 2 environments.
  - » Division 2 suitability will be removed from the stock motor nameplate.
- Contact Toshiba for availability and price.
- Adders above are suitable for drive end and non-drive end Installation.

## Software: Engineering Data

**Stock Modified**

Upon request, Toshiba provides a standard data package for stock motors, at no charge. In addition, for stock modified motors, Toshiba will provide the following standard data package at no additional charge only if specified at the time of order: base general arrangement drawing, speed-torque and speed-current curve (at 100% rated voltage), nameplate data, performance data, connection diagram, instruction and maintenance manual, and spare bearings parts list.

Above data will be sent out in electronic format. If hard copy information is required, see the adder below. For software other than what is listed above or that is specified after time of order, see table below.

**Prices below are NET adders per option.**

| Software | Price |
|---|---|
| Toshiba Standard Software Package After Acknowledgement (1) | $75 |
| Non-Standard Speed-Torque & Speed-Current Curve | $75 |
| Non-Standard Thermal Damage (Safe Stall Time) Curve | $75 |
| Non-Standard Performance Curve | $75 |
| Torsional Data (2) | $100 |
| Non-Standard Dimensional Print | $75 |
| Certificate of Compliance | $75 |
| First Page of Customer Supplied Data Sheet (3) | $55 |
| Additional Pages of Customer Supplied Data Sheet (3) | $40 |
| One Hard Copy of Standard Software Package | $30 |
| Express Shipping of Hard Copy of Standard Software Package | Standard Shipping Rates Apply |
| Other Special Request | Contact Toshiba |

(1) This adder applies only if it is specified after the order has been entered and acknowledged.

(2) This adder will include shaft drawing, rotor assembly inertia, and shaft torsional stiffness values.

(3) This adder pertains to typical Toshiba performance data only.

## Space Heaters

Space heaters are strip-type heaters mounted inside the frame near the coils to prevent moisture condensation in the motor during times the motor is not energized. Heater leads are brought out to the motor's main conduit box and marked H1 and H2. Standard heater voltage is 120 V single-phase unless otherwise specified.

| Option | | Standard | Division 2 |
|---|---|---|---|
| Frame | 56/143/145 | $328 | $492 |
| | 182/184 | $328 | $492 |
| | 213/215 | $328 | $492 |
| | 254/256 | $328 | $492 |
| | 284/286 | $481 | $722 |
| | 324/326 | $481 | $722 |
| | 364/365 | $580 | $870 |
| | 404/405 | $700 | $1,050 |
| | 444/445 | $831 | $1,242 |
| | 447 | $941 | $1,412 |
| | 449/500 | $941 | $1,412 |
| | 5000/5800 | $1,148 | $1,722 |

**Special Note:**
- Adders above are not available on explosion proof product.

## Terminal Blocks/Strips

Insulated stud-type terminal blocks/strips can be provided for single-voltage, single-speed applications in the standard conduit box.

| Option | | Terminal Block (1) | Terminal Strip (2) |
|---|---|---|---|
| Frame | 56/143/145 | $339 | $219 |
| | 182/184 | $339 | $219 |
| | 213/215 | $339 | $219 |
| | 254/256 | $339 | $219 |
| | 284/286 | $405 | $219 |
| | 324/326 | $733 | $219 |
| | 364/365 | $733 | $219 |
| | 404/405 | $733 | $219 |
| | 444/445 | $1,589 | $219 |
| | 447 | $1,589 | $219 |
| | 449/500 | $1,805 | $219 |
| | 5000/5800 | $2,527 | $219 |

(1) This adder refers to power leads only.
(2) This adder refers to accessory leads only.

**Special Note:**
- Adders above are not available on explosion proof product.

## Thermal Protection

Toshiba provides a wide variety of protective devices which are available as follows.

### Resistance Temperature Detectors (RTDs)

**Winding (Stator) RTDs –** A set of six (two per phase, three leads) winding RTDs are provided with leads terminated in an auxiliary conduit box. Pricing below does not include readout device(s).

| Option | | Stator RTDs (Copper; 10 Ohm) | Stator RTDs (Platinum; 100 Ohm) | Stator RTDs (Nickel; 120 Ohm) |
|---|---|---|---|---|
| Frame | 143/145 | — | — | — |
| | 182/184 | — | — | — |
| | 213/215 | — | — | — |
| | 254/256 | — | — | — |
| | 284/286 | $4,266 | $4,266 | $4,266 |
| | 324/326 | $4,266 | $4,266 | $4,266 |
| | 364/365 | $4,266 | $4,266 | $4,266 |
| | 404/405 | $4,266 | $4,266 | $4,266 |
| | 444/445 | $4,266 | $4,266 | $4,266 |
| | 447 | $4,266 | $4,266 | $4,266 |
| | 449/500 | $4,266 | $4,266 | $4,266 |
| | 5000/5800 | $4,266 | $4,266 | $4,266 |

**Special Note:**
- Contact Toshiba for pricing on other RTD types.
- This adder is not available on explosion proof motors.
- RTDs will be installed on winding end turns.

**Bearing RTDs –** Pricing includes one RTD per bearing (a total of two RTDs) and a three-lead single element design with leads terminated in separate terminal housings. Pricing below does not include readout device(s).

| Option | | Bearing RTDs (Copper; 10 Ohm) | Bearing RTDs (Platinum; 100 Ohm) | Bearing RTDs (Nickel; 120 Ohm) |
|---|---|---|---|---|
| Frame | S444/445/447, S/B 447/449 | $4,813 | $4,813 | $4,813 |
| | Durabull 5009/10/11 | $4,813 | $4,813 | $4,813 |
| | Durabull 5809/10/11 | $4,813 | $4,813 | $4,813 |

**Special Note:**
- Frames S444/445/447, S/B 447/449, Durabull 5009/10/11 and 5809/10/11 have Bearing RTD provisions as standard.
- This horizontal Bearing RTD/Vibration Transmitter Provision is for single use of a vibration monitoring device or a three-lead single element bearing protective device.

## Thermostats (Klixons)

Toshiba's standard offering includes a normally-closed (NC), bi-metallic, temperature actuated element mounted on the stator winding. Leads are marked P1 and P2. Termination of the leads is in the main conduit box. Special thermostats are available upon request. Contact Toshiba for pricing and availability.

| Option | | Klixons NC | Klixons NO | Hermetically Sealed (1) |
|---|---|---|---|---|
| Frame | 56/143/145 | $164 | $219 | $328 |
| | 182/184 | $164 | $219 | $328 |
| | 213/215 | $164 | $219 | $328 |
| | 254/256 | $164 | $219 | $328 |
| | 284/286 | $164 | $219 | $328 |
| | 324/326 | $230 | $328 | $459 |
| | 364/365 | $230 | $328 | $459 |
| | 404/405 | $328 | $438 | $656 |
| | 444/445 | $328 | $438 | $656 |
| | 447 | $405 | $547 | $809 |
| | 449/500 | $405 | $547 | $809 |
| | 5000/5800 | $438 | $656 | $875 |

(1) Hermetically Sealed must be used for Div 2 environments, otherwise Div 2 statement will be removed from the nameplate.

## Winding PTC Thermistors

Non-linear resistance temperature detectors are mounted on the motor winding. This thermal protection consists of three thermistors only or three thermistors with a solid state control relay. The provided control relay is intended for mounting in a remote location.

| Option | | Mark A (PTC) Thermistor | Mark A (PTC) Thermistor & Module |
|---|---|---|---|
| Frame | 56/143/145 | $328 | $1,367 |
| | 182/184 | $328 | $1,367 |
| | 213/215 | $328 | $1,367 |
| | 254/256 | $328 | $1,367 |
| | 284/286 | $328 | $1,367 |
| | 324/326 | $328 | $1,367 |
| | 364/365 | $328 | $1,367 |
| | 404/405 | $328 | $1,367 |
| | 444/445 | $328 | $1,367 |
| | 447 | $328 | $1,367 |
| | 449/500 | $328 | $1,367 |
| | 5000/5800 | $328 | $1,367 |

**Special Note:**

- Adders above are not available for stock modification on explosion proof product.
- Thermistors will be installed on winding end turns.

## Vertical Jacking Provisions

Vertical jacking is used to assist in the proper alignment of the motor shaft with the driven equipment for shimming purposes. Provisions for four jacking bolts (one per foot) are provided. Jacking bolts are to be supplied by the customer.

| Option | | Vertical Jacking |
|---|---|---|
| Frame | 143/145 | $545 |
| | 182/184 | $545 |
| | 213/215 | $650 |
| | 254/256 | $650 |
| | 284/286 | $780 |
| | 324/326 | $875 |
| | 364/365 | $875 |
| | 404/405 | $984 |
| | 444/445 | $984 |
| | 447 | $984 |
| | 449/500 | $1,203 |
| | 5000/5800 | $1,203 |

**Special Note:**

- This adder comes standard on 404/405, S444/445/447 and S/B447/449, Durabull 5009/10/11 and 5809/10/11.

## Vertical Lifting Provisions

This modification provides vertical lifting provisions for standard footless motors that are mounted vertical shaft down only.

| Option | | Vertical Lifting (1) |
|---|---|---|
| Frame | 143/145 | $328 |
| | 182/184 | $394 |
| | 213/215 | $394 |
| | 254/256 | $547 |
| | 284/286 | $547 |
| | 324/326 | $755 |
| | 364/365 | $755 |
| | 404/405 | — |
| | 444/445 | — |
| | 449/500 | — |
| | 5000/5800 | — |

(1) Vertical lifting available on round body EQP Global® footless.

**Special Notes:**

- Above adders are not available on drip proof or explosion proof motors.
- Vertical lifting provisions are standard on cooling tower product.
- It is recommended that if a motor is mounted vertically shaft down, a drip-cover also be provided (See "Drip-Cover" section).

## Vibration Detectors

| Option | | Metrix Accelerometer Sensor Both Ends |
|---|---|---|
| Frame | S444/445/447, S/B447/449 | $7,380 |
| | 5009/10/11 | $7,380 |
| | 5809/10/11 | $7,380 |

**Special Notes:**

- Currently not available as a modification for other frames.
- This horizontal Bearing RTD/Vibration Transmitter Provision is for single use of a vibration monitoring device or a three-lead single element bearing protective device.

# Low Voltage Modifications
## Production Price List

For "Build-to-Order" production motors (frames 140–440), use the list prices shown below. For frames 500 and above, refer to the applicable Stock Motor section of the catalog for list pricing.

To determine the net motor price apply the motor's multiplier symbol. Then, apply the MTRMOD multiplier symbol to determine the net price of the modifications. Add these amounts together to arrive at the "TOTAL NET PRICE."

Contact Toshiba for any potential configured items not listed.

| HP | Speed (RPM) | Frame | SD List | 840 List | 841 List |
|---|---|---|---|---|---|
| | | | MXTFCG | MXT40G | MXT41G |
| 1 | 3600 | 143T | N/A | N/A | N/A |
| 1 | 1800 | 143T | $1,282 | $1,388 | $1,679 |
| 1 | 1200 | 145T | $1,594 | $1,727 | $2,089 |
| 1 | 900 | 182T | $2,054 | $2,227 | $2,524 |
| 1.5 | 3600 | 143T | $1,451 | $1,572 | $1,902 |
| 1.5 | 1800 | 145T | $1,407 | $1,524 | $1,844 |
| 1.5 | 1200 | 182T | $1,702 | $1,843 | $2,230 |
| 1.5 | 900 | 184T | $2,367 | $2,552 | $2,853 |
| 2 | 3600 | 145T | $1,689 | $1,829 | $2,213 |
| 2 | 1800 | 145T | $1,532 | $1,659 | $2,007 |
| 2 | 1200 | 184T | $1,971 | $2,134 | $2,582 |
| 2 | 900 | 213T | $3,120 | $3,363 | $3,760 |
| 3 | 3600 | 182T | $1,870 | $2,025 | $2,451 |
| 3 | 1800 | 182T | $1,716 | $1,858 | $2,249 |
| 3 | 1200 | 213T | $2,275 | $2,464 | $2,981 |
| 3 | 900 | 215T | $3,639 | $3,923 | $4,385 |
| 5 | 3600 | 184T | $1,962 | $2,125 | $2,572 |
| 5 | 1800 | 184T | $1,698 | $1,839 | $2,226 |
| 5 | 1200 | 215T | $2,695 | $2,919 | $3,532 |
| 5 | 900 | 254T | $4,034 | $4,348 | $4,861 |
| 7.5 | 3600 | 213T | $1,999 | $2,165 | $2,620 |
| 7.5 | 1800 | 213T | $1,814 | $1,964 | $2,377 |
| 7.5 | 1200 | 254T | $3,089 | $3,345 | $4,048 |
| 7.5 | 900 | 256T | $5,090 | $5,487 | $6,135 |
| 10 | 3600 | 215T | $2,286 | $2,476 | $2,996 |
| 10 | 1800 | 215T | $2,208 | $2,391 | $2,893 |
| 10 | 1200 | 256T | $3,773 | $4,086 | $4,944 |
| 10 | 900 | 284T | $5,943 | $6,406 | $7,162 |
| 15 | 3600 | 254T | $3,143 | $3,404 | $4,119 |
| 15 | 1800 | 254T | $2,979 | $3,226 | $3,904 |
| 15 | 1200 | 284T | $5,290 | $5,729 | $6,932 |
| 15 | 900 | 286T | $7,735 | $8,338 | $9,322 |
| 20 | 3600 | 256T | $3,878 | $4,200 | $5,082 |
| 20 | 1800 | 256T | $3,680 | $3,985 | $4,822 |
| 20 | 1200 | 286T | $6,195 | $6,709 | $8,118 |
| 20 | 900 | 324T | $9,455 | $10,192 | $11,395 |
| 25 | 3600 | 284TS | $4,995 | $5,410 | $6,546 |

| HP | Speed (RPM) | Frame | SD List | 840 List | 841 List |
|---|---|---|---|---|---|
| | | | MXTFCG | MXT40G | MXT41G |
| 25 | 1800 | 284T | $4,463 | $4,833 | $5,848 |
| 25 | 1200 | 324T | $7,896 | $8,551 | $10,347 |
| 25 | 900 | 326T | $10,994 | $11,851 | $13,250 |
| 30 | 3600 | 286TS | $5,577 | $6,040 | $7,308 |
| 30 | 1800 | 286T | $5,366 | $5,811 | $7,032 |
| 30 | 1200 | 326T | $9,180 | $9,942 | $12,030 |
| 30 | 900 | 364T | $13,011 | $14,026 | $15,681 |
| 40 | 3600 | 324TS | $7,231 | $7,831 | $9,476 |
| 40 | 1800 | 324T | $6,938 | $7,514 | $9,092 |
| 40 | 1200 | 364T | $12,011 | $13,008 | $15,740 |
| 40 | 900 | 365T | $15,735 | $16,962 | $18,964 |
| 50 | 3600 | 326TS | $9,547 | $10,339 | $12,511 |
| 50 | 1800 | 326T | $8,461 | $9,163 | $11,088 |
| 50 | 1200 | 365T | $13,746 | $14,887 | $18,013 |
| 50 | 900 | 404T | $18,800 | $20,266 | $22,613 |
| 60 | 3600 | 364TS | $11,766 | $12,743 | $15,419 |
| 60 | 1800 | 364T | $11,924 | $12,914 | $15,626 |
| 60 | 1200 | 404T | $14,022 | $15,186 | $18,375 |
| 60 | 900 | 405T | $21,475 | $23,150 | $25,882 |
| 75 | 3600 | 365TS | $14,144 | $15,318 | $18,535 |
| 75 | 1800 | 365T | $13,149 | $14,240 | $17,231 |
| 75 | 1200 | 405T | $15,147 | $16,404 | $19,849 |
| 75 | 900 | S444T | $23,270 | $25,248 | $28,157 |
| 100 | 3600 | 405TS | $14,816 | $16,046 | $19,415 |
| 100 | 1800 | 405T | $15,362 | $16,637 | $20,130 |
| 100 | 1200 | S444T | $23,604 | $24,296 | $24,987 |
| 100 | 900 | S445T | $25,658 | $27,839 | $31,046 |
| 125 | 3600 | S44TS | $20,407 | $21,738 | $25,616 |
| 125 | 1800 | S444T | $16,734 | $18,182 | $21,005 |
| 125 | 1200 | S445T | $25,144 | $27,658 | $30,423 |
| 125 | 900 | S447T | $29,486 | $32,435 | $35,679 |
| 150 | 3600 | S445TS | $21,648 | $23,844 | $27,173 |
| 150 | 1800 | S445T | $18,867 | $20,422 | $23,682 |
| 150 | 1200 | S447T | $28,489 | $31,338 | $34,472 |
| 200 | 3600 | S447TS | $26,798 | $28,727 | $33,638 |
| 200 | 1800 | S447T | $22,677 | $24,840 | $28,466 |

**Production modifications not applicable to EQP Global® motors 140 through 440 frame (use production price on page 104).**

# Low Voltage Modifications

## Production Modifications

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## Altitude

Standard designs are built for operation up to 3,300 ft. (1000 m) above sea level at a maximum ambient temperature of 40°C. Altitudes over 3,300 ft. may affect frame size. Please contact Toshiba to confirm.

## Ambient Temperature

Toshiba motors are designed to operate in an ambient temperature range between -25° and 40°C (-13°F and 104°F). For operation in temperatures above or below the standard, contact Toshiba.

**Special Notes:**

- Non-standard ambient temperatures may affect frame size and insulation class. Please contact Toshiba to confirm.
- Maximum ambient for explosion proof motors when operated on adjustable speed drives is 50°C.

## Balance/Vibration

All Toshiba motors are dynamically balanced and measured in accordance with NEMA MG1 standards unless otherwise specified by the design. Toshiba motors all have a standard vibration level of 0.12 inches/second. See adder below for vibration levels lower than the Toshiba standard.

| Option | | Precision 0.08 in/sec. (1, 2) | Special Balance Requirements |
|---|---|---|---|
| Frame | 143/145 | $284 | Contact Toshiba |
| | 182/184 | $284 | |
| | 213/215 | $284 | |
| | 254/256 | $328 | |
| | 284/286 | $328 | |
| | 324/326 | $383 | |
| | 364/365 | $383 | |
| | 404/405 | $492 | |
| | 444/445 | $492 | |
| | 447 | $930 | |
| | 449/500 | $930 (2) | |
| | 5000/5800 | $984 (2) | |
| | 5011/5811 | — | |

(1) This vibration level is standard on all 840 and 841 products.
(2) Contact Toshiba for 3600 RPM (2-pole motors).

## Bases (Slide Bases)

Contact Toshiba.

## Bearings

Special bearings and designs are available on a production basis. Standard bearings can be changed for specific application requirements. The following list additions apply.

## Sealed/Shielded Bearings

Open and totally enclosed general purpose motors on 250T frame and smaller contain shielded or sealed-type, non-regreasable bearings as standard. Contact Toshiba to determine actual stock design bearing information.

| Option | | Sealed Bearings |
|---|---|---|
| Frame | 143/145 | — |
| | 182/184 | — |
| | 213/215 | — |
| | 254/256 | — |
| | 284/286 | $328 |
| | 324/326 | $328 |
| | 364/365 | $514 |
| | 404/405 | $820 |
| | 444/445 | — |
| | 447 | — |
| | 449/500 | — |
| | 5000/5800 | — |

**Special Notes:**

- Bearings are lubricated for life and cannot be regreased.
- Sealed bearings come standard on all 140 through 250 frame motors, except for all 841 products.

## Sleeve Bearings

Contact Low Voltage Motor Application Support for price and availability.

## Insulated Bearings

Insulated bearings are typically applied in applications where shaft current concerns exist (i.e. applications involving the use of adjustable speed drives). Insulating the bearings helps to prevent electrical arcing (bearing fluting) and potential premature bearing failure.

Pricing below is for insulating the bearings on both end bells.

| Option | | Insulating Ball Bearings | Insulating Roller |
|---|---|---|---|
| Frame | 143/145 | $1,476 | — |
| | 182/184 | $2,122 | — |
| | 213/215 | $2,516 | — |
| | 254/256 | $2,892 | — |
| | 284/286 | $3,292 | — |
| | 324/326 | $3,359 | — |
| | 364/365 | $3,380 | — |
| | 404/405 | $3,609 | $6,978 (1) |
| | 444/445 | $3,938 | $7,289 (1) |
| | 447 | $3,938 | $7,289 (1) |
| | 449/500 | $4,375 | $7,960 (1) |
| | 5000 | $6,016 | $11,474 (1) |
| | 5800 | $6,525 | $12,500 (1) |

(1) Contact Toshiba for delivery. Availability of bearings may vary.

**Special Notes:**

- Insulating the bearings is recommended when shaft voltage exceeds 300 mV.
- It is up to the user to determine when insulated bearings are required, especially with the use of inverter-fed control. NEMA MG1 Part 31 suggests insulating the bearing(s) on all motors in 500 series frames and larger when inverter-fed.
- Toshiba suggests insulating both bearings on all frame sizes 440 and larger when used with adjustable speed drives.
- When insulated bearings are used on direct-coupled applications, the use of an insulated coupling and/or a shaft grounding brush is required in order to reduce the risk of driven equipment bearing damage. Grounding brushes are not suitable for Division 2 environments.
- Insulated bearings are not available on angular contact bearing construction.
- If bearing thermal devices are required with insulated bearings, a special version of the thermal device will be required. Contact Toshiba for availability and price of this thermal device.
- Hybrid (ceramic ball) bearings are utilized for frames 140-250. Insocoat bearings are utilized for frames 280 and above.

## Regreasable or Locked Bearings

Regreasable and locked bearings come standard in all 280T frame and larger motors.

| Option | | Regreasable (1) | Locked (2) |
|---|---|---|---|
| Frame | 143/145 | $164 | $164 |
| | 182/184 | $164 | $164 |
| | 213/215 | $219 | $219 |
| | 254/256 | $219 | $219 |
| | 284/286 | Toshiba Standard | Toshiba Standard |
| | 324/326 | | |
| | 364/365 | | |
| | 404/405 | | |
| | 444/445 | | |
| | 447 | | |
| | 449/500 | | |
| | 5000/5800 | | |

(1) This comes standard on all 841 motors.
(2) This comes standard on 280 frame and larger on all 840 motors, and is standard on all 841 motors.

**Special Notes:**

- Adders above are not available on explosion proof product.
- If special end-play tolerances with bearing lock nuts are required, contact Toshiba for pricing.

## Change Bearings

Cylindrical roller bearings are used in horizontal motors where high radial loads are present for an improved L-10 life, i.e. belted applications.

| Option | | Roller Bearings |
|---|---|---|
| Frame | 143/145 | — |
| | 182/184 | — |
| | 213/215 | — |
| | 254/256 | $708 |
| | 284/286 | $926 |
| | 324/326 | $1,025 |
| | 364/365 | $1,090 |
| | 404/405 | $1,199 |
| | 444/445 | (1) |
| | 447 | (1) |
| | 449/500 | (1) |
| | 5000/5800 | (1) |

(1) Roller Bearing standard for belt drive motors.

**Special Notes:**

- This is applicable only for 1800 RPM motors and slower.
- Roller bearing requests require that full belting/application details be provided prior to order acceptance.
- Adders above not available on explosion proof product.

## Blowers

Toshiba motors are suitable for use with inverter-fed controllers. Turndown capability is a function of the product selected. See individual product page for specific information. When turndown requirements exceed product capability, the use of an auxiliary blower is required. Contact Toshiba for help with determining whether a blower is required for an application.

The National Electrical Code 430.126 (A) (4) mandates that motors with external-force ventilation have a form of thermal protection. See “Thermal Protection” section for the addition of thermal protection. This addition is not included in the blower adder.

| Option | | Blower |
|---|---|---|
| Frame | 143/145 | $2,189 |
| | 182/184 | $2,328 |
| | 213/215 | $2,571 |
| | 254/256 | $2,730 |
| | 284/286 | $3,137 |
| | 324/326 | $3,585 |
| | 364/365 | $4,553 |
| | 404/405 | $5,679 |
| | 444/445 | $6,995 |
| | 447 | $6,995 |
| | 449/500 | $7,279 |
| | 5010 | $7,618 |
| | 5810 | $18,125 |
| | 5011/5811 | Contact Toshiba |

**Special Notes:**

- Adders above are not available on explosion proof product.
- Blower standard voltages are as follows:
  - » 140 through 280T frames—single-phase 230 to 330 V and three phase 230 to 330/400 to 575 V
  - » 320 through N449T frames—three-phase 230 to 330/400 to 575 V
  - » 500 frame and larger – three-phase 460 or 575 V (specify at time of order)
- Blowers cannot operate on line voltages over 575 V.
- Contact Toshiba for applications requiring line voltages over 575 V.
- Blowers are not suitable for Division 2 applications. Contact Toshiba for availability in Division 2 applications.

## Brakes

Toshiba offers a brake motor series in up to 280 frame to cover applications with brake needs. Please see the Definite Purpose, Brake Motor section of the catalog. For brake motors above this, please contact Toshiba for availability.

**Special Notes:**

- Brakes are available for Division 1 and Division 2 applications for 140 through 250 frames. Contact Toshiba for price and availability.
- 140 through 180 frames are suitable for vertical mount without modifications.

## Conduit Box Modifications

Toshiba's standard main conduit box on all motors are located in the F1 position, with the exception of oil well pump motors that have the main box located in the F2 position. (See TEFC Top Mount section of catalog for F3.)

### Auxiliary Terminal Box

Termination of protective or monitoring devices can be provided in a separate auxiliary box (280 frame and larger) or a condulet mounted off the main terminal box (250T frame and below). All auxiliary boxes are mounted on the same side as the main terminal box unless otherwise specified.

| Option | | Condulet | Auxiliary Cast Iron Box |
|---|---|---|---|
| Frame | 143/145 | $383 | — |
| | 182/184 | $383 | — |
| | 213/215 | $383 | — |
| | 254/256 | $383 | — |
| | 284/286 | $450 | $766 |
| | 324/326 | $450 | $766 |
| | 364/365 | $450 | $766 |
| | 404/405 | — | $766 |
| | 444/445 | — | $766 |
| | 447 | — | $766 |
| | 449/500 | — | $766 |
| | 5000/5800 | — | $766 |

**Special Notes:**

- Adders above are not available on explosion proof product.
- Auxiliary conduit box is provided as standard with stator RTD adder on all motors.

### Cast Iron Main Box

Cast iron conduit boxes come standard on all Explosion Proof, EQP Global®, and Quarry Duty Products. Cast iron conduit boxes also come standard on 500 frame and larger quarry duty products and all TEFC 5000 frames and above.

### Location

All motors are provided with the main terminal box in the F1 position, with the exception of oil well pump motors that have the main box located in the F2 position. For conduit box location in the F2 position, see adder below.

| Option | | F2 (Production) | F3 (Top-Mount) |
|---|---|---|---|
| Frame | 143/145 | No Change | See TEFC Top Mount Section of Catalog for F3 |
| | 182/184 | | |
| | 213/215 | | |
| | 254/256 | | |
| | 284/286 | | |
| | 324/326 | | |
| | 364/365 | | |
| | 404/405 | | |
| | 444/445 | | |
| | 447 | | |
| | 449/500 | | |
| | 5000/5800 | | |

**Special Notes:**

- Not all motors are field-modifiable to F2 assembly.
- See "Applications" section for F2 field-modifiability.

### Remote-Mount Conduit Box

For applications requiring that the conduit box be located away from the motor, Toshiba is able to supply a remote-mount conduit box. The conduit box will be supplied with the main motor, but will arrive unfastened. The remote-mount conduit box includes a main terminal box and a threaded mounting plate on the motor and the conduit box.

| Option | | Cast Iron Conduit Box |
|---|---|---|
| Frame | 143/145 | $219 |
| | 182/184 | $219 |
| | 213/215 | $273 |
| | 254/256 | $273 |
| | 284/286 | $438 |
| | 324/326 | $438 |
| | 364/365 | $656 |
| | 404/405 | $656 |
| | 444/445 | $1,094 |
| | 447 | $1,094 |
| | 449/500 | $1,313 |
| | 5000/5800 | $1,750 |

**Special Note:**

- Adders above are not available on explosion proof products.
- If special lead lengths are required, please specify motor and accessory lead lengths (if applicable).

## Couplings & Sheaves Mounted

Couplings and V-belt sheaves must be supplied (finished bored, balanced, and key-seated) to Toshiba's shaft dimensions before they can be mounted to a motor. An incoming identification number must be obtained from Toshiba, and coupling must be shipped at least three weeks in advance before scheduled motor shipment, and must include manufacturer's mounting instructions.

| Option | | Customer Supplied Sheave/Coupling |
|---|---|---|
| Frame | 143/145 | $656 |
| | 182/184 | $656 |
| | 213/215 | $766 |
| | 254/256 | $875 |
| | 284/286 | $875 |
| | 324/326 | $875 |
| | 364/365 | $984 |
| | 404/405 | $984 |
| | 444/445 | $1,500 |
| | 447 | $2,100 |
| | 449/500 | $2,600 |
| | 5000/5800 | $2,750 |

**Special Note:**

- Incoming parts without a proper Toshiba identification number will not be accepted and will be returned to sender.

## Current Transformers

See "Surge Protection" modifications section.

## Documentation

See "Software" modifications section.

## Dowel Pin Provisions

Dowel pin holes will be provided on both sides of the motor drive end. These are provided to ensure motor alignment is maintained after the motor is installed.

| Option | | Two Per Motor |
|---|---|---|
| Frame | 143/145 | $547 |
| | 182/184 | $547 |
| | 213/215 | $547 |
| | 254/256 | $656 |
| | 284/286 | $656 |
| | 324/326 | $766 |
| | 364/365 | $766 |
| | 404/405 | $930 |
| | 444/445 | $930 |
| | 447 | $984 |
| | 449/500 | $1,094 |
| | 5000/5800 | $1,313 |

**Special Note:**

- If four holes are required, one on each motor foot, double the above adder.
- This feature comes as standard on TEFC frames S/B447/449, 5011, 5811, Durabull 5009/10/11 and 5809/10/11.

## Drains & Breathers

Standard horizontally-mounted totally enclosed fan cooled and open motors are provided with drain holes. Drain holes are located at the lowest point on the motor.

### Additional Drain Holes

For additional drain hole(s), see adder below.

| Option | | Drain Hole | Drain Hole Conduit Box (1) | Stainless T-Drain | Stainless T-Drain Conduit Box (1) |
|---|---|---|---|---|---|
| Frame | 143/145 | $131 | $131 | $219 | $219 |
| | 182/184 | $131 | $131 | $219 | $219 |
| | 213/215 | $131 | $131 | $219 | $219 |
| | 254/256 | $131 | $131 | $328 | $328 |
| | 284/286 | $131 | $131 | $328 | $328 |
| | 324/326 | $131 | $131 | $328 | $328 |
| | 364/365 | $131 | $131 | $328 | $328 |
| | 404/405 | $131 | $131 | $328 | $328 |
| | 444/445 | $131 | $131 | $328 | $328 |
| | 447 | $131 | $131 | $328 | $328 |
| | 449/500 | $131 | $131 | $328 | $328 |
| | 5000/5800 | $131 | $131 | $328 | $328 |

(1) Conduit box drain holes are available on cast conduit boxes only.

**Special Notes:**

- Adders above are not available on explosion proof products.
- All EQP Global® products are provided with additional plugged drain provisions in each bearing bracket for vertical mounting configurations. Plugs must be removed for proper drainage of moisture.

### Breathers

To request breather(s) be added to a motor, see adder below.

| Option | | Standard Breather (1) | UL Stainless Breather (2) | Standard Breather Conduit Box (3) |
|---|---|---|---|---|
| Frame | 143/145 | $219 | $273 | $273 |
| | 182/184 | $219 | $273 | $273 |
| | 213/215 | $219 | $273 | $273 |
| | 254/256 | $328 | $383 | $383 |
| | 284/286 | $328 | $383 | $383 |
| | 324/326 | $328 | $383 | $383 |
| | 364/365 | $328 | $438 | $438 |
| | 404/405 | $328 | $438 | $438 |
| | 444/445 | $328 | $438 | $438 |
| | 447 | $328 | $438 | $438 |
| | 449/500 | $328 | $438 | $438 |
| | 5000/5800 | $328 | $438 | $438 |

(1) All 840 and all 841 motors are equipped with either an automatic bronze drain and breather or stainless steel T-drains as standard.
(2) Explosion proof motors have UL-listed stainless steel drain and breathers as standard (for horizontal mounting only). For vertical mounting, apply list adder "UL Stainless Breather" located in the lowest point in the bearing bracket.
(3) Standard and stainless breathers are available for cast iron conduit boxes only (not available on explosion proof motors).

**Special Notes:**

- EQP Global® 840 and 841 motors have tapped holes fitted with stainless steel T-drains located at the lowest point in the face of each bearing bracket (140 through 210 frames) or on the lowest point of the frame (250 through 360 frames).
- Additional breathers are not available on explosion proof product for vertical mounting.

## Drip Covers

Drip covers can be furnished on standard TEFC motors for extra protection from dripping liquids and falling objects when the motor is mounted in the vertical shaft-down position. Severe duty drip covers are of fabricated steel ⅜" with lip.

| Option | | Drip Cover |
|---|---|---|
| Frame | 56/143/145 | $103 |
| | 182/184 | $114 |
| | 213/215 | $145 |
| | 254/256 | $208 |
| | 284/286 | $260 |
| | 324/326 | $341 |
| | 364/365 | $388 |
| | 404/405 | $445 |
| | 444/445 | $510 |
| | 447 | $510 |
| | 449/500 | $659 |
| | 5010 | $963 |

**Special Notes:**

- The drip cover adder does not include vertical lifting provisions.
- If lifting provisions are required, see "Vertical Lifting" modifications section.

## Enclosures

This section refers to additional specifications used to define the motor's enclosure. These adders may be required in order to provide a necessary additional degree of protection for normal operation in certain environments.

### Marine Duty

Marine Duty IEEE 45 must be incorporated into an EQP Series 840 or 841 base motor. Please see adders below.

| Option | | IEEE 45 (1) | IEEE 45 (2) |
|---|---|---|---|
| Frame | 143/145 | $383 | Standard on 840 & 841 Products |
| | 182/184 | $383 | |
| | 213/215 | $405 | |
| | 254/256 | $438 | |
| | 284/286 | $645 | |
| | 324/326 | $700 | |
| | 364/365 | $853 | |
| | 404/405 | $1,083 | |
| | 444/445 | $1,291 | |
| | 447 | $1,542 | |
| | 449/500 | $1,542 | |
| | 5000/5800 | $1,914 | |

(1) In above-deck applications the adder includes space heaters with leads terminating in main terminal box and tropicalization in accordance with IEEE 45 requirements.
  » IP56 degree of protection is required

(2) In below-deck applications, the EQP Series product meets requirement as standard.

**Special Note:**

- EQP 840 and EQP 841 products through 449T frame are nameplated IEEE 45 Marine Duty as standard.

### Mill & Chemical Construction

See the General Purpose TEFC EQP Global® 840 sections of the price guide for base motor product meeting this requirement.

### Petro-Chemical Construction

See the General Purpose TEFC EQP Global® 841 sections of the price guide for base motor products meeting this requirement.

### Classified-Division 2 or Zone 2 Locations

Environmental/application conditions may require a special motor design and special labeling of the product to ensure proper protection and/or safety during use. If an environment and/or application has been identified as a Division 2 or Zone 2 location, Toshiba requires that a Class, Group, and Temperature code (T-code) be provided to ensure safe operation in the specified atmosphere. The adder below must be applied to the EQPIII or EQP Global® base motor list price of the proper frame size to meet the temperature code requirement (contact Toshiba for the correct motor sizing).

| Option | | Class I, Division 2 (1) | Class II, Division 2 (2, 3, 4) |
|---|---|---|---|
| Frame | 143/145 | Coming Soon | |
| | 182/184 | | |
| | 213/215 | | |
| | 254/256 | | |
| | 284/286 | | |
| | 324/326 | | |
| | 364/365 | | |
| | 404/405 | | |
| | 444/445 | | |
| | 447 | | |
| | 449/500 | | |
| | 5000/5800 | | |

(1) Refer to Division 2 capabilities from Appendix D.
(2) This must be incorporated into a Global Series product.
(3) CSA certification not available for Class II, Division 2. Class II certification can be made available through special acceptance. Contact Toshiba for pricing and delivery.
(4) Groups F & G, T3B temperature code. Group E not available.

**Special Notes:**

- For Division 1 applications, see "Totally Enclosed Explosion Proof" section of the price guide or contact Toshiba.
- Suitability of Zone 2 application is based on the National Electric Code (NEC).
- Refer to Motor Appendix D for Division 2 reference tables.

## Encoders

Encoders are used to regulate speed on motors linked to variable speed applications, and they are available either face-mounted or shaft-mounted. Toshiba's standard offering is a BEI HS35 (shaft-mount) or Avtron M56 (face-mount). All prices below are based on Pulse Per Revolution (PPR) of 1024 single-output and dual-channel (A & B) quadrature. Encoder type must be specified upon order.

| Option | | NorthStar SL56 (2, 3) | NorthStar HSD38 (1) | NorthStar ISD37 (1, 4) | Avtron AV56 (2, 3) | Avtron HS45 (1) |
|---|---|---|---|---|---|---|
| Frame | 143/145 | $3,391 | $2,406 | $3,281 | $3,391 | $4,310 |
| | 182/184 | $3,391 | $2,406 | $3,281 | $3,391 | $4,310 |
| | 213/215 | $3,391 | $2,406 | $3,281 | $3,391 | $4,310 |
| | 254/256 | $3,391 | $2,406 | $3,281 | $3,391 | $4,310 |
| | 284/286 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |
| | 324/326 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |
| | 364/365 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |
| | 404/405 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |
| | 444/445 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |
| | 447 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |
| | 449/500 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |
| | 5000/5800 | $4,041 | $2,406 | $3,281 | $4,041 | $4,310 |

| Option | | Avtron AV32 (1) | Avtron HS35M (1) | Dynapar HS35 (1) | Dynapar HS20 (1) | BEI HS35 (1) |
|---|---|---|---|---|---|---|
| Frame | 143/145 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 182/184 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 213/215 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 254/256 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 284/286 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 324/326 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 364/365 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 404/405 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 444/445 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 447 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 449/500 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |
| | 5000/5800 | $2,050 | $2,734 | $2,734 | $2,188 | $2,734 |

(1) The encoder is shaft-mounted.
(2) The encoder is face-mounted.
(3) 280 frame and above are for TEAO and TEBC applications only.
(4) This encoder is suitable for Division 2 environments (Groups A, B, C, and D).

**Special Notes:**

- Adders above are not available on explosion proof product.
- For availability on explosion proof product, contact Toshiba.

## Export Crating

Toshiba provides packaging options for different shipping requirements. Options include standard commercial packaging (for common, below-deck transport on ships) and containerized shipping. Both options are available at a net price of 8% of the motor's total sell price or a minimum of $350, whichever is greater.

## Fan Covers

Cast Iron fan covers are available for totally enclosed fan cooled enclosures.

| Option | | Cast Iron Fan Cover (1) |
|---|---|---|
| Frame | 143/145 | $90 |
| | 182/184 | $110 |
| | 213/215 | $140 |
| | 254/256 | $180 |
| | 284/286 | $260 |
| | 324/326 | $300 |
| | 364/365 | $485 |
| | 404/405 | $640 |
| | 444/445 | $1000 |
| | 447 | $1,500 |
| | 449 | $2,200 |
| | 500 | Contact Toshiba |
| | 5000/5800 | Contact Toshiba |

(1) This feature is standard on EQPIII 840, EQPIII 841, EQP Global® 840, EQP Global® 841, and explosion proof motors.

## Flange-Mounting

Flanges can be ordered through production and are also available as kits. Contact Field Service for Spare Part Kits.

### Open Drip-Proof Motors

| Option | | C-Face Footed | D-Flange Footed (1) |
|---|---|---|---|
| Frame | 143/145 | — | — |
| | 182/184 | — | — |
| | 213/215 | — | — |
| | 254/256 | — | — |
| | 284/286 | — | — |
| | 324/326 | — | — |
| | 364/365 | — | $1,695 |
| | 404/405 | $1,094 | $2,078 |
| | 444/445 | $1,586 | $2,297 |
| | 447 | $1,695 | $2,734 |
| | 449/500 | — | $2,734 (2) |
| | 5000/5800 | — | — |

(1) D-flanges are available on 2-pole (3600 RPM) or 4-pole (1800 RPM) short shaft motors only.
(2) 500 frame D-flanges are available with diameters larger than those of short shaft motors. Contact Toshiba for specific availability.

**Special Note:**

- 210 through 440 frames meet NEMA BA dimension for C-flanges.

### Quarry Duty 587 Frame

| | | S587 | B587 |
|---|---|---|---|
| C-Flange (1) | | $1,558 | $1,558 |
| D-Flanges | D25 (2) | $1,908 | N/A |
| | D32 (3) | $2,151 | $2,151 |

**Special Notes:**

(1) C-flange not designed to support motor weight.
(2) D25-Flange: Supports S587 motor weight only, up to 6,000 lbs.
(3) D32-Flange: Supports S587 & B587 motor weight, up to 9,000 lbs.

### Totally Enclosed Explosion Proof Motors

| Option | | C-Face Footed |
|---|---|---|
| Frame | 143/145 | $241 (1) |
| | 182/184 | $273 (1) |
| | 213/215 | $328 (1) |
| | 254/256 | $438 (1) |
| | 284/286 | $766 |
| | 324/326 | $875 |
| | 364/365 | $984 |
| | 404/405 | — |
| | 444/445 | — |
| | 447 | — |
| | 449/500 | — |
| | 5000/5800 | — |

(1) Motors do not meet NEMA BA dimensions.

### Totally Enclosed Fan Cooled Motors

| Option | | C-Face | | | | | |
|---|---|---|---|---|---|---|---|
| | | SD | | 840 | | 841 | |
| | | Footed | Footless | Footed | Footless | Footed | Footless |
| Frame | 56/143/145 | $168 | $270 | $168 | $270 | $329 | $528 |
| | 182/184 | $277 | $463 | $277 | $463 | $352 | $588 |
| | 213/215 | $277 | $463 | $277 | $463 | $411 | $588 |
| | 254/256 | $406 | $540 | $406 | $540 | $462 | $615 |
| | 284/286 | $451 | $529 | $451 | $529 | $664 | $779 |
| | 324/326 | $740 | $1,020 | $740 | $1,020 | $913 | $1,258 |
| | 364/365 | $1,113 | $1,440 | $1,113 | $1,440 | $1,237 | $1,601 |
| | 404/405 | $1,382 | $1,909 | $1,728 | $2,387 | $1,728 | $2,387 |
| | 444/445 | $1,765 | $2,679 | $1,977 | $3,001 | $1,977 | $3,001 |
| | 447 | $1,765 | $2,679 | $1,977 | $3,001 | $1,977 | $3,001 |
| | 449 | $2,207 | $3,384 | $2,472 | $3,790 | $2,472 | $3,790 |
| | 500 | - | - | - | - | - | - |
| | 5000/5800 | $2,880 | - | $2,880 | - | - | - |

These adders do not include drip covers or vertical lifting provisions.

| Option | | D-Flange | | | | | |
|---|---|---|---|---|---|---|---|
| | | SD | | 840 | | 841 | |
| | | Footed | Footless | Footed | Footless | Footed | Footless |
| Frame | 213/215 | $357 | $428 | $357 | $428 | $422 | $506 |
| | 254/256 | $480 | $540 | $480 | $540 | $581 | $653 |
| | 284/286 | $722 | $891 | $722 | $891 | $824 | $1,017 |
| | 324/326 | $886 | $1,022 | $886 | $1,022 | $1,123 | $1,296 |
| | 364/365 | $1,138 | $1,469 | $1,138 | $1,469 | $1,424 | $1,838 |
| | 404/405 | $2,026 | $2,506 | $2,399 | $2,967 | $2,399 | $2,967 |
| | 444/445 | $2,297 | $3,063 | $2,573 | $3,431 | $2,573 | $3,431 |
| | 447 | $2,297 | $3,063 | $2,573 | $3,431 | $2,573 | $3,431 |
| | 449 | $2,734 | $3,391 | $3,062 | $3,798 | $3,062 | $3,798 |
| | 500 | - | - | - | - | - | - |
| | 5000/5800 | $3,740 | - | $3,740 | - | - | - |

These adders do not include drip covers or vertical lifting provisions.

## Frequency

See Voltage Section.

## Grease Fittings

Standard hydraulic, Alemite/Zerk type fittings are provided with motors with regreasable bearings. For special grease fittings and drains, contact Toshiba for pricing and availability. For grease fittings, see “Regreasable Bearings” modification.

## Grounding Provisions

All motor frames 140 through 5810 have CSA clamp-type grounding lugs in the conduit box. All EQP Global® 840 and EQP Global® 841 motors are provided with a UL-approved clamp-type grounding lug in the conduit box.

### External Grounding Provisions on Motor Frame (Base)

All EQPIII 841 and EQP Global® 841 motors have an additional grounding provision on the motor base as standard. The grounding provisions on the motor base are ¼ to 20 UNC (unified inch coarse thread) for motors up to 50 HP, ⅜ to 16 UNC for motors above 50 HP and up to 200 HP, and ½ to 13 UNC for motors above 200 HP.

| Option | | Base Grounding |
|---|---|---|
| Frame | 143/145 | $219 |
| | 182/184 | $219 |
| | 213/215 | $219 |
| | 254/256 | $219 |
| | 284/286 | $219 |
| | 324/326 | $219 |
| | 364/365 | $219 |
| | 404/405 | $219 |
| | 444/445 | $219 |
| | 447 | $219 |
| | 449/500 | $219 |
| | 5010/5810 | $219 |
| | 5011/5811 | (1) |

(1) Grounding provision is provided as standard.

**Special Note:**

- External grounding provisions are available for explosion proof product but must be used as a supplementary ground connection in conjunction to the main equipment ground provision provided in the main terminal box.

### External Grounding Pad to Motor Frame

Apply the adder below for a copper ground pad with two holes mounted on the motor frame. When placing the order, the hole and tap size must be provided.

| Option | | Frame Grounding |
|---|---|---|
| Frame | 143/145 | — |
| | 182/184 | — |
| | 213/215 | — |
| | 254/256 | — |
| | 284/286 | — |
| | 324/326 | $1,641 |
| | 364/365 | $1,641 |
| | 404/405 | $1,641 |
| | 444/445 | $1,641 |
| | 447 | $1,641 |
| | 449/500 | $1,641 |
| | 5000/5800 | $1,641 |

### Grounding Provisions to Motor Shaft

See “Shaft Grounding” modifications section.

## Hardware

Standard hardware is non-corrosive zinc dichromate. Stainless hardware fasteners (holding brackets, conduit box, fan cover, and inner caps) are available. Toshiba standard stainless hardware is 304 unless specified otherwise.

| Option | | 304 SS Hardware | 316 SS Hardware |
|---|---|---|---|
| Frame | 143/145 | $328 | $438 |
| | 182/184 | $328 | $438 |
| | 213/215 | $383 | $492 |
| | 254/256 | $438 | $547 |
| | 284/286 | $438 | $547 |
| | 324/326 | $711 | $875 |
| | 364/365 | $766 | $875 |
| | 404/405 | $875 | $1,094 |
| | 444/445 | $930 | $1,148 |
| | 447 | $984 | $1,203 |
| | 449/500 | $984 | $1,313 |
| | 5000/5800 | $1,094 | $1,531 |

**Special Note:**

- Adders above are not available on explosion proof product.
- Adders not available on quarry duty product.

## Insulation Modifications

Insulation systems are divided into classes according to the thermal endurance by temperature rating. Standard motor insulation is non-hygroscopic Class F (utilizing Class H components), and is dipped and baked in a Class H varnish. Unusual or severe applications may require special insulation systems or winding protection.

### Upgrade to Class H Insulation System

| Option | | Class H |
|---|---|---|
| | 364/365 | $1,054 |
| | 404/405 | $1,723 |
| | 444/445 | $2,440 |
| | 447 | $3,019 |
| | 449/500 | $3,773 |
| | 5000/5800 | $5,031 |

**Special Notes:**

- Adders above not available on explosion proof product.
- No UL Component Recognition (UR) approval listing for Class H.
- Class H insulation is not UL 1004 compliant.

### Tropicalized Coating on Motor Winding & Internal Surface

This adder provides additional insulation coating as well as corrosion protection for all internal machined surfaces.

| Option | | Internal Coating |
|---|---|---|
| Frame | 143/145 | $164 |
| | 182/184 | $164 |
| | 213/215 | $219 |
| | 254/256 | $328 |
| | 284/286 | $547 |
| | 324/326 | $766 |
| | 364/365 | $875 |
| | 404/405 | $1,203 |
| | 444/445 | $1,641 |
| | 447 | $2,406 |
| | 449/500 | $2,406 |
| | 5000/5800 | $2,734 |

**Special Note:**

- This adder comes standard on all 840 and all 841 product.

## Fungus-Proof Coating on Motor Windings

Unwanted fungi may break down a motor's insulation system over time. The addition of the fungus-proof adder will protect motor windings from this type of problem.

| Option | | Fungus-Proof Coating |
|---|---|---|
| Frame | 143/145 | $109 |
| | 182/184 | $109 |
| | 213/215 | $164 |
| | 254/256 | $219 |
| | 284/286 | $328 |
| | 324/326 | $438 |
| | 364/365 | $547 |
| | 404/405 | $711 |
| | 444/445 | $930 |
| | 447 | $1,203 |
| | 449/500 | $1,203 |
| | 5000/5800 | $1,531 |

## Encapsulate Windings

The encapsulate windings adder consists of an additional epoxy resin coating on the motor winding. Protects motor internally in situations where internal components will be directly exposed to corrosive and/or humid environments.

| Option | | Encapsulate (1) |
|---|---|---|
| Frame | 404/405 | $2,166 |
| | 444/445 | $2,964 |
| | 447 | $3,281 |
| | 449/500 | Contact Toshiba |
| | 5000/5800 | |

(1) List prices apply to open drip-proof motors only.

**Special Note:**

- Adders above are not available on explosion proof or totally enclosed fan cooled product.

# Lead Length/Lead Terminals

Crimp-type lead lugs/ring terminals come standard on motors as follows:

1. 210 frame and larger on all EQP 840 products
2. All EQP 841 products
3. All other 280 frame and larger motors

## Crimp Lead Terminals

| Option | | Crimp |
|---|---|---|
| Frame | 143/145 | $109 |
| | 182/184 | $109 |
| | 213/215 | $153 |
| | 254/256 | $153 |
| | 284/286 | — |
| | 324/326 | — |
| | 364/365 | — |
| | 404/405 | — |
| | 444/445 | — |
| | 447 | — |
| | 449/500 | — |
| | 5000/5800 | — |

## Burndy Lugs/Two-Hole Terminals

| Option | | Burndy |
|---|---|---|
| Frame | 143/145 | — |
| | 182/184 | — |
| | 213/215 | — |
| | 254/256 | — |
| | 284/286 | $744 |
| | 324/326 | $744 |
| | 364/365 | $744 |
| | 404/405 | $744 |
| | 444/445 | $744 |
| | 447 | $744 |
| | 449/500 | $744 |
| | 5000/5800 | $744 |

## Longer Lead Length than Standard

Typical lead lengths are 5" on 143-184T, 7" on 213-256T, 10" on 284-365T, and 12" on 404-5810U frames. Prices are based on a per foot, per lead basis. Multiply the number of motor leads by the number of desired feet and then by the applicable charge below.

| Option | | Per Foot, Per Lead (1) |
|---|---|---|
| Frame | 364/365 | $22 |
| | 404/405 | $22 |
| | 444/445 | $33 |
| | 447 | $33 |
| | 449/500 | $55 |
| | 5000/5800 | $55 |

(1) For the standard number of leads, refer to the Toshiba Installation and Maintenance Manual.

**Special Note:**

- Lead Cable Length from T-base: 140-180 = 5 inches, 210-250 = 7 inches, 280-440 = 10 inches, 449-5810U = 12 inches.

# Lubrication

All bearings in motors with Class F insulation will be furnished with a lubricant that is capable of operating in ambient temperatures between -25˚ and 65˚C. Please note that it is not recommended to mix greases of different bases. The mixing of different types of thickeners may destroy the composition and physical properties of the grease.

## High Temperature Grease

This adder is for applications in which the ambient temperature is greater than 65˚C.

| Option | | High Temp. Grease |
|---|---|---|
| Frame | 143/145 | $109 |
| | 182/184 | $109 |
| | 213/215 | $109 |
| | 254/256 | $109 |
| | 284/286 | $109 |
| | 324/326 | $273 |
| | 364/365 | $273 |
| | 404/405 | $273 |
| | 444/445 | $273 |
| | 447 | $273 |
| | 449/500 | $273 |
| | 5000/5800 | $273 |

## Low Temperature Grease

This adder is for applications in which the ambient temperature ranges from -25˚ to -40˚C.

| Option | | Low Temp. Grease |
|---|---|---|
| Frame | 56/143/145 | $109 (1) |
| | 182/184 | $109 (1) |
| | 213/215 | $109 (1) |
| | 254/256 | $109 (1) |
| | 284/286 | $109 |
| | 324/326 | $273 |
| | 364/365 | $273 |
| | 404/405 | $273 |
| | 444/445 | $273 |
| | 447 | $273 |
| | 449/500 | $273 |
| | 5000/5800 | $273 |

(1) All sealed bearing design motors come standard with lithium based grease suitable for -40°C ambient.

**Special Note:**

- Not suitable for explosion proof motors.

## Oil-Mist

Oil-mist lubrication is available on EQPIII 840 and EQPIII 841 motors only. Toshiba's EQPIII 840 and EQPIII 841 motors can be modified to accept an externally-generated oil-mist/dry sump lubrication arrangement. The type of preparation must be noted within the purchase order:

1. Oil-Mist Provisions (for future oil mist): The bearing cavity is arranged for oil-mist, but the bearings will be packed with grease for normal operation. Should the oil-mist system be connected, Toshiba recommends that the grease be cleaned from the bearings and bearing cavities.
2. Oil-Mist Ready: The bearings will receive a light coat of oil for testing and shipment; however, the oil-mist system must be connected upon receipt of product.

| Option | | Oil-Mist Provisions | Oil-Mist Ready |
|---|---|---|---|
| Frame | 143/145 | $766 | $766 |
| | 182/184 | $766 | $766 |
| | 213/215 | $766 | $766 |
| | 254/256 | $875 | $875 |
| | 284/286 | $875 | $875 |
| | 324/326 | $1,094 | $1,094 |
| | 364/365 | $1,313 | $1,313 |
| | 404/405 | $1,750 | $1,750 |
| | 444/445 | $2,625 | $2,625 |
| | 447 | $3,172 | $3,172 |
| | 449/500 | $3,172 | $3,172 |
| | 5000/5800 | $3,828 | $3,828 |

**Special Notes:**

- Adders above are not available on explosion proof product.
- This adder is not available on general purpose vertical shaft-down or shaft-up applications. Contact Toshiba for vertical oil mist applications.
- For storage, refer to Toshiba's oil-mist manual.

## Special-Based Grease Requirements

This adder is for applications in which the customer specifies a grease other than the Toshiba standard. For other special grease, contact Toshiba.

# Nameplates

Standard nameplates are 304-grade stainless steel with engraved lettering. Additional nameplates for remote mounting and special markings are available.

## Duplicate or Special Nameplates

For requests other than what is listed below, contact Toshiba.

| Option | | Duplicate Nameplate | Special ID Tag |
|---|---|---|---|
| Frame | 56/143/145 | $150 | $150 |
| | 182/184 | $150 | $150 |
| | 213/215 | $150 | $150 |
| | 254/256 | $150 | $150 |
| | 284/286 | $150 | $150 |
| | 324/326 | $150 | $150 |
| | 364/365 | $150 | $150 |
| | 404/405 | $150 | $150 |
| | 444/445 | $150 | $150 |
| | 447 | $150 | $150 |
| | 449/500 | $150 | $150 |
| | 5000/5800 | $150 | $150 |

## Paint

The standard paint finish is a self-priming, air-dried, acrylic alkyd resin finish. Beyond the standard colors offered by Toshiba, special colors and types of paints are available upon request. For special paint requirements, full specifications and color chip/manufacture color code will be required. Special paints requiring special application/curing equipment may not be available. Contact Toshiba for full details.

| Option | | Color Change Only | Special |
|---|---|---|---|
| Frame | 143/145 | Contact Toshiba | Contact Toshiba |
| | 182/184 | | |
| | 213/215 | | |
| | 254/256 | | |
| | 284/286 | | |
| | 324/326 | | |
| | 364/365 | | |
| | 404/405 | | |
| | 444/445 | | |
| | 447 | | |
| | 449/500 | $984 | |
| | 5000/5800 | $1,094 | |

**Special Note:**

- Toshiba standard paint color is RAL 6012 green.

## Screens

Corrosion-resistant screens covering air inlets and outlets of open drip-proof motors are available. Motors equipped with screens will meet the NEMA guarded definition.

### Screens to an Open Drip-Proof Motor

| Option | | Corrosion-Resistant | Stainless Steel |
|---|---|---|---|
| Frame | 143/145 | $219 | $273 |
| | 182/184 | $273 | $328 |
| | 213/215 | $306 | $361 |
| | 254/256 | $361 | $416 |
| | 284/286 | $383 | $438 |
| | 324/326 | $438 | $547 |
| | 364/365 | $547 | $766 |
| | 404/405 | $766 | $1,094 |
| | 444/445 | $820 | $1,203 |
| | 447 | $875 | $1,258 |
| | 449/500 | $875 | $1,258 |
| | 5000/5800 | $1,094 | $1,641 |

**Special Note:**

- Screens come standard on oil well pump motors.

## Seals

Shaft seals are installed on the shaft at the bracket face to prevent the ingress of dirt and liquid.

| Option | | V-Ring Drive End (1) | V-Ring Both Ends (1) | Labyrinth Drive End (2) |
|---|---|---|---|---|
| Frame | 143/145 | $142 | $284 | $492 |
| | 182/184 | $186 | $372 | $492 |
| | 213/215 | $186 | $372 | $547 |
| | 254/256 | $186 | $372 | $656 |
| | 284/286 | $197 | $394 | $766 |
| | 324/326 | $252 | $503 | $766 |
| | 364/365 | $252 | $503 | $984 |
| | 404/405 | $317 | $634 | $984 |
| | 444/445 | $328 | $656 | $1,203 |
| | 447 | $328 | $656 | $1,422 |
| | 449/500 | $350 | $700 | $1,531 |
| | 5000/5800 | $350 | $700 | $1,641 |
| Option | | Labyrinth Both Ends (2) | Taconite Drive End (3) | Taconite Both Ends (3) |
| Frame | 143/145 | $984 | $492 | $984 |
| | 182/184 | $984 | $492 | $984 |
| | 213/215 | $1,094 | $547 | $1,094 |
| | 254/256 | $1,313 | $656 | $1,313 |
| | 284/286 | $1,531 | $766 | $1,531 |
| | 324/326 | $1,531 | $766 | $1,531 |
| | 364/365 | $1,969 | $984 | $1,969 |
| | 404/405 | $1,969 | $984 | $1,969 |
| | 444/445 | $2,406 | $1,203 | $2,406 |
| | 447 | $2,844 | $1,422 | $2,844 |
| | 449/500 | $3,063 | $1,531 | $3,063 |
| | 5000/5800 | $3,281 | $1,641 | $3,281 |

(1) V-Ring shaft seals come standard on the drive end of totally enclosed motors.
(2) Non-contact labyrinth seals come standard on both ends of all EQP 841 series products and 400 frame and larger for EQP 840 series products.
(3) The taconite construction consists of two special bronze labyrinth seals (one on each end).

**Special Notes:**

- Adders above are not available on explosion proof product.
- Explosion proof products are provided with brass shaft slinger on both ends as standard.

## Service Factor

Standard stock motors are designed for 1.15 service factor unless otherwise noted. Higher service factors are available if requested. Inquiries for service factors above 1.15 should be submitted to Toshiba for review. In certain cases, a higher service factor will require an increase in frame size or a special design.

# Shafts

For shafts other than the Toshiba standard, see adders below.

## NEMA TS-Shaft to NEMA T-Shaft

| Option | | NEMA TS to NEMA T (2-Pole Motors) |
|---|---|---|
| Frame | 284/286 | $405 |
| | 324/326 | $591 |
| | 364/365 | $667 |
| | 404/405 | $755 |

**Special Note:**

- T-shaft, 2-pole motors are not recommended for belted applications.

## NEMA TS Short Shaft

Toshiba does not charge for this modification on a production basis for direct-coupled applications. Requests for this option will be subject to standard factory lead times.

## Special Shaft (Non-NEMA)

Any special shafts beyond what is listed above require adders from both Table A and Table B below.

- Table A – Base Charge for Shaft
- Table B – Shaft Feature Adder

### Table A – Base Adder for Special Shaft Requirement

| Option | | Quantity 1 | Quantity 2 to 4 | Quantity 5+ |
|---|---|---|---|---|
| Frame | 143/145 | $656 | $295 | $109 |
| | 182/184 | $656 | $295 | $109 |
| | 213/215 | $766 | $295 | $109 |
| | 254/256 | $831 | $328 | $131 |
| | 284/286 | $930 | $372 | $186 |
| | 324/326 | $1,006 | $427 | $230 |
| | 364/365 | $1,192 | $481 | $273 |
| | 404/405 | $1,389 | $492 | $339 |
| | 444/445 | $1,641 | $678 | $416 |
| | 447 | $1,750 | $711 | $416 |
| | 449/500 | $1,750 | $711 | $416 |
| | 5000/5800 | $2,406 | $1,148 | $656 |

### Table B – Shaft Features/Material

| Option | | 304 Stainless Steel (1) | 316 Stainless Steel (1) | 416 Stainless Steel (2) | 4142 High Strength Steel | For each additional 5" length (3) |
|---|---|---|---|---|---|---|
| Frame | 143/145 | $175 | $328 | $131 | $66 | $66 |
| | 182/184 | $175 | $328 | $131 | $66 | $66 |
| | 213/215 | $372 | $711 | $273 | $98 | $98 |
| | 254/256 | $514 | $1,006 | $383 | $98 | $98 |
| | 284/286 | $766 | $1,498 | $569 | $120 | $120 |
| | 324/326 | $1,389 | $2,734 | $984 | $153 | $153 |
| | 364/365 | $1,794 | $3,588 | $1,313 | $164 | $164 |
| | 404/405 | $2,581 | $5,163 | $1,936 | $186 | $186 |
| | 444/445 | $2,767 | $5,534 | $2,078 | $219 | $219 |
| | 447 | $2,898 | $5,797 | $2,078 | $230 | $230 |
| | 449/500 | $3,063 | $6,125 | $2,188 | $230 | $230 |
| | 5000/5800 | $3,281 | $6,563 | $2,461 | $273 | $273 |

| Option | | Drill & Tap in Shaft End | Steps – For Each Step or Reduced Dia. | Special Keyway | Threads | Tapers |
|---|---|---|---|---|---|---|
| Frame | 143/145 | $66 | $66 | $66 | $66 | $88 |
| | 182/184 | $66 | $66 | $66 | $66 | $88 |
| | 213/215 | $98 | $98 | $98 | $98 | $109 |
| | 254/256 | $98 | $98 | $98 | $98 | $142 |
| | 284/286 | $120 | $120 | $120 | $120 | $175 |
| | 324/326 | $153 | $153 | $153 | $153 | $208 |
| | 364/365 | $164 | $164 | $164 | $164 | $230 |
| | 404/405 | $186 | $186 | $186 | $186 | $263 |
| | 444/445 | $219 | $219 | $219 | $219 | $295 |
| | 447 | $230 | $230 | $230 | $230 | $306 |
| | 449/500 | $230 | $230 | $230 | $230 | $306 |
| | 5000/5800 | $273 | $273 | $273 | $273 | $438 |

(1) Not available on 2-pole (3600/3000 RPM) motors.
(2) The use of 416 stainless steel is required for 2-pole motors.
(3) For lengths greater than four times the shaft diameter, contact Toshiba for availability and pricing.

## Shaft Grounding Provisions

Shaft grounding provisions help to eliminate shaft currents that can be introduced into the motor through upstream controllers (i.e. adjustable speed drives). These currents can potentially lead to premature failure of the bearings, commonly referred to as “fluting.”

| Option | | Shaft Grounding Brush | Aegis Grounding Ring (1) |
|---|---|---|---|
| Frame | 143/145 | - | $182 |
| | 182/184 | - | $208 |
| | 213/215 | - | $236 |
| | 254/256 | $1,367 | $290 |
| | 284/286 | $1,367 | $344 |
| | 324/326 | $1,477 | $398 |
| | 364/365 | $1,641 | $404 |
| | 404/405TS | $1,805 | $597 |
| | 404/405T | $1,805 | $798 |
| | 444/445TS | $2,187 | $861 |
| | 444/445T | $2,187 | $1,097 |
| | 447/449TS | $2,187 | $861 |
| | 447/449T | $2,187 | $1,097 |
| | 500 | $2,187 | $1,097 |
| | 5000/5800 | $2,734 | $1,486 |

(1) For motors with a c-flange, the shaft grounding ring to be installed on the opposite drive end.

**Special Notes:**

- Adders above do not include insulated bearings.
- Adders above are not available on explosion proof product.
- Insulating the bearings is recommended when the shaft voltage exceeds 300 mV.
- It is up to the user to determine when insulated bearings are required, especially with the use of an inverter-fed control. NEMA MG1 Part 31 suggests insulating the bearing(s) on all motors in 500 series frames and larger that are inverter-fed.
- Shaft grounding rings may be used to divert the current around the bearing with the use of inverter-fed control.
- Toshiba recommends the non-drive end bearing be insulated on all frame sizes 440 and larger, when used with adjustable speed drives.
- Insulated bearings are not available on angular contact bearing construction.
- Where insulated bearings are used on direct coupled applications the use of insulated coupling and/or shaft grounding brush is required to reduce the risk of driven equipment bearing damage.
  - » Ground rings are not suitable for Division 2 environments
- Contact Toshiba for availability and price.
- Adders above, are suitable for drive end and non-drive end installation.

## Software: Engineering Data

Upon request only at the time of order, Toshiba will provide the following standard data package is available for production motors at no charge: certified print, speed-torque and speed current curve (at 100% rated voltage), nameplate data, performance data, connection diagram, instruction and maintenance manual, and spare bearings parts list.

Above data will be sent out in electronic format. If hard copy information is required, see the adder below. For software other than what is listed above or that is specified after time of order, see table below.

**Prices below are NET adders per option.**

| Software | Price |
|---|---|
| Toshiba Standard Software Package (1) | $75 |
| Speed Torque & Speed-Current Curve | $75 |
| Thermal Damage (Safe Stall Time) Curve | $75 |
| Performance Curve | $75 |
| Torsional Data (3) | $100 |
| Non-Standard Outline Drawing | Contact Toshiba |
| Certificate of Compliance | $75 |
| First Page of Customer Supplied Data Sheet (2) | $55 |
| Additional Pages of Customer Supplied Data Sheet (2) | $40 |
| Additional Copies of Data | $30 |
| Express Shipping | $50 |
| Other Special Requests | Contact Toshiba |

(1) This adder applies only if it is specified after the order has been entered and acknowledged.
(2) This adder pertains to typical Toshiba performance data only.
(3) This adder will include shaft drawing, rotor assembly inertia, shaft torsional stiffness values.

## Space Heaters

Space heaters are strip-type heaters mounted inside the frame near the coils to prevent moisture condensation in the motor during times the motor is not energized. Heater leads are brought out to the motor’s main conduit box and marked H1 and H2. Standard heater voltage is 120 V single-phase unless otherwise specified.

| Option | | Standard | Division 2 | Explosion Proof |
|---|---|---|---|---|
| Frame | 143/145 | $328 | $492 | — |
| | 182/184 | $328 | $492 | — |
| | 213/215 | $328 | $492 | — |
| | 254/256 | $328 | $492 | — |
| | 284/286 | $481 | $722 | — |
| | 324/326 | $481 | $722 | — |
| | 364/365 | $580 | $870 | — |
| | 404/405 | $700 | $1,050 | $1,400 |
| | 444/445 | $831 | $1,242 | $1,652 |
| | 447 | $941 | $1,412 | $1,859 |
| | 449/500 | $941 | $1,412 | $1,859 |
| | 5000/5800 | $1,148 | $1,722 | — |

## Starting/Connection

Toshiba standard stock motors have various starting connections/configurations available. For special or non-standard starting requirements, use the modifications below.

| Option | | Part Winding | Wye-Delta |
|---|---|---|---|
| Frame | 143/145 | — | — |
| | 182/184 | — | — |
| | 213/215 | $153 | $153 |
| | 254/256 | $208 | $208 |
| | 284/286 | $241 | $241 |
| | 324/326 | $295 | $295 |
| | 364/365 | $427 | $427 |
| | 404/405 | $667 | $667 |
| | 444/445 | $1,083 | $1,083 |
| | 447 | $1,203 | $1,203 |
| | 449/500 | $1,203 | $1,203 |
| | 5000/5800 | (1) | (1) |

(1) Contact Toshiba on 5000 frames and larger for price and availability.

## Surge Protection

Surge protection for motors is available on 440 frames and larger.

| Option | | Surge Capacitors (1) | Lightning Arrestor (1) | Surge Protection Package (1) | Current Transformer (2) (One Per Phase) |
|---|---|---|---|---|---|
| Frame | 449/500 | $4,750 | $16,700 | $20,925 | $5,900 |
| | 5000/5800 | $4,750 | $16,700 | $20,925 | $5,900 |

(1) Not available for use with ASD control.
(2) Current transformers supplied with 10:1 current ratio as standard. Specify if other current ratio is desired.

**Special Notes:**

- This adder comes with an oversized main terminal box.
- These adders are not suitable for Division 2 environments.

## Terminal Blocks/Strips

Insulated stud-type terminal blocks/strips can be provided for single-voltage, single-speed applications in the standard conduit box.

| Option | | Terminal Block (1) | Terminal Strip (2) |
|---|---|---|---|
| Frame | 143/145 | $339 | $219 |
| | 182/184 | $339 | $219 |
| | 213/215 | $339 | $219 |
| | 254/256 | $339 | $219 |
| | 284/286 | $405 | $219 |
| | 324/326 | $733 | $219 |
| | 364/365 | $733 | $219 |
| | 404/405 | $733 | $219 |
| | 444/445 | $1,589 | $219 |
| | 447 | $1,589 | $219 |
| | 449/500 | $1,805 | $219 |
| | 5000/5800 | $2,527 | $219 |

(1) This adder refers to power leads only.
(2) This adder refers to accessory leads only.

**Special Note:**

- Adders above are not available on explosion proof product.

## Testing

Toshiba motors are tested in compliance with IEEE Std. 112 to meet NEMA MG1 requirements. Test reports and optional testing are available for each individual motor. Duplicates/copies of standard routine test reports are available.

Please contact Toshiba for scheduling/coordination for witness testing requirements.

**Prices below are NET adders per option.**

| Option | | Routine, Unwitnessed (Report Only) | Routine, Witnessed | Complete, Unwitnessed (2) | Complete, Witnessed (2) | Noise, Unwitnessed (1) |
|---|---|---|---|---|---|---|
| Frame | 143/145 | $60 | $600 | $3,800 | $4,500 | $1,200 |
| | 182/184 | $60 | $600 | $3,800 | $4,500 | $1,200 |
| | 213/215 | $60 | $600 | $3,800 | $4,500 | $1,200 |
| | 254/256 | $60 | $600 | $3,800 | $4,500 | $1,200 |
| | 284/286 | $60 | $1,000 | $4,200 | $5,250 | $1,600 |
| | 324/326 | $60 | $1,000 | $4,200 | $6,000 | $1,600 |
| | 364/365 | $60 | $1,500 | $4,500 | $6,750 | $1,600 |
| | 404/405 | $60 | $1,500 | $4,500 | $7,500 | $1,600 |
| | 444/445 | $60 | $1,500 | $5,700 | $8,250 | $2,000 |
| | 447 | $60 | $1,500 | $5,700 | $8,250 | $2,000 |
| | 449/500 | $60 | $2,000 | $6,400 | $10,500 | $2,400 |
| | 5000/5800 | $60 | $2,000 | $6,400 | $10,500 | $2,400 |

| Option | | Noise, Witnessed (1) | Vibration | Insulation Resistance | Polarization Index |
|---|---|---|---|---|---|
| Frame | 143/145 | $2,000 | $1,200 | $700 | $1,000 |
| | 182/184 | $2,000 | $1,200 | $700 | $1,000 |
| | 213/215 | $2,000 | $1,200 | $700 | $1,000 |
| | 254/256 | $2,000 | $1,200 | $800 | $1,100 |
| | 284/286 | $2,400 | $1,600 | $800 | $1,100 |
| | 324/326 | $2,400 | $1,600 | $900 | $1,200 |
| | 364/365 | $2,400 | $1,600 | $900 | $1,200 |
| | 404/405 | $2,400 | $1,600 | $1,000 | $1,300 |
| | 444/445 | $3,000 | $2,000 | $1,000 | $1,300 |
| | 447 | $3,000 | $2,000 | $1,100 | $1,400 |
| | 449/500 | $3,000 | $2,000 | $1,100 | $1,400 |
| | 5000/5800 | $3,000 | $2,000 | $1,100 | $1,400 |

(1) Noise test consists of overall sound pressure values/readings only. For octave band measurements, contact Toshiba.
(2) Complete performance test per IEEE 112 method B.

**Special Notes:**

- For testing of more than one voltage or speed, multiply the adder above by the following.
  - One Additional Voltage or Speed — 1.50
  - Two Additional Voltages or Speeds — 2.00
  - Three Additional Voltages or Speeds — 2.50
- Contact Toshiba for additional voltages not listed below.

# Thermal Protection

Toshiba provides a wide variety of protective devices which are available as follows.

## Thermostats (Klixons)

Toshiba's standard offering includes a normally-closed (NC), bi-metallic, temperature actuated element mounted on the stator winding. Leads are marked P1 and P2. Termination of the leads is in the main conduit box. Special thermostats are available upon request. Contact Toshiba for pricing and availability.

| Option | | Klixons NC | Klixons NO | Hermetically Sealed (1) |
|---|---|---|---|---|
| Frame | 56/143/145 | $164 | $219 | $328 |
| | 182/184 | $164 | $219 | $328 |
| | 213/215 | $164 | $219 | $328 |
| | 254/256 | $164 | $219 | $328 |
| | 284/286 | $164 | $219 | $328 |
| | 324/326 | $230 | $328 | $459 |
| | 364/365 | $230 | $328 | $459 |
| | 404/405 | $328 | $438 | $656 |
| | 444/445 | $328 | $438 | $656 |
| | 447 | $405 | $547 | $809 |
| | 449/500 | $405 | $547 | $809 |
| | 5000/5800 | $438 | $656 | $875 |

(1) If used in Division 2 environments, hermetically sealed thermostats are required.

## Winding PTC Thermistors

Non-linear resistance temperature detectors are mounted on the motor winding. This thermal protection consists of three thermistors only or three thermistors with a solid state control relay. The provided control relay is intended for mounting in a remote location.

| Option | | Mark A (PTC) Thermistor | Mark A (PTC) Thermistor & Module (1) |
|---|---|---|---|
| Frame | 143/145 | $328 | $1,367 |
| | 182/184 | $328 | $1,367 |
| | 213/215 | $328 | $1,367 |
| | 254/256 | $328 | $1,367 |
| | 284/286 | $328 | $1,367 |
| | 324/326 | $328 | $1,367 |
| | 364/365 | $328 | $1,367 |
| | 404/405 | $328 | $1,367 |
| | 444/445 | $328 | $1,367 |
| | 447 | $328 | $1,367 |
| | 449/500 | $328 | $1,367 |
| | 5000/5800 | $328 | $1,367 |

(1) This adder includes auxiliary conduit.

**Special Note:**

- Thermistors can only be terminated in the main terminal box for explosion proof product.

## Thermocouples

**Winding (Stator) Thermocouples –** A set of six (two per phase) winding thermocouples are provided and leads are terminated in a separate auxiliary conduit box. Pricing below does not include readout device(s).

| Option | | Stator Thermocouples "Type J" | Stator Thermocouples "Type T" |
|---|---|---|---|
| Frame | 143/145 | — | — |
| | 182/184 | — | — |
| | 213/215 | — | — |
| | 254/256 | — | — |
| | 284/286 | $2,625 | $2,625 |
| | 324/326 | $2,625 | $2,625 |
| | 364/365 | $2,625 | $2,625 |
| | 404/405 | $2,625 | $2,625 |
| | 444/445 | $2,625 | $2,625 |
| | 447 | $2,625 | $2,625 |
| | 449/500 | $2,625 | $2,625 |
| | 5000/5800 | $2,625 | $2,625 |
| Option | | Stator Thermocouples "Type E" | Stator Thermocouples "Type K" |
| Frame | 143/145 | — | — |
| | 182/184 | — | — |
| | 213/215 | — | — |
| | 284/286 | $2,625 | $2,625 |
| | 324/326 | $2,625 | $2,625 |
| | 364/365 | $2,625 | $2,625 |
| | 404/405 | $2,625 | $2,625 |
| | 444/445 | $2,625 | $2,625 |
| | 447 | $2,625 | $2,625 |
| | 449/500 | $2,625 | $2,625 |
| | 5000/5800 | $2,625 | $2,625 |

**Bearing Thermocouple –** Pricing includes one per bearing (total of two thermocouples) with leads terminated in separate terminal housings. Pricing below does not include readout device(s).

| Option | | Bearing Thermocouples "Type J" | Bearing Thermocouples "Type T" |
|---|---|---|---|
| Frame | 143/145 | — | — |
| | 182/184 | — | — |
| | 213/215 | — | — |
| | 254/256 | — | — |
| | 284/286 | $3,938 | $3,938 |
| | 324/326 | $3,938 | $3,938 |
| | 364/365 | $3,938 | $3,938 |
| | 404/405 | $3,938 | $3,938 |
| | 444/445 | $3,938 | $3,938 |
| | 447 | $3,938 | $3,938 |
| | 449/500 | $3,938 | $3,938 |
| | 5000/5800 | $3,938 | $3,938 |
| Option | | Bearing Thermocouples "Type E" | Bearing Thermocouples "Type K" |
| Frame | 143/145 | — | — |
| | 182/184 | — | — |
| | 213/215 | — | — |
| | 254/256 | — | — |
| | 284/286 | $3,938 | $3,938 |
| | 324/326 | $3,938 | $3,938 |
| | 364/365 | $3,938 | $3,938 |
| | 404/405 | $3,938 | $3,938 |
| | 444/445 | $3,938 | $3,938 |
| | 447 | $3,938 | $3,938 |
| | 449/500 | $3,938 | $3,938 |
| | 5000/5800 | $3,938 | $3,938 |

## Resistance Temperature Detectors (RTDs)

**Winding (Stator) RTDs –** A set of six (two per phase, three leads) winding RTDs are provided with leads terminated in an auxiliary conduit box. Pricing below does not include readout device(s).

| Option | | Stator RTDs (Copper; 10 Ohm) | Stator RTDs (Platinum; 100 Ohm) | Stator RTDs (Nickel; 120 Ohm) |
|---|---|---|---|---|
| Frame | 143/145 | — | — | — |
| | 182/184 | — | — | — |
| | 213/215 | — | — | — |
| | 254/256 | — | — | |
| | 284/286 | $4,266 | $4,266 | $4,266 |
| | 324/326 | $4,266 | $4,266 | $4,266 |
| | 364/365 | $4,266 | $4,266 | $4,266 |
| | 404/405 | $4,266 | $4,266 | $4,266 |
| | 444/445 | $4,266 | $4,266 | $4,266 |
| | 447 | $4,266 | $4,266 | $4,266 |
| | 449/500 | $4,266 | $4,266 | $4,266 |
| | 5000/5800 | $4,266 | $4,266 | $4,266 |

**Special Notes:**
- Contact Toshiba for pricing on other RTD types.
- This adder is not available on explosion proof motors.

**Bearing RTDs –** Pricing includes one RTD per bearing (a total of two RTDs) and a three-lead single element design with leads terminated in separate terminal housings. Pricing below does not include readout device(s).

| Option | | Bearing RTDs (Copper; 10 Ohm) | Bearing RTDs (Platinum; 100 Ohm) | Bearing RTDs (Nickel; 120 Ohm) |
|---|---|---|---|---|
| Frame | 143/145 | — | — | — |
| | 182/184 | — | — | — |
| | 213/215 | — | — | — |
| | 254/256 | — | — | |
| | 284/286 | $4,813 | $4,813 | $4,813 |
| | 324/326 | $4,813 | $4,813 | $4,813 |
| | 364/365 | $4,813 | $4,813 | $4,813 |
| | 404/405 | $4,813 | $4,813 | $4,813 |
| | 444/445 | $4,813 | $4,813 | $4,813 |
| | 447 | $4,813 | $4,813 | $4,813 |
| | 449/500 | $4,813 | $4,813 | $4,813 |
| | 5000/5800 | $4,813 | $4,813 | $4,813 |

**Special Notes:**
- Contact Toshiba for pricing on other RTD types, including dual element.
- This adder is not available on explosion proof motors.
- Frames S/B 447/449, Durabull 5009/10/11 and 5809/10/11 have Bearing RTD provisions as standard. This horizontal Bearing RTD/Vibration Transmitter Provision is for single use of a vibration monitoring device or a three-lead single element bearing protective device.

## Torque

For special torque requirements (i.e. starting/locked rotor, pull-up and/or breakdown torque), contact Toshiba. When available, please provide speed torque curve on the driven equipment and driven equipment inertia.

## Vertical Jacking Provisions

Vertical jacking is used to assist in the proper alignment of the motor shaft with the driven equipment for shimming purposes. Provisions for four jacking bolts (one per foot) are provided. Jacking bolts are to be supplied by the customer.

| Option | | Vertical Jacking |
|---|---|---|
| Frame | 143/145 | $545 |
| | 182/184 | $545 |
| | 213/215 | $650 |
| | 254/256 | $650 |
| | 284/286 | $760 |
| | 324/326 | $875 |
| | 364/365 | $875 |
| | 404/405 | $984 |
| | 444/445 | $984 |
| | 447 | $984 |
| | 449/500 | $1,203 |
| | 5000/5800 | $1,203 |

**Special Note:**
- This adder comes standard on 404/405, S444/445/447 and S/B447/449, Durabull 5009/10/11 and 5809/10/11.

## Vertical Lifting Provisions

This modification provides vertical lifting provisions for standard footless motors that are mounted vertical shaft down only.

| Option | | Vertical Lifting (1) |
|---|---|---|
| Frame | 143/145 | $328 |
| | 182/184 | $394 |
| | 213/215 | $394 |
| | 254/256 | $547 |
| | 284/286 | $547 |
| | 324/326 | $755 |
| | 364/365 | $755 |
| | 404/405 | $952 |
| | 444/445 | $1050 |
| | 447 | $1050 |
| | 449/500 | $1203 |
| | 5000/5800 | — |

(1) Contact Toshiba for footed motors.

**Special Notes:**
- Above adders not available on open drip-proof or explosion proof motors.
- It is recommended that if a motor is mounted vertically, a drip cover also be provided (see "Drip Cover" section).

## Vibration Detectors

These detectors are for single-direction monitoring (horizontal, vertical, or axial). For total coverage of all three directions, three detectors must be provided. Monitoring direction must be specified at time of order.

### Vibration Monitoring Detectors

**Robertshaw** - consists of a self-contained detector and switch. A Robertshaw is an acceleration-sensitive instrument that measures peak vibratory shock at the point of measurement.

**Accelerometer** - used to sense bearing housing vibration on motors with anti-friction bearings.

| Option | | Provisions Only for Robertshaw (1, 3) | Robertshaw Sensor (2, 3) | Provisions for Accelerometer or Velocity Sensor (4) | Metrix Accelerometer Sensor Both Ends (5) |
|---|---|---|---|---|---|
| Frame | 143/145 | — | — | $547 | — |
| | 182/184 | — | — | $547 | — |
| | 213/215 | — | — | $547 | — |
| | 254/256 | $1,039 | $4,266 | $547 | — |
| | 284/286 | $1,039 | $4,266 | $547 | — |
| | 324/326 | $1,039 | $4,266 | $547 | — |
| | 364/365 | $1,039 | $4,266 | $547 | — |
| | 404/405 | $1,039 | $4,266 | $547 | — |
| | 444/445 | $1,039 | $4,266 | $1,039 | $7,380 |
| | 447 | $1,039 | $4,266 | $1,039 | $7,380 |
| | 449/500 | $1,039 | $4,266 | $1,039 | $7,380 |
| | 5000/5800 | $1,039 | $4,266 | $1,039 | $7,380 |

(1) Provisions for mounting are based on a Robertshaw model number 366.
(2) Standard model number offering is 366 (not suitable for Division 2 applications – Contact Toshiba for Division 2).
(3) This adder is not available on explosion proof motors.
(4) Pricing is based on Toshiba providing a single 1”-spot face surface with a ¼”-18 NPT drill and tapped hole, unless specified otherwise.
(5) Pricing is based on Metrix Vibration Sensor Model ST5484E

**Special Note:**

- For regreasable motors, the provisions available are horizontal and axial. Consult factory for vertical provisions.
- Axial provisions on the non-drive end are not available on TEFC product.

## Voltage

Motors are designed to operate successfully at plus or minus ten percent (10%) rated voltage; or plus or minus five percent (5%) of rated frequency; or combined variation not to exceed ten percent (10%). For 60 Hz voltages other than 230/460, 460, 575, please refer to the list adder for an applicable charge.

This adder applies to 600 V motors or below only. Contact Toshiba for voltages above 600 that are not listed in this catalog.

| Option | | 60 Hz | 50 Hz |
|---|---|---|---|
| Frame | 143/145 | $175 | Contact Toshiba |
| | 182/184 | $175 | |
| | 213/215 | $219 | |
| | 254/256 | $273 | |
| | 284/286 | $328 | |
| | 324/326 | $558 | |
| | 364/365 | $820 | |
| | 404/405 | $1,291 | |
| | 444/445 | $1,750 | |
| | 447 | $2,144 | |
| | 449/500 | $2,144 | |
| | 5000/5800 | $2,636 | |

# Medium Voltage
# General Purpose Series
## Open Enclosure Motors

Toshiba's general-purpose, medium voltage open enclosure motor series features Open Drip-Proof (ODP) and Weather-Protected Type I and II motors. With in-house design, engineering, and manufacturing capabilities, each motor is customizable to your specifications and can be tested alongside Toshiba drives or switchgear for seamless integration. Supported by Houston-based experts, Toshiba simplifies the installation and maintenance of complex systems. In addition, Toshiba keeps high-demand motors in stock to minimize lead times for immediate use or quick customization.

**Standard Features:**

- Open Drip-Proof, Weather-Protected Type I, or Weather-Protected Type II
- High Efficiency
- 60 Hz: 2300/4160, 2300/4000, 4000, or 4160 V
- Three-Phase
- 1.15 Service Factor*
- Horizontal Foot-Mounted Direct-Coupled Applications
- Class F Form-Wound Insulation
- Class B Temperature Rise at 1.0 Service Factor by Resistance*
- IP22, IP23, or IP24 Protection
- Vacuum-Pressure Impregnated System
- Cast Iron Frame & Brackets with Cast Iron or Stamped Steel Terminal Box(es)
- Anti-Friction Ball or Sleeve Bearings
- Aluminum Die Cast or Copper Bar Rotor
- Polyurea Base Grease or ISO VG Oil
- 304 Stainless Steel Nameplate

*Except Where Noted

**Applications:**

- Pumps
- Fans
- Compressors
- Conveyors
- Mixers
- Material Handling
- General Applications

**Warranty:**

- From Date of Manufacture: 18 Months**
- From Date of Installation: 12 Months**

**Whichever Comes First



# Open Enclosure
# Open Drip-Proof (ODP)
## High Efficiency



Toshiba's medium voltage Open Drip-Proof (ODP) motors are designed for optimal performance in clean, dry, and controlled environments. Their open construction allows for effective cooling while preventing liquid droplets from entering the motor, protecting internal components. Known for their high efficiency, ODP motors reduce operating costs and deliver substantial power output, making them optimal for heavy duty applications. Constructed from robust cast iron, these motors are built to withstand industrial stresses and provide long-term durability. Customizable features allow these motors to meet specific application requirements, including different mounting and cooling options.

### Product Scope:

**Horsepower:** 200 to 900 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM*

**Volt (60 Hz):** 2300/4160 or 4000 V**

**Enclosure:** Open Drip-Proof: IP22

**Frame Size:** 505US through 5810US

**Construction:** Cast Iron Frame & Brackets with Cast Iron or Stamped Steel Terminal Box(es)

**Insulation:** Class F with Class B Rise at 1.0 Service Factor by Resistance (except where noted)

**Environment:** Recommended for Indoor Use

*Contact Toshiba for availability on lower speed designs
**Contact Toshiba for availability on 6000, 60 Hz motors
Additional Options Available; See Catalog Production Modifications Section

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Accelerometer Provisions | Air Intake Screen | Dual Voltage | IP22 Degree Protection |
|---|---|---|---|---|---|---|---|---|---|
| MXTDPM | 505-509 | Option | Option | Option | Option | Option | Option | Included | Included |
| | 5810 | Option | Option | Option | Option | Option | Option | Included | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 200 | 1200 | 2300/4160 | 505US | ANTI-FRICTION | 4000 | F2006VLF3JF | 52/31 | 92.4 | | MXTDPM | $39,821 |
| 250 | 3600 | 2300/4160 | 505USS | ANTI-FRICTION | 4000 | F2502VLG3JF | 60/34 | 92.4 | | MXTDPM | $36,725 |
| 250 | 1200 | 2300/4160 | 505US | ANTI-FRICTION | 4000 | F2506VLF3JF | 63/37 | 93.0 | | MXTDPM | $41,256 |
| 250 | 900 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F2508VLF3JM | 62/36 | 93.0 | 12 | MXTDPM | $72,551 |
| 300 | 3600 | 2300/4160 | 505USS | ANTI-FRICTION | 4000 | F3002VLG3JF | 72/40 | 94.1 | | MXTDPM | $38,238 |
| 300 | 1800 | 2300/4160 | 505US | ANTI-FRICTION | 4000 | F3004VLF3JF | 70/40 | 93.6 | | MXTDPM | $38,372 |
| 300 | 1200 | 2300/4160 | 505US | ANTI-FRICTION | 4000 | F3006VLF3JF | 71/41 | 94.5 | | MXTDPM | $42,796 |
| 300 | 900 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F3008VLF3JM | 74/43 | 93.8 | 12 | MXTDPM | $74,066 |
| 350 | 3600 | 2300/4160 | 507USS | ANTI-FRICTION | 4000 | F3502VLG3JF | 81/45 | 93.6 | 14 | MXTDPM | $40,457 |
| 350 | 1800 | 2300/4160 | 505US | ANTI-FRICTION | 4000 | F3504VLF3JF | 80/44 | 95.0 | | MXTDPM | $40,765 |
| 350 | 1200 | 2300/4160 | 507US | ANTI-FRICTION | 4000 | F3506VLF3JF | 84/49 | 94.5 | 14 | MXTDPM | $45,926 |
| 350 | 900 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F3508VLF3JM | 86/49 | 94.1 | 12 | MXTDPM | $78,960 |
| 400 | 3600 | 2300/4160 | 507USS | ANTI-FRICTION | 4000 | F4002VLG3JF | 91/51 | 94.5 | | MXTDPM | $41,780 |
| 400 | 1800 | 2300/4160 | 507US | ANTI-FRICTION | 4000 | F4004VLF3JF | 90/52 | 94.5 | | MXTDPM | $41,987 |
| 400 | 1200 | 2300/4160 | 509US | ANTI-FRICTION | 4500 | F4006VLF3JF | 99/58 | 95.2 | | MXTDPM | $56,197 |

# Open Enclosure

## Open Drip-Proof (ODP)

### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 900 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F4008VLF3JM | 98/56 | 94.1 | 12 | MXTDPM | $80,334 |
| 450 | 3600 | 2300/4160 | 509USS | ANTI-FRICTION | 4500 | F4502VLG3JF | 102/56 | 95.4 | | MXTDPM | $45,803 |
| 450 | 1800 | 2300/4160 | 509US | ANTI-FRICTION | 4500 | F4504VLF3JF | 100/56 | 95.4 | | MXTDPM | $47,652 |
| 450 | 900 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F4508VLF3JM | 109/63 | 94.4 | 12 | MXTDPM | $83,822 |
| 500 | 3600 | 2300/4160 | 509USS | ANTI-FRICTION | 4500 | F5002VLG3JF | 112/61 | 94.5 | | MXTDPM | $47,037 |
| 500 | 1800 | 2300/4160 | 509US | ANTI-FRICTION | 4500 | F5004VLF3JF | 114/64 | 95.4 | | MXTDPM | $49,434 |
| 500 | 1200 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F5006VLF3JM | 114/66 | 95.3 | 12 | MXTDPM | $84,608 |
| 500 | 900 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F5008VLF3JM | 122/70 | 95.2 | 12 | MXTDPM | $87,772 |
| 600 | 1800 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F6004VLF3JM | 135/78 | 93.7 | 12 | MXTDPM | $94,086 |
| 600 | 1200 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F6006VLF3JM | 139/81 | 95.4 | 12 | MXTDPM | $94,709 |
| 700 | 1800 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F7004VLF3JM | 157/90 | 93.7 | 12 | MXTDPM | $96,660 |
| 700 | 1200 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F7006VLF3JM | 162/93 | 96.1 | 12 | MXTDPM | $97,215 |
| 800 | 1800 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F8004VLF3JM | 178/103 | 94.2 | 12 | MXTDPM | $98,716 |
| 900 | 1800 | 2300/4160 | 5810US | ANTI-FRICTION | 5500 | F9004VLF3JM | 200/115 | 94.7 | 12 | MXTDPM | $101,090 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Open Enclosure
## Weather Protected I (WPI)
### High Efficiency



Toshiba's General Purpose Weather-Protected Type I (WPI) motor series includes ventilation openings with overhanging covers for efficient cooling and protection against environmental hazards. Built with robust materials and corrosion-resistant coatings, these motors offer durability and ease of maintenance. They are designed to meet the industry's needs for energy conservation and reliability in indoor environments. These customizable motors are ideal for various applications, including power generation, water and wastewater treatment, oil and gas, and more.

### Product Scope:

**Horsepower:** 250 to 2,000 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM*

**Volt (60 Hz):** 2300/4000 or 4000 V**

**Enclosure:** Weather-Protected Type I: IP23

**Frame Size:** 588USS through 5811/12USS

**Construction:** Cast Iron Frame, End Brackets & Main Terminal Box for 5812 and smaller (Fabricated Steel Main Terminal Box for 6800 and Larger frames)

**Insulation:** Class F with Class B Rise at 1.0 Service Factor by Resistance (Except Where Noted)

**Environment:** Recommended for Indoor Use

*Contact Toshiba for availability on lower speed designs
**Contact Toshiba for availability on 6000 V, 60 Hz motors
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Dual-Mount Capability | Tri-Mount Capabilities | IP23 Degree Protection |
|---|---|---|---|---|---|---|---|---|
| MXTWP1 | 5012 | Included | Included | Included | Included | Included | N/A | Included |
| | 588 | Included | Included | Included | Included | N/A | N/A | Included |
| | 5809-5812 | Included | Included | Included | Included | N/A | Included | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 250 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |
| 250 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP1 | CF |
| 250 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 250 | 900 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 300 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |
| 300 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP1 | CF |
| 300 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 300 | 900 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 350 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |
| 350 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP1 | CF |
| 350 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 350 | 900 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 400 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4003WPAK11F-A | 94/54 | 93.6 | 4 | MXTWP1 | $71,595 |
| 400 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4003WPQK11F-A | 94/54 | 93 | 4, 10 | MXTWP1 | $90,905 |
| 400 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4003WPAK11F-C | 94/54 | 93 | 4, 12 | MXTWP1 | $95,104 |
| 400 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4003WPQK11F-C | 94/54 | 93 | 4, 10, 12 | MXTWP1 | $114,414 |
| 400 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |

# Open Enclosure

## Weather Protected I (WPI)

### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4004WPAK11E-A | 95/55 | 92.4 | | MXTWP1 | $74,302 |
| 400 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4004WPAK11E-C | 93/54 | 92.4 | 12 | MXTWP1 | $97,811 |
| 400 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP1 | CF |
| 400 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4006WPAK11E-A | 99/57 | 92.7 | | MXTWP1 | $81,487 |
| 400 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4006WPAK11E-C | 103/60 | 93.8 | 12 | MXTWP1 | $104,995 |
| 400 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 450 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4503WPAK11F-A | 104/60 | 94.1 | 4 | MXTWP1 | $72,105 |
| 450 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4503WPQK11F-A | 104/60 | 93.6 | 4, 10 | MXTWP1 | $91,416 |
| 450 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4503WPAK11F-C | 104/60 | 93.6 | 4, 12 | MXTWP1 | $95,613 |
| 450 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4503WPQK11F-C | 104/60 | 93.6 | 4, 10, 12 | MXTWP1 | $114,925 |
| 450 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |
| 450 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4504WPAK11E-A | 106/61 | 93 | | MXTWP1 | $75,364 |
| 450 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4504WPAK11E-C | 101/58 | 92.4 | 12 | MXTWP1 | $98,872 |
| 450 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP1 | CF |
| 450 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4506WPAK11E-A | 113/65 | 93.5 | | MXTWP1 | $82,548 |
| 450 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4506WPAK11E-C | 116/67 | 94 | 12 | MXTWP1 | $106,058 |
| 450 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 500 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 5003WPAK11F-A | 114/66 | 93.6 | 4 | MXTWP1 | $73,052 |
| 500 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 5003WPQK11F-A | 114/66 | 93.6 | 4, 10 | MXTWP1 | $92,363 |
| 500 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 5003WPAK11F-C | 114/66 | 93 | 4, 12 | MXTWP1 | $96,561 |
| 500 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 5003WPQK11F-C | 114/66 | 93 | 4, 10, 12 | MXTWP1 | $115,871 |
| 500 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |
| 500 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 5004WPAK11E-A | 114/66 | 93 | | MXTWP1 | $75,879 |
| 500 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 5004WPAK11E-C | 113/65 | 92.4 | 12 | MXTWP1 | $99,388 |
| 500 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP1 | CF |
| 500 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 5006WPAK11E-A | 128/74 | 93.6 | | MXTWP1 | $83,064 |
| 500 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 5006WPAK11E-C | 130/75 | 94.2 | 12 | MXTWP1 | $106,572 |
| 500 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP1 | CF |
| 600 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 6003WPAK11F-A | 137/79 | 94.4 | 4 | MXTWP1 | $75,040 |
| 600 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 6003WPQK11F-A | 137/79 | 94.1 | 4, 10 | MXTWP1 | $94,350 |
| 600 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 6003WPAK11F-C | 137/79 | 94.1 | 4, 12 | MXTWP1 | $98,548 |
| 600 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 6003WPQK11F-C | 137/79 | 94.1 | 4, 10, 12 | MXTWP1 | $117,858 |
| 600 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |
| 600 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 6004WPAK11E-A | 139/80 | 93.5 | | MXTWP1 | $76,965 |
| 600 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 6004WPAK11E-C | 133/77 | 93.4 | 12 | MXTWP1 | $100,473 |
| 600 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP1 | CF |
| 600 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 6006WPAK11E-C | 157/90 | 94.2 | 12 | MXTWP1 | $109,055 |
| 600 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 6008WPAL11E-A | 93 | 94.3 | | MXTWP1 | $100,570 |
| 700 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 7003WPAK11F-A | 158/91 | 94.5 | 4 | MXTWP1 | $80,737 |
| 700 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 7003WPQK11F-A | 158/91 | 94.2 | 4, 10 | MXTWP1 | $100,047 |
| 700 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 7003WPAK11F-C | 158/91 | 94.3 | 4, 12 | MXTWP1 | $104,245 |
| 700 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 7003WPQK11F-C | 158/91 | 94.3 | 4, 10, 12 | MXTWP1 | $123,555 |
| 700 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP1 | CF |
| 700 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 7004WPAK11E-A | 165/95 | 94 | | MXTWP1 | $85,957 |
| 700 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 7004WPAK11E-C | 151/87 | 93.7 | 12 | MXTWP1 | $109,465 |
| 700 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 7006WPAK11E-A | 100 | 93.5 | | MXTWP1 | $94,997 |
| 700 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 7008WPAL11E-A | 108 | 94.3 | | MXTWP1 | $102,990 |
| 800 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 8003WPAK11F-A | 180/104 | 94.1 | 4 | MXTWP1 | $85,887 |
| 800 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 8003WPQK11F-A | 180/104 | 93.8 | 4, 10 | MXTWP1 | $105,196 |

# Open Enclosure
## Weather Protected I (WPI)
### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 800 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 8003WPAK11F-C | 180/104 | 94.1 | 4, 12 | MXTWP1 | $109,395 |
| 800 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 8003WPQK11F-C | 180/104 | 94.1 | 4, 10, 12 | MXTWP1 | $128,707 |
| 800 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | 8003WPAL11F-A | 102 | 95.2 | 4 | MXTWP1 | $98,648 |
| 800 | 3600 | 4000 | 5811/12USS | SLEEVE | | 8003WPQL11F-A | 101 | 95.1 | 4 | MXTWP1 | $117,885 |
| 800 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | 8003WPAL11F-C | 103 | 95.1 | 4, 12 | MXTWP1 | $123,560 |
| 800 | 3600 | 4000 | 5811/12USS | SLEEVE | | 8003WPQL11F-C | 101 | 95.1 | 4,12 | MXTWP1 | $143,724 |
| 800 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4,12 | MXTWP1 | CF |
| 800 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 8004WPAK11E-A | 187/108 | 93.6 | | MXTWP1 | $90,966 |
| 800 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 8004WPAK11E-C | 174/100 | 94.1 | 12 | MXTWP1 | $114,475 |
| 800 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 8006WPAL11E-A | 115 | 94.5 | | MXTWP1 | $104,488 |
| 900 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | 9003WPAL11F-A | 114 | 95.4 | 4 | MXTWP1 | $99,171 |
| 900 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | 9003WPQL11F-A | 114 | 95.3 | 4, 10 | MXTWP1 | $119,274 |
| 900 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | 9003WPAL11F-C | 110 | 95.8 | 4, 12 | MXTWP1 | $124,918 |
| 900 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | 9003WPQL11F-C | 110 | 95.7 | 4, 10, 12 | MXTWP1 | $145,069 |
| 900 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4,12,14 | MXTWP1 | CF |
| 900 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 9005WPAL11E-A | 113 | 95.5 | 4 | MXTWP1 | $101,057 |
| 900 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | 9005WPQL11E-A | 113 | 95.5 | 4, 10 | MXTWP1 | $121,208 |
| 900 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 9005WPAL11E-C | 117 | 95.6 | 4, 12 | MXTWP1 | $126,804 |
| 900 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | 9005WPQL11E-C | 113 | 95.5 | 4, 10, 12 | MXTWP1 | $146,956 |
| 900 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 9006WPAL11E-A | 124 | 94.5 | | MXTWP1 | $107,064 |
| 1000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M203WPAL11F-A | 126 | 95.5 | 4 | MXTWP1 | $100,529 |
| 1000 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M203WPQL11F-A | 126 | 95.4 | 4, 10 | MXTWP1 | $120,679 |
| 1000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M203WPAL11F-C | 122 | 96 | 4, 12 | MXTWP1 | $126,277 |
| 1000 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M203WPQL11F-C | 122 | 95.9 | 4, 10, 12 | MXTWP1 | $146,427 |
| 1000 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M205WPAL11E-A | 128 | 95.4 | 4 | MXTWP1 | $103,506 |
| 1000 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | M205WPQL11E-A | 128 | 95.4 | 4, 10 | MXTWP1 | $123,655 |
| 1000 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M205WPAL11E-C | 131 | 95.7 | 4, 12 | MXTWP1 | $129,252 |
| 1000 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | M205WPQL11E-C | 131 | 95.6 | 4, 10, 12 | MXTWP1 | $149,402 |
| 1000 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M206WPAL11E-A | 140 | 94.5 | 3, 14, 20 | MXTWP1 | $109,973 |
| 1250 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M253WPAL11F-A | 158 | 95.7 | 4 | MXTWP1 | $106,076 |
| 1250 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M253WPQL11F-A | 158 | 95.6 | 4, 10 | MXTWP1 | $126,226 |
| 1250 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M253WPAL11F-C | 153 | 96.2 | 4, 12 | MXTWP1 | $131,824 |
| 1250 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M253WPQL11F-C | 153 | 96.1 | 4, 10, 12 | MXTWP1 | $151,974 |
| 1250 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M255WPAL11E-A | 159 | 95.5 | 4 | MXTWP1 | $110,690 |
| 1250 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | M255WPQL11E-A | 159 | 95.5 | 4, 10 | MXTWP1 | $130,840 |
| 1250 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M255WPAL11E-C | 162 | 95.9 | 4, 12 | MXTWP1 | $136,437 |
| 1250 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | M255WPQL11E-C | 162 | 95.8 | 10, 12 | MXTWP1 | $156,588 |
| 1500 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M303WPAL11F-A | 189 | 95.8 | 4 | MXTWP1 | $111,271 |
| 1500 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M303WPQL11F-A | 189 | 95.7 | 4, 10 | MXTWP1 | $131,420 |
| 1500 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M303WPAL11F-C | 183 | 96.2 | 4, 12 | MXTWP1 | $137,018 |
| 1500 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M303WPQL11F-C | 183 | 96.1 | 4, 10, 12 | MXTWP1 | $157,168 |
| 1500 | 1800 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M305WPAL11E-A | 189 | 95.6 | 4 | MXTWP1 | $114,632 |
| 1500 | 1800 | 4000 | 5811/12USS | SLEEVE | 7500 | M305WPQL11E-A | 189 | 95.6 | 4, 10 | MXTWP1 | $134,782 |
| 1500 | 1800 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M305WPAL11E-C | 193 | 96 | 4, 12 | MXTWP1 | $140,379 |
| 1500 | 1800 | 4000 | 5811/12USS | SLEEVE | 7500 | M305WPQL11E-C | 193 | 95.9 | 4, 10, 12 | MXTWP1 | $160,529 |
| 1750 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M353WPAL11F-A | 224 | 95.8 | 4 | MXTWP1 | $114,942 |
| 1750 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M353WPQL11F-A | 224 | 95.6 | 4, 10 | MXTWP1 | $135,092 |
| 1750 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M353WPAL11F-C | 216 | 96.1 | 4, 12 | MXTWP1 | $140,690 |
| 1750 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M353WPQL11F-C | 216 | 95.9 | 4, 10, 12, 14 | MXTWP1 | $160,841 |

# Open Enclosure
## Weather Protected I (WPI)
### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1750 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M355WPAL11E-A | 221 | 95.5 | 4, 14 | MXTWP1 | $116,690 |
| 1750 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | M355WPQL11E-A | 221 | 95.5 | 4, 10, 14 | MXTWP1 | $136,840 |
| 2000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M403WPAL11F-A | 253 | 95.8 | 4, 14 | MXTWP1 | $119,128 |
| 2000 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M403WPQL11F-A | 253 | 95.7 | 4, 10, 14 | MXTWP1 | $139,278 |
| 2000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M403WPAL11F-C | 245 | 96.1 | 4, 12, 14 | MXTWP1 | $144,874 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Open Enclosure
## Weather Protected II (WPII)
### High Efficiency



Toshiba's General Purpose Weather-Protected Type II (WPII) high-efficiency motor series has increased water and dust protection compared to other open frames. Offering a cost-effective balance of protection and price for outdoor and indoor applications. It features high torque, low vibration design, and robust construction for industries such as oil and gas, mining, and wastewater treatment. These motors are built to withstand challenging conditions and feature advanced components for extended operational life and exceptional dependability. Toshiba's in-house design, engineering, and manufacturing capabilities allow for customization, resulting in a product line that minimizes maintenance and downtime.

### Product Scope:

**Horsepower:** 250 to 5,500 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM*

**Volt (60 Hz):** 2300/4000 or 4000 V**

**Enclosure:** Weather-Protected Type II: IP24

**Frame Size:** 588USS through 450-1600

**Construction:** Cast Iron Frame, End Brackets & Main Terminal Box (Fabricated Steel Main Terminal Box for IEC, 6800 and Larger Frames)

**Insulation:** Class F with Class B Rise at 1.0 Service Factor

**Environment:** Suitable for Indoor or Outdoor Use

*Contact Toshiba for availability on lower speed designs
**Contact Toshiba for availability on 6000 V, 60 Hz motors
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Dual-Mount Capability | Tri-Mount Capabilities | IP24 Degree Protection |
|---|---|---|---|---|---|---|---|---|
| MXTWP2 | 5012 | Included | Included | Included | Included | Included | N/A | Included |
| | 588 | Included | Included | Included | Included | N/A | N/A | Included |
| | 5809-6812 | Included | Included | Included | Included | N/A | Included | Included |
| | 6813-450 | Included | Included | Included | Included | Included | N/A | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 250 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 250 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP2 | CF |
| 250 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 250 | 900 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 300 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 300 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP2 | CF |
| 300 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 300 | 900 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 350 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 350 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP2 | CF |
| 350 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 350 | 900 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 400 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4003WTAK11F-A | 94/54 | 93.6 | 4 | MXTWP2 | $72,460 |
| 400 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4003WTQK11F-A | 94/54 | 93 | 4, 10 | MXTWP2 | $91,772 |

# Open Enclosure

## Weather Protected II (WPII)

### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4003WTAK11F-C | 94/54 | 93 | 4, 12 | MXTWP2 | $95,970 |
| 400 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4003WTQK11F-C | 94/54 | 93 | 4, 10, 12 | MXTWP2 | $115,280 |
| 400 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 400 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4004WTAK11E-A | 94/54 | 93 | | MXTWP2 | $75,226 |
| 400 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4004WTAK11E-C | 89/51 | 92.4 | 12 | MXTWP2 | $94,536 |
| 400 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP2 | CF |
| 400 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4006WTAK11E-A | 97/56 | 92.9 | | MXTWP2 | $85,696 |
| 400 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4006WTAK11E-C | 103/60 | 94 | 12 | MXTWP2 | $109,205 |
| 400 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 400 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 4008WTAL11E-A | 60 | 94.3 | | MXTWP2 | $92,645 |
| 450 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4503WTAK11F-A | 104/60 | 94.1 | 4 | MXTWP2 | $73,648 |
| 450 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4503WTQK11F-A | 104/60 | 93.6 | 4, 10 | MXTWP2 | $92,960 |
| 450 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 4503WTAK11F-C | 104/60 | 93.6 | 4, 12 | MXTWP2 | $97,156 |
| 450 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 4503WTQK11F-C | 104/60 | 93.6 | 4, 10, 12 | MXTWP2 | $116,468 |
| 450 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 450 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4504WTAK11E-A | 106/61 | 93 | | MXTWP2 | $76,973 |
| 450 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4504WTAK11E-C | 103/59 | 93 | 12 | MXTWP2 | $100,482 |
| 450 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP2 | CF |
| 450 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4506WTAK11E-A | 113/65 | 93.6 | | MXTWP2 | $87,644 |
| 450 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 4506WTAK11E-C | 116/67 | 94.3 | 12 | MXTWP2 | $111,153 |
| 450 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 450 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 4508WTAL11E-A | 66 | 93.8 | | MXTWP2 | $95,669 |
| 500 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 5003WTAK11F-A | 114/66 | 93.6 | 4 | MXTWP2 | $76,129 |
| 500 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 5003WTQK11F-A | 114/66 | 93.6 | 4, 10 | MXTWP2 | $95,438 |
| 500 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 5003WTAK11F-C | 114/66 | 93.6 | 4, 12 | MXTWP2 | $99,637 |
| 500 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 5003WTQK11F-C | 114/66 | 93.6 | 4, 10, 12 | MXTWP2 | $118,947 |
| 500 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 500 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 5004WTAK11E-A | 114/66 | 93 | | MXTWP2 | $79,431 |
| 500 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 5004WTAK11E-C | 112/65 | 93 | 12 | MXTWP2 | $102,940 |
| 500 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP2 | CF |
| 500 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5295 | 5006WTAK11E-A | 126/73 | 93.8 | | MXTWP2 | $91,500 |
| 500 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5295 | 5006WTAK11E-C | 130/75 | 94.5 | 12 | MXTWP2 | $115,008 |
| 500 | 1200 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 12 | MXTWP2 | CF |
| 500 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 5008WTAL11E-A | 75 | 95.6 | | MXTWP2 | $98,475 |
| 600 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 6003WTAK11F-A | 137/79 | 94.2 | 4 | MXTWP2 | $79,313 |
| 600 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 6003WTQK11F-A | 137/79 | 94.2 | 4, 10 | MXTWP2 | $98,625 |
| 600 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 4500 | 6003WTAK11F-C | 137/69 | 94.3 | 4, 12 | MXTWP2 | $102,823 |
| 600 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 6003WTQK11F-C | 137/69 | 94.3 | 4, 10, 12 | MXTWP2 | $122,133 |
| 600 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 600 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 6004WTAK11E-A | 137/79 | 93.7 | | MXTWP2 | $80,948 |
| 600 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 6004WTAK11E-C | 130/75 | 93.4 | 12 | MXTWP2 | $104,456 |
| 600 | 1800 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | | MXTWP2 | CF |
| 600 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 6006WTAL11E-A | 93.4 | 93.7 | | MXTWP2 | $97,976 |
| 600 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 6008WTAL11E-A | 93 | 95.6 | | MXTWP2 | $104,402 |
| 700 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 7003WTAK11F-A | 159/92 | 94.5 | 4 | MXTWP2 | $85,008 |
| 700 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 7003WTQK11F-A | 159/92 | 94.3 | 4, 10 | MXTWP2 | $104,319 |
| 700 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 7003WTAK11F-C | 158/91 | 94.4 | 4, 12 | MXTWP2 | $108,516 |
| 700 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 7003WTQK11F-C | 158/91 | 94.4 | 4, 10, 12 | MXTWP2 | $127,827 |

# Open Enclosure
## Weather Protected II (WPII)
### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 700 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 7003WTAL11F-AF | 88 | 94.7 | 4 | MXTWP2 | $90,041 |
| 700 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | 7003WTQL11F-AF | 88 | 94.5 | 4, 10 | MXTWP2 | $107,413 |
| 700 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 7003WTAL11F-CF | 89 | 94.8 | 4, 12 | MXTWP2 | $113,016 |
| 700 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | 7003WTQL11F-CF | 89 | 94.5 | 4, 10, 12 | MXTWP2 | $131,417 |
| 700 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 700 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 7004WTAK11E-A | 165/95 | 94.2 | | MXTWP2 | $86,681 |
| 700 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 7004WTAK11E-C | 151/87 | 93.9 | 12 | MXTWP2 | $110,190 |
| 700 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 7006WTAL11E-A | 100 | 95.6 | | MXTWP2 | $98,980 |
| 700 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 7008WTAL11E-A | 108 | 95.8 | | MXTWP2 | $107,331 |
| 800 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 8003WTAK11F-A | 182/105 | 94.1 | 4 | MXTWP2 | $88,667 |
| 800 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 8003WTQK11F-A | 180/104 | 93.8 | 4, 10 | MXTWP2 | $108,557 |
| 800 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 8003WTAK11F-C | 178/103 | 94.4 | 4, 12 | MXTWP2 | $112,175 |
| 800 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 8003WTQK11F-CF | 175/101 | 94.9 | 4, 10, 12 | MXTWP2 | $131,658 |
| 800 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 8003WTAL11F-AF | 100 | 94.7 | 4 | MXTWP2 | $91,412 |
| 800 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | 8003WTQL11F-AF | 100 | 94.4 | 4, 10 | MXTWP2 | $109,656 |
| 800 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 8003WTAL11F-CF | 101 | 95.1 | 4, 12 | MXTWP2 | $116,025 |
| 800 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | 8003WTQL11F-CF | 101 | 95 | 4, 10, 12 | MXTWP2 | $135,819 |
| 800 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 6725 | 8003WTAL11F-A | 102 | 95.2 | 4 | MXTWP2 | $93,105 |
| 800 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | 8003WTQL11F-A | 102 | 95 | 4, 10 | MXTWP2 | $113,256 |
| 800 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | 8003WTAL11F-C | 99 | 94.5 | 4, 12 | MXTWP2 | $118,854 |
| 800 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | 8003WTQL11F-C | 99 | 95.5 | 4, 10, 12 | MXTWP2 | $139,004 |
| 800 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 800 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5000 | 8004WTAK11E-A | 185/107 | 93.5 | 3, 20 | MXTWP2 | $90,762 |
| 800 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 8005WTAL11E-A | 108 | 94.5 | 4 | MXTWP2 | $97,369 |
| 800 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | 8005WTQL11E-A | 103 | 93.9 | 4, 10 | MXTWP2 | $117,519 |
| 800 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 8005WTAL11E-C | 108 | 95 | 4, 12 | MXTWP2 | $123,116 |
| 800 | 1800 | 4000 | 5811/12US | SLEEVE | 7500 | 8005WTQL11E-C | 103 | 93.9 | 4, 10, 12 | MXTWP2 | $143,267 |
| 800 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7550 | 8006WTAL11E-A | 115 | 94.6 | | MXTWP2 | $108,698 |
| 800 | 900 | 4000 | 6810/11/12US | SLEEVE | 15000 | 8008WTQL11E-C | 108 | 94.7 | 10, 12 | MXTWP2 | $229,998 |
| 900 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 9003WTAK11F-A1 | CF | 94.1 | 4 | MXTWP2 | $92,325 |
| 900 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 9003WTQK11F-A1 | CF | 94.1 | 4, 10 | MXTWP2 | $112,215 |
| 900 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | 9003WTAK11F-C | CF | 94.2 | 4, 12 | MXTWP2 | $115,833 |
| 900 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | 9003WTQK11F-CF | 193/113 | 95.2 | 4, 10, 12 | MXTWP2 | $136,917 |
| 900 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 9003WTAL11F-AF | 113 | 95.4 | 4 | MXTWP2 | $93,911 |
| 900 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | 9003WTQL11F-AF | 113 | 95.4 | 4, 10 | MXTWP2 | $113,755 |
| 900 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 9003WTAL11F-CF | 112 | 95.2 | 4, 12 | MXTWP2 | $118,186 |
| 900 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | 9003WTQL11F-CF | 112 | 96.3 | 4, 10, 12 | MXTWP2 | $137,869 |
| 900 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 6941 | 9003WTAL11F-A | 114 | 95.4 | 4 | MXTWP2 | $100,140 |
| 900 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | 9003WTQL11F-A | 114 | 95.3 | 4, 10 | MXTWP2 | $121,466 |
| 900 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | 9003WTAL11F-C | 110 | 96.3 | 4, 12 | MXTWP2 | $125,886 |
| 900 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | 9003WTQL11F-C | 110 | 95.7 | 4, 10, 12 | MXTWP2 | $146,036 |
| 900 | 3600 | 4000 | 588USS | ANTI-FRICTION | 5000 | CF | CF | CF | 4 | MXTWP2 | CF |
| 900 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | 9005WTAL11E-A | 114 | 94.5 | 4 | MXTWP2 | $103,068 |
| 900 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | 9005WTQL11E-A | 114 | 95.5 | 4, 10 | MXTWP2 | $123,218 |
| 900 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 9005WTAL11E-C | 117 | 95 | 4, 12 | MXTWP2 | $128,816 |
| 900 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | 9005WTQL11E-C | 117 | 95.5 | 4, 10, 12 | MXTWP2 | $148,965 |
| 900 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 6865 | 9006WTAL11E-A | 124 | 95.4 | | MXTWP2 | $111,341 |
| 900 | 900 | 4000 | 6810/11/12US | SLEEVE | 15000 | 9008WTQL11E-C | 121 | 95.2 | 10, 12 | MXTWP2 | $239,774 |

# Open Enclosure
## Weather Protected II (WPII)
### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1000 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | M203WTAK11F-A1 | CF | CF | 4 | MXTWP2 | $95,984 |
| 1000 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | M203WTQK11F-A1 | CF | CF | 4, 10 | MXTWP2 | $116,002 |
| 1000 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5000 | M203WTAK11F-C | CF | CF | 4, 12 | MXTWP2 | $119,492 |
| 1000 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5000 | M203WTQK11F-CF | 222/128 | 94.7 | 4, 10, 12 | MXTWP2 | $141,583 |
| 1000 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | M203WTAL11F-AF | 123 | 95.2 | 4 | MXTWP2 | $96,923 |
| 1000 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | M203WTQL11F-AF | 124 | 95.2 | 4, 10 | MXTWP2 | $115,995 |
| 1000 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | M203WTAL11F-CF | 125 | 95.4 | 4, 12 | MXTWP2 | $120,291 |
| 1000 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | M203WTQL11F-CF | 125 | 95 | 4, 10, 12 | MXTWP2 | $141,151 |
| 1000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7091 | M203WTAL11F-A | 126 | 95 | 4 | MXTWP2 | $105,691 |
| 1000 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M203WTQL11F-A | 126 | 95.1 | 4, 10 | MXTWP2 | $125,841 |
| 1000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M203WTAL11F-C | 122 | 95.5 | 4, 12 | MXTWP2 | $131,439 |
| 1000 | 3600 | 4000 | 5811/12USS | SLEEVE | 7801 | M203WTQL11F-C | 122 | 95.5 | 4, 10, 12 | MXTWP2 | $151,590 |
| 1000 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 6870 | M205WTAL11E-A | 126 | 95.1 | 4 | MXTWP2 | $107,399 |
| 1000 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M205WTQL11E-A | 126 | 95 | 4, 10 | MXTWP2 | $127,549 |
| 1000 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M205WTAL11E-C | 131 | 95.7 | 4, 12 | MXTWP2 | $133,147 |
| 1000 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M205WTQL11E-C | 131 | 95.4 | 4, 10, 12 | MXTWP2 | $153,297 |
| 1000 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7300 | M206WTAL11E-A | 135 | 95 | 3, 14, 20 | MXTWP2 | $114,452 |
| 1000 | 900 | 4000 | 6812/13US | SLEEVE | 14000 | M208WTQL11E-C | 134 | 95.6 | 10, 12 | MXTWP2 | $250,764 |
| 1250 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | M253WTAL11F-AF | 155 | 95.5 | 4 | MXTWP2 | $107,096 |
| 1250 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | M253WTAL11F-CF | 156 | 95.4 | 4, 12 | MXTWP2 | $127,476 |
| 1250 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | M253WTQL11F-AF | 155 | 95.4 | 4, 10 | MXTWP2 | $128,414 |
| 1250 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | M253WTQL11F-CF | 156 | 94.5 | 4, 10, 12 | MXTWP2 | $150,380 |
| 1250 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7288 | M253WTAL11F-A | 158 | 94.9 | 4 | MXTWP2 | $110,339 |
| 1250 | 3600 | 4000 | 5811/12USS | SLEEVE | 7000 | M253WTQL11F-A | 158 | 95.2 | 4, 10 | MXTWP2 | $130,490 |
| 1250 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7400 | M253WTAL11F-C | 153 | 95.2 | 4, 12 | MXTWP2 | $136,088 |
| 1250 | 3600 | 4000 | 5811/12USS | SLEEVE | 7906 | M253WTQL11F-C | 153 | 95.7 | 4, 10, 12 | MXTWP2 | $156,237 |
| 1250 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 8100 | M255WTAL11E-A | 157 | 95.8 | 4 | MXTWP2 | $114,877 |
| 1250 | 1800 | 4000 | 5811/12US | SLEEVE | 8100 | M255WTQL11E-A | 157 | 96.1 | 4, 10 | MXTWP2 | $135,028 |
| 1250 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M255WTAL11E-C | 162 | 95.7 | 4, 12 | MXTWP2 | $140,624 |
| 1250 | 1800 | 4000 | 5811/12US | SLEEVE | 8100 | M255WTQL11E-C | 162 | 95.4 | 4, 10, 12 | MXTWP2 | $160,775 |
| 1250 | 1200 | 4000 | 6810/11/12US | SLEEVE | 14000 | M257WTQL11E-C | 157 | 95.4 | 4, 10, 12 | MXTWP2 | $258,321 |
| 1250 | 900 | 4000 | 6812/13US | SLEEVE | 14000 | M258WTQL11E-C | 169 | 95.4 | 10, 12 | MXTWP2 | $264,450 |
| 1500 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | M303WTAL11F-CF | 187 | 95.7 | 4, 12 | MXTWP2 | $139,123 |
| 1500 | 3600 | 4000 | 5809/10/11USS | SLEEVE | 7300 | M303WTQL11F-CF | 187 | 95.8 | 4, 10, 12 | MXTWP2 | $156,603 |
| 1500 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7434 | M303WTAL11F-A | 189 | 97 | 4 | MXTWP2 | $115,884 |
| 1500 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M303WTQL11F-A | 189 | 95 | 4, 10 | MXTWP2 | $136,034 |
| 1500 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7500 | M303WTAL11F-C | 183 | 94.5 | 4, 12 | MXTWP2 | $141,632 |
| 1500 | 3600 | 4000 | 5811/12USS | SLEEVE | 8044 | M303WTQL11F-C | 183 | 95.3 | 4, 10, 12 | MXTWP2 | $161,783 |
| 1500 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 8100 | M305WTAL11E-A | 189 | 95.3 | 3, 4, 14, 20 | MXTWP2 | $118,863 |
| 1500 | 1800 | 4000 | 5811/12US | SLEEVE | 8100 | M305WTQL11E-A | 189 | 96.2 | 3, 4, 10, 14, 20 | MXTWP2 | $139,014 |
| 1500 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7900 | M305WTAL11E-C | 193 | 95.8 | 3, 4, 12, 14, 20 | MXTWP2 | $144,610 |
| 1500 | 1800 | 4000 | 5811/12US | SLEEVE | 8100 | M305WTQL11E-C | 193 | 95.4 | 3, 4, 10, 12, 14, 20 | MXTWP2 | $164,761 |
| 1500 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M305WTAL11E-CF | 196 | 96.2 | 4, 12 | MXTWP2 | $245,973 |
| 1500 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M305WTQL11E-CF | 196 | 95.4 | 4, 10, 12 | MXTWP2 | $263,208 |
| 1500 | 1200 | 4000 | 6810/11/12US | SLEEVE | 14000 | M307WTQL11E-C | 187 | 96.8 | 4, 10, 12 | MXTWP2 | $265,266 |
| 1500 | 900 | 4000 | 6812/13US | SLEEVE | 14000 | M308WTQL11E-C | 205 | 95 | 10, 12 | MXTWP2 | $275,927 |
| 1750 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M353WTAL11F-A | 224 | 96.8 | 4 | MXTWP2 | $120,138 |
| 1750 | 3600 | 4000 | 5811/12USS | SLEEVE | 7500 | M353WTQL11F-A | 224 | 95 | 4, 10 | MXTWP2 | $140,287 |

# Open Enclosure
## Weather Protected II (WPII)
### High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1750 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7300 | M353WTAL11F-C | 216 | 95.8 | 4, 12 | MXTWP2 | $145,884 |
| 1750 | 3600 | 4000 | 5811/12USS | SLEEVE | 8237 | M353WTQL11F-C | 216 | 95.2 | 4, 10, 12 | MXTWP2 | $166,035 |
| 1750 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M355WTAL11E-C | 219 | 95.2 | 4, 12 | MXTWP2 | $248,388 |
| 1750 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M355WTQL11E-C | 219 | 95.5 | 4, 10, 12 | MXTWP2 | $265,164 |
| 1750 | 1200 | 4000 | 6810/11/12US | SLEEVE | 14000 | M357WTQL11E-C | 218 | 95.6 | 4, 10, 12 | MXTWP2 | $274,775 |
| 2000 | 3600 | 4000 | 5811/12USS | SLEEVE | 8551 | M403WTQL11F-C | 245 | 96 | 4, 10, 12 | MXTWP2 | $173,062 |
| 2000 | 3600 | 4000 | 6810/11/12US | SLEEVE | 15000 | M403WTQL11F-CF | 249 | 96.1 | 4, 10, 12 | MXTWP2 | $250,467 |
| 2000 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M405WTAL11E-C | 250 | 96.1 | 4, 12 | MXTWP2 | $255,868 |
| 2000 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M405WTQL11E-C | 250 | 95.6 | 4, 10, 12 | MXTWP2 | $272,644 |
| 2000 | 1200 | 4000 | 6810/11/12US | SLEEVE | 14000 | M407WTQL11E-C | 250 | 94.3 | 4, 10, 12 | MXTWP2 | $287,122 |
| 2250 | 3600 | 4000 | 6810/11/12US | SLEEVE | 15000 | M453WTQL11F-C | 279 | 96.3 | 4, 10, 12 | MXTWP2 | $270,617 |
| 2250 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M455WTAL11E-C | 278 | 96.3 | 4, 12 | MXTWP2 | $269,771 |
| 2250 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M455WTQL11E-C | 278 | 96.3 | 4, 10, 12 | MXTWP2 | $286,547 |
| 2250 | 1200 | 4000 | 6812/13US | SLEEVE | 14000 | M457WTQL11E-C | 281 | 95.5 | 4, 10, 12 | MXTWP2 | $299,664 |
| 2500 | 3600 | 4000 | 6810/11/12US | SLEEVE | 15000 | M503WTQL11F-C | 309 | 95.8 | 4, 10, 12 | MXTWP2 | $284,128 |
| 2500 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M505WTAL11E-C | 309 | 96.4 | 4, 12 | MXTWP2 | $280,306 |
| 2500 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M505WTQL11E-C | 309 | 96.4 | 4, 10, 12 | MXTWP2 | $297,083 |
| 2500 | 1200 | 4000 | 6812/13US | SLEEVE | 14000 | M507WTQL11E-C | 318 | 95.4 | 4, 10, 12 | MXTWP2 | $312,852 |
| 2750 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 14500 | M553WTQL11F-C | 337 | 95.7 | 4, 10, 12 | MXTWP2 | $299,552 |
| 2750 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 15500 | M555WTAL11E-C | 338 | 96.3 | 4, 12 | MXTWP2 | $294,274 |
| 2750 | 1800 | 4000 | 6812/13US | SLEEVE | 15000 | M555WTQL11E-C | 338 | 96.3 | 4, 10, 12 | MXTWP2 | $311,050 |
| 2750 | 1200 | 4000 | 6812/13US | SLEEVE | 15000 | M557WTQL11E-C | 368 | 95.9 | 3, 4, 10, 12, 14, 20 | MXTWP2 | $325,168 |
| 3000 | 3600 | 4000 | 6810/11/12US | SLEEVE | 15000 | M603WTQL11F-C | 370 | 96.3 | 4, 10, 12 | MXTWP2 | $312,503 |
| 3000 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 15500 | M605WTAL11E-C | 369 | 96.7 | 4, 12 | MXTWP2 | $308,617 |
| 3000 | 1800 | 4000 | 6812/13US | SLEEVE | 14000 | M605WTQL11E-C | 369 | 96.7 | 4, 10, 12 | MXTWP2 | $325,393 |
| 3500 | 3600 | 4000 | 6810/11/12US | SLEEVE | 15000 | M703WTQL11F-C | 431 | 96.2 | 4, 10, 12 | MXTWP2 | $325,570 |
| 3500 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 15500 | M705WTAL11E-C | 431 | 96.6 | 4, 12 | MXTWP2 | $321,522 |
| 3500 | 1800 | 4000 | 6812/13US | SLEEVE | 14000 | M705WTQL11E-C | 431 | 96.1 | 4, 10, 12 | MXTWP2 | $338,300 |
| 4000 | 3600 | 4000 | 6812/13USS | SLEEVE | 14000 | M803WTQL11F-C | 495 | 96.2 | 4, 10, 12 | MXTWP2 | $333,313 |
| 4000 | 1800 | 4000 | 450-1600 | SLEEVE | 14000 | M805WTQL11E-C | 495 | 96.6 | 4, 10, 12 | MXTWP2 | $344,116 |
| 4000 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 15500 | M805WTAL11E-C | 495 | 96.6 | 3, 4, 12, 14, 20 | MXTWP2 | $336,909 |
| 4000 | 1800 | 4000 | 6812/13US | SLEEVE | 16000 | M805WTQL11E-CF | 509 | 96.7 | 3, 4, 10, 12, 14, 20 | MXTWP2 | $353,685 |
| 4500 | 3600 | 4000 | 6812/13USS | SLEEVE | 14000 | M903WTQL11F-C | 553 | 97.1 | 4, 10, 12 | MXTWP2 | $345,157 |
| 4500 | 1800 | 4000 | 450-1600 | SLEEVE | 16000 | M905WTQL11E-C | 575 | 97.1 | 4, 10, 12 | MXTWP2 | $356,332 |
| 5000 | 3600 | 4000 | 450-1600 | SLEEVE | 16000 | C203WTQL11E-C | 603 | 97 | 4, 10, 12 | MXTWP2 | $352,301 |
| 5500 | 3600 | 4000 | 450-1600 | SLEEVE | 16000 | C223WTQL11E-C | 664 | 97 | 4, 10, 12 | MXTWP2 | $360,756 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Medium Voltage General Purpose Series

## Totally Enclosed Motors

Toshiba's versatile medium voltage motor series offers a wide range of high-efficiency options, including select models that meet NEMA Premium Efficiency standards. With in-house design, engineering, and manufacturing capabilities, each motor is customizable to your specifications and can be tested alongside the Toshiba drive or switchgear for seamless integration. Supported by Houston-based experts, Toshiba simplifies the installation and maintenance of complex systems. For fast availability in everyday or critical situations, Toshiba keeps high-demand motors in stock for immediate use or to minimize lead times in customization.

**Standard Features:**

- Totally Enclosed Fan Cooled, Air-to-Air Cooled, and Totally Enclosed Water-to-Air Cooled
- High & NEMA Premium® Efficiency
- 60 Hz: 2300/4160, 2300/4000, 4000 or 4160 V
- Three-Phase
- Horizontal Foot-Mounted Direct-Coupled or Belted Applications (Where Noted)
- Class F Form-Wound Insulation
- Class B Temperature Rise at 1.0 Service Factor by Resistance (Where Noted)
- IP44, IP54, or IP55 Protection
- Vacuum-Pressure Impregnated System
- Cast Iron Frame & End Brackets
- Cast Iron Terminal Box & Fabricated Steel Box
- Anti-Friction Ball or Sleeve Bearings
- Aluminum Die Cast or Copper Bar Rotor
- Polyurea Base Grease or ISO VG Oil
- 304 Stainless Steel Nameplate

**Applications:**

- General Applications
- Compressors
- Conveyors
- Pumps
- Mixers
- Fans
- Material Handling

**Warranty:**

- From Date of Manufacture: 18 Months**
- From Date of Installation: 12 Months**

**Whichever Comes First



# Totally Enclosed
# TEFC General Purpose
## High & NEMA Premium® Efficiency



Toshiba's Totally Enclosed Fan Cooled (TEFC) General Purpose motor series is designed to have high ingress protection from moisture and contaminants, making these motors ideal for challenging environments like oil & gas, mining & minerals, and chemical industries. It meets global demands for energy conservation and long service life, offering exceptionally high torque and low vibration for superior performance and reliability. Built with a heavy-duty cast-iron frame, oversized 300 series bearings, and advanced insulation systems, these motors are engineered for durability and efficiency. Toshiba's in-house design and manufacturing capabilities allow for complete customization, ensuring each motor meets specific application requirements.

### Product Scope:

**Horsepower:** 100 to 2,500 HP

**Speed:** 3600, 1800, 1200, 900, or 720 RPM*

**Voltage:** 2300/4000 or 4000 V*

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** S447TS/449TS through N8810

**Construction:** Cast Iron Frame & End Brackets

**Insulation:** Class F with Class B Rise at 1.0 Service Factor by RM (Where Noted)

**Environment:** Suitable for Indoor or Outdoor

*Contact Toshiba for 6000 or 6600 V Options
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Accelerometer Provisions | Premium Efficiency | Dual Mount Capability | Tri-Mount Capability | IP54 Degree Protection |
|---|---|---|---|---|---|---|---|---|---|---|
| MXTFCM | S/B449 | Option | Included | Included | Included | Included | Included | Included | N/A | Included |
| | 5011 | Included | Included | Included | Included | Included | N/A | N/A | Included | Included |
| | 5811 | Included | Included | Included | Included | Included | N/A | N/A | Included | Included |
| | 6811 | Included | Included | Included | Included | Included | N/A | N/A | Included | Included |
| MXTFGM | N6810 | Included | Included | Included | Included | Option | N/A | Included | N/A | Included |
| | N7808 | Included | Included | Included | Included | Option | N/A | Included | N/A | Included |
| | N8810 | Included | Included | Included | Included | Option | N/A | Included | N/A | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 3600 | 2300/4000 | S447TS/S449TS | ANTI-FRICTION | 3500 | 1003SDAK41B-A | 22.1/12.7 | 93 | 4 | MXTFCM | $54,396 |
| 100 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1004SDAK41A-A | 25.6/14.7 | 94.1 | | MXTFCM | $53,557 |
| 100 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1004SDAK41A-AR | 25.6/14.7 | 94.1 | | MXTFCM | $54,547 |
| 100 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1006SDAK41A-A | CF | CF | | MXTFCM | $63,775 |
| 125 | 3600 | 2300/4000 | S447TS/S449TS | ANTI-FRICTION | 3500 | 1253SDAK41B-A | 27.5/15.8 | 93.6 | 4 | MXTFCM | $55,233 |
| 125 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1254SDAK41A-A | 31.7/18.2 | 94.1 | | MXTFCM | $54,396 |
| 125 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1254SDAK41A-AR | 31.7/18.2 | 94.1 | | MXTFCM | $55,386 |
| 125 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1256SDAK41A-A | CF | CF | | MXTFCM | $64,600 |
| 125 | 900 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1258SDAK41A-A | 35/20 | 94.5 | | MXTFCM | $67,437 |
| 125 | 900 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1258SDAK41A-AR | 35/20 | 94.5 | | MXTFCM | $68,427 |
| 150 | 3600 | 2300/4000 | S447TS/S449TS | ANTI-FRICTION | 3500 | 1503SDAK41B-A | 32.9/18.9 | 94.5 | 4 | MXTFCM | $56,455 |
| 150 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1504SDAK41A-A | 38/22 | 94.5 | | MXTFCM | $55,892 |
| 150 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1504SDAK41A-AR | 38/22 | 94.5 | | MXTFCM | $56,882 |

# Totally Enclosed

## TEFC General Purpose

## High & NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1506SDAK41A-A | 35/20 | 94.5 | | MXTFCM | $65,824 |
| 150 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 1506SDAK41A-AR | 35/20 | 94.5 | | MXTFCM | $66,814 |
| 150 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 3500 | 1508SDAK41A-A | 42/24 | 94.5 | | MXTFCM | $68,152 |
| 150 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 3500 | 1508SDAK41A-AR | 42/24 | 94.5 | | MXTFCM | $69,142 |
| 200 | 3600 | 2300/4000 | S447TS/S449TS | ANTI-FRICTION | 3500 | 2003SDAK41B-A | 44/25 | 95 | 4 | MXTFCM | $59,939 |
| 200 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2004SDAK41A-A | 51/29 | 95 | | MXTFCM | $57,605 |
| 200 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2004SDAK41A-AR | 51/29 | 95 | | MXTFCM | $58,595 |
| 200 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2006SDAK41A-A | 47/27 | 95 | | MXTFCM | $67,664 |
| 200 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2006SDAK41A-AR | 47/27 | 95 | | MXTFCM | $68,654 |
| 200 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 2008SDAK41A-A | 55/32 | 95 | | MXTFCM | $70,502 |
| 200 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 3500 | 2008SDAK41A-AR | 55/32 | 95 | | MXTFCM | $71,492 |
| 200 | 900 | 4000 | 5009/10/11US | ANTI-FRICTION | 6000 | 2008FTAL11E-A | 31 | 93.6 | | MXTFCM | $68,500 |
| 250 | 3600 | 2300/4000 | S447TS/S449TS | ANTI-FRICTION | 3500 | 2503SDAK41B-A | 56/32 | 95 | 4 | MXTFCM | $61,545 |
| 250 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2504SDAK41A-A | 63/37 | 95 | | MXTFCM | $59,567 |
| 250 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2504SDAK41A-AR | 63/37 | 95 | | MXTFCM | $60,557 |
| 250 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2506SDAK41A-A | 60/35 | 95 | | MXTFCM | $69,471 |
| 250 | 1200 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 2506SDAK41A-AR | 60/35 | 95 | | MXTFCM | $70,461 |
| 250 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 2508SDAK41A-A | 73/42 | 95 | | MXTFCM | $72,852 |
| 250 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 2508SDAK41A-AR | 73/42 | 95 | | MXTFCM | $73,842 |
| 250 | 900 | 4000 | 5009/10/11US | ANTI-FRICTION | 6100 | 2508FTAL11E-A | 38 | 93.6 | | MXTFCM | $69,137 |
| 300 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 3004SDAK41A-A | 77/44 | 95 | | MXTFCM | $62,092 |
| 300 | 1800 | 2300/4000 | S447T/S449T | ANTI-FRICTION | 3500 | 3004SDAK41A-AR | 77/44 | 95 | | MXTFCM | $63,082 |
| 300 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 4397 | 3004FTAL11E-A | 43 | 94.5 | | MXTFCM | $59,079 |
| 300 | 1200 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3006SDAK41A-A | 71/41 | 95 | | MXTFCM | $71,293 |
| 300 | 1200 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3006SDAK41A-AR | 71/41 | 95 | | MXTFCM | $72,283 |
| 300 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 4523 | 3006FTAL11E-A | 45 | 94.5 | | MXTFCM | $68,540 |
| 300 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3008SDAK41A-A | 48 | 95 | 3, 14, 20 | MXTFCM | $75,202 |
| 300 | 900 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3008SDAK41A-AR | 48 | 95 | 3, 14, 20 | MXTFCM | $76,192 |
| 300 | 900 | 4000 | 5009/10/11US | ANTI-FRICTION | 6200 | 3008FTAL11E-A | 46 | 94.1 | | MXTFCM | $72,687 |
| 350 | 3600 | 4000 | 5009/10/11USS | ANTI-FRICTION | 4407 | 3503FTAL11F-A | 46 | 93.6 | 4 | MXTFCM | $60,932 |
| 350 | 3600 | 4000 | 5009/10/11USS | ANTI-FRICTION | 5000 | 3503FTAL11F-C | 44 | 95 | 4, 12 | MXTFCM | $85,615 |
| 350 | 1800 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3504SDAK41A-A | 89/51 | 95.4 | | MXTFCM | $63,368 |
| 350 | 1800 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3504SDAK41A-AR | 89/51 | 95.4 | | MXTFCM | $64,358 |
| 350 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 4371 | 3504FTAL11E-A | 50 | 94.5 | | MXTFCM | $60,062 |
| 350 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 3504FTQL11E-A | 44 | 93 | 10 | MXTFCM | $79,355 |
| 350 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3504FTAL11E-C | 50 | 94.5 | 12 | MXTFCM | $84,746 |
| 350 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 3504FTQL11E-C | 44 | 93.6 | 10, 12 | MXTFCM | $104,039 |
| 350 | 1200 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3506SDAK41A-A | 83/48 | 95.4 | | MXTFCM | $73,116 |
| 350 | 1200 | 2300/4000 | B447T/B449T | ANTI-FRICTION | 4000 | 3506SDAK41A-AR | 83/48 | 95.4 | | MXTFCM | $74,106 |
| 350 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 4697 | 3506FTAL11E-A | 51 | 94.1 | | MXTFCM | $69,489 |
| 350 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 6700 | 3508FTAL11E-A | 52 | 94.1 | | MXTFCM | $85,451 |
| 400 | 3600 | 4000 | 5009/10/11USS | ANTI-FRICTION | 5800 | 4003FTAL11F-A | 52 | 94.1 | 4 | MXTFCM | $66,691 |
| 400 | 3600 | 4000 | 5009/10/11USS | ANTI-FRICTION | 5000 | 4003FTAL11F-C | 50 | 94.1 | 4, 12 | MXTFCM | $91,376 |
| 400 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 4628 | 4004FTAL11E-A | 56 | 95 | | MXTFCM | $68,174 |
| 400 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 4004FTQL11E-A | 50 | 94.1 | 10 | MXTFCM | $88,451 |
| 400 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4004FTAL11E-C | 50 | 94.1 | 12 | MXTFCM | $92,859 |
| 400 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 4004FTQL11E-C | 50 | 94.1 | 10, 12 | MXTFCM | $113,135 |
| 400 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 6500 | 4006FTAL11E-A | 61 | 94.5 | | MXTFCM | $72,028 |

# Totally Enclosed

## TEFC General Purpose

## High & NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 6800 | 4008FTAL11E-A | 60.5 | 94.1 | | MXTFCM | $89,921 |
| 450 | 3600 | 4000 | 5009/10/11USS | ANTI-FRICTION | 4594 | 4503FTAL11F-A | 59 | 94.5 | 4 | MXTFCM | $68,927 |
| 450 | 3600 | 4000 | 5009/10/11USS | ANTI-FRICTION | 5052 | 4503FTAL11F-C | 56 | 95.4 | 4, 12 | MXTFCM | $93,610 |
| 450 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 4730 | 4504FTAL11E-A | 63 | 95 | | MXTFCM | $72,216 |
| 450 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 4504FTQL11E-A | 56 | 94.1 | 10 | MXTFCM | $92,494 |
| 450 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4504FTAL11E-C | 56 | 94.1 | 12 | MXTFCM | $96,901 |
| 450 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 4504FTQL11E-C | 56 | 94.1 | 10, 12 | MXTFCM | $117,178 |
| 450 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5003 | 4506FTAL11E-A | 70 | 94.5 | | MXTFCM | $77,825 |
| 450 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4506FTAL11E-C | 70 | 94.1 | 12 | MXTFCM | $104,236 |
| 450 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 6900 | 4508FTAL11E-A | 68 | 94.5 | | MXTFCM | $93,185 |
| 500 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 6500 | 5003FTAL11F-A | 66 | 94.5 | 4 | MXTFCM | $85,378 |
| 500 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 5003FTAL11F-C | 62 | 94.5 | 4, 12 | MXTFCM | $112,412 |
| 500 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 4892 | 5004FTAL11E-A | 70 | 95 | | MXTFCM | $75,204 |
| 500 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 5004FTQL11E-A | 62 | 94.1 | 10 | MXTFCM | $95,478 |
| 500 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 6800 | 5004FTAL11E-C | 70 | 95 | 12 | MXTFCM | $99,887 |
| 500 | 1800 | 4000 | 5009/10/11US | SLEEVE | 5000 | 5004FTQL11E-C | 62 | 94.1 | 10, 12 | MXTFCM | $106,878 |
| 500 | 1200 | 4000 | 5809/10/11US | ANTI-FRICTION | 6274 | 5006FTAL11E-A | 69 | 95.4 | | MXTFCM | $95,845 |
| 500 | 1200 | 4000 | 5809/10/11US | SLEEVE | 6274 | 5006FTQL11E-A | 69 | 95.4 | 10 | MXTFCM | $105,229 |
| 500 | 1200 | 4000 | 5809/10/11US | ANTI-FRICTION | 6500 | 5006FTAL11E-C | 65 | 94.5 | 12 | MXTFCM | $117,106 |
| 500 | 1200 | 4000 | 5809/10/11US | SLEEVE | 6500 | 5006FTQL11E-C | 65 | 94.5 | 10, 12 | MXTFCM | $128,824 |
| 500 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 5008FTAL11E-A | 61 | 94.1 | | MXTFCM | $100,828 |
| 600 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7016 | 6003FTAL11F-A | 78 | 95 | 4 | MXTFCM | $89,354 |
| 600 | 3600 | 4000 | 5809/10/11USS | ANTI-FRICTION | 7000 | 6003FTAL11F-C | 74 | 95 | 4, 12 | MXTFCM | $116,388 |
| 600 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 6004FTAL11E-AF | 86 | 95.3 | | MXTFCM | $78,061 |
| 600 | 1800 | 4000 | 5809/10/11US | ANTI-FRICTION | 6714 | 6004FTAL11E-A | 78 | 94.5 | | MXTFCM | $92,011 |
| 600 | 1800 | 4000 | 5809/10/11US | SLEEVE | 7000 | 6004FTQL11E-A | 75 | 95 | 10 | MXTFCM | $110,513 |
| 600 | 1800 | 4000 | 5809/10/11US | ANTI-FRICTION | 6535 | 6004FTAL11E-C | 76 | 94.5 | 12 | MXTFCM | $119,044 |
| 600 | 1800 | 4000 | 5809/10/11US | SLEEVE | 7000 | 6004FTQL11E-C | 76 | 94.5 | 10, 12 | MXTFCM | $137,546 |
| 600 | 1200 | 4000 | 5809/10/11US | ANTI-FRICTION | 6681 | 6006FTAL11E-A | 83 | 95.8 | | MXTFCM | $99,253 |
| 600 | 1200 | 4000 | 5809/10/11US | SLEEVE | 6681 | 6006FTQL11E-A | 83 | 95.8 | 10 | MXTFCM | $116,303 |
| 600 | 900 | 4000 | 6809/10/11US | ANTI-FRICTION | 15000 | 6008FTAL11E-C | 85 | 95.4 | 12 | MXTFCM | $189,452 |
| 600 | 900 | 4000 | 6809/10/11US | SLEEVE | 15000 | 6008FTQL11E-C | 85 | 95.4 | 10, 12 | MXTFCM | $206,502 |
| 700 | 1800 | 4000 | 5809/10/11US | ANTI-FRICTION | 7047 | 7004FTAL11E-A | 92 | 95 | | MXTFCM | $101,061 |
| 700 | 1800 | 4000 | 5809/10/11US | SLEEVE | 7000 | 7004FTQL11E-A | 86 | 95 | 10 | MXTFCM | $122,220 |
| 700 | 1800 | 4000 | 5809/10/11US | ANTI-FRICTION | 6600 | 7004FTAL11E-C | 88 | 94.5 | 12 | MXTFCM | $128,097 |
| 700 | 1800 | 4000 | 5809/10/11US | SLEEVE | 7000 | 7004FTQL11E-C | 88 | 94.5 | 10, 12 | MXTFCM | $149,255 |
| 700 | 1200 | 4000 | 5809/10/11US | ANTI-FRICTION | 7084 | 7006FTAL11E-A | 96 | 95.8 | | MXTFCM | $104,940 |
| 700 | 900 | 4000 | 6809/10/11US | ANTI-FRICTION | 15000 | 7008FTAL11E-C | 99 | 95.4 | 12 | MXTFCM | $190,945 |
| 700 | 900 | 4000 | 6809/10/11US | SLEEVE | 15000 | 7008FTQL11E-C | 99 | 95.4 | 10, 12 | MXTFCM | $207,995 |
| 800 | 1800 | 4000 | 5809/10/11US | ANTI-FRICTION | 7237 | 8004FTAL11E-A | 105 | 95 | | MXTFCM | $103,388 |
| 800 | 1800 | 4000 | 5809/10/11US | SLEEVE | 7000 | 8004FTQL11E-A | 102 | 95 | 10 | MXTFCM | $124,545 |
| 800 | 1800 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 8004FTAL11E-C | 100 | 95 | 12 | MXTFCM | $130,423 |
| 800 | 1800 | 4000 | 5809/10/11US | SLEEVE | 7000 | 8004FTQL11E-C | 100 | 95 | 10, 12 | MXTFCM | $151,581 |
| 800 | 1200 | 4000 | 6809/10/11US | ANTI-FRICTION | 9000 | 8006FTAL11E-C | 101 | 95.8 | 12 | MXTFCM | $174,530 |
| 800 | 1200 | 4000 | 6809/10/11US | SLEEVE | 9000 | 8006FTQL11E-C | 101 | 95.8 | 10, 12 | MXTFCM | $189,620 |
| 800 | 900 | 4000 | 6809/10/11US | ANTI-FRICTION | 15000 | 8008FTAL11E-C | 114 | 95.8 | 12 | MXTFCM | $192,700 |
| 800 | 900 | 4000 | 6809/10/11US | SLEEVE | 15000 | 8008FTQL11E-C | 113 | 95.8 | 10, 12 | MXTFCM | $209,750 |
| 900 | 1800 | 4000 | 6809/10/11US | ANTI-FRICTION | 9000 | 9004FTAL11E-C | 115 | 94.5 | 12 | MXTFCM | $189,796 |

# Totally Enclosed

## TEFC General Purpose

## High & NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 900 | 1800 | 4000 | 6809/10/11US | SLEEVE | 9000 | 9004FTQL11E-C | 115 | 94.5 | 10, 12 | MXTFCM | $203,863 |
| 900 | 1200 | 4000 | 6809/10/11US | ANTI-FRICTION | 9000 | 9006FTAL11E-C | 113 | 95.8 | 12 | MXTFCM | $194,062 |
| 900 | 1200 | 4000 | 6809/10/11US | SLEEVE | 9000 | 9006FTQL11E-C | 113 | 95.8 | 10, 12 | MXTFCM | $208,855 |
| 900 | 900 | 4000 | N7808 | ANTI-FRICTION | 15000 | J9008FLF3I-C | 120 | 95.8 | 1, 12 | MXTFGN | CF |
| 900 | 720 | 4000 | N7808 | ANTI-FRICTION | 15000 | J9009FLF3I-C | 120 | 95.8 | 1, 12 | MXTFGN | CF |
| 1000 | 1800 | 4000 | N6810 | ANTI-FRICTION | 12000 | J1004FLF3I-C | 126.1 | 96.3 | 1, 12 | MXTFGN | CF |
| 1000 | 1800 | 4000 | 6809/10/11US | ANTI-FRICTION | 9000 | M204FTAL11E-C | 127 | 94.5 | 12 | MXTFCM | $204,230 |
| 1000 | 1800 | 4000 | 6809/10/11US | SLEEVE | 9000 | M204FTQL11E-C | 127 | 94.5 | 10, 12 | MXTFCM | $227,572 |
| 1000 | 1200 | 4000 | N6810 | ANTI-FRICTION | 12000 | J1006FLF3I-C | 131 | 96.0 | 1, 12 | MXTFGN | CF |
| 1000 | 1200 | 4000 | 6809/10/11US | ANTI-FRICTION | 9000 | M206FTAL11E-C | 127 | 94.5 | 12 | MXTFCM | $214,950 |
| 1000 | 1200 | 4000 | 6809/10/11US | SLEEVE | 9000 | M206FTQL11E-C | 127 | 94.5 | 10, 12 | MXTFCM | $227,825 |
| 1000 | 900 | 4000 | N7808 | ANTI-FRICTION | 15000 | J1008FLF3I-C | 133 | 95.8 | 1, 12 | MXTFGN | CF |
| 1000 | 720 | 4000 | N7808 | ANTI-FRICTION | 15000 | J1010FLF3I-C | 133 | 95.8 | 1, 12 | MXTFGN | CF |
| 1250 | 1800 | 4000 | N6810 | ANTI-FRICTION | 12000 | J1254FLF3I-C | 158 | 96.0 | 1, 12 | MXTFGN | CF |
| 1250 | 1800 | 4000 | 6809/10/11US | ANTI-FRICTION | 9000 | M254FTAL11E-C | 158 | 95 | 12 | MXTFCM | $224,743 |
| 1250 | 1800 | 4000 | 6809/10/11US | SLEEVE | 9000 | M254FTQL11E-C | 158 | 95 | 10, 12 | MXTFCM | $235,827 |
| 1250 | 1200 | 4000 | N7808 | ANTI-FRICTION | 15000 | J1256FLF3I-C | 162 | 95.8 | 1, 12 | MXTFGN | CF |
| 1250 | 900 | 4000 | N8810 | ANTI-FRICTION | 18700 | J1258FLF3I-C | 164 | 95.8 | 1, 12 | MXTFGN | CF |
| 1500 | 1800 | 4000 | N7808 | ANTI-FRICTION | 15000 | J1504FLF3I-C | 186 | 96.5 | 1, 12 | MXTFGN | CF |
| 1500 | 1200 | 4000 | N7808 | ANTI-FRICTION | 15000 | J1506FLF3I-C | 195 | 95.8 | 1, 12 | MXTFGN | CF |
| 1500 | 900 | 4000 | N8810 | ANTI-FRICTION | 18700 | J1508FLF3I-C | 197 | 95.8 | 1, 12 | MXTFGN | CF |
| 1750 | 1800 | 4000 | N7808 | ANTI-FRICTION | 15000 | J1754FLF3I-C | 216 | 96.5 | 1, 12 | MXTFGN | CF |
| 1750 | 1200 | 4000 | N8810 | ANTI-FRICTION | 18700 | J1756FLF3I-C | 222 | 96.5 | 1, 12 | MXTFGN | CF |
| 2000 | 1800 | 4000 | N8810 | ANTI-FRICTION | 18700 | J2004FLF3I-C | 247 | 96.5 | 1, 12 | MXTFGN | CF |
| 2000 | 1200 | 4000 | N8810 | ANTI-FRICTION | 18700 | J2006FLF3I-C | 253 | 96.5 | 1, 12 | MXTFGN | CF |
| 2250 | 1800 | 4000 | N8810 | ANTI-FRICTION | 18700 | J2254FLF3I-C | 278 | 96.5 | 1, 12 | MXTFGN | CF |
| 2250 | 1200 | 4000 | N8810 | ANTI-FRICTION | 18700 | J2256FLF3I-C | 284 | 96.5 | 1, 12 | MXTFGN | CF |
| 2500 | 1800 | 4000 | N8810 | ANTI-FRICTION | 18700 | J2504FLF3I-C | 305 | 96.5 | 1, 12 | MXTFGN | CF |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Totally Enclosed
# Totally Enclosed Fan Cooled 840
## High Efficiency



For frames that fall outside 841 guidelines yet still require essential Petrochem Severe Duty features, Toshiba's Totally Enclosed Fan Cooled (TEFC) 840 motor series is the ideal solution. Combining advanced mechanical enhancements with an IP55 rating, these motors deliver outstanding protection against moisture and contaminants. Engineered with heavy-duty construction, the 840 series excels in challenging environments, providing robust, versatile performance tailored to rigorous industrial demands.

### Product Scope:

**Horsepower:** 200 to 500 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM

**Volt (60 Hz):** 4000 V*

**Enclosure:** Totally Enclosed Fan Cooled: IP55

**Frame Size:** 5009/10/11US through 5809/10/11US

**Construction:** Cast Iron Frame & Brackets with Cast Iron or Fabricated Steel Terminal Box(es) & Fan Cover

*Contact Toshiba for availability on lower speed designs
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Accelerometer Provisions | Premium Efficiency | Dual Mount Capability | Tri-Mount Capability | IP55 Degree Protection | Class I Div 2 | Severe Duty Features * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MXTFCM | 5011 | Included | Included | Included | Included | Included | N/A | N/A | Included | Included | Included | Included |
| | 5811 | Included | Included | Included | Included | Included | N/A | N/A | Included | Included | Included | Included |

*See Medium Voltage Modification Section "TEFC 840 Severe Duty Package"

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 200 | 900 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 2008XSAL11E-A | 30 | 93.6 | | MXTFCM | $80,364 |
| 250 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 2506XSAL11E-A | 38 | 93.6 | | MXTFCM | $79,445 |
| 250 | 900 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 2508XSAL11E-A | 38 | 93.6 | | MXTFCM | $81,001 |
| 300 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3004XSAL11E-AF | 45 | 94.5 | | MXTFCM | $70,942 |
| 300 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3006XSAL11E-A | 45 | 94.5 | | MXTFCM | $80,403 |
| 300 | 900 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3008XSAL11E-A | 46 | 94.1 | | MXTFCM | $84,550 |
| 350 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3503XSAL11F-A | 46 | 93.6 | | MXTFCM | $72,796 |
| 350 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3503XSAL11F-C | 44 | 95 | | MXTFCM | $97,478 |
| 350 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3504XSAL11E-CF | 50 | 94.5 | | MXTFCM | $96,610 |
| 350 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 3506XSAL11E-A | 51 | 94.1 | | MXTFCM | $81,353 |
| 350 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 3508XSAL11E-A | 52 | 94.1 | | MXTFCM | $97,315 |
| 400 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4003XSAL11F-A | 52 | 94.1 | | MXTFCM | $78,554 |
| 400 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 7000 | 4003XSAL11F-C | 50 | 94.1 | | MXTFCM | $103,239 |
| 400 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4004XSAL11E-A | 56 | 95.0 | | MXTFCM | $80,037 |
| 400 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4004XSAL11E-C | 50 | 94.1 | 12 | MXTFCM | $104,722 |
| 400 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4006XSAL11E-A | 61 | 94.5 | | MXTFCM | $83,892 |
| 400 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 4008XSAL11E-A | 61 | 94.1 | | MXTFCM | $101,784 |
| 450 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4503XSAL11F-A | 59 | 94.5 | | MXTFCM | $80,791 |
| 450 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 7000 | 4503XSAL11F-C | 56 | 95.4 | 12 | MXTFCM | $105,474 |
| 450 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4504XSAL11E-A | 63 | 95.0 | | MXTFCM | $84,080 |
| 450 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4504XSAL11E-C | 56 | 94.1 | 12 | MXTFCM | $108,765 |
| 450 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4506XSAL11E-A | 70 | 94.5 | | MXTFCM | $89,689 |
| 450 | 1200 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 4506XSAL11E-C | 70 | 94.5 | | MXTFCM | $116,100 |

# Totally Enclosed

## Totally Enclosed
## Fan Cooled 840
## High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 450 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 4508XSAL11E-A | 68 | 94.5 | | MXTFCM | $105,049 |
| 500 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 7000 | 5003XSAL11F-A | 66 | 94.5 | | MXTFCM | $97,241 |
| 500 | 3600 | 4000 | 5009/10/11US | ANTI-FRICTION | 7000 | 5003XSAL11F-C | 62 | 94.5 | 12 | MXTFCM | $124,276 |
| 500 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 5004XSAL11E-A | 70 | 95.0 | | MXTFCM | $87,067 |
| 500 | 1800 | 4000 | 5009/10/11US | ANTI-FRICTION | 5000 | 5004XSAL11E-C | 62 | 94.1 | 12 | MXTFCM | $111,750 |
| 500 | 1200 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 5006XSAL11E-A | 69 | 95.4 | | MXTFCM | $100,043 |
| 500 | 1200 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 5006XSAL11E-A | 69 | 95.4 | | MXTFCM | $124,683 |
| 500 | 900 | 4000 | 5809/10/11US | ANTI-FRICTION | 7000 | 5008XSAL11E-A | 61 | 94.1 | | MXTFCM | $112,692 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Totally Enclosed
# Totally Enclosed Fan Cooled 841
## High & NEMA Premium® Efficiency



Toshiba's 841 Medium-Voltage motor series offers exceptional performance, reliability, and energy efficiency for demanding industrial environments. Meeting and exceeding IEEE Std. 841™ specifications, these motors feature heavy-duty designs, IP55-rated protection, and NEMA Premium® Efficiency to reduce costs and enhance durability. Certified for Class I, Division 2 hazardous locations, they are ideal for critical applications in Oil & Gas, Mining & Mineral, and Pulp & Paper industries, providing long-lasting, low-maintenance solutions for harsh conditions.

### Product Scope:

**Horsepower:** 100 to 400 HP

**Speed (60 Hz):** 1800, 1200, or 900 RPM

**Volt (60 Hz):** 2300/4000 or 4000 V*

**Enclosure:** Totally Enclosed Fan Cooled: IP55

**Frame Size:** S447T/449T through B447/9T

**Construction:** Cast Iron Frame & Brackets with Cast Iron or Fabricated Steel Terminal Box(es) & Fan Cover

*Contact Toshiba for availability on lower speed designs
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Accelerometer Provisions | Premium Efficiency | Dual Mount Capability | Tri-Mount Capability | IP55 Degree Protection | 841 Nameplated | Class I Div 2 | Severe Duty Features * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MXTFCM | S/B449 | Option | Included | Included | Included | Included | Included | Included | N/A | Included | Included | Included | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 1800 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1004XDAK41A-A | 25/15 | 93.6 | | MXTFCM | $59,164 |
| 100 | 1800 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 1004XDAK41A-AR | 25.6/14.7 | 94.1 | | MXTFCM | $60,154 |
| 100 | 1200 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1006XDAK41A-A | CF | CF | | MXTFCM | $70,451 |
| 125 | 1800 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1254XDAK41A-A | 31/18 | 94.1 | | MXTFCM | $60,090 |
| 125 | 1800 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 1254XDAK41A-AR | 31.7/18.2 | 94.1 | | MXTFCM | $61,080 |
| 125 | 1200 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1256XDAK41A-A | CF | CF | | MXTFCM | $71,361 |
| 125 | 900 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1258XDAK41A-A | 35/20 | 94.5 | | MXTFCM | $74,496 |
| 125 | 900 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 1258XDAK41A-AR | 35/20 | 94.5 | | MXTFCM | $75,486 |
| 150 | 1800 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1504XDAK41A-A | 38/22 | 94.5 | | MXTFCM | $61,743 |
| 150 | 1800 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 1504XDAK41A-AR | 38/22 | 94.5 | | MXTFCM | $62,733 |
| 150 | 1200 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1506XDAK41A-A | 35/20 | 94.5 | | MXTFCM | $72,714 |
| 150 | 1200 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 1506XDAK41A-AR | 94.5 | CF | | MXTFCM | $70,324 |
| 150 | 900 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 1508XDAK41A-A | 42/24 | 94.5 | | MXTFCM | $75,286 |
| 150 | 900 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 1508XDAK41A-AR | 42/24 | 94.5 | | MXTFCM | $76,276 |
| 200 | 1800 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 2004XDAK41A-A | 50/29 | 95.0 | | MXTFCM | $63,635 |
| 200 | 1800 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 2004XDAK41A-AR | 51/29 | 95.0 | | MXTFCM | $64,625 |
| 200 | 1200 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 2006XDAK41A-A | 47/27 | 95.0 | | MXTFCM | $74,747 |
| 200 | 1200 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 2006XDAK41A-AR | 47/27 | 95.0 | | MXTFCM | $75,737 |
| 200 | 900 | 2300/4000 | B449T | ANTI-FRICTION | 3500 | 2008XDAK41A-A | 56/32 | 95.0 | | MXTFCM | $77,882 |
| 200 | 900 | 2300/4000 | B447/9T | ANTI-FRICTION | 4000 | 2008XDAK41A-AR | 55/32 | 95.0 | | MXTFCM | $78,872 |
| 250 | 1800 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 2504XDAK41A-A | 64/37 | 95.0 | | MXTFCM | $65,802 |
| 250 | 1200 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 2506XDAK41A-A | 61/35 | 95.0 | | MXTFCM | $76,743 |
| 250 | 1200 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 2506XDAK41A-AR | 60/35 | 95.0 | | MXTFCM | $77,733 |

# Totally Enclosed

## Totally Enclosed
## Fan Cooled 841
## High & NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 250 | 900 | 2300/4000 | B449T | ANTI-FRICTION | 4000 | 2508XDAK41A-A | 73/42 | 95.0 | | MXTFCM | $80,477 |
| 250 | 900 | 2300/4000 | B447/9T | ANTI-FRICTION | 4000 | 2508XDAK41A-AR | 73/42 | 95.0 | | MXTFCM | $81,467 |
| 300 | 1800 | 2300/4000 | S449T | ANTI-FRICTION | 3500 | 3004XDAK41A-A | 76/44 | 95.0 | | MXTFCM | $68,592 |
| 300 | 1800 | 2300/4000 | S447/9T | ANTI-FRICTION | 3500 | 3004XDAK41A-AR | 77/44 | 95.0 | | MXTFCM | $69,582 |
| 300 | 1200 | 2300/4000 | B449T | ANTI-FRICTION | 4000 | 3006XDAK41A-A | 71/41 | 95.0 | | MXTFCM | $78,756 |
| 300 | 1200 | 2300/4000 | B447/9T | ANTI-FRICTION | 4000 | 3006XDAK41A-AR | 95.0 | CF | | MXTFCM | $79,746 |
| 300 | 900 | 2300/4000 | B449T | ANTI-FRICTION | 4000 | 3008XDAK41A-A | 83/48 | 95.0 | 3, 14 | MXTFCM | $83,073 |
| 300 | 900 | 2300/4000 | B447/9T | ANTI-FRICTION | 4000 | 3008XDAK41A-AR | 48 | 95.0 | 3, 14 | MXTFCM | $84,063 |
| 350 | 1800 | 2300/4000 | B449T | ANTI-FRICTION | 4000 | 3504XDAK41A-A | 88/51 | 95.4 | | MXTFCM | $70,001 |
| 350 | 1800 | 2300/4000 | B447/9T | ANTI-FRICTION | 4000 | 3504XDAK41A-AR | 89/51 | 95.4 | | MXTFCM | $70,991 |
| 350 | 1200 | 2300/4000 | B449T | ANTI-FRICTION | 4000 | 3506XDAK41A-A | 83/48 | 95.4 | | MXTFCM | $80,770 |
| 350 | 1200 | 2300/4000 | B447/9T | ANTI-FRICTION | 4000 | 3506XDAK41A-AR | 83/48 | 95.4 | | MXTFCM | $81,760 |
| 400 | 1800 | 2300/4000 | B449T | ANTI-FRICTION | 4000 | 4004XDAK41A-A | 100/58 | 95.4 | | MXTFCM | $71,220 |
| 400 | 1800 | 2300/4000 | B447/9T | ANTI-FRICTION | 4000 | 4004XDAK41A-AR | 101/58 | 95.4 | | MXTFCM | $72,210 |

**NOTE:** NEMA Premium efficiency not applicable on motors below 250 HP.
FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Totally Enclosed

## Totally Enclosed
## High Torque 587 Frame
### High & NEMA Premium® Efficiency



Toshiba's High Torque 587 Frame motors are designed to thrive in the unforgiving conditions of cement, mining, and aggregate applications. Delivering exceptionally high torque during startup and increased load demand periods, the IP55-rated enclosure is protected against moisture and contaminants even in dirty, dusty, and humid environments, providing reliable performance. The robust construction of the heavy-duty cast-iron frame, brackets, and terminal box enhance their ruggedness. Manufactured with an unwavering commitment to quality, the High Torque 587 Frame series is a preferred choice for industries that demand durability in demanding applications.

### Product Scope:

**Horsepower:** 200 to 750 HP

**Speed (60 Hz):** 1800, 1200, or 900 RPM

**Volt (60 Hz):** 2300/4000 or 4000 V*

**Enclosure:** Totally Enclosed Fan Cooled

**Frame Size:** S/B 586/7

**Construction:** Cast Iron Frame & End Brackets with Fabricated Steel Fan Cover

**Insulation:** Class F Inverter Duty, Meets Applicable NEMA MG1 Part 31 Requirements

**Environment:** Suitable for Indoor or Outdoor

*Contact Toshiba for availability on lower speed designs
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Accelerometer Provisions | Premium Efficiency | Dual-Mount Capability | Quad-Mount Capabilities | IP55 Degree Protection | F1/F2/F3 Field Modifiable T-Box (F1 Std.) | Design C Torque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MXTFCM | S587 | Included | Included | Included | Included | Included | Included | Included | N/A | Included | Included | Included |
| | B587 | Included | Included | Included | Included | Included | Included | N/A | Included | Included | Included | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 200 | 900 | 2300/4000 | S586/7 | Anti-Friction | 6025 | 2008SDAK41A-AF | 55.5/32.6 | 95 | 8,15 | MXTFCM | $79,889 |
| 200 | 900 | 2300/4000 | S586/7 | Anti-Friction | 6025 | 2008SDAK41A-ARF | 55.5/32.6 | 95 | 2,15 | MXTFCM | $83,811 |
| 250 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6000 | 2506SDAK41A-AF | 63.0/36.5 | 95.1 | 8,15 | MXTFCM | $78,766 |
| 250 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6000 | 2506SDAK41A-ARF | 63.0/36.5 | 95.1 | 2,15 | MXTFCM | $82,688 |
| 250 | 900 | 2300/4000 | S586/7 | Anti-Friction | 6035 | 2508SDAK41A-AF | 73.3/42.1 | 95 | 8,15 | MXTFCM | $80,669 |
| 250 | 900 | 2300/4000 | S586/7 | Anti-Friction | 6035 | 2508SDAK41A-ARF | 73.3/42.1 | 95 | 2,15 | MXTFCM | $84,591 |
| 300 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6020 | 3004SDAK41A-AF | 73.0/42.0 | 95.7 | 8,15 | MXTFCM | $68,363 |
| 300 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6020 | 3004SDAK41A-ARF | 73.0/42.0 | 95.7 | 2,15 | MXTFCM | $72,285 |
| 300 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6025 | 3006SDAK41A-AF | 68.9/43.5 | 95.2 | 8,15 | MXTFCM | $81,860 |
| 300 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6025 | 3006SDAK41A-ARF | 68.9/43.5 | 95.2 | 2,15 | MXTFCM | $83,013 |
| 300 | 900 | 2300/4000 | S586/7 | Anti-Friction | 6040 | 3008SDAK41A-AF | 75.8/46.1 | 95 | 8,15 | MXTFCM | $85,008 |
| 300 | 900 | 2300/4000 | S586/7 | Anti-Friction | 6040 | 3008SDAK41A-ARF | 75.8/46.1 | 95 | 2,15 | MXTFCM | $88,935 |
| 350 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6030 | 3504SDAK41A-AF | 84.5/49.0 | 96 | 8,15 | MXTFCM | $69,566 |
| 350 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6030 | 3504SDAK41A-ARF | 84.5/49.0 | 96 | 2,15 | MXTFCM | $73,489 |
| 350 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6035 | 3506SDAK41A-AF | 81.2/50.67 | 95.4 | 8,15 | MXTFCM | $81,099 |
| 350 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6035 | 3506SDAK41A-ARF | 81.2/50.67 | 95.4 | 2,15 | MXTFCM | $85,021 |
| 350 | 900 | 2300/4000 | B587/8/9/10 | Anti-Friction | 6050 | 3508SDAK41A-A | 82.5/52.3 | 95.4 | 8,15 | MXTFCM | $89,459 |
| 350 | 900 | 2300/4000 | B587/8/9/10 | Anti-Friction | 6050 | 3508SDAK41A-AR | 82.5/52.3 | 95.4 | 2,15 | MXTFCM | $93,381 |

# Totally Enclosed

## Totally Enclosed
## High Torque 587 Frame
## High & NEMA Premium® Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6040 | 4004SDAK41A-AF | 96.5/56.0 | 96 | 8,15 | MXTFCM | $81,413 |
| 400 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6040 | 4004SDAK41A-ARF | 96.5/56.0 | 96 | 2,15 | MXTFCM | $85,336 |
| 400 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6045 | 4006SDAK41A-A | 92.2/58.4 | 95.4 | 8,15 | MXTFCM | $84,205 |
| 400 | 1200 | 2300/4000 | S586/7 | Anti-Friction | 6045 | 4006SDAK41A-AR | 92.2/58.4 | 95.4 | 2,15 | MXTFCM | $88,129 |
| 400 | 900 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7000 | 4008SDAK41A-A | 95.6/60.5 | 94.7 | 8,15 | MXTFCM | $94,127 |
| 400 | 900 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7000 | 4008SDAK41A-AR | 95.6/60.5 | 94.7 | 2,15 | MXTFCM | $98,049 |
| 450 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6050 | 4504SDAK41A-A | 109.0/63.0 | 96.1 | 8,15 | MXTFCM | $84,436 |
| 450 | 1800 | 2300/4000 | S586/7 | Anti-Friction | 6050 | 4504SDAK41A-AR | 109.0/63.0 | 96.1 | 2,15 | MXTFCM | $88,359 |
| 450 | 1200 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7000 | 4506SDAK41A-A | 100.7/63.5 | 96.2 | 8,15 | MXTFCM | $91,299 |
| 450 | 1200 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7000 | 4506SDAK41A-AR | 100.7/63.5 | 96.2 | 2,15 | MXTFCM | $95,220 |
| 450 | 900 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7020 | 4508SDAK41A-A | 108.2/68.4 | 94.5 | 8,15 | MXTFCM | $99,031 |
| 450 | 900 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7020 | 4508SDAK41A-AR | 108.2/68.4 | 94.5 | 2,15 | MXTFCM | $102,952 |
| 500 | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7010 | 5004SDAK41A-A | 122.5/71.0 | 95.5 | 8,15 | MXTFCM | $88,092 |
| 500 | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7010 | 5004SDAK41A-AR | 122.5/71.0 | 95.5 | 2,15 | MXTFCM | $92,014 |
| 500 | 1200 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7020 | 5006SDAK41A-A | 110.6/70.5 | 96.2 | 8,15 | MXTFCM | $99,869 |
| 500 | 1200 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7020 | 5006SDAK41A-AR | 110.6/70.5 | 96.2 | 2,15 | MXTFCM | $103,791 |
| 600 | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7030 | 6004SDAK41A-A | 148.5/85.5 | 96.2 | 8,15 | MXTFCM | $91,750 |
| 600 | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7030 | 6004SDAK41A-AR | 148.5/85.5 | 96.2 | 2,15 | MXTFCM | $95,669 |
| 600 | 1200 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7035 | 6006SDAK41A-A | 135.2/86.1 | 96.2 | 8,15 | MXTFCM | $104,022 |
| 600 | 1200 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7035 | 6006SDAK41A-AR | 135.2/86.1 | 96.2 | 2,15 | MXTFCM | $107,942 |
| 700 | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7040 | 7004SDAK41A-A | 135.2/86.1 | 96.2 | 8,15 | MXTFCM | $100,357 |
| 700 | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7040 | 7004SDAK41A-AR | 135.2/86.1 | 96.2 | 2,15 | MXTFCM | $104,279 |
| 750* | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7060 | 7504SDAK41A-A | 186.0/107.5 | 95.8 | 3,15,20 | MXTFCM | $104,528 |
| 750* | 1800 | 2300/4000 | B587/8/9/10 | Anti-Friction | 7060 | 7504SDAK41A-AR | 186.0/107.5 | 95.8 | 2,3,15,20 | MXTFCM | $108,450 |

**NOTE:** NEMA Premium efficiency not applicable on motors below 250 HP.
FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Totally Enclosed
# Totally Enclosed Air-Air Cooled (TEAAC)
## High Efficiency



Toshiba's Totally Enclosed Air-to-Air Cooled (TEAAC) motor series is designed for exceptional durability and performance in demanding conditions. These motors excel in wet, dirty, or dusty environments, ensuring reliable operation. The advanced cooling system effectively dissipates heat by circulating hot air through an internal heat exchanger, keeping the motor at optimal operating temperatures without exposure to external contaminants. This consistent cooling performance reduces maintenance needs and enhances operational efficiency. TEAAC motors are ideal for a variety of applications, including powering pumps and compressors in the oil and gas industry, operating equipment in marine environments, and handling corrosive substances in chemical processing plants.

### Product Scope:

**Horsepower:** 450 to 3,000 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM*

**Volt (60 Hz):** 4000 V, Option for 2300 V**

**Enclosure:** Totally Enclosed Air-to-Air Cooled

**Frame Size:** 5810/11/12US through 450-1600

**Construction:** Cast Iron Frame, End Brackets & Main Terminal Box or Fabricated Steel Frame & Main Terminal Box

**Insulation:** Class F with Class B Rise at 1.0 Service Factor by RM

**Environment:** Suitable for Indoor or Outdoor

*Contact Toshiba for availability on lower speed designs
**Contact Toshiba for availability on 6000 V, 60 Hz motors
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Dual-Mount Capability | Tri-Mount Capability | IP54 Degree Protection |
|---|---|---|---|---|---|---|---|---|
| MXTFCM | 5812-6812 | Included | Included | Included | Included | N/A | Included | Included |
| | 6813-450 | Included | Included | Included | Included | Included | N/A | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 450 | 900 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 4508TCAL11E-A | 68 | 93.6 | | MXTAAM | $119,687 |
| 500 | 900 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 5008TCAL11E-A | 75 | 93.6 | | MXTAAM | $120,132 |
| 500 | 900 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 5008TCAL11E-C | 70 | 94.1 | 12 | MXTAAM | $145,880 |
| 600 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | 6003TCAL11F-A | 79 | $94 | 4 | MXTAAM | $100,266 |
| 600 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | 6003TCAL11F-C | 79 | $94 | 4, 12 | MXTAAM | $125,998 |
| 600 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 6005TCAL11E-A | 105 | 94.5 | 4 | MXTAAM | $115,292 |
| 600 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 6005TCQL11E-A | 105 | 94.5 | 4, 10 | MXTAAM | $135,436 |
| 600 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 6005TCAL11E-C | 101 | 95 | 4, 12 | MXTAAM | $141,033 |
| 600 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 6005TCQL11E-C | 101 | 95 | 4, 10, 12 | MXTAAM | $161,181 |
| 600 | 1200 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 6006TCAL11E-A | 85 | 93.6 | | MXTAAM | $121,833 |
| 600 | 1200 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 6006TCAL11E-C | 80 | 94.1 | 12 | MXTAAM | $147,579 |
| 600 | 900 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 6008TCAL11E-A | 89 | 93.6 | | MXTAAM | $122,310 |
| 600 | 900 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 6008TCAL11E-C | 83 | 94.1 | 12 | MXTAAM | $148,059 |
| 700 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | 7003TCAL11F-A | 89 | 94.5 | 4 | MXTAAM | $103,100 |
| 700 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | 7003TCQL11F-A | 89 | 93.6 | 4, 10 | MXTAAM | $123,250 |
| 700 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | 7003TCAL11F-C | 87 | 95 | 4, 12 | MXTAAM | $128,847 |

# Totally Enclosed

## Totally Enclosed
## Air-Air Cooled (TEAAC)
## High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 700 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | 7003TCQL11F-C | 87 | 94.1 | 4, 10, 12 | MXTAAM | $148,997 |
| 700 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 7005TCAL11E-A | 90 | 94.5 | 4 | MXTAAM | $117,145 |
| 700 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 7005TCQL11E-A | 90 | 94.5 | 4, 10 | MXTAAM | $137,294 |
| 700 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 7005TCAL11E-C | 89 | 94.5 | 4, 12 | MXTAAM | $142,892 |
| 700 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 7005TCQL11E-C | 89 | 94.5 | 4, 10, 12 | MXTAAM | $163,043 |
| 700 | 1200 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 7006TCAL11E-A | 100 | 93.6 | | MXTAAM | $127,455 |
| 700 | 1200 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 7006TCAL11E-C | 93 | 94.1 | 12 | MXTAAM | $153,203 |
| 800 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | 8003TCAL11F-A | 101 | 95 | 4 | MXTAAM | $106,014 |
| 800 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | 8003TCQL11F-A | 101 | 94.1 | 4, 10 | MXTAAM | $126,163 |
| 800 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | 8003TCAL11F-C | 99 | 95.4 | 4, 12 | MXTAAM | $131,760 |
| 800 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | 8003TCQL11F-C | 99 | 94.5 | 4, 10, 12 | MXTAAM | $151,911 |
| 800 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 8005TCAL11E-A | 105 | 94.5 | 4 | MXTAAM | $119,028 |
| 800 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 8005TCQL11E-A | 105 | 94.5 | 4, 10 | MXTAAM | $139,178 |
| 800 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 8005TCAL11E-C | 101 | 95 | 4, 12 | MXTAAM | $144,775 |
| 800 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 8005TCQL11E-C | 101 | 95 | 4, 10, 12 | MXTAAM | $164,926 |
| 800 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 15000 | 8007TCAL11E-C | 108 | 94.5 | 4, 12 | MXTAAM | $221,496 |
| 800 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15500 | 8007TCQL11E-C | 108 | 94.5 | 4, 10, 12 | MXTAAM | $236,214 |
| 900 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | 9003TCAL11F-A | 113 | 95 | 4 | MXTAAM | $113,889 |
| 900 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | 9003TCQL11F-A | 113 | 94.5 | 4, 10 | MXTAAM | $134,039 |
| 900 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | 9003TCAL11F-C | 111 | 95.4 | 4, 12 | MXTAAM | $139,636 |
| 900 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | 9003TCQL11F-C | 111 | 94.5 | 4, 10, 12 | MXTAAM | $159,786 |
| 900 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 9005TCAL11E-A | 115 | 95 | 4 | MXTAAM | $120,744 |
| 900 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 9005TCQL11E-A | 115 | 95 | 4, 10 | MXTAAM | $140,894 |
| 900 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | 9005TCAL11E-C | 114 | 95 | 4, 12 | MXTAAM | $146,491 |
| 900 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | 9005TCQL11E-C | 114 | 95 | 4, 10, 12 | MXTAAM | $166,642 |
| 900 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 15000 | 9007TCAL11E-C | 122 | 94.5 | 4, 12 | MXTAAM | $224,895 |
| 900 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15500 | 9007TCQL11E-C | 122 | 94.5 | 4, 10, 12 | MXTAAM | $240,196 |
| 1000 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | M203TCAL11F-A | 125 | 95.4 | 4 | MXTAAM | $129,628 |
| 1000 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | M203TCQL11F-A | 125 | 94.5 | 4, 10 | MXTAAM | $149,779 |
| 1000 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | M203TCAL11F-C | 122 | 95.8 | 4, 12 | MXTAAM | $155,377 |
| 1000 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | M203TCQL11F-C | 122 | 95 | 4, 10, 12 | MXTAAM | $175,527 |
| 1000 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | M205TCAL11E-A | 130 | 95 | 4 | MXTAAM | $134,547 |
| 1000 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | M205TCQL11E-A | 130 | 95 | 4, 10 | MXTAAM | $154,696 |
| 1000 | 1800 | 4000 | 5810/11/12US | ANTI-FRICTION | 9100 | M205TCAL11E-C | 127 | 95.4 | 4, 12 | MXTAAM | $160,293 |
| 1000 | 1800 | 4000 | 5810/11/12US | SLEEVE | 9100 | M205TCQL11E-C | 127 | 95.4 | 4, 10, 12 | MXTAAM | $180,444 |
| 1000 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15500 | M207TCQL11E-C | 130 | 94.2 | 4, 10, 12 | MXTAAM | $224,242 |
| 1000 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 15500 | M207TCAL11E-C | 130 | 94.2 | 4, 12 | MXTAAM | $228,346 |
| 1250 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | M253TCAL11F-A | 155 | 95.8 | 4, 20 | MXTAAM | $137,018 |
| 1250 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | M253TCQL11F-A | 155 | 95 | 4, 10, 20 | MXTAAM | $157,168 |
| 1250 | 3600 | 4000 | 5810/11/12USS | ANTI-FRICTION | 9100 | M253TCAL11F-C | 152 | 95.8 | 4, 12, 20 | MXTAAM | $162,765 |
| 1250 | 3600 | 4000 | 5810/11/12USS | SLEEVE | 9100 | M253TCQL11F-C | 152 | 95.4 | 4, 10, 12, 20 | MXTAAM | $182,916 |
| 1250 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15500 | M255TCQL11E-CF | 158 | 95.4 | 4, 12 | MXTAAM | $235,356 |
| 1250 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 15000 | M257TCAL11E-C | 162 | 95 | 4, 12 | MXTAAM | $281,932 |
| 1250 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15500 | M257TCQL11E-C | 162 | 95 | 4, 10, 12 | MXTAAM | $296,351 |
| 1500 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15500 | M303TCQL11F-C | 187 | 94.5 | 4, 10, 12 | MXTAAM | $280,083 |
| 1500 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 15000 | M305TCAL11E-C | 189 | 95.4 | 4, 12 | MXTAAM | $234,817 |
| 1500 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15500 | M305TCQL11E-C | 189 | 95.4 | 4, 10, 12 | MXTAAM | $251,504 |
| 1500 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 15000 | M307TCAL11E-C | 193 | 95 | 4, 12 | MXTAAM | $284,196 |

# Totally Enclosed

## Totally Enclosed
## Air-Air Cooled (TEAAC)
## High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1500 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15500 | M307TCQL11E-C | 193 | 95 | 4, 10, 12 | MXTAAM | $301,464 |
| 1750 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15500 | M353TCQL11F-C | 215 | 95 | 4, 10, 12 | MXTAAM | $290,839 |
| 1750 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 15000 | M355TCAL11E-C | 219 | 95.4 | 4, 12 | MXTAAM | $270,932 |
| 1750 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15500 | M355TCQL11E-C | 219 | 95.4 | 4, 10, 12 | MXTAAM | $284,464 |
| 1750 | 1200 | 4000 | 6812/13US | ANTI-FRICTION | 15000 | M357TCAL11E-C | 226 | 95 | 4, 12 | MXTAAM | $288,618 |
| 1750 | 1200 | 4000 | 6812/13US | SLEEVE | 15500 | M357TCQL11E-C | 226 | 95 | 4, 10, 12 | MXTAAM | $303,696 |
| 2000 | 3600 | 4000 | 6812/13USS | SLEEVE | 15500 | M403TCQL11F-C | 242 | 95 | 4, 10, 12 | MXTAAM | $314,336 |
| 2000 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 15000 | M405TCAL11E-C | 250 | 95.8 | 4, 12 | MXTAAM | $289,759 |
| 2000 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15500 | M405TCQL11E-C | 250 | 95.8 | 4, 10, 12 | MXTAAM | $305,806 |
| 2250 | 3600 | 4000 | 6812/13US | SLEEVE | 15500 | M453TCQL11F-C | 271 | 95 | 4, 10, 12 | MXTAAM | $332,382 |
| 2250 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 15500 | M455TCAL11E-C | 282 | 95.8 | 4, 12 | MXTAAM | $309,448 |
| 2250 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15500 | M455TCQL11E-C | 282 | 95.8 | 4, 10, 12 | MXTAAM | $327,686 |
| 2500 | 3600 | 4000 | 450-1600 | SLEEVE | 16000 | M503TCQL11F-C | 300 | 95.4 | 4, 10, 12 | MXTAAM | $340,428 |
| 2500 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 15000 | M505TCAL11E-C | 311 | 96.2 | 4, 12 | MXTAAM | $320,350 |
| 2500 | 1800 | 4000 | 6812/13US | SLEEVE | 15500 | M505TCQL11E-C | 311 | 96.2 | 4, 10, 12 | MXTAAM | $335,638 |
| 3000 | 1800 | 4000 | 450-1600 | ANTI-FRICTION | 16000 | M605TCAL11E-C | 371 | 96.5 | 4, 12 | MXTAAM | $337,117 |
| 3000 | 1800 | 4000 | 450-1600 | SLEEVE | 16000 | M605TCQL11E-C | 371 | 96.5 | 4, 10, 12 | MXTAAM | $357,179 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Totally Enclosed
# Totally Enclosed Water-to-Air Cooled (TEWAC)
## High Efficiency



Toshiba's Totally Enclosed Water-to-Air Cooled (TEWAC) motors are designed to meet the industry's increasing demands for energy conservation and exceptional product performance. The efficient water-to-air cooling system enhances heat dissipation, allowing for higher output within a compact frame size. The fully enclosed design safeguards against contaminants such as dust, moisture, and corrosive elements. Whether for oil and gas exploration, chemical processing plant, or other industrial applications, TEWAC motors can be tailored to meet specific application requirements made possible by Toshiba's in-house design, engineering, and manufacturing capabilities.

### Product Scope:

**Horsepower:** 400 to 5,500 HP

**Speed (60 Hz):** 3600, 1800, 1200, or 900 RPM*

**Volt (60 Hz):** 2300/4000 or 4000 V**

**Enclosure:** Totally Enclosed Water-to-Air Cooled

**Frame Size:** 5011/12USS through 6812/13USS

**Construction:** Cast Iron Frame, End Brackets & Main Terminal Box for 5012 & 5812 Frames; Fabricated Steel Main Box for 6800 & Larger

**Insulation:** Class F with Class B Rise at 1.0 Service Factor by RM

**Environment:** Suitable for Indoor or Outdoor

*Contact Toshiba for availability on lower speed designs
**Contact Toshiba for availability on 6000 V, 60 Hz motors
"CF" = Consult Factory

### General Features:

| | | Insulated NDE Bearing | Winding RTDs 2/ph. | Bearing RTD Provisions | 120V Single Ph. Space Heater | Dual-Mount Capability | Tri-Mount Capabilities | Carbon Steel Single Wall Material; Cooler with 90/10 Cu/Ni Tube Material | IP54 Degree Protection |
|---|---|---|---|---|---|---|---|---|---|
| MXTWAC | 5012 | Included | Included | Included | Included | Included | N/A | Included | Included |
| | 5810-6812 | Included | Included | Included | Included | N/A | Included | Included | Included |
| | 6813-450 | Included | Included | Included | Included | Included | N/A | Included | Included |

| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 4003TWAK11F-A | 94/54 | 93.6 | 4 | MXTWAC | $78,256 |
| 400 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 4003TWQK11F-A | 94/54 | 93 | 4, 10 | MXTWAC | $96,670 |
| 400 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 4003TWAK11F-C | 94/54 | 92.4 | 4, 12 | MXTWAC | $103,739 |
| 400 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 4003TWQK11F-C | 94/54 | 93 | 4, 10, 12 | MXTWAC | $122,153 |
| 400 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4004TWAK11E-A | 94/54 | 92.4 | | MXTWAC | $81,243 |
| 400 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4004TWAK11E-C | 89/51 | 92.4 | 12 | MXTWAC | $102,099 |
| 400 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4006TWAK11E-A | 97/56 | 92.4 | | MXTWAC | $92,551 |
| 400 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4006TWAK11E-C | 103/60 | 93.6 | 12 | MXTWAC | $116,146 |
| 400 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 4008TWAL11E-A | 60 | 94.1 | | MXTWAC | $100,056 |
| 400 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 4008TWAL11E-C | 60 | 94.1 | 12 | MXTWAC | $127,864 |
| 450 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 4503TWAK11F-A | 104/60 | 94.1 | 4 | MXTWAC | $79,540 |
| 450 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 4503TWQK11F-A | 104/60 | 93.6 | 4, 10 | MXTWAC | $97,954 |
| 450 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 4503TWAK11F-C | 104/60 | 93 | 4, 12 | MXTWAC | $105,023 |
| 450 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 4503TWQK11F-C | 104/60 | 93.6 | 4, 10, 12 | MXTWAC | $123,437 |

# Totally Enclosed

## Totally Enclosed
## Water-Air Cooled (TEWAC)
## High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 450 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4504TWAK11E-A | 106/61 | 93 | | MXTWAC | $83,130 |
| 450 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4504TWAK11E-C | 103/59 | 92.4 | 12 | MXTWAC | $108,519 |
| 450 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4506TWAK11E-A | 113/65 | 93 | | MXTWAC | $94,655 |
| 450 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 4506TWAK11E-C | 116/67 | 94.1 | 12 | MXTWAC | $120,044 |
| 450 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 4508TWAL11E-A | 66 | 93.6 | | MXTWAC | $103,322 |
| 450 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 4508TWAL11E-C | 61 | 94.1 | 12 | MXTWAC | $131,129 |
| 500 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 5003TWAK11F-A | 114/66 | 93.6 | 4 | MXTWAC | $82,218 |
| 500 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 5003TWQK11F-A | 114/66 | 93.6 | 4, 10 | MXTWAC | $100,632 |
| 500 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 5003TWAK11F-C | 114/66 | 93 | 4, 12 | MXTWAC | $107,701 |
| 500 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 5003TWQK11F-C | 114/66 | 93.6 | 4, 10, 12 | MXTWAC | $126,115 |
| 500 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 5004TWAK11E-A | 114/66 | 93 | | MXTWAC | $85,785 |
| 500 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 5004TWAK11E-C | 112/65 | 92.4 | 12 | MXTWAC | $111,175 |
| 500 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 5006TWAK11E-A | 126/73 | 93 | | MXTWAC | $98,820 |
| 500 | 1200 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 5006TWAK11E-C | 130/75 | 94.1 | 12 | MXTWAC | $124,209 |
| 500 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 5008TWAL11E-A | 69 | 94.5 | | MXTWAC | $106,352 |
| 500 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 5008TWAL11E-C | 75 | 93.6 | 12 | MXTWAC | $134,160 |
| 600 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 6003TWAK11F-A | 137/79 | 94.1 | 4 | MXTWAC | $85,658 |
| 600 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 6003TWQK11F-A | 137/79 | 94.1 | 4, 10 | MXTWAC | $104,072 |
| 600 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 6003TWAK11F-C | 137/79 | 93.6 | 4, 12 | MXTWAC | $111,141 |
| 600 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 6003TWQK11F-C | 137/79 | 94.1 | 4, 10, 12 | MXTWAC | $129,555 |
| 600 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 6004TWAK11E-A | 137/79 | 93 | | MXTWAC | $87,420 |
| 600 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 6004TWAK11E-C | 130/75 | 93 | 12 | MXTWAC | $112,812 |
| 600 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 6006TWAL11E-A | 86 | 93 | | MXTWAC | $105,813 |
| 600 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 6006TWAL11E-C | 86 | 93 | 12 | MXTWAC | $133,620 |
| 600 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 6008TWAL11E-A | 84 | 94.5 | | MXTWAC | $112,753 |
| 600 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 6008TWAL11E-C | 93 | 94.1 | 12 | MXTWAC | $140,560 |
| 700 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 7003TWAK11F-A | 159/92 | 94.1 | 4 | MXTWAC | $91,808 |
| 700 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 7003TWQK11F-A | 159/92 | 94.1 | 4, 10 | MXTWAC | $110,222 |
| 700 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 7003TWAK11F-C | 158/91 | 94.1 | 4, 12 | MXTWAC | $117,291 |
| 700 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 7003TWQK11F-C | 158/91 | 94.1 | 4, 10, 12 | MXTWAC | $135,705 |
| 700 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | 7003TWAL11F-AF | CF | CF | 4 | MXTWAC | CF |
| 700 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | 7003TWQL11F-AF | 88 | 94.5 | 4, 10 | MXTWAC | $154,119 |
| 700 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | 7003TWAL11F-CF | 89 | 94.5 | 4, 12 | MXTWAC | $161,187 |
| 700 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | 7003TWQL11F-CF | 89 | 94.5 | 4, 10, 12 | MXTWAC | $205,084 |
| 700 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 7004TWAK11E-A | 165/95 | 93.6 | | MXTWAC | $93,616 |
| 700 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 7004TWAK11E-C | 151/87 | 93.6 | 12 | MXTWAC | $119,005 |
| 700 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 7006TWAL11E-A | 94 | 94.1 | | MXTWAC | $106,898 |
| 700 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 7006TWAL11E-C | 100 | 94.5 | 12 | MXTWAC | $134,706 |
| 700 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 7008TWAL11E-A | 99 | 94.5 | | MXTWAC | $115,917 |
| 700 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 7008TWAL11E-C | 108 | 94.1 | 12 | MXTWAC | $143,725 |
| 800 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 8003TWAK11F-A | 182/105 | 94 | 4 | MXTWAC | $95,759 |
| 800 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 8003TWQK11F-A | 182/105 | 94 | 4, 10 | MXTWAC | $114,173 |
| 800 | 3600 | 2300/4000 | 5011/12USS | ANTI-FRICTION | 5500 | 8003TWAK11F-C | 178/103 | 94 | 4, 12 | MXTWAC | $121,242 |
| 800 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | 8003TWQK11F-C | 175/101 | 94.9 | 4, 10, 12 | MXTWAC | $139,656 |
| 800 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | 8003TWAL11F-AF | 102 | 95.2 | 4 | MXTWAC | $100,553 |
| 800 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | 8003TWQL11F-CF | 102 | 95.2 | 4, 10, 12 | MXTWAC | CF |
| 800 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 8004TWAK11E-A | 185/107 | 93.5 | | MXTWAC | $98,022 |
| 800 | 1800 | 2300/4000 | 5011/12US | ANTI-FRICTION | 5500 | 8004TWAK11E-C | 185/107 | 93.5 | 12 | MXTWAC | $121,149 |
| 800 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | 8004TWQL11E-A | 107 | 93 | 10 | MXTWAC | $116,436 |

# Totally Enclosed

## Totally Enclosed
## Water-Air Cooled (TEWAC)
## High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 800 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | 8004TWQL11E-C | 108 | 93.6 | 10, 12 | MXTWAC | $141,919 |
| 800 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 8006TWAL11E-A | 103 | 94.5 | | MXTWAC | $117,393 |
| 800 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 8006TWAL11E-C | 108 | 93.6 | 12 | MXTWAC | $145,199 |
| 800 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 8008TWAL11E-C | 103 | 94.5 | 12 | MXTWAC | $230,280 |
| 800 | 900 | 4000 | 5811/12US | SLEEVE | 8000 | 8008TWQL11E-C | 108 | 94.5 | 10, 12 | MXTWAC | $248,398 |
| 900 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | 9003TWAL11F-A | 114 | 95.4 | 4 | MXTWAC | $108,150 |
| 900 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | 9003TWQL11F-A | 114 | 95.3 | 4, 10 | MXTWAC | $126,564 |
| 900 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | 9003TWAL11F-C | 110 | 95.8 | 4, 12 | MXTWAC | $133,632 |
| 900 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | 9003TWQL11F-C | 110 | 95.7 | 4, 10, 12 | MXTWAC | $152,046 |
| 900 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 9005TWAL11E-A | 110 | 95.4 | 4 | MXTWAC | $111,312 |
| 900 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | 9005TWQL11E-A | 110 | 95.4 | 4, 10 | MXTWAC | $129,726 |
| 900 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 9005TWAL11E-C | 114 | 95 | 4, 12 | MXTWAC | $136,795 |
| 900 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | 9005TWQL11E-C | 114 | 95.4 | 4, 10, 12 | MXTWAC | $155,209 |
| 900 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 9006TWAL11E-A | 117 | 95.4 | | MXTWAC | $120,248 |
| 900 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 9006TWAL11E-C | 114 | 95.4 | 12 | MXTWAC | $145,730 |
| 900 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | 9008TWAL11E-C | 117 | 95.4 | 12 | MXTWAC | $240,837 |
| 900 | 900 | 4000 | 5811/12US | SLEEVE | 8000 | 9008TWQL11E-C | 125 | 94.5 | 10, 12 | MXTWAC | $258,955 |
| 1000 | 3600 | 2300/4000 | 5011/12USS | SLEEVE | 5500 | M203TWQK11F-CF | 222/128 | 94.7 | 4, 10, 12 | MXTWAC | $145,577 |
| 1000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M203TWAL11F-A | 126 | 95.4 | 4 | MXTWAC | $114,146 |
| 1000 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M203TWQL11F-A | 126 | 95.4 | 4, 10 | MXTWAC | $132,560 |
| 1000 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M203TWAL11F-C | 122 | 95.8 | 4, 12 | MXTWAC | $139,629 |
| 1000 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M203TWQL11F-C | 122 | 95.8 | 4, 10, 12 | MXTWAC | $176,457 |
| 1000 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M205TWQL11E-A | 131 | 95.4 | 4, 10 | MXTWAC | $134,404 |
| 1000 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M205TWAL11E-C | 126 | 95.4 | 4, 12 | MXTWAC | $141,472 |
| 1000 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M205TWQL11E-C | 126 | 95.4 | 4, 10, 12 | MXTWAC | $159,886 |
| 1000 | 1800 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M205TWAL11E-A | 122 | 95.8 | 4 | MXTWAC | $115,990 |
| 1000 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M206TWAL11E-A | 131 | 95.4 | | MXTWAC | $123,607 |
| 1000 | 1200 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M206TWAL11E-C | 137 | 94.5 | 12 | MXTWAC | $149,090 |
| 1000 | 900 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M208TWAL11E-C | 135 | 94.5 | 12 | MXTWAC | $252,706 |
| 1000 | 900 | 4000 | 6812/13US | SLEEVE | 15000 | M208TWQL11E-C | 134 | 95 | 10, 12 | MXTWAC | $270,824 |
| 1250 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M253TWAL11F-A | 158 | 95.4 | 4 | MXTWAC | $119,165 |
| 1250 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M253TWQL11F-A | 158 | 95.4 | 4, 10 | MXTWAC | $137,579 |
| 1250 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M253TWAL11F-C | 153 | 95.8 | 4, 12 | MXTWAC | $144,648 |
| 1250 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M253TWQL11F-C | 153 | 95.8 | 4, 10, 12 | MXTWAC | $181,476 |
| 1250 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M255TWAL11E-A | 157 | 95.4 | 4 | MXTWAC | $124,067 |
| 1250 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M255TWQL11E-A | 157 | 95.4 | 4, 10 | MXTWAC | $142,481 |
| 1250 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M255TWAL11E-C | 162 | 95.8 | 4, 12 | MXTWAC | $149,549 |
| 1250 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M255TWQL11E-C | 162 | 95.8 | 4, 10, 12 | MXTWAC | $167,963 |
| 1250 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M257TWAL11E-C | 157 | 94.5 | 4, 12 | MXTWAC | $260,867 |
| 1250 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15000 | M257TWQL11E-C | 157 | 94.5 | 4, 10, 12 | MXTWAC | $278,985 |
| 1250 | 900 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M258TWAL11E-C | 169 | 95 | 12 | MXTWAC | $267,487 |
| 1250 | 900 | 4000 | 6812/13US | SLEEVE | 15000 | M258TWQL11E-C | 169 | 95 | 10, 12 | MXTWAC | $285,605 |
| 1500 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M303TWAL11F-A | 189 | 95.4 | 4 | MXTWAC | $125,154 |
| 1500 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M303TWQL11F-A | 189 | 95.4 | 4, 10 | MXTWAC | $143,568 |
| 1500 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M303TWAL11F-C | 183 | 95.8 | 4, 12 | MXTWAC | $150,636 |
| 1500 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M303TWQL11F-C | 183 | 95.8 | 4, 10, 12 | MXTWAC | $187,464 |
| 1500 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M305TWAL11E-A | 189 | 95.4 | 4 | MXTWAC | $128,371 |
| 1500 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M305TWQL11E-A | 189 | 95.4 | 4, 10 | MXTWAC | $146,785 |
| 1500 | 1800 | 4000 | 5811/12US | ANTI-FRICTION | 7800 | M305TWAL11E-C | 193 | 95.8 | 4, 12 | MXTWAC | $153,854 |

# Totally Enclosed

## Totally Enclosed Water-Air Cooled (TEWAC) High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1500 | 1800 | 4000 | 5811/12US | SLEEVE | 8000 | M305TWQL11E-C | 193 | 95.8 | 4, 10, 12 | MXTWAC | $172,268 |
| 1500 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M307TWAL11E-C | 196 | 95 | 4, 12 | MXTWAC | $268,369 |
| 1500 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15000 | M307TWQL11E-C | 196 | 95 | 4, 10, 12 | MXTWAC | $286,487 |
| 1500 | 900 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M308TWAL11E-C | 187 | 95 | 12 | MXTWAC | $279,883 |
| 1500 | 900 | 4000 | 6812/13US | SLEEVE | 15000 | M308TWQL11E-C | 187 | 95 | 10, 12 | MXTWAC | $298,001 |
| 1750 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M353TWAL11F-A | 224 | 95.8 | 4 | MXTWAC | $129,748 |
| 1750 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M353TWQL11F-A | 224 | 95.4 | 4, 10 | MXTWAC | $148,162 |
| 1750 | 3600 | 4000 | 5811/12USS | ANTI-FRICTION | 7800 | M353TWAL11F-C | 216 | 95.8 | 4, 12 | MXTWAC | $155,231 |
| 1750 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M353TWQL11F-C | 216 | 95.8 | 4, 10, 12 | MXTWAC | $173,645 |
| 1750 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M355TWAL11E-C | 219 | 95.8 | 4, 12 | MXTWAC | $268,258 |
| 1750 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M355TWQL11E-C | 219 | 95.8 | 4, 10, 12 | MXTWAC | $293,741 |
| 1750 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M357TWAL11E-C | 218 | 95 | 4, 12 | MXTWAC | $278,637 |
| 1750 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15000 | M357TWQL11E-C | 218 | 95 | 4, 10, 12 | MXTWAC | $296,756 |
| 1750 | 900 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M358TWAL11E-C | 245 | 95 | 12 | MXTWAC | $328,193 |
| 2000 | 3600 | 4000 | 5811/12USS | SLEEVE | 8000 | M403TWQL11F-C | 245 | 95.8 | 4, 10, 12 | MXTWAC | $186,907 |
| 2000 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15000 | M403TWQL11F-CF | 249 | 95 | 4, 10, 12 | MXTWAC | $300,560 |
| 2000 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M405TWAL11E-C | 250 | 95.8 | 4, 12 | MXTWAC | $276,337 |
| 2000 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M405TWQL11E-C | 250 | 95.8 | 4, 10, 12 | MXTWAC | $301,819 |
| 2000 | 1200 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M407TWAL11E-C | 250 | 95 | 4, 12 | MXTWAC | $291,972 |
| 2000 | 1200 | 4000 | 6810/11/12US | SLEEVE | 15000 | M407TWQL11E-C | 250 | 95 | 4, 10, 12 | MXTWAC | $310,091 |
| 2250 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15000 | M453TWQL11F-C | 279 | 95.4 | 4, 10, 12 | MXTWAC | $324,741 |
| 2250 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M455TWAL11E-C | 278 | 95.8 | 4, 12 | MXTWAC | $291,352 |
| 2250 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M455TWQL11E-C | 278 | 95.8 | 4, 10, 12 | MXTWAC | $316,834 |
| 2250 | 1200 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M457TWAL11E-C | 281 | 95.4 | 4, 12 | MXTWAC | $305,517 |
| 2250 | 1200 | 4000 | 6812/13US | SLEEVE | 15000 | M457TWQL11E-C | 281 | 95.4 | 4, 10, 12 | MXTWAC | $331,000 |
| 2500 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15000 | M503TWQL11F-C | 309 | 95.4 | 4, 12 | MXTWAC | $340,953 |
| 2500 | 1800 | 4000 | 6810/11/12US | ANTI-FRICTION | 14500 | M505TWAL11E-C | 309 | 96.2 | 4, 12 | MXTWAC | $302,730 |
| 2500 | 1800 | 4000 | 6810/11/12US | SLEEVE | 15000 | M505TWQL11E-C | 309 | 96.2 | 4, 10, 12 | MXTWAC | $328,213 |
| 2500 | 1200 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M507TWAL11E-C | 318 | 95.8 | 4, 12 | MXTWAC | $319,761 |
| 2500 | 1200 | 4000 | 6812/13US | SLEEVE | 15000 | M507TWQL11E-C | 318 | 95.8 | 4, 10, 12 | MXTWAC | $345,244 |
| 2750 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15000 | M553TWQL11F-C | 337 | 96.2 | 4, 10, 12 | MXTWAC | $359,462 |
| 2750 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M555TWAL11F-C | 338 | 96.5 | 4, 12 | MXTWAC | $317,815 |
| 2750 | 1800 | 4000 | 6812/13US | SLEEVE | 15000 | M555TWQL11F-C | 338 | 96.5 | 4, 10, 12 | MXTWAC | $343,298 |
| 2750 | 1200 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M557TWAL11F-C | 368 | 95.8 | 4, 12 | MXTWAC | $333,062 |
| 2750 | 1200 | 4000 | 6812/13US | SLEEVE | 15000 | M557TWQL11E-C | 368 | 95.8 | 4, 10, 12 | MXTWAC | $358,545 |
| 3000 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15000 | M603TWQL11F-C | 370 | 95.8 | 4, 10, 12 | MXTWAC | $375,002 |
| 3000 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M605TWAL11E-C | 369 | 96.5 | 4, 12 | MXTWAC | $333,306 |
| 3000 | 1800 | 4000 | 6812/13US | SLEEVE | 15000 | M605TWQL11E-C | 369 | 96.5 | 4, 10, 12 | MXTWAC | $358,788 |
| 3500 | 3600 | 4000 | 6810/11/12USS | SLEEVE | 15000 | M703TWQL11F-C | 431 | 96.2 | 4, 10, 12 | MXTWAC | $390,684 |
| 3500 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M705TWAL11E-C | 431 | 96.5 | 4, 12 | MXTWAC | $347,244 |
| 3500 | 1800 | 4000 | 6812/13US | SLEEVE | 15000 | M705TWQL11E-C | 431 | 96.5 | 4, 10, 12 | MXTWAC | $372,726 |
| 4000 | 3600 | 4000 | 6812/13USS | SLEEVE | 15000 | M803TWQL11F-C | 495 | 96.5 | 4, 10, 12 | MXTWAC | $399,975 |
| 4000 | 1800 | 4000 | 450-1600 | ANTI-FRICTION | 16000 | M805TWAL11E-CF | 509 | 97.1 | 4, 12 | MXTWAC | $371,179 |
| 4000 | 1800 | 4000 | 450-1600 | ANTI-FRICTION | 16000 | M805TWQL11E-CF | 509 | 97.1 | 4, 12 | MXTWAC | $396,661 |
| 4000 | 1800 | 4000 | 6812/13US | ANTI-FRICTION | 14500 | M805TWAL11E-C | 495 | 96.5 | 4, 12 | MXTWAC | $363,861 |
| 4000 | 1800 | 4000 | 6812/13US | SLEEVE | 15000 | M805TWQL11E-C | 495 | 96.5 | 4, 10, 12 | MXTWAC | $389,344 |
| 4500 | 3600 | 4000 | 6812/13USS | SLEEVE | 15000 | M903TWQL11F-C | 553 | 96.2 | 4, 10, 12 | MXTWAC | $414,189 |
| 4500 | 1800 | 4000 | 450-1600 | ANTI-FRICTION | 16000 | M905TWAL11E-C | 575 | 96.8 | 4, 12 | MXTWAC | $389,931 |
| 4500 | 1800 | 4000 | 450-1600 | SLEEVE | 16000 | M905TWQL11E-C | 575 | 96.8 | 4, 10, 12 | MXTWAC | $415,414 |

# Totally Enclosed

## Totally Enclosed
## Water-Air Cooled (TEWAC)
## High Efficiency



| HP | Speed (RPM) | Volts | Frame | Bearing | Weight (lbs.) | Model Number | FL Amps | Nominal FL EFF | Notes | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5000 | 3600 | 4000 | 450-1600 | SLEEVE | 16000 | C203TWQL11F-C | 603 | 96.8 | 4, 10, 12 | MXTWAC | $422,761 |
| 5000 | 3600 | 4000 | 6812/13USS | SLEEVE | 15000 | C203TWQL11F-CF | 603 | 96.8 | 4, 10, 12 | MXTWAC | $418,427 |
| 5500 | 3600 | 4000 | 6812/13USS | SLEEVE | 15000 | C223TWQL11F-C | 663 | 97 | 4, 10, 12 | MXTWAC | $427,335 |

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.

# Medium Voltage Modifications
## Production Modifications


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# Basic Design Fundamentals

## Altitude

Standard motors are built for operation up to 3,300 ft. (1,000 m) above sea level at a maximum ambient of 40°C within Class B rise limits when operated at rated horsepower. Altitudes over 3,300 ft. may affect frame size. Final frame size is subject to final design completion. Contact Toshiba for pricing.

## Ambient Temperature

Toshiba motors are designed to operate in an ambient temperature range of -10° and 40°C for sleeve bearings and -20° and 40°C for anti-friction.

**Special Notes:**

- Ambient conditions may affect frame size. Final frame size is subject to final design completion.
- Sleeve bearings may require a flood lubrication system for above 40°C ambient and below -10°C.
- At ambient temperatures of -40° through -10°C, oil sump heaters are recommended for motors with self-cooled sleeve bearings. See Oil Sump Heaters adders.
- At ambient temperatures of -40° through -20°C, special low temperature grease is usually required for motors with anti-friction bearings. See "Grease - Low Temperature" section for adders.

## Constant Torque - Motor Mounted Independent Blower

The turndown capability of an inverter-fed Toshiba motor is a function of the product selected and load. When turndown requirements exceed product capability, the use of an auxiliary blower is required. Contact Toshiba for help with determining whether a blower is required and for pricing.

| Option | | Blower Assembly |
|---|---|---|
| Frame | 440/500 | $12,075 |
| | 5000/5800 | $12,075 |
| | 6800/450 | $12,075 |

## Direction of Rotation

At time of order, the customer must specify the direction of rotation for the motor. Toshiba standard is counter clockwise (CCW) as viewed from non-drive end (NDE) of the motor. Directional arrow will be provided on all uni-directional motors.

## IP Enclosure Protection

This motor modification is necessary to meet IEC enclosure definition of IP55. Available on totally enclosed motors only.

| Option | | IP55 |
|---|---|---|
| Frame | 440/500 | $4,354 |
| | 5000/5800 | $4,442 |
| | 6800/450 | $4,442 |

**Special Note:**

- MV-840/841 Offering comes Standard with IP55 protection.

## Location: Classified-Division 2 or Zone 2

Environmental/application conditions may require a special motor design and special labeling of the product to ensure proper protection and/or safety during use. If an environment and/or application has been identified as a Division 2 or Zone 2 location, Toshiba requires that a Class, Group, and Temperature code (T-code) be provided to ensure safe operation in the specified atmosphere.

| Option | | Class I, Div 2 (1) |
|---|---|---|
| Frame | 440/500 | $3,713 |
| | 5000/5800 | $3,713 |
| | 6800/450 | $4,525 (2) |

(1) All medium voltage products are suitable for a T3 (200°C) T-code under a sinewave condition based on a 1.0 service factor. For T-code ratings below 200°C, contact Toshiba for product pricing and availability. Please contact Toshiba for applications utilizing ASD control. Please note that the NEC does not require the motor to be specifically nameplated with the area classification.
(2) Class I Div 2 not available for 6800 frame TEAAC and larger.

**Special Notes:**

- Low temperature space heaters are included in the above adders.
- Consult Toshiba for CSA certification and any other.
- Suitability of Zone 2 application is based on the National Electric Code (NEC).

## Petrochem Severe Duty** - Totally Enclosed Motors

- IP55 Degree of Protection for Motor & T-Boxes
- Non-Contacting Labyrinth Seals on Both Bearings
- IP5X for Sleeve Bearings
- Insulation System Capable of Withstanding an Immersion Test in Accordance with NEMA MG 1
- Tropicalization Treatment on Windings
- Cast Iron Frame & Brackets with Cast Iron or Fabricated Steel Terminal Box(es) & Fan Cover
- Grounding Lugs on Motor Frame & Inside Main T-Box
- 0.005-Inch Precision Foot Flatness
- Non-Sparking, Epoxy-Coated Aluminum Internal Fan
- Direction of Rotation Arrow for Motors with Uni-Directional Rotation
- Gasketed Main T-Box & Auxiliary T-Box
- Lead Separator Gaskets
- Corrosion-Resistant Drain & Breather at Lowest Part of Motor Frame & Inside Main T-Box
- Severe Duty, Corrosion-Resistant, Rust-Inhibitive Paint System on Motor & Shaft/Rotor Assembly
- Corrosion-Resistant Hardware
- Standard Non-Witnessed Routine Testing per IEEE 112

| Option | | Severe Duty Package |
|---|---|---|
| Frame | 5000/5800 | $12,360 |
| | 6800/450 | |

**Special Note:**

** 500HP and above.

## Shipping - Export Crating

Toshiba provides packaging options for different shipping requirements. Options include commercial packaging (for common, below-deck transport on ships) and containerized shipping.

| Option | | Export Crating |
|---|---|---|
| Frame | 440/500 | $3,564 |
| | 5000/5800 | $4,532 |
| | 6800/450 | $5,467 |

## Tagging/Nameplates

Standard nameplates are 304-grade stainless steel with laser etched lettering. Additional nameplates for remote-mounting and special markings are available. For requests other than below, contact Toshiba.

| Option | | Duplicate Nameplate | Special ID Tag | 316 Stainless Steel |
|---|---|---|---|---|
| Frame | All Frames | $283 | $283 | $734 |

# Bearings

Special bearings and designs are available on a production basis for specific application requirements.

**Bearing RTDs - Single Element –** Pricing includes one RTD per bearing (total of two) and a three-lead, single element design with leads terminated to its own cable head. Termination to an auxiliary terminal box is available at an additional cost. Copper, nickel and thermocouples can be substituted at no charge.

| Option | | Bearing RTDs (Copper, 10 Ohm) | Bearing RTDs (Platinum, 100 Ohm) |
|---|---|---|---|
| Frame | 440/500 | $4,005 | $4,005 |
| | 5000/5800 | $4,005 | $4,005 |
| | 6800/450 | $4,005 | $4,005 |
| Option | | Bearing RTDs (Nickel, 120 Ohm) | |
| Frame | 440/500 | $4,005 | |
| | 5000/5800 | $4,005 | |
| | 6800/450 | $4,005 | |

### Bearing RTDs - Dual Elements

| Option | | Bearing RTDs (Copper, 10 Ohm) | Bearing RTDs (Platinum, 100 Ohm) |
|---|---|---|---|
| Frame | 440/500 | $5,263 | $5,263 |
| | 5000/5800 | $5,263 | $5,263 |
| | 6800/450 | $5,263 | $5,263 |
| Option | | Bearing RTDs (Nickel, 120 Ohm) | |
| Frame | 440/500 | $5,263 | |
| | 5000/5800 | $5,263 | |
| | 6800/450 | $5,263 | |

**Special Note:**
- Contact Toshiba for pricing on other RTD types.
- Provisions bearing RTDs are $1,450 (list price) for ODP and legacy frames.

## Constant Level Oilers

| Option | | Oiler (1 per Bearing) |
|---|---|---|
| Frame | 5000/5800 | $1,870 |
| | 6800/450 | $1,990 |

**Special Notes:**
- Constant Level Oiler adder is available on motors with sleeve bearings only.
- Constant level oilers are not allowed with flood lube provisions.

## Flood Lube Provisions (Sleeve Bearings Only)

| Option | | Carbon Steel Flood Lube Provisions Only | 304 SS Flood Lube Provisions Only |
|---|---|---|---|
| | 5000/5800 | $1,280 | $2,022 |
| | 6800/450 | $1,408 | $2,224 |

**Special Note:**
- Pricing includes inlet/outlet piping to the first flange.
- Lube oil system to be provided by others.
- Constant level oilers are not allowed with flood lube provisions.
- Contact Toshiba for heat rejection, flow rate and pressure.

## Grease – High Temperature

This adder is for applications in which the ambient temperature is greater than 40˚C.

| Option | | High Temp. Grease (40˚C) |
|---|---|---|
| Frame | 440/500 | $300 |
| | 5000/5800 | $347 |
| | 6800/450 | $405 |

## Grease – Low Temperature

This adder is for applications in which the ambient temperature is less than -20˚C and up to -40˚C.

| Option | | Low Temp. Grease (–20˚C) |
|---|---|---|
| Frame | 440/500 | $300 |
| | 5000/5800 | $347 |
| | 6800/450 | $405 |

## Insulated Bearings

NEMA MG1 Part 31 suggests insulating the bearing(s) on all motors in 500 series frames and larger when inverter-fed. Toshiba recommends insulating the bearings when shaft voltage exceeds 300 mV, but it is up to the user to determine when insulated bearings are required, especially with the use of a non-Toshiba inverter-fed control. Sleeve bearings are insulated on DE and NDE. For motors with anti-friction bearings, the following options are available.

| Option | | NDE | DE |
|---|---|---|---|
| Frame | 440/500 | $2,166 | $2,166 |
| | 5000/5800 | Included | $2,343 |
| | 6800/450 | Included | $2,706 |

**Special Notes:**
- When insulated bearings are used on direct-coupled applications, the use of an insulated coupling and/or a shaft grounding brush is required in order to reduce the risk of driven equipment bearing damage.

## Oil – Mist

Medium voltage motors can be provided to accept an externally-generated oil-mist/dry sump lubrication arrangement. The type of preparation must be noted within the purchase order:

1. Oil-Mist Provision (provision for future oil mist): The bearing cavity is arranged for oil-mist, but the bearings will be packed with grease for normal operation. Should the oil-mist system be connected, Toshiba recommends that the grease be cleaned from the bearings and bearing cavities.
2. Oil-Mist Ready: The bearings will receive a light coat of oil for testing and shipment; however, the oil-mist system must be connected upon receipt of product.

| Option | | Oil-Mist Provision | Oil-Mist Ready |
|---|---|---|---|
| Frame | 440/500 | $2,888 | $2,888 |
| | 5000/5800 | $4,211 | $4,211 |
| | 6800/450 | $4,565 | $4,565 |

**Special Notes:**
- This adder is not available on general purpose vertical shaft-down or shaft-up applications.
- Oil mist not suitable for sleeve bearings.

## Oil Sump Heaters

In ambient temperatures below -10°C, oil sump heaters are required for motors with sleeve bearings.

| Option | | Non-Hazardous Area | Hazardous Area |
|---|---|---|---|
| Frame | 440/500 | N/A | N/A |
| | 5000/5800 | $2,653 | $5,962 |
| | 6800/450 | $2,847 | $6,441 |

**Special Notes:**
- This adder applies only to motors with self-cooled sleeve bearings.
- Oil sump heaters operate at 120 or 240 V (customer to specify voltage).

## Roller Bearing for Belted Applications

Cylindrical roller bearings are used in motors where high radial loads are present (i.e. belted applications) for an improved L-10 bearing life.

| Option | | Roller Bearing |
|---|---|---|
| | | DE (1) |
| Frame | 440/500 | $2,398 |
| | 5000/5800 | $3,923 |
| | 6800/450 | $4,142 |

(1) TEFC & ODP motors only.

**Special Notes:**
- Roller bearing is available only on 1800 RPM and slower motors.
- Belted application requires full belting details and provided prior to order acceptance.
- 4142 shaft material will be provided for 6800 frame and smaller.
- Contact factory for insulated roller bearing.

## Seals

Shaft seals are installed on the shaft at the bracket face to prevent the ingress of dirt and liquid. Toshiba motors with sleeve bearings come standard with labyrinth seals. For motors with anti-friction bearings, the following options are available.

| Option | | Labyrinth Drive End | Labyrinth Both Ends | Taconite Drive End (1) | Taconite Both Ends (1) |
|---|---|---|---|---|---|
| Frame | 440/500 | $2,728 | $3,637 | $2,728 | $3,637 |
| | 5000/5800 | $2,873 | $3,782 | $2,873 | $3,782 |
| | 6800/450 | $3,219 | $4,235 | $3,219 | $4,235 |

(1) Taconite seal construction consists of two special bronze labyrinth seals (one on each end).

**Special Notes:**
- Not available on ODP 5810 and smaller.

## Vibration Detectors

These detectors are for single-direction monitoring (horizontal, vertical, or axial). For total coverage of all three directions, three detectors must be used. Toshiba standard is horizontal position. Transmitter is not provided.

## Vibration Monitoring Devices

**Robertshaw –** consists of a self-contained detector and switch. A Robertshaw is an acceleration-sensitive instrument that measures peak vibratory shock at the point of measurement.

**Accelerometer –** used to sense bearing housing vibration on motors with anti-friction bearings.

| Option | | Provision for Robertshaw Switch (1) | | Robertshaw Switch (2) | |
|---|---|---|---|---|---|
| | | One End | Both Ends | One End | Both Ends |
| Frame | 440/500 | $571 | $1,143 | $2,560 | $5,119 |
| | 5000/5800 | $571 | $1,143 | $2,560 | $5,119 |
| | 6800/450 | $571 | $1,143 | $2,560 | $5,119 |
| Option | | Provision for Metrix Accelerometer Sensor (3) | | Metrix Accelerometer Sensor/ST5484E | |
| | | One End | Both Ends | One End | Both Ends |
| Frame | 440/500 | $571 | $1,143 | $2,719 | $5,424 |
| | 5000/5800 | $571 | $1,143 | $2,719 | $5,424 |
| | 6800/450 | $571 | $1,143 | $2,719 | $5,424 |

| Option | | Flying Lead Termination (One End) | Flying Lead Termination (Both Ends) | Termination to Aux. T-Box (One end) | Termination to Aux. T-Box (Both Ends) |
|---|---|---|---|---|---|
| Frame | 440/500 | $0 | $0 | $1,263 | $2,526 |
| | 5000/5800 | $0 | $0 | $1,263 | $2,526 |
| | 6800/450 | $0 | $0 | $1,263 | $2,526 |

(1) Provisions for mounting are based on a Robertshaw model number 366. For other sensor provisions, contact Toshiba for price and availability.
(2) Robertshaw sensors are not suitable for Division 2 applications. Please contact Toshiba for Division 2 sensors.
(3) Standard accelerometer sensor is Metrix ST5484E. For other models or manufacturers, contact Toshiba for price and availability.

**Non-Contacting Proximity Probes** – used to sense shaft vibration on motors with sleeve bearings. Contact Toshiba for other vibration probe options.

| Option | | "Bently-Nevada Vibration Probe Provisions (X, Y)" | Bently-Nevada Non-Contacting Vibration Probes (X,Y) | Provision for Key Phasor (Phase Reference Probe) | Key Phasor (Phase Reference Probe) |
|---|---|---|---|---|---|
| | | Both Ends | Both Ends | One End | One End |
| Frame | 440/500 | N/A | N/A | N/A | N/A |
| | 5000/5800 | $4,415 | $31,595 | $1,324 | $7,514 |
| | 6800/450 | $4,415 | $31,595 | $1,324 | $7,514 |

**Special Note:**
- Key phasor will be quantity one per motor.
- Provision for key phasor may only be added with purchase of provisions for vibration probes.

# Coatings

## Internal Coating for Extreme Service Operation

This adder provides additional insulation coating as well as corrosion protection for all internal machined surfaces.

| Option | | Internal Coating |
|---|---|---|
| Frame | 440/500 | $2,647 |
| | 5000/5800 | $3,007 |
| | 6800/450 | $3,267 |

**Special Note:**
- MV-840/841 offering comes STD with internal coating for severe duty application.

## Paint

For special paint requirements, full specifications and color chip/manufacture color code will be required. Special paints requiring special application/curing equipment may not be available. Contact Toshiba for full details.

| Option | | Special Paint Color | Epoxy |
|---|---|---|---|
| Frame | 440/500 | $963 | $10,315 |
| | 5000/5800 | $1,082 | $10,526 |
| | 6800/450 | $1,443 | $10,737 |

## Tropicalize/Fungus-Proof Windings

Unwanted fungi may break down a motor's insulation system over time. The addition of the tropicalize/fungus- proof adder will protect motor windings from this type of problem.

| Option | | Tropicalize/Fungus-Proof Winding |
|---|---|---|
| Frame | 440/500 | $1,353 |
| | 5000/5800 | $1,684 |
| | 6800/450 | $2,002 |

**Special Notes:**
- MV-840/841 offering comes standard with tropicalized winding.

# Frame

## Breathers

All TEFC motors are provided with drain holes and breathers that are located at the lowest point on the motor. Frame breather plugs available for totally enclosed designs only.

| Option | | 304 SS Breather (1) | 316 SS Breather | Standard Breather Conduit Box |
|---|---|---|---|---|
| Frame | 440/500 | $482 | $501 | $361 |
| | 5000/5800 | $482 | $501 | $361 |
| | 6800/450 | $482 | $501 | $361 |

## Dowel Pin Provisions

Dowel pin pilot holes will be provided on two diagonal feet. These are provided to ensure motor alignment is maintained after the motor is installed.

| Option | | Two Per Motor | Special |
|---|---|---|---|
| Frame | 440/500 | $1,203* | Contact Toshiba |
| | 5000/5800 | $1,444* | |
| | 6800/450 | Included | |

**Special Notes:**
- Adder applies to ODP only.
- Dowel pin provisions come standard for medium voltage motors with exception to ODP.

## External Grounding Pads on Motor Frame

Apply the adder below for a copper ground pad with two holes mounted on the motor frame. When placing the order, the hole and tap size must be provided.

| Option | | Frame Grounding | |
|---|---|---|---|
| | | One | Two |
| Frame | 440/500 | $1,805 | $3,027 |
| | 5000/5800 | $1,805 | $3,027 |
| | 6800/450 | $1,805 | $3,027 |

1) MV-840/841 offering comes STD with one ½'' Grounding lug on motor frame.

## Fan Cover Material

| Option | | Fabricated Steel |
|---|---|---|
| Frame | 440 | $3,325 |
| | 5000/5800 | $3,575 |

**Special Note:**
- Standard TEFC fan cover material is cast iron except for 6800 frame.

## Flange-Mounting

Flange mounting is available only on motors with ball bearings and direct-coupled applications.

| Option | | Open Drip-Proof | Totally Enclosed Fan Cooled | | Top Hat Style |
|---|---|---|---|---|---|
| | | D-Flange Footed | C-Face Footed | D-Flange Footed | D-Flange Footed |
| Frame | 440/500 | $3,446 | $2,216 | $3,446 | N/A |
| | 5000/5800 | $4,101 | $4,343 (2) | $5,117 | $5,363 (1) |
| | 6800/450 | - | N/A | - | $6,201 (1) |

(1) Only applicable to two-pole motors.
(2) Applicable to Legacy frame TEFC only.

**Special Notes:**
- C-face option is not available for ODP enclosure.
- Consult factory for frames above NEMA availability.
- Top hat style includes WPI, WPII, TEAAC and TEWAC.

## Hardware

Standard hardware is corrosion resistant. Stainless steel hardware fasteners for holding brackets, conduit box, fan cover, and inner caps are available.

| Option | | 304 SS Hardware | 316 SS Hardware |
|---|---|---|---|
| Frame | 440/500 | $858 | $1,030 |
| | 5000/5800 | $858 | $1,030 |
| | 6800/450 | $1,203 | $1,443 |

**Special Note:**
- This adder applies only to M12 size and smaller hardware.

## Soleplates/Slide Rails/Shims

| Option | | Soleplate (2 pcs) | Slide Rails | 304 SS Shim Pack (4 pcs) |
|---|---|---|---|---|
| Frame | 440/500 | $14,820 | $10,192 | $14,338 |
| | 5000/5800 | $16,118 | $11,260 | $14,689 |
| | 6800/450 | $17,572 | $12,550 | $15,902 |

## Space Heaters

Space heaters are strip-type heaters mounted inside the frame near the coils to prevent moisture condensation inside the motor during times the motor is not energized. Heater leads are brought out to the motor's auxiliary box and marked H1 and H2. Standard heater voltage is 120 V single-phase unless otherwise specified.

| Option | | Standard Space Heater | Low Temp Space Heater |
|---|---|---|---|
| Frame | 440/500 | $1,568 | $3,135 |
| | 5000/5800 | $1,568 | $3,135 |
| | 6800/450 | - | $3,135 |

**Special Notes:**
- Space heaters are included on all MV Motors with exception to ODP & S/B449.
- Low temperature space heater is included on MV-840 offering wired to separate auxiliary box.

## Vertical Jacking Provisions

Vertical jacking is used to assist in the proper alignment of the motor shaft with the driven equipment. Provisions for four jacking bolts (one per foot) are provided. Jacking bolts are to be supplied by the customer. Vertical jacking provisions are standard for all enclosures except for ODP.

| Option | | Vertical Jacking Provisions |
|---|---|---|
| Frame | 440/500 | $1,082** |
| | 5000/5800 | $1,444** |
| | 6800/450 | Included |

| Option | | Vertical Jacking Screws |
|---|---|---|
| Frame | 440/500 | $374 |
| | 5000/5800 | $528 |
| | 6800/450 | $594 |

**Special Note:**
- Four jacking screws will be provided per motor.

** Adder applies to ODP only.

# Rotor

## Coupling/Sheave

Coupling/Sheave must be supplied finished, bored, appropriately balanced, and freight-allowed to Toshiba manufacturing plant. An incoming identification number must be obtained from Toshiba. The coupling/sheave must be shipped to arrive at the designated plants, at least six weeks prior to the order's acknowledged ship date and must include the manufacturer's mounting instructions and balance report.

| Option | | Customer-Supplied Coupling/Sheave |
|---|---|---|
| Frame | 440/500 | $4,825 |
| | 5000/5800 | $6,313 |
| | 6800/450 | $8,608 |

## Encoders

Encoders regulate speed on motors linked to variable speed applications, and they are available either face-mounted or shaft-mounted. Toshiba's standard offering is a Dynapar HS35 (shaft-mount) or Avtron M3 (shaft-mount). All prices below are based on Pulse Per Revolution (PPR) of 1024 single-output and dual-channel (A & B) quadrature. Encoder type must be specified upon order.

| Option | | Dynapar HS35 | Avtron M3 | Special |
|---|---|---|---|---|
| Frame | 440/500 (1) | $3,007 | $4,202 | Contact Toshiba |
| | 5000/5800 (1) | $3,007 | $4,202 | |
| | 6800/450(1) | $3,007 | $4,202 | |

**Special Notes:**
- (1) Only available for anti-friction motors.

## Shaft Grounding Provisions

Shaft grounding provisions help to eliminate shaft currents that can be introduced into the motor through upstream controllers (i.e. adjustable speed drives). These currents can potentially lead to premature failure of the bearings, commonly referred to as fluting.

| Option | | Shaft Grounding (1) |
|---|---|---|
| Frame | 440/500 | $3,388 |
| | 5000/5800 | $3,388 |
| | 6800/450 | $3,795 |

(1) For additional or alternative protection against shaft currents, see insulated bearings under Bearings section.

**Special Notes:**
- Insulating the bearings is recommended when the shaft voltage exceeds 300 mV.
- It is up to the user to determine when insulated bearings are required, especially with the use of an inverter-fed control.
- When insulated bearings are used on direct coupled applications, the use of insulated coupling and/or shaft grounding brush is required to reduce the risk of driven equipment bearing damage.
- Shaft grounding is not suitable for Division 2 environments.

# Shafts

For shafts with non-NEMA dimensions and/or non-Toshiba standard designs, see adders below.

## List Adders for Special Shafts

- All motors: add $3,000 + price of option(s) below

| Option | | 4140/4142 High Carbon Steel | Drill & Tap in Shaft End | Omit Keyway | |
|---|---|---|---|---|---|
| Frame | 440/500 | $484 | $248 | $241 | |
| | 5000/5800 | $506 | $297 | $253 | |
| | 6800/450 | $601 | $332 | $300 | |
| **Option** | | **Threads** | **Tapers (1)** | **Up to 5" Additional Length** | **Forged Shaft** |
| Frame | 440/500 | $241 | $325 | $347 | Contact Toshiba |
| | 5000/5800 | $253 | $337 | $387 | |
| | 6800/450 | $300 | $482 | $435 | |

(1) Customer must furnish taper gauge freight allowed to Toshiba factory.

**Special Notes:**
- 4140/4142 shaft material comes standard on belted coupled roller bearing option.
- 4140/4142 standard for 2-pole.

## Software: Engineering Data

Toshiba provides a variety of software for stock and production motors. The following standard Toshiba data package is available at no additional charge: certified prints, nameplate data, performance data, connection diagram, instructional and maintenance manual, and spare bearings parts list.

Above data will be sent out in electronic format (PDF only). For software other than what is listed above or that is specified after time of order, see table below.

| Software | Price |
|---|---|
| Toshiba Standard Software Package | Included |
| Thermal Damage (Safe Stall Time) Curve | Included |
| Performance Curve | $566 |
| Torsional Data (1) | $1,132 |
| Customer Supplied Data Sheet (2) | $504 |
| Cylindrical Roller Bearings Radial Loads (3) | $94 |
| Center of Gravity Added to Outline Drawing | $151 |
| Other Special Requests | Contact Toshiba |

(1) This adder will include shaft drawing, rotor assembly inertia, shaft torsional stiffness values.
(2) This adder pertains to customer supplied data sheets. Price is per page..
(3) Supporting mechanical load information is required for perfomace curves, bearing loading or torsional data.
(4) Certified Drawings and Data on non-standard product is available after the completion of engineering only.

## Stator

### Additional VPI

Improve a motor's insulation system by applying one additional VPI process.

| Option | | Additional VPI |
|---|---|---|
| Frame | 440/500 | $3,525 |
| | 5000/5800 | $4,088 |
| | 6800/450 | $4,400 |

**Stator (Winding) RTDs –** A set of six winding RTDs (two per phase, leads) are provided with leads terminated in an auxiliary conduit box. Pricing below does not include readout devices.

| Option | | Stator RTDs (Copper, 10 Ohm) | Stator RTDs (Platinum, 100 Ohm) | Stator RTDs (Nickel, 120 Ohm) |
|---|---|---|---|---|
| Frame | 440/500 | $3,443 | $3,443 | $3,443 |
| | 5000/5800 | $3,443 | $3,443 | $3,443 |
| | 6800/450 | $3,443 | $3,443 | $3,443 |

**Special Notes:**
- Contact Toshiba for pricing on other RTD types. .
- All MV Motors, except for ODP, come standard with 100 Ohm Pt Winding RTD's.

**Thermostats (Klixons) –** Toshiba's standard offering of MV-XP includes hermetically sealed, normally-closed (NC), bi-metallic thermostats, and a temperature-actuated element mounted on the stator winding. Leads are marked P1 and P2. Termination of the leads is in an auxiliary conduit box. Special thermostats are available upon request. Contact Toshiba for pricing and availability.

### Upgrade to Class H Insulation System

| Option | | Class H |
|---|---|---|
| Frame | 440/500 | Contact Toshiba |
| | 5000/5800 | |
| | 6800/450 | |

**Special Note:**
- Subject to additional 4-week lead time.

## Terminal Boxes

### Auxiliary Terminal Box

Termination of protective or monitoring devices can be provided in a separate auxiliary box. Auxiliary box location is to be specified by the customer at time of order.

| Option | | 304 SS per Box | Aux. Cast Iron Box | Aux. Steel Box |
|---|---|---|---|---|
| Frame | 440/500 | $2,717 | Standard | Contact Toshiba |
| | 5000/5800 | $2,717 | | |
| | 6800/450 | $2,717 | | |

**Special Notes:**
- Auxiliary terminal cast iron box is provided as standard with stator RTD adder on all motors.
- Auxiliary terminal cast iron box is provided as standard with space heaters adders.

### Burndy Lugs/Two-Hole Terminals

| Option | | Burndy |
|---|---|---|
| Frame | 440/500 | $818 |
| | 5000/5800 | $836 |
| | 6800/450 | $1,001 |

## Current Transformers

Toshiba offers window-type current transformers (one per phase). Both leads of each winding are inserted in opposite directions to measure any difference that would signify ground fault leakage.

| Option | | Differential CTs (One Per Phase) | Ammeter CT |
|---|---|---|---|
| Frame | 440/500 | $6,153 | $1,904 |
| | 5000/5800 | $6,153 | $1,904 |
| | 6800/450 | $6,153 | $1,904 |
| | N6800–N8800* | $6,842 | $2,134 |
| | 1080/T8800 | $7,017 | $2,192 |
| | 1400 | $7,017 | $2,192 |

**Special Notes:**
- Must add NEMA Type II terminal box. See main box construction for NEMA Type II adder.
- Current transformer leads will be terminated in a separate auxiliary box.

## Drains

For additional drain hole(s).

| Option | | Drain Hole Conduit Box | 304 SS Drain Plug Conduit Box |
|---|---|---|---|
| Frame | 440/500 | $144 | $361 |
| | 5000/5800 | $144 | $361 |
| | 6800/450 | $144 | $361 |

**Special Notes:**
- MV-840/841 comes standard with a main conduit box drain plug.
- 316 SS available with 316 SS hardware adder.

## Main Box Construction

Toshiba motors come standard with cast iron or fabricated steel NEMA Type I terminal box.

| Option | | 304 SS | NEMA Type II | Special Features |
|---|---|---|---|---|
| Frame | 440/500 | $10,835 | $3,658 | Contact Toshiba |
| | 5000/5800 | $11,380 | $3,658 | |
| | 6800/450 | $14,058 | Included | |

**Special Notes:**
- A top mount main box (F3) is available on TEFC enclosure only.
- NEMA Type II main box comes with stand-off insulators.
- NEMA Type II box must be added when selected accessories special notes state NEMA Type II box is required.

## Remote-Mount Conduit Box

For applications requiring that the conduit box be located away from the motor, Toshiba is able to supply a remote-mount conduit box. The conduit box will be supplied with the main motor, but will arrive unfastened. The remote-mount conduit box includes a main terminal box and a threaded mounting plate. Contact Toshiba for prices.

## Surge Protection

The following options add protection from power surges coming from the power source. Surge capacitors reduce the steepness of a power surge front, and lightning arrestors limit the peak voltage of such a surge. Surge protection devices are not recommended for use with ASD control.

| Option | | Surge Capacitor (1) | Lightning Arrestors (1) | Surge Protection Package (1) |
|---|---|---|---|---|
| Frame | 440/500 | $5,225 | $18,370 | $23,018 |
| | 5000/5800 | $5,225 | $18,370 | $23,018 |
| | 6800/450 | $5,225 | $18,370 | $23,018 |

**Special Note:**
- Must add NEMA Type II terminal box. See main box construction for NEMA Type II adder.
- Surge capacitor will be a 3-pole single device, model 18L0015WH.

## Terminal Box Space Heaters

| Option | | Terminal Box Space Heater |
|---|---|---|
| Frame | 440/500 | $1,568 |
| | 5000/5800 | $1,568 |
| | 6800/450 | $1,568 |

**Special Note:**
- Must add NEMA Type II terminal box. See main box construction for NEMA Type II adder. Main terminal box will be fabricated steel when terminal box space heaters are selected.

## Testing

All Toshiba motors are tested in compliance with IEEE Std. 112 to meet NEMA MG1 requirements. Test reports and optional testing are available for each individual motor. Documentation to be provided in digital format.

Please contact Toshiba for scheduling/coordination for witness testing requirements.

| Option | | Routine, Unwitnessed (Report Only) | Routine, Witnessed | Complete, Unwitnessed |
|---|---|---|---|---|
| Frame | 440/500 | Included | $11,000 | $12,020 |
| | 5000/5800 | Included | $11,000 | $12,020 |
| | 6800/450 | Included | $11,000 | $12,020 |
| **Option** | | **Complete, Witnessed** | **Noise, Unwitnessed (1)** | **Noise Witnessed (1)** |
| Frame | 440/500 | $21,344 | $4,095 | $6,553 |
| | 5000/5800 | $21,344 | $4,095 | $6,553 |
| | 6800/450 | $21,344 | $4,095 | $6,553 |
| **Option** | | **Vibration** | **Insulation Resistance** | **Polarization Index** |
| Frame | 440/500 | $2,925 | $1,755 | $2,105 |
| | 5000/5800 | $2,925 | $1,755 | $2,105 |
| | 6800/450 | $2,925 | $1,755 | $2,105 |

(1) Noise test consists of overall sound pressure values/readings only. For octave band measurements, please contact Toshiba.

**Special Notes:**

- Contact Toshiba for sealed winding conformance on medium voltage motors.
- Every motor manufactured by Toshiba is given a routine test per NEMA MG1 and IEEE 112. Test results are compared to design standards and limits to ensure freedom from electrical or mechanical defects. A standard routine test consists of:
  - No-Load Current
  - No-Load Watts Inputs
  - No-Load Speed
  - Winding Resistance
  - High Potential Test (Dielectric Test)
  - Locked Rotor Current
  - Locked Rotor Watts Input
  - Visual Inspection
  - Vibration Check – Overall Vibration Displacement Measurements Tested per NEMA MG1-12
- Performance tests are performed In accordance with NEMA MG1-12 and IEEE 112 Method B (dynamometer) or Method "F1". A complete performance test consists of:
  - Temperature Rise of Stator Windings, Drive End Bearing, and Frame at Rated load
  - Winding Resistance
  - Input Current at 100, 75, 50, and 25 percent of Rated No-load HP
  - Efficiency at 100, 75, 50, and 25 percent of Rated Full-load HP
  - Power Factor at 100, 75, 50, and 25 percent of Rated Full-load HP
  - Speed (RPM) at 100, 75, 50, and 25 percent of Rated Full-load HP
  - Torque at 100, 75, 50, and 25 percent of Rated Full-load HP
  - Locked Rotor Torque and Amps
  - Breakdown Torque
  - No Load Amps and Watt Input

## Top Hat

### Air Inlet RTD

| Option | | Air Inlet RTD |
|---|---|---|
| Frame | 440/500 | $1,975 |
| | 5000/5800 | $1,975 |
| | 6800/450 | $1,975 |

**Special Notes:**

- Not available on ODP or TEFC motor enclosures.

### Differential Pressure Switch/Gauge

On a motor with air filters, a pressure switch is used to measure the pressure drop across the filter caused by clogging. Toshiba's standard differential pressure switch is the Dwyer Instruments Model No. 1950 series.

| Option | | Switch | Gauge |
|---|---|---|---|
| Frame | 440/500 | N/A | N/A |
| | 5000/5800 | $3,179 | $2,904 |
| | 6800/450 | $3,179 | $2,904 |

**Special Note:**

- Differential pressure switches and gauges are available on WPI/WPII motors only.
- Contact Toshiba for switch gauge combo.

### Filters

Toshiba filters are 304 stainless steel with 70 micron filtration. Filter are removable and washable without shutting down the motor.

| Option | | Stainless Steel |
|---|---|---|
| Frame | 440/500 | N/A |
| | 5000/5800 | $1,984 |
| | 6800/450 | $2,134 |

**Special Notes:**

- This adder applies to WPI/II motors only.
- Contact Toshiba for 10 micron option.

### Louvers

| Option | | Intake | Exhaust |
|---|---|---|---|
| Frame | 440/500 | N/A | N/A |
| | 5000/5800 | $2,706 | $2,706 |
| | 6800/450 | $2,910 | $2,910 |

**Special Notes:**

- This adder applies to WPI/II motors only.

# Appendix A
# Model Number Breakdown Type 1

| First Field (One Digit) | | | Second Field - HP (Three Digits) | | | | Third Field - Poles & Fan Type (One Digit) | | | | Fourth Field - Construction (One Digit) | | Fifth Field (One Digit) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Symbol | Phase/Start | Design | Symbol | | | Output (HP) | Symbol | Pole | Fan Type | | Symbol | Enclosure | Symbol | Ins. | S.F. |
| A | Three-Phase Squirrel Cage | A | X | ? | ? | Reciprocal | 1 | 2 | Uni-CW | Single Speed | A | Open | A | A | 1 |
| B | | B | X | 1 | 2 | 1/12 | 2 | | Bi | | C | Underwater Type - Gas Filled | B | | 1.15 |
| C | | C | X | 2 | 0 | 1/20 | 3 | | Uni-CCW | | D | Open Drip Proof Guarded | C | | 1.25 |
| D | | D | | | | | 4 | 4 | Bi | | E | Totally Enclosed | D | | 1.35 |
| I (Note 8) | Explosion Proof Drive System (UL File E53559) | | 1 | / | 8 | 1/8 | 5 | | Uni | | F | Totally Enclosed Fan Cooled | E | | 1.4 |
| | | | 1 | / | 2 | 1/2 | 6 | 6 | Bi | | G | Weather Protected Type-1 | U | | SPL |
| L | Single-Phase Condensor SKD | L | 3 | / | 4 | 3/4 | 7 | | Uni | | K | Open Pipe Ventilated | F | B | 1 |
| M | | M | | | | | 8 | 8 | Bi | | M | Splash Proof - Open Machine | G | | 1.15 |
| N | | N | 0 | 0 | 1 | 1 | E | | Uni | | N | Weather Protected Type-2 | H | | 1.25 |
| O | | O | 0 | 2 | 0 | 20 | 9 | 10 | Bi | | O | | I | | 1.35 |
| P | Single-Phase Squirrel Cage SIK | L | 1 | 5 | 0 | 150 | F | | Uni | | P | Totally Enclosed Pipe-Ventilated Machine | J | | 1.4 |
| Q | | M | | | | | A | 12 | Bi | | | | V | | SPL |
| R | | N | Y | ? | ? | 1/10 Times | G | | Uni | | Q | Underwater Type - Oil Filled | K | F | 1 |
| S | | O | Y | 1 | 5 | 1 1/2 | B | 14 | Bi | | S | Guarded - Open Machine | L | | 1.15 |
| T | Single-Phase, Two-Condensor Start & Operate SIKD | L | Y | 7 | 5 | 7 1/2 | H | | Uni | | U | Underwater Type - Water-Filled | M | | 1.25 |
| U | | M | 018 (Note 4) | | | 18.5 kW | C | 16 | Bi | | V | Dripp -Proof | N | | 1.35 |
| V | | N | | | | | J | | Uni | | Y | Explosion Proof | O | | 1.4 |
| W | | O | | | | | D | 18 | Bi | | R | Corrosion Proof | W | | SPL |
| E | Three-Phase Wound Rotor | | | | | | K | | Uni | | W | Totally Enclosed Fan Cooled - Outdoor Use | P | H | 1.0 |
| F | Other Three-Phase | | | | | | M | Over 20 | Bi | | Z | Water-Proof Machine | Q | | 1.15 |
| G | Single-Phase, One Condensor SIKD | | | | | | N | | Uni | | B | Totally Enclosed Air Over (TEAO) | R | | 1.25 |
| X | Single-Phase Shaded Pole | | | | | | W | One Winding | | Multi-Speed | H | Open Drip Proof Air Over | S | | 1.35 |
| Y | Other Single-Phase | | | | | | X | Two Winding | | | L | Liquid Cooling | T | | 1.4 |
| Z | IEC Metric | | | | | | Y | Three Winding | | | I | Water Cooling | X | | SPL |
| | | | | | | | Z | Other | | | J | | | | |
| | | | | | | | Bi = Bidirectional * | | | | T | Totally Enclosed with Water Air Cooled (TEWAC) | | | |
| | | | | | | | Uni = Unidirectional * | | | | | | | | |
| | | | | | | | *Viewed from OPE | | | | X | Other | | | |
| | | | | | | | | | | | 2 | Brake Motor: 6 lb. ft. | | | |
| | | | | | | | | | | | 3 | Brake Motor: 10 lb. ft. | | | |
| | | | | | | | | | | | 4 | Brake Motor: 15 lb. ft. | | | |
| | | | | | | | | | | | 5 | Brake Motor: 35 lb. ft. | | | |
| | | | | | | | | | | | 6 | Brake Motor: 50 lb. ft. | | | |

**Use the Below for Motors over 1000 HP**

| | |
|---|---|
| H | Three-Phase Wound Rotor: Times 10 |
| J | Three-Phase Squirrel Cage: Times 10 |
| K | Three-Phase Squirrel Cage: Times 100 |

Example(s):

H125 = 1,250 HP

K125 = 12,500 HP

# Appendix A
# Model Number Breakdown Type 1

| *Sixth Field - Mounting (One Digit)* | | |
|---|---|---|
| Symbol | Mount Type | Shaft End |
| F | Floor-Mount | Standard |
| G | | Short |
| A | | Special |
| R | Resilient Base | Standard |
| Q | | Short |
| I | | Special |
| T | C-Face Footed | Standard |
| H | | Special |
| U | | Short |
| C | C-Face Footless | Standard |
| J | | Special |
| E | D-Flange Footed | Standard |
| K | | Special |
| D | D-Flange Footless | Standard |
| L | | Special |
| M | Pad-Mount Footless w/o C-Face | Standard |
| P | | Special |
| N | Footless Frame | Standard |
| V | | Special |
| X | Other | --- |
| S | OEM Motor | Special Shaft & Flange |
| B | OEM Motor | Standard |

| *Seventh Field - Bearings (One Digit)* | |
|---|---|
| Symbol | Bearing Type |
| 1 | Shielded Ball w/ Plugs |
| 2 | Shielded Ball w/o Plugs |
| 3 | Open Ball Bearing w/ Plugs |
| 4 | Roller Bearing on P.E. w/ Plugs |
| 5 | Roller Bearing on P.E. & O.P.E. |
| 6 | Sleeve Bearing w/ Plugs |
| 7 | Sleeve Bearing w/o Plugs |
| 8 | Roller Bearing on O.P.E. & Ball on P.E. |
| 9 | Special Construction |
| 0 | Other |
| F | Angular Contact Ball (P.E. & O.P.E.) |
| G | Angular Contact Ball + Ball |
| H | Angular Contact Ball + Roller |
| J | Cylindrical Roller + Ball |
| K | Cylindrical Roller + Roller |
| L | Sleeve Bearing (Horiz.) - Self Lub. |
| M | Sleeve Bearing for Vertical |
| N | Third Pedestal Bearing |
| P | Fourth Pedestal Bearing (Jackshaft) |
| Q | Ball + Forced Oil Lube |
| R | Roller + Forced Oil Lube |
| S | Angular Contact + Forced Oil Lube |
| T | Cylindrical Roller + Forced Oil Lube |
| U | Sleeve Bearing (Horiz.) - Forced Oil Lube |
| V | Sleeve for Vertical + Forced Oil Lube |
| W | Third Pedestal Bearing + Forced Oil Lube |
| X | Fourth Pedestal Bearing + Forced Oil Lube (Jackshaft) |

| *Eighth Field - Voltage (One Digit)* | |
|---|---|
| Symbol | Volts - Hz |
| A | 230/460 - 60 |
| B | 460 - 60 |
| C | 230 - 60 |
| D | 115/230 - 60 |
| E | 115 - 60 |
| F | 240/480 - 60 |
| G | 2300 or 2400 - 60 |
| H | 220/380 - 60 |
| I | 4000 or 4160 - 60 |
| J | 2300/4160 or 2300/4000 or 2400/4160 - 60 |
| K | 6000 or 6600 - 60 |
| L | 208/416 - 60 |
| M | 13200 - 60 |
| N | 220/440 - 60 |
| O | 575 - 60 |
| P | Other - 60 |
| Q | 2300 - 50 |
| R | 4000 or 4160 - 50 |
| S | 4600 - 50 |
| T | 6000 or 6600 - 50 |
| U | 230/460 - 60 |
| V | 190/380 - 50 |
| W | 200/400 - 50 |
| X | 220/440 - 50 |
| Y | Other - 50 |
| Z | Other |

| *Ninth Field (Not To Exceed Three Digits)* | |
|---|---|
| Symbol | Features |
| 0 | Toshiba Internal Reference |
| 1 | Toshiba Internal Reference |
| 2 | Toshiba Internal Reference |
| 3 | Toshiba Internal Reference |
| ...n | Toshiba Internal Reference |
| A | Toshiba Internal Reference |
| B | Toshiba Internal Reference |
| C | Toshiba Internal Reference |
| D | Toshiba Internal Reference |
| E | Toshiba Internal Reference |
| F | Toshiba Internal Reference |
| G | Toshiba Internal Reference |
| H | Toshiba Internal Reference |
| I | Toshiba Internal Reference |
| J | Toshiba Internal Reference |
| K | Toshiba Internal Reference |
| L | Toshiba Internal Reference |
| M | Toshiba Internal Reference |
| N | Toshiba Internal Reference |
| O | Toshiba Internal Reference |
| P | Toshiba Internal Reference |
| Q | Toshiba Internal Reference |
| R | Toshiba Internal Reference |
| S | Toshiba Internal Reference |
| T | Toshiba Internal Reference |
| U | Toshiba Internal Reference |
| V | Toshiba Internal Reference |
| W | Toshiba Internal Reference |
| X | Toshiba Internal Reference |
| Y | Toshiba Internal Reference |
| Z | Toshiba Internal Reference |
| LX | Toshiba Internal Reference |
| LO | Toshiba Internal Reference |
| NH | Toshiba Internal Reference |
| **Medium Voltage Ratings** | |
| C | Toshiba Internal Reference |
| D | Toshiba Internal Reference |
| E | Toshiba Internal Reference |
| F | Toshiba Internal Reference |
| M | Toshiba Internal Reference |

| *Tenth Field Optional Extensions (Note 6)* | |
|---|---|
| Symbol | Features |
| A | Toshiba Internal Reference |
| B | Toshiba Internal Reference |
| C | Toshiba Internal Reference |
| D | Toshiba Internal Reference |
| E | Toshiba Internal Reference |
| F | Toshiba Internal Reference |
| G | Toshiba Internal Reference |
| H | Toshiba Internal Reference |
| I | Toshiba Internal Reference |
| J | Toshiba Internal Reference |
| K | Toshiba Internal Reference |
| L | Toshiba Internal Reference |
| M | Toshiba Internal Reference |
| N | Toshiba Internal Reference |
| O | Toshiba Internal Reference |
| P | Toshiba Internal Reference |
| Q | Toshiba Internal Reference |
| R | Toshiba Internal Reference |
| S | Toshiba Internal Reference |
| T | Toshiba Internal Reference |
| U | Toshiba Internal Reference |
| V | Toshiba Internal Reference |
| W | Toshiba Internal Reference |
| X | Toshiba Internal Reference |
| Y | Toshiba Internal Reference |
| Z | Toshiba Internal Reference |

# Appendix A
# Model Number Breakdown Type 2

| Horsepower or kW | Pole Speed | Enclosure / Construction | Product Family |
|---|---|---|---|
| (Three Digits) | (One Digit) | (Two Digit) | (One Digit) |
| ___ ___ ___ | ___ | ___ ___ | ___ |
| **Horsepower**<br>1/2 = 1/2 HP<br>3/4 = 3/4 HP<br>Y15 = 1.5 HP<br>Y75 = 7.5 HP<br><br>1000+ (HP) Rating<br>First Digit = M<br>[M = 50 Multiplier]<br><br>5000+ (HP) Rating<br>First Digit = C<br>[C = 250 Multiplier]<br><br>Second & Third Digit = A Numerical Range from 20 to 99<br>{Ex: M20 = 1000; 50 x 20 = 1000}<br>{Ex: M25 = 1250; 50 x 25 = 1250}<br><br>**KW**[3]<br>X37 = 0.37 KW<br>Y11 = 1.1 KW<br>018 = 18.5 KW | **Single Speed**<br>1 = 2-Pole (uni-CW)<br>2 = 2-Pole (Bi)<br>3 = 2-Pole (Uni-CCW)<br>4 = 4-Pole (bi)<br>5 = 4-Pole (Uni-CCW)<br>6 = 6-Pole (Bi)<br>7 = 6-Pole (Uni-CCW)<br>8 = 8-Pole (Bi)<br><br>**Multi-Speed**<br>N = 4/8-Pole 1 Wdg.<br>P = 4/8-Pole 2 Wdg.<br>Q = 4/6-Pole 2 Wdg. | BC = Blower Cooled<br>DP = ODP<br>FA = TEAO<br>FC = TEFC (IP44)<br>FN = TENV<br>FT = TEFC (IP54)<br>QD = Quarry Duty<br>SD = Severe Duty<br>TC = TEAAC<br>WP = WP1<br>WT = WP2<br>XD = 841 Petro-Chem<br>XP = TEXP<br>XS = 840 Mill & Chem | A = Anti-Friction Bearings<br>B = Brake Motor<br>C = Design C<br>D = Single Label (Class I)<br>E = Dual Label (Class I & II)<br>F = VFD/ASD Motor<br>G = Cooling Tower<br>H = Close-Coupled Pump (Steel)<br>J = Close-Coupled Pump (Cast Iron)<br>K = Dry Kiln<br>M = Metric[3] (KW Only)<br>N = Steel Frame<br>P = OWP<br>Q = Sleeve Bearing<br>R = Rig Motor<br>S = Standard (default)<br>T = Triple Rate<br>U = Permanent Magnet<br>W = SS Washdown |

The standard frame offering's catalog number ends after the initial eleventh digit (i.e. shaft column). All alternate frame size offerings use an alpha-numerical sequence.

**EXAMPLE:**
The defined standard frame assignment is N449T, the catalog number would be: 2504FCSB31A
Alternate Frames Available:
**449T Frame:** Catalog Number: 2504FCSB31A-**F1**
**505UZ Frame:** Catalog Number: 2504FCSB31**G-F1**

# Appendix A
# Model Number Breakdown Type 2

| Voltage/ Frequency | Efficiency Type | Mounting | Shaft | | Suffix (Optional) | |
|---|---|---|---|---|---|---|
| (One Digit) | (One Digit) | (One Digit) | (One Digit) | | (Three Digits) - All Are Required for Proper Usage | |
| ___ | ___ | ___ | ___ | – | ___ | ___ ___ |
| **60 Hz**<br>A = 230/460<br>B = 460<br>C = 575<br>D = 230/460/796<br>G = 2300<br>J = 2300/4160<br>K = 2300/4000<br>L = 4000<br>O = 6600<br>U = 200<br><br>**50 Hz**<br>M = 230/400<br>N = 400<br>8 = 6000<br><br>**60/50Hz**<br>R = 230/460 V @ 60 Hz and 190/380V @ 50 Hz<br>T= 460 V @ 60 Hz and 380V @50 Hz<br>V= 230/400 V @ 50 Hz and 460V @ 60Hz<br>W = 400 V @ 50 Hz and 460 V @ 60 Hz | **NEMA**<br>1 = Standard Eff.<br>2 = Epact Eff.<br>3 = Premium Eff.<br>4 = NEMA Prem. Eff.<br>9 = Super Prem. Eff<br><br>**IEC**<br>5 = IE1<br>6 = IE2<br>7 = IE3<br>8 = IE4 | **NEMA**<br>1 = Footed<br>2 = C-Face Footed<br>3 = D-Flange Footed<br>4 = C-Face Round<br>5 = D-Flange Round<br>6 = Round Body<br>7 = C-Face NEMA “BA”<br><br>**IEC**[4, 5, 6]<br>F = Footed (B3)<br>G = FF Footed (B35)<br>H = FT Footed (B34)<br>J = FF Rd Body (B5)<br>K = FT Rd Body (B14) | **NEMA**<br>A = T-Shaft<br>B = TS-Shaft<br>C = TSS-Shaft<br>D = TZ-Shaft<br>E = US-Shaft<br>F = USS-Shaft<br>G = UZ-Shaft<br>* H = 56-Shaft<br>* K = 140C-Shaft<br>M = JM-Shaft<br>N = Keyless Shaft<br>P = JP-Shaft<br><br>W = HP Solid Shaft (Normal Thrust)<br><br>X = LP Solid Shaft (Medium Thrust)<br><br>Y = VP Solid Shaft (High Thrust)<br><br>Z = TP Hollow Shaft (High Thrust)<br><br>**IEC**<br>S = Std. Shaft<br><br>**Note:**<br>* = Shaft & Flange for Frame Series/Size Described | | A = Alum. Rotor<br>C = Cu Bar Rotor<br>F = Alt. Frame Size<br>H = Toshiba Internal Reference<br>L= Aluminum Frame<br>P = Purchased<br>R = Roller Bearing<br>T = Toshiba Internal Reference<br>Y = 115°C Ambient<br>Z = 135°C Ambient<br><br>2 = F2 Mount<br>3 = F3 Top Mount | See Note #2 |

**Notes:**
(1) HP ratings covered by multiple frame assignments will follow this format as an example.
Rating: EQPIII/4P/250 HP/460V/TEFC Available in 449, N449 & 505UZ Frames
(2) To Be Used Only in Conjunction with IEC Metric Frame Ratings; 18.5 KW is Special Case
(3) FF Flange is Similar to NEMA D-Flange with Clearance through Hole Construction
(4) FT Flange is Same as FF Flange Except Holes are Tapped
(5) FI Flange is Similar to NEMA C-Face Flange with Blind Threaded Holes

# Appendix B
# TIPA SERVICE KITS
# Bearing Brackets



## EQP Global® SD, 840 & 841 Series

| Motor Series | Frame | Part Number | Description | DIscount Symbol | List Price |
|---|---|---|---|---|---|
| SD / 840 | 140 | SVC-00011-KIT | SERVICE KIT, 140 FRAME, BEARING BRACKET-DE, SD/840 | MZLVM | $145 |
| SD / 840 | 140 | SVC-00013-KIT | SERVICE KIT, 140 FRAME, BEARING BRACKET-NDE, SD/840 | MZLVM | $145 |
| SD / 840 | 180 | SVC-00031-KIT | SERVICE KIT, 180 FRAME, BEARING BRACKET-DE, SD/840 | MZLVM | $175 |
| SD / 840 | 180 | SVC-00033-KIT | SERVICE KIT, 180 FRAME, BEARING BRACKET-NDE, SD/840 | MZLVM | $175 |
| SD / 840 | 210 | SVC-00051-KIT | SERVICE KIT, 210 FRAME, BEARING BRACKET-DE, SD/840 | MZLVM | $240 |
| SD / 840 | 210 | SVC-00053-KIT | SERVICE KIT, 210 FRAME, BEARING BRACKET-NDE, SD/840 | MZLVM | $240 |
| SD / 840 | 250 | SVC-00077-KIT | SERVICE KIT, 250 FRAME, BEARING BRACKET-DE, SD/840 | MZLVM | $350 |
| SD / 840 | 250 | SVC-00079-KIT | SERVICE KIT, 250 FRAME, BEARING BRACKET-NDE, SD/840 | MZLVM | $350 |
| SD | 280 | SVC-00100-KIT | SERVICE KIT, 280 FRAME, BEARING BRACKET-DE, SD | MZLVM | $390 |
| SD | 280 | SVC-00103-KIT | SERVICE KIT, 280 FRAME, BEARING BRACKET-NDE, SD | MZLVM | $390 |
| SD | 320 | SVC-00126-KIT | SERVICE KIT, 320 FRAME, BEARING BRACKET-DE, SD | MZLVM | $640 |
| SD | 320 | SVC-00129-KIT | SERVICE KIT, 320 FRAME, BEARING BRACKET-NDE, SD | MZLVM | $640 |
| SD | 360 | SVC-00179-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-DE, SD, 6312 | MZLVM | $780 |
| SD | 360 | SVC-00163-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-DE, SD, 6314 | MZLVM | $780 |
| SD | 360 | SVC-00153-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-NDE, SD | MZLVM | $780 |
| SD | 400 | SVC-00225-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, SD, 6313 | MZLVM | $1,100 |
| SD | 400 | SVC-00206-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, SD, 6317 | MZLVM | $1,100 |
| SD | 400 | SVC-00209-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, SD, NU317 | MZLVM | $1,100 |
| SD | 400 | SVC-00192-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-NDE, SD, FIXED | MZLVM | $1,100 |
| SD | 400 | SVC-00193-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-NDE, SD, FREE | MZLVM | $1,100 |
| 840 | 280 | SVC-00098-KIT | SERVICE KIT, 280 FRAME, BEARING BRACKET-DE, 840 | MZLVM | $390 |
| 840 | 280 | SVC-00101-KIT | SERVICE KIT, 280 FRAME, BEARING BRACKET-NDE, 840 | MZLVM | $390 |
| 840 | 320 | SVC-00124-KIT | SERVICE KIT, 320 FRAME, BEARING BRACKET-DE, 840 | MZLVM | $640 |
| 840 | 320 | SVC-00127-KIT | SERVICE KIT, 320 FRAME, BEARING BRACKET-NDE, 840 | MZLVM | $640 |
| 840 | 360 | SVC-00177-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-DE, 840, 6312 | MZLVM | $835 |
| 840 | 360 | SVC-00161-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-DE, 840, 6314 | MZLVM | $835 |
| 840 | 360 | SVC-00151-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-NDE, 840 | MZLVM | $835 |
| 840 | 400 | SVC-00223-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, 840, 6313 | MZLVM | $1,495 |
| 840 | 400 | SVC-00204-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, 840, 6317 | MZLVM | $1,495 |
| 840 | 400 | SVC-00207-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, 840, NU317 | MZLVM | $1,495 |
| 840 | 400 | SVC-00188-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-NDE, 840, FIXED | MZLVM | $1,495 |
| 840 | 400 | SVC-00189-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-NDE, 840, FREE | MZLVM | $1,495 |
| 841 | 140 | SVC-00010-KIT | SERVICE KIT, 140 FRAME, BEARING BRACKET-DE, 841 | MZLVM | $255 |
| 841 | 140 | SVC-00012-KIT | SERVICE KIT, 140 FRAME, BEARING BRACKET-NDE, 841 | MZLVM | $255 |
| 841 | 180 | SVC-00030-KIT | SERVICE KIT, 180 FRAME, BEARING BRACKET-DE, 841 | MZLVM | $305 |
| 841 | 180 | SVC-00032-KIT | SERVICE KIT, 180 FRAME, BEARING BRACKET-NDE, 841 | MZLVM | $305 |
| 841 | 210 | SVC-00050-KIT | SERVICE KIT, 210 FRAME, BEARING BRACKET-DE, 841 | MZLVM | $355 |
| 841 | 210 | SVC-00052-KIT | SERVICE KIT, 210 FRAME, BEARING BRACKET-NDE, 841 | MZLVM | $355 |
| 841 | 250 | SVC-00076-KIT | SERVICE KIT, 250 FRAME, BEARING BRACKET-DE, 841 | MZLVM | $400 |
| 841 | 250 | SVC-00078-KIT | SERVICE KIT, 250 FRAME, BEARING BRACKET-NDE, 841 | MZLVM | $400 |
| 841 | 280 | SVC-00099-KIT | SERVICE KIT, 280 FRAME, BEARING BRACKET-DE, 841 | MZLVM | $575 |
| 841 | 280 | SVC-00102-KIT | SERVICE KIT, 280 FRAME, BEARING BRACKET-NDE, 841 | MZLVM | $575 |

# Appendix B
# TIPA SERVICE KITS
# Bearing Brackets



## EQP Global® SD, 840 & 841 Series

| Motor Series | Frame | Part Number | Description | DIscount Symbol | List Price |
|---|---|---|---|---|---|
| 841 | 320 | SVC-00125-KIT | SERVICE KIT, 320 FRAME, BEARING BRACKET-DE, 841 | MZLVM | $790 |
| 841 | 320 | SVC-00128-KIT | SERVICE KIT, 320 FRAME, BEARING BRACKET-NDE, 841 | MZLVM | $790 |
| 841 | 360 | SVC-00178-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-DE, 841, 6312 | MZLVM | $1,070 |
| 841 | 360 | SVC-00162-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-DE, 841, 6314 | MZLVM | $1,070 |
| 841 | 360 | SVC-00152-KIT | SERVICE KIT, 360 FRAME, BEARING BRACKET-NDE, 841 | MZLVM | $1,070 |
| 841 | 400 | SVC-00224-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, 841, 6313 | MZLVM | $1,495 |
| 841 | 400 | SVC-00205-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, 841, 6317 | MZLVM | $1,495 |
| 841 | 400 | SVC-00208-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-DE, 841, NU317 | MZLVM | $1,495 |
| 841 | 400 | SVC-00190-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-NDE, 841, FIXED | MZLVM | $1,495 |
| 841 | 400 | SVC-00191-KIT | SERVICE KIT, 400 FRAME, BEARING BRACKET-NDE, 841, FREE | MZLVM | $1,495 |

**Notes:**
- The service kits include the seals.
- For use on motors sold after 2017 for the 140-360 frame. 400 frame flanges are for the current design.
- For use with TIPA manufactured items only.

# Appendix B
# TIPA SERVICE KITS
# C-Flanges



## EQP Global® SD, 840 & 841 Series

| Motor Series | Frame | Bearing Size | Part Number | DIscount Symbol | List Price |
|---|---|---|---|---|---|
| SD | 140T 2-8P | 6305 | SVC-00018-KIT | MZLVM | $145 |
| SD | 180T 2-8P | 6306 | SVC-00038-KIT | MZLVM | $240 |
| SD | 210T 2-8P | 6308 | SVC-00058-KIT | MZLVM | $240 |
| SD | 250T 2-8P | 6309 | SVC-00084-KIT | MZLVM | $351 |
| SD | 280T/TS 2-8P | 6310 | SVC-00111-KIT | MZLVM | $390 |
| SD | 320T/TS 2-8P | 6312 | SVC-00137-KIT | MZLVM | $640 |
| SD | 360TS - 2P | 6312 | SVC-00182-KIT | MZLVM | $963 |
| SD | 360T 4-8P (360TS 4P) | 6314 | SVC-00170-KIT | MZLVM | $963 |
| SD | 400TS - 2P (4P-100HP) | 6313 | SVC-00230-KIT | MZLVM | $1,196 |
| SD | 400T 4-8P | 6317 | SVC-00216-KIT | MZLVM | $1,196 |
| 840 | 140T 2-8P | 6305 | SVC-00018-KIT | MZLVM | $145 |
| 840 | 180T 2-8P | 6306 | SVC-00038-KIT | MZLVM | $240 |
| 840 | 210T 2-8P | 6308 | SVC-00058-KIT | MZLVM | $240 |
| 840 | 250T 2-8P | 6309 | SVC-00084-KIT | MZLVM | $351 |
| 840 | 280T/TS 2-8P | 6310 | SVC-00109-KIT | MZLVM | $390 |
| 840 | 320T/TS 2-8P | 6312 | SVC-00135-KIT | MZLVM | $640 |
| 840 | 360TS - 2P | 6312 | SVC-00180-KIT | MZLVM | $963 |
| 840 | 360T 4-8P (360TS 4P) | 6314 | SVC-00168-KIT | MZLVM | $963 |
| 840 | 400TS - 2P (4P-100HP) | 6313 | SVC-00228-KIT | MZLVM | $1,495 |
| 840 | 400T 4-8P | 6317 | SVC-00214-KIT | MZLVM | $1,495 |
| 841 | 140T 2-8P | 6305 | SVC-00017-KIT | MZLVM | $285 |
| 841 | 180T 2-8P | 6306 | SVC-00037-KIT | MZLVM | $305 |
| 841 | 210T 2-8P | 6308 | SVC-00057-KIT | MZLVM | $356 |
| 841 | 250T 2-8P | 6309 | SVC-00083-KIT | MZLVM | $400 |
| 841 | 280T/TS 2-8P | 6310 | SVC-00110-KIT | MZLVM | $575 |
| 841 | 320T/TS 2-8P | 6312 | SVC-00136-KIT | MZLVM | $790 |
| 841 | 360TS - 2P | 6312 | SVC-00181-KIT | MZLVM | $1,070 |
| 841 | 360T 4-8P (360TS 4P) | 6314 | SVC-00169-KIT | MZLVM | $1,070 |
| 841 | 400TS - 2P (4P-100HP) | 6313 | SVC-00229-KIT | MZLVM | $1,495 |
| 841 | 400T 4-8P | 6317 | SVC-00215-KIT | MZLVM | $1,495 |

**Notes:**
- The service kits include the seals.
- For use on motors sold after 2017 for the 140-360 frame. 400 frame flanges are for the current design.
- For use with TIPA manufactured items only.

# Appendix B
# TIPA SERVICE KITS
# D-Flanges



## EQP Global® SD, 840 & 841 Series

| Motor Series | Frame | Bearing Size | Part Number | DIscount Symbol | List Price |
|---|---|---|---|---|---|
| SD | 210T 2-8P | 6308 | SVC-00061-KIT | MZLVM | $309 |
| SD | 250T 2-8P | 6309 | SVC-00087-KIT | MZLVM | $415 |
| SD | 280T/TS 2-8P | 6310 | SVC-00114-KIT | MZLVM | $625 |
| SD | 320T/TS 2-8P | 6312 | SVC-00140-KIT | MZLVM | $767 |
| SD | 360TS - 2P | 6312 | SVC-00185-KIT | MZLVM | $985 |
| SD | 360T 4-8P (360TS 4P) | 6314 | SVC-00173-KIT | MZLVM | $985 |
| SD | 400TS - 2P (4P-100HP) | 6313 | SVC-00233-KIT | MZLVM | $1,753 |
| SD | 400T 4-8P | 6317 | SVC-00219-KIT | MZLVM | $1,753 |
| 840 | 210T 2-8P | 6308 | SVC-00059-KIT | MZLVM | $309 |
| 840 | 250T 2-8P | 6309 | SVC-00085-KIT | MZLVM | $415 |
| 840 | 280T/TS 2-8P | 6310 | SVC-00112-KIT | MZLVM | $625 |
| 840 | 320T/TS 2-8P | 6312 | SVC-00138-KIT | MZLVM | $767 |
| 840 | 360TS - 2P | 6312 | SVC-00183-KIT | MZLVM | $985 |
| 840 | 360T 4-8P (360TS 4P) | 6314 | SVC-00171-KIT | MZLVM | $985 |
| 840 | 400TS - 2P (4P-100HP) | 6313 | SVC-00231-KIT | MZLVM | $2,076 |
| 840 | 400T 4-8P | 6317 | SVC-00217-KIT | MZLVM | $2,076 |
| 841 | 210T 2-8P | 6308 | SVC-00060-KIT | MZLVM | $365 |
| 841 | 250T 2-8P | 6309 | SVC-00086-KIT | MZLVM | $503 |
| 841 | 280T/TS 2-8P | 6310 | SVC-00113-KIT | MZLVM | $713 |
| 841 | 320T/TS 2-8P | 6312 | SVC-00139-KIT | MZLVM | $972 |
| 841 | 360TS - 2P | 6312 | SVC-00184-KIT | MZLVM | $1,232 |
| 841 | 360T 4-8P (360TS 4P) | 6314 | SVC-00172-KIT | MZLVM | $1,232 |
| 841 | 400TS - 2P (4P-100HP) | 6313 | SVC-00232-KIT | MZLVM | $2,076 |
| 841 | 400T 4-8P | 6317 | SVC-00218-KIT | MZLVM | $2,076 |

**Notes:**
- The service kits include the seals.
- For use on motors sold after 2017 for the 210-360 frame. 400 frame flanges are for the current design.
- For use with TIPA manufactured items only.

# Appendix B
# TIPA SERVICE KITS
# Fan Covers



## EQP Global® SD, 840 & 841 Series

| Motor Series | Frame | Part Number | Description | DIscount Symbol | List Price |
|---|---|---|---|---|---|
| SD | 140 | SVC-00024-KIT | SERVICE KIT, 140 FRAME, FAN COVER-SD, STEEL | MZLVM | $85 |
| SD | 180 | SVC-00044-KIT | SERVICE KIT, 180 FRAME, FAN COVER-SD, STEEL | MZLVM | $120 |
| SD | 210 | SVC-00067-KIT | SERVICE KIT, 210 FRAME, FAN COVER-SD, STEEL | MZLVM | $155 |
| SD | 250 | SVC-00093-KIT | SERVICE KIT, 250 FRAME, FAN COVER-SD, STEEL | MZLVM | $200 |
| SD | 280 | SVC-00118-KIT | SERVICE KIT, 280 FRAME, FAN COVER-SD, STEEL | MZLVM | $250 |
| SD | 320 | SVC-00144-KIT | SERVICE KIT, 320 FRAME, FAN COVER-SD, STEEL | MZLVM | $325 |
| SD | 360 | SVC-00159-KIT | SERVICE KIT, 360 FRAME, FAN COVER-SD, STEEL | MZLVM | $350 |
| SD | 400 | SVC-00200-KIT | SERVICE KIT, 400 FRAME, FAN COVER, SD, STEEL | MZLVM | $375 |
| 840 | 140 | SVC-00022-KIT | SERVICE KIT, 140 FRAME, FAN COVER-840, CI | MZLVM | $125 |
| 840 | 180 | SVC-00042-KIT | SERVICE KIT, 180 FRAME, FAN COVER-840, CI | MZLVM | $150 |
| 840 | 210 | SVC-00065-KIT | SERVICE KIT, 210 FRAME, FAN COVER-840, CI | MZLVM | $200 |
| 840 | 250 | SVC-00091-KIT | SERVICE KIT, 250 FRAME, FAN COVER-840, CI | MZLVM | $300 |
| 841 | 140 | SVC-00023-KIT | SERVICE KIT, 140 FRAME, FAN COVER-841, CI | MZLVM | $125 |
| 841 | 180 | SVC-00043-KIT | SERVICE KIT, 180 FRAME, FAN COVER-841, CI | MZLVM | $150 |
| 841 | 210 | SVC-00066-KIT | SERVICE KIT, 210 FRAME, FAN COVER-841, CI | MZLVM | $200 |
| 841 | 250 | SVC-00092-KIT | SERVICE KIT, 250 FRAME, FAN COVER-841, CI | MZLVM | $300 |
| 840/841 | 280 | SVC-00117-KIT | SERVICE KIT, 280 FRAME, FAN COVER-840/841, CI | MZLVM | $360 |
| 840/841 | 320 | SVC-00143-KIT | SERVICE KIT, 320 FRAME, FAN COVER-840/841, CI | MZLVM | $500 |
| 840/841 | 360 | SVC-00158-KIT | SERVICE KIT, 360 FRAME, FAN COVER-840/841, CI | MZLVM | $585 |
| 840/841 | 400 | SVC-00199-KIT | SERVICE KIT, 400 FRAME, FAN COVER, 840/841, CI | MZLVM | $600 |

**Notes:**
- For use on motors sold after 2017 for the 140-360 frame. 400 frame flanges are for the current design.
- For use with TIPA manufactured items only.

# Appendix B
# TIPA SERVICE KITS
# Drip Covers



## EQP Global® SD, 840 & 841 Series

| Motor Series | Frame | Part Number | Description | DIscount Symbol | List Price |
|---|---|---|---|---|---|
| SD | 140 | SVC-00021-KIT | SERVICE KIT, 140 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $105 |
| SD | 180 | SVC-00041-KIT | SERVICE KIT, 180 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $127 |
| SD | 210 | SVC-00064-KIT | SERVICE KIT, 210 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $163 |
| SD | 250 | SVC-00090-KIT | SERVICE KIT, 250 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $212 |
| SD | 280 | SVC-00116-KIT | SERVICE KIT, 280 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $267 |
| SD | 320 | SVC-00142-KIT | SERVICE KIT, 320 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $348 |
| SD | 360 | SVC-00157-KIT | SERVICE KIT, 360 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $397 |
| SD | 400 | SVC-00198-KIT | SERVICE KIT, 400 FRAME, DRIP COVER WITH STEEL FAN COVER | MZLVM | $387 |
| 840 | 140 | SVC-00019-KIT | SERVICE KIT, 140 FRAME, DRIP COVER WITH 840 CI FAN COVER | MZLVM | $129 |
| 840 | 180 | SVC-00039-KIT | SERVICE KIT, 180 FRAME, DRIP COVER WITH 840 CI FAN COVER | MZLVM | $159 |
| 840 | 210 | SVC-00062-KIT | SERVICE KIT, 210 FRAME, DRIP COVER WITH 840 CI FAN COVER | MZLVM | $201 |
| 840 | 250 | SVC-00088-KIT | SERVICE KIT, 250 FRAME, DRIP COVER WITH 840 CI FAN COVER | MZLVM | $311 |
| 841 | 140 | SVC-00020-KIT | SERVICE KIT, 140 FRAME, DRIP COVER WITH CI FAN COVER | MZLVM | $129 |
| 841 | 180 | SVC-00040-KIT | SERVICE KIT, 180 FRAME, DRIP COVER WITH CI FAN COVER | MZLVM | $159 |
| 841 | 210 | SVC-00063-KIT | SERVICE KIT, 210 FRAME, DRIP COVER WITH CI FAN COVER | MZLVM | $201 |
| 841 | 250 | SVC-00089-KIT | SERVICE KIT, 250 FRAME, DRIP COVER WITH CI FAN COVER | MZLVM | $311 |
| 840 / 841 | 280 | SVC-00115-KIT | SERVICE KIT, 280 FRAME, DRIP COVER WITH 841 CI FAN COVER | MZLVM | $382 |
| 840 / 841 | 320 | SVC-00141-KIT | SERVICE KIT, 320 FRAME, DRIP COVER WITH 841 CI FAN COVER | MZLVM | $525 |
| 840 / 841 | 360 | SVC-00156-KIT | SERVICE KIT, 360 FRAME, DRIP COVER WITH 841 CI FAN COVER | MZLVM | $595 |
| 840 / 841 | 400 | SVC-00197-KIT | SERVICE KIT, 400 FRAME, DRIP COVER WITH 841 CI FAN COVER | MZLVM | $611 |

**Notes:**
- For use on motors sold after 2017 for the 140-360 frame. 400 frame flanges are for the current design.

# Appendix B
# TIPA SERVICE KITS
# Terminal Boxes



## EQP Global® SD, 840 & 841 Series

| Motor Series | Frame | Part Number | Description | DIscount Symbol | List Price |
|---|---|---|---|---|---|
| SD / 840 / 841 | 140 | SVC-00027-KIT | SERVICE KIT, 140 FRAME, T-BOX ASSY, UL GROUNDING | MZLVM | $155 |
| SD / 840 / 841 | 180 | SVC-00047-KIT | SERVICE KIT, 180 FRAME, T-BOX ASSY, UL GROUNDING | MZLVM | $155 |
| SD / 840 / 841 | 210 | SVC-00070-KIT | SERVICE KIT, 210 FRAME, T-BOX ASSY, UL GROUNDING | MZLVM | $210 |
| SD / 840 / 841 | 250 | SVC-00096-KIT | SERVICE KIT, 250 FRAME,T-BOX ASSY, UL GROUNDING | MZLVM | $210 |
| SD / 840 / 841 | 280 | SVC-00121-KIT | SERVICE KIT, 280 FRAME, T-BOX ASSY, UL GROUNDING | MZLVM | $380 |
| SD / 840 / 841 | 320 | SVC-00148-KIT | SERVICE KIT, 320 FRAME, T-BOX ASSY, UL GROUNDING | MZLVM | $380 |
| SD / 840 / 841 | 360 | SVC-00160-KIT | SERVICE KIT, 360 FRAME, T-BOX ASSY, UL GROUNDING | MZLVM | $400 |

**Notes:**
- For use with TIPA manufactured items only.

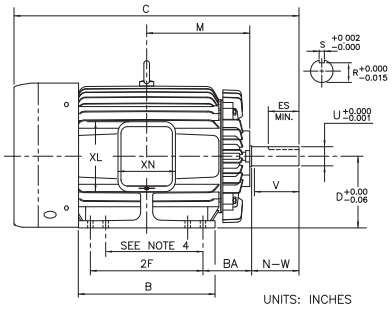
# Appendix C
# Efficiency Tables

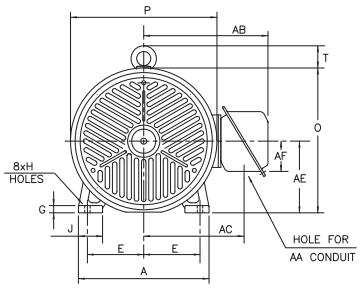
## Full-Load Efficiencies for NEMA Premium® Efficiency Electric Motors Rated 600 V or Less (NEMA Table 12-12 & NEMA 20-B)

| HP | 2-Pole | | 4-Pole | | 6-Pole | | 8-Pole | |
|---|---|---|---|---|---|---|---|---|
| | Nominal Efficiency | Minimum Efficiency | Nominal Efficiency | Minimum Efficiency | Nominal Efficiency | Minimum Efficiency | Nominal Efficiency | Minimum Efficiency |
| Open Drip-Proof Motors | | | | | | | | |
| 1 | 77.0 | 74.0 | 85.5 | 82.5 | 82.5 | 80.0 | 75.5 | 72.0 |
| 1.5 | 84.0 | 81.5 | 86.5 | 84.0 | 86.5 | 84.0 | 77.0 | 74.0 |
| 2 | 85.5 | 82.5 | 86.5 | 84.0 | 87.5 | 85.5 | 86.5 | 84.0 |
| 3 | 85.5 | 82.5 | 89.5 | 87.5 | 88.5 | 86.5 | 87.5 | 85.5 |
| 5 | 86.5 | 84.0 | 89.5 | 87.5 | 89.5 | 87.5 | 88.5 | 86.5 |
| 7.5 | 88.5 | 86.5 | 91.0 | 89.5 | 90.2 | 88.5 | 89.5 | 87.5 |
| 10 | 89.5 | 87.5 | 91.7 | 90.2 | 91.7 | 90.2 | 90.2 | 88.5 |
| 15 | 90.2 | 88.5 | 93.0 | 91.7 | 91.7 | 90.2 | 90.2 | 88.5 |
| 20 | 91.0 | 89.5 | 93.0 | 91.7 | 92.4 | 91.0 | 91.0 | 89.5 |
| 25 | 91.7 | 90.2 | 93.6 | 92.4 | 93.0 | 91.7 | 91.0 | 89.5 |
| 30 | 91.7 | 90.2 | 94.1 | 93.0 | 93.6 | 92.4 | 91.0 | 90.2 |
| 40 | 92.4 | 91.0 | 94.1 | 93.0 | 94.1 | 93.0 | 91.7 | 90.2 |
| 50 | 93.0 | 91.7 | 94.5 | 93.6 | 94.1 | 93.0 | 91.7 | 91.0 |
| 60 | 93.6 | 92.4 | 95.0 | 94.1 | 94.5 | 93.6 | 92.4 | 91.7 |
| 75 | 93.6 | 92.4 | 95.0 | 94.1 | 94.5 | 93.6 | 93.0 | 93.0 |
| 100 | 93.6 | 92.4 | 95.4 | 94.5 | 95.0 | 94.1 | 94.1 | 93.0 |
| 125 | 94.1 | 93.0 | 95.4 | 94.5 | 95.0 | 94.1 | 94.1 | 93.0 |
| 150 | 94.1 | 93.0 | 95.8 | 95.0 | 95.4 | 94.5 | 94.1 | 93.0 |
| 200 | 95.0 | 94.1 | 95.8 | 95.0 | 95.4 | 94.5 | 94.1 | 93.0 |
| 250 | 95.0 | 94.1 | 95.8 | 95.0 | 95.8 | 95.0 | 95.0 | 94.1 |
| 300 | 95.4 | 94.5 | 95.8 | 95.0 | 95.8* | 95.0* | 95.0* | 94.1* |
| 350 | 95.4 | 94.5 | 95.8 | 95.0 | 95.8* | 95.0* | 95.0* | 94.1* |
| 400 | 95.8 | 95.0 | 95.8 | 95.0 | 95.8* | 95.0* | 95.0* | 94.1* |
| 450 | 96.2 | 95.4 | 96.2 | 95.4 | 95.8* | 95.0* | 95.0* | 94.1* |
| 500 | 96.2 | 95.4 | 96.2 | 95.4 | 95.8* | 95.0* | 95.0* | 94.1* |
| Totally Enclosed Fan Cooled Motors | | | | | | | | |
| 1 | 77.0 | 74.0 | 85.5 | 82.5 | 82.5 | 80.0 | 75.5 | 72.0 |
| 1.5 | 84.0 | 81.5 | 86.5 | 84.0 | 87.5 | 85.5 | 78.5 | 75.5 |
| 2 | 85.5 | 82.5 | 86.5 | 84.0 | 88.5 | 86.5 | 84.0 | 81.5 |
| 3 | 86.5 | 84.0 | 89.5 | 87.5 | 89.5 | 87.5 | 85.5 | 82.5 |
| 5 | 88.5 | 86.5 | 89.5 | 87.5 | 89.5 | 87.5 | 86.5 | 94.0 |
| 7.5 | 89.5 | 87.5 | 91.7 | 90.2 | 91.0 | 89.5 | 86.5 | 84.0 |
| 10 | 90.2 | 88.5 | 91.7 | 90.2 | 91.0 | 89.5 | 89.5 | 87.5 |
| 15 | 91.0 | 89.5 | 92.4 | 91.0 | 91.7 | 90.2 | 89.5 | 87.5 |
| 20 | 91.0 | 89.5 | 93.0 | 91.7 | 91.7 | 90.2 | 90.2 | 88.5 |
| 25 | 91.7 | 90.2 | 93.6 | 92.4 | 93.0 | 91.7 | 90.2 | 88.5 |
| 30 | 91.7 | 90.2 | 93.6 | 92.4 | 93.0 | 91.7 | 91.7 | 90.2 |
| 40 | 92.4 | 91.0 | 94.1 | 93.0 | 94.1 | 93.0 | 91.7 | 90.2 |
| 50 | 93.0 | 91.7 | 94.5 | 93.6 | 94.1 | 93.0 | 92.4 | 91.0 |
| 60 | 93.6 | 92.4 | 95.0 | 94.1 | 94.5 | 93.6 | 92.4 | 91.0 |
| 75 | 93.6 | 92.4 | 95.4 | 94.5 | 94.5 | 93.6 | 93.6 | 92.4 |
| 100 | 94.1 | 93.0 | 95.4 | 94.5 | 95.0 | 94.1 | 93.6 | 92.4 |
| 125 | 95.0 | 94.1 | 95.4 | 94.5 | 95.0 | 94.1 | 94.1 | 93.0 |
| 150 | 95.0 | 94.1 | 95.8 | 95.0 | 95.8 | 95.0 | 94.1 | 93.0 |
| 200 | 95.4 | 94.5 | 96.2 | 95.4 | 95.8 | 95.0 | 94.5 | 93.6 |
| 250 | 95.8 | 95.0 | 96.2 | 95.4 | 95.8 | 95.0 | 95.0 | 94.1 |
| 300 | 95.8 | 95.0 | 96.2 | 95.4 | 95.8* | 95.0* | 95.0* | 94.1* |
| 350 | 95.8 | 95.0 | 96.2 | 95.4 | 95.8* | 95.0* | 95.0* | 94.1* |
| 400 | 95.8 | 95.0 | 96.2 | 95.4 | 95.8* | 95.0* | 95.0* | 94.1* |
| 450 | 95.8 | 95.0 | 96.2 | 95.4 | 95.8* | 95.0* | 95.0* | 94.1* |
| 500 | 95.8 | 95.0 | 96.2 | 95.4 | 95.8* | 95.0* | 95.0* | 94.1* |

*Not Regulated by the U.S. Department of Energy
(Refer to NEMA Table 20-B)

# Appendix C Frame Dimensions




## NEMA Quick Reference Chart

| NEMA Frames | D | E | 2F | H | BA | N-W | U | R | ES | S |
|---|---|---|---|---|---|---|---|---|---|---|
| 56 | 3.500 | 2.440 | 3.000 | 0.350 | 2.750 | 1.880 | 0.625 | 0.517 | 1.410 | 0.188 |
| 143T | 3.500 | 2.750 | 4.000 | 0.340 | 2.250 | 2.250 | 0.875 | 0.771 | 1.410 | 0.188 |
| 145T | 3.500 | 2.750 | 5.000 | 0.340 | 2.250 | 2.250 | 0.875 | 0.771 | 1.410 | 0.188 |
| 182T | 4.500 | 3.750 | 4.500 | 0.410 | 2.750 | 2.750 | 1.125 | 0.986 | 1.780 | 0.250 |
| 184T | 4.500 | 3.750 | 5.500 | 0.410 | 2.750 | 2.750 | 1.125 | 0.986 | 1.780 | 0.250 |
| 213T | 5.250 | 4.250 | 5.500 | 0.410 | 3.510 | 3.380 | 1.375 | 1.201 | 2.420 | 0.313 |
| 215T | 5.250 | 4.250 | 7.000 | 0.410 | 3.510 | 3.380 | 1.375 | 1.201 | 2.420 | 0.313 |
| 254T | 6.250 | 5.000 | 8.250 | 0.530 | 4.250 | 4.000 | 1.625 | 1.416 | 2.920 | 0.375 |
| 256T | 6.250 | 5.000 | 10.000 | 0.530 | 4.250 | 4.000 | 1.625 | 1.416 | 2.920 | 0.375 |
| 284T | 7.000 | 5.500 | 9.500 | 0.530 | 4.750 | 4.620 | 1.875 | 1.587 | 3.310 | 0.500 |
| 284TS | 7.000 | 5.500 | 9.500 | 0.530 | 4.750 | 3.250 | 1.625 | 1.416 | 1.910 | 0.375 |
| 286T | 7.000 | 5.500 | 11.000 | 0.530 | 4.750 | 4.620 | 1.875 | 1.587 | 3.310 | 0.500 |
| 286TS | 7.000 | 5.500 | 11.000 | 0.530 | 4.750 | 3.250 | 1.625 | 1.416 | 1.910 | 0.375 |
| 324T | 8.000 | 6.250 | 10.500 | 0.660 | 5.250 | 5.250 | 2.125 | 1.845 | 3.920 | 0.500 |
| 324TS | 8.000 | 6.250 | 10.500 | 0.660 | 5.250 | 3.750 | 1.875 | 1.591 | 2.030 | 0.500 |
| 326T | 8.000 | 6.250 | 12.000 | 0.660 | 5.250 | 5.250 | 2.125 | 1.845 | 3.920 | 0.500 |
| 326TS | 8.000 | 6.250 | 12.000 | 0.660 | 5.250 | 3.750 | 1.875 | 1.591 | 2.030 | 0.500 |
| 364T | 9.000 | 7.000 | 11.250 | 0.660 | 5.880 | 5.880 | 2.375 | 2.021 | 4.290 | 0.625 |
| 364TS | 9.000 | 7.000 | 11.250 | 0.660 | 5.880 | 3.750 | 1.875 | 1.591 | 2.030 | 0.500 |
| 365T | 9.000 | 7.000 | 12.250 | 0.660 | 5.880 | 5.880 | 2.375 | 2.021 | 4.290 | 0.625 |
| 365TS | 9.000 | 7.000 | 12.250 | 0.660 | 5.880 | 3.750 | 1.875 | 1.591 | 2.030 | 0.500 |
| 404T | 10.000 | 8.000 | 12.250 | 0.810 | 6.620 | 7.250 | 2.875 | 2.450 | 5.620 | 0.750 |
| 404TS | 10.000 | 8.000 | 12.250 | 0.810 | 6.620 | 4.250 | 2.125 | 1.845 | 2.780 | 0.500 |
| 405T | 10.000 | 8.000 | 13.750 | 0.810 | 6.620 | 7.250 | 2.875 | 2.450 | 5.620 | 0.750 |
| 405TS | 10.000 | 8.000 | 13.750 | 0.810 | 6.620 | 4.250 | 2.125 | 1.845 | 2.780 | 0.500 |
| S444T | 11.000 | 9.000 | 14.500 | 0.810 | 7.500 | 8.500 | 3.375 | 2.880 | 6.910 | 0.875 |
| S444TS | 11.000 | 9.000 | 14.500 | 0.810 | 7.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| S445T | 11.000 | 9.000 | 16.500 | 0.810 | 7.500 | 8.500 | 3.375 | 2.880 | 6.910 | 0.875 |
| S445TS | 11.000 | 9.000 | 16.500 | 0.810 | 7.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| S447T | 11.000 | 9.000 | 20.000 | 0.810 | 7.500 | 8.500 | 3.375 | 2.880 | 6.910 | 0.875 |
| S447TS | 11.000 | 9.000 | 20.000 | 0.810 | 7.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| NEMA Frames | D | E | 2F | H | BA | N-W | U | R | ES | S |
| N449T | 11.000 | 9.000 | 25.000 | 0.810 | 7.500 | 8.500 | 3.375 | 2.880 | 6.910 | 0.875 |
| B449T | 11.000 | 9.000 | 25.000 | 0.820 | 7.500 | 8.500 | 3.375 | 2.880 | 6.910 | 0.875 |
| B449TS | 11.000 | 9.000 | 25.000 | 0.810 | 7.500 | 8.500 | 3.375 | 2.021 | 3.030 | 0.625 |
| S449T | 11.000 | 9.000 | 25.000 | 0.820 | 7.500 | 8.500 | 3.375 | 2.880 | 6.910 | 0.875 |
| S449TS | 11.000 | 9.000 | 25.000 | 0.820 | 7.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| N449TS | 11.000 | 9.000 | 25.000 | 0.810 | 7.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| 505UZ | 12.500 | 10.000 | 18.000 | 0.940 | 8.500 | 11.620 | 3.875 | 3.309 | 10.000 | 1.000 |
| 505US | 12.500 | 10.000 | 18.000 | 0.940 | 8.500 | 4.750 | 2.875 | 2.450 | 3.000 | 0.750 |
| 505USS | 12.500 | 10.000 | 18.000 | 0.940 | 8.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| 507UZ | 12.500 | 10.000 | 22.000 | 0.940 | 8.500 | 11.620 | 3.875 | 3.309 | 10.000 | 1.000 |
| 507US | 12.500 | 10.000 | 22.000 | 0.940 | 8.500 | 10.130 | 3.375 | 2.880 | 8.500 | 0.875 |
| 507USS | 12.500 | 10.000 | 22.000 | 0.940 | 8.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| 509UZ | 12.500 | 10.000 | 28.000 | 0.940 | 8.500 | 11.620 | 5.250 | 4.549 | 10.030 | 1.250 |
| 509US | 12.500 | 10.000 | 28.000 | 0.940 | 8.500 | 10.130 | 3.375 | 2.880 | 8.500 | 0.875 |
| 509USS | 12.500 | 10.000 | 28.000 | 0.940 | 8.500 | 4.750 | 2.375 | 2.021 | 3.000 | 0.625 |
| 5010UZ | 12.500 | 10.000 | 32.000 | 1.120 | 8.500 | 11.620 | 4.375 | 3.817 | 10.000 | 1.000 |
| 5010US | 12.500 | 10.000 | 32.000 | 1.120 | 8.500 | 6.250 | 3.625 | 3.134 | 5.000 | 0.875 |
| 5010USS | 12.500 | 10.000 | 32.000 | 1.120 | 8.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| 5011USS | 12.500 | 10.000 | 36.000 | 1.125 | 8.500 | 4.750 | 2.375 | 2.021 | 3.030 | 0.625 |
| 5011US | 12.500 | 10.000 | 36.000 | 1.125 | 8.500 | 6.250 | 3.625 | 3.134 | 5.030 | 0.875 |
| 5011UZ | 12.500 | 10.000 | 36.000 | 1.125 | 8.500 | 11.380 | 4.375 | 3.817 | 10.030 | 1.000 |
| B587/8/9/10LL | 14.500 | 11.500 | 25.00/28.00/35.00/36.00 | 1.190 | 10.000 | 8.250 | 5.250 | 4.550 | 10.000 | 1.000 |
| B587/8/9/10LS | 14.500 | 11.500 | 25.00/28.00/35.00/36.00 | 1.190 | 10.000 | 11.625 | 4.375 | 3.817 | 10.000 | 1.000 |
| B587/8/9/10LQ | 14.500 | 11.500 | 25.00/28.00/35.00/36.00 | 1.190 | 10.000 | 8.250 | 3.875 | 3.309 | 6.300 | 1.000 |
| S587L | 14.500 | 11.500 | 25.000 | 1.190 | 10.000 | 11.625 | 3.875 | 3.309 | 10.000 | 1.000 |
| S587LS | 14.500 | 11.500 | 25.000 | 1.190 | 10.000 | 8.250 | 3.875 | 3.309 | 6.300 | 1.000 |
| S587LQ | 14.500 | 11.500 | 25.000 | 1.190 | 10.000 | 11.625 | 4.375 | 3.817 | 10.000 | 1.000 |
| N587UZQ | 14.500 | 11.500 | 25.000 | 1.120 | 10.000 | 11.620 | 4.375 | 3.817 | 10.000 | 1.000 |
| N587UZ | 14.500 | 11.500 | 25.000 | 1.120 | 10.000 | 11.620 | 3.875 | 3.309 | 10.000 | 1.000 |
| N587US | 14.500 | 11.500 | 25.000 | 1.120 | 10.000 | 4.750 | 2.875 | 2.450 | 3.000 | 0.750 |
| N587USS | 14.500 | 11.500 | 25.000 | 1.120 | 10.000 | 4.750 | 2.375 | 2.021 | 3.000 | 0.625 |
| 5810UZ | 14.500 | 11.500 | 36.000/32.000 | 1.200 | 10.000 | 11.620 | 5.250 | 4.550 | 10.000 | 1.250 |
| 5810US | 14.500 | 11.500 | 36.000/32.000 | 1.200 | 10.000 | 6.250 | 3.625 | 3.134 | 5.000 | 0.875 |
| 5810USS | 14.500 | 11.500 | 36.000/32.000 | 1.200 | 10.000 | 6.750 | 2.375 | 2.021 | 5.000 | 0.625 |
| 5809/10/11USS | 14.500 | 11.500 | 32.000/36.000/40.000 | 1.125 | 10.000 | 5.740 | 2.625 | 2.275 | 3.030 | 0.625 |
| 5809/10/11US | 14.500 | 11.500 | 32.000/36.000/40.000 | 1.125 | 10.000 | 6.250 | 4.000 | 3.436 | 5.030 | 1.000 |
| 5809/10/11UZ | 14.500 | 11.500 | 32.000/36.000/40.000 | 1.125 | 10.000 | 11.620 | 5.250 | 4.550 | 10.030 | 1.250 |

# Appendix C - Frame Mounting

| Enclosure | ODP | TEFC | TEXP | TEFC | ODP | TEFC | TEFC | TEFC |
|---|---|---|---|---|---|---|---|---|
| Eff. Type | High Eff., Prem. Eff, | SD, 840, 841 | Global | Quarry Duty | Dry Kiln | JM/JP, Cooling Tower | Brake | OWP |
| Frame | Mounting | Mounting | Mounting | Mounting | Mounting | Mounting | Mounting | Mounting |
| 56 | N/A | Dual Mount 56/56H | N/A | N/A | N/A | N/A | N/A | N/A |
| 143 | Not Dual Mount | Dual Mount - 143/145 | Dual Mount - 143/145 | N/A | N/A | Dual Mount - 143/145 | Dual Mount - 143/145 | N/A |
| 145 | Not Dual Mount | Dual Mount - 143/145 | Dual Mount - 143/145 | N/A | N/A | Dual Mount - 143/145 | Dual Mount - 143/145 | N/A |
| 182 | Not Dual Mount | Dual Mount - 182/184 | Dual Mount - 182/184 | N/A | N/A | Dual Mount - 182/184 | Dual Mount - 182/184 | N/A |
| 184 | Not Dual Mount | Dual Mount - 182/184 | Dual Mount - 182/184 | Dual Mount - 182/184 | N/A | Dual Mount - 182/184 | Dual Mount - 182/184 | N/A |
| 213 | Not Dual Mount | Dual Mount - 213/215 | Dual Mount - 213/215 | Dual Mount - 213/215 | N/A | Dual Mount - 213/215 | Dual Mount - 213/215 | N/A |
| 215 | Not Dual Mount | Dual Mount - 213/215 | Dual Mount - 213/215 | Dual Mount - 213/215 | Not Dual Mount | Dual Mount - 213/215 | Dual Mount - 213/215 | Dual Mount - 213/215 |
| 254 | Not Dual Mount | Dual Mount - 254/256 | Dual Mount - 254/256 | Dual Mount - 254/256 | Not Dual Mount | Dual Mount - 254/256 | Dual Mount - 254/256 | Dual Mount - 254/256 |
| 256 | Not Dual Mount | Dual Mount - 254/256 | Dual Mount - 254/256 | Dual Mount - 254/256 | Not Dual Mount | Dual Mount - 254/256 | Dual Mount - 254/256 | Dual Mount - 254/256 |
| 284 | Not Dual Mount | Dual Mount - 284/286 | Dual Mount - 284/286 | Dual Mount - 284/286 | Not Dual Mount | Dual Mount - 284/286 | Dual Mount - 284/286 | Dual Mount - 284/286 |
| 286 | Not Dual Mount | Dual Mount - 284/286 | Dual Mount - 284/286 | Dual Mount - 284/286 | Not Dual Mount | Dual Mount - 284/286 | Dual Mount - 284/286 | Dual Mount - 284/286 |
| 324 | Not Dual Mount | Dual Mount - 324/326 | Dual Mount - 324/326 | Dual Mount - 324/326 | Not Dual Mount | Dual Mount - 324/326 | N/A | Dual Mount - 324/326 |
| 326 | Not Dual Mount | Dual Mount - 324/326 | Dual Mount - 324/326 | Dual Mount - 324/326 | Not Dual Mount | Dual Mount - 324/326 | N/A | Dual Mount - 324/326 |
| 364 | Not Dual Mount | Dual Mount - 364/365 | Dual Mount - 364/365 | Dual Mount - 364/365 | Not Dual Mount | Dual Mount - 364/365 | N/A | Dual Mount - 364/365 |
| 365 | Not Dual Mount | Dual Mount - 364/365 | Dual Mount - 364/365 | Dual Mount - 364/365 | Not Dual Mount | Dual Mount - 364/365 | N/A | Dual Mount - 364/365 |
| 404 | Not Dual Mount | Dual Mount - 404/405 | Dual Mount - 404/405 | Dual Mount - 404/405 | N/A | N/A | N/A | Dual Mount - 404/405 |
| 405 | Not Dual Mount | Dual Mount - 404/405 | Dual Mount - 404/405 | Dual Mount - 404/405 | N/A | N/A | N/A | Dual Mount - 404/405 |
| 444 | Not Dual Mount | Dual Mount - S444/445 | Dual Mount - 444/445 | Dual Mount - 444/445 | N/A | N/A | N/A | Dual Mount - S444/445 |
| 445 | Not Dual Mount | Dual Mount - S445/447 | Dual Mount - 444/445 | Dual Mount - 444/445 | N/A | N/A | N/A | N/A |
| 447 | Not Dual Mount | Dual Mount - S445/447 | Not Dual Mount | N/A | N/A | N/A | N/A | N/A |
| N447 | N/A | Dual Mount N447/N449 | N/A | N/A | N/A | N/A | N/A | N/A |
| 449 | Not Dual Mount | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| S449 | N/A | Dual Mount - S447/449 | Dual Mount - S447/449 | N/A | N/A | N/A | N/A | N/A |
| B449 | N/A | Dual Mount - B447/449 | Dual Mount - B447/449 | N/A | N/A | N/A | N/A | N/A |
| N449 | N/A | Dual Mount - N447/N449 | Dual Mount - N447/N449 | N/A | N/A | N/A | N/A | N/A |
| 505 | Not Dual Mount | Not Dual Mount | N/A | Not Dual Mount | N/A | N/A | N/A | N/A |
| 507 | Not Dual Mount | Not Dual Mount | N/A | N/A | N/A | N/A | N/A | N/A |
| 509 | Not Dual Mount | N/A | Not Dual Mount | N/A | N/A | N/A | N/A | N/A |
| 5010 | N/A | Not Dual Mount | N/A | Not Dual Mount | N/A | N/A | N/A | N/A |
| 5011 | N/A | Triple Mount - 5009/10/11 | N/A | N/A | N/A | N/A | N/A | N/A |
| 587 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N587 | N/A | N/A | N/A | Not Dual Mount | N/A | N/A | N/A | N/A |
| 5810 | Not Dual Mount | Dual Mount - 5809/5810 | Not Dual Mount | Dual Mount - 5809/5810 | N/A | N/A | N/A | N/A |
| 5811 | N/A | Triple Mount - 5809/10/11 | Not Dual Mount | N/A | N/A | N/A | N/A | N/A |

# Appendix D
# UL® & CSA® Explosion Proof Classifications

## CAUTION!

Motors that are misused in hazardous environments can cause a fire or explosion, resulting in destruction of property, serious injury, or death. **Only the end user or a qualified underwriter should identify and select the appropriate motor class, group, division, and temperature code to meet the requirements of each installation.** Toshiba can only advise what listings and approvals Toshiba motors carry. Toshiba cannot evaluate nor recommend what motors may be suitable for use in hazardous environments.

**Hazardous Locations:**
For details on area classification and equipment suitability, please consult NFPA70 National Electric Code® Articles 500 to 516.

- **Class I Group C** — locations containing flammable gas, flammable liquid-produced vapor, or combustible liquid-produced vapor mixed with air that may burn or explode, having either a maximum experimental safe gap (MESG) value greater than 0.45 mm and less than or equal to 0.75 mm, or a minimum igniting current ratio (MIC ratio) greater than 0.40 and less than or equal to 0.80. Please consult NFPA 497 for substances and additional information related to this group.
- **Class I Group D** — locations containing flammable gas, flammable liquid-produced vapor, or combustible liquid-produced vapor mixed with air that may burn or explode, having either a maximum experimental safe gap (MESG) value greater than 0.75 mm or a minimum igniting current ratio (MIC ratio) greater than 0.80. Please consult NFPA 497 for substances and additional information related to this group.
- **Class II Group E** — locations with atmospheres containing combustible metal dusts, including aluminum, magnesium, and their commercial alloys, or other combustible dusts whose particle size, abrasiveness, and conductivity present similar hazards in the use of electrical equipment. Please consult NFPA 499 for substances and additional information related to this group.
- **Class II Group F** — locations with atmospheres containing combustible carbonaceous dusts that have more than 8% total entrapped volatiles or that have been sensitized by other materials so that they present an explosion hazard. Coal, carbon black, charcoal, and coke dusts are examples of carbonaceous dusts. Please consult NFPA 499 for other substances and additional information related to this group.
- **Class II Group G** — locations with atmospheres containing combustible dusts not included in Group E or F, including flour, grain, wood, plastic, and chemicals. Please consult NFPA 499 for substances and additional information related to this group.

**Class II Temperature Codes:**
The temperature marking shall be less than the ignition temperature of the specific dust to be encountered. For organic dusts that may dehydrate or carbonize, the temperature marking shall not exceed the lower of either the ignition temperature or 165°C (329°F). Due to the low surface temperature requirements (higher temperature codes) mandated in Class II F & G, over temperature protection must be used.

- All Toshiba Explosion Proof motors are equipped with an internally-mounted, normally-closed winding thermostat.

**Surface Temperatures:**
Surface temperatures of Toshiba's Explosion Proof motors shall not exceed the following UL® and CSA® maximums under fault conditions. The below temperature class (T Code) identifies the maximum motor surface temperature that will be developed under all operating conditions.

- Division 1 considers external surface temperature and includes overloads and locked rotor conditions.
- Division 2 considers internal and external surface temperatures during normal operation.

| T Code | Maximum Motor Surface Temperature | |
|---|---|---|
| | °C | °F |
| T1 | 450° | 842° |
| T2 | 300° | 572° |
| T2A | 280° | 536° |
| T2B | 260° | 500° |
| T2C | 230° | 446° |
| T2D | 215° | 419° |
| T3 | 200° | 392° |

| T Code | Maximum Motor Surface Temperature | |
|---|---|---|
| | °C | °F |
| T3A | 180° | 356° |
| T3B | 165° | 329° |
| T3C | 160° | 320° |
| T4 | 135° | 275° |
| T4A | 120° | 248° |
| T5 | 100° | 212° |
| T6 | 85° | 185° |

**Additional Notes:**

- All Toshiba Explosion Proof motors are supplied with Explosion Proof UL- and CSA-approved conduit boxes as standard.

# Appendix D
# Inverter Capabilities

## Motor ASD Capabilities & Application Details for Non-Hazardous NEMA MG1 Parts 30 & 31

| Totally Enclosed | | | | | |
|---|---|---|---|---|---|
| Max HP | Enclosure | NEMA Frame | Inverter Duty - 1.0 SF | | |
| | | | Variable Torque | Constant Torque | Constant HP |
| 5 | TEFC/TEAO/TEBC | 56 - 180 | 60:1 | 10:1 | 1:1.5 |
| 100 | TEFC/TEAO/TEBC | 210 - 400 | 60:1 | 10:1 | 1:1.5 |
| 350 | TEFC/TEAO/TEBC | 440 | 60:1 | 10:1 | 1:1.5 |
| 400 | TEFC/TEAO/TEBC | 500/5000 | 60:1 | 10:1 | 1:1.5 |
| 500 | TEFC/TEAO/TEBC | 500/5000 | 60:1 | 3:1 | 1:1.5 |
| 600 | TEFC/TEAO/TEBC | 580/5800 | 60:1 | 10:1 | 1:1.5 |
| 800 | TEFC/TEAO/TEBC | 580/5800 | 60:1 | 3:1 | 1:1.5 |

***NOTE:** Totally Enclosed 4 and 6 pole motors up to 200 HP in the 500 frame or below may be run as low as 3 Hz constant torque.

**Special Notes:**

- **[1] Motors 56 - 440 frame are nameplated Class I, Div 2 as standard, if 20:1 CT is required on the nameplate, a re-nameplate would be required. Re-nameplate charges would apply.**
- [2] 400 HP, 3600 RPM ratings in B449TS frame are suitable for 2:1 Constant Torque (CT) and Variable Torque (VT) only.
- [3]B5003FKG8BMH, , B5001FKG8BMH, B5001FKG8OMH, B5003FKG8OMH are not suitable for ASD use.

# Appendix D
# Division 2 Motors

TEFC EQP Global® SD, 840, 841, Close-Coupled Pump, and Cooling Tower NEMA Premium® Efficiency motors are now CSA certified for Division 2, Class I, Group A, B, C, and D for sine wave and inverter duty power. They also include equivalent Zone markings for Class I Zone 2, Groups IIA, IIB, and IIC for sine wave and inverter duty power.

Division 2 Temperature-codes are provided in the standard format per the NEC Article 500 requirements. Equivalent Zone Temp-codes are provided in the "T-code = °C" format because NEC Article 505 does not allow all temp.-codes permitted by NEC 500. Inverter temp.-codes are provided in the "T-code = °C" format because they apply to both the equivalent Zone (NEC 505) requirements and NEC 500 requirements.

Please reference the table below for temperature and temp-code values.

| US (NEC 500) CA (CEC Annex J) | US (NEC 505) CA (CEC Section 18) | Maximum Motor Surface Temperature °C |
|---|---|---|
| T1 | T1 | 450° C |
| T2 | T2 | 300° C |
| T2A | - | 280° C |
| T2B | - | 260° C |
| T2C | - | 230° C |
| T2D | - | 215° C |
| T3 | T3 | 200° C |
| T3A | - | 180° C |
| T3B | - | 165° C |
| T3C | - | 160° C |
| T4 | T4 | 135° C |
| T4A | - | 120° C |
| T5 | T5 | 100° C |
| T6 | T6 | 85° C |

| Sinewave - Class I, Division 2, Groups A, B, C, D | | | | |
|---|---|---|---|---|
| Totally Enclosed | | | | |
| Max HP | Enclosure | NEMA Frame | T-Code (1.0 SF) | T-Code (1.15 SF) |
| 5 | TEFC/TEAO/TEBC | 56 - 180 | T4A | T4A |
| 100 | TEFC/TEAO/TEBC | 210 - 400 | T3C | T3 |
| 200 | TEFC/TEAO/TEBC | 440 | T3C | T3 |
| 400 | TEFC/TEAO/TEBC | 447/449 | T3 | T2D |
| 500 | TEFC/TEAO/TEBC | 500/5000 | T3 | T3 |
| 800 | TEFC/TEAO/TEBC | 580/5800 | T3 | T3 |

| Inverter Duty - Class I, Division 2, Groups A, B, C, D | | | | | | |
|---|---|---|---|---|---|---|
| Totally Enclosed | | | | | | |
| Max HP | Enclosure | NEMA Frame | T-Code | Inverter Duty - 1.0 SF | | |
| | | | | Variable Torque | Constant Torque | Constant HP |
| 5 | TEFC/TEAO/TEBC | 56 - 180 | T4 | 60:1 | 10:1 | 1:1.5 |
| 100 | TEFC/TEAO/TEBC | 210 - 400 | T3 | 60:1 | 10:1 | 1:1.5 |
| 400 | TEFC/TEAO/TEBC | 447/449 | T3 | 60:1 | 10:1 | 1:1.5 |
| 400 | TEFC/TEAO/TEBC | 500/5000 | T2D | 60:1 | 10:1 | 1:1.5 |
| 500 | TEFC/TEAO/TEBC | 500/5000 | T2C | 60:1 | 3:1 | 1:1.5 |
| | | | T3 | 60:1 | - | 1:1.5 |
| 600 | TEFC/TEAO/TEBC | 580/5800 | T2C | 60:1 | 10:1 | 1:1.5 |
| 800 | TEFC/TEAO/TEBC | 580/5800 | T3B | 60:1 | 3:1 | 1:1.5 |

**NOTES:**

1) All max. HPs provided above are for a 60 Hz base. 50 Hz HPs must be derated by 5/6 of the 60 Hz HP and rounded to the nearest standard offering for 400 frames and above. For special 50 Hz requests not covered in this table, please contact Toshiba.
2) T-Codes will change with a warmer ambient temperature above 40 °C. Consult Factory for changes.

# Appendix E
# Low Voltage Motor IEC 60034-30 Standard for Efficiency Classes

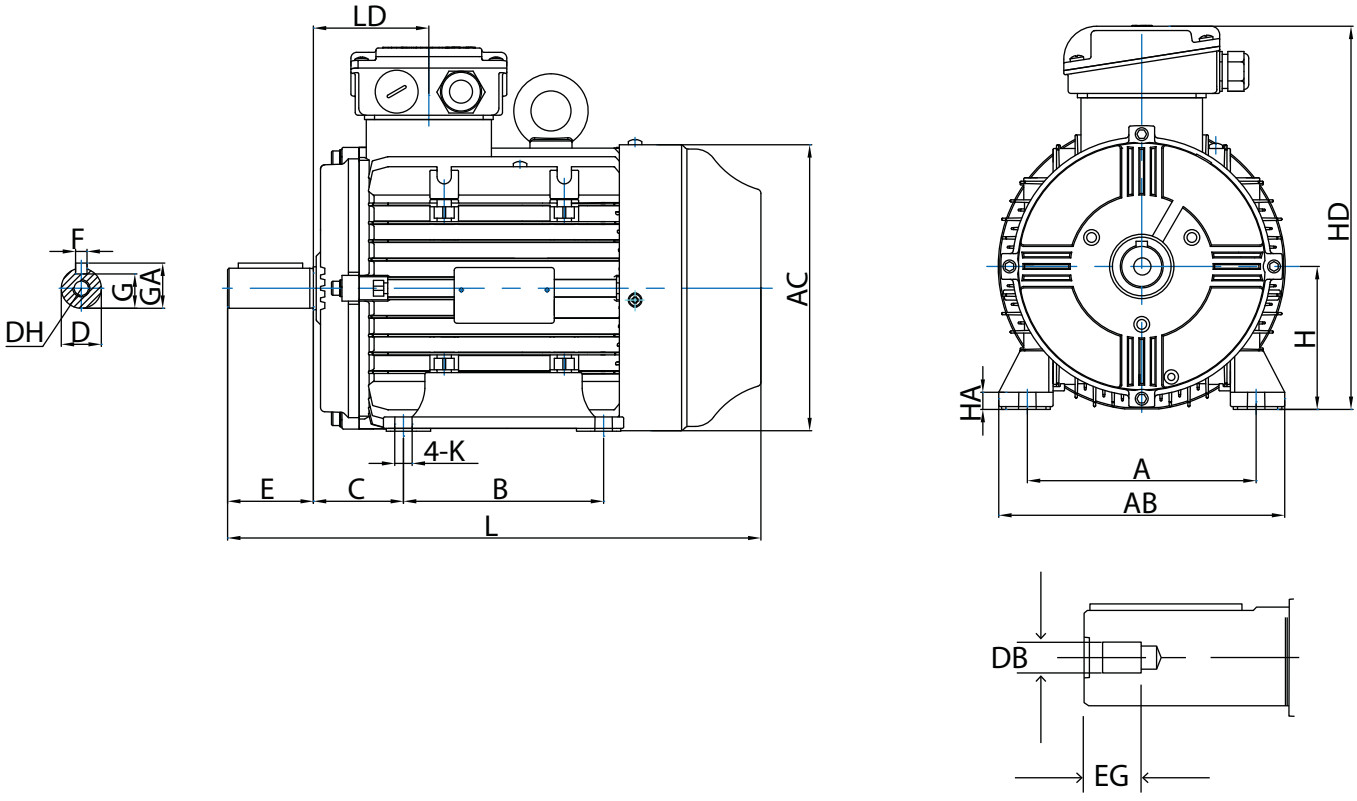
## IEC Efficiency Table

| kW (50 Hz) | IE2 High Efficiency | | | | IE3 Premium Efficiency | | | | IE4 Super Premium Efficiency | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2-Pole | 4-Pole | 6-Pole | 8-Pole | 2-Pole | 4-Pole | 6-Pole | 8-Pole | 2-Pole | 4-Pole | 6-Pole | 8-Pole |
| 0.55 | 74.1 | 77.1 | 73.1 | 61.7 | 77.8 | 80.8 | 77.2 | 73 | 81.5 | 83.9 | 80.9 | 77 |
| 0.75 | 77.4 | 79.6 | 75.9 | 66.2 | 80.7 | 82.5 | 78.9 | 75 | 83.5 | 85.7 | 82.7 | 78.4 |
| 1.1 | 79.6 | 81.4 | 78.1 | 70.8 | 82.7 | 84.1 | 81 | 77.7 | 85.2 | 87.2 | 84.5 | 80.8 |
| 1.5 | 81.3 | 82.8 | 79.8 | 74.1 | 84.2 | 85.3 | 82.5 | 79.7 | 86.5 | 88.2 | 85.9 | 82.6 |
| 2.2 | 83.2 | 84.3 | 81.8 | 77.6 | 85.9 | 86.7 | 84.3 | 81.9 | 88 | 89.5 | 87.4 | 84.5 |
| 3 | 84.6 | 85.5 | 83.3 | 80 | 87.1 | 87.7 | 85.6 | 83.5 | 89.1 | 90.4 | 88.6 | 85.9 |
| 4 | 85.8 | 86.6 | 84.6 | 81.9 | 88.1 | 88.6 | 86.8 | 84.8 | 90 | 91.1 | 89.5 | 87.1 |
| 5.5 | 87 | 87.7 | 86 | 83.8 | 89.2 | 89.6 | 88 | 86.2 | 90.9 | 91.9 | 90.5 | 88.3 |
| 7.5 | 88.1 | 88.7 | 87.2 | 85.3 | 90.1 | 90.4 | 89.1 | 87.3 | 91.7 | 92.6 | 91.3 | 89.3 |
| 11 | 89.4 | 89.8 | 88.7 | 86.9 | 91.2 | 91.4 | 90.3 | 88.6 | 92.6 | 93.3 | 92.3 | 90.4 |
| 15 | 90.3 | 90.6 | 89.7 | 88 | 91.9 | 92.1 | 91.2 | 89.6 | 93.3 | 93.9 | 92.9 | 91.2 |
| 18.5 | 90.9 | 91.2 | 90.4 | 88.6 | 92.4 | 92.6 | 91.7 | 90.1 | 93.7 | 94.2 | 93.4 | 91.7 |
| 22 | 91.3 | 91.6 | 90.9 | 89.1 | 92.7 | 93 | 92.2 | 90.6 | 94 | 94.5 | 93.7 | 92.1 |
| 30 | 92 | 92.3 | 91.7 | 89.8 | 93.3 | 93.6 | 92.9 | 91.3 | 94.5 | 94.9 | 94.2 | 92.7 |
| 37 | 92.5 | 92.7 | 92.2 | 90.3 | 93.7 | 93.9 | 93.3 | 91.8 | 94.8 | 95.2 | 94.5 | 93.1 |
| 45 | 92.9 | 93.1 | 92.7 | 90.7 | 94 | 94.2 | 93.7 | 92.2 | 95 | 95.4 | 94.8 | 93.4 |
| 55 | 93.2 | 93.5 | 93.1 | 91 | 94.3 | 94.6 | 94.1 | 92.5 | 95.3 | 95.7 | 95.1 | 93.7 |
| 75 | 93.8 | 94 | 93.7 | 91.6 | 94.7 | 95 | 94.6 | 93.1 | 95.6 | 96 | 95.4 | 94.2 |
| 90 | 94.1 | 94.2 | 94 | 91.9 | 95 | 95.2 | 94.9 | 93.4 | 95.8 | 96.1 | 95.6 | 94.4 |
| 110 | 94.3 | 94.5 | 94.3 | 92.3 | 95.2 | 95.4 | 95.1 | 93.7 | 96 | 96.3 | 95.8 | 94.7 |
| 132 | 94.6 | 94.7 | 94.6 | 92.6 | 85.4 | 95.6 | 95.4 | 94 | 96.2 | 96.4 | 96 | 94.9 |
| 160 | 94.8 | 94.9 | 94.8 | 93 | 95.6 | 95.8 | 95.6 | 94.3 | 96.3 | 96.6 | 96.2 | 95.1 |
| 200 | 95 | 95.1 | 95 | 93.5 | 95.8 | 96 | 95.8 | 94.6 | 96.5 | 96.7 | 96.3 | 95.4 |
| 250 | 95 | 95.1 | 95 | 93.5 | 95.8 | 96 | 95.8 | 94.6 | 96.5 | 96.7 | 96.5 | 95.4 |
| 315 | 95 | 95.1 | 95 | 93.5 | 95.8 | 96 | 95.8 | 94.6 | 96.5 | 96.7 | 96.6 | 95.4 |
| 355 | 95 | 95.1 | 95 | 93.5 | 95.8 | 96 | 95.8 | 94.6 | 96.5 | 96.7 | 96.6 | 95.4 |
| 400 | 95 | 95.1 | 95 | 93.5 | 95.8 | 96 | 95.8 | 94.6 | 96.5 | 96.7 | 96.6 | 95.4 |

# Appendix F
# IEC Motors

## IEC Quick Reference Chart

| IEC Frames | Mounting | | | | | Shaft | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | H | K | D | E | F | G | DB | EG |
| 63 | 100 | 80 | 40 | 63 | 7 | 11 | 23 | 3 | 8.5 | M4 | 10 |
| 71 | 112 | 90 | 45 | 71 | 7 | 14 | 30 | 5 | 11 | M5 | 12.5 |
| 80 | 125 | 100 | 50 | 80 | 10 | 19 | 40 | 6 | 15.5 | M6 | 16 |
| 90S | 140 | 100 | 56 | 90 | 10 | 24 | 50 | 8 | 20 | M8 | 19 |
| 90L | 140 | 125 | 56 | 90 | 10 | 24 | 50 | 8 | 20 | M8 | 19 |
| 100L | 160 | 140 | 63 | 100 | 12 | 28 | 60 | 8 | 24 | M10 | 22 |
| 112M | 190 | 140 | 70 | 112 | 12 | 28 | 60 | 8 | 24 | M10 | 22 |
| 132S | 216 | 140 | 89 | 132 | 12 | 38 | 80 | 10 | 33 | M12 | 28 |
| 132M | 216 | 178 | 89 | 132 | 12 | 38 | 80 | 10 | 33 | M12 | 36 |
| 160M | 254 | 210 | 108 | 160 | 15 | 42 | 110 | 12 | 37 | M16 | 36 |
| 160L | 254 | 254 | 108 | 160 | 15 | 42 | 110 | 12 | 37 | M16 | 36 |
| 180M | 279 | 241 | 121 | 180 | 15 | 48 | 110 | 14 | 42.5 | M16 | 36 |
| 180L | 279 | 279 | 121 | 180 | 15 | 48 | 110 | 14 | 42.5 | M16 | 36 |
| 200L | 318 | 305 | 133 | 200 | 19 | 55 | 110 | 16 | 49 | M20 | 42 |
| 225S | 356 | 286 | 149 | 225 | 19 | 60 | 140 | 18 | 53 | M20 | 42 |
| 225S -2P | 356 | 286 | 149 | 225 | 19 | 55 | 110 | 16 | 49 | M20 | 42 |
| 225M | 356 | 311 | 149 | 225 | 19 | 60 | 140 | 18 | 53 | M20 | 42 |
| 225M - 2P | 356 | 311 | 149 | 225 | 19 | 55 | 110 | 16 | 49 | M20 | 42 |
| 250S | 406 | 311 | 168 | 250 | 24 | 65 | 140 | 18 | 58 | M20 | 42 |
| 250S -2P | 406 | 311 | 168 | 250 | 24 | 60 | 140 | 18 | 53 | M20 | 42 |
| 250M | 406 | 349 | 168 | 250 | 24 | 65 | 140 | 18 | 58 | M20 | 42 |
| 250M - 2P | 406 | 349 | 168 | 250 | 24 | 60 | 140 | 18 | 53 | M20 | 42 |
| 280S | 457 | 368 | 190 | 280 | 24 | 75 | 140 | 20 | 67.5 | M20 | 42 |
| 280S - 2P | 457 | 368 | 190 | 280 | 24 | 65 | 140 | 18 | 58 | M20 | 42 |
| 280M | 457 | 419 | 190 | 280 | 24 | 75 | 140 | 20 | 67.5 | M20 | 42 |
| 280M - 2P | 457 | 419 | 190 | 280 | 24 | 65 | 140 | 18 | 58 | M20 | 42 |
| 315S | 508 | 406 | 216 | 315 | 28 | 80 | 170 | 22 | 71 | M20 | 42 |
| 315S - 2P | 508 | 406 | 216 | 315 | 28 | 65 | 140 | 18 | 58 | M20 | 48 |
| 315M | 508 | 457 | 216 | 315 | 28 | 80 | 170 | 22 | 71 | M21 | 48 |
| 315M - 2P | 508 | 457 | 216 | 315 | 28 | 65 | 140 | 18 | 58 | M22 | 48 |



# Toshiba Adjustable Speed Drives

## AWARD-WINNING ADJUSTABLE SPEED DRIVES FOR VIRTUALLY ANY INDUSTRY, APPLICATION, AND ENVIRONMENT

Toshiba is a leading manufacturer of low and medium voltage adjustable speed drives ranging from 1/2 to 11,000 HP and 230 to 6,900 V. Known for their quality, performance, and reliability, Toshiba drives are a preferred choice in the most demanding applications. With decades of experience, our US-based support team is a knowledgeable partner in providing customer-centric solutions. The large installed base across diverse industries demonstrates customers' confidence in Toshiba drives and service.



# Low Voltage Adjustable Speed Drives
# AS3 General Purpose
## Specifications

The Toshiba AS3 series adjustable speed drive is designed for demanding industrial applications, offering a robust, energy-efficient solution that enhances performance and safety while minimizing maintenance and downtime. Featuring dual PID control, multiple control modes, and built-in communication protocols like Modbus TCP and Ethernet/IP, the AS3 series integrates seamlessly into modern digitalized operations. It supports a wide range of motor control applications, including pumps, fans, and compressors, with high overload capacity and comprehensive protection features. With an intuitive interface, Industry 4.0/IoT readiness, and US-based customer support, the AS3 series is a reliable and flexible choice for maximizing system efficiency and reducing the total cost of ownership.

### Product Scope

200 to 230 V at 0.5 to 75 HP HD (1 to 100 HP ND)
380 to 460 V at 0.5 to 450 HP HD (1 to 500 HP ND)
500 to 690 V at 2 to 75 HP HD (3 to 100 HP ND)

### Highlights

- Dual Rating through Parameter Change (Heavy Duty and Normal Duty)
  - Heavy Duty 110% Continuous Output Current, 150% Overload for 60 Seconds
  - Normal Duty 105% Continuous Output Current, 120% Overload for 60 Seconds
- Eight Programmable Digital Inputs
- Three Programmable Digital Outputs: One Form-C Relay & Two Form-A Dry Contact Relays
- Three Programmable Analog Inputs: One 4 to 20mA, One 0 to 10 VDC & One +10 VDC
- Two Programmable Analog Outputs: Both 4 to 20mA or 0 to 10 VDC
- Embedded STO Safety Terminal Compliant with IEC 61800-5-2 and SIL3 level in IEC 61508
- Two-Wire/Four-Wire RS485
- Built-in Dual Port EtherNet/IP®
- Embedded Web Server
- Real-Time Clock for Past Trip Monitoring or Calendar Functionality
- QR Code Display for Additional Parameter Information and Fault Troubleshooting

### Standard Features

- UL Type 1 up to 100 HP HD (125 HP ND) 460 V
- Ambient Temperature: 14° to 122°F (-10° to +50°C) or 140°F (+60°C) with Derate
- Altitude: Up to 1000 Meters Without Derate
- Humidity: 95% Non-Condensing
- Advanced LCD Keypad with Capacitive Touch Wheel for Navigating and Programming
- Save, Restore & Clone Multiple Drive Settings
- Real Time Clock for Past Trip Monitoring or Calendar Functionality
- Built-Dynamic Braking Drive Circuit Up to 100 HP HD (125 HP ND) 460 V
- All Models Include DC Link Reactor



# AS3 General Purpose

## 230 V Power Unit

## Pricing & Dimensions



| VAC | HP (HD) | FLA (HD) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Heavy Duty - 150% current overload for 60 seconds** (Primarily used for constant torque applications. Examples are conveyors, crushers, extruders and mixers) | | | | | | | | | |
| 230 | 0.5 | 3.3 | VFAS3-2004P | $950 | A1 | 13.8 | 5.7 | 8.0 | 9.5 |
| 230 | 1 | 4.6 | VFAS3-2007P | $1,050 | A1 | 13.8 | 5.7 | 8.0 | 9.5 |
| 230 | 2 | 8.0 | VFAS3-2015P | $1,110 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 230 | 3 | 11.2 | VFAS3-2022P | $1,240 | A1 | 13.8 | 5.7 | 8.0 | 10.1 |
| 230 | 5 | 18.7 | VFAS3-2037P | $1,400 | A2 | 16.2 | 6.7 | 9.2 | 17.0 |
| 230 | 7.5 | 25.4 | VFAS3-2055P | $1,740 | A3 | 21.8 | 8.3 | 9.2 | 30.4 |
| 230 | 10 | 32.7 | VFAS3-2075P | $2,040 | A3 | 21.8 | 8.3 | 9.2 | 30.4 |
| 230 | 15 | 46.8 | VFAS3-2110P | $2,600 | A4 | 27.3 | 8.9 | 10.7 | 60.2 |
| 230 | 20 | 63.4 | VFAS3-2150P | $2,900 | A4 | 27.3 | 8.9 | 10.7 | 60.2 |
| 230 | 25 | 78.4 | VFAS3-2185P | $3,900 | A4 | 27.3 | 8.9 | 10.7 | 60.2 |
| 230 | 30 | 92.6 | VFAS3-2220P | $4,450 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 230 | 40 | 123 | VFAS3-2300P | $7,100 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 230 | 50 | 149 | VFAS3-2370P | $11,000 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 230 | 60 | 176 | VFAS3-2450P | $13,500 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 230 | 75 | 211 | VFAS3-2550P | $16,600 | A6 | 33.5 | 12.7 | 15.4 | 181 |

| VAC | HP (ND) | FLA (ND) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Normal Duty - 120% current overload for 60 seconds** (Primarily used for variable torque applications. Examples are fans, centrifugal pumps and blowers) | | | | | | | | | |
| 230 | 1 | 4.6 | VFAS3-2004P | $950 | A1 | 13.8 | 5.7 | 8.0 | 9.5 |
| 230 | 2 | 8.0 | VFAS3-2007P | $1,050 | A1 | 13.8 | 5.7 | 8.0 | 9.5 |
| 230 | 3 | 11.2 | VFAS3-2015P | $1,110 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 230 | 5 | 18.7 | VFAS3-2022P | $1,240 | A1 | 13.8 | 5.7 | 8.0 | 10.1 |
| 230 | 7.5 | 25.4 | VFAS3-2037P | $1,400 | A2 | 16.2 | 6.7 | 9.2 | 17.0 |
| 230 | 10 | 32.7 | VFAS3-2055P | $1,740 | A3 | 21.8 | 8.3 | 9.2 | 30.4 |
| 230 | 15 | 46.8 | VFAS3-2075P | $2,040 | A3 | 21.8 | 8.3 | 9.2 | 30.4 |
| 230 | 20 | 63.4 | VFAS3-2110P | $2,600 | A4 | 27.3 | 8.9 | 10.7 | 60.2 |
| 230 | 25 | 78.4 | VFAS3-2150P | $2,900 | A4 | 27.3 | 8.9 | 10.7 | 60.2 |
| 230 | 30 | 92.6 | VFAS3-2185P | $3,900 | A4 | 27.3 | 8.9 | 10.7 | 60.2 |
| 230 | 40 | 123 | VFAS3-2220P | $4,450 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 230 | 50 | 149 | VFAS3-2300P | $7,100 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 230 | 60 | 176 | VFAS3-2370P | $11,000 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 230 | 75 | 211 | VFAS3-2450P | $13,500 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 230 | 100 | 282 | VFAS3-2550P | $16,600 | A6 | 33.5 | 12.7 | 15.4 | 181 |

**Notes:**
- Frame A6 and A8 units do not include a dynamic braking circuit. This is available as an option.
- Frame A6 and larger units are rated IP00. Conduit adapters are available as an option.
  *DC link reactor attaches to top.

# AS3 General Purpose

## 460 V Power Unit

## Pricing & Dimensions



| VAC | HP (HD) | FLA (HD) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Heavy Duty - 150% current overload for 60 seconds** (Primarily used for constant torque applications. Examples are conveyors, crushers, extruders and mixers) | | | | | | | | | |
| 460 | 0.5 | 1.5 | VFAS3-4004PC | $830 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 460 | 1 | 2.2 | VFAS3-4007PC | $940 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 460 | 2 | 4.0 | VFAS3-4015PC | $1,020 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 460 | 3 | 5.6 | VFAS3-4022PC | $1,100 | A1 | 13.8 | 5.7 | 8.0 | 10.1 |
| 460 | 5 | 9.3 | VFAS3-4037PC | $1,320 | A1 | 13.8 | 5.7 | 8.0 | 10.4 |
| 460 | 7.5 | 12.7 | VFAS3-4055PC | $1,610 | A2 | 16.2 | 6.7 | 9.2 | 17.0 |
| 460 | 10 | 16.5 | VFAS3-4075PC | $2,000 | A2 | 16.2 | 6.7 | 9.2 | 17.0 |
| 460 | 15 | 23.5 | VFAS3-4110PC | $2,600 | A3 | 21.8 | 8.3 | 9.2 | 30.0 |
| 460 | 20 | 31.7 | VFAS3-4150PC | $3,250 | A3 | 21.8 | 8.3 | 9.2 | 31.3 |
| 460 | 25 | 39.2 | VFAS3-4185PC | $4,000 | A3 | 21.8 | 8.3 | 9.2 | 31.5 |
| 460 | 30 | 46.3 | VFAS3-4220PC | $4,200 | A4 | 27.3 | 8.9 | 10.7 | 61.7 |
| 460 | 40 | 61.5 | VFAS3-4300PC | $5,050 | A4 | 27.3 | 8.9 | 10.7 | 62.2 |
| 460 | 50 | 74.5 | VFAS3-4370PC | $6,700 | A4 | 27.3 | 8.9 | 10.7 | 63.3 |
| 460 | 60 | 88.0 | VFAS3-4450PC | $8,100 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 460 | 75 | 106 | VFAS3-4550PC | $8,900 | A5 | 36.8 | 11.5 | 12.7 | 130 |
| 460 | 100 | 145 | VFAS3-4750PC | $11,000 | A5 | 36.8 | 11.5 | 12.7 | 131 |
| 460 | 125 | 173 | VFAS3-4900PC | $14,000 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 460 | 150 | 211 | VFAS3-4110KPC | $15,900 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 460 | 200 | 250 | VFAS3-4132KPC | $19,200 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 460 | 250 | 314 | VFAS3-4160KPC | $23,400 | A7 | 47.0 | 17.3 | 14.8 | 366 (230)* |
| 460 | 300 | 387 | VFAS3-4200KPC | $27,300 | A8 | 47.0 | 23.5 | 14.8 | 428 (296)* |
| 460 | 350 | 427 | VFAS3-4220KPC | $30,900 | A8 | 47.0 | 23.5 | 14.8 | 450 (230)* |
| 460 | 450 | 550 | VFAS3-4280KPC | $42,600 | A8 | 47.0 | 23.5 | 14.8 | 450 (230)* |

**Notes:**
- Frame A6 and A8 units do not include a dynamic braking circuit. This is available as an option.
- Frame A6 and larger units are rated IP00. Conduit adapters are available as an option.
- Frame A7 and A8 do not meet UL requirements unless installed in a cabinet. See user manual for more information.
- DC link reactor attaches to top.

# AS3 General Purpose

## 460 V Power Unit

## Pricing & Dimensions



| VAC | HP (ND) | FLA (ND) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Normal Duty - 120% current overload for 60 seconds** (Primarily used for variable torque applications. Examples are fans, centrifugal pumps and blowers) | | | | | | | | | |
| 460 | 1 | 2.2 | VFAS3-4004PC | $830 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 460 | 2 | 4.0 | VFAS3-4007PC | $940 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 460 | 3 | 5.6 | VFAS3-4015PC | $1,020 | A1 | 13.8 | 5.7 | 8.0 | 9.9 |
| 460 | 5 | 9.3 | VFAS3-4022PC | $1,100 | A1 | 13.8 | 5.7 | 8.0 | 10.1 |
| 460 | 7.5 | 12.7 | VFAS3-4037PC | $1,320 | A1 | 13.8 | 5.7 | 8.0 | 10.4 |
| 460 | 10 | 16.5 | VFAS3-4055PC | $1,610 | A2 | 16.2 | 6.7 | 9.2 | 17.0 |
| 460 | 15 | 23.5 | VFAS3-4075PC | $2,000 | A2 | 16.2 | 6.7 | 9.2 | 17.0 |
| 460 | 20 | 31.7 | VFAS3-4110PC | $2,600 | A3 | 21.8 | 8.3 | 9.2 | 30.0 |
| 460 | 25 | 39.2 | VFAS3-4150PC | $3,250 | A3 | 21.8 | 8.3 | 9.2 | 31.3 |
| 460 | 30 | 46.3 | VFAS3-4185PC | $4,000 | A3 | 21.8 | 8.3 | 9.2 | 31.5 |
| 460 | 40 | 61.5 | VFAS3-4220PC | $4,200 | A4 | 27.3 | 8.9 | 10.7 | 61.7 |
| 460 | 50 | 74.5 | VFAS3-4300PC | $5,050 | A4 | 27.3 | 8.9 | 10.7 | 62.2 |
| 460 | 60 | 88.0 | VFAS3-4370PC | $6,700 | A4 | 27.3 | 8.9 | 10.7 | 63.3 |
| 460 | 75 | 106 | VFAS3-4450PC | $8,100 | A5 | 36.8 | 11.5 | 12.7 | 127 |
| 460 | 100 | 145 | VFAS3-4550PC | $8,900 | A5 | 36.8 | 11.5 | 12.7 | 130 |
| 460 | 125 | 173 | VFAS3-4750PC | $11,000 | A5 | 36.8 | 11.5 | 12.7 | 131 |
| 460 | 150 | 211 | VFAS3-4900PC | $14,000 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 460 | 200 | 250 | VFAS3-4110KPC | $15,900 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 460 | 250 | 302 | VFAS3-4132KPC | $19,200 | A6 | 33.5 | 12.7 | 15.4 | 181 |
| 460 | 350 | 427 | VFAS3-4160KPC | $23,400 | A7 | 47.0 | 17.3 | 14.8 | 366 (230)* |
| 460 | 400 | 481 | VFAS3-4200KPC | $27,300 | A8 | 47.0 | 23.5 | 14.8 | 428 (296)* |
| 460 | 450 | 550 | VFAS3-4220KPC | $30,900 | A8 | 47.0 | 23.5 | 14.8 | 450 (230)* |
| 460 | 500 | 616 | VFAS3-4280KPC | $42,600 | A8 | 47.0 | 23.5 | 14.8 | 450 (230)* |

**Notes:**
- Frame A6 and A8 units do not include a dynamic braking circuit. This is available as an option.
- Frame A6 and larger units are rated IP00. Conduit adapters are available as an option.
- Frame A7 and A8 do not meet UL requirements unless installed in a cabinet. See user manual for more information.
- DC link reactor attaches to top.

# AS3 General Purpose

## 600 V Power Unit

## Pricing & Dimensions



| VAC | HP (HD) | FLA (HD) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Heavy Duty - 150% current overload for 60 seconds**<br>(Primarily used for constant torque applications. Examples are conveyors, crushers, extruders and mixers) | | | | | | | | | |
| 600 | 2 | 3.1 | VFAS3-6022PC | $4,000 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 3 | 4.2 | VFAS3-6030PC | $4,050 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 5 | 7.2 | VFAS3-6055PC | $4,100 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 7.5 | 9.5 | VFAS3-6075PC | $4,150 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 10 | 13.5 | VFAS3-6110PC | $4,250 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 15 | 18 | VFAS3-6150PC | $4,300 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 20 | 24 | VFAS3-6185PC | $4,400 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 25 | 29 | VFAS3-6220PC | $4,450 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 30 | 34 | VFAS3-6300PC | $6,700 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 40 | 45 | VFAS3-6370PC | $6,900 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 50 | 55 | VFAS3-6450PC | $7,000 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 60 | 66 | VFAS3-6550PC | $7,500 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 75 | 83 | VFAS3-6750PC | $8,100 | A2Y | 24.8 | 12.6 | 11.7 | 130 |

| VAC | HP (ND) | FLA (ND) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Normal Duty - 120% current overload for 60 seconds**<br>(Primarily used for variable torque applications. Examples are fans, centrifugal pumps and blowers) | | | | | | | | | |
| 600 | 3 | 4.2 | VFAS3-6022PC | $4,000 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 5 | 7.2 | VFAS3-6040PC | $4,100 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 7.5 | 9.5 | VFAS3-6055PC | $4,100 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 10 | 13.5 | VFAS3-6075PC | $4,150 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 15 | 18 | VFAS3-6110PC | $4,250 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 20 | 24 | VFAS3-6150PC | $4,300 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 25 | 29 | VFAS3-6185PC | $4,400 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 30 | 34 | VFAS3-6220PC | $4,450 | A1Y | 16.6 | 9.5 | 9.6 | 60 |
| 600 | 40 | 45 | VFAS3-6300PC | $6,700 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 50 | 55 | VFAS3-6370PC | $6,900 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 60 | 66 | VFAS3-6450PC | $7,000 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 75 | 83 | VFAS3-6550PC | $7,500 | A2Y | 24.8 | 12.6 | 11.7 | 130 |
| 600 | 100 | 108 | VFAS3-6750PC | $8,100 | A2Y | 24.8 | 12.6 | 11.7 | 130 |

**Notes:**
- Current and HP ratings in this table are applicable only at 600 V; HP and FLA ratings at 690 V are available in the manual.
- Power units are rated IP00. Conduit adapters are available as an option.

# Low Voltage Adjustable Speed Drives
# AS3 UL Type 12/IP55
## Specifications

The Toshiba AS3 series adjustable speed drive is constructed for demanding outdoor industrial applications, offering robust, energy-efficient performance with minimal maintenance. Built to withstand harsh environments, the totally enclosed UL Type 12/IP55 AS3 is dustproof, optimal for environments with small particles floating around. It seamlessly integrates into modern operations with dual PID control, multiple motor control modes, and built-in communication protocols. The AS3 series supports various motor control applications and features an IP65-rated LCD keypad for easy operation.

### Product Scope

- 1/2 to 100 HP (Heavy Duty)
- 1 to 125 HP (Normal Duty)
- 460 V
- Three-Phase Power

### Highlights

- Type 12/IP55 Rated Enclosure
- Dual Rated Capacity
- Heavy Duty 110% Continuous Output Current, 150% Overload for 60 Seconds
- Normal Duty 105% Continuous Output Current, 120% Overload for 60 Seconds
- Built-in Dual Port EtherNet/IP® Communications
- Advanced IP65 Rated Full English Display LCD Keypad
- Permanent Magnet Motor Control
- Advanced Pump Control

### Standard Features

- Ambient Temperature: 5° to 122°F (-15° to +50°C) (Derate Above 104°F or 40°C)
- Altitude: Up to 1000 Meters Without Derate
- Humidity: 95% Non-Condensing
- Advanced LCD Keypad with Capacitive Touch Wheel for Navigating and Programming
- Save, Restore & Clone Multiple Drive Settings
- Real Time Clock for Past Trip Monitoring or Calendar Functionality
- All Models Include a Built in Dynamic Braking Circuit
- All Models Include DC Link Reactor



# AS3 UL Type 12/IP55

## 460 V Power Unit

## Pricing & Dimensions



| VAC | HP (HD) | FLA (HD) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Heavy Duty - 150% current overload for 60 seconds** (Primarily used for constant torque applications. Examples are conveyors, crushers, extruders and mixers) | | | | | | | | | |
| 460 | 0.5 | 1.5 | VFAS3-4004PCE | $1,280 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 1 | 2.2 | VFAS3-4007PCE | $1,310 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 2 | 4.0 | VFAS3-4015PCE | $1,420 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 3 | 5.6 | VFAS3-4022PCE | $1,530 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 5 | 9.3 | VFAS3-4037PCE | $2,050 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 7.5 | 12.7 | VFAS3-4055PCE | $2,250 | A2E | 29.3 | 9.9 | 11.9 | 38 |
| 460 | 10 | 16.5 | VFAS3-4075PCE | $2,800 | A2E | 29.3 | 9.9 | 11.9 | 38 |
| 460 | 15 | 23.5 | VFAS3-4110PCE | $3,000 | A3E | 29.3 | 9.9 | 11.9 | 48 |
| 460 | 20 | 31.7 | VFAS3-4150PCE | $3,700 | A3E | 29.3 | 9.9 | 11.9 | 48 |
| 460 | 25 | 39.2 | VFAS3-4185PCE | $4,600 | A3E | 29.3 | 9.9 | 11.9 | 48 |
| 460 | 30 | 46.3 | VFAS3-4220PCE | $4,800 | A4E | 40.0 | 11.5 | 13.4 | 115 |
| 460 | 40 | 61.5 | VFAS3-4300PCE | $5,800 | A4E | 40.0 | 11.5 | 13.4 | 115 |
| 460 | 50 | 74.5 | VFAS3-4370PCE | $7,700 | A4E | 40.0 | 11.5 | 13.4 | 115 |
| 460 | 60 | 88.0 | VFAS3-4450PCE | $9,300 | A5E | 53.5 | 13.6 | 14.8 | 200 |
| 460 | 75 | 106 | VFAS3-4550PCE | $10,300 | A5E | 53.5 | 13.6 | 14.8 | 200 |
| 460 | 100 | 145 | VFAS3-4750PCE | $12,600 | A5E | 53.5 | 13.6 | 14.8 | 200 |

| VAC | HP (ND) | FLA (ND) | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| **Normal Duty - 120% current overload for 60 seconds** (Primarily used for variable torque applications. Examples are fans, centrifugal pumps and blowers) | | | | | | | | | |
| 460 | 1 | 2.2 | VFAS3-4004PCE | $1,280 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 2 | 4.0 | VFAS3-4007PCE | $1,310 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 3 | 5.6 | VFAS3-4015PCE | $1,420 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 5 | 9.3 | VFAS3-4022PCE | $1,530 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 7.5 | 12.7 | VFAS3-4037PCE | $2,050 | A1E | 29.3 | 9.9 | 10.7 | 30 |
| 460 | 10 | 16.5 | VFAS3-4055PCE | $2,250 | A2E | 29.3 | 9.9 | 11.9 | 38 |
| 460 | 15 | 23.5 | VFAS3-4075PCE | $2,800 | A2E | 29.3 | 9.9 | 11.9 | 38 |
| 460 | 20 | 31.7 | VFAS3-4110PCE | $3,000 | A3E | 29.3 | 9.9 | 11.9 | 48 |
| 460 | 25 | 39.2 | VFAS3-4150PCE | $3,700 | A3E | 29.3 | 9.9 | 11.9 | 48 |
| 460 | 30 | 46.3 | VFAS3-4185PCE | $4,600 | A3E | 29.3 | 9.9 | 11.9 | 48 |
| 460 | 40 | 61.5 | VFAS3-4220PCE | $4,800 | A4E | 40.0 | 11.5 | 13.4 | 115 |
| 460 | 50 | 74.5 | VFAS3-4300PCE | $5,800 | A4E | 40.0 | 11.5 | 13.4 | 115 |
| 460 | 60 | 88.0 | VFAS3-4370PCE | $7,700 | A4E | 40.0 | 11.5 | 13.4 | 115 |
| 460 | 75 | 106 | VFAS3-4450PCE | $9,300 | A5E | 53.5 | 13.6 | 14.8 | 200 |
| 460 | 100 | 145 | VFAS3-4550PCE | $10,300 | A5E | 53.5 | 13.6 | 14.8 | 200 |
| 460 | 125 | 173 | VFAS3-4750PCE | $12,600 | A5E | 53.5 | 13.6 | 14.8 | 200 |

# Low Voltage Adjustable Speed Drives
# AS3P Outdoor
## Specifications

Toshiba's AS3P series offers a UL Type 3R free-standing enclosure to protect electrical components from environmental conditions. This durable and cost-effective solution, with a short lead time, makes it suitable for demanding industrial environments. Customizations include adding door-mounted pilot devices, surge arrestor protection, space heaters to prevent moisture accumulation, and line reactors to minimize harmonics. With a combination of robust protection and advanced functionality, the AS3P series is an excellent choice for reliable and efficient performance in outdoor applications.

### Product Scope

- 380 to 460 V at 7.5 to 450 HP HD (10 to 500 HP ND)

### Highlights

- Dual Rating through Parameter Change (Heavy Duty and Normal Duty)
  - Heavy Duty 110% Continuous Output Current, 150% Overload for 60 Seconds
  - Normal Duty 105% Continuous Output Current, 120% Overload for 60 Seconds
- Eight Programmable Digital Inputs
- Three Programmable Digital Outputs: One Form-C Relay & Two Form-A Dry Contact Relays
- Three Programmable Analog Inputs: One 4 to 20mA, One 0 to 10 VDC & One +10 VDC
- Two Programmable Analog Outputs: Both 4 to 20mA or 0 to 10 VDC
- Embedded STO Safety Terminal Compliant with IEC 61800-5-2 and SIL3 level in IEC 61508
- Two-Wire/Four-Wire RS485
- Built-in Dual Port EtherNet/IP®
- Embedded Web Server
- Real-Time Clock for Past Trip Monitoring or Calendar Functionality
- QR Code Display for Additional Parameter Information and Fault Troubleshooting

### Standard Features

- UL Type 3R Outdoor Rated Enclosure Standard
- Ambient Temperature: 14° to 104°F (-10° to +40°C)
- Altitude: Up to 1000 Meters Without Derate
- Humidity: 95% Non-Condensing
- Advanced LCD Keypad with Capacitive Touch Wheel for Navigating and Programming
- Save, Restore & Clone Multiple Drive Settings
- Real Time Clock for Past Trip Monitoring or Calendar Functionality
- Built-Dynamic Braking Drive Circuit

### Available Installed Options

- Input Line Reactor
- Surge Arrestor
- Door-Mounted Selector Switches
- Door-Mounted Push Buttons
- Door-Mounted Pilot Lights
- Cabinet Space Heater



# AS3P Outdoor

## Part Numbering Convention



Ordering Information: Use the following part numbering convention to configure the AS3P unit package when placing your order.

| Example Part Number: | AS3P | 4 | ###/###K | AA | # | * | * | * | * |
|---|---|---|---|---|---|---|---|---|---|

**Series:**
AS3P - AS3P Style Assembly

**Voltage:**
4 - 460

**Model Number:**

| | |
|---|---|
| 055 – 7.5HP/10HP | 550 – 75HP/100HP |
| 075 – 10HP/15HP | 750 – 100HP/125HP |
| 110 – 15HP/20HP | 900 – 125HP/ 150HP |
| 150 – 20HP/25HP | 110K – 150HP/200HP |
| 185 – 25HP/30HP | 132K – 200HP/250HP |
| 220 – 30HP/40HP | 160K – 250HP/300HP |
| 300 – 40HP/50HP | 200K – 300HP/400HP |
| 370 – 50HP/60HP | 220K – 350HP/450HP |
| 450 – 60HP/75HP | 280K – 450HP/500HP |

**Style:**
AA - Includes Input Circuit Breaker
AE -Includes Input Circuit Breaker, Isolated Three-contactor Bypass, Overload Protection

**Reactor:**
0 - No Line Reactor
3 - 3% AC Line Reactor
5 - 5% AC Line Reactor

**Surge Arrestor:**
0 - No Surge Arrestor
M - Basic (MOV) Surge Arrestor
S - Raycap Strikesorb Surge Arrestor

**Space Heater:**
0 - No Space Heater
T - Cabinet Space Heater with Thermostat

**Motor Space Heater Circuit:**
0 - No Motor Space Heater Circuit
R - Motor Space Heater Circuit

**4 Door Mounted Pilot Device:**
0 - No Option
A - 2 Position Switch, “LOCAL/REMOTE”
B - 3 Position Switch, “HAND/OFF/AUTO”
C - Pilot Light, White, “POWER ON”
D - Pilot Light, Amber, “ASD FAULT”
E - Pilot Light, Red, “ASD RUN”
F - Pilot Light, Green, “ASD STOPPED”
G - Push Button, Red, “RUN”
H - Push Button, Black, “STOP”
I - Push Button, Black, “RESET”
J - Push Button, Red, “EMERGENCY STOP”
K - Speed Potentiometer

**SCCR Rating:**
0 - 18kA
6 - 65kA
Y - 100kA

**Notes:**
- AA - Includes AS3, Input Circuit Breaker and All Necessary Components for Operation in a Standing UL Type 3R Outdoor Enclosure
- 3% ACL - 3% Impedance Input Line Reactor
- 5% ACL - 5% Impedance Input Line Reactor
- Basic Surge Arrestor - Standard Surge Arrestor; Make and Model May Vary
- Raycap Strikesorb Surge Arrestor - Three (3) Raycap Strikesorb Surge Arrestors on Incoming Side of Unit
- 2- or 3-Position Selector Switch - Two- or Three-Position Selector Switch (e.g. LOCAL/REMOTE, HAND/OFF/AUTO)
- Push Button - Standard Push Button (e.g. RUN, STOP, RESET, E-STOP)
- Pilot Light - Standard Pilot Light (e.g. POWER ON, ASD FAULTED, ASD RUNNING, ASD STOPPED)
- Cabinet Space Heater - Installed Cabinet Space Heater with Thermostat
- Motor Space Heater Circuit - Includes Motor Space Heater Terminals and Installed 200VA 120V CPT for Motor Space Heater Power

# AS3P Outdoor

## 460 V Assembly Unit

## Pricing & Dimensions



| VAC | HP (HD) | FLA (HD) | Model Number | List Price | H | W | D | Shipping Weight (lbs.) | 3% ACLR | 5% ACLR | 65kA SCCR | 100kA SCCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | | | | | |
| **Heavy Duty - 150% current overload for 60 seconds** (Primarily used for constant torque applications. Examples are conveyors, crushers, extruders and mixers) | | | | | | | | | | | | |
| 460 | 7.5 | 12.7 | AS3P4055AA | $9,100 | 73 | 32 | 24 | 400 | $963 | $1,050 | $300 | $600 |
| 460 | 10 | 16.5 | AS3P4075AA | $9,500 | 73 | 32 | 24 | 400 | $1,163 | $1,413 | $300 | $600 |
| 460 | 15 | 23.5 | AS3P4110AA | $10,000 | 73 | 35 | 26 | 460 | $1,275 | $1,525 | $300 | $600 |
| 460 | 20 | 31.7 | AS3P4150AA | $10,700 | 73 | 35 | 26 | 460 | $1,313 | $1,563 | $300 | $600 |
| 460 | 25 | 39.2 | AS3P4185AA | $11,300 | 73 | 35 | 26 | 500 | $1,313 | $1,563 | $300 | $600 |
| 460 | 30 | 46.3 | AS3P4220AA | $11,700 | 73 | 35 | 26 | 500 | $1,400 | $1,650 | $300 | $600 |
| 460 | 40 | 61.5 | AS3P4300AA | $12,200 | 73 | 35 | 26 | 500 | $1,550 | $1,800 | $750 | $1,400 |
| 460 | 50 | 74.5 | AS3P4370AA | $13,500 | 73 | 35 | 26 | 500 | $1,650 | $1,900 | $750 | $1,400 |
| 460 | 60 | 88 | AS3P4450AA | $15,900 | 73 | 35 | 26 | 500 | $1,900 | $2,150 | $750 | $1,400 |
| 460 | 75 | 106 | AS3P4550AA | $17,100 | 73 | 35 | 26 | 550 | $2,350 | $2,600 | $750 | $1,400 |
| 460 | 100 | 145 | AS3P4750AA | $20,800 | 73 | 35 | 26 | 570 | $2,550 | $2,800 | $1,500 | $1,750 |
| 460 | 125 | 173 | AS3P4900AA | $32,000 | 75 | 48 | 30 | 800 | $2,800 | $3,050 | $1,500 | $1,750 |
| 460 | 150 | 211 | AS3P4110KAA | $34,900 | 75 | 48 | 30 | 820 | $2,900 | $3,150 | $1,500 | $1,750 |
| 460 | 200 | 250 | AS3P4132KAA | $40,800 | 75 | 48 | 30 | 820 | $3,250 | $3,500 | $1,500 | $1,750 |
| 460 | 250 | 314 | AS3P4160KAA | $61,000 | 90 | 65 | 35 | N/A | $3,800 | $4,350 | $4,500 | N/A |
| 460 | 300 | 387 | AS3P4200KAA | $71,200 | 90 | 65 | 35 | N/A | $3,950 | $4,600 | $4,500 | N/A |
| 460 | 350 | 427 | AS3P4220KAA | $74,900 | 90 | 65 | 35 | N/A | $4,100 | $5,585 | $4,500 | N/A |
| 460 | 450 | 550 | AS3P4280KAA | $80,000 | 90 | 65 | 35 | N/A | $4,255 | $6,250 | $4,500 | N/A |

| VAC | HP (ND) | FLA (ND) | Model Number | List Price | H | W | D | Shipping Weight (lbs.) | 3% ACLR | 5% ACLR | 65kA SCCR | 100kA SCCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | | | | | |
| **Normal Duty - 120% current overload for 60 seconds** (Primarily used for variable torque applications. Examples are fans, centrifugal pumps and blowers) | | | | | | | | | | | | |
| 460 | 10 | 16.5 | AS3P4055AA | $9,100 | 73 | 32 | 24 | 400 | $963 | $1,050 | $300 | $600 |
| 460 | 15 | 23.5 | AS3P4075AA | $9,500 | 73 | 32 | 24 | 400 | $1,163 | $1,413 | $300 | $600 |
| 460 | 20 | 31.7 | AS3P4110AA | $10,000 | 73 | 35 | 26 | 460 | $1,275 | $1,525 | $300 | $600 |
| 460 | 25 | 39.2 | AS3P4150AA | $10,700 | 73 | 35 | 26 | 460 | $1,313 | $1,563 | $300 | $600 |
| 460 | 30 | 46.3 | AS3P4185AA | $11,300 | 73 | 35 | 26 | 500 | $1,313 | $1,563 | $300 | $600 |
| 460 | 40 | 61.5 | AS3P4220AA | $11,700 | 73 | 35 | 26 | 500 | $1,400 | $1,650 | $300 | $600 |
| 460 | 50 | 74.5 | AS3P4300AA | $12,200 | 73 | 35 | 26 | 500 | $1,550 | $1,800 | $750 | $1,400 |
| 460 | 60 | 88 | AS3P4370AA | $13,500 | 73 | 35 | 26 | 500 | $1,650 | $1,900 | $750 | $1,400 |
| 460 | 75 | 106 | AS3P4450AA | $15,900 | 73 | 35 | 26 | 500 | $1,900 | $2,150 | $750 | $1,400 |
| 460 | 100 | 145 | AS3P4550AA | $17,100 | 73 | 35 | 26 | 550 | $2,350 | $2,600 | $750 | $1,400 |
| 460 | 125 | 173 | AS3P4750AA | $20,800 | 73 | 35 | 26 | 570 | $2,550 | $2,800 | $1,500 | $1,750 |
| 460 | 150 | 211 | AS3P4900AA | $32,000 | 75 | 48 | 30 | 800 | $2,800 | $3,050 | $1,500 | $1,750 |
| 460 | 200 | 250 | AS3P4110KAA | $34,900 | 75 | 48 | 30 | 820 | $2,900 | $3,150 | $1,500 | $1,750 |
| 460 | 250 | 302 | AS3P4132KAA | $40,800 | 75 | 48 | 30 | 820 | $3,250 | $3,500 | $1,500 | $1,750 |
| 460 | 350 | 427 | AS3P4160KAA | $61,000 | 90 | 65 | 35 | N/A | $3,800 | $4,350 | $4,500 | N/A |
| 460 | 400 | 481 | AS3P4200KAA | $71,200 | 90 | 65 | 35 | N/A | $3,950 | $4,600 | $4,500 | N/A |
| 460 | 450 | 550 | AS3P4220KAA | $74,900 | 90 | 65 | 35 | N/A | $4,100 | $5,585 | $4,500 | N/A |
| 460 | 500 | 616 | AS3P4280KAA | $80,000 | 90 | 65 | 35 | N/A | $4,255 | $6,250 | $4,500 | N/A |

**Notes:**
• ASDAS3 Discount Symbol applies to AS3P base models. ASD C Discount Symbol applies to all configured items.

# AS3P Outdoor

## 460 V Assembly Unit with Bypass
## Pricing & Dimensions



| VAC | HP (HD) | FLA (HD) | Model Number | List Price | H | W | D | 3% ACLR | 5% ACLR | 65kA SCCR | 100kA SCCR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | | | | |
| **Heavy Duty - 150% current overload for 60 seconds** (Primarily used for constant torque applications. Examples are conveyors, crushers, extruders and mixers) | | | | | | | | | | | |
| 460 | 7.5 | 12.7 | AS3P4055AE | $16,750 | 73 | 32 | 24 | $963 | $1,050 | $300 | $600 |
| 460 | 10 | 16.5 | AS3P4075AE | $17,250 | 73 | 32 | 24 | $1,163 | $1,413 | $300 | $600 |
| 460 | 15 | 23.5 | AS3P4110AE | $18,750 | 73 | 35 | 26 | $1,275 | $1,525 | $300 | $600 |
| 460 | 20 | 31.7 | AS3P4150AE | $19,000 | 73 | 35 | 26 | $1,313 | $1,563 | $300 | $600 |
| 460 | 25 | 39.2 | AS3P4185AE | $20,500 | 73 | 35 | 26 | $1,313 | $1,563 | $300 | $600 |
| 460 | 30 | 46.3 | AS3P4220AE | $21,500 | 73 | 35 | 26 | $1,400 | $1,650 | $300 | $600 |
| 460 | 40 | 61.5 | AS3P4300AE | $23,850 | 73 | 35 | 26 | $1,550 | $1,800 | $750 | $1,400 |
| 460 | 50 | 74.5 | AS3P4370AE | $26,500 | 73 | 35 | 26 | $1,650 | $1,900 | $750 | $1,400 |
| 460 | 60 | 88 | AS3P4450AE | $30,500 | 75 | 48 | 30 | $1,900 | $2,150 | $750 | $1,400 |
| 460 | 75 | 106 | AS3P4550AE | $35,100 | 75 | 48 | 30 | $2,350 | $2,600 | $750 | $1,400 |
| 460 | 100 | 145 | AS3P4750AE | $39,600 | 75 | 48 | 30 | $2,550 | $2,800 | $1,500 | $1,750 |
| 460 | 125 | 173 | AS3P4900AE | $59,000 | 76 | 48 | 32 | $2,800 | $3,050 | $1,500 | $1,750 |
| 460 | 150 | 211 | AS3P4110KAE | $61,000 | 76 | 48 | 32 | $2,900 | $3,150 | $1,500 | $1,750 |
| 460 | 200 | 250 | AS3P4132KAE | $62,500 | 76 | 48 | 32 | $3,250 | $3,500 | $1,500 | $1,750 |

| VAC | HP (ND) | FLA (ND) | Model Number | List Price | H | W | D | 3% ACLR | 5% ACLR | 65kA SCCR | 100kA SCCR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | | | | |
| **Normal Duty - 120% current overload for 60 seconds** (Primarily used for variable torque applications. Examples are fans, centrifugal pumps and blowers) | | | | | | | | | | | |
| 460 | 10 | 16.5 | AS3P4055AE | $16,750 | 73 | 32 | 24 | $963 | $1,050 | $300 | $600 |
| 460 | 15 | 23.5 | AS3P4075AE | $17,250 | 73 | 32 | 24 | $1,163 | $1,413 | $300 | $600 |
| 460 | 20 | 31.7 | AS3P4110AE | $18,750 | 73 | 35 | 26 | $1,275 | $1,525 | $300 | $600 |
| 460 | 25 | 39.2 | AS3P4150AE | $19,000 | 73 | 35 | 26 | $1,313 | $1,563 | $300 | $600 |
| 460 | 30 | 46.3 | AS3P4185AE | $20,500 | 73 | 35 | 26 | $1,313 | $1,563 | $300 | $600 |
| 460 | 40 | 61.5 | AS3P4220AE | $21,500 | 73 | 35 | 26 | $1,400 | $1,650 | $300 | $600 |
| 460 | 50 | 74.5 | AS3P4300AE | $23,850 | 73 | 35 | 26 | $1,550 | $1,800 | $750 | $1,400 |
| 460 | 60 | 88 | AS3P4370AE | $26,500 | 73 | 35 | 26 | $1,650 | $1,900 | $750 | $1,400 |
| 460 | 75 | 106 | AS3P4450AE | $30,500 | 75 | 48 | 30 | $1,900 | $2,150 | $750 | $1,400 |
| 460 | 100 | 145 | AS3P4550AE | $35,100 | 75 | 48 | 30 | $2,350 | $2,600 | $750 | $1,400 |
| 460 | 125 | 173 | AS3P4750AE | $39,600 | 75 | 48 | 30 | $2,550 | $2,800 | $1,500 | $1,750 |
| 460 | 150 | 211 | AS3P4900AE | $59,000 | 76 | 48 | 32 | $2,800 | $3,050 | $1,500 | $1,750 |
| 460 | 200 | 250 | AS3P4110KAE | $61,000 | 76 | 48 | 32 | $2,900 | $3,150 | $1,500 | $1,750 |
| 460 | 250 | 302 | AS3P4132KAE | $62,500 | 76 | 48 | 32 | $3,250 | $3,500 | $1,500 | $1,750 |

**Notes:**
• ASDAS3 Discount Symbol applies to AS3P base models. ASD C Discount Symbol applies to all configured items.

# AS3P Outdoor

## 460 V Assembly Unit Options



| Basic Surge Arrestor | Raycap Strikesorb Surge Arrestor | 2 or 3 Position Switch | Speed Potentiometer | Push Button | Pilot Light | Cabinet Space Heater | Motor Space Heater Circuit |
|---|---|---|---|---|---|---|---|
| $650 | $2,375 | $375 | $400 | $250 | $250 | $1,500 | $700 |

**Notes:**
• ASDAS3 Discount Symbol applies to AS3P base models. ASD C Discount Symbol applies to all configured items.

# AS3 General Purpose

## Options Information & Pricing



### AS3 Conduit Adapters

| 230 V AS3 Model Number | 460 V AS3 Model Number | 600 V AS3 Model Number | Frame | Conduit Adapter Model Number | List Price | Height Increase (in.) | Stand Alone Drive Rating |
|---|---|---|---|---|---|---|---|
| VFAS3-2004P | VFAS3-4004PC | | A1 | Included | N/A | N/A | UL Type 1 |
| VFAS3-2007P | VFAS3-4007PC | | | | | | |
| VFAS3-2015P | VFAS3-4015PC | | | | | | |
| VFAS3-2022P | VFAS3-4022PC | | | | | | |
| | VFAS3-4037PC | | | | | | |
| VFAS3-2037P | VFAS3-4055PC | | A2 | | | | |
| | VFAS3-4075PC | | | | | | |
| VFAS3-2055P | VFAS3-4110PC | | A3 | | | | |
| VFAS3-2075P | VFAS3-4150PC | | | | | | |
| | VFAS3-4185PC | | | | | | |
| VFAS3-2110P | VFAS3-4220PC | | A4 | | | | |
| VFAS3-2150P | VFAS3-4300PC | | | | | | |
| VFAS3-2185P | VFAS3-4370PC | | | | | | |
| VFAS3-2220P | VFAS3-4450PC | | A5 | | | | |
| VFAS3-2300P | VFAS3-4550PC | | | | | | |
| VFAS3-2370P | VFAS3-4750PC | | | | | | |
| VFAS3-2450P | VFAS3-4900PC | | A6 | NEM1306Z | $1,750 | 13.7 | IP00 |
| VFAS3-2550P | VFAS3-4110KPC | | | | | | |
| | VFAS3-4132KPC | | | | | | |
| | VFAS3-4160KPC | | A7 | NEM1112Z | $1,300 | 15.5 | |
| | VFAS3-4200KPC | | A8 | NEM1113Z | $1,755 | | |
| | VFAS3-4220KPC | | | | | | |
| | VFAS3-4280KPC | | | | | | |
| | | VFAS3-6022PC | A1Y | NEM301Z | $600 | 5.3 | IP00 |
| | | VFAS3-6030PC | | | | | |
| | | VFAS3-6040PC | | | | | |
| | | VFAS3-6055PC | | | | | |
| | | VFAS3-6075PC | | | | | |
| | | VFAS3-6110PC | | | | | |
| | | VFAS3-6150PC | | | | | |
| | | VFAS3-6185PC | | | | | |
| | | VFAS3-6220PC | | | | | |
| | | VFAS3-6300PC | A2Y | NEM302Z | $800 | 7 | IP00 |
| | | VFAS3-6370PC | | | | | |
| | | VFAS3-6450PC | | | | | |
| | | VFAS3-6550PC | | | | | |
| | | VFAS3-6750PC | | | | | |

**Notes:**

- AS3 units rated IP00 do not include a bottom cover.
- Stand-alone AS3 power units from frame A6 through A8 do not comply with UL Type 1 standards. The conduit adapters listed above will bring the power unit into UL Type 1 compliance.
- Frame A7 and A8 do not meet UL requirements unless installed in a cabinet. See user manual for more information.

# AS3 General Purpose

## Options Information & Pricing





### AS3 Flange-Mount Kits

| 230 V AS3 Model Number | 460 V AS3 Model Number | Frame | Flange-Mount Kit Model Number | List Price |
|---|---|---|---|---|
| VFAS3-2004P | VFAS3-4004PC | A1 | FOT018Z | $300 |
| VFAS3-2007P | VFAS3-4007PC | | | |
| VFAS3-2015P | VFAS3-4015PC | | | |
| VFAS3-2022P | VFAS3-4022PC | | | |
| | VFAS3-4037PC | | | |
| VFAS3-2037P | VFAS3-4055PC | A2 | FOT019Z | $400 |
| | VFAS3-4075PC | | | |
| VFAS3-2055P | VFAS3-4110PC | A3 | FOT020Z | $450 |
| VFAS3-2075P | VFAS3-4150PC | | | |
| | VFAS3-4185PC | | | |
| VFAS3-2110P | VFAS3-4220PC | A4 | FOT021Z | $650 |
| VFAS3-2150P | VFAS3-4300PC | | | |
| VFAS3-2185P | VFAS3-4370PC | | | |
| VFAS3-2220P | VFAS3-4450PC | A5 | FOT022Z | $700 |
| VFAS3-2300P | VFAS3-4550PC | | | |
| VFAS3-2370P | VFAS3-4750PC | | | |
| VFAS3-2450P | VFAS3-4900PC | A6 | FOT023Z | $1,815 |
| VFAS3-2550P | VFAS3-4110KPC | | | |
| | VFAS3-4132KPC | | | |
| | VFAS3-4160KPC | A7 | FOT013Z | $1,050 |
| | VFAS3-4200KPC | A8 | FOT014Z | $1,420 |
| | VFAS3-4220KPC | | | |
| | VFAS3-4280KPC | | | |

**Notes:**

• The flange-mount kit allows the AS3 to be installed inside an enclosure with the heat sink mounted out-the-back to reduce cooling requirements and minimize enclosure dimensions.

# AS3 General Purpose
## Options Information & Pricing



### AS3 Options

| Model Number | Description | Applicable Option Slot | List Price |
|---|---|---|---|
| SBP010Z | Door mounting kit for the AS3 keypad<br>Retains the IP65 rating of the keypad | N/A | $100 |
| CAB0011-0A | One meter cable for remote mounting the AS3 keypad | | $40 |
| CAB0012-0A | Two meter cable for remote mounting the AS3 keypad | | $50 |
| CAB0015-0A | Five meter cable for remote mounting the AS3 keypad | | $60 |
| CAN001Z | CAN Open® communication option card<br>Includes two RJ45 ports | A | $150 |
| DEV003Z | DeviceNet® communication option card | | $550 |
| IPE003Z | EtherCAT ® communication option card | | $400 |
| PDP003Z | PROFIBUS® communication option card | | $450 |
| PNE001Z | PROFINET® communication option card | | $400 |
| ETB013Z | I/O extension 1 option card<br>Includes:<br>-6 digital inputs<br>-2 digital open collector outputs<br>-2 analog inputs | A, B, or C | $400 |
| ETB014Z | I/O extension 2 option card<br>Includes:<br>-3 relay outputs | | $250 |
| VEC008Z | RS422 line driver encoder feedback card | B | $200 |
| VEC010Z | Resolver feedback card | | $300 |
| HD15-TB | HD15 to terminal block D-Sub Make Connector for VEC008Z card | N/A | $220 |
| AS3-ACI | 120VAC logic input control terminal card Includes:<br>-6 120VAC digital inputs<br>-3 relay outputs<br>-3 analog inputs<br>-2 analog outputs<br>-STO terminals | Replaces Default Control Terminal Strip | $350 |

# AS3 General Purpose

## Options Information & Pricing



### AS3 IGBT7 Braking Units

| 230 V AS3 Model Number | 460 V AS3 Model Number | Frame | IGBT7 Braking Unit Model Number | List Price |
|---|---|---|---|---|
| VFAS3-2004P | VFAS3-4004PC | A1 | Included | N/A |
| VFAS3-2007P | VFAS3-4007PC | | | |
| VFAS3-2015P | VFAS3-4015PC | | | |
| VFAS3-2022P | VFAS3-4022PC | | | |
| | VFAS3-4037PC | | | |
| VFAS3-2037P | VFAS3-4055PC | A2 | | |
| | VFAS3-4075PC | | | |
| VFAS3-2055P | VFAS3-4110PC | A3 | | |
| VFAS3-2075P | VFAS3-4150PC | | | |
| | VFAS3-4185PC | | | |
| VFAS3-2110P | VFAS3-4220PC | A4 | | |
| VFAS3-2150P | VFAS3-4300PC | | | |
| VFAS3-2185P | VFAS3-4370PC | | | |
| VFAS3-2220P | VFAS3-4450PC | A5 | | |
| VFAS3-2300P | VFAS3-4550PC | | | |
| VFAS3-2370P | VFAS3-4750PC | | | |
| VFAS3-2450P | VFAS3-4900PC | A6 | PB7-4132K | $4,000 |
| VFAS3-2550P | VFAS3-4110KPC | | | |
| | VFAS3-4132KPC | | | |
| | VFAS3-4160KPC | A7 | Included | N/A |
| | VFAS3-4200KPC | A8 | PB7-4200K | $5,500 |
| | VFAS3-4220KPC | | | |
| | VFAS3-4280KPC | | | |

# Micro Adjustable Speed Drives
# S15 Microdrive
## Specifications

Toshiba's heavy-duty S15 Microdrive is a compact, high-performance solution developed to control a wide range of variable and constant torque applications across multiple industries. The S15 features a two-wire RS485 communication port, expanded PID control and is capable of working with permanent magnet (PM) motors, providing greater flexibility in motor selection. Extensive capabilities include past trip monitoring with data storage for the last eight faults, a rotary encoder, and LED display. With reliable performance and a competitive cost, the S15 delivers robust functionality in a space-saving design.

### Product Scope

200 to 230 V at 0.5 to 20 HP
380 to 460 V at 0.5 to 20 HP
525 to 600 V at 2 to 20 HP

### Single Phase

200 to 230 V at 0.25 to 3 HP

### Highlights

- 110% Continuous Overload Rating, 150% for 60 Seconds
- Three Programmable Discrete Outputs: One Form-A, One Form-C & One Open Collector
- Six Programmable Discrete Inputs
- One Programmable Analog Outputs: 4 to 20 mA or 0 to 10 VDC
- Three Programmable Analog Inputs: One 4 to 20 mA Input, One 0 to 10 VDC Input & One ±10 VDC Input
- Ten Year Life-Long Design
- Compact Design
- Capable of Working with Permanent Magnet (PM) Motors
- Safe Torque Off (STO) Compliant
- Auto-Restart Operation/Catch a Spinning Motor

### Standard Features

- IP20 Enclosure; Wall-Mount
- Past Trip Monitoring: Stores the Last Eight Faults in Succession, Along with At-Trip Operation Data
- Rotary Encoder
- EOI: Four-Digit/Seven-Segment LED Display
- Ambient Temperature: 14° to 122°F (-10° to 50°C)
- Humidity: 95% Non-Condensing
- Altitude: Up to 1000 Meters without Derate
- Two-Wire RS485 Communication Port
- Compliances: UL Listed in US & Canada, CSA® & CE®



# S15 Microdrive

## S15 Power Unit

## Pricing & Dimensions



| VAC | HP | FLA | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| 230 Single-Phase | 0.25 | 1.5 | VFS15S-2002PL-W1 | $440 | 1C2 | 5.1 | 2.8 | 4.0 | 2.9 |
| 230 Single-Phase | 0.5 | 3.3 | VFS15S-2004PL-W1 | $460 | 1C2 | 5.1 | 2.8 | 4.7 | 3.1 |
| 230 Single-Phase | 1 | 4.8 | VFS15S-2007PL-W1 | $490 | 1C2 | 5.1 | 2.8 | 5.3 | 3.5 |
| 230 Single-Phase | 2 | 8 | VFS15S-2015PL-W1 | $590 | 2C2 | 5.1 | 4.1 | 5.9 | 4.4 |
| 230 Single-Phase | 3 | 11 | VFS15S-2022PL-W1 | $680 | 2C2 | 5.1 | 4.1 | 5.9 | 4.4 |

| VAC | HP | FLA | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| 230 | 0.5 | 3.3 | VFS15-2004PM-W1 | $440 | 1C3 | 5.1 | 2.8 | 4.7 | 2.9 |
| 230 | 1 | 4.8 | VFS15-2007PM-W1 | $480 | 1C3 | 5.1 | 2.8 | 5.1 | 3.1 |
| 230 | 2 | 8 | VFS15-2015PM-W1 | $620 | 2F3 | 5.1 | 4.1 | 5.1 | 4.0 |
| 230 | 3 | 11 | VFS15-2022PM-W1 | $700 | 2F3 | 5.1 | 4.1 | 5.1 | 4.2 |
| 230 | 5 | 17.5 | VFS15-2037PM-W1 | $950 | 3F3 | 6.7 | 5.5 | 5.9 | 6.0 |
| 230 | 7.5 | 27.5 | VFS15-2055PM-W1 | $1,350 | 4C3 | 8.7 | 5.9 | 6.7 | 10.8 |
| 230 | 10 | 33 | VFS15-2075PM-W1 | $1,480 | 4C3 | 8.7 | 5.9 | 6.7 | 11.0 |
| 230 | 15 | 54 | VFS15-2110PM-W1 | $1,970 | 5C3 | 12.2 | 7.1 | 7.5 | 19.4 |
| 230 | 20 | 66 | VFS15-2150PM-W1 | $2,500 | 5C3 | 12.2 | 7.1 | 7.5 | 19.8 |

| VAC | HP | FLA | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| 460 | 0.5 | 1.5 | VFS15-4004PL1-W1 | $580 | 2C4 | 5.1 | 4.2 | 5.9 | 4.0 |
| 460 | 1 | 2.3 | VFS15-4007PL1-W1 | $610 | 2C4 | 5.1 | 4.2 | 5.9 | 4.2 |
| 460 | 2 | 4.1 | VFS15-4015PL1-W1 | $730 | 2C4 | 5.1 | 4.2 | 5.9 | 4.4 |
| 460 | 3 | 5.5 | VFS15-4022PL1-W1 | $840 | 3C4 | 6.7 | 5.5 | 5.9 | 6.6 |
| 460 | 5 | 9.5 | VFS15-4037PL1-W1 | $1,010 | 3C4 | 6.7 | 5.5 | 5.9 | 7.3 |
| 460 | 7.5 | 14.3 | VFS15-4055PL-W1 | $1,470 | 4C4 | 8.7 | 5.9 | 6.7 | 11.7 |
| 460 | 10 | 17 | VFS15-4075PL-W1 | $1,530 | 4C4 | 8.7 | 5.9 | 6.7 | 11.9 |
| 460 | 15 | 27.7 | VFS15-4110PL-W1 | $2,110 | 5C4 | 12.2 | 7.1 | 7.5 | 19.2 |
| 460 | 20 | 33 | VFS15-4150PL-W1 | $2,500 | 5C4 | 12.2 | 7.1 | 7.5 | 19.4 |

| VAC | HP | FLA | Model Number | List Price | Frame | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | |
| 600 | 2 | 2.7 | VFS15-6015P-W1 | $800 | S2C6 | 5.2 | 4.2 | 6.0 | 2.4 |
| 600 | 3 | 3.9 | VFS15-6022P-W1 | $900 | S3C6 | 6.7 | 5.6 | 6.0 | 4.0 |
| 600 | 5 | 6.1 | VFS15-6037P-W1 | $1,050 | S3C6 | 6.7 | 5.6 | 6.0 | 4.2 |
| 600 | 7.5 | 9 | VFS15-6055P-W1 | $1,920 | S4C6 | 8.7 | 6.0 | 6.7 | 7.9 |
| 600 | 10 | 11 | VFS15-6075P-W1 | $2,140 | S4C6 | 8.7 | 6.0 | 6.7 | 8.2 |
| 600 | 15 | 17 | VFS15-6110P-W1 | $2,740 | S5C6 | 12.3 | 7.1 | 7.5 | 13.4 |
| 600 | 20 | 22 | VFS15-6150P-W1 | $2,960 | S5C6 | 12.3 | 7.1 | 7.5 | 13.7 |

# S15 Microdrive

## S15 Option

## Information & Pricing



### S15 Conduit Adapters

| 230 V Drive Model Numbers | 460 V Drive Model Numbers | 600 V Drive Model Numbers | Model Numbers | List Price | Height Increase (in.) |
|---|---|---|---|---|---|
| VFS15-2004<br>VFS15-2007<br>VFS15S-2002<br>VFS15S-2004<br>VFS15S-2007 | N/A | N/A | NEM201Z | $180 | 2.57 |
| VFS15-2015<br>VFS15-2022 | N/A | N/A | NEM202Z | $80 | 2.58 |
| VFS15S-2015<br>VFS15S-2022 | N/A | N/A | NEM203Z | $150 | 2.58 |
| N/A | VFS15-4004PL<br>VFS15-4007PL<br>VFS15-4015PL | N/A | NEM204Z | $110 | 2.58 |
| N/A | VFS15-4004PL1<br>VFS15-4007PL1<br>VFS15-4015PL1 | VFS15-6015 | NEM209Z | $180 | 2.56 |
| N/A | VFS15-4022PL1<br>VFS15-4037PL1 | VFS15-6022<br>VFS15-6037 | NEM210Z | $180 | 3.01 |
| VFS15-2037 | N/A | N/A | NEM205Z | $95 | 2.62 |
| N/A | VFS15-4022PL<br>VFS15-4037PL | N/A | NEM206Z | $135 | 2.56 |
| VFS15-2055<br>VFS15-2075 | VFS15-4055<br>VFS15-4075 | VFS15-6055<br>VFS15-6075 | NEM207Z | $125 | 3.70 |
| VFS15-2110<br>VFS15-2150 | VFS15-4110<br>VFS15-4150 | VFS15-6110<br>VFS15-6150 | NEM208Z | $190 | 3.88 |

**Notes:**
- Conduit adapters are mounted below the power terminal strips and replace the plastic plate provided with the drive.
- Conduit adapters provide mechanical strength and a location for a conduit connector.
- S15 power units do not meet UL requirements unless installed in a cabinet. See user manual for more information.
- The height of the S15 will increase with the addition of the conduit adapter.

# S15 Microdrive

## S15 Option

## Information & Pricing



DIN005Z Front



DIN005Z Back

### DIN Rail Mounting Kits

| 230 V Drive Model Numbers | 460 V Drive Model Numbers | 600 V Drive Model Numbers | Model Numbers | List Price |
|---|---|---|---|---|
| VFS15S-2002<br>VFS15S-2004<br>VFS15S-2007<br>VFS15-2004<br>VFS15-2007 | N/A | N/A | DIN003Z | $75 |
| VFS15S-2015<br>VFS15S-2022<br>VFS15-2015<br>VFS15-2022 | VFS15-4004<br>VFS15-4007<br>VFS15-4015 | VFS15-6015 | DIN005Z | $100 |

# S15 Microdrive

## S15 Option

## Information & Pricing

### Communication Cards, Keypads & Cables

| Model Number | Description | List Price |
|---|---|---|
| RKP007Z | Remote Mount Keypad<br>One CAB001x-0A Cable is Necessary<br>Hardware Included  | $125 |
| CAB0011-0A | One-meter Communication Cable | $40 |
| CAB0012-0A | Two-meter Communication Cable | $50 |
| CAB0015-0A | Five-meter Communication Cable | $60 |
| PWU003Z | Parameter Writer Stores S15 Parameter Sets<br>Writes Program Sets to Drive With or Without Incoming Power to the Drive  | $1,050 |
| TOS-SN-10B | Remote-mount Touch-pad Includes 1.5-meter Connection Cable<br>M3 Mounting Hardware Not Included  | $225 |
| PDP003Z | Profibus® Communication Option Card for S15 Drive<br>SBP009Z Required  | $450 |
| DEV003Z | DeviceNet® Communication Option Card for S15 Drive<br>SBP009Z Required  | $550 |
| CAN001Z | CAN Open® Communication Option Card Includes two RJ45 Ports | $150 |
| PNE001Z | PROFINET® Communication Option Card | $400 |
| IPE002Z | Ethernet/IP® - Modbus TCP Communication Option Card for S15 Drive<br>SBP009Z Required  | $400 |

# S15 Microdrive

## S15 Option

## Information & Pricing

| Model Number | Description | List Price |
|---|---|---|
| IPE003Z | EtherCAT® Communication Option Card for S15 Drive<br>SBP009Z Required  | $400 |
| SBP009Z | S15 Communication Option Adapter  | $50 |
| USB001Z | USB-to-serial Conversion Unit<br>Allows Users to Use a USB Port on Computers as a COMport for Connecting it to an ASD for Data Communications<br>USB Input and RS485 or TTL Output for Use on S15<br>CAB001x-0A Required  | $230 |

**Notes:**

- All of the options listed above are not installed and ship separately.

# Nano Adjustable Speed Drives
# NC3 Nanodrive
## Specifications

The NC3 is a RoHS compliant, nano-sized adjustable speed drive optimized to meet the demands of most 120/220 V industrial or HVAC applications. It can be operated from either a single or three-phase power source, making it a reliable option for OEMs. Its easy installation and drop-in replacement for starters add to its appeal. The NC3 is RoHS-compliant, loaded with advanced features, including automated cooling fan control and parts replacement alarm offers a compact yet powerful solution for various industrial needs.

### Product Scope

200 to 230 V at 0.5 to 5 HP

### Single Phase

200 to 230 V at 0.5 to 3 HP
120V at 0.5 to 1 HP (Three-Phase 230VAC Output)

### Highlights

- Powerful, User-Friendly, Long-Life Nano-Sized Drive
- Features Include:
  - Automatic Torque Boost
  - Vector Control
  - PID
  - DC Braking
  - Automated Cooling Fan Control
  - Parts Replacement Alarm
- Modbus RTU Communication with RS485
- Options Include:
  - EMC Plate
- Remote Keypad IP54 Rated
- DIN Rail
- LCD Parameter Writer



# NC3 Nanodrive

## NC3 Power Unit
## Pricing & Dimensions



### NC3 230 V

| VAC | HP | FLA | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| 230 | 0.5 | 2.4 | VFNC3-2004P | $320 | 5.2 | 2.9 | 4.8 | 1.8 |
| 230 | 1 | 4.2 | VFNC3-2007P | $350 | 5.2 | 2.9 | 5.2 | 1.8 |
| 230 | 2 | 7.5 | VFNC3-2015P | $430 | 5.2 | 2.9 | 5.2 | 2.7 |
| 230 | 3 | 10.0 | VFNC3-2022P | $500 | 5.2 | 4.2 | 5.2 | 2.7 |
| 230 | 5 | 16.7 | VFNC3-2037P | $650 | 6.7 | 4.2 | 5.6 | 4.4 |

### NC3 230 V Single-Phase

| VAC | HP | FLA | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| 230 Single-Phase | 0.25 | 1.4 | VFNC3S-2002PL | $320 | 5.2 | 2.9 | 4.0 | 1.8 |
| 230 Single-Phase | 0.5 | 2.4 | VFNC3S-2004PL | $320 | 5.2 | 2.9 | 4.8 | 1.8 |
| 230 Single-Phase | 1 | 4.2 | VFNC3S-2007PL | $350 | 5.2 | 2.9 | 5.2 | 1.8 |
| 230 Single-Phase | 2 | 7.5 | VFNC3S-2015PL | $430 | 5.2 | 4.2 | 6.2 | 3.3 |
| 230 Single-Phase | 3 | 10.0 | VFNC3S-2022PL | $500 | 5.2 | 4.2 | 6.2 | 3.3 |

### NC3 120 V Single-Phase

| VAC | HP | FLA | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| 120 Single-Phase | 0.5 | 2.4 | VFNC3S-1004P | $410 | 5.1 | 2.8 | 4.8 | 2.2 |
| 120 Single-Phase | 1 | 4.2 | VFNC3S-1007P | $550 | 5.1 | 4.1 | 6.1 | 3.3 |

# Low Voltage Adjustable Speed Drives
# Plus Pack Outdoor
## Specifications

Toshiba's Plus Pack is a high-performance, large-horsepower adjustable speed drive (ASD) designed for energy efficiency in demanding applications. The UL Type 3R version is built for outdoor use, with a durable white paint finish that enhances resilience in harsh environments. Equipped with two Half/Full Duplex RS485 communication ports, it allows flexible and efficient data transmission, providing seamless integration with multiple devices and reliable communication in complex industrial networks. The Plus Pack delivers reliable, continuous operation, making it ideal for powering large industrial equipment, including pumps, compressors, and heavy-duty conveyor belts.

### Product Scope

380 to 460 V
6-Pulse: 100 to 1500 HP
12-Pulse: 100 to 1500 HP
18-Pulse: 100 to 800 HP

### Highlights

- Proprietary VLP Technology®
- No Flow/Low NPSH Cut-Off
- Maximized Energy Savings on Variable Torque Loads
- Time-Based Alternation
- Regenerative Power Ride Through
- 18-Pulse Diode Front-End (Option)
- Non Air-to-Air Heat Exchangers
- 100% Continuous Overload Rating, 120% for 60 Seconds
- Eight Programmable Discrete Inputs with Selectable Sync or Source Logic
- Three Programmable Discrete Output Contacts: Two Form-A Contacts & One Form-C Contact
- Three Programmable Analog Inputs: One 0 to 20 mA or 0 to 10 VDC, One 0 to 10 VDC & One ±10 VDC
- Two Programmable Analog Outputs: One 4 to 20 mA or 0 to 10 VDC & One 4 to 20 mA Isolated Output
- Two Half/Full Duplex RS485 Communication Ports
- Auto-Restart Operation/Catch a Spinning Motor

### Standard Features

- UL Type 1 or 3R Enclosure
- 18-Pulse Auto Phase-Shifting Transformer (Optional)
- Built-In, Real-Time Clock
- Two Protective Function Activation Relay Contact Outputs
- Past Trip Monitoring: Stores the Last Four Faults in Succession, Along with Cumulative At-Trip Times
- EOI: Four-Digit/Seven-Digit LED Display
- Save, Restore & Clone Multiple Drive Settings
- Ambient Temperature: 14° to 122°F (-10° to 50°C)
- Altitude: Up to 1500 Meters without Derate
- Humidity: 95% Non-Condensing
- Standards/Compliances: IEEE®, UL Listed in US & Canada, NEMA® & NEC®



VLP Technology® as used herein refers to Virtual Linear Pump technology.

# Plus Pack Outdoor

## Part Numbering Convention



Use the following part numbering system when ordering a Plus Pack.

| Example Part Number: | HX7+G | 4 | ##0/##K/##L | CB |
|---|---|---|---|---|

**Series:**
HX7+G — HX7 Plus Pack Rev. G

**Voltage:**
4 — 460

**Model Number:**

| | |
|---|---|
| 11K — 100 HP | 70K —7600 HP |
| 16K — 150 HP | 81K — 800 HP |
| 20K — 200 HP | 93K — 900 HP |
| 26K — 250 HP | 10L — 1000 HP |
| 39K — 350 HP | 12L — 1200 HP |
| 45K — 400 HP | 14L40 — 1400 HP |
| 51K40 — 500 HP | 15L40 — 1500 HP |
| 60K — 600 HP | |

**Style:**
CB — UL Type 3R, Includes Input Circuit Breaker
CB1 — UL Type 1, Includes Input Circuit Breaker
CC — UL Type 3R, Includes 12-pulse Input Circuit Breaker
CC1 — UL Type 1, Includes 12-pulse Input Circuit Breaker
CD — UL Type 3R, Includes 18-pulse Input Circuit Breaker

**Notes:**
- Plus Pack units do not include dynamic braking transistors as standard.
- 12-pulse adjustable speed drives require a 12-pulse phase-shifting transformer (not included).
- Height dimensions listed include removable eyebolts and base.
- Width dimensions listed include heat exchanger.
- Depth dimensions listed include door devices.
- 500, 1400, and 1500 HP Plus Packs are rated 40°C maximum.
- 18-pulse adjustable speed drives have an integrated 18-pulse phase-shifting transformer.
- Factory authorized startup (Plus Pack Startup and/or FS T&R course) is required on all ASDs 600 HP and larger.

# Plus Pack Outdoor

## 6-Pulse & 12 Pulse Unit (UL Type 1 Enclosure)

## Pricing & Dimensions



| VAC | HP (ND) | FLA (ND) | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| **6-Pulse Unit** | | | | | | | | |
| 460 | 250 | 313 | HX7+G426KCB1 | $47,100 | 81.5 | 37 | 40 | 1200 |
| 460 | 350 | 469 | HX7+G439KCB1 | $54,600 | 81.5 | 37 | 40 | 1200 |
| 460 | 400 | 546 | HX7+G445KCB1 | $62,100 | 81.5 | 37 | 40 | 1200 |
| 460 | 500 | 623 | HX7+G451K40CB1 | $69,600 | 81.5 | 37 | 40 | 1500 |
| 460 | 600 | 722 | HX7+G460KCB1 | $98,500 | 81.5 | 72 | 46 | 2000 |
| 460 | 700 | 842 | HX7+G470KCB1 | $102,800 | 81.5 | 72 | 46 | 2000 |
| 460 | 800 | 980 | HX7+G481KCB1 | $125,200 | 81.5 | 72 | 46 | 2000 |
| 460 | 900 | 1121 | HX7+G493KCB1 | $135,900 | 81.5 | 72 | 46 | 2000 |
| 460 | 1000 | 1203 | HX7+G410LCB1 | $145,600 | 81.5 | 72 | 46 | 3500 |
| 460 | 1200 | 1443 | HX7+G412LCB1 | $169,100 | 82.5 | 84 | 46 | 3500 |
| 460 | 1400 | 1684 | HX7+G414L40CB1 | $192,600 | 82.5 | 84 | 46 | 3500 |
| 460 | 1500 | 1804 | HX7+G415L40CB1 | $215,100 | 82.5 | 84 | 46 | 3500 |

| VAC | HP (ND) | FLA (ND) | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| **12-Pulse Unit** | | | | | | | | |
| 460 | 250 | 313 | HX7+G426KCC1 | $51,400 | 81.5 | 37 | 40 | 1200 |
| 460 | 350 | 469 | HX7+G439KCC1 | $58,900 | 81.5 | 37 | 40 | 1200 |
| 460 | 400 | 546 | HX7+G445KCC1 | $66,400 | 81.5 | 37 | 40 | 1200 |
| 460 | 500 | 623 | HX7+G451K40CC1 | $76,000 | 81.5 | 37 | 40 | 1500 |
| 460 | 600 | 722 | HX7+G460KCC1 | $104,900 | 81.5 | 72 | 46 | 2000 |
| 460 | 700 | 842 | HX7+G470KCC1 | $112,400 | 81.5 | 72 | 46 | 2000 |
| 460 | 800 | 980 | HX7+G481KCC1 | $133,800 | 81.5 | 72 | 46 | 2000 |
| 460 | 900 | 1121 | HX7+G493KCC1 | $144,500 | 81.5 | 72 | 46 | 2000 |
| 460 | 1000 | 1203 | HX7+G410LCC1 | $157,300 | 81.5 | 72 | 46 | 3500 |
| 460 | 1200 | 1443 | HX7+G412LCC1 | $181,900 | 82.5 | 84 | 46 | 3500 |
| 460 | 1400 | 1684 | HX7+G414L40CC1 | $205,500 | 82.5 | 84 | 46 | 3500 |
| 460 | 1500 | 1804 | HX7+G415L40CC1 | $229,000 | 82.5 | 84 | 46 | 3500 |

**Notes:**

- Dimensions and weights are for estimation purposes only — height dimensions listed include removable eyebolts and base; width dimensions listed include heat exchanger; depth dimensions listed include door devices.
- 500, 1400, and 1500 HP Plus Packs are rated 40°C maximum.
- Plus Pack units do not include dynamic braking transistors as standard.
- 12-pulse adjustable speed drives require a 12-pulse phase-shifting transformer (not included).
- Factory authorized startup (Plus Pack Startup and/or FS T&R course) is required on all ASDs 600 HP and larger.
- ASD H Discount Symbol applies to Plus Pack base models. ASD C Discount Symbol applies to all configured items.

# Plus Pack Outdoor

## 6-Pulse & 12 Pulse Unit (UL Type 3R Enclosure) Pricing & Dimensions



| VAC | HP (ND) | FLA (ND) | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| **6-Pulse Unit** | | | | | | | | |
| 460 | 100 | 133 | HX7+G411KCB | $34,300 | 81.5 | 25 | 35 | 1000 |
| 460 | 150 | 196 | HX7+G416KCB | $40,700 | 81.5 | 31.5 | 35 | 1000 |
| 460 | 200 | 241 | HX7+G420KCB | $42,800 | 81.5 | 31.5 | 35 | 1000 |
| 460 | 250 | 313 | HX7+G426KCB | $52,500 | 81.5 | 46 | 42 | 1200 |
| 460 | 350 | 469 | HX7+G439KCB | $63,200 | 81.5 | 46 | 42 | 1200 |
| 460 | 400 | 546 | HX7+G445KCB | $70,700 | 81.5 | 46 | 42 | 1200 |
| 460 | 500 | 623 | HX7+G451K40CB | $81,400 | 81.5 | 61 | 42 | 1500 |
| 460 | 600 | 722 | HX7+G460KCB | $106,000 | 81.5 | 90 | 48 | 2000 |
| 460 | 700 | 842 | HX7+G470KCB | $110,300 | 81.5 | 90 | 48 | 2000 |
| 460 | 800 | 980 | HX7+G481KCB | $131,700 | 81.5 | 90 | 48 | 2000 |
| 460 | 900 | 1121 | HX7+G493KCB | $143,400 | 81.5 | 90 | 48 | 2000 |
| 460 | 1000 | 1203 | HX7+G410LCB | $175,500 | 81.5 | 90 | 46 | 3500 |
| 460 | 1200 | 1443 | HX7+G412LCB | $201,200 | 82.5 | 110 | 48 | 3500 |
| 460 | 1400 | 1684 | HX7+G414L40CB | $215,100 | 82.5 | 110 | 48 | 3500 |
| 460 | 1500 | 1804 | HX7+G415L40CB | $232,200 | 82.5 | 110 | 48 | 3500 |

| VAC | HP (ND) | FLA (ND) | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| **12-Pulse Unit** | | | | | | | | |
| 460 | 100 | 133 | HX7+G411KCC | $39,600 | 81.5 | 25 | 35 | 1000 |
| 460 | 150 | 196 | HX7+G416KCC | $42,800 | 81.5 | 31.5 | 35 | 1000 |
| 460 | 200 | 241 | HX7+G420KCC | $46,100 | 81.5 | 31.5 | 35 | 1000 |
| 460 | 250 | 313 | HX7+G426KCC | $55,700 | 81.5 | 46 | 42 | 1200 |
| 460 | 350 | 469 | HX7+G439KCC | $67,500 | 81.5 | 46 | 42 | 1200 |
| 460 | 400 | 546 | HX7+G445KCC | $76,000 | 81.5 | 46 | 42 | 1200 |
| 460 | 500 | 623 | HX7+G451K40CC | $85,600 | 81.5 | 61 | 42 | 1500 |
| 460 | 600 | 722 | HX7+G460KCC | $113,500 | 81.5 | 90 | 48 | 2000 |
| 460 | 700 | 842 | HX7+G470KCC | $118,800 | 81.5 | 90 | 48 | 2000 |
| 460 | 800 | 980 | HX7+G481KCC | $140,200 | 81.5 | 90 | 48 | 2000 |
| 460 | 900 | 1121 | HX7+G493KCC | $153,100 | 81.5 | 90 | 48 | 2000 |
| 460 | 1000 | 1203 | HX7+G410LCC | $187,300 | 81.5 | 90 | 46 | 3500 |
| 460 | 1200 | 1443 | HX7+G412LCC | $214,000 | 82.5 | 110 | 48 | 3500 |
| 460 | 1400 | 1684 | HX7+G414L40CC | $229,000 | 82.5 | 110 | 48 | 3500 |
| 460 | 1500 | 1804 | HX7+G415L40CC | $246,100 | 82.5 | 110 | 48 | 3500 |

**Notes:**

- Dimensions and weights are for estimation purposes only — height dimensions listed include removable eyebolts and base; width dimensions listed include heat exchanger; depth dimensions listed include door devices.
- 100 HP do not utilize heat exchanger.
- 500, 1400, and 1500 HP Plus Packs are rated 40°C maximum.
- Plus Pack units do not include dynamic braking transistors as standard.
- 12-pulse adjustable speed drives require a 12-pulse phase-shifting transformer (not included).
- Factory authorized startup (Plus Pack Startup and/or FS T&R course) is required on all ASDs 600 HP and larger.
- ASD H Discount Symbol applies to Plus Pack base models. ASD C Discount Symbol applies to all configured items.

# Plus Pack Outdoor

## 18 Pulse Unit ( UL Type 3R Enclosure)
## (Phase Shifting AutoTransformer Included)
## Pricing & Dimensions



| VAC | HP (ND) | FLA (ND) | Model Number | List Price | H | W | D | Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | |
| **18-Pulse Unit** | | | | | | | | |
| 460 | 100 | 133 | HX7+G411KCD | $76,000 | 81.5 | 70 | 35 | 2550 |
| 460 | 150 | 196 | HX7+G416KCD | $83,500 | 81.5 | 70 | 35 | 2550 |
| 460 | 200 | 241 | HX7+G420KCD | $91,000 | 81.5 | 70 | 35 | 2550 |
| 460 | 250 | 313 | HX7+G426KCD | $115,600 | 81.5 | 93.5 | 44 | 3425 |
| 460 | 350 | 469 | HX7+G439KCD | $133,800 | 81.5 | 93.5 | 44 | 3650 |
| 460 | 400 | 546 | HX7+G445KCD | $149,800 | 81.5 | 93.5 | 44 | 3900 |
| 460 | 500 | 623 | HX7+G451K40CD | $183,000 | 81.5 | 93.5 | 44 | 3900 |
| 460 | 600 | 722 | HX7+G460KCD | $218,300 | 81.5 | 130 | 46.5 | 5700 |
| 460 | 700 | 842 | HX7+G470KCD | $245,100 | 81.5 | 130 | 46.5 | 5775 |
| 460 | 800 | 980 | HX7+G481KCD | $278,200 | 81.5 | 130 | 46.5 | 5775 |

**Notes:**

- Dimensions and weights are for estimation purposes only — height dimensions listed include removable eyebolts and base; width dimensions listed include heat exchanger; depth dimensions listed include door devices.
- 18-pulse adjustable speed drives have an integrated 18-pulse phase-shifting transformer.
- 500 HP 18-pulse Plus Pack is rated 40°C maximum.
- Plus Pack units do not include dynamic braking transistors as standard.
- Factory authorized startup (Plus Pack Startup and/or FS T&R course) is required on all ASDs 600 HP and larger.
- ASD H Discount Symbol applies to Plus Pack base models. ASD C Discount Symbol applies to all configured items.

# Plus Pack Outdoor

## Option Information & Pricing

### Installed Isolated Bypass

| Option Code | Description | List Price |
|---|---|---|
| AE | 100 HP Isolated Three-contactor Bypass | Consult Factory |
| | 150 HP Isolated Three-contactor Bypass | |
| | 200 HP Isolated Three-contactor Bypass | |
| | 250 HP Isolated Three-contactor Bypass | |
| | 350 HP Isolated Three-contactor Bypass | |
| | 400 HP Isolated Three-contactor Bypass | |
| | 500 HP Isolated Three-contactor Bypass | |
| | 600 HP Isolated Three-contactor Bypass | |
| | 700 HP Isolated Three-contactor Bypass | |
| | 800 HP Isolated Three-contactor Bypass | |

**Notes:**
- Bypasses are only available for 6-pulse adjustable speed drives. Consult factory for 900 HP and larger size adjustable speed drives on option availability.
- Dimensions will be significantly affected with bypass adders.

### Installed Dynamic Braking Transistors

| Option Code | Description | List Price |
|---|---|---|
| DB | 100 HP IGBT7 | $1,200 |
| | 150 to 200 HP IGBT7 | $1,500 |
| | 250 HP IGBT7 | $1,600 |
| | 350 to 500 HP IGBT7 | $2,000 |
| | 600 to 1500 HP IGBT7 | $3,000 |

**Notes:**
- Plus Packs 250 HP and above must use the 250 HP heavy duty dynamic braking resistor.
- Larger units have limited braking capacity.

### Service Entrance Requirement

| Option Code | Description | List Price |
|---|---|---|
| SE | Addition of neutral grounding bus to meeting service entrance requirement. | $12,000 |

# Plus Pack Outdoor
## Option Information & Pricing



### Installed Junction Boxes

| Option Code | Description | List Price |
|---|---|---|
| JB | 100 HP Junction Box | $1,350 |
| | 150 to 500 HP Junction Box (Standard on 518 kVA CB CC) | $2,225 |
| | 600 to 800 HP Junction Box | $3,900 |
| | 900 to 1500 HP Junction Box | $4,450 |

**Notes:**
- Junction box included on 18-pulse units.

### Installed DC Link Reactors

| Option Code | Description | List Price |
|---|---|---|
| RD | 150 HP-Installed DC Link Reactor | $2,000 |
| | 200 HP-Installed DC Link Reactor | $2,475 |
| | 250 HP-Installed DC Link Reactor | $2,750 |
| | 350 HP-Installed DC Link Reactor | $3,300 |
| | 400 HP-Installed DC Link Reactor | $3,575 |
| | 500 HP-Installed DC Link Reactor | $5,000 |
| | 600 HP-Installed DC Link Reactor | $6,000 |
| | 700 HP-Installed DC Link Reactor | $7,250 |
| | 800 HP-Installed DC Link Reactor | $7,500 |
| | 900 HP-Installed DC Link Reactor | $10,000 |
| | 1000 HP-Installed DC Link Reactor | $11,000 |
| | 1200 HP-Installed DC Link Reactor | $12,000 |
| | 1400 HP-Installed DC Link Reactor | $14,000 |
| | 1500 HP-Installed DC Link Reactor | $16,000 |

**Notes:**
- 60 to 100 HP Plus Pack power units do not have DC link reactor option connection points.
- DC link reactors included on 18-pulse units.




### Installed Raycap Surge Suppressors

| Option Code | Description | List Price |
|---|---|---|
| SS | Installed Raycap Surge Suppressors for CB & CD Units | $3,000 |
| | Installed Raycap Surge Suppressors for CC Units | $6,000 |

# Low Voltage ASD Options

## ASD Options

### Communication Options

| Part Number | Description | List Price |
|---|---|---|
| USB-485-2W | 2-Wire RS485 to USB Cable for PC to ASD Compatible with AS3, S15, Plus Pack | $150 |
| MIRIUS | Network Gateway that Supports the Following Protocols:<br>Modbus RTU<br>BACnet MS/TP<br>Metasys N2  | $1,400 |
| RJ45-TB | RJ45 to Terminal Block Adapter | $30 |

**Notes:**

- ASD C Discount Symbol applies to all configured items.

# Low Voltage ASD Options
## External Gateway Options

### Millennium Series Communication Options

| Part Number | Description | List Price |
|---|---|---|
| DNET-1000 | Network Gateway that Supports the Following Protocols:<br>DeviceNet®<br>Modbus RTU<br>BACnet MS/TP<br>Metasys N2  | $1,350 |
| ECAT-1000 | Network Gateway that Supports the Following Protocols:<br>EtherCAT®<br>Modbus RTU<br>BACnet MS/TP<br>Metasys N2  | $1,350 |
| ETH-1000 | Network Gateway that Supports the Following Protocols:<br>AB CSP (PCCC)<br>EtherNet/IP®<br>BACnet/IP<br>BACnet MS/TP<br>Modbus/TCP<br>Modbus RTU<br>Profinet IO<br>Metasys N2  | $1,725 |
| PBDP-1000 | Network Gateway that Supports the Following Protocols:<br>Profibus DP<br>Modbus RTU<br>BACnet MS/TP<br>Metasys N2  | $1,830 |

**Notes:**
- ASD C Discount Symbol applies to all configured items.

# Low Voltage ASD Options
## Configured ASD Options

### Installed Buttons

| Part Number | Description | List Price |
|---|---|---|
| BA | Automatic Bypass upon ASD Fault for Units with Bypass | $600 |
| B1 | Non-illuminated Push-button<br>Black Button for Stop<br>Red Button for Start<br>Controls ASD Only | $600 |
| BJ | Jog Push-button | $300 |
| BX | Miscellaneous Push-button | $300 |

**Notes:**
- ASD C Discount Symbol applies to all configured items.

### Installed Space Heaters

| Part Number | Description | List Price |
|---|---|---|
| HM | Motor Space Heater | $400 |
| HS | Cabinet Anti-condensation Space Heater Powered by Incoming Power<br>Activated when ASD is Not Running | $500 |
| HT | Cabinet Space Heater Powered by Incoming Power<br>Thermostat Controlled | $600 |
| T2 | 200 VA 120 V CPT for Motor Space Heater Power | $300 |

**Notes:**
- Voltage and wattage ratings required when specifying HM option.
- Motor space heater will be remotely powered by customer's power supply unless T2 option is also specified.
- Some motors may require CPT larger than 200 VA.
- ASD C Discount Symbol applies to all configured items.

### Installed Voltage Monitor Relay

| Part Number | Description | List Price |
|---|---|---|
| VM | Voltage Monitor Relay<br>Disables the Drive During a Phase Loss, Under Voltage or Phase Reversal Condition | $1,000 |

**Notes:**
- ASD C Discount Symbol applies to all configured items.

# Low Voltage ASD Options
## Configured ASD Options

### Installed Meters

| Part Number | Description | List Price |
|---|---|---|
| M1 | Output Voltage Current Meter Package | $350 |
| MA | Output Current Meter | $200 |
| ME | Elapsed Time Meter | $200 |
| MF | Output Frequency Meter | $200 |
| MV | Output Voltage Meter | $200 |
| MX | Miscellaneous Meter<br>Order by Description | CF |
| RT | RTD Monitor/Relay<br>12 RTD Inputs (Accepts Pt100, Ni100, Ni120, and Cu10 RTDs)<br>Door-mount Display | $4,400 |

**Notes:**
- AM and FM analog outputs are used for meter display.
- Please consult factory for availability and pricing if more than two meters are needed, as additional transformers may be required.
- CF = Consult Factory.
- ASD C Discount Symbol applies to all configured items.

# Low Voltage ASD Options
## Configured ASD Options

| Part number | Description | List Price |
|---|---|---|
| PA | Pilot Light for ASD Mode Indicator | $300 |
| PB | Pilot Light for Bypass Mode Indicator | $300 |
| PF | Pilot Light for Fault Indicator (Amber) | $300 |
| PG | Pilot Light for Stop Indicator (Green) | $300 |
| PP | Pilot Light for Power on Indicator (White) | $300 |
| PR | Pilot Light for Run Indicator (Red) | $300 |
| PX | Pilot Light for Miscellaneous Indicator<br>Specify at Time of Order | CF |

**Notes:**
- The discrete outputs OUT1, OUT2, and FLA/B/C are used to activate the pilot lights.
- For more than three active indicators, consult factory for pricing and availability of additional required hardware.
- CF = Consult Factory.
- ASD C Discount Symbol applies to all configured items.

## Miscellaneous Options

| Part Number | Description | List Price |
|---|---|---|
| X2 | Isolated 4 to 20 mA Transducer Connected to AM Terminal | $550 |
| X3 | Isolated 4 to 20 mA Transducer Connected to FM Terminal | $550 |
| X5 | Isolated 3 to 15 PSI Transducer Connected to VI Terminal | $680 |

**Notes:**
- ASD C Discount Symbol applies to all configured items.

# Low Voltage ASD Options

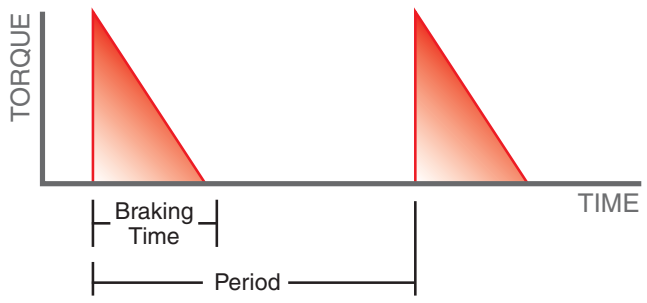
## Dynamic Braking Resistors

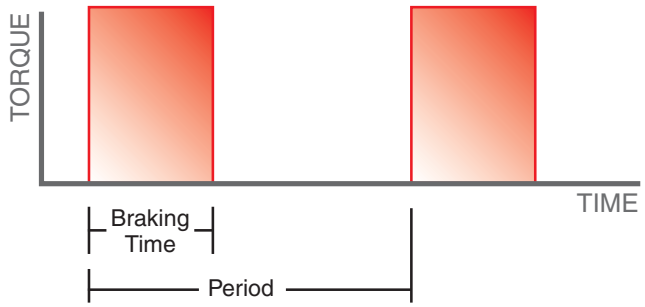
Dynamic braking resistors, also abbreviated as DBRs or PBRs (for power braking resistors), are typically designed to remove excess energy from a system in the form of heat. DBRs are normally connected in series with a chopper transistor labeled “IGBT7” across the DC bus which allows the resistor to bleed off excess voltage. Typical applications involving excess regeneration include decelerating high inertia loads and overhauling loads causing regenerative power.

Heavy duty resistors are rated at 125% braking torque and a maximum of 50% overhauling duty cycle or 100% decel rate on a two-minute period (ie. one minute on, one minute off for 50% overhauling cycle). Standard duty resistors are rated at 40% braking torque and a maximum of 20% overhauling duty cycle or 40% decel rate.

Heavy duty resistors are recommended for regenerative applications, while standard duty resistors are only recommended for applications with nuisance overvoltages.
DBRs must only be used in conjunction with thermal protection properly rated for the resistor’s capacity and an input contactor to open the input three-phase power to the ASD in the event that a DBR over-temperature condition occurs.

The DBR part numbering convention (BR-####-XXX*) is as follows:




BR — Braking Resistor
#### — Ohm Value with One Implied Decimal Place
XXX — Size in Watts
* — Watts Multiplier (0=Multiply by 1, K=Multiply 10, L=Multiply by 100, M=Multiply by 1,000)

**Notes:**

- Larger HP units have limited braking capacity.
- Dynamic braking parameters must be set correctly in order for DBRs to be used, failure to do so may result in damage to the drive or resistor. Parameter settings are typeform and application specific. Please see each ASD’s respective Installation and Operations Manual for more information.
- Dynamic braking transistors are not standard with all ASDs.
- Dynamic braking options listed are not necessarily the same as the options listed in the AS3, AS1, S11, or S15 Installation and Operations Manual.



# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 1 Indoor Rated Dynamic Braking Resistors

### 230 V Power Rating – Heavy Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 0.75 | BR-2000-3000-UL | 7 | 5 | 12 | $250 |
| 1 | BR-1500-3250-UL | 7 | 5 | 12 | $250 |
| 2 | BR-0760-6500-UL | 7 | 7 | 12 | $350 |
| 3 | BR-0510-120K-UL | 7 | 10 | 12 | $450 |
| 5 | BR-0300-160K-UL | 7 | 13 | 12 | $550 |
| 7.5 | BR-0198-240K-UL | 7 | 10 | 19 | $740 |
| 10 | BR-0155-349K-UL | 7 | 10 | 19 | $815 |
| 15 | BR-0099-524K-UL | 7 | 10 | 26.5 | $1,005 |
| 20 | BR-0073-612K-UL | 7 | 13 | 26.5 | $1,265 |
| 25 | BR-0065-842K-UL | 7 | 16 | 26.5 | $1,615 |
| 30 | BR-0055-112L-UL | 12 | 10 | 28 | $1,905 |
| 40 | BR-0040-144L-UL | 12 | 13 | 28 | $2,170 |
| 50 | BR-0033-168L-UL | 12 | 16 | 28 | $2,855 |
| 60 | BR-0027-195L-UL | 12 | 16 | 28 | $3,425 |
| 75 | BR-0022-250L-UL | 26 | 18 | 30 | $4,555 |
| 100 | BR-0017-316L-UL | 26 | 18 | 30 | $5,035 |
| 125 | BR-0013-384L-UL | 34 | 18 | 30 | $6,930 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

### 230 V Power Rating – Standard Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 0.75 | BR-6100-2500-UL | 7 | 5 | 12 | $250 |
| 1 | BR-4500-2500-UL | 7 | 5 | 12 | $250 |
| 2 | BR-2300-2500-UL | 7 | 5 | 12 | $250 |
| 3 | BR-1520-3250-UL | 7 | 5 | 12 | $250 |
| 5 | BR-0900-3500-UL | 7 | 5 | 12 | $250 |
| 7.5 | BR-0600-8000-UL | 7 | 7 | 12 | $350 |
| 10 | BR-0460-8000-UL | 7 | 7 | 12 | $350 |
| 15 | BR-0300-120K-UL | 7 | 10 | 12 | $450 |
| 20 | BR-0228-140K-UL | 7 | 13 | 12 | $550 |
| 25 | BR-0184-160K-UL | 7 | 13 | 12 | $550 |
| 30 | BR-0150-200K-UL | 7 | 16 | 12 | $640 |
| 40 | BR-0112-280K-UL | 7 | 13 | 19 | $900 |
| 50 | BR-0093-372K-UL | 7 | 10 | 19 | $815 |
| 60 | BR-0078-527K-UL | 7 | 10 | 26.5 | $1,005 |
| 75 | BR-0064-655K-UL | 7 | 13 | 26.5 | $1,265 |
| 100 | BR-0048-622K-UL | 7 | 13 | 26.5 | $1,370 |
| 125 | BR-0037-745K-UL | 7 | 13 | 26.5 | $1,370 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 1 Indoor Rated Dynamic Braking Resistors

### 460 V Power Rating – Heavy Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 1 | BR-6000-3500-UL | 7 | 5 | 12 | $250 |
| 2 | BR-3000-6500-UL | 7 | 7 | 12 | $350 |
| 3 | BR-2010-9750-UL | 7 | 10 | 12 | $450 |
| 5 | BR-1200-160K-UL | 7 | 13 | 12 | $550 |
| 7.5 | BR-0810-240K-UL | 7 | 10 | 19 | $740 |
| 10 | BR-0600-320K-UL | 7 | 13 | 19 | $900 |
| 15 | BR-0408-480K-UL | 7 | 13 | 26.5 | $1,255 |
| 20 | BR-0292-656K-UL | 7 | 13 | 26.5 | $1,265 |
| 25 | BR-0245-794K-UL | 7 | 16 | 26.5 | $1,480 |
| 30 | BR-0198-105L-UL | 12 | 10 | 28 | $1,745 |
| 40 | BR-0164-138L-UL | 12 | 16 | 28 | $2,400 |
| 50 | BR-0130-168L-UL | 12 | 16 | 28 | $2,855 |
| 60 | BR-0104-211L-UL | 18 | 18 | 30 | $3,440 |
| 75 | BR-0080-288L-UL | 26 | 18 | 30 | $4,395 |
| 100 | BR-0060-310L-UL | 34 | 18 | 30 | $5,580 |
| 125 | BR-0049-395L-UL | 34 | 18 | 30 | $6,220 |
| 150 | BR-0040-465L-UL | 42 | 18 | 30 | $7,815 |
| 200 | BR-0030-676L-UL | 50 | 18 | 30 | $10,220 |
| 250 | BR-0024-778L-UL | 50 | 18 | 30 | $10,375 |
| 300 | BR-0020-873L-UL | 50 | 18 | 30 | $12,365 |
| 350 | BR-0019-109M-UL | 42 | 18 | 30 | $15,310 |
| 400 | BR-0015-116M-UL | 42 | 18 | 30 | $17,320 |
| 450 | BR-0013-154M-UL | 58 | 18 | 30 | $22,480 |
| 550 | BR-0011-176M-UL | 58 | 18 | 30 | $25,460 |
| 600 | BR-0011-184M-UL | 58 | 18 | 30 | $26,255 |
| 700 | BR-0009-222M-UL | 58 | 18 | 30 | $32,730 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 1 Indoor Rated Dynamic Braking Resistors

#### 460 V Power Rating – Standard Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 1 | BR-180K-2500-UL | 7 | 5 | 12 | $250 |
| 2 | BR-9250-2500-UL | 7 | 5 | 12 | $250 |
| 3 | BR-6100-2500-UL | 7 | 5 | 12 | $250 |
| 5 | BR-3600-3500-UL | 7 | 5 | 12 | $250 |
| 7.5 | BR-2400-8000-UL | 7 | 7 | 12 | $350 |
| 10 | BR-1800-7000-UL | 7 | 7 | 12 | $350 |
| 15 | BR-1200-105K-UL | 7 | 10 | 12 | $450 |
| 20 | BR-0920-160K-UL | 7 | 13 | 12 | $550 |
| 25 | BR-0720-160K-UL | 7 | 13 | 12 | $550 |
| 30 | BR-0600-200K-UL | 7 | 16 | 12 | $640 |
| 40 | BR-0455-280K-UL | 7 | 13 | 19 | $840 |
| 50 | BR-0368-320K-UL | 7 | 13 | 19 | $900 |
| 60 | BR-0310-400K-UL | 7 | 16 | 19 | $1,095 |
| 75 | BR-0240-480K-UL | 7 | 13 | 26.5 | $1,255 |
| 100 | BR-0196-635K-UL | 7 | 13 | 26.5 | $1,265 |
| 125 | BR-0153-807K-UL | 7 | 16 | 26.5 | $1,480 |
| 150 | BR-0127-107L-UL | 12 | 13 | 28 | $1,980 |
| 200 | BR-0091-118L-UL | 12 | 13 | 28 | $2,170 |
| 250 | BR-0074-149L-UL | 12 | 13 | 28 | $2,375 |
| 300 | BR-0064-230L-UL | 18 | 18 | 30 | $3,440 |
| 350 | BR-0051-262L-UL | 26 | 18 | 30 | $4,715 |
| 400 | BR-0046-291L-UL | 34 | 18 | 30 | $5,580 |
| 450 | BR-0042-302L-UL | 26 | 18 | 30 | $5,520 |
| 550 | BR-0034-336L-UL | 26 | 18 | 30 | $5,330 |
| 600 | BR-0032-461L-UL | 34 | 18 | 30 | $6,545 |
| 700 | BR-0026-517L-UL | 34 | 18 | 30 | $7,720 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 1 Indoor Rated Dynamic Braking Resistors

### 600/690 V Power Rating – Heavy Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 2 | BR-6500-7000-UL | 7 | 7 | 12 | $350 |
| 3 | BR-4350-9750-UL | 7 | 10 | 12 | $450 |
| 5 | BR-2600-160K-UL | 7 | 13 | 12 | $550 |
| 7.5 | BR-1740-240K-UL | 7 | 10 | 19 | $740 |
| 10 | BR-1280-320K-UL | 7 | 13 | 19 | $900 |
| 15 | BR-0864-480K-UL | 7 | 13 | 26.5 | $1,255 |
| 20 | BR-0656-640K-UL | 12 | 10 | 28 | $1,255 |
| 25 | BR-0520-800K-UL | 12 | 13 | 28 | $1,905 |
| 30 | BR-0437-984K-UL | 12 | 10 | 28 | $1,745 |
| 40 | BR-0344-138L-UL | 12 | 13 | 28 | $2,160 |
| 50 | BR-0260-176L-UL | 12 | 16 | 28 | $2,585 |
| 60 | BR-0206-174L-UL | 18 | 18 | 30 | $3,175 |
| 75 | BR-0166-215L-UL | 18 | 18 | 30 | $3,765 |
| 100 | BR-0133-332L-UL | 26 | 18 | 30 | $5,360 |
| 125 | BR-0102-417L-UL | 34 | 18 | 30 | $6,580 |
| 150 | BR-0087-453L-UL | 42 | 18 | 30 | $7,655 |
| 200 | BR-0064-640L-UL | 42 | 18 | 30 | $9,445 |
| 250 | BR-0052-749L-UL | 58 | 18 | 30 | $10,225 |
| 300 | BR-0043-956L-UL | 74 | 18 | 30 | $14,260 |
| 350 | BR-0037-107M-UL | 42 | 18 | 30 | $18,500 |
| 400 | BR-0032-128M-UL | 42 | 18 | 30 | $18,895 |
| 450 | BR-0029-126M-UL | 42 | 18 | 30 | $18,500 |
| 550 | BR-0024-188M-UL | 66 | 18 | 30 | $26,990 |
| 700 | BR-0018-233M-UL | 58 | 18 | 30 | $31,640 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 1 Indoor Rated Dynamic Braking Resistors

### 600/690 V Power Rating – Standard Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 2 | BR-200K-2500-UL | 7 | 5 | 12 | $250 |
| 3 | BR-130K-2500-UL | 7 | 5 | 12 | $250 |
| 5 | BR-8000-3500-UL | 7 | 5 | 12 | $250 |
| 7.5 | BR-5200-5000-UL | 7 | 7 | 12 | $350 |
| 10 | BR-4000-7000-UL | 7 | 7 | 12 | $350 |
| 15 | BR-2700-105K-UL | 7 | 10 | 12 | $450 |
| 20 | BR-2000-140K-UL | 7 | 13 | 12 | $550 |
| 25 | BR-1600-160K-UL | 7 | 13 | 12 | $550 |
| 30 | BR-1300-200K-UL | 7 | 16 | 12 | $640 |
| 40 | BR-0980-280K-UL | 7 | 13 | 19 | $840 |
| 50 | BR-0784-320K-UL | 7 | 13 | 19 | $900 |
| 60 | BR-0650-400K-UL | 7 | 16 | 19 | $1,095 |
| 75 | BR-0528-480K-UL | 7 | 13 | 26.5 | $1,255 |
| 100 | BR-0400-640K-UL | 12 | 10 | 28 | $1,610 |
| 125 | BR-0310-794K-UL | 7 | 16 | 26.5 | $1,480 |
| 150 | BR-0264-140L-UL | 12 | 13 | 28 | $2,160 |
| 200 | BR-0208-141L-UL | 12 | 13 | 28 | $2,160 |
| 250 | BR-0160-164L-UL | 12 | 16 | 28 | $2,585 |
| 300 | BR-0126-202L-UL | 18 | 18 | 30 | $3,765 |
| 350 | BR-0117-237L-UL | 18 | 18 | 30 | $3,765 |
| 400 | BR-0102-255L-UL | 26 | 18 | 30 | $4,395 |
| 450 | BR-0088-317L-UL | 26 | 18 | 30 | $4,715 |
| 550 | BR-0073-356L-UL | 26 | 18 | 30 | $5,520 |
| 700 | BR-0055-448L-UL | 34 | 18 | 30 | $6,865 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 3R Outdoor Rated Dynamic Braking Resistors

### 230 V Power Rating – Heavy Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 1 | BR-1500-3250-W | 5 | 12 | 5 | $275 |
| 2 | BR-0760-6500-W | 5 | 12 | 7 | $385 |
| 3 | BR-0510-120K-W | 5 | 12 | 10 | $500 |
| 5 | BR-0300-160K-W | 5 | 12 | 13 | $600 |
| 7.5 | BR-0198-240K-W | 5 | 19 | 10 | $850 |
| 10 | BR-0155-349K-W | 5 | 19 | 10 | $900 |
| 15 | BR-0099-524K-W | 5 | 26.5 | 10 | $1,150 |
| 20 | BR-0073-612K-W | 5 | 26.5 | 13 | $1,450 |
| 25 | BR-0065-842K-W | 5 | 26.5 | 16 | $1,800 |
| 30 | BR-0055-112L-W | 10 | 28 | 10 | $2,100 |
| 40 | BR-0040-144L-W | 10 | 28 | 13 | $2,400 |
| 50 | BR-0033-168L-W | 10 | 28 | 16 | $3,150 |
| 60 | BR-0027-195L-W | 10 | 28 | 16 | $3,800 |
| 75 | BR-0022-250L-W | 24 | 30 | 18 | $5,050 |
| 100 | BR-0017-316L-W | 24 | 30 | 18 | $5,600 |
| 125 | BR-0013-384L-W | 32 | 30 | 18 | $7,650 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 3R Outdoor Rated Dynamic Braking Resistors

### 230 V Power Rating – Standard Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 1 | BR-4500-2500-W | 5 | 12 | 5 | $250 |
| 2 | BR-2300-2500-W | 5 | 12 | 5 | $250 |
| 3 | BR-1520-3250-W | 5 | 12 | 5 | $260 |
| 5 | BR-0900-3500-W | 5 | 12 | 5 | $260 |
| 7.5 | BR-0600-8000-W | 5 | 12 | 7 | $370 |
| 10 | BR-0460-8000-W | 5 | 12 | 7 | $400 |
| 15 | BR-0300-120K-W | 5 | 12 | 10 | $500 |
| 20 | BR-0228-140K-W | 5 | 12 | 13 | $600 |
| 25 | BR-0184-160K-W | 5 | 12 | 13 | $650 |
| 30 | BR-0150-200K-W | 5 | 12 | 16 | $750 |
| 40 | BR-0112-280K-W | 5 | 19 | 13 | $1,000 |
| 50 | BR-0093-372K-W | 5 | 19 | 10 | $1,050 |
| 60 | BR-0078-527K-W | 5 | 26.5 | 10 | $1,150 |
| 75 | BR-0064-655K-W | 5 | 26.5 | 13 | $1,400 |
| 100 | BR-0048-622K-W | 5 | 26.5 | 13 | $1,500 |
| 125 | BR-0037-745K-W | 5 | 26.5 | 13 | $1,550 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 3R Outdoor Rated Dynamic Braking Resistors

### 460 V Power Rating – Heavy Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 1 | BR-6000-3500-W | 5 | 12 | 5 | $250 |
| 2 | BR-3000-6500-W | 5 | 12 | 7 | $370 |
| 3 | BR-2010-9750-W | 5 | 12 | 10 | $500 |
| 5 | BR-1200-160K-W | 5 | 12 | 13 | $600 |
| 7.5 | BR-0810-240K-W | 5 | 19 | 10 | $850 |
| 10 | BR-0600-320K-W | 5 | 19 | 13 | $1,000 |
| 15 | BR-0408-480K-W | 5 | 26.5 | 13 | $1,400 |
| 20 | BR-0292-656K-W | 5 | 26.5 | 13 | $1,450 |
| 25 | BR-0245-794K-W | 5 | 26.5 | 16 | $1,550 |
| 30 | BR-0198-105L-W | 10 | 28 | 10 | $1,950 |
| 40 | BR-0164-138L-W | 10 | 28 | 16 | $2,650 |
| 50 | BR-0130-168L-W | 10 | 28 | 16 | $3,150 |
| 60 | BR-0104-211L-W | 16 | 30 | 18 | $3,850 |
| 75 | BR-0080-288L-W | 24 | 30 | 18 | $4,850 |
| 100 | BR-0060-310L-W | 32 | 30 | 18 | $6,050 |
| 125 | BR-0049-395L-W | 32 | 30 | 18 | $6,900 |
| 150 | BR-0040-465L-W | 40 | 30 | 18 | $8,400 |
| 200 | BR-0030-676L-W | 48 | 30 | 18 | $10,500 |
| 250 | BR-0024-778L-W | 48 | 30 | 18 | $11,750 |
| 300 | BR-0020-873L-W | 48 | 30 | 18 | $13,600 |
| 350 | BR-0019-109M-W | 2x40 | 2x30 | 2x18 | $16,050 |
| 400 | BR-0015-116M-W | 2x40 | 2x30 | 2x18 | $18,500 |
| 450 | BR-0013-154M-W | 2x56 | 2x30 | 2x18 | $24,650 |
| 550 | BR-0011-176M-W | 2x56 | 2x30 | 2x18 | $25,550 |
| 600 | BR-0011-184M-W | 2x56 | 2x30 | 2x18 | $29,000 |
| 700 | BR-0009-222M-W | 3x56 | 3x30 | 3x18 | $35,750 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 3R Outdoor Rated Dynamic Braking Resistors

### 460 V Power Rating – Standard Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 1 | BR-180K-2500-W | 5 | 12 | 5 | $250 |
| 2 | BR-9250-2500-W | 5 | 12 | 5 | $250 |
| 3 | BR-6100-2500-W | 5 | 12 | 5 | $260 |
| 5 | BR-3600-3500-W | 5 | 12 | 5 | $270 |
| 7.5 | BR-2400-8000-W | 5 | 12 | 7 | $370 |
| 10 | BR-1800-7000-W | 5 | 12 | 7 | $400 |
| 15 | BR-1200-105K-W | 5 | 12 | 10 | $500 |
| 20 | BR-0920-160K-W | 5 | 12 | 13 | $600 |
| 25 | BR-0720-160K-W | 5 | 12 | 13 | $650 |
| 30 | BR-0600-200K-W | 5 | 12 | 16 | $750 |
| 40 | BR-0455-280K-W | 5 | 19 | 13 | $900 |
| 50 | BR-0368-320K-W | 5 | 19 | 13 | $1,000 |
| 60 | BR-0310-400K-W | 5 | 19 | 16 | $1,200 |
| 75 | BR-0240-480K-W | 5 | 26.5 | 13 | $1,400 |
| 100 | BR-0196-635K-W | 5 | 26.5 | 13 | $1,450 |
| 125 | BR-0153-807K-W | 5 | 26.5 | 16 | $1,650 |
| 150 | BR-0127-107L-W | 10 | 28 | 13 | $2,200 |
| 200 | BR-0091-118L-W | 10 | 28 | 13 | $2,450 |
| 250 | BR-0074-149L-W | 10 | 28 | 13 | $2,800 |
| 300 | BR-0064-230L-W | 16 | 30 | 18 | $3,650 |
| 350 | BR-0051-262L-W | 24 | 30 | 18 | $4,950 |
| 400 | BR-0046-291L-W | 32 | 30 | 18 | $5,750 |
| 450 | BR-0042-302L-W | 24 | 30 | 18 | $6,000 |
| 550 | BR-0034-336L-W | 24 | 30 | 18 | $6,550 |
| 600 | BR-0032-461L-W | 32 | 30 | 18 | $7,300 |
| 700 | BR-0026-517L-W | 32 | 30 | 18 | $8,050 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 3R Outdoor Rated Dynamic Braking Resistors

### 600/690 V Power Rating – Heavy Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 2 | BR-6500-7000-W | 5 | 12 | 7 | $370 |
| 3 | BR-4350-9750-W | 5 | 12 | 10 | $500 |
| 5 | BR-2600-160K-W | 5 | 12 | 13 | $600 |
| 7.5 | BR-1740-240K-W | 5 | 19 | 10 | $850 |
| 10 | BR-1280-320K-W | 5 | 19 | 13 | $1,000 |
| 15 | BR-0864-480K-W | 5 | 26.5 | 13 | $1,250 |
| 20 | BR-0656-640K-W | 10 | 28 | 10 | $1,650 |
| 25 | BR-0520-800K-W | 10 | 28 | 13 | $2,000 |
| 30 | BR-0437-984K-W | 10 | 28 | 10 | $2,250 |
| 40 | BR-0344-138L-W | 10 | 28 | 13 | $2,500 |
| 50 | BR-0260-176L-W | 10 | 28 | 16 | $2,850 |
| 60 | BR-0206-174L-W | 16 | 30 | 18 | $3,450 |
| 75 | BR-0166-215L-W | 16 | 30 | 18 | $4,200 |
| 100 | BR-0133-332L-W | 24 | 30 | 18 | $5,950 |
| 125 | BR-0102-417L-W | 32 | 30 | 18 | $7,300 |
| 150 | BR-0087-453L-W | 40 | 30 | 18 | $8,400 |
| 200 | BR-0064-640L-W | 40 | 30 | 18 | $10,500 |
| 250 | BR-0052-749L-W | 56 | 30 | 18 | $11,750 |
| 300 | BR-0043-956L-W | 72 | 30 | 18 | $16,050 |
| 350 | BR-0037-107M-W | 2x40 | 2x30 | 2x18 | $19,100 |
| 400 | BR-0032-128M-W | 2x40 | 2x30 | 2x18 | $20,950 |
| 450 | BR-0029-126M-W | 2x40 | 2x30 | 2x18 | $23,450 |
| 550 | BR-0024-188M-W | 2x64 | 2x30 | 2x18 | $27,750 |
| 700 | BR-0018-233M-W | 3x56 | 3x30 | 3x18 | $32,650 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Resistors

### UL Type 3R Outdoor Rated Dynamic Braking Resistors

### 600/690 V Power Rating – Standard Duty Dynamic Braking Resistors

| HP | Model Number | H | W | D | List Price |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 2 | BR-200K-2500-W | 5 | 12 | 5 | $250 |
| 3 | BR-130K-2500-W | 5 | 12 | 5 | $260 |
| 5 | BR-8000-3500-W | 5 | 12 | 5 | $270 |
| 7.5 | BR-5200-5000-W | 5 | 12 | 7 | $370 |
| 10 | BR-4000-7000-W | 5 | 12 | 7 | $400 |
| 15 | BR-2700-105K-W | 5 | 12 | 10 | $500 |
| 20 | BR-2000-140K-W | 5 | 12 | 13 | $600 |
| 25 | BR-1600-160K-W | 5 | 12 | 13 | $650 |
| 30 | BR-1300-200K-W | 5 | 12 | 16 | $750 |
| 40 | BR-0980-280K-W | 5 | 19 | 13 | $950 |
| 50 | BR-0784-320K-W | 5 | 19 | 13 | $1,000 |
| 60 | BR-0650-400K-W | 5 | 19 | 16 | $1,200 |
| 75 | BR-0528-480K-W | 5 | 26.5 | 13 | $1,400 |
| 100 | BR-0400-640K-W | 10 | 28 | 10 | $1,800 |
| 125 | BR-0310-794K-W | 5 | 26.5 | 16 | $1,650 |
| 150 | BR-0264-140L-W | 10 | 28 | 13 | $2,250 |
| 200 | BR-0208-141L-W | 10 | 28 | 13 | $2,500 |
| 250 | BR-0160-164L-W | 10 | 28 | 16 | $3,100 |
| 300 | BR-0126-202L-W | 16 | 30 | 18 | $3,950 |
| 350 | BR-0117-237L-W | 16 | 30 | 18 | $4,450 |
| 400 | BR-0102-255L-W | 24 | 30 | 18 | $4,950 |
| 450 | BR-0088-317L-W | 24 | 30 | 18 | $5,250 |
| 550 | BR-0073-356L-W | 24 | 30 | 18 | $6,050 |
| 700 | BR-0055-448L-W | 32 | 30 | 18 | $7,400 |

**Notes:**
Dynamic braking resistors come with a normally-closed thermal switch and terminal block.

# Low Voltage ASD Options

## Dynamic Braking Modules

Dynamic Braking Modules are designed to activate an external braking resistor which in return will improve the performance of the adjustable speed drives. The module is connected to the positive and negative DC bus terminals of the drive to monitor the DC Bus Voltage and activate the braking resistor when needed. This will prevent any downtime due to over-voltage trips. These modules are extremely useful in applications that require the drive to take on regenerative power from the motor, such as decelerating high inertia loads and overhauling loads.

### 240 V Power Rating - Open Type Dynamic Braking Module

| Continuous Current | Model Number | Description | H | W | D | List Price |
|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | |
| 50 A | BM2-50 | 240 Volt Braking Module Rated 50A Continuous, Minimum 1.95 Ohms, UL | 11 | 6.38 | 5.1 | $1,620 |
| 115 A | BM2-115 | 240 Volt Braking Module Rated 115A Continuous, Minimum 1.95 Ohms, UL | 13.8 | 6.38 | 5.1 | $1,950 |
| 150 A | BM2-150 | 240 Volt Braking Module Rated 150A Continuous, Minimum 1.3 Ohms, UL | 13.8 | 6.38 | 5.1 | $2,200 |
| 450 A | BM240-450 | 240 Volt Braking Module Rated 450A Continuous, Minimum 0.65 Ohms, UL | 20 | 7.13 | 10 | $7,370 |
| 600 A | BM240-600 | 240 Volt Braking Module Rated 600A Continuous, Minimum 0.43 Ohms, UL | 20 | 7.13 | 10 | $8,520 |
| 900 A | BM240-900 | 240 Volt Braking Module Rated 900A Continuous, Minimum 0.29 Ohms, UL | 24 | 10.1 | 10 | $11,970 |
| 1200 A | BM240-1200 | 240 Volt Braking Module Rated 1200A Continuous, Minimum 0.22 Ohms, UL | 24 | 10.1 | 10 | $14,430 |

### 460 V Power Rating - Open Type Dynamic Braking Module

| Continuous Current | Model Number | Description | H | W | D | List Price |
|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | |
| 50 A | BM4-50 | 480 Volt Braking Module Rated 50A Continuous, Minimum 3.88 Ohms, UL | 11 | 6.38 | 5.1 | $1,620 |
| 115 A | BM4-115 | 480 Volt Braking Module Rated 115A Continuous, Minimum 3.88 Ohms, UL | 13.8 | 6.38 | 5.1 | $1,950 |
| 150 A | BM4-150 | 480 Volt Braking Module Rated 150A Continuous, Minimum 2.60 Ohms, UL | 13.8 | 6.38 | 5.1 | $2,200 |
| 450 A | BM480-450 | 480 Volt Braking Module Rated 450A Continuous, Minimum 1.29 Ohms, UL | 20 | 7.13 | 10 | $7,540 |
| 600 A | BM480-600 | 480 Volt Braking Module Rated 600A Continuous, Minimum 0.86 Ohms, UL | 20 | 7.13 | 10 | $8,700 |
| 900 A | BM480-900 | 480 Volt Braking Module Rated 900A Continuous, Minimum 0.57 Ohms, UL | 24 | 10.1 | 10 | $12,280 |
| 1200 A | BM480-1200 | 480 Volt Braking Module Rated 1200A Continuous, Minimum 0.43 Ohms, UL | 24 | 10.1 | 10 | $15,440 |

### 600 V Power Rating - Open Type Dynamic Braking Module

| Continuous Current | Model Number | Description | H | W | D | List Price |
|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | |
| 50 A | BM6-50 | 600 Volt Braking Module Rated 50A Continuous, Minimum 4.85 Ohms, UL | 11 | 6.38 | 5.1 | $1,830 |
| 115 A | BM6-115 | 600 Volt Braking Module Rated 115A Continuous, Minimum 4.85 Ohms, UL | 13.8 | 6.38 | 5.1 | $2,040 |
| 150 A | BM6-150 | 600 Volt Braking Module Rated 150A Continuous, Minimum 3.30 Ohms, UL | 13.8 | 6.38 | 5.1 | $2,270 |
| 450 A | BM600-450 | 600 Volt Braking Module Rated 450A Continuous, Minimum 1.62 Ohms, UL | 20 | 7.13 | 10 | $7,620 |
| 600 A | BM600-600 | 600 Volt Braking Module Rated 600A Continuous, Minimum 1.08 Ohms, UL | 20 | 7.13 | 10 | $8,840 |
| 900 A | BM600-900 | 600 Volt Braking Module Rated 900A Continuous, Minimum 0.72 Ohms, UL | 24 | 10.1 | 10 | $12,280 |
| 1200 A | BM600-1200 | 600 Volt Braking Module Rated 1200A Continuous, Minimum 0.54 Ohms, UL | 24 | 10.1 | 10 | $15,440 |

### 690 V Power Rating - Open Type Dynamic Braking Module

| Continuous Current | Model Number | Description | H | W | D | List Price |
|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | |
| 450 A | BM690-450 | 690 Volt Braking Module Rated 450A Continuous, Minimum 1.82 Ohms, UL | 20 | 7.13 | 10 | $7,620 |
| 600 A | BM690-600 | 690 Volt Braking Module Rated 600A Continuous, Minimum 1.21 Ohms, UL | 20 | 7.13 | 10 | $8,840 |
| 900 A | BM690-900 | 690 Volt Braking Module Rated 900A Continuous, Minimum 0.81 Ohms, UL | 24 | 10.1 | 10 | $12,450 |
| 1200 A | BM690-1200 | 690 Volt Braking Module Rated 1200A Continuous, Minimum 0.61 Ohms, UL | 24 | 10.1 | 10 | $16,160 |

# Reactors & Filters
## Line Reactors

Line reactors, also referred to as chokes, are passive-power conditioning devices. Reactors are most often applied to correct or prevent power-line problems inherent in ASD applications. When applied to the input of an adjustable speed drive, the line reactor is intended to protect the input of the drive from power-line problems or vice versa.

Applying line reactors is simple. There are two factors to consider when selecting the amperage and percent impedance for an application. For amperage, the line reactor must meet or exceed the current flow requirements of the application. The percent impedance indicates the expected voltage drop across the reactor at full load. For instance, if the input voltage is 460 VAC a 5% impedance line reactor is applied, a 13.86 volt drop [(460 x .05)/1.73] will occur with a resultant 466 VAC output.

### Typical Applications

### Input

- Reducing Reflected Harmonics to the Power-line
- High Ratios Between Point of Common Coupling (PCC) ASD's Power Capacity
- Example: A pad-mounted transformer has a capacity of 1000 kVA, the ASD has a capacity of 11 kVA (10 HP) for a ratio of 90:1 (stiff line). Toshiba suggests that a line reactor be used where the ratio is greater than 20:1

Nuisance trips due to line voltage spikes can be minimized, as the line reactor will reduce the magnitude duration of the transients.

### Output

- Adding Inductance to a Low Impedance Motor
- Excessively Long Motor Lead-lengths Must Be Addressed with a Long Lead-length Filter



# Reactors & Filters

## Line Reactors



### 230 V, 3% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 5 | 0.5 | 202311 | 3.63 | 4.45 | 1.78 | 1.4 | $130 |
| 5.5 | 1 | 202312 | 3.63 | 4.45 | 1.78 | 1.2 | $145 |
| 10 | 2 | 202313 | 3.63 | 4.45 | 1.78 | 1.3 | $160 |
| 12 | 3 | 202314 | 4.44 | 4.25 | 2.64 | 3 | $180 |
| 19 | 5 | 202315 | 5 | 6 | 4 | 8 | $265 |
| 25 | 7.5 | 202316 | 5 | 6 | 4 | 8 | $320 |
| 34 | 10 | 202317 | 5.75 | 7.2 | 4.25 | 12 | $330 |
| 48 | 15 | 202318 | 5.75 | 7.2 | 4.25 | 12 | $405 |
| 62 | 20 | 202319 | 5.75 | 7.2 | 4.25 | 12 | $515 |
| 80 | 25 | 202320 | 5.75 | 7.2 | 5 | 15 | $565 |
| 100 | 30 | 202321 | 7 | 9 | 7 | 30 | $700 |
| 118 | 40 | 202322 | 7 | 9 | 7 | 30 | $725 |
| 152 | 50 | 202323 | 7 | 9 | 7 | 30 | $850 |
| 180 | 60 | 202324 | 9 | 11 | 7 | 45 | $935 |
| 211 | 75 | 202325 | 9 | 11 | 7 | 50 | $1,010 |
| 280 | 100 | 202326 | 9 | 11 | 7 | 50 | $1,130 |

### 230 V, 3% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 5 | 0.5 | 202327 | 12.25 | 12.5 | 6.75 | 11.8 | $320 |
| 5.5 | 1 | 202328 | 12.25 | 12.5 | 6.75 | 11.6 | $340 |
| 10 | 2 | 202329 | 12.25 | 12.5 | 6.75 | 11.7 | $355 |
| 12 | 3 | 202330 | 12.25 | 12.5 | 6.75 | 13.4 | $375 |
| 19 | 5 | 202331 | 12.25 | 12.5 | 6.75 | 18.4 | $590 |
| 25 | 7.5 | 202332 | 12.25 | 12.5 | 6.75 | 18.4 | $645 |
| 34 | 10 | 202333 | 12.25 | 12.5 | 6.75 | 22.4 | $655 |
| 48 | 15 | 202334 | 12.25 | 12.5 | 6.75 | 22.4 | $730 |
| 62 | 20 | 202335 | 12.25 | 12.5 | 6.75 | 22.4 | $835 |
| 80 | 25 | 202336 | 12.25 | 12.5 | 6.75 | 25.4 | $885 |
| 100 | 30 | 202337 | 19.13 | 15.43 | 15.43 | 67 | $1,020 |
| 118 | 40 | 202338 | 19.13 | 15.43 | 15.43 | 67 | $1,350 |
| 152 | 50 | 202339 | 19.13 | 15.43 | 15.43 | 67 | $1,470 |
| 180 | 60 | 202340 | 22.12 | 20.43 | 24.37 | 112 | $2,080 |
| 211 | 75 | 202341 | 22.12 | 20.43 | 24.37 | 116 | $2,155 |
| 280 | 100 | 202342 | 22.12 | 20.43 | 24.37 | 116 | $2,270 |

# Reactors & Filters

## Line Reactors



### 230 V, 3% Type 3R Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 5 | 0.5 | 202343 | 11.45 | 10.31 | 12 | 16.4 | $590 |
| 5.5 | 1 | 202344 | 11.45 | 10.31 | 12 | 16.2 | $610 |
| 10 | 2 | 202345 | 11.45 | 10.31 | 12 | 16.3 | $625 |
| 12 | 3 | 202346 | 11.45 | 17.8 | 12 | 18 | $645 |
| 19 | 5 | 202347 | 11.5 | 10 | 12 | 23 | $740 |
| 25 | 7.5 | 202348 | 11.5 | 10 | 12 | 23 | $800 |
| 34 | 10 | 202349 | 11.5 | 10 | 12 | 27 | $810 |
| 48 | 15 | 202350 | 11.5 | 10 | 12 | 27 | $890 |
| 62 | 20 | 202351 | 11.5 | 10 | 12 | 27 | $995 |
| 80 | 25 | 202352 | 11.5 | 10 | 12 | 25.4 | $1,125 |
| 100 | 30 | 202353 | 19.18 | 15.62 | 19.5 | 68 | $1,355 |
| 118 | 40 | 202354 | 19.18 | 15.62 | 19.5 | 68 | $1,575 |
| 152 | 50 | 202355 | 19.18 | 15.62 | 19.5 | 68 | $1,715 |
| 180 | 60 | 202356 | 22.15 | 20.62 | 28.5 | 116 | $2,365 |
| 211 | 75 | 202357 | 22.15 | 20.62 | 28.5 | 120 | $2,455 |
| 280 | 100 | 202358 | 22.15 | 20.62 | 28.5 | 120 | $2,575 |

### 230 V, 5% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 0.5 | 202359 | 3.63 | 4.45 | 1.78 | 1.4 | $130 |
| 5 | 1 | 202360 | 3.63 | 4.45 | 1.78 | 1.2 | $150 |
| 10 | 2 | 202361 | 3.63 | 4.45 | 1.78 | 1.5 | $170 |
| 11 | 3 | 202362 | 4.44 | 4.25 | 2.64 | 2.6 | $190 |
| 17 | 5 | 202363 | 5 | 6 | 4 | 8 | $280 |
| 26 | 7.5 | 202364 | 5 | 6 | 4 | 8 | $340 |
| 31 | 10 | 202365 | 5.75 | 7 | 4.25 | 12 | $375 |
| 47 | 15 | 202366 | 5.75 | 7.2 | 4.25 | 12 | $445 |
| 62 | 20 | 202367 | 5.75 | 7.5 | 5 | 15 | $580 |
| 75 | 25 | 202368 | 7 | 9 | 6 | 30 | $655 |
| 92 | 30 | 202369 | 7 | 9 | 7 | 30 | $880 |
| 114 | 40 | 202370 | 7 | 9 | 7 | 30 | $990 |
| 143 | 50 | 202371 | 9 | 11 | 7 | 38 | $1,240 |
| 169 | 60 | 202372 | 9 | 11 | 7 | 45 | $1,330 |
| 220 | 75 | 202373 | 9 | 11 | 7 | 50 | $1,405 |
| 275 | 100 | 202374 | 9 | 11 | 7 | 50 | $1,795 |

# Reactors & Filters

## Line Reactors



### 230 V, 5% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 0.5 | 202375 | 12.25 | 12.5 | 6.75 | 11.8 | $325 |
| 5 | 1 | 202376 | 12.25 | 12.5 | 6.75 | 11.6 | $340 |
| 10 | 2 | 202377 | 12.25 | 12.5 | 6.75 | 11.9 | $360 |
| 11 | 3 | 202378 | 12.25 | 12.5 | 6.75 | 13 | $385 |
| 17 | 5 | 202379 | 12.25 | 12.5 | 6.75 | 18.4 | $600 |
| 26 | 7.5 | 202380 | 12.25 | 12.5 | 6.75 | 18.4 | $665 |
| 31 | 10 | 202381 | 12.25 | 12.5 | 6.75 | 22.4 | $695 |
| 47 | 15 | 202382 | 12.25 | 12.5 | 6.75 | 22.4 | $770 |
| 62 | 20 | 202383 | 12.25 | 12.5 | 6.75 | 25.4 | $905 |
| 75 | 25 | 202384 | 19.13 | 15.43 | 15.43 | 67 | $1,275 |
| 92 | 30 | 202385 | 19.13 | 15.43 | 15.43 | 67 | $1,335 |
| 114 | 40 | 202386 | 19.13 | 15.43 | 15.43 | 67 | $1,610 |
| 143 | 50 | 202387 | 19.13 | 15.43 | 15.43 | 75 | $1,860 |
| 169 | 60 | 202388 | 19.13 | 15.43 | 15.43 | 82 | $1,955 |
| 220 | 75 | 202389 | 22.12 | 20.43 | 24.37 | 116 | $2,550 |
| 275 | 100 | 202390 | 22.12 | 20.43 | 24.37 | 116 | $2,940 |

### 230 V, 5% Type 3R Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 0.5 | 202391 | 11.45 | 10.31 | 12 | 16.4 | $595 |
| 5 | 1 | 202392 | 11.45 | 10.31 | 12 | 16.2 | $610 |
| 10 | 2 | 202393 | 11.45 | 10.31 | 12 | 16.5 | $630 |
| 11 | 3 | 202394 | 11.45 | 17.8 | 12 | 17.6 | $655 |
| 17 | 5 | 202395 | 11.5 | 10 | 12 | 23 | $750 |
| 26 | 7.5 | 202396 | 11.5 | 10 | 12 | 23 | $820 |
| 31 | 10 | 202397 | 11.5 | 10 | 12 | 27 | $850 |
| 47 | 15 | 202398 | 11.5 | 10 | 12 | 27 | $930 |
| 62 | 20 | 202399 | 11.5 | 10 | 12 | 30 | $1,070 |
| 75 | 25 | 202400 | 19.18 | 15.62 | 19.5 | 67 | $1,410 |
| 92 | 30 | 202401 | 19.18 | 15.62 | 19.5 | 68 | $1,555 |
| 114 | 40 | 202402 | 19.18 | 15.62 | 19.5 | 68 | $1,845 |
| 143 | 50 | 202403 | 19.18 | 15.62 | 19.5 | 76 | $2,110 |
| 169 | 60 | 202404 | 19.18 | 15.62 | 19.5 | 83 | $2,200 |
| 220 | 75 | 202405 | 22.15 | 20.62 | 28.5 | 120 | $2,850 |
| 275 | 100 | 202406 | 22.15 | 20.62 | 28.5 | 120 | $3,245 |

# Reactors & Filters

## Line Reactors



### 460 V, 3% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 1.6 | 0.5 | 202407 | 3.63 | 4.45 | 1.78 | 1.3 | $100 |
| 2.3 | 1 | 202408 | 3.63 | 4.45 | 1.78 | 1.2 | $115 |
| 4.2 | 2 | 202409 | 3.63 | 4.45 | 1.78 | 1.4 | $130 |
| 5 | 3 | 202410 | 3.63 | 4.45 | 1.78 | 1.4 | $145 |
| 8.2 | 5 | 202411 | 4.44 | 4.25 | 2.64 | 3 | $160 |
| 11 | 7.5 | 202412 | 4.44 | 4.25 | 2.64 | 3.2 | $170 |
| 14 | 10 | 202413 | 4.44 | 4.25 | 2.64 | 3.3 | $215 |
| 30 | 15 | 202414 | 5 | 6 | 4 | 8 | $280 |
| 30 | 20 | 202415 | 5 | 6 | 4 | 8 | $350 |
| 50 | 25 | 202416 | 5.75 | 7.2 | 4.25 | 10 | $370 |
| 45 | 30 | 202417 | 5.75 | 7.2 | 4.25 | 10 | $435 |
| 55 | 40 | 202418 | 5.75 | 7.2 | 5 | 15 | $585 |
| 65 | 50 | 202419 | 7 | 9 | 6 | 25 | $600 |
| 77 | 60 | 202420 | 7 | 9 | 6 | 25 | $675 |
| 110 | 75 | 202421 | 7 | 9 | 7 | 30 | $920 |
| 150 | 100 | 202422 | 7 | 11 | 7 | 40 | $1,050 |
| 165 | 125 | 202423 | 9 | 11 | 7 | 40 | $1,285 |
| 185 | 150 | 202424 | 9 | 11 | 7 | 40 | $1,405 |
| 240 | 200 | 202425 | 9 | 11 | 8 | 65 | $1,575 |
| 340 | 250 | 202426 | 9 | 11 | 8 | 65 | $1,870 |
| 370 | 300 | 202427 | 9 | 11 | 8 | 65 | $2,060 |
| 500 | 350 | 202428 | 9 | 11 | 9 | 70 | $2,440 |
| 520 | 400 | 202429 | 9 | 11 | 9 | 70 | $2,445 |
| 610 | 450 | 202430 | 11.38 | 14.5 | 9.5 | 110 | $3,205 |
| 610 | 500 | 202431 | 11.38 | 14.5 | 9.5 | 110 | $3,805 |
| 750 | 600 | 202432 | 11.38 | 16 | 11 | 155 | $4,675 |
| 850 | 700 | 202433 | 11.38 | 15 | 12 | 158 | $6,360 |
| 965 | 800 | 202434 | 18.5 | 17.32 | 12.85 | 280 | $7,270 |
| 1100 | 900 | 202435 | 18.5 | 18.25 | 12.5 | 275 | $8,180 |
| 1216 | 1000 | 202436 | 18.5 | 18.25 | 12.5 | 290 | $9,085 |
| 1350 | 1100 | 202437 | 20 | 21 | 16 | 475 | $9,990 |
| 1500 | 1250 | 202438 | 20 | 21 | 14.75 | 500 | $11,355 |

# Reactors & Filters

## Line Reactors



### 460 V, 3% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 1.6 | 0.5 | 202439 | 12.25 | 12.5 | 6.75 | 11.7 | $295 |
| 2.3 | 1 | 202440 | 12.25 | 12.5 | 6.75 | 11.6 | $310 |
| 4.2 | 2 | 202441 | 12.25 | 12.5 | 6.75 | 11.8 | $325 |
| 5 | 3 | 202442 | 12.25 | 12.5 | 6.75 | 11.8 | $335 |
| 8.2 | 5 | 202443 | 12.25 | 12.5 | 6.75 | 13.4 | $350 |
| 11 | 7.5 | 202444 | 12.25 | 12.5 | 6.75 | 13.6 | $365 |
| 14 | 10 | 202445 | 12.25 | 12.5 | 6.75 | 13.7 | $405 |
| 30 | 15 | 202446 | 12.25 | 12.5 | 6.75 | 18.4 | $570 |
| 30 | 20 | 202447 | 12.25 | 12.5 | 6.75 | 18.4 | $640 |
| 50 | 25 | 202448 | 12.25 | 12.5 | 6.75 | 20.4 | $690 |
| 45 | 30 | 202449 | 12.25 | 12.5 | 6.75 | 20.4 | $760 |
| 55 | 40 | 202450 | 12.25 | 12.5 | 6.75 | 25.4 | $905 |
| 65 | 50 | 202451 | 19.13 | 15.43 | 15.43 | 62 | $1,220 |
| 77 | 60 | 202452 | 19.13 | 15.43 | 15.43 | 62 | $1,295 |
| 110 | 75 | 202453 | 19.13 | 15.43 | 15.43 | 67 | $1,545 |
| 150 | 100 | 202454 | 19.13 | 15.43 | 15.43 | 77 | $1,675 |
| 165 | 125 | 202455 | 19.13 | 15.43 | 15.43 | 77 | $1,905 |
| 185 | 150 | 202456 | 22.12 | 20.43 | 24.37 | 106 | $2,550 |
| 240 | 200 | 202457 | 22.12 | 20.43 | 24.37 | 131 | $2,720 |
| 340 | 250 | 202458 | 22.12 | 20.43 | 24.37 | 132 | $3,015 |
| 370 | 300 | 202459 | 22.12 | 20.43 | 24.37 | 132 | $3,205 |
| 500 | 350 | 202460 | 22.12 | 20.43 | 24.37 | 136 | $3,580 |
| 520 | 400 | 202461 | 22.12 | 20.43 | 24.37 | 136 | $3,590 |
| 610 | 450 | 202462 | 22.12 | 20.43 | 24.37 | 176 | $4,350 |
| 610 | 500 | 202463 | 22.12 | 20.43 | 24.37 | 176 | $4,945 |
| 750 | 600 | 202464 | 48 | 36.27 | 36.27 | 315 | $8,510 |
| 850 | 700 | 202465 | 48 | 36.27 | 36.27 | 468 | $10,195 |
| 965 | 800 | 202466 | 48 | 36.27 | 36.27 | 590 | $11,105 |
| 1100 | 900 | 202467 | 48 | 36.27 | 36.27 | 585 | $12,015 |
| 1216 | 1000 | 202468 | 48 | 36.27 | 36.27 | 600 | $12,920 |
| 1350 | 1100 | 202469 | 48 | 36.27 | 36.27 | 785 | $13,830 |
| 1500 | 1250 | 202470 | 48 | 36.27 | 36.27 | 810 | $15,190 |

# Reactors & Filters

## Line Reactors



### 460 V, 3% Type 3R Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 1.6 | 0.5 | 202471 | 11.45 | 10.31 | 12 | 16.3 | $565 |
| 2.3 | 1 | 202472 | 11.45 | 10.31 | 12 | 16.2 | $580 |
| 4.2 | 2 | 202473 | 11.45 | 10.31 | 12 | 16.4 | $590 |
| 5 | 3 | 202474 | 11.45 | 10.31 | 12 | 16.4 | $605 |
| 8.2 | 5 | 202475 | 11.45 | 18 | 12 | 13.4 | $620 |
| 11 | 7.5 | 202476 | 11.45 | 17.8 | 12 | 18.2 | $630 |
| 14 | 10 | 202477 | 11.45 | 17.8 | 12 | 18.3 | $675 |
| 30 | 15 | 202478 | 11.5 | 10 | 12 | 23 | $760 |
| 30 | 20 | 202479 | 11.5 | 10 | 12 | 23 | $835 |
| 50 | 25 | 202480 | 11.5 | 10 | 12 | 25 | $855 |
| 45 | 30 | 202481 | 11.5 | 10 | 12 | 25 | $920 |
| 55 | 40 | 202482 | 11.5 | 10 | 12 | 30 | $1070 |
| 65 | 50 | 202483 | 19.18 | 15.62 | 19.5 | 63 | $1,345 |
| 77 | 60 | 202484 | 19.18 | 15.62 | 19.5 | 63 | $1,425 |
| 110 | 75 | 202485 | 19.18 | 15.62 | 19.5 | 68 | $1,780 |
| 150 | 100 | 202486 | 19.18 | 15.62 | 19.5 | 78 | $1,915 |
| 165 | 125 | 202487 | 19.18 | 15.62 | 19.5 | 78 | $2,155 |
| 185 | 150 | 202488 | 22.15 | 20.62 | 28.5 | 110 | $2,840 |
| 240 | 200 | 202489 | 22.15 | 20.62 | 28.5 | 135 | $3,140 |
| 340 | 250 | 202490 | 22.15 | 20.62 | 28.5 | 135 | $3,415 |
| 370 | 300 | 202491 | 22.15 | 20.62 | 28.5 | 135 | $3,610 |
| 500 | 350 | 202492 | 22.15 | 20.62 | 28.5 | 136 | $4,085 |
| 520 | 400 | 202493 | 22.15 | 20.62 | 28.5 | 136 | $4,090 |
| 610 | 450 | 202494 | 22.15 | 20.62 | 28.5 | 180 | $4,920 |
| 610 | 500 | 202495 | 22.15 | 20.62 | 28.5 | 180 | $5,550 |
| 750 | 600 | 204692 | 36 | 28 | 30 | 305 | $9,625 |
| 850 | 700 | 204693 | 36 | 28 | 30 | 305 | $11,420 |
| 965 | 800 | 204694 | 48 | 36 | 36 | 610 | $12,435 |
| 1100 | 900 | 204695 | 48 | 36 | 36 | 610 | $13,695 |
| 1216 | 1000 | 204696 | 48 | 36 | 36 | 610 | $14,730 |
| 1350 | 1100 | 204697 | 50 | 40 | 40 | 860 | $15,765 |

# Reactors & Filters

## Line Reactors



### 460 V, 5% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 1.6 | 0.5 | 202496 | 3.63 | 4.45 | 1.78 | 1.3 | $105 |
| 2.3 | 1 | 202497 | 3.63 | 4.45 | 1.78 | 1.4 | $120 |
| 4.2 | 2 | 202498 | 4.44 | 4.25 | 2.64 | 2.8 | $150 |
| 5 | 3 | 202499 | 4.44 | 4.25 | 2.64 | 3 | $155 |
| 8.2 | 5 | 202500 | 4.44 | 4.25 | 2.64 | 3.7 | $185 |
| 11 | 7.5 | 202501 | 4.44 | 4.25 | 2.64 | 4 | $235 |
| 14 | 10 | 202502 | 4.44 | 4.25 | 2.64 | 4.2 | $280 |
| 30 | 15 | 202503 | 5 | 6 | 4 | 7 | $350 |
| 30 | 20 | 202504 | 5.75 | 7.5 | 5 | 15 | $425 |
| 50 | 25 | 202505 | 5.75 | 7.2 | 5 | 15 | $555 |
| 45 | 30 | 202506 | 5.75 | 7.2 | 5 | 16 | $565 |
| 55 | 40 | 202507 | 7 | 9 | 6 | 25 | $640 |
| 65 | 50 | 202508 | 7 | 9 | 6 | 25 | $920 |
| 77 | 60 | 202509 | 7 | 9 | 6 | 25 | $900 |
| 110 | 75 | 202510 | 9 | 11 | 7 | 45 | $1,095 |
| 150 | 100 | 202511 | 9 | 11 | 7 | 52 | $1,240 |
| 165 | 125 | 202512 | 10.15 | 10.75 | 6.75 | 55 | $1,375 |
| 185 | 150 | 202513 | 9 | 11 | 8 | 55 | $1,660 |
| 240 | 200 | 202514 | 9 | 11 | 9 | 70 | $1,910 |
| 310 | 250 | 202515 | 11.38 | 14.5 | 9.5 | 110 | $2,315 |
| 370 | 300 | 202516 | 11.38 | 14.5 | 9.31 | 95 | $2,685 |
| 500 | 350 | 202517 | 11.38 | 14.5 | 9.31 | 100 | $3,220 |
| 520 | 400 | 202518 | 11.38 | 14.5 | 9.5 | 110 | $3,245 |
| 610 | 450 | 202519 | 11.38 | 14.5 | 11 | 120 | $3,845 |
| 610 | 500 | 202520 | 11.38 | 14.5 | 11 | 120 | $4,170 |
| 750 | 600 | 202521 | 11.38 | 15 | 13 | 260 | $5,015 |
| 850 | 700 | 202522 | 11.38 | 15 | 13 | 260 | $6,825 |
| 965 | 800 | 202523 | 18.5 | 18.25 | 12.5 | 290 | $7,800 |
| 1100 | 900 | 202524 | 18.5 | 18.25 | 12.5 | 290 | $8,775 |
| 1216 | 1000 | 202525 | 18.5 | 18.25 | 12.5 | 274 | $9,745 |
| 1350 | 1100 | 202526 | 20 | 21 | 16 | 525 | $10,725 |

# Reactors & Filters

## Line Reactors



### 460 V, 5% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 1.6 | 0.5 | 202527 | 12.25 | 12.5 | 6.75 | 11.7 | $300 |
| 2.3 | 1 | 202528 | 12.25 | 12.5 | 6.75 | 11.8 | $315 |
| 4.2 | 2 | 202529 | 12.25 | 12.5 | 6.75 | 13.2 | $340 |
| 5 | 3 | 202530 | 12.25 | 12.5 | 6.75 | 13.4 | $345 |
| 8.2 | 5 | 202531 | 12.25 | 12.5 | 6.75 | 14.1 | $375 |
| 11 | 7.5 | 202532 | 12.25 | 14.4 | 6.75 | 4 | $430 |
| 14 | 10 | 202533 | 12.25 | 12.5 | 6.75 | 14.6 | $475 |
| 30 | 15 | 202534 | 12.25 | 12.5 | 6.75 | 17.4 | $670 |
| 30 | 20 | 202535 | 12.25 | 12.5 | 6.75 | 25.4 | $745 |
| 50 | 25 | 202536 | 12.25 | 12.5 | 6.75 | 25.4 | $875 |
| 45 | 30 | 202537 | 12.25 | 12.5 | 6.75 | 26.4 | $890 |
| 55 | 40 | 202538 | 19.13 | 15.43 | 15.43 | 62 | $1,265 |
| 65 | 50 | 202539 | 19.13 | 15.43 | 15.43 | 62 | $1,545 |
| 77 | 60 | 202540 | 19.13 | 15.43 | 15.43 | 62 | $1,520 |
| 110 | 75 | 202541 | 19.13 | 15.43 | 15.43 | 89 | $1,720 |
| 150 | 100 | 202542 | 19.13 | 15.43 | 15.43 | 118 | $1,860 |
| 165 | 125 | 202543 | 22.12 | 20.43 | 24.37 | 125 | $2,515 |
| 185 | 150 | 202544 | 22.12 | 20.43 | 24.37 | 126 | $2,805 |
| 240 | 200 | 202545 | 22.12 | 20.43 | 24.37 | 141 | $3,050 |
| 340 | 250 | 202546 | 22.12 | 20.43 | 24.37 | 171 | $3,460 |
| 370 | 300 | 202547 | 22.12 | 20.43 | 24.37 | 171 | $3,825 |
| 500 | 350 | 202548 | 22.12 | 20.43 | 24.37 | 175 | $4,360 |
| 520 | 400 | 202549 | 22.12 | 20.43 | 24.37 | 201 | $4,390 |
| 610 | 450 | 202550 | 36 | 28.39 | 30.19 | 295 | $6,220 |
| 610 | 500 | 202551 | 36 | 28.39 | 30.19 | 295 | $6,545 |
| 750 | 600 | 202552 | 48 | 36.27 | 36.27 | 582 | $8,855 |
| 850 | 700 | 202553 | 48 | 36.27 | 36.27 | 590 | $10,660 |
| 965 | 800 | 202554 | 48 | 36.27 | 36.27 | 615 | $11,635 |
| 1100 | 900 | 202555 | 48 | 36.27 | 36.27 | 618 | $12,610 |
| 1216 | 1000 | 202556 | 48 | 36.27 | 36.27 | 627 | $13,585 |
| 1350 | 1100 | 202557 | 48 | 36.27 | 36.27 | 860 | $14,560 |

# Reactors & Filters

## Line Reactors



### 460 V, 5% Type 3R Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 1.6 | 0.5 | 202558 | 11.45 | 10.31 | 12 | 16.3 | $565 |
| 2.3 | 1 | 202559 | 11.45 | 10.31 | 12 | 16.4 | $585 |
| 4.2 | 2 | 202560 | 11.45 | 17.8 | 12 | 13.2 | $610 |
| 5 | 3 | 202561 | 11.45 | 18 | 12 | 13.4 | $615 |
| 8.2 | 5 | 202562 | 11.45 | 18.7 | 12 | 14.1 | $645 |
| 11 | 7.5 | 202563 | 11.45 | 19 | 12 | 4 | $700 |
| 14 | 10 | 202564 | 11.45 | 17.8 | 12 | 19.2 | $745 |
| 30 | 15 | 202565 | 11.5 | 10 | 12 | 22 | $830 |
| 30 | 20 | 202566 | 11.5 | 10 | 12 | 30 | $910 |
| 50 | 25 | 202567 | 11.5 | 10 | 12 | 30 | $1,040 |
| 45 | 30 | 202568 | 11.5 | 10 | 12 | 31 | $1,050 |
| 55 | 40 | 202569 | 19.18 | 15.62 | 19.5 | 63 | $1,390 |
| 65 | 50 | 202570 | 19.18 | 15.62 | 19.5 | 63 | $1,680 |
| 77 | 60 | 202571 | 19.18 | 15.62 | 19.5 | 63 | $1,655 |
| 110 | 75 | 202572 | 19.18 | 15.62 | 19.5 | 90 | $1,950 |
| 150 | 100 | 202573 | 19.18 | 15.62 | 19.5 | 120 | $2,095 |
| 165 | 125 | 202574 | 22.15 | 20.62 | 28.5 | 130 | $2,810 |
| 185 | 150 | 202575 | 22.15 | 20.62 | 28.5 | 130 | $3,100 |
| 240 | 200 | 202576 | 22.15 | 20.62 | 28.5 | 145 | $3,490 |
| 340 | 250 | 202577 | 22.12 | 20.43 | 24.37 | 175 | $3,885 |
| 370 | 300 | 202578 | 22.12 | 20.43 | 24.37 | 175 | $4,265 |
| 500 | 350 | 202579 | 22.15 | 20.62 | 28.5 | 180 | $4,870 |
| 520 | 400 | 202580 | 22.15 | 20.62 | 28.5 | 210 | $4,920 |
| 610 | 450 | 202581 | 36 | 28.39 | 36.86 | 305 | $7,430 |
| 610 | 500 | 202582 | 36 | 28.39 | 36.86 | 305 | $7,775 |

# Reactors & Filters

## Line Reactors



### 600 V, 3% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.2 | 2 | 202583 | 3.63 | 4.45 | 1.78 | 1.5 | $155 |
| 4.8 | 3 | 202584 | 4.44 | 4.25 | 2.64 | 3.5 | $160 |
| 7.6 | 5 | 202585 | 4.44 | 4.25 | 2.64 | 3 | $180 |
| 9 | 7.5 | 202586 | 4.44 | 4.25 | 2.64 | 3.2 | $205 |
| 11 | 10 | 202587 | 4.44 | 4.25 | 2.64 | 3.8 | $205 |
| 19.5 | 15 | 202588 | 5 | 6 | 4 | 8 | $330 |
| 24 | 20 | 202589 | 5 | 6 | 4 | 8 | $350 |
| 30 | 25 | 202590 | 5 | 6 | 4 | 8 | $360 |
| 32 | 30 | 202591 | 5.75 | 4.2 | 4.25 | 12 | $370 |
| 41 | 40 | 202592 | 5.75 | 7.2 | 5 | 15 | $440 |
| 52 | 50 | 202593 | 5.75 | 7.2 | 5 | 15 | $580 |
| 62 | 60 | 202594 | 7 | 9 | 6 | 30 | $595 |
| 77 | 75 | 202595 | 7 | 9 | 6 | 30 | $640 |
| 99 | 100 | 202596 | 7 | 9 | 6 | 30 | $845 |
| 125 | 125 | 202597 | 9 | 11 | 7 | 45 | $970 |
| 144 | 150 | 202598 | 9 | 11 | 7 | 45 | $1,180 |
| 192 | 200 | 202599 | 9 | 11 | 7 | 50 | $1,300 |
| 242 | 250 | 202600 | 9 | 11 | 8 | 65 | $1,485 |
| 292 | 300 | 202601 | 9 | 11 | 8 | 65 | $1,825 |
| 336 | 350 | 202602 | 9 | 11 | 9 | 70 | $2,005 |
| 385 | 400 | 202603 | 9 | 11 | 9 | 70 | $2,110 |
| 412 | 450 | 202604 | 9 | 11 | 9 | 70 | $2,290 |
| 480 | 500 | 202605 | 11.38 | 15 | 11 | 110 | $2,515 |
| 610 | 600 | 202606 | 11.38 | 14.5 | 11 | 150 | $3,050 |
| 675 | 700 | 202607 | 11.38 | 15 | 11 | 160 | $3,685 |
| 778 | 800 | 202608 | 11.38 | 15 | 13 | 185 | $4,045 |
| 900 | 900 | 202609 | 18.5 | 18.25 | 12.5 | 280 | $5,385 |
| 1000 | 1000 | 202610 | 18.5 | 18.25 | 12.5 | 280 | $5,640 |
| 1064 | 1100 | 202611 | 18.5 | 18.25 | 12.5 | 315 | $5,855 |
| 1216 | 1250 | 202612 | 18.5 | 18.25 | 12.5 | 300 | $6,585 |
| 1500 | 1500 | 202613 | 20 | 21 | 16 | 465 | $9,910 |

# Reactors & Filters

## Line Reactors



### 600 V, 3% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.2 | 2 | 202614 | 12.25 | 12.5 | 6.75 | 11.9 | $320 |
| 4.8 | 3 | 202615 | 12.25 | 12.5 | 6.75 | 13.9 | $325 |
| 7.6 | 5 | 202616 | 12.25 | 12.5 | 6.75 | 13.4 | $350 |
| 9 | 7.5 | 202617 | 12.25 | 12.5 | 6.75 | 13.6 | $360 |
| 11 | 10 | 202618 | 12.25 | 12.5 | 6.75 | 14.2 | $400 |
| 19.5 | 15 | 202619 | 12.25 | 12.5 | 6.75 | 18.4 | $650 |
| 24 | 20 | 202620 | 12.25 | 12.5 | 6.75 | 18.4 | $675 |
| 30 | 25 | 202621 | 12.25 | 12.5 | 6.75 | 18.4 | $675 |
| 32 | 30 | 202622 | 12.25 | 12.5 | 6.75 | 22.4 | $690 |
| 41 | 40 | 202623 | 12.25 | 12.5 | 6.75 | 25.4 | $765 |
| 52 | 50 | 202624 | 12.25 | 12.5 | 6.75 | 25.4 | $900 |
| 62 | 60 | 202625 | 19.13 | 15.43 | 15.43 | 67 | $1,215 |
| 77 | 75 | 202626 | 19.13 | 15.43 | 15.43 | 67 | $1,260 |
| 99 | 100 | 202627 | 19.13 | 15.43 | 15.43 | 67 | $1,470 |
| 125 | 125 | 202628 | 19.13 | 15.43 | 15.43 | 82 | $1,595 |
| 144 | 150 | 202629 | 19.13 | 15.43 | 15.43 | 82 | $1,805 |
| 192 | 200 | 202630 | 22.12 | 20.43 | 24.37 | 116 | $2,440 |
| 242 | 250 | 202631 | 22.12 | 20.43 | 24.37 | 131 | $2,630 |
| 292 | 300 | 202632 | 22.12 | 20.43 | 24.37 | 131 | $2,970 |
| 336 | 350 | 202633 | 22.12 | 20.43 | 24.37 | 145 | $3,145 |
| 385 | 400 | 202634 | 22.12 | 20.43 | 24.37 | 145 | $3,255 |
| 412 | 450 | 202635 | 22.12 | 20.43 | 24.37 | 145 | $3,435 |
| 480 | 500 | 202636 | 36 | 28.39 | 30.19 | 270 | $4,890 |
| 610 | 600 | 202637 | 36 | 28.39 | 30.19 | 310 | $5,425 |
| 675 | 700 | 202638 | 48 | 36.27 | 36.27 | 320 | $7,520 |
| 778 | 800 | 202639 | 48 | 36.27 | 36.27 | 585 | $7,880 |
| 900 | 900 | 202640 | 48 | 36.27 | 36.27 | 590 | $9,220 |
| 1000 | 1000 | 202641 | 48 | 36.27 | 36.27 | 590 | $9,475 |
| 1064 | 1100 | 202642 | 48 | 36.27 | 36.27 | 625 | $9,690 |
| 1216 | 1250 | 202643 | 48 | 36.27 | 36.27 | 610 | $10,425 |
| 1500 | 1500 | 202644 | 48 | 36.27 | 36.27 | 775 | $13,750 |

# Reactors & Filters

## Line Reactors



### 600 V, 3% Type 3R Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.2 | 2 | 202645 | 11.45 | 10.31 | 12 | 16.5 | $610 |
| 4.8 | 3 | 202646 | 11.45 | 18.5 | 12 | 13.9 | $615 |
| 7.6 | 5 | 202647 | 11.45 | 18 | 12 | 13.4 | $640 |
| 9 | 7.5 | 202648 | 11.45 | 17.8 | 12 | 18.2 | $655 |
| 11 | 10 | 202649 | 11.45 | 17.8 | 12 | 18.8 | $665 |
| 19.5 | 15 | 202650 | 11.5 | 10 | 12 | 23 | $810 |
| 24 | 20 | 202651 | 11.5 | 10 | 12 | 23 | $835 |
| 30 | 25 | 202652 | 11.5 | 10 | 12 | 23 | $840 |
| 32 | 30 | 202653 | 11.5 | 10 | 12 | 27 | $860 |
| 41 | 40 | 202654 | 11.5 | 10 | 12 | 30 | $925 |
| 52 | 50 | 202655 | 11.5 | 10 | 12 | 30 | $1,060 |
| 62 | 60 | 202656 | 19.18 | 15.62 | 19.5 | 68 | $1,345 |
| 77 | 75 | 202657 | 19.18 | 15.62 | 19.5 | 68 | $1,385 |
| 99 | 100 | 202658 | 19.18 | 15.62 | 19.5 | 68 | $1,700 |
| 125 | 125 | 202659 | 19.18 | 15.62 | 19.5 | 83 | $1,825 |
| 144 | 150 | 202660 | 19.18 | 15.62 | 19.5 | 83 | $2,050 |
| 192 | 200 | 202661 | 22.15 | 20.62 | 28.5 | 120 | $2,735 |
| 242 | 250 | 202662 | 22.15 | 20.62 | 28.5 | 135 | $3,045 |
| 292 | 300 | 202663 | 22.15 | 20.62 | 28.5 | 135 | $3,365 |
| 336 | 350 | 202664 | 22.15 | 20.62 | 28.5 | 150 | $3,550 |
| 385 | 400 | 202665 | 22.15 | 20.62 | 28.5 | 150 | $3,655 |
| 412 | 450 | 202666 | 22.15 | 20.62 | 28.5 | 150 | $3,845 |
| 480 | 500 | 202667 | 36 | 28.39 | 36.86 | 180 | $6,065 |
| 610 | 600 | 202668 | 36 | 28.39 | 36.86 | 320 | $7,070 |

# Reactors & Filters

## Line Reactors



### 600 V, 5% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 2 | 202669 | 4.44 | 4.25 | 2.64 | 2.7 | $160 |
| 4.5 | 3 | 202670 | 4.44 | 4.25 | 2.64 | 2.9 | $170 |
| 6.8 | 5 | 202671 | 4.44 | 4.25 | 2.64 | 3.4 | $185 |
| 10 | 7.5 | 202672 | 5 | 6 | 4 | 8 | $310 |
| 11 | 10 | 202673 | 5 | 6 | 4 | 8 | $350 |
| 18.5 | 15 | 202674 | 5 | 6 | 4 | 8 | $380 |
| 23 | 20 | 202675 | 5.75 | 7.2 | 4.25 | 12 | $430 |
| 30 | 25 | 202676 | 5.75 | 7.2 | 5 | 15 | $460 |
| 32 | 30 | 202677 | 5.75 | 7.2 | 5 | 16 | $560 |
| 44 | 40 | 202678 | 7 | 9 | 6 | 30 | $610 |
| 58 | 50 | 202679 | 7 | 9 | 6 | 30 | $730 |
| 62 | 60 | 202680 | 9 | 11 | 6 | 45 | $910 |
| 82 | 75 | 202681 | 9 | 11 | 6 | 45 | $925 |
| 99 | 100 | 202682 | 9 | 11 | 7 | 50 | $1,260 |
| 130 | 125 | 202683 | 9 | 11 | 7.5 | 65 | $1,330 |
| 155 | 150 | 202684 | 9 | 11 | 8 | 65 | $1,390 |
| 192 | 200 | 202685 | 9 | 11 | 9 | 70 | $1,765 |
| 260 | 250 | 202686 | 11.38 | 15 | 11 | 110 | $2,475 |
| 310 | 300 | 202687 | 11.38 | 15 | 11 | 110 | $2,520 |
| 344 | 350 | 202688 | 11.38 | 15 | 11 | 110 | $2,710 |
| 382 | 400 | 202689 | 11.38 | 15 | 11 | 110 | $2,800 |
| 440 | 450 | 202690 | 11.38 | 15 | 13 | 150 | $3,540 |
| 500 | 500 | 202691 | 11.38 | 15 | 13 | 150 | $3,690 |
| 610 | 600 | 202692 | 11.38 | 15 | 13 | 176 | $4,030 |
| 760 | 700 | 202693 | 18.5 | 18.25 | 12.5 | 280 | $5,135 |
| 850 | 800 | 202694 | 18.5 | 18.25 | 12.5 | 310 | $5,650 |
| 900 | 900 | 202695 | 18.5 | 18.25 | 12.5 | 310 | $6,765 |
| 1000 | 1000 | 202696 | 18.5 | 18.25 | 12.5 | 375 | $6,920 |
| 1064 | 1100 | 202697 | 18.5 | 18.25 | 12.5 | 450 | $7,150 |
| 1200 | 1250 | 202698 | 20 | 21 | 16 | 475 | $9,455 |
| 1500 | 1500 | 202699 | 20 | 21 | 16 | 575 | $12,490 |

# Reactors & Filters

## Line Reactors



### 600 V, 5% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 2 | 202700 | 12.25 | 12.5 | 6.75 | 13.1 | $335 |
| 4.5 | 3 | 202701 | 12.25 | 12.5 | 6.75 | 13.3 | $340 |
| 6.8 | 5 | 202702 | 12.25 | 12.5 | 6.75 | 13.8 | $375 |
| 10 | 7.5 | 202703 | 12.25 | 12.5 | 6.75 | 18.4 | $635 |
| 11 | 10 | 202704 | 12.25 | 12.5 | 6.75 | 18.4 | $675 |
| 18.5 | 15 | 202705 | 12.25 | 12.5 | 6.75 | 18.4 | $700 |
| 23 | 20 | 202706 | 12.25 | 12.5 | 6.75 | 22.4 | $750 |
| 30 | 25 | 202707 | 12.25 | 12.5 | 6.75 | 25.4 | $780 |
| 32 | 30 | 202708 | 12.25 | 12.5 | 6.75 | 26.4 | $880 |
| 44 | 40 | 202709 | 19.13 | 15.43 | 15.43 | 67 | $1,230 |
| 58 | 50 | 202710 | 19.13 | 15.43 | 15.43 | 67 | $1,355 |
| 62 | 60 | 202711 | 19.13 | 15.43 | 15.43 | 82 | $1,530 |
| 82 | 75 | 202712 | 19.13 | 15.43 | 15.43 | 82 | $1,545 |
| 99 | 100 | 202713 | 19.13 | 15.43 | 15.43 | 116 | $1,885 |
| 130 | 125 | 202714 | 19.13 | 20.43 | 24.37 | 135 | $1,950 |
| 155 | 150 | 202715 | 22.12 | 20.43 | 24.37 | 131 | $2,530 |
| 192 | 200 | 202716 | 22.12 | 20.43 | 24.37 | 136 | $2,910 |
| 260 | 250 | 202717 | 22.12 | 20.43 | 24.37 | 176 | $3,620 |
| 310 | 300 | 202718 | 22.12 | 20.43 | 24.37 | 176 | $3,665 |
| 344 | 350 | 202719 | 22.12 | 20.43 | 24.37 | 176 | $3,855 |
| 382 | 400 | 202720 | 22.12 | 20.43 | 24.37 | 176 | $3,945 |
| 440 | 450 | 202721 | 36 | 28.39 | 30.19 | 310 | $5,915 |
| 500 | 500 | 202722 | 36 | 28.39 | 30.19 | 310 | $6,065 |
| 610 | 600 | 202723 | 36 | 28.39 | 30.19 | 336 | $6,405 |
| 760 | 700 | 202724 | 48 | 36.27 | 36.27 | 590 | $8,975 |
| 850 | 800 | 202725 | 48 | 36.27 | 36.27 | 620 | $9,490 |
| 900 | 900 | 202726 | 48 | 36.27 | 36.27 | 620 | $10,605 |
| 1000 | 1000 | 202727 | 48 | 36.27 | 36.27 | 685 | $10,760 |
| 1064 | 1100 | 202728 | 48 | 36.27 | 36.27 | 760 | $10,985 |
| 1200 | 1250 | 202729 | 48 | 36.27 | 36.27 | 785 | $13,290 |
| 1500 | 1500 | 202730 | 48 | 36.27 | 36.27 | 885 | $16,325 |

# Reactors & Filters

## Line Reactors



### 600 V, 5% Type 3R Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 2 | 202731 | 11.45 | 17.7 | 12 | 13.1 | $625 |
| 4.5 | 3 | 202732 | 11.45 | 17.9 | 12 | 13.3 | $630 |
| 6.8 | 5 | 202733 | 11.45 | 18.4 | 12 | 13.8 | $645 |
| 10 | 7.5 | 202734 | 11.5 | 10 | 12 | 20 | $795 |
| 11 | 10 | 202735 | 11.5 | 10 | 12 | 20 | $840 |
| 18.5 | 15 | 202736 | 11.5 | 10 | 12 | 20 | $865 |
| 23 | 20 | 202737 | 11.5 | 10 | 12 | 27 | $915 |
| 30 | 25 | 202738 | 11.5 | 10 | 12 | 30 | $940 |
| 32 | 30 | 202739 | 11.5 | 10 | 12 | 31 | $1,045 |
| 44 | 40 | 202740 | 19.18 | 15.62 | 19.5 | 68 | $1,355 |
| 58 | 50 | 202741 | 19.18 | 15.62 | 19.5 | 68 | $1,485 |
| 62 | 60 | 202742 | 19.18 | 15.62 | 19.5 | 83 | $1,665 |
| 82 | 75 | 202743 | 19.18 | 15.62 | 19.5 | 83 | $1,680 |
| 99 | 100 | 202744 | 19.18 | 15.62 | 19.5 | 118 | $2,125 |
| 130 | 125 | 202745 | 19.18 | 15.62 | 19.5 | 140 | $2,195 |
| 155 | 150 | 202746 | 22.15 | 20.62 | 28.5 | 135 | $2,825 |
| 192 | 200 | 202747 | 22.15 | 20.62 | 28.5 | 140 | $3,215 |
| 260 | 250 | 202748 | 22.15 | 20.62 | 28.5 | 180 | $4,070 |
| 310 | 300 | 202749 | 22.15 | 20.62 | 28.5 | 180 | $4,085 |
| 344 | 350 | 202750 | 22.15 | 20.62 | 28.5 | 180 | $4,280 |
| 382 | 400 | 202751 | 22.15 | 20.62 | 28.5 | 180 | $4,370 |
| 440 | 450 | 202752 | 36 | 28.39 | 36.86 | 320 | $7,125 |
| 500 | 500 | 202753 | 36 | 28.39 | 36.86 | 320 | $7,275 |
| 610 | 600 | 202754 | 36 | 28.39 | 36.86 | 350 | $9,025 |

# Reactors & Filters

## Line Reactors



### 690 V, 3% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.3 | 2 | 202755 | 3.63 | 4.45 | 1.78 | 1.5 | $155 |
| 5 | 3 | 202756 | 4.44 | 4.25 | 2.64 | 3.5 | $160 |
| 7 | 5 | 202757 | 4.44 | 4.25 | 2.64 | 3 | $180 |
| 10.4 | 7.5 | 202758 | 4.44 | 4.25 | 2.64 | 3.2 | $205 |
| 11 | 10 | 202759 | 4.44 | 4.25 | 2.64 | 3.8 | $205 |
| 19.5 | 15 | 202760 | 5 | 6 | 4 | 8 | $330 |
| 24 | 20 | 202761 | 5 | 6 | 4 | 8 | $350 |
| 30 | 25 | 202762 | 5 | 6 | 4 | 8 | $360 |
| 32 | 30 | 202763 | 5.75 | 4.2 | 4.25 | 12 | $370 |
| 41 | 40 | 202764 | 5.75 | 7.2 | 5 | 15 | $440 |
| 52 | 50 | 202765 | 5.75 | 7.2 | 5 | 15 | $580 |
| 62 | 60 | 202766 | 7 | 9 | 6 | 30 | $595 |
| 77 | 75 | 202767 | 7 | 9 | 6 | 30 | $640 |
| 99 | 100 | 202768 | 7 | 9 | 6 | 30 | $845 |
| 125 | 125 | 202769 | 9 | 11 | 7 | 45 | $970 |
| 144 | 150 | 202770 | 9 | 11 | 7 | 45 | $1,180 |
| 192 | 200 | 202771 | 9 | 11 | 7 | 50 | $1,300 |
| 242 | 250 | 202772 | 9 | 11 | 8 | 65 | $1,485 |
| 292 | 300 | 202773 | 9 | 11 | 8 | 65 | $1,825 |
| 336 | 350 | 202774 | 9 | 11 | 9 | 70 | $2,005 |
| 385 | 400 | 202775 | 9 | 11 | 9 | 70 | $2,110 |
| 412 | 450 | 202776 | 9 | 11 | 9 | 70 | $2,290 |
| 480 | 500 | 202777 | 11.38 | 15 | 11 | 110 | $2,515 |
| 610 | 600 | 202778 | 11.38 | 14.5 | 11 | 150 | $3,050 |
| 675 | 700 | 202779 | 11.38 | 15 | 11 | 160 | $3,685 |
| 850 | 800 | 202780 | 11.38 | 15 | 13 | 185 | $4,045 |
| 900 | 900 | 202781 | 18.5 | 18.25 | 12.5 | 280 | $5,385 |
| 1000 | 1000 | 202782 | 18.5 | 18.25 | 12.5 | 280 | $5,640 |
| 1064 | 1100 | 202783 | 18.5 | 18.25 | 12.5 | 315 | $5,855 |
| 1200 | 1250 | 202784 | 18.5 | 18.25 | 12.5 | 300 | $6,585 |
| 1500 | 1500 | 202785 | 20 | 21 | 16 | 465 | $9,910 |

# Reactors & Filters

## Line Reactors



### 690 V, 3% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.3 | 2 | 202786 | 12.25 | 12.5 | 6.75 | 11.9 | $320 |
| 5 | 3 | 202787 | 12.25 | 12.5 | 6.75 | 13.9 | $325 |
| 7 | 5 | 202788 | 12.25 | 12.5 | 6.75 | 13.4 | $350 |
| 10.4 | 7.5 | 202789 | 12.25 | 12.5 | 6.75 | 13.6 | $360 |
| 11 | 10 | 202790 | 12.25 | 12.5 | 6.75 | 14.2 | $400 |
| 19.5 | 15 | 202791 | 7.5 | 10 | 7 | 14 | $540 |
| 24 | 20 | 202792 | 7.5 | 10 | 7 | 14 | $565 |
| 30 | 25 | 202793 | 7.5 | 10 | 7 | 14 | $570 |
| 32 | 30 | 202794 | 7.5 | 10 | 7 | 18 | $620 |
| 41 | 40 | 202795 | 7.5 | 10 | 7 | 21 | $700 |
| 52 | 50 | 202796 | 7.5 | 10 | 7 | 21 | $850 |
| 62 | 60 | 202797 | 9 | 12 | 8 | 42 | $960 |
| 77 | 75 | 202798 | 9 | 12 | 8 | 42 | $1,005 |
| 99 | 100 | 202799 | 15.5 | 15 | 13 | 65 | $1,440 |
| 125 | 125 | 202801 | 15.5 | 15 | 13 | 261 | $1,580 |
| 144 | 150 | 202802 | 15.5 | 15 | 13 | 80 | $1,810 |
| 192 | 200 | 202803 | 15.5 | 15 | 13 | 85 | $1,940 |
| 242 | 250 | 202804 | 15.5 | 15 | 13 | 100 | $2,140 |
| 292 | 300 | 202805 | 15.5 | 15 | 13 | 100 | $2,515 |
| 336 | 350 | 202806 | 18.5 | 20 | 16 | 120 | $2,885 |
| 385 | 400 | 202807 | 18.5 | 20 | 16 | 120 | $3,005 |
| 412 | 450 | 202808 | 18.5 | 20 | 16 | 120 | $3,200 |
| 480 | 500 | 202809 | 18.5 | 20 | 16 | 160 | $3,445 |
| 610 | 600 | 202810 | 18.5 | 20 | 16 | 160 | $4,035 |
| 675 | 700 | 202811 | 18.5 | 20 | 16 | 210 | $4,735 |
| 850 | 800 | 202812 | 11.38 | 15 | 11 | 275 | $5,125 |
| 900 | 900 | 202813 | 18.5 | 18.25 | 12.5 | 280 | $7,710 |
| 1000 | 1000 | 202814 | 18.5 | 18.25 | 12.5 | 290 | $7,995 |
| 1064 | 1100 | 202815 | 18.5 | 18.25 | 12.5 | 315 | $8,230 |
| 1200 | 1250 | 202816 | 36 | 28.39 | 30.19 | 325 | $9,035 |
| 1500 | 1500 | 202817 | 36 | 28.39 | 30.19 | 625 | $12,695 |

# Reactors & Filters

## Line Reactors



### 690 V, 5% Open Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 2 | 202818 | 4.44 | 4.25 | 2.64 | 2.7 | $160 |
| 4.5 | 3 | 202819 | 4.44 | 4.25 | 2.64 | 2.9 | $170 |
| 6.8 | 5 | 202820 | 4.44 | 4.25 | 2.64 | 3.4 | $185 |
| 10 | 7.5 | 202821 | 5 | 6 | 4 | 8 | $345 |
| 11 | 10 | 202822 | 5 | 6 | 4 | 8 | $385 |
| 18.5 | 15 | 202823 | 5 | 6 | 4.5 | 8 | $420 |
| 23 | 20 | 202824 | 5.75 | 7.2 | 4.61 | 12 | $475 |
| 30 | 25 | 202825 | 5.75 | 7.2 | 5 | 15 | $505 |
| 32 | 30 | 202826 | 7.75 | 7.2 | 5 | 16 | $615 |
| 44 | 40 | 202827 | 7 | 9 | 6 | 30 | $670 |
| 58 | 50 | 202828 | 7 | 9 | 6 | 30 | $800 |
| 62 | 60 | 202829 | 9 | 11 | 6 | 45 | $1,000 |
| 82 | 75 | 202830 | 9 | 11 | 6 | 45 | $1,020 |
| 99 | 100 | 202831 | 9 | 11 | 7 | 50 | $1,385 |
| 130 | 125 | 202832 | 9 | 11 | 8 | 65 | $1,460 |
| 155 | 150 | 202833 | 9 | 11 | 8 | 65 | $1,525 |
| 192 | 200 | 202834 | 9 | 11 | 9 | 70 | $1,940 |
| 260 | 250 | 202835 | 11.38 | 15 | 11 | 110 | $2,725 |
| 310 | 300 | 202836 | 11.38 | 15 | 11 | 110 | $2,770 |
| 344 | 350 | 202837 | 11.38 | 15 | 11 | 110 | $2,980 |
| 382 | 400 | 202838 | 11.38 | 15 | 11 | 110 | $3,080 |
| 440 | 450 | 202839 | 11.38 | 15 | 13 | 165 | $3,895 |
| 500 | 500 | 202840 | 11.38 | 15 | 13 | 165 | $4,060 |
| 576 | 600 | 202841 | 11.38 | 15 | 13 | 175 | $4,430 |
| 760 | 700 | 202842 | 18.5 | 18.25 | 12.5 | 200 | $5,650 |
| 864 | 800 | 202843 | 18.5 | 18.25 | 12.5 | 280 | $6,215 |
| 864 | 900 | 202844 | 18.5 | 18.25 | 12.5 | 290 | $7,445 |
| 1000 | 1000 | 202845 | 18.5 | 18.25 | 12.5 | 375 | $7,615 |
| 1064 | 1100 | 202846 | 18.5 | 18.25 | 12.5 | 450 | $7,865 |
| 1200 | 1250 | 202847 | 20 | 21 | 16 | 475 | $10,400 |
| 1500 | 1500 | 202848 | 20 | 21 | 16 | 575 | $13,740 |

# Reactors & Filters

## Line Reactors



### 690 V, 5% Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 3.4 | 2 | 202849 | 12.25 | 12.5 | 6.75 | 13.1 | $335 |
| 4.5 | 3 | 202850 | 12.25 | 12.5 | 6.75 | 13.3 | $340 |
| 6.8 | 5 | 202851 | 12.25 | 12.5 | 6.75 | 13.8 | $375 |
| 10 | 7.5 | 202852 | 7.5 | 10 | 7 | 14 | $560 |
| 11 | 10 | 202853 | 7.5 | 10 | 7 | 14 | $600 |
| 18.5 | 15 | 202854 | 7.5 | 10 | 7 | 14 | $635 |
| 23 | 20 | 202855 | 7.5 | 10 | 7 | 18 | $690 |
| 30 | 25 | 202856 | 7.5 | 10 | 7 | 21 | $720 |
| 32 | 30 | 202857 | 9 | 12 | 8 | 28 | $830 |
| 44 | 40 | 202858 | 9 | 12 | 8 | 42 | $970 |
| 58 | 50 | 202859 | 9 | 12 | 8 | 42 | $1,105 |
| 62 | 60 | 202860 | 15.5 | 15 | 13 | 80 | $1,510 |
| 82 | 75 | 202861 | 15.5 | 15 | 13 | 80 | $1,525 |
| 99 | 100 | 202862 | 15.5 | 15 | 13 | 85 | $1,900 |
| 130 | 125 | 202863 | 15.5 | 15 | 13 | 100 | $1,970 |
| 155 | 150 | 202864 | 15.5 | 15 | 13 | 100 | $2,040 |
| 192 | 200 | 202865 | 18.5 | 20 | 16 | 120 | $2,620 |
| 260 | 250 | 202866 | 18.5 | 20 | 16 | 160 | $3,410 |
| 310 | 300 | 202867 | 18.5 | 20 | 16 | 160 | $3,450 |
| 344 | 350 | 202868 | 18.5 | 20 | 16 | 160 | $3,660 |
| 382 | 400 | 202869 | 18.5 | 20 | 16 | 160 | $3,760 |
| 440 | 450 | 202870 | 18.5 | 20 | 16 | 215 | $4,575 |
| 500 | 500 | 202871 | 18.5 | 20 | 16 | 215 | $4,740 |
| 576 | 600 | 202872 | 18.5 | 20 | 16 | 225 | $5,115 |
| 760 | 700 | 202873 | 18.5 | 18.25 | 12.5 | 200 | $6,335 |
| 864 | 800 | 202874 | 36 | 28.39 | 30.19 | 440 | $8,005 |
| 864 | 900 | 202875 | 36 | 28.39 | 30.19 | 450 | $9,235 |
| 1000 | 1000 | 202876 | 18.5 | 18.25 | 12.5 | 375 | $9,405 |
| 1064 | 1100 | 202877 | 18.5 | 18.25 | 12.5 | 450 | $9,655 |
| 1200 | 1250 | 202878 | 36 | 28.39 | 30.19 | 635 | $12,190 |
| 1500 | 1500 | 202879 | 20 | 21 | 16 | 575 | $15,530 |

# Reactors & Filters

## Passive Harmonic Filters



### Passive Harmonic Filter 460 V Open Enclosure

The HarmonicGuard® Passive (HGP) Filter provides a low impedance path for the major harmonic currents demanded by adjustable speed drives. This greatly reduces the amount of harmonic currents flowing through the electrical power distribution system, bringing those harmonic currents in line with the IEEE-519 standard for harmonic distortion mandated by an increasing number of utilities. PQconnect provides Bluetooth remote connectivity to monitor power quality and control the filter.

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 7.6 | 5 | 203002 | 19.75 | 17 | 9.79 | 40 | $4,250 |
| 11 | 7.5 | 203003 | 19.75 | 17.24 | 9.79 | 45 | $4,440 |
| 14 | 10 | 203004 | 19.75 | 17 | 9.79 | 45 | $4,625 |
| 21 | 15 | 203005 | 19.75 | 17 | 10.14 | 55 | $5,175 |
| 27 | 20 | 203006 | 19.75 | 17 | 8 | 65 | $5,805 |
| 34 | 25 | 203007 | 19.75 | 17.24 | 10.14 | 67 | $6,325 |
| 40 | 30 | 203008 | 30.75 | 17 | 11.38 | 85 | $6,945 |
| 52 | 40 | 203009 | 30.75 | 17 | 11.5 | 125 | $7,390 |
| 65 | 50 | 203010 | 30.75 | 17 | 11.5 | 135 | $8,240 |
| 77 | 60 | 203011 | 30.75 | 17 | 11.5 | 140 | $9,200 |
| 96 | 75 | 203012 | 30.75 | 17 | 11.5 | 145 | $10,225 |
| 124 | 100 | 203013 | 30.75 | 17 | 11.5 | 205 | $12,850 |
| 156 | 125 | 203014 | 56 | 17 | 13.13 | 225 | $14,570 |
| 180 | 150 | 203015 | 56 | 17 | 13.13 | 265 | $15,115 |
| 240 | 200 | 203016 | 67 | 17 | 13.5 | 350 | $16,215 |
| 302 | 250 | 203017 | 67 | 17 | 13.5 | 360 | $22,015 |
| 361 | 300 | 203018 | 67 | 17.31 | 14.5 | 490 | $26,885 |
| 414 | 350 | 203019 | 40 | 41.21 | 20.53 | 640 | $30,160 |
| 477 | 400 | 203020 | 40 | 41.21 | 20.53 | 680 | $33,305 |
| 515 | 450 | 203021 | 45 | 45 | 24 | 840 | $39,595 |
| 590 | 500 | 203022 | 45 | 45 | 24 | 875 | $41,400 |
| 720 | 600 | 203023 | 45 | 46 | 24 | 1110 | $47,670 |
| 840 | 700 | 203024 | 56 | 72 | 24 | 1250 | $55,095 |
| 960 | 800 | 203025 | 56 | 72 | 24 | 1300 | $61,010 |
| 1080 | 900 | 203026 | 56 | 72 | 24 | 1400 | $68,830 |

# Reactors & Filters

## Passive Harmonic Filters



### Passive Harmonic Filter 460 V Type 1 Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 7.6 | 5 | 203027 | 20.52 | 17.62 | 12.52 | 65 | $5,150 |
| 11 | 7.5 | 203028 | 20.52 | 17.62 | 12.52 | 70 | $5,490 |
| 14 | 10 | 203029 | 20.52 | 17.62 | 12.52 | 70 | $5,815 |
| 21 | 15 | 203030 | 20.52 | 17.62 | 12.52 | 80 | $6,525 |
| 27 | 20 | 203031 | 20.52 | 17.62 | 12.52 | 90 | $7,405 |
| 34 | 25 | 203032 | 20.52 | 17.62 | 12.52 | 88 | $8,520 |
| 40 | 30 | 203033 | 31.55 | 17.5 | 12.54 | 150 | $9,150 |
| 52 | 40 | 203034 | 31.55 | 17.5 | 12.54 | 190 | $9,755 |
| 65 | 50 | 203035 | 31.55 | 17.5 | 12.54 | 200 | $10,415 |
| 77 | 60 | 203036 | 31.7 | 17.6 | 12.6 | 206 | $11,760 |
| 96 | 75 | 203037 | 31.55 | 17.5 | 12.54 | 210 | $12,675 |
| 124 | 100 | 203038 | 56.15 | 17.66 | 16.33 | 300 | $17,385 |
| 156 | 125 | 203039 | 56.15 | 17.66 | 16.33 | 320 | $18,130 |
| 180 | 150 | 203040 | 56.15 | 17.66 | 16.33 | 360 | $19,430 |
| 240 | 200 | 203041 | 70 | 20 | 20 | 500 | $20,410 |
| 302 | 250 | 203042 | 70 | 20 | 20 | 545 | $25,390 |
| 361 | 300 | 203043 | 70 | 20 | 20 | 640 | $30,790 |
| 414 | 350 | 203044 | 70 | 20 | 20 | 650 | $33,795 |
| 477 | 400 | 203045 | 70 | 20 | 20 | 800 | $36,630 |
| 515 | 450 | 203046 | 62.57 | 52 | 24.38 | 1010 | $46,030 |
| 590 | 500 | 203047 | 62.57 | 52 | 24.38 | 1025 | $48,165 |
| 720 | 600 | 203048 | 62.57 | 52 | 24.38 | 1250 | $55,950 |
| 840 | 700 | 203049 | 62.57 | 52 | 26.46 | 1570 | $62,800 |
| 960 | 800 | 203050 | 62.57 | 52 | 26.46 | 1670 | $69,170 |
| 1080 | 900 | 203051 | 62.57 | 72 | 26.46 | 2020 | $79,730 |

# Reactors & Filters

## Passive Harmonic Filters



### Passive Harmonic Filter 460 V Type 3R Enclosure

| Amps | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|
| | | | Dimensions (in.) | | | | |
| 7.6 | 5 | 203052 | 33.24 | 33 | 13.73 | 101 | $5,980 |
| 11 | 7.5 | 203053 | 33.24 | 33 | 13.73 | 106 | $6,105 |
| 14 | 10 | 203054 | 33.24 | 33 | 13.73 | 113 | $6,330 |
| 21 | 15 | 203055 | 33.24 | 33 | 13.73 | 126 | $6,735 |
| 27 | 20 | 203056 | 33.24 | 33 | 13.73 | 126 | $7,630 |
| 34 | 25 | 203057 | 33.24 | 33 | 13.73 | 131 | $9,190 |
| 40 | 30 | 203058 | 37.58 | 39.41 | 13.73 | 294 | $9,985 |
| 52 | 40 | 203059 | 38.6 | 39.51 | 13.5 | 221 | $10,420 |
| 65 | 50 | 203060 | 38.6 | 39.51 | 13.5 | 231 | $10,825 |
| 77 | 60 | 203061 | 38.6 | 39.51 | 13.5 | 241 | $12,420 |
| 96 | 75 | 203062 | 38.6 | 39.51 | 13.5 | 248 | $13,225 |
| 124 | 100 | 203063 | 38.6 | 39.51 | 13.5 | 274 | $18,465 |
| 156 | 125 | 203064 | 38.6 | 39.51 | 13.5 | 291 | $19,315 |
| 180 | 150 | 203065 | 52.58 | 39.07 | 17.73 | 405 | $19,375 |
| 240 | 200 | 203066 | 52.58 | 39.07 | 17.73 | 475 | $22,055 |
| 302 | 250 | 203067 | 53.86 | 45.14 | 21.73 | 555 | $29,710 |
| 361 | 300 | 202880 | 53.86 | 45.4 | 21.73 | 623 | $33,705 |
| 414 | 350 | 202881 | 53.86 | 45.4 | 21.73 | 673 | $36,690 |
| 477 | 400 | 202882 | 65.77 | 57.13 | 26.32 | 995 | $38,000 |
| 515 | 450 | 202883 | 65.77 | 57.13 | 26.32 | 1004 | $47,150 |
| 590 | 500 | 202884 | 65.77 | 57.13 | 26.32 | 1019 | $54,135 |
| 720 | 600 | 202885 | 65.77 | 57.13 | 26.32 | 1244 | $61,720 |
| 840 | 700 | 202886 | 80.22 | 72.06 | 30 | 2598 | $68,880 |
| 960 | 800 | 202887 | 80.22 | 72.06 | 30 | 1600 | $74,010 |
| 1080 | 900 | 203001 | 80.22 | 72.06 | 30 | 3048 | $85,295 |

# Reactors & Filters

## Long Lead Filters



Long lead filters are designed for applications with long motor leads between IGBT-switched adjustable speed drives. Typical installations include deep wells, process lines, conveyor systems. Refer to the Operating Maintenance Manual for guidelines.

Long lead filters are current-rated devices. Therefore, know the total motor load on the ASD for proper application. They are to be wired directly to the adjustable speed drive installed adjacent to the output terminals. Installing the filters anywhere else in the circuit will negatively affect performance.

### For Motor Lead-Lengths up to 1000 ft. 2-4 kHz Maximum Carrier Frequency

| FLA | Voltage | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | |
| **Open Type Enclosure** | | | | | | | | |
| 2 | 230/460/600 | -/0.75/1 | 204673 | 9 | 5.5 | 7.25 | 8 | $705 |
| 3 | 230/460/600 | 0.5/1/2 | 204674 | 9 | 5.5 | 7.25 | 8 | $720 |
| 4 | 230/460/600 | 0.75/2/3 | 202193 | 9 | 5.5 | 7.25 | 8 | $735 |
| 6 | 230/460/600 | 1/3/- | 202194 | 9 | 5.5 | 7.25 | 8 | $755 |
| 8 | 230/460/600 | 2/5/5 | 202195 | 9 | 5.5 | 8.25 | 8 | $765 |
| 12 | 230/460/600 | 3/7.5/10 | 202196 | 9 | 5.5 | 8.25 | 8 | $800 |
| 16 | 230/460/600 | 5/10/- | 202197 | 9 | 5.5 | 8.25 | 12 | $805 |
| 18 | 230/460/600 | -/10/15 | 204675 | 9 | 5.5 | 8.25 | 12 | $890 |
| 25 | 230/460/600 | 7.5/15/20 | 202198 | 9 | 5.5 | 8.25 | 12 | $1,075 |
| 27 | 230/460/600 | -/20/25 | 204676 | 9 | 5.5 | 8.25 | 14 | $1,115 |
| 35 | 230/460/600 | 10/25/30 | 202199 | 12 | 8 | 9 | 17 | $1,165 |
| 45 | 230/460/600 | 15/30/40 | 202200 | 12 | 8 | 9 | 17 | $1,210 |
| 55 | 230/460/600 | 20/40/50 | 202201 | 12 | 8 | 9 | 23 | $1,245 |
| 80 | 230/460/600 | 30/60/75 | 202202 | 12 | 8 | 9 | 23 | $1,760 |
| 110 | 230/460/600 | 40/75/100 | 202203 | 12 | 8 | 10.25 | 40 | $2,065 |
| 130 | 230/460/600 | 50/100/125 | 202204 | 8.5 | 11.75 | 9.5 | 55 | $2,415 |
| 160 | 230/460/600 | 60/125/150 | 202205 | 8.5 | 11.75 | 10.5 | 60 | $2,660 |
| 200 | 230/460/600 | 75/150/200 | 202206 | 8.5 | 11.75 | 9.5 | 60 | $2,900 |
| 250 | 230/460/600 | 100/200/250 | 202207 | 8.5 | 11.75 | 9.5 | 65 | $2,980 |
| 305 | 230/460/600 | -/250/300 | 202208 | 8.75 | 11.75 | 12.25 | 80 | $3,235 |
| 362 | 230/460/600 | 150/300/350 | 202209 | 8.75 | 11.75 | 12 | 80 | $3,705 |
| 420 | 230/460/600 | -/350/450 | 204677 | 10 | 11.75 | 13.75 | 95 | $4,295 |
| 480 | 230/460/600 | 200/400/500 | 202210 | 10 | 11.75 | 13.75 | 100 | $4,580 |
| 600 | 230/460/600 | -/500/600 | 202211 | 12.75 | 15 | 13.75 | 130 | $4,800 |
| 750 | 230/460/600 | -/600/700 | 202212 | 12.75 | 15 | 14.5 | 135 | $7,830 |

**Notes:**
- Consult factory for installed pricing.
- CF: Consult Factory.

# Reactors & Filters

## Long Lead Filters



| FLA | Voltage | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | |
| **Type 1 Enclosure** | | | | | | | | |
| 2 | 230/460/600 | -/0.75/1 | 204683 | 9 | 5.5 | 10 | 11 | $1,115 |
| 3 | 230/460/600 | 0.5/1/2 | 204684 | 9 | 5.5 | 10 | 11 | $1,120 |
| 4 | 230/460/600 | 0.75/2/3 | 201534 | 9 | 5.5 | 10 | 11 | $1,135 |
| 6 | 230/460/600 | 1/3/- | 201535 | 9 | 5.5 | 10 | 11 | $1,155 |
| 8 | 230/460/600 | 2/5/5 | 201536 | 9 | 5.5 | 10 | 11 | $1,180 |
| 12 | 230/460/600 | 3/7.5/10 | 201537 | 9 | 5.5 | 10 | 11 | $1,230 |
| 16 | 230/460/600 | 5/10/- | 201538 | 9 | 5.5 | 10 | 15 | $1,255 |
| 18 | 230/460/600 | -/10/15 | 204685 | 9 | 5.5 | 10 | 15 | $1,305 |
| 25 | 230/460/600 | 7.5/15/20 | 201539 | 9 | 5.5 | 10 | 15 | $1,390 |
| 27 | 230/460/600 | -/20/25HP | 204686 | 9 | 5.5 | 10 | 15 | $1,440 |
| 35 | 230/460/600 | 10/25/30 | 201540 | 12 | 8 | 11.5 | 23 | $1,490 |
| 45 | 230/460/600 | 15/30/40 | 201541 | 12 | 8 | 11.5 | 23 | $1,540 |
| 55 | 230/460/600 | 20/40/50 | 201542 | 12 | 8 | 11.5 | 23 | $1,680 |
| 80 | 230/460/600 | 30/60/75 | 201543 | 12 | 8 | 11.5 | 29 | $2,185 |
| 110 | 230/460/600 | 40/75/100 | 201544 | 16.5 | 18 | 15 | 68 | $2,995 |
| 130 | 230/460/600 | 50/100/125 | 201545 | 16.5 | 18 | 15 | 83 | $3,380 |
| 160 | 230/460/600 | 60/125/150 | 201546 | 16.5 | 18 | 15 | 83 | $3,630 |
| 200 | 230/460/600 | 75/150/200 | 201547 | 16.5 | 18 | 15 | 93 | $3,780 |
| 250 | 230/460/600 | 100/200/250 | 201548 | 16.5 | 18 | 15 | 93 | $3,855 |
| 305 | 230/460/600 | -/250/300 | 201549 | 16.5 | 18 | 30 | 117 | $3,875 |
| 362 | 230/460/600 | 150/300/350 | 201550 | 16.5 | 18 | 30 | 117 | $4,315 |
| 420 | 230/460/600 | -/350/450 | 204687 | 16.5 | 18 | 30 | 132 | $4,675 |
| 480 | 230/460/600 | 200/400/500 | 201551 | 16.5 | 18 | 30 | 138 | $5,235 |
| 600 | 230/460/600 | -/500/600 | 201552 | 16.5 | 18 | 30 | 168 | $5,725 |
| 750 | 230/460/600 | -/600/700 | 201553 | 16.5 | 18 | 30 | 180 | $10,255 |

**Notes:**

- Consult factory for installed pricing.
- CF: Consult Factory.

# Reactors & Filters

## Long Lead Filters



| FLA | Voltage | HP | Model Number | H | W | D | Weight (lbs.) | List Price |
|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | |
| **Type 3R Enclosure** | | | | | | | | |
| 2 | 230/460/600 | 0.5/1/2 | 204678 | 11.45 | 10 | 12 | 25 | $1,365 |
| 3 | 230/460/600 | 0.5/1/2 | 204679 | 11.45 | 10 | 12 | 25 | $1,375 |
| 4 | 230/460/600 | 0.75/2/3 | 202213 | 11.45 | 10 | 12 | 25 | $1,385 |
| 6 | 230/460/600 | 1/3/- | 202214 | 11.45 | 10 | 12 | 25 | $1,410 |
| 8 | 230/460/600 | 2/5/5 | 202215 | 11.45 | 10 | 12 | 25 | $1,440 |
| 12 | 230/460/600 | 3/7.5/10 | 202216 | 11.45 | 10 | 12 | 25 | $1,505 |
| 16 | 230/460/600 | 5/10/- | 202217 | 11.45 | 10 | 12 | 29 | $1,530 |
| 18 | 230/460/600 | -/10/15 | 204680 | 11.45 | 10 | 12 | 29 | $1,600 |
| 25 | 230/460/600 | 7.5/15/20 | 202218 | 11.45 | 10 | 12 | 29 | $1,700 |
| 27 | 230/460/600 | -/20/25 | 204681 | 11.45 | 10 | 12 | 29 | $1,765 |
| 35 | 230/460/600 | 10/25/30 | 202219 | 19.18 | 15.62 | 19.5 | 56 | $1,825 |
| 45 | 230/460/600 | 15/30/40 | 202220 | 19.18 | 15.62 | 19.5 | 56 | $1,885 |
| 55 | 230/460/600 | 20/40/50 | 202221 | 19.18 | 15.62 | 19.5 | 56 | $2,050 |
| 80 | 230/460/600 | 30/60/75 | 202222 | 19.18 | 15.62 | 19.5 | 62 | $2,675 |
| 110 | 230/460/600 | 40/75/100 | 202223 | 19.18 | 15.62 | 19.5 | 74 | $3,290 |
| 130 | 230/460/600 | 50/100/125 | 202224 | 19.18 | 15.62 | 19.5 | 89 | $3,710 |
| 160 | 230/460/600 | 60/125/150 | 202225 | 19.18 | 15.62 | 19.5 | 99 | $3,985 |
| 200 | 230/460/600 | 75/150/200 | 202226 | 19.18 | 15.62 | 19.5 | 99 | $4,150 |
| 250 | 230/460/600 | 100/200/250 | 202227 | 19.18 | 15.62 | 19.5 | 99 | $4,230 |
| 305 | 230/460/600 | -/250/300 | 202228 | 22.15 | 20.62 | 28.5 | 109 | $4,255 |
| 362 | 230/460/600 | 150/300/350 | 202229 | 22.15 | 20.62 | 28.5 | 109 | $4,735 |
| 420 | 230/460/600 | -/350/450 | 204682 | 22.15 | 20.62 | 28.5 | 156 | $5,130 |
| 480 | 230/460/600 | 200/400/500 | 202230 | 22.15 | 20.62 | 28.5 | 161 | $5,750 |
| 600 | 230/460/600 | -/500/600 | 202231 | 36 | 28.21 | 36.86 | 297 | $6,285 |
| 750 | 230/460/600 | -/600/700 | 202232 | 36 | 28.21 | 36.86 | 307 | $11,255 |

**Notes:**

- Consult factory for installed pricing.
- CF: Consult Factory.

# Medium Voltage Adjustable Speed Drives
## T300MV2® General Purpose
### Specifications

Toshiba's T300MV2 medium voltage adjustable speed drive combines cutting-edge technology with a streamlined design to deliver a powerful solution for enhancing productivity and efficiency in industrial and commercial applications. Equipped with advanced multi-level Pulse Width Modulation (PWM) with Neutral-Point Clamping (NPC) technology, the T300MV2 offers a compact footprint, a reduced component count, and sophisticated safety features. Backed by comprehensive US-based training and support, the T300MV2 stands out as an exceptional choice for maximizing efficiency and reliability in demanding industrial environments.

**Product Scope**

2400 V at 300 to 3000 HP
3300 V at 300 to 8000 HP
4160 V at 300 to 11,000 HP
6600 V at 300 to 9000 HP
6900 V at 7000 to 10,000 HP

**Highlights**

- Three Cables In, Three Cables Out
- 24-Pulse Harmonic Cancellation Complies with IEEE 519 2014
- Higher True Power Factor (>0.96) than Running Motors Across-the-Line
- Small Footprint Through Compact Power Modules, Standard Copper-Wound Isolation Transformer & Air-Cooling System
- Robust, High-Quality Medium Voltage IGBT Technology, Transistors & Control Components
- Advanced Electronics to Reduce Component Count
- Additive Multi-Level PWM Output Voltage with No Neutral Shift

**Standard Features**

- Overload Rating, 115% for 60 Seconds (Some Ratings with 110% Overload)
- UL Type 1 Ventilated Enclosure with Gasket & Air Intake Filters with IP20 Degree of Protection
- Ten Digital Inputs: Interposing Relay may be Required
- Ten Digital Outputs: Interposing Relay may be Required
- Three Analog Inputs: Isolation Transducer Required
- Eight Analog Outputs: Isolation Transducer Required
- Medium Voltage IGBT Technology
- EOI: Plain-English LCD Display
- Ambient Temperature: 32° to 104° F (0° to 40°C)
- Altitude: Up to 1000 Meters without Derate
- Humidity: 95% Non-Condensing
- Motor Cable Length 1000 ft. Without Additional Filter
- Standards & Compliances: NEC®, NEMA®, UL Listed in US & Canada, ANSI®



c UL us

# T300MV2® General Purpose
## Part Numbering Convention

The T300MV2 can be configured with commonly-used options for an easy-to-install, turn-key package. See the chart below for available configurations. Custom packages are available upon request. Drawings supplied by Toshiba's MV Adjustable Speed Drives Department.

The example, M4AAN44050AAA0, shows a standard duty T300MV2, Frame A, 60Hz, non-regen, 4160 V input, 4160 V output, 500 HP, input disconnect, cooling fan power, standard output reactor, no main input bus.

| Example Part Number: | M4 | A | A | N | 4 | 4 | 050 | A | A | A | 0 | xx |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Series:**
M4 - MV2

**Frame Type:**

| | | |
|---|---|---|
| 0 - Frame 0 | A - Frame A | E - Frame E |
| 1 - Frame 1 | B - Frame B | F - Frame F |
| 2 - Frame 2 | C - Frame C | G - Frame G |
| 3 - Frame 3 | D - Frame D | H - Frame H |
| 4 - Frame 4 | | |

**Input Frequency:**
A - 60 Hz
B - 50 Hz

**Type:**
N - For Non-Regen Adjustable Speed Drives
R - Regen Module Adjustable Speed Drives

**Input Voltage:**

| | | |
|---|---|---|
| 2 - 2400 | 7 - 6900 | E - 12000 |
| 3 - 3300 | A - 7200 | F - 12470 |
| 4 - 4160 | B - 8320 | G - 13200 |
| 5 - 4800 | C - 10000 | H - 13800 |
| 6 - 6600 | D - 11000 | Z - Other |

**Output Voltage:**
2 - 2400 3 - 3300 4 - 4160 6 - 6600 7 - 6900

**Output Rated Capacity:**

| | | | | |
|---|---|---|---|---|
| 030 - 300 HP | 070 - 700 HP | 175 - 1750 HP | 400 - 4000 HP | 800 - 8000 HP |
| 035 - 350 HP | 080 - 800 HP | 200 - 2000 HP | 450 - 4500 HP | 900 - 9000 HP |
| 040 - 400 HP | 090 - 900 HP | 225 - 2250 HP | 500 - 5000 HP | 10K - 10000 HP |
| 045 - 450 HP | 100 - 1000 HP | 250 - 2500 HP | 550 - 5500 HP | 11K - 11000 HP |
| 050 - 500 HP | 125 - 1250 HP | 300 - 3000 HP | 600 - 6000 HP | |
| 060 - 600 HP | 150 - 1500 HP | 350 - 3500 HP | 700 - 7000 HP | |

**Configuration:**

| | ID: | CP: | BYP: | RFAN: |
|---|---|---|---|---|
| A -- | Yes | Yes | No | No |
| B -- | Yes | No | No | No |
| C -- | No | Yes | No | No |
| D -- | No | No | No | No |
| E -- | Yes | Yes | Yes | No |
| F -- | Yes | No | Yes | No |
| G -- | No | Yes | Yes | No |
| H -- | No | No | Yes | No |
| J -- | Yes | Yes | No | Yes |
| K -- | Yes | No | No | Yes |
| L -- | No | Yes | No | Yes |
| M -- | No | No | No | Yes |
| N-- | Yes | Yes | Yes | Yes |
| P -- | Yes | No | Yes | Yes |
| Q -- | No | Yes | Yes | Yes |
| R -- | No | No | Yes | Yes |

ID - Input Disconnect
CP - Internal Cooling Fan Power
BYP - Bypass
RFAN - Redundant Fans

**Output Options:**

| | |
|---|---|
| A - Standard Reactor | D - Transfer |
| B - DV/DT Filter | E - Sine wave Filter |
| C - DV/DT Filter and Transfer | F - Sine wave Filter and Transfer |

**Cooling Options:**

| | |
|---|---|
| A - Standard | C - Heat Exchanger Cooled |
| B - Bottom Air Feed | D - Outdoor Converter |

**Main Input Bus:**

| | |
|---|---|
| 0 - None | 3 - 2000 A Uninsulated |
| 1 - 1200 A Uninsulated | 4 - 2000 A Insulated |
| 2 - 1200 A Insulated | |

**Additional Options:**
Additional numbers or letters that may be used to designate other options or identify individual units in multiple unit orders

# T300MV2® General Purpose
## 2400 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| **Without Bypass** | | | | | | | | | |
| 300 | 64 | M4AAN22030AAA0 | A2 | 103.7 | 48 | 48 | MVDT3I | $310,200 | 4400 |
| 350 | 75 | M4AAN22035AAA0 | A2 | 103.7 | 48 | 48 | MVDT3I | $312,400 | 4700 |
| 400 | 86 | M4AAN22040AAA0 | A2 | 103.7 | 48 | 48 | MVDT3I | $323,400 | 5000 |
| 450 | 97 | M4AAN22045AAA0 | A2 | 103.7 | 48 | 48 | MVDT3I | $324,500 | 5200 |
| 500 | 107 | M4AAN22050AAA0 | A2 | 103.7 | 48 | 48 | MVDT3I | $325,600 | 5500 |
| 600 | 129 | M4BAN22060AAA0 | B2 | 103.7 | 74 | 42 | MVDT3I | $349,800 | 7400 |
| 700 | 150 | M4BAN22070AAA0 | B2 | 103.7 | 74 | 42 | MVDT3I | $354,200 | 7700 |
| 800 | 172 | M4BAN22080AAA0 | B2 | 103.7 | 74 | 42 | MVDT3I | $358,600 | 8000 |
| 900 | 193 | M4BAN22090AAA0 | B2 | 103.7 | 74 | 42 | MVDT3I | $363,000 | 8300 |
| 1000 | 215 | M4BAN22100AAA0 | B2 | 103.7 | 74 | 42 | MVDT3I | $368,500 | 8600 |
| 1250 | 269 | M4DAN22125AAA0 | D2 | 103.7 | 122 | 42 | MVDT3I | $484,000 | 11300 |
| 1500 | 322 | M4DAN22150AAA0 | D2 | 103.7 | 122 | 42 | MVDT3I | $495,000 | 11800 |
| 1750 | 376 | M4DAN22175AAA0 | D2 | 103.7 | 122 | 42 | MVDT3I | $506,000 | 12200 |
| 2000 | 430 | M4DAN22200AAA0 | D2 | 103.7 | 122 | 42 | MVDT3I | $512,600 | 12800 |
| 2250 | 483 | M44AN22225AAA0 | 4 | 103.7 | 222 | 48 | MVDT3I | $710,600 | 18500 |
| 2500 | 537 | M44AN22250AAA0 | 4 | 103.7 | 222 | 48 | MVDT3I | $720,500 | 18500 |
| 3000 | 645 | M44AN22300AAA0 | 4 | 103.7 | 222 | 48 | MVDT3I | $737,000 | 18500 |
| **With Manual Bypass** | | | | | | | | | |
| 300 | 64 | M4AAN22030EAA0 | A2 | 103.7 | 78 | 48 | MVDT3I | $465,200 | 4800 |
| 350 | 75 | M4AAN22035EAA0 | A2 | 103.7 | 78 | 48 | MVDT3I | $467,400 | 5000 |
| 400 | 86 | M4AAN22040EAA0 | A2 | 103.7 | 78 | 48 | MVDT3I | $478,400 | 5200 |
| 450 | 97 | M4AAN22045EAA0 | A2 | 103.7 | 78 | 48 | MVDT3I | $479,500 | 5400 |
| 500 | 107 | M4AAN22050EAA0 | A2 | 103.7 | 78 | 48 | MVDT3I | $480,600 | 5600 |
| 600 | 129 | M4BAN22060EAA0 | B2 | 103.7 | 104 | 42 | MVDT3I | $504,800 | 8500 |
| 700 | 150 | M4BAN22070EAA0 | B2 | 103.7 | 104 | 42 | MVDT3I | $509,200 | 8800 |
| 800 | 172 | M4BAN22080EAA0 | B2 | 103.7 | 104 | 42 | MVDT3I | $513,600 | 9100 |
| 900 | 193 | M4BAN22090EAA0 | B2 | 103.7 | 104 | 42 | MVDT3I | $518,000 | 9400 |
| 1000 | 215 | M4BAN22100EAA0 | B2 | 103.7 | 104 | 42 | MVDT3I | $523,500 | 9700 |
| 1250 | 269 | M4DAN22125EAA0 | D2 | 103.7 | 152 | 42 | MVDT3I | $639,000 | 12400 |
| 1500 | 322 | M4DAN22150EAA0 | D2 | 103.7 | 158 | 42 | MVDT3I | $650,000 | 12900 |
| 1750 | 376 | M4DAN22175EAA0 | D2 | 103.7 | 188 | 42 | MVDT3I | $702,000 | 14700 |
| 2000 | 430 | M4DAN22200EAA0 | D2 | 103.7 | 188 | 42 | MVDT3I | $708,600 | 15300 |
| 2250 | 483 | M44AN22225EAA0 | 4 | 103.7 | 258 | 48 | MVDT3I | $906,600 | 35800 |
| 2500 | 537 | M44AN22250EAA0 | 4 | 103.7 | 258 | 48 | MVDT3I | $916,500 | 35800 |
| 3000 | 645 | M44AN22300EAA0 | 4 | 103.7 | 258 | 48 | MVDT3I | $933,000 | 35800 |

**Notes:**
- HP ratings above are for typical 4-pole motors.
- Dimensions do not include space required for clearance for airflow, door operation, etc.
- Bypass Starter pricing is based on fixed contactors (non draw-out type). Please select required Motor Protection relay option.
- Frames B2, and D2 adjustable speed drives with redundant fan option will increase in height by 7" over the standard model.
- Frame 4 3000 HP: consult factory for update on UL status.
- Weights and dimensions are subject to change.
- Units with bypass start the motor across the line for "emergency maintenance bypass" use when the VFD is out of service. Toshiba Standard RX5 simple overload relay is included in bypass at no additional cost. RTD monitoring not included.
- AAA are Standard models; -EAA include Bypass.

# T300MV2® General Purpose
## 3300 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| **Without Bypass** | | | | | | | | | |
| 300 | 47 | M4AAN33030AAA0 | A4µ | 103.7 | 48 | 48 | MVDT3I | $396,000 | 6000 |
| 400 | 63 | M4AAN33040AAA0 | A4µ | 103.7 | 48 | 48 | MVDT3I | $398,200 | 6000 |
| 500 | 78 | M4AAN33050AAA0 | A4 | 103.7 | 60 | 48 | MVDT3I | $400,400 | 7600 |
| 600 | 94 | M4AAN33060AAA0 | A4 | 103.7 | 60 | 48 | MVDT3I | $401,500 | 7600 |
| 700 | 109 | M4AAN33070AAA0 | A4 | 103.7 | 60 | 48 | MVDT3I | $402,600 | 7600 |
| 800 | 125 | M4BAN33080AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $455,400 | 9200 |
| 900 | 141 | M4BAN33090AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $464,200 | 9200 |
| 1000 | 156 | M4BAN33100AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $488,400 | 9800 |
| 1250 | 195 | M4BAN33125AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $496,100 | 10600 |
| 1500 | 234 | M4BAN33150AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $507,100 | 11500 |
| 1750 | 273 | M4CAN33175AAA0 | C4 | 103.7 | 154 | 49.5 | MVDT3I | $654,500 | 16400 |
| 2000 | 310 | M4CAN33200AAA0 | C4 | 103.7 | 154 | 49.5 | MVDT3I | $718,300 | 17200 |
| 2250 | 352 | M4CAN33225AAA0 | C4 | 103.7 | 154 | 49.5 | MVDT3I | $761,200 | 18100 |
| 1750 | 273 | M42AN33175AAA0 | 2 | 103.7 | 164 | 49.5 | MVDT3I | $654,500 | 16400 |
| 2000 | 310 | M42AN33200AAA0 | 2 | 103.7 | 164 | 49.5 | MVDT3I | $663,300 | 17200 |
| 2250 | 352 | M42AN33225AAA0 | 2 | 103.7 | 164 | 49.5 | MVDT3I | $763,400 | 18100 |
| 2500 | 391 | M43AN33250AAA0 | 3 | 103.7 | 174 | 49.5 | MVDT3I | $815,100 | 20000 |
| 3000 | 469 | M43AN33300AAA0 | 3 | 103.7 | 174 | 49.5 | MVDT3I | $922,900 | 20800 |
| 3500 | 547 | M44AN33350AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $1,015,300 | 26000 |
| 4000 | 625 | M44AN33400AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $1,056,000 | 27100 |
| 4500 | 703 | M44AN33450AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $1,078,000 | 29100 |
| 5000 | 780 | M4GAN33500AAA0 | G4P | 103.7 | 307.5 | 60 | MVDT3I | $1,595,000 | 38750 |
| 5500 | 858 | M4GAN33550AAA0 | G4P | 103.7 | 307.5 | 60 | MVDT3I | $1,815,000 | 44500 |
| 6000 | 936 | M4GAN33600AAA0 | G4P | 103.7 | 402.5 | 60 | MVDT3I | $2,035,000 | 40750 |
| 7000 | 1092 | M4HAN33700AAA0 | H4P | 103.7 | 402.5 | 60 | MVDT3I | $2,198,900 | 64300 |
| 8000 | 1240 | M4HAN33800AAA0 | H4P | 103.7 | 402.5 | 60 | MVDT3I | $2,308,900 | 68300 |
| **With Manual Bypass** | | | | | | | | | |
| 300 | 47 | M4AAN33030EAA0 | A4µ | 103.7 | 78 | 48 | MVDT3I | $551,000 | 7100 |
| 400 | 63 | M4AAN33040EAA0 | A4µ | 103.7 | 78 | 48 | MVDT3I | $553,200 | 7100 |
| 500 | 78 | M4AAN33050EAA0 | A4 | 103.7 | 90 | 48 | MVDT3I | $555,400 | 8700 |
| 600 | 94 | M4AAN33060EAA0 | A4 | 103.7 | 90 | 48 | MVDT3I | $556,500 | 8700 |
| 700 | 109 | M4AAN33070EAA0 | A4 | 103.7 | 90 | 48 | MVDT3I | $557,600 | 8700 |
| 800 | 125 | M4BAN33080EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $610,400 | 10300 |
| 900 | 141 | M4BAN33090EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $619,200 | 10300 |
| 1000 | 156 | M4BAN33100EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $643,400 | 10900 |
| 1250 | 195 | M4BAN33125EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $651,100 | 11700 |
| 1500 | 234 | M4BAN33150EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $662,100 | 12600 |
| 1750 | 273 | M4CAN33175EAA0 | C4 | 103.7 | 184 | 49.5 | MVDT3I | $809,500 | 17500 |
| 2000 | 310 | M42CN33200EAA0 | C4 | 103.7 | 184 | 49.5 | MVDT3I | $873,300 | 18300 |
| 2250 | 352 | M4CAN33225EAA0 | C4 | 103.7 | 184 | 49.5 | MVDT3I | $957,200 | 19200 |
| 1750 | 273 | M4CAN33225EAA0 | 2 | 103.7 | 194 | 49.5 | MVDT3I | $809,500 | 17500 |
| 2000 | 310 | M42CN33200EAA0 | 2 | 103.7 | 194 | 49.5 | MVDT3I | $818,300 | 18300 |
| 2250 | 352 | M42CN33250EAA0 | 2 | 103.7 | 194 | 49.5 | MVDT3I | $959,400 | 19200 |
| 2500 | 391 | M43AN33250EAA0 | 3 | 103.7 | 210 | 49.5 | MVDT3I | $1,011,100 | 22000 |
| 3000 | 469 | M43AN33300EAA0 | 3 | 103.7 | 210 | 49.5 | MVDT3I | $1,118,900 | 22800 |
| 3500 | 547 | M44AN33350EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,211,300 | 28000 |
| 4000 | 625 | M44AN33400EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,252,000 | 29100 |
| 4500 | 703 | M44AN33450EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,274,000 | 31100 |

# T300MV2® General Purpose

## 4160 VAC Output

## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| Without Bypass | | | | | | | | | |
| 300 | 37 | M4AAN44030AAA0 | A4µ | 103.7 | 48 | 48 | MVDT3I | $376,000 | 5200 |
| 400 | 50 | M4AAN44040AAA0 | A4µ | 103.7 | 48 | 48 | MVDT3I | $380,000 | 5600 |
| 500 | 62 | M4AAN44050AAA0 | A4µ | 103.7 | 48 | 48 | MVDT3I | $384,000 | 6000 |
| 600 | 74 | M4AAN44060AAA0 | A4µ | 103.7 | 48 | 48 | MVDT3I | $400,000 | 6200 |
| 700 | 87 | M4AAN44070AAA0 | A4 | 103.7 | 60 | 48 | MVDT3I | $402,000 | 7000 |
| 800 | 99 | M4AAN44080AAA0 | A4 | 103.7 | 60 | 48 | MVDT3I | $404,000 | 7200 |
| 900 | 112 | M4AAN44090AAA0 | A4 | 103.7 | 60 | 48 | MVDT3I | $406,000 | 7400 |
| 1000* | 124 | M4AAN44100AAA0 | A4 | 103.7 | 60 | 48 | MVDT3I | $408,000 | 7600 |
| 1000 | 124 | M4BAN44100AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $450,000 | 10000 |
| 1250 | 155 | M4BAN44125AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $460,000 | 10500 |
| 1500 | 186 | M4BAN44150AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $470,000 | 11000 |
| 1750 | 217 | M4BAN44175AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $480,000 | 11500 |
| 2000* | 248 | M4BAN44200AAA0 | B4 | 103.7 | 90 | 48 | MVDT3I | $500,000 | 12000 |
| 2250 | 279 | M4CAN44225AAA0 | C4 | 103.7 | 154 | 49.5 | MVDT3I | $665,000 | 15700 |
| 2500 | 310 | M4CAN44250AAA0 | C4 | 103.7 | 154 | 49.5 | MVDT3I | $675,000 | 16500 |
| 3000* | 372 | M4CAN44300AAA0 | C4 | 103.7 | 154 | 49.5 | MVDT3I | $685,000 | 17300 |
| 300 | 37 | M40AN44030AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $320,000 | 5500 |
| 400 | 50 | M40AN44040AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $330,000 | 6000 |
| 500 | 62 | M40AN44050AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $340,000 | 6400 |
| 600 | 74 | M40AN44060AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $350,000 | 6600 |
| 700 | 87 | M40AN44070AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $360,000 | 6800 |
| 800 | 99 | M40AN44080AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $380,000 | 7200 |
| 900 | 112 | M40AN44090AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $400,000 | 7500 |
| 1000* | 124 | M40AN44100AAA0 | 0 | 103.7 | 74 | 43.4 | MVDT3I | $420,000 | 8300 |
| 1000 | 124 | M41AN44100AAA0 | 1 | 103.7 | 122 | 43.4 | MVDT3I | $425,000 | 9000 |
| 1250 | 155 | M41AN44125AAA0 | 1 | 103.7 | 122 | 43.4 | MVDT3I | $435,000 | 10200 |
| 1500 | 186 | M41AN44150AAA0 | 1 | 103.7 | 122 | 43.4 | MVDT3I | $445,000 | 11000 |
| 1750 | 217 | M41AN44175AAA0 | 1 | 103.7 | 122 | 43.4 | MVDT3I | $455,000 | 11900 |
| 2000* | 248 | M41AN44200AAA0 | 1 | 103.7 | 122 | 43.4 | MVDT3I | $475,000 | 12500 |
| 2250 | 279 | M42AN44225AAA0 | 2 | 103.7 | 164 | 49.5 | MVDT3I | $676,000 | 15700 |
| 2500 | 310 | M42AN44250AAA0 | 2 | 103.7 | 164 | 49.5 | MVDT3I | $686,000 | 16500 |
| 3000* | 372 | M42AN44300AAA0 | 2 | 103.7 | 164 | 49.5 | MVDT3I | $696,000 | 17300 |
| 3000 | 372 | M43AN44300AAA0 | 3 | 103.7 | 174 | 49.5 | MVDT3I | $770,000 | 18200 |
| 3500 | 434 | M43AN44350AAA0 | 3 | 103.7 | 174 | 49.5 | MVDT3I | $800,000 | 19000 |
| 4000* | 496 | M43AN44400AAA0 | 3 | 103.7 | 174 | 49.5 | MVDT3I | $830,000 | 19800 |
| 4000 | 496 | M44AN44400AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $915,000 | 24200 |
| 4500 | 558 | M44AN44450AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $930,000 | 25200 |
| 5000 | 620 | M44AN44500AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $945,000 | 26250 |
| 5500 | 682 | M44AN44550AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $960,000 | 27200 |
| 6000* | 744 | M44AN44600AAA0 | 4 | 103.7 | 222 | 49.5 | MVDT3I | $973,000 | 28250 |
| 7000 | 868 | M4GAN44700AAA0 | G4P | 103.7 | 307.5 | 60 | MVDT3I | $1,800,000 | 37500 |
| 8000* | 992 | M4GAN44800AAA0 | G4P | 103.7 | 307.5 | 60 | MVDT3I | $1,900,000 | 41000 |
| 8000 | 992 | M4HAN44800AAA0 | H4P | 103.7 | 402.5 | 60 | MVDT3I | $2,000,000 | 56800 |
| 9000 | 1116 | M4HAN44900AAA0 | H4P | 103.7 | 402.5 | 60 | MVDT3I | $2,250,000 | 60800 |
| 10000 | 1240 | M4HAN4410KAAA0 | H4P | 103.7 | 402.5 | 60 | MVDT3I | $2,400,000 | 64800 |
| 11000 | 1364 | M4HAN4411KAAA0 | H4P | 103.7 | 402.5 | 60 | MVDT3I | $2,550,000 | 68800 |

# T300MV2® General Purpose
## 4160 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| With Manual Bypass | | | | | | | | | |
| 300 | 37 | M4AAN44030EAA0 | A4µ | 103.7 | 78 | 48 | MVDT3I | $531,000 | 6300 |
| 400 | 50 | M4AAN44040EAA0 | A4µ | 103.7 | 78 | 48 | MVDT3I | $535,000 | 6700 |
| 500 | 62 | M4AAN44050EAA0 | A4µ | 103.7 | 78 | 48 | MVDT3I | $539,000 | 7100 |
| 600 | 74 | M4AAN44060EAA0 | A4µ | 103.7 | 78 | 48 | MVDT3I | $555,000 | 7300 |
| 700 | 87 | M4AAN44070EAA0 | A4 | 103.7 | 90 | 48 | MVDT3I | $557,000 | 8100 |
| 800 | 99 | M4AAN44080EAA0 | A4 | 103.7 | 90 | 48 | MVDT3I | $559,000 | 8300 |
| 900 | 112 | M4AAN44090EAA0 | A4 | 103.7 | 90 | 48 | MVDT3I | $561,000 | 8500 |
| 1000* | 124 | M4AAN44100EAA0 | A4 | 103.7 | 90 | 48 | MVDT3I | $563,000 | 8700 |
| 1000 | 124 | M4BAN44100EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $605,000 | 10200 |
| 1250 | 155 | M4BAN44125EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $615,000 | 10300 |
| 1500 | 186 | M4BAN44150EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $625,000 | 11100 |
| 1750 | 217 | M4BAN44175EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $635,000 | 12000 |
| 2000* | 248 | M4BAN44200EAA0 | B4 | 103.7 | 120 | 48 | MVDT3I | $655,000 | 12600 |
| 2250 | 279 | M4CAN44225EAA0 | C4 | 103.7 | 184 | 49.5 | MVDT3I | $820,000 | 16800 |
| 2500 | 310 | M4CAN44250EAA0 | C4 | 103.7 | 184 | 49.5 | MVDT3I | $830,000 | 17600 |
| 3000* | 372 | M4CAN44300EAA0 | C4 | 103.7 | 184 | 49.5 | MVDT3I | $840,000 | 19300 |
| 300 | 37 | M40AN44030EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $475,000 | 6600 |
| 400 | 50 | M40AN44040EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $485,000 | 7100 |
| 500 | 62 | M40AN44050EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $495,000 | 7500 |
| 600 | 74 | M40AN44060EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $505,000 | 7700 |
| 700 | 87 | M40AN44070EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $515,000 | 7900 |
| 800 | 99 | M40AN44080EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $535,000 | 8300 |
| 900 | 112 | M40AN44090EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $555,000 | 8600 |
| 1000* | 124 | M40AN44100EAA0 | 0 | 103.7 | 104 | 43.4 | MVDT3I | $575,000 | 9400 |
| 1000 | 124 | M41AN44100EAA0 | 1 | 103.7 | 152 | 43.4 | MVDT3I | $580,000 | 10600 |
| 1250 | 155 | M41AN44125EAA0 | 1 | 103.7 | 152 | 43.4 | MVDT3I | $590,000 | 11300 |
| 1500 | 186 | M41AN44150EAA0 | 1 | 103.7 | 152 | 43.4 | MVDT3I | $600,000 | 12100 |
| 1750 | 217 | M41AN44175EAA0 | 1 | 103.7 | 152 | 43.4 | MVDT3I | $610,000 | 13000 |
| 2000* | 248 | M41AN44200EAA0 | 1 | 103.7 | 152 | 43.4 | MVDT3I | $630,000 | 13600 |
| 2250 | 279 | M42AN44225EAA0 | 2 | 103.7 | 194 | 49.5 | MVDT3I | $831,000 | 16800 |
| 2500 | 310 | M42AN44250EAA0 | 2 | 103.7 | 194 | 49.5 | MVDT3I | $841,000 | 17600 |
| 3000* | 372 | M42AN44300EAA0 | 2 | 103.7 | 194 | 49.5 | MVDT3I | $892,000 | 19300 |
| 3000 | 372 | M43AN44300EAA0 | 3 | 103.7 | 210 | 49.5 | MVDT3I | $966,000 | 20200 |
| 3500 | 434 | M43AN44350EAA0 | 3 | 103.7 | 210 | 49.5 | MVDT3I | $996,000 | 21000 |
| 4000* | 496 | M43AN44400EAA0 | 3 | 103.7 | 210 | 49.5 | MVDT3I | $1,026,000 | 21800 |
| 4000 | 496 | M44AN44400EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,111,000 | 25700 |
| 4500 | 558 | M44AN44450EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,126,000 | 26700 |
| 5000 | 620 | M44AN44500EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,141,000 | 27750 |
| 5500 | 682 | M44AN44550EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,156,000 | 28700 |
| 6000* | 720 | M44AN44600EAA0 | 4 | 103.7 | 258 | 49.5 | MVDT3I | $1,169,000 | 29750 |

**Notes:**
- HP ratings above are for typical 4-pole motors.
- Dimensions do not include space required or clearance for air flow, door operation, etc.
- Bypass Starter pricing is based on fixed contactors (not rack-out type). Please select required Motor Protection relay option.
- Frame 0 & 1 adjustable speed drives with redundant fan option will increase in height by 7" over the standard model.
- Weights and dimensions are subject to change.
- Bypass contactors are used up to 720 amps motor FLA. Above 720 amps motor FLA breakers required for bypass. Please contact factory.
- Units with bypass start the motor across the line for "emergency maintenance bypass" use when the VFD is out of service. Toshiba standard RX5 overload relay is included with bypass at no additional cost. RTD monitoring not included.
- AAA are Standard models; -EAA include Bypass.

*Model numbers with an asterisk have a 110% OL rating. 1000 HP (Frame A4/Frame 0), 2000 HP (Frame B4/Frame 1), 3000 HP (Frame 2), 4000 HP (Frame 3), 6000 HP (Frame 4), and 8000 HP (Frame G4P).

# T300MV2® General Purpose
## 6600 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| Without Bypass | | | | | | | | | |
| 300 | 23 | M4AAN66030AAA0 | A6Sμ* | 103.7 | 108 | 48 | MVDT3I | $612,260 | 9900 |
| 400 | 31 | M4AAN66040AAA0 | A6Sμ* | 103.7 | 108 | 48 | MVDT3I | $617,100 | 9900 |
| 500 | 39 | M4AAN66050AAA0 | A6Sμ* | 103.7 | 108 | 48 | MVDT3I | $621,940 | 9900 |
| 600 | 47 | M4AAN66060AAA0 | A6Sμ* | 103.7 | 108 | 48 | MVDT3I | $626,780 | 9900 |
| 700 | 55 | M4AAN66070AAA0 | A6Sμ* | 103.7 | 108 | 48 | MVDT3I | $631,620 | 9900 |
| 800 | 63 | M4AAN66080AAA0 | A6Sμ* | 103.7 | 108 | 48 | MVDT3I | $636,460 | 9900 |
| 900 | 70 | M4AAN66090AAA0 | A6S | 103.7 | 138 | 48 | MVDT3I | $670,340 | 11300 |
| 1000 | 78 | M4AAN66100AAA0 | A6S | 103.7 | 138 | 48 | MVDT3I | $672,760 | 11600 |
| 1250 | 98 | M4AAN66125AAA0 | A6S | 103.7 | 138 | 48 | MVDT3I | $684,860 | 12100 |
| 1500 | 117 | M4AAN66150AAA0 | A6S | 103.7 | 138 | 48 | MVDT3I | $699,380 | 12700 |
| 1750 | 137 | M4BAN66175AAA0 | B6S* | 103.7 | 176 | 48 | MVDT3I | $771,980 | 15600 |
| 2000 | 156 | M4BAN66200AAA0 | B6S* | 103.7 | 176 | 48 | MVDT3I | $796,180 | 16300 |
| 2250 | 176 | M4BAN66225AAA0 | B6S* | 103.7 | 176 | 48 | MVDT3I | $808,280 | 17000 |
| 2500 | 195 | M4BAN66250AAA0 | B6S* | 103.7 | 176 | 48 | MVDT3I | $820,380 | 17700 |
| 3000 | 234 | M4BAN66300AAA0 | B6S* | 103.7 | 176 | 48 | MVDT3I | $832,480 | 18400 |
| 3500 | 273 | M4CAN66350AAA0 | C6S | 103.7 | 234 | 60 | MVDT3I | $1,195,480 | 26800 |
| 4000 | 313 | M4CAN66400AAA0 | C6S | 103.7 | 234 | 60 | MVDT3I | $1,208,790 | 27800 |
| 4500 | 352 | M4DAN66450AAA0 | D6S | 103.7 | 265 | 60 | MVDT3I | $1,258,400 | 30500 |
| 5000 | 391 | M4DAN66500AAA0 | D6S | 103.7 | 265 | 60 | MVDT3I | $1,268,080 | 31500 |
| 5500 | 430 | M4FAN66550AAA0 | F6S | 103.7 | 328.5 | 60 | MVDT3I | $1,543,960 | 35000 |
| 6000 | 469 | M4FAN66600AAA0 | F6S | 103.7 | 328.5 | 60 | MVDT3I | $1,580,260 | 36500 |
| 7000 | 547 | M4FAN66700AAA0 | F6S | 103.7 | 328.5 | 60 | MVDT3I | $1,631,080 | 38900 |
| 8000 | 625 | M4FAN66800AAA0 | F6S+ | 103.7 | 402.5 | 60 | MVDT3I | $1,885,180 | 41750 |
| 9000 | 703 | M4FAN66900AAA0 | F6S+ | 103.7 | 402.5 | 60 | MVDT3I | $1,938,420 | 44750 |
| With Manual Bypass | | | | | | | | | |
| 300 | 23 | M4AAN66030EAA0 | A6Sμ* | 103.7 | 138 | 48 | MVDT3I | $796,000 | 11000 |
| 400 | 31 | M4AAN66040EAA0 | A6Sμ | 103.7 | 138 | 48 | MVDT3I | $800,000 | 11000 |
| 500 | 39 | M4AAN66050EAA0 | A6Sμ | 103.7 | 138 | 48 | MVDT3I | $804,000 | 11000 |
| 600 | 47 | M4AAN66060EAA0 | A6Sμ | 103.7 | 138 | 48 | MVDT3I | $808,000 | 11000 |
| 700 | 55 | M4AAN66070EAA0 | A6Sμ | 103.7 | 138 | 48 | MVDT3I | $812,000 | 11000 |
| 800 | 63 | M4AAN66080EAA0 | A6Sμ | 103.7 | 138 | 48 | MVDT3I | $816,000 | 11000 |
| 900 | 70 | M4AAN66090EAA0 | A6S | 103.7 | 168 | 48 | MVDT3I | $844,000 | 12700 |
| 1000 | 78 | M4AAN66100EAA0 | A6S | 103.7 | 168 | 48 | MVDT3I | $846,000 | 13000 |
| 1250 | 98 | M4AAN66125EAA0 | A6S | 103.7 | 168 | 48 | MVDT3I | $856,000 | 13500 |
| 1500 | 117 | M4AAN66150EAA0 | A6S | 103.7 | 168 | 48 | MVDT3I | $868,000 | 14100 |
| 1750 | 137 | M4BAN66175EAA0 | B6S | 103.7 | 206 | 48 | MVDT3I | $928,000 | 16900 |
| 2000 | 156 | M4BAN66200EAA0 | B6S | 103.7 | 206 | 48 | MVDT3I | $948,000 | 17400 |
| 2250 | 176 | M4BAN66225EAA0 | B6S | 103.7 | 206 | 48 | MVDT3I | $958,000 | 18200 |
| 2500 | 195 | M4BAN66250EAA0 | B6S | 103.7 | 206 | 48 | MVDT3I | $968,000 | 19000 |
| 3000 | 234 | M4BAN66300EAA0 | B6S | 103.7 | 206 | 48 | MVDT3I | $978,000 | 19800 |
| 3500 | 273 | M4CAN66350EAA0 | C6S | 103.7 | 264 | 60 | MVDT3I | $1,278,000 | 29700 |
| 4000 | 313 | M4CAN66400EAA0 | C6S | 103.7 | 264 | 60 | MVDT3I | $1,289,000 | 30700 |
| 4500 | 352 | M4DAN66450EAA0 | D6S | 103.7 | 295 | 60 | MVDT3I | $1,402,000 | 31600 |
| 5000 | 391 | M4DAN66500EAA0 | D6S | 103.7 | 295 | 60 | MVDT3I | $1,410,000 | 33500 |

# T300MV2® General Purpose
## 6600 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| With Manual Bypass | | | | | | | | | |
| 5500 | 430 | M4FAN66550EAA0 | F6S | 103.7 | 364.5 | 60 | MVDT3I | $1,638,000 | 37000 |
| 6000 | 469 | M4FAN66600EAA0 | F6S | 103.7 | 364.5 | 60 | MVDT3I | $1,668,000 | 38500 |
| 7000 | 547 | M4FAN66700EAA0 | F6S | 103.7 | 364.5 | 60 | MVDT3I | $1,710,000 | 40000 |
| 8000 | 625 | M4FAN66800EAA0 | F6S+ | 103.7 | 438.5 | 60 | MVDT3I | $1,920,000 | 44650 |
| 9000 | 703 | M4FAN66900EAA0 | F6S+ | 103.7 | 438.5 | 60 | MVDT3I | $1,964,000 | 46750 |

**Notes:**
- HP ratings above are for typical 4-pole motors.
- Dimensions do not include space required for clearance for air flow, door operation, etc.
- Bypass Starter pricing is based on fixed contactors (not rack-out type). Please select required Motor Protection relay option.
- Weights and dimensions are subject to change.
- C6S/D6S/F6S/F6S+ are UL/cUL listed. For all other units, consult factory for updated UL status.
- (*) Frame size needs factory approval before quoting.
- CF = Consult Factory.
- Units with bypass start the motor across the line for emergency maintenance bypass use when VFD is out of service. Toshiba standard RX5 overload relay is included with bypass at not additional cost. RTD monitoring not included.
- AAA are Standard models; -EAA include Bypass.

# T300MV2® General Purpose

## Frame F7

## Specifications

The T300MV2 F7 frame medium voltage adjustable speed drive extends Toshiba's indoor high horsepower air-cooled offerings with an adjustable speed drive offering a true 6.9 kV output, allowing for increased power density while reducing the adjustable speed drive's overall footprint.

### Product Scope

7,000 to 10,000 HP
4.16 - 6.9 kV Input Voltage
6.9 kV Output Voltage

### Highlights

- Integral Three Power Module Design for Easier Removal for Maintenance or Repair Purposes
- Optional Redundant Fans (N+1 for Inverter Cabinet, Full Redundant for All Other Cabinets)
- UL Type 1 Enclosure
- UL Listed



# T300MV2® General Purpose
## 6900 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| Without Bypass | | | | | | | | | |
| 7000 | 523 | M4FAN77700AAA0 | F7 | 122 | 377 | 60 | MVDT3I | $1,735,030 | 46400 |
| 8000 | 598 | M4FAN77800AAA0 | F7 | 122 | 377 | 60 | MVDT3I | $1,850,640 | 46900 |
| 9000 | 673 | M4FAN77900AAA0 | F7 | 122 | 377 | 60 | MVDT3I | $2,151,270 | 47400 |
| 10000 | 747 | M4FAN7710KAAA0 | F7 | 122 | 377 | 60 | MVDT3I | $2,178,770 | 47900 |

**Notes:**
- HP ratings above are for typical 4-pole motors.
- Dimensions do not include space required for clearance for air flow, door operation, etc.
- Bypass Starter pricing is based on fixed contactors (not rack-out type). Please select required Motor Protection relay option.
- Weights and dimensions are subject to change.
- C6S/D6S/F6S/F6S+/F7 are UL/cUL listed. For all other units, consult factory for updated UL status.
- (*) Frame size needs factory approval before quoting.
- CF = Consult Factory.
- Units with bypass start the motor across the line for emergency maintenance bypass use when VFD is out of service. Toshiba standard RX5 overload relay is included with bypass at no additional cost. RTD monitoring not included.
- AAA are Standard models; -EAA include Bypass.

# T300MV2® General Purpose
## Option Information & Pricing



### 50 Hz (Option Code B)

Price adder is for magnetics including input isolation transformer, pre-charge reactor, output reactor and low voltage VFD for Fan power (fans are rated at 60Hz).

For 50 Hz, add 15% to the list price.

Example 1:
60 Hz: 4160 V Input and 4160 V Output: M4AAN44050AAA0; 500 HP — list price: $364,000.
50 Hz: 4160 V Input and 4160 V Output: M4ABN44050AAA0; 500 HP — list price: $364,000 plus 15% = $418,600.

### BIL Transformer Rating

2400 V: 20 kV for Both Primary and Secondary
3300 V & 4160 V: 30 kV for Both Primary and Secondary
6600 V: 45 kV Primary and 30 kV Secondary
13.8 kV Input Transformer BIL: 60 kV Primary and 30 kV Secondary

To change to 45 kV BIL @ Primary: add 5% to the total price of the drive.
Maximum BIL level for A4u/A4/B4 is 45 kV BIL. In case of higher BIL (60 kV), please select Frame 1.

### 6.9 to 13.8 kV Input

- The HV input option gives users the ability to input >6.9 to 13.8 kV primary voltages directly to the adjustable speed drive transformer. In this option the short circuit rating is 40 kA. This option pricing is available only as a price adder. Published standard dimensions will increase in width 74" for all frame sizes except G4P and H4P, or 23" for G4P and H4P frame sizes.
- The 74" section includes fused input disconnect switch, input contactor, soft charge circuit, and PTs. This arrangement replicates the standard T300 topology but with different components sized for HV input and increased lead spacing for the specified input voltage.

**Notes:**
- No bypass is available with this feature.
- The price of the adjustable speed drive will increase by 10% to accommodate the transformer HV windings and HV pre-charge reactor.
- In case of HV Input; Frame A4µ and A4 ASD will be in Frame 0.
- In case of HV input Frame B4 adjustable speed drives will be in Frame 1.
- No HV Input option for common AC Bus.
- For above mentioned frames, select ASD per following page.

# T300MV2® General Purpose
## Option Information & Pricing



| MV Frame | MV Input Frame | Discount Symbol | List Price |
|---|---|---|---|
| Frame A2/B2/D2 | Max Permissible 6600 V | MVDOPT | CF (Consult Factory) |
| Frame A4µ, A4 & 0 | Frame 0 | MVDOPT | Use 1000 HP (Frame 1) x 10% Price + Selected HV Input Price |
| Frame B4 | Frame 1 | MVDOPT | Drive Price (Frame1) x 10% Price + Selected HV Input Price |
| Frame 1, 2, 3, 4, C4, G4P, H4P | No Change | MVDOPT | Drive Price x 10% + Selected HV Input Price |
| For 6600 V ASD | CF (Consult Factory) | MVDOPT | CF (Consult Factory) |
| For 6900 V ASD | CF (Consult Factory) | MVDOPT | CF (Consult Factory) |

| Frame Size | Description | Discount Symbol | List Price |
|---|---|---|---|
| Frame C4, 0 to 4 | Up to 15 kV Input — Includes Fused Input Disconnect, Input Breaker, Soft Charge Circuit, and PT (add 74" to Width) | MVDOPT | $123,750 |
| Frames G4P & H4P | Up to 15 kV Input — Includes Fused Input Disconnect, Input Breaker, Soft Charge Circuit, and PTs (add 23" to Width) | MVDOPT | $153,000 |

Note: If prices change, below pricing examples will change.

Example 1: 1,250 HP, 13.8 kV input with 4160 V output. This is a Frame B4 rating but will be housed in a Frame 1 (122") enclosure.

Use the Frame 1, 1,250 HP price of $399,000, plus 10% ($39,900) and add the 74" section at $123,750. Total list price equals $562,650. Overall dimension will be 196" (122" + 74"). Part number will be M41ANH4125AAA0.

Example 2: 10,000 HP, 13.8 kV input with 4160 V output. This is a Frame H4P rating, 10,0000 HP price of $2,400,000, plus 10% ($240,000) and add the 74" section at $153,000. Existing input section is 51" which is removed and replaced with the 74" HV input section. Total list price equals $2,793,000. Overall dimension will be 196" (402.5" - 51" + 74"). Part number will be M4HANH410KAAA0.

Examples use list price only. Final pricing will be different based on option multipliers.

# T300MV2® General Purpose
## Option Information & Pricing



### Sync-Xfer

Sync-Xfer is a solution that combines the proven reliability of a Toshiba medium voltage adjustable speed drive (ASD) with the precision of Toshiba controlgear. With Sync-Xfer, an applicable Toshiba medium voltage ASD can determine characteristics of the utility line and transfer motor supply power from variable speed to utility power via Toshiba vacuum contactors or vacuum circuit breakers. Alternatively, the ASD can capture a motor from utility power and return it to variable speed. Sync-Xfer can therefore have a significant impact by lowering a system's cost with respect to applications in which multiple motors are controlled by one or more ASDs, including those used for starting duty only.

Sync-Xfer applications require sync ready adjustable speed drive with the following options added to standard ASD pricing.

| | Item | Description |
|---|---|---|
| 1 | Sync Ready Kit includes sync reactor, one output PT, and sync check relay | Use Price Book to Select the Sync Ready Kit Price Based on Frame Size. |
| 2 | Bypass section with feedback CTs | Use Price Book to Select the Bypass Section. One Section is Required per Motor. |
| 3 | Motor Protection Relay | Use Price Book to Select the Motor Protection Relay. One Relay is Required per Motor. |
| 4 | Selection Logic with PLC | Required for complex sync transfer applications. Consult Factory. |
| 5 | Customer-Supplied MCC | Consult factory. |
| 6 | Multiple Motors | Consult factory. |
| 7 | Sync-Xfer System with two ASDs | Consult factory. |

**Notes:**
- ASD with one motor sync transfer - price per above guidelines.
- For more than one motor and all other applications - Consult factory.

# T300MV2® General Purpose
## Option Information & Pricing



| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| 12th Digit D | **2400 V** | | |
| | Sync Ready Kit - Frame A2 | MVDOPT | $25,000 |
| | Sync Ready kit - Frame B2 | | $28,000 |
| | Sync Ready Kit - Frame D2 up to 1500 HP | | $31,500 |
| | Sync Ready Kit- Frame D2 above 1500 HP | | $35,000 |
| | Sync Ready Kit - Frame 4 | | $48,000 |
| | **4160 V** | | |
| | Sync Ready Kit - Frame A4µ/A4/0 | MVDOPT | $21,000 |
| | Sync Ready Kit - Frame B4/1 | | $26,000 |
| | Sync Ready Kit - Frame C4/2 (2250 & 2500 HP) | | $31,500 |
| | Sync Ready Kit - Frame 3 (3000 & 3500 HP) & 3000 HP Frame C4/2 | | $35,000 |
| | Sync Ready Kit - Frame 4 & 4000 HP Frame 3 | | $47,000 |
| | Sync Ready Kit - Frame G4P | | $58,000 |
| | Sync Ready Kit - Frame H4P | | $83,000 |
| | **6600 V** | | |
| | Sync Ready Kit - Frame C6S | MVDOPT | CF |
| | Sync Ready Kit - Frame D6S | | CF |
| | Sync Ready Kit - Frame F6S | | CF |
| | Sync Ready Kit - Frame F6S+ | | CF |
| | **6900 V** | | |
| | Sync Ready Kit - Frame F7 | MVDOPT | CF |

| | | | |
|---|---|---|---|
| | Bypass sections with feedback CTs - 360 A contactor | MVDOPT | $165,000 |
| | For one motor only. Consult factory for more than two motors | | |
| | Bypass sections with feedback CTs - 720 A contactor | | $206,000 |
| | For one motor only. Consult factory for more than two motors | | |

**Notes:**
- CF = Consult Factory

# T300MV2® General Purpose
## Option Information & Pricing



### Typical Layout for Sync-Xfer

Please contact factory, as many variations are available.

Frame A4µ/A4/A2/B4/B2/0/1: Sync-Xfer Arrangement for Single Motor

<table>
<tr><td>BYP 1</td><td rowspan="2">A4µ/A4/A2/B4/B2/0/1</td></tr>
<tr><td>ASD 1</td></tr>
</table>

Frame C4, 2, 3 & 4: Sync-Xfer Arrangement for Single Motor

<table>
<tr><td rowspan="2">Frame C4, 2, 3 & 4</td><td>BYP 1</td></tr>
<tr><td>ASD 1</td></tr>
</table>

Contact factory for F7/G4P/H4P frame sizes and all 6600 V drives.

# T300MV2® General Purpose
## Option Information & Pricing



### Solid State Starter Bypass

The Toshiba JKSSS Plus Series digital, reduced-voltage, solid state starter is designed to be a superior method of providing soft-start control and protection for AC motors while in bypass. Advantages include solid state construction, advanced motor protection, step-less acceleration, reduced inrush current, minimal maintenance, and high-duty cycle capability. Published ASD dimensions will increase based on the size of additional equipment.

| Rating | Description | List Price |
|---|---|---|
| **2400 V** | | |
| 300 to 450 HP | SSS Bypass | CF |
| 500 to 900 HP | | CF |
| 1000 to 1500 HP | | CF |
| 1750 HP | SSS Bypass | CF |
| 2000 to 2500 HP | | CF |
| **3300 V** | | |
| 500 to 700 HP | SSS Bypass | CF |
| 800 to 1500 HP | | CF |
| 1750 to 2250 HP | | CF |
| 2500 to 3500 HP | SSS Bypass | CF |
| 4000 to 4500 HP | | CF |
| **4160 V** | | |
| 500 to 900 HP | SSS Bypass | CF |
| 1000 to 1750 HP | | CF |
| 2000 to 2500 HP | | CF |
| 3000 to 3500 HP | SSS Bypass | CF |
| 4000 to 6000 HP | | CF |
| 5000 to 6000 HP (max. 720 Amps) | | CF |
| **6600 V** | | |
| 300 to 1000 HP | SSS Bypass | CF |
| 1250 to 1750 HP | | CF |
| 2000 to 2500 HP | SSS Bypass | CF |
| 3500 to 4500 HP | | CF |
| 5000 to 6000 HP | SSS Bypass | CF |
| 7000 to 9000 HP | | CF |

# T300MV2® General Purpose
## Option Information & Pricing



### DV/DT Output Filters

A DV/DT output filter is recommended for lead-length from 1,000 ft. to 2,000 ft.

| Option Code | Size | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| 12th Digit B | **2400 V** | | | |
| | Frame A2 | Output DV/DT Filter | MVDOPT | $25,000 |
| | Frame B2 | | | $27,000 |
| | Frame D2 1250 HP - 1500 HP | | | $30,000 |
| | Frame D2 1750 HP - 2000 HP | | | $33,000 |
| | Frame 4 | | | $39,000 |
| | **3300 V** | | | |
| | Frame A4µ/A4 | Output DV/DT Filter | MVDOPT | $25,000 |
| | Frame B4 | | | $27,000 |
| | Frame 2 | | | $30,000 |
| | Frame 3 | | | $33,000 |
| | Frame 4 | | | $39,000 |
| | **4160 V** | | | |
| | Frame A4µ/A4/0 | Output DV/DT Filter | MVDOPT | $25,000 |
| | Frame B4/1 | | | $27,000 |
| | Frame 2 | | | $30,000 |
| | Frame 3 | | | $33,000 |
| | Frame 4 | | | $39,000 |
| | Frame G4P | | | $55,000 |
| | Frame H4P | | | $70,000 |

### Sine Wave Output Filters

A sine wave output filter is recommended for lead-lengths above 2,000 feet up to 6 miles. Sine wave output filters are recommended in applications where a step-up transformer is used on the output of the drive.

| Option Code | Size | Cabinet Width | Description | Discount Symbol | LIst Price |
|---|---|---|---|---|---|
| 12th Digit E | **2400 V** | | | | |
| | Frame A2/B2/C2/D2 | N/A | N/A | MVDOPT | N/A |
| | Frame 4 | N/A | | | N/A |
| | **4160 V** | | | | |
| | Frame A4µ | N/A | Sine Wave Output Filter | MVDOPT | $40,000 |
| | Frame A4µ Common AC Bus | 22" | | | $66,000 |
| | Frame A4 | N/A | | | $51,000 |
| | Frame A4 Common AC Bus | 22" | | | $66,000 |
| | Frame B4 | 22" | | | $78,000 |
| | Frame 0 | N/A | | | $42,000 |
| | Frame 1 | N/A | | | $53,000 |
| | Frame 2 | 40" | | | $96,000 |
| | Frame 3 | 40" | | | $125,000 |
| | Frame 4 | 40" | | | $156,000 |
| | Frame G4P | 48" | | | $229,000 |
| | Frame H4P | 48" | | | $390,000 |

**Note:**
6000 HP, G4P/H4P with sine wave filter is not UL listed.

# T300MV2® General Purpose
## Option Information & Pricing



### Redundant Fans

Redundant fan option includes two groups of fans. A main control board is used to program the redundant fan logic for cycling fan groups at a set interval. Upon failure of a fan in any one group, the programs will automatically cycle the drive cooling to the second fan group without stopping the adjustable speed drive. A fan fault alarm will be annunciated.

| Option Code | Size | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| 11th Digit J through R | Frame A2, B2 | Redundant Fans | MVDOPT | $13,000 |
| | Frame D2 | | | $31,000 |
| | Frame A4µ, A4, B4. 0, 1 | | | $13,000 |
| | Frame C4,2,3 | | | $37,000 |
| | Frame 4 | | | $45,000 |
| | Frame G4P | | | $84,000 |
| | Frame H4P | | | $106,000 |
| | Frame A6Sµ | | | $13,000 |
| | Frame A6S | | | $20,000 |
| | B6S | | | $31,000 |
| | Frame C6S, D6S | | | $65,000 |
| | Frame F6S | | | $84,000 |
| | Frame F6S+ | | | $130,000 |
| | Frame F7 | | | CF |
| FRS | Frame A4µ, A4, 0 | Drives with Sine Wave Filter | | $13,000 |
| | Frame B4 | | | $20,000 |
| | Frame 1 | | | $13,000 |
| | Frame C4,2,3 | | | $40,000 |
| | Frame 4 | | | $56,000 |
| | Frame G4P | | | $84,000 |
| | Frame H4P | | | $120,000 |
| FRS-CB | Frame A4µ, A4, B4 Common AC Bus | Drives with Sine Wave Filter | | $20,000 |

### Drive & Motor Space Heaters

| Option Code | Size | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| EDH | Frame A2 | Drive space heater operating voltage 208/240 VAC. External power required. | MVDOPT | $4,000 |
| | Frame B2 | | | $5,400 |
| | Frame D2 | | | $8,000 |
| | Frame A4µ, A4, B4, 0, 1 | | | $4,000 |
| | Frame C4, 2 | | | $5,400 |
| | Frame 3 | | | $8,000 |
| | Frame 4 | | | $9,000 |
| | Frame G4P, H4P | | | $13,000 |
| | Frame F7 | | | CF |
| EHM1 | Power Provided Separately | Basic motor space heater control circuit to turn motor space heater ON (up to 10 amps) when drive is not operating. External 120V/240V power supplied by customer. For special requirements, consult factory. | | $4,000 |
| EHM2 | Power Provided Separately | Motor space heater circuit with indicating light. External power supplied by customer. | | $5,600 |

# T300MV2® General Purpose
## Option Information & Pricing



### Communication Interface

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| CS | TOSLINE-S20LP Communication Card with FC Connector (Tosline-S20 with F07 Connector Included on Control Board) | MVDOPT | $6,000 |
| CD | DeviceNet® Communication Card | | $8,000 |
| CP | Profibus® Communication Card | | $8,000 |
| CR | Modbus RTU/ModBus TCP IP/Ethernet Communication Card | | $5,000 |
| CE | Ethernet Global Data (EGD) Communication Card | | $6,000 |
| CN | TCNET Communication Card | | $6,000 |

### Keyed Door Interlocks

The end-user address is required. Default key manufacturer is Superior.

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| KK | Single Lock | MVDOPT | $5,000 |
| | Transfer Blocks w/3 Locks | | $7,000 |
| | Transfer Blocks w/4 Locks | | $9,000 |
| | Transfer Blocks w/5 Locks | | $11,000 |
| | Transfer Blocks w/6 Locks | | $13,000 |
| | Transfer Blocks w/7 Locks | | $15,000 |

**Note:** KIRK© Key Brand: add $2,400 list adder per lock.

# T300MV2® General Purpose
## Option Information & Pricing



### Door-Mounted Equipment - Meters

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| M5 | Multilin 869, 12-channel, RTD monitor (869 E-P5-NN-G5-H-R-R-A-N-N-G-S-S-F-B-SE-N-N-B) Includes Output Phase CTs & One Output Ground CT | MVDOPT | $39,000 |
| M5-1 | Multilin 869, 12-channel, RTD monitor (869 E-P5-NN-G5-H-R-R-A-N-N-G-S-S-F-B-SE-N-N-B) Includes Output Phase CTs, One Output Ground CT & Output PTs | | $44,000 |
| MA | Output Amp Meter using Drive Analog Output | | $4,000 |
| MF | Output Frequency Meter using Drive Analog Output | | $4,000 |
| MV | Output Volt Meter using Drive Analog Output | | $4,000 |
| ME | Elapsed Time Meter | | $2,000 |
| MX | Miscellaneous Meter | | CF |
| MQ | PQMII-T20 - Mod 525, Multilin Input Power Quality Meter with Input Phase CTs | | $22,000 |
| MQ-1 | PQMII-T20 - Mod 525, Multilin Input Power Quality Meter with Input Phase CTs & Power Analysis Option | | $25,000 |
| RT | Door-mounted TE-RTD12 RTD Monitor (12 inputs) | | $10,000 |
| TPR6 | TPR6 relay to monitor up 14 RTDs (TPR6-14-2-M-F5) | | $16,000 |
| TPR6-1 | TPR6 relay to monitor up 14 RTDs (TPR6-14-2-M-F5). RS485 to Ethernet TCP/IP media converter | | $19,000 |
| AFR-5 | Arc-flash Relay with Optical Sensors (A4µ/A4/B4/Frame 1) (A4u/A4/B4/1 Frames only; consult factory for UL status) Consult Factory for UL Status | | $44,000 |

### Pilot Lights

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| LED | LED Full Voltage Indicating Light | MVDOPT | $800 |
| Push to Test | Push to Test LED Full Voltage Indicating Light | | $1,200 |

**For motor protection relays:**

1. Motor differential protection (87M) CTs are not included. These CTs are typically provided in the motor terminal box and are supplied by the motor manufacturer.
2. Multilin 869 relay part number must be properly selected for Ground CT ratios. Ground CT with 1A or 5A secondary is connected to Slot J and Differential core balance CT with 0.025 secondary is connected to Slot K. For questions or application support, please contact the factory.
3. The output CTs used with the motor protection relay are Class C10. For other CT Class, please consult factory.

# T300MV2® General Purpose
## Option Information & Pricing



### Push-Buttons

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| PBI | IEC Style | MVDOPT | $600 |
| PBN | UL Type Style | | $800 |

**Notes:**
- Mounted on drive enclosure.

### Speed Potentiometer & Switches

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| S1 | Speed Control Potentiometer | MVDOPT | $1,800 |
| S2 | Speed Control Potentiometer with Local/Remote Switch | | $2,600 |

### Miscellaneous Options

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| RX | IEC Relay Outputs 115 V, 2 A, Form-C | MVDOPT | $1,200 |
| SP | Interposing Relay with 24 VDC Coil | | $1,200 |
| X1 | 4 to 20 mA Isolation Transducer | | $5,000 |

### Selector Switches

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| S1 | Selector Switch - 2 Position | MVDOPT | $1,000 |
| S2 | Selector Switch - 3 Position | | $1,000 |

### Remote Monitoring

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| EDGE | Edge Computing Gateway | MVDOPT | $8,000 |

### Power Module Lifting Equipment F7

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| GCI677FG055 | Carriage Assembly | MVDACC | $7,000 |
| PC10480P914 | Scissor Lift Truck | | $6,000 |

# T300MV2® General Purpose
## Spare Parts Kits



Toshiba recommends a separate line item on the purchase order for spare parts. Spare Parts Kits provide an easy and practical way to acquire the proper spare parts to handle most emergencies. Spare Parts Kits contain one of each circuit board, one low voltage power supply, rectifier fuses, diodes, one set of control power fuses, four potential transformer fuses, three input fuses.

Spare Parts Kits can be ordered with or without a power module. To order a Spare Parts Kit, please use the following numbering convention:

| Example Part Number: | SPK-M4 | A | A | N | 4 | 4 | 050 | A | -1 |
|---|---|---|---|---|---|---|---|---|---|

**Series:**
M4 - MV2

**Frame Type:**

| | | |
|---|---|---|
| 0 - Frame 0 | A - Frame A | E - Frame E |
| 1 - Frame 1 | B - Frame B | F - Frame F |
| 2 - Frame 2 | C - Frame C | G - Frame G |
| 3 - Frame 3 | D - Frame D | H - Frame H |
| 4 - Frame 4 | | |

**Input Frequency:**
A - 60 Hz

**Type:**
N - For Non-Regen Adjustable Speed Drives
R - Regen Module Adjustable Speed Drives

**Input Voltage:**

| | | |
|---|---|---|
| 2 - 2400 | 7 - 6900 | E - 12000 |
| 3 - 3300 | A - 7200 | F - 12470 |
| 4 - 4160 | B - 8320 | G - 13200 |
| 5 - 4800 | C - 10000 | H - 13800 |
| 6 - 6600 | D - 11000 | Z - Other |

**Output Voltage:**
2 - 2400 3 - 3300 4 - 4160 6 - 6600 7 - 6900

**Output Rated Capacity:**

| | | | | |
|---|---|---|---|---|
| 030 - 300 HP | 070 - 700 HP | 175 - 1750 HP | 400 - 4000 HP | 800 - 8000 HP |
| 035 - 350 HP | 080 - 800 HP | 200 - 2000 HP | 450 - 4500 HP | 900 - 9000 HP |
| 040 - 400 HP | 090 - 900 HP | 225 - 2250 HP | 500 - 5000 HP | 10K - 10000 HP |
| 045 - 450 HP | 100 - 1000 HP | 250 - 2500 HP | 550 - 5500 HP | 11K - 11000 HP |
| 050 - 500 HP | 125 - 1250 HP | 300 - 3000 HP | 600 - 6000 HP | |
| 060 - 600 HP | 150 - 1500 HP | 350 - 3500 HP | 700 - 7000 HP | |

**Configuration:**
A - Standard Fans
J - Redundant Fans

**Power Module:**
-1 (Included)

# T300MV2® General Purpose
## Spare Parts Kits



Input fuses will change as HP changes. Spare Parts Kits contain:

| Item | 2400 V Qty. | 3300 V Qty. | 4160 V Qty. | Description | Part Number |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | Control Board | PC61910P200C |
| 2 | 1 | 1 | 1 | GSD Board | PC61910P203A |
| 3 | 1 | 1 | 1 | XIO Board | PC61910P201B |
| 4 | 1 | 1 | 1 | EXIO Board | PC61910P205B |
| 5 | 1 | 1 | 1 | Interface Board | Job/Inverter Specific |
| 6 | 1 | 1 | 1 | External Interface Board | PC61910P206A |
| 7 | 1 | 1 | 1 | Keypad Interface Board | PC61910P204A |
| 8 | 1 | 1 | 1 | Display/Keypad | PC61910P216 |
| 9 | 1 | 1 | 1 | Power Supply | GCI6720G282 |
| 10 | 1 | 1 | 1 | GDI Board | PC61910P135A |
| 11 | 1 | 1 | 1 | PDM Board | PC61910P107A |
| 12 | 2 | 2 | 2 | Control Power Fuse | HP-Specific |
| 13 | 3 | 3 | 3/6 | Input Fuse | HP-Specific |
| 14 | 4 | 4 | 4 | CPT Fuse | PC16109P902* |
| 15 | 4 | 12 | 12 | Rectifier Fuse | HP-Specific |
| 16 | 4 | 12 | 12 | Diode Pack | HP-Specific |
| 17 | 1 | 1 | 1/2*** | Power Module (One Phase)** | HP-Specific |
| 18 | 1 | 1 | 1/2 | Cooling Fan | HP & Application Specific |

*6000 HP and below only.
**Only included in kits designated with -1.
***Only G4P & H4P have 2 power modules in kit due to 2 power modules per phase.

**Notes:**
- Spare parts list are not applicable for high voltage inputs. Contact factory for pricing.
- Prices valid when ordering along with adjustable speed drive.

# T300MV2® General Purpose
## Spare Parts Kits



| Part Number without PM, with Redundant Fan | List Price | Frame | Part Number with PM & Redundant Fan | List Price |
|---|---|---|---|---|
| **2400 V Kits** | | | | |
| SPK-M4AAN22030J to SPK-M4AAN22050J | $29,770 | A2 | SPK-M4AAN22030J-1 to SPK-M4AAN22050J-1 | $43,420 |
| SPK-M4BAN22060J to SPK-M4BAN22100J | $31,500 | B2 | SPK-M4BAN22060J-1 to SPK-M4BAN22100J-1 | $47,050 |
| SPK-M4DAN22125J to SPK-M4DAN22200J | $34,450 | D2 | SPK-M4DAN22125J-1 to SPK-M4DAN22200J-1 | $59,785 |
| SPK-M44AN22225J to SPK-M44AN22300J | $37,030 | 4 | SPK-M44AN22225J-1 to SPK-M44AN22300J-1 | $117,175 |
| **3300 V Kits** | | | | |
| SPK-M4ABN33030J to SPK-M4ABN33045J | $29,675 | A4µ | SPK-M4ABN33030J-1 to SPK-M4ABN33045J-1 | $61,475 |
| SPK-M4ABN33050J to SPK-M4ABN33070J | $30,300 | A4 | SPK-M4ABN33050J-1 to SPK-M4ABN33070J-1 | $62,550 |
| SPK-M40BN33030J to SPK-M40BN33070J | $27,190 | 0 | SPK-M40BN33030J-1 to SPK-M40BN33070J-1 | $58,080 |
| SPK-M41BN33080J to SPK-M41BN33150J | $32,580 | 1 | SPK-M41BN33080J-1 to SPK-M41BN33150J-1 | $78,930 |
| SPK-M4BBN33080J to SPK-M4BBN33150J | $32,580 | B4 | SPK-M4BBN33080J-1 to SPK-M4BBN33150J-1 | $78,930 |
| SPK-M42BN33175J to SPK-M42BN33225J | $38,050 | 2 | SPK-M42BN33175J-1 to SPK-M42BN33225J-1 | $105,195 |
| SPK-M4CBN33175J to SPK-M4CBN33225J | $38,050 | C4 | SPK-M4CBN33175J-1 to SPK-M4CBN33225J-1 | $105,195 |
| SPK-M43BN33225J to SPK-M43BN33300J | $38,800 | 3 | SPK-M43BN33225J-1 to SPK-M43BN33300J-1 | $131,550 |
| SPK-M44BN33300J to SPK-M44BN33450J | $43,300 | 4 | SPK-M44BN33300J-1 to SPK-M44BN33450J-1 | $161,100 |
| **4160 V Kits** | | | | |
| SPK-M4AAN44030J to SPK-M4AAN44060J | $31,575 | A4µ | SPK-M4AAN44030J-1 to SPK-M4AAN44060J-1 | $71,050 |
| SPK-M4AAN44070J to SPK-M4AAN44100J | $33,290 | A4 | SPK-M4AAN44070J-1 to SPK-M4AAN44100J-1 | $66,285 |
| SPK-M40AN44030J to SPK-M40AN44100J | $33,290 | 0 | SPK-M40AN44030J-1 to SPK-M40AN44100J-1 | $66,285 |
| SPK-M41AN44100J to SPK-M41AN44200J | $34,670 | 1 | SPK-M41AN44100J-1 to SPK-M41AN44200J-1 | $77,890 |
| SPK-M4BAN44100J to SPK-M4BAN44200J | $34,670 | B4 | SPK-M4BAN44100J-1 to SPK-M4BAN44200J-1 | $77,890 |
| SPK-M42AN44225J to SPK-M42AN44300J | $39,785 | 2 | SPK-M42AN44225J-1 to SPK-M42AN44300J-1 | $104,425 |
| SPK-M4CAN44225J to SPK-M4CAN44300J | $39,785 | C4 | SPK-M4CAN44225J-1 to SPK-M4CAN44300J-1 | $104,425 |
| SPK-M43AN44300J to SPK-M43AN44400J | $43,575 | 3 | SPK-M43AN44300J-1 to SPK-M43AN44400J-1 | $132,480 |
| SPK-M44AN44400J to SPK-M44AN44600J | $42,560 | 4 | SPK-M44AN44400J-1 to SPK-M44AN44600J-1 | $161,550 |
| SPK-M4GAN44700J to SPK-M4GAN44800J | $48,175 | G4P* | SPK-M4GAN44700J-1 to SPK-M4GAN44800J-1 | $227,600 |
| SPK-M4HAN44800J to SPK-M4HAN4411KJ | $45,000 | H4P* | SPK-M4HAN44800J-1 to SPK-M4HAN4411KJ-1 | $280,775 |

**Notes:**
- Prices valid when ordered along with adjustable speed drive.

*Parallel configuration contains two power modules in the kit.

# T300MV2® General Purpose
## Spare Parts Kits



| Part Number without PM, with Std Fan | List Price | Frame | Part Number with PM & Std Fan | List Price |
|---|---|---|---|---|
| **2400 V Kits** | | | | |
| SPK-M4AAN22030A to SPK-M4AAN22050A | $26,560 | A2 | SPK-M4AAN22030A-1 to SPK-M4AAN22050A-1 | $41,375 |
| SPK-M4BAN22060A to SPK-M4BAN22100A | $28,250 | B2 | SPK-M4BAN22060A-1 to SPK-M4BAN22100A-1 | $44,260 |
| SPK-M4DAN22125A to SPK-M4DAN22200A | $31,190 | D2 | SPK-M4DAN22125A-1 to SPK-M4DAN22200A-1 | $56,980 |
| SPK-M44AN22225A to SPK-M44AN22300A | $34,080 | 4 | SPK-M44AN22225A-1 to SPK-M44AN22300A-1 | $114,225 |
| **3300 V Kits** | | | | |
| SPK-M4ABN33030A to SPK-M4ABN33045A | $29,675 | A4µ | SPK-M4ABN33030A-1 to SPK-M4ABN33045A-1 | $61,475 |
| SPK-M4ABN33050A to SPK-M4ABN33070A | $30,300 | A4 | SPK-M4ABN33050A-1 to SPK-M4ABN33070A-1 | $62,550 |
| SPK-M40BN33030A to SPK-M40BN33070A | $30,300 | 0 | SPK-M40BN33030A-1 to SPK-M40BN33070A-1 | $62,550 |
| SPK-M41BN33080A to SPK-M41BN33150A | $32,580 | 1 | SPK-M41BN33080A-1 to SPK-M41BN33150A-1 | $78,930 |
| SPK-M4BBN33080A to SPK-M4BBN33150A | $32,580 | B4 | SPK-M4BBN33080A-1 to SPK-M4BBN33150A-1 | $78,930 |
| SPK-M42BN33175A to SPK-M42BN33225A | $38,050 | 2 | SPK-M42BN33175A-1 to SPK-M42BN33225A-1 | $105,195 |
| SPK-M4CBN33175A to SPK-M4CBN33225A | $38,050 | C4 | SPK-M4CBN33175A-1 to SPK-M4CBN33225A-1 | $105,195 |
| SPK-M43BN33225A to SPK-M43BN33300A | $38,800 | 3 | SPK-M43BN33225A-1 to SPK-M43BN33300A-1 | $131,550 |
| SPK-M44BN33300A to SPK-M44BN33450A | $43,300 | 4 | SPK-M44BN33300A-1 to SPK-M44BN33450A-1 | $161,100 |
| **4160 V Kits** | | | | |
| SPK-M4AAN44030A to SPK-M4AAN44060A | $29,860 | A4µ | SPK-M4AAN44030A-1 to SPK-M4AAN44060A-1 | $59,580 |
| SPK-M4AAN44070A to SPK-M4AAN44100A | $29,990 | A4 | SPK-M4AAN44070A-1 to SPK-M4AAN44100A-1 | $60,920 |
| SPK-M40AN44030A to SPK-M40AN44100A | $29,990 | 0 | SPK-M40AN44030A-1 to SPK-M40AN44100A-1 | $60,920 |
| SPK-M41AN44100A to SPK-M41AN44200A | $31,370 | 1 | SPK-M41AN44100A-1 to SPK-M41AN44200A-1 | $77,620 |
| SPK-M4BAN44100A to SPK-M4BAN44200A | $31,370 | B4 | SPK-M4BAN44100A-1 to SPK-M4BAN44200A-1 | $77,620 |
| SPK-M42AN44225A to SPK-M42AN44300A | $38,140 | 2 | SPK-M42AN44225A-1 to SPK-M42AN44300A-1 | $105,290 |
| SPK-M4CAN44225A to SPK-M4CAN44300A | $38,140 | C4 | SPK-M4CAN44225A-1 to SPK-M4CAN44300A-1 | $105,290 |
| SPK-M43AN44300A to SPK-M43AN44400A | $41,250 | 3 | SPK-M43AN44300A-1 to SPK-M43AN44400A-1 | $132,100 |
| SPK-M44AN44400A to SPK-M44AN44600A | $44,185 | 4 | SPK-M44AN44400A-1 to SPK-M44AN44600A-1 | $161,990 |
| SPK-M4GAN44700A to SPK-M4GAN44800A | $47,885 | G4P* | SPK-M4GAN44700A-1 to SPK-M4GAN44800A-1 | $233,385 |
| SPK-M4HAN44800A to SPK-M4HAN4411KA | $51,775 | H4P* | SPK-M4HAN44800A-1 to SPK-M4HAN4411KA-1 | $287,375 |

**Notes:**
- Prices valid when ordered along with adjustable speed drive. See parts catalog for price if not purchased with a drive.
* Parallel configuration contains two power modules in the kit.

# T300MV2® General Purpose
## Spare Parts Kits



| Item | 6600 V Qty. (300 to 3000 HP) | Description | Part Number |
|---|---|---|---|
| 1 | 1 | Control Board | PC61910P200C |
| 2 | 1 | GSD Board | PC61910P203A |
| 3 | 1 | XIO Board | PC61910P201B |
| 4 | 1 | EXIO Board | PC61910P205B |
| 5 | 1 | Interface Board | HP-Specific |
| 6 | 1 | External Interface Board | PC61910P206A |
| 7 | 1 | Keypad Interface Board | PC61910P204A |
| 8 | 1 | Display/Keypad | PC61910P216 |
| 9 | 1 | Power Supply | GCI6720G282 |
| 10 | 1 | GDI Board | PC61910P135A |
| 11 | 1 | PDM Board | PC61910P107A |
| 12 | 2 | Control Power Fuse | HP-Specific |
| 13 | 3 | Input Fuse | HP-Specific |
| 14 | 2 | CPT Fuse | PC31029P002 |
| 15 | 10/16 | Rectifier Fuse | HP-Specific |
| 16 | 10/16 | Diode Pack | HP-Specific |
| 17 | 1 | Cooling Fan | HP & Application Specific |
| 18 | 1 | Power Module (One Phase)** | HP-Specific |

# T300MV2® General Purpose
## Spare Parts Kits



| Part Number without PM, with Redundant Fan | List Price | Frame | Part Number with PM & Redundant Fan | List Price |
|---|---|---|---|---|
| **6600 V Kits** | | | | |
| SPK-M4AAN66030J to SPK-M4AAN66080J | $35,800 | A6Sμ | SPK-M4AAN66030J-1 to SPK-M4AAN66080J-1 | $70,400 |
| SPK-M4AAN66090J to SPK-M4AAN66150J | $36,950 | A6S | SPK-M4AAN66090J-1 to SPK-M4AAN66150J-1 | $85,650 |
| SPK-M4BAN66175J to SPK-M4BAN66300J | $40,150 | B6S | SPK-M4BAN66175J-1 to SPK-M4BAN66300J-1 | $125,625 |
| SPK-M4CAN66350J to SPK-M4CAN66400J | $54,800 | C6S | SPK-M4CAN66350J-1 to SPK-M4CAN66400J-1 | $148,650 |
| SPK-M4DAN66450J to SPK-M4DAN66500J | $58,200 | D6S | SPK-M4DAN66450J-1 to SPK-M4DAN66500J-1 | $186,750 |
| SPK-M4FAN66550J to SPK-M4FAN66700J | $62,100 | F6S | SPK-M4FAN66550J-1 to SPK-M4FAN66700J-1 | $221,350 |
| SPK-M4FAN66800J to SPK-M4FAN66900J | $64,800 | F6S+ | SPK-M4FAN66800J-1 to SPK-M4FAN66900J-1 | $225,150 |
| **Part Number without PM, with Std Fan** | **List Price** | **Frame** | **Part Number with PM & Std Fan** | **List Price** |
| **6600 V Kits** | | | | |
| SPK-M4AAN66030A to SPK-M4AAN66080A | $23,500 | A6Sμ | SPK-M4AAN66030A-1 to SPK-M4AAN66080A-1 | $69,200 |
| SPK-M4AAN66090A to SPK-M4AAN66150A | $33,650 | A6S | SPK-M4AAN66090A-1 to SPK-M4AAN66150A-1 | $83,450 |
| SPK-M4BAN66175A to SPK-M4BAN66300A | $36,850 | B6S | SPK-M4BAN66175A-1 to SPK-M4BAN66300A-1 | $123,500 |
| SPK-M4CAN66350A to SPK-M4CAN66400A | $48,150 | C6S | SPK-M4CAN66350A-1 to SPK-M4CAN66400A-1 | $146,000 |
| SPK-M4DAN66450A to SPK-M4DAN66500A | $51,500 | D6S | SPK-M4DAN66450A-1 to SPK-M4DAN66500A-1 | $183,500 |
| SPK-M4FAN66550A to SPK-M4FAN66700A | $55,450 | F6S | SPK-M4FAN66550A-1 to SPK-M4FAN66700A-1 | $218,750 |
| SPK-M4FAN66800A to SPK-M4FAN66900A | $58,150 | F6S+ | SPK-M4FAN66800A-1 to SPK-M4FAN66900A-1 | $223,250 |

**Notes:**
- Power module pricing includes one 2400 V and one 4160 V module.

# T300MV2® General Purpose
## Spare Parts Kits



| Item | 6900 V Qty. (7000 to 10000 HP) | Description | Part Number |
|---|---|---|---|
| 1 | 1 | Control Board | PC61910P200C |
| 2 | 1 | GSD Board | PC61910P203A |
| 3 | 1 | XIO Board | PC61910P201B |
| 4 | 1 | EXIO Board | PC61910P205B |
| 5 | 1 | Interface Board | HP-Specific |
| 6 | 1 | External Interface Board | PC61910P206A |
| 7 | 1 | Keypad Interface Board | PC61910P204A |
| 8 | 1 | Display/Keypad | PC61910P216 |
| 9 | 1 | Power Supply | GCI6720G282 |
| 10 | 1 | GDI Board | PC61910P135A |
| 11 | 1 | PDM Board | PC61910P107A |
| 12 | 1 | ROH Board | PC61910P232A |
| 13 | 1 | OIB Board | PC61910P127A |
| 14 | 2 | Control Power Fuse | HP-Specific |
| 15 | 6 | Input Fuse | HP-Specific |
| 16 | 2 | CPT Fuse | PC31029P002 |
| 17 | 12 | Rectifier Fuse | HP-Specific |
| 18 | 12 | Diode Pack | HP-Specific |
| 19 | 1 | Cooling Fan | HP & Application Specific |
| 20 | 1 | Power Module (One Phase)** | HP-Specific |

# T300MV2® General Purpose
## Spare Parts Kits



| Part Number without PM, with Redundant Fan | List Price | Frame | Part Number with PM & Redundant Fan | List Price |
|---|---|---|---|---|
| **6900 V Kits** | | | | |
| SPK-M4FAN77700J to SPK-M4FAN7710KJ | CF | F7 | SPK-M4FAN77700J-1 to SPK-M4FAN7710KJ-1 | CF |

| Part Number without PM, with Std Fan | List Price | Frame | Part Number with PM & Std Fan | List Price |
|---|---|---|---|---|
| **6900 V Kits** | | | | |
| SPK-M4FAN77700A to SPK-M4FAN7710KA | CF | F7 | SPK-M4FAN77700A-1 to SPK-M4FAN7710KA-1 | CF |

**Notes:**
- Prices valid when ordered along with adjustable speed drive. See parts catalog for price if not purchased with a drive.

# T300MV2® General Purpose

## Heat Loss Data

## (Standard Duty Adjustable Speed Drive)



| Voltage | Motor HP | Motor kW | Output kVA | Losses | |
|---|---|---|---|---|---|
| | | | | kW | BTU/hr |
| 2400 | 300 | 233 | 268 | 8.1 | 27,551 |
| | 350 | 272 | 313 | 9.4 | 31,919 |
| | 400 | 311 | 357 | 10.7 | 36,623 |
| | 450 | 350 | 402 | 12.1 | 41,327 |
| | 500 | 389 | 447 | 13.4 | 45,695 |
| | 600 | 466 | 536 | 16.1 | 54,767 |
| | 700 | 544 | 625 | 18.7 | 63,838 |
| | 800 | 622 | 715 | 21.5 | 73,246 |
| | 900 | 699 | 804 | 24.1 | 82,318 |
| | 1000 | 777 | 893 | 26.8 | 91,390 |
| | 1250 | 971 | 1116 | 33.5 | 114,237 |
| | 1500 | 1166 | 1340 | 40.2 | 137,085 |
| | 1750 | 1360 | 1563 | 46.9 | 159,932 |
| | 2000 | 1554 | 1786 | 53.6 | 182,780 |
| | 2250 | 1748 | 2010 | 60.3 | 205,627 |
| | 2500 | 1943 | 2233 | 67.0 | 228,475 |
| | 3000 | 2331 | 2680 | 80.4 | 274,169 |

# T300MV2® General Purpose

## Heat Loss Data
## (Standard Duty Adjustable Speed Drive)



| Voltage | Motor HP | Motor kW | Output kVA | Losses | |
|---|---|---|---|---|---|
| | | | | kW | BTU/hr |
| 4160 | 300 | 233 | 268 | 8.2 | 27,849 |
| | 350 | 272 | 313 | 9.5 | 32,511 |
| | 400 | 311 | 357 | 10.9 | 37,172 |
| | 450 | 350 | 402 | 12.3 | 41,834 |
| | 500 | 389 | 447 | 13.6 | 46,495 |
| | 600 | 466 | 536 | 16.3 | 55,699 |
| | 700 | 544 | 625 | 19.0 | 65,022 |
| | 800 | 622 | 715 | 21.8 | 74,345 |
| | 900 | 699 | 804 | 24.5 | 83,548 |
| | 1000 | 777 | 893 | 27.2 | 92,871 |
| | 1250 | 971 | 1116 | 34.0 | 116,059 |
| | 1500 | 1166 | 1340 | 40.8 | 139,366 |
| | 1750 | 1360 | 1563 | 47.6 | 162,554 |
| | 2000 | 1554 | 1786 | 54.4 | 185,742 |
| | 2250 | 1748 | 2010 | 61.2 | 208,930 |
| | 2500 | 1943 | 2233 | 68.0 | 232,237 |
| | 3000 | 2331 | 2680 | 81.6 | 278,613 |
| | 3500 | 2720 | 3126 | 95.2 | 325,108 |
| | 4000 | 3108 | 3573 | 108.8 | 371,484 |
| | 4500 | 3497 | 4019 | 122.4 | 417,979 |
| | 5000 | 3885 | 4466 | 136.0 | 464,355 |
| | 5500 | 4274 | 4913 | 149.6 | 510,850 |
| | 6000 | 4662 | 5359 | 163.2 | 557,226 |
| | 7000 | 5439 | 6252 | 190.4 | 650,096 |
| | 8000 | 6216 | 7145 | 217.6 | 742,967 |
| | 9000 | 6993 | 8038 | 244.8 | 835,838 |
| | 10000 | 7770 | 8931 | 272.0 | 928,709 |
| | 11000 | 8590 | 9828 | 299.6 | 1,021,160 |

# T300MV2® General Purpose

## Heat Loss Data
## (Standard Duty Drive)



| Voltage | Motor HP | Motor kW | Output kVA | Losses | |
|---|---|---|---|---|---|
| | | | | kW | BTU/hr |
| 6600 | 300 | 234 | 267 | 11.9 | 40,606 |
| | 350 | 273 | 312 | 13.4 | 45,665 |
| | 400 | 312 | 357 | 14.7 | 50,140 |
| | 450 | 351 | 401 | 15.5 | 52,752 |
| | 500 | 390 | 446 | 16.8 | 57,354 |
| | 600 | 468 | 535 | 19.8 | 67,403 |
| | 700 | 546 | 624 | 21.9 | 74,872 |
| | 800 | 623 | 713 | 24.4 | 83,293 |
| | 900 | 701 | 802 | 27.1 | 92,548 |
| | 1000 | 779 | 892 | 29.0 | 98,846 |
| | 1250 | 974 | 1115 | 35.8 | 122,045 |
| | 1500 | 1169 | 1337 | 41.6 | 141,870 |
| | 1750 | 1364 | 1560 | 48.7 | 166,121 |
| | 2000 | 1559 | 1783 | 54.6 | 186,322 |
| | 2250 | 1753 | 2006 | 61.4 | 209,391 |
| | 2500 | 1948 | 2229 | 67.4 | 229,846 |
| | 3000 | 2338 | 2675 | 80.3 | 274,097 |
| | 3500 | 2728 | 3121 | 94.3 | 321,785 |
| | 4000 | 3117 | 3567 | 107.4 | 366,635 |
| | 4500 | 3507 | 4012 | 120.8 | 412,317 |
| | 5000 | 3896 | 4458 | 134.2 | 458,000 |
| | 5500 | 4286 | 4904 | 147.6 | 503,683 |
| | 6000 | 4676 | 5350 | 160.0 | 545,924 |
| | 7000 | 5455 | 6242 | 184.8 | 630,698 |
| | 8000 | 6234 | 7133 | 216.6 | 738,982 |
| | 9000 | 7014 | 8025 | 245.1 | 836,373 |

| Voltage | Motor HP | Motor kW | Output kVA | Losses | |
|---|---|---|---|---|---|
| | | | | kW | BTU/hr |
| 6900 | 7000 | 5440 | 6252 | 195.8 | 668,234 |
| | 8000 | 6217 | 7146 | 220.7 | 753,072 |
| | 9000 | 6994 | 8039 | 244.8 | 835,258 |
| | 10000 | 7771 | 8932 | 270.4 | 922,748 |

# MTX2® Outdoor
## Specifications

Toshiba's MTX2 UL Type 3R outdoor medium voltage adjustable speed drive is one of Toshiba's most innovative offerings, designed with a totally enclosed cooling system that eliminates the need for an air-conditioned E-house, reducing both footprint and construction costs. This robust drive features an advanced enclosure design and power section topology with removable power modules, improving Mean Time to Repair (MTTR) and providing reliable performance in harsh environments. Specifically engineered for outdoor mounting in remote locations, the MTX2 series is available in UL Type 3R/4/4X ratings and is built to withstand extreme environmental conditions.

### Product Scope

4160 V at 500 to 1,500 HP and 3,500 to 6,000 HP

### Highlights

- Outdoor Design UL-Rated Rainproof (UL Type 3R) Enclosure (Optional Type 3R stainless steel, Type 4, and Type 4X stainless steel enclosures also available for MTX2-15 only)
- Distribution-Quality Lightning Arrestors as Standard
- 36-Pulse Harmonic Cancellation Complies with IEEE 519 2014
- Higher True Power Factor (>0.96) than Running Motors Across-the-Line
- Provides Easy Monitoring & Maintenance through Advanced User Interface Design
- Removable Power Modules
- Totally Enclosed Cooling System
- Allows for Standard Motors to be Used in Conjunction with Drive Without Special Motor Insulation

### Standard Features

- 100% Continuous Overload Rating, 115% for 60 Seconds
- UL Type 3R Enclosure
- Ten Discrete Digital Input Terminals with Programmable Functions
- Ten Available Digital Programmable Outputs
- Three Analog Inputs; Isolation Transducer Required
- Eight Analog Outputs; Isolation Transducer Required
- Medium Voltage IGBT Technology
- EOI: Plain-English LCD Display
- Ambient Temperature: -49° to 122°F (-45° to 50°C)
- Humidity: 95% No Condensation; 100% when Heaters Energized
- Externally Powered Space Heaters
- Standards & Compliances: NEC®, NEMA® & ANSI®



# MTX2® Outdoor

## Part Numbering Convention



The MTX2 can be configured with commonly-used options for an easy-to-install, turn-key package. See the chart below for available configurations. Custom packages are available upon request.
Drawings supplied by Toshiba's MV Adjustable Speed Drives Department.

The example below, MX45AN44050AAA, shows a standard duty MTX2, 500 HP, 4160 V input, 4160 V output with input disconnect and cooling fan power.

| Example Part Number: | MX4 | 0 | A | N | 4 | 4 | 050 | A | A | A | xxx |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Series:**
MX4 -- MV2 Outdoor

**Frame type:**
4 -- MTX2-60
5 -- MTX2-15 (Stacked)
6 -- MTX2-15 (Low profile)

**Input Frequency:**
A -- 60 Hz
B -- 50 Hz

**Type:**
N -- For Non Regen Drives
R -- Regen Module Drives

**Input Voltage:**
4 -- 4160

**Output Voltage:**
4 -- 4160

**Output Rated Capacity**

| | | |
|---|---|---|
| 050 -- 500 HP | 350 -- 3500 HP | 500 -- 5000 HP |
| 100 -- 1000 HP | 400 -- 4000 HP | 550 -- 5500 HP |
| 150 -- 1500 HP | 450 -- 4500 HP | 600 -- 6000 HP |

| Configuration: | ID: | CP: | BYP: |
|---|---|---|---|
| A -- | Yes | Yes | No |
| B -- | Yes | No | No |
| C -- | No | Yes | No |
| D -- | No | No | No |

ID -- Input Disconnect
CP -- Internal Cooling Fan Power

**Output Options:**

| | | |
|---|---|---|
| A -- Standard Reactor | C -- (DV/DT filter and transfer) | E -- Sine Wave Filter |
| B -- (DV/DT filter) | D -- Transfer | F -- Sine Wave Filter and Transfer |

**Enclosure Options:**

| | | |
|---|---|---|
| A -- UL Type 3R, Standard Paint | C -- UL Type 4, Standard Paint | |
| B -- UL Type 3R, Stainless Steel | D -- UL Type 4X, Stainless Steel | *Options B, C & D are only available for MTX2-15. |

**Additional Options:**
Additional numbers or letters that may be used to designate other options or identify individual units in multiple unit orders

# MTX2® Outdoor
## 4160 VAC Output
## Pricing & Dimensions



| VAC | HP | FLA | Model Number | Frame | Enclosure | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dimensions (in.) | | | | | |
| 4160V | 500 | 62 | MX45AN44050AAA | MTX2-15 | 3R | 107 | 110 | 78 | MVDMTX | $878,240 | 13600 |
| 4160V | 1000 | 124 | MX45AN44100AAA | MTX2-15 | 3R | 107 | 110 | 78 | MVDMTX | $897,270 | 15300 |
| 4160V | 1250 | 155 | MX45AN44125AAA | MTX2-15 | 3R | 107 | 110 | 78 | MVDMTX | $955,570 | 16300 |
| 4160V | 1500 | 186 | MX45AN44150AAA | MTX2-15 | 3R | 107 | 110 | 78 | MVDMTX | $1,015,520 | 17900 |
| 4160V | 500 | 62 | MX45AN44050AAB | MTX2-15 | 3R Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,120,125 | 13600 |
| 4160V | 1000 | 124 | MX45AN44100AAB | MTX2-15 | 3R Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,137,750 | 15300 |
| 4160V | 1250 | 155 | MX45AN44125AAB | MTX2-15 | 3R Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,207,500 | 16300 |
| 4160V | 1500 | 186 | MX45AN44150AAB | MTX2-15 | 3R Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,279,875 | 17900 |
| 4160V | 500 | 62 | MX45AN44050AAC | MTX2-15 | 4 | 107 | 110 | 78 | MVDMTX | $967,150 | 13600 |
| 4160V | 1000 | 124 | MX45AN44100AAC | MTX2-15 | 4 | 107 | 110 | 78 | MVDMTX | $985,435 | 15300 |
| 4160V | 1250 | 155 | MX45AN44125AAC | MTX2-15 | 4 | 107 | 110 | 78 | MVDMTX | $1,047,765 | 16300 |
| 4160V | 1500 | 186 | MX45AN44150AAC | MTX2-15 | 4 | 107 | 110 | 78 | MVDMTX | $1,112,050 | 17900 |
| 4160V | 500 | 62 | MX45AN44050AAD | MTX2-15 | 4X Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,184,250 | 13600 |
| 4160V | 1000 | 124 | MX45AN44100AAD | MTX2-15 | 4X Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,199,750 | 15300 |
| 4160V | 1250 | 155 | MX45AN44125AAD | MTX2-15 | 4X Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,271,375 | 16300 |
| 4160V | 1500 | 186 | MX45AN44150AAD | MTX2-15 | 4X Stainless Steel | 107 | 110 | 78 | MVDMTX | $1,345,875 | 17900 |
| 4160V | 3500 | 434 | MX44AN44350AAA | MTX2-60 | 3R | 110 | 386 | 72 | MVDMTX | $2,022,300 | 38800 |
| 4160V | 4000 | 496 | MX44AN44400AAA | MTX2-60 | 3R | 110 | 386 | 72 | MVDMTX | $2,052,648 | 39800 |
| 4160V | 4500 | 558 | MX44AN44450AAA | MTX2-60 | 3R | 110 | 386 | 72 | MVDMTX | $2,083,644 | 40800 |
| 4160V | 5000 | 620 | MX44AN44500AAA | MTX2-60 | 3R | 110 | 386 | 72 | MVDMTX | $2,115,288 | 41800 |
| 4160V | 5500 | 682 | MX44AN44550AAA | MTX2-60 | 3R | 110 | 386 | 72 | MVDMTX | $2,147,580 | 42800 |
| 4160V | 6000 | 744* | MX44AN44600AAA | MTX2-60 | 3R | 110 | 386 | 72 | MVDMTX | $2,180,412 | 43800 |

**Notes:**
- MTX2-15 available in Low Profile configuration at same price as listed stacked configuration.
- HP rating is based on a typical 4-pole motor.
- Always use motor FLA rating to size adjustable speed drives.
- CF = Consult Factory
- Model numbers with an asterisk have a 110% OL rating.
- Optional MTX2-60 maintenance enclosure adds 50” to depth.

# MTX2® Outdoor
## Option Information & Pricing



### DVDT Output Filters

A DV/DT output filter is recommended for lead-lengths from 1,000 ft. to 2,000 ft.

| Option Code | Rating | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| 13th Digit B | 500 | DV/DT Filter | MVDOPT | $23,000 |
| | 1000 | | | $26,000 |
| | 1500 | | | $29,000 |
| | 3250-6000 | | | CF |

### Sine Wave Output Filters

A sine wave output filter is recommended for lead-lengths of 2,000 ft. to 6 miles. Sine wave output filters are recommended in applications where a step-up transformer is used on the output of the drive.

| Option Code | Rating | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| 13th Digit B | 500 | Sine Wave Filter | MVDOPT | $66,000 |
| | 1000 | | | $68,000 |
| | 1500 | | | $70,000 |
| | 3250-6000 | | | CF |

### Push Buttons

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| PBI | IEC Style | MVDOPT | $600 |
| PBN | UL Type Style | | $800 |

### Communication Interface

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| CS | TOSLINE-S20LP Communication Card with FC Connector (Tosline-S20 with F07 Connector Included on Control Board) | MVDOPT | $6,000 |
| CD | DeviceNet® Communication Card | | $8,000 |
| CP | Profibus® Communication Card | | $8,000 |
| CR | Modbus RTU/ModBus TCP IP/Ethernet Communication Card | | $5,000 |
| CE | Ethernet Global Data (EGD) Communication Card | | $6,000 |
| CN | TCNET Communication Card | | $6,000 |

# MTX2® Outdoor
## Option Information & Pricing



### Pilot Lights

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| LED | LED Full Voltage Indicating Light | MVDOPT | $800 |
| Push to Test | Push to Test LED Full Voltage Indicating Light | | $1,200 |

### Weather Protection Walk-in Enclosure MTX2-60

Outdoor enclosure option provides weather protection for maintenance personnel when accessing the control section and power modules.

| Description | Dimensions | Discount Symbol | List Price | Weight |
|---|---|---|---|---|
| MTX2-60 Walk-in Enclosure | 96"H x 174"W x 50"D | MVDOPT | CF | 2300 |

### Power Module Lifting Attachment MTX2-15

| Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|
| Power Module Overhead Lift Attachment | GCI6825G055MC | MVDACC | $9,500 |

### Power Module Lifting Equipment MTX2-60

Outdoor enclosure option provides weather protection for maintenance personnel when accessing the control section and power modules.

| Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|
| Power Module Lift Attachment | GCI6729G057 | MVDACC | $15,000 |

# MTX2® Outdoor

## Spare Parts Kits



| Item | 4160 V Qty. (300 to 3000 HP) | Description | Part Number |
|---|---|---|---|
| 1 | 1 | Control Board | PC61910P200C |
| 2 | 1 | GSD Board | PC61910P203A |
| 3 | 1 | XIO Board | PC61910P201B |
| 4 | 1 | EXIO Board | PC61910P205B |
| 5 | 1 | Interface Board | HP - Specific |
| 6 | 1 | External Interface Board | PC61910P206A |
| 7 | 1 | Keypad Interface Board | PC61910P204A |
| 8 | 1 | Display/Keypad | PC61910P216 |
| 9 | 1 | Power Supply | GCI6720G282 |
| 10 | 1 | GDI Board | PC61910P135A |
| 11 | 1 | PDM Board | PC61910P107A |
| 12 | 1 | Fan | HP - Specific |
| 13 | 4 | CPT Fuse - 2E 4.8kV | PC16109P902 |
| 14 | 3 | Input Fuse | HP - Specific |
| 15 | 6 | Rectifier Fuse | HP - Specific |
| 16 | 1 | Control Power Fuse | PC26163P050 |
| 17 | 1 | Space Heater Fuse | PC26143P625 |
| 18 | 1 | Space Heater Fuse | PC26130P029 |
| 19 | 1 | Power Module (One Phase)** | HP - Specific |

| Part Number | List Price Without PM | Frame | Part Number | List Price With PM |
|---|---|---|---|---|
| SPK-MX45AN44050 to SPK-MX45AN44150 | $26,100 | MTX2-15* | SPK-MX45AN44050-1 to SPK-MX45AN44150-1 | $106,000 |
| SPK-MX44AN44350 to SPK-MX44AN44600 | $80,100 | MTX2-60 | SPK-MX44AN44350-1 to SPK-MX44AN44600-1 | $209,450 |

*Stacked or Low Profile configurations.

# MTX® Outdoor
## Specifications

Toshiba's MTX® UL Type 3R outdoor medium voltage adjustable speed drive features an advanced enclosure design and power section topology. As the world's first medium voltage drive specifically designed for outdoor installation, the MTX is engineered for remote applications or locations where a building does not exist. It can be mounted virtually anywhere, from jungles to deserts, eliminating the need for indoor floor space. The MTX is an excellent option for extreme environmental conditions and challenging remote installations.

### Product Scope

4160 V at 500 to 3000 HP

### Highlights

- Outdoor Enclosure Design
- Three Cables In, Three Cables Out
- Distribution-Quality Lightning Arrestors as Standard
- 36-Pulse Harmonic Cancellation Complies with IEEE 519 2014
- Higher True Power Factor (>0.96) than Running Motors Across-the-Line
- Provides Easy Monitoring & Maintenance through Advanced User Interface Design
- UL-Rated Rainproof (UL Type 3R) Enclosure
- Lowers Cost of Ownership from Rated Full-Load Operation at -20° to 50°C
- Allows for Standard Motors to be Used in Conjunction with Drive Without Special Motor Insulation

### Standard Features

- 100% Continuous Overload Rating, 115% for 60 Seconds
- UL Type 3R Enclosure
- Ten Discrete Digital Input Terminals with Programmable Functions
- Ten Available Digital Programmable Outputs
- Three Analog Inputs; Isolation Transducer Required
- Eight Analog Outputs; Isolation Transducer Required
- Medium Voltage IGBT Technology
- EOI: Plain-English LCD Display
- Ambient Temperature: -4° to 122°F (-20° to 50°C)
- Altitude: Up to 1000 Meters without Derate (4500 Meter Option Available)
- Humidity: 95% No Condensation; 100% when Heaters Energized
- Standards & Compliances: NEC®, NEMA®, UL Listed in US & Canada, ANSI®



# MTX® Outdoor

## Part Numbering Convention



The MTX can be configured with commonly-used options for an easy-to-install, turn-key package. See the chart below for available configurations. Custom packages are available upon request. Drawings supplied by Toshiba's MV Adjustable Speed Drives Department.

The example below, MX40AN44050AAA, shows a standard duty MTX, 500 HP, 4160 V input, 4160 V output with input disconnect, cooling fan power, input disconnect and cooling fan power.

| Example Part Number: | MX4 | 0 | A | N | 4 | 4 | 050 | A | A | A | xxx |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Series:**
MX4 -- MV2 Outdoor

**Frame type:**
0 -- MTX-15 (Convection w fixed modules)
2 -- MTX-30 (Convection w fixed modules)

**Input Frequency:**
A -- 60 Hz
B -- 50 Hz

**Type:**
N -- For non regen adjustable speed drives
R -- Regen Module Adjustable Speed Drives

**Input Voltage:**

| | |
|---|---|
| 2 -- 2400 | D -- 11000 |
| 4 -- 4160 | F -- 12400 |
| 6 -- 6600 | H --13800 |

**Output Voltage:**
4 -- 4160

**Output Rated Capacity:**

| | |
|---|---|
| 050 --500 HP | 200 -- 2000 HP |
| 100 -- 1000 HP | 250 -- 2500 HP |
| 150 -- 1500 HP | 300 -- 3000 HP |

**Configuration:**

| | ID: | CP: | BYP: |
|---|---|---|---|
| A -- | Yes | Yes | No |
| B -- | Yes | No | No |
| C -- | No | Yes | No |
| D -- | No | No | No |

ID -- Input Disconnect
CP -- Internal Cooling Fan Power

**Output Options:**

| | |
|---|---|
| A -- Standard reactor | E -- Sine Wave Filter |
| D --Transfer | F -- Sine Wave Filter and Transfer |

**Enclosure Options:**
A -- Standard paint
B -- Stainless steel

**Additional Options:**
Additional numbers or letters that may be used to designate other options or identify individual units in multiple unit orders

# MTX® Outdoor

## 4160 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | H | W | D | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Drive Dimensions | | | Bypass Dimensions | | | | | |
| **Without Bypass** | | | | | | | | | | | |
| 500 | 62 | MX40AN44050AAA | 107 | 181 | 69 | N/A | | | MVDMTX | $683,990 | 14000 |
| 1000 | 124 | MX40AN44100AAA | 107 | 181 | 69 | | | | MVDMTX | $722,110 | 14500 |
| 1500 | 186 | MX40AN44150AAA | 107 | 181 | 69 | | | | MVDMTX | $741,970 | 15000 |
| 2000 | 248 | MX42AN44200AAA | 111 | 238 | 70 | | | | MVDMTX | $1,290,290 | 20700 |
| 2500 | 310 | MX42AN44250AAA | 111 | 238 | 70 | | | | MVDMTX | $1,360,710 | 22700 |
| 3000 | 372 | MX42AN44300AAA | 111 | 238 | 70 | | | | MVDMTX | $1,414,070 | 24700 |

# MTX® Outdoor
## Option Information & Pricing



### Sync-Xfer

Sync-Xfer is a solution that combines the proven reliability of a Toshiba medium voltage adjustable speed drive (ASD) with the precision of Toshiba controlgear. With Sync-Xfer, an applicable Toshiba medium voltage ASD can determine characteristics of the utility line and transfer motor supply power from variable speed to utility power via Toshiba vacuum contactors or vacuum circuit breakers. Alternatively, such ASD can capture a motor from utility power and return it to variable speed. Sync-Xfer can therefore have a significant impact by lowering a system's cost with respect to applications in which multiple motors are controlled by one or more ASDs, including those used for starting duty only.

Sync-Xfer applications require sync ready adjustable speed drive with the following options added to standard ASD pricing.

| | Item | Description |
|---|---|---|
| 1 | Sync Ready Kit, Includes Sync Reactor, One Output PT and Sync Check Relay | Use Price Book to Select the Sync Ready Kit Price Based on Frame Size. |
| 2 | Bypass Section w/ Feedback CTs | Use Price Book to Select the Bypass Lineup for One Motor. |
| 3 | Motor Protection Relay | Use Price Book to Select the Motor Protection Relay for Each Motor/Additional Motors. |
| 4 | Selection Logic with PLC | Required for Complex Sync Transfer Applications. Consult Factory. |
| 5 | Customer-Supplied MCC | Consult Factory. |

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| SX | Sync Ready Kit (500 to 1500 HP) One per Drive | MVDOPT | $23,400 |
| | Bypass Lineup for One Motor (500 to 2500 HP) | MVDOPT | CF |
| | Sync Ready Kit (2000 to 3000 HP) One per Drive | MVDOPT | $29,376 |
| | Bypass Lineup for One Motor with Feedback CTs (Above 2500 HP) | MVDOPT | CF |

**Notes:**
- Field interconnecting cable not included for bypass.
- CF = Consult Factory.
- MTX drive with one motor sync transfer- price per above guideline.
- For all other applications, consult factory.

# MTX® Outdoor
## Option Information & Pricing



### 6.9 To 13.8 kV Input

The HV Input option gives users the ability to input 6.9 to 13.8 kV primary voltages directly to the drive transformer. This option pricing is available only as a price adder to the standard unit. Published standard dimensions will increase 74” on width based on the selection of HV equipment.

- 74” section includes fused input disconnect switch, input contactor, soft charge circuit, and PTs. This arrangement mimics the standard -AA adjustable speed drive but with HV input.
- Option price = adjustable speed drive price x 10% + List Price for HP size below.
- Add 74" to MTX-15 and 113.5" to MTX-30 adder adjustable speed drive dimensions.

**Notes:**
- UL/cUL in progress.
- No bypass is available with this feature.
- The price of the adjustable speed drive will increase by 10% to accommodate the HV windings.

| HP | Description | Discount Symbol | List Price |
|---|---|---|---|
| 1500 | Up to 15 kV Input Includes: Fused Input Disconnect, Input Breaker, Soft Charge Circuit, PTs (add 74” to Width) | MVDOPT | $123,750 |
| 3000 | Up to 15 kV Input Includes: Fused Input Disconnect, Input Breaker, Soft Charge Circuit, PTs (add 74” to Width) | MVDOPT | $153,000 |

Note: If prices change, below pricing examples will change.

Example 1: 500 HP, 13.8 kV input with 4160 V output. Use the 500 HP price of $683,990 plus 10% = $752,389 and add the 74” section at $123,750. Total list price equals $876,139. Overall dimension will be 242” (168” + 74”). Part number will be MX40ANH4050AAA.

Example uses list price only. Final pricing will be different based on option multipliers.

# MTX® Outdoor
## Option Information & Pricing



### DV/DT Output Filter

A DV/DT output filter is recommended for lead-lengths between 1000 ft. to 2000 ft.

| Option Code | Rating | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| 13th Digit B thru C | 500 | DV/DT Filter | MVDOPT | $23,000 |
| | 1000 | | | $26,000 |
| | 1500 | | | $29,000 |
| | 2000 | | | $31,000 |
| | 2500 | | | $34,000 |
| | 3000 | | | $37,000 |

### Sine Wave Output Filters

A sine wave output filter is recommended for lead-lengths of 2000 ft. to 6 miles. Sine wave output filters are recommended in applications where a step-up transformer is used on the output of the adjustable speed drive.

| Option Code | Rating | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| 12th DigitE | 500 | Output Sine Wave Filter | MVDOPT | $66,000 |
| | 1000 | | | $68,000 |
| | 1500 | | | $70,000 |
| | 2000 | Additional Cabinet Required for Sine Wave Filter | | $153,000 |
| | 2500 | | | $157,000 |
| | 3000 | | | $161,000 |

### Motor Space Heaters

| Option Code | HP Range | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| EMH1 | Power provided Separately | Basic space heater control circuit to turn one space heater ON (up to 10 amps) when the drive is not operating. External 120V or 240V supplied by customer. For special requirements, consult factory. | MVDOPT | $4,000 |
| EMH2 | Power provided Separately | Motor space heater circuit with indicating light. External power supplied by customer. | | $5,600 |

**Notes:**

- Contact Factory for Extreme Weather Space Heater Pricing. Extreme Heater Package Requires External 240 V Power.

# MTX® Outdoor
## Option Information & Pricing



### Pilot Lights

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| LED | LED Full Voltage Indicating Light | MVDOPT | $800 |
| Push to Test | Push to Test LED Full Voltage Indicating Light | | $1,200 |

### Push Buttons

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| PBI | IEC Style | MVDOPT | $500 |
| PBN | UL Type Style | | $700 |

### Communication Interface

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| CS | TOSLINE-S20LP Communication Card with FC Connector (Tosline-S20 with F07 Connector Included on Control Board) | MVDOPT | $6,000 |
| CD | DeviceNet® Communication Card | | $8,000 |
| CP | Profibus® Communication Card | | $8,000 |
| CR | Modbus RTU/ModBus TCP IP/Ethernet Communication Card | | $5,000 |
| CE | Ethernet Global Data (EGD) Communication Card | | $6,000 |
| CN | TCNET Communication Card | | $6,000 |

**Notes:**
- See T300MV2 Option section for complete list of optional features.

# MTX® Outdoor
## Spare Parts Kits



Toshiba recommends a separate line item on the purchase order for spare parts on the adjustable speed drives purchase order. Spare parts are handled by the spare parts group. Spare Parts Kits provide an easy and practical way to acquire the proper spare parts to handle most emergencies. Spare Parts Kits contain one of each circuit board, one low voltage power supply, rectifier fuses, diodes, and one set of control power fuses.

To order a Spare Parts Kit, please use the following numbering convention:

| Example Part Number: | SPK-MX4 | 0 | A | N | 4 | 4 | 050 |
|---|---|---|---|---|---|---|---|

**Series:**
MX4 — MTX

**Frame type:**
0 — MTX-15
2 — MTX-30

**Input Frequency:**
A -- 60 Hz
B -- 50 Hz

**Type:**
N — Non-Regen
R — Regen

**Input Voltage:**
2 -- 2400
3 -- 3300
4 -- 4160

**Output Voltage:**
4 -- 4160

**4160V Output:**

| | |
|---|---|
| 050 --500 HP | 200 -- 2000 HP |
| 100 -- 1000 HP | 250 -- 2500 HP |
| 150 -- 1500 HP | 300 -- 3000 HP |

# MTX® Outdoor
## Spare Parts Kits



| Item | Quantity (500-1500 HP) | Quantity (2000-3000 HP) | Description | Part Number |
|---|---|---|---|---|
| 1 | 1 | 1 | Control Board | PC61910P200C |
| 2 | 1 | 1 | GSD Board | PC61910P203A |
| 3 | 1 | 1 | XIO Board | PC61910P201B |
| 4 | 1 | 1 | EXIO Board | PC61910P205B |
| 5 | 1 | 1 | Interface Board | HP - Specific |
| 6 | 1 | 1 | External Interface Board | PC61910P206A |
| 7 | 1 | 1 | Keypad Interface Board | PC61910P204A |
| 8 | 1 | 1 | Display/Keypad | PC61910P216 |
| 9 | 1 | 1 | Power Supply | GCI6720G282 |
| 10 | 1 | 1 | GDI Board | PC61910P135A |
| 11 | 1 | 1 | PDM Board | PC61910P107A |
| 12 | 1 | 1 | Fan | HP - Specific |
| 13 | 1 | N/A | Fan Starting Cap | PC42000P412 |
| 14 | 4 | 4 | CPT Fuse - 2E 4.8kV | PC16109P902 |
| 15 | 3 | 3 | Input Fuse | HP - Specific |
| 16 | 6 | 6 | Rectifier Fuse | HP - Specific |
| 17 | 1 | N/A | Control Power Fuse | PC26163P150 |
| 18 | 1 | 1 | Control Power Fuse | PC26163P050 |
| 19 | 1 | 1 | Space Heater Fuse | HP - Specific |
| 20 | 2 | 4 | Diode Pack | PC40333P402 |
| 21 | 6 | N/A | Rectifier | PC40365P200 |
| 22 | N/A | 6 | Rectifier | PC40365P400 |
| 23 | 8 | 16 | PM IGBT | PC40233P406 |
| 24 | 2 | 4 | PM Fuse | PC16109P901 |
| 25 | 1 | 2 | PM PWR Supply Board | PC43000P015 |
| 26 | 1 | 2 | PM OLB Board | PC61910P073C |
| 27 | 1 | 2 | PM VDET Board | PC61910P134A |
| 28 | 4 | 8 | PM RGM Board | PC61910P106A |
| 29 | 1 | 2 | PM CHG DET Board | PC61910P110A |
| 30 | 2 | 4 | PM Gate Driver Board | PC61910P077G |
| 31 | 2 | 4 | PM Gate Driver Board | PC61910P077H |

| Part Number | Frame | List Price |
|---|---|---|
| SPK-MX40AN44050-1 to SPK-MX40AN44150-1 | MTX-15 | $74,780 |
| SPK-MX42AN44200-1 to SPK-MX42AN44300-1 | MTX-30 | $121,500 |

# T300BMV2® General Purpose
## Specifications

Toshiba's T300BMV2 indoor medium voltage adjustable speed drive is a cost-effective solution that integrates Toshiba's latest MV2 digital control platform with advanced technology. Utilizing aluminum magnetics and multi-level Pulse Width Modulation (PWM) with Neutral-Point Clamping (NPC) technology, the T300BMV2 offers a reduced component count, smaller footprint, and lower overall costs. It features an advanced enclosure design and power section topology, with an optional input controller that includes an isolation switch, input fuses, and a vacuum contactor.

### Product Scope

4160 V at 300 to 3000 HP

### Highlights

- Aluminum Transformer and Magnetics
- Distribution-Quality Lightning Arrestors as Standard
- 24-Pulse Harmonic Cancellation Complies with IEEE 519 2014
- Higher True Power Factor (>0.96) than Running Motors Across-the-Line
- Provides Easy Monitoring & Maintenance through Advanced User Interface Design
- Removable Power Modules
- Allows for Standard Motors to be Used in Conjunction with Drive Without Special Motor Insulation

### Standard Features

- Overload Rating, 115% for 60 Seconds (Some Ratings with 110% Overload)
- UL Type 1 Ventilated Enclosure with Gasket & Air Intake Filters with IP20 Degree of Protection
- Four Programmable Digital Inputs
- Four Programmable Digital Outputs
- One Analog Input
- One Analog Output
- Medium Voltage IGBT Technology
- EOI: Plain-English LCD/LED Display
- Ambient Temperature: 32° to 104°F (0° to 40°C)
- Altitude: Up to 1000 Meters
- Humidity: 95% Non-Condensing
- Motor Cable Length 1000 ft. Without Output Filter
- Standards & Compliances: NEC®, NEMA®, UL Listed in US & Canada, ANSI®



c UL us

# T300BMV2® General Purpose
## Part Numbering Convention



The BMV2 can be configured with commonly-used options for an easy-to-install, turn-key package. See the chart below for available configurations. Custom packages are available upon request. Drawings supplied by Toshiba's MV Adjustable Speed Drives Department.

| Example Part Number: | MB4 | A | A | N | 4 | 4 | 070 | A | A | A | 0 | xx |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Series:**
MB4 - BMV2

**Frame Type:**
A - Frame A
B - Frame B
C - Frame C

**Input Frequency:**
A - 60 Hz

**Type:**
N - For Non-Regen Adjustable Speed Drives

**Input Voltage:**
4 - 4160

**Output Voltage:**
4 - 4160

**Output Rated Capacity:**
070 - 700 HP
080 - 800 HP
090 - 900 HP
100 - 1000 HP
125 - 1250 HP
150 - 1500 HP
175 - 1750 HP
200 - 2000 HP
225 - 2250 HP
250 - 2500 HP
300 - 3000 HP

**Configuration:**

| | ID: | CP: | |
|---|---|---|---|
| A - | Yes | Yes | |
| B - | Yes | No | ID - Input Disconnect |
| C - | No | Yes | CP - Internal Cooling Fan Power |
| D - | No | No | |

**Output Options:**
A - Standard Reactor
B - dV/dt Filter

**Cooling Options:**
A - Standard

**Main Input Bus:**
0 - None

**Additional Options:**
Additional numbers or letters that may be used to designate other options or identify individual units in multiple unit orders

# T300BMV2® General Purpose

## BMV2 - 4160 VAC Output

## Pricing & Dimensions



| VAC | HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Dimensions (in.) | | | | | |
| **Without Input Controller** | | | | | | | | | | |
| 4160 | 300 | 37 | MB4AAN44030CAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $304,500 | 5200 |
| 4160 | 400 | 50 | MB4AAN44040CAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $315,800 | 5600 |
| 4160 | 500 | 62 | MB4AAN44050CAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $321,400 | 6000 |
| 4160 | 600 | 74 | MB4AAN44060CAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $326,200 | 6200 |
| 4160 | 700 | 87 | MB4ASAN44070CAA0 | AS4 | 103.7 | 55 | 48 | MVDBMV | $325,700 | 6000 |
| 4160 | 800 | 99 | MB4ASAN44080CAA0 | AS4 | 103.7 | 55 | 48 | MVDBMV | $328,500 | 6300 |
| 4160 | 900 | 112 | MB4ASAN44090CAA0 | AS4 | 103.7 | 55 | 48 | MVDBMV | $336,300 | 6500 |
| 4160 | 1000* | 124 | MB4ASAN44100CAA0 | AS4 | 103.7 | 55 | 48 | MVDBMV | $346,000 | 6700 |
| 4160 | 700 | 87 | MB4AAN44070CAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $330,600 | 6000 |
| 4160 | 800 | 99 | MB4AAN44080CAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $335,400 | 6400 |
| 4160 | 900 | 112 | MB4AAN44090CAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $343,200 | 6500 |
| 4160 | 1000* | 124 | MB4AAN44100CAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $351,200 | 6700 |
| 4160 | 1000 | 124 | MB4BSAN44100CAA0 | BS4 | 103.7 | 85 | 48 | MVDBMV | $404,500 | 10500 |
| 4160 | 1250 | 155 | MB4BSAN44125CAA0 | BS4 | 103.7 | 85 | 48 | MVDBMV | $407,600 | 11000 |
| 4160 | 1500 | 186 | MB4BSAN44150CAA0 | BS4 | 103.7 | 85 | 48 | MVDBMV | $421,600 | 11500 |
| 4160 | 1750 | 217 | MB4BSAN44175CAA0 | BS4 | 103.7 | 85 | 48 | MVDBMV | $424,500 | 12000 |
| 4160 | 2000* | 248 | MB4BSAN44200CAA0 | BS4 | 103.7 | 85 | 48 | MVDBMV | $434,900 | 12500 |
| 4160 | 1250 | 155 | MB4BAN44125CAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $422,500 | 11300 |
| 4160 | 1500 | 186 | MB4BAN44150CAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $438,500 | 11700 |
| 4160 | 1750 | 217 | MB4BAN44175CAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $441,400 | 12100 |
| 4160 | 2000* | 248 | MB4BAN44200CAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $450,100 | 12500 |
| 4160 | 2250 | 279 | MB4CAN44225CAA0 | C4 | 103.7 | 154 | 48 | MVDBMV | $610,200 | 17300 |
| 4160 | 2500 | 310 | MB4CAN44250CAA0 | C4 | 103.7 | 154 | 48 | MVDBMV | $618,100 | 17300 |
| 4160 | 3000 | 371 | MB4CAN44300CAA0 | C4 | 103.7 | 154 | 48 | MVDBMV | $619,900 | 17300 |
| **With Input Controller** | | | | | | | | | | |
| 4160 | 300 | 37 | MB4AAN44030AAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $339,100 | 5200 |
| 4160 | 400 | 50 | MB4AAN44040AAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $351,200 | 5600 |
| 4160 | 500 | 62 | MB4AAN44050AAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $356,700 | 6000 |
| 4160 | 600 | 74 | MB4AAN44060AAA0 | A4µ | 103.7 | 48 | 48 | MVDBMV | $360,700 | 6200 |
| 4160 | 700 | 87 | MB4AAN44070AAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $363,100 | 6900 |
| 4160 | 800 | 99 | MB4AAN44080AAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $368,100 | 7000 |
| 4160 | 900 | 112 | MB4AAN44090AAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $376,200 | 7200 |
| 4160 | 1000* | 124 | MB4AAN44100AAA0 | A4 | 103.7 | 60 | 48 | MVDBMV | $387,800 | 7400 |
| 4160 | 1250 | 155 | MB4BAN44125AAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $470,400 | 11300 |
| 4160 | 1500 | 186 | MB4BAN44150AAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $485,100 | 11700 |
| 4160 | 1750 | 217 | MB4BAN44175AAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $488,100 | 12100 |
| 4160 | 2000* | 248 | MB4BAN44200AAA0 | B4 | 103.7 | 90 | 48 | MVDBMV | $497,200 | 12500 |
| 4160 | 2250 | 279 | MB4CAN44225AAA0 | C4 | 103.7 | 154 | 48 | MVDBMV | $654,600 | 17300 |
| 4160 | 2500 | 310 | MB4CAN44250AAA0 | C4 | 103.7 | 154 | 48 | MVDBMV | $662,700 | 17300 |
| 4160 | 3000 | 371 | MB4CAN44300AAA0 | C4 | 103.7 | 154 | 48 | MVDBMV | $677,900 | 17300 |

**Notes:**

- HP rating is based on a typical 4-pole motor.
- Always use motor FLA rating to size adjustable speed drives.
- CF = Consult Factory.
- (*) Model numbers with asterisk have 110% OL rating.

# T300BMV2® General Purpose
## Option Information & Pricing



### DV/DT Output Filters

A DV/DT output filter is recommended for lead-lengths of 1000 feet to 2000 feet (Not Available for Frame AS4/BS4)

| Option Code | Size | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| 13th Digit B | **4160 V** | | | |
| | Frame A4µ/A4 | Output DV/DT Filter | MVDOPT | $25,000 |
| | Frame B4 | | | $27,000 |
| | Frame C4 | | | $37,000 |

### Drive & Motor Space Heaters

| Option Code | HP Range | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| EDH | Frame A4µ/ A4 | Drive Space Heater 208/240 VAC. External power required. | MVDOPT | $4,000 |
| | Frame AS4 | | | $5,400 |
| | Frame B4 | | | $8,000 |
| | Frame BS4 | | | $5,400 |
| | Frame C4 | | | $8,000 |
| EHM1 | Power provided Separately | Basic motor space heater circuit to turn Space Heaters ON (up to 10 amps) when drive is not operating. External 120/240 VAC supplied by customer. | | $4,000 |
| EHM2 | Power provided Separately | Motor space heater circuit with indicating light. External power supplied by customer. | | $5,600 |

### Communication Interface

| Option Code | Description | Discount Symbol | List Price |
|---|---|---|---|
| CS | TOSLINE-S20LP Communication Card with FC Connector (Tosline-S20 with F07 Connector Included on Control Board) | MVDOPT | $6,000 |
| CD | DeviceNet® Communication Card | | $8,000 |
| CP | Profibus® Communication Card | | $8,000 |
| CR | Modbus RTU/ModBus TCP IP/Ethernet Communication Card | | $5,000 |
| CE | Ethernet Global Data (EGD) Communication Card | | $6,000 |
| CN | TCNET Communication Card | | $6,000 |

# T300BMV2® General Purpose
## Option Information & Pricing



### Spare Parts

| Item | 4160 V Qty. | Description | Part Number |
|---|---|---|---|
| 1 | 1 | Control Board | PC61910P200C |
| 2 | 1 | GSD Board | PC61910P203A |
| 3 | 1 | XIO Board | PC61910P201B |
| 4 | 1 | EXIO Board | PC61910P205B |
| 5 | 1 | Interface Board | HP-Specific |
| 6 | 1 | Keypad Interface Board | PC61910P204A |
| 7 | 1 | Display/Keypad | PC61910P216 |
| 8 | 1 | Power Supply | GCI6720G282 |
| 9 | 1 | GDI Board | PC61910P135A |
| 10 | 1 | PDM Board | PC61910P107A |
| 11 | 2 | Control Power Fuse | HP-Specific |
| 12 | 4 | CPT Fuse | PC16109P902 |
| 13 | 4 | Rectifier Fuse | HP-Specific |
| 14 | 4 | Diode Pack | HP-Specific |
| 15 | 1 | Power Module (One Phase)* | HP-Specific |
| 16 | 1 | Cooling Fan | HP-Specific |

*Only included in kits designated with -1

| Part Number without PM, with Std Fan | List Price | Frame | Part Number & Std Fan | List Price |
|---|---|---|---|---|
| SPK-MB4AAN44030A to SPK-MB4AAN44060A | $29,240 | A4 | SPK-MB4AAN44030A-1 to SPK-MB4AAN44060A-1 | $63,750 |
| SPK-MB4AAN44030C to SPK-MB4AAN44060C | $29,040 | A4 | SPK-MB4AAN44030C-1 to SPK-MB4AAN44060C-1 | $63,750 |
| SPK-MB4ASAN44070C to SPK-MB4ASAN44100C | $32,070 | AS4 | SPK-MB4ASAN44070C-1 to SPK-MB4ASAN44100C-1 | $66,750 |
| SPK-MB4AAN44070A to SPK-MB4AAN44100A | $32,270 | A4 | SPK-MB4AAN44070A-1 to SPK-MB4AAN44100A-1 | $67,150 |
| SPK-MB4AAN44070C TO SPK-MB4AAN44100C | $32,070 | A4 | SPK-MB4AAN44070C-1 to SPK-MB4AAN44100C-1 | $67,150 |
| SPK-MB4BSAN44125C to SPK-MB4BSAN44200C | $34,370 | BS4 | SPK-MB4BSAN44125C-1 to SPK-MB4BSAN44200C-1 | $76,020 |
| SPK-MB4BAN44125A to SPK-MB4BAN44200A | $34,570 | B4 | SPK-MB4BAN44125A-1 to SPK-MB4BAN44200A-1 | $76,220 |
| SPK-MB4BAN44125C to SPK-MB4BAN44200C | $34,570 | B4 | SPK-MB4BAN44125C-1 to SPK-MB4BAN44200C-1 | $76,220 |
| SPK-MB4CAN44225A to SPK-MB4CAN44300A | $38,140 | C4 | SPK-MB4CAN44225A-1 to SPK-MB4CAN44300A-1 | $104,425 |
| SPK-MB4CAN44225C to SPK-MB4CAN44300C | $37,940 | C4 | SPK-MB4CAN44225C-1 to SPK-MB4CAN44300C-1 | $104,225 |

**Note:**
- xxxC part number does not include input fuses.

# Regen
## Specifications

Toshiba's Regen medium voltage adjustable speed drive is a fully regenerative system that can be easily configured with commonly used options for a hassle-free, turnkey installation. While the standard T300MV2® drive supports only two-quadrant operation, adding the Regen module upgrades it to a four-quadrant operation with an active front end. This enhancement allows energy from an induction or synchronous motor to be efficiently regenerated back into the power grid, with adjustable power factor control and minimal reflected harmonics.

Please note: Existing T300MV2 adjustable speed drives cannot be retrofitted to add the regenerative capability.

### Product Scope

4160 V at 300 to 6000 HP

### Highlights

- 100% Regeneration
- Three Cables In, Three Cables Out
- Isolation Transformer
- Multi-Level PWM Output
- Five-Cycle Ride Through
- Auto-Restart
- Higher True Power Factor (0.99)
- Small Footprint Through Compact Power Modules, Standard Copper-Wound Isolation Transformer & Air-Cooling System
- Advanced Electronics to Reduce Component Count

### Standard Features

- 100% Continuous Overload Rating, 115%* for 60 Seconds
- UL Type 1 Ventilated & IP20 Gasket & Filter Enclosure
- Ten Digital Inputs: Interposing Relay may be Required
- Ten Digital Outputs: Interposing Relay may be Required
- Three Analog Inputs: Isolation Transducer Required
- Eight Analog Outputs: Isolation Transducer Required
- EOI: Plain-English LCD Display
- Standards & Compliances: IEC®, NEMA® & ANSI®



**Notes:**

*Some drive ratings are limited to 110% overload for 60 seconds.

# Regen

## Part Numbering Convention



The Regen can be configured with commonly-used options for an easy-to-install, turn-key package. See the chart below for available configurations. Custom packages are available upon request. The Regen includes a ground lug and customer terminal block. Drawings supplied by Toshiba's MV Adjustable Speed Drive Department. The example, M4AAR44050AAA0-CR, shows a standard duty Regen, 500 HP, 4160 V input, 4160 V output with Input disconnect, cooling fan power, and Modbus RTU/Modbus TCP IP/Ethernet communication card.

| Example Part Number: | M4 | A | A | R | 4 | 4 | 050 | A | A | A | 0 | xx |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Series:**
M4 - MV2

**Frame Type:**
A - Frame A
B - Frame B
C - Frame C
F - Frame F

**Input Frequency:**
A - 60 Hz
B - 50 Hz

**Type:**
R - Regen Module Adjustable Speed Drives

**Input Voltage:**

| | | |
|---|---|---|
| 2 - 2400 | 7 - 6900 | E - 12000 |
| 3 - 3300 | A - 7200 | F - 12470 |
| 4 - 4160 | B - 8320 | G - 13200 |
| 5 - 4800 | C - 10000 | H - 13800 |
| 6 - 6600 | D - 11000 | Z - Other |

**Output Voltage:**
2 - 2400*1 3 - 3300 4 - 4160

**Output Rated Capacity:**

| | | | |
|---|---|---|---|
| 030 - 300 HP | 070 - 700 HP | 175 - 1750 HP | 400 - 4000 HP |
| 035 - 350 HP | 080 - 800 HP | 200 - 2000 HP | 450 - 4500 HP |
| 040 - 400 HP | 090 - 900 HP | 225 - 2250 HP | 500 - 5000 HP |
| 045 - 450 HP | 100 - 1000 HP | 250 - 2500 HP | 550 - 5500 HP |
| 050 - 500 HP | 125 - 1250 HP | 300 - 3000 HP | 600 - 6000 HP |
| 060 - 600 HP | 150 - 1500 HP | 350 - 3500 HP | |

**Configuration:**

| | ID: | CP: | BYP: | RFAN: |
|---|---|---|---|---|
| A -- | Yes | Yes | No | No |
| B -- | Yes | No | No | No |
| C -- | No | Yes | No | No |
| D -- | No | No | No | No |
| E -- | Yes | Yes | Yes | No |
| F -- | Yes | No | Yes | No |
| G -- | No | Yes | Yes | No |
| H -- | No | No | Yes | No |
| J -- | Yes | Yes | No | Yes |
| K -- | Yes | No | No | Yes |
| L -- | No | Yes | No | Yes |
| M -- | No | No | No | Yes |
| N-- | Yes | Yes | Yes | Yes |
| P -- | Yes | No | Yes | Yes |
| Q -- | No | Yes | Yes | Yes |
| R -- | No | No | Yes | Yes |

ID - Input Disconnect
CP - Internal Cooling Fan Power
BYP - Bypass
RFAN - Redundant Fans

**Output Options:**
A - Standard Reactor
B - DV/DT Filter
C - DV/DT Filter and Transfer
D - Transfer
E - Sine Wave Filter
F - Sine Wave Filter and Transfer

**Cooling Options:**
A - Standard

**Main Input Bus:**
0 - None

**Additional Options:**
Additional numbers or letters that may be used to designate other options or identify individual units in multiple unit orders.

*1 - 2400 V output requires a sine wave filter.

# Regen

## 4160 VAC Output
## Pricing & Dimensions



| HP | FLA | Model Number | Frame | H | W | D | Discount Symbol | List Price | Estimated Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | | |
| **Without Bypass** | | | | | | | | | |
| 300 | 37 | M4AAR44030AAA0 | A4R | 104 | 96 | 48 | MVDREG | $517,385 | 9500 |
| 350 | 43 | M4AAR44035AAA0 | A4R | 104 | 96 | 48 | MVDREG | $520,950 | 9500 |
| 400 | 50 | M4AAR44040AAA0 | A4R | 104 | 96 | 48 | MVDREG | $524,975 | 9500 |
| 450 | 56 | M4AAR44045AAA0 | A4R | 104 | 96 | 48 | MVDREG | $528,080 | 9500 |
| 500 | 62 | M4AAR44050AAA0 | A4R | 104 | 96 | 48 | MVDREG | $531,875 | 9500 |
| 600 | 74 | M4AAR44060AAA0 | A4R | 104 | 96 | 48 | MVDREG | $538,085 | 9500 |
| 700 | 87 | M4AAR44070AAA0 | A4R | 104 | 96 | 48 | MVDREG | $539,350 | 9500 |
| 800 | 99 | M4AAR44080AAA0 | A4R | 104 | 96 | 48 | MVDREG | $543,950 | 9500 |
| 900 | 112 | M4AAR44090AAA0 | A4R | 104 | 96 | 48 | MVDREG | $548,550 | 9500 |
| 1000 | 124 | M4AAR44100AAA0 | A4R | 104 | 96 | 48 | MVDREG | $565,800 | 9500 |
| 1000 | 124 | M4BAR44100AAA0 | B4R | 104 | 140 | 48 | MVDREG | $637,100 | 11950 |
| 1250 | 155 | M4BAR44125AAA0 | B4R | 104 | 140 | 48 | MVDREG | $653,200 | 12450 |
| 1500 | 186 | M4BAR44150AAA0 | B4R | 104 | 140 | 48 | MVDREG | $668,150 | 12950 |
| 1750 | 217 | M4BAR44175AAA0 | B4R | 104 | 140 | 48 | MVDREG | $676,200 | 13950 |
| 2000 | 248 | M4BAR44200AAA0 | B4R | 104 | 140 | 48 | MVDREG | $683,675 | 14950 |
| 2250 | 279 | M4CAR44225AAA0 | C4R | 104 | 258 | 60 | MVDREG | $956,800 | 21750 |
| 2500 | 310 | M4CAR44250AAA0 | C4R | 104 | 258 | 60 | MVDREG | $970,600 | 22750 |
| 3000 | 372 | M4CAR44300AAA0 | C4R | 104 | 258 | 60 | MVDREG | $1,194,850 | 24750 |
| 4000 | 496 | M4FAR44400AAA0 | F4R | 104 | 313.5 | 60 | MVDREG | $1,497,300 | 37525 |
| 4500 | 558 | M4FAR44450AAA0 | F4R | 104 | 313.5 | 60 | MVDREG | $1,521,450 | 38525 |
| 5000 | 620 | M4FAR44500AAA0 | F4R | 104 | 313.5 | 60 | MVDREG | $1,545,600 | 39525 |
| 5500 | 682 | M4FAR44550AAA0 | F4R | 104 | 313.5 | 60 | MVDREG | $1,569,750 | 40525 |
| 6000 | 744 | M4FAR44600AAA0 | F4R | 104 | 313.5 | 60 | MVDREG | $1,619,800 | 41525 |
| **With Bypass** | | | | | | | | | |
| 300 | 37 | M4AAR44030EAA0 | A4R | 104 | 126 | 48 | MVDREG | $672,385 | 10600 |
| 350 | 43 | M4AAR44035EAA0 | A4R | 104 | 126 | 48 | MVDREG | $675,950 | 10600 |
| 400 | 50 | M4AAR44040EAA0 | A4R | 104 | 126 | 48 | MVDREG | $679,975 | 10600 |
| 450 | 56 | M4AAR44045EAA0 | A4R | 104 | 126 | 48 | MVDREG | $683,080 | 10600 |
| 500 | 62 | M4AAR44050EAA0 | A4R | 104 | 126 | 48 | MVDREG | $686,875 | 10600 |
| 600 | 74 | M4AAR44060EAA0 | A4R | 104 | 126 | 48 | MVDREG | $693,085 | 10600 |
| 700 | 87 | M4AAR44070EAA0 | A4R | 104 | 126 | 48 | MVDREG | $694,350 | 10600 |
| 800 | 99 | M4AAR44080EAA0 | A4R | 104 | 126 | 48 | MVDREG | $698,950 | 10600 |
| 900 | 112 | M4AAR44090EAA0 | A4R | 104 | 126 | 48 | MVDREG | $703,550 | 10600 |
| 1000 | 124 | M4AAR44100EAA0 | A4R | 104 | 126 | 48 | MVDREG | $720,800 | 10600 |
| 1000 | 124 | M4BAR44100EAA0 | B4R | 104 | 170 | 48 | MVDREG | $792,100 | 13050 |
| 1250 | 155 | M4BAR44125EAA0 | B4R | 104 | 170 | 48 | MVDREG | $808,200 | 13550 |
| 1500 | 186 | M4BAR44150EAA0 | B4R | 104 | 170 | 48 | MVDREG | $823,150 | 14050 |
| 1750 | 217 | M4BAR44175EAA0 | B4R | 104 | 170 | 48 | MVDREG | $831,200 | 15050 |
| 2000 | 248 | M4BAR44200EAA0 | B4R | 104 | 170 | 48 | MVDREG | $838,675 | 16050 |
| 2250 | 279 | M4CAR44225EAA0 | C4R | 104 | 288 | 60 | MVDREG | $1,111,800 | 22850 |
| 2500 | 310 | M4CAR44250EAA0 | C4R | 104 | 288 | 60 | MVDREG | $1,125,600 | 23850 |
| 3000 | 372 | M4CAR44300EAA0 | C4R | 104 | 294 | 60 | MVDREG | $1,390,850 | 25850 |
| 4000 | 496 | M4FAR44400EAA0 | F4R | 104 | 349.5 | 60 | MVDREG | $1,693,300 | 39525 |
| 4500 | 558 | M4FAR44450EAA0 | F4R | 104 | 349.5 | 60 | MVDREG | $1,717,450 | 40525 |
| 5000 | 620 | M4FAR44500EAA0 | F4R | 104 | 349.5 | 60 | MVDREG | $1,741,600 | 41525 |
| 5500 | 682 | M4FAR44550EAA0 | F4R | 104 | 349.5 | 60 | MVDREG | $1,765,750 | 42525 |
| 6000 | 744 | M4FAR44600EAA0 | F4R | 104 | 349.5 | 60 | MVDREG | $1,815,800 | 43525 |

# Regen
## Spare Parts Kits



Input fuses will change as HP changes. Spare Parts Kits contain:

| Item | 4160 V Qty. | Description | Part Number |
|---|---|---|---|
| 1 | 1 | Control Board | PC61910P200C |
| 2 | 1 | GSD Board | PC61910P203A |
| 3 | 1 | XIO Board | PC61910P201B |
| 4 | 1 | EXIO Board | PC61910P205B |
| 5 | 1 | Interface Board | Job/Inverter Specific |
| 6 | 1 | External Interface Board | PC61910P206A |
| 7 | 1 | Keypad Interface Board | PC61910P204A |
| 8 | 1 | Display/Keypad | PC61910P216 |
| 9 | 1 | Power Supply | GCI6720G282 |
| 10 | 1 | GDI Board | PC61910P085A |
| 11 | 1 | PDM Board | PC61910P107A |
| 12 | 2 | Control Power Fuse | HP-Specific |
| 13 | 3 | Input Fuse | HP-Specific |
| 14 | 4 | CPT Fuse | PC16109P902 |
| 15 | 2 | Power Module (One Phase)* | HP-Specific |
| 16 | 1/2 | Cooling Fan | HP & Application Specific |

* Only included in kits designated with -1.

**Notes:**
- Spare parts list is not applicable for high voltage input. Contact factory for pricing.
- Prices valid when ordered along with adjustable speed drive. See parts catalog for price if not purchased with a drive.

# Regen
## Spare Parts Kits



| Part Number without PM, with Redundant Fan | List Price | Frame | Part Number with PM & Redundant Fan | List Price |
|---|---|---|---|---|
| **4160 V Kits** | | | | |
| SPK-M4AAR44030J to SPK-M4AAR44100J | CF | A4R | SPK-M4AAR44030J-1 to SPK-M4AAR44100J-1 | CF |
| SPK-M4BAR44100J to SPK-M4BAR44200J | CF | B4R | SPK-M4BAR44100J-1 to SPK-M4BAR44200J-1 | CF |
| SPK-M4CAR44225J to SPK-M4CAR44300J | CF | C4R | SPK-M4CAR44225J-1 to SPK-M4CAR44300J-1 | CF |
| SPK-M4FAR44400J to SPK-M4FAR44600J | CF | F4R | SPK-M4FAR44400J-1 to SPK-M4FAR44600J-1 | CF |

| Part Number without PM, with Std Fan | List Price | Frame | Part Number with PM & Std Fan | List Price |
|---|---|---|---|---|
| **4160 V Kits** | | | | |
| SPK-M4AAR44030A to SPK-M4AAR44100A | CF | A4R | SPK-M4AAR44030A-1 to SPK-M4AAR44100A-1 | CF |
| SPK-M4BAR44100A to SPK-M4BAR44200A | CF | B4R | SPK-M4BAR44100A-1 to SPK-M4BAR44200A-1 | CF |
| SPK-M4CAR44225A to SPK-M4CAR44300A | CF | C4R | SPK-M4CAR44225A-1 to SPK-M4CAR44300A-1 | CF |
| SPK-M4FAR44400A to SPK-M4FAR44600A | CF | F4R | SPK-M4FAR44400A-1 to SPK-M4FAR44600A-1 | CF |

**Notes:**
- Prices valid when ordered along with adjustable speed drive. See parts catalog for price if not purchased with a drive.

# Medium Voltage ASD Accessories

## Power Module Lifting Equipment Information & Pricing

### T300MVi® & T300MV2®

| Frame | Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|---|
| **2400 V** | | | | |
| A2 | Lifting Bracket | GCI673AG055 | MVDACC | $440 |
| B2 | Lifting Bracket | GCI673BG055 | MVDACC | $470 |
| D2 | Lifting Bracket | GCI673DG055 | MVDACC | $420 |
| 4 | Lifting Bracket | GCI6724G055 | MVDACC | $2,060 |
| 4 | Ramp | GCI6724G053 | MVDACC | $2,310 |
| 4 | Truck | GCI6724G054 | MVDACC | $5,020 |
| **4160 V** | | | | |
| 0 - GCI6720G050 & GCI6720G050A * | Lifting Bracket | GCI6720G055 | MVDACC | $620 |
| 0 - GCI6720G050B & GCI6720G050BP* | Lifting Bracket | GCI6720G055B | MVDACC | $600 |
| A4 | Lifting Bracket | GCI6720G055B | MVDACC | $600 |
| 1 | Lifting Bracket | GCI6721G055 | MVDACC | $650 |
| B4/BS4 | Lifting Bracket | GCI6721G055 | MVDACC | $650 |
| 2/C4 | Lifting Bracket | GCI6722G055 | MVDACC | $490 |
| 2/C4 | Ramp | GCI6723G053 | MVDACC | $1,730 |
| 2/C4 | Truck | GCI6723G055 | MVDACC | $5,320 |
| 3 | Lifting Bracket | GCI6723G054 | MVDACC | $1,330 |
| 3 | Ramp | GCI6723G053 | MVDACC | $1,730 |
| 3 | Truck | GCI6723G055 | MVDACC | $5,320 |
| 4 | Lifting Bracket | GCI6724G055 | MVDACC | $2,060 |
| 4 | Ramp | GCI6724G053 | MVDACC | $2,310 |
| 4 | Truck | GCI6724G054 | MVDACC | $5,020 |
| G4P | Lifting Bracket | GCI6723G054 | MVDACC | $1,330 |
| G4P | Lift | PC10480P910 | MVDACC | $32,640 |
| H4P | Lifting Bracket | GCI6724G055 | MVDACC | $2,060 |
| H4P | Lift | PC10480P910 | MVDACC | $32,640 |
| **6600 V** | | | | |
| A6Sμ | Lifting Bracket | GCI673AG055 | MVDACC | $440 |
| A6Sμ | Lifter | PC10480P910 | MVDACC | $32,640 |
| A6S | Lifting Bracket | GCI6720G055B | MVDACC | $600 |
| A6S | Lifter | PC10480P910 | MVDACC | $32,640 |
| B6S | Lifting Bracket | GCI6721G055 | MVDACC | $650 |
| B6S | Lifter | PC10480P910 | MVDACC | $32,640 |
| C6S | Lifting Bracket | GCI6722G055 | MVDACC | $490 |
| C6S | Lifter | PC10480P910 | MVDACC | $32,640 |
| D6S | Lifting Bracket | GCI6723G054 | MVDACC | $1,330 |
| D6S | Lifter | PC10480P910 | MVDACC | $32,640 |
| F6S/F6S+ | Lifting Bracket - Upper | GCI6722G055 | MVDACC | $490 |
| F6S/F6S+ | Lifting Bracket - Lower | GCI6724G055 | MVDACC | $2,060 |
| F6S/F6S+ | Lifter | PC10480P910 | MVDACC | $32,640 |
| **6900 V** | | | | |
| F7 | PM Assembly Pallet | PC6770FG720 | MVDACC | $6,500 |
| F7 | Scissor Lift Truck | PC10480P914 | MVDACC | $3,370 |

**Notes:**

- "No letter" and "A" modules are not interchangeable with "B" and "BP" modules.

# Medium Voltage ASD Accessories

## Power Module Lifting Equipment Information & Pricing

### BMV2

| Frame | Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|---|
| A4/AS4 | Lifting Bracket | GCI6720G055 | MVDACC | $620 |
| B4/BS4 | Lifting Bracket | GCI6721G055 | MVDACC | $650 |
| C4 | Lifting Bracket | GCI6722G055 | MVDACC | $490 |
| C4 | Ramp | GCI6723G053 | MVDACC | $1,730 |
| C4 | Truck | GCI6723G055 | MVDACC | $5,320 |

### REGENERATIVE DRIVES

| Frame | Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|---|
| A4R | Lifting Bracket | GCI6720G055 | MVDACC | $620 |
| B4R | Lifting Bracket | GCI6721G055 | MVDACC | $650 |
| C4R | Lifting Bracket | GCI6722G055 | MVDACC | $490 |
| F4R | Lifting Bracket | GCI6724G055 | MVDACC | $2,060 |

### MTX2®

#### MTX2-15®

| Frame | Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|---|
| MTX2-15 | Lifting Bracket | GCI6825G054 | MVDACC | $710 |
| MTX2-15 | Trolley Assembly | GCI6825G055MC | MVDACC | $16,000 |

#### MTX2-60®

| Frame | Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|---|
| MTX2-60 | Lifting Bracket | GCI6729G057 | MVDACC | $14,080 |

# Medium Voltage ASD Accessories

## Loose Communication Cards Information & Pricing

### Communication Interface

| Option Code | Description | Part Number | Discount Symbol | List Price |
|---|---|---|---|---|
| CD | DeviceNet Communication card | PC61910P229 | MVDOPT | $4,800 |
| CP | Profibus Communication Card | PC61910P223 | MVDOPT | $5,600 |
| CR | Modbus RTU/Modbus TCP IP/Ethernet Communication Card | PC61910P079E | MVDOPT | $3,600 |

# Appendices

## Appendix A
## Pricing & Delivery

### Pricing Information

- List pricing is subject to change at any time.
- All dimensions and weights are approximate and subject to change without notice.
- Contact the appropriate department for “CF” (consult factory) items.
- Contact the appropriate Toshiba representative for multipliers, pricing on special features, or options not listed in this guide.
- All options may not work in conjunction with one another. Contact the appropriate department for compatibility.
- Unless otherwise specified, all offered ASDs are three-phase input, three-phase output, single-phase input, three-phase output are available as option.
- See each device’s Part Numbering Convention section for the required ordering information.
- Please see Toshiba’s Terms and Conditions at https://www.toshiba.com/tic/cms_files/TCofSale.pdf

### Delivery

We offer engineered product options that can be ordered in a variety of configurations. The combination compatibility between different options can further impact delivery lead times.

Included in this price book are delivery guidelines that can be used to assist in determining the typical delivery of a standard or engineered product. Any item in stock is subject to prior sale. Please check with customer service for availability delivery schedules.

# Appendix B
# Drawing Requests

## Drawing Requests

### Approval Drawings

Please include a part number of DWG-APR to request approval drawings on any purchase order to Toshiba. For non-standard parts, a set of drawings will be provided for your approval six to eight weeks after acceptance of the purchase order. Standard product drawings will be available immediately for approval. Not all products in this price book are standard.

Equipment manufacturing starts only after receipt of approved drawings with a written request to:

1. Release for manufacture as submitted, or provided there is no impact on technical/commercial conditions.
2. Revise and release as noted.

### Reference Drawings

Please include a part number of DWG-REF to request reference drawings on any purchase order to Toshiba. For non-standard parts, a set of drawings will be provided for your reference four to six weeks after receipt of the purchase order. Standard product drawings will be available immediately for reference. Not all products in this price book are standard.

Any changes made to reference drawings are considered a change request which are subject to change fees and may also affect product lead times.

# Appendix C
# TOSHcare® Adjustable Speed Drive Power Module Reconditioning Program

Toshiba International Corporation is proud to offer its TOSHcare Power Module Reconditioning Program (Program) for Toshiba's T300MVi® and T300MV2® adjustable speed drives (ASDs). This program allows customers to send power modules for ASDs back to Toshiba's factory for reconditioning at a fixed price. Customers can choose the Basic or Advanced service option depending on the age, physical condition and/or run time of applicable power modules.

**The Basic service option includes:**

- Replacement of select circuit boards and devices, as applicable
- Factory inspection and testing (full voltage, full current & overload) of power modules

**The Basic Plus service option includes:**

- All services as part of the Basic service option
- Extensive cleaning and reapplication of thermal compound on the power devices

**The Advanced service option includes:**

- All services included above as part of the Basic Plus service option
- Extensive cleaning of power modules
- Replacement of IGBTs and diodes in power modules

Each power module reconditioned under the Program is also eligible for a complimentary one (1) year TOSHcare Protection Plan (Protection Plan), which applies to the entire reconditioned power module for one (1) year after the date the reconditioned module is shipped out from Toshiba's repair shop (Protection Plan Period).

- The Protection Plan covers all parts and repair shop labor on Covered Failures.
- Inspection fees for Covered Failures are waived during the Protection Plan Period.

- When purchasing Program coverage, customers also have the option to purchase an additional year of Protection Plan coverage in addition to the original one (1) year Protection Plan included as part of the Program.

Reconditioning of a power module typically depends on shop loading. If a reconditioned module is needed sooner than current lead times, reconditioning services can be expedited at an additional expense.

To learn more about pricing or for any questions you may have about the Program, please email us at TIC-Service@toshiba.com or you can visit www.toshiba.com/tic/toshcare to submit a Power Module Reconditioning request form.

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[1] Power modules that have been damaged or need repairs are not eligible for the Program. However, TOSHcare Protection Plans, which provide coverage of out-of-warranty equipment and parts for correction of applicable defects in materials or workmanship (Covered Failures), maybe added as an a-la-carte service.

## Basic Power Module Reconditioning

| 2400 V Power Modules | | | |
|---|---|---|---|
| **Frame Size** | **Model Number** | **List Price** | **Optional 2nd Year Plan Adder** |
| A2 | GCI673AG052 | $9,270 | $1,250 |
| B2 | GCI673BG052 | $9,270 | $1,250 |
| D2 | GCI673DG052 | $9,270 | $1,250 |
| 0 | GCI6730G050A | $15,760 | $2,500 |
| 1 | GCI6731G050A | $16,360 | $2,500 |
| C6S | GCI6732G050A | $23,180 | $5,625 |
| D6S | GCI6733G050A | $23,180 | $5,625 |
| F6S | GCI673FG050 | $23,180 | $5,625 |
| 4 | GCI6734G050A | $37,270 | $9,625 |
| **4160 V Power Modules** | | | |
| 0 | GCI6720G050B | $15,760 | $2,500 |
| 0 | GCI6720G050A | $15,760 | $2,500 |
| A4U | GCI672AG050U | $15,760 | $2,500 |
| 1 | GCI6721G050A | $16,360 | $2,500 |
| 1 | GCI6721G050B | $16,360 | $2,500 |
| B4 | GCI6721G050B | $16,360 | $2,500 |
| 2 | GCI6722G050A | $23,180 | $5,625 |
| C6S | GCI6722G050A2 | $23,180 | $5,625 |
| D6S | GCI6723G050A2 | $31,750 | $8,225 |
| 3 | GCI6723G050A1 | $31,750 | $8,225 |
| F6S | GCI6724G050A2 | $37,270 | $9,625 |
| 4 | GCI6724G050A1 | $37,270 | $9,625 |

## Basic Plus Power Module Reconditioning

| 2400 V Power Modules | | | |
|---|---|---|---|
| **Frame Size** | **Model Number** | **List Price** | **Optional 2nd Year Plan Adder** |
| A2 | GCI673AG052 | $15,925 | $2,250 |
| B2 | GCI673BG052 | $15,925 | $2,250 |
| D2 | GCI673DG052 | $15,925 | $2,250 |
| 0 | GCI6730G050A | $22,498 | $4,500 |
| 1 | GCI6731G050A | $25,355 | $4,500 |
| C6S | GCI6732G050A | $35,921 | $7,625 |
| D6S | GCI6733G050A | $35,921 | $7,625 |
| F6S | GCI673FG050 | $35,921 | $7,625 |
| 4 | GCI6734G050A | $54,175 | $12,625 |
| **4160 V Power Modules** | | | |
| 0 | GCI6720G050B | $22,498 | $4,500 |
| 0 | GCI6720G050A | $22,498 | $4,500 |
| A4U | GCI672AG050U | $22,498 | $4,500 |
| 1 | GCI6721G050A | $25,355 | $4,500 |
| 1 | GCI6721G050B | $25,355 | $4,500 |
| B4 | GCI6721G050B | $25,355 | $4,500 |
| 2 | GCI6722G050A | $35,921 | $7,625 |
| C6S | GCI6722G050A2 | $35,921 | $7,625 |
| D6S | GCI6723G050A2 | $48,339 | $10,225 |
| 3 | GCI6723G050A1 | $48,339 | $10,225 |
| F6S | GCI6724G050A2 | $54,175 | $12,625 |
| 4 | GCI6724G050A1 | $54,175 | $12,625 |

# Advanced Power Module Reconditioning

| 2400 V Power Modules | | | |
|---|---|---|---|
| **Frame Size** | **Model Number** | **List Price** | **Optional 2nd Year Plan Adder** |
| A2 | GCI673AG052 | $29,470 | $3,250 |
| B2 | GCI673BG052 | $29,470 | $3,250 |
| D2 | GCI673DG052 | $29,470 | $3,250 |
| 0 | GCI6730G050A | $36,300 | $6,250 |
| 1 | GCI6731G050A | $44,780 | $6,250 |
| C6S | GCI6732G050A | $62,060 | $10,750 |
| D6S | GCI6733G050A | $62,060 | $10,750 |
| F6S | GCI673FG050 | $62,060 | $10,750 |
| 4 | GCI6734G050A | $102,740 | $15,000 |
| **4160 V Power Modules** | | | |
| 0 | GCI6720G050B | $36,300 | $6,250 |
| 0 | GCI6720G050A | $36,300 | $6,250 |
| A4U | GCI672AG050U | $36,300 | $6,250 |
| 1 | GCI6721G050A | $44,780 | $6,250 |
| 1 | GCI6721G050B | $44,780 | $6,250 |
| B4 | GCI6721G050B | $44,780 | $6,250 |
| 2 | GCI6722G050A | $62,060 | $10,750 |
| C6S | GCI6722G050A2 | $62,060 | $10,750 |
| D6S | GCI6723G050A2 | $83,460 | $12,500 |
| 3 | GCI6723G050A1 | $83,460 | $12,500 |
| F6S | GCI6724G050A2 | $102,740 | $15,000 |
| 4 | GCI6724G050A1 | $102,740 | $15,000 |
| **Legacy Power Modules** | | | |
| 0 | GCI6720G050** | $46,210 | $6,250 |
| 1 | GCI6721G050** | $58,370 | $8,750 |
| 2 | GCI6722G050** | $85,110 | $13,125 |
| 3 | GCI6723G050** | $117,610 | $16,250 |
| 4 | GCI6724G050** | $139,050 | $18,750 |

**In addition to being reconditioned, these modules will be upgraded to the "A" version, which includes replacement of main capacitors.

# TOSHcare® Protection Plans, Including Preventive Maintenance Services

## General Information

Toshiba International Corporation offers TOSHcare Protection Plans at a fixed price for certain medium voltage adjustable speed drives that it sells. These Protection Plans may be purchased for either one (1) or two (2) year terms. With a TOSHcare Protection Plan, customers have the ability to purchase coverage for correction of applicable defects in materials or workmanship for out-of-warranty equipment and parts while reducing the likelihood of unplanned shutdowns with regular maintenance.

TOSHcare Protection Plans cover all components of the applicable adjustable speed drive except its magnetic components such as transformers and reactors. TOSHcare Protection Plans also include preventive maintenance services appropriate for the age and condition of your adjustable speed drive.

Prices for TOSHcare Protection Plans vary according to the age and/or horsepower of your adjustable speed drive as well as the plan length, all as shown further below. In addition, preventive maintenance activities included in your TOSHcare Protection Plan will also vary depending on the age of the adjustable speed drive (please see below tables and examples).

## Preventive Maintenance Plans

Purchases of TOSHcare Protection Plans include appropriate preventive maintenance services to be performed on your adjustable speed drive. Toshiba offers two (2) types of preventive maintenance plans – Basic or Advanced - as part of a TOSHcare Protection Plan.

Services included in the basic preventive maintenance plan **(Basic PM Plan)** are recommended on a yearly basis while services included in the advanced preventive maintenance plan **(Advanced PM Plan)** are recommended once every five (5) years in lieu of performing Basic PM Plan services that same year. Frequency of when preventive maintenance services are needed can vary depending on factors such as adjustable speed drive and/or building condition or the application in which an adjustable speed drive is used.

The Basic PM Plan includes a thorough cleaning of the drive itself, verification of tightness of connections in the adjustable speed drive, and an inspection of all accessible adjustable speed drive components. The Advanced PM plan includes all services that are included in the Basic PM plan as well as detailed testing of the adjustable speed drive's magnetic components and contactors. It also includes an analysis of the adjustable speed drive's trouble record with personalized recommendations for improved operation.

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[1] Fixed price TOSHcare Protection Plans are available for frame sizes A4U, A4, 0, B4, 1, MTX®, 2, 3, and 4.

[2] Please note that these fixed price protection plans are currently only available for medium voltage adjustable speed drives that are less than five (5) years old.

[3] If a TOSHcare Protection Plan is not the right choice for you or your company, Toshiba also provides stand-alone preventive maintenance services for medium voltage adjustable speed drives purchased from Toshiba. Fixed pricing for stand-alone services for certain frame sizes is set forth later in this section.

# TOSHcare® Protection Plans

## Possible Scenarios

Customers can purchase either a one (1) or two (2) year TOSHcare Protection Plan for an eligible medium voltage adjustable speed drive purchased from Toshiba. Prior to purchase of the plan, Toshiba-authorized field service personnel will 1) perform preventive maintenance services that would normally be performed under either a Basic PM Plan or Advanced PM Plan, as applicable, to determine the condition of the applicable adjustable speed drive **(Initial PM Services)** and 2) make recommendations for any additional work needed, if any.

After Customer has submitted a purchase order for the desired TOSHcare Protection Plan and the initial PM has been conducted, there are three possible scenarios:

**Scenario A –** No additional work is required. In this scenario, Customer will be invoiced for the chosen plan.

**Scenario B –** Toshiba recommends additional work to repair or update the drive. If Customer accepts the recommendations, including additional charges to be incurred, Customer will be charged for the additional work and invoiced for the chosen plan.

**Scenario C -** Toshiba recommends additional work to repair or update the adjustable speed drive. If Customer declines the recommendations and no additional work is performed on the adjustable speed drive, Customer will be charged for the Initial PM Services only. Customer will not be charged for the TOSHcare Protection Plan because the adjustable speed drive will not be eligible for a TOSHcare Protection Plan.

In order to see what services are included with the TOSHcare Protection Plan you are choosing as well as applicable pricing for such plan, please look for the appropriate plan period (1 year or 2 years) and the age of the applicable adjustable speed drive in the charts below.

## Included Services:

**1 Year TOSHcare Protection Plan**

| Drive Age | | | | | |
|---|---|---|---|---|---|
| **Services included** | 1 | 2 | 3 | 4 | 5 |
| Basic Power Module Reconditioning | | | | X | X |
| Basic PM | X | X | X | X | |
| Advanced PM** | | | | | X |

**2 Year TOSHcare Protection Plan**

| Drive Age | | | | | |
|---|---|---|---|---|---|
| Services Included | 1 | 2 | 3 | 4 | 5 |
| Basic Power Module Reconditioning | | | X | X | X |
| Basic PM | XX* | XX* | X | X | X |
| Advanced PM** | | | X | X | X |

*Services included in a Basic PM Plan will be performed in each of Year 1 and Year 2 of a two (2) year TOSHcare Protection Plan.

**Except for adjustable speed drives that are less than three (3) years old, services included in an Advanced PM Plan will be performed during the first year of the plan. For adjustable speed drives that are less than three (3) years old, services included in an Advanced PM Plan will be performed during the second year of the plan.

# TOSHcare® Protection Plans

## Pricing (Based on Adjustable Speed Drive Age)

**1-Year TOSHcare Protection Plan**

| Drive Age | | | | | |
|---|---|---|---|---|---|
| Frame size | 1 | 2 | 3 | 4 | 5 |
| A4U | $66,100 | $70,500 | $74,900 | $159,600 | $171,500 |
| A4 | $66,100 | $70,500 | $74,900 | $159,600 | $171,500 |
| 0 | $66,100 | $70,500 | $74,900 | $159,600 | $171,500 |
| 1 | $66,100 | $70,500 | $74,900 | $159,600 | $171,500 |
| B4 | $66,100 | $70,500 | $74,900 | $159,600 | $171,500 |
| 2 | $94,100 | $102,200 | $110,200 | $281,300 | $289,300 |
| 3 | $106,000 | $115,700 | $125,500 | $343,300 | $353,000 |
| 4 | $117,300 | $128,700 | $140,100 | $359,500 | $370,800 |

**2-Year TOSHcare Protection Plan**

| Drive Age | | | | | |
|---|---|---|---|---|---|
| Frame size | 1 | 2 | 3 | 4 | 5 |
| A4U | $110,300 | $114,600 | $206,900 | $211,300 | $230,600 |
| A4 | $110,300 | $114,600 | $206,900 | $211,300 | $230,600 |
| 0 | $110,300 | $114,600 | $206,900 | $211,300 | $230,600 |
| 1 | $110,300 | $114,600 | $206,900 | $211,300 | $230,600 |
| B4 | $110,300 | $114,600 | $206,900 | $211,300 | $230,600 |
| 2 | $147,900 | $155,900 | $327,000 | $335,100 | $358,100 |
| 3 | $163,200 | $172,900 | $390,700 | $400,400 | $425,200 |
| 4 | $177,700 | $189,100 | $408,500 | $419,900 | $446,200 |

## Pricing Examples:

**Example 1:** If Customer purchases a one (1) year TOSHcare Protection Plan for a three (3) year old frame 1 medium voltage adjustable speed drive, the cost of the plan is $74,900 and includes services included under a Basic PM Plan to be performed during the plan year.

**Example 2:** If Customer purchases a two (2) year TOSHcare Protection Plan for a three (3) year old frame 1 medium voltage adjustable speed drive, the cost of the plan is $206,900 and includes:

- Preventive maintenance services during each of the two (2) years; specifically, services included under a Basic PM Plan during the first year of the plan and services included under an Advanced PM Plan during the second year of the plan; and
- Reconditioning of each of an eligible adjustable speed drive's three (3) power modules during the second year of the plan.

## Stand-Alone Preventive Maintenance Service Visits

Please see the table below for fixed pricing for stand-alone service visits offering performance of preventive maintenance services otherwise offered as part of a Basic PM Plan or an Advanced PM Plan. Pricing is set out by adjustable speed drive frame size.

**Pricing for Individual (single) Preventive Maintenance Service Visits**

| Frame size | Basic PM | Advanced PM |
|---|---|---|
| A4U | $36,000 | $43,000 |
| A4 | $36,000 | $43,000 |
| 0 | $36,000 | $43,000 |
| B4 | $36,000 | $43,000 |
| 1 | $36,000 | $43,000 |
| MTX | $36,000 | $43,000 |
| 2 | $38,000 | $55,000 |
| 3 | $38,000 | $55,000 |
| 4 | $38,000 | $55,000 |

## Contact Information and Forms

To learn more or for general inquiries about TOSHcare Protection Plans, please email us at TIC-Service@toshiba.com or visit www.toshiba.com/tic/service-warranty/service-request-forms.

To purchase a TOSHcare Protection Plan, please fill out Toshiba's Request for On-site Service, and a Toshiba representative will be in touch. (You may also need to complete Toshiba's Return Authorization process.)

[4] All prices listed below include applicable travel and living expenses of Toshiba-authorized field service personnel for applicable medium voltage adjustable speed drives located within the continental United States or Canada.

# Appendix D

# Special Testing

## Control Logic Witness Testing

- Testing conducted under shop ambient conditions.
- Test has a minimum one week impact on shipping lead times.

Standard Witness Testing for Low Voltage Adjustable Speed Drives (Per Day, Per Rating)

| All Horsepowers | List Price | Discount Symbol |
|---|---|---|
| Standard Witness Testing | $14,000 | ASD C |

Standard Witness Testing for Medium Voltage Adjustable Speed Drives

| Sync Transfer | Frames 0 & 1 | Frames ≥ 2 | Discount Symbol |
|---|---|---|---|
| YES | $50,000 List | $60,000 List | MVDOPT |
| NO | $40,000 List | $50,000 List | MVDOPT |

## Burn-In Testing (Unwitnessed)

- Burn-in Testing is performed in Toshiba's Control Plant with a reactor load. A shorted reactor at reduced voltage is used to demonstrate the current carrying capacity (Amps) of the ASD.
- Testing conducted under shop ambient conditions.
- Burn-in test capacitiy ≤900 Amps max.

| | 8 Hr. Burn-In | 16 Hr. Burn-In | 24 Hr. Burn-In | 40 Hr. Burn-In | Discount Symbol |
|---|---|---|---|---|---|
| MV-ASD Burn-In | $20,000 List | $30,000 List | $40,000 List | $70,000 List | MVDOPT |
| LV-ASD Burn-In | $3,000 List | $6,000 List | $9,000 List | $15,000 List | ASD C |

## Dynamometer Testing Prices (Witnessed or Unwitnessed)

- Testing conducted under shop ambient conditions.
- Test has a minimum one week impact on shipping lead times. Actual impact dependent upon scope of testing and shop loading at time of testing.
- Test motor will be provided by Toshiba where available. In some cases, a test motor cannot be supplied by Toshiba. In this case, customer will be expected to supply a motor to Toshiba for load.
- Motor-Adjustable Speed Drive string testing is subject to additional motor testing charges.
- Maximum load capability 1,250 HP.

Dynamometer Test Capacities (ASD Ratings)

| | | |
|---|---|---|
| 6,600 V @ 150 Amps max. | 690 V @ 900 Amps max. | 230 V @ 1,000 Amps max. |
| 4,000 V @ 250 Amps max. | 600 V @ 1,250 Amps max. | |
| 2,300 V @ 400 Amps max. | 480 V @ 1,750 Amps max. | |

Dynamometer Testing for Low Voltage Adjustable Speed Drives
(Motor Test Lab - Dynamometer Testing NOT TO EXCEED 8 hrs.)

| Small | Medium | Large | Discount Symbol |
|---|---|---|---|
| ≤100 HP | 125 to 450 HP | ≥500 HP | - |
| $14,000 List | $22,000 List | $27,000 List | ASD C |

Dynamometer Testing for Medium Voltage Adjustable Speed Drives
(Motor Test Lab - Dynamometer Testing NOT TO EXCEED 8 hrs.)

| Sync Transfer | Frames 0 & 1 | Frames ≥ 2 | Discount Symbol |
|---|---|---|---|
| YES | $50,000 List | $60,000 List | MVDOPT |
| NO | $40,000 List | $50,000 List | MVDOPT |

# Medium Voltage Adjustable Speed Drives
# Related Services
## Statement of Conformance

### STATEMENT OF CONFORMANCE IEEE 519, 2014

Toshiba guarantees that the T300MVi/2® and MTX/2® medium voltage adjustable speed drive product lines will meet or exceed IEEE 519 per table 1 and 2 standards as advertised at the input to the adjustable speed drive to reduce harmonic distortion associated with AC adjustable speed drives and other nonlinear loads that employ the use of three-phase, six-pulse diode bridge rectifiers. During testing, the technologically advanced designs of the T300MVi/2 and MTX/2 have been proven to:

- Reduce voltage harmonic distortion, as measured at the input terminals, to less than 5% at full load operation per table 1. The daily and weekly percentiles (95th & 99th percentiles) in table 1 are met.
- Reduce current harmonic distortion, as measured at the input terminals, to less than 5% at full load operation per table 2 and table 5. The daily and weekly percentiles (95th & 99th percentiles) in table 2 are met.
- Not become overloaded by upstream harmonic sources.
- Not resonate with other power system components due to its specially designed input topology.
- Present no compatibility problems with engine generator sets.

# Medium Voltage Adjustable Speed Drives
# Related Services
## Medium Voltage Worksheet

**Specification for Procurement 2400/3300/4160/6600/6900 VAC Adjustable Speed Drive**

| | | | |
|---|---|---|---|
| **PROJECT REFERENCE:** | | **R.F.Q. REFERENCE** | |
| **SPEC. REFERENCE** | | **DATE** | |

### MOTOR DATA

| | |
|---|---|
| HP/kW | |
| New/Existing | |
| Voltage (Volts) | |
| FLA (Amps) | |
| Speed (RPM) | |
| Motor Lead Length (Ft) | |
| Service Factor | |
| Space Heater (Volts/Watts) | |
| RTD (Make/Qty) | |
| Inverter-Duty | ☐Yes ☐No |
| Encoder | |

### LOAD TYPE

| | |
|---|---|
| Variable Torque | ☐ |
| Constant Torque | ☐ |
| Regeneration | ☐ |
| Fan/Pump | |
| Other | |
| Speed Range | **Hz to Hz** |

### BREAKAWAY TORQUE

| | |
|---|---|
| 0 to 100% | ☐ |
| 101 to 150% | ☐ |

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### ENVIRONMENT

| | | |
|---|---|---|
| Control Room Max. Ambient | °C | |
| Control Room Min. Ambient | °C | |
| Elevation | Meters ASL | |
| Humidity Non-condensing | % | |
| Adjustable Speed Drive Cabinet Space Heater | ☐Yes | ☐No |
| Adjustable Speed Drive Cabinet Space Heater Test Circuit | ☐Yes | ☐No |
| Motor Space Heater Circuit (Externally Powered) | ☐Yes | ☐No |
| Motor Cabinet Space Heater Test Circuit | ☐Yes | ☐No |

### DESIGN STANDARDS

### ENCLOSURE

| | | | | |
|---|---|---|---|---|
| UL® | ☐ | | UL Type 1 | |
| cUL | ☐ | | UL Type 3R | |
| IEEE 519 | ☐ | | Electrical House | ☐ |
| Other | | | | |

### SPEED REGULATION

| | |
|---|---|
| 0.5%, Without Tachometer | ☐ |
| 0.1% With Tachometer | ☐ |
| Other | |
| Motoring | ☐ |
| Volts/Hz Speed Control | ☐ |
| Closed Loop Vector Control | ☐ |
| Master Follower | |
| Speed Regulation without Encoder/ Resolver | |
| Speed Regulation with Encoder/Resolver | |

### SUPPLY SYSTEM VOLTAGE (± 10%)

| | | | |
|---|---|---|---|
| 2400 V | | | |
| 3300 V | | | |
| 4160 V | ☐ | | |
| 6600 V | ☐ | | |
| 6900 V | ☐ | | |
| Other_____V | ☐ | | |
| Line Frequency | ☐60 Hz | | ☐50 Hz |

# Medium Voltage Adjustable Speed Drives
# Related Services
## Medium Voltage Worksheet

### CABLE

| | | |
|---|---|---|
| Power Cable Entry | ☐TOP | ☐BOTTOM |
| Power Cable Exit | ☐TOP | ☐BOTTOM |
| Control Cable Entry | ☐TOP | ☐BOTTOM |
| Control Cable Exit | ☐TOP | ☐BOTTOM |

### OPTIONS

| | | | |
|---|---|---|---|
| SUPERIOR Key Interlocks | ☐ | | |
| KIRK Key Interlocks | ☐ | | |
| Relay Outputs 115 V, 2 A, Form-C | ☐ | | |
| 24 VDC Power Supply | ☐ | | |
| 4 to 20 mA Isolated Analog Outputs | ☐Speed | ☐Current | ☐Voltage |
| | ☐Load | ☐Other | |
| Control Power Backup 1 KVA, 120 V, Toshiba UPS | ☐ | | |
| Control Power Backup 1 KVA, 120 V, By Others | ☐ | | |
| Auxiliary Pilot Lights | ☐ | | |
| Auxiliary Pilot Lights Type | ☐ | | |
| Auxiliary Push Buttons | ☐ | | |
| Auxiliary Push Buttons Type | ☐ | | |
| Redundant Fan (3,460 V) | ☐ | | |
| Additional Controls (Please Attach Control Schematic) | ☐ | | |
| | ☐ | | |

### AUXILIARY EQUIPMENT

| Bypass Starter | |
|---|---|
| Across The Line | ☐ |
| RVAT | ☐ |
| Solid State Starter | ☐ |
| Synchronous Transfer | ☐ |
| Number of Motors | |
| Indoor Rated Sync.Transfer (GEAR) | |
| Outdoor Rated Sync.Transfer (GEAR) | |
| Gear Supplied by Others | |

### COMMUNICATION OPTIONS

| | |
|---|---|
| TOSLINE S20 | ☐ |
| DeviceNET® | ☐ |
| ProfiBus® | ☐ |
| Ethernet | ☐ |
| ModBus RTU/PLUS | ☐ |
| Other | |

### MOTOR PROTECTION

| | |
|---|---|
| TE-RTD12 | ☐ |

# Medium Voltage Adjustable Speed Drives
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| | |
|---|---|
| MULTILIN 369 | ☐ |
| MULTILIN 869 | ☐ |
| SEL 710-5 | ☐ |
| SEL 710-5 with RTD inputs | ☐ |
| RTD TYPE | ☐ |

### SERVICES

| | |
|---|---|
| Startup (Included in Price of Unit) | ☐ |
| Onsite Factory Training Testing | ☐ |
| Factory Training Houston | ☐ |

### SPARES

| | | |
|---|---|---|
| Spare Parts Kit | ☐Yes | ☐No |
| Spare Power Module | ☐Yes | ☐No |

### SOFTWARE

| | | |
|---|---|---|
| PC Interface Software | ☐Yes | ☐No |

### TESTING

| | |
|---|---|
| Witness Test – QC Runback | ☐ |
| Witness Test – Dynamometer (Upto 1250 HP) | ☐ |
| Adjustable Speed Drive/Motor Combined Test at Motor Vendor's Facility | ☐ |

### ADDITIONAL REQUIREMENTS

| | |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

# Toshiba Controls

## SMART, RELIABLE DESIGNS WITH PROVEN PERFORMANCE

Toshiba provides a diverse range of motor control and protection solutions for both medium and low voltage applications, designed to enhance operational efficiency and safeguard critical systems. Toshiba's medium voltage controllers deliver superior motor control with high performance and dependability, offering robust protection in demanding industrial environments. The medium voltage motor control centers (MCC), including the Arc-Resistant JK MCC, provide enhanced safety and reliability in control gear for industrial applications. Toshiba's medium voltage switchgear assemblies are engineered to deliver safe and efficient distribution of electrical power in complex systems.



# Controls
## Medium Voltage Controllers
### JK Full Voltage Controllers

Toshiba's medium voltage JK Full Voltage Controller series features a streamlined, space-saving design. Full-voltage starters use no internal power cables, enhancing safety and simplifying maintenance. Expanded capabilities allow for flexible configurations, whether used as an individual starter or in a control center lineup with incoming disconnect switches. Additionally, the JK Series integrates seamlessly with Toshiba's HVK switchgear.

#### Highlights

- JK400 & JK700 Series
- Reduced Footprint
- Rigid 11-Gauge Steel Frame
- Visible, Bolted Pressure, Isolation Switch
  - Less Resistance
  - Less Wear
  - No Insertion Pressure
  - Mechanical Interlocking System
- Reduced Voltage Auto-Transformer (RVAT) Controllers
  - Three Vacuum Contactors
  - Three Winding Copper-Wound Auto-Transformer with 50, 65 & 80% Voltage Taps
  - Adjustable Solid State Transition Timer & Incomplete Sequence Timer

#### Standard Features

- UL Listed in US & Canada
- Meet NEMA Class E2 Requirements
- Front-Accessible Main Bus
- Current Transformers
- Mechanical & Electrical Interlocks
- Control Power Transformer with Primary/Secondary Fuses
- Solid State Protection Relay (Overload & Single Phase)
- Start/Stop Push Buttons
- Run/Off Pilot Lights




c UL us

# Medium Voltage Controllers

## JK400 Series Starters



### Product Scope

2300 to 6600 V
360 A Maximum
Up to 5000 HP

### Standard Features

- 30 Inch Wide Footprint*
- Two-High Design Option
- Available Configurations:
  - Full-Voltage
  - Non-Reversing
  - Reversing

* Dimensions are based on UL Type 1, 12 enclosure ratings. For UL Type 3R, add 6" to width.

### JK400 Series Starters Current Rating

| Enclosure Type | Maximum Continuous Amps 46" & 60" One-High Controller | | Maximum Continuous Amps 90" One-High Controller or Lower Controller in a Two-High Stacked Arrangement | | Maximum Continuous Amps Upper Controller in a Two-High Stacked Arrangement |
|---|---|---|---|---|---|
| | Fixed Type | Drawout Type | Fixed Type | Drawout Type | Fixed & Drawout Type |
| Type 1 Ventilated | 360 A | 360 A | 360 A | 360 A | 320 A |
| Type 1 Non-Ventilated | 320 A | 320 A | 320 A | 360 A | 280 A |
| Type 12 & 3R | 310 A | 310 A | 310 A | 310 A | 280 A |

**Notes:**

- Actual limits based on your specific application parameters. All specifications subject to change without notice.

### JK400 Series Short Circuit Withstand Capability

| Interrupting Capacity (Symmetrical Amps) | Interrupting Capacity (Symmetrical MVA) | Short Time Capability 30 Seconds (Amps) | Short Time Capability 1 Second (Amps) | Dielectric Withst. 1 Minute (KVAC) | Impulse Voltage Withst. (KV) |
|---|---|---|---|---|---|
| 50,000 @ 2.3 to 6.6 KV | 200 @ 2.3 KV<br>350 @ 4.0 KV<br>400 @ 4.6 KV<br>570 @ 6.6 KV | 2400 A | 6000 A | 18.2 | 60 KV |

### JK400 Series Application Table

| Enclosed Max. Continuous Current (Amps) | Maximum Horsepower at Utilization Voltage | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2300 V | | | 4200 V | | | 6600 V | | |
| | Synchronous Motors | | Induction Motors | Synchronous Motors | | Induction Motors | Synchronous Motors | | Induction Motors |
| | 0.8 PF | 1.0 PF | | 0.8 PF | 1.0 PF | | 0.8 PF | 1.0 PF | |
| 360 | 1500 | 1750 | 1500 | 2500 | 3000 | 2500 | 4000 | 5000 | 4000 |
| 320 | 1250 | 1500 | 1250 | 2250 | 2500 | 2250 | 3500 | 4500 | 3500 |
| 310 | 1250 | 1500 | 1250 | 2000 | 2500 | 2000 | 3500 | 4000 | 3500 |
| 280 | 1000 | 1250 | 1000 | 1750 | 2250 | 1750 | 3000 | 3500 | 3000 |

**Notes:**

- For transformer and capacitor load-switching applications, consult factory.
- Maximum rating depends on enclosure rating.

# Medium Voltage Controllers
## JK700 Series Starters



### Product Scope

2300 to 6600 V
720 A Maximum
Up to 6000 HP

### Standard Features

- 36 Inch Wide Footprint*
- One-High Enclosure Design
- Available Configuration:
  - Full-Voltage
  - Non-Reversing
  - Reversing

* Dimensions are based on UL Type 1, 12 enclosure ratings. For UL Type 3R, add 6" to width.

### JK700 Series Starters Current Rating

| Enclosure Type | Max. Continuous Amps |
|---|---|
| Type 1 Ventilated | 720 A |
| Type 1 Non-Ventilated | 650 A |
| Type 12 | 600 A |
| Type 3R | 680 A |

**Notes:**
- Actual limits are based on your specific application parameters. All specifications subject to change without notice.

### JK700 Series Short Circuit Withstand Capability

| Interrupting Capacity (Symmetrical Amps) | Interrupting Capacity (Symmetrical MVA) | Short Time Capability 30 Seconds (Amps) | Short Time Capability 1 Second (Amps) | Dielectric Withst 1 Minute (KVAC) | Impulse Voltage Withst (KV) |
|---|---|---|---|---|---|
| 50,000 @ 2.3 to 6.6 KV | 200 @ 2.3 KV<br>350 @ 4.0 KV<br>400 @ 4.6 KV<br>570 @ 4.6 KV | 4320 A | 8000 A | AC 13.25<br>DC 19 | 60 KV |

### JK700 Series Application Table

| Enclosed Max. Continuous Current (Amps) | Maximum Horsepower at Utilization Voltage | | | | | |
|---|---|---|---|---|---|---|
| | 2300 V | | | 4200 V | | |
| | Synchronous Motors | | Induction Motors | Synchronous Motors | | Induction Motors |
| | 0.8 PF | 1.0 PF | | 0.8 PF | 1.0 PF | |
| 720 | 3000 | 3500 | 3000 | 5500 | 6000 | 5500 |
| 650 | 2750 | 3000 | 2750 | 5000 | 5500 | 5000 |
| 600 | 2500 | 2750 | 2500 | 4500 | 5000 | 4500 |

**Notes:**
- Maximum rating depends on enclosure rating.
- Consult factory for 6600 V ratings.

# Medium Voltage Controllers

## JK400 & JK700 Series Pricing



### JK Full Voltage Non-Reversing (UL Type 1) Controller Pricing

| Nominal System Voltage | HP | Contactor Type | Model Number | H | W | D | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | |
| 2300 | 75 to 800 | 400 A Fixed | FK400B2_ | 46 | 30 | 36 | PAC JK | $66,000 |
| | 900 to 1500 | 400 A Fixed | FK400B2_ | 46 | 30 | 36 | PAC JK | $68,000 |
| | 75 to 800 | 400 A Drawout | JK400B2_ | 46 | 30 | 36 | PAC JK | $69,000 |
| | 900 to 1500 | 400 A Drawout | JK400B2_ | 46 | 30 | 36 | PAC JK | $72,000 |
| | 1750 to 2250 | 720 A Fixed | JK700B2_ | 90 | 36 | 36 | PAC JK | $88,000 |
| | 2500 | 720 A Fixed | JK700B2_ | 90 | 36 | 36 | PAC JK | $90,000 |
| 4160 | 200 to 1500 | 400 A Fixed | FK400B4_ | 46 | 30 | 36 | PAC JK | $66,000 |
| | 1750 to 3000 | 400 A Fixed | FK400B4_ | 46 | 30 | 36 | PAC JK | $68,000 |
| | 200 to 1500 | 400 A Drawout | JK400B4_ | 46 | 30 | 36 | PAC JK | $69,000 |
| | 1750 to 3000 | 400 A Drawout | JK400B4_ | 46 | 30 | 36 | PAC JK | $72,000 |
| | 3000 to 4000 | 720 A Fixed | JK700B4_ | 90 | 36 | 36 | PAC JK | $88,000 |
| | 4500 to 5000 | 720 A Fixed | JK700B4_ | 90 | 36 | 36 | PAC JK | $90,000 |
| 6600 | 200 to 700 | 400 A Fixed | FK400BB_ | 46 | 30 | 36 | PAC JK | $72,000 |
| | 750 to 2250 | 400 A Fixed | FK400BB_ | 46 | 30 | 36 | PAC JK | $76,000 |
| | 2500 to 4000 | 400 A Fixed | FK400BB_ | 46 | 30 | 36 | PAC JK | $82,000 |
| | 200 to 700 | 400 A Drawout | JK400BB_ | 46 | 30 | 36 | PAC JK | $78,000 |
| | 75 to 2250 | 400 A Drawout | JK400BB_ | 46 | 30 | 36 | PAC JK | $82,000 |
| | 2500 to 4000 | 400 A Drawout | JK400BB_ | 46 | 30 | 36 | PAC JK | $88,000 |
| | 4500 to 9000 | 720 A Fixed | JK700BB_ | 90 | 36 | 36 | PAC JK | CF |

**Notes:**

- For other system voltages (i.e. 3300 V), consult factory.
- HP rating is based on a typical 4-pole motor. Always use motor FLA rating. Refer to application tables (i.e. ampere rating in the appropriate enclosure rating) to size starters.
- 46-inch tall one-high units can be supplied as a 60" tall enclosure with a larger low voltage compartment. Consult factory for price adder.

# Medium Voltage Controllers

## JK400 & JK700 Series Pricing



### JK Reduced Voltage Autotransformer Type (UL Type 1) Controller Pricing

| Nominal System Voltage | HP | Contactor Type | Model Number | H | W | D | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | |
| 2300 | 100 to 350 | 400 A Drawout | JK420B2_ | 90 | 36 | 36 | PAC JK | $105,000 |
| | 400 | 400 A Drawout | JK420B2040 | 90 | 36 | 36 | PAC JK | $106,000 |
| | 500 | 400 A Drawout | JK420B2050 | 90 | 36 | 36 | PAC JK | $107,000 |
| | 600 | 400 A Drawout | JK420B2060 | 90 | 36 | 36 | PAC JK | $108,000 |
| | 700 | 400 A Drawout | JK420B2070 | 90 | 36 | 36 | PAC JK | $116,000 |
| | 800 | 400 A Drawout | JK420B2080 | 90 | 36 | 36 | PAC JK | $117,000 |
| | 900 | 400 A Drawout | JK420B2090 | 90 | 36 | 36 | PAC JK | $123,000 |
| | 1000 | 400 A Drawout | JK420B2100 | 90 | 36 | 36 | PAC JK | $125,000 |
| | 1250 | 400 A Drawout | JK420B2125 | 90 | 36 | 36 | PAC JK | $127,000 |
| | 1500 | 400 A Drawout | JK420B2150 | 90 | 42 | 36 | PAC JK | $129,000 |
| | 1750 to 2250 | 720 A Fixed | JK720B2_ | 90 | 72 | 36 | PAC JK | $227,000 |
| | 2500 | 720 A Fixed | JK720B250 | 90 | 84 | 36 | PAC JK | $245,000 |
| 4160 | 200 | 400 A Drawout | JK420B4020 | 90 | 36 | 36 | PAC JK | $105,000 |
| | 300 to 400 | 400 A Drawout | JK420B4_ | 90 | 36 | 36 | PAC JK | $106,000 |
| | 500 | 400 A Drawout | JK420B4050 | 90 | 36 | 36 | PAC JK | $107,000 |
| | 600 to 700 | 400 A Drawout | JK420B4_ | 90 | 36 | 36 | PACJK | $112,000 |
| | 800 to 900 | 400 A Drawout | JK420B4_ | 90 | 36 | 36 | PAC JK | $114,000 |
| | 1000 | 400 A Drawout | JK420B4100 | 90 | 36 | 36 | PAC JK | $116,000 |
| | 1250 | 400 A Drawout | JK420B4125 | 90 | 36 | 36 | PAC JK | $118,000 |
| | 1500 | 400 A Drawout | JK420B4150 | 90 | 42 | 36 | PAC JK | $123,000 |
| | 2000 | 400 A Drawout | JK420B4200 | 90 | 42 | 36 | PAC JK | $125,000 |
| | 2250 | 400 A Drawout | JK420B4225 | 90 | 42 | 36 | PAC JK | $129,000 |
| | 2500 | 400 A Drawout | JK420B4250 | 90 | 42 | 36 | PAC JK | $132,000 |
| | 3000* | 400 A Drawout | JK420B4300 | 90 | 42 | 36 | PAC JK | $137,000 |
| | 3500 to 4000 | 720 A Fixed | JK720BB_ | 90 | 72 | 36 | PAC JK | $218,000 |
| | 4500 | 720 A Fixed | JK720BB450 | 90 | 72 | 36 | PAC JK | $223,000 |
| | 5000 to 5500 | 720 A Fixed | JK720BB_ | 90 | 84 | 36 | PAC JK | $247,000 |

**Notes:**

- For other system voltages (i.e. 3300 V), consult factory.
- HP rating is based on a typical 4-pole motor. Always use motor FLA rating. Refer to application tables (i.e. ampere rating in the appropriate enclosure rating) to size starters.
- Consult factory for UL listing.

# Medium Voltage Controllers

## JK Solid State Starters

Toshiba's medium voltage JK Solid State Starter series offers advanced control and protection for demanding industrial applications. Engineered with soft start and stop capabilities, it provides smooth acceleration and deceleration, reducing mechanical stress on equipment. With a high current capacity rated at 500% for up to 60 seconds and true thermal modeling, these starters are built to handle challenging conditions. Their adaptable design allows seamless integration as standalone starters or within control center lineups. Utilized with Toshiba's HVK/VK switchgear, JK starters are ideal for controlling induction, wound rotor, or synchronous motors, as well as transformers, and capacitors.

### Highlights



Touchscreen, showing previous keypad programming method/display.

- JKSSS4 & JKSSS7 Series
- Soft Start
- 7" Full-Color Touchscreen Keypad (Included as standard)
- Reduced Footprint
- Rigid 11-Gauge Steel Frame
- Programmable Via Keypad or Software
- Fiber Optically Isolated Low Voltage Compartment
- Built-In 120 V Control Power Transformer; Voltage & Current Metering
- Fully-Rated Bypass Contactor for Increased Thermal Capacity & Optional Across-the-Line Start
- Line Isolation Vacuum Contactor
- Heavy Duty SCR Stack Assemblies with Ring Transformer Isolation
- Visible Grounding Bar
- Coordinated Motor Fuses with Blown Fuse Indicators
- Ground Fault Protection



Touchscreen, showing new programming method/display.

### Standard Features

- UL Listed in US & Canada
- UL Type 1 Enclosure
- Meets NEMA Class E2 Requirements
- Front-Accessible Main Bus
- Top or Bottom Entry & Exit
- Removable Entry Plates for Easy Connection
- RTD Input for Precision Thermal Management
- Built-In Real-Time Clock
- Current Transformers
- Non-Load-Break Disconnect Switch with Door Safety Interlocking
- Single- & Three-Phase Overload Protection
- LED Trip Indicator
- Manual or Remote Reset (Auto-Reset Optional)



# Medium Voltage Controllers

## JKSSS4 Solid State Starters



### Product Scope

2300 to 6600 V
360 A Maximum
Up to 5000 HP

### JKSSS4 Series Current Ratings

| Enclosure Type | Max. Continuous Amps 90" One-High Controller |
|---|---|
| Type 1 Ventilated | 360 A |
| Type 12 & 3R | 300 A |

**Notes:**
- Actual limits based on your specific application. All specifications subject to change without notice.

### JKSSS4 Series Short Circuit Withstand Capability

| Interrupting Capacity (Symmetrical Amps) | Interrupting Capacity (Symmetrical MVA) | Short Time Capability 30 Seconds (Amps) | Short Time Capability 1 Second (Amps) | Dielectric Withst 1 Minute (KVAC) | Impulse Voltage Withst (KV) |
|---|---|---|---|---|---|
| 50,000 @ 2.3 to 6.6 KV | 200 @ 2.3 KV<br>350 @ 4.0 KV<br>570 @ 6.6 KV | 2400 A | 6000 A | 18.2 | 60 KV |

### JKSSS4 Series Application Table

| Enclosed Max. Continuous Current (Amps) | Maximum Horsepower at Utilization Voltage | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2300 V | | | 4200 V | | | 6600 V | | |
| | Synchronous Motors | | Induction Motors | Synchronous Motors | | Induction Motors | Synchronous Motors | | Induction Motors |
| | 0.8 PF | 1.0 PF | | 0.8 PF | 1.0 PF | | 0.8 PF | 1.0 PF | |
| 360 | 1500 | 1750 | 1500 | 2500 | 3000 | 2500 | 4000 | 5000 | 4000 |
| 300 | 1000 | 1250 | 1000 | 1750 | 2250 | 1750 | 3500 | 4000 | 3500 |

**Notes:**
- Line reactors and MOVs are not required with Toshiba solid state starters.
- The starter is not affected by line capacitance, power source rating (MVA), multiple starters on the supply bus, or cable length.
- Maximum rating depends on enclosure rating and motor FLA.

# Medium Voltage Controllers

## JKSSS7 Solid State Starters



### Product Scope

2300 to 4200 V
720 A Maximum
Up to 6000 HP

### JKSSS7 Series Current Ratings

| Enclosure Type | Max. Continuous Amps 90" One-High Controller |
|---|---|
| Type 1 Ventilated | 720 A |
| Type 1 Non-Ventilated | 650 A |
| Type 12 | 600 A |
| Type 3R | 680 A |

**Notes:**
- All specifications subject to change without notice.
- Actual limits based on your specific application.

### JKSSS7 Series Short Circuit Withstand Capability

| Interrupting Capacity (Symmetrical Amps) | Interrupting Capacity (Symmetrical MVA) | Short Time Capability 30 Seconds (Amps) | Short Time Capability 1 Second (Amps) | Dielectric Withst 1 Minute (KV) | Impulse Voltage Withst (KV) |
|---|---|---|---|---|---|
| 50,000 @ 2.3 to 4.2 KV | 200 @ 2.3 KV<br>350 @ 4.0 KV | 4320 A | 8000 A | AC 13.25<br>DC 19 | 60 KV |

### JKSSS7 Series Application Table

| Enclosed Max. Continuous Current (Amps) | Maximum Horsepower at Utilization Voltage | | | | | |
|---|---|---|---|---|---|---|
| | 2300 V | | | 4200 V | | |
| | Synchronous Motors | | Induction Motors | Synchronous Motors | | Induction Motors |
| | 0.8 PF | 1.0 PF | | 0.8 PF | 1.0 PF | |
| 720 | 3000 | 3500 | 3000 | 5500 | 6000 | 5500 |
| 650 | 2750 | 3000 | 2750 | 5000 | 5500 | 5000 |
| 600 | 2500 | 2750 | 2500 | 4500 | 5000 | 4500 |

**Notes:**
- Line reactors and MOVs are not required with Toshiba solid state starters.
- The starter is not affected by line capacitance, power source rating (MVA), multiple starters on the supply bus, or motor cable length.
- Maximum rating depends on enclosure rating.

# Medium Voltage Controllers

## JK Solid State Starter Series Pricing



### JK Reduced Voltage Solid State Starter (UL Type 1) Pricing

| Nominal System Voltage | HP | Contactor Type | Model Number | H | W | D | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | |
| 2300 | 100 to 250 | 400 A Fixed | JKSSS4-B2_ | 90 | 30 | 36 | PAC JK | $105,000 |
| | 300 to 350 | 400 A Fixed | JKSSS4-B2_ | 90 | 30 | 36 | PAC JK | $107,000 |
| | 400 to 500 | 400 A Fixed | JKSSS4-B2_ | 90 | 30 | 36 | PAC JK | $108,000 |
| | 600 to 800 | 400 A Fixed | JKSSS4-B2_ | 90 | 30 | 36 | PAC JK | $109,000 |
| | 900 | 400 A Fixed | JKSSS4-B2090 | 90 | 30 | 36 | PAC JK | $111,000 |
| | 1000 | 400 A Fixed | JKSSS4-B2100 | 90 | 30 | 36 | PAC JK | $114,000 |
| | 1250 | 400 A Fixed | JKSSS4-B2125 | 90 | 30 | 36 | PAC JK | $116,000 |
| | 1500 | 400 A Fixed | JKSSS4-B2150 | 90 | 30 | 36 | PAC JK | $119,000 |
| | 1750 | 720 A Fixed | JKSSS7-B2175 | 90 | 72 | 36 | PAC JK | $177,000 |
| | 2000 to 2250 | 720 A Fixed | JKSSS7-B2_ | 90 | 72 | 36 | PAC JK | $185,000 |
| 4160 | 200 to 400 | 400 A Fixed | JKSSS4-B4_ | 90 | 30 | 36 | PAC JK | $108,000 |
| | 500 to 700 | 400 A Fixed | JKSSS4-B4_ | 90 | 30 | 36 | PAC JK | $109,000 |
| | 800 to 1000 | 400 A Fixed | JKSSS4-B4_ | 90 | 30 | 36 | PAC JK | $111,000 |
| | 1250 | 400 A Fixed | JKSSS4-B4125 | 90 | 30 | 36 | PAC JK | $114,000 |
| | 1500 | 400 A Fixed | JKSSS4-B4150 | 90 | 30 | 36 | PAC JK | $116,000 |
| | 1750 to 2000 | 400 A Fixed | JKSSS4-B4_ | 90 | 30 | 36 | PAC JK | $119,000 |
| | 2250 to 2500 | 400 A Fixed | JKSSS4-B4_ | 90 | 30 | 36 | PAC JK | $123,000 |
| | 3000 | 400 A Fixed | JKSSS4-B4300 | 90 | 30 | 36 | PAC JK | $127,000 |
| | 3500 | 720 A Fixed | JKSSS7-B4350 | 90 | 72 | 36 | PAC JK | $217,000 |
| | 4000 to 4500 | 720 A Fixed | JKSSS7-B4_ | 90 | 72 | 36 | PAC JK | $240,000 |
| | 5000 to 5500 | 720 A Fixed | JKSSS7-B4_ | 90 | 72 | 36 | PAC JK | $249,000 |
| | 6000 | 720 A Fixed | JKSSS7-B4600 | 90 | 72 | 36 | PAC JK | $257,000 |

**Notes:**

- For other system voltages (i.e. 3300 V), contact the factory.
- HP rating is based on a typical 4-pole motor. Always use motor FLA rating. Refer to application tables (i.e. ampere rating in the appropriate enclosure rating) to size starters.
- For 6600 V starters, consult factory.

# Medium Voltage Controllers

## JK Series Part Numbering Convention



The JK series combines a fixed isolation switch with either a drawout or fixed contactor/main fuse assembly.

**Available Options**

- **JK** – Withdrawable 400 A or Fixed 720 A Contactor/Main Power Fuse Assembly
- **FK** – Fixed Type 400 A Contactor Power Fuses
- **JKSSS** – Reduced Voltage Solid-State Type with Fixed 400 A or 720 A Isolation Contactor
- **JKSSD** – Reduced Voltage Solid-State Type with Drawout 400 A Isolation Contactor
- **JKAR** – Arc-Resistant Type 2B Drawout 400 A Contactor

**Available Controller Types**

- **FVNR** – Full Voltage Non-Reversing Type
- **FDR** – Transformer Feeder (As Standard Uses Latched-Type Contactor)
- **FVR** – Full-Voltage Reversing Type
- **RVAT** – Reduced-Voltage Auto-transformer Type
- **SSS** – Reduced-Voltage Solid-State Type

Consult factory for other controller types that are available (i.e. reversing SSS, synchronous RVAT).

**Ordering Information:** Use the following part numbering convention to configure the JK Starter when placing your order. For transformer feeder application, select "ZZZ" under Motor Rating; specify transformer KVA separately.

| Example Part Number: | JK/FK/JKSSS | 4 | 00 | B | 4 | 025 | SH | B |
|---|---|---|---|---|---|---|---|---|

**Series**

**Contactor Rating:**
4 — 400 A
7 — 720 A

**Controller Type:**
00 — FVNR
01 — FDR
10 — FVR
20 — RVAT
N/A — SSS

**Enclosure Rating:**
B — 1 (Indoor)
K — 12 (Indoor)
E — 3R (Outdoor)
A — 1 Gasketed (Indoor)
2 — AR Type 2B
Z — OTHER

**Line Voltage:**
2 — 2400
3 — 3300
4 — 4160
A — 4800
B — 6600
Z — OTHER

**Motor Rating:**

| | | | |
|---|---|---|---|
| 010 — 100 HP | 045 — 450 HP | 150 — 1500 HP | 450 — 4500 HP |
| 012 — 125 HP | 050 — 500 HP | 175 — 1750 HP | 500 — 5000 HP |
| 015 — 150 HP | 060 — 600 HP | 200 — 2000 HP | 550 — 5500 HP |
| 020 — 200 HP | 070 — 700 HP | 225 — 2250 HP | 600 — 6000 HP |
| 025 — 250 HP | 080 — 800 HP | 250 — 2500 HP | ZZZ — OTHER |
| 030 — 300 HP | 090 — 900 HP | 300 — 3000 HP | |
| 035 — 350 HP | 100 — 1000 HP | 350 — 3500 HP | |
| 040 — 400 HP | 125 — 1250 HP | 400 — 4000 HP | |

**Additional Functions:**
- See Options Section
- Options Should be Entered in Alphabetical Order
- If the Smart Part Number is Longer than Two Options, Replace all Options with a "-1"
- List all Options with Descriptions for All Equipment

**Load Cable Enclosure Exit Location:**
B — Bottom Exit
T — Top Exit

# Medium Voltage Controllers
## JK Series Factory-Installed Modifications



### Medium Voltage Starter Options

### Pilot Devices

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| B1 | Push-buttons: Start/Stop Standard on FVNR and RVAT, Opt. on JKSSS | PACCFG | $800 |
| BE | Push-button: Emergency Stop, Mushroom Head (Red) | PACCFG | $900 |
| BR | Push-button: “Reset” Overload Relay | PACCFG | $400 |
| BX | Push-button: Specify Function | PACCFG | CF |
| PB | Pilot Light: Bypass Mode Indication (White) for JKSSS | PACCFG | $500 |
| PF | Pilot Light: Fault Indication (Amber); Protection Relay Trip Indication | PACCFG | $500 |
| PG | Pilot Light: Stop Indication (Green); Standard on FVNR and RVAT | PACCFG | $500 |
| PP | Pilot Light: Power On Indication (White) | PACCFG | $500 |
| PR | Pilot Light: Run Indication (Red); Standard on FVNR and RVAT | PACCFG | $500 |
| PX | Pilot Light: Miscellaneous; Specify Function | PACCFG | CF |
| SO | Selector Switch: Off/On | PACCFG | $800 |
| SH | Selector Switch: Hand/Off/Auto | PACCFG | $800 |
| SL | Selector Switch: Local/Remote | PACCFG | $800 |
| SX2 | Selector Switch: Two-position/Specify Function | PACCFG | CF |
| SX3 | Selector Switch: Three-position/Specify Function | PACCFG | CF |

**Notes:**
- When selecting push-button or pilot light, add color code.
- Full-voltage and RVAT-type controllers come with standard pilot lights (see individual controller description). These options are for additional lights on these controllers.

### Protective Relays

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| - | Solid-state Protection Relay (Overload/Phase Failure) - Standard with Drawout Contactor IEEE® Device no. 46/51. For JKSSS, see “Emergency Full Voltage Starting” Option | PACCFG | STD |
| M3 | Multilin 859, 12-channel RTD Monitor & OL, Includes CTs & Ground CT | PACCFG | $35,000 |
| M4 | Multilin 869, 12-channel RTD Monitor & OL, Includes CTs & Ground CT | PACCFG | $38,000 |
| M5 | SEL 710, 12-channel RTD Monitor & OL, Includes CTs & Ground CT | PACCFG | $38,000 |
| RT | RTD Monitor/Relay, Door-mounted, 12 RTD Inputs, Pt100, Ni100, Ni120, Cu10, IEEE Device no. 49. JKSSS Includes 12 RTD Inputs Standard | PACCFG | $9,900 |
| V1 | Undervoltage Relay (Standard on JKSSS) IEEE Device no. 27 | PACCFG | $2,000 |
| V2 | Overvoltage Relay (Standard on JKSSS) IEEE Device no. 59 | PACCFG | $2,000 |
| V3 | Under, Overvoltage Relay (Standard on JKSSS) IEEE Device no. 27/59 | PACCFG | $4,000 |
| - | Incomplete Sequence Protection Standard on Applicable Controllers IEEE Device no. 48 | PACCFG | STD |
| AF | Arc-Flash Detection Relay w/Point & Fiber-Optic Sensors | PACCFG | CF |

# Medium Voltage Controllers

## JK Series Factory-Installed Modifications



### Control Relays

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| R22 | 4-pole: Contact Arrangement 2NO, 2NC (Wired to Terminals) | PACCFG | $1,200 |
| R40 | 4-pole: Contact Arrangement 4NO (Wired to Terminals) | PACCFG | $1,200 |
| R44 | 8-pole: Contact Arrangement 4NO, 4NC (Wired to Terminals) | PACCFG | $2,200 |
| R62 | 8-pole: Contact Arrangement 6NO, 2NC (Wired to Terminals) | PACCFG | $2,200 |
| R80 | 8-pole: Contact Arrangement 8NO (Wired to Terminals) | PACCFG | $2,200 |
| TX | Timing Relay, Solid State (Specify Time-range and Function) | PACCFG | $2,500 |

### Miscellaneous

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| HS | Cubicle Space Heater (Standard on Type 3R Enclosures) | PACCFG | $2,600 |
| HT | Thermostat (for Cubicle Space Heater) | PACCFG | $1,000 |
| D8 | Lighting Arrestor - Three-phase, Station Class (15” inc. sec. may be Required) | PACCFG | $12,000 |
| D9 | Surge Capacitor (Three-phase) | PACCFG | CF |
| T4 | Add 2nd PT/CPT, 100/300 to 500 VA (Standard on SSS) | PACCFG | $3,000 |
| T8 | Additional CPT Capacity (VA) | PACCFG | CF |
| - | Device Markers | PACCFG | STD |
| KK | Key Interlock | PACCFG | $4,000 |
| L1 | Latched Contactor (Specify Close Trip Voltages) Includes AC/DC Rectifier | PACCFG | $6,000 |
| L2 | Capacitor Trip Device (For Use on Latched-type Contactors) | PACCFG | $3,000 |

**Notes:**
- Option T4 is not used if option MY (below) is selected.

### Metering

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| MA | Analog Ammeter, AC, Single-phase Monitoring (Standard on Full Voltage and RVAT) | PACCFG | $2,000 |
| MT | Ammeter Switch (Three-phase Monitoring) | PACCFG | $1,500 |
| MV | Analog Voltmeter (AC Single-phase Monitoring) | PACCFG | $4,500 |
| MY | "Analog Voltmeter (AC Single Three-phase Monitoring, Includes: Meter, Three-phase Switch, Additional PT)" | PACCFG | $9,000 |
| ME | Elapsed Time Meter | PACCFG | $3,000 |
| W3 | Current Transducer (4-20 mA Output) | PACCFG | $7,200 |

**Notes:**
- JKSSS includes many metering features. See JKSSS section for further details.

# Medium Voltage Controllers
## JK Series Factory-Installed Modifications



### Enclosure

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| - | Type-1 General Purpose (Indoor) | PACCFG | STD |
| K | Type-12 Dust-tight (Indoor), One-high (46”-60” H) Controller | PACCFG | $6,000 |
| | Type-12 Dust-tight (Indoor), all 90” H Cubicles (Two-high Controller, RVAT, SSS) | PACCFG | $12,000 |
| KD | Drip Shield (for Type 1 or 12 Enclosure) | PACCFG | $8,000 |
| E | Type-3R Rainproof, Sleet-resistant (Outdoor), One-high (46”-60” H) Controller | PACCFG | $20,000 |
| | Type-3R Rainproof, Sleet-resistant (Outdoor), all 90” H Cubicles (Two-high Controller, RVAT, SSS) | PACCFG | $22,000 |

### Special Options For Solid State Starters

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| F3 | Emergency Full Voltage Starting<br>Includes:<br>SSS/Bypass Selector Switch<br>Current Transformers<br>Solid State Overload | PACCFG | $6,000 |
| MZ | Ground Fault: Zero Sequence, Includes GF Board Sensor (ZCT), IEEE Device no. 50G | PACCFG | $6,000 |
| D4 | Input Isolation Contactor/Power Fuses Change from Fixed to Drawout | PACCFG | $12,000 |
| - | Contactor for Power Correction Capacitor Switching | PACCFG | CF |

| Communications Option Code | Modification Description | Discount Symbol | List Price |
|---|---|---|---|
| XVS1 | Provides Modbus RTU over EtherNet® (Modbus TCP) & Internet (TCP/IP) over EtherNet | PACCFG | $7,000 |
| XVS2 | Provides Modbus RTU over Ethernet (Modbus TCP) | PACCFG | $5,500 |
| CO | Provides CAN Open® Communications | PACCFG | $7,500 |
| DN | Provides DeviceNet® Communications | PACCFG | $7,000 |
| EI | Provides EtherNet/IP® Communications | PACCFG | $7,500 |
| IB | Provides PROFIBUS® Communications | PACCFG | $7,500 |
| PN | Provides PROFINET® Communications | PACCFG | $7,500 |
| EC | Provides EtherCAT® Communications | PACCFG | $7,500 |

**Notes:**
- Option E includes cubicle space heater and thermostat.

# Medium Voltage Controllers
## JK Series Accessories



### Push-button/Pilot Light Color Codes

| Color Pb Caps | Color Pl Lens | Color Code |
|---|---|---|
| Green | Green | G |
| Black | - | B |
| Red | Red | R |
| White | White | W |
| Yellow | Yellow | Y |
| Blue | Blue | B |

### JK Series Accessories

| Catalog Number | Item | Description | Discount Symbol | List Price |
|---|---|---|---|---|
| LCV5010H20G01 | JK Yoke | Carriage Lifting Attachment | PAC I | $800 |

**Notes:**
- JK lifting yoke is recommended for two-high FVNR & RVAT-type controllers with 400A Withdrawable Contactors.

# Medium Voltage Controllers

## Arc-Resistant JK Motor Control Center

**New Product**

The Arc-Resistant JK (AR-JK) Motor Control Center is designed to increase safety, reliability, and uptime. Arc faults result from electric current traveling through the air between conducting metals due to factors like accidental contact, improper work procedures, or inadequate maintenance. These faults release dangerous energy levels, causing extreme heat, light, noise, and toxic fumes, which can lead to serious injuries, unplanned downtime, and costly replacements. Utilizing advanced technology, high-quality materials, and structural design, the AR-JK effectively mitigates the risks and costs associated with an arc fault by containing and diverting arc-related explosions.

### Highlights

- Conforms to UL 347, CSA 22.2 no. 253:20, IEEE C37.20.7 Standards
- Rated to Withstand 50kA (Symmetrical) for 0.5 Seconds
- 2.4 – 6.9 kV (7.2 kV Max)
- 1200 A Insulated Main Bus
- 50 or 60 Hz
- 60 kV BIL
- Standard Withdrawable Vacuum Contactor
- Type 2B Accessibility (Front, Sides, Rear, LV Compartment)
- Meets NEMA Class E1 Non-Fused and Type E2 Fused Controller Configurations
- Modular Plenum Exhaust Allows End User Flexibility
- Top or Bottom Cable Entry/Exit

### Standard Features

- Bolted-Pressure Isolation Switch with External Operating Handle
- Viewing Window for Isolation Switch Position Indication
- Toshiba Designed and Manufactured Vacuum Contactors
- Current Transformers
- Mechanical & Electrical Interlocks
- Control Power Transformers with Primary/Secondary Fuses
- Solid State Protection Relay



# Medium Voltage Controllers

## Arc-Resistant JK Motor Control Center



### AR-JK Series Starters Controller Pricing

| Nominal System Voltage | HP | Contactor Type | Model Number | H | W | D | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|
| | | | | Dimensions (in.) | | | | |
| 2300 | 100 to 250 | 400 A Drawout | JKAR4__-22_ | 128 | 58 | 51 | PAC JK | CF |
| | 300 to 350 | 400 A Drawout | JKAR4__-22_ | 128 | 58 | 51 | PAC JK | CF |
| | 400 to 500 | 400 A Drawout | JKAR4__-22_ | 128 | 58 | 51 | PAC JK | CF |
| | 600 to 800 | 400 A Drawout | JKAR4__-22_ | 128 | 58 | 51 | PAC JK | CF |
| | 900 | 400 A Drawout | JKAR4__-22090 | 128 | 58 | 51 | PAC JK | CF |
| | 1000 | 400 A Drawout | JKAR4__-22100 | 128 | 58 | 51 | PAC JK | CF |
| | 1250 | 400 A Drawout | JKAR4__-22125 | 128 | 58 | 51 | PAC JK | CF |
| | 1500 | 400 A Drawout | JKAR4__-22150 | 128 | 58 | 51 | PAC JK | CF |
| 4160 | 200 to 400 | 400 A Drawout | JKAR4__-24_ | 128 | 58 | 51 | PAC JK | CF |
| | 500 to 700 | 400 A Drawout | JKAR4__-24_ | 128 | 58 | 51 | PAC JK | CF |
| | 800 to 1000 | 400 A Drawout | JKAR4__-24_ | 128 | 58 | 51 | PAC JK | CF |
| | 1250 | 400 A Drawout | JKAR4__-24125 | 128 | 58 | 51 | PAC JK | CF |
| | 1500 | 400 A Drawout | JKAR4__-24150 | 128 | 58 | 51 | PAC JK | CF |
| | 1750 to 2000 | 400 A Drawout | JKAR4__-24_ | 128 | 58 | 51 | PAC JK | CF |
| | 2250 to 2500 | 400 A Drawout | JKAR4__-24_ | 128 | 58 | 51 | PAC JK | CF |
| 6600 | 200 to 700 | 400 A Drawout | JKAR4__-2B_ | 128 | 58 | 51 | PAC JK | CF |
| | 750 to 2250 | 400 A Drawout | JKAR4__-2B_ | 128 | 58 | 51 | PAC JK | CF |
| | 2500 to 4000 | 400 A Drawout | JKAR4__-2B_ | 128 | 58 | 51 | PAC JK | CF |
| | 200 to 700 | 400 A Drawout | JKAR4__-2B_ | 128 | 58 | 51 | PAC JK | CF |
| | 75 to 2250 | 400 A Drawout | JKAR4__-2B_ | 128 | 58 | 51 | PAC JK | CF |
| | 2500 to 4000 | 400 A Drawout | JKAR4__-2B_ | 128 | 58 | 51 | PAC JK | CF |

**Notes:**

- For other system voltages (i.e. 3300 V), consult factory.
- HP rating is based on a typical 4-pole motor. Always use motor FLA rating. Refer to application tables (i.e. ampere rating in the appropriate enclosure rating) to size starters.
- Consult factory with project requirements and for pricing.
- Height includes arc plenum mounted on top of the enclosure.
- Width does not include 1.5" added onto each end of the MCC lineup.
- All AR JK include arc plenum and arc chute exhaust and can be customized according to installation requirements. Consult factory for dimensions.

# Medium Voltage Controllers
# Medium Voltage JK OEM Power Cells

Toshiba's UL-listed JK OEM Power Cell kit provides exceptional flexibility for designing and applying vacuum contactors. This adaptable design is engineered for integrators as a starter in the electrical control panels. It can replace air or vacuum contactors when used for motors, starters, or distribution applications. Built with a robust steel structure and factory-assembled for precision, it enhances space utilization while incorporating safety features such as a bolted-pressure isolation switch with mechanical and electrical interlocks.

## Standard Features

- Toshiba Medium Voltage Vacuum Contactor, 400 A
- Draw-Out or Fixed-Type
- Patented, Bolted Pressure-Isolation Switch
- Less than 24" Wide, 29.3" High, Less than 33" Deep
- Available with or without Main Power Fuse-Clips (Single- or Double-Barrel)
- Front-Accessible
- Electrically Held or Latched-Type Versions

## Visible, Bolted Pressure, Isolation Switch Features

- Less Resistance
- Less Wear
- No Insertion Pressure
- Mechanical Interlocking System

## JK OEM Cell Application Table

| System Voltage | 0.8 PF Ind./Syn. Motor | 1 PF Syn. Motor | Three-Phase Transformer | Three-Phase Capacitor |
|---|---|---|---|---|
| 2.2 to 2.5 KV | 1750 HP | 2000 HP | 1500 KVA | 1500 KVAR |
| 3 to 3.3 KV | 2250 HP | 2500 HP | 2000 KVA | 2000 KVAR |
| 4 to 5 KV | 3000 HP | 3500 HP | 3000 KVA | 2000 KVAR |
| 6 to 6.6 KV | 4500 HP | 5000 HP | 4000 KVA | 2000 KVAR |

**Notes:**
- The above table is based on general-load data standard application.
- Lower limitations may apply on specific applications (i.e. applications above 1000 masl).



# Medium Voltage Controllers

## JK OEM Power Cell Pricing



| Model Number | Description | Application | Discount Symbol | List Price |
|---|---|---|---|---|
| GCV5084L03G00-7 | Fixed-type Without Fuse Clips (With Bus) | Used When Upstream Protection is Provided | PACJKO | $19,200 |
| GCV5084L03G01-7 | Fixed-type With Single-barrel Fuse Clips | Motor HP Rating up to 1500 HP | PACJKO | $18,200 |
| GCV5084L03G02-7 | Fixed-type With Double-barrel Fuse Clips | Motor HP Rating up to 3000 HP | PACJKO | $18,400 |
| GCV5084L03G03 | Fixed-type for CPT/PT/CB | Includes Bolted Pressure - Isolation Switch for Disconnecting CPT/PTs, Provision to Fix-mount 1 or 2 CPT/PTs with Mounting Provision for Secondary Low Voltage Circuit Breaker | PACJKO | $8,600 |
| GCV5084L03G04 | Fixed-type for CPT/PT/LS | Includes Bolted Pressure - Isolation Switch for Disconnecting CPT/PTs, Provision to Fix-mount 1 or 2 CPT/PTs with Limit Switch | PACJKO | $8,600 |
| GCV5084L04G00-71 | Drawout-type Without Fuse Clips | Used when Upstream Protection is Provided | PACJKO | $25,900 |
| GCV5084L04G01-71 | Drawout-type With Single-barrel Fuse Clips | Motor HP Rating up to 1500 HP | PACJKO | $24,900 |
| GCV5084L04G02-71 | Drawout-type With Double-barrel Fuse Clips | Motor HP Rating up to 3000 HP | PACJKO | $25,100 |
| GCV5084L05G00-7L1 | Fixed-latched-type Without Fuse Clips | Used when Upstream Protection is Provided | PACJKO | $20,500 |
| GCV5084L05G01-7L1 | Fixed-latched-type With Single-barrel Fuse Clips | For Distribution Loads (400 A Maximum), Transformer, or Capacitor Switching | PACJKO | $19,500 |
| GCV5084L05G02-7L1 | Fixed-latched-type With Double-barrel Fuse Clips | For Distribution Loads (400 A Maximum), Transformer, or Capacitor Switching | PACJKO | $19,700 |
| GCV5084L06G00-71L1 | Drawout-latched-type Without Fuse Clips | Used when Upstream Protection is Provided | PACJKO | $27,700 |
| GCV5084L06G01-71L1 | Drawout-latched-type With Single-barrel Fuse Clips | For Distribution Loads (400 A Maximum), Transformer, or Capacitor Switching | PACJKO | $26,700 |
| GCV5084L06G02-71L1 | Drawout-latched-type With Double-barrel Fuse Clips | For Distribution Loads (400 A Maximum), Transformer, or Capacitor Switching | PACJKO | $26,900 |

## Factory Modifications

| Option | Modification Description | List Price |
|---|---|---|
| K1 | Provision for Addition of Key Interlock Switch (to Lock Disconnect in Closed Position) | $1,000 |
| K2 | Provision for Addition of Key Interlock Switch (to Lock Disconnect in Open Position) | $1,000 |

**Notes:**

- Add modification option code to end of OEM kit part number or prior to dash "-". (e.g. GCV5084L03G03K1 or GCV5084L04G01K2-71)
- Key switch is not included. Use Superior catalog no. S105821Y (Type B-4003-1) or Kirk Key catalog no. KBL002510 (Type SD-TYP-F).

# Vacuum Contactors

## Low & Medium Voltage Vacuum Contactors

Toshiba offers a wide range of low and medium voltage vacuum contactors with advanced protection and control. Available in compact, electrically maintained, or latched-type designs, Toshiba's vacuum contactors efficiently protect and control motors, transformers, and breakers for various industrial applications.

### Standard Features

- **Environment-Resistant:** Ideal for Use in High Dust Areas; Switching Arc is Contained within Vacuum Bottle, Shielding Main Contacts
- **Reduced Maintenance:** Vacuum Bottle Contacts Have Long Life with Virtually No Maintenance
- **No External Surge Protection:** Special Main Contact Materials Minimize Chopping Current; No Surge Suppressor/Arrester Required Except for Special Applications
- **Designed for Safety:** High & Low Voltage Parts are totally Separated by Insulated Barrier (Non-Flammable Molded Frame)
- **Conformity Industrial Standards:** Conforms to Latest International Standards Such as UL®, CSA®, AS, BS, NEMA®, IEC60470 (2000); Consult Factory On Each Series
- **Electronic-Control Drive Unit:** All Contactors Include Electronic Control of Operating Coil Which Offers Wide Control Voltage of 100 to 240 VAC & 100 to 250 VDC, Anti-Chopping Feature Reduce Power Consumption
- Electrically Held or Latched-Type Versions (Medium Voltage Models)

### HCV-7HA (7200 V, 400 A) Contactor



HCV-7HA (7.2 KV, 400 A)

- **New HCV-7HA(L) Contactor:** Available in Non-latched and Latched Type Versions; Contactor has Same Dimensions as the HCV-5HA, but Includes Higher Performance Vacuum Interrupter
- **Higher Interrupting-Performance:** Afford a Wide Margin of Protective Coordination with Any Type of Power Fuse Resulting in Increased Electrical Safety & Reliability

### Vertical Magnetic Arc Dispersion System

- **Designed for Longer Wear**: Unique Vertical Magnetic Arc Dispersion System, USA patent (HCV-1KAU, HCV-7HA, HCV-7HAL, HCV-6KAU, HCV-6KALU)



Axial Magnetic Field Interrupter - Arc Dispersion



# Vacuum Contactors

## Low Voltage

## Vacuum Contactor Specifications



### Low Voltage Technical Data

| Model Number | HCV-1JBU | HCV-1KAU |
|---|---|---|
| Voltage | 208 to 1500 V | |
| Operational Current | 600 A | 720 A |
| Rated Thermal Current | 600 A | 720 A |
| Interrupting Current | 42,000 A | |
| Peak Withstand Current | - | 85 KA |
| Short-Circuit Making/Breaking Current IEC 60470 (2000) | 6000 A (100 Times) | 7200 A (100 Times) |
| | 6000 A (25 Times) | 7200 A (25 Times) |
| Withstand Overload Current | 3600 A for 30 Seconds | 4320 A for 30 Seconds |
| | 6000 A for 2 Seconds | 7200 A for 2 Seconds |
| | 9000 A for 1 Second | 10,800 A for 1 Second |
| | 30,000 A for 0.05 Seconds | 36,000 A for 0.05 Seconds |
| Coordination with Current-Limiting Fuses | 50 KA | 45 KA |
| Switching Frequency | 1200/Hour | |
| Mechanical Life | 2.5 Million | |
| Electrical Life | 500,000 | |
| Impulse Withstand | 15 KV | |
| Dielectric Strength | 5.5 KV for 1 Minute | |
| Pick-up Voltage | 85% Hot to 70% Cold AC or DC | |
| Drop-out Voltage | 20% or More of Rated Control Voltage (Cold) | |

**Notes:**

- Maximum required test; actual life under normal conditions is greater.

# Vacuum Contactors

## Low Voltage

## Vacuum Contactor Specifications



### Low Voltage Technical Data

| Model Number | | HCV-1JBU | HCV-1KAU |
|---|---|---|---|
| Control Voltage | Standard | 100 to 240 VAC/DC | |
| Control Circuit Burden | Closing | 1080 VA | |
| | Holding | 50 VA | |
| Auxiliary Contact Ratings | Arrangement | 3NO-3NC | |
| | Current | 10 A (A600) | |
| | Voltage | 600 V Maximum, 48 V Minimum | |
| | VAC | 720 VA (P.F. 0.35) | |
| | VDC | 60 W (L/R 150 ms) | |
| Application Conditions | Altitude without Derating | Lower than 3300 ft. (1000 m) | |
| | Ambient | -5 to 40°C | |
| | Relative Humidity | 45 to 85% | |
| | Vibration | Maximum 20 Hz to 1 G | |
| | Shock | Maximum 30 G | |
| Weight in lbs. (kg) | | 59.5 (27) | 61.7 (28) |

# Vacuum Contactors

## Low Voltage

## Vacuum Contactor Specifications



### Low Voltage Application Table

| Model | System Voltage | Induction Motor | Three-Phase Transformer | Three-Phase Capacitor |
|---|---|---|---|---|
|  | 208 V | 200 HP | 100 KVA | - |
| | 230 V | 250 HP | 200 KVA | 200 KVAR |
| | 380 V | 300 HP | 350 KVA | - |
| | 460 V | 500 HP | 400 KVA | 400 KVAR |
| | 575/600 V | 600 HP | 560 KVA | 500 KVAR |
| | 762/796 V | 800 HP | 720 KVA | - |
| | 1500 V | 1600 HP | 1400 KVA | 1400 KVAR |
|  | 230 V | 300 HP | 240 KVA | 250 KVAR |
| | 380 V | 450 HP | 400 KVA | - |
| | 460 V | 600 HP | 480 KVA | 500 KVAR |
| | 575/600 V | 700 HP | 600 KVA | 600 KVAR |
| | 762/796 V | 900 HP | 800 KVA | - |
| | 1500 V | 2000 HP | 1500 KVA | 1500 KVAR |

**Notes:**
- The above table is based on general load data and standard application.
- Lower limitations may apply on specific application (i.e. applications above 3000 meter elevations).

### Accessories

- **Capacitor Trip Device:** Used for Latched Contactor when DC Power is Not Available; Charges from AC Power, Supplies DC Power to Trip Coil
- **Control Power Rectifier:** Converts AC to DC Control Power for Trip Coil on Latched-Type Contactors
- **Surge Suppressor:** Three-Phase-Type NV60K304T1 for 3.6 to 7.2 KV, NVK95K304T1 for 12 to 15 KV; Surge Suppressor Composed of Capacitor and Series Resistor for an Excellent Protection Device; Features Suppression, Decreased Surge Generation; Suitable for Protecting Motors and Transformers Requiring Frequent Operations
- **Mechanical Interlock:** Used in a Reversing Starter to Mechanically Prevent Forward/ Reverse Contactors from Closing Simultaneously (Not Available for CV-10 Series)



### Reversing Contactor Assembly

- Low Voltage Vacuum Contactors, HCV-1JBU (600 A, 208 to 1500 V) and HCV-1KAU (720 A, 208 to 1500 V) Available in Assembly for Reversing Motor Applications; Assembly Consists of Two Contactors on Common Base-plate with Mechanical Interlock; Line-Side Bus Jumpers with Incoming Mechanical Lugs, Load-Side Cable Jumpers, Output Mechanical Lugs also Included

# Vacuum Contactors

## Medium Voltage

## Vacuum Contactor Specifications



### Medium Voltage Technical Data

| Model Number | HCV-5HA | HCV-5HAL | HCV-7HA | HCV-7HAL | HCV-6KAU | HCV-6KALU | CV-10HA(L) | CV-10HB(L) |
|---|---|---|---|---|---|---|---|---|
| Rated Supply Voltage (Rated Maximum Voltage) | 2.4 to 6.6 KV (7.2 kV) | | | | | | 11 to 13.8 kV (15kV) | 11 to 12 kV (13.8 kV)* |
| Operational Current | 400 A | | 400 A | | 720 A | | 400 A | |
| Rated Thermal Current | 450 A | | 450 A | | 800 A | | 450 A | |
| Interrupting Current | 7000 A @ 5 kV (4500 A @ 7.2 kV) | | 7200 A | | 7200 A | | 5000 A @ 12 kV (4000 A @ 15 kV) | 5000A ** |
| Peak Withstand Current | 15.8 kA | | 20 kA | | 20 kA | | 12.5 kA | |
| Class E1 MVA | 29/60/54 (2400 V/5000 V/6900 V) | | 30/62/86 (2400 V/5000 V/6900 V) | | 30/62/86 (2400 V/5000 V/6900 V) | | 95/96 (11 kV/13.8 kV) | 95 (11 kV) |
| Class E2 MVA | 200/400/600 (2400 V/5000 V/6900 V) | | 200/400/600 (2400 V/5000 V/6900 V) | | 200/400/600 (2400 V/5000 V/6900 V) | | 953/1195 (11 kV/13.8 kV) | |
| Withstand Overload Current | 2400 A for 30 Seconds | | 2400 A for 30 Seconds | | 4320 A for 30 Seconds | | 2400 A for 30 Seconds | |
| | 6000 A for 1 Second | | 6000 A for 1 Second | | 10,800 A for 1 Second | | 8000 A for 1 Second | |
| Short Circuit Current (E2) | 50 kA (130 kA Peak) See Coordination Below | | 50 kA (130 kA Peak) See Coordination Below | | 50 kA (130 kA Peak) See Coordination Below | | 50 kA (130 kA Peak) See Coordination Below | |
| Coordination W/Current Limiting Fuses | Peak Let-Thru 65 kA Max. | | Peak Let-Thru 77 kA Max. | | Peak Let-Thru 85 kA Max. | | Peak let-Thru 36 kA Max. | |
| Switching Frequency | 1200/Hr | 300/Hr | 1200/Hr | 300/Hr | 600/Hr | 300/Hr | 300/Hr | 120/Hr |
| Mechanical Life | 2.5 Million | 0.25 Million | 2.5 Million | 0.25 Million | 1 Million | 0.20 Million | 0.25 Million | |
| Electrical Life | 0.25 Million | | 0.25 Million | | 0.20 Million | | 0.10 Million | |
| Impulse Withstand | 60 kV | | | | | | 75 kV (95 kV)**** | |
| Dielectric Strength | 18.2kV, 1 Minute | | 18.2kV, 1 Minute | | 18.2kV, 1 Minute | | 35.75 kV (42 kV)***, 1 Minute | |
| Pick-up Voltage | 85% Hot to 70% Cold AC or DC | | | | | | | |
| Drop-out Voltage | 70% Hot to 60% Cold AC or DC | | | | | | | |
| Tripping Voltage | 60% or Less of Coil Rating DC (Cold) | | | | | | | |

**Notes:**

* 13.8 kV maximum for capcitor switching (5000 kVAR max. with a 6% series reactor)
** The rated inerrupting current was tested at 12 kV
*** Special withstand voltage (42 kV for 1 minute) available by request
**** 95kV BIL with Station Class Arresters. Consult factory for further details

# Vacuum Contactors

## Medium Voltage

## Vacuum Contactor Specifications



| Model Number | | HCV-5HA | HCV-5HAL | HCV-7HA | HCV-7HAL | HCV-6KAU | HCV-6KALU | CV-10HA(L) | CV-10HB(L) |
|---|---|---|---|---|---|---|---|---|---|
| Control Voltage | Standard | 120 VAC, 50/60 Hz | | | | 115 to 240 VAC/ 125 to 250 VDC | | 100 to 240 VAC/ 125 to 250 VDC | |
| | Optional * | 240 VAC/125 VDC/250 VDC | | | | - | | - | |
| | Tripping | - | 24, 32, 48, 125, 250 VDC | - | 24, 32, 48, 125, 250 VDC | - | 24, 32, 48, 125, 250 VDC | - | 125 VDC |
| Control Circuit Burden | Closing | 5.4 A Peak @ 120 VAC 670 VA (AC), 700 W (DC) | | | | 6 to 7.0 A @ 120 VAC 840 VA (AC), 875 W (DC) | | 7.2 A Peak @ 120 VAC 864 VA (AC), 900 W (DC) | |
| | Holding | 0.12 A Avg. @ 120 VAC 85 VA (AC), 85 W (DC) | | | | 0.8 to 1 A @ 120 VAC 48 VA | | 0.16 A Avg. @ 120 VAC 80 VA (AC), 90 W (DC) | |
| | Tripping** | 4.8 A Peak @125 VDC | | | | | | | |
| Auxiliary Contact Ratings | Arrangement | 3NO-3NC | 2NO-2NC | 3NO-3NC | 2NO-2NC | 3NO-3NC | 2NO-2NC | 4NO-2NC | 2NO-1NC |
| | Current | 10 A (A600) | | | | | | | |
| | Voltage | 600 V Maximum, 48 V Minimum | | | | | | | |
| | AC | 720 VA (P.F. 0.35) | | | | | | | |
| | DC | 60 W (L/R 150 ms) | | | | | | | |
| Application Conditions | Altitude w/o Derating | Lower than 3300 ft (1000 m) | | | | | | | |
| | Ambient | -5° to 40°C | | | | | | | |
| | Relative Humidity | 45 to 85% | | | | | | | |
| | Vibration | Maximum 20 Hz to 1 G | | | | | | | |
| | Shock | Maximum 30 G | | | | | | | |
| Weight in lbs. (kg) | | 43 (19.5) | 44 (20.0) | 44 (19.5) | 45 (20.0) | 60 (27) | 62 (28) | 88 (40) | 91 (41) |

**Notes:**

* Adjustable via switch settings on the electronic drive unit

** Trip circuit burden applies to all latched type contactors only

# Vacuum Contactors

## Medium Voltage
## Vacuum Contactor Specifications



### Medium Voltage Application Table

| Model Number | System Voltage | 0.8 PF Ind./ Syn. Motor | 1.0 PF Syn. Motor | Three-Phase Transformer | Three-Phase Capacitor |
|---|---|---|---|---|---|
| HCV-5HA(L)<br>HCV-7HA(L)<br>(400 A) | 2.2 to 2.5 KV | 1750 HP | 2000 HP | 1500 KVA | 1500 KVAR |
| | 3 to 3.3 KV | 2250 HP | 2500 HP | 2000 KVA | 2000 KVAR |
| | 4 to 5 KV | 3000 HP | 3500 HP | 3000 KVA | 2000 KVAR |
| | 6 to 6.6 KV | 4500 HP | 5000 HP | 4000 KVA | 2000 KVAR |
| HCV-6KA(L)U<br>(720 A) | 2.2 to 2.5 KV | 2500 HP | 3000 HP | 2500 KVA | 2000 KVAR |
| | 3 to 3.3 KV | 3000 HP | 3500 HP | 3500 KVA | 2000 KVAR |
| | 4 to 5 KV | 4500 HP | 5000 HP | 4500 KVA | 2000 KVAR |
| | 6 to 6.6 KV | 6000 HP | 7000 HP | 7000 KVA | 2000 KVAR |
| CV-10HA(L)<br>(400 A) | 6.9 to 7.2 KV | 3500 HP | 4000 HP | 3000 KVA | N/A |
| | 10 to 12 KV | 5500 HP | 6000 HP | 5500 KVA | |
| | 13.8 KV | 7000 HP | 7500 HP | 6500 KVA | |
| CV-10HB(L)<br>(400 A Continuous, 230 A Breaking) | 2.2 to 2.5 KV | N/A | N/A | N/A | 1500 KVAR |
| | 3 to 3.3 KV | | | | 2000 KVAR |
| | 4 to 5 KV | | | | 2000 KVAR |
| | 6 to 6.6 KV | | | | 3000 KVAR |
| | 6.9 to 7.2 KV | | | | 3000 KVAR |
| | 10 to 13.8 KV | | | | 5000 KVAR |

**Notes:**
- The above table is based on general load data and standard application.
- Lower limitations may apply on specific applications (i.e. applications above 3,000 meter elevations).

# Vacuum Contactors

## Low & Medium Voltage
## Vacuum Contactor Pricing

| Model Number | Description | Application | Discount Symbol | List Price |
|---|---|---|---|---|
| HCV-5HA | 400 A, 2.3 to 7.2 KV Non-Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $9,600 |
| HCV-5HAL-xx* | 400 A, 2.3 to 7.2 KV Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $11,400 |
| LCVREV5HA | 400 A, 2.3 to 7.2 KV Non-Latched, Reversing Type | Motors, Distribution Loads | PAC JK | $24,000 |
| HCV-7HA | 400 A, 2.3 to 7.2 KV Non-Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $8,800 |
| HCV-7HAL-x* | 400 A, 2.3 to 7.2 KV Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $10,600 |
| HCV-6KAU | 720 A, 2.3 to 7.2 KV Non-Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $18,000 |
| HCV-6KALU-xx* | 720 A, 2.3 to 7.2 KV Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $20,000 |
| CV-10HA | 400 A, 10 to 15 KV Non-Latched Type | Motors, Distribution Loads, Transformer | PAC A | $18,000 |
| CV-10HAL | 400 A, 10 to 15 KV Latched Type | Distribution Loads, Transformer Switching | PAC A | $20,000 |
| CV-10HB | 400 A, 10 to 13.8 KV Non-Latched Type | Capacitor Switching | PAC A | $20,000 |
| CV-10HBL | 400 A, 10 to 13.8 KV Latched Type | Capacitor Switching | PAC A | $22,000 |
| HCV-1JBU | 600 A, 208 to 1500 V Non-Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $9,500 |
| HCV-1KAU | 720 A, 208 to 1500 V Non-Latched Type | Motors, Distribution Loads, Transformer/Capacitor Switching | PAC A | $17,000 |
| HCVR-1JBU | Reversing Contactor Assembly, 600 A, 208 to 1500 V Non-Latched Type | Reversing Motors | PAC A | $28,000 |
| HCVR-1KAU | Reversing Contactor Assembly, 720 A, 208 to 1500 V Non-Latched Type | Reversing Motors | PAC A | $39,000 |

**Notes:**

* For HCV-5HAL and HCV-6KALU, replace "xx" in model number with close and trip voltage codes. First "x" is closing voltage and second "x" is trip coil voltage. For HCV-7HAL, replace "x" in model number with trip coil voltage only.

## Latched Contactor Voltage Codes

| Close Voltage | Code | Trip-Coil Voltage | Code |
|---|---|---|---|
| 1 | 120 VAC | 1 | 125 VDC |
| 2 | 240 VAC | 2 | 250 VDC |
| 3 | 125 VDC | 3* | 24 VDC |
| 4 | 250 VDC | 4* | 32 VDC |
| | | 5* | 48 VDC |

**Notes:**

* For 24 VDC, 32 VDC, and 48 VDC trip, add $2,200 to list price shown in table. Adder includes auxiliary contact arc killer.

# Vacuum Contactors

## Low & Medium Voltage

## Vacuum Contactor Accessories

| Model Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| CIT-10QA | Capacitor Trip Device Used for Latched-type Vacuum Contactor or Vacuum Circuit Breaker when DC Power is Not Available. Charges from AC Power and Supplies DC Power to Trip Coil  | PACACC | $2,000 |
| 4A9A8586G001 | AC/DC Control Power Rectifier Converts 120/240 VAC Input to 125/520 VDC to Power Trip Coil on Latched-type Vacuum Contactor or Control Power for a Vacuum Circuit Breaker  | PACACC | $500 |
| NV60K304T1 | Surge Suppressor: Three-phase CR Surge Suppressor for 3.3 to 7.2 kV System  | PACACC | $3,700 |
| NV95K304T1 | Surge Suppressor: Three-phase CR Surge Suppressor for 10 to 15 kV System | PACACC | $9,000 |
| 2C9G0059G002 | Mechanical Interlock for HCV-5HA(L) & HCV-7HA(L) | PACACC | $1,600 |
| 2C9G0068G001 | Mechanical Interlock for HCV-6KA(L)U | PACACC | $1,600 |
| 3Z9G0119G001 | Latched-contactor Modification Kit for HCV-5HA & HCV-6KAU; 125 VDC Trip-coil | PACACC | $1,000 |
| 3Z9G0119G002 | Latched-contactor Modification Kit for HCV-5HA & HCV-6KAU; 250 VDC Trip-coil | PACACC | $1,000 |
| 3Z9G0119G003 | Latched-contactor Modification Kit for HCV-5HA & HCV-6KAU; 24 VDC Trip-coil | PACACC | $2,000 |
| 3Z9G0119G004 | Latched-contactor Modification Kit for HCV-5HA & HCV-6KAU; 30/32 VDC Trip-coil | PACACC | $2,000 |
| 3Z9G0119G005 | Latched-contactor Modification Kit for HCV-5HA & HCV-6KAU; 48 VDC Trip-coil | PACACC | $2,000 |
| PC18330P671 | Latched-contactor Auxiliary Contact Arc Killer for HCV-5HAL & HCV-6KALU; Used with 24/32/48 VDC Trip-coil Models | PACACC | $800 |
| 5P9A2593P001 | B9 Lubricating Grease (30 g tube) | 204 | $50 |

# Low Voltage Solid State Starters
## TE3 Series

The Toshiba TE3 low voltage motor starter series is a top-tier, digitally programmable solid-state starter tailored for diverse industrial applications. Engineered for heavy-duty performance and advanced motor protection, the TE3 excels in demanding environments. Its standout features include an intelligent Energy Recovery System (iERS) for enhanced energy efficiency, a removable 3.5" color touch screen with IP66/N4X rating, and 42 smart application profiles for quick setup within a minute. The TE3's reliable performance and efficiency is an optimal solution for industries like oil & gas, HVAC, and manufacturing.

### Product Scope

18 to 1250 A
200 to 600 V

### Highlights

- 500% for 60 Seconds Overload Capacity
- Removable 3.5" Color Touch Screen Rated IP66/UL Type 4X
- Single-Line Display for Easy System Monitoring
- 42 Smart Application Profiles for Automatic 1 Minute Setup
- Built-In ANSI-Rated Bypass Contactor
- Three-Phase Metering for Power, Voltage, and Current
- Electronic Overload (Class 5 – 30)
- Automatic Load Tuning
- Modbus RTU Communications (Others Available)
- Data Logger Records Up To Three Million Events Downloadable Via USB Port or TE3 Tool Software
- Multiple Language Support Including English, Spanish, French, Plus More
- Four Programmable Digital Inputs (Optional Expansion Module For Additional Inputs)
- Five Programmable Relay Outputs (Optional Expansion Module For Additional Outputs)
- 4 – 20 mA / 0 – 10 V Analog Input / Output



# Low Voltage Solid State Starters

## TE3 Series Pricing




### TE3 Solid State Starter Pricing — Open Chassis Type

| Model Number | Max. Amps | Nominal Motor Rating 50/60 Hz | | | | | | | | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 208 V/HP | | 230 V/HP | | 460 V/HP | | 575 V/HP | | | |
| | | Shunt Bypass | Start Bypass | Shunt Bypass | Start Bypass | Shunt Bypass | Start Bypass | Shunt Bypass | Start Bypass | | |
| TE3-18-BP | 18 | 5 | 3 | 5 | 5 | 10 | 10 | 15 | 10 | PAC J | $3,060 |
| TE3-28-BP | 28 | 7.5 | 7.5 | 7.5 | 7.5 | 20 | 15 | 25 | 20 | PAC J | $3,100 |
| TE3-39-BP | 39 | 10 | 10 | 10 | 10 | 25 | 25 | 30 | 30 | PAC J | $3,200 |
| TE3-48-BP | 48 | 15 | 10 | 15 | 15 | 30 | 30 | 40 | 30 | PAC J | $3,300 |
| TE3-62-BP | 62 | 20 | 15 | 20 | 20 | 40 | 40 | 60 | 50 | PAC J | $4,300 |
| TE3-78-BP | 78 | 25 | 20 | 25 | 25 | 60 | 50 | 75 | 60 | PAC J | $4,400 |
| TE3-92-BP | 92 | 30 | 25 | 30 | 30 | 60 | 60 | 75 | 75 | PAC J | $4,800 |
| TE3-112-BP | 112 | 30 | 30 | 40 | 30 | 75 | 75 | 100 | 75 | PAC J | $5,000 |
| TE3-150-BP | 150 | 40 | 40 | 50 | 50 | 100 | 100 | 125 | - | PAC J | $5,200 |
| TE3-160-BP | 160 | 50 | 40 | 60 | 50 | 125 | 100 | 150 | - | PAC J | $5,400 |
| TE3-210-BP | 210 | 60 | 60 | 75 | 60 | 150 | 150 | 200 | 150 | PAC J | $7,000 |
| TE3-275-BP | 275 | 75 | 60 | 100 | 75 | 200 | 150 | 200 | 150 | PAC J | $8,400 |
| TE3-361-BP | 361 | 125 | 75 | 125 | 125 | 300 | 250 | 350 | 300 | PAC J | $9,100 |
| TE3-450-BP | 450 | 150 | 125 | 150 | 150 | 350 | 300 | 450 | 300 | PAC J | $9,800 |
| TE3-550-BP | 550 | 150 | 150 | 200 | 200 | 450 | 400 | 500 | 500 | PAC J | $13,000 |
| TE3-600-BP | 600 | 200 | 200 | 200 | 200 | 500 | 500 | 600 | 600 | PAC J | $14,000 |
| TE3-862-BP | 862 | 250 | 250 | 300 | 300 | 600 | 500 | 700 | 600 | PAC J | $20,000 |
| TE3-900-BP | 900 | 300 | 250 | 350 | 300 | 700 | 600 | 900 | 600 | PAC J | $23,000 |
| TE3-1006-BP | 1006 | 350 | 300 | 400 | 400 | 800 | 800 | 1000 | 900 | PAC J | $36,000 |
| TE3-1250-BP | 1250 | 450 | 350 | 500 | 450 | 1000 | 900 | 1200 | 1000 | PAC J | $44,000 |

**Notes:**

- Data is based on NEC Table 430-150, full-load current three-phase motors.
- Size soft starter based on actual motor nameplate FLA.
- Chassis dimensions are on page 377.
- Accessories are on page 377.

# Low Voltage Solid State Starters

## TE3 Series Dimensions/Weights & Accessories




### TE3 Series - Open Chassis Type

| Model | Dimensions Inches (mm) | | | Approx. Weight lbs. (kg) |
|---|---|---|---|---|
| | H | W | D | |
| TE3-18-BP to TE3-48-BP | 11.16 (283) | 5.62 (143) | 7.25 (184) | 8.8 (4.0) |
| TE3-62-BP to TE3-112-BP | 14.93 (125) | 8.14 (207) | 7.94 (202) | 23 (10) |
| TE3-150-BP to TE3-160-BP | 19.6 (498) | 8.2 (208) | 7.7 (196) | 33 (15) |
| TE3-210-BP | 32 (813) | 12.62 (321) | 10.08 (256) | 130 (59) |
| TE3-275-BP | | | | 140 (64) |
| TE3-361-BP to TE3-450-BP | | | | 145 (66) |
| TE3-550-BP to TE3-600-BP | | | | 165 (75) |
| TE3-862-BP to TE3-900-BP | 43 (1092) | 25.5 (648) | 11.53 (293) | 325 (147) |
| TE3-1006-BP to TE3-1250-BP | 46.56 (1183) | 26.27 (667) | 14.7 (373) | 400 (181) |

## TE3 Series Accessories

### TE3 Series Communication Modules

| Part Number | Description | Model | Discount Symbol | List Price |
|---|---|---|---|---|
| TE-AB6600 | Profibus DPV1 Communications Module | All | PACACC | $1,500 |
| TE-AB6604 | Ethernet/IP Communications Module | All | PACACC | $1,500 |
| TE-AB6610 | Ethernet, PROFINET, EtherCAT, Ethernet/IP, BACnet/IP Communications Module | All | PACACC | $2,900 |

### TE3 Series Remote Keypad Kits

| Part Number | Description | Model | Discount Symbol | List Price |
|---|---|---|---|---|
| TE3-KP-KIT-1 | Type 1, 12 & 4X with 36" Cable | All | PACACC | $320 |
| TE3-KP-KIT-2 | Type 1, 12 & 4X with 72" Cable | All | PACACC | $380 |
| TE3-KP-KIT-3 | Type 1, 12 & 4X with 108" Cable | All | PACACC | $420 |

### TE3 Series Lug Kits

| Part Number | Description | Model | Discount Symbol | List Price |
|---|---|---|---|---|
| 71-0228 | #14-#4 (1/ph, Line & Load) | TE3-18 to TE3-48 | PACACC | $120 |
| 71-0229 | #14-1/0 (1/ph, Line & Load) | TE3-62 to TE3-112 | PACACC | $180 |
| 71-0230 | #14-3/0 (1/ph, Line & Load) | TE3-150 to TE3-160 | PACACC | $360 |
| 71-0231 | #6-250MCM (2/ph, Line & Load) | TE3-210 to TE3-361 | PACACC | $500 |
| 71-0232 | #6-500MCM (2/ph, Line & Load) | TE3-450 to TE3-600 | PACACC | $700 |
| 71-0251 | #6-600MCM (3/ph, Line & Load) | TE3-862 to TE3-900 | PACACC | $1,800 |
| 71-0252 | #6-600MCM (4/ph, Line & Load) | TE3-1006 to TE3-1250 | PACACC | $2,000 |

Notes:
- Remote keypad kit includes gasket and cable. Existing TE3 keypad is to be used for door-mounting.
- TE3 open chassis units do not come with lugs.

# Low Voltage Solid State Starters
## TE2 Series

Toshiba's TE2 low voltage motor starter series is designed to deliver exceptional performance while saving space, time, and costs. Its innovative design provides stepless soft starting for three-phase AC induction motors, effectively protecting mechanical components from excessive torque stress, and shielding electrical systems from high inrush currents. The Pump-Flex Deceleration Control feature prevents equipment damage from abrupt stops, making the TE2 ideal for applications such as pumps, fans, blowers, and conveyors.

### Product Scope

18 to 1250 A
200 to 600 V

### Highlights

- 3-Phase Voltage Metering
- Power Factor Indications and Protections
- 4 - 20 mA Analog Output
- Built-In Bypass Contactor
- Communications: RS485 Modbus RTU
- Advanced Motor Protection
- Narrow Width for Motor Control Center (MCC) Mounting
- Remote Keypad Mounting
- Pull-Apart Control Terminals for Easy Assembly & Wiring
- Smooth, Stepless Soft Start
  - Voltage Ramp Start: 1 to 120 Seconds
  - Initial Voltage: 0 to 100%
- Soft Stop
  - Stop Voltage: 0 to 100%
- Deceleration/Pump Control
- Current Limit: 200 to 600%
- Overload Capacity: 500% for 60 Seconds
- Undercurrent
- Overcurrent
- Jog Mode
- Three Programmable Output Relays
- Two-Wire or Three-Wire Control Standard
- 120 Vac Control Voltage

### Standard Features

- UL Listed in US & Canada
- Four-Digit EOI Display
- Start & Run Protection
- Residual Ground Fault
- Retentive Thermal Memory
- Overload Reset: Manual or Automatic
- Phase Loss (Single-Phase)/Imbalance (5 to 30%)
- Electronic Overload
- Shorted SCR
- Shorted Load
- Over-Temperature



# Low Voltage Solid State Starters

## TE2 Series Pricing




### TE2 Solid State Starter Pricing — Open Chassis Type

| Model Number | Max. Amps | Nominal Motor Rating 50/60 Hz | | | | | | | | Discount Symbol | List Price |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 208 V/HP | | 230 V/HP | | 460 V/HP | | 575 V/HP | | | |
| | | Shunt Bypass | Start Bypass | Shunt Bypass | Start Bypass | Shunt Bypass | Start Bypass | Shunt Bypass | Start Bypass | | |
| TE2-18-BP | 18 | 5 | 3 | 5 | 5 | 10 | 10 | 15 | 10 | PAC J | $3,300 |
| TE2-28-BP | 28 | 7.5 | 7.5 | 7.5 | 7.5 | 20 | 15 | 25 | 20 | PAC J | $3,400 |
| TE2-39-BP | 39 | 10 | 10 | 10 | 10 | 25 | 25 | 30 | 30 | PAC J | $3,500 |
| TE2-48-BP | 48 | 15 | 10 | 15 | 15 | 30 | 30 | 40 | 30 | PAC J | $3,700 |
| TE2-62-BP | 62 | 20 | 15 | 20 | 20 | 40 | 40 | 60 | 50 | PAC J | $4,480 |
| TE2-78-BP | 78 | 25 | 20 | 25 | 25 | 60 | 50 | 75 | 60 | PAC J | $4,600 |
| TE2-92-BP | 92 | 30 | 25 | 30 | 30 | 60 | 60 | 75 | 75 | PAC J | $5,200 |
| TE2-112-BP | 112 | 30 | 30 | 40 | 30 | 75 | 75 | 100 | 75 | PAC J | $5,400 |
| TE2-150-BP | 150 | 40 | 40 | 50 | 50 | 100 | 100 | 125 | - | PAC J | $5,800 |
| TE2-160-BP | 160 | 50 | 40 | 60 | 50 | 125 | 100 | 150 | - | PAC J | $6,340 |
| TE2-210-BP | 210 | 60 | 60 | 75 | 60 | 150 | 150 | 200 | 150 | PAC J | $9,000 |
| TE2-275-BP | 275 | 75 | 60 | 100 | 75 | 200 | 150 | 200 | 150 | PAC J | $10,400 |
| TE2-361-BP | 361 | 125 | 75 | 125 | 125 | 300 | 250 | 350 | 300 | PAC J | $11,020 |
| TE2-450-BP | 450 | 150 | 125 | 150 | 150 | 350 | 300 | 450 | 300 | PAC J | $12,140 |
| TE2-550-BP | 550 | 150 | 150 | 200 | 200 | 450 | 400 | 500 | 500 | PAC J | $15,200 |
| TE2-600-BP | 600 | 200 | 200 | 200 | 200 | 500 | 500 | 600 | 600 | PAC J | $16,900 |
| TE2-862-BP | 862 | 250 | 250 | 300 | 300 | 600 | 500 | 700 | 600 | PAC J | $21,380 |
| TE2-900-BP | 900 | 300 | 250 | 350 | 300 | 700 | 600 | 900 | 600 | PAC J | $23,360 |
| TE2-1006-BP | 1006 | 350 | 300 | 400 | 400 | 800 | 800 | 1000 | 900 | PAC J | $38,000 |
| TE2-1250-BP | 1250 | 450 | 350 | 500 | 450 | 1000 | 900 | 1200 | 1000 | PAC J | $44,500 |

**Notes:**

- Data is based on NEC Table 430-150, full-load current three-phase motors.
- Size soft starter based on actual motor nameplate FLA.
- Chassis dimensions are on page 382.
- Accessories are on page 383.

# Low Voltage Solid State Starters

## TE-H Series

The TE-H Series from Toshiba is a versatile and robust solution for industrial applications. It combines the performance of Toshiba's TE2 Series Solid State Starter within a heavy-duty enclosure, which provides reliable soft starting, motor and load protection, and flexible control options. Ready to use right out of the box, the TE-H Series simplifies installation. It is ideal for pumps, fans, blowers, and conveyors with closed-loop torque/current ramping for smooth acceleration and for compressors and chillers with voltage ramping and current limiting for efficient starts in limited power conditions.

### Product Scope

21 to 1080 A
200 to 600 V

### Highlights

- Type 12/4 Enclosure
- Circuit Breaker with Door Operator (Models 45 to 1080)
- Fusible Disconnect Switch with Fuses (Models 21 to 40)
- 65kAIC Rating Standard
  (Models 21 to 600. Models 690 to 1080, consult factory)
- Surge Arrestor
- Built-In Full Rated Bypass Contactor
- Communications: RS485 Modbus RTU



TE-H Smart Door

### Standard Features

- Includes TE2 Series SSS
- UL Listed in US & Canada
- Four-Digit EOI Display
- 120 V Control Voltage (CPT Included)
- Smart Door
  - Door Mounted Keypad
  - Emergency Stop Button
  - Local/Off/Remote Switch
  - Start/Stop Button




### Options See page 382

- Soft Start or Across-the-Line Switch
- Communications: EtherNet®, DeviceNet®, Profibus®, DP, PROFINET®
- Enclosure Space Heater & Thermostat
- RTD Monitor/Relay (12 RTD Inputs)
- Type 4X Stainless Steel Enclosure (Consult Factory)
- Floor Stand (Frame 2 Only)

# Low Voltage Solid State Starters

## TE-H Series Pricing



### TE-H Heavy Duty Combination Type

| Model Number | Max. Amps (1.00 SF) | Max. Amps (1.15 SF) | Nominal Motor HP Rating | | | | Maximum KW Rating | | | Discount Symbol | List Price | Enclosure Frame Size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 200 V/HP | 230 V/HP | 460 V/HP | 575 V/HP | 220 V/KW | 380 V/KW | 415 V/KW | | | |
| TE-H-21-CB-* | 28 | 24 | 7.5 | 7.5 | 10 to 15 | 15 to 20 | 5.5 | 11 | 11 | PAC I | $6,200 | 1 |
| TE-H-27-CB-* | 39 | 33 | 10 | 10 | 20 to 25 | 25 to 30 | 7.5 | 15 | 15 | PAC I | $6,300 | 1 |
| TE-H-40-CB-* | 48 | 41 | 10 | 15 | 30 | 30 | 11 | 18.5 | 18.5 | PAC I | $6,400 | 1 |
| TE-H-45-CB-* | 62 | 53 | 15 | 20 | 40 | 40 to 50 | 15 | 30 | 30 | PAC I | $6,500 | 1 |
| TE-H-55-CB-* | 78 | 67 | 20 | 25 | 50 | 60 | 18.5 | 37 | 30 | PAC I | $7,600 | 1 |
| TE-H-68-CB-* | 92 | 80 | 25 | 30 | 60 | - | 22 | 45 | 37 | PAC I | $8,200 | 1 |
| TE-H-96-CB-* | 112 | 97 | 30 | 30 | 75 | 75 | 30 | 55 | 60 | PAC I | $8,700 | 1 |
| TE-H-125-CB-* | 160 | 139 | 40 | 40 to 50 | 100 | - | 45 | 75 | 75 | PAC I | $9,200 | 1 |
| TE-H-156-CB-* | 210 | 182 | 50 to 60 | 60 | 125 to 150 | 100 to 150 | 55 | 90 | 90 | PAC I | $11,000 | 2 |
| TE-H-220-CB-* | 275 | 239 | 60 | 75 | 150 | 150 | 55 | 110 | 132 | PAC I | $12,500 | 2 |
| TE-H-248-CB-* | 361 | 313 | 75 to 100 | 100 to 125 | 200 to 250 | 200 to 300 | 75 | 132 | 132 | PAC I | $17,600 | 2 |
| TE-H-400-CB-* | 450 | 391 | 125 | 150 | 300 | 300 | - | 200 | 250 | PAC I | $21,000 | 2 |
| TE-H-480-CB-* | 550 | 478 | 150 | 200 | 400 | 350 to 500 | - | - | - | PAC I | $23,500 | 2 |
| TE-H-600-CB-*# | 600 | - | 150 | 250 | 500 | 600 | - | - | - | PAC I | $30,000 | 2 |
| TE-H-690-CB-* | 862 | 749 | 250 | 250 | 500 | 600 | - | 355 | 400 | PAC I | $32,000 | 2.5 |
| TE-H-800-CB-* | 900 | 782 | 250 | 300 | 600 | 600 | - | 450 | 500 | PAC I | $34,000 | 2.5 |
| TE-H-960-CB-* | 1006 | 874 | 300 | 350 to 400 | 700 to 800 | 700 to 900 | - | 475 | 500 | PAC I | $49,000 | 3 |
| TE-H-1080-CB-* | 1250 | 1087 | 350 | 450 | 900 | 1000 | - | 565 | 600 | PAC I | $56,000 | 3 |

**Notes:**

# - TE-H-600 is 1.0 S.F. rated. Use 690 model if 1.15 S.F. is required.

* - Replace with Line and Control Voltage code listed below:

1 = 208 V, 120 V Ctrl, 50/60 Hz
2 = 230 V, 120 V Ctrl, 50/60 Hz
3 = 380 V, 120 V Ctrl, 50/60 Hz
4 = 460 V, 120 V Ctrl, 50/60 Hz
5 = 575 V, 120 V Ctrl, 50/60 Hz
6 = 415 V, 120 V Ctrl, 50/60 Hz

# Low Voltage Solid State Starters

## TE2 & TE-H Series Dimensions/Weights/Factory Modifications

### TE2 Series — Open Chassis Type

| Model | Open-Chassis Type | | | |
|---|---|---|---|---|
| | Dimensions (in.) | | | Approx. Weight lbs. (kg) |
| | H | W | D | |
| TE2-18-BP to TE2-48-BP | 8.75 (216) | 8.00 (203) | 6.66 (169) | 13 (5.9) |
| TE2-62-BP to TE2-112-BP | 14.00 (355.6) | 8.00 (203) | 6.68 (170) | 23 (10.4) |
| TE2-150-BP to TE2-160-BP | 19.21 (487.9) | 8.00 (203) | 6.68 (170) | 33 (15) |
| TE2-210-BP | 28.50 (712.4) | 12.50 (317.5) | 9.04 (223) | 130 (59) |
| TE2-275-BP | | | | 140 (63.5) |
| TE2-361-BP to TE2-450-BP | | | | 145 (65.8) |
| TE2-550-BP to TE2-600-BP | 32.03 (813.6) | 12.50 (317.5) | 9.87 (250.7) | 165 (74.8) |
| TE2-862-BP to TE2-900-BP | 44.13 (1120) | 25.5 (647.7) | 11.86 (301) | 315 (143) |
| TE2-1006-BP | 46.56 (1182) | 28.2 (716) | 13.00 (330) | 550 (250) |
| TE2-1250-BP | 46.56 (1182) | 28.2 (716) | 13.00 (330) | 750 (340) |

### TE-H & TE-B Series

| Frame Size | Enclosure | H | W | D | Rating |
|---|---|---|---|---|---|
| | | Dimensions (in.) | | | |
| 1 | Wall Mount | 37 | 15 | 12 | N4/12 |
| 2 | Wall Mount | 48 | 33 | 16 | N4/12 |
| 2.5 | Floor Standing | 87 | 32 | 24 | N4/12 |
| 3 | Floor Standing | 90 | 39.5 | 24 | N4/12 |

### TE-H & TE-B Series Factory Installed Modifications

| Option Code | Modification Description | Discount Symbol | List Price |
|---|---|---|---|
| RX | Emergency Bypass - Door-Mounted SS/ATL Switch with Solid State Overload Relay | PAC I | $3,000 |
| H | Heater with Thermostat | PAC I | $1,800 |
| RTD | TE-RTD12 RTD Monitor/Relay - Includes Door-Mounted Keypad/Display | PAC I | $6,000 |
| N4X | Type 4X Stainless Steel Enclosure | PAC I | CF |
| REV | Reversing Contactors (Interlocked) | PAC I | CF |

| Communications Option Code | Modification Description | Discount Symbol | List Price |
|---|---|---|---|
| XVS1 | Provides Modbus RTU over EtherNet® (Modbus TCP) & Internet (TCP/IP) over EtherNet | PACCFG | $7.000 |
| XVS2 | Provides Modbus RTU over EtherNet (Modbus TCP) | PACCFG | $5,500 |
| CO | Provides CAN Open® Communications | PACCFG | $7,500 |
| DN | Provides DeviceNet® Communications | PACCFG | $7,000 |
| EI | Provides EtherNet/IP® Communications | PACCFG | $7,500 |
| IB | Provides interbus Communications | PACCFG | $7,500 |
| PN | Provides PROFINET® Communications | PACCFG | $7,500 |
| EC | Provides EtherCAT® Communications | PACCFG | $7,500 |

# Low Voltage Solid State Starters
## TE2 Series Accessories




### TE2 Series Accessories

| Part Number | Description | Model | Discount Symbol | List Price |
|---|---|---|---|---|
| TE-KP12-KIT2-1 | Remote Display Kit - Type 1, 12 & 4X with 1-Meter Cable | TE2-18 to TE2-48 | PACACC | $600 |
| TE-KP12-KIT2-2 | Remote Display Kit - Type 1, 12 & 4X with 2-Meter Cable | | PACACC | $700 |
| TE-KP12-KIT2-3 | Remote Display Kit - Type 1, 12 & 4X with 3-Meter Cable | | PACACC | $800 |
| TE-KP12-KIT-1 | Remote Display Kit - Type 1, 12 & 4X with 1-Meter Cable | TE2-62 & above | PACACC | $600 |
| TE-KP12-KIT-2 | Remote Display Kit - Type 1, 12 & 4X with 2-Meter Cable | | PACACC | $700 |
| TE-KP12-KIT-3 | Remote Display Kit - Type 1, 12 & 4X with 3-Meter Cable | | PACACC | $800 |
| 66-0103B | Floor Stand Kit for Enclosure Frame Size 2 (Adds 18" to Height) | TE-H-156 to 600 | PACACC | $2,000 |

**Notes:**
- Remote display cable assembly includes connectors on each end.
- TE2 open chassis units do not come with lugs. Soft starters up to 60A rating are provided with terminal bus tabs as standard.

| Lug Kits Part Number | Wire Size | Model | Discount Symbol | List Price |
|---|---|---|---|---|
| 71-0228 | #14-#4 (1/ph, Line & Load) | TE2-18 to TE2-48 | PACACC | $120 |
| 71-0229 | #14-1/0 (1/ph, Line & Load) | TE2-62 to TE2-112 | PACACC | $180 |
| 71-0230 | #14-3/0 (1/ph, Line & Load) | TE2-150 to TE2-160 | PACACC | $360 |
| 71-0231 | #6-250MCM (2/ph, Line & Load) | TE2-210 to TE2-361 | PACACC | $500 |
| 71-0232 | #6-500MCM (2/ph, Line & Load) | TE2-450 to TE2-600 | PACACC | $700 |
| 71-0251 | #6-600MCM (3/ph, Line & Load) | TE2-862 to TE2-900 | PACACC | $1,800 |
| 71-0252 | #6-600MCM (4/ph, Line & Load) | TE2-1006 to TE2-1250 | PACACC | $2,000 |

### Protection Relays

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| RX-5 | Solid State Motor Protection Relay w/Residual Ground Fault Protection  | PACACC | $1,600 |
| RX-ZCT | RX-5 Ground Fault Board for Use w/Zero-Sequence CT | PACACC | $1,500 |
| RX-KP4-KIT-2 | Remote Display Kit for RX-5 Relay - Type 1, 12 & 4X w/2-Meter Cable  | PACACC | $600 |
| TE-RTD12 | 12-Channel Motor RTD Monitor w/Differential Protection  | PACACC | $3,400 |
| TE-RTD12-C | 12-Channel Motor RTD Monitor w/Conformal Coating | PACACC | $4,000 |
| TE-RTD-KP12-KIT-3 | Remote Display Kit for TE-RTD12 Relay - Type 1, 12 & 4X w/3-Meter Cable | PACACC | $700 |

# Low Voltage Solid State Starters
# Touchscreen Panel

Intelligent Color Touchscreen Interface



Touchscreen, showing RX Relay display in English.

## Product Scope

Combines multiple relays into one unified interface
Can be used on various starter series
Simplifies setup using a single touchscreen
Plain text interaction in any of the 8 supported languages

## Highlights

- Type 1, 12 & 4X Rated
- One HMI for Multiple Products
  - TE2 Low Voltage Solid State Starter
  - RX Solid State Protection Relay
  - TE-RTD12 RTD Monitor/Relay
  - JKSSS Medium Voltage Solid State Starter
- Multiple Language Support (Additional Languages Coming)

| **Medium Voltage:** | **Low Voltage:** |
|---|---|
| - English | - English |
| - Russian | - Russian |
| - Chinese | - Chinese |
| - Spanish | - Spanish |
| - German | - German |
| - French | - Polish |



Touchscreen, showing RX Relay display in Spanish.

| Part Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| TE2-HMI | For TE2 Series (Low Voltage Solid State Starter) | PACACC | $2,100 |
| JKSSS-HMI | For JKSSS (Medium Voltage Solid State Starter) | PACACC | $2,100 |




Touchscreen showing TE-RTD Relay with all 12 RTD temperatures.

# Low Voltage Solid State Starters
## TE-B Series

The Toshiba TE-B Series is an exceptional solution for industrial applications, designed to provide reliable and efficient motor control. Offering smooth, soft starting capabilities reduces mechanical stress on motors and equipment, significantly extending their lifespan. It safeguards machinery against potential damage with advanced motor and load protection features, providing continuous and safe operation. Flexible control options and ready-to-use right out of the box makes the TE-B Series an optimal choice for industries seeking performance and value.

### Product Scope

21 to 600 A
200 to 600 V

### Highlights

- Basic Model
- Uses TE2 Chassis
- Type 12/4 Enclosure
- Start Rated Bypass Contactor
- Available in Fused Disconnect, Circuit Breaker, or Main Lug Only Models
- Includes Control Power Transformer (120 Vac)
- Includes Basic Door Mounted Controls
  - Illuminated E-Stop Pushbutton
  - Local/Off/Remote Selector Switch
  - Start/Stop Pushbuttons (Operates in Hand Mode)
  - Run Pilot Light (Operates in Hand and Remote Modes)
  - Power On Pilot Light
  - Reset Fault Light/Reset Pushbutton
- Includes I/O Board for End User Connections
- Communications: RS485 Modbus RTU
- Surge Device Installed
- 65 kA Rated Units Available. Consult Factory




### Options See page 382

- Communications: EtherNet®, DeviceNet®, Profibus®, DP, PROFINET®
- Enclosure Space Heater & Thermostat
- RTD Monitor/Relay (12 RTD Inputs)
- Type 4X Stainless Steel Enclosure (Consult Factory)
- Floor Stand (Frame 2 Only)
- Touchscreen Keypad

# Low Voltage Solid State Starters

## TE-B Series Pricing



### TE-B Heavy Duty Combination Type

| Combination Type Model Number | Max. Amps (1.00 SF) | Max. Amps (1.15 SF) | Nominal Motor HP Rating | | | | Maximum KW Rating | | | Discount Symbol | List Price | Enclosure Frame Size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 200 V/HP | 230 V/HP | 460 V/HP | 575 V/HP | 220 V/KW | 380 V/KW | 415 V/KW | | | |
| TE-B-21-FS-* | 28 | 24 | 7.5 | 7.5 | 10 to 15 | 15 to 20 | 5.5 | 11 | 11 | PAC I | $5,700 | 1 |
| TE-B-27-FS-* | 39 | 33 | 10 | 10 | 20 to 25 | 25 to 30 | 7.5 | 15 | 15 | PAC I | $5,800 | 1 |
| TE-B-40-FS-* | 48 | 41 | 10 | 15 | 30 | 30 | 11 | 18.5 | 18.5 | PAC I | $6,100 | 1 |
| TE-B-45-CB-* | 62 | 53 | 15 | 20 | 40 | 40 to 50 | 15 | 30 | 30 | PAC I | $6,300 | 1 |
| TE-B-55-CB-* | 78 | 67 | 20 | 25 | 50 | 60 | 18.5 | 37 | 30 | PAC I | $6,800 | 1 |
| TE-B-68-CB-* | 92 | 80 | 25 | 30 | 60 | - | 22 | 45 | 37 | PAC I | $7,000 | 1 |
| TE-B-96-CB-* | 112 | 97 | 30 | 30 | 75 | 75 | 30 | 55 | 60 | PAC I | $7,300 | 1 |
| TE-B-125-CB-* | 160 | 139 | 40 | 40 to 50 | 100 | - | 45 | 75 | 75 | PAC I | $7,800 | 1 |
| TE-B-156-CB-* | 210 | 182 | 50 to 60 | 60 | 125 to 150 | 100 to 150 | 55 | 90 | 90 | PAC I | $10,500 | 2 |
| TE-B-220-CB-* | 275 | 239 | 60 | 75 | 150 | 150 | 55 | 110 | 132 | PAC I | $11,300 | 2 |
| TE-B-248-CB-* | 361 | 313 | 75 to 100 | 100 to 125 | 200 to 250 | 200 to 300 | 75.0 | 132 | 132 | PAC I | $12,500 | 2 |
| TE-B-400-CB-* | 450 | 391 | 125 | 150 | 300 | 300 | - | 200.0 | 250.0 | PAC I | $18,200 | 2 |
| TE-B-480-CB-* | 450 | 391 | 150 | 200 | 400 | 350 to 500 | - | - | - | PAC I | $21,200 | 2 |
| TE-B-600-CB-*# | 550 | - | 150 | 250 | 500 | 600 | - | - | - | PAC I | $27,500 | 2 |

**Notes:**
"FS" = Fused Disconnect Switch w/Fuse, "CB" = Circuit Breaker.

### TE-B Heavy Duty Non-Combination Type

| Combination Type Model Number | Max. Amps (1.00 SF) | Max. Amps (1.15 SF) | Nominal Motor HP Rating | | | | Maximum KW Rating | | | Discount Symbol | List Price | Enclosure Frame Size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 200 V/HP | 230 V/HP | 460 V/HP | 575 V/HP | 220 V/KW | 380 V/KW | 415 V/KW | | | |
| TE-B-21-MLO-* | 28 | 24 | 7.5 | 7.5 | 10 to 15 | 15 to 20 | 5.5 | 11 | 11 | PAC I | $5,500 | 1 |
| TE-B-27-MLO-* | 39 | 33 | 10 | 10 | 20 to 25 | 25 to 30 | 7.5 | 15 | 15 | PAC I | $5,580 | 1 |
| TE-B-40-MLO-* | 48 | 41 | 10 | 15 | 30 | 30 | 11 | 18.5 | 18.5 | PAC I | $5,640 | 1 |
| TE-B-45-MLO-* | 62 | 53 | 15 | 20 | 40 | 40 to 50 | 15 | 30 | 30 | PAC I | $5,820 | 1 |
| TE-B-55-MLO-* | 78 | 67 | 20 | 25 | 50 | 60 | 18.5 | 37 | 30 | PAC I | $6,460 | 1 |
| TE-B-68-MLO-* | 92 | 80 | 25 | 30 | 60 | - | 22 | 45 | 37 | PAC I | $6,540 | 1 |
| TE-B-96-MLO-* | 112 | 97 | 30 | 30 | 75 | 75 | 30 | 55 | 60 | PAC I | $6,700 | 1 |
| TE-B-125-MLO-* | 160 | 139 | 40 | 40 to 50 | 100 | - | 45 | 75 | 75 | PAC I | $6,780 | 1 |
| TE-B-156-MLO-* | 210 | 182 | 50 to 60 | 60 | 125 to 150 | 100 to 150 | 55 | 90 | 90 | PAC I | $9,960 | 2 |
| TE-B-220-MLO-* | 275 | 239 | 60 | 75 | 150 | 150 | 55 | 110 | 132 | PAC I | $10,800 | 2 |
| TE-B-248-MLO-* | 361 | 313 | 75 to 100 | 100 to 125 | 200 to 250 | 200 to 300 | 75.0 | 132 | 132 | PAC I | $11,000 | 2 |
| TE-B-400-MLO-* | 450 | 391 | 125 | 150 | 300 | 300 | - | 200.0 | 250.0 | PAC I | $15,500 | 2 |
| TE-B-480-MLO-* | 450 | 391 | 150 | 200 | 400 | 350 to 500 | - | - | - | PAC I | $16,500 | 2 |
| TE-B-600-MLO-*# | 550 | - | 150 | 250 | 500 | 600 | - | - | - | PAC I | $18,500 | 2 |

**Notes:**
"MLO" = Main Lug Only (No Disconnect) Available Options - See Page 382.
# TE-B-600 is 1.0 S.F. rated. Use TE-H-690 model if 1.15 S.F. is required.

* Replace with Line and Control Voltage code listed below:
1 = 208 V, 120 V Ctrl, 50/60 Hz
2 = 230 V, 120 V Ctrl, 50/60 Hz
3 = 380 V, 120 V Ctrl, 50/60 Hz
4 = 460 V, 120 V Ctrl, 50/60 Hz
5 = 575 V, 120 V Ctrl, 50/60 Hz
6 = 415 V, 120 V Ctrl, 50/60 Hz

# Vacuum Circuit Breakers
## VK/HVK Series

The VK and HVK Series circuit breakers combine Toshiba's quality and state-of-the-art vacuum technology to provide full range of voltages and interrupting ratings with the highest reliability and service for worldwide applications.

### Product Scope

5 to 15 KV
1200, 2000 & 3000 A
250 to 1000 MVA

### Highlights

- VK & HVK Series
- Compact & Lightweight
- Available In:
  - Fixed Style
  - Drawout Style
  - Manual Operated
  - Motor Operated
- Designed for Safety with Electrical & Mechanical Interlocks
- Excellent Breaking Performance
- Minimized Maintenance & Inspection
- Front-Mounted with Circuit Control Components on Printed Circuit Board

### Standard Features

- Meets or Exceeds ANSI® Standard
- Rugged & Simple Primary Disconnects
- Heavy Duty Auxiliary Contacts
- High-Tech Control Circuit Board
- Rugged Steel Frame
- Heavy Duty & Glass Polyester High-Performance Insulation Barrier



# Vacuum Circuit Breakers

## VK/HVK Series

## Specifications



### Rating & Specifications with Voltage Range Factor K=1.0

### (Symmetrical Current Rating Basis, ANSI C37.06-1997)

| Identification | | | | Insulation Level | | Current | | |
|---|---|---|---|---|---|---|---|---|
| Model Number | Nominal RMS Voltage Class (KV) | Max. RMS Volts | Nominal Three-Phase Class MVA | Rated Low Freq. Withstand (KV, RMS) | Rated Impulse Withstand Voltage (KV, CREST) | Cont. Current Rating (A, RMS) | RMS Short Circuit Current (KA, RMS) | Close & Latch Capability (KA, PEAK) |
| HVK-6M32A | 4.16 | 4.76 | 250 | 19 | 60 | 1200 | 29 | 58 |
| HVK-6P32A | 4.16 | 4.76 | 250 | 19 | 60 | 2000 | 29 | 58 |
| HVK-6M40A | 4.16 | 4.76 | 350 | 19 | 60 | 1200 | 41 | 66 |
| HVK-6P40A | 4.16 | 4.76 | 350 | 19 | 60 | 2000 | 41 | 66 |
| VK-6M50 | 4.16 | 4.76 | 350 | 19 | 60 | 1200 | 41 | 78 |
| VK-6P50 | 4.16 | 4.76 | 350 | 19 | 60 | 2000 | 41 | 78 |
| VK-6Q50 | 4.16 | 4.76 | 350 | 19 | 60 | 3000 | 41 | 78 |
| HVK-8M40A | 7.2 | 8.25 | 500 | 36 | 95 | 1200 | 33 | 66 |
| HVK-8P40A | 7.2 | 8.25 | 500 | 36 | 95 | 2000 | 33 | 66 |
| HVK-10M25A2 | 13.8 | 15 | 500 | 36 | 95 | 1200 | 18 | 37 |
| HVK-10P25A2 | 13.8 | 15 | 500 | 36 | 95 | 2000 | 18 | 37 |
| HVK-10M40A | 13.8 | 15 | 1000 | 36 | 95 | 1200 | 37 | 59 |
| HVK-10P40A | 13.8 | 15 | 1000 | 36 | 95 | 2000 | 37 | 59 |
| VK-10M50 | 13.8 | 15 | 1000 | 36 | 95 | 1200 | 37 | 77 |
| VK-10P50 | 13.8 | 15 | 1000 | 36 | 95 | 2000 | 37 | 77 |
| VK-10Q50 | 13.8 | 15 | 1000 | 36 | 95 | 3000 | 37 | 77 |

**Notes:**

- Maximum voltage for which the breaker is designed and the upper limit of operation are based on ANSI C84.1.
- Rated interrupting time: three cycles (all above breakers).
- Rated permissible tripping delay time: two seconds (all above breakers).

# Vacuum Circuit Breakers

## VK/HVK Series

## Part Numbering Convention



**Ordering Information:** Use the following part numbering convention to configure the breaker when placing your order. For additional factory installed options, add the appropriate option code on the end as in the example below.

Example is a HVK series breaker rated 4.16 KV, 1200 A, 29 KA, Fixed-Type, with 125 VDC Close/Charge/Trip and 120 VAC undervoltage release.

| Example Part Number: | HVK- | 6 | M | 32 | F | V | V | -UV |
|---|---|---|---|---|---|---|---|---|

**Series**

**Voltage Class:**
6 — 4.2 KV
8 — 7.2 KV
10 — 15 KV

**Continuous Amps:**
M — 1200 A
P — 2000 A
Q — 3000 A

**Interrupting Capability:**
25 — 18 KA
32 — 29 KA
40 — 28 to 41 KA
50 — 37 to 50 KA

**Breaker Configuration:**
- — Drawout
F — Fixed

**Closing/Charging Voltage:**
V — 125 VDC

**Tripping Voltage:**
V — 125 VDC

**Factory Modification:**
N/A — None
UV — Undervoltage

# Vacuum Circuit Breakers

## VK/HVK Series

## Pricing & Factory Modifications



| Model Number | Nominal RMS Voltage Class (KV) | Cont. Current Rating (A, RMS) | Three-Phase Class MVA | RMS Short Circuit Current (KA, RMS) | Discount Symbol | Drawout-Type Breaker List Price | Fixed-Type Breaker List Price |
|---|---|---|---|---|---|---|---|
| HVK-6M32A-VV | 4.16 | 1200 | 250 | 29 | PACVCB | $57,000 | $51,000 |
| HVK-6P32A-VV | 4.16 | 2000 | 250 | 29 | PACVCB | $76,000 | $70,000 |
| HVK-6M40A-VV | 4.16 | 1200 | 350 | 41 | PACVCB | $59,000 | $53,000 |
| HVK-6P40A-VV | 4.16 | 2000 | 350 | 41 | PACVCB | $76,000 | $70,000 |
| VK-6M50-VV | 4.16 | 1200 | 350 | 41 | PACVCB | $122,000 | CF |
| VK-6P50-VV | 4.16 | 2000 | 350 | 41 | PACVCB | $128,000 | CF |
| VK-6Q50-VV | 4.16 | 3000 | 350 | 41 | PACVCB | $145,000 | CF |
| HVK-8M40A-VV | 7.2 | 1200 | 500 | 33 | PACVCB | $59,000 | $53,000 |
| HVK-8P40A-VV | 7.2 | 2000 | 500 | 33 | PACVCB | $76,000 | $70,000 |
| HVK-10M25A2-VV | 13.8 | 1200 | 500 | 18 | PACVCB | $59,000 | $56,000 |
| HVK-10P25A2-VV | 13.8 | 2000 | 500 | 18 | PACVCB | $76,000 | $70,000 |
| HVK-10M40A-VV | 13.8 | 1200 | 1000 | 37 | PACVCB | $59,000 | $53,000 |
| HVK-10P40A-VV | 13.8 | 2000 | 1000 | 37 | PACVCB | $76,000 | $70,000 |
| VK-10M50-VV | 13.8 | 1200 | 1000 | 37 | PACVCB | $122,000 | CF |
| VK-10P50-VV | 13.8 | 2000 | 1000 | 37 | PACVCB | $128,000 | CF |
| VK-10Q50-VV | 13.8 | 3000 | 1000 | 37 | PACVCB | $145,000 | CF |

**Notes:**

- Breakers sold without cells are not for use in applications involving breaker retrofits.
- Racking and charging handles are not included with breaker or cell and must be ordered separately. See breaker accessories.
- CF: Consult Factory.

## VK/HVK Series Breaker Factory Modifications

| Modification | Breaker Series | Code | Discount Symbol | List Price |
|---|---|---|---|---|
| Under Voltage Release (120 VAC) | VK & HVK | UV | PACVCB | $5,000 |
| MOC Rod | VK & HVK | MOC | PACVCB | $8,000 |

# Vacuum Circuit Breakers
## HV6 Series

Toshiba's HV6 series circuit breakers are designed specifically for medium voltage, low-capacity power receiving and transforming facilities. The HV6 series low-surge features and compact size make it ideal for a wide variety of applications, including mobile power centers and portable substations.

### Product Scope

600 A
2300 to 7200 V
12.5 kA

### Highlights

- Compact & Lightweight
- Available In:
  - Fixed Style
  - Drawout Style
  - Manual Operated
  - Motor Operated
- Designed for Safety with Electrical & Mechanical Interlocks
- Excellent Breaking Performance
- Minimized Maintenance & Inspection
- Made in Houston, Texas

### Standard Features

- Front-Mounted Operation Counter
- Conforms to JIS C 4603 & JEC-2300
- Low Surge Interrupters
- Low Chopping-Current
- Multiple Main Terminal Configurations
- Power Terminals Available in Two Directions
  - U-Vertical
  - L-Horizontal



# Vacuum Circuit Breakers

## HV6 Series

## Part Numbering Convention



**Ordering Information:** Use the following part numbering convention to configure the breaker when placing your order. For additional factory installed options, add the appropriate option code on the end as in the example below.

Example is an HV6, fixed-type, motor-operated, with power stabs horizontal, with 125 VDC close/charge/trip.

| HV6CS- | ML | | -V | | V | | | |
|---|---|---|---|---|---|---|---|---|
| Model | Type | | Closing-Coil Volts | | Trip-Coil Volts | | Factory Modification | |
| Version | Code | Configuration/ Operation | Code | Volts | Code | Volts | Code | Mod. |
| HV6CS | U | Fixed/Manual Operation | A | None (Manually Operated) | S | 24/32 VDC | -R | Replaces V16 Series Fixed-Mount Version (Same Faceplate Dimensions) |
| | L | Fixed/Manual Operation | | | V | 125 VDC | | |
| HV6CS | MU | Fixed/Motor Operation | V | 125 VDC | S | 24/32 VDC | -R | Replaces V16 Series Fixed-Mount Version (Same Faceplate Dimensions) |
| | ML | Fixed/Motor Operation | | | | | | |
| | MLD | Drawout/Motor Operation | | | V | 125 VDC | Not Applicable on Drawout Version | |

**Notes:**

- Factory modification "-R" includes a special mounting faceplate on the HV6 so it can replace a V16 without enclosure modification. The front-facing of the HV6 is smaller than the V16. This modification is applicable for the fixed-type models only, if the faceplate was used for mounting or if the face was protruding though the enclosure. This is a no-cost adder.

# Vacuum Circuit Breakers

## HV6 Series
## Specifications & Pricing



| Model Number | | HV6CS-U | HV6CS-L | HV6CS-MU | HV6CS-ML | HV6CS-MLD |
|---|---|---|---|---|---|---|
| Maximum Continuous Current Rating | | 600 A | | | | |
| Rated Voltage | | 2.4 to 7.2 KV | | | | |
| Interrupting Current (0.15 P.F.) | | 12.5 KA (Sym.) | | | | |
| Rated Frequency | | 50/60 Hz | | | | |
| Transient Recovery Voltage | | 0.32 KV/Microsecond at 4.2 KV & Above, Below 0.16 KV/Microsecond | | | | |
| Making Current | | 31.5 KA (Peak) | | | | |
| Short-time Current | | 12.5 KA for 2 Seconds | | | | |
| Interrupting Time | | Less than 3 Cycles | | | | |
| Insulation Level (Basic Impulse Level) | | 60 KV | | | | |
| AC Withstand Voltage | | 22 KV for 1 Minute | | | | |
| Operation Duty | | Open 1 Minute; Closed/Open 3 Minutes; Closed/Open | | | | |
| Mechanical Life | | 10,000 Operations | | | | |
| Load-Switching Life | | 10,000 Operations | | | | |
| Auxiliary Contacts | Form | 2NO-2NC | | | | |
| | Cont. Current | 10 A | | | | |
| | Voltage | 300 V Maximum; 48 V Minimum | | | | |
| | Interrupting | AC: 700 VA at PF 0.35/DC: 60 W at L/R 150 ms | | | | |
| Altitude (Above Derate by ANSI C37.04) | | 3300 ft (1000 m) | | | | |
| Ambient Temperature | | -5° to 40 C° | | | | |
| Installation | | Fixed | | | | Drawout |
| Operation | | Manual Closing | | Motor Spring Closing | | |
| Opening Time | | 30 ms (Typical) | | | | |
| No-Load Closing Time | | - | | 30 ms | | |
| Charging | Voltage/Current | - | | 125 VDC/2.5 A Peak (0.9 A Average) | | |
| Closing | Voltage/Current | - | | 125 VDC/1.1 A | | |
| Tripping | Voltage/Current | 125 VDC/3.0 A | | 125 VDC/4.6 A | | |
| Under Voltage Release | | 0.4 A at 120 VAC (Trip Voltage 24 to 72 VAC) | | | | |
| Weight in lbs. (kg) | | 66 (30) | | 73 (33) | | 99 (45) |
| **Discount Symbol** | | **PACVCB** | **PACVCB** | **PACVCB** | **PACVCB** | **PACVCB** |
| **List Price*** | | $9,000 | $9,400 | $10,000 | $10,000 | $12,000 |

*Add $1,000 to list price for 24 to 32 VDC trip.

# Vacuum Circuit Breakers

## OEM Cell Pricing

| OEM Cell Model Number | Used for Breaker | Cell Weight | Discount Symbol | List Price |
|---|---|---|---|---|
| HKA-10MS-K-X<br>(Provision for Key interlock & Shutter Padlock) | HVK-6M32A<br>HVK-6M40A<br>HVK-8M40A<br>HVK-10M25A2<br>HVK-10M40A | 130 kg.<br>287 lb. | PACVCB | $22,000 |
| HKA-10PS-K-X<br>(Provision for Key Interlock & Shutter Padlock) | HVK-6P32A<br>HVK-6P40A<br>HVK-8P40A<br>HVK-10P25A2<br>HVK-10P40A | 150 kg.<br>330 lb. | PACVCB | $28,000 |
| HKA-10MS1 | VK-6M50<br>VK-10M50<br>VZ-10M50 | 150 kg.<br>330 lb. | PACVCB | $24,000 |
| HKA-10PS1 | VK-6P50<br>VK-10P50<br>VZ-10P50 | 170 kg.<br>380 lb | PACVCB | $29,000 |
| HKA-6QS | VK-6Q50<br>VK-10Q50<br>VZ-10Q50 | 290 kg.<br>640 lb | PACVCB | $50,000 |
| H6A-HLS | HV6CS-MLD | 20 kg.<br>44 lb | PACVCB | $8,000 |

**Notes:**

- For adding a key interlock, the key interlock kit (in breaker accessories) is required. The actual lock is not included with the cell or the interlock kit and must be purchased separately.

# Vacuum Circuit Breakers
## Accessories

| Model Number | Description | Discount Symbol | List Price |
|---|---|---|---|
| CIT-10QA | Capacitor-Trip Device Used for Latched-Type Vacuum Contactor or Vacuum Circuit Breaker when DC Power Not Available.<br>Device Charges from AC Power & Supplies DC Power to Trip-Coil  | PACACC | $2,000 |
| 4A9A8586G001 | AC/DC Control Power Rectifier Converts 120/240 VAC Input to 125/250 VDC to Power Trip-Coil on Latched-Type Vacuum Contactor or Control Power for Vacuum Circuit Breaker  | PACACC | $500 |
| NV60K304T1 | Surge Suppressor; Three-Phase CR Surge Suppressor for 3.3 to 7.2 kV System  | PACACC | $3,700 |
| NV95K304T1 | Surge Suppressor; Three-Phase CR Surge Suppressor for 10 to 15 kV System | PACACC | $9,000 |
| 4D9A2365G001 | Charging Handle for VK & HVK Series | PACACC | $1,000 |
| 4D9A2177G002 | Racking Handle for VK & HVK Series | PACACC | $1,000 |
| 4D9A2283G002 | Key Interlock Kit without Lock for HKA-10MS/PS Cells | PACACC | $1,500 |
| 4D9A2283G003 | Key Interlock Kit without Lock for HKA-10MS1/PS1 Cells | PACACC | $1,500 |
| 4D9A2177G008 | Mechanism Operating Contacts (MOC 6a-6b) Kit for VK & HVK Breakers | PACACC | $2,400 |
| 4D9A2177G012 | Truck Operating Contacts (TOC 6a-6b) Kit for HKA Cells (VK & HVK Breakers) | PACACC | $2,000 |
| L-21CBS | Portable Lifter for HVK Series Breakers | PACACC | $12,000 |
| 5P1B0404P013 | Portable Lifter for VK & VZ Series Breakers | PACACC | $14,000 |
| 5P9A2593P001 | B9 Lubricating Grease (30 g Tube) | 204 | $50 |

# Toshiba Industrial Automation

## COMPREHENSIVE SOLUTIONS FOR OPTIMUM PERFORMANCE

At the core of every Toshiba control system, Toshiba industrial automation provide comprehensive automation solutions, including the V200 Series Micro PLCs, Type 1 Light Series PLCs, and advanced Operator Interface Stations. These systems support a wide range of applications, from simple sequence control to large process automation and automation systems. TIC also offers Operator Interface Stations and Gateway protocol converters to enhance system integration and efficiency.



# Human Machine Interface (HMI)

## OIS PLUS Series

## Pricing

Extensive monitoring and operation functions ensure an advanced operation environment. Monitoring screens have a hierarchical (or top-down) design where the user starts from higher-level screens and moves to the screens lower in the hierarchy to find the information to be monitored. Related data can be quickly displayed. Multiple monitoring screens are linked for display purposes so that information can be monitored and analyzed from several perspectives.

### Operator Interface Stations

| Part Number | Description | List Price |
|---|---|---|
| OIS451E PLUS | 4.3" TFT 480 x 272 WQVGA Color Touchscreen, Ethernet Port, IEC61131-3, Accepts 1 Clip-on I/O modules, 1x micro SDHC, Built-in Webserver, 24 VDC PS | $600 |
| OIS701E PLUS | 7" TFT WVGA 800 x480 Color Touchscreen, Ethernet Port, Alarms & Data Logging, IEC61131-3, Accepts 3 Clip-on I/O Modules, 1x micro SDHC, Built-in Webserver, 24 VDC PS | $850 |
| OIS101E PLUS | 10.1" TFT 1024 x 600 WSVGA Color Touchscreen, Ethernet Port, Alarms & Data Logging, IE61131-3, 1x micro SDHC, Built-in Webserver, 24 VDC PS | $1,160 |
| OIS150A | 15.1" TFT XGA, 1024 x 768 Color Touchscreen, Ethernet Port, IEC61131-3, 1x micro SDHC, Built-in Webserver, 24 VDC PS | $3,100 |

**Notes:**

- For availability of other displays, please contact TIC-Service@toshiba.com



# Human Machine Interface (HMI)

## OIS PLUS Series

## Pricing



### Clip-On I/O — Digital

| Part Number | Description | List Price |
|---|---|---|
| TRPDIO1616P | 16 Inputs, 24 VDC (sink), 2 HS; 16 Outputs PNP; 2 PWN | $230 |
| TRPDIRO1614P | 16 Inputs, 24 VDC (sink), 2 HS; 12 Relay Out, 2 PNP; 2 PWN | $230 |
| TRPDIO0404A0402U | 4 ip 24 VDC (sink/source), 2 HS; 4 op PNP, 2 HS PLS; 4 AI (16 Bits) (selectable) 0-5/10 VDC, 0-50/100mv, 0/4-20mA, RTD, TC; 2 AO (12 Bits) 0/4-20mA, 0-5/10 VDC | $370 |
| TRPDIRO0808A0401U | 8 ip 24 VDC (sink/source), 2 HS; 6 ro, 2 op PNP, 2 HS PLS; 4 AI (16 Bits) (selectable) 0-5/10 VDC, 0-50/100mv, 0/4-20mA, RTD, TC; 1 AO (12 Bits) 4-20mA, 0-10 VDC | $380 |
| TRPDIO1210PA0201L | 12 ip 24 VDC (sink), 2 HS; 10 op PNP, 2 HS PLS; 2 AI (16 Bits) (selectable) 0-5/10 VDC, 0/4-20mA; 1 AO (12 Bits) 4-20mA, 0-10 VDC | $210 |
| TRPDIO1212PA0200L | 12 ip 24 VDC (sink), 2 HS; 12 op PNP, 2 HS PLS; 2 AI (16 Bits) (selectable) 0-5/10 VDC, 0/4-20mA | $190 |

**Notes:**

- For availability of other displays, please contact TIC-Service@toshiba.com

### Cables

| Part Number | Description | List Price |
|---|---|---|
| EC-P-046A-00 | Connects OIS40R/OIS PLUS/GWY to T1/T2E/T3/S2E/S2T RS485 Port, Pigtail on PLC End, 2 m | $35 |
| EC-P-108A-00 | Connects OIS PLUS to G9/P9/AS1 ASDs, RS485, 4W | $35 |
| EC-P-108C-00 | Connects OIS PLUS to VF-nC3/FS1 ASDs, RS485, 2W | $35 |
| RC-P-009H-00 | Connects OIS PLUS/GWY to V200 Series PLC, RS232, 2 m | $35 |
| RC-P-108A-00 | Connects V200 PLC to Toshiba G9/AS1 ASDs, RS485, 4W, 2 m | $35 |
| IBM-0909-1-00 | Programming Cable For Download from Computer to All OIS/OIS PLUS<br>Use with OISetup32 & OIL-DS Setup Software | $35 |

# Programmable Logic Controllers (PLCs)
## V200/V100 Series
## Pricing

Toshiba's V200 series products are micro programmable logic controllers with optional expansion I/O. Impressive communications capabilities, an advanced instruction set, and a large memory (program and data register) make the V200 an ideal fit for applications that previously required larger, more expensive programmable controllers. In addition, the V200's high-speed performance makes it especially suited for sophisticated machine-control and complicated process-control applications.

### CPU Modules

| Part Number | Description | List Price |
|---|---|---|
| GPU234*3S | V200 CPU, 8 Inputs 24 VDC, 8 Output NPN, RS232/485, USB & Ethernet Ports, Supports up to 16 I/O Modules, Requires 24 VDC PS. Remote Programming & Monitoring | $400 |
| GPU115*3S | V100 CPU, 8 Inputs 24 VDC, 6 Outputs Relay, Expandable, Requires 24 VDC PS | $300 |

### Digital I/O Modules

| Part Number | Description | List Price |
|---|---|---|
| GDI216S*S | 16 Digital Inputs, 24 VDC, 8p/com, sink/source | $120 |
| GDD288NL*S | 8 Digital Inputs, 8 NPN Type Outputs | $150 |
| GDD288PL*S | 8 Digital Inputs, 8 PNP Type Outputs | $150 |
| GDR288L*S | 8 Digital Inputs, 24 VDC. 4p/com, 8 Outputs Relay, 4p/com | $150 |
| GDO216NL*S | 16 Outputs, 24 VDC Transistor, 8p/com, NPN | $220 |
| GRO216S*S | 16 Outputs Relay, 8p/com | $230 |

**Notes:**
- For availability of other modules, please contact TIC-Service@toshiba.com



# Programmable Logic Controllers (PLCs)

## V200 Series Pricing



### Analog I/O Modules

| Part Number | Description | List Price |
|---|---|---|
| GAD204**S | 4 Analog Inputs (0-10 VDC / 0-20mA / 4-20 mA ), 16 Bits | $280 |
| GAA244**S | 4 Analog Selectable Inputs, 4-20 ma, 0-10 VDC, 0-50/100 mV, RTD, TC -- 2 Analog Outputs, 4-20 mA, 0-10 VDC, 12 Bits | $360 |
| GDA204L*S | 4 Analog Outputs (0-10 VDC / 4-20mA), 12 Bits | $330 |
| GADA402*S | 4 Linear Inputs (0-10 V) / 4-20mA / 0-20mA), 16 Bits 2 Analog Outputs (0-10 V / 4-20mA / 0-20mA), 12 Bits | $250 |

### Cables

| Part Number | Description | List Price |
|---|---|---|
| RC-P-009I-00 | Connects OIS PLUS/GWY to V200 Series PLC, RS485, 2 m | $35 |
| RC-P-009H-00 | Connects OIS PLUS/GWY to V200 Series PLC, RS232, 2 m | $35 |
| RC-P-108C-00 | Connects V200 PLC to Toshiba VF-nC3/FS1 ASDs, RS485, 2W, 2 m | $35 |
| RC-P-108A-00 | Connects V200 PLC to Toshiba G9/AS1 ASDs, RS485, 4W, 2 m | $35 |

### Programming Software

| Part Number | Description | List Price |
|---|---|---|
| OIL-DS2 v 2.36 | V100, V200 and OIS Software - For use with above PLC's and OIS HMI | FREE |

# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

## Pricing

The type1 light controllers are 2nd generation V2000 CPU modules. The Unified Controller nv seriesTM type1 light controllers are available in a range of options for a variety of industrial and process control applications.

### Type 1 Light-Series Controller Modules

| Part Number | Description | List Price |
|---|---|---|
| HPUM11**S | Sequence Control Module, Standard CPU<br>User Program Capacity 32 kSteps<br>Ports: USB, Ethernet & SD Card Slot<br>Uses V-Tool Programming Software | $2,490 |
| HPUM12**S | Sequence Control Module, High Performance CPU<br>User Program Capacity 64 kSteps Ports:<br>USB, Ethernet & SD Card Slot TC-Net I/O Loop,<br>Optical Network Uses V-Tool Programming Software | $5,640 |
| HPUM14**S | Sequence Control Module, Redundant CPU<br>User Program Capacity 128 kSteps<br>Ports: USB, Ethernet & Tracking Cables<br>TC-Net I/O Loop, Optical Network<br>Uses V-Tool Programming Software | $9,820 |

### Main/Expansion Racks

| Part Number | Description | List Price |
|---|---|---|
| GBU643D*S | Base Rack Four Station Bus Slots<br>1-3I/O Slots Not for PUM11 | $590 |
| GBU648E*S | Base Rack Four Slots (Up to 5 Station Bus Slots)<br>Not for PUM11 | $640 |
| GBU664**S | Base Rack for PUM11 Three I/O Slots<br>No Station Bus Expansion Rack<br>Four I/O Slots | $300 |
| GBU666**S | Base Rack for PUM11 Five I/O Slots<br>No Station Bus Expansion Rack<br>Six I/O Slots | $300 |
| GBU668**S | Base Rack for PUM11 Seven I/O Slots<br>No Station Bus Expansion Rack<br>Eight I/O Slots | $320 |
| GIF661**S | Interface Module for Connecting Expansion Racks | $210 |
| GIF658**S | Duplicate Interface Module for Expansion Unit for PUM14 | $2,110 |

**Notes:**

- For availability of other modules, please contact TIC-Service@toshiba.com



# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

## PLC Pricing



### Power Supplies

| Part Number | Description | List Price |
|---|---|---|
| GPS632**S | 24 VDC Power Supply<br>For Main/Expansion Racks | $530 |
| GPS652**S | 100 to 110 VDC Power Supply<br>For Main/Expansion Racks | $890 |
| GPS693**S | 120/240 VAC Power Supply<br>For Main/Expansion Racks<br>24 VDC Service PS | $360 |
| GPS691**S | 120/240 VAC Power Supply<br>For Main Rack with UPS Interface Connections | $600 |

### Direct I/O Modules — Discrete

| Part Number | Description | List Price |
|---|---|---|
| GIN663**S | AC Input Module<br>16 Points<br>200 to 240 VAC | $340 |
| GIN653**S | AC Input Module<br>16 Points<br>100 to 120 VAC | $340 |
| GDI632D*S | DC Input Module<br>8 Points<br>12 to 24 VDC<br>Isolated Between Points | $320 |
| GDI633**S | DC Input Module<br>16 Points<br>12 to 24 VDC | $210 |
| GDI634**S | DC Input Module<br>32 Points<br>24 VDC | $500 |
| GDI635**S | DC Input Module<br>64 Points<br>24 VDC | $710 |
| GDI635H*S | DC Input Module<br>High Speed<br>64 Points<br>24 VDC | $780 |
| GDI653**S | DC Input Module<br>16 Points<br>100 to 110 VDC<br>0.1A/Point, Sync | $410 |
| GCD633**S | DC Input Module<br>Change Detect<br>16 Points<br>12 to 24 VDC | $710 |

# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

## PLC Pricing



### Direct I/O Modules — Discrete

| Part Number | Description | List Price |
|---|---|---|
| GDO633**S | DC Output Module<br>16 Points, 5 to 24 VDC, 1A/Point<br>Sync (Source Load) | $240 |
| GDO633P*S | DC Output Module<br>16 Points, 5 to 24 VDC, 1A/Point, Source | $220 |
| GDO634**S | DC Output Module<br>32 Points, 5 to 24 VDC, 0.1A/Point<br>Sync | $570 |
| GDO635**S | DC Output Module<br>64 Points, 5 to 24 VDC, 0.1A/Point<br>Sync | $800 |
| GAC663A*S | AC Output Module<br>12 Points, 100 to 240 VAC<br>1A/Point | $360 |
| GRO662S*S | Relay Output Module<br>Eight Points (Isolated)<br>240 VAC/24 VDC (max)<br>2A/Point | $290 |
| GRO663**S | Relay Output Module<br>16 Points, 240 VAC/24 VDC (max), 2A/Point | $320 |

### Direct I/O Modules — Analog

| Part Number | Description | List Price |
|---|---|---|
| GAD634L*S | Analog Input Module<br>Four Channels<br>0 to 10 V Input<br>8-Bit | $390 |
| GAD668**S | Analog Input Module<br>Eight Channels<br>0 to 5 V<br>0 to 20 mA<br>±10 V<br>16-Bit | $1,320 |
| GAD674**S | Analog Input Module<br>Four Channels<br>±10 V Input<br>12-Bit | $800 |
| GAD624**S | Analog Input Module<br>Four Channels<br>1 to 5 VDC/4 to 20 mA<br>12-Bit | $800 |
| GAD638S*S | Analog Input Module<br>Eight Channels (Isolated)<br>±10 V Input<br>12-Bit | $2,380 |
| GAD624L*S | Analog Input Module<br>Four Channels<br>1 to 5 VDC/4 to 20 mA<br>8-Bit | $390 |
| GAD628S*S | Analog Input Module<br>Eight Channels (Isolated)<br>0 to 5 V/0 to 20 mA<br>12-Bit | $2,380 |
| GRT614**S | RTD Input Module<br>Four Channels<br>Pt100 Input<br>12-Bit | $1,430 |

# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

## PLC Pricing



| Part Number | Description | List Price |
|---|---|---|
| GTC618**S | Thermocouple Input Module<br>Eight Channels<br>E, J, K<br>16-Bit | $1,120 |
| GDA672**S | Analog Output Module<br>Two Channels<br>±10 V Output<br>12-Bit | $970 |
| GDA624S*S | Analog Output Module<br>Four Channels (Isolated)<br>0 to 20 mA<br>16-Bit<br>Output Hold Option | $2,720 |
| GDA622L*S | Analog Output Module<br>Two Channels<br>1 to 5 VDC/4 to 20 mA<br>8-Bit | $440 |
| GDA622**S | Analog Output Module<br>Two Channels<br>1 to 5 V/4 to 20 mA<br>8-Bit | $970 |
| GDA664**S | Analog Output Module<br>Four Channels<br>0 to 5 V/0 to 20 mA<br>±10 V<br>16-Bit | $1,260 |

# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

## PLC Pricing



### Cables

| Part Number | Description | List Price |
|---|---|---|
| GCS6R3*CS | Expansion Cable<br>0.3 m Long | $130 |
| GCS6R5*CS | Expansion Cable<br>0.5 m Long | $140 |
| GCS6R7*CS | Expansion Cable<br>0.7 m Long | $130 |
| GCS6*1*CS | Expansion Cable<br>1.2 m Long | $160 |
| GCX701*CS | Tracking Cable, 1m, Standard | $280 |
| HCZ701*CS | 1m Optical Tracking Cable | $300 |
| TKIO20 | Cable for Hi-Density PLC I/O Modules<br>24 VDC<br>One End I/O Connector & Other End Pigtail<br>1/32 pt Module<br>2/64 Module<br>2 m Long | $190 |

### Intelligent I/O Modules

| Part Number | Description | List Price |
|---|---|---|
| GPI632**S | Pulse Input Module<br>Two Channels<br>Up to 50 kpps<br>5/12/24 V Input<br>24-Bit Counter | $1,180 |
| GPI672**S | Pulse Input Module<br>Two Channels<br>Up to 50 kpps<br>RS422 Input<br>24-Bit Counter | $1,060 |

### Network Modules

| Part Number | Description | List Price |
|---|---|---|
| GDN611A*S | DeviceNet® Scanner Module | $1,500 |
| GPF611**S | Profibus DP Master Module | $6,650 |
| GPF612**S | Profibus DP Slave Module | $5,770 |
| GEN651A*S | Ethernet Module<br>Single Bus<br>100 Base-TX | $2,700 |

# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

## PLC Pricing



### Network Peripherals

| Part Number | Description | List Price |
|---|---|---|
| HGA922**S | TC-Net I/O Adapter Connects G2 Racks to TC-Net I/O Loop Allows Use of All G2 I/O Modules | $3,650 |
| HCF622**S | Communication Interface Module | $2,300 |

### Programming

| Part Number | Description | List Price |
|---|---|---|
| HET81E4SS | Engineering Tool; MS Windows® XP or Later<br>Programs All Type 1 Light Series & nV Controllers IEC61131-3 Compliant<br>Single Station Stand Alone Version | $3,420 |
| HET8UE4SS | Free Engineering Tool; MS Windows® XP or Later<br>Programs only the PUM11 CPU IEC61131-3 Compliant<br>Single Station Stand Alone Version | - |
| HET82E4SS | Engineering Tool (Client-server, English version) | $9,310 |

### Parts & Peripherals

| Part Number | Description | List Price |
|---|---|---|
| GPT9R2*AS | Spare Thermistor for TTC218/GTC618 Thermocouple Input Card | $20 |
| GSP691**S | Module<br>Blank with Cover for Custom I/O Card | $80 |
| GSP600*AS | Module<br>Blank | $60 |
| GBT611*AS | Battery<br>Spare for S2/L2 CPU Modules | $100 |
| BTM12 | Battery for processor, Type 1 Light and Type 2 Light | $190 |

**Notes:**

- For availability and pricing of other equipment, please contact TIC-Service@toshiba.com
- For further information, documentation etc. please visit https://www.toshiba.com/tic/plcs

# Agency Approvals

## ISO 9001:2008

**Emblem:** ISO 9001:2008
**Agency:** International Standards Organization
**Requirements:** ISO 9001

## UL Listed

**Emblem:**

**Agency:** Underwriters Laboratories (UL)
**Requirements:** a) Construction in accordance with UL 1004 and 674; covers safe application of XP electric motors for use in classified locations
b) Compliance with UL requirements is documented in Toshiba's UL File - E53559
c) Maintain traceability of product using UL controlled serial numbers on listing labels

## UL Component Recognition

**Emblem:**

**Agency:** Underwriters Laboratories (UL)
**Requirements:** UL 1004 Safety Standard for Electric Motors
**Toshiba File:** E133052

## CSA Safety & Energy Efficiency

**Emblem:**

**Agency:** Canadian Standards Association (CSA)
**Requirements:** CSA Std. C22.2 No. 0, 77, 100, and 145 &390

## NEMA

**Emblem:**

**Agency:** National Electrical Manufacturers Association (NEMA)
**Requirements:** Meets or exceeds efficiency values of NEMA MG-1 (most recent version), Tables 12-12 (LV 60 Hz), 12-13 (MV 60 Hz), and 12-14 (LV 50 Hz) NEMA Premium marking is primarily intended for 60 Hz applications

## U.S. Department of Energy

**Emblem:**

**Agency:** U.S. Department of Energy (DOE)
**Requirements:** Motors whose efficiency levels meet or exceed the values shown in the Code of Federal Regulations - particularly those shown in 10 CFR Part 431 (location of this legislation may change and is subject to the evolving decisions made by the U.S. Department of Energy)
**Toshiba File:** CC027B, CC020A, CC129B

## CSA Safety

**Emblem:**

**Agency:** Canadian Standards Association (CSA)
**Requirements:** CSA Std. C22.2 No. 0, 77, 100, and 145

## CSA Energy Efficiency

**Emblem:**

**Agency:** Canadian Standards Association (CSA)
**Requirements:** CSA Std. C390 Toshiba File: MC 153942 - EEV 79018

**1-800-231-1412**
**www.toshiba.com/tic**

## CONTACT US

| MOTORS, DRIVES, CONTROLS & INDUSTRIAL AUTOMATION | |
|---|---|
| | **EMAIL US** |
| Customer Service & Technical Support | TIC-Service@toshiba.com |

| | **CUSTOMER SERVICE SUPPORT** |
|---|---|
| Motors, Drives, Controls & Industrial Automation | Tel: (855) 803-7091 Option 1<br>Fax: (713) 896-5242 |
| | **TECHNICAL SUPPORT** |
| Medium Voltage Motors | Tel: (855) 803-7091 Option 3 |
| Low Voltage Motors | Tel: (855) 803-7091 Option 2 |
| Medium Voltage Drives | Tel: (855) 803-7090 |
| Low Voltage Drives | Tel: (855) 803-7089 |
| Controls | Tel: (800) 231-1412 Option 5 |
| Instrumentation | Tel: (800) 231-1412 x26723 |
| PLC, Process Control & IoT Solution Pack | Tel: (800) 231-1412 x26755 |
| Field Service:<br>Rapid Response<br>Repair Authorization<br>On Site Service Request<br>Service Training<br>Motor Warranty<br>Motor & Drive Parts<br>TOSHcare | Tel: (855) 803-7092 Option 2 |

# Notes

| | |
|---|---|
| 1 | Non-USMCA Qualified |
| 2 | Drive End Roller Bearing |
| 3 | 1.0 Service Factor |
| 4 | Uni-directional CCW Rotation When Facing Non-Drive End |
| 5 | Uni-directional CW Rotation When Facing Non-Drive End |
| 6 | NEMA Design A |
| 7 | Totally Enclosed Non-Ventilated (TENV) |
| 8 | Ball-Bearing Long Shaft as Standard |
| 9 | Nameplated Dual Frequency 50/60 Hz |
| 10 | Insulated Sleeve Bearings |
| 11 | Insulated Bearing Housing |
| 12 | Copper Bar Rotor |
| 13 | 841 Features May Not Be Fully Compliant |
| 14 | Class F Rise by Resistance at 1.0 Service Factor |
| 15 | Suitable for Vertical Mounting |
| 16 | Non-NEMA "BA" Dimensions |
| 17 | Available Until Stock Depleted |
| 18 | Drilled for Multi-Mount (Appendix C) |
| 19 | Suitable for Variable Torque Operation Only When Used with an ASD |
| 20 | Motor Not Suitable for Operation with an ASD |
| 21 | 1.25 Service Factor |



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