

# 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](http://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

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### 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.



# MOTORS

## Low Voltage Motors

### TEFC General Purpose Motors .....1

EQP Global® SD .....	2
EQP Global® SD C-Face .....	11
EQP Global® SD Top Mount .....	18
EQP Global® 840 .....	21
EQP Global® 840 C-Face.....	29
EQP Global® 841 .....	35
EQP Global® 841 C-Face.....	42
EQP Global® 661 .....	49

### Explosion Proof Motors..... 53

EQP Global® XP, TEFC.....	54
EQP Global® XP C-Face, TEFC.....	58

### IEC Motors ..... 63

EQP Global® IEC, TEFC.....	64
----------------------------	----

### Definite Purpose Motors ..... 69

EQP Global® Close-Coupled Pump JM, TEFC .....	70
EQP Global® Close-Coupled Pump JP, TEFC.....	72
EQP Global® Critical Cooling, TEAO .....	74
EQP Global® Cooling Tower, TEFC & TEAO .....	77
Quarry Duty, TEFC .....	81
EQP Global® Brake Motor, TEFC.....	85

## Low Voltage Modifications

### Stock Modifications..... 91

### Production Price List ..... 104

### Production Modifications..... 106

## Medium Voltage Motors

### Open Enclosure

#### General Purpose Motors ..... 125

Open Drip-Proof.....	126
Weather-Protected Type I .....	128
Weather-Protected Type II.....	132

### Totally Enclosed

#### General Purpose Motors ..... 137

TEFC General Purpose .....	138
TEFC 840 .....	142
TEFC 841 .....	144
High Torque 587 Frame .....	146
Totally Enclosed Air-to-Air Cooled .....	148
Totally Enclosed Water-to-Air Cooled .....	151

## Medium Voltage Modifications

### Production Modifications..... 157

## Motor Appendices

### Appendix A ..... 166

Model Number Breakdown Type 1.....	166
Model Number Breakdown Type 2.....	168

### Appendix B ..... 171

TIPA Service Kits EQP Global® Bearing Brackets ..	171
TIPA Service Kits EQP Global® C Flanges.....	173
TIPA Service Kits EQP Global® D Flanges.....	174
TIPA Service Kits EQP Global® Fan Covers.....	175
TIPA Service Kits EQP Global® Drip Covers.....	176
TIPA Service Kits EQP Global® Terminal Boxes.....	177

### Appendix C ..... 178

Efficiency Tables .....	178
Frame Dimensions.....	179
Frame Mounting.....	180

### Appendix D ..... 181

UL® & CSA® Explosion Proof Classifications.....	181
Inverter Capabilities .....	182
Division 2 Motors .....	183

### Appendix E..... 184

Low Voltage Motor IEC 60034-30	
Standards for Efficiency Classes .....	184

### Appendix F..... 185

IEC Motors - Quick Reference Chart .....	185
--	-----

# ADJUSTABLE SPEED DRIVES

## Low Voltage ASD

<b>AS3 General Purpose .....</b>	<b>189</b>
Power Unit Pricing & Dimensions .....	190
<b>AS3 UL Type 12/IP55 .....</b>	<b>194</b>
Power Unit Pricing & Dimensions .....	195
<b>AS3P Outdoor .....</b>	<b>196</b>
Part Numbering Convention .....	197
Assembly Unit Pricing & Dimensions .....	198
Assembly Unit Options .....	200
AS3 Options Information & Pricing .....	201
<b>S15 Microdrive .....</b>	<b>205</b>
Power Unit Pricing & Dimensions .....	206
Option Information & Pricing .....	207
<b>NC3 Nanodrive.....</b>	<b>211</b>
Power Unit Pricing & Dimensions .....	212
<b>Plus Pack Outdoor.....</b>	<b>213</b>
Part Numbering Convention .....	214
Unit Pricing & Dimensions .....	215
Options Information & Pricing .....	218

## Low Voltage ASD Options

<b>ASD Options .....</b>	<b>221</b>
<b>External Gateway Options.....</b>	<b>222</b>
<b>Configured ASD Options .....</b>	<b>223</b>
<b>Dynamic Braking Resistors.....</b>	<b>226</b>
<b>Reactors &amp; Filters.....</b>	<b>239</b>

## Medium Voltage ASD

<b>T300MV2® General Purpose .....</b>	<b>265</b>
Part Numbering Convention .....	266
Pricing & Dimensions .....	267
<b>T300MV2® General Purpose Frame F7 ...</b>	<b>273</b>
Pricing & Dimensions .....	274
Option Information & Pricing .....	275
Spare Parts Kits .....	286
Heat Loss Data .....	294
<b>MTX2® Outdoor.....</b>	<b>297</b>
Part Numbering Convention .....	298
Pricing & Dimensions .....	299
Option Information & Pricing .....	300
Spare Parts Kits .....	302
<b>MTX® Outdoor .....</b>	<b>303</b>
Part Numbering Convention .....	304
Pricing & Dimensions .....	305
Option Information & Pricing .....	306
Spare Parts Kits .....	310
<b>T300BMV2 General Purpose .....</b>	<b>313</b>
Part Numbering Convention .....	314
Pricing & Dimensions .....	315
Option Information & Pricing .....	316
<b>Regen .....</b>	<b>319</b>
Part Numbering Convention .....	320
Pricing & Dimensions .....	321
Spare Parts Kits .....	322
<b>MV ASD Accessories .....</b>	<b>325</b>
T300MVi® & T300MV2® Lifting Equipment .....	325
BMV2 Lifting Equipment.....	326
Regenerative Drives Lifting Equipment.....	326
MTX2® Lifting Equipment .....	326
Loose Communication Cards .....	327

## ASD Appendices

<b>Appendix A</b> .....	<b>329</b>
Pricing & Delivery .....	329
<b>Appendix B</b> .....	<b>330</b>
Drawing Requests .....	330
<b>Appendix C</b> .....	<b>331</b>
TOSHcare® Adjustable Speed Drive Power Module Reconditioning Program .....	331
TOSHcare® Protection Plans, Including Preventive Maintenance Services .....	331
<b>Appendix D</b> .....	<b>338</b>
Special Testing .....	338
Medium Voltage ASD Related Services .....	339

# CONTROLS

## Medium Voltage Controllers

<b>JK Full Voltage Controllers</b> .....	<b>347</b>
JK400 Series Starters .....	348
JK700 Series Starters .....	349
JK400 & JK700 Series Pricing .....	350
<b>JK Solid State Starters</b> .....	<b>352</b>
JKSSS4 Solid State Starters .....	353
JKSSS7 Solid State Starters .....	354
JK Solid State Starter Series Pricing .....	355
<b>JK Series Part Numbering Convention</b> .	<b>356</b>
JK Series Factory-Installed Modifications .....	357
JK Series Accessories .....	360
<b>Arc-Resistant JK Motor Control Center</b> .	<b>361</b>
AR-JK Series Starters Controller Pricing .....	362
<b>JK OEM Power Cells</b> .....	<b>363</b>
JK OEM Power Cell Pricing .....	364

## Vacuum Contactors

<b>Low &amp; Medium Voltage Vacuum Contactors</b> .....	<b>365</b>
Low Voltage Vacuum Contactor Specifications . . .	366
Medium Voltage Vacuum Contactor Specifications .....	369
Low & Medium Voltage Contactor Pricing .....	372
Low & Medium Voltage Contactor Accessories . . .	373

## Low Voltage Solid State Starters

<b>TE3 Series</b> .....	<b>375</b>
<b>TE2 Series</b> .....	<b>378</b>
<b>TE-H Series</b> .....	<b>380</b>
<b>TE2 &amp; TE-H Series Dimensions, Weights, Mods</b> .....	<b>382</b>
<b>TE2 Series Accessories</b> .....	<b>383</b>
<b>Touchscreen Panel</b> .....	<b>384</b>
<b>TE-B Series</b> .....	<b>385</b>

## Vacuum Circuit Breakers

<b>VK/HVK Series</b> .....	<b>387</b>
Specifications .....	388
Part Numbering Convention .....	389
Pricing & Factory Modifications .....	390
<b>HV6 Series</b> .....	<b>391</b>
Part Numbering Convention .....	392
Specifications & Pricing .....	393
<b>OEM Cell Pricing</b> .....	<b>394</b>
<b>Accessories</b> .....	<b>395</b>

# INDUSTRIAL AUTOMATION

---

## Human Machine Interface (HMI)

OIS PLUS Series ..... 399

## Programmable Logic Controllers (PLCs)

V200/V100 Series ..... 401

Type 1 Light Series ..... 403



# TOSHIBA TRAINING

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## 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](http://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](http://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](mailto:TIC-Service@toshiba.com).

# Available Classes

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## 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.)

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## 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

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## 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")<sup>3</sup>. 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](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](mailto: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](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<sup>®</sup> SD Motor Series

The Toshiba EQP Global<sup>®</sup> 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<sup>®</sup> 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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

# Totally Enclosed Fan Cooled

## EQP Global® SD

### NEMA Premium® Efficiency



#### 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

CC027B



# 3 YEAR WARRANTY

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	1/24FN3C31H-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**



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

TEFC General Purpose

## Totally Enclosed Fan Cooled

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Explosion Proof

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Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	\$45,460
150	900	460	S449T	2300	1508SDSB41A-R	188	94.1	2, 18	MXTFCG	\$45,460
150	900	575	S449T	2300	1508SDSC41A	150	94.1	18	MXTFCG	\$45,460
150	900	575	S449T	2300	1508SDSC41A-R	150	94.1	2, 18	MXTFCG	\$45,460
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	\$33,296
200	1200	460	S449T	3820	2006SDSB41A-R	232	95.8	2, 18	MXTFCG	\$33,296
200	1200	575	S449T	3820	2006SDSC41A	186	95.8	18	MXTFCG	\$33,296
200	1200	575	S449T	3820	2006SDSC41A-R	186	95.8	2, 18	MXTFCG	\$33,296
200	900	460	S449T	2300	2008SDSB41A	252	94.5	18	MXTFCG	\$46,679
200	900	460	S449T	2300	2008SDSB41A-R	252	94.5	2, 18	MXTFCG	\$46,679
200	900	575	S449T	2300	2008SDSC41A	201	94.5	18	MXTFCG	\$46,679
200	900	575	S449T	2300	2008SDSC41A-R	201	94.5	2, 18	MXTFCG	\$46,679
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	\$41,896
250	3600	575	B449TS	4000	2502SDSC41B	219	95.8	18	MXTFCG	\$41,896
250	1800	460	S449T	2330	2504SDSB41A	282	96.2	18	MXTFCG	\$36,170
250	1800	460	S449T	2330	2504SDSB41A-R	282	96.2	2, 18	MXTFCG	\$36,170
250	1800	575	S449T	2330	2504SDSC41A	226	96.2	18	MXTFCG	\$36,170
250	1800	575	S449T	2330	2504SDSC41A-R	226	96.2	2, 18	MXTFCG	\$36,170
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	\$40,093
250	1200	460	S449T	2330	2506SDSB41A-R	294	95.8	2, 18	MXTFCG	\$40,093
250	1200	575	S449T	2330	2506SDSC41A	236	95.8	18	MXTFCG	\$40,093
250	1200	575	S449T	2330	2506SDSC41A-R	236	95.8	2, 18	MXTFCG	\$40,093
250	900	460	B449T	4000	2508SDSB41A	315	95.0	18	MXTFCG	\$48,901
250	900	460	B449T	4000	2508SDSB41A-R	315	95.0	2, 18	MXTFCG	\$48,901
250	900	575	B449T	4000	2508SDSC41A	256	95.0	18	MXTFCG	\$48,901
250	900	575	B449T	4000	2508SDSC41A-R	256	95.0	2, 18	MXTFCG	\$48,901
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	\$49,391
300	3600	575	B449TS	4000	3002SDSC41B	261	96.2	18	MXTFCG	\$49,391
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	\$38,691
300	1800	460	S449T	2330	3004SDSB41A-R	345	96.2	2, 18	MXTFCG	\$38,691
300	1800	575	S449T	2330	3004SDSC41A	275	96.2	18	MXTFCG	\$38,691
300	1800	575	S449T	2330	3004SDSC41A-R	275	96.2	2, 18	MXTFCG	\$38,691
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	\$52,109
300	1200	460	B449T	4000	3006SDSB41A-R	357	95.8	2, 18	MXTFCG	\$52,109
300	1200	575	B449T	4000	3006SDSC41A	285	95.8	18	MXTFCG	\$52,109
300	1200	575	B449T	4000	3006SDSC41A-R	285	95.8	2, 18	MXTFCG	\$52,109
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	\$52,022
350	3600	460	B449TS	4000	3501SDSB41B	380	95.8	5, 18	MXTFCG	\$52,022
350	3600	575	B449TS	4000	3503SDSC41B	304	95.8	4, 18	MXTFCG	\$52,022
350	3600	575	B449TS	4000	3501SDSC41B	304	95.8	5, 18	MXTFCG	\$52,022
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	\$54,939
350	1200	460	B449T	4000	3506SDSB41A-R	420	95.8	2, 18	MXTFCG	\$54,939
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	\$54,939
350	1200	575	B449T	4000	3506SDSC41A-R	336	95.8	2, 18	MXTFCG	\$54,939
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	\$56,236
400	3600	460	B449TS	4000	4001SDSB41B	435	95.8	4, 18	MXTFCG	\$56,236
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	\$56,236
400	3600	575	B449TS	4000	4001SDSC41B	348	95.8	4, 18	MXTFCG	\$56,236
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**  
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TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	F6006FLG3BMH	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	F6006FLF4OMH	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



**3** THREE YEAR WARRANTY

#### Product Scope:

<b>Horsepower:</b>	0.5 to 75 HP
<b>Speed (60 Hz):</b>	3600, 1800, or 1200 RPM
<b>(50 Hz):</b>	3000, 1500, or 1000 RPM
<b>Volt (60 Hz):</b>	230/460 or 575 V
<b>(50 Hz):</b>	190/380 V
<b>Enclosure:</b>	Totally Enclosed Fan Cooled
<b>Frame Size:</b>	56C through 365TC
<b>Construction:</b>	Cast Iron Frame, Bearing Brackets & Conduit Box
<b>Insulation:</b>	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
<b>C-Face Footed</b>										
0.5	1800	230/460	56C	53	1/24FN3R32H-P	1.4/0.7	84.0	1, 9, 18, 21	MTPFCP	\$550
0.5	1800	575	56C	53	1/24FN3C32H-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



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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



## 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	1/24FN3R34H-P	1.4/0.7	84.0	1, 9, 18, 21	MTPFCP	\$556
0.5	1800	575	56C	53	1/24FN3C34H-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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

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



## 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)



**3** YEAR WARRANTY

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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

TEFC General Purpose

# Totally Enclosed Fan Cooled

## EQP Global® SD Top Mount

### NEMA Premium® Efficiency



Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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.



### 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





TEFC General Purpose  
 Explosion Proof  
 IEC  
 Definite Purpose  
 LV Mods. (Stock & Prod.)  
 MV General Purpose Open  
 MV Gen. Purp. Enclosed  
 MV Modifications

# Totally Enclosed Fan Cooled

## EQP Global® 840

### NEMA Premium® Efficiency



#### Product Scope:

- Horsepower:** 0.75 to 500 HP

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

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

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- Enclosure:** Totally Enclosed Fan Cooled

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- Frame Size:** 143T through 5810UZ

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- Construction:** All Cast Iron

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



**3** THREE YEAR WARRANTY

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



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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

## Totally Enclosed Fan Cooled

## EQP Global® 840

## NEMA Premium® Efficiency



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



TEFC General Purpose

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Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

TEFC General Purpose

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## EQP Global® 840

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LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	\$49,323
150	900	575	S449T	3800	1508XSSC41A-R	150	94.5	1, 2, 18	MXT40G	\$49,323
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	\$36,863
200	1200	460	S449T	3860	2006XSSB41A-R	232	95.8	2, 18	MXT40G	\$36,863
200	1200	575	S449T	3860	2006XSSC41A	186	95.8	18	MXT40G	\$36,863
200	1200	575	S449T	3860	2006XSSC41A-R	186	95.8	2, 18	MXT40G	\$36,863
200	900	460	S449T	3860	2008XSSB41A	252	94.5	18	MXT40G	\$50,647
200	900	460	S449T	3800	2008XSSB41A-R	252	94.5	2, 18	MXT40G	\$50,647
200	900	575	S449T	3860	2008XSSC41A	201	94.5	18	MXT40G	\$50,647
200	900	575	S449T	3800	2008XSSC41A-R	201	94.5	2, 18	MXT40G	\$50,647
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	\$45,877
250	3600	575	B449TS	4015	2502XSSC41B	219	95.8	18	MXT40G	\$45,877
250	1800	460	S449T	3631	2504XSSB41A-R	276	96.2	2, 18	MXT40G	\$37,807
250	1800	460	S449T	3608	2504XSSB41A	276	96.2	18	MXT40G	\$37,807
250	1800	575	S449T	3860	2504XSSC41A-R	221	96.2	2, 18	MXT40G	\$37,807
250	1800	575	S449T	3860	2504XSSC41A	221	96.2	18	MXT40G	\$37,807
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	\$43,902
250	1200	460	S449T	3860	2506XSSB41A-R	295	95.8	2, 18	MXT40G	\$43,902
250	1200	575	S449T	3860	2506XSSC41A	236	95.8	18	MXT40G	\$43,902
250	1200	575	S449T	3860	2506XSSC41A-R	236	95.8	2, 18	MXT40G	\$43,902
250	900	460	B449T	4060	2508XSSB41A-R	316	94.5	2, 18	MXT40G	\$53,058
250	900	575	B449T	4060	2508XSSC41A-R	253	94.5	2, 18	MXT40G	\$53,058

# Totally Enclosed Fan Cooled

## EQP Global® 840

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LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	\$54,201
300	3600	575	B449TS	4015	3002XSSC41B	261	95.8	18	MXT40G	\$54,201
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	\$42,367
300	1800	460	S449T	3860	3004XSSB41A	330	96.2	2, 18	MXT40G	\$42,367
300	1800	575	S449T	3860	3004XSSC41A-R	267	96.2	2, 18	MXT40G	\$42,367
300	1800	575	S449T	3860	3004XSSC41A	267	96.2	2, 18	MXT40G	\$42,367
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	\$56,184
350	3600	460	B449TS	4015	3501XSSB41B	380	95.8	5, 18	MXT40G	\$56,184
350	3600	575	B449TS	4015	3503XSSC41B	304	95.8	18	MXT40G	\$56,184
350	3600	575	B449TS	4015	3501XSSC41B	304	95.8	5, 18	MXT40G	\$56,184
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	\$59,334
350	1200	460	B449T	4060	3506XSSB41A-R	420	95.8	2, 18	MXT40G	\$59,334
350	1200	575	B449T	4060	3506XSSC41A	336	95.8	18	MXT40G	\$59,334
350	1200	575	B449T	4060	3506XSSC41A-R	336	95.8	2, 18	MXT40G	\$59,334
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



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



**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
<b>C-Face Footed</b>										
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



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**



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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



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**  
**NEMAPremium® Efficiency**



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

TEFC General Purpose  
 Explosion Proof  
 IEC  
 Definite Purpose  
 LV Mods. (Stock & Prod.)  
 MV General Purpose Open  
 MV Gen. Purp. Enclosed  
 MV Modifications

# Totally Enclosed Fan Cooled

## EQP Global® 840 C-Face

### NEMA Premium® Efficiency



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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

# Totally Enclosed Fan Cooled

## EQP Global® 841

### NEMA Premium® Efficiency



**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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

TEFC General Purpose

## Totally Enclosed Fan Cooled

## EQP Global® 841

## NEMA Premium® Efficiency



Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

### NEMAPremium® Efficiency



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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

## 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
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	\$55,007
150	900	460	S449T	3800	1508XDSB41A-R	188	94.5	2, 18	MXT41G	\$55,007
150	900	575	S449T	3800	1508XDSC41A	150	94.5	18	MXT41G	\$55,007
150	900	575	S449T	3800	1508XDSC41A-R	150	94.5	2, 18	MXT41G	\$55,007
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	\$40,913
200	1200	460	S449T	3860	2006XDSB41A-R	231	95.8	18	MXT41G	\$40,913
200	1200	575	S449T	3860	2006XDSC41A	185	95.8	18	MXT41G	\$40,913
200	1200	575	S449T	3860	2006XDSC41A-R	185	95.8	18	MXT41G	\$40,913
200	900	460	S449T	3800	2008XDSB41A	254	94.5	18	MXT41G	\$56,479
200	900	460	S449T	3800	2008XDSB41A-R	246	94.5	2, 18	MXT41G	\$56,479
200	900	575	S449T	3800	2008XDSC41A	201	94.5	18	MXT41G	\$56,479
200	900	575	S449T	3800	2008XDSC41A-R	201	94.5	2, 18	MXT41G	\$56,479
250	3600	460	B449TS	4015	2502XDSB41B	273	95.8	18	MXT41G	\$49,094
250	3600	575	B449TS	4015	2502XDSC41B	218	95.8	18	MXT41G	\$49,094
250	1800	460	S449T	3800	2504XDSB41A	282	96.2	18	MXT41G	\$40,470
250	1800	460	S449T	3800	2504XDSB41A-R	282	96.2	2, 18	MXT41G	\$40,470
250	1800	575	S449T	3800	2504XDSC41A	225	96.2	18	MXT41G	\$40,470
250	1800	575	S449T	3800	2504XDSC41A-R	225	96.2	2, 18	MXT41G	\$40,470
250	1200	460	S449T	3800	2506XDSB41A	294	95.8	18	MXT41G	\$47,801
250	1200	460	S449T	3800	2506XDSB41A-R	294	95.8	18	MXT41G	\$47,801
250	1200	575	S449T	3800	2506XDSC41A	235	95.8	18	MXT41G	\$47,801
250	1200	575	S449T	3800	2506XDSC41A-R	235	95.8	18	MXT41G	\$47,801
250	900	460	B449T	4000	2508XDSB41A	315	95.0	18	MXT41G	\$59,170
250	900	460	B449T	4000	2508XDSB41A-R	256	95.0	18	MXT41G	\$59,170
250	900	575	B449T	4000	2508XDSC41A	256	95.0	18	MXT41G	\$59,170
250	900	575	B449T	4000	2508XDSC41A-R	256	95.0	2, 18	MXT41G	\$59,170
300	3600	460	B449TS	4015	3002XDSB41B	326	96.2	18	MXT41G	\$58,080
300	3600	575	B449TS	4015	3002XDSC41B	261	96.2	18	MXT41G	\$58,080
300	1800	460	S449T	3800	3004XDSB41A	344	96.2	18	MXT41G	\$46,886
300	1800	460	S449T	3800	3004XDSB41A-R	344	96.2	2, 18	MXT41G	\$46,886
300	1800	575	S449T	3800	3004XDSC41A	275	96.2	18	MXT41G	\$46,886
300	1800	575	S449T	3800	3004XDSC41A-R	275	96.2	2, 18	MXT41G	\$46,886
300	1200	460	B449T	4060	3006XDSB41A-R	356	96	18	MXT41G	\$61,100
300	1200	460	B449T	4060	3006XDSB41A	356	96	18	MXT41G	\$61,100
300	1200	575	B449T	4060	3006XDSC41A-R	284	96	18	MXT41G	\$61,100



# Totally Enclosed Fan Cooled

## EQP Global<sup>®</sup> 841

### NEMA Premium<sup>®</sup> Efficiency



HP	Speed (RPM)	Volts	Frame	Weight (lbs.)	Model Number	FL Amps	Nominal FL EFF	Notes	Discount Symbol	List Price
300	1200	575	B449T	4060	3006XDSC41A	284	96	18	MXT41G	\$61,100
350	3600	460	B449TS	4015	3503XDSB41B	379	95.8	18	MXT41G	\$61,803
350	3600	575	B449TS	4015	3503XDSC41B	304	95.8	18	MXT41G	\$61,803
350	3600	460	B449TS	4000	3501XDSB41B	380	96	4, 18	MXTFCG	\$61,803
350	3600	575	B449TS	4000	3501XDSC41B	304	96	4, 18	MXTFCG	\$61,803
350	1200	460	B449T	4060	3506XDSB41A	419	95.8	18	MXT41G	\$65,268
350	1200	460	B449T	4060	3506XDSB41A-R	419	95.8	18	MXT41G	\$65,268
350	1200	575	B449T	4060	3506XDSC41A	335	95.8	18	MXT41G	\$65,268
350	1200	575	B449T	4060	3506XDSC41A-R	335	95.8	18	MXT41G	\$65,268
400	3600	460	B449TS	4060	4003XDSB41B	435	95.8	4, 18	MXT41G	\$66,808
400	3600	575	B449TS	4060	4003XDSC41B	348	95.8	4, 18	MXT41G	\$66,808
400	3600	460	B449TS	4060	4001XDSB41B	435	96	4, 18	MXT41G	\$66,808
400	3600	575	B449TS	4060	4001XDSC41B	348	96	4, 18	MXT41G	\$66,808

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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

# Totally Enclosed Fan Cooled

## EQP Global® 841 C-Face

### NEMA Premium® Efficiency



#### 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)



**5 FIVE YEAR WARRANTY**

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
<b>C-Face Footed</b>										
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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



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

### NEMAPremium® Efficiency



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
<b>C-Face Footless</b>										
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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

## 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
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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

MV Modifications	MV Gen. Purp. Enclosed	MV General Purpose Open	LV Mods. (Stock & Prod.)	Definite Purpose	IEC	Explosion Proof	TEFC General Purpose
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# General Purpose TEFC

## EQP Global<sup>®</sup> 661 Motor Series

New  
Product

Toshiba's totally enclosed fan cooled, NEMA Premium<sup>®</sup>, 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<sup>®</sup> 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 - Roller Bearings on the DE
- 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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

# Totally Enclosed Fan Cooled

## EQP Global® 661

### NEMA Premium® Efficiency



#### Product Scope:

- Horsepower:** 5 to 75 HP

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

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

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- Enclosure:** Totally Enclosed Fan Cooled

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- Frame Size:** 184T through 365T

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- Construction:** All Cast Iron

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



# 5 FIVE YEAR WARRANTY

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, 2, 18	MTP841	\$1,129
5	1800	575	184T	119	0054XDGC41A-PR	5.2	89.5	1, 2, 18	MTP841	\$1,129
5	1200	460	215T	192	0056XDGB41A-PR	6.9	89.5	1, 2, 18	MTP841	\$2,200
5	1200	575	215T	187	0056XDGC41A-PR	5.5	89.5	1, 2, 18	MTP841	\$2,200
5	900	460	254T	264	0058XDGB41A-PR	7.5	86.5	1, 2, 18	MTP841	\$3,779
5	900	575	254T	264	0058XDGC41A-PR	6	86.5	1, 2, 18	MTP841	\$3,779
7.5	1800	460	213T	199	Y754XDGB41A-PR	9.8	91.7	1, 2, 18	MTP841	\$1,759
7.5	1800	575	213T	190	Y754XDGC41A-PR	7.8	91.7	1, 2, 18	MTP841	\$1,759
7.5	1200	460	254T	289	Y756XDGB41A-PR	9.9	91.0	1, 2, 18	MTP841	\$2,859
7.5	1200	575	254T	282	Y756XDGC41A-PR	8.2	91.0	1, 2, 18	MTP841	\$2,859
7.5	900	460	256T	273	Y758XDGB41A-PR	11.5	86.5	1, 2, 18	MTP841	\$4,244
7.5	900	575	256T	304	Y758XDGC41A-PR	9.1	86.5	1, 2, 18	MTP841	\$4,244
10	1800	460	215T	207	0104XDGB41A-PR	13	91.7	1, 2, 18	MTP841	\$2,066
10	1800	575	215T	203	0104XDGC41A-PR	10.4	91.7	1, 2, 18	MTP841	\$2,066
10	1200	460	256T	310	0106XDGB41A-PR	13.4	91.0	1, 2, 18	MTP841	\$3,461
10	1200	575	256T	313	0106XDGC41A-PR	10.8	91.0	1, 2, 18	MTP841	\$3,461
10	900	460	284T	403	0108XDGB41A-PR	14.5	89.5	1, 2, 18	MTP841	\$5,518
10	900	575	284T	452	0108XDGC41A-PR	11.6	89.5	1, 2, 18	MTP841	\$5,518
15	1800	460	254T	325	0154XDGB41A-PR	19	92.4	1, 2, 18	MTP841	\$2,726
15	1800	575	254T	326	0154XDGC41A-PR	15.2	92.4	1, 2, 18	MTP841	\$2,726
15	1200	460	284T	452	0156XDGB41A-PR	19.6	91.7	1, 2, 18	MTP841	\$4,594
15	1200	575	284T	454	0156XDGC41A-PR	15.8	91.7	1, 2, 18	MTP841	\$4,594
15	900	460	286T	436	0158XDGB41A-PR	22	89.5	1, 2, 18	MTP841	\$6,580
15	900	575	286T	487	0158XDGC41A-PR	17.5	89.5	1, 2, 18	MTP841	\$6,580
20	1800	460	256T	369	0204XDGB41A-PR	25	93.0	1, 2, 18	MTP841	\$3,362
20	1800	575	256T	370	0204XDGC41A-PR	20	93.0	1, 2, 18	MTP841	\$3,362
20	1200	460	286T	496	0206XDGB41A-PR	25	91.7	1, 2, 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, 2, 18	MTP841	\$5,497
20	900	460	324T	585	0208XDGB41A-PR	28	90.2	1, 2, 18	MTP841	\$7,858
20	900	575	324T	655	0208XDGC41A-PR	22	90.2	1, 2, 18	MTP841	\$7,858
25	1800	460	284T	529	0254XDGB41A-PR	31	93.8	1, 2, 18	MTP841	\$4,004
25	1800	575	284T	531	0254XDGC41A-PR	31	93.6	1, 2, 18	MTP841	\$4,004
25	1200	460	324T	655	0256XDGB41A-PR	31	93.0	1, 2, 18	MTP841	\$6,662
25	1200	575	324T	650	0256XDGC41A-PR	25	93.0	1, 2, 18	MTP841	\$6,662
25	900	460	326T	612	0258XDGB41A-PR	35	90.2	1, 2, 18	MTP841	\$9,069
25	900	575	326T	677	0258XDGC41A-PR	27	90.2	1, 2, 18	MTP841	\$9,069
30	1800	460	286T	542	0304XDGB41A-PR	36	93.6	1, 2, 18	MTP841	\$4,573
30	1800	575	286T	536	0304XDGC41A-PR	29	93.6	1, 2, 18	MTP841	\$4,573
30	1200	460	326T	677	0306XDGB41A-PR	37	93.0	1, 2, 18	MTP841	\$7,602
30	1200	575	326T	672	0306XDGC41A-PR	30	93.0	1, 2, 18	MTP841	\$7,602
30	900	460	364T	836	0308XDGB41A-PR	41	91.7	1, 2, 18	MTP841	\$12,081
30	900	575	364T	842	0308XDGC41A-PR	33	91.7	1, 2, 18	MTP841	\$12,081
40	1800	460	324T	701	0404XDGB41A-PR	48	94.1	1, 2, 18	MTP841	\$6,077
40	1800	575	324T	703	0404XDGC41A-PR	38	94.1	1, 2, 18	MTP841	\$6,077
40	1200	460	364T	836	0406XDGB41A-PR	48	94.1	1, 2, 18	MTP841	\$10,210
40	1200	575	364T	842	0406XDGC41A-PR	38	94.1	1, 2, 18	MTP841	\$10,210
40	900	460	365T	873	0408XDGB41A-PR	54	91.7	1, 2, 18	MTP841	\$13,801
40	900	575	365T	877	0408XDGC41A-PR	44	91.7	1, 2, 18	MTP841	\$13,801
50	1800	460	326T	748	0504XDGB41A-PR	60	94.5	1, 2, 18	MTP841	\$7,393
50	1800	575	326T	765	0504XDGC41A-PR	48	94.5	1, 2, 18	MTP841	\$7,393
50	1200	460	365T	873	0506XDGB41A-PR	60	94.1	1, 2, 18	MTP841	\$11,613
50	1200	575	365T	888	0506XDGC41A-PR	48	94.1	1, 2, 18	MTP841	\$11,613
60	1800	460	364T	928	0604XDGB41A-PR	69	95.0	1, 2, 18	MTP841	\$9,456
60	1800	575	364T	916	0604XDGC41A-PR	55	95.0	1, 2, 18	MTP841	\$9,456
75	1800	460	365T	1012	0754XDGB41A-PR	86	95.4	1, 2, 18	MTP841	\$11,875
75	1800	575	365T	1010	0754XDGC41A-PR	69	95.4	1, 2, 18	MTP841	\$11,875

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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications





# 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.



### 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 Slings
- 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



#### 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)



**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	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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	B1254YLF4OSH	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<sup>®</sup> XP

### NEMA Premium<sup>®</sup> Efficiency



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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



#### 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.



### 3 YEAR WARRANTY

HP	Speed (RPM)	Volts	Frame	Weight (lbs.)	Model Number	FL Amps	Nominal FL EFF	Notes	Discount Symbol	List Price
<b>C-Face Footed</b>										
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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



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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

MV Modifications	MV Gen. Purp. Enclosed	MV General Purpose Open	LV Mods. (Stock & Prod.)	Definite Purpose	IEC	Explosion Proof	TEFC General Purpose
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# 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



TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

# Totally Enclosed Fan Cooled

## EQP Global® IEC

### IE3 Efficiency



**3** THREE YEAR WARRANTY

#### Product Scope:

- Power:** 0.75 to 45 kW

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

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- Volt:**
- (50 Hz)\*** 230/400, 240/415, 220/380 or 400, 415, 380 V
- (60 Hz):** 460 V

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- Enclosure:** Totally Enclosed Fan Cooled (IC411)

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- Frame Size:** 80M through 225S

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- Construction:** Aluminum Fin Type (90-160 Frame)  
Cast Iron (80, 180-225 Frame)

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- Insulation:** Class F, Exceeds IEC 60034-25 (Inverter Duty)  
(Voltage Withstand Capability of 2000 V in 0.1 μs)

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- Environment:** Suitable for Indoor or Outdoor Use in Severe Duty Applications

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\*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
<b>Footed (B3)</b>										
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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
<b>Footed D-Flange (B35)</b>										
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

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

# 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
<b>Footless D-Flange (B5)</b>										
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	Y756SDMV7JS-PL	15.4	89.1	1,9	MTPIEC	\$2,614
11	3000	400	160M	93	0112SDMV7JS-PL	20	91.2	1,9	MTPIEC	\$2,074
11	1500	400	160M	102	0114SDMV7JS-PL	22	91.4	1,9	MTPIEC	\$2,065
11	1000	400	160L	120	0116SDMV7JS-PL	22	90.3	1,9	MTPIEC	\$3,665
15	3000	400	160M	103	0152SDMV7JS-PL	28	91.9	1,9	MTPIEC	\$2,686
15	1500	400	160L	118	0154SDMV7JS-PL	29	92.1	1,9	MTPIEC	\$2,550
15	1000	400	180L	192	0156SDMV7JS-P	31	91.2	1,9	MTPIEC	\$4,293
18.5	3000	400	160L	116	0182SDMV7JS-PL	33	92.4	1,9	MTPIEC	\$3,298
18.5	1500	400	180M	199	0184SDMV7JS-P	36	92.6	1,9	MTPIEC	\$3,093
18.5	1000	400	200L	275	0186SDMV7JS-P	35	91.7	1,9	MTPIEC	\$5,211
22	3000	400	180M	194	0222SDMV7JS-P	39	92.7	1,9	MTPIEC	\$3,788
22	1500	400	180L	205	0224SDMV7JS-P	41	93.0	1,9	MTPIEC	\$3,718
22	1000	400	200L	290	0226SDMV7JS-P	42	92.2	1,9	MTPIEC	\$6,361
30	3000	400	200L	304	0302SDMV7JS-P	53	93.3	1,9	MTPIEC	\$4,771
30	1500	400	200L	300	0304SDMV7JS-P	57	93.6	1,9	MTPIEC	\$4,807
30	1000	400	225S	350	0306SDMV7JS-P	59	92.9	1,9	MTPIEC	\$8,323
37	3000	400	200L	330	0372SDMV7JS-P	67	93.7	1,9	MTPIEC	\$6,615
37	1500	400	225S	341	0374SDMV7JS-P	68	93.9	1,9	MTPIEC	\$5,863
45	3000	400	225S	340	0452SDMV7JS-P	82	94.0	1,9	MTPIEC	\$8,152
45	1500	400	225S	374	0454SDMV7JS-P	82	94.2	1,9	MTPIEC	\$8,262
<b>Footed C-Face (B34)</b>										
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	Y756SDMV7HS-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
<b>Footless C-Face (B14)</b>										
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

TEFC General Purpose  
 Explosion Proof  
 IEC  
 Definite Purpose  
 LV Mods. (Stock & Prod.)  
 MV General Purpose Open  
 MV Gen. Purp. Enclosed  
 MV Modifications

# 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	Y756SDMV7KS-PL	15.4	89.1	1, 9	MTPIEC	\$2,614
11	3000	400	160M	93	0112SDMV7KS-PL	20	91.2	1, 9	MTPIEC	\$2,074
11	1500	400	160M	102	0114SDMV7KS-PL	22	91.4	1, 9	MTPIEC	\$2,065
11	1000	400	160L	116	0116SDMV7KS-PL	22	90.3	1, 9	MTPIEC	\$3,665
15	3000	400	160M	103	0152SDMV7KS-PL	28	91.9	1, 9	MTPIEC	\$2,686
15	1500	400	160L	118	0154SDMV7KS-PL	29	92.1	1, 9	MTPIEC	\$2,550
18.5	3000	400	160L	116	0182SDMV7KS-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



TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

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



**3** THREE YEAR WARRANTY

## Product Scope:

- Horsepower:** 1 to 75 HP

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

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

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- Enclosure:** Totally Enclosed Fan Cooled

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

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

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

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\* Contact Toshiba for other voltages.

HP	Speed (RPM)	Volts	Frame	Weight (lbs.)	Model Number	FL Amps	Nominal FL EFF	Notes	Discount Symbol	List Price
<b>JM</b>										
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

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



HP	Speed (RPM)	Volts	Frame	Weight (lbs.)	Model Number	FL Amps	Nominal FL EFF	Notes	Discount Symbol	List Price
<b>JP</b>										
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



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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



# 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



## 3 THREE YEAR WARRANTY

### 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

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	40A001L1ZVS210	-	-		MTPFCP	\$830
1	1800	575	143T	60	405001L1ZVS210	-	-		MTPFCP	\$830
1.5	3600	230/460	145T	60	20AY15L1ZVS210	-	-		MTPFCP	\$913
1.5	3600	575	143T	60	205Y15L1ZVS210	-	-		MTPFCP	\$913
2	3600	230/460	145T	55	20A002L1ZVS210	-	-		MTPFCP	\$950
2	3600	575	145T	60	205002L1ZVS210	-	-		MTPFCP	\$950
2	1800	230/460	145T	62	40A002L1ZVS210	-	-		MTPFCP	\$960
2	1800	575	145T	62	405002L1ZVS210	-	-		MTPFCP	\$960
3	3600	230/460	182T	86	20A003L1ZVS210	-	-		MTPFCP	\$1,190
3	3600	575	182T	86	205003L1ZVS210	-	-		MTPFCP	\$1,190
3	1800	230/460	182T	97	40A003L1ZVS210	-	-		MTPFCP	\$1,171
3	1800	575	182T	95	405003L1ZVS210	-	-		MTPFCP	\$1,171
5	3600	230/460	184T	97	20A005L1ZVS210	-	-		MTPFCP	\$1,387
5	3600	575	184T	99	205005L1ZVS210	-	-		MTPFCP	\$1,387
5	1800	230/460	184T	105	40A005L1ZVS210	-	-		MTPFCP	\$1,296
5	1800	575	184T	106	405005L1ZVS210	-	-		MTPFCP	\$1,296
7.5	3600	230/460	213T	165	20AY75L1ZVS210	-	-		MTPFCP	\$2,061
7.5	3600	575	213T	163	205Y75L1ZVS210	-	-		MTPFCP	\$2,061
7.5	1800	230/460	213T	187	40AY75L1ZVS210	-	-		MTPFCP	\$2,030
7.5	1800	575	213T	187	405Y75L1ZVS210	-	-		MTPFCP	\$2,030
10	3600	230/460	215T	183	20A010L1ZVS210	-	-		MTPFCP	\$2,246
10	3600	575	215T	183	205010L1ZVS210	-	-		MTPFCP	\$2,246
10	1800	230/460	215T	198	40A010L1ZVS210	-	-		MTPFCP	\$2,131
10	1800	575	215T	198	405010L1ZVS210	-	-		MTPFCP	\$2,131
15	3600	230/460	254T	302	20A015L1ZVS210	-	-		MTPFCP	\$3,464
15	3600	575	254T	298	205015L1ZVS210	-	-		MTPFCP	\$3,464
15	1800	230/460	254T	306	40A015L1ZVS210	-	-		MTPFCP	\$3,403
15	1800	575	254T	313	405015L1ZVS210	-	-		MTPFCP	\$3,403

TEFC General Purpose  
 Explosion Proof  
 IEC  
 Definite Purpose  
 LV Mods. (Stock & Prod.)  
 MV General Purpose Open  
 MV Gen. Purp. Enclosed  
 MV Modifications

# Totally Enclosed Air Over EQP Global® Critical Cooling NEMAPremium® 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	-	20A020L1ZVS210	-	-		MTPFCP	\$3,871
20	3600	575	256T	-	20S020L1ZVS210	-	-		MTPFCP	\$3,871
20	1800	230/460	256T	355	40A020L1ZVS210	-	-		MTPFCP	\$3,783
20	1800	575	256T	355	40S020L1ZVS210	-	-		MTPFCP	\$3,783
25	3600	230/460	284TS	-	20A025L1ZVS210	-	-		MTPFCP	\$4,835
25	1800	230/460	256T	-	40A025L1ZVS210	-	-		MTPFCP	\$4,895
30	3600	230/460	286TS	-	20A030L1ZVS210	-	-		MTPFCP	\$4,860
30	1800	230/460	256T	-	40A030L1ZVS210	-	-		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<sup>®</sup> Cooling Tower Motors

Toshiba's EQP Global<sup>®</sup> 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<sup>®</sup> 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:

- Totally Enclosed Fan Cooled or Totally Enclosed Air Over
- Severe Duty
- NEMA Premium<sup>®</sup> 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



TEFC General Purpose  
 Explosion Proof  
 IEC  
 Definite Purpose  
 LV Mods. (Stock & Prod.)  
 MV General Purpose Open  
 MV Gen. Purp. Enclosed  
 MV Modifications

# Totally Enclosed Fan Cooled & Totally Enclosed Air Over

## EQP Global® Cooling Tower

### NEMA Premium® Efficiency



# 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
<b>TEFC</b>										
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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
<b>TEAO</b>										
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

TEFC General Purpose

# Totally Enclosed Fan Cooled & Totally Enclosed Air Over

## EQP Global® Cooling Tower

### NEMA Premium® Efficiency



Explosion Proof

IEC

Definite Purpose

LV Mods.  
(Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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.



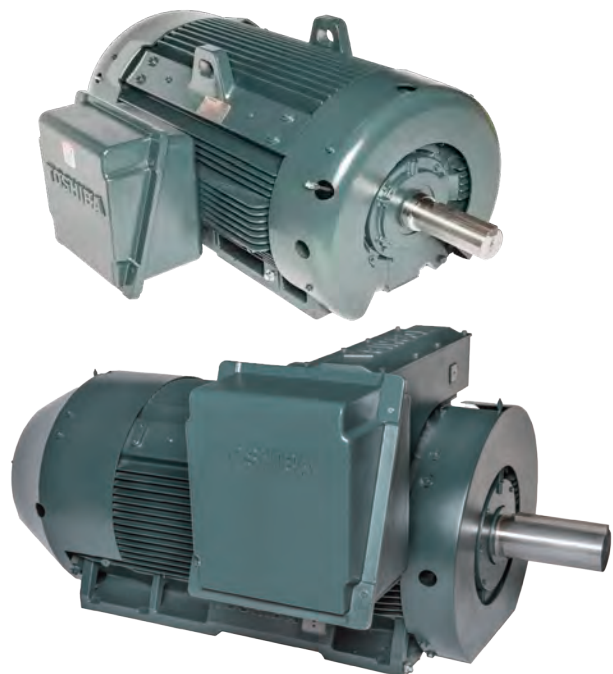
### Standard Features:

- 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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

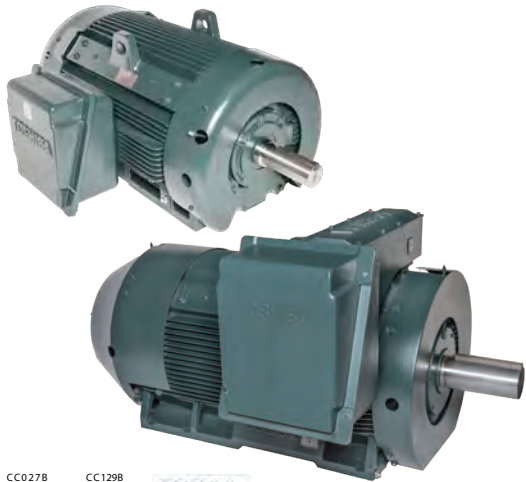
MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

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



## Product Scope:

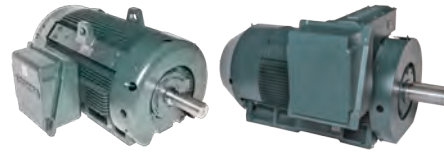
- Horsepower:** 5 to 750 HP
- Speed (60 Hz):** 1800, 1200, or 900 RPM
- Volt (60 Hz):** 460 or 575 V
- Enclosure:** Totally Enclosed Fan Cooled
- Frame Size:** 184T through B587LL
- Construction:** Cast Iron Frame, Bearing Brackets & Conduit Box
- Insulation:** Class F Inverter Duty, Exceeds NEMA MG1 Part 31  
(Voltage Withstand Capability of 2000 V in 0.1 μs)



**3** THREE YEAR WARRANTY

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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	\$34,369
200	1200	575	S449T	2500	2006QDSC41A-R	194	95.8	2, 6, 18	MXTQDP	\$34,369
200	900	460	S587LQ	3900	2008QDSB41A-R	282	94.5	2, 6, 18	MXTQDP	\$52,859
200	900	575	S587LQ	2700	2008QDSC41A-R	227	94.5	2, 6, 18	MXTQDP	\$52,859
250	1800	460	S449T	2330	2504QDSB41A-R	293	96.2	2,6,18	MXTQDP	\$35,346
250	1800	575	S449T	2330	2504QDSC41A-R	236	96.2	2,6,18	MXTQDP	\$35,346
250	1200	460	S587LQ	4600	2506QDSB41A-R	313	95.8	2, 6, 18	MXTQDP	\$52,411
250	1200	575	S587LQ	4600	2506QDSC41A-R	250	96.2	2, 6, 18	MXTQDP	\$52,411
250	900	460	S587LQ	3919	2508QDSB41A-R	359	95.0	2, 6, 18	MXTQDP	\$58,066
250	900	575	S587LQ	2700	2508QDSC41A-R	290	95.0	2, 6, 18	MXTQDP	\$58,066
300	1800	460	S587LQ	2330	3004QDSB41A-R	355	96.2	2, 6, 18	MXTQDP	\$48,600
300	1800	460	S449T	2330	3004QDSB41A-RF	355	96.2	2,6,18	MXTQDP	\$44,391
300	1800	575	S587LQ	2330	3004QDSC41A-R	284	96.2	2, 6, 18	MXTQDP	\$48,600
300	1800	575	S449T	2330	3004QDSC41A-RF	284	96.2	2,6,18	MXTQDP	\$44,391
300	1200	460	S587LQ	4700	3006QDSB41A-R	377	96.2	2, 6, 18	MXTQDP	\$55,818
300	1200	575	S587LQ	4700	3006QDSC41A-R	301	96.2	2, 6, 18	MXTQDP	\$55,818
300	900	460	S810UZ	6000	F3008FLF4BMQ	443	95.0	2	MXTQDP	\$53,174
300	900	575	S810UZ	6093	F3008FLF4OMQ	351	95.0	2	MXTQDP	\$53,174
300	900	460	S587LQ	6000	3008QDSB41A-R	429	95.0	2, 18	MXTQDP	\$60,968

TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

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



HP	Speed (RPM)	Volts	Frame	Weight (lbs.)	Model Number	FL Amps	Nominal FL EFF	Notes	Discount Symbol	List Price
300	900	575	S587LQ	6093	3008QDSC41A-R	349	95.0	2, 18	MXTQDP	\$60,968
350	1800	460	S587LQ	4500	3504QDSB41A-R	400	96.2	2, 6, 18	MXTQDP	\$53,312
350	1800	575	S587LQ	4500	3504QDSC41A-R	323	96.2	2, 6, 18	MXTQDP	\$53,312
350	1200	460	S587LQ	4800	3506QDSB41A-R	443	96.2	2, 6, 18	MXTQDP	\$60,953
350	1200	460	B449T	4100	3506QDSB41A-RF	429	95.8	2, 6, 18	MXTQDP	\$58,339
350	1200	575	S587LQ	4800	3506QDSC41A-R	353	96.2	2, 6, 18	MXTQDP	\$60,593
350	1200	575	B449T	4100	3506QDSC41A-RF	342	95.8	2, 6, 18	MXTQDP	\$58,339
350	900	460	S587LQ	6000	3508QDSB41A-R	514	95.0	2, 18	MXTQDP	\$68,696
350	900	575	S587LQ	6000	3508QDSC41A-R	412	95.0	2, 18	MXTQDP	\$68,696
400	1800	460	S587LQ	4550	4004QDSB41A-R	458	96.2	2, 6, 18	MXTQDP	\$56,776
400	1800	575	S587LQ	4500	4004QDSC41A-R	371	96.2	2, 6, 18	MXTQDP	\$56,776
400	1200	460	S5010UZ	5081	F4006FLF4BMQ	510	95.2	2, 6	MXTQDP	\$51,456
400	1200	575	S5010UZ	4600	F4006FLF4OMQ	421	95.4	2, 6	MXTQDP	\$51,456
400	1200	460	S587LQ	4800	4006QDSB41A-R	514	96.2	2, 6, 18	MXTQDP	\$64,532
400	1200	575	S587LQ	4800	4006QDSC41A-R	413	96.2	2, 6, 18	MXTQDP	\$64,532
400	900	460	S587LQ	6000	4008QDSB41A-R	565	95.0	2, 18	MXTQDP	\$78,338
400	900	575	S587LQ	6000	4008QDSC41A-R	455	95.0	2, 18	MXTQDP	\$78,338
400	900	460	S5810UZ	6000	F4008FLF4BMQ	514	94.1	2	MXTQDP	\$68,259
400	900	575	S5810UZ	6093	F4008FLF4OMQ	449	95.0	2	MXTQDP	\$68,259
450	1800	460	S587LQ	4700	4504QDSB41A-R	512	96.2	2, 6, 18	MXTQDP	\$60,467
450	1800	575	S587LQ	4700	4504QDSC41A-R	412	96.2	2, 6, 18	MXTQDP	\$60,467
450	1200	460	B587LL	6100	4506QDSB41A-R	564	96.2	2, 6, 18	MXTQDP	\$72,480
450	1200	575	B587LL	6100	4506QDSC41A-R	450	96.2	2, 6, 18	MXTQDP	\$72,480
450	900	460	B587LL	6000	4508QDSB41A-R	632	95.0	2, 18	MXTQDP	\$84,066
450	900	575	B587LL	6000	4508QDSC41A-R	516	95.0	2, 18	MXTQDP	\$84,066
450	900	460	S5810UZ	6000	F4508FLF4BMQ	617	95.4	2	MXTQDP	\$73,289
450	900	575	S5810UZ	6093	F4508FLF4OMQ	543	95.0	2	MXTQDP	\$73,289
500	1800	460	B587LL	6000	5004QDSB41A-R	557	96.2	2, 6, 18	MXTQDP	\$69,227
500	1800	575	B587LL	6000	5004QDSC41A-R	470	96.2	2, 6, 18	MXTQDP	\$69,227
500	1200	460	B587LL	6200	5006QDSB41A-R	635	96.2	2, 6, 18	MXTQDP	\$80,735
500	1200	575	B587LL	6200	5006QDSC41A-R	502	96.2	2, 6, 18	MXTQDP	\$80,735
600	1800	460	B587LL	6100	6004QDSB31A-R	709		2, 18	MXTQDP	\$73,726
600	1800	575	B587LL	6100	6004QDSC31A-R	568		2, 18	MXTQDP	\$73,726
600	1200	460	B587LL	6250	6006QDSB31A-R	773		2, 18	MXTQDP	\$94,021
600	1200	575	B587LL	6250	6006QDSC31A-R	614		2, 18	MXTQDP	\$94,021
700	1800	460	B587LL	6300	7004QDSB31A-R	829		2, 18	MXTQDP	\$87,671
700	1800	575	B587LL	6300	7004QDSC31A-R	660		2, 18	MXTQDP	\$87,671
750	1800	460	B587LL	6300	7504QDSB31A-R	898		2, 3, 18, 20	MXTQDP	\$91,176
750	1800	575	B587LL	6300	7504QDSC31A-R	713		2, 3, 18, 20	MXTQDP	\$91,176

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





TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

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



### Product Scope:

**Horsepower:** 0.75 to 30 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

**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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mod. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



TEFC General Purpose  
Explosion Proof  
IEC  
Definite Purpose  
LV Mods. (Stock & Prod.)  
MV General Purpose Open  
MV Gen. Purp. Enclosed  
MV Modifications

# 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
<b>C-Face Footed</b>										
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
<b>C-Face Footless</b>										
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



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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.

MV Modifications	
MV Gen. Purp. Enclosed	
MV General Purpose Open	
<b>LV Mods. (Stock &amp; Prod.)</b>	
Definite Purpose	
IEC	
Explosion Proof	
TEFC General Purpose	

# Low Voltage Modifications

## Stock Modifications

<b>Altitude</b> .....	<b>93</b>	<b>Hardware</b> .....	<b>98</b>
<b>Ambient Temperature</b> .....	<b>93</b>	<b>Insulation Modifications</b> .....	<b>99</b>
<b>Bearings</b> .....	<b>93</b>	Tropicalized Coating on Motor Windings	
Sealed/Shielded Bearings.....	93	and Internal Surface.....	99
Insulated Bearings .....	93	Fungus-Proof Coating on Motor Windings.....	99
Change Bearings .....	93	<b>Lead Terminals</b> .....	<b>99</b>
<b>Blowers</b> .....	<b>94</b>	Crimp Lead Terminals.....	99
<b>Conduit Box Modifications</b> .....	<b>94</b>	Burdny Lugs/Two-Hole Terminals.....	99
Auxiliary Terminal Box .....	94	<b>Lubrication</b> .....	<b>99</b>
Cast Iron Main Box.....	94	High Temperature Grease .....	99
Location .....	95	Low Temperature Grease.....	100
Remote-Mount Conduit Box.....	95	Special-Based Grease .....	100
<b>Couplings &amp; Sheaves Mounted</b> .....	<b>95</b>	<b>Nameplate(s)</b> .....	<b>100</b>
<b>Documentation</b> .....	<b>95</b>	Duplicate or Special Nameplate.....	100
<b>Dowel Pin Provisions</b> .....	<b>95</b>	<b>Screens</b> .....	<b>100</b>
<b>Drains &amp; Breathers</b> .....	<b>96</b>	Screens to an Open Drip-Proof Motor .....	100
Breathers .....	96	<b>Service Factor</b> .....	<b>100</b>
Additional Drain Holes .....	96	<b>Shaft Grounding Provisions</b> .....	<b>101</b>
<b>Drip Covers</b> .....	<b>96</b>	<b>Software: Engineering Data</b> .....	<b>101</b>
<b>Enclosures</b> .....	<b>96</b>	<b>Space Heaters</b> .....	<b>102</b>
Marine Duty .....	96	<b>Terminal Blocks/Strips</b> .....	<b>102</b>
Classified-Class II Zone/Division II Locations.....	97	<b>Thermal Protection</b> .....	<b>102</b>
<b>Export Crating</b> .....	<b>97</b>	Resistance Temperature Detectors (RTDs).....	102
<b>Fan Covers</b> .....	<b>97</b>	Thermostats (Klixons) .....	103
<b>Flange-Mounting</b> .....	<b>97</b>	Winding PTC Thermistors .....	103
Open Drip-Proof Motors.....	97	<b>Vertical Jacking Provisions</b> .....	<b>103</b>
Totally Enclosed Fan Cooled Motors .....	97	<b>Vertical Lifting Provisions</b> .....	<b>103</b>
Totally Enclosed Explosion Proof .....	98	<b>Vibration Detectors</b> .....	<b>103</b>
<b>Grounding Provisions</b> .....	<b>98</b>		
External Grounding Provisions			
on Motor Frame .....	98		
External Grounding Pad on Motor Frame.....	98		

### 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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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 conduit 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 3/8" 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 conjunction 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  $-25^{\circ}$  and  $65^{\circ}\text{C}$ . 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  $65^{\circ}\text{C}$ .

	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
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
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
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	Klixons	Hermetically Sealed (1)	
	NC	NO		
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).

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

# Low Voltage Modifications

## Production Modifications

<b>Altitude</b> .....	<b>107</b>	Fungus-Proof Coating on Motor Windings.....	115
<b>Ambient Temperature</b> .....	<b>107</b>	Encapsulate Windings .....	115
<b>Balance/Vibration</b> .....	<b>107</b>	<b>Lead Length/Lead Terminals</b> .....	<b>115</b>
<b>Bases (Slide Bases)</b> .....	<b>107</b>	Crimp Terminals.....	115
<b>Bearings</b> .....	<b>107</b>	Burndy Lugs/Two-Hole Terminals .....	115
Sealed/Shielded Bearings .....	107	Longer Lead Length than Standard .....	115
Sleeve Bearings.....	107	<b>Lubrication</b> .....	<b>116</b>
Insulated Bearings .....	107	High Temperature Grease.....	116
Regreasable or Locked Bearings.....	108	Low Temperature Grease.....	116
Change Bearings .....	108	Oil-Mist .....	116
<b>Blowers</b> .....	<b>108</b>	Special-Based Grease Requirements.....	116
<b>Brakes</b> .....	<b>109</b>	<b>Nameplates</b> .....	<b>116</b>
<b>Conduit Box Modifications</b> .....	<b>109</b>	Duplicate or Special Nameplates .....	116
Auxiliary Terminal Box.....	109	<b>Paint</b> .....	<b>117</b>
Cast Iron Main Box .....	109	<b>Screens</b> .....	<b>117</b>
Location.....	109	Screens to an Open Drip-Proof Motor.....	117
Remote-Mount Conduit Box.....	109	<b>Seals</b> .....	<b>117</b>
<b>Couplings &amp; Sheaves Mounted</b> .....	<b>110</b>	<b>Service Factor</b> .....	<b>117</b>
<b>Current Transformers</b> .....	<b>110</b>	<b>Shafts</b> .....	<b>118</b>
<b>Documentation</b> .....	<b>110</b>	NEMA TS-Shaft to NEMA T-Shaft.....	118
<b>Dowel Pin Provisions</b> .....	<b>110</b>	NEMA TS Short Shaft.....	118
<b>Drains &amp; Breathers</b> .....	<b>110</b>	Special Shaft (Non-NEMA) .....	118
Additional Drain Holes.....	110	<b>Shaft Grounding Provisions</b> .....	<b>119</b>
Breathers .....	110	<b>Software: Engineering Data</b> .....	<b>119</b>
<b>Drip Covers</b> .....	<b>111</b>	<b>Space Heaters</b> .....	<b>119</b>
<b>Enclosures</b> .....	<b>111</b>	<b>Starting/Connection</b> .....	<b>120</b>
Marine Duty.....	111	<b>Surge Protection</b> .....	<b>120</b>
Mill & Chemical Construction .....	111	<b>Terminal Blocks/Strips</b> .....	<b>120</b>
Petro-Chemical Construction.....	111	<b>Testing</b> .....	<b>120</b>
Classified-Division 2/Zone 2 Locations.....	111	<b>Thermal Protection</b> .....	<b>121</b>
<b>Encoders</b> .....	<b>112</b>	Thermostats (Klixons).....	121
<b>Export Crating</b> .....	<b>112</b>	Winding PTC Thermistors .....	121
<b>Fan Covers</b> .....	<b>112</b>	Thermocouples .....	121
<b>Flange-Mounting</b> .....	<b>112</b>	Resistance Temperature Detectors (RTDs) .....	122
Open Drip-Proof Motors .....	112	<b>Torque</b> .....	<b>122</b>
Quarry Duty 587 Frame Motors .....	112	<b>Vertical Jacking Provisions</b> .....	<b>122</b>
Totally Enclosed Explosion Proof Motors .....	113	<b>Vertical Lifting Provisions</b> .....	<b>122</b>
Totally Enclosed Fan Cooled Motors.....	113	<b>Vibration Detectors</b> .....	<b>123</b>
<b>Frequency</b> .....	<b>113</b>	Vibration Monitoring Detectors.....	123
<b>Grease Fittings</b> .....	<b>113</b>	<b>Voltage</b> .....	<b>123</b>
<b>Grounding Provisions</b> .....	<b>113</b>		
External Grounding Provisions			
on Motor Frame .....	113		
External Grounding Pad to Motor Frame .....	114		
Grounding Provisions to Motor Shaft.....	114		
<b>Hardware</b> .....	<b>114</b>		
<b>Insulation Modifications</b> .....	<b>114</b>		
Upgrade to Class H Insulation System .....	114		
Tropicalized Coating on Motor Winding			
& Internal Surface .....	114		

## 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
	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	—	Contact Toshiba

(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)
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
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
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 conduit 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
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
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
	182/184	\$131	\$131	\$219
	213/215	\$131	\$131	\$219
	254/256	\$131	\$131	\$328
	284/286	\$131	\$131	\$328
	324/326	\$131	\$131	\$328
	364/365	\$131	\$131	\$328
	404/405	\$131	\$131	\$328
	444/445	\$131	\$131	\$328
	447	\$131	\$131	\$328
	449/500	\$131	\$131	\$328
	5000/5800	\$131	\$131	\$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
	182/184	\$219	\$273
	213/215	\$219	\$273
	254/256	\$328	\$383
	284/286	\$328	\$383
	324/326	\$328	\$383
	364/365	\$328	\$438
	404/405	\$328	\$438
	444/445	\$328	\$438
	447	\$328	\$438
	449/500	\$328	\$438
	5000/5800	\$328	\$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 3/8" with lip.

Option	Drip Cover
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)
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)
143/145	Coming Soon	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	
D-Flanges	C-Flange (1)	\$1,558	\$1,558
	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	
	Option	Price
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
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
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
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	Contact Toshiba

(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:

- 210 frame and larger on all EQP 840 products
- All EQP 841 products
- 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
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
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
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
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	
	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

- V-Ring shaft seals come standard on the drive end of totally enclosed motors.
- 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.
- 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)
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+
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)
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 regreassable 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
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	

MV Modifications	MV Gen. Purp. Enclosed	MV General Purpose Open	LV Mods. (Stock & Prod.)	Definite Purpose	IEC	Explosion Proof	TEFC General Purpose
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# 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:

<b>Horsepower:</b>	200 to 900 HP
<b>Speed (60 Hz):</b>	3600, 1800, 1200, or 900 RPM*
<b>Volt (60 Hz):</b>	2300/4160 or 4000 V**
<b>Enclosure:</b>	Open Drip-Proof: IP22
<b>Frame Size:</b>	505US through 5810US
<b>Construction:</b>	Cast Iron Frame & Brackets with Cast Iron or Stamped Steel Terminal Box(es)
<b>Insulation:</b>	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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

# 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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



TEFC General Purpose

# Open Enclosure

## Weather Protected I (WPI)

### High Efficiency



Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

# Open Enclosure

## Weather Protected II (WP11)

### High Efficiency



Toshiba's General Purpose Weather-Protected Type II (WP11) 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

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

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

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

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

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

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

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- 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 (WP11)

### 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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose

## Open Enclosure

## Weather Protected II (WP II)

## High Efficiency



Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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 (WP II)

### 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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

# Open Enclosure

## Weather Protected II (WP II)

### 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:

<b>Horsepower:</b>	100 to 2,500 HP
<b>Speed:</b>	3600, 1800, 1200, 900, or 720 RPM*
<b>Voltage:</b>	2300/4000 or 4000 V*
<b>Enclosure:</b>	Totally Enclosed Fan Cooled
<b>Frame Size:</b>	S447TS/449TS through N8810
<b>Construction:</b>	Cast Iron Frame & End Brackets
<b>Insulation:</b>	Class F with Class B Rise at 1.0 Service Factor by RM (Where Noted)
<b>Environment:</b>	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
<b>MXTFCM</b>	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
<b>MXTFGM</b>	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

TEFC General Purpose

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MV Modifications

TEFC General Purpose

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## TEFC General Purpose

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LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



# 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-C	69	95.4	12	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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



# 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:

MXTFCM	S/B449	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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

# 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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

# 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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications



TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

# 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:

<b>Horsepower:</b>	400 to 5,500 HP
<b>Speed (60 Hz):</b>	3600, 1800, 1200, or 900 RPM*
<b>Volt (60 Hz):</b>	2300/4000 or 4000 V**
<b>Enclosure:</b>	Totally Enclosed Water-to-Air Cooled
<b>Frame Size:</b>	5011/12USS through 6812/13USS
<b>Construction:</b>	Cast Iron Frame, End Brackets & Main Terminal Box for 5012 & 5812 Frames; Fabricated Steel Main Box for 6800 & Larger
<b>Insulation:</b>	Class F with Class B Rise at 1.0 Service Factor by RM
<b>Environment:</b>	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

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

TEFC General Purpose

# Totally Enclosed

## Totally Enclosed

### Water-Air Cooled (TEWAC)

### High Efficiency



Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock &amp; Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

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	4508TVAL11E-A	66	93.6		MXTWAC	\$103,322
450	900	4000	5811/12US	ANTI-FRICTION	7800	4508TVAL11E-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	5008TVAL11E-A	69	94.5		MXTWAC	\$106,352
500	900	4000	5811/12US	ANTI-FRICTION	7800	5008TVAL11E-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	6006TVAL11E-A	86	93		MXTWAC	\$105,813
600	1200	4000	5811/12US	ANTI-FRICTION	7800	6006TVAL11E-C	86	93	12	MXTWAC	\$133,620
600	900	4000	5811/12US	ANTI-FRICTION	7800	6008TVAL11E-A	84	94.5		MXTWAC	\$112,753
600	900	4000	5811/12US	ANTI-FRICTION	7800	6008TVAL11E-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	7003TVAL11F-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	7003TVAL11F-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	7006TVAL11E-A	94	94.1		MXTWAC	\$106,898
700	1200	4000	5811/12US	ANTI-FRICTION	7800	7006TVAL11E-C	100	94.5	12	MXTWAC	\$134,706
700	900	4000	5811/12US	ANTI-FRICTION	7800	7008TVAL11E-A	99	94.5		MXTWAC	\$115,917
700	900	4000	5811/12US	ANTI-FRICTION	7800	7008TVAL11E-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	8003TVAL11F-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	8006TVAL11E-A	103	94.5		MXTWAC	\$117,393
800	1200	4000	5811/12US	ANTI-FRICTION	7800	8006TVAL11E-C	108	93.6	12	MXTWAC	\$145,199
800	900	4000	5811/12US	ANTI-FRICTION	7800	8008TVAL11E-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	9003TVAL11F-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	9003TVAL11F-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	9005TVAL11E-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	9005TVAL11E-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	9006TVAL11E-A	117	95.4		MXTWAC	\$120,248
900	1200	4000	5811/12US	ANTI-FRICTION	7800	9006TVAL11E-C	114	95.4	12	MXTWAC	\$145,730
900	900	4000	5811/12US	ANTI-FRICTION	7800	9008TVAL11E-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	M203TVAL11F-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	M203TVAL11F-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	M205TVAL11E-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	M205TVAL11E-A	122	95.8	4	MXTWAC	\$115,990
1000	1200	4000	5811/12US	ANTI-FRICTION	7800	M206TVAL11E-A	131	95.4		MXTWAC	\$123,607
1000	1200	4000	5811/12US	ANTI-FRICTION	7800	M206TVAL11E-C	137	94.5	12	MXTWAC	\$149,090
1000	900	4000	5811/12US	ANTI-FRICTION	7800	M208TVAL11E-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	M253TVAL11F-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	M253TVAL11F-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	M255TVAL11E-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	M255TVAL11E-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	M257TVAL11E-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	M258TVAL11E-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	M303TVAL11F-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	M303TVAL11F-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	M305TVAL11E-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	M305TVAL11E-C	193	95.8	4, 12	MXTWAC	\$153,854

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

**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.

TEFC General Purpose

Explosion Proof

IEC

Definite Purpose

LV Mods. (Stock & Prod.)

MV General Purpose Open

MV Gen. Purp. Enclosed

MV Modifications

MV Modifications	MV Gen. Purp. Enclosed	MV General Purpose Open	LV Mods. (Stock & Prod.)	Definite Purpose	IEC	Explosion Proof	TEFC General Purpose
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# Medium Voltage Modifications

## Production Modifications

<b>Basic Design Fundamentals.....</b>	<b>158</b>	<b>Stator .....</b>	<b>163</b>
Altitude.....	158	Additional VPI.....	163
Ambient Temperature .....	158	Stator (Winding) RTDs.....	163
Constant Torque - Motor Mounted Independent Blower.....	158	Thermostats (Klixons).....	163
Direction of Rotation.....	158	Upgrade to Class H Insulation System.....	163
IP Enclosure Protection .....	158	<b>Terminal Boxes .....</b>	<b>163</b>
Location: Classified-Division 2/Zone 2 .....	158	Auxiliary Terminal Box .....	163
Severe Duty Package** .....	158	Burndy Lugs/Two-Hole Terminals .....	163
Shipping - Export Crating .....	158	Current Transformers .....	164
Tagging/Nameplates .....	158	Drains .....	164
<b>Bearings.....</b>	<b>159</b>	Main Box Construction .....	164
Bearing RTDs, Single & Dual Elements .....	159	Remote-Mount Conduit Box.....	164
Constant Level Oilers.....	159	Surge Protection .....	164
Flood Lube Provisions (Sleeve Bearings Only) .....	159	Terminal Box Space Heaters .....	164
Grease – High Temperature .....	159	<b>Testing.....</b>	<b>165</b>
Grease – Low Temperature.....	159	<b>Top Hat .....</b>	<b>165</b>
Insulated Bearings .....	159	Air Inlet RTD.....	165
Oil – Mist.....	159	Differential Pressure Switch/Gauge.....	165
Oil Sump Heaters .....	160	Filters.....	165
Roller Bearing for Belted Applications.....	160	Louvers .....	165
Seals .....	160		
Vibration Detectors.....	160		
Vibration Monitoring Devices .....	160		
<b>Coatings.....</b>	<b>161</b>		
Internal Coating for Extreme Service Operation .....	161		
Paint .....	161		
<b>Frame .....</b>	<b>161</b>		
Breathers.....	161		
Dowel Pin Provisions .....	161		
External Grounding Pads on Motor Frame.....	161		
Fan Cover Material .....	161		
Flange-Mounting .....	161		
Hardware.....	161		
Soleplates/Slide Rails/Shims .....	162		
Space Heaters .....	162		
Vertical Jacking Provisions.....	162		
<b>Rotor .....</b>	<b>162</b>		
Coupling/Sheave .....	162		
Encoders.....	162		
Shaft Grounding Provisions.....	162		
<b>Shafts .....</b>	<b>162</b>		
List Adders for Special Shafts.....	162		
<b>Software .....</b>	<b>163</b>		
Software: Engineering Data.....	163		

## 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
Frame	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
Frame		DE (1)
	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
Frame	440/500	\$571	\$1,143
	5000/5800	\$571	\$1,143
	6800/450	\$571	\$1,143
Option	Provision for Metrix Accelerometer Sensor (3)	Metrix Accelerometer Sensor/ST5484E	
		One End	Both Ends
Frame	440/500	\$571	\$1,143
	5000/5800	\$571	\$1,143
	6800/450	\$571	\$1,143

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
	5000/5800	\$0	\$0	\$1,263
	6800/450	\$0	\$0	\$1,263

(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
Frame	440/500	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 1/2" 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 performance 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
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)
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
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
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
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	
	5000/5800	Included	\$11,000	
	6800/450	Included	\$11,000	
Option	Complete, Witnessed	Noise, Unwitnessed (1)	Noise Witnessed (1)	
	440/500	\$21,344	\$4,095	
	5000/5800	\$21,344	\$4,095	
Frame	6800/450	\$21,344	\$4,095	
	Option	Vibration	Insulation Resistance	Polarization Index
		440/500	\$2,925	\$1,755
5000/5800		\$2,925	\$1,755	
Frame	6800/450	\$2,925	\$1,755	

(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
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
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
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
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	A	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		Bi		E	Totally Enclosed	D		1.35	
I (Note 8)	Explosion Proof Drive System (UL File E53559)		1 / 8	1/8	5	4	Uni	A	F	Totally Enclosed Fan Cooled	E	A	1.4	
			1 / 2	1/2	6		Bi		G	Weather Protected Type-1	U		SPL	
L	Single-Phase Condensor SKD	L	3 / 4	3/4	7	6	Uni	Single Speed	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		10		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	12	Uni	Single Speed	P	Totally Enclosed Pipe-Ventilated Machine	J	F	1.4	
Q		M			A		12		Bi	V			SPL	
R		N	Y ? ?	1/10 Times	G		14		Uni	Q	Underwater Type - Oil Filled		K	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	16	Uni	Single Speed	U	Underwater Type - Water-Filled	M	F	1.25	
U		M	018 (Note 4)	18.5 kW	C		16		Bi	V	Dripp -Proof		N	1.35
V		N			J		16		Uni	Y	Explosion Proof		O	1.4
W		O			D		18		Bi	R	Corrosion Proof		W	SPL
E	Three-Phase Wound Rotor					Over 20	K	Multi-Speed	W	Totally Enclosed Fan Cooled - Outdoor Use	P	H	1.0	
F	Other Three-Phase						Uni		Z	Water-Proof Machine	Q		1.15	
G	Single-Phase, One Condensor SIKD						Bi		B	Totally Enclosed Air Over (TEAO)	R		1.25	
X	Single-Phase Shaded Pole						Uni		H	Open Drip Proof Air Over	S		1.35	
Y	Other Single-Phase								L	Liquid Cooling	T	1.4		
Z	IEC Metric								I	Water Cooling	X	SPL		
									J					
									T	Totally Enclosed with Water Air Cooled (TEWAC)				
									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)			Seventh Field - Bearings (One Digit)		Eighth Field - Voltage (One Digit)		Ninth Field (Not To Exceed Three Digits)		Tenth Field Optional Extensions (Note 6)	
Symbol	Mount Type	Shaft End	Symbol	Bearing Type	Symbol	Volts - Hz	Symbol	Features	Symbol	Features
F	Floor-Mount	Standard	1	Shielded Ball w w/ Plugs	A	230/460 - 60	0	Toshiba Internal Reference	A	Toshiba Internal Reference
G		Short	2	Shielded Ball w/o Plugs	B	460 - 60	1	Toshiba Internal Reference	B	Toshiba Internal Reference
A		Special	3	Open Ball Bearing v w/ Plugs	C	230 - 60	2	Toshiba Internal Reference	C	Toshiba Internal Reference
R	Resilient Base	Standard	4	Roller Bearing on P.E. w w/ Plugs	D	115/230 - 60	3	Toshiba Internal Reference	D	Toshiba Internal Reference
Q		Short	5	Roller Bearing on P.E. & O.P.E.	E	115 - 60	...	Toshiba Internal Reference	E	Toshiba Internal Reference
I		Special	6	Sleeve Bearing v w/ Plugs	F	240/480 - 60	A	Toshiba Internal Reference	F	Toshiba Internal Reference
T	C-Face Footed	Standard	7	Sleeve Bearing w/o Plugs	G	2300 or 2400 - 60	B	Toshiba Internal Reference	G	Toshiba Internal Reference
H		Special	8	Roller Bearing on O.P.E. & Ball on P.E.	H	220/380 - 60	C	Toshiba Internal Reference	H	Toshiba Internal Reference
U		Short	9	Special Construction	I	4000 or 4160 - 60	D	Toshiba Internal Reference	I	Toshiba Internal Reference
C	C-Face Footless	Standard	0	Other	J	2300/4160 or 2300/4000 or 2400/4160 - 60	E	Toshiba Internal Reference	J	Toshiba Internal Reference
J		Special	F	Angular Contact Ball (P.E. & O.P.E.)	F		Toshiba Internal Reference	K	Toshiba Internal Reference	
E	D-Flange Footed	Standard	G	Angular Contact Ball + Ball	K	6000 or 6600 - 60	G	Toshiba Internal Reference	L	Toshiba Internal Reference
K		Special	H	Angular Contact Ball + Roller	L	208/416 - 60	H	Toshiba Internal Reference	M	Toshiba Internal Reference
D	D-Flange Footless	Standard	J	Cylindrical Roller + Ball	M	13200 - 60	I	Toshiba Internal Reference	N	Toshiba Internal Reference
L		Special	K	Cylindrical Roller + Roller	N	220/440 - 60	J	Toshiba Internal Reference	O	Toshiba Internal Reference
M	Pad-Mount Footless w/o C-Face	Standard	L	Sleeve Bearing (Horiz.) - Self Lub.	O	575 - 60	K	Toshiba Internal Reference	P	Toshiba Internal Reference
P		Special	M	Sleeve Bearing for Vertical	P	Other - 60	L	Toshiba Internal Reference	Q	Toshiba Internal Reference
N	Footless Frame	Standard	N	Third Pedestal Bearing	Q	2300 - 50	M	Toshiba Internal Reference	R	Toshiba Internal Reference
V		Special	P	Fourth Pedestal Bearing (Jackshaft)	R	4000 or 4160 - 50	N	Toshiba Internal Reference	S	Toshiba Internal Reference
X	Other	---	Q	Ball + Forced Oil Lube	S	4600 - 50	O	Toshiba Internal Reference	T	Toshiba Internal Reference
S	OEM Motor	Special Shaft & Flange	R	Roller + Forced Oil Lube	T	6000 or 6600 - 50	P	Toshiba Internal Reference	U	Toshiba Internal Reference
			S	Angular Contact + Forced Oil Lube	U	230/460 - 60	Q	Toshiba Internal Reference	V	Toshiba Internal Reference
			T	Cylindrical Roller + Forced Oil Lube	V	190/380 - 50	R	Toshiba Internal Reference	W	Toshiba Internal Reference
B	OEM Motor	Standard	U	Sleeve Bearing (Horiz.) - Forced Oil Lube	W	200/400 - 50	S	Toshiba Internal Reference	X	Toshiba Internal Reference
			V	Sleeve for Vertical + Forced Oil Lube	X	220/440 - 50	T	Toshiba Internal Reference	Y	Toshiba Internal Reference
			W	Third Pedestal Bearing + Forced Oil Lube	Y	Other - 50	U	Toshiba Internal Reference	Z	Toshiba Internal Reference
			X	Fourth Pedestal Bearing + Forced Oil Lube (Jackshaft)	Z	Other	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		
<b>Medium Voltage Ratings</b>										
							C	Toshiba Internal Reference		
							D	Toshiba Internal Reference		
							E	Toshiba Internal Reference		
							F	Toshiba Internal Reference		
							M	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)
---	---	---	---
<p><b>Horsepower</b></p> <p>1/2 = 1/2 HP</p> <p>3/4 = 3/4 HP</p> <p>Y15 = 1.5 HP</p> <p>Y75 = 7.5 HP</p> <p>1000+ (HP) Rating</p> <p>First Digit = M</p> <p>[M = 50 Multiplier]</p> <p>5000+ (HP) Rating</p> <p>First Digit = C</p> <p>[C = 250 Multiplier]</p> <p>Second &amp; Third Digit = A</p> <p>Numerical Range</p> <p>from 20 to 99</p> <p>{Ex: M20 = 1000; 50 x 20 = 1000}</p> <p>{Ex: M25 = 1250; 50 x 25 = 1250}</p> <p><b>KW<sup>3</sup></b></p> <p>X37 = 0.37 KW</p> <p>Y11 = 1.1 KW</p> <p>018 = 18.5 KW</p>	<p><b>Single Speed</b></p> <p>1 = 2-Pole (uni-CW)</p> <p>2 = 2-Pole (Bi)</p> <p>3 = 2-Pole (Uni-CCW)</p> <p>4 = 4-Pole (bi)</p> <p>5 = 4-Pole (Uni-CCW)</p> <p>6 = 6-Pole (Bi)</p> <p>7 = 6-Pole (Uni-CCW)</p> <p>8 = 8-Pole (Bi)</p> <p><b>Multi-Speed</b></p> <p>N = 4/8-Pole 1 Wdg.</p> <p>P = 4/8-Pole 2 Wdg.</p> <p>Q = 4/6-Pole 2 Wdg.</p>	<p>BC = Blower Cooled</p> <p>DP = ODP</p> <p>FA = TEAO</p> <p>FC = TEFC (IP44)</p> <p>FN = TENV</p> <p>FT = TEFC (IP54)</p> <p>QD = Quarry Duty</p> <p>SD = Severe Duty</p> <p>TC = TEAAC</p> <p>WP = WP1</p> <p>WT = WP2</p> <p>XD = 841 Petro-Chem</p> <p>XP = TEXP</p> <p>XS = 840 Mill &amp; Chem</p>	<p>A = Anti-Friction Bearings</p> <p>B = Brake Motor</p> <p>C = Design C</p> <p>D = Single Label (Class I)</p> <p>E = Dual Label (Class I &amp; II)</p> <p>F = VFD/ASD Motor</p> <p>G = Cooling Tower</p> <p>H = Close-Coupled Pump (Steel)</p> <p>J = Close-Coupled Pump (Cast Iron)</p> <p>K = Dry Kiln</p> <p>M = Metric<sup>3</sup> (KW Only)</p> <p>N = Steel Frame</p> <p>P = OWP</p> <p>Q = Sleeve Bearing</p> <p>R = Rig Motor</p> <p>S = Standard (default)</p> <p>T = Triple Rate</p> <p>U = Permanent Magnet</p> <p>W = SS Washdown</p>

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
<b>60 Hz</b> A = 230/460 B = 460 C = 575 D = 230/460/796 G = 2300 J = 2300/4160 K = 2300/4000 L = 4000 O = 6600 U = 200  <b>50 Hz</b> M = 230/400 N = 400 8 = 6000  <b>60/50Hz</b> R = 230/460 V @ 60 Hz and 190/380V @ 50 Hz  T = 460 V @ 60 Hz and 380V @ 50 Hz  V = 230/400 V @ 50 Hz and 460V @ 60Hz  W = 400 V @ 50 Hz and 460 V @ 60 Hz	<b>NEMA</b> 1 = Standard Eff. 2 = Epact Eff. 3 = Premium Eff. 4 = NEMA Prem. Eff. 9 = Super Prem. Eff.  <b>IEC</b> 5 = IE1 6 = IE2 7 = IE3 8 = IE4	<b>NEMA</b> 1 = Footed 2 = C-Face Footed 3 = D-Flange Footed 4 = C-Face Round 5 = D-Flange Round 6 = Round Body 7 = C-Face NEMA "BA"  <b>IEC<sup>4,5,6</sup></b> F = Footed (B3) G = FF Footed (B35) H = FT Footed (B34) J = FF Rd Body (B5) K = FT Rd Body (B14)	<b>NEMA</b> A = T-Shaft B = TS-Shaft C = TSS-Shaft D = TZ-Shaft E = US-Shaft F = USS-Shaft G = UZ-Shaft * H = 56-Shaft * K = 140C-Shaft M = JM-Shaft N = Keyless Shaft P = JP-Shaft  W = HP Solid Shaft (Normal Thrust)  X = LP Solid Shaft (Medium Thrust)  Y = VP Solid Shaft (High Thrust)  Z = TP Hollow Shaft (High Thrust)  <b>IEC</b> S = Std. Shaft  <b>Note:</b> * = Shaft & Flange for Frame Series/Size Described	A = Alum. Rotor C = Cu Bar Rotor F = Alt. Frame Size H = Toshiba Internal Reference L = Aluminum Frame P = Purchased R = Roller Bearing T = Toshiba Internal Reference Y = 115°C Ambient Z = 135°C Ambient  2 = F2 Mount 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

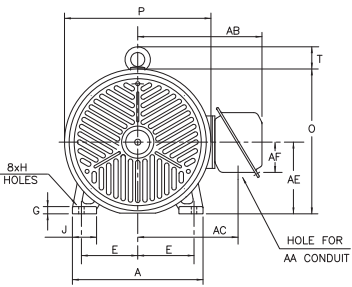
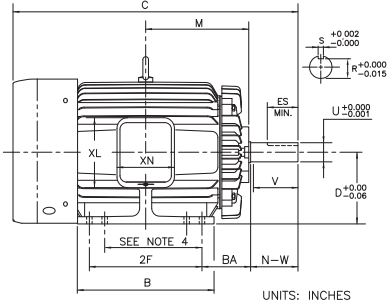
### Full-Load Efficiencies for NEMA Premium® Efficiency Electric Motors Rated 600 V or Less (NEMA Table 12-12 & NEMA 20-B)

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
<b>Open Drip-Proof Motors</b>								
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*
<b>Totally Enclosed Fan Cooled Motors</b>								
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	84.0
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:**

- <sup>1</sup> 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.
- <sup>2</sup> 400 HP, 3600 RPM ratings in B449TS frame are suitable for 2:1 Constant Torque (CT) and Variable Torque (VT) only.
- <sup>3</sup>B5003FKG8BMH, B5001FKG8BMH, B5001FKG8OMH, B5003FKG8OMH are not suitable for ASD use.

## Appendix D

### Division 2 Motors

TEFC EQP Global<sup>®</sup> SD, 840, 841, Close-Coupled Pump, and Cooling Tower NEMA Premium<sup>®</sup> 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

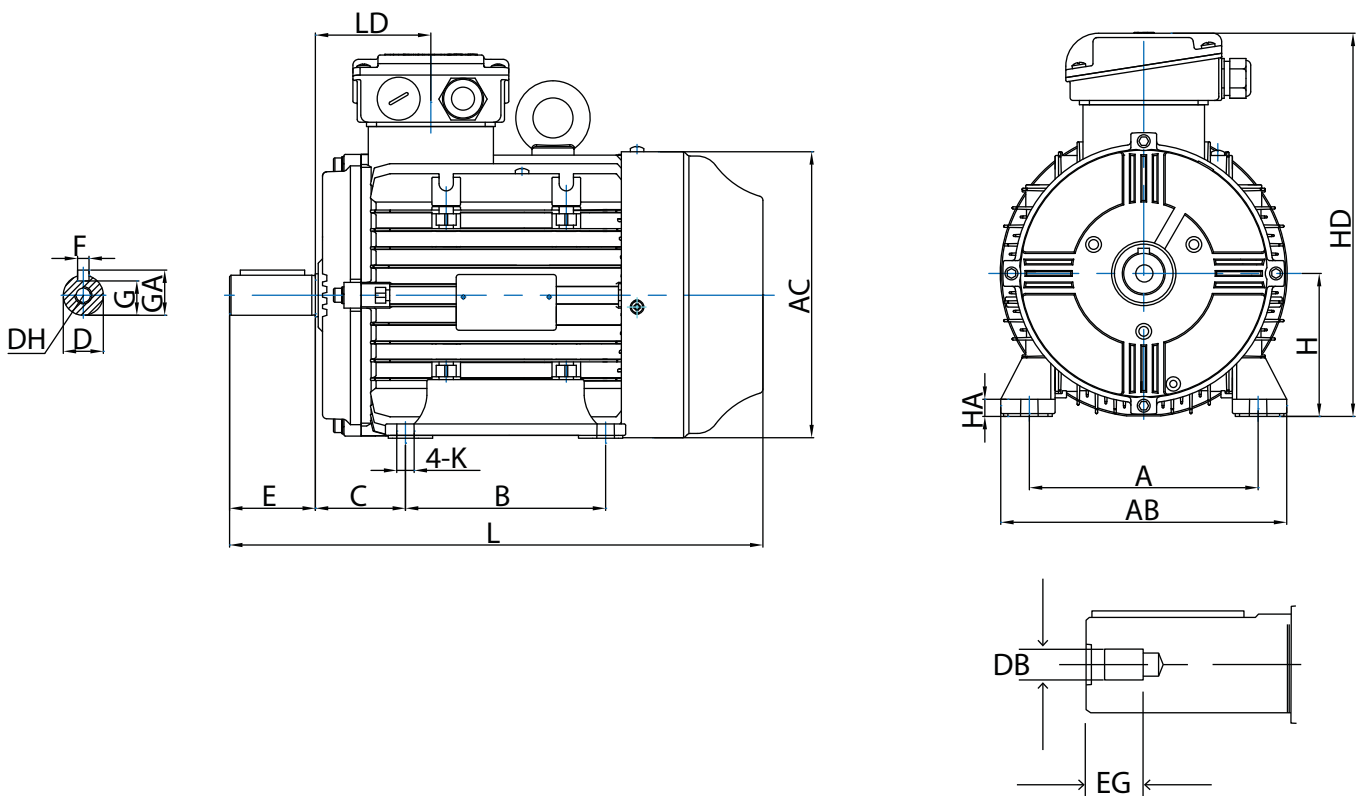
kW (50 Hz)	IE2 High Efficiency				IE3 Premium Efficiency				IE4 Super Premium Efficiency			
	2-Pole	4-Pole	6-Pole	8-Pole	2-Pole	4-Pole	6-Pole	8-Pole	2-Pole	4-Pole	6-Pole	8-Pole
0.55	74.1	77.1	73.1	61.7	77.8	80.8	77.2	73	81.5	83.9	80.9	77
0.75	77.4	79.6	75.9	66.2	80.7	82.5	78.9	75	83.5	85.7	82.7	78.4
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	95.4	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 <td>18</td> <td>53</td> <td>M20</td> <td>42</td>	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.)			
<b>Heavy Duty - 150% current overload for 60 seconds</b> (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.)			
<b>Normal Duty - 120% current overload for 60 seconds</b> (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.)			
<b>Heavy Duty - 150% current overload for 60 seconds</b> (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.)			
<b>Normal Duty - 120% current overload for 60 seconds</b> (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.)			
<b>Heavy Duty - 150% current overload for 60 seconds</b>									
(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.)			
<b>Normal Duty - 120% current overload for 60 seconds</b>									
(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.)			
<b>Heavy Duty - 150% current overload for 60 seconds</b> <small>(Primarily used for constant torque applications. Examples are conveyors, crushers, extruders and mixers)</small>									
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.)			
<b>Normal Duty - 120% current overload for 60 seconds</b> <small>(Primarily used for variable torque applications. Examples are fans, centrifugal pumps and blowers)</small>									
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	#	*	*	*	*
<b>Series:</b> AS3P - AS3P Style Assembly									
<b>Voltage:</b> 4 - 460									
<b>Model Number:</b> 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									
<b>Style:</b> AA - Includes Input Circuit Breaker AE -Includes Input Circuit Breaker, Isolated Three-contactor Bypass, Overload Protection									
<b>Reactor:</b> 0 - No Line Reactor 3 - 3% AC Line Reactor 5 - 5% AC Line Reactor									
<b>Surge Arrestor:</b> 0 - No Surge Arrestor M - Basic (MOV) Surge Arrestor S - Raycap Strikesorb Surge Arrestor									
<b>Space Heater:</b> 0 - No Space Heater T - Cabinet Space Heater with Thermostat		<b>Motor Space Heater Circuit:</b> 0 - No Motor Space Heater Circuit R - Motor Space Heater Circuit							
<b>4 Door Mounted Pilot Device:</b> 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							
<b>SCCR Rating:</b> 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.)							
<b>Heavy Duty - 150% current overload for 60 seconds</b> (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.)							
<b>Normal Duty - 120% current overload for 60 seconds</b> (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.)						
<b>Heavy Duty - 150% current overload for 60 seconds</b> (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.)						
<b>Normal Duty - 120% current overload for 60 seconds</b> (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				
VFAS3-2550P	VFAS3-4110KPC						
	VFAS3-4132KPC		A7	NEM1112Z	\$1,300	15.5	
	VFAS3-4160KPC						
	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	A2Y	NEM302Z	\$800	7	IP00
		VFAS3-6300PC					
		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	A3	FOT020Z	\$450
VFAS3-2055P	VFAS3-4110PC			
VFAS3-2075P	VFAS3-4150PC			
	VFAS3-4185PC	A4	FOT021Z	\$650
VFAS3-2110P	VFAS3-4220PC			
VFAS3-2150P	VFAS3-4300PC			
VFAS3-2185P	VFAS3-4370PC	A5	FOT022Z	\$700
VFAS3-2220P	VFAS3-4450PC			
VFAS3-2300P	VFAS3-4550PC			
VFAS3-2370P	VFAS3-4750PC	A6	FOT023Z	\$1,815
VFAS3-2450P	VFAS3-4900PC			
VFAS3-2550P	VFAS3-4110KPC			
	VFAS3-4132KPC	A7	FOT013Z	\$1,050
	VFAS3-4160KPC			
	VFAS3-4200KPC			
	VFAS3-4220KPC	A8	FOT014Z	\$1,420
	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 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 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 Includes: -6 digital inputs -2 digital open collector outputs -2 analog inputs	A, B, or C	\$400
ETB014Z	I/O extension 2 option card Includes: -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: -6 120VAC digital inputs -3 relay outputs -3 analog inputs -2 analog outputs -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	A3		
VFAS3-2055P	VFAS3-4110PC			
VFAS3-2075P	VFAS3-4150PC			
	VFAS3-4185PC	A4		
VFAS3-2110P	VFAS3-4220PC			
VFAS3-2150P	VFAS3-4300PC			
VFAS3-2185P	VFAS3-4370PC	A5		
VFAS3-2220P	VFAS3-4450PC			
VFAS3-2300P	VFAS3-4550PC			
VFAS3-2370P	VFAS3-4750PC	A6		
VFAS3-2450P	VFAS3-4900PC			
VFAS3-2550P	VFAS3-4110KPC			
	VFAS3-4132KPC	A7	PB7-4132K	\$4,000
	VFAS3-4160KPC	A8	Included	N/A
	VFAS3-4200KPC			
	VFAS3-4220KPC			
	VFAS3-4280KPC		PB7-4200K	\$5,500



# 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  $\pm 10$  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 VFS15-2007 VFS15S-2002 VFS15S-2004 VFS15S-2007	N/A	N/A	NEM201Z	\$180	2.57
VFS15-2015 VFS15-2022	N/A	N/A	NEM202Z	\$80	2.58
VFS15S-2015 VFS15S-2022	N/A	N/A	NEM203Z	\$150	2.58
N/A	VFS15-4004PL VFS15-4007PL VFS15-4015PL	N/A	NEM204Z	\$110	2.58
N/A	VFS15-4004PL1 VFS15-4007PL1 VFS15-4015PL1	VFS15-6015	NEM209Z	\$180	2.56
N/A	VFS15-4022PL1 VFS15-4037PL1	VFS15-6022 VFS15-6037	NEM210Z	\$180	3.01
VFS15-2037	N/A	N/A	NEM205Z	\$95	2.62
N/A	VFS15-4022PL VFS15-4037PL	N/A	NEM206Z	\$135	2.56
VFS15-2055 VFS15-2075	VFS15-4055 VFS15-4075	VFS15-6055 VFS15-6075	NEM207Z	\$125	3.70
VFS15-2110 VFS15-2150	VFS15-4110 VFS15-4150	VFS15-6110 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 VFS15S-2004 VFS15S-2007 VFS15-2004 VFS15-2007	N/A	N/A	DIN003Z	\$75
VFS15S-2015 VFS15S-2022 VFS15-2015 VFS15-2022	VFS15-4004 VFS15-4007 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 One CAB001x-0A Cable is Necessary 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 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 M3 Mounting Hardware Not Included	\$225
PDP003Z	Profibus® Communication Option Card for S15 Drive SBP009Z Required	\$450
DEV003Z	DeviceNet® Communication Option Card for S15 Drive 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 SBP009Z Required	\$400

# S15 Microdrive

## S15 Option

### Information & Pricing

Model Number	Description	List Price
IPE003Z	EtherCAT® Communication Option Card for S15 Drive SBP009Z Required	\$400
SBP009Z	S15 Communication Option Adapter	\$50
USB001Z	USB-to-serial Conversion Unit Allows Users to Use a USB Port on Computers as a COMport for Connecting it to an ASD for Data Communications USB Input and RS485 or TTL Output for Use on S15 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
<b>Series:</b> HX7+G — HX7 Plus Pack Rev. G				
<b>Voltage:</b> 4 — 460				
<b>Model Number:</b> 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				
<b>Style:</b> 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.)			
<b>6-Pulse Unit</b>								
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.)			
<b>12-Pulse Unit</b>								
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.)			
<b>6-Pulse Unit</b>								
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.)			
<b>12-Pulse Unit</b>								
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.)			
<b>18-Pulse Unit</b>								
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.

AS3

S15

NC3

Plus Pack

LV Options

Reactors & Filters

## 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: Modbus RTU BACnet MS/TP 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	<p>Network Gateway that Supports the Following Protocols:</p> <ul style="list-style-type: none"> <li>DeviceNet®</li> <li>Modbus RTU</li> <li>BACnet MS/TP</li> <li>Metasys N2</li> </ul> 	\$1,350
ECAT-1000	<p>Network Gateway that Supports the Following Protocols:</p> <ul style="list-style-type: none"> <li>EtherCAT®</li> <li>Modbus RTU</li> <li>BACnet MS/TP</li> <li>Metasys N2</li> </ul> 	\$1,350
ETH-1000	<p>Network Gateway that Supports the Following Protocols:</p> <ul style="list-style-type: none"> <li>AB CSP (PCCC)</li> <li>EtherNet/IP®</li> <li>BACnet/IP</li> <li>BACnet MS/TP</li> <li>Modbus/TCP</li> <li>Modbus RTU</li> <li>Profinet IO</li> <li>Metasys N2</li> </ul> 	\$1,725
PBDP-1000	<p>Network Gateway that Supports the Following Protocols:</p> <ul style="list-style-type: none"> <li>Profibus DP</li> <li>Modbus RTU</li> <li>BACnet MS/TP</li> <li>Metasys N2</li> </ul> 	\$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 Black Button for Stop Red Button for Start 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 Activated when ASD is Not Running	\$500
HT	Cabinet Space Heater Powered by Incoming Power 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 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 Order by Description	CF
RT	RTD Monitor/Relay 12 RTD Inputs (Accepts Pt100, Ni100, Ni120, and Cu10 RTDs) 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 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

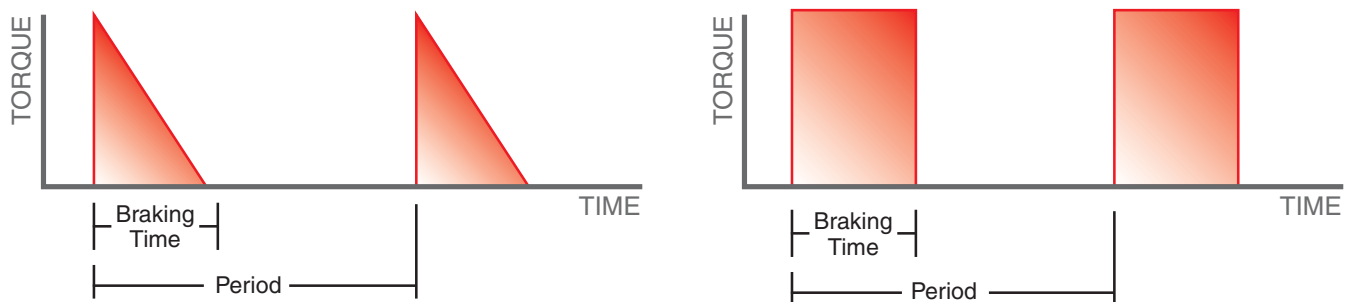
Dynamic braking resistors, also abbreviated as DBRs or PBRs (for power braking resistors), are typically designed to remove excess energy from a system in the form of heat. DBRs are normally connected in series with a chopper transistor labeled “IGBT7” across the DC bus which allows the resistor to bleed 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 by 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
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
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
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
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
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
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
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
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
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
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
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
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  $[(460 \times .05)/1.73]$  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

AS3

S15

NC3

Plus Pack

LV Options

Reactors &amp; Filters

# 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

AS3

S15

NC3

Plus Pack

LV Options

Reactors &amp; Filters

# 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

AS3

S15

NC3

Plus Pack

LV Options

Reactors  
& Filters

# 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

AS3

S15

NC3

Plus Pack

LV Options

Reactors &amp; Filters

# 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

AS3

S15

NC3

Plus Pack

LV Options

Reactors  
& Filters

# 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

AS3

S15

NC3

Plus Pack

LV Options

Reactors &amp; Filters



# 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

AS3

S15

NC3

Plus Pack

LV Options

Reactors &amp; Filters

# 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

AS3

S15

NC3

Plus Pack

LV Options

Reactors &amp; Filters

# 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.)				
<b>Open Type Enclosure</b>								
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.)				
<b>Type 1 Enclosure</b>								
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.)				
<b>Type 3R Enclosure</b>								
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®



# T300MV2<sup>®</sup> 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
<b>Series:</b> M4 - MV2												
<b>Frame Type:</b> 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												
<b>Input Frequency:</b> A - 60 Hz B - 50 Hz												
<b>Type:</b> N - For Non-Regen Adjustable Speed Drives R - Regen Module Adjustable Speed Drives												
<b>Input Voltage:</b> 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												
<b>Output Voltage:</b> 2 - 2400    3 - 3300    4 - 4160    6 - 6600    7 - 6900												
<b>Output Rated Capacity:</b> 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												
<b>Configuration:</b>	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								
<b>Output Options:</b> 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												
<b>Cooling Options:</b> A - Standard    C - Heat Exchanger Cooled B - Bottom Air Feed    D - Outdoor Converter												
<b>Main Input Bus:</b> 0 - None    3 - 2000 A Uninsulated 1 - 1200 A Uninsulated    4 - 2000 A Insulated 2 - 1200 A Insulated												
<b>Additional Options:</b> Additional numbers or letters that may be used to designate other options or identify individual units in multiple unit orders												

# T300MV2<sup>®</sup> General Purpose

## 2400 VAC Output

### Pricing & Dimensions



HP	FLA	Model Number	Frame	Dimensions (in.)			Discount Symbol	List Price	Estimated Shipping Weight (lbs.)
				H	W	D			
<b>Without Bypass</b>									
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
<b>With Manual Bypass</b>									
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 &amp; Dimensions



HP	FLA	Model Number	Frame	Dimensions (in.)			Discount Symbol	List Price	Estimated Shipping Weight (lbs.)
				H	W	D			
<b>Without Bypass</b>									
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
<b>With Manual Bypass</b>									
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<sup>®</sup> 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

MTX2/MTX

BMV2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

# 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.)					
<b>With Manual Bypass</b>									
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<sup>®</sup> General Purpose

## 6600 VAC Output

### Pricing & Dimensions



T300MV2

MTX2/MTX

BMV2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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.)					
<b>Without Bypass</b>									
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, 10,000 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	<b>2400 V</b>			
	Sync Ready Kit - Frame A2	MVD OPT	\$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	
	<b>4160 V</b>			
	Sync Ready Kit - Frame A4μ/A4/0	MVD OPT	\$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		
	<b>6600 V</b>			
	Sync Ready Kit - Frame C6S	MVD OPT	CF	
	Sync Ready Kit - Frame D6S		CF	
	Sync Ready Kit - Frame F6S		CF	
	Sync Ready Kit - Frame F6S+		CF	
	<b>6900 V</b>			
		Sync Ready Kit - Frame F7	MVD OPT	CF
		Bypass sections with feedback CTs - 360 A contactor	MVD OPT	\$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<sup>®</sup> 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

BYP 1	A4μ/A4/A2/B4/B2/0/1
ASD 1	

Frame C4, 2, 3 & 4: Sync-Xfer Arrangement for Single Motor

Frame C4, 2, 3 & 4	BYP 1
	ASD 1

Contact factory for F7/G4P/H4P frame sizes and all 6600 V drives.

# T300MV2<sup>®</sup> 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
<b>2400 V</b>		
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
<b>3300 V</b>		
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
<b>4160 V</b>		
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
<b>6600 V</b>		
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



T300MV2

MTX2/MTX

### 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	<b>2400 V</b>			
	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
	<b>3300 V</b>			
	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
	<b>4160 V</b>			
	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

BMV2

Regen

MV ASD Accessories

MV Controllers

### 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	<b>2400 V</b>				
	Frame A2/B2/C2/D2	N/A	N/A	MVDOPT	N/A
	Frame 4	N/A			N/A
	<b>4160 V</b>				
	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

Vacuum Contactors

LV SSS

Vacuum Breakers

**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	MVD OPT	\$13,000
	Frame D2			\$31,000
	Frame A4 $\mu$ , 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 A6S $\mu$			\$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 A4 $\mu$ , A4, 0	Drives with Sine Wave Filter	MVD OPT	\$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 A4 $\mu$ , A4, B4 Common AC Bus	Drives with Sine Wave Filter	MVD OPT	\$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.	MVD OPT	\$4,000
	Frame B2			\$5,400
	Frame D2			\$8,000
	Frame A4 $\mu$ , 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.	MVD OPT	\$4,000
EHM2	Power Provided Separately	Motor space heater circuit with indicating light. External power supplied by customer.	MVD OPT	\$5,600

# T300MV2® General Purpose

## Option Information & Pricing



T300MV2

MTX2/MTX

### 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

BMV2

Regen

### 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.

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# 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:

- 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.
- 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.
- 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



T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

### 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
<b>Series:</b> M4 - MV2									
<b>Frame Type:</b> 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									
<b>Input Frequency:</b> A - 60 Hz									
<b>Type:</b> N - For Non-Regen Adjustable Speed Drives R - Regen Module Adjustable Speed Drives									
<b>Input Voltage:</b> 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									
<b>Output Voltage:</b> 2 - 2400    3 - 3300    4 - 4160    6 - 6600    7 - 6900									
<b>Output Rated Capacity:</b> 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									
<b>Configuration:</b> A - Standard Fans J - Redundant Fans									
<b>Power Module:</b> -1 (Included)									

# T300MV2<sup>®</sup> 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
<b>2400 V Kits</b>				
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
<b>3300 V Kits</b>				
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
<b>4160 V Kits</b>				
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
<b>2400 V Kits</b>				
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
<b>3300 V Kits</b>				
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
<b>4160 V Kits</b>				
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

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# T300MV2<sup>®</sup> 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
<b>6600 V Kits</b>				
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
<b>6600 V Kits</b>				
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
<b>6900 V Kits</b>				
SPK-M4FAN77700J to SPK-M4FAN7710KJ	CF	F7	SPK-M4FAN77700J-1 to SPK-M4FAN7710KJ-1	CF
<b>6900 V Kits</b>				
Part Number without PM, with Std Fan	List Price	Frame	Part Number with PM & Std Fan	List Price
<b>6900 V Kits</b>				
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

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# 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

MTX2/MTX

BMV2

Regen

MV ASD  
AccessoriesMV  
ControllersVacuum  
Contactors

LV SSS

Vacuum  
BreakersIndustrial  
Automation

# 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<sup>®</sup> 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<sup>®</sup>, NEMA<sup>®</sup> & ANSI<sup>®</sup>



# 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																									
<b>Series:</b> MX4 -- MV2 Outdoor																																				
<b>Frame type:</b> 4 -- MTX2-60 5 -- MTX2-15 (Stacked) 6 -- MTX2-15 (Low profile)																																				
<b>Input Frequency:</b> A -- 60 Hz B -- 50 Hz																																				
<b>Type:</b> N -- For Non Regen Drives R -- Regen Module Drives																																				
<b>Input Voltage:</b> 4 -- 4160																																				
<b>Output Voltage:</b> 4 -- 4160																																				
<b>Output Rated Capacity</b> <table border="0"> <tr> <td>050 -- 500 HP</td> <td>350 -- 3500 HP</td> <td>500 -- 5000 HP</td> </tr> <tr> <td>100 -- 1000 HP</td> <td>400 -- 4000 HP</td> <td>550 -- 5500 HP</td> </tr> <tr> <td>150 -- 1500 HP</td> <td>450 -- 4500 HP</td> <td>600 -- 6000 HP</td> </tr> </table>												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																
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<table border="0"> <tr> <td><b>Configuration:</b></td> <td><b>ID:</b></td> <td><b>CP:</b></td> <td><b>BYP:</b></td> <td></td> </tr> <tr> <td>A --</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>ID -- Input Disconnect</td> </tr> <tr> <td>B --</td> <td>Yes</td> <td>No</td> <td>No</td> <td>CP -- Internal Cooling Fan Power</td> </tr> <tr> <td>C --</td> <td>No</td> <td>Yes</td> <td>No</td> <td></td> </tr> <tr> <td>D --</td> <td>No</td> <td>No</td> <td>No</td> <td></td> </tr> </table>												<b>Configuration:</b>	<b>ID:</b>	<b>CP:</b>	<b>BYP:</b>		A --	Yes	Yes	No	ID -- Input Disconnect	B --	Yes	No	No	CP -- Internal Cooling Fan Power	C --	No	Yes	No		D --	No	No	No	
<b>Configuration:</b>	<b>ID:</b>	<b>CP:</b>	<b>BYP:</b>																																	
A --	Yes	Yes	No	ID -- Input Disconnect																																
B --	Yes	No	No	CP -- Internal Cooling Fan Power																																
C --	No	Yes	No																																	
D --	No	No	No																																	
<b>Output Options:</b> <table border="0"> <tr> <td>A -- Standard Reactor</td> <td>C -- (DV/DT filter and transfer)</td> <td>E -- Sine Wave Filter</td> </tr> <tr> <td>B -- (DV/DT filter)</td> <td>D -- Transfer</td> <td>F -- Sine Wave Filter and Transfer</td> </tr> </table>												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																			
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																																		
<b>Enclosure Options:</b> <table border="0"> <tr> <td>A -- UL Type 3R, Standard Paint</td> <td>C -- UL Type 4, Standard Paint</td> <td></td> </tr> <tr> <td>B -- UL Type 3R, Stainless Steel</td> <td>D -- UL Type 4X, Stainless Steel</td> <td>*Options B, C &amp; D are only available for MTX2-15.</td> </tr> </table>												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.																			
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.																																		
<b>Additional Options:</b> 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.

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
AccessoriesMV  
ControllersVacuum  
Contactors

LV SSS

Vacuum  
BreakersIndustrial  
Automation

# 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	MVD OPT	\$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	MVD OPT	\$66,000
	1000			\$68,000
	1500			\$70,000
	3250-6000			CF

### Push Buttons

Option Code	Description	Discount Symbol	List Price
PBI	IEC Style	MVD OPT	\$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)	MVD OPT	\$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

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# 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<sup>®</sup> Outdoor Specifications

Toshiba's MTX<sup>®</sup> 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<sup>®</sup>, NEMA<sup>®</sup>, UL Listed in US & Canada, ANSI<sup>®</sup>



# MTX<sup>®</sup> 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																									
<b>Series:</b> MX4 -- MV2 Outdoor																																				
<b>Frame type:</b> 0 -- MTX-15 (Convection w fixed modules) 2 -- MTX-30 (Convection w fixed modules)																																				
<b>Input Frequency:</b> A -- 60 Hz B -- 50 Hz																																				
<b>Type:</b> N -- For non regen adjustable speed drives R -- Regen Module Adjustable Speed Drives																																				
<b>Input Voltage:</b> 2 -- 2400    D -- 11000 4 -- 4160    F -- 12400 6 -- 6600    H -- 13800																																				
<b>Output Voltage:</b> 4 -- 4160																																				
<b>Output Rated Capacity:</b> 050 -- 500 HP    200 -- 2000 HP 100 -- 1000 HP    250 -- 2500 HP 150 -- 1500 HP    300 -- 3000 HP																																				
<table border="0"> <tr> <td><b>Configuration:</b></td> <td><b>ID:</b></td> <td><b>CP:</b></td> <td><b>BYP:</b></td> <td></td> </tr> <tr> <td>A --</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>ID -- Input Disconnect</td> </tr> <tr> <td>B --</td> <td>Yes</td> <td>No</td> <td>No</td> <td>CP -- Internal Cooling</td> </tr> <tr> <td>C --</td> <td>No</td> <td>Yes</td> <td>No</td> <td>Fan Power</td> </tr> <tr> <td>D --</td> <td>No</td> <td>No</td> <td>No</td> <td></td> </tr> </table>												<b>Configuration:</b>	<b>ID:</b>	<b>CP:</b>	<b>BYP:</b>		A --	Yes	Yes	No	ID -- Input Disconnect	B --	Yes	No	No	CP -- Internal Cooling	C --	No	Yes	No	Fan Power	D --	No	No	No	
<b>Configuration:</b>	<b>ID:</b>	<b>CP:</b>	<b>BYP:</b>																																	
A --	Yes	Yes	No	ID -- Input Disconnect																																
B --	Yes	No	No	CP -- Internal Cooling																																
C --	No	Yes	No	Fan Power																																
D --	No	No	No																																	
<b>Output Options:</b> A -- Standard reactor    E -- Sine Wave Filter D -- Transfer    F -- Sine Wave Filter and Transfer																																				
<b>Enclosure Options:</b> A -- Standard paint B -- Stainless steel																																				
<b>Additional Options:</b> 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					
<b>Without Bypass</b>											
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

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# MTX<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Outdoor

## Option Information & Pricing



T300MV2

MTX2/MTX

BMV2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

### 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 <sup>®</sup> Communication Card		\$8,000
CP	Profibus <sup>®</sup> 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
<b>Series:</b> MX4 — MTX							
<b>Frame type:</b> 0 — MTX-15 2 — MTX-30							
<b>Input Frequency:</b> A -- 60 Hz B -- 50 Hz							
<b>Type:</b> N — Non-Regen R — Regen							
<b>Input Voltage:</b> 2 -- 2400 3 -- 3300 4 -- 4160							
<b>Output Voltage:</b> 4 -- 4160							
<b>4160V Output:</b> 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	PC4200P412
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

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
AccessoriesMV  
ControllersVacuum  
Contactors

LV SSS

Vacuum  
BreakersIndustrial  
Automation



# T300BMV2<sup>®</sup> 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<sup>®</sup>, NEMA<sup>®</sup>, UL Listed in US & Canada, ANSI<sup>®</sup>



# 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
<b>Series:</b> MB4 - BMV2												
<b>Frame Type:</b> A - Frame A B - Frame B C - Frame C												
<b>Input Frequency:</b> A - 60 Hz												
<b>Type:</b> N - For Non-Regen Adjustable Speed Drives												
<b>Input Voltage:</b> 4 - 4160												
<b>Output Voltage:</b> 4 - 4160												
<b>Output Rated Capacity:</b> 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												
<b>Configuration:</b>												
<b>ID:</b>												
<b>CP:</b>												
A - Yes												
B - Yes												
C - No												
D - No												
<b>Output Options:</b> A - Standard Reactor B - dV/dt Filter												
<b>Cooling Options:</b> A - Standard												
<b>Main Input Bus:</b> 0 - None												
<b>Additional Options:</b> 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.)					
<b>Without Input Controller</b>										
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
<b>With Input Controller</b>										
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
<b>Series:</b> M4 - MV2												
<b>Frame Type:</b> A - Frame A B - Frame B C - Frame C F - Frame F												
<b>Input Frequency:</b> A - 60 Hz B - 50 Hz												
<b>Type:</b> R - Regen Module Adjustable Speed Drives												
<b>Input Voltage:</b> 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												
<b>Output Voltage:</b> 2 - 2400*1    3 - 3300    4 - 4160												
<b>Output Rated Capacity:</b> 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												
<b>Configuration:</b>	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							
<b>Output Options:</b> 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												
<b>Cooling Options:</b> A - Standard												
<b>Main Input Bus:</b> 0 - None												
<b>Additional Options:</b> 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.)					
<b>Without Bypass</b>									
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
<b>With Bypass</b>									
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

T300MV2

MTX2/MTX

BMW2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

# 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
<b>4160 V Kits</b>				
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
<b>4160 V Kits</b>				
Part Number without PM, with Std Fan	List Price	Frame	Part Number with PM & Std Fan	List Price
<b>4160 V Kits</b>				
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.

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation





# Medium Voltage ASD Accessories

## Power Module Lifting Equipment Information & Pricing

### T300MVi® & T300MV2°

Frame	Description	Part Number	Discount Symbol	List Price
<b>2400 V</b>				
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
<b>4160 V</b>				
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
<b>6600 V</b>				
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
<b>6900 V</b>				
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<sup>®</sup>

#### MTX2-15<sup>°</sup>

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<sup>°</sup>

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](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](mailto:TIC-Service@toshiba.com) or you can visit [www.toshiba.com/tic/toshcare](http://www.toshiba.com/tic/toshcare) to submit a Power Module Reconditioning request form.



<sup>1</sup> 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.



<sup>1</sup> Fixed price TOSHcare Protection Plans are available for frame sizes A4U, A4, 0, B4, 1, MTX®, 2, 3, and 4.

<sup>2</sup> 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.

<sup>3</sup> 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.

## 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.

## Pricing (Based on Adjustable Speed Drive Age)

### 1-Year TOSHcare Protection Plan

Frame size	Drive Age				
	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

Frame size	Drive Age				
	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](mailto:TIC-Service@toshiba.com) or visit [www.toshiba.com/tic/service-warranty/service-request-forms](http://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.)

\* 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 capacity ≤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<sup>®</sup> and MTX/2<sup>®</sup> 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

<b>PROJECT REFERENCE:</b>		<b>R.F.Q. REFERENCE</b>	
<b>SPEC. REFERENCE</b>		<b>DATE</b>	

### 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Encoder	

### LOAD TYPE

Variable Torque	<input type="checkbox"/>
Constant Torque	<input type="checkbox"/>
Regeneration	<input type="checkbox"/>
Fan/Pump	
Other	
Speed Range	Hz to Hz

### BREAKAWAY TORQUE

0 to 100%	<input type="checkbox"/>
101 to 150%	<input type="checkbox"/>



# Medium Voltage Adjustable Speed Drives

## Related Services

### Medium Voltage Worksheet

#### ENVIRONMENT

Control Room Max. Ambient	°C	
Control Room Min. Ambient	°C	
Elevation	Meters ASL	
Humidity Non-condensing	%	
Adjustable Speed Drive Cabinet Space Heater	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Adjustable Speed Drive Cabinet Space Heater Test Circuit	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Motor Space Heater Circuit (Externally Powered)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Motor Cabinet Space Heater Test Circuit	<input type="checkbox"/> Yes	<input type="checkbox"/> No

#### DESIGN STANDARDS

#### ENCLOSURE

UL®	<input type="checkbox"/>		UL Type 1	
cUL	<input type="checkbox"/>		UL Type 3R	
IEEE 519	<input type="checkbox"/>		Electrical House	<input type="checkbox"/>
Other				

#### SPEED REGULATION

0.5%, Without Tachometer	<input type="checkbox"/>
0.1% With Tachometer	<input type="checkbox"/>
Other	
Motoring	<input type="checkbox"/>
Volts/Hz Speed Control	<input type="checkbox"/>
Closed Loop Vector Control	<input type="checkbox"/>
Master Follower	
Speed Regulation without Encoder/ Resolver	
Speed Regulation with Encoder/Resolver	

#### SUPPLY SYSTEM VOLTAGE (± 10%)

2400 V			
3300 V			
4160 V	<input type="checkbox"/>		
6600 V	<input type="checkbox"/>		
6900 V	<input type="checkbox"/>		
Other _____ V	<input type="checkbox"/>		
Line Frequency	<input type="checkbox"/> 60 Hz	<input type="checkbox"/> 50 Hz	

# Medium Voltage Adjustable Speed Drives Related Services

## Medium Voltage Worksheet

### CABLE

Power Cable Entry	<input type="checkbox"/> TOP	<input type="checkbox"/> BOTTOM
Power Cable Exit	<input type="checkbox"/> TOP	<input type="checkbox"/> BOTTOM
Control Cable Entry	<input type="checkbox"/> TOP	<input type="checkbox"/> BOTTOM
Control Cable Exit	<input type="checkbox"/> TOP	<input type="checkbox"/> BOTTOM

### OPTIONS

SUPERIOR Key Interlocks	<input type="checkbox"/>		
KIRK Key Interlocks	<input type="checkbox"/>		
Relay Outputs 115 V, 2 A, Form-C	<input type="checkbox"/>		
24 VDC Power Supply	<input type="checkbox"/>		
4 to 20 mA Isolated Analog Outputs	<input type="checkbox"/> Speed	<input type="checkbox"/> Current	<input type="checkbox"/> Voltage
	<input type="checkbox"/> Load	<input type="checkbox"/> Other	
Control Power Backup 1 KVA, 120 V, Toshiba UPS	<input type="checkbox"/>		
Control Power Backup 1 KVA, 120 V, By Others	<input type="checkbox"/>		
Auxiliary Pilot Lights	<input type="checkbox"/>		
Auxiliary Pilot Lights Type	<input type="checkbox"/>		
Auxiliary Push Buttons	<input type="checkbox"/>		
Auxiliary Push Buttons Type	<input type="checkbox"/>		
Redundant Fan (3,460 V)	<input type="checkbox"/>		
Additional Controls (Please Attach Control Schematic)	<input type="checkbox"/>		
	<input type="checkbox"/>		

### AUXILIARY EQUIPMENT

Bypass Starter	
Across The Line	<input type="checkbox"/>
RVAT	<input type="checkbox"/>
Solid State Starter	<input type="checkbox"/>
Synchronous Transfer	<input type="checkbox"/>
Number of Motors	
Indoor Rated Sync.Transfer (GEAR)	
Outdoor Rated Sync.Transfer (GEAR)	
Gear Supplied by Others	

### COMMUNICATION OPTIONS

TOSLINE S20	<input type="checkbox"/>
DeviceNET®	<input type="checkbox"/>
ProfiBus®	<input type="checkbox"/>
Ethernet	<input type="checkbox"/>
ModBus RTU/PLUS	<input type="checkbox"/>
Other	

### MOTOR PROTECTION

TE-RTD12	<input type="checkbox"/>
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# Medium Voltage Adjustable Speed Drives Related Services

## Medium Voltage Worksheet

MULTILIN 369	<input type="checkbox"/>
MULTILIN 869	<input type="checkbox"/>
SEL 710-5	<input type="checkbox"/>
SEL 710-5 with RTD inputs	<input type="checkbox"/>
RTD TYPE	<input type="checkbox"/>

### SERVICES

Startup (Included in Price of Unit)	<input type="checkbox"/>
Onsite Factory Training Testing	<input type="checkbox"/>
Factory Training Houston	<input type="checkbox"/>

### SPARES

Spare Parts Kit	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Spare Power Module	<input type="checkbox"/> Yes	<input type="checkbox"/> No

### SOFTWARE

PC Interface Software	<input type="checkbox"/> Yes	<input type="checkbox"/> No
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### TESTING

Witness Test – QC Runback	<input type="checkbox"/>
Witness Test – Dynamometer (Upto 1250 HP)	<input type="checkbox"/>
Adjustable Speed Drive/Motor Combined Test at Motor Vendor's Facility	<input type="checkbox"/>

### 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



# 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 350 @ 4.0 KV 400 @ 4.6 KV 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 350 @ 4.0 KV 400 @ 4.6 KV 570 @ 4.6 KV	4320 A	8000 A	AC 13.25 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.



T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# 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	PAC JK	\$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.

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

# 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

- JKSS4 & JKSS7 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 previous keypad programming method/display.



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 350 @ 4.0 KV 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 350 @ 4.0 KV	4320 A	8000 A	AC 13.25 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
<b>Series</b>								
<b>Contactor Rating:</b> 4 – 400 A 7 – 720 A								
<b>Controller Type:</b> 00 – FVNR 01 – FDR 10 – FVR 20 – RVAT N/A – SSS								
<b>Enclosure Rating:</b> B – 1 (Indoor) K – 12 (Indoor) E – 3R (Outdoor) A – 1 Gasketed (Indoor) 2 – AR Type 2B Z – OTHER								
<b>Line Voltage:</b> 2 – 2400 3 – 3300 4 – 4160	A – 4800 B – 6600 Z – OTHER							
<b>Motor Rating:</b> 010 – 100 HP 012 – 125 HP 015 – 150 HP 020 – 200 HP 025 – 250 HP 030 – 300 HP 035 – 350 HP 040 – 400 HP	045 – 450 HP 050 – 500 HP 060 – 600 HP 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 350 – 3500 HP 400 – 4000 HP	450 – 4500 HP 500 – 5000 HP 550 – 5500 HP 600 – 6000 HP ZZZ – OTHER					
<b>Additional Functions:</b> <ul style="list-style-type: none"> <li>• See Options Section</li> <li>• Options Should be Entered in Alphabetical Order</li> <li>• If the Smart Part Number is Longer than Two Options, Replace all Options with a “-1”</li> <li>• List all Options with Descriptions for All Equipment</li> </ul>								
<b>Load Cable Enclosure Exit Location:</b> B – Bottom Exit T – Top Exit								



# Medium Voltage Controllers

## JK Series Factory-Installed Modifications



T300MV2

MTX2/MTX

### 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

BMV2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

# 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



T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

### 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 Includes: SSS/Bypass Selector Switch Current Transformers 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)

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# 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 capacitor switching (5000 kVAR max. with a 6% series reactor)

\*\* The rated interrupting 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) HCV-7HA(L) (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 (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) (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) (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).

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# 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

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
AccessoriesMV  
ControllersVacuum  
Contactors

LV SSS

Vacuum  
BreakersIndustrial  
Automation



# 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.

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

# 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

### 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)



TE-H Smart Door





# 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

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD Accessories

MV Controllers

Vacuum Contactors

LV SSS

Vacuum Breakers

Industrial Automation

# Low Voltage Solid State Starters

## TE2 & TE-H Series Dimensions/Weights/Factory Modifications

### TE2 Series — Open Chassis Type

Model	Open-Chassis Type			Approx. Weight lbs. (kg)
	Dimensions (in.)			
	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

## 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:

- English
- Russian
- Chinese
- Spanish
- German
- French

### Low Voltage:

- English
- Russian
- Chinese
- Spanish
- German
- Polish



Touchscreen, showing RX Relay display in English.



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
<b>Series</b>								
<b>Voltage Class:</b> 6 – 4.2 KV 8 – 7.2 KV 10 – 15 KV								
<b>Continuous Amps:</b> M – 1200 A P – 2000 A Q – 3000 A								
<b>Interrupting Capability:</b> 25 – 18 KA 32 – 29 KA 40 – 28 to 41 KA 50 – 37 to 50 KA								
<b>Breaker Configuration:</b> - – Drawout F – Fixed								
<b>Closing/Charging Voltage:</b> V – 125 VDC								
<b>Tripping Voltage:</b> V – 125 VDC								
<b>Factory Modification:</b> 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			V	125 VDC		
	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 through 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)
<b>Discount Symbol</b>		<b>PACVCB</b>	<b>PACVCB</b>	<b>PACVCB</b>	<b>PACVCB</b>	<b>PACVCB</b>
<b>List Price*</b>		\$9,000	\$9,400	\$10,000	\$10,000	\$12,000

\*Add \$1,000 to list price for 24 to 32 VDC trip.

T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

# Vacuum Circuit Breakers

## OEM Cell Pricing

OEM Cell Model Number	Used for Breaker	Cell Weight	Discount Symbol	List Price
HKA-10MS-K-X (Provision for Key interlock & Shutter Padlock)	HVK-6M32A HVK-6M40A HVK-8M40A HVK-10M25A2 HVK-10M40A	130 kg. 287 lb.	PACVCB	\$22,000
HKA-10PS-K-X (Provision for Key Interlock & Shutter Padlock)	HVK-6P32A HVK-6P40A HVK-8P40A HVK-10P25A2 HVK-10P40A	150 kg. 330 lb.	PACVCB	\$28,000
HKA-10MS1	VK-6M50 VK-10M50 VZ-10M50	150 kg. 330 lb.	PACVCB	\$24,000
HKA-10PS1	VK-6P50 VK-10P50 VZ-10P50	170 kg. 380 lb.	PACVCB	\$29,000
HKA-6QS	VK-6Q50 VK-10Q50 VZ-10Q50	290 kg. 640 lb.	PACVCB	\$50,000
H6A-HLS	HV6CS-MLD	20 kg. 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	<p>Capacitor-Trip Device Used for Latched-Type Vacuum Contactor or Vacuum Circuit Breaker when DC Power Not Available. Device Charges from AC Power &amp; Supplies DC Power to Trip-Coil</p> 	PACACC	\$2,000
4A9A8586G001	<p>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</p> 	PACACC	\$500
NV60K304T1	<p>Surge Suppressor; Three-Phase CR Surge Suppressor for 3.3 to 7.2 kV System</p> 	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, IEC61131-3, 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](mailto: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](mailto: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 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](mailto: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 series™ 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 User Program Capacity 32 kSteps Ports: USB, Ethernet & SD Card Slot Uses V-Tool Programming Software	\$2,490
HPUM12**S	Sequence Control Module, High Performance CPU User Program Capacity 64 kSteps Ports: USB, Ethernet & SD Card Slot TC-Net I/O Loop, Optical Network Uses V-Tool Programming Software	\$5,640
HPUM14**S	Sequence Control Module, Redundant CPU User Program Capacity 128 kSteps Ports: USB, Ethernet & Tracking Cables TC-Net I/O Loop, Optical Network Uses V-Tool Programming Software	\$9,820

### Main/Expansion Racks

Part Number	Description	List Price
GBU643D*S	Base Rack Four Station Bus Slots 1-3I/O Slots Not for PUM11	\$590
GBU648E*S	Base Rack Four Slots (Up to 5 Station Bus Slots) Not for PUM11	\$640
GBU664**S	Base Rack for PUM11 Three I/O Slots No Station Bus Expansion Rack Four I/O Slots	\$300
GBU666**S	Base Rack for PUM11 Five I/O Slots No Station Bus Expansion Rack Six I/O Slots	\$300
GBU668**S	Base Rack for PUM11 Seven I/O Slots No Station Bus Expansion Rack 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](mailto: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 For Main/Expansion Racks	\$530
GPS652**S	100 to 110 VDC Power Supply For Main/Expansion Racks	\$890
GPS693**S	120/240 VAC Power Supply For Main/Expansion Racks 24 VDC Service PS	\$360
GPS691**S	120/240 VAC Power Supply For Main Rack with UPS Interface Connections	\$600

### Direct I/O Modules — Discrete

Part Number	Description	List Price
GIN663**S	AC Input Module 16 Points 200 to 240 VAC	\$340
GIN653**S	AC Input Module 16 Points 100 to 120 VAC	\$340
GDI632D*S	DC Input Module 8 Points 12 to 24 VDC Isolated Between Points	\$320
GDI633**S	DC Input Module 16 Points 12 to 24 VDC	\$210
GDI634**S	DC Input Module 32 Points 24 VDC	\$500
GDI635**S	DC Input Module 64 Points 24 VDC	\$710
GDI635H*S	DC Input Module High Speed 64 Points 24 VDC	\$780
GDI653**S	DC Input Module 16 Points 100 to 110 VDC 0.1A/Point, Sync	\$410
GCD633**S	DC Input Module Change Detect 16 Points 12 to 24 VDC	\$710



# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

### PLC Pricing



T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

### Direct I/O Modules — Discrete

Part Number	Description	List Price
GDO633**S	DC Output Module 16 Points, 5 to 24 VDC, 1A/Point Sync (Source Load)	\$240
GDO633P*S	DC Output Module 16 Points, 5 to 24 VDC, 1A/Point, Source	\$220
GDO634**S	DC Output Module 32 Points, 5 to 24 VDC, 0.1A/Point Sync	\$570
GDO635**S	DC Output Module 64 Points, 5 to 24 VDC, 0.1A/Point Sync	\$800
GAC663A*S	AC Output Module 12 Points, 100 to 240 VAC 1A/Point	\$360
GRO662S*S	Relay Output Module Eight Points (Isolated) 240 VAC/24 VDC (max) 2A/Point	\$290
GRO663**S	Relay Output Module 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 Four Channels 0 to 10 V Input 8-Bit	\$390
GAD668**S	Analog Input Module Eight Channels 0 to 5 V 0 to 20 mA ±10 V 16-Bit	\$1,320
GAD674**S	Analog Input Module Four Channels ±10 V Input 12-Bit	\$800
GAD624**S	Analog Input Module Four Channels 1 to 5 VDC/4 to 20 mA 12-Bit	\$800
GAD638S*S	Analog Input Module Eight Channels (Isolated) ±10 V Input 12-Bit	\$2,380
GAD624L*S	Analog Input Module Four Channels 1 to 5 VDC/4 to 20 mA 8-Bit	\$390
GAD628S*S	Analog Input Module Eight Channels (Isolated) 0 to 5 V/0 to 20 mA 12-Bit	\$2,380
GRT614**S	RTD Input Module Four Channels Pt100 Input 12-Bit	\$1,430

# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

### PLC Pricing



Part Number	Description	List Price
GTC618**S	Thermocouple Input Module Eight Channels E, J, K 16-Bit	\$1,120
GDA672**S	Analog Output Module Two Channels $\pm 10$ V Output 12-Bit	\$970
GDA624S*S	Analog Output Module Four Channels (Isolated) 0 to 20 mA 16-Bit Output Hold Option	\$2,720
GDA622L*S	Analog Output Module Two Channels 1 to 5 VDC/4 to 20 mA 8-Bit	\$440
GDA622**S	Analog Output Module Two Channels 1 to 5 V/4 to 20 mA 8-Bit	\$970
GDA664**S	Analog Output Module Four Channels 0 to 5 V/0 to 20 mA $\pm 10$ V 16-Bit	\$1,260

# Programmable Logic Controllers (PLCs)

## Type 1 Light Series

### PLC Pricing



T300MV2

MTX2/MTX

BMV2

Regen

MV ASD  
Accessories

MV  
Controllers

Vacuum  
Contactors

LV SSS

Vacuum  
Breakers

Industrial  
Automation

### Cables

Part Number	Description	List Price
GCS6R3*CS	Expansion Cable 0.3 m Long	\$130
GCS6R5*CS	Expansion Cable 0.5 m Long	\$140
GCS6R7*CS	Expansion Cable 0.7 m Long	\$130
GCS6*1*CS	Expansion Cable 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 24 VDC One End I/O Connector & Other End Pigtail 1/32 pt Module 2/64 Module 2 m Long	\$190

### Intelligent I/O Modules

Part Number	Description	List Price
GPI632**S	Pulse Input Module Two Channels Up to 50 kpps 5/12/24 V Input 24-Bit Counter	\$1,180
GPI672**S	Pulse Input Module Two Channels Up to 50 kpps RS422 Input 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 Single Bus 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 Programs All Type 1 Light Series & nV Controllers IEC61131-3 Compliant Single Station Stand Alone Version	\$3,420
HET8UE4SS	Free Engineering Tool; MS Windows® XP or Later Programs only the PUM11 CPU IEC61131-3 Compliant 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 Blank with Cover for Custom I/O Card	\$80
GSP600*AS	Module Blank	\$60
GBT611*AS	Battery 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](mailto:TIC-Service@toshiba.com)
- For further information, documentation etc. please visit <https://www.toshiba.com/tic/plcs>

## 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**

<b>MOTORS, DRIVES, CONTROLS &amp; INDUSTRIAL AUTOMATION</b>	
<b>EMAIL US</b>	
Customer Service & Technical Support	TIC-Service@toshiba.com
<b>CUSTOMER SERVICE SUPPORT</b>	
Motors, Drives, Controls & Industrial Automation	Tel: (855) 803-7091 Option 1 Fax: (713) 896-5242
<b>TECHNICAL SUPPORT</b>	
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: Rapid Response Repair Authorization On Site Service Request Service Training Motor Warranty Motor & Drive Parts TOSHcare	Tel: (855) 803-7092 Option 2

## Notes

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<b>1</b>	Non-USMCA Qualified
<b>2</b>	Drive End Roller Bearing
<b>3</b>	1.0 Service Factor
<b>4</b>	Uni-directional CCW Rotation When Facing Non-Drive End
<b>5</b>	Uni-directional CW Rotation When Facing Non-Drive End
<b>6</b>	NEMA Design A
<b>7</b>	Totally Enclosed Non-Ventilated (TENV)
<b>8</b>	Ball-Bearing Long Shaft as Standard
<b>9</b>	Nameplated Dual Frequency 50/60 Hz
<b>10</b>	Insulated Sleeve Bearings
<b>11</b>	Insulated Bearing Housing
<b>12</b>	Copper Bar Rotor
<b>13</b>	841 Features May Not Be Fully Compliant
<b>14</b>	Class F Rise by Resistance at 1.0 Service Factor
<b>15</b>	Suitable for Vertical Mounting
<b>16</b>	Non-NEMA "BA" Dimensions
<b>17</b>	Available Until Stock Depleted
<b>18</b>	Drilled for Multi-Mount (Appendix C)
<b>19</b>	Suitable for Variable Torque Operation Only When Used with an ASD
<b>20</b>	Motor Not Suitable for Operation with an ASD
<b>21</b>	1.25 Service Factor

# **TOSHIBA**

## **Toshiba International Corporation**

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