Motor and Drives Price Book

TECO Westinghouse

Effective: 07-08-2018

Reprinted: 03-26-2019

TECO Westinghouse

QUALITY AND ENVIRONMENTAL STATEMENT

TECO-Westinghouse Motor Company (TWMC) is committed to serving the needs of our customers BETTER THAN ANYONE ELSE. We strive to provide quality products and services while also minimizing safety and environmental impacts. We are also committed to providing a work environment that protects the health and safety of employees, visitors, and guests. We understand that safety, quality, and environmental stewardship are at the core of our business.

Safety, sustainability, improved efficiency, compliance, and continuity are at the heart of the Quality and Environmental Management Systems. Therefore, management is committed to and personally involved in establishing objectives and periodically reviewing these objectives to ensure its continuing suitability. The management team assures that quality and environmental requirements are clearly stated and implemented. They also provide the necessary training and equipment, establish measurable guidelines, and define priorities for continual improvement.

Quality and environmental objectives and targets are established within the Quality and Environmental Management Systems and are communicated to all employees. TWMC is committed to maintaining these systems, and this cannot be done without each employee striving for excellence in personal job performance. We will not settle for less than exact conformance in anything we do.

POLÍTICA DE CALIDAD Y AMBIENTAL

TECO-Westinghouse Motor Company (TWMC) está comprometido a satisfacer las necesidades de nuestros clientes MEJOR QUE CUALQUIER OTRA COMPAÑIA. Nos esforzamos por ofrecer productos y servicios de calidad al mismo tiempo que minimizamos los impactos en la seguridad y el medio ambiente. También estamos comprometidos a proveer un ambiente de trabajo que proteja la salud y seguridad de empleados, visitantes e invitados. Entendemos que la administración de la seguridad, la calidad y el medio ambiente están en el centro de nuestro negocio.

La seguridad, la sostenibilidad, la mejora de la eficiencia, el cumplimiento y la continuidad son el corazón de los Sistemas de Gestión de Calidad y Medio Ambiente. Por lo tanto, la gerencia está comprometida con y personalmente involucrada en el establecimiento de objetivos y revisar periódicamente estos objetivos para asegurar su continuada adecuación. El equipo directivo se asegura que los requisitos de calidad y medioambientales estén claramente establecidos e implementados. También proporcionan la capacitación y el equipo necesarios, establecen pautas medibles y definen las prioridades para la mejora continua.

Se establecen objetivos y metas de calidad y medioambientales dentro de los Sistemas de Gestión de Calidad y Medio Ambiente y se comunican a todos los empleados. TWMC esta comprometido a mantener estos sistemas, y esto no puede hacerse sin que cada empleado se esfuerce por la excelencia en el desempeño de su trabajo personal. No estaremos satisfechos con menos que con la conformidad exacta en cualquier cosa que hagamos.

Patrick M. Rogers
President
TECO-Westinghouse Motor Company 3/2/17

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All data presented in this book is for reference only and subject to change without notice. For specific applications, certified dimensions, or additional performance data, etc., please contact your TECO-Westinghouse representative or call: 1-800-USE-TECO

Notes:

(1) Italicized letters represent the TECO Product Type (e.g. ASHH). Letters in brackets represent the Catalog Number [e.g. DHP]. Both Product Type and Catalog Number can be found on Motor Nameplate.

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Notes:

(1) Italicized letters represent the TECO Product Type (e.g. ASHH). Letters in brackets represent the catalog number [e.g. DHP]. Both Product Type and Catalog Number can be found on Motor Nameplate.

(2) Medium Voltage Crusher Duty Motor (pg. 96-97) and Medium Voltage Vertical Motors offered (various - see next page for details).

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Notes:

* Fire Pump Available.

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ONLINE SUBMITTAL DATA INSTRUCTIONS

ONLINE INSTRUCTIONS

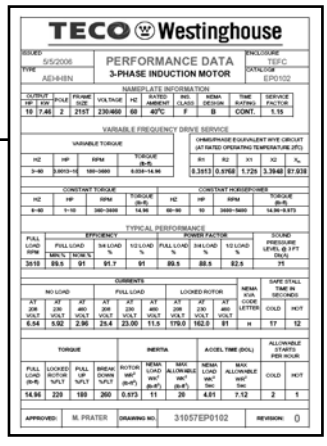
SUBMITTAL DATA

Submittal data consists of basic performance data, dimensional drawings, connection diagrams, and instruction manuals. Mechanical and electrical submittal data is available on many stock catalog motors through our website **www.tecowestinghouse.com** by following three easy steps. If additional submittal data is required, please contact your TECO-Westinghouse representative.

1. **From our website homepage, www.tecowestinghouse.com, scroll to the bottom, enter in the part or catalog number in the box labeled "Find" and then click on "Go".**

   (Note: If you have a TECO-Westinghouse motor and are looking for the performance data, please use the catalog number from the nameplate for your search. Ex: EP0102.)

2. A product listing page appears regarding the motor. Click on the product catalog number and the download page appears. Here, you are able to print the available performance data, dimensional drawings, connection diagrams, and instruction manuals in PDF format for the motor you have selected. Links to the available information are listed at the bottom of the screen. **Click on the appropriate product link for the information that you need.**


TECO Westinghouse

PERFORMANCE DATA
3-PHASE INDUCTION MOTOR

3. Your results will look similar to the example shown to the right for the TECO-Westinghouse MAX-E1® NEMA Premium Efficiency Severe Duty TEFC motor, catalog # EP0102.

   It's that easy!

CATALOG NUMBER REFERENCE GUIDE

EXAMPLE:

DHP 0754R

FIRST 1-3 SPACES (LETTERS) DESIGNATE THE MOTOR PRODUCT LINE

THREE PHASE ODP

DSP=	ROLLED STEEL ODP NEMA PREMIUM F#56 (1/4 HP - 3 HP)
DTP=	ROLLED STEEL ODP NEMA PREMIUM F#140T - 280T (1 HP - 40 HP)
*DS=	ROLLED STEEL ODP HIGH EFFICIENCY F#56 (1/3 HP - 3 HP)
DJPP/DJMP=	ROLLED STEEL ODP JP/JM NEMA PREMIUM (1 HP - 40 HP)
*DJP/DJM=	ROLLED STEEL ODP JP/JM HIGH EFFICIENCY (1 HP - 40 HP)
DTP_G=	ROLLED STEEL ODP NEMA PREMIUM WITH AEGIS® SGR (1 HP - 40 HP)
DHP=	CAST IRON ODP NEMA PREMIUM (1 HP - 800 HP)
DHP_G=	CAST IRON ODP NEMA PREMIUM WITH AEGIS® SGR (1 HP - 75 HP)

THREE PHASE TEFC - GENERAL PURPOSE MOTORS

*G=	3-PHASE FRACTIONAL HP TEFC HIGH EFFICIENCY (1/3 HP - 2 HP)
GH=	ROLLED STEEL TEFC NEMA PREMIUM F#56 (1/4 HP - 2 HP)
GP=	ROLLED STEEL TEFC NEMA PREMIUM F#140T - 210T (1 HP - 10 HP)
GH_C=	ROLLED STEEL TEFC NEMA PREMIUM FOOTED C-FACE F#56 (1/4 HP - 2 HP)
GHV_C=	ROLLED STEEL TEFC NEMA PREMIUM ROUND BODY C-FACE F#56 (1/4 HP - 2 HP)
GP_C=	ROLLED STEEL TEFC NEMA PREMIUM FOOTED C-FACE F#140T - 210T (1 HP - 10 HP)
GPV_C=	ROLLED STEEL TEFC NEMA PREMIUM ROUND BODY C-FACE F#140T - 210T (1 HP - 10 HP)
GP_G=	ROLLED STEEL TEFC NEMA PREMIUM WITH AEGIS® SGR (1 HP - 10 HP)
MP=	MAX-IE3 METRIC PREMIUM IE3 EFFICIENCY (0.75 Kw - 112 kW)

THREE PHASE TEFC - SEVERE DUTY MOTORS

JPP/JMP=	CAST IRON TEFC JP/JM NEMA PREMIUM (1 HP - 50 HP)
*JPN/JMN=	CAST IRON TEFC JP/JM HIGH EFFICIENCY (3/4 HP - 50 HP)
NP=	MAX-PE™ NEMA PREMIUM (1 HP - 200 HP)
NP_C=	MAX-PE™ NEMA PREMIUM FOOTED C-FACE (1 HP - 200 HP)
NPV_C=	MAX-PE™ NEMA PREMIUM ROUND BODY C-FACE (1 HP - 200 HP)
NP_G=	MAX-PE™ NEMA PREMIUM WITH AEGIS® SGR (1 HP - 75 HP)
*NV_C=	MAX-SE™ HIGH EFFICIENCY ROUND BODY C-FACE (1 HP - 100 HP)
EP=	MAX-E1® NEMA PREMIUM (1 HP - 500 HP)
E=	MAX-E1® HIGH EFFICIENCY (3/4 HP - 800 HP)
EP_C=	MAX-E1® NEMA PREMIUM FOOTED C-FACE (1 HP - 300 HP)
EPV_C=	MAX-E1® NEMA PREMIUM ROUND BODY C-FACE (1 HP - 300 HP)
EPY=	KEYLESS SHAFT NEMA PREMIUM (200 HP - 500 HP)
EY=	KEYLESS SHAFT HIGH EFFICIENCY (600 HP - 800 HP)
HH=	MAX-E2/841® "LITE" NEMA PREMIUM (1 HP - 300 HP)
HB=	MAX-E2/841® NEMA PREMIUM (1 HP - 500 HP)
HB_C=	MAX-E2/841® NEMA PREMIUM FOOTED C-FACE (1 HP - 100 HP)
HBV_C=	MAX-E2/841® NEMA PREMIUM ROUND BODY C-FACE (1 HP - 100 HP)
CDP=	MAX-HT™ NEMA PREMIUM DESIGN C (20 HP - 200 HP)
CDP=	MAX-HT™ NEMA PREMIUM DESIGN A (250 HP - 500 HP)
*CD=	MAX-HT™ HIGH EFFICIENCY DESIGN C (20 HP - 600 HP)
KD=	MAX-HT™ MEDIUM VOLTAGE ENERGY EFFICIENT HIGH TORQUE (100 HP - 900 HP)
MP=	MAX-IE3 METRIC PREMIUM IE3 EFFICIENCY (0.75 Kw - 112 kW)

DEFINITE PURPOSE MOTORS

WFP/WP=	STAINLESS STEEL WASHDOWN NEMA PREMIUM FOOTED C-FACE (1/2 HP - 10 HP)
WFPV/WPV=	STAINLESS STEEL WASHDOWN NEMA PREMIUM ROUND BODY C-FACE (1/2 HP - 10 HP)
S=	SINGLE PHASE HIGH TORQUE (1/3 HP - 10 HP)
SP/SPH=	HVAC SINGLE PHASE OPD (1/4 HP - 3 HP)
ST/SPT/SPHT=	HVAC SINGLE PHASE TEFC (1/4 HP - 10 HP)
Q=	ODP OIL WELL PUMP STANDARD EFFICIENCY (5 HP - 125 HP)
QT=	TEFC OIL WELL PUMP STANDARD EFFICIENCY(5 HP - 125 HP)
CP=	2 SPEED, 1 WINDING, VARIABLE TORQUE HIGH EFFICIENCY (100/25 HP - 300/75 HP)

EXPLOSION PROOF MOTORS

XP=	TEXP EXPLOSION PROOF NEMA PREMIUM (1 HP - 400 HP)
XP_C=	TEXP EXPLOSION PROOF NEMA PREMIUM FOOTED C-FACE (1 HP - 100 HP)
XV_C=	TEXP EXPLOSION PROOF NEMA PREMIUM ROUND BODY C-FACE (1 HP - 75 HP)

First 1-3 spaces list continued on next page>>

Notes:

* Product is obsolete.

CATALOG NUMBER REFERENCE GUIDE

EXAMPLE:

Effective 07-08-18
Supercedes 03-24-17

DHP 0754R

FIRST 1-3 SPACES (LETTERS) DESIGNATE THE MOTOR PRODUCT LINE

MEDIUM VOLTAGE MOTORS - GLOBAL SERIES

PG=	MEDIUM VOLTAGE WPI NEMA PREMIUM (100 HP - 2000 HP)
P=	MEDIUM VOLTAGE ODP HIGH EFFICIENCY (100 HP - 1000 HP)
KG=	MEDIUM VOLTAGE TEFC NEMA PREMIUM (100 HP - 900 HP)
*JH=	MEDIUM VOLTAGE TEFC IEC HIGH EFFICIENCY (800 HP - 2000 HP)
KF=	MEDIUM VOLTAGE TEFC NEMA PREMIUM (500 HP - 2000 HP)
JF=	MEDIUM VOLTAGE TEFC IEC HIGH EFFICIENCY (900 HP - 1750 HP)

VERTICAL MOTORS

VHP=	MAX-VHP™ LV HT VHS WPI NEMA PREMIUM (7.5 HP - 500 HP)
VH=	MAX-VH™ LV HT VHS WPI HIGH EFFICIENCY (7.5 HP - 500 HP)
VHTP=	MAX-VHP™ LV HT VHS TEFC NEMA PREMIUM (15 HP - 800 HP)
VHKP=	MEDIUM VOLTAGE HT WPI NEMA PREMIUM (200 HP - 1000 HP)
VHKTP=	MEDIUM VOLTAGE HT TEFC NEMA PREMIUM (200 HP - 700 HP)
NPV_P=	MAX-PE™ LV NORMAL THRUST VSS ROUND BODY NEMA PREMIUM (7.5 HP - 200 HP)
HBV_P=	MAX-E2/841™ LV NORMAL THRUST VSS ROUND BODY NEMA PREMIUM (15 HP - 100 HP)
VSP=	MAX-VSP™ LV HT VSS WPI NEMA PREMIUM (15 HP - 800 HP)
VSTP=	MAX-VSP™ LV HT VSS TEFC NEMA PREMIUM (15 HP - 800 HP)
VSKP=	LOW VOLTAGE HT VSS WPI PREMIUM EFFICIENCY (200 HP - 1000 HP)
VSKTP=	MEDIUM VOLTAGE HT VSS TEFC PREMIUM EFFICIENCY (200 HP - 700 HP)

NEXT 3-4 SPACES (NUMBERS) DESIGNATE THE HORSEPOWER

THE FOLLOWING MOTOR LINES ARE THE ONLY ONES THAT WILL HAVE 4 SPACES: PG, P, JH, KF, JF, VHKP, VSKP

IF FOR ONE OF ABOVE, HP <1000, USE A "0" IN 1ST SPACE -- "0800" = 800 HP (e.g. JH**0800**8)
FOR ALL OTHERS, IF HP IS <100, USE A "0" IN 1ST SPACE SPACE -- "025" = 25 HP (e.g. EP**025**4)
IF HP IS <100, USE A "0" IN THE 1ST SPACE - "075" = 75 HP
IF HP < 1, USE A "0" IN THE 1ST SPACE, FOLLOWED BY A "/", THEN THE NUMBER AFTER THE DECIMAL - "0/2" = 0.25 HP (i.g. DSP**0/2**2)
IF HP HAS A DECIMAL > 1, USE THE WHOLE NUMBER 1ST FOLLOWED BY A "/", THEN THE NUMBER AFTER THE DECIMAL - "7/5" = 7.5 HP (e.g. DTP**7/5**4)

NEXT SPACE (NUMBER) DESIGNATES THE SPEED

2 = 2 POLE = 3600 OR 3000 RPM
4 = 4 POLE = 1800 OR 1500 RPM
6 = 6 POLE = 1200 OR 1000 RPM
8 = 8 POLE = 900 OR 750 RPM

NEXT SPACE IF OCCUPIED

S = 4 POLE MOTOR WITH SHORT SHAFT (TS)
5 = MOTOR STOCKED STANDARD AS 575 VOLT
R = MOTOR STOCKED STANDARD WITH A DRIVE-END ROLLER BEARING
C = MOTOR STOCKED STANDARD WITH A C-FACE

Notes:

* Product is obsolete.

1. Vertical motor abbreviations: "VHS" stands for "Vertical Hollow Shaft", "VSS" stands for "Vertical Solid Shaft", "LV" stands for "Low Voltage", "HT" stands for "High Thrust".
2. "ODP" stands for "Open Drip Proof".
3. "WPI" stands for "Weather Protected Type I".

CONTACT US

Effective 07-08-18
Supercedes 03-24-17

STOCK MOTOR GROUP	**Customer Service Hours:** 7:00 am to 7:00 pm CST Monday through Friday **Toll Free: 1-800-USE-TECO (873-8326)**	
T-Frame Documents:	tframedocs@tecowestinghouse.com	Drawings, Test Reports, Submittal Requests, Etc.
T-Frame Parts:	tframeparts@tecowestinghouse.com	Stock Parts Quotes and Availability
T-Frame Warranty:	tframewarranty@tecowestinghouse.com	Warranty Support
Customer Service:	customerservice@tecowestinghouse.com	Orders Status, Stock Checks, Quotes, Etc.
Purchase Orders Entry:	orders@tecowestinghouse.com	Orders Only
CONTROLS GROUP	**Phone: 800-279-4007**	
Low Voltage Technical Support	controlstechsupport@tecowestinghouse.com	Technical Support, Submittal Information On Build Up Packages
Low Voltage Warranty	controlswarranty@tecowestinghouse.com	Controls Warranty Support For VFDs, Starters
Purchase Orders Entry	orders@tecowestinghouse.com	Orders Only

CENTRAL PHONE NUMBERS	
Stock Product Group Customer Service	800-USE-TECO (873-8326)
Controls Group Technical Support	800-279-4007

After Hours Emergency Line: 24 Hours a Day / 7 Days a Week	
Sales/ Customer Service*:	512-632-7338
Motor Technical Support:	512-538-8771
Inverters/ Controls Products Technical Support:	512-633-1513

Notes:

* Additional Fees Apply for After Hours Emergency Sales. For additional details, please contact your Customer Service Representative or Outside Sales Representative for your area.

Customer Service Center Locations:
Spartanburg, South Carolina
Round Rock, Texas

Warehouse Distribution Center Locations:
Spartanburg, South Carolina
Allentown, Pennsylvania
Des Moines, Iowa
Round Rock, Texas
Reno/Sparks, Nevada

TECO-WESTINGHOUSE MOTOR COMPANY FIELD SERVICE RATES

Effective 07-08-18
Supercedes 03-24-17

5100 N. IH-35, Round Rock, TX 78681
Toll-Free: 1-800-451-8798 . Phone: 512-255-4141 . Fax: 512-244-5512 . www.tecowestinghouse.com

FIELD SERVICE

Domestic Field Service Rate $ 180.00 / hr*
International Field Service Rate $ 200.00 / hr*

EXPENSES

Travel Time Charged as above*
Mileage $ 0.75 / mile*
Meals (Domestic) $ 55.00 / day
Meals (International) $ 75.00 / day
Expenses (Gross Margin) Cost plus 25%
(Includes subcontractors, materials, freight, lodging and transportation)

NOTES

1. The rates are valid through December 31, 2019.
2. Normal field service working hours are 7:00 A.M. until 4:00 P.M., Monday - Friday.
3. Saturdays and after eight consecutive hours worked or traveled will be billed at normal rate x 1.5
4. Sundays and after twelve consecutive hours worked or traveled will be billed at normal rate x 2.0
5. Holidays will be billed at normal rate x 3.0
6. Stand-by time will be billed as described above when personnel are unable to work due to circumstances beyond TWMC control.
7. For services rendered at isolated locations or where service personnel must remain at the job site on a twenty-hour basis, the rate will be commensurate with the conditions of the facility.
8. When service personnel are required to perform work in locations that are judged by TWMC to be high risk areas, a hazard rate will be applied.
9. Mileage will be billed when technicians use their personal vehicles in lieu of airfare or a rental car.
10. Rates do not include local, state, federal, international taxes, duties, or tariffs.

Rev. 8, 01/09/18

Terms and Conditions of Sale

TECO-Westinghouse Motor Company (TWMC) hereby gives notice of its objection to any different or additional terms and conditions. Unless different or additional terms are stated in TWMC's proposal, in which event:

1) Such different or additional terms shall be exclusive as to the subject covered,
2) The terms and conditions stated herein apply, and
3) Such Terms and Conditions supersede any prior or contemporaneous agreements or correspondence between the parties.

This sale is expressly conditional on the Purchaser's assent to the Terms and Conditions stated herein. The Purchaser's direction to proceed with any of the engineering, manufacture, or shipment of any product is conclusive as to such assent. Dispatch of the Purchaser's purchase order (PO) will constitute an acceptance of the quotation, and an assent to the Terms and Conditions stated herein, if the purchase order agrees with the quotation in respect to all material terms.

Quotations

Each quotation is valid for thirty (30) days from the date of the quotation unless otherwise stated in the quotation.

Minimum Billing

The minimum billing per order shall be $100.00, unless otherwise agreed upon by TWMC.

Taxes

With the exception of Harbor Maintenance Tax as stated in the following paragraph, TWMC will assume the payment of all taxes and fees assessed by any taxing authority in the United States with respect to this order. The Purchaser will assume the payment of all taxes, duties, fees and other charges assessed by any taxing authority in the Purchaser's country or country of ultimate destination with respect to this order. Under FAS Incoterms it is the Purchaser's responsibility to clear the goods for export. Accordingly, should the Purchaser appoint a freight forwarder or agent to effect export on the Purchaser's instruction, the Purchaser's freight forwarder is responsible for payment of the US Harbor Maintenance Tax on behalf of the Purchaser.

Terms of Payment

A. Net 30

For contracts with a total price less than $250,000 and with a shipment date less than twelve (12) months from the date of order, an invoice will be issued when each unit is shipped and the standard terms of payment are net within thirty (30) days from the date of invoice.

B. Progress Payments

For contracts with a total price greater than $250,000 and/or with a shipment date greater than 12 months from the date of order, the following payment terms shall apply:

1. 10% of the contract price shall be invoiced when drawings for approval are issued by TWMC. If drawings for approval are not specified, an invoice will be mailed when construction drawings are issued, but in no event later than 120 days after the date of order.
2. 30% of the price of each unit shall be invoiced seven (7) months prior to the first day of the scheduled shipment month of that unit.
3. 30% of the price of each unit shall be invoiced four (4) months prior to the first day of the scheduled shipment month of that unit.
4. The final 30% of the price of each unit shall be invoiced upon complete shipment of each unit.

In each of the above instances, the terms of payment are net within 30 days from date of invoice.

5. A separate invoice will be issued concurrently with sections 1, 2, 3, and 4 for the escalation on that portion of the contract price. The escalation for the portion of the contract involved under 1, 2, 3, and 4 ceases on the date the invoice is issued.

C. Adequate Assurances of Payment

If, in the judgment of TWMC, the financial condition of the Purchaser does not justify the terms of payment specified, TWMC may, at its option, require full or partial payment in advance.

Overdue Payments

If payments are not made in accordance with these terms, the quoted price shall, without prejudice to the right of TWMC to immediate payment, be increased by an amount equal to the lesser of 1.5 percent (%), or the highest legal rate of interest on the unpaid balance, plus all expenses of collection including but not limited to attorneys' fees and court costs.

Delivery

Delivery of each item of equipment shall be made FOB Point of Shipment with freight prepaid. Purchaser shall reimburse TWMC for freight charges in an amount equal to the lesser of TWMC's NEMA Frame Freight Policy in effect at the time of shipment or actual freight charges. Such amounts will be paid by the Purchaser upon presentation of invoice by TWMC.

Force Majeure

TWMC shall not be liable for failure to perform or for delay in performance resulting from any cause beyond TWMC's reasonable control or due to compliance with any regulations, orders, acts, instructions or priority requests of any federal, state, or municipal Government, or any department or agency thereof, civil or military authority, acts of God, acts or omissions of the Purchaser, fires,

floods, weather, strikes, lockouts, factory shutdowns, faulty castings or forgings, embargoes, wars, hostilities, riots, delays or shortages in transportation or inability to obtain labor, manufacturing facilities, or material from TWMC's usual sources. In the event of delay in performance due to any such cause, the date of delivery or time for completion shall be extended by a period of time reasonably necessary to overcome the effect of such delay, and TWMC shall be reimbursed for any additional expense(s) resulting from such delay. The Purchaser's receipt of products shall constitute a waiver of any claims related to the delay.

Warranty

Standard Warranty

TWMC warrants that the equipment furnished hereunder will be of the kind and quality described in its proposal or contract and will be free of defects in workmanship and material.
The warranty period for the stock motor is one (1) year after the date of initial operation, or eighteen (18) months after the date of manufacture (with respect to high efficiency motors, the warranty period shall be thirty-six (36) months from the date of manufacture from TWMC's facility regardless of the date the motor is placed in operation), whichever is earlier.
The warranty period for the Gears is twenty-four (24) months from the date of shipment.
TWMC shall correct such nonconformity by repairing or replacing the defective part or parts, FOB factory or its designated repair facility at TWMC's option.
The Purchaser shall not be required to deliver a defective part to the seller if:

1. The part was destroyed as a result of its defect or of any defect in any part covered in this warranty, and
2. The seller is reasonably satisfied that the part was defective at the time of sale. If both these conditions are met the seller shall replace the part in the same manner as if the Purchaser had delivered it into the seller's plant.

This warranty is conditioned upon the storage, installation, operation, and maintenance of the equipment in accordance with any TWMC recommendations and standard industry practice. The Gears shall be in use for two (2) daily work shifts (total of sixteen (16) hours/day) only. Other exceptions to the standard warranty where applicable will be specified on the product page in the price book where they apply.
In no event shall TWMC be responsible for:

1. Providing working access to the defect, including the removal disassembly, replacement or reinstallation of any equipment, materials or structures to the extent necessary to permit TWMC to perform its warranty obligations,
2. Transportation costs to and from the TWMC factory or designated repair facility,
3. The conditions of any test shall be mutually agreed upon, and TWMC shall be notified of, and may be present at all tests that may be made,
4. Repairs performed without authorization by TWMC.

Merger Clause

Any representation, warranty, course of dealing, or trade usage not contained or referenced herein shall not be binding on TWMC. This writing, along with any additional parol agreements favoring TWMC, constitutes the entire agreement of the parties on the subject matter hereof. No modification, amendment, recision, waiver, or other change shall be binding on TWMC unless expressly assented to in writing by TWMC.
DISCLAIMER OF WARRANTIES: THE WARRANTIES SET FORTH IN THIS PROVISION ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER STATUTORY, EXPRESS OR IMPLIED (INCLUDING ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE EXCEPT OF TITLE AND AGAINST PATENT INFRINGEMENT.
The remedies provided above are the Purchaser's sole remedies for any failure of TWMC to comply with its obligations.
Correction of any nonconformity in the manner and for the period of time provided above shall constitute complete fulfillment of all the liabilities of TWMC whether the claims of the Purchaser are based in contract, in tort (including negligence or strict liability) otherwise with respect to or arising out of the product furnished hereunder.

Limitation of Liability

TWMC, its subcontractors and suppliers of any tier, shall not be liable in contract, in tort (including negligence or strict liability) or otherwise for interruption of business, downtime costs, loss of profits or revenues, loss of use of equipment or power system, cost of capital, cost of purchased or replacement power or temporary equipment (including additional expenses incurred in using the existing facilities), claims of customers of Purchaser, or for any special, indirect, incidental, or consequential damages whatsoever. The remedies of the Purchaser set forth herein are exclusive and the total cumulative liability of TWMC with respect to any contract, or any action taken in connection therewith such as the performance or breach thereof, or from the manufacture, sale, delivery, resale, or use of any product covered by or furnished under the order, whether in contract, in tort (including negligence or strict liability) or otherwise shall not exceed the price of the product or part on which such

liability is based.

Patents

Subject to the following provisions, TWMC shall, at its own expense, defend or at its option settle any claim, suit or proceeding brought against the Purchaser, and/or its customers, so far as based on an allegation that any product constitutes a direct or contributory infringement of any claim of any patent of the United States in force at the time of sale. This obligation shall be effective only if Purchaser shall have made all payments then due hereunder and if TWMC is notified promptly in writing and given authority, information, and assistance for the defense of said claim, suit, or proceeding.
TWMC shall pay all damages and costs awarded in such suit or proceeding so defended.

1. In case the use or sale of such product or parts is enjoined, TWMC shall, at its option and its own expense perform one of the following actions:
   a. Procure for the Purchaser the right to continue using said product or part thereof; or
   b. Replace it with a non-infringing product; or
   c. Modify it so it becomes noninfringing, or
   d. As a last resort, refund the purchase price.
2. The foregoing indemnity does not apply to the following items:
   a. Patented processes performed by the product, or any product produced thereby,
   b. Products supplied according to a design other than that of TWMC's and which is required by the Purchaser,
   c. Combinations of the product with another product not furnished hereunder unless TWMC is a contributory infringer,
   d. Any settlement of a suit or proceeding made without TWMC's written consent.

The foregoing states the entire liability of TWMC with respect to patent infringement by said product or any part thereof. If a suit or proceeding is brought against TWMC solely on account of activities enumerated in paragraph 2 a, b, c, above, the Purchaser agrees to indemnify TWMC in the manner and to the extent TWMC indemnified the Purchaser for products furnished.

Additional Conditions Applicable to Nuclear Applications

1. In the event that the Purchaser or third parties use product or any part thereof, in connection with any activity or process involving nuclear fission or fusion or any use or handling of any source, special nuclear or byproduct material as those materials are defined in the US Atomic Energy Act of 1954 as amended, the Purchaser, at no expense to TWMC shall provide or arrange for insurance coverage, indemnities, waivers of liability, recourse and subrogation in such amounts and under such terms and conditions as may be acceptable to TWMC, to protect TWMC (and its subsidiaries, subcontractors or suppliers of any tier) against any and all loss, cost, damage or expense and claims and demands therefore, in contract, in tort or otherwise, including the cost of investigating, litigating and/or settling any such claims or demands, on account of bodily injury, sickness, disease or death to any person or the loss of, loss of use of, or damage to property whether located on or off the site of a nuclear installation, arising out of, or resulting from the radioactive, toxic, explosive or other hazardous properties of source, special nuclear or byproduct materials, as those materials are defined in the US Atomic Energy Act of 1954 as amended.
2. In the event that the Purchaser resells, distributes or in any way relinquishes control of the product or services to a third party, the Purchaser shall require from such third party
   a. Compliance with all requirements under Additional Conditions Applicable to Nuclear Applications Section 1 above and
   b. Assurance that any subsequent Purchaser of the product or services complies with all requirements under Additional Conditions Applicable to Nuclear Applications Section 1 above.

Interpretation

All orders shall be interpreted in accordance with the laws of the State of Texas.

STOCK MOTOR AND CONTROL PRODUCTS WARRANTY POLICY

Effective 07-08-18
Supercedes 03-24-17

See page 216 for Control Products Return Procedure.

STANDARD WARRANTY INFORMATION

All TECO-Westinghouse brand Stock Motors and Low Voltage Control Products, such as Solid State Starters and AC Drives, ("control products") sold by TECO-Westinghouse Motor Company ("TWMC") are warranted to be free from defects in material and workmanship for a period of 36 months from the date of manufacture. A warranty of 36 months from the date of sale is applicable when a TWMC Low Voltage Control Product and a TWMC Inverter Duty Motor are purchased together. All MAX-E2/841® motors have a 5 year warranty.

This warranty is conditioned upon the installation, operation, and maintenance of the motors and control products in accordance with TECO-Westinghouse Motor Company's recommendations or standard industry practice, and the motors and control products have at all times been operated or used under normal operating conditions for which they were designed. This warranty will not be applicable to products that have been altered without written permission from TWMC.

TWMC shall, at its sole option and expense, either repair or replace, FOB warehouse or TWMC designated service center, any such motor, motor part, or control product which is defective within the warranty period.

In the event of warranty claims, TWMC must be notified promptly following any motor or control product failure. The motor or control product shall be sent to a TWMC authorized service center for diagnosis on the cause of failure. For motor and control products if the failure is due to defective material and/or workmanship, TWMC will replace or repair the defective motor, motor part, or control product at its discretion.

The repair or replacement of defective material and workmanship shall constitute complete fulfillment of TECO-Westinghouse Motor Company's warranty liability whether the warranty claims are based on contract, tort (including negligence and strict liability), or otherwise. **THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, AND ALL WARRANTIES ARISING FROM COURSE OF DEALING AND USAGE OF TRADE. UNDER NO CIRCUMSTANCES SHALL TECO-WESTINGHOUSE MOTOR COMPANY BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING FREIGHT.**

STOCK MOTOR AND CONTROL PRODUCTS RETURN POLICY

All returned goods are subject to prior approval and must be accompanied by a Return Material Authorization (RMA) number. These goods must be returned within 90 days, freight prepaid, in resalable condition and in original packaging. A 15% restocking fee will be applied. If upon receipt of the RMA, goods are deemed not to be in resalable condition or in original packaging, then additional fees will be applied. **RETURNS ON MODIFIED MOTORS OR CONTROL PRODUCTS WILL NOT BE ALLOWED.**

CONTINUED ON NEXT PAGE >>>

PROCEDURE FOR WARRANTY CLAIMS ON STOCK MOTORS

Effective 07-08-18
Supercedes 03-24-17

WARRANTY CLAIMS

In the event of a warranty claim, TECO-Westinghouse Motor Company must be notified witin 30 days of indicated failure to process repair or replacement of motor. Original purchase information will be requested. The failed motor shall be sent to a TECO-Westinghouse authorized service center for diagnosis on the cause of the failure. EASA Certified Shops can be found at **Easa.com** using the "find a member" search feature. If the failure is due to defective material and/or workmanship, TWMC shall, at its sole option, either repair on a straight time bases, issue credit, or replace, FOB Warehouse any such motor or component that is defective within the warranty period. Failure to notify TWMC prior to performing repairs or providing replacements will result in denial of warranty claims.

Contact the TWMC Warranty Department at (**512) 218-7475**.
or through email - **tframewarranty@tecowestinghouse.com**

AUTHORIZED SERVICE

Authorized service centers shall contact TWMC's Warranty Department for serial number verification to determine warranty status of the motor. If the motor is within the original warranty period, the service center shall dismantle and inspect the motor, and prepare a standard EASA Warranty Repair Report. Email the report to Stock Product Warranty Email, **tframewarranty@tecowestinghouse.com** for review of the failure and determination if the failure will be covered under terms of the TWMC standard warranty.

TO START A WARRANTY CLAIM

Email Information to tframewarranty@tecowestinghouse.com and we will advise of the next steps.

Subject Line: Include CAT#, your company name, PO# or serial number.
Complete information will be processed first. Incomplete information will not be saved. When asking for status or providing additional information, please include the information below so it is clear which claim you are referencing.

- Picture of the nameplate.
- Verify and record **serial** number.
- Verify and record catalog (CAT) number.
- Picture of motor and failure.
- Who purchased the motor from TWMC?
- **PO# or Order#** of failed motor.
- Description of **failure.**
- Was the motor run across the line, VFD, or soft start?
- What **is the motor operating?**
- How long was the motor in service?
- **EASA report** or short form completely filled out.
- Name of EASA shop if applicable.
- **Inspection fee** amount if applicable.
- **Estimate** of repairs if applicable.

CONTINUED ON NEXT PAGE >>>

PROCEDURE FOR WARRANTY CLAIMS ON STOCK MOTORS

Effective 07-08-18
Supercedes 03-24-17

WARRANTY DETERMINATION

If the motor failure is determined to be a warranty failure, a Warranty Claim Authourization (WCA) number will be assigned to the claim. The WCA number represents the credit memo number for any motor not repaired, as well as the purchase order number for inspection, and/or repair charges for motors to be replaced or repaired. Charges for inspections and/or repairs to motors outside the warranty period or for failures not resulting from material or workmanship issues are the sole responsibility of the end user.

For Warranty Repairs: The original EASA Warranty Repair Report, along with pictures documenting the failure, shall be submitted to the TWMC's Warranty Department, along with an invoice for all repair charges. All reports and invoices submitted require an RMA number for processing. Claims submitted without RMA numbers will be denied.

For Warranty Credit: The original EASA Warranty Repair Report, pictures, invoice and the original nameplate off the motor must be returned to TWMC's Warranty Department prior to issuance of credit. All claims and invoices submitted require a WCA number for processing. Claims submitted without WCA numbers will be denied. An invoice must be received for payment of inspection charges. Invoice only for inspection charges. Credit will be issued to the buyers account for any motor determined not repairable.

Request for warranty replacements: In special circumstances, TWMC's Warranty Department can approve replacement orders, if an exact replacement motor/component is in stock. If a warranty replacement motor is needed and approved, a new purchase order, with reference to the warranty claim number will need to be emailed to **orders@tecowestinghouse.com** for processing and shipment. All such orders will be shipped FOB warehouse, and the customer will receive an invoice for the replacement. Upon receipt of the nameplate off the original failed motor, credit will be issued for the failed motor. Freight is not covered under warranty.

NOTE: If the cause of the failure is determined to not be a result of manufacturer's defect or workmanship, all expenses associated with inspection, repair, etc., will be the responsibility of others.

MOTOR AND DRIVE COMBINATION PACKAGES

Effective 07-08-18
Supercedes 03-24-17

Premium Efficient Motor and Drive Combination Packages developed for both constant and variable torque applications

APPLICABLE MOTORS

- Rolled Steel and Cast Iron ODP
  - 143T through 5009B Frame
  - 1 to 500 HP
  - 1200, 1800, and 3600 RPM
- MAX-E1® type AEHE, AEHH8N
  - 143T through 6808B Frame
  - 1 to 800 HP
  - 900, 1200, 1800, and 3600 RPM
  - 230VAC to 125 HP, 460VAC to 800 HP

APPLICABLE VARIABLE FREQUENCY DRIVES PRODUCTS

- EQ7 or A510 Drives for Constant Torque Applications
- EQ7 or F510 Drives for Variable Torque Applications
- 230VAC to 125 HP, 460VAC to 800 HP

- Single Source Reliability
- Contact your local TECO representative for additional discounts and warranties when purchasing matching motor and drive sets
- Select any combination of ODP or MAX-E1® premium Efficient Motors with any power-matched A510, F510, or EQ7 VFD

HVAC SINGLE PHASE ODP

BSGS39, NEMA PREMIUM [SP/SPH]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans
- Pumps
- Compressors
- Air Conditioning Blowers
- Heating
- Ventilation

FEATURES:

- Output Range: 1/4 - 3 HP
- Speed: 3600 & 1800 RPM
- Enclosure: Open Drip Proof (IP22)
- Voltage: 115/208/230V (Tri-Voltage)
- Single Phase, 60 Hz; 1.15 Service Factor for 115V & 230V or 1.0 Service Factor for 208V
- Capacitor Start, Capacitor Run
- Class F Insulation
- Automatic Reset Overload
- Class B Temperature Rise
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- Rolled Steel Frame
- Cast Aluminum Terminal Box
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Lacquer Top Coat
- Paint Color: Blue - Munsell 5 PB 3/8
- Double Shielded Bearings Pre-Packed with Lithium Base Grease
- No Terminals; Lead End Peel-Off Insulation
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate
- Motors are UL Recognized for United States and Canada

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor subject to availability.

HVAC SINGLE PHASE ODP

BSGS39, NEMA PREMIUM [SP/SPH]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING. WT. (lbs.)	LIST PRICE ($)
SP0/22	1/4	3600	48	66.0	90.0	1.31	25	285
SPH0/22	1/4	3600	56	66.0	90.0	1.31	26	310
SP0/24	1/4	1800	48	68.5	81.0	1.41	26	299
SPH0/24	1/4	1800	56	68.5	81.0	1.41	26	310
SP0/32	1/3	3600	48	70.5	90.0	1.71	26	315
SPH0/32	1/3	3600	56	70.5	90.0	1.71	26	323
SP0/34	1/3	1800	48	72.4	81.0	1.85	27	317
SPH0/34	1/3	1800	56	72.4	81.0	1.85	31	331
SP0/52	1/2	3600	48	72.4	90.0	2.47	29	333
SPH0/52	1/2	3600	56	72.4	90.0	2.47	29	366
SP0/54	1/2	1800	48	76.2	83.0	2.54	34	335
SPH0/54	1/2	1800	56	76.2	83.0	2.54	34	351
SP0/72	3/4	3600	48	76.2	92.0	3.41	33	368
SPH0/72	3/4	3600	56	76.2	92.0	3.41	33	399
SP0/74	3/4	1800	143T	81.8	90.0	3.25	42	438
SPH0/74	3/4	1800	56H	81.8	90.0	3.25	44	440
SPH0012	1	3600	56H	80.4	92.0	4.41	37	442
SP0012	1	3600	143T	80.4	92.0	4.41	38	455
SPH0014	1	1800	56H	82.6	90.0	4.39	47	498
SP0014	1	1800	143T	82.6	90.0	4.39	47	535
SPH1/52	1.5	3600	56H	81.5	96.0	6.11	42	485
SP1/52	1.5	3600	143T	81.5	96.0	6.11	42	500
SPH1/54	1.5	1800	56H	83.8	96.0	5.94	55	572
SP1/54	1.5	1800	145T	83.8	96.0	5.94	55	645
SPH0022	2	3600	56H	82.9	96.0	8.19	45	515
SP0022	2	3600	145T	82.9	96.0	8.19	45	520
SPH0024	2	1800	56H	84.5	96.0	8.04	62	652
SP0024	2	1800	145T	84.5	96.0	8.04	63	760
SPH0032	3	3600	56H	84.1	98.0	11.6	55	532
SP0032	3	3600	145T	84.1	98.0	11.6	55	565

Notes:

(1) Data subject to change without notice.

HVAC SINGLE PHASE TEFC

BEGS39, NEMA PREMIUM (1/4 HP - 3 HP) [SPT/SPHT]
BEGS19, ENERGY EFFICIENT (3 HP - 10 HP) [ST]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans
- Pumps
- Compressors
- Air Conditioning Blowers
- Heating
- Ventilation

FEATURES:

- Output Range: 1/4 - 10 HP
- Speed: 3600 & 1800 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP44)
- Voltage: 115/208/230V (Tri-Voltage); 3 HP and Larger are 208-230V
- Single Phase, 60 Hz; 1.15 Service Factor for 115V & 230V or 1.0 Service Factor for 208V
- Capacitor Start, Capacitor Run
- Class F Insulation
- Automatic Reset Overload
- Class B Temperature Rise
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- Rolled Steel Frame
- Cast Aluminum Terminal Box
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Lacquer Top Coat
- Paint Color: Blue - Munsell 5 PB 3/8
- Double Shielded Bearings Pre-Packed with Lithium Base Grease
- No Terminals; Lead End Peel-Off Insulation
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate
- Motors are UL Recognized for United States and Canada

EXTRAS/ OPTIONS:

- Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor subject to availability.

HVAC SINGLE PHASE TEFC

BEGS39, NEMA PREMIUM (1/4 HP - 3 HP) [SPT/SPHT]
BEGS19, ENERGY EFFICIENT (3 HP - 10 HP) [ST]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING. WT. (lbs.)	LIST PRICE ($)
SPT0/22	1/4	3600	48	68.0	90.0	1.28	23	323
SPHT0/22	1/4	3600	56	68.0	90.0	1.28	23	335
SPT0/24	1/4	1800	48	70.0	83.0	1.35	24	335
SPHT0/24	1/4	1800	56	70.0	83.0	1.35	24	347
SPT0/32	1/3	3600	48	72.0	90.0	1.68	24	335
SPHT0/32	1/3	3600	56	72.0	90.0	1.68	24	347
SPT0/34	1/3	1800	48	74.0	83.0	1.77	25	341
SPHT0/34	1/3	1800	56	74.0	83.0	1.77	25	371
SPT0/52	1/2	3600	48	74.0	90.0	2.42	27	365
SPHT0/52	1/2	3600	56	74.0	90.0	2.42	27	377
SPT0/54	1/2	1800	48	77.0	85.0	2.46	29	371
SPHT0/54	1/2	1800	56	77.0	85.0	2.46	29	377
SPT0/72	3/4	3600	48	77.0	92.0	3.38	30	389
SPHT0/72	3/4	3600	56	77.0	92.0	3.38	30	407
SPT0/74	3/4	1800	48	78.5	87.0	3.50	32	395
SPHT0/74	3/4	1800	56	78.5	87.0	3.50	32	413
SPHT0012	1	3600	56H	78.5	92.0	4.51	38	436
SPT0012	1	3600	143T	78.5	92.0	4.51	38	449
SPHT0014	1	1800	56H	80.0	90.0	4.53	41	497
SPT0014	1	1800	143T	80.0	90.0	4.53	42	502
SPHT1/52	1.5	3600	56H	81.5	96.0	6.11	42	478
SPT1/52	1.5	3600	143T	81.5	96.0	6.11	43	490
SPHT1/54	1.5	1800	56H	81.5	92.0	6.38	46	563
SPT1/54	1.5	1800	145T	81.5	92.0	6.38	47	568
SPHT0022	2	3600	56H	82.5	96.0	8.23	45	520
SPT0022	2	3600	145T	82.5	96.0	8.23	45	533
SPHT0024	2	1800	56H	82.5	92.0	8.59	54	628
SPT0024	2	1800	145T	82.5	92.0	8.59	54	536
SPHT0032	3	3600	56H	84.0	98.0	11.70	56	551
SPT0032	3	3600	145T	84.0	98.0	11.70	56	536
ST0034[1]	3	1800	182T	82.5	92.0	12.6	97	880
ST0052[1]	5	3600	184T	82.0	98.0	20.0	112	940
ST0054[1]	5	1800	184T	84.0	94.0	20.4	117	1,041
ST7/52[1]	7.5	3600	213T	84.5	98.0	28.9	160	1,532
ST7/54[1]	7.5	1800	213T	82.0	94.0	31.1	188	1,807
ST0102[1]	10	3600	215T	86.0	98.0	38.7	195	1,783
ST0104[1]	10	1800	215T	83.5	94.0	41.6	215	2,142

Notes:

(1) All data subject to change without notice.

FARM DUTY SINGLE PHASE

Effective 07-08-18
Supercedes 03-24-17

BEGCFD, HIGH EFFICIENCY (1/3 HP - 1 HP) [S]
BECCFD, HIGH EFFICIENCY (1.5 HP) [S]
BECSFD, HIGH EFFICIENCY (2 HP -10 HP) [S]

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- Farm Equipment
- Machine Tools

FEATURES:

- Output Range: 1/3 - 10 HP
- Speed: 1800 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP44)
- Voltage: 115/230V (3 HP and Larger are 230V Only)
- Single Phase, 60 Hz, 1.15 Service Factor (Continuous)
- Definite Purpose High Torque Farm Duty Design
- Capacitor Start, Induction Run - 1/3 HP to 1.5 HP
- Capacitor Start, Permanent Split Capacitor Run - 2 HP to 10 HP
- Class B Insulation from 1/3 HP to 3 HP
- Class F Insulation from 5 HP to 10 HP
- Manual Reset Overload with Outside Rubber Boot
- Class B Temperature Rise
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- Rolled Steel Frame for 1/3 - 1 HP
- Cast Iron Frame for 1.5 - 10 HP
- Rolled Steel Terminal Box
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Green - Munsell 5G 4/4
- Double Shielded Bearings Pre-Packed with MULTEMP SRL (Non-regreasable)
- Rubber Dust Flinger on DE
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate Frames 143T and Larger
- Motors are U.L. Recognized and CSA Approved

EXTRAS/ OPTIONS:

- Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability in higher elevations.
(3) Motor subject to availability.

FARM DUTY SINGLE PHASE

Effective 07-08-18
Supercedes 03-24-17

BEGCFD, HIGH EFFICIENCY (1/3 HP - 1 HP) [S]
BECCFD, HIGH EFFICIENCY (1.5 HP) [S]
BECSFD, HIGH EFFICIENCY (2 HP -10 HP) [S]

HP	RPM	FL EFF (%)	FL PF (%)	FRAME MATERIAL[4]	FOOTED FRAME				FOOTED C-FACE			
					FRAME	CATALOG NO.	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)	FRAME	CATALOG NO.	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
1/3	1800	51.0	47.0	RS	56	S0/34[1]	29	364	56C	S0/34C[1]	29	511
1/2	1800	58.0	58.0	RS	56	S0/54[1]	33	386	56C	S0/54C[1]	33	533
3/4	1800	65.0	63.0	RS	56	S0/74[1]	38	396	56C	S0/74C[1]	38	556
1	1800	69.0	68.0	RS	56	S0014[1]	50	400	56C	S0014C[1]	50	585
1.5	1800	70.0	63.0	CI	145T	S1/54[1]	73	565	145TC	S1/54C[1]	73	674
2	1800	73.0	63.5	CI[2]	182T	S0024[2]	120	740	182TC	S0024C[2]	120	935
3	1800	74.0	63.0	CI[2]	182T	S0034[2,3]	120	840	182TC	S0034C[2,3]	120	1,033
5	1800	78.5	69.0	CI[2]	184T	S0054[2,3]	135	959	184TC	S0054C[2,3]	135	1,148
7.5	1800	80.0	84.5	CI[2]	213T	S7/54[2,3]	200	1,630	213TC	S7/54C[2,3]	200	1,807
10	1800	78.5	87.0	CI[2]	215T	S0104[2,3]	210	1,942	215TC	S0104C[2,3]	210	2,109

Notes:

(1) BEGCFD and BECCFD are capacitor start, induction run.
(2) BECSFD is capacitor start and permanent split capacitor run.
(3) Ratings 3 HP and Larger are 230V only.
(4) Frame Material: RS = Rolled Steel; CI = Cast Iron
(5) Data subject to change without notice.

OIL WELL PUMP ODP

CCOO2A

ASFAFP, STANDARD EFFICIENCY, DESIGN D [Q]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Oil Well Pumps
- Any Applications Requiring NEMA Design D Torques

FEATURES:

- Output Range: 5 - 125 HP
- Speed: 1200 RPM
- Enclosure: Open Drip Proof (IP22)
- Voltage: 230/460/796V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design D Torques
- Cast Iron Frame, End Brackets and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F2 Mounted, F1 Available with Modification
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: White - Munsell N9.5
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 280T and Smaller (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 320T and Larger
- Labyrinth Type Metal Flinger on Both Ends for Frames F# 320T and Larger
- Cast Iron Inner and Outer Bearing Caps for F# 324T and Larger
- Stainless Steel Nameplate
- 12 Leads
- Standard with Klixon 9700K Temperature Limiting Switch, 1 Per Phase
- 5% Minimum Slip
- Rodent Screens

EXTRAS/ OPTIONS:

- Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) All motors are NEMA Design D torque

OIL WELL PUMP ODP

CCOO2A

ASFAFP, STANDARD EFFICIENCY, DESIGN D [Q]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
Q0056	5	1200	215T	81.5	77.0	7.45	205	1,189
Q7/56	7.5	1200	254T	85.5	82.0	10.0	270	1,514
Q0106	10	1200	256T	85.5	85.0	12.9	335	1,851
Q0156	15	1200	284T	87.5	86.0	18.7	410	2,651
Q0206	20	1200	286T	85.5	89.0	24.6	453	3,270
Q0256	25	1200	324T	86.5	89.0	30.4	620	3,921
Q0306	30	1200	326T	86.5	90.0	36.1	700	4,245
Q0406	40	1200	365T	89.5	90.0	46.5	795	5,895
Q0506	50	1200	404T	88.5	89.5	59.1	1,075	7,265
Q0606	60	1200	404T	89.5	90.0	70.0	1,165	8,339
Q0756	75	1200	405T	88.5	91.0	87.5	1,245	9,894
Q1006R	100	1200	444T	86.5	82.0	132	1,585	13,015
Q1256R	125	1200	445T	87.0	82.0	164	1,725	14,104

Notes:

(1) "R" = Motor stocked standard with a drive-end roller bearing.
(2) All motors are NEMA Design D torque.

OIL WELL PUMP TEFC

CCOO2A

AEEAFP, STANDARD EFFICIENCY, DESIGN D [QT]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Oil Well Pumps
- Any Applications Requiring NEMA Design D Torques

FEATURES:

- Output Range: 5 - 125 HP
- Speed: 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54)
- Voltage: 230/460/796V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design D Torques
- Cast Iron Frame, End Brackets, Fan Cover and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F2 Mounted, F1 Available with Modification
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint System: Phenolic Rust Proof Base with Alkyd Finish
- Paint Color: Dark Blue (Munsell 5PB 4.5/2)
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 280T and Smaller (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 320T and Larger
- Labyrinth Type Metal Flinger on Both Ends for Frames F# 320T and Larger
- Cast Iron Inner and Outer Bearing Caps for F# 324T and Larger
- Stainless Steel Nameplate
- 12 Leads
- Standard with Klixon 9700K Temperature Limiting Switch, 1 Per Phase
- 5% Minimum Slip

EXTRAS/ OPTIONS:

- Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Please consult factory for suitability in higher ambients.
(2) Please consult factory for suitability in higher elevations.
(3) All motors are NEMA Design D torque

OIL WELL PUMP TEFC

CCOO2A

AEEAFP, STANDARD EFFICIENCY, DESIGN D [QT]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
QT0056	5	1200	215T	83.5	81.5	6.88	155	1,494
QT7/56	7.5	1200	254T	83.5	83.0	10.1	270	1,751
QT0106	10	1200	256T	84.0	84.0	13.3	335	2,318
QT0156	15	1200	284T	85.5	88.0	18.7	410	2,884
QT0206	20	1200	286T	86.5	89.0	24.3	453	3,605
QT0256	25	1200	324T	87.0	88.0	30.6	620	4,223
QT0306	30	1200	326T	87.5	90.5	35.5	700	5,047
QT0406	40	1200	365T	88.5	89.0	47.5	795	6,798
QT0506	50	1200	404T	89.5	92.0	56.9	1,075	8,395
QT0606	60	1200	405T	90.0	92.0	67.8	1,165	9,528
QT0756	75	1200	444T	90.0	88.5	88.2	1,245	16,171
QT1006	100	1200	445T	90.5	89.0	116	1,585	19,776
QT1006R	100	1200	445T	90.5	89.0	116	1,585	19,776
QT1256	125	1200	447T	91.5	89.0	144	1,785	22,660
QT1256R	125	1200	447T	91.5	89.0	144	1,785	22,660

Notes:

(1) "R" = Motor stocked standard with a drive-end roller bearing.

(2) All motors are NEMA Design D torque.

2 SPEED, 1 WINDING, VARIABLE TORQUE

AECA, HIGH EFFICIENCY [CP]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Cooling Towers

FEATURES:

- Output Range: 100 - 300 HP
- Speeds: 1800 / 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 460V Only
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- Self-Certified for Class I, Div. 2, Groups B, C, D
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum
- Cast Iron Frame, End Brackets, Fan Cover and Main Conduit Box(4)
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: 2 Part Epoxy
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- Epoxy Coated Internals
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings
- Stainless Steel Nameplate and Hardware
- Stainless Steel Automatic Breather Drain
- 6 Leads Only
- Noise Level Not to Exceed 85 dB(A) at 1 Meter Unloaded
- 2 Speed, 1 Winding - Variable Torque
- High Efficiency, Severe Duty

EXTRAS/ OPTIONS:

- Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Please consult factory for suitability in higher ambients.
(2) Please consult factory for suitability in higher elevations.
(3) Additional charge for Division II nameplate - see Factory Modifications Pricing.
(4) Catalog# CP3004/8 (F#5009B) will have steel fan cover.
(5) Multi-speed motors are exempt from (DOE) Department of Energy premium efficiency requirements.

2 SPEED, 1 WINDING, VARIABLE TORQUE

AECA, HIGH EFFICIENCY [CP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
CP1004/8	100 / 25	1800/900	444T	92.5 / 88.0	90.0 / 62.0	112 / 42.9	1,855	19,986
CP1254/8	125 / 31	1800/900	445T	92.5 / 88.0	90.0 / 62.0	141 / 53.2	2,105	24,483
CP1504/8	150 / 37	1800/900	447T	93.0 / 90.0	90.0 / 62.0	168 / 62.9	2,647	29,979
CP2004/8	200 / 50	1800/900	449T	93.5 / 90.0	90.5 / 62.0	221 / 83.9	2,820	35,975
CP2504/8	250 / 62.5	1800/900	449T	94.0 / 90.0	90.5 / 62.0	275 / 105	2,820	44,969
CP3004/8	300 / 75	1800/900	5009B	94.5 / 92.0	91.0 / 72.0	327 / 106	4,125	48,966

Notes:

(1) Data subject to change without notice.

ROLLED STEEL ODP FAMILY

ASGHPE, NEMA PREMIUM, F#56 (1/4 HP - 3 HP) [DSP]
ASGH, NEMA PREMIUM, F#140T - 280T (1 HP - 40 HP) [DTP]
ASGA, HIGH EFFICIENCY, F#56 (1/3 HP - 3 HP) [DS]
ASGHJP/JM, NEMA PREMIUM, CLOSE COUPLED, (1 HP - 40 HP) [DJPP/DJMP]
ASGAJP/JM, HIGH EFFICIENCY, CLOSE COUPLED, (1 HP - 40 HP)[DJP/DJM]*

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- HVAC Equipment
- Compressors
- Fire Pumps*

FIRE SAFETY

FEATURES:

- Output Range: 1/3 - 40 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Open Drip Proof (IP22)
- Voltage: 230/460V (Usable on 200 & 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Rolled Steel Frame and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Premium - Blue - Munsell 5PB 3/8
  High Efficiency - Light Gray - Munsell N5.0
- Double Shielded Bearings Pre-Packed with MULTEMP SRL (Non-regreasable)
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(3,4)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP and Larger
- Motors are U.L. Recognized for United States and Canada, CSA Approved and CE Marked

EXTRAS/ OPTIONS:

- Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

* Fire Pump available. See product page for more details.
(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1.

ROLLED STEEL ODP PREMIUM

ASGHPE, NEMA PREMIUM, F#56 (1/4 HP - 3 HP) [DSP]
ASGH, NEMA PREMIUM, F#140T - 280T (1 HP - 40 HP) [DTP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DSP0/22	1/4	3600	56	72.0	82.0	0.79	19	250
DSP0/24	1/4	1800	56	72.0	73.0	0.89	20	267
DSP0/26	1/4	1200	56	70.0	61.0	1.10	24	358
DSP0/32	1/3	3600	56	71.5	80.5	1.08	21	250
DSP0/34	1/3	1800	56	75.5	74.5	1.11	22	267
DSP0/36	1/3	1200	56	72.0	61.0	1.42	22	358
DSP0/52	1/2	3600	56	73.4	81.5	1.57	22	267
DSP0/54	1/2	1800	56	78.2	81.0	1.48	22	294
DSP0/56	1/2	1200	56	75.5	63.0	1.97	23	389
DSP0/72	3/4	3600	56	76.8	80.0	2.29	35	300
DSP0/74	3/4	1800	56	81.1	77.5	2.23	23	325
DSP0/76	3/4	1200	56	81.7	67.5	2.55	26	396
DSP0012	1	3600	56	77.0	79.5	3.06	25	348
DTP0012	1	3600	143T	80.0	85.5	2.74	34	367
DSP0014	1	1800	56	83.5	72.0	3.11	25	348
DTP0014	1	1800	143T	85.5	75.5	2.90	42	367
DSP0016	1	1200	56	82.5	66.0	3.44	32	412
DTP0016	1	1200	145T	82.5	66.0	3.44	43	474
DSP1/52	1.5	3600	56	85.5	83.0	3.96	26	373
DTP1/52	1.5	3600	143T	85.5	83.0	3.96	34	391
DSP1/54	1.5	1800	56	86.5	80.5	4.03	30	373
DTP1/54	1.5	1800	145T	86.5	80.5	4.03	47	406
DTP1/56	1.5	1200	182T	86.5	54.0	6.01	94	502
DSP0022	2	3600	56	86.5	85.0	5.09	28	396
DTP0022	2	3600	145T	85.5	89.0	4.92	42	442
DSP0024	2	1800	56	86.5	79.0	5.48	35	396
DTP0024	2	1800	145T	86.5	79.0	5.48	47	431
DTP0026	2	1200	184T	87.5	57.0	7.51	94	549
DSP0032	3	3600	56	86.5	89.0	7.30	36	478
DTP0032	3	3600	145T	85.5	86.0	7.64	42	493
DSP0034	3	1800	56	86.9	80.0	8.08	53	450
DTP0034	3	1800	182T	89.5	73.0	8.60	94	485
DTP0036	3	1200	213T	88.5	69.0	9.20	158	766
DTP0052	5	3600	182T	87.5	88.0	12.2	94	559
DTP0054	5	1800	184T	89.5	77.0	13.6	94	593
DTP0056	5	1200	215T	89.5	73.0	14.3	158	925
DTP7/52	7.5	3600	184T	88.5	90.0	17.6	94	736
DTP7/54	7.5	1800	213T	91.0	81.0	19.1	158	851
DTP7/56	7.5	1200	254T	90.2	77.0	20.2	292	1,380
DTP0102	10	3600	213T	90.2	85.5	24.3	158	925
DTP0104	10	1800	215T	91.7	84.0	24.3	158	1,008
DTP0106	10	1200	256T	91.7	79.5	25.7	292	1,577
DTP0152	15	3600	215T	91.0	87.0	35.5	158	1,238
DTP0154	15	1800	254T	93.0	83.0	36.4	230	1,389
DTP0156	15	1200	284T	91.7	80.0	38.3	344	2,108
DTP0202	20	3600	254T	91.7	90.0	45.4	292	1,612
DTP0204	20	1800	256T	93.0	83.0	48.5	292	1,717
DTP0206	20	1200	284T	92.4	81.5	49.4	344	2,555
DTP0252	25	3600	256T	91.7	91.0	56.1	292	1,913
DTP0254	25	1800	284T	93.6	85.0	58.8	344	2,122
DTP0302	30	3600	284TS	92.4	90.0	67.6	344	2,365
DTP0304	30	1800	286T	94.1	86.0	69.4	415	2,494
DTP0402	40	3600	286TS	92.4	90.5	89.6	415	3,027

Notes:

(1) DSP0034 is not the same or equivalent (different frame) to DS0034. Shaft diameters are different.
(2) DSP0034 comes with the Premium Efficiency nameplate but does not have the NEMA Premium logo. DSP0034 meets DoE SMR rules for premium efficiency but not NEMA MG-1 Table 12.12.
(3) All data subject to change without notice.

ASGA, HIGH EFFICIENCY, F#56 (1/3 HP - 3 HP) [DS]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DS0/32	1/3	3600	A56	68.0	73.8	1.24	21	237
DS0/34	1/3	1800	A56	75.5	73.0	1.13	22	253
DS0/36	1/3	1200	A56	75.5	67.2	1.23	22	340
DS0/52	1/2	3600	A56	72.0	73.8	1.76	22	253
DS0/54	1/2	1800	A56	77.0	68.8	1.77	22	278
DS0/56	1/2	1200	A56	75.5	65.5	1.89	23	370
DS0/72	3/4	3600	A56	75.5	74.2	2.51	35	284
DS0/74	3/4	1800	A56	75.5	70.0	2.66	23	309
DS0/76	3/4	1200	A56	75.5	63.2	2.94	26	375
DS0012	1	3600	A56	74.0	74.0	3.40	25	331
DS0014	1	1800	A56	77.0	75.8	3.20	25	331
DS0016	1	1200	A56	77.0	70.8	3.40	32	391
DS1/52	1.5	3600	A56	77.0	79.2	4.60	26	354
DS1/54	1.5	1800	A56	80.0	80.0	4.40	30	354
DS0022	2	3600	A56	80.0	80.5	5.80	28	375
DS0024	2	1800	B56	81.5	82.0	5.60	35	375
DS0032	3	3600	B56	82.5	85.0	8.00	36	453
DS0034	3	1800	56HZ	86.5	80.5	8.00	53	427

Notes:

(1) Per DOE regulations, this High Efficiency motor line inventory will be available through June 2018 or until current inventory has been depleted. Whichever occurs first.
(2) Once product listed on this page has been depleted from current stock, that model becomes obsolete and cannot be re-ordered.
(3) Please see our new line of Premium Efficient 56 frame Rolled Steel ODP motors on page 32.
(4) DSP0034 is not the same or equivalent (different frame) to DS0034. Shaft diameters are different.
(5) All data subject to change without notice.
(6) Fire Pump version is no longer available.

ROLLED STEEL ODP JP/JM PREMIUM

ASGHJP/JM, NEMA PREMIUM, CLOSE COUPLED, (1 HP - 40 HP) [DJPP/DJMP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CATALOG NO.		HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT. (lbs.)		LIST PRICE ($)
JP	JM							JP	JM	
DJPP0014	DJMP0014	1	1800	143JP/JM	85.5	75.5	2.90	40	40	439
DJPP0016	DJMP0016	1	1200	145JP/JM	82.5	66.0	3.44	45	45	546
DJPP1/52	DJMP1/52	1.5	3600	143JP/JM	85.5	83.0	3.96	40	40	466
DJPP1/54	DJMP1/54	1.5	1800	145JP/JM	86.5	80.5	4.03	47	47	485
DJPP1/56	DJMP1/56	1.5	1200	182JP/JM	86.5	54.0	6.01	90	83	568
DJPP0022	DJMP0022	2	3600	145JP/JM	86.5	85.0	5.09	45	45	488
DJPP0024	DJMP0024	2	1800	145JP/JM	86.5	79.0	5.48	50	49	488
DJPP0026	DJMP0026	2	1200	184JP/JM	87.5	57.0	7.51	93	89	629
DJPP0032	DJMP0032	3	3600	145JP/JM	85.5	86.0	7.64	50	50	571
DJPP0034	DJMP0034	3	1800	182JP/JM	89.5	73.0	8.60	113	95	550
DJPP0036	DJMP0036	3	1200	213JP/JM	88.5	69.0	9.20	155	146	880
DJPP0052	DJMP0052	5	3600	182JP/JM	87.5	88.0	12.2	95	78	706
DJPP0054	DJMP0054	5	1800	184JP/JM	89.5	77.0	13.6	113	108	649
DJPP0056	DJMP0056	5	1200	215JP/JM	89.5	73.0	14.3	155	146	1,218
DJPP7/52	DJMP7/52	7.5	3600	184JP/JM	88.5	90.0	17.6	100	78	865
DJPP7/54	DJMP7/54	7.5	1800	213JP/JM	91.0	81.0	19.1	155	140	931
DJPP7/56	DJMP7/56	7.5	1200	254JP/JM	90.2	77.0	20.2	265	265	1,507
DJPP0102	DJMP0102	10	3600	213JP/JM	90.2	85.5	24.3	167	165	1,092
DJPP0104	DJMP0104	10	1800	215JP/JM	91.7	84.0	24.3	180	150	1,038
DJPP0106	DJMP0106	10	1200	256JP/JM	91.7	79.5	25.7	290	275	1,757
DJPP0152	DJMP0152	15	3600	215JP/JM	91.0	87.0	35.5	167	165	1,442
DJPP0154	DJMP0154	15	1800	254JP/JM	93.0	83.0	36.4	265	257	1,537
DJPP0156	DJMP0156	15	1200	284JP/JM	91.7	80.0	38.3	375	365	2,244
DJPP0202	DJMP0202	20	3600	254JP/JM	91.7	90.0	45.4	265	250	1,835
DJPP0204	DJMP0204	20	1800	256JP/JM	93.0	83.0	48.5	275	265	1,914
DJPP0206	DJMP0206	20	1200	284JP/JM	92.4	81.5	49.7	410	405	2,852
DJPP0252	DJMP0252	25	3600	256JP/JM	91.7	91.0	56.1	300	275	2,178
DJPP0254	DJMP0254	25	1800	284JP/JM	93.6	85.0	58.8	375	365	2,256
DJPP0302	DJMP0302	30	3600	284JP/JM	92.4	90.0	67.6	370	350	2,538
DJPP0304	DJMP0304	30	1800	286JP/JM	94.1	86.0	69.4	395	370	2,644
DJPP0402	DJMP0402	40	3600	286JP/JM	92.4	90.5	89.6	395	370	3,314

Notes:
(1) All data subject to change without notice.

ROLLED STEEL ODP JP/JM

ASGAJP/JM, HIGH EFFICIENCY, CLOSE COUPLED, (1 HP - 40 HP)[DJP_FP/DJM_FP]

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

FIRE PUMP CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT. (lbs.)		FIRE PUMP LIST PRICE ($)
							JP	JM	
DJP0014FP	1	1800	143JP/JM	82.5	78.5	2.90	40	40	483
DJP0016FP	1	1200	145JP/JM	80.0	72.5	3.20	45	45	605
DJP1/52FP	1.5	3600	143JP/JM	82.5	82.8	4.10	40	40	526
DJP1/54FP	1.5	1800	145JP/JM	84.0	84.0	4.00	47	47	526
DJP1/56PFP	1.5	1200	182JP/JM	84.0	55.0	6.08	90	83	624
DJP0022FP	2	3600	145JP/JM	84.0	83.5	5.30	45	45	537
DJP0024FP	2	1800	145JP/JM	84.0	81.0	5.50	50	49	537
DJP0026FP	2	1200	184JP/JM	85.5	62.0	7.10	93	89	692
DJP0032FP	3	3600	145JP/JM	84.0	87.0	7.70	50	50	681
DJP0034FP	3	1800	182JP/JM	86.5	78.0	8.30	113	95	605
DJP0036FP	3	1200	213JP/JM	86.5	71.0	9.20	155	146	968
DJP0052FP	5	3600	182JP/JM	85.5	90.0	12.2	95	78	846
DJP0054FP	5	1800	184JP/JM	87.5	81.5	13.1	113	108	714
DJP0056FP	5	1200	215JP/JM	87.5	72.0	14.9	155	146	1,340
DJP7/52FP	7.5	3600	184JP/JM	87.5	91.0	17.6	100	78	1,010
DJP7/54FP	7.5	1800	213JP/JM	88.5	85.0	18.7	155	140	1,026
DJP7/56FP	7.5	1200	254JP/JM	88.5	81.0	19.6	265	265	1,658
DJP0102FP	10	3600	213JP/JM	88.5	88.0	24.0	167	165	1,297
DJP0104FP	10	1800	215JP/JM	89.5	86.5	24.2	180	150	1,142
DJP0106FP	10	1200	256JP/JM	90.2	81.0	25.6	290	275	1,933
DJP0152FP	15	3600	215JP/JM	89.5	87.5	35.9	167	165	1,712
DJP0154FP	15	1800	254JP/JM	91.0	88.0	35.1	265	257	1,690
DJP0156FP	15	1200	284JP/JM	90.2	83.0	37.5	375	365	2,469
DJP0202FP	20	3600	254JP/JM	90.2	91.0	45.6	265	250	2,019
DJP0204FP	20	1800	256JP/JM	91.0	88.0	46.8	275	265	2,105
DJP0206FP	20	1200	284JP/JM	91.0	84.0	49.0	410	405	3,162
DJP0252FP	25	3600	256JP/JM	91.0	91.0	56.5	300	275	2,460
DJP0254FP	25	1800	284JP/JM	91.7	86.0	59.4	375	365	2,481
DJP0302FP	30	3600	284JP/JM	91.0	89.0	69.4	370	350	2,792
DJP0304FP	30	1800	286JP/JM	92.4	86.5	70.3	395	370	2,908
DJP0402FP	40	3600	286JP/JM	91.7	88.0	92.8	395	370	3,810

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) Per DOE regulations, this High Efficiency motor line inventory will be available through June 2018, or until current inventory has been depleted. Whichever occurs first.

(4) Once product listed on this page has been depleted from current stock, that model becomes obsolete and can not be re-ordered.

(5) Please see our new line of Premium Efficient JP/JM Rolled Steel ODP motors on page 34.

(6) All data subject to change without notice.

ROLLED STEEL ODP JP/JM

ASGAJP/JM, HIGH EFFICIENCY, CLOSE COUPLED, (1 HP - 40 HP)[DJP/DJM]

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CATALOG NO.		HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT. (lbs.)		FIRE PUMP LIST PRICE ($)
JP	JM							JP	JM	
DJP0014	DJM0014	1	1800	143JP/JM	82.5	78.5	2.90	40	40	439
DJP0016	DJM0016	1	1200	145JP/JM	80.0	72.5	3.20	45	45	550
DJP1/52	DJM1/52	1.5	3600	143JP/JM	82.5	82.8	4.10	40	40	478
DJP1/54	DJM1/54	1.5	1800	145JP/JM	84.0	84.0	4.00	47	47	478
DJP1/56P	DJM1/56	1.5	1200	182JP/JM	84.0	55.0	6.08	90	83	568
DJP0022	DJM0022	2	3600	145JP/JM	84.0	83.5	5.30	45	45	488
DJP0024	DJM0024	2	1800	145JP/JM	84.0	81.0	5.50	50	49	488
DJP0026	DJM0026	2	1200	184JP/JM	85.5	62.0	7.10	93	89	629
DJP0032	DJM0032	3	3600	145JP/JM	84.0	87.0	7.70	50	50	619
DJP0034	DJM0034	3	1800	182JP/JM	86.5	78.0	8.30	113	95	550
DJP0036	DJM0036	3	1200	213JP/JM	86.5	71.0	9.20	155	146	880
DJP0052	DJM0052	5	3600	182JP/JM	85.5	90.0	12.2	95	78	769
DJP0054	DJM0054	5	1800	184JP/JM	87.5	81.5	13.1	113	108	649
DJP0056	DJM0056	5	1200	215JP/JM	87.5	72.0	14.9	155	146	1,218
DJP7/52	DJM7/52	7.5	3600	184JP/JM	87.5	91.0	17.6	100	78	918
DJP7/54	DJM7/54	7.5	1800	213JP/JM	88.5	85.0	18.7	155	140	933
DJP7/56	DJM7/56	7.5	1200	254JP/JM	88.5	81.0	19.6	265	265	1,507
DJP0102	DJM0102	10	3600	213JP/JM	88.5	88.0	24.0	167	165	1,179
DJP0104	DJM0104	10	1800	215JP/JM	89.5	86.5	24.2	180	150	1,038
DJP0106	DJM0106	10	1200	256JP/JM	90.2	81.0	25.6	290	275	1,757
DJP0152	DJM0152	15	3600	215JP/JM	89.5	87.5	35.9	167	165	1,556
DJP0154	DJM0154	15	1800	254JP/JM	91.0	88.0	35.1	265	257	1,537
DJP0156	DJM0156	15	1200	284JP/JM	90.2	83.0	37.5	375	365	2,244
DJP0202	DJM0202	20	3600	254JP/JM	90.2	91.0	45.6	265	250	1,835
DJP0204	DJM0204	20	1800	256JP/JM	91.0	88.0	46.8	275	265	1,914
DJP0206	DJM0206	20	1200	284JP/JM	91.0	84.0	49.0	410	405	2,875
DJP0252	DJM0252	25	3600	256JP/JM	91.0	91.0	56.5	300	275	2,236
DJP0254	DJM0254	25	1800	284JP/JM	91.7	86.0	59.4	375	365	2,256
DJP0302	DJM0302	30	3600	284JP/JM	91.0	89.0	69.4	370	350	2,538
DJP0304	DJM0304	30	1800	286JP/JM	92.4	86.5	70.3	395	370	2,644
DJP0402	DJM0402	40	3600	286JP/JM	91.7	88.0	92.8	395	370	3,464

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) Per DOE regulations, this High Efficiency motor line inventory will be available through June 2018, or until current inventory has been depleted. Whichever occurs first.

(4) Once product listed on this page has been depleted from current stock, that model becomes obsolete and can not be re-ordered.

(5) Please see our new line of Premium Efficient JP/JM Rolled Steel ODP motors on page 34.

(6) All data subject to change without notice.

ROLLED STEEL ODP AEGIS® SGR

ASGH, NEMA PREMIUM WITH AEGIS® SGR [DTP_G]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- HVAC Equipment

The AEGIS® SGR Bearing Protection Ring aids in preventing electrical bearing "fluting"damage by safely diverting harmful shaft voltages and bearing currents to ground. Using proprietary Electron Transport Technology™, the conductive microfibers inside the AEGIS® SGR provide reliable current diversion technology for shaft grounding with a "path of least resistance" to dramatically extend motor life. **AEGIS® Shaft Grounding Rings have a warranty of 1 year.**

FEATURES:

- Output Range: 1 - 40 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Open Drip Proof (IP22)
- Voltage: 230/460V (Usable on 200 & 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Grounding Ring Factory Installed Externally on DE Bracket
- Class F Insulation
- NEMA Design B Torques
- Rolled Steel Frame and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Double Shielded Bearings Pre-Packed with MULTEMP SRL (Non-regreasable)
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(3,4)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP and Larger
- Motors are U.L. Recognized for United States and Canada, CSA Approved and CE Marked

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

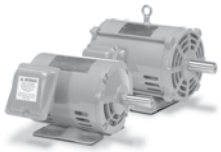
Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(5) AEGIS® SGR Bearing Protection Ring can not be used in Hazardous Locations (E.g. Class I, Div. 2, etc.)

ROLLED STEEL ODP AEGIS® SGR

ASGH, NEMA PREMIUM WITH AEGIS® SGR [DTP_G]

Effective 07-08-18
Supercedes 03-24-17



CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DTP0012G	1	3600	143T	80.0	85.5	2.74	34	467
DTP0014G	1	1800	143T	85.5	75.5	2.90	42	464
DTP0016G	1	1200	145T	82.5	66.0	3.44	43	587
DTP1/52G	1.5	3600	143T	85.5	83.0	3.96	34	493
DTP1/54G	1.5	1800	145T	86.5	80.5	4.03	47	504
DTP1/56G	1.5	1200	182T	86.5	54.0	6.01	94	693
DTP0022G	2	3600	145T	85.5	89.0	4.92	42	544
DTP0024G	2	1800	145T	86.5	79.0	5.48	47	533
DTP0026G	2	1200	184T	87.5	57.0	7.51	94	721
DTP0032G	3	3600	145T	85.5	86.0	7.64	42	605
DTP0034G	3	1800	182T	89.5	73.0	8.60	94	667
DTP0036G	3	1200	213T	88.5	69.0	9.20	158	1,004
DTP0052G	5	3600	182T	87.5	88.0	12.2	94	705
DTP0054G	5	1800	184T	89.5	77.0	13.6	94	735
DTP0056G	5	1200	215T	89.5	73.0	14.3	158	1,232
DTP7/52G	7.5	3600	184T	88.5	90.0	17.6	94	897
DTP7/54G	7.5	1800	213T	91.0	81.0	19.1	158	1,033
DTP7/56G	7.5	1200	254T	90.2	77.0	20.2	292	1,621
DTP0102G	10	3600	213T	90.2	85.5	24.3	158	1,118
DTP0104G	10	1800	215T	91.7	84.0	24.3	158	1,200
DTP0106G	10	1200	256T	91.7	79.5	25.7	292	1,814
DTP0152G	15	3600	215T	91.0	87.0	35.5	158	1,447
DTP0154G	15	1800	254T	93.0	83.0	36.4	230	1,632
DTP0156G	15	1200	284T	91.7	80.0	38.3	344	2,401
DTP0202G	20	3600	254T	91.7	90.0	45.4	292	1,872
DTP0204G	20	1800	256T	93.0	83.0	48.5	292	1,973
DTP0206G	20	1200	286T	92.4	81.5	49.4	344	2,881
DTP0252G	25	3600	256T	91.7	91.0	56.1	292	2,178
DTP0254G	25	1800	284T	93.6	85.0	58.8	344	2,416
DTP0302G	30	3600	284TS	92.4	90.0	67.6	344	2,649
DTP0304G	30	1800	286T	94.1	86.0	69.4	415	2,805
DTP0402G	40	3600	286TS	92.4	90.5	89.6	415	3,345

Notes:

(1) AEGIS® SGR Rings have a warranty of 1 year.
(2) All data subject to change without notice.

CAST IRON ODP

ASHH, NEMA PREMIUM [DHP]*

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- HVAC Equipment
- Fire Pumps*

FIRE SAFETY

FEATURES:

- Output Range: 1 - 800 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Open Drip Proof (IP22)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Cast Iron Frame and End Brackets
- Rolled Steel Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature (2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Light Gray - Munsell N5.0
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140T - 280T (Non-regreasable)
- High Quality Ball (or Roller) Bearings regreasable with Mobil Polyrex™ EM for F# 280TS and Larger
- Labyrinth Type Metal Flinger on Both Ends for F# 280TS and Larger
- Cast Iron Inner and Outer Bearing Caps for F#280TS and Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2 (4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP to 125 HP;
- 6 Leads for 150 HP and Larger
- Motors are U.L. Recognized, CSA Approved and CE Marked

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

* Fire Pump available. See product page for more details.

(1) Available in 575V. TWMC carries minimal 575V stock; please check availability to ensure required motors are in stock. Ratings may be available from our Canadian warehouses and/or our factory. Pricing and leadtime may vary.

(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.

(3) Consult a Stock Product Application Specialist for suitability in higher elevations.

(4) Motor service factor is 1.0 when operated on a VFD.

(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1, Part 31.

CAST IRON ODP

ASHH, NEMA PREMIUM [DHP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP0014	1	1800	143T	85.5	78.0	1.41	54	386
DHP00145	1	1800	143T	85.5	78.0	1.13	54	386
DHP0016	1	1200	145T	82.5	65.5	1.74	75	499
DHP00165	1	1200	145T	82.5	65.5	1.39	75	499
DHP1/52	1.5	3600	143T	85.5	80.0	2.06	50	412
DHP1/525	1.5	3600	143T	85.5	80.0	1.65	50	412
DHP1/54	1.5	1800	145T	86.5	80.5	2.02	60	427
DHP1/545	1.5	1800	145T	86.5	80.5	1.62	60	427
DHP1/56	1.5	1200	182T	87.5	63.0	2.55	123	528
DHP1/565	1.5	1200	182T	87.5	63.0	2.04	123	528
DHP0022	2	3600	145T	85.5	84.5	2.59	57	466
DHP00225	2	3600	145T	85.5	84.5	2.07	57	466
DHP0024	2	1800	145T	86.5	79.5	2.72	58	453
DHP00245	2	1800	145T	86.5	79.5	2.18	58	453
DHP0026	2	1200	184T	87.5	71.0	3.01	130	578
DHP00265	2	1200	184T	87.5	71.0	2.40	130	578
DHP0032	3	3600	145T	87.5	87.0	3.69	66	519
DHP00325	3	3600	145T	87.5	87.0	2.95	66	519
DHP0034	3	1800	182T	89.5	81.0	3.88	117	499
DHP00345	3	1800	182T	89.5	81.0	3.10	117	499
DHP0036	3	1200	213T	88.5	77.0	4.12	183	806
DHP00365	3	1200	213T	88.5	77.0	3.30	183	806
DHP0052	5	3600	182T	87.5	91.0	5.90	120	589
DHP00525	5	3600	182T	87.5	91.0	4.72	120	589
DHP0054	5	1800	184T	89.5	84.5	6.19	145	624
DHP00545	5	1800	184T	89.5	84.5	4.95	145	624
DHP0056	5	1200	215T	89.5	79.0	6.62	195	973
DHP00565	5	1200	215T	89.5	79.0	5.30	195	973
DHP7/52	7.5	3600	184T	88.5	91.5	8.65	134	776
DHP7/525	7.5	3600	184T	88.5	91.5	6.92	134	776
DHP7/54	7.5	1800	213T	91.0	86.0	8.97	187	895
DHP7/545	7.5	1800	213T	91.0	86.0	7.18	187	895
DHP7/56	7.5	1200	254T	90.2	79.0	9.85	260	1,452
DHP7/565	7.5	1200	254T	90.2	79.0	7.88	260	1,452
DHP0102	10	3600	213T	90.2	88.0	11.8	190	973
DHP01025	10	3600	213T	90.2	88.0	14.75	190	973
DHP0104	10	1800	215T	91.7	87.0	11.7	215	1,061
DHP01045	10	1800	215T	91.7	87.0	9.36	215	1,061
DHP0106	10	1200	256T	91.7	81.0	12.6	329	1,660
DHP01065	10	1200	256T	91.7	81.0	10.08	329	1,660
DHP0152	15	3600	215T	90.2	87.5	17.8	220	1,303
DHP01525	15	3600	215T	90.2	87.5	14.24	220	1,303
DHP0154	15	1800	254T	93.0	84.5	17.9	247	1,463
DHP01545	15	1800	254T	93.0	84.5	14.32	247	1,463
DHP0156	15	1200	284T	91.7	83.0	18.5	367	2,220
DHP01565	15	1200	284T	91.7	83.0	14.8	367	2,220

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.
(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.
(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.
(3) To order 575V, add "5" to the end of Catalog Number, for example: "DHP00545" for 5 HP, 1800 RPM, 575V.
(4) "R" = Motor stocked standard with a Drive-End Roller Bearing.
(5) Ratings 150 HP and larger are 460V only.
(6) All data subject to change without notice.

CAST IRON ODP

ASHH, NEMA PREMIUM [DHP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP0202	20	3600	254T	91.0	90.5	22.8	233	1,696
DHP02025	20	3600	254T	91.0	90.5	18.24	233	1,696
DHP0204	20	1800	256T	93.0	86.5	23.3	350	1,808
DHP02045	20	1800	256T	93.0	86.5	18.64	350	1,808
DHP0206	20	1200	286T	92.4	83.5	24.3	392	2,690
DHP02065	20	1200	286T	92.4	83.5	19.44	392	2,690
DHP0252	25	3600	256T	91.7	92.0	27.7	317	2,014
DHP02525	25	3600	256T	91.7	92.0	22.16	317	2,014
DHP0254	25	1800	284T	93.6	87.0	28.7	352	2,233
DHP02545	25	1800	284T	93.6	87.0	22.96	352	2,233
DHP0256	25	1200	324T	93.0	83.0	30.3	640	3,337
DHP02565	25	1200	324T	93.0	83.0	24.24	640	3,337
DHP0302	30	3600	284TS	92.4	90.5	33.6	405	2,490
DHP03025	30	3600	284TS	92.4	90.5	26.88	405	2,490
DHP0304	30	1800	286T	94.1	87.0	34.3	429	2,624
DHP03045	30	1800	286T	94.1	87.0	27.44	429	2,624
DHP0306	30	1200	326T	93.6	83.5	35.9	568	3,750
DHP03065	30	1200	326T	93.6	83.5	28.72	568	3,750
DHP0402	40	3600	286TS	92.4	91.5	44.3	442	3,187
DHP04025	40	3600	286TS	92.4	91.5	35.44	442	3,187
DHP0404	40	1800	324T	94.1	86.0	46.3	608	3,254
DHP04045	40	1800	324T	94.1	86.0	37.04	608	3,254
DHP0406	40	1200	364T	94.1	87.0	45.7	835	4,679
DHP04065	40	1200	364T	94.1	87.0	36.56	835	4,679
DHP0502	50	3600	324TS	93.0	86.0	58.5	552	3,924
DHP05025	50	3600	324TS	93.0	86.0	46.8	552	3,924
DHP0504	50	1800	326T	94.5	85.0	58.3	629	3,647
DHP05045	50	1800	326T	94.5	85.0	46.64	629	3,647
DHP0506	50	1200	365T	94.1	86.0	57.8	766	5,544
DHP05065	50	1200	365T	94.1	86.0	46.24	766	5,544
DHP0602	60	3600	326TS	93.6	87.0	69.0	614	4,613
DHP06025	60	3600	326TS	93.6	87.0	55.2	614	4,613
DHP0604	60	1800	364T	95.0	85.0	69.6	735	4,627
DHP06045	60	1800	364T	95.0	85.0	55.68	735	4,627
DHP0606	60	1200	404T	94.5	85.5	69.5	1,100	6,641
DHP06065	60	1200	404T	94.5	85.5	55.6	1,100	6,641
DHP0752	75	3600	364TS	94.1	90.5	82.5	704	6,129
DHP07525	75	3600	364TS	94.1	90.5	66	704	6,129
DHP0754	75	1800	365T	95.0	86.0	86.0	850	5,482
DHP07545	75	1800	365T	95.0	86.0	68.8	850	5,482
DHP0754R	75	1800	365T	95.0	86.0	86.0	850	5,482
DHP07545R	75	1800	365T	95.0	86.0	68.8	850	5,482
DHP0756	75	1200	405T	94.5	86.5	86.0	1,210	7,985
DHP07565	75	1200	405T	94.5	86.5	68.8	1,210	7,985
DHP0756R	75	1200	405T	94.5	86.5	86.0	1,210	7,985
DHP07565R	75	1200	405T	94.5	86.5	68.8	1,210	7,985

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) To order 575V, add "5" to the end of Catalog Number, for example: "DHP00545" for 5 HP, 1800 RPM, 575V.

(4) "R" = Motor stocked standard with a Drive-End Roller Bearing.

(5) Ratings 150 HP and larger are 460V only.

(6) All data subject to change without notice.

CAST IRON ODP

ASHH, NEMA PREMIUM [DHP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP1002	100	3600	365TS	94.1	90.5	110	761	8,129
DHP10025	100	3600	365TS	94.1	90.5	88	761	8,129
DHP1004	100	1800	404T	95.4	85.5	115	961	7,032
DHP10045	100	1800	404T	95.4	85.5	92	961	7,032
DHP1004R	100	1800	404T	95.4	85.5	115	961	7,032
DHP10045R	100	1800	404T	95.4	85.5	92	961	7,032
DHP1006	100	1200	444T	95.0	82.0	120	1,350	11,614
DHP10065	100	1200	444T	95.0	82.0	96	1,350	11,614
DHP1006R	100	1200	444T	95.0	82.0	120	1,350	11,614
DHP10065R	100	1200	444T	95.0	82.0	96	1,350	11,614
DHP1252	125	3600	404TS	94.1	90.5	137	907	10,296
DHP12525	125	3600	404TS	94.1	90.5	110	907	10,296
DHP1254	125	1800	405T	95.4	84.5	145	1,109	8,811
DHP12545	125	1800	405T	95.4	84.5	116	1,109	8,811
DHP1254R	125	1800	405T	95.4	84.5	145	1,109	8,811
DHP12545R	125	1800	405T	95.4	84.5	116	1,109	8,811
DHP1256	125	1200	445T	95.0	82.0	150	1,605	13,591
DHP12565	125	1200	445T	95.0	82.0	120	1,605	13,591
DHP1256R	125	1200	445T	95.0	82.0	150	1,605	13,591
DHP12565R	125	1200	445T	95.0	82.0	120	1,605	13,591
DHP1502	150	3600	405TS	94.5	90.5	164	1,003	12,470
DHP15025	150	3600	405TS	94.5	90.5	131	1,003	12,470
DHP1504	150	1800	444T	95.8	86.0	170	1,540	11,791
DHP15045	150	1800	444T	95.8	86.0	136	1,540	11,791
DHP1504R	150	1800	444T	95.8	86.0	170	1,540	11,791
DHP15045R	150	1800	444T	95.8	86.0	136	1,540	11,791
DHP1506	150	1200	445T	95.4	82.5	178	1,705	16,084
DHP15065	150	1200	445T	95.4	82.5	142	1,705	16,084
DHP1506R	150	1200	445T	95.4	82.5	178	1,705	16,084
DHP15065R	150	1200	445T	95.4	82.5	142	1,705	16,084
DHP2002	200	3600	444TS	95.0	88.5	223	1,324	16,151
DHP20025	200	3600	444TS	95.0	88.5	178	1,324	16,151
DHP2004	200	1800	445T	95.8	86.5	226	1,577	14,434
DHP20045	200	1800	445T	95.8	86.5	181	1,577	14,434
DHP2006	200	1200	447T	95.4	83.0	236	2,010	21,409
DHP20065	200	1200	447T	95.4	83.0	189	2,010	21,409
DHP2006R	200	1200	447T	95.4	83.0	236	2,010	21,409
DHP20065R	200	1200	447T	95.4	83.0	189	2,010	21,409

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) To order 575V, add "5" to the end of Catalog Number, for example: "DHP00545" for 5 HP, 1800 RPM, 575V.

(4) "R" = Motor stocked standard with a Drive-End Roller Bearing.

(5) Ratings 150 HP and larger are 460V only.

(6) All data subject to change without notice.

CAST IRON ODP

ASHH, NEMA PREMIUM [DHP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP2502	250	3600	445TS	95.0	88.5	278	1,470	19,641
DHP25025	250	3600	445TS	95.0	88.5	222	1,470	19,641
DHP2504	250	1800	447T	95.8	87.0	281	1,806	20,434
DHP25045	250	1800	447T	95.8	87.0	225	1,806	20,434
DHP2504R	250	1800	447T	95.8	87.0	281	1,806	20,434
DHP25045R	250	1800	447T	95.8	87.0	225	1,806	20,434
DHP2506	250	1200	449T	95.8	83.0	296	2,420	26,762
DHP25065	250	1200	449T	95.8	83.0	237	2,420	26,762
DHP2506R	250	1200	449T	95.8	83.0	296	2,420	26,762
DHP25065R	250	1200	449T	95.8	83.0	237	2,420	26,762
DHP3002	300	3600	445TS	95.4	89.0	331	1,535	25,151
DHP30025	300	3600	445TS	95.4	89.0	265	1,320	25,151
DHP3004	300	1800	449T	95.8	87.5	335	2,140	24,999
DHP30045	300	1800	449T	95.8	87.5	268	2,140	24,999
DHP3006	300	1200	449T	95.4	87.0	338	2,615	32,115
DHP30065	300	1200	449T	95.4	87.0	338	2,615	32,115
DHP3502	350	3600	447TS	95.4	90.0	382	1,840	28,254
DHP35025	350	3600	447TS	95.4	90.0	306	1,590	28,254
DHP3504	350	1800	449T	95.8	87.5	391	2,310	29,170
DHP35045	350	1800	449T	95.8	87.5	313	2,310	29,170
DHP3506	350	1200	5009B	95.4	85.0	404	3,715	56,959
DHP35065	350	1200	5009B	95.4	85.0	323	3,715	56,959
DHP4002	400	3600	449TS	95.8	90.0	434	2,037	32,247
DHP40025	400	3600	449TS	95.8	90.0	347	2,055	32,247
DHP4004	400	1800	449T	95.8	87.7	446	2,445	33,336
DHP40045	400	1800	449T	95.8	87.7	357	2,445	33,336
DHP4006	400	1200	5009B	95.8	84.5	463	3,835	58,556
DHP40065	400	1200	5009B	95.8	84.5	370	3,835	58,556
DHP4502	450	3600	449TS	95.8	90.5	486	2,125	37,080
DHP45025	450	3600	449TS	95.8	90.5	389	2,125	37,080
DHP4504	450	1800	5009B	96.2	88.0	498	3,620	53,921
DHP45045	450	1800	5009B	96.2	88.0	398	3,620	53,921
DHP4506	450	1200	5009B	96.2	84.0	521	3,960	66,693
DHP45065	450	1200	5009B	96.2	84.0	416	3,960	66,693
DHP5002	500	3600	449TS	95.8	91.2	417	2,225	40,927
DHP50025	500	3600	449TS	95.8	91.2	334	2,225	40,927
DHP5004	500	1800	5009B	96.2	88.0	553	3,790	59,689
DHP50045	500	1800	5009B	96.2	88.0	426	3,790	59,689
DHP5006	500	1200	5009B	96.2	84.0	579	4,075	69,783
DHP50065	500	1200	5009B	96.2	84.0	463	4,075	69,783

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) To order 575V, add "5" to the end of Catalog Number, for example: "DHP00545" for 5 HP, 1800 RPM, 575V.

(4) "R" = Motor stocked standard with a Drive-End Roller Bearing.

(5) Ratings 150 HP and larger are 460V only.

(6) All data subject to change without notice.

ASHH, NEMA PREMIUM [DHP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP6002	600	3600	5011A	95.0	87.5	676	3,240	62,060
DHP60025	600	3600	5011A	95.0	87.5	541	3,240	62,060
DHP6004	600	1800	5011B	96.2	87.8	665	3,650	67,130
DHP60045	600	1800	5011B	96.2	87.8	532	3,650	67,130
DHP6006	600	1200	5011B	95.8	82.6	710	4,250	70,551
DHP60065	600	1200	5011B	95.8	82.6	568	4,250	70,551
DHP6006R	600	1200	5011B	95.8	82.6	710	4,250	70,551
DHP60065R	600	1200	5011B	95.8	82.6	568	4,250	70,551
DHP7002	700	3600	5012A	95.0	88.3	781	3,610	70,432
DHP70025	700	3600	5012A	95.0	88.3	625	3,610	70,432
DHP7004	700	1800	5011B	96.2	86.0	792	3,870	70,075
DHP70045	700	1800	5011B	96.2	86.0	634	3,870	70,075
DHP7006	700	1200	5810B	95.8	82.6	828	6,450	79,713
DHP70065	700	1200	5810B	95.8	82.6	662	6,450	79,713
DHP8002	800	3600	5012A	95.0	87.9	897	3,610	73,994
DHP80025	800	3600	5012A	95.0	87.9	718	3,610	73,994
DHP8004	800	1800	5012B	96.2	86.2	903	4,210	75,074
DHP80045	800	1800	5012B	96.2	86.2	722	4,210	75,074
DHP8004R	800	1800	5012B	96.2	86.2	903	4,210	75,074
DHP80045R	800	1800	5012B	96.2	86.2	722	4,210	75,074
DHP8006	800	1200	5810B	95.8	82.5	948	6,820	90,527
DHP80065	800	1200	5810B	95.8	82.5	758	6,820	90,527
DHP8006R	800	1200	5810B	95.8	82.5	948	6,820	90,527
DHP80065R	800	1200	5810B	95.8	82.5	758	6,820	90,527

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) To order 575V, add "5" to the end of Catalog Number, for example: "DHP00545" for 5 HP, 1800 RPM, 575V.

(4) "R" = Motor stocked standard with a Drive-End Roller Bearing.

(5) Ratings 150 HP and larger are 460V only.

(6) All data subject to change without notice.

CAST IRON ODP - FIRE PUMP

ASHH, NEMA PREMIUM [DHP_FP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

FIRE PUMP CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP0014FP	1	1800	143T	85.5	78.0	1.41	54	425
DHP0016FP	1	1200	145T	82.5	65.5	1.74	75	548
DHP1/52FP	1.5	3600	143T	85.5	80.0	2.06	50	453
DHP1/54FP	1.5	1800	145T	86.5	80.5	2.02	60	471
DHP1/56FP	1.5	1200	182T	87.5	63.0	2.55	123	581
DHP0022FP	2	3600	145T	85.5	84.5	2.59	57	512
DHP0024FP	2	1800	145T	86.5	79.5	2.72	58	499
DHP0026FP	2	1200	184T	87.5	71.0	3.01	130	636
DHP0032FP	3	3600	145T	87.5	87.0	3.69	66	571
DHP0034FP	3	1800	182T	89.5	81.0	3.88	117	548
DHP0036FP	3	1200	213T	88.5	77.0	4.12	183	887
DHP0052FP	5	3600	182T	87.5	91.0	5.90	120	648
DHP0054FP	5	1800	184T	89.5	84.5	6.19	145	687
DHP0056FP	5	1200	215T	89.5	79.0	6.62	195	1,071
DHP7/52FP	7.5	3600	184T	88.5	91.5	8.65	134	853
DHP7/54FP	7.5	1800	213T	91.0	86.0	8.97	187	985
DHP7/56FP	7.5	1200	254T	90.2	79.0	9.85	260	1,598
DHP0102FP	10	3600	213T	90.2	88.0	11.8	190	1,071
DHP0104FP	10	1800	215T	91.7	87.0	11.7	215	1,167
DHP0106FP	10	1200	256T	91.7	81.0	12.6	329	1,826
DHP0152FP	15	3600	215T	90.2	87.5	17.8	220	1,434
DHP0154FP	15	1800	254T	93.0	84.5	17.9	247	1,609
DHP0156FP	15	1200	284T	91.7	83.0	18.5	367	2,442
DHP0202FP	20	3600	254T	91.0	90.5	22.8	233	1,866
DHP0204FP	20	1800	256T	93.0	86.5	23.3	350	1,989
DHP0206FP	20	1200	286T	92.4	83.5	24.3	392	2,959
DHP0252FP	25	3600	256T	91.7	92.0	27.7	317	2,216
DHP0254FP	25	1800	284T	93.6	87.0	28.7	352	2,457
DHP0256FP	25	1200	324T	93.0	83.0	30.3	640	3,671
DHP0302FP	30	3600	284TS	92.4	90.5	33.6	405	2,739
DHP0304FP	30	1800	286T	94.1	87.0	34.3	429	2,887
DHP0306FP	30	1200	326T	93.6	83.5	35.9	568	4,125
DHP0402FP	40	3600	286TS	92.4	91.5	44.3	442	3,505
DHP0404FP	40	1800	324T	94.1	86.0	46.3	608	3,579
DHP0406FP	40	1200	364T	94.1	87.0	45.7	835	5,147
DHP0502FP	50	3600	324TS	93.0	86.0	58.5	552	4,317
DHP0504FP	50	1800	326T	94.5	85.0	58.3	629	4,012
DHP0506FP	50	1200	365T	94.1	86.0	57.8	766	6,099
DHP0602FP	60	3600	326TS	93.6	87.0	69.0	614	5,075
DHP0604FP	60	1800	364T	95.0	85.0	69.6	735	5,089
DHP0606FP	60	1200	404T	94.5	85.5	69.5	1,100	7,328
DHP0752FP	75	3600	364TS	94.1	90.5	82.5	704	6,741
DHP0754FP	75	1800	365T	95.0	86.0	86.0	850	6,030
DHP0754RFP	75	1800	365T	95.0	86.0	86.0	850	6,030
DHP0756FP	75	1200	405T	94.5	86.5	86.0	1,210	8,783
DHP0756RFP	75	1200	405T	94.5	86.5	86.0	1,210	8,783

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) To order 575V, add "5" to the end of Catalog Number, for example: "DHP00545" for 5 HP, 1800 RPM, 575V.

(4) "R" = Motor stocked standard with a Drive-End Roller Bearing.

(5) Ratings 150 HP and larger are 460V only.

(6) All data subject to change without notice.

CAST IRON ODP - FIRE PUMP

ASHH, NEMA PREMIUM [DHP_FP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

FIRE PUMP CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP1002FP	100	3600	365TS	94.1	90.5	110	761	8,941
DHP1004FP	100	1800	404T	95.4	85.5	115	961	7,735
DHP1004RFP	100	1800	404T	95.4	85.5	115	961	7,735
DHP1006FP	100	1200	444T	95.0	82.0	120	1,350	12,776
DHP1006RFP	100	1200	444T	95.0	82.0	120	1,350	12,776
DHP1252FP	125	3600	404TS	94.1	90.5	137	907	11,326
DHP1254FP	125	1800	405T	95.4	84.5	145	1,109	9,691
DHP1254RFP	125	1800	405T	95.4	84.5	145	1,109	9,691
DHP1256FP	125	1200	445T	95.0	82.0	150	1,605	14,950
DHP1256RFP	125	1200	445T	95.0	82.0	150	1,605	14,950
DHP1502FP	150	3600	405TS	94.5	90.5	164	1,003	13,718
DHP1504FP	150	1800	444T	95.8	86.0	170	1,540	12,971
DHP1504RFP	150	1800	444T	95.8	86.0	170	1,540	12,971
DHP1506FP	150	1200	445T	95.4	82.5	178	1,705	17,693
DHP1506RFP	150	1200	445T	95.4	82.5	178	1,705	17,693
DHP2002FP	200	3600	444TS	95.0	88.5	223	1,324	17,766
DHP2004FP	200	1800	445T	95.8	86.5	226	1,577	15,877
DHP2006FP	200	1200	447T	95.4	83.0	236	2,010	23,550
DHP2006RFP	200	1200	447T	95.4	83.0	236	2,010	23,550
DHP2502FP	250	3600	445TS	95.0	88.5	278	1,470	21,605
DHP2504FP	250	1800	447T	95.8	87.0	281	1,806	22,478
DHP2504RFP	250	1800	447T	95.8	87.0	281	1,806	22,478
DHP2506FP	250	1200	449T	95.4	83.0	296	2,420	29,438
DHP2506RFP	250	1200	449T	95.4	83.0	296	2,420	29,438
DHP3002FP	300	3600	445TS	95.4	89.0	331	1,320	27,666
DHP3004FP	300	1800	449T	95.8	87.5	335	2,140	27,490
DHP3006FP	300	1200	449T	95.4	87.0	338	2,615	35,327
DHP3502FP	350	3600	447TS	95.4	90.0	382	1,590	31,079
DHP3504FP	350	1800	449T	95.8	87.5	391	2,310	32,087
DHP4002FP	400	3600	449TS	95.8	90.0	434	2,055	35,472
DHP4004FP	400	1800	449T	95.8	87.7	446	2,445	36,670
DHP4502FP	450	3600	449TS	95.8	90.5	486	2,125	40,788
DHP5002FP	500	3600	449TS	95.8	91.2	536	2,225	45,020

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 – EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "DHP_FP" catalog number.

(3) To order 575V, add "5" to the end of Catalog Number, for example: "DHP00545" for 5 HP, 1800 RPM, 575V.

(4) "R" = Motor stocked standard with a Drive-End Roller Bearing.

(5) Ratings 150 HP and larger are 460V only.

(6) All data subject to change without notice.

CAST IRON ODP AEGIS® SGR

ASHH, NEMA PREMIUM WITH AEGIS® SGR [DHP_G]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- HVAC Equipment
- Pumps
- Compressors

The AEGIS® SGR Bearing Protection Ring aids in preventing electrical bearing "fluting"damage by safely diverting harmful shaft voltages and bearing currents to ground. Using proprietary Electron Transport Technology™, the conductive microfibers inside the AEGIS® SGR provide reliable current diversion technology for shaft grounding with a "path of least resistance" to dramatically extend motor life. **AEGIS® Shaft Grounding Rings have a warranty of 1 year.**

FEATURES:

- Output Range: 1 - 75 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Open Drip Proof (IP22)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Grounding Ring Factory Installed Externally on DE Bracket for F# 143T - 286T; Internally on NDE for F# 284TS - 405T
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Cast Iron Frame and End Brackets
- Rolled Steel Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Light Gray - Munsell N5.0
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140T - 280T (Non-regreasable)
- High Quality Ball (or Roller) Bearings regreasable with Mobil Polyrex™ EM for F# 280TS and Larger
- Labyrinth Type Metal Flinger on Both Ends for F# 280TS and Larger
- Cast Iron Inner and Outer Bearing Caps for F#280TS and Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP to 125 HP;
- 6 Leads for 150 HP and Larger
- Motors are U.L. Recognized, CSA Approved and CE Marked

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Available in 575V. TWMC carries minimal 575V stock; please check availability to ensure required motors are in stock. Ratings may be available from our Canadian warehouses and/or our factory. Pricing and leadtime may vary.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(6) AEGIS® SGR Bearing Protection Ring can not be used in Hazardous Locations (e.g. Class I, Div. 2, etc.)

CAST IRON ODP AEGIS® SGR

ASHH, NEMA PREMIUM WITH AEGIS® SGR [DHP_G]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
DHP0014G	1	1800	143T	85.5	78.0	1.41	54	491
DHP0016G	1	1200	145T	82.5	65.5	1.74	75	619
DHP1/52G	1.5	3600	143T	85.5	80.0	2.06	50	522
DHP1/54G	1.5	1800	145T	86.5	80.5	2.02	60	540
DHP1/56G	1.5	1200	182T	87.5	63.0	2.55	123	688
DHP0022G	2	3600	145T	85.5	84.5	2.59	57	582
DHP0024G	2	1800	145T	86.5	79.5	2.72	58	569
DHP0026G	2	1200	184T	87.5	71.0	3.01	130	824
DHP0032G	3	3600	145T	87.5	87.0	3.69	66	639
DHP0034G	3	1800	182T	89.5	81.0	3.88	117	670
DHP0036G	3	1200	213T	88.5	77.0	4.12	183	1,107
DHP0052G	5	3600	182T	87.5	91.0	5.90	120	773
DHP0054G	5	1800	184T	89.5	84.5	6.19	145	803
DHP0056G	5	1200	215T	89.5	79.0	6.62	195	1,288
DHP7/52G	7.5	3600	184T	88.5	91.5	8.65	134	951
DHP7/54G	7.5	1800	213T	91.0	86.0	8.97	187	1,185
DHP7/56G	7.5	1200	254T	90.2	79.0	9.85	260	1,719
DHP0102G	10	3600	213T	90.2	88.0	11.8	190	1,192
DHP0104G	10	1800	215T	91.7	87.0	11.7	215	1,273
DHP0106G	10	1200	256T	91.7	81.0	12.6	329	1,934
DHP0152G	15	3600	215T	90.2	87.5	17.8	220	1,543
DHP0154G	15	1800	254T	93.0	84.5	17.9	247	1,728
DHP0156G	15	1200	284T	91.7	83.0	18.5	367	2,560
DHP0202G	20	3600	254T	91.0	90.5	22.8	233	1,992
DHP0204G	20	1800	256T	93.0	86.5	23.3	350	2,103
DHP0206G	20	1200	286T	92.4	83.5	24.3	392	3,066
DHP0252G	25	3600	256T	91.7	92.0	27.7	317	2,325
DHP0254G	25	1800	284T	93.6	87.0	28.7	352	2,575
DHP0256G	25	1200	324T	93.0	83.0	30.3	640	3,781
DHP0302G	30	3600	284TS	92.4	90.5	33.6	405	2,828
DHP0304G	30	1800	286T	94.1	87.0	34.3	429	2,990
DHP0306G	30	1200	326T	93.6	83.5	35.9	568	4,221
DHP0402G	40	3600	286TS	92.4	91.5	44.3	442	3,577
DHP0404G	40	1800	324T	94.1	86.0	46.3	608	3,688
DHP0406G	40	1200	364T	94.1	87.0	45.7	835	5,233
DHP0502G	50	3600	324TS	93.0	86.0	58.5	552	4,386
DHP0504G	50	1800	326T	94.5	85.0	58.3	629	4,109
DHP0506G	50	1200	365T	94.1	86.0	57.8	766	6,146
DHP0602G	60	3600	326TS	93.6	87.0	69.0	614	5,130
DHP0604G	60	1800	364T	95.0	85.0	69.6	735	5,175
DHP0606G	60	1200	404T	94.5	85.5	69.5	1,100	7,395
DHP0752G	75	3600	364TS	94.1	90.5	82.5	704	6,740
DHP0754G	75	1800	365T	95.0	86.0	86.0	850	6,075
DHP0756G	75	1200	405T	94.5	86.5	86.0	1,210	8,764

Notes:

(1) Ratings larger than 75 HP with SGR can be quoted and provided upon request.
(2) All data subject to change without notice.

3-PHASE FRACTIONAL HP TEFC

AEGA, FOOTED, HIGH EFFICIENCY [G]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- HVAC Equipment

FEATURES:

- Output Range: 1/3 - 2 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP44)
- Voltage: 230/460V (Usable on 200 & 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Rolled Steel Frame and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- Double Shielded Bearings Pre-Packed with MULTEMP SRL (Non-regreasable)
- Mylar Nameplate
- Rubber Dust Flinger on Drive-End
- 9 Leads

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Please consult factory for suitability in higher ambient environments.
(2) Please consult factory for suitability in higher elevations.
(3) 1 HP and larger are CSA certified and UL recognized. Motors below 1 HP are CSA certified only.
(4) 56 frames change to GH and 140 and above frames change to GP. G type will be obseleted in June of 2018.

3-PHASE FRACTIONAL HP TEFC

AEGA, FOOTED, HIGH EFFICIENCY [G]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NUMBER	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT (lbs.)	LIST PRICE ($)
G0/32	1/3	3600	56	66.0	78.0	1.20	24	267
G0/34	1/3	1800	56	71.0	70.0	1.30	26	314
G0/36	1/3	1200	56	68.0	63.0	1.50	26	427
G0/52	1/2	3600	56	70.0	80.0	1.70	26	301
G0/54	1/2	1800	56	72.0	69.0	1.90	26	359
G0/56	1/2	1200	56	70.0	60.0	2.20	30	466
G0/72	3/4	3600	56	76.0	84.0	2.20	26	327
G0/74	3/4	1800	56	73.0	66.0	2.90	30	387
G0/76	3/4	1200	56	73.0	66.0	2.90	32	485
G0012	1	3600	56	76.0	84.0	2.90	26	382
G0014	1	1800	56	77.0	71.0	3.40	33	406
G0016	1	1200	56	75.0	70.0	3.80	35	515
G1/52	1.5	3600	56	78.0	83.0	4.30	30	411
G1/54	1.5	1800	56	78.0	77.0	4.70	39	444
G1/56	1.5	1200	56	75.0	71.0	5.30	39	583
G0022	2	3600	56	81.0	86.0	5.40	39	502
G0024	2	1800	56	78.5	76.0	6.30	39	467

Notes:

(1) Per DOE regulations, this High Efficiency inventory will be available through June 2018, or until current inventory has been depleted. Whichever occurs first.
(2) Once product listed above has been depleted from current stock, that model becomes obsolete and can not be reordered.
(3) Please see our new line of Premium Efficient 3-Phase Fractional Horespower Rolled Steel TEFC motors on page 52.
(4) Rolled Steel C-Face kits are available. Please see page 142 for price and part number.
(5) All data subject to change without notice.

ROLLED STEEL TEFC FAMILY

Effective 07-08-18
Supercedes 03-24-17

AEGHPE, NEMA PREMIUM, F#56 (1/4 HP - 2 HP) [GH]
AEGH, NEMA PREMIUM, F#140T - 210T (1 HP - 10 HP) [GP]
AEGHPE-CF, NEMA PREMIUM, FOOTED C-FACE, F#56 (1/4 HP - 2 HP) [GH_C]
AETHPE, NEMA PREMIUM, ROUND BODY C-FACE, F#56 (1/4 HP - 2 HP) [GHV_C]
AEGHCF, NEMA PREMIUM, FOOTED C-FACE, F#140T - 210T (1 HP - 10 HP) [GP_C]
AETHCF, NEMA PREMIUM, ROUND BODY C-FACE, F#140T - 210T (1 HP - 10 HP) [GPV_C]

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- HVAC Equipment

FEATURES:

- Output Range: 1/4 - 10 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP44)
- Voltage: 230/460V (Usable on 200 & 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Rolled Steel Frame, Fan Cover, and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted Only (F2 not available)
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- Cast Iron End Brackets
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Double Shielded Bearings Pre-Packed with MULTEMP SRL (Non-regreasable)
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2 (3,4)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP and Larger
- Motors are U.L. Recognized for United States and Canada, CSA Approved and CE Marked

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.

ROLLED STEEL TEFC PREMIUM

AEGHPE, NEMA PREMIUM, F#56 (1/4 HP - 2 HP) [GH]
AEGH, NEMA PREMIUM, F#140T - 210T (1 HP - 10 HP) [GP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
GH0/22	1/4	3600	56	72.0	82.0	0.79	25	346
GH0/24	1/4	1800	56	72.0	73.0	0.89	27	336
GH0/26	1/4	1200	56	72.0	71.5	0.91	31	460
GH0/32	1/3	3600	56	72.0	80.5	1.08	25	357
GH0/34	1/3	1800	56	75.5	74.5	1.11	27	346
GH0/36	1/3	1200	56	72.0	61.0	1.42	31	471
GH0/52	1/2	3600	56	74.0	81.5	1.55	26	365
GH0/54	1/2	1800	56	78.5	81.0	1.47	30	366
GH0/56	1/2	1200	56	75.5	63.0	1.97	37	495
GH0/72	3/4	3600	56	77.0	80.0	2.28	28	385
GH0/74	3/4	1800	56	81.5	77.5	2.22	30	375
GH0/76	3/4	1200	56	81.7	67.5	2.55	38	515
GH0012	1	3600	56	77.0	79.5	3.06	31	393
GP0012	1	3600	143T	80.0	85.5	2.74	33	414
GH0014	1	1800	56	85.5	75.5	2.90	41	388
GP0014	1	1800	143T	85.5	75.5	2.90	41	405
GH0016	1	1200	56	82.5	66.0	3.44	45	520
GP0016	1	1200	145T	82.5	66.0	3.44	43	532
GH1/52	1.5	3600	56	85.5	83.0	3.96	35	452
GP1/52	1.5	3600	143T	85.5	83.0	3.96	33	476
GH1/54	1.5	1800	56	86.5	80.5	4.03	44	478
GP1/54	1.5	1800	145T	86.5	80.5	4.03	46	454
GP1/56	1.5	1200	182T	87.5	55.0	5.84	75	534
GH0022	2	3600	56	86.5	85.0	5.09	42	477
GP0022	2	3600	145T	86.5	85.0	5.09	41	502
GH0024	2	1800	56	86.5	79.0	5.48	46	509
GP0024	2	1800	145T	86.5	79.0	5.48	46	483
GP0026	2	1200	184T	88.5	64.5	6.56	97	602
GH0032	3	3600	56	86.5	89.0	7.30	35	560
GP0032	3	3600	182T	87.5	87.5	7.34	84	590
GP0034	3	1800	182T	89.5	74.0	8.48	69	588
GP0036	3	1200	213T	89.5	68.0	9.23	145	790
GP0052	5	3600	184T	89.5	90.0	11.6	97	694
GP0054	5	1800	184T	89.5	80.0	13.1	94	632
GP0056	5	1200	215T	90.2	73.5	14.1	189	1,131
GP7/52	7.5	3600	213T	90.2	84.5	18.4	141	937
GP7/54	7.5	1800	213T	91.7	83.0	18.5	135	965
GP0102	10	3600	215T	91.0	86.0	23.9	186	1,087
GP0104	10	1800	215T	91.7	85.0	24.0	183	1,131

Notes:
(1) All data subject to change without notice.

ROLLED STEEL TEFC PREMIUM C-FACE

AEGHPE-CF, NEMA PREMIUM, FOOTED C-FACE, F#56 (1/4 HP - 2 HP) [GH_C]
AETHPE, NEMA PREMIUM, ROUND BODY C-FACE, F#56 (1/4 HP - 2 HP) [GHV_C]
AEGHCF, NEMA PREMIUM, FOOTED C-FACE, F#140T - 210T (1 HP - 10 HP) [GP_C]
AETHCF, NEMA PREMIUM, ROUND BODY C-FACE, F#140T - 210T (1 HP - 10 HP) [GPV_C]

Effective 07-08-18
Supercedes 03-24-17

HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	FOOTED C-FACE		ROUND BODY C-FACE		LIST PRICE ($)
						CATALOG NO.	APPROX. SHIPPING WT. (lbs.)	CATALOG NO.	APPROX. SHIPPING WT. (lbs.)	
1/4	3600	56C	72.0	82.0	0.79	GH0/22C	25	GHV0/22C	24	342
1/4	1800	56C	72.0	73.0	0.89	GH0/24C	27	GHV0/24C	26	289
1/4	1200	56C	72.0	71.5	0.91	GH0/26C	30	GHV0/26C	29	405
1/3	3600	56C	72.0	80.5	1.08	GH0/32C	30	GHV0/32C	29	365
1/3	1800	56C	75.5	74.5	1.11	GH0/34C	32	GHV0/34C	31	317
1/3	1200	56C	72.0	61.0	1.42	GH0/36C	36	GHV0/36C	35	420
1/2	3600	56C	74.0	81.5	1.55	GH0/52C	31	GHV0/52C	30	370
1/2	1800	56C	78.5	81.0	1.47	GH0/54C	35	GHV0/54C	34	345
1/2	1200	56C	75.5	63.0	1.97	GH0/56C	42	GHV0/56C	41	433
3/4	3600	56C	77.0	80.0	2.28	GH0/72C	33	GHV0/72C	32	375
3/4	1800	56C	81.5	77.5	2.22	GH0/74C	35	GHV0/74C	34	352
3/4	1200	56C	81.7	67.5	2.55	GH0/76C	42	GHV0/76C	41	472
1	3600	56C	77.0	79.5	3.06	GH0012C	35	GHV0012C	34	435
1	3600	143TC	80.0	85.5	2.74	GP0012C	35	GPV0012C	34	476
1	1800	56C	85.5	75.5	2.90	GH0014C	45	GHV0014C	44	432
1	1800	143TC	85.5	75.5	2.90	GP0014C	45	GPV0014C	44	520
1	1200	56C	82.5	66.0	3.44	GH0016C	42	GHV0016C	41	496
1	1200	145TC	82.5	66.0	3.44	GP0016C	42	GPV0016C	41	521
1.5	3600	56C	85.5	83.0	3.96	GH1/52C	39	GHV1/52C	38	475
1.5	3600	143TC	85.5	83.0	3.96	GP1/52C	39	GPV1/52C	38	547
1.5	1800	56C	86.5	80.5	4.03	GH1/54C	48	GHV1/54C	47	459
1.5	1800	145TC	86.5	80.5	4.03	GP1/54C	48	GPV1/54C	47	565
1.5	1200	182TC	87.5	55.0	5.84	GP1/56C	75	GPV1/56C	74	688
2	3600	56C	86.5	85.0	5.09	GH0022C	46	GHV0022C	45	485
2	3600	145TC	86.5	85.0	5.09	GP0022C	46	GPV0022C	45	577
2	1800	56C	86.5	79.0	5.48	GH0024C	49	GHV0024C	48	510
2	1800	145TC	86.5	79.0	5.48	GP0024C	49	GPV0024C	48	585
2	1200	184TC	88.5	64.5	6.56	GP0026C	132	GPV0026C	97	965
3	3600	182TC	87.5	87.5	7.34	GP0032C	130	GPV0032C	84	750
3	3600	56C	86.5	89.0	7.30	GH0032C	35	GHV0032C	35	355
3	1800	182TC	89.5	74.0	8.48	GP0034C	135	GPV0034C	69	855
3	1200	213TC	89.5	68.0	9.23	GP0036C	164	GPV0036C	145	1,536
5	3600	184TC	89.5	90.0	11.6	GP0052C	135	GPV0052C	97	939
5	1800	184TC	89.5	80.0	13.1	GP0054C	135	GPV0054C	94	960
5	1200	215TC	90.2	73.5	14.1	GP0056C	210	GPV0056C	189	1,634
7.5	3600	213TC	90.2	84.5	18.4	GP7/52C	180	GPV7/52C	141	1,525
7.5	1800	213TC	91.7	83.0	18.5	GP7/54C	200	GPV7/54C	135	1,524
10	3600	215TC	91.0	86.0	23.9	GP0102C	220	GPV0102C	186	1,716
10	1800	215TC	91.7	85.0	24.0	GP0104C	219	GPV0104C	183	1,825

Notes:
(1) Motors on this page do not include Drip Cover. Drip covers are available. See page 144.
(2) All data subject to change without notice.

ROLLED STEEL TEFC AEGIS® SGR

AEGH, FOOTED, NEMA PREMIUM WITH AEGIS® SGR [GP_G]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- HVAC Equipment
- Pumps
- Compressors

The AEGIS® SGR Bearing Protection Ring aids in preventing electrical bearing "fluting"damage by safely diverting harmful shaft voltages and bearing currents to ground. Using proprietary Electron Transport Technology™, the conductive microfibers inside the AEGIS® SGR provide reliable current diversion technology for shaft grounding with a "path of least resistance" to dramatically extend motor life. **AEGIS® Shaft Grounding Rings have a warranty of 1 year.**

FEATURES:

- Output Range: 1 - 10 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP44)
- Voltage: 230/460V (Usable on 200 & 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Grounding Ring Factory Installed Externally on NDE Bracket
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Rolled Steel Frame, Fan Cover, and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted Only (F2 not available)
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- Cast Iron End Brackets
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Double Shielded Bearings Pre-Packed with MULTEMP SRL (Non-regreasable)
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(3,4)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP and Larger
- Motors are U.L. Recognized for United States and Canada, CSA Approved and CE Marked

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31
(5) AEGIS® SGR Bearing Protection Ring can not be used in Hazardous Locations (e.g. Class I, Div. 2, etc.)

ROLLED STEEL TEFC AEGIS® SGR

AEGH, FOOTED, NEMA PREMIUM WITH AEGIS® SGR [GP_G]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (230V)	APPROX SHIPPING WT. (lbs.)	LIST PRICE ($)
GP0012G	1	3600	143T	80.0	85.5	2.74	33	493
GP0014G	1	1800	143T	85.5	75.5	2.90	41	511
GP0016G	1	1200	145T	82.5	66.0	3.44	43	628
GP1/52G	1.5	3600	143T	85.5	83.0	3.96	33	561
GP1/54G	1.5	1800	145T	86.5	80.5	4.03	46	566
GP1/56G	1.5	1200	182T	87.5	55.0	5.84	75	688
GP0022G	2	3600	145T	86.5	85.0	5.09	41	594
GP0024G	2	1800	145T	86.5	79.0	5.48	46	603
GP0026G	2	1200	184T	88.5	64.5	6.56	97	755
GP0032G	3	3600	182T	87.5	87.5	7.34	84	719
GP0034G	3	1800	182T	89.5	74.0	8.48	69	701
GP0036G	3	1200	213T	89.5	68.0	9.23	145	970
GP0052G	5	3600	184T	89.5	90.0	11.6	97	862
GP0054G	5	1800	184T	89.5	80.0	13.1	94	792
GP0056G	5	1200	215T	90.2	73.5	14.1	189	1,357
GP7/52G	7.5	3600	213T	90.2	84.5	18.4	141	1,153
GP7/54G	7.5	1800	213T	91.7	83.0	18.5	135	1,148
GP0102G	10	3600	215T	91.0	86.0	23.9	186	1,311
GP0104G	10	1800	215T	91.7	85.0	24.0	183	1,350

Notes:
(1) All data subject to change without notice.

MAX-IE3™ METRIC

AESV3W, IEC, IE3 EFFICIENCY [MP]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- Any Application that Requires IEC Mounting Dimensions

FEATURES:

- Output Range: 1 - 150 HP (0.75 - 112 kW)
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 230/460V (Usable on 208V)(1) Ratings 150 HP and up are 460V only
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- Cast Iron Frame, End Brackets and Main Conduit Box; Rolled Steel Fan Cover
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F3 Mounted (IM1001)
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 80 - 225 (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with with MULTEMP SRL for F# 250 and Larger
- Oil Seal/V-Ring on Both Ends
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 12 Leads to 280 Frame and 6 Leads to 315 Frame and Up.
- Motors are CE Marked

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Suitable for Wye/Delta Starting and part winding on 230V.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated by NEMA MG-1. Part 31.

MAX-IE3™ METRIC

ee CCOO2A CE

AESV3W, IEC, IE3 EFFICIENCY [MP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	KW	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. KG (lbs.)	LIST PRICE ($)
MP0012	0.75	1	3600	80M	77.0	84.0	1.46	18 (40)	433
MP0014	0.75	1	1800	80M	85.5	74.5	1.48	21 (46)	435
MP0016	0.75	1	1200	90S	82.5	70.0	1.63	28 (61)	519
MP1/52	1.1	1.5	3600	80M	84.0	85.0	1.93	20 (44)	485
MP1/54	1.1	1.5	1800	90S	86.5	81.0	1.97	27 (59)	485
MP1/56	1.1	1.5	1200	112M	87.5	64.0	2.47	31 (68)	615
MP0022	1.5	2	3600	90S	85.5	89.5	2.46	25.5 (56)	519
MP0024	1.5	2	1800	90L	86.5	75.0	2.90	28.5 (63)	516
MP0026	1.5	2	1200	112M	88.5	69.0	3.08	43.5 (96)	671
MP0032	2.2	3	3600	90L	86.5	89.0	3.59	29 (64)	624
MP0034	2.2	3	1800	100L	89.5	83.5	3.69	39.5 (87)	605
MP0036	2.2	3	1200	112M	89.5	67.5	4.09	53.5 (118)	872
MP0042	3.0	4	3600	100L	88.5	88.0	4.83	41.5 (91.5)	764
MP0044	3.0	4	1800	100L	89.5	78.5	5.36	42 (93)	707
MP0046	3.0	4	1200	132S	89.5	78.5	5.36	75 (165)	1,202
MP5/52	4.0	5.5	3600	112M	88.5	91.0	6.23	51 (113.5)	799
MP5/54	4.0	5.5	1800	112M	89.5	81.5	6.88	53 (117)	730
MP5/56	4.0	5.5	1200	132M	89.5	79.5	7.06	91.5 (202)	1,216
MP7/52	5.5	7.5	3600	132S	89.5	86.5	8.92	73 (161)	1,043
MP7/54	5.5	7.5	1800	132S	91.7	85.0	8.86	75.5 (166)	1,057
MP7/56	5.5	7.5	1200	132M	91.0	74.5	10.2	91 (200)	1,724
MP0102	7.5	10	3600	132S	90.2	87.5	11.9	76 (167)	1,202
MP0104	7.5	10	1800	132M	91.7	85.5	12.0	93 (205)	1,259
MP0106	7.5	10	1200	160M	91.0	81.5	12.7	135 (298)	2,053
MP0152	11	15	3600	160M	91.0	92.5	16.4	130 (287)	1,724
MP0154	11	15	1800	160M	92.4	87.0	17.2	131 (287)	1,736
MP0156	11	15	1200	160L	91.7	81.5	18.5	150 (331)	2,777
MP0202	15	20	3600	160M	91.0	92.5	22.4	130 (287)	2,138
MP0204	15	20	1800	160L	93.0	86.5	23.4	150 (331)	2,165
MP0206	15	20	1200	180L	91.7	83.0	24.7	205 (452)	3,503
MP0252	18.5	25	3600	160L	91.7	93.0	27.2	140 (308.5)	2,817
MP0254	18.5	25	1800	180M	93.6	82.5	30.1	195 (430)	2,634
MP0256	18.5	25	1200	200L	93.0	82.0	30.4	270 (595)	4,759
MP0302	22	30	3600	180M	91.7	90.0	32.0	180 (397)	3,266
MP0304	22	30	1800	180L	93.6	84.0	33.6	205 (452)	3,217
MP0306	22	30	1200	200L	93.0	82.0	34.6	290 (639)	5,056
MP0402	30	40	3600	200L	92.4	91.0	42.8	265 (584)	4,839
MP0404	30	40	1800	200L	94.1	89.5	42.8	285 (628)	4,715
MP0406	30	40	1200	225M	94.1	86.5	44.2	385 (849)	7,152
MP0502	37	50	3600	200L	93.0	91.0	52.5	300 (661)	5,870
MP0504	37	50	1800	225S	94.5	86.5	54.3	350 (772)	6,145
MP0506	37	50	1200	250M	94.1	88.0	53.6	460 (1014)	10,046
MP0602	45	60	3600	225M	93.6	93.5	61.7	340 (750)	7,878
MP0604	45	60	1800	225M	95.0	86.5	65.7	360 (794)	7,240
MP0606	45	60	1200	280S	94.5	85.5	69.5	600 (1322)	11,710
MP0752	56	75	3600	250M	93.6	93.0	75.9	465 (1025)	11,429
MP0754	56	75	1800	250M	95.4	88.0	78.7	480 (1058)	10,330
MP0756	56	75	1200	280M	94.5	84.5	87.9	660 (1455)	11,294
MP1002	75	100	3600	280S	94.1	89.5	111	585 (1290)	15,592
MP1004	75	100	1800	280S	95.4	87.5	112	620 (1367)	12,312
MP1006	75	100	1200	315S	95.0	84.0	117	900 (1984)	14,426
MP1252	93	125	3600	280M	95.0	89.5	138	615 (1356)	15,683
MP1254	93	125	1800	280M	95.4	88.5	139	690 (1521)	14,708
MP1256	93	125	1200	315M	95.0	84.5	146	960 (2116)	18,971
MP1502	112	150	3600	315S	95.0	91.0	162	860 (1896)	18,702
MP1504	112	150	1800	315S	95.8	88.0	167	960 (2116)	16,712
MP1506	112	150	1200	315M	95.8	84.5	173	1160 (2557)	21,131

Notes:

(1) All data subject to change without notice.

CAST IRON TEFC JP/JM

AEHH8NJP/JM, NEMA PREMIUM, CLOSE-COUPLED [JPP/JMP]
AEEAJP/JM, HIGH EFFICIENCY, CLOSE-COUPLED [JPN/JMN]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Pumps

FEATURES:

- Output Range: 3/4 - 50 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54)
- Voltage: 230/460V (Usable on 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C & D - Temp Code T3C Minimum(5)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Cast Iron Frame, End Brackets & Fan Cover and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Premium - Light Gray - Munsell N5.0
High Efficient - Dark Gray - Munsell 7.5B 3.5/0.5
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140JP/JM - 280JP/JM (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 280JP/JM (2P), 320JP/JM and Larger
- Automatic Grease Discharge Fittings on Regreasable Models
- Rubber Dust Flinger on DE for F# 140JP/JM - 280JP/JM
- Labyrinth Type Metal Flinger on Both Ends for F# 280JP/JM (2P), 320JP/JM and Larger
- Cast Iron Inner and Outer Bearing Caps for Frame# 280JP/JM (2P), 320JP/JM and Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(3,4)
- Inverter Duty Speed Range: 10:1 Variable Torque, 5:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP to 125 HP;
- Motors are U.L. Recognized, CSA Approved and CE Marked

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(5) CSA Certification for Hazardous Location only applies to AEHH8NJP/JM, NEMA premium [JPP/JMP] product line.

CAST IRON TEFC JP/JM

AEHH8NJP/JM, NEMA PREMIUM, CLOSE-COUPLED [JPP/JMP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.		HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)		LIST PRICE ($)
JP	JM							JP	JM	
JPP0012	JMP0012	1	3600	143JP/JM	82.5	85.0	1.34	61	61	617
JPP0014	JMP0014	1	1800	143JP/JM	85.5	73.0	1.50	61	61	565
JPP0016	JMP0016	1	1200	145JP/JM	82.5	65.5	1.73	61	61	682
JPP1/52	JMP1/52	1.5	3600	143JP/JM	84.0	83.5	2.00	68	68	617
JPP1/54	JMP1/54	1.5	1800	145JP/JM	86.5	78.0	2.08	61	61	615
JPP1/56	JMP1/56	1.5	1200	182JP/JM	87.5	63.5	2.53	68	68	733
JPP0022	JMP0022	2	3600	145JP/JM	86.5	86.0	2.52	106	106	661
JPP0024	JMP0024	2	1800	145JP/JM	86.5	78.0	2.78	68	68	660
JPP0026	JMP0026	2	1200	184JP/JM	88.5	70.5	3.00	68	68	821
JPP0032	JMP0032	3	3600	182JP/JM	88.5	90.0	3.53	126	126	771
JPP0034	JMP0034	3	1800	182JP/JM	89.5	84.0	3.74	106	106	750
JPP0036	JMP0036	3	1200	213JP/JM	89.5	78.0	4.02	106	106	1,160
JPP0052	JMP0052	5	3600	184JP/JM	88.5	92.5	5.72	186	186	965
JPP0054	JMP0054	5	1800	184JP/JM	89.5	85.5	6.12	126	126	882
JPP0056	JMP0056	5	1200	215JP/JM	91.0	82.5	6.24	126	126	1,504
JPP7/52	JMP7/52	7.5	3600	213JP/JM	91.0	89.0	8.67	213	213	1,191
JPP7/54	JMP7/54	7.5	1800	213JP/JM	91.7	86.5	8.85	186	186	1,147
JPP7/56	JMP7/56	7.5	1200	254JP/JM	91.0	80.5	9.59	186	186	2,031
JPP0102	JMP0102	10	3600	215JP/JM	91.0	89.5	11.5	325	325	1,394
JPP0104	JMP0104	10	1800	215JP/JM	91.7	88.0	11.6	213	213	1,366
JPP0106	JMP0106	10	1200	256JP/JM	91.0	80.5	12.8	213	213	2,530
JPP0152	JMP0152	15	3600	254JP/JM	92.4	91.5	16.6	354	354	1,965
JPP0154	JMP0154	15	1800	254JP/JM	92.4	88.0	17.3	325	325	1,933
JPP0156	JMP0156	15	1200	284JP/JM	92.4	83.5	18.2	325	325	3,310
JPP0202	JMP0202	20	3600	256JP/JM	92.4	92.5	21.9	464	464	2,511
JPP0204	JMP0204	20	1800	256JP/JM	93.0	87.5	23.0	354	354	2,426
JPP0206	JMP0206	20	1200	286JP/JM	91.7	84.0	24.3	354	354	4,147
JPP0252	JMP0252	25	3600	284JP/JM	92.4	91.0	27.8	507	507	2,999
JPP0254	JMP0254	25	1800	284JP/JM	93.6	86.0	29.1	464	4647	2,853
JPP0256	JMP0256	25	1200	324JP/JM	93.0	83.0	30.3	464	464	5,075
JPP0302	JMP0302	30	3600	286JP/JM	93.0	91.0	33.2	694	694	3,488
JPP0304	JMP0304	30	1800	286JP/JM	93.6	87.5	34.3	507	507	3,457
JPP0306	JMP0306	30	1200	326JP/JM	93.0	80.5	37.5	507	507	5,443
JPP0402	JMP0402	40	3600	324JP/JM	94.1	90.0	44.2	784	784	4,597
JPP0404	JMP0404	40	1800	324JP/JM	94.1	86.0	46.3	694	694	4,521
JPP0406	~	40	1200	364JP/JM	94.1	86.5	46.0	694	694	6,936
JPP0502	JMP0502	50	3600	326JP/JM	94.1	91.0	54.7	926	926	5,651
JPP0504	JMP0504	50	1800	326JP/JM	94.5	87.0	56.9	784	784	5,640
JPP0506	~	50	1200	365JP/JM	94.1	86.0	57.8	784	784	8,930

Notes:
(1) Data subject to change without notice.

CAST IRON TEFC JP/JM

AEEAJP/JM, HIGH EFFICIENCY, CLOSE-COUPLED [JPN/JMN]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.		HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)		LIST PRICE ($)
JP	JM							JP	JM	
JPN0/76	JMN0/76	3/4	1200	143JP/JM	74.0	65.5	1.50	101	101	568
JPN0014	JMN0014	1	1800	143JP/JM	82.5	77.0	1.48	60	80	480
JPN0016	JMN0016	1	1200	145JP/JM	80.0	63.5	1.85	110	110	596
JPN1/52	JMN1/52	1.5	3600	143JP/JM	82.5	85.0	2.01	79	75	497
JPN1/54	JMN1/54	1.5	1800	145JP/JM	84.0	80.5	2.08	47	58	528
JPN1/56	JMN1/56	1.5	1200	182JP/JM	85.5	66.5	2.47	139	139	630
JPN0022	JMN0022	2	3600	145JP/JM	84.0	88.5	2.52	81	80	568
JPN0024	JMN0024	2	1800	145JP/JM	84.0	82.5	2.70	85	75	568
JPN0026	JMN0026	2	1200	184JP/JM	86.5	67.0	3.23	152	152	706
JPN0032	JMN0032	3	3600	182JP/JM	85.5	90.0	3.65	108	105	663
JPN0034	JMN0034	3	1800	182JP/JM	87.5	82.5	3.89	110	105	645
JPN0036	JMN0036	3	1200	213JP/JM	87.5	76.5	4.20	184	184	866
JPN0052	JMN0052	5	3600	184JP/JM	87.5	91.5	5.85	125	165	830
JPN0054	JMN0054	5	1800	184JP/JM	87.5	86.5	6.20	130	120	758
JPN0056	JMN0056	5	1200	215JP/JM	87.5	76.5	7.00	223	210	1,294
JPN7/52	JMN7/52	7.5	3600	213JP/JM	88.5	87.0	9.10	178	180	1,024
JPN7/54	JMN7/54	7.5	1800	213JP/JM	89.5	88.0	8.90	143	180	987
JPN7/56	JMN7/56	7.5	1200	254JP/JM	89.5	81.0	9.70	287	310	1,747
JPN0102	JMN0102	10	3600	215JP/JM	89.5	90.0	11.60	205	205	1,199
JPN0104	JMN0104	10	1800	215JP/JM	89.5	89.5	11.70	235	230	1,174
JPN0106	JMN0106	10	1200	256JP/JM	89.5	82.5	12.70	342	325	2,175
JPN0152	JMN0152	15	3600	254JP/JM	90.2	91.5	17.00	281	246	1,690
JPN0154	JMN0154	15	1800	254JP/JM	91.0	88.0	17.60	340	330	1,662
JPN0156	JMN0156	15	1200	284JP/JM	90.2	83.0	18.8	450	470	2,847
JPN0202	JMN0202	20	3600	256JP/JM	90.2	92.0	22.6	370	307	2,160
JPN0204	JMN0204	20	1800	256JP/JM	91.0	88.0	23.4	370	370	2,086
JPN0206	JMN0206	20	1200	286JP/JM	90.2	83.5	24.9	513	520	3,699
JPN0252	JMN0252	25	3600	284JP/JM	91.0	90.5	28.4	515	470	2,579
JPN0254	JMN0254	25	1800	284JP/JM	92.4	89.0	28.5	431	431	2,453
JPN0256	JMN0256	25	1200	324JP/JM	91.7	81.5	31.3	660	660	4,452
JPN0302	JMN0302	30	3600	286JP/JM	91.0	91.0	33.9	565	535	3,140
JPN0304	JMN0304	30	1800	286JP/JM	92.4	88.0	34.6	574	560	2,951
JPN0306	JMN0306	30	1200	326JP/JM	91.7	80.5	38.1	671	671	5,119
JPN0402	JMN0402	40	3600	324JP/JM	91.7	89.5	45.7	695	695	4,158
JPN0404	JMN0404	40	1800	324JP/JM	93.0	89.0	45.3	715	730	3,979
JPN0406	JMN0406	40	1200	364JP/JM	93.0	86.5	46.6	785	785	6,808
JPN0502	JMN0502	50	3600	326JP/JM	92.4	90.5	56.0	671	671	5,518
JPN0504	JMN0504	50	1800	326JP/JM	93.0	89.5	56.0	741	741	5,061
JPN0506	~	50	1200	365JP/JM	93.0	85.5	59.0	913	N/A	7,873

Notes:

(1) Per DOE regulations, this High Efficiency inventory will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient JP/JM Cast Iron TEFC motors on page 59.

(2) Data subject to change without notice.

MAX-PE™ FAMILY

AEHH8P, NEMA PREMIUM [NP]
AEHH8PCF, NEMA PREMIUM, FOOTED C-FACE [NP_C]
AEUH8PDC, NEMA PREMIUM, ROUND BODY C-FACE [NPV_C]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Crushers
- Compressors
- Mixers
- Conveyors

FEATURES:

- Output Range: 1 - 200 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3C Minimum
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum; Various Ratings also Meet Design C
- Cast Iron Frame and End Brackets; Rolled Steel Fan Cover and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140T - 280T (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 280TS and Larger
- Automatic Grease Discharge Fittings on Regreasable Models
- Labyrinth Type Metal Flinger on Both Ends for F# 280TS and Larger
- Cast Iron Inner and Outer Bearing Caps for F#280TS and Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP to 125 HP;
- 6 Leads for 150 HP and Larger
- Motors are U.L. Recognized, CSA Approved and CE Marked
- Dual Drilled Feet Available on Most Ratings - Longer Frames (i.e. 145T Drilled also for 143T)
- Provisions for Breather Drains for Vertical Mount Down (F# 324T and Larger)
- Rubber Dust Flinger on Drive-End for F# 140T - 280T

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Motors 7.5 HP & up are Suitable for Wye/Delta Starting.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31

AEHH8P, NEMA PREMIUM [NP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX SHIPPING WT. (lbs.)	LIST PRICE ($)
NP0012	1	3600	143T	82.5	85.0	1.34	83	445
NP0014(C)	1	1800	143T	85.5	73.0	1.50	48	425
NP0016	1	1200	145T	82.5	65.5	1.73	90	515
NP1/52	1.5	3600	143T	84.0	83.5	2.00	85	465
NP1/54(C)	1.5	1800	145T	86.5	78.0	2.08	78	477
NP1/56	1.5	1200	182T	87.5	63.5	2.53	120	542
NP0022	2	3600	145T	86.5	86.0	2.52	62	483
NP0024(C)	2	1800	145T	86.5	78.0	2.78	90	490
NP0026(C)	2	1200	184T	88.5	70.5	3.00	132	607
NP0032	3	3600	182T	88.5	90.0	3.53	130	569
NP0034(C)	3	1800	182T	89.5	84.0	3.74	135	553
NP0036(C)	3	1200	213T	89.5	78.0	4.02	164	845
NP0052	5	3600	184T	88.5	92.5	5.72	135	699
NP0054(C)	5	1800	184T	89.5	85.5	6.12	133	637
NP0056(C)	5	1200	215T	91.0	82.5	6.24	210	1,142
NP7/52	7.5	3600	213T	91.0	89.0	8.67	180	949
NP7/54(C)	7.5	1800	213T	91.7	86.5	8.85	200	985
NP7/56(C)	7.5	1200	254T	91.0	80.5	9.59	315	1,600
NP0102	10	3600	215T	91.0	89.5	11.5	220	1,103
NP0104(C)	10	1800	215T	91.7	88.0	11.6	219	1,140
NP0106(C)	10	1200	256T	91.0	80.5	12.8	340	1,943
NP0152	15	3600	254T	92.4	91.5	16.6	325	1,545
NP0154(C)	15	1800	254T	92.4	88.0	17.3	316	1,505
NP0156(C)	15	1200	284T	92.4	83.5	18.2	530	2,675
NP0202	20	3600	256T	92.4	92.5	21.9	380	1,968
NP0204(C)	20	1800	256T	93.0	87.5	23.0	395	1,897
NP0206(C)	20	1200	286T	91.7	84.0	24.3	520	3,357
NP0252	25	3600	284TS	92.4	91.0	27.8	460	2,509
NP0254(C)	25	1800	284T	93.6	86.0	29.1	510	2,434
NP0254S(C)	25	1800	284TS	93.6	86.0	29.1	510	2,434
NP0256(C)	25	1200	324T	93.0	83.0	30.3	745	4,196
NP0302	30	3600	286TS	93.0	91.0	33.2	508	2,961
NP0304(C)	30	1800	286T	93.6	87.5	34.3	545	2,833
NP0304S(C)	30	1800	286TS	93.6	87.5	34.3	545	2,833
NP0306(C)	30	1200	326T	93.0	80.5	37.5	775	4,695
NP0402	40	3600	324TS	94.1	90.0	44.2	650	3,922
NP0404(C)	40	1800	324T	94.1	86.0	46.3	710	3,806
NP0404S(C)	40	1800	324TS	94.1	86.0	46.3	710	3,806
NP0406(C)	40	1200	364T	94.1	86.5	46.0	945	6,174
NP0502	50	3600	326TS	94.1	91.0	54.7	775	5,257
NP0504(C)	50	1800	326T	94.5	87.0	56.9	795	4,821
NP0504S(C)	50	1800	326TS	94.5	87.0	56.9	795	4,821
NP0506(C)	50	1200	365T	94.1	86.0	57.8	1040	7,611

Notes:
(1) All data subject to change without notice.
(2) Ratings 150 HP and larger are 460V only.
(C) Meets NEMA Design C Torque.

AEHH8P, NEMA PREMIUM [NP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX SHIPPING WT. (lbs.)	LIST PRICE ($)
NP0602	60	3600	364TS	94.1	93.0	64.2	890	6,903
NP0604(C)	60	1800	364T	95.0	86.5	68.4	870	6,205
NP0604S(C)	60	1800	364TS	95.0	86.5	68.4	870	6,205
NP0606(C)	60	1200	404T	94.5	87.0	68.4	1,295	9,050
NP0752	75	3600	365TS	94.5	93.0	79.9	970	8,835
NP0754(C)	75	1800	365T	95.4	86.5	85.1	1,075	8,005
NP0754S(C)	75	1800	365TS	95.4	86.5	85.1	1,075	8,005
NP0754R(C)	75	1800	365T	95.4	86.5	85.1	1,075	8,005
NP0756(C)	75	1200	405T	94.5	86.5	85.9	1,317	10,756
NP0756R(C)	75	1200	405T	94.5	86.5	85.9	1,317	10,756
NP1002	100	3600	405TS	95.4	92.0	107	1,286	11,934
NP1004(C)	100	1800	405T	95.4	87.5	112	1,360	11,125
NP1004S(C)	100	1800	405TS	95.4	87.5	112	1,360	11,125
NP1004R(C)	100	1800	405T	95.4	87.5	112	1,360	11,125
NP1006	100	1200	444T	95.0	82.5	119	1,665	13,739
NP1006R	100	1200	444T	95.0	82.5	119	1,665	13,739
NP1252	125	3600	444TS	95.0	86.0	143	1,530	14,936
NP1254	125	1800	444T	95.4	84.0	146	1,705	14,008
NP1254S	125	1800	444TS	95.4	84.0	146	1,705	14,008
NP1254R	125	1800	444T	95.4	84.0	146	1,705	14,008
NP1256	125	1200	445T	95.0	83.0	148	1,860	18,067
NP1256R	125	1200	445T	95.0	83.0	148	1,860	18,067
NP1502(2)	150	3600	445TS	95.0	87.0	170	1,710	17,811
NP1504(2)	150	1800	445T	95.8	84.0	175	1,865	15,916
NP1504S(2)	150	1800	445TS	95.8	84.0	175	1,865	15,916
NP1504R(2)	150	1800	445T	95.8	84.0	175	1,865	15,916
NP1506(2)	150	1200	447T	95.8	83.5	176	2,230	20,125
NP1506R(2)	150	1200	447T	95.8	83.5	176	2,230	20,125
NP2002(2)	200	3600	447TS	95.4	87.0	226	2,015	24,395
NP2004(2)	200	1800	447T	96.2	84.5	230	2,465	20,890
NP2004S(2)	200	1800	447TS	96.2	84.5	230	2,465	20,890
NP2004R(2)	200	1800	447T	96.2	84.5	230	2,465	20,890
NP2006(2)	200	1200	449T	95.8	84.0	233	2,625	26,321
NP2006R(2)	200	1200	449T	95.8	84.0	233	2,625	26,321

Notes:

(1) All data subject to change without notice.
(2) Ratings 150 HP and Larger are 460V Only.
(C) Meets NEMA Design C Torque.

AEHH8PCF, NEMA PREMIUM, FOOTED C-FACE [NP_C]
AEUH8PDC, NEMA PREMIUM, ROUND BODY C-FACE [NPV_C]

Effective 07-08-18
Supercedes 03-24-17

HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	FOOTED C-FACE		ROUND BODY C-FACE	
							CATALOG NO.	LIST PRICE ($)	CATALOG NO.	LIST PRICE ($))
1	3600	143TC	82.5	85.0	1.34	85	NP0012C	431	NPV0012C	557
1	1800	143TC	85.5	73.0	1.50	50	NP0014C(C)	462	NPV0014C(C)	547
1	1200	145TC	82.5	65.5	1.73	92	NP0016C	594	NPV0016C	675
1.5	3600	143TC	84.0	83.5	2.00	87	NP1/52C	515	NPV1/52C	576
1.5	1800	145TC	86.5	78.0	2.08	80	NP1/54C(C)	523	NPV1/54C(C)	596
1.5	1200	182TC	87.5	63.5	2.53	122	NP1/56C	618	NPV1/56C	792
2	3600	145TC	86.5	86.0	2.52	64	NP0022C	560	NPV0022C	640
2	1800	145TC	86.5	78.0	2.78	92	NP0024C(C)	570	NPV0024C(C)	667
2	1200	184TC	88.5	70.5	3.00	134	NP0026C(C)	700	NPV0026C(C)	893
3	3600	182TC	88.5	90.0	3.53	132	NP0032C	674	NPV0032C	774
3	1800	182TC	89.5	84.0	3.74	137	NP0034C (C)	643	NPV0034C(C)	813
3	1200	213TC	89.5	78.0	4.02	166	NP0036C(C)	1,017	NPV0036C(C)	1,206
5	3600	184TC	88.5	92.5	5.72	137	NP0052C	794	NPV0052C	913
5	1800	184TC	89.5	85.5	6.12	135	NP0054C(C)	703	NPV0054C(C)	868
5	1200	215TC	91.0	82.5	6.24	212	NP0056C(C)	1,298	NPV0056C(C)	1,446
7.5	3600	213TC	91.0	89.0	8.67	182	NP7/52C	1,098	NPV7/52C	1,233
7.5	1800	213TC	91.7	86.5	8.85	202	NP7/54C(C)	1,097	NPV7/54C(C)	1,331
7.5	1200	254TC	91.0	80.5	9.59	317	NP7/56C(C)	1,795	NPV7/56C(C)	1,967
10	3600	215TC	91.0	89.5	11.50	222	NP0102C	1,276	NPV0102C	1,430
10	1800	215TC	91.7	88.0	11.60	221	NP0104C(C)	1,334	NPV0104C(C)	1,446
10	1200	256TC	91.0	80.5	12.80	342	NP0106C(C)	2,229	NPV0106C(C)	2,486
15	3600	254TC	92.4	91.5	16.60	327	NP0152C	1,797	NPV0152C	1,944
15	1800	254TC	92.4	88.0	17.30	318	NP0154C(C)	1,732	NPV0154C(C)	1,888
15	1200	284TC	92.4	83.5	18.20	532	NP0156C(C)	3,112	NPV0156C(C)	3,240
20	3600	256TC	92.4	92.5	21.90	382	NP0202C	2,302	NPV0202C	2,639
20	1800	256TC	93.0	87.5	23.00	397	NP0204C(C)	2,199	NPV0204C(C)	2,456
20	1200	286TC	91.7	84.0	24.30	522	NP0206C(C)	3,940	NPV0206C(C)	3,537
25	3600	284TSC	92.4	91.0	27.80	462	NP0252C	2,928	NPV0252C	3,151
25	1800	284TC	93.6	86.0	29.10	512	NP0254C(C)	2,733	NPV0254C(C)	3,070
25	1200	324TC	93.0	83.0	30.30	747	NP0256C(C)	4,894	NPV0256C(C)	4,639
30	3600	286TSC	93.0	91.0	33.20	510	NP0302C	3,473	NPV0302C	3,380
30	1800	286TC	93.6	87.5	34.30	547	NP0304C(C)	3,324	NPV0304C(C)	3,253
30	1200	326TC	93.0	80.5	37.50	777	NP0306C(C)	5,533	NPV0306C(C)	5,324
40	3600	324TSC	94.1	90.0	44.20	652	NP0402C	4,406	NPV0402C	4,425
40	1800	324TC	94.1	86.0	46.30	712	NP0404C(C)	4,317	NPV0404C(C)	4,265
40	1200	364TC	94.1	86.5	46.00	947	NP0406C(C)	7,018	NPV0406C(C)	6,771
50	3600	326TSC	94.1	91.0	54.70	777	NP0502C	5,838	NPV0502C	5,758
50	1800	326TC	94.5	87.0	56.90	797	NP0504C(C)	5,422	NPV0504C(C)	5,332
50	1200	365TC	94.1	86.0	57.80	1,042	NP0506C(C)	8,488	NPV0506C(C)	8,821
60	3600	364TSC	94.1	93.0	64.20	892	NP0602C	7,652	NPV0602C	7,241
60	1800	364TC	95.0	86.5	68.40	872	NP0604C(C)	7,053	NPV0604C(C)	7,168
60	1200	404TC	94.5	87.0	68.30	1,297	NP0606C(C)	10,220	NPV0606C(C)	9,826
75	3600	365TSC	94.5	93.0	79.90	972	NP0752C	9,795	NPV0752C	9,103
75	1800	365TC	95.4	86.5	85.1	1,077	NP0754C(C)	8,873	NPV0754C(C)	8,890
75	1200	405TC	94.5	86.5	85.9	1,319	NP0756C(C)	11,927	NPV0756C(C)	11,223
100	3600	405TSC	95.4	92.0	107.0	1,288	NP1002C	13,228	NPV1002C	11,280
100	1800	405TC	95.4	87.5	112.0	1,362	NP1004C(C)	12,435	NPV1004C(C)	11,307
100	1200	444TC	95.0	82.5	119.0	1,665	NP1006C	15,113	NPV1006C	14,371
125	3600	444TSC	95.0	86.0	143.0	1,515	NP1252C	16,430	NPV1252C	14,042
125	1800	444TC	95.4	84.0	146.0	1,520	NP1254C	15,409	NPV1254C	13,952
125	1800	444TSC	95.4	84.0	146.0	1,520	NP1254CS	15,409	~	~
125	1200	445TC	95.0	83.0	148.0	1,620	NP1256C	19,874	NPV1256C	15,728
150	3600	445TSC	95.0	87.0	170.0	1,610	NP1502C	19,592	NPV1502C	14,443
150	1800	445TC	95.8	84.0	175.0	1,700	NP1504C	17,507	NPV1504C	15,185
150	1800	445TSC	95.8	84.0	175.0	1,700	NP1504CS	20,257	~	~
150	1200	447TC	95.8	83.5	176.0	2,100	NP1506C	22,138	NPV1506C	18,352
200	3600	447TSC	95.4	87.0	226.0	1,830	NP2002C	26,834	NPV2002C	18,912
200	1800	447TC	96.2	84.5	230.0	2,140	NP2004C	22,979	NPV2004C	19,477
200	1800	447TSC	96.2	84.5	230.0	2,140	NP2004CS	22,979	~	~
200	1200	449TC	95.8	84.0	233.0	2,390	NP2006C	28,952	NPV2006C	20,409

Notes:
(1) All data subject to change without notice.
(2) Ratings 150 HP and Larger are 460V Only.
(3) Footed C-Face Frame Size 140, BA dim = 2.25", Frame Size 180 BA dim = 2.75".
(C) Meets NEMA Design C Torque.

MAX-PE™ AEGIS® SGR

AEHH8P, NEMA PREMIUM [NP_G]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- HVAC Equipment

The AEGIS® SGR Bearing Protection Ring aids in preventing electrical bearing "fluting"damage by safely diverting harmful shaft voltages and bearing currents to ground. Using proprietary Electron Transport Technology™, the conductive microfibers inside the AEGIS® SGR provide reliable current diversion technology for shaft grounding with a "path of least resistance" to dramatically extend motor life. **AEGIS® Shaft Grounding Rings have a warranty of 1 year.**

FEATURES:

- Output Range: 1 - 75 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54)
- Voltage: 230/460V (Usable on 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Grounding Ring Factory Installed Externally on NDE Bracket for F# 143T - 286T; Internally on NDE for F# 284TS - 405T
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum; Various Ratings also Meet Design C
- Cast Iron Frame and End Brackets; Rolled Steel Fan Cover and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140T - 280T (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 280TS and Larger
- Automatic Grease Discharge Fittings on Regreasable Models
- Labyrinth Type Metal Flinger on Both Ends for F# 280TS and Larger
- Cast Iron Inner and Outer Bearing Caps for F#280TS and Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP to 75 HP;
- Motors are U.L. Recognized, CSA Approved and CE Marked
- Dual Drilled Feet Available on Most Ratings - Longer Frames (i.e. 145T Drilled also for 143T)
- Provisions for Breather Drains for Vertical Mount Down (F# 324T and Larger)
- Rubber Dust Flinger on Drive-End for F# 140T - 280T

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Motors 7.5 HP & up are suitable for Wye/Delta Starting.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(6) AEGIS® SGR Bearing Protection Ring can not be used in Hazardous Locations (e.g. Class I, Div. 2, etc.)

AEHH8P, NEMA PREMIUM [NP_G]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX SHIPPING WT. (lbs.)	LIST PRICE ($)
NP0012G	1	3600	143T	82.5	85.0	1.34	83	519
NP0014G(C)	1	1800	143T	85.5	73.0	1.50	48	538
NP0016G	1	1200	145T	82.5	65.5	1.73	90	661
NP1/52G	1.5	3600	143T	84.0	83.5	2.00	85	590
NP1/54G(C)	1.5	1800	145T	86.5	78.0	2.08	78	595
NP1/56G	1.5	1200	182T	87.5	63.5	2.53	120	724
NP0022G	2	3600	145T	86.5	86.0	2.52	62	625
NP0024G(C)	2	1800	145T	86.5	78.0	2.78	90	634
NP0026G(C)	2	1200	184T	88.5	70.5	3.00	132	795
NP0032G	3	3600	182T	88.5	90.0	3.53	130	757
NP0034G(C)	3	1800	182T	89.5	84.0	3.74	135	737
NP0036G(C)	3	1200	213T	89.5	78.0	4.02	164	1,021
NP0052G	5	3600	184T	88.5	92.5	5.72	135	907
NP0054G(C)	5	1800	184T	89.5	85.5	6.12	133	833
NP0056G(C)	5	1200	215T	91.0	82.5	6.24	210	1,429
NP7/52G	7.5	3600	213T	91.0	89.0	8.67	180	1,213
NP7/54G(C)	7.5	1800	213T	91.7	86.5	8.85	200	1,208
NP7/56G(C)	7.5	1200	254T	91.0	80.5	9.59	315	1,969
NP0102G	10	3600	215T	91.0	89.5	11.5	220	1,380
NP0104G(C)	10	1800	215T	91.7	88.0	11.6	219	1,421
NP0106G(C)	10	1200	256T	91.0	80.5	12.8	340	2,347
NP0152G	15	3600	254T	92.4	91.5	16.6	325	1,909
NP0154G(C)	15	1800	254T	92.4	88.0	17.3	316	1,862
NP0156G(C)	15	1200	284T	92.4	83.5	18.2	530	3,200
NP0202G	20	3600	256T	92.4	92.5	21.9	380	2,378
NP0204G(C)	20	1800	256T	93.0	87.5	23.0	395	2,293
NP0206G(C)	20	1200	286T	91.7	84.0	24.3	520	3,957
NP0252G	25	3600	284TS	92.4	91.0	27.8	460	2,978
NP0254G(C)	25	1800	284T	93.6	86.0	29.1	510	2,800
NP0256G(C)	25	1200	324T	93.0	83.0	30.3	745	4,926
NP0302G	30	3600	286TS	93.0	91.0	33.2	508	3,482
NP0304G(C)	30	1800	286T	93.6	87.5	34.3	545	3,360
NP0306G(C)	30	1200	326T	93.0	80.5	37.5	775	5,458
NP0402G	40	3600	324TS	94.1	90.0	44.2	650	4,578
NP0404G(C)	40	1800	324T	94.1	86.0	46.3	710	4,475
NP0406G(C)	40	1200	364T	94.1	86.5	46.0	945	7,137
NP0502G	50	3600	326TS	94.1	91.0	54.7	775	6,073
NP0504G(C)	50	1800	326T	94.5	87.0	56.9	795	5,603
NP0506G(C)	50	1200	365T	94.1	86.0	57.8	1040	8,731
NP0602G	60	3600	364TS	94.1	93.0	64.2	890	7,904
NP0604G(C)	60	1800	364T	95.0	86.5	68.4	870	7,176
NP0606G(C)	60	1200	404T	94.5	87.0	68.3	1,295	10,404
NP0752G	75	3600	365TS	94.5	93.0	79.9	970	10,054
NP0754G(C)	75	1800	365T	95.4	86.5	85.1	1,075	9,180
NP0756G(C)	75	1200	405T	94.5	86.5	85.9	1,317	12,299

Notes:
(1) All data subject to change without notice.
(C) Meets NEMA Design C Torque.

AEVANE, HIGH EFFICIENCY, ROUND BODY C-FACE [NV_C]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- Crushers
- Mixers
- Conveyors

FEATURES:

- Output Range: 1 - 100 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54)
- Voltage: 230/460V (Usable on 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Factory Self-Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3C Minimum
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum; Various Ratings also Meet Design C
- Cast Iron Frame, End Brackets, Main Conduit Box; Rolled Steel Fan Cover
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140T - 280T (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 280TS and Larger
- Automatic Grease Discharge Fittings on Regreasable Models
- Labyrinth Type Metal Flinger on Both Ends for F# 280TS and Larger
- Cast Iron Inner and Outer Bearing Caps for F#280TS and Larger
- Stainless Steel Nameplate
- Suitable for Inverter Duty per NEMA MG-1, Part 30(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP to 125 HP;
- Motors are U.L. Recognized, CSA Approved and CE Marked
- Rubber Dust Flinger on Drive-End for F# 140T - 280T

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Factory Self-Certification for hazardous areas for 440T/TS frames requires fan change. Please see modifications section; Additional charge for Division II nameplates.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1.
(6) Per DOE regulations, this High Efficiency inventory (Ratings Below 600 HP) will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient MAX-PE™ Premium Efficient Round Body C-Face motors beginning on page 64.

AEVANE, HIGH EFFICIENCY, ROUND BODY C-FACE [NV_C]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX SHIPPING WT. (lbs.)	LIST PRICE ($)
NV0012C	1	3600	143TC	77.0	84.5	1.44	85	399
NV0014C(C)	1	1800	143TC	82.5	77.0	1.48	50	406
NV0016C	1	1200	145TC	80.0	63.3	3.69	56	515
NV1/52C	1.5	3600	143TC	82.5	85.0	2.01	50	455
NV1/54C(C)	1.5	1800	145TC	84.0	80.5	2.08	54	457
NV1/56C	1.5	1200	182TC	85.5	66.5	4.94	79	542
NV0022C	2	3600	145TC	84.0	88.5	2.52	53	483
NV0024C(C)	2	1800	145TC	84.0	82.5	2.70	80	490
NV0026C(C)	2	1200	184TC	86.5	67.0	6.46	104	607
NV0032C	3	3600	182TC	85.5	90.0	3.65	135	569
NV0034C(C)	3	1800	182TC	87.5	82.5	3.89	122	553
NV0036C(C)	3	1200	213TC	89.5	76.5	8.39	158	796
NV0052C	5	3600	184TC	87.5	91.5	5.85	145	699
NV0054C(C)	5	1800	184TC	87.5	86.5	6.20	150	637
NV0056C(C)	5	1200	215TC	87.5	76.5	14.0	176	1,142
NV7/52C	7.5	3600	213TC	88.5	87.0	9.10	190	949
NV7/54C(C)	7.5	1800	213TC	89.5	88.0	8.90	198	947
NV7/56C(C)	7.5	1200	254TC	89.5	81.0	19.4	274	1,600
NV0102C	10	3600	215TC	89.5	90.0	11.6	218	1,103
NV0104C(C)	10	1800	215TC	89.5	89.5	11.7	221	1,140
NV0106C(C)	10	1200	256TC	89.5	92.5	25.4	324	1,943
NV0152C	15	3600	254TC	90.2	91.5	17.0	350	1,545
NV0154C(C)	15	1800	254TC	91.0	88.0	17.6	365	1,505
NV0156C(C)	15	1200	284TC	90.2	83.0	37.0	425	2,675
NV0202C	20	3600	256TC	90.2	92.0	22.6	375	1,968
NV0204C(C)	20	1800	256TC	91.0	88.0	23.4	410	1,897
NV0206C(C)	20	1200	286TC	90.2	83.5	49.7	470	3,357
NV0252C	25	3600	284TSC	91.0	90.5	28.4	444	2,509
NV0254C(C)	25	1800	284TC	92.4	89.0	28.5	515	2,334
NV0256C(C)	25	1200	324TC	91.7	91.5	62.6	606	4,196
NV0302C	30	3600	286TSC	91.0	91.0	33.9	555	2,961
NV0304C(C)	30	1800	286TC	92.4	88.0	34.6	503	2,833
NV0306C(C)	30	1200	326TC	91.7	80.5	76.1	699	4,695
NV0402C	40	3600	324TSC	91.7	89.5	45.7	625	3,922
NV0404C(C)	40	1800	324TC	93.0	89.0	45.3	740	3,806
NV0406C(C)	40	1200	364TC	93.0	86.5	93.1	766	6,174
NV0502C	50	3600	326TSC	92.4	90.5	56.0	706	5,257
NV0504C(C)	50	1800	326TC	93.0	89.5	56.0	835	4,821
NV0506C(C)	50	1200	365TC	93.0	85.5	118.0	837	7,611
NV0602C	60	3600	364TSC	93.0	93.0	65.0	910	6,903
NV0604C(C)	60	1800	364TC	93.6	86.5	69.5	915	6,205
NV0606C(C)	60	1200	404TC	93.6	88.0	136	972	9,050
NV0752C	75	3600	365TSC	93.0	93.5	81.0	871	8,835
NV0754C(C)	75	1800	365TC	94.1	87.5	85.5	1,035	8,005
NV0756C(C)	75	1200	405TC	93.6	88.5	170	1,304	10,756
NV1002C	100	3600	405TSC	93.6	91.5	110	1,203	11,934
NV1004C(C)	100	1800	405TC	94.5	89.0	112	1,365	11,125

Notes:

(1) Motors on this page do not include Drip Cover. Drip covers are available. See page 144.

(2) Per DOE regulations, these high efficiency motors will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient MAX-PE Round Body C-face motors on page 64.

(3) Once product listed above has been depleted from current stock, that model becomes obsolete and can not be reordered.

(C) Meets NEMA Design C Torque.

MAX-E1® FAMILY

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]
AEHE, HIGH EFFICIENCY [E]
AEHH8NCF, NEMA PREMIUM, FOOTED C-FACE (1 HP - 300 HP) [EP_C]
AEUH8NDC, NEMA PREMIUM, ROUND BODY C-FACE (1 HP - 100 HP) [EPV_C]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Crushers
- Compressors
- Mixers
- Conveyors
- Any Severe Duty/ Petro-Chem/ Pulp & Paper Application

FEATURES:

- Output Range: 3/4 - 800 HP
- Speed: 3600, 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54 for 280 Frames and below, IP55 for 280TS Frames and above)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only(1,2)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum(7,8)
- CSA Certified for Class II, Div. 2, Groups F & G - Temp Code T3 Minimum(7,8,12) (444T and Above)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum; Various Ratings also Meet Design C
- Cast Iron Frame, End Brackets & Fan Cover and Main Conduit Box(9)
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(3)
- Designed for 3300 ft. Elevation(4)
- Bi-Directional Rotation; Except 2 Pole "Hybrid" and F# 5000 and Larger Ratings are Counter-Clockwise facing the DE
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F# 140T - 449T
  Copper/Copper Alloy Rotor Construction for F# 5000 and Larger(10)
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Light Gray - Munsell N5.0
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140T - 280T (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 280TS and Larger
- Automatic Grease Discharge Fittings on Regreasable Models
- Labyrinth Type Metal Flinger on Both Ends for F# 280TS and Larger
- Cast Iron Inner and Outer Bearing Caps for F#280TS and Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(5,6,11)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque (350 HP and Larger are 3:1 Constant Torque)(11)
- 9 Leads for 5 HP and Smaller;
- 12 Leads for 7.5 HP to 125 HP;
- 6 Leads for 150 HP and Larger
- Motors are U.L. Recognized, CSA Approved, CE Marked. ABS Design Assessment from 250 HP-800 HP(11)
- Dual Drilled Feet Available on Most Ratings - Longer Frames (i.e. 145T Drilled also for 143T)
- 2-Pole Motors 600 HP and Larger are Form Wound and Insulated Non-Drive End Bearing
- Rubber Dust Flinger on Drive-End for F# 140T - 280T
- Catalog Numbers Ending in "R" Come Standard with Roller Bearings for Belted Applications.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) TWMC carries minimal MAX-E1® 575V stock; please check availability to ensure required motors are available. Ratings may be available from our Canadian warehouses at a higher price or from our factory with a longer lead time. Pricing and lead time may vary.
(2) Motors 7.5 HP & up are Suitable for Wye/Delta Starting.
(3) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(4) Consult a Stock Product Application Specialist for suitability at higher elevations.
(5) Motor service factor is 1.0 when operated on a VFD.
(6) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(7) Catalog# EP3502, EP3504, EP4002T & EP4004T are "Hybrid" ratings; Not CSA Certified (Self-Certify Only) for hazardous locations, and not dual drilled.
(8) Catalog# EP3006 also not CSA Certified for Hazardous Locations (Self-Certify Only).
(9) F# 5000 and with Larger with Pressed Steel Plate Main Conduit Box.
(10) F# 5007 - 5011 8 Pole Ratings are Aluminum Die Cast Squirrel Cage Rotor Construction.
(11) EP4002T & EP4004T are hybrid frames and not VFD suitable.
(12) Various temp codes apply to ratings. Consult a product specialist for accurate code.

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EP0/78	0.75	900	145T	84.0	81.5	10.9	59	906
EP0/785	0.75	900	145T	84.0	81.5	8.72	59	906
EP0012	1	3600	143T	82.5	85.0	1.34	65	436
EP00125	1	3600	143T	82.5	85.0	1.07	65	436
EP0014(C)	1	1800	143T	85.5	73.0	1.50	58	439
EP00145(C)	1	1800	143T	85.5	73.0	1.20	58	439
EP0016	1	1200	145T	82.5	65.5	1.73	83	569
EP00165	1	1200	145T	82.5	65.5	1.38	83	569
EP0018	1	900	182T	77.0	58.5	2.08	105	945
EP00185	1	900	182T	77.0	58.5	1.66	105	945
EP1/52	1.5	3600	143T	84.0	83.5	2.00	56	501
EP1/525	1.5	3600	143T	84.0	83.5	1.60	56	501
EP1/54(C)	1.5	1800	145T	86.5	78.0	2.08	80	503
EP1/545(C)	1.5	1800	145T	86.5	78.0	1.66	80	503
EP1/56	1.5	1200	182T	87.5	63.5	2.53	125	591
EP1/565	1.5	1200	182T	87.5	63.5	2.02	125	591
EP1/58	1.5	900	184T	78.5	60.5	2.96	125	1,126
EP1/585	1.5	900	184T	78.5	60.5	2.36	125	1,126
EP0022	2	3600	145T	86.5	86.0	2.52	95	528
EP00225	2	3600	145T	86.5	86.0	2.02	95	528
EP0024(C)	2	1800	145T	86.5	78.0	2.78	68	536
EP00245(C)	2	1800	145T	86.5	78.0	2.22	68	536
EP0026(C)	2	1200	184T	88.5	70.5	3.00	136	666
EP00265(C)	2	1200	184T	88.5	70.5	2.40	136	666
EP0028(C)	2	900	213T	85.5	68.0	3.22	173	1,310
EP00285(C)	2	900	213T	85.5	68.0	2.58	173	1,310
EP0032	3	3600	182T	88.5	90.0	3.53	125	621
EP00325	3	3600	182T	88.5	90.0	2.82	125	621
EP0034(C)	3	1800	182T	89.5	81.5	3.85	130	607
EP00345(C)	3	1800	182T	89.5	81.5	3.08	130	607
EP0036(C)	3	1200	213T	89.5	78.0	4.02	180	874
EP00365(C)	3	1200	213T	89.5	78.0	3.22	180	874
EP0038(C)	3	900	215T	85.5	66.0	4.98	192	1,725
EP00385(C)	3	900	215T	85.5	66.0	3.98	192	1,725
EP0052	5	3600	184T	88.5	92.5	5.72	145	768
EP00525	5	3600	184T	88.5	92.5	4.58	145	768
EP0054(C)	5	1800	184T	89.5	85.5	6.12	150	700
EP00545(C)	5	1800	184T	89.5	85.5	4.90	150	700
EP0056(C)	5	1200	215T	91.0	82.5	6.24	225	1,254
EP00565(C)	5	1200	215T	91.0	82.5	4.99	225	1,254
EP0058	5	900	254T	87.5	72.0	7.43	305	2,347
EP00585	5	900	254T	87.5	72.0	3.78	305	2,347

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(C) Meets NEMA Design C Torque.

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EP7/52	7.5	3600	213T	91.0	89.0	8.67	200	1,038
EP7/525	7.5	3600	213T	91.0	89.0	6.94	200	1,038
EP7/54(C)	7.5	1800	213T	91.7	86.5	8.85	510	1,042
EP7/545(C)	7.5	1800	213T	91.7	86.5	7.08	510	1,042
EP7/56(C)	7.5	1200	254T	91.0	80.5	9.59	325	1,763
EP7/565(C)	7.5	1200	254T	91.0	80.5	7.67	325	1,763
EP7/58(C)	7.5	900	256T	87.5	74.0	10.8	365	2,988
EP7/585(C)	7.5	900	256T	87.5	74.0	8.6	365	2,988
EP0102	10	3600	215T	91.0	89.5	11.5	235	1,204
EP01025	10	3600	215T	91.0	89.5	9.2	235	1,204
EP0104(C)	10	1800	215T	91.7	88.0	11.6	265	1,254
EP01045(C)	10	1800	215T	91.7	88.0	9.28	265	1,254
EP0106(C)	10	1200	256T	91.0	80.5	12.8	380	2,144
EP01065(C)	10	1200	256T	91.0	80.5	10.24	380	2,144
EP0108(C)	10	900	284T	90.2	73.5	14.1	445	3,765
EP01085(C)	10	900	284T	90.2	73.5	11.28	445	3,765
EP0152	15	3600	254T	92.4	91.5	16.6	345	1,703
EP01525	15	3600	254T	92.4	91.5	13.28	345	1,703
EP0154(C)	15	1800	254T	92.4	88.0	17.3	360	1,657
EP01545(C)	15	1800	254T	92.4	88.0	13.84	360	1,657
EP0156(C)	15	1200	284T	92.4	83.5	18.2	460	2,937
EP01565(C)	15	1200	284T	92.4	83.5	14.56	460	2,937
EP0158(C)	15	900	286T	90.2	78.0	20.0	510	4,938
EP01585	15	900	286T	90.2	78.0	16.0	510	4,938
EP0202	20	3600	256T	92.4	92.5	21.9	405	2,165
EP02025	20	3600	256T	92.4	92.5	17.52	405	2,165
EP0204(C)	20	1800	256T	93.0	87.5	23.0	410	2,089
EP02045(C)	20	1800	256T	93.0	87.5	18.4	410	2,089
EP0206(C)	20	1200	286T	91.7	84.0	24.3	550	3,703
EP02065(C)	20	1200	286T	91.7	84.0	19.44	550	3,703
EP0208(C)	20	900	324T	91.0	81.0	25.4	585	5,953
EP02085(C)	20	900	324T	91.0	81.0	20.32	585	5,953
EP0252	25	3600	284TS	92.4	91.0	27.8	498	2,775
EP02525	25	3600	284TS	92.4	91.0	22.24	498	2,775
EP0254(C)	25	1800	284T	93.6	86.0	29.1	520	2,548
EP02545(C)	25	1800	284T	93.6	86.0	23.28	520	2,548
EP0254S(C)	25	1800	284TS	93.6	86.0	29.1	520	2,548
EP02545S(C)	25	1800	284TS	93.6	86.0	23.28	520	2,548
EP0256(C)	25	1200	324T	93.0	83.0	30.3	725	4,590
EP02565(C)	25	1200	324T	93.0	83.0	24.24	725	4,590
EP0258(C)	25	900	326T	91.0	80.0	32.2	684	7,037
EP02585(C)	25	900	326T	91.0	80.0	25.76	684	7,037

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(C) Meets NEMA Design C Torque.

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EP0302	30	3600	286TS	93.0	91.0	33.2	530	3,300
EP03025	30	3600	286TS	93.0	91.0	26.56	530	3,300
EP0304(C)	30	1800	286T	93.6	87.5	34.3	558	3,134
EP03045(C)	30	1800	286T	93.6	87.5	27.68	558	3,134
EP0304S(C)	30	1800	286TS	93.6	87.5	34.3	558	3,134
EP03045S(C)	30	1800	286TS	93.6	87.5	27.44	558	3,134
EP0306(C)	30	1200	326T	93.0	80.5	37.5	775	5,173
EP03065(C)	30	1200	326T	93.0	80.5	30	775	5,173
EP0308(C)	30	900	364T	93.0	78.0	38.7	898	8,183
EP03085(C)	30	900	364T	93.0	78.0	30.96	898	8,183
EP0402	40	3600	324TS	94.1	90.0	44.2	755	4,312
EP04025	40	3600	324TS	94.1	90.0	35.36	755	4,312
EP0404(C)	40	1800	324T	94.1	86.0	46.3	750	4,160
EP04045(C)	40	1800	324T	94.1	86.0	37.04	750	4,160
EP0404S(C)	40	1800	324TS	94.1	86.0	46.3	750	4,160
EP04045S(C)	40	1800	324TS	94.1	86.0	37.04	750	4,160
EP0406(C)	40	1200	364T	94.1	86.5	46.0	1025	6,785
EP04065(C)	40	1200	364T	94.1	86.5	36.8	1025	6,785
EP0408(C)	40	900	365T	93.0	78.0	51.6	1035	10,107
EP04085(C)	40	900	365T	93.0	78.0	41.3	1035	10,107
EP0502	50	3600	326TS	94.1	91.0	54.7	815	5,747
EP05025	50	3600	326TS	94.1	91.0	43.76	815	5,747
EP0504(C)	50	1800	326T	94.5	87.0	56.9	845	5,283
EP05045(C)	50	1800	326T	94.5	87.0	45.52	845	5,283
EP0504S(C)	50	1800	326TS	94.5	87.0	56.9	845	5,283
EP05045S(C)	50	1800	326TS	94.5	87.0	45.52	845	5,283
EP0506(C)	50	1200	365T	94.1	86.0	57.8	1105	8,369
EP05065(C)	50	1200	365T	94.1	86.0	46.22	1105	8,369
EP0506R(C)	50	1200	365T	94.1	86.0	57.8	1105	8,369
EP0508(C)	50	900	404T	93.0	81.0	62.1	1098	11,925
EP05085(C)	50	900	404T	93.0	81.0	49.68	1098	11,925
EP0602	60	3600	364TS	94.1	93.0	64.2	960	7,574
EP06025	60	3600	364TS	94.1	93.0	51.4	960	7,574
EP0604(C)	60	1800	364T	95.0	86.5	68.4	945	6,825
EP0604R(C)	60	1800	364T	95.0	86.5	68.4	945	6,825
EP06045(C)	60	1800	364T	95.0	86.5	54.7	945	6,825
EP0604S(C)	60	1800	364TS	95.0	86.5	68.4	945	6,825
EP06045S(C)	60	1800	364TS	95.0	86.5	54.7	945	6,825
EP0606(C)	60	1200	404T	94.5	87.0	68.3	1,305	9,839
EP0606R(C)	60	1200	404T	94.5	87.0	68.3	1,305	9,839
EP06065(C)	60	1200	404T	94.5	87.0	54.6	1,305	9,839
EP0608(C)	60	900	405T	93.0	81.0	74.6	1,410	13,816
EP06085(C)	60	900	405T	93.0	81.0	59.7	1,410	13,816

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(C) Meets NEMA Design C Torque.

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EP0752	75	3600	365TS	94.5	93.0	79.9	995	9,673
EP07525	75	3600	365TS	94.5	93.0	63.9	995	9,673
EP0754(C)	75	1800	365T	95.4	86.5	85.1	1,045	8,717
EP07545(C)	75	1800	365T	95.4	86.5	68.1	1,045	8,717
EP0754S(C)	75	1800	365TS	95.4	86.5	85.1	1,045	8,717
EP07545S(C)	75	1800	365TS	95.4	86.5	68.1	1,045	8,717
EP0754R(C)	75	1800	365T	95.4	86.5	85.1	1,045	8,717
EP07545R(C)	75	1800	365T	95.4	86.5	68.1	1,045	8,717
EP0756(C)	75	1200	405T	94.5	86.5	85.9	1,440	11,717
EP07565(C)	75	1200	405T	94.5	86.5	68.7	1,440	11,717
EP0756R(C)	75	1200	405T	94.5	86.5	85.9	1,440	11,717
EP07565R(C)	75	1200	405T	94.5	86.5	68.7	1,440	11,717
EP0758	75	900	444T	93.6	79.0	95.0	1,790	17,441
EP07585	75	900	444T	93.6	79.0	76.0	1,790	17,441
EP0758R	75	900	444T	93.6	79.0	95.0	1,790	17,441
EP07585R	75	900	444T	93.6	79.0	76.0	1,790	17,441
EP1002	100	3600	405TS	95.4	92.0	107	1,386	13,119
EP10025	100	3600	405TS	95.4	92.0	86	1,386	13,119
EP1004(C)	100	1800	405T	95.4	87.5	112	1,415	12,230
EP10045(C)	100	1800	405T	95.4	87.5	90	1,415	12,230
EP1004S(C)	100	1800	405TS	95.4	87.5	112	1,415	12,230
EP10045S(C)	100	1800	405TS	95.4	87.5	90	1,415	12,230
EP1004R(C)	100	1800	405T	95.4	87.5	112	1,415	12,230
EP10045R(C)	100	1800	405T	95.4	87.5	90	1,415	12,230
EP1006	100	1200	444T	95.0	82.5	119	1,783	15,053
EP10065	100	1200	444T	95.0	82.5	95	1,783	15,053
EP1006R	100	1200	445T	95.0	82.5	119	1,783	15,053
EP10065R	100	1200	445T	95.0	82.5	95	1,783	15,053
EP1008	100	900	445T	93.6	79.0	127	2,088	22,655
EP10085	100	900	445T	93.6	79.0	102	2,088	22,655
EP1008R	100	900	445T	93.6	79.0	127	2,088	22,655
EP10085R	100	900	445T	93.6	79.0	102	2,088	22,655
EP1252	125	3600	444TS	95.0	86.0	143	1,656	16,310
EP12525	125	3600	444TS	95.0	86.0	114	1,656	16,310
EP1254	125	1800	444T	95.4	85.0	144	1,830	15,183
EP12545	125	1800	444T	95.4	85.0	115	1,830	15,183
EP1254S	125	1800	444TS	95.4	85.0	144	1,830	15,183
EP12545S	125	1800	444TS	95.4	85.0	115	1,830	15,183
EP1254R	125	1800	444T	95.4	85.0	144	1,830	15,183
EP12545R	125	1800	444T	95.4	85.0	115	1,830	15,183
EP1256	125	1200	445T	95.0	83.0	148	2,193	19,757
EP12565	125	1200	445T	95.0	83.0	118	2,193	19,757
EP1256R	125	1200	445T	95.0	83.0	148	2,193	19,757
EP12565R	125	1200	445T	95.0	83.0	118	2,193	19,757
EP1258	125	900	447T	94.1	80.0	155	2,490	26,051
EP12585	125	900	447T	94.1	80.0	124	2,490	26,051
EP1258R	125	900	447T	94.1	80.0	155	2,490	26,051
EP12585R	125	900	447T	94.1	80.0	124	2,490	26,051

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(C) Meets NEMA Design C Torque.

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EP1502	150	3600	445TS	95.0	87.0	170	1,783	19,533
EP15025	150	3600	445TS	95.0	87.0	136	1,783	19,533
EP1504	150	1800	445T	95.8	85.0	172	2,005	17,491
EP15045	150	1800	445T	95.8	85.0	138	2,005	17,491
EP1504S	150	1800	445TS	95.8	85.0	172	2,005	17,491
EP15045S	150	1800	445TS	95.8	85.0	138	2,005	17,491
EP1504R	150	1800	445T	95.8	85.0	172	2,005	17,491
EP15045R	150	1800	445T	95.8	85.0	138	2,005	17,491
EP1506	150	1200	447T	95.8	83.5	176	2,547	22,102
EP15065	150	1200	447T	95.8	83.5	141	2,547	22,102
EP1506R	150	1200	447T	95.8	83.5	176	2,547	22,102
EP15065R	150	1200	447T	95.8	83.5	141	2,547	22,102
EP1508	150	900	449T	94.1	80.0	187	2,389	31,289
EP15085	150	900	449T	94.1	80.0	150	2,389	31,289
EP1508R	150	900	449T	94.1	80.0	187	2,389	31,289
EP15085R	150	900	449T	94.1	80.0	150	2,389	31,289
EP2002	200	3600	447TS	95.4	89.0	221	2,444	26,752
EP20025	200	3600	447TS	95.4	89.0	177	2,444	26,752
EP2004	200	1800	447T	96.2	87.0	224	2,547	22,869
EP20045	200	1800	447T	96.2	87.0	179	2,547	22,869
EP2004S	200	1800	447TS	96.2	87.0	224	2,547	22,869
EP20045S	200	1800	447TS	96.2	87.0	179	2,547	22,869
EP2004R	200	1800	447T	96.2	87.0	224	2,547	22,869
EP20045R	200	1800	447T	96.2	87.0	179	2,547	22,869
EP2006	200	1200	449T	95.8	84.0	233	2,785	28,869
EP20065	200	1200	449T	95.8	84.0	186	2,785	28,869
EP2006R	200	1200	449T	95.8	84.0	233	2,785	28,869
EP20065R	200	1200	449T	95.8	84.0	186	2,785	28,869
EP2008T	200	900	449T	94.5	80.0	248	2,706	37,000
EP20085T	200	900	449T	94.5	80.0	198	2,706	37,000
EP2008TR	200	900	449T	94.5	80.0	248	2,706	37,000
EP20085TR	200	900	449T	94.5	80.0	198	2,706	37,000
EP2008	200	900	5007B	94.5	81.0	304	3,400	39,361
EP20085	200	900	5007B	94.5	81.0	243	3,400	39,361
EP2008R	200	900	5007C	94.5	81.0	304	3,400	39,361
EP20085R	200	900	5007C	94.5	81.0	243	3,400	39,361
EP2502	250	3600	449TS	95.8	89.8	272	2,547	34,864
EP25025	250	3600	449TS	95.8	89.8	218	2,547	34,864
EP2504	250	1800	449T	96.2	88.0	277	2,720	29,407
EP25045	250	1800	449T	96.2	88.0	222	2,720	29,407
EP2506	250	1200	449T	95.8	84.5	289	2,925	30,234
EP25065	250	1200	449T	95.8	84.5	231	2,925	30,234
EP2506R	250	1200	449T	95.8	84.5	289	2,925	30,234
EP25065R	250	1200	449T	95.8	84.5	231	2,925	30,234
EP2508	250	900	5009B	95.0	81.0	304	4,200	44,274
EP25085	250	900	5009B	95.0	81.0	243	4,200	44,274
EP2508R	250	900	5009C	95.0	81.0	304	4,200	44,274
EP25085R	250	900	5009C	95.0	81.0	243	4,200	44,274

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(C) Meets NEMA Design C Torque.

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EP3002	300	3600	449TS	95.8	90.2	325	2,647	37,549
EP30025	300	3600	449TS	95.8	90.2	260	2,647	37,549
EP3004	300	1800	449T	96.2	88.0	332	2,855	30,794
EP30045	300	1800	449T	96.2	88.0	266	2,855	30,794
EP3004R	300	1800	449T	96.2	88.0	332	2,855	30,763
EP30045R	300	1800	449T	96.2	88.0	266	2,855	30,763
EP3006	300	1200	449T	95.8	84.5	347	3,430	31,708
EP30065	300	1200	449T	95.8	84.5	278	3,430	31,708
EP3006R	300	1200	449T	95.8	84.5	347	3,430	31,708
EP30065R	300	1200	449T	95.8	84.5	278	3,430	31,708
EP3008	300	900	5009B	95.0	81.0	365	4,410	48,598
EP30085	300	900	5009B	95.0	81.0	292	4,410	48,598
EP3008R	300	900	5009C	95.0	81.0	365	4,410	48,598
EP30085R	300	900	5009C	95.0	81.0	292	4,410	48,598
EP3502	350	3600	449TS	95.8	90.2	379	2,785	39,634
EP35025	350	3600	449TS	95.8	90.2	303	2,785	39,634
EP3504	350	1800	449T	96.2	88.0	387	3,280	33,316
EP35045	350	1800	449T	96.2	88.0	310	3,280	33,316
EP3504R	350	1800	449T	96.2	88.0	387	3,280	33,316
EP35045R	350	1800	449T	96.2	88.0	310	3,280	33,316
EP3506	350	1200	5011B	95.8	87.0	393	5,565	52,460
EP35065	350	1200	5011B	95.8	87.0	314	5,565	52,460
EP3506R	350	1200	5011C	95.8	87.0	393	5,565	52,460
EP35065R	350	1200	5011C	95.8	87.0	314	5,565	52,460
EP3508	350	900	5011B	95.0	81.0	426	5,040	59,712
EP35085	350	900	5011B	95.0	81.0	341	5,040	59,712
EP3508R	350	900	5011C	95.0	81.0	426	5,040	59,712
EP35085R	350	900	5011C	95.0	81.0	340	5,040	59,712
EP4002T(2,3,4,6)	400	3600	449TS	95.8	92.5	423	2,950	44,851
EP40025T(2,3,4,6)	400	3600	449TS	95.8	92.5	338	2,950	44,851
EP4002	400	3600	5009A	95.8	91.6	427	3,623	53,035
EP40025	400	3600	5009A	95.8	91.6	342	3,623	53,035
EP4004T(2,3,4,6)	400	1800	449T	96.2	90.0	433	3,500	38,009
EP40045T(2,3,4,6)	400	1800	449T	96.2	90.0	346	3,500	38,009
EP4004	400	1800	5009B	96.2	90.0	433	4,025	47,263
EP40045	400	1800	5009B	96.2	90.0	347	4,025	47,263
EP4004R	400	1800	5009C	96.2	90.0	433	4,025	47,263
EP40045R	400	1800	5009C	96.2	90.0	347	4,025	47,263
EP4006	400	1200	5011B	95.8	87.0	449	5,803	60,355
EP40065	400	1200	5011B	95.8	87.0	359	5,803	60,355
EP4006R	400	1200	5011C	95.8	87.0	449	5,803	60,355
EP40065R	400	1200	5011C	95.8	87.0	359	5,803	60,355
EP4008	400	900	5808B	95.0	82.5	478	5,355	76,928
EP40085	400	900	5808B	95.0	82.5	382	5,355	76,928
EP4008R	400	900	5808C	95.0	82.5	478	5,355	76,928
EP40085R	400	900	5808C	95.0	82.5	382	5,355	76,928

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.
(2) Not suitable for Class I, Division 2 or Class II, Division 2.
(3) No 50Hz data (380V) on nameplate.
(4) Not suitable for VFD.
(5) All data subject to change without notice.
(6) Special Order Only.

AEHH8N, NEMA PREMIUM (1 HP - 500 HP) [EP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EP4502	450	3600	5011A	95.8	91.7	480	4,410	62,392
EP45025	450	3600	5011A	95.8	91.7	384	4,410	62,392
EP4504	450	1800	5011B	96.2	90.0	487	5,040	56,464
EP45045	450	1800	5011B	96.2	90.0	390	5,040	56,464
EP4504R	450	1800	5011C	96.2	90.0	487	5,040	56,464
EP45045R	450	1800	5011C	96.2	90.0	390	5,040	56,464
EP4506	450	1200	5808B	95.8	88.0	500	5,803	67,650
EP45065	450	1200	5808B	95.8	88.0	400	5,803	67,650
EP4506R	450	1200	5808C	95.8	88.0	500	5,803	67,650
EP45065R	450	1200	5808C	95.8	88.0	400	5,803	67,650
EP4508	450	900	5808B	95.0	82.5	535	5,723	79,909
EP45085	450	900	5808B	95.0	82.5	428	5,723	79,909
EP4508R	450	900	5808C	95.0	82.5	535	5,723	79,909
EP45085R	450	900	5808C	95.0	82.5	428	5,723	79,909
EP5002	500	3600	5011A	95.8	91.7	533	4,830	65,477
EP50025	500	3600	5011A	95.8	91.7	426	4,830	65,477
EP5004	500	1800	5011B	96.2	90.0	541	5,250	62,034
EP50045	500	1800	5011B	96.2	90.0	433	5,250	62,034
EP5004R	500	1800	5011C	96.2	90.0	541	5,250	62,034
EP50045R	500	1800	5011C	96.2	90.0	433	5,250	62,034
EP5006	500	1200	5808B	95.8	88.0	555	6,330	73,219
EP50065	500	1200	5808B	95.8	88.0	444	6,330	73,219
EP5006R	500	1200	5808C	95.8	88.0	555	6,330	73,219
EP50065R	500	1200	5808C	95.8	88.0	444	6,330	73,219
EP5008	500	900	5810B	95.0	83.0	594	6,300	85,522
EP50085	500	900	5810B	95.0	83.0	475	6,300	85,522
EP5008R	500	900	5810C	95.0	83.0	594	6,300	85,522
EP50085R	500	900	5810C	95.0	83.0	475	6,300	85,522

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

AEHE, HIGH EFFICIENCY [E]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
E0/78	3/4	900	145T	70.0	53.5	1.90	85	803
E0/785	3/4	900	145T	70.0	53.5	1.52	85	803
E0018	1	900	182T	77.0	58.5	2.08	105	945
E00185	1	900	182T	77.0	58.5	1.68	105	945
E1/58	1.5	900	184T	77.0	60.5	3.02	125	1,126
E1/585	1.5	900	184T	77.0	60.5	2.40	125	1,126
E0028(C)	2	900	213T	85.5	64.0	3.42	173	1,310
E00285(C)	2	900	213T	85.5	64.0	4.00	173	1,310
E0038(C)	3	900	215T	85.5	66.0	5.00	192	1,725
E00385(C)	3	900	215T	85.5	66.0	4.00	192	1,725
E0058	5	900	254T	86.5	72.0	7.50	305	2,347
E00585	5	900	254T	86.5	72.0	6.00	305	2,347
E7/58(C)	7.5	900	256T	85.5	71.5	11.5	365	2,988
E7/585(C)	7.5	900	256T	85.5	71.5	9.2	365	2,988
E0108(C)	10	900	284T	89.5	73.5	14.3	445	3,765
E01085(C)	10	900	284T	89.5	73.5	11.4	445	3,765
E0158	15	900	286T	89.5	78.0	20.1	510	4,938
E01585	15	900	286T	89.5	78.0	16.1	510	4,938
E0208(C)	20	900	324T	90.2	81.0	25.7	585	5,953
E02085(C)	20	900	324T	90.2	81.0	20.5	585	5,953
E0258(C)	25	900	326T	90.2	79.5	32.7	684	7,037
E02585(C)	25	900	326T	90.2	79.5	20.5	684	7,037
E0308(C)	30	900	364T	93.0	77.5	39.0	898	8,183
E03085(C)	30	900	364T	93.0	77.5	31.2	898	8,183
E0408(C)	40	900	365T	91.7	76.5	53.5	1020	10,107
E04085(C)	40	900	365T	91.7	76.5	42.7	1020	10,107
E0508(C)	50	900	404T	93.0	80.5	65.2	1,098	11,925
E05085(C)	50	900	404T	93.0	80.5	42.7	1,098	11,925
E0608(C)	60	900	405T	93.0	81.0	74.5	1,410	13,816
E06085(C)	60	900	405T	93.0	81.0	81.0	1,410	13,816
E0758	75	900	444T	93.0	79.0	95.6	1,790	17,441
E07585	75	900	444T	93.0	79.0	76.5	1,790	17,441
E0758R	75	900	444T	93.0	79.0	95.6	1,790	17,441
E07585R	75	900	444T	93.0	79.0	76.5	1,790	17,441
E1008	100	900	445T	93.0	79.0	127.0	2,088	22,655
E10085	100	900	445T	93.0	79.0	101.6	2,088	22,655
E1008R	100	900	445T	93.0	79.0	127.0	2,088	22,655
E10085R	100	900	445T	93.0	79.0	101.6	2,088	22,655
E1258	125	900	447T	93.6	80.0	156.0	2,490	26,051
E12585	125	900	447T	93.6	80.0	124.8	2,490	26,051
E1258R	125	900	447T	93.6	80.0	156.0	2,490	26,051
E12585R	125	900	447T	93.6	80.0	124.8	2,490	26,051
E1508	150	900	449T	93.6	80.0	188.0	2,903	31,289
E15085	150	900	449T	93.6	80.0	150.4	2,903	31,289
E1508R	150	900	449T	93.6	80.0	188.0	2,903	31,289
E15085R	150	900	449T	93.6	80.0	150.4	2,903	31,289
E2008	200	900	5007B	94.4	82.0	242.0	3,570	39,361
E20085	200	900	5007B	94.4	82.0	193.6	3,570	39,361
E2008R	200	900	5007C	94.4	82.0	242.0	3,570	39,361
E20085R	200	900	5007C	94.4	82.0	193.6	3,570	39,361
E2508	250	900	5009B	94.5	81.0	306.0	4,200	44,274
E25085	250	900	5009B	94.5	81.0	244.8	4,200	44,274
E2508R	250	900	5009C	94.5	81.0	306.0	4,200	44,274
E25085R	250	900	5009C	94.5	81.0	244.8	4,200	44,274

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(2) Ratings above 600 HP ("E" motors) do not have a NEMA Premium requirement and therefore will continue to be stock items.

(3) Per DOE regulations, this High Efficiency inventory (Ratings Below 600 HP) will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient 8 pole MAX-E1® motors beginning on page 70.

(4) All data subject to change without notice.

(C) Meets NEMA Design C Torque..

AEHE, HIGH EFFICIENCY [E]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
E3008	300	900	5009B	94.6	81.0	366.0	4,410	48,598
E30085	300	900	5009B	94.6	81.0	292.8	4,410	48,598
E3008R	300	900	5009C	94.6	81.0	366.0	4,410	48,598
E30085R	300	900	5009C	94.6	81.0	292.8	4,410	48,598
E3508	350	900	5011B	94.8	81.0	426.0	5,040	59,712
E35085	350	900	5011B	94.8	81.0	340.8	5,040	59,712
E3508R	350	900	5011C	94.8	81.0	426.0	5,040	59,712
E35085R	350	900	5011C	94.8	81.0	340.8	5,040	59,712
E4008	400	900	5808B	94.8	82.5	478.0	5,355	76,928
E40085	400	900	5808B	94.8	82.5	382.4	5,355	76,928
E4008R	400	900	5808C	94.8	82.5	478.0	5,355	76,928
E40085R	400	900	5808C	94.8	82.5	382.4	5,355	76,928
E4508	450	900	5808B	95.0	82.5	537.0	5,723	79,909
E45085	450	900	5808B	95.0	82.5	429.6	5,723	79,909
E4508R	450	900	5808C	95.0	82.5	537.0	5,723	79,909
E45085R	450	900	5808C	95.0	82.5	429.6	5,723	79,909
E5008	500	900	5810B	95.2	82.5	596	6,300	85,522
E50085	500	900	5810B	95.2	82.5	476.8	6,300	85,522
E5008R	500	900	5810C	95.2	82.5	596	6,300	85,522
E50085R	500	900	5810C	95.2	82.5	479.8	6,300	85,522
E6002	600	3600	5810A	95.4	90.5	650	6,355	75,164
E60025	600	3600	5810A	95.4	90.5	520	6,355	75,164
E6004	600	1800	5808B	95.5	90.0	654	6,360	70,142
E60045	600	1800	5808B	95.5	90.0	523.2	6,360	70,142
E6004R	600	1800	5808C	95.5	90.0	654	6,360	70,142
E60045R	600	1800	5808C	95.5	90.0	523.2	6,360	70,142
E6006	600	1200	5810B	95.6	86.8	677	6,720	83,002
E60065	600	1200	5810B	95.6	86.8	541.6	6,720	83,002
E6006R	600	1200	5810C	95.6	86.8	677	6,720	83,002
E60065R	600	1200	5810C	95.6	86.8	541.6	6,720	83,002
E6008	600	900	6808B	95.5	84.0	700	8,750	101,254
E60085	600	900	6808B	95.5	84.0	560	8,750	101,254
E6008R	600	900	6808C	95.5	84.0	700	8,750	101,254
E60085R	600	900	6808C	95.5	84.0	560	8,750	101,254

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(2) Ratings above 600 HP ("E" motors) do not have a NEMA Premium requirement and therefore will continue to be stock items.

(3) Per DOE regulations, this High Efficiency inventory (Ratings Below 600 HP) will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient 8 pole MAX-E1® motors beginning on page 70.

(4) All data subject to change without notice.

AEHE, HIGH EFFICIENCY [E]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460/575V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
E7002	700	3600	5810A	95.5	90.5	758	6,500	82,862
E70025	700	3600	5810A	95.5	90.5	606.4	6,500	82,862
E7004	700	1800	5810B	95.6	90.0	762	7,140	82,441
E70045	700	1800	5810B	95.6	90.0	609.6	7,140	82,441
E7004R	700	1800	5810C	95.6	90.0	762	7,140	82,441
E70045R	700	1800	5810C	95.6	90.0	609.6	7,140	82,441
E7006	700	1200	5810B	95.8	86.8	788	7,245	93,780
E70065	700	1200	5810B	95.8	86.8	630.4	7,245	93,780
E7006R	700	1200	5810C	95.8	86.8	788	7,245	93,780
E70065R	700	1200	5810C	95.8	86.8	630.4	7,245	93,780
E7008	700	900	6808B	95.6	84.0	816	8,925	108,547
E70085	700	900	6808B	95.6	84.0	652.8	8,925	108,547
E7008R	700	900	6808C	95.6	84.0	816	8,925	108,547
E70085R	700	900	6808C	95.6	84.0	652.8	8,925	108,547
E8002	800	3600	6808A	95.5	90.5	867	8,750	111,092
E80025	800	3600	6808A	95.5	90.5	693.6	8,750	111,092
E8004	800	1800	5810B	95.6	90.5	866	7,613	88,323
E80045	800	1800	5810B	95.6	90.5	692.8	7,613	88,323
E8004R	800	1800	5810C	95.6	90.5	866	7,613	88,323
E80045R	800	1800	5810C	95.6	90.5	692.8	7,613	88,323
E8006	800	1200	6808B	96.0	87.0	897	8,000	106,503
E80065	800	1200	6808B	96.0	87.0	717.6	8,000	106,503
E8006R	800	1200	6808C	96.0	87.0	897	8,400	106,503
E80065R	800	1200	6808C	96.0	87.0	717.6	8,400	106,503
E8008	800	900	6808B	95.6	84.0	933	9,293	114,776
E80085	800	900	6808B	95.6	84.0	746.4	9,293	114,776
E8008R	800	900	6808C	95.6	84.0	933	9,293	114,776
E80085R	800	900	6808C	95.6	84.0	746.4	9,293	114,776

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "EP00545" for 5 HP, 1800 RPM, 575V.

(2) Ratings above 600 HP ("E" motors) do not have a NEMA Premium requirement and therefore will continue to be stock items.

(3) Per DOE regulations, this High Efficiency inventory (Ratings Below 600 HP) will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient 8 pole MAX-E1® motors beginning on page 70.

(4) All data subject to change without notice.

AEHH8NCF, NEMA PREMIUM, FOOTED C-FACE (1 HP - 300 HP) [EP_C]
AEUH8NDC, NEMA PREMIUM, ROUND BODY C-FACE (1 HP - 300 HP) [EPV_C]

Effective 07-08-18
Supercedes 03-24-17

HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	SHIPPING WT. (lbs.)	FOOTED C-FACE		ROUND BODY C-FACE	
							CATALOG NO.	LIST PRICE ($)	CATALOG NO.	LIST PRICE ($)
1	3600	143TC	82.5	85.0	1.34	59	EP0012C	555	EPV0012C	592
1	1800	143TC	85.5	73.0	1.50	59	EP0014C(C)	547	EPV0014C(C)	610
1	1200	145TC	82.5	65.5	1.73	88	EP0016C	710	EPV0016C	671
1.5	3600	143TC	84.0	83.5	2.00	59	EP1/52C	600	EPV1/52C	635
1.5	1800	145TC	86.5	78.0	2.08	65	EP1/54C(C)	627	EPV1/54C(C)	650
1.5	1200	182TC	87.5	63.5	2.53	133	EP1/56C	737	EPV1/56C	723
2	3600	145TC	86.5	86.0	2.52	65	EP0022C	630	EPV0022C	754
2	1800	145TC	86.5	78.0	2.78	65	EP0024C(C)	668	EPV0024C(C)	763
2	1200	184TC	88.5	70.5	3.00	145	EP0026C(C)	830	EPV0026C(C)	950
3	3600	182TC	88.5	90.0	3.53	100	EP0032C	774	EPV0032C	884
3	1800	182TC	89.5	81.5	3.85	100	EP0034C(C)	756	EPV0034C(C)	864
3	1200	213TC	89.5	78.0	4.02	191	EP0036C(C)	1,091	EPV0036C(C)	1,378
5	3600	184TC	88.5	92.5	5.72	120	EP0052C	913	EPV0052C	1,042
5	1800	184TC	89.5	85.5	6.12	120	EP0054C(C)	868	EPV0054C(C)	992
5	1200	215TC	91.0	82.5	6.24	239	EP0056C(C)	1,447	EPV0056C(C)	1,653
7.5	3600	213TC	91.0	89.0	8.67	175	EP7/52C	1,233	EPV7/52C	1,409
7.5	1800	213TC	91.7	86.5	8.85	175	EP7/54C(C)	1,238	EPV7/54C(C)	1,415
7.5	1200	254TC	91.0	80.5	9.59	345	EP7/56C(C)	1,967	EPV7/56C(C)	2,248
10	3600	215TC	91.0	89.5	11.5	198	EP0102C	1,429	EPV0102C	1,634
10	1800	215TC	91.7	88.0	11.6	198	EP0104C(C)	1,447	EPV0104C(C)	1,653
10	1200	256TC	91.0	80.5	12.8	403	EP0106C(C)	2,314	EPV0106C(C)	2,945
15	3600	254TC	92.4	91.5	16.6	310	EP0152C	1,945	EPV0152C	2,222
15	1800	254TC	92.4	88.0	17.3	310	EP0154C(C)	1,888	EPV0154C(C)	2,158
15	1200	284TC	92.4	83.5	18.2	488	EP0156C(C)	3,240	EPV0156C(C)	3,703
20	3600	256TC	92.4	92.5	21.9	350	EP0202C	2,361	EPV0202C	2,898
20	1800	256TC	93.0	87.5	23.0	350	EP0204C(C)	2,286	EPV0204C(C)	2,912
20	1200	286TC	91.7	84.0	24.3	583	EP0206C(C)	4,050	EPV0206C(C)	4,397
25	3600	284TSC	92.4	91.0	27.8	430	EP0252C	3,183	EPV0252C	3,352
25	1800	284TC	93.6	86.0	29.1	441	EP0254C(C)	2,997	EPV0254C(C)	3,157
25	1200	324TC	93.0	83.0	30.3	769	EP0256C(C)	5,035	EPV0256C(C)	5,301
30	3600	286TSC	93.0	91.0	33.2	469	EP0302C	3,669	EPV0302C	3,864
30	1800	286TC	93.6	87.5	34.3	490	EP0304C(C)	3,530	EPV0304C(C)	3,717
30	1200	326TC	93.0	80.5	37.5	822	EP0306C(C)	5,555	EPV0306C(C)	5,849
40	3600	324TSC	94.1	90.0	44.2	635	EP0402C	4,803	EPV0402C	5,057
40	1800	324TC	94.1	86.0	46.3	682	EP0404C(C)	4,629	EPV0404C(C)	4,875
40	1200	364TC	94.1	86.5	46.0	1,018	EP0406C(C)	7,349	EPV0406C(C)	7,738
50	3600	326TSC	94.1	91.0	54.7	710	EP0502C	6,249	EPV0502C	6,581
50	1800	326TC	94.5	87.0	56.9	744	EP0504C(C)	5,787	EPV0504C(C)	6,093
50	1200	365TC	94.1	86.0	57.8	1,172	EP0506C(C)	8,911	EPV0506C(C)	9,384
60	3600	364TSC	94.1	93.0	64.2	839	EP0602C	8,101	EPV0602C	8,275
60	1800	364TC	95.0	86.5	68.4	920	EP0604C(C)	7,464	EPV0604C(C)	7,625
60	1200	404TC	94.5	87.0	68.3	1,384	EP0606C(C)	10,762	EPV0606C(C)	10,994
75	3600	365TSC	94.5	93.0	79.9	903	EP0752C	10,184	EPV0752C	10,403
75	1800	365TC	95.4	86.5	85.1	1,050	EP0754C(C)	9,258	EPV0754C(C)	9,457
75	1200	405TC	94.5	86.5	85.9	1,527	EP0756C(C)	12,557	EPV0756C(C)	12,827
100	3600	405TSC	95.4	92.0	107	1,183	EP1002C	13,771	EPV1002C	14,068
100	1800	405TC	95.4	87.5	112	1,310	EP1004C(C)	12,960	EPV1004C(C)	13,240
100	1200	444TC	95.0	82.5	119	1,750	EP1006C	15,579	EPV1006C	15,835
125	3600	444TSC	95.0	86.0	143	1,654	EP1252C	17,871	~	~
125	1800	444TC	95.4	85.0	144	1,650	EP1254C	17,150	~	~
125	1800	444TSC	95.4	85.0	144	1,650	EP1254CS	17,150	~	~
125	1200	445TC	95.0	83.0	148	1,750	EP1256C	19,403	~	~
150	3600	445TSC	95.0	87.0	170	1,740	EP1502C	20,703	~	~
150	1800	445TC	95.8	85.0	172	1,830	EP1504C	19,137	~	~
150	1800	445TSC	95.8	85.0	172	1,830	EP1504CS	19,137	~	~
150	1200	447TC	95.8	83.5	176	2,230	EP1506C	23,484	~	~
200	3600	447TSC	95.4	89.0	221	1,960	EP2002C	27,614	~	~
200	1800	447TC	96.2	87.0	224	2,270	EP2004C	24,349	~	~
200	1800	447TSC	96.2	87.0	224	2,270	EP2004CS	24,349	~	~
200	1200	449TC	95.8	84.0	233	2,520	EP2006C	29,355	~	~
250	3600	449TSC	95.8	89.8	272	2,400	EP2502C	34,505	~	~
250	1800	449TC	96.2	88.0	277	2,550	EP2504C	29,870	~	~
250	1800	449TSC	96.2	88.0	277	2,550	EP2504CS	29,870	~	~
250	1200	449TC	95.8	84.5	289	2,630	EP2506C	32,586	~	~
300	3600	449TSC	95.8	90.2	325	2,640	EP3002C	37,823	~	~
300	1800	449TC	96.2	88.0	332	2,680	EP3004C	31,106	~	~
300	1800	449TSC	96.2	88.0	332	2,680	EP3004CS	31,106	~	~

Notes:
(1) Motors meet design B torques, except where noted with (C).
(2) Ratings 150 HP and larger are 460V only.
(3) Footed C-Face Frame Size 140, BA dim = 2.25", Frame Size 180 BA dim = 2.75".
(C) Meets NEMA Design C Torque.

KEYLESS SHAFT MOTOR

AEHHSY, NEMA PREMIUM (200 HP - 500 HP) [EPY]
AEHESY, HIGH EFFICIENCY [EY]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Compressors
- Mixers
- Any Severe Duty/ Petro-Chem Pulp & Paper Application

FEATURES:

- Output Range: 200 - 800 HP
- Speed: 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 460V Only
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum(3)
- CSA Certified for Class II, Div. 2, Groups F & G - Temp Code T3 Minimum(3)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Cast Iron Frame, End Brackets & Fan Cover and Main Conduit Box(6)
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- SCM440 Q&T Keyless Oversized Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction or Copper/Copper Alloy Rotor Construction. See product page for more details.
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Light Gray - Munsell N5.0
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings on Regreasable Models
- Labyrinth Type Metal Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque (350 HP and Larger are 3:1 Constant Torque)
- 6 Leads
- Motors are U.L. Recognized, CSA Approved and CE Marked
- Provisions for Bearing RTDs, both End Brackets Pre-Drilled and Plugged; F#5000 and Larger Only

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) CSA Certification for Hazardous Locations only applies to select ratings. See product page for select details.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(6) F# 5000 and Larger with Pressed Steel Plate Main Conduit Box.

KEYLESS SHAFT MOTOR

AEHHSY, NEMA PREMIUM (200 HP - 500 HP) [EPY]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	SHAFT DIAMETER (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EPY2006(1,3)	200	1200	449TY	95.8	84.0	233	3.875	2,685	30,363
EPY2008(1,3)	200	900	449TY	94.5	80.0	248	3.875	3,090	42,605
EPY2504(1,3)	250	1800	449TY	96.2	88.0	277	3.875	2,720	30,901
EPY2506(1,3)	250	1200	449TY	95.8	84.5	289	3.875	2,925	31,728
EPY2508(1,2,3)	250	900	5009UZ	95.0	81.0	304	5.000	4,200	47,517
EPY3004(1,3)	300	1800	449TY	96.2	88.0	332	3.875	2,855	32,288
EPY3006(1,3)	300	1200	449TY	95.8	84.5	347	3.875	3,100	33,202
EPY3008(1,2,3)	300	900	5009UZ	95.0	81.0	365	5.000	4,410	51,842
EPY3504(1,3)	350	1800	449TY	96.2	88.0	387	3.875	3,280	34,811
EPY3506(1,2,3)	350	1200	5011UZ	95.8	87.0	393	5.000	4,950	55,703
EPY3508(1,2,3)	350	900	5011UZ	95.0	81.0	426	5.000	5,040	62,956
EPY4004(1,2,3)	400	1800	5009UZ	96.2	90.0	433	5.000	4,025	50,506
EPY4006(1,2,3)	400	1200	5011UZ	95.8	87.0	449	5.000	4,950	63,598
EPY4008(1,2,3)	400	900	5808UZ	95.0	82.5	478	5.750	5,590	85,062
EPY4504(1,2,3)	450	1800	5011UZ	96.2	90.0	487	5.000	5,040	59,707
EPY4506(1,2,3)	450	1200	5808UZ	95.8	88.0	500	5.750	5,550	75,784
EPY4508(1,2,3)	450	900	5808UZ	95.0	82.5	538	5.750	6,320	88,043
EPY5004(1,2,3)	500	1800	5011UZ	96.2	90.0	541	5.000	5,300	65,277
EPY5006(1,2,3)	500	1200	5808UZ	95.8	88.0	555	5.750	5,900	81,352
EPY5008(1,2,3)	500	900	5810UZ	95.0	83.0	594	5.750	6,950	93,656

Notes:

(1) Noted ratings CSA Certified for Hazardous Locations Class 1 Div 2, Class 2 Div 2.
(2) Noted ratings with Copper/Copper Alloy Rotor Construction.
(3) Data subject to change without notice.

KEYLESS SHAFT MOTOR

AEHESY, HIGH EFFICIENCY [EY]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	SHAFT DIAMETER (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
EY2006	200	1200	449TY	95.8	84.0	233	3.875	2,685	47,185
EY2008	200	900	449TY	94.5	80.0	248	3.875	3,090	52,670
EY2504	250	1800	449TY	96.2	88.0	277	3.875	2,720	47,619
EY2506	250	1200	449TY	95.8	84.5	289	3.875	2,925	47,741
EY2508	250	900	5009UZ	94.5	81.0	304	5.000	4,200	56,699
EY3004	300	1800	449TY	96.2	88.0	332	3.875	2,855	48,256
EY3006	300	1200	449TY	95.8	84.5	347	3.875	3,100	48,925
EY3008(2,4,5)	300	900	5009UZ	94.6	81.0	365	5.000	4,410	60,997
EY3504	350	1800	449TY	96.2	88.0	387	3.875	3,280	48,668
EY3508(2,4,5)	350	900	5011UZ	94.8	81.0	426	5.000	5,040	72,799
EY4004	400	1800	5009UZ	95.2	90.0	433	5.000	4,025	59,140
EY4006(2,4,5)	400	1200	5011UZ	95.0	88.0	449	5.000	4,950	75,131
EY4008(2,3,4,5)	400	900	5808UZ	94.8	82.0	476	5.750	5,590	100,708
EY4504	450	1800	5011UZ	95.2	90.0	487	5.000	5,040	68,227
EY4506(2,3,4,5)	450	1800	5808UZ	95.0	88.0	500	5.750	5,550	89,428
EY4508(2,3,4,5)	450	1800	5808UZ	95.0	82.5	535	5.750	6,320	103,066
EY5004	500	1800	5011UZ	95.3	90.0	541	5.750	5,300	73,160
EY5006(2,3,4,5)	500	1200	5808UZ	95.4	86.5	555	5.750	5,900	95,254
EY5008(2,3,4,5)	500	900	5810UZ	95.2	82.5	590	5.750	6,950	110,692
EY6004(2,3,4,5)	600	1800	5808UZ	95.5	90.0	654	5.750	6,250	92,430
EY6006(2,3,4,5)	600	1200	5810UZ	95.6	86.8	677	5.750	6,550	111,229
EY6008(2,3,4,5)	600	900	6808UZ	95.5	84.0	700	5.750	8,600	123,794
EY7004(2,3,4,5)	700	1800	5810UZ	95.6	90.0	762	5.750	7,350	108,203
EY7006(2,3,4,5)	700	1200	5810UZ	95.8	86.8	788	5.750	7,450	127,557
EY7008(2,3,4,5)	700	900	6808UZ	95.6	84.0	816	5.750	9,050	132,490
EY8004(2,3,4,5)	800	1800	5810UZ	95.6	90.5	866	5.750	7,800	115,715
EY8006(2,3,4,5)	800	1200	6808UZ	96.0	87.0	897	5.750	8,550	138,656
EY8008(2,3,4,5)	800	900	6808UZ	95.6	84.0	933	5.750	9,400	142,347

Notes:

(1) Per DOE regulations, the High Efficiency inventory horsepower range of 200 HP - 500 HP will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient Keyless Shaft motors on page 82.
(2) Ratings in **Bold Print** do not have a DOE mandated NEMA Premium requirement and therefore will continue to be stock items. No change to current design.
(3) Noted ratings CSA Certified for Hazardous Locations Class 1 Div 2.
(4) Noted ratings with Copper/Copper Alloy Rotor Construction.
(5) Data subject to change without notice.

MAX-E2/841® LITE

AEHH, NEMA PREMIUM [HH]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Crushers
- Compressors
- Mixers
- Conveyors
- Severe Duty/ Petro-Chem
- Pulp & Paper Application
- Marine Duty

FEATURES:

- Output Range: 1 - 300 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled 280T Frames and Smaller are IP55; 280TS Frames and Larger are IP56
- Voltage: 460V Only
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum
- CSA Certified for Class II, Div. 2, Groups F & G - Temp Code T3 Minimum(5) (444T and above)
- IEEE 841 Ready
- Meets IEEE 45 Marine Duty
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum; Various Ratings also Meet Design C
- Cast Iron Frame, End Brackets & Fan Cover and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: 2 Part Epoxy
- Paint Color: Blue - Munsell 5PB 3/8
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings
- Rubber Dust Flinger on DE for F# 140T - 280T
- Oil Seal/V-Ring on Both Ends for F# 320T - 400T
- Labyrinth Type Metal Flinger on Both Ends for F# 440T and Larger
- Cast Iron Inner and Outer Bearing Caps for F# 400T and Larger
- Stainless Steel Nameplate and Hardware
- Stainless Steel Automatic Breather Drain
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(3,4)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque (350 HP and Larger are 3:1 Constant Torque)
- Motors are U.L. Recognized, CSA Approved
- 3 Leads Only
- Dual Drilled Feet Available on Most Ratings - Longer Frames (i.e. 145T Drilled also for 143T)
- Vibration Not to Exceed 0.08 Inches Per Second
- Noise Level Not to Exceed 85 dB(A) at 1 Meter Unloaded

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(5) Various temp codes apply to ratings. Consult a stock product specialist for accurate code.

AEHH, NEMA PREMIUM [HH]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	SHIPPING WT. (lbs.)	LIST PRICE ($)
HH0012	1	3600	143T	85.0	82.50	1.3	58	525
HH0014(C)	1	1800	143T	73.0	85.50	1.5	58	503
HH0016	1	1200	145T	65.5	82.50	1.7	97	626
HH1/52	1.5	3600	143T	83.5	84.00	2.0	58	544
HH1/54(C)	1.5	1800	145T	78.0	86.50	2.1	65	577
HH1/56	1.5	1200	182T	63.5	87.50	2.5	130	647
HH0022	2	3600	145T	86.0	86.50	2.5	78	589
HH0024(C)	2	1800	145T	78.0	86.50	2.8	97	615
HH0026(C)	2	1200	184T	70.5	88.50	3.0	150	743
HH0032	3	3600	182T	90.0	88.50	3.5	100	687
HH0034(C)	3	1800	182T	84.0	89.50	3.7	130	693
HH0036(C)	3	1200	213T	78.0	89.50	4.0	220	963
HH0052	5	3600	184T	92.5	88.50	5.7	140	857
HH0054(C)	5	1800	184T	85.5	89.50	6.1	150	818
HH0056(C)	5	1200	215T	82.5	91.00	6.2	235	1,400
HH7/52	7.5	3600	213T	89.0	91.00	8.7	202	1,155
HH7/54(C)	7.5	1800	213T	86.5	91.70	8.9	202	1,161
HH7/56(C)	7.5	1200	254T	80.5	91.00	9.6	323	1,942
HH0102	10	3600	215T	89.5	91.00	11.5	224	1,345
HH0104(C)	10	1800	215T	88.0	91.70	11.6	224	1,381
HH0106(C)	10	1200	256T	80.5	91.00	12.8	380	2,373
HH0152	15	3600	254T	91.5	92.40	16.6	323	1,884
HH0154(C)	15	1800	254T	88.0	92.40	17.3	345	1,833
HH0156(C)	15	1200	284T	83.5	92.40	18.2	540	3,191
HH0202	20	3600	256T	92.5	92.40	21.9	367	2,365
HH0204(C)	20	1800	256T	87.5	93.00	23.0	425	2,310
HH0206(C)	20	1200	286T	84.0	91.70	24.3	565	3,954
HH0252	25	3600	284TS	91.0	92.40	27.8	490	2,940
HH0254(C)	25	1800	284T	86.0	93.60	29.1	555	2,765
HH0256(C)	25	1200	324T	83.0	93.00	30.3	759	4,774
HH0302	30	3600	286TS	91.0	93.00	33.2	535	3,457
HH0304(C)	30	1800	286T	87.5	93.60	34.3	656	3,417
HH0306(C)	30	1200	326T	80.5	93.00	37.5	795	5,458
HH0402	40	3600	324TS	90.0	94.10	44.2	755	4,536
HH0404(C)	40	1800	324T	86.0	94.10	46.3	740	4,374
HH0406(C)	40	1200	364T	86.5	94.10	46	898	7,292
HH0502	50	3600	326TS	91.0	94.10	54.7	782	5,892
HH0504(C)	50	1800	326T	87.0	94.50	56.9	845	5,371
HH0506(C)	50	1200	365T	86.0	94.10	57.8	1,110	8,679
HH0602	60	3600	364TS	93.0	94.10	64.2	853	7,979
HH0604(C)	60	1800	364T	86.5	95.00	68.4	955	7,699
HH0606(C)	60	1200	404T	87.0	94.50	68.3	1,355	10,359
HH0752	75	3600	365TS	93.0	94.50	79.9	1,015	9,937
HH0754(C)	75	1800	365T	86.5	95.40	85.1	1,040	9,658
HH0756(C)	75	1200	405T	86.5	94.50	85.9	1,363	11,968
HH1002	100	3600	405TS	92.0	95.40	107	1,330	13,500
HH1004(C)	100	1800	405T	87.5	95.40	112	1,385	12,456
HH1006	100	1200	444T	82.5	95.00	119	1,833	16,656
HH1252	125	3600	444TS	86.0	95.00	143	1,783	17,637
HH1254	125	1800	444T	84.0	95.40	146	1,833	16,377
HH1256	125	1200	445T	83.0	95.00	148	1,961	20,547
HH1502	150	3600	445TS	87.0	95.00	170	1,808	21,137
HH1504	150	1800	445T	84.0	95.80	175	2,037	19,071
HH1506	150	1200	447T	83.5	95.80	176	2,400	22,997
HH2002	200	3600	447TS	87.0	95.40	226	2,317	27,344
HH2004	200	1800	447T	84.5	96.20	230	2,426	23,649
HH2006	200	1200	449T	84.0	95.80	233	2,801	29,660
HH2502	250	3600	449TS	88.0	95.80	278	2,725	35,448
HH2504	250	1800	449T	85.5	96.20	285	2,710	30,155
HH2506	250	1200	449T	84.5	95.80	289	3,080	38,212
HH3002	300	3600	449TS	88.0	95.80	333	2,928	42,477
HH3004	300	1800	449T	85.5	96.20	342	2,980	36,380

Notes:

(1) 575V not offered as stock for this product line.

(2) All data subject to change without notice.

(C) Meets NEMA Design C Torque.

AEHH8B, NEMA PREMIUM [HB]
AEHH8BCF, NEMA PREMIUM, FOOTED C-FACE (1 HP - 100 HP) [HB_C]
AEUH8BDC, NEMA PREMIUM, ROUND BODY C-FACE (1 HP - 100 HP) [HBV_C]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Fans & Blowers
- Pumps
- Crushers
- Compressors
- Mixers
- Conveyors
- Severe Duty/ Petro-Chem
- Pulp & Paper Application
- Marine Duty

FEATURES:

- Output Range: 1 - 500 HP
- Speed: 3600, 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP56)
- Voltage: 460V Only(1)
- Meets GM 7E-TA Specifications
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum(6,7)
- CSA Certified for Class II, Div. 2, Groups F & G - Temp Code T3 Minimum (Frame 444T and Above)(6,7)
- Meets or Exceeds IEEE 841 Standards
- Meets IEEE 45 Marine Duty and ABS Design Assessment up to 500 HP(2,4,6 pole only)(10)
- Extended Warranty - 60 Months from Date of Manufacture
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum; Various Ratings also Meet Design C
- Cast Iron Frame, End Brackets & Fan Cover and Main Conduit Box(8)
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 50˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation; Except 2 Pole "Hybrid" and F# 5000 and Larger Ratings are Counter-Clockwise facing the DE
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F# 140T - 449T
  Copper/Copper Alloy Rotor Construction for F# 5000 and Larger(9)
- Paint System: 2 Part Epoxy
- Paint Color: Blue - Munsell 5PB 3/8
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings for Horizontal or Vertical Mounting
- VBXX INPRO™ Seals are IP66 Rated and are Installed on Both Ends
- Stainless Steel Nameplate and Hardware
- Stainless Steel Automatic Breather Drain
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2 (4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque (350 HP and Larger are 3:1 Constant Torque)(4,5)
- Motors are U.L. Recognized, CSA Approved
- 3 Leads Only
- Dual Drilled Feet Available on Most Ratings - Longer Frames (i.e. 145T Drilled also for 143T)
- Vibration Not to Exceed 0.08 Inches Per Second
- Noise Level Not to Exceed 85 dB(A) at 1 Meter Unloaded

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:
(1) TWMC carries minimal MAX-E2® 575V stock; please check availability to ensure required motors are available. Ratings may be available from our Canadian Warehouses at a higher price or from our factory with a longer lead time. Pricing and lead time may vary.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(6) Catalog# HB3502 & HB3504 are "Hybrid" ratings; Not CSA Certified (Self-Certify Only) for hazardous locations, and not dual drilled.
(7) Catalog# HB3006 also not CSA Certified for hazardous locations (Self-Certify Only).
(8) F# 5000 and with Larger with Pressed Steel Plate Main Conduit Box.
(9) F# 5007 - 5011 8 Pole Ratings are Aluminum Die Cast Squirrel Cage Rotor Construction.
(10) Contact Application Engineering for ABS Motor Pricing
(11) To convert to IP65 the M17 modification will be required. To convert to IP66 the M31 modification will be required.

AEHH8B, NEMA PREMIUM [HB]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
HB0012	1	3600	143T	82.50	85.0	1.3	58	998
HB0014(C)	1	1800	143T	85.50	73.0	1.5	58	956
HB0016	1	1200	145T	82.50	65.5	1.7	97	1,043
HB0018	1	900	182T	77.00	58.5	2.1	115	1,260
HB1/52	1.5	3600	143T	84.00	83.5	2.0	58	987
HB1/54(C)	1.5	1800	145T	86.50	78.0	2.1	65	999
HB1/56	1.5	1200	182T	87.50	63.5	2.5	130	1,154
HB1/58	1.5	900	184T	78.50	60.5	3.0	125	1,409
HB0022	2	3600	145T	86.50	86.0	2.5	78	1,007
HB0024(C)	2	1800	145T	86.50	78.0	2.8	97	1,015
HB0026(C)	2	1200	184T	88.50	70.5	3.0	150	1,270
HB0028	2	900	213T	85.50	64.0	5.0	173	1,868
HB0032	3	3600	182T	88.50	90.0	3.5	100	1,189
HB0034(C)	3	1800	182T	89.50	84.0	3.7	130	1,160
HB0036(C)	3	1200	213T	89.50	78.0	4.0	220	1,669
HB0038	3	900	215T	85.50	66.0	5.0	192	2,069
HB0052	5	3600	184T	88.50	92.5	5.7	140	1,385
HB0054(C)	5	1800	184T	89.50	85.5	6.1	150	1,297
HB0056(C)	5	1200	215T	91.00	82.5	6.2	235	2,021
HB0058	5	900	254T	86.50	72.0	7.5	305	2,739
HB7/52	7.5	3600	213T	91.00	89.0	8.7	202	1,805
HB7/54(C)	7.5	1800	213T	91.70	86.5	8.9	202	1,785
HB7/56(C)	7.5	1200	254T	91.00	80.5	9.6	323	2,837
HB7/58	7.5	900	256T	86.50	71.5	11.5	365	3,169
HB0102	10	3600	215T	91.00	89.5	11.5	224	1,930
HB0104(C)	10	1800	215T	91.70	88.0	11.6	224	1,958
HB0106(C)	10	1200	256T	91.00	80.5	12.8	380	3,277
HB0108	10	900	284T	89.50	73.5	14.2	445	4,120
HB0152	15	3600	254T	92.40	91.5	16.6	323	2,784
HB0154(C)	15	1800	254T	92.40	88.0	17.3	345	2,727
HB0156(C)	15	1200	284T	92.40	83.5	18.2	540	4,018
HB0158	15	900	286T	89.50	78.0	20.1	510	5,071
HB0202	20	3600	256T	92.40	92.5	21.9	367	3,329
HB0204(C)	20	1800	256T	93.00	87.5	23.0	425	3,214
HB0206(C)	20	1200	286T	91.70	84.0	24.3	565	4,734
HB0208	20	900	324T	90.20	81.0	25.6	585	5,932
HB0252	25	3600	284TS	92.40	91.0	27.8	490	3,930
HB0254(C)	25	1800	284T	93.60	86.0	29.1	555	3,800
HB0256(C)	25	1200	324T	93.00	83.0	30.3	759	5,931
HB0258	25	900	326T	90.20	79.5	25.6	684	6,695
HB0302	30	3600	286TS	93.00	91.0	33.2	535	4,184
HB0304(C)	30	1800	286T	93.60	87.5	34.3	656	4,082
HB0306(C)	30	1200	326T	93.00	80.5	37.5	795	6,315
HB0308	30	900	364T	93.00	77.5	39.0	898	9,078
HB0402	40	3600	324TS	94.10	90.0	44.2	755	5,713
HB0404(C)	40	1800	324T	94.10	86.0	46.3	740	5,597
HB0406(C)	40	1200	364T	94.10	86.5	46.0	898	9,411
HB0408	40	900	365T	91.70	76.5	53.4	1,035	11,143
HB0502	50	3600	326TS	94.10	91.0	54.7	835	6,788
HB0504(C)	50	1800	326T	94.50	87.0	56.9	835	6,271
HB0506(C)	50	1200	365T	94.10	86.0	57.8	963	10,601
HB0508	50	900	404T	93.00	80.5	53.4	1,098	12,683

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "HB00545" for 5 HP, 1800 RPM, 575V.

(2) All data subject to change without notice.

(C) Meets NEMA Design C Torque. All other motors are NEMA B Torque.

AEHH8B, NEMA PREMIUM [HB]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
HB0602	60	3600	364TS	94.10	93.0	64.2	920	10,369
HB0604(C)	60	1800	364T	95.00	86.5	68.4	930	9,855
HB0606(C)	60	1200	404T	94.50	87.0	68.3	1,201	11,980
HB0608	60	900	405T	93.00	81.0	74.6	1,410	13,765
HB0752	75	3600	365TS	94.50	93.0	79.9	1,005	11,747
HB0754(C)	75	1800	365T	95.40	86.5	85.1	1,040	10,964
HB0756(C)	75	1200	405T	94.50	86.5	85.9	1,363	13,225
HB0758	75	900	444T	93.60	79.0	95.6	1,790	17,206
HB1002	100	3600	405TS	95.40	92.0	107	1,330	14,865
HB1004(C)	100	1800	405T	95.40	87.5	112	1,385	13,501
HB1006	100	1200	444T	95.00	82.5	119	1,833	17,953
HB1008	100	900	445T	93.60	79.0	127	2,088	20,867
HB1252	125	3600	444TS	95.00	86.0	143	1,783	18,839
HB1254	125	1800	444T	95.40	84.0	146	1,833	17,902
HB1256	125	1200	445T	95.00	83.0	148	1,961	22,223
HB1258	125	900	447T	94.10	80.0	156	2,490	24,139
HB1502	150	3600	445TS	95.00	87.0	170	1,808	21,833
HB1504	150	1800	445T	95.80	84.0	175	2,037	19,847
HB1506	150	1200	447T	95.80	83.5	176	2,400	23,667
HB1508	150	900	449T	94.10	80.0	242	2,903	33,070
HB2002	200	3600	447TS	95.40	87.0	226	2,160	27,887
HB2004	200	1800	447T	96.20	84.5	230	2,426	23,826
HB2006	200	1200	449T	95.80	84.0	233	2,675	30,041
HB2008	200	900	449T	94.50	80.0	242	2,670	37,361
HB2502	250	3600	449TS	95.80	88.0	278	2,595	36,169
HB2504	250	1800	449T	96.20	85.5	285	2,801	32,494
HB2506	250	1200	449T	95.80	84.5	289	2,955	38,925
HB2508	250	900	5009B	95.00	81.0	304	4,200	57,450
HB3002	300	3600	449TS	95.80	88.0	326	2,928	44,802
HB3004	300	1800	449T	96.20	85.5	342	2,930	38,198
HB3006	300	1200	449T	95.80	86.5	339	3,450	57,919
HB3008	300	900	5009B	95.00	81.0	365	4,410	60,269
HB3502	350	3600	449TS	95.80	91.6	373	3,100	57,059
HB3504	350	1800	449T	96.20	90.0	379	3,350	53,470
HB3506	350	1200	5011B	95.80	87.0	393	4,200	79,500
HB3508	350	900	5011B	95.00	81.0	426	5,040	83,474
HB4002	400	3600	5009A	95.80	91.6	427	3,450	78,692
HB4004	400	1800	5009B	96.20	90.0	433	3,700	73,232
HB4006	400	1200	5011B	95.80	87.0	449	4,900	87,561
HB4008	400	900	5808B	95.40	82.5	476	5,355	90,188
HB4502	450	3600	5011A	95.80	91.7	480	4,200	87,126
HB4504	450	1800	5011B	96.20	90.0	487	4,800	82,925
HB4506	450	1200	5808B	95.80	88.0	500	5,250	104,410
HB4508	450	900	5808B	95.40	82.5	535	5,723	108,586
HB5002	500	3600	5011A	95.80	91.7	533	4,600	95,855
HB5004	500	1800	5011B	96.20	90.0	541	5,000	88,213
HB5006	500	1200	5808B	95.80	88.0	555	5,600	107,117
HB5008	500	900	5810C	95.60	83.0	590	6,300	110,331

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "HB00545" for 5 HP, 1800 RPM, 575V.
(2) All data subject to change without notice.
(C) Meets NEMA Design C Torque. All other motors are NEMA B Torque.

AEHH8BCF, NEMA PREMIUM, FOOTED C-FACE (1 HP - 100 HP) [HB_C]
AEUH8BDC, NEMA PREMIUM, ROUND BODY C-FACE (1 HP - 100 HP) [HBV_C]

Effective 07-08-18
Supercedes 03-24-17

HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	SHIPPING WT. (lbs.)	FOOTED C-FACE		ROUND BODY C-FACE	
							CATALOG NO.	LIST PRICE ($)	CATALOG NO.	LIST PRICE ($)
1	3600	143TC	82.5	85.0	1.34	58	HB0012C	1,146	HBV0012C	1,208
1	1800	143TC	85.5	73.0	1.50	58	HB0014C(C)	1,140	HBV0014C(C)	1,203
1	1200	145TC	82.5	65.5	1.73	97	HB0016C	1,223	HBV0016C	1,285
1.5	3600	143TC	84.0	83.5	2.00	65	HB1/52C	1,159	HBV1/52C	1,222
1.5	1800	145TC	86.5	78.0	2.08	65	HB1/54C(C)	1,211	HBV1/54C(C)	1,286
1.5	1200	182TC	87.5	63.5	2.53	137	HB1/56C	1,411	HBV1/56C	1,501
2	3600	145TC	86.5	86.0	2.52	78	HB0022C	1,194	HBV0022C	1,261
2	1800	145TC	86.5	78.0	2.78	97	HB0024C(C)	1,229	HBV0024C(C)	1,294
2	1200	184TC	88.5	70.5	3.00	150	HB0026C(C)	1,593	HBV0026C(C)	1,680
3	3600	182TC	88.5	90.0	3.53	100	HB0032C	1,411	HBV0032C	1,501
3	1800	182TC	89.5	84.0	3.74	130	HB0034C(C)	1,411	HBV0034C(C)	1,501
3	1200	213TC	89.5	78.0	4.02	220	HB0036C(C)	2,229	HBV0036C(C)	2,336
5	3600	184TC	88.5	92.5	5.72	140	HB0052C	1,635	HBV0052C	1,761
5	1800	184TC	89.5	85.5	6.12	150	HB0054C(C)	1,588	HBV0054C(C)	1,675
5	1200	215TC	91.0	82.5	6.24	235	HB0056C(C)	2,394	HBV0056C(C)	2,498
7.5	3600	213TC	91.0	89.0	8.67	202	HB7/52C	2,129	HBV7/52C	2,240
7.5	1800	213TC	91.7	86.5	8.85	202	HB7/54C(C)	2,164	HBV7/54C(C)	2,377
7.5	1200	254TC	91.0	80.5	9.59	323	HB7/56C(C)	3,299	HBV7/56C(C)	3,439
10	3600	215TC	91.0	89.5	11.50	224	HB0102C	2,281	HBV0102C	2,387
10	1800	215TC	91.7	88.0	11.60	224	HB0104C(C)	2,323	HBV0104C(C)	2,462
10	1200	256TC	91.0	80.5	12.80	380	HB0106C(C)	3,817	HBV0106C(C)	4,052
15	3600	254TC	92.4	91.5	16.60	323	HB0152C	3,240	HBV0152C	3,487
15	1800	254TC	92.4	88.0	17.30	345	HB0154C(C)	3,229	HBV0154C(C)	3,888
15	1200	284TC	92.4	83.5	18.20	540	HB0156C(C)	4,675	HBV0156C(C)	5,051
20	3600	256TC	92.4	92.5	21.90	367	HB0202C	3,870	HBV0202C	4,102
20	1800	256TC	93.0	87.5	23.00	425	HB0204C(C)	3,817	HBV0204C(C)	4,155
20	1200	286TC	91.7	84.0	24.30	565	HB0206C(C)	5,640	HBV0206C(C)	5,792
25	3600	284TSC	92.4	91.0	27.80	490	HB0252C	4,416	HBV0252C	4,586
25	1800	284TC	93.6	86.0	29.10	555	HB0254C(C)	4,365	HBV0254C(C)	5,176
25	1200	324TC	93.0	83.0	30.30	759	HB0256C(C)	6,721	HBV0256C(C)	6,927
30	3600	286TSC	93.0	91.0	33.20	535	HB0302C	4,706	HBV0302C	5,073
30	1800	286TC	93.6	87.5	34.30	656	HB0304C(C)	4,706	HBV0304C(C)	5,485
30	1200	326TC	93.0	80.5	37.50	795	HB0306C(C)	7,194	HBV0306C(C)	7,701
40	3600	324TSC	94.1	90.0	44.20	755	HB0402C	6,516	HBV0402C	7,138
40	1800	324TC	94.1	86.0	46.30	740	HB0404C(C)	6,340	HBV0404C(C)	6,553
40	1200	364TC	94.1	86.5	46.00	898	HB0406C(C)	10,647	HBV0406C(C)	10,893
50	3600	326TSC	94.1	91.0	54.70	782	HB0502C	7,500	HBV0502C	7,897
50	1800	326TC	94.5	87.0	56.90	845	HB0504C(C)	7,336	HBV0504C(C)	7,889
50	1200	365TC	94.1	86.0	57.80	1,110	HB0506C(C)	12,366	HBV0506C(C)	12,579
60	3600	364TSC	94.1	93.0	64.20	853	HB0602C	11,467	HBV0602C	11,696
60	1800	364TC	95.0	86.5	68.40	955	HB0604C(C)	11,131	HBV0604(C)	11,365
60	1200	404TC	94.5	87.0	68.30	1,355	HB0606C(C)	13,863	HBV0606C(C)	14,156
75	3600	365TSC	94.5	93.0	79.90	1,015	HB0752C	12,992	HBV0752C	13,191
75	1800	365TC	95.4	86.5	85.1	1,040	HB0754C(C)	12,423	HBV0754C(C)	12,943
75	1200	405TC	94.5	86.5	85.9	1,363	HB0756C(C)	15,092	HBV0756C(C)	15,366
100	3600	405TSC	95.4	92.0	107.0	1,330	HB1002C	16,304	HBV1002C	16,552
100	1800	405TC	95.4	87.5	112.0	1,385	HB1004C(C)	15,217	HBV1004C(C)	15,484

Notes:

(1) To check stock or order 575V motors, add "5" to the end of Catalog Number, for example: "HB00545" for 5 HP, 1800 RPM, 575V.

(2) All data subject to change without notice.

(3) Footed C-Face Frame Size 140, BA dim = 2.25", Frame Size 180 BA dim = 2.75".

(C) Meets NEMA Design C Torque.

MAX-HT™ LOW VOLTAGE CRUSHER DUTY

AEHHGD, NEMA PREMIUM, DESIGN C (20 HP - 200 HP) [CDP]
AEEAGD, HIGH EFFICIENCY, DESIGN C [CD]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Crushers
- Impactors
- Chippers/ Shredders
- Ball Mills/ Rolling Mills
- Any High Torque Application

FEATURES:

- Output Range: 20 - 600 HP
- Speed: 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum(6)
- CSA Certified for Class II, Div. 2, Groups F & G - Temp Code T3 Minimum (Frame 444T and above)(6)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design C Torques; Equal or Greater Than 200% Starting Torque / 250% Breakdown Torque
- Cast Iron Frame, End Brackets, Main Conduit Box; Rolled Steel Fan Cover(7)
- Grounding Terminal Inside Main Conduit Box(8)
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- High Strength 4140 AISI Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5 BG 3.5/0.5
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings
- Gamma (Axial Face) Seal on Both Ends for F# 140T - 400T
- Labyrinth Type Metal Flinger on Both Ends for F# 440T and Larger
- Cast Iron Inner and Outer Bearing Caps for F# 320T and Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1.4.4.2, Part 31(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque (350 HP and Larger are 3:1 Constant Torque)
- 12 Leads for 125 HP and Smaller
- 6 Leads for 150 HP and Larger
- Standard With Thermistors (PTC 140˚C) 1 per Phase
- Locknut and Washer on NDE for Vertical Shaft Down Applications on F# 440 and Larger
- Drain Holes / Plugs on Both End Brackets for Vertical Applications
- Threaded One Way Breather Drains for Horizontal Mount Applications

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

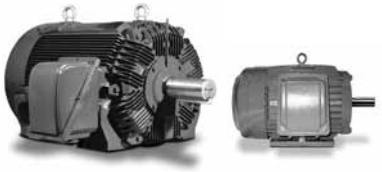
Notes:

(1) 575V motors available on a made-to order basis. Consult a Stock Product Application Specialist for details.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31
(6) **CSA Certification for Hazardous Locations only applies to AEHHGD, NEMA Premium Type.**
(7) F# 5000 and with Larger with Pressed Steel Plate Main Conduit Box; CDPxxxxRZs have a cast iron box with grade 8 bolts.
(8) Additional Foot Grounding Provision for F# 440 and Larger.

MAX-HT™ LOW VOLTAGE CRUSHER DUTY

AEHHGD, NEMA PREMIUM, DESIGN C (20 HP - 200 HP) [CDP]

Effective 07-08-18
Supercedes 03-24-17



CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
CDP0204	20	1800	256T	93.0	86.0	23.4	395	2,796
CDP0206	20	1200	286T	91.7	84.0	24.3	520	3,387
CDP0208	20	900	324T	91.0	81.0	25.4	557	5,468
CDP0254	25	1800	284T	93.6	86.0	29.1	510	3,118
CDP0256	25	1200	324T	93.0	83.0	30.3	745	5,242
CDP0258	25	900	326T	91.0	80.0	32.2	665	6,105
CDP0304	30	1800	286T	93.6	87.5	34.3	545	3,549
CDP0306	30	1200	326T	93.0	80.5	37.5	775	5,293
CDP0308	30	900	364T	93.0	78.0	38.7	718	6,491
CDP0308R	30	900	364T	93.0	78.0	38.7	718	6,491
CDP0404	40	1800	324T	91.4	86.0	46.3	710	4,670
CDP0406	40	1200	364T	91.4	86.5	46.0	945	7,205
CDP0406R	40	1200	364T	91.4	86.5	46.0	945	7,205
CDP0408	40	900	365T	93.0	78.0	52.0	807	9,938
CDP0408R	40	900	365T	93.0	78.0	52.0	807	9,938
CDP0504	50	1800	326T	94.5	87.0	57.0	795	5,445
CDP0506	50	1200	365T	94.1	86.0	58.0	1,040	8,509
CDP0506R	50	1200	365T	94.1	86.0	58.0	1,040	8,509
CDP0508	50	900	404T	93.0	81.0	62.0	868	11,419
CDP0508R	50	900	404T	93.0	81.0	62.0	868	11,419
CDP0604	60	1800	364T	95.0	86.5	68.0	870	7,662
CDP0604R	60	1800	364T	95.0	86.5	68.0	870	7,662
CDP0606	60	1200	404T	94.5	87.0	68.0	1,295	11,279
CDP0606R	60	1200	404T	94.5	87.0	68.0	1,295	11,279
CDP0608	60	900	405T	93.0	81.0	75.0	1,243	12,772
CDP0608R	60	900	405T	93.0	81.0	75.0	1,243	12,772
CDP0754	75	1800	365T	95.4	86.5	85.0	1,075	9,798
CDP0754R	75	1800	365T	95.4	86.5	85.0	1,075	9,798
CDP0756	75	1200	405T	94.5	86.5	86.0	1,317	11,870
CDP0756R	75	1200	405T	94.5	86.5	86.0	1,317	11,870
CDP0758	75	900	444T	93.6	73.0	103	1,600	25,472
CDP0758R	75	900	444T	93.6	73.0	103	1,600	25,472
CDP1004	100	1800	405T	95.4	87.5	112	1,360	12,226
CDP1004R	100	1800	405T	95.4	87.5	112	1,360	12,226
CDP1006	100	1200	444T	95.0	82.5	119	1,665	21,559
CDP1006R	100	1200	444T	95.0	82.5	119	1,665	21,559
CDP1008	100	900	445T	93.6	78.0	128	1,800	27,162
CDP1008R	100	900	445T	93.6	78.0	128	1,800	27,162
CDP1254	125	1800	444T	95.4	85.0	144	1,705	21,789
CDP1254R	125	1800	444T	95.4	85.0	144	1,705	21,789
CDP1256	125	1200	445T	95.0	83.0	148	1,995	26,611
CDP1256R	125	1200	445T	95.0	83.0	148	1,995	26,611
CDP1258	125	900	447T	94.1	80.0	155	2,450	30,714
CDP1258R	125	900	447TZ	94.1	80.0	155	2,450	30,714
CDP1504	150	1800	445T	95.8	85.0	172	1,865	22,828
CDP1504R	150	1800	445T	95.8	85.0	172	1,865	22,828
CDP1506	150	1200	447T	95.8	83.5	176	2,363	28,740
CDP1506R	150	1200	447TZ	95.8	83.5	176	2,363	28,740
CDP1508	150	900	449T	94.1	80.0	187	2,800	35,697
CDP1508R	150	900	449TZ	94.1	80.0	187	2,800	35,697
CDP2004	200	1800	447T	95.4	87.0	226	2,465	25,309
CDP2004R	200	1800	447TZ	95.4	87.0	226	2,465	25,309
CDP2006T	200	1200	449T	95.8	84.0	233	2,783	29,354
CDP2006R	200	1200	449TZ	95.8	84.0	233	2,783	29,354
CDP2008T	200	900	449T	94.5	82.5	240	2,875	29,857
CDP2008TR	200	900	449TZ	94.5	82.5	240	2,875	29,857

Notes:

(1) AEHHGD "CDP" motors replace AEEAGD "CD" motor line in compliance to new DOE standards.

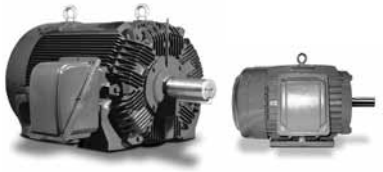
(2) All data subject to change without notice.

MAX-HT™ LOW VOLTAGE CRUSHER DUTY

CCOO2A

AEEAGD, HIGH EFFICIENCY, DESIGN C [CD]

Effective 07-08-18
Supercedes 03-24-17



CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
CD0204	20	1800	256T	91.0	90.0	22.9	395	1,955
CD0206	20	1200	286T	90.2	83.5	24.9	520	3,089
CD0208	20	900	324T	90.2	81.0	25.7	557	5,086
CD0254	25	1800	284T	92.4	86.5	29.3	510	2,428
CD0256	25	1200	324T	91.7	81.5	31.3	745	4,028
CD0258	25	900	326T	90.2	79.5	32.7	665	5,880
CD0304	30	1800	286T	92.4	88.0	34.6	545	2,946
CD0306	30	1200	326T	91.7	80.5	38.1	775	4,717
CD0308	30	900	364T	91.7	77.5	39.6	718	7,206
CD0404	40	1800	324T	93.0	90.0	44.8	710	3,811
CD0406	40	1200	364T	93.0	86.5	46.6	945	6,359
CD0406R	40	1200	364T	93.0	86.5	46.6	945	6,359
CD0408	40	900	365T	92.4	76.5	53.0	807	8,928
CD0408R	40	900	365T	92.4	76.5	53.0	807	8,928
CD0504	50	1800	326T	93.0	90.0	56.0	795	4,949
CD0506	50	1200	365T	93.0	85.5	59.0	1,040	7,687
CD0506R	50	1200	365T	93.0	85.5	59.0	1,040	7,687
CD0508	50	900	404T	93.0	80.5	62.5	868	9,979
CD0508R	50	900	404T	93.0	80.5	62.5	868	9,979
CD0604	60	1800	364T	93.6	87.0	69.0	870	6,700
CD0604R	60	1800	364T	93.6	87.0	69.0	870	6,700
CD0606	60	1200	404T	93.6	88.0	68.0	1,295	9,955
CD0606R	60	1200	404T	93.6	88.0	68.0	1,295	9,955
CD0608	60	900	405T	93.0	81.0	74.5	1,243	11,162
CD0608R	60	900	405T	93.0	81.0	74.5	1,243	11,162
CD0754	75	1800	365T	94.1	88.0	85.0	1,075	8,565
CD0754R	75	1800	365T	94.1	88.0	85.0	1,075	8,565
CD0756	75	1200	405T	93.6	88.5	85.0	1,317	10,326
CD0756R	75	1200	405T	93.6	88.5	85.0	1,317	10,326
CD0758	75	900	444T	92.4	79.5	95.6	1,600	22,702
CD0758R	75	900	444T	92.4	79.5	95.6	1,600	22,702
CD1004	100	1800	405T	94.5	90.0	110	1,360	10,791
CD1004R	100	1800	405T	94.5	90.0	110	1,360	10,791
CD1006	100	1200	444T	94.1	83.5	119	1,665	19,366
CD1006R	100	1200	444T	94.1	83.5	119	1,665	19,366
CD1008	100	900	445T	92.4	80.0	127	1,800	23,950
CD1008R	100	900	445T	92.4	80.0	127	1,800	23,950
CD1254	125	1800	444T	94.5	87.5	142	1,705	19,808
CD1254R	125	1800	444T	94.5	87.5	142	1,705	19,808
CD1256	125	1200	445T	94.1	83.0	150	1,995	23,718
CD1256R	125	1200	445T	94.1	83.0	150	1,995	23,718
CD1258	125	900	447T	93.0	81.0	155	2,450	27,921
CD1258R	125	900	447TZ	93.0	81.0	155	2,450	27,921

Notes:

(1) Per DOE regulations, this High Efficiency inventory in 256T - 449T frame will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of 256T - 449T frame Premium Efficient Crusher Duty (AEHHGD) motors on page 91.

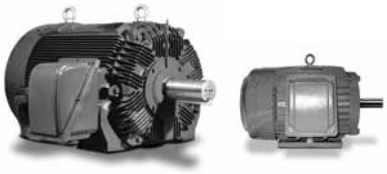
(2) All data subject to change without notice.

MAX-HT™ LOW VOLTAGE CRUSHER DUTY

CCOO2A

AEEAGD, HIGH EFFICIENCY, DESIGN C [CD]

Effective 07-08-18
Supercedes 03-24-17



CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
CD1504	150	1800	445T	95.0	88.0	168	1,865	20,752
CD1504R	150	1800	445T	95.0	88.0	168	1,865	20,752
CD1506	150	1200	447T	95.0	86.5	171	2,363	25,922
CD1506R	150	1200	447TZ	95.0	86.5	171	2,363	25,922
CD1508	150	900	449T	93.0	81.5	185	2,800	32,451
CD1508R	150	900	449TZ	93.0	81.5	185	2,800	32,451
CD2004R	200	1800	447TZ	95.0	88.5	223	2,465	22,557
CD2006R	200	1200	449TZ	95.0	86.5	228	2,783	26,162
CD2006RZ	200	1200	505UZ	95.0	85.0	231	3,500	26,148
CD2008R	200	900	5007C	94.1	80.0	249	3,728	39,222
CD2504TB	250	1800	449T	95.4	88.5	277	2,708	23,463
CD2504TR	250	1800	449TZ	95.4	88.5	277	2,708	23,463
CD2504R	250	1800	5007C	95.0	88.0	280	3,570	26,148
CD2504RZ	250	1800	505UZ	95.0	88.0	280	3,150	25,493
CD2506TR	250	1200	449TZ	95.4	88.5	277	2,800	27,725
CD2506R	250	1200	5007C	95.0	85.0	290	3,500	28,817
CD2506RZ	250	1200	586/7UZ	95.0	85.0	290	4,750	37,366
CD2508R	250	900	5009C	94.5	80.0	310	4,200	43,674
CD3004TR	300	1800	449TZ	95.4	88.5	333	2,800	27,483
CD3004R	300	1800	5007C	95.4	88.5	333	3,585	29,186
CD3004RZ	300	1800	586/7UZ	95.4	88.5	333	4,748	37,361
CD3006TR	300	1200	449TZ	95.4	88.5	333	3,100	33,559
CD3006R	300	1200	5009C	95.0	85.0	348	4,175	36,397
CD3006RZ	300	1200	586/7UZ	95.0	85.0	348	5,100	42,962
CD3008R(1)	300	900	5806C	94.5	81.0	367	5,093	54,417
CD3504TR	350	1800	449TZ	95.4	88.5	388	3,100	30,434
CD3504R	350	1800	5009C	95.4	88.5	388	3,945	32,510
CD3504RZ	350	1800	586/7UZ	95.4	88.5	388	5,093	40,182
CD3506R	350	1200	5806C	95.0	85.0	406	4,750	43,816
CD3506RZ	350	1200	586/7UZ	95.0	85.0	406	5,565	45,976
CD3508R(1)	350	900	5808C	94.5	81.0	427	5,610	57,032
CD4004R	400	1800	5806C	95.4	89.0	441	4,748	41,413
CD4004RZ	400	1800	586/7UZ	95.4	89.0	441	5,445	44,342
CD4006R(1)	400	1200	5808C	95.0	85.5	461	5,100	49,186
CD4006RZ(1)	400	1200	586/7UZ	95.0	85.5	461	6,020	49,186
CD4008R(1)	400	900	5808C	95.0	81.0	487	5,828	69,102
CD4504R	450	1800	5808C	95.4	89.5	493	5,093	46,108
CD4504RZ	450	1800	586/7UZ	95.4	89.5	493	6,510	46,108
CD4506R(1)	450	1200	5808C	95.4	85.5	517	5,565	53,427
CD5004R	500	1800	5808C	95.8	89.5	547	5,445	47,549
CD5006R(1)	500	1200	5808C	95.4	85.5	574	6,020	56,820
CD6004R(1)	600	1800	5808C	95.8	89.5	655	6,510	67,773
CD6006R(1)	600	1200	5810C	95.4	85.5	689	6,898	81,499

Notes:

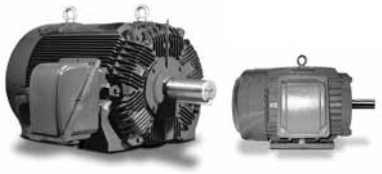
(1) Ratings in **Bold Print** do not have a DOE mandated NEMA Premium requirement and therefore will continue to be stock items. No change to current design.
(2) Per DOE regulations, the non-exempt High Efficiency inventory will be available through June 2018, or until current inventory has been depleted. Whichever occurs first. Please see our new line of Premium Efficient Crusher Duty (AEHHGD) motors on page 91.
(3) All data subject to change without notice.

MAX-HT™ LOW VOLTAGE CRUSHER DUTY

NEMA Premium ee CCOO2A

AEHHGD, NEMA PREMIUM, DESIGN A [CDP]

Effective 07-08-18
Supercedes 03-24-17



APPLICATIONS:

- Crushers
- Impactors
- Chippers/ Shredders
- Ball Mills/ Rolling Mills
- Any High Torque Application

FEATURES:

- Output Range: 200 - 500 HP
- Speed: 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 460V(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum(6)
- CSA Certified for Class II, Div. 2, Groups F & G - Temp Code T3 Minimum (Frame 444T and above)(6)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design A Torques; Equal or Greater Than 200% Starting Torque / 250% Breakdown Torque
- Cast Iron Frame, End Brackets; Pressed Steel Plate Main Conduit Box and Fan Cover
- Cast Iron Main Conduit Box on 505UZ Frame
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- High Strength 4140 AISI Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5 BG 3.5/0.5
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings
- Labyrinth Type Metal Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque (350 HP and Larger are 3:1 Constant Torque)
- 6 Leads
- Standard With Thermistors (PTC 140˚C) 1 per Phase
- Locknut and Washer on NDE for Vertical Shaft Down Applications
- Drain Holes / Plugs on Both End Brackets for Vertical Applications
- Threaded One Way Breather Drains for Horizontal Mount Applications

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) 575V motors available on a made-to order basis. Consult a Stock Product Application Specialist for details.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(6) **CSA Certification for Hazardous Locations only applies to AEHHGD, NEMA Premium Type.**

MAX-HT™ LOW VOLTAGE CRUSHER DUTY

NEMA Premium ee CCOO2A

AEHHGD, NEMA PREMIUM, DESIGN A [CDP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING. WT. (lbs.)	LIST PRICE ($)
CDP2006RZ	200	1200	505UZ	95.8	79.9	245	3,200	31,800
CDP2008R	200	900	5007C	94.5	80.2	247	2,000	44,570
CDP2008RZ	200	900	586/7UZ	94.5	77.2	257	2,370	59,359
CDP2504TB	250	1800	449T	96.2	85.0	286	2,750	28,723
CDP2504TR	250	1800	449TZ	96.2	85.0	286	2,760	28,723
CDP2504R	250	1800	5007C	96.2	82.4	295	3,620	33,838
CDP2504RZ	250	1800	505UZ	96.2	82.4	295	3,250	32,354
CDP2506TR	250	1200	449TZ	95.8	78.5	311	2,925	29,337
CDP2506R	250	1200	5007C	95.8	80.4	304	3,760	36,021
CDP2506RZ	250	1200	586/7UZ	95.8	80.2	305	4,850	48,445
CDP2508R	250	900	5009C	95.0	81.9	301	2,250	48,600
CDP2508RZ	250	900	586/7UZ	95.0	78.1	316	2,450	54,483
CDP3004TR	300	1800	449TZ	96.2	84.0	348	2,865	33,478
CDP3004R	300	1800	5007C	96.2	83.5	350	3,750	36,483
CDP3004RZ	300	1800	586/7UZ	96.2	82.7	353	4,900	50,686
CDP3006TR(2)	300	1200	449TZ	95.8	82.5	355	3,450	39,166
CDP3006R	300	1200	5009C	95.8	83.0	353	4,350	41,361
CDP3006RZ	300	1200	586/7UZ	95.8	81.7	359	4,950	53,179
CDP3504TR	350	1800	449TZ	96.2	88.5	385	3,290	33,478
CDP3504R	350	1800	5009C	96.2	86.2	395	4,140	37,456
CDP3504RZ	350	1800	586/7UZ	96.2	82.7	412	5,050	52,083
CDP3506R	350	1200	5806C	95.8	79.5	430	5,680	54,844
CDP3506RZ	350	1200	586/7UZ	95.8	80.6	424	5,100	55,046
CDP4004R	400	1800	5806C	96.2	83.3	467	5,650	55,405
CDP4004RZ	400	1800	586/7UZ	96.2	83.2	468	5,200	55,999
CDP4504R	450	1800	5808C	96.2	82.5	531	5,650	56,008
CDP4504RZ	450	1800	586/7UZ	96.2	82.8	529	5,300	57,456
CDP5004R	500	1800	5808C	96.2	85.6	569	5,860	60,631
CDP5004RZ	500	1800	586/7UZ	96.2	84.4	577	5,450	61,476

Notes:

(1) All data subject to change without notice.

(2) CDP3006TR is not suitable for 50HZ operation and the nameplate data will not include 50HZ data.

MAX-HT™ MEDIUM VOLTAGE CRUSHER DUTY

AEHAGD, ENERGY EFFICIENT, HIGH TORQUE [KD]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Mills
- Grinders
- Compressors
- Crushers
- Impacters
- Ball Mills
- Shredders
- High Torque Applications

FEATURES:

- Output Range: 100 - 900 HP
- Speed: 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 2300/4000V(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum
- CSA Certified for Class II, Div. 2, Groups F & G - Temp Code T3 Minimum
- Class F Insulation
- Class B Temperature Rise
- NEMA Design C Torques; Equal or Greater Than 200% Starting Torque / 250% Breakdown Torque
- Cast Iron Frame, End Brackets; Pressed Steel Plate Main Conduit Box and Fan Cover(5)
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- High Strength 4140 AISI Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5 BG 3.5/0.5
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings
- Labyrinth Type Metal Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps
- Stainless Steel Nameplate
- Suitable for Inverter Duty (PWM - Pulse Width Modulation) per NEMA MG-16
- Inverter Duty Speed Range: 10:1 Variable Torque, 3:1 Constant Torque(6)
- 6 Leads
- CSA Approved
- Locknut and Washer on NDE for Vertical Shaft Down Applications
- Drain Holes / Plugs on Both End Brackets for Vertical Applications
- Threaded One Way Breather Drains for Horizontal Mount Applications
- 100 Ohm Platinum Stator RTD's (2/Phase); in separate Auxiliary Box
- Space Heaters (120V); in separate Auxiliary Box(4)
- Mounting Provisions for Bearing RTD's and Vibration Detectors on F# 5007 and Larger

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Suitable for Full Voltage Direct On-Line Connection, Wye-Delta Start, Reduced Voltage Start or VFD.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Space Heaters are Low Temperature Type; Suitable for Hazardous Location Division 2 Environments
(5) F# 447T(Z) - 449T(Z) with Cast Iron Main Conduit Box and Cast Iron Fan Cover.
(6) Motor service factor is 1.0 when operated on a VFD.

MAX-HT™ MEDIUM VOLTAGE CRUSHER DUTY

AEHAGD, ENERGY EFFICIENT, HIGH TORQUE [KD]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING. WT. (lbs.)	LIST PRICE ($)
KD1004	100	1800	447TZ	94.50	82.2	24.0	2,220	38,804
KD1006R	100	1200	447TZ	94.10	77.8	26.0	2,175	39,913
KD1008R	100	900	447TZ	93.00	72.2	28.0	2,400	40,747
KD1254	125	1800	447TZ	94.50	82.6	30.0	2,350	43,059
KD1256R	125	1200	449TZ	94.10	79.2	32.0	2,625	43,621
KD1258R	125	900	449TZ	93.60	72.5	35.0	2,575	50,984
KD1504	150	1800	449TZ	95.00	83.0	36.0	2,550	50,110
KD1506R	150	1200	449TZ	95.00	74.9	40.0	3,830	55,363
KD1508R	150	900	5007C	93.60	76.7	40.0	3,650	59,123
KD2004	200	1800	5007B	95.00	82.6	48.0	3,970	56,639
KD2006R	200	1200	5007C	95.00	75.0	55.0	3,950	68,251
KD2008R	200	900	5009C	94.10	76.3	53.0	3,875	74,594
KD2504	250	1800	5007B	95.00	82.7	60.0	4,050	68,800
KD2506R	250	1200	5009C	95.00	75.8	66.0	4,080	75,216
KD2508R	250	900	5009C	94.50	76.5	65.0	4,210	85,386
KD3004	300	1800	5009B	95.40	83.0	72.0	4,155	71,847
KD3006R	300	1200	5009C	95.00	76.0	79.0	4,235	81,263
KD3008R	300	900	5011C	94.50	77.1	78.0	4,660	91,047
KD3504	350	1800	5009B	95.40	82.8	84.0	4,305	81,331
KD3506R	350	1200	5011C	95.00	76.8	91.0	4,460	87,992
KD3508R	350	900	5808C	94.50	76.0	92.0	5,825	109,906
KD4004	400	1800	5011B	95.40	83.7	95.0	4,490	85,842
KD4006R	400	1200	5808C	95.00	75.3	106.0	4,725	94,759
KD4008R	400	900	5808C	94.50	75.8	106.0	6,280	118,071
KD4504	450	1800	5011B	95.40	83.7	107.0	4,620	90,593
KD4506R	450	1200	5808C	95.00	75.8	118.0	5,400	105,854
KD4508R	450	900	5810C	94.50	75.9	119.0	6,585	118,755
KD5004	500	1800	5011B	95.80	82.9	119.0	4,845	96,395
KD5006R	500	1200	5810C	95.00	76.5	130.0	5,710	116,384
KD5008R	500	900	5810C	94.50	76.1	131.0	7,040	124,829
KD6004	600	1800	5810B	95.80	81.9	144.0	6,115	112,434
KD6006R	600	1200	5810C	95.00	78.1	153.0	6,160	131,821
KD6008R	600	900	6808C	94.50	76.8	156.0	7,830	166,505
KD7004	700	1800	5810B	95.80	82.6	167.0	6,610	128,917
KD7006R	700	1200	6808C	95.00	81.8	170.0	8,260	152,720
KD7008R	700	900	6808C	94.50	77.1	182.0	8,755	167,606
KD8004	800	1800	6808B	95.80	80.3	196.0	7,900	145,875
KD8006R	800	1200	6808C	95.00	82.3	193.0	8,955	167,283
KD9004	900	1800	6808B	95.80	80.9	219.0	8,360	156,293

Notes:

(1) All data subject to change without notice.

STAINLESS STEEL WASHDOWN

AEGP, NEMA PREMIUM, FOOTED C-FACE [WFP/WP]
AEGPCW, NEMA PREMIUM, ROUND BODY C-FACE [WFPV/WPV]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Any Application Where the Motor Will be Subjected to High Pressure Spray Down
- Marine Duty
- Food Processing and Packaging

FEATURES:

- Output: 1/2 - 10 HP
- Speed: 3600 & 1800 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP66) (IEEE 45)
- Voltage: 230/460V (Usable on 208V)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Stainless Steel Frame, End Brackets and Hardware
- Grounding Terminal Inside Main Conduit Box
- Stainless Steel Oversized Main Conduit Box - F3 Mounted (IM1001)
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation
- SUS304 Stainless Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Double Shielded Bearings Pre-Packed with MULTEMP SRL
- Contact Lip Type Seal on Both Ends
- Etched Nameplate on the Stainless Steel Frame
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(3,4)
- Inverter Duty Speed Range: 10:1 Variable Torque, 4:1 Constant Torque
- 9 Leads
- Two Drain Holes on Bottom of Frame and one in the C-Flange
- Motors are U.L. Recognized, CSA Approved and CE Marked
- Department of Energy Efficiency Certificate # CC082A
- Encapsulated Windings as Option(5)

EXTRAS/ OPTIONS:

- Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31
(5) Consult a Stock Product Application Specialist for encapsulated winding quote.
(6) TENV up to 1 HP.
(7) Turn down the same TEFC 60 min. duty intermittent.

STAINLESS STEEL WASHDOWN

AEGP, NEMA PREMIUM, FOOTED C-FACE [WFP/WP]
AEGPCW, NEMA PREMIUM, ROUND BODY C-FACE [WFPV/WPV]

Effective 07-08-18
Supercedes 03-24-17

HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	FOOTED C-FACE		ROUND BODY C-FACE	
							CATALOG NO.	LIST PRICE ($)	CATALOG NO.	LIST PRICE ($)
1/2	3600	A56C	75.0	79.0	0.8	37	WFP0/52C	731	WFPV0/52C	731
1/2	1800	A56C	80.0	65.0	0.9	37	WFP0/54C	747	WFPV0/54C	747
3/4	3600	A56C	77.0	84.0	1.1	39	WFP0/72C	798	WFPV0/72C	798
3/4	1800	A56C	80.0	68.0	1.3	39	WFP0/74C	824	WFPV0/74C	824
1	3600	A56C	77.0	90.0	1.4	37	WFP0012C	984	WFPV0012C	984
1	3600	143TC	77.0	90.0	1.4	46	WP0012C	984	WPV0012C	984
1	1800	B56C	85.5	70.0	1.6	44	WFP0014C	1,015	WFPV0014C	1,015
1	1800	143TC	85.5	70.0	1.6	46	WP0014C	1,015	WPV0014C	1,015
1.5	3600	B56C	84.0	90.0	2.0	45	WFP1/52C	1,066	WFPV1/52C	1,066
1.5	3600	143TC	84.0	90.0	2.0	50	WP1/52C	1,066	WPV1/52C	1,066
1.5	1800	C56C	86.5	73.0	2.2	55	WFP1/54C	1,053	WFPV1/54C	1,053
1.5	1800	145TC	86.5	73.0	2.2	58	WP1/54C	1,053	WPV1/54C	1,053
2	3600	C56C	85.5	91.0	2.4	52	WFP0022C	1,275	WFPV0022C	1,275
2	3600	145TC	85.5	91.0	2.4	58	WP0022C	1,275	WPV0022C	1,275
2	1800	C56C	86.5	75.0	3.0	62	WFP0024C	1,251	WFPV0024C	1,251
2	1800	145TC	86.5	75.0	3.0	65	WP0024C	1,251	WPV0024C	1,251
3	3600	182TC	86.5	88.0	4.1	80	WP0032C	2,415	WPV0032C	2,415
3	1800	182TC	86.5	78.0	4.0	115	WP0034C	2,462	WPV0034C	2,462
5	3600	184TC	88.5	91.0	6.1	128	WP0052C	2,812	WPV0052C	2,812
5	1800	184TC	89.5	85.0	6.3	128	WP0054C	2,833	WPV0054C	2,833
7.5	3600	213TC	89.5	85.0	9.5	175	WP7/52C	4,355	WPV7/52C	4,355
7.5	1800	213TC	91.7	82.0	9.3	190	WP7/54C	4,790	WPV7/54C	4,790
10	3600	215TC	90.2	87.0	12.2	210	WP0102C	4,411	WPV0102C	4,411
10	1800	215TC	91.7	84.0	12.2	225	WP0104C	4,992	WPV0104C	4,992

Notes:

(1) Select catalog numbers have changed in order to follow the following format:
"WFPV" = 56 Frame Round Body C-Face
"WFP" = 56 Frame Footed C-Face
"WPV" = F#140TC - F#210TC Round Body C-Face
"WP" = F#140TC - F#210TC Footed C-Face

(2) Data subject to change without notice.

TEXP EXPLOSION PROOF FAMILY

AEHHXV/AEHHXU, NEMA PREMIUM [XP]
AEHHXG/AEHHXF, NEMA PREMIUM, FOOTED C-FACE (1 HP - 100 HP)[XP_C]
AEUHXG/AEUHXF, NEMA PREMIUM, ROUND BODY C-FACE (1 HP - 75 HP)[XPV_C]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Grain Elevators
- Pumps
- Blowers
- Applications Where Explosive Gases are Present
- Applications Where Explosive Dusts/ Grains are Present

FEATURES:

- Output Range: 1 - 400 HP
- Speed: 3600, 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled - Explosion Proof (IP55)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- Class I, Div. 1, Group C & D and Class II, Groups E, F and G - Temp Code T2D/T3B Up to and Including F# 256T
- Class I, Div. 1, Group D and Class II, Groups E, F and G - Temp Code T2D/T3B for F# 284T and Larger
- UL File: E84757
- CSA File: #64671
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Standard with Klixon 9700K Temperature Limiting Switch, 1 per Phase
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Dual Drilled Back Feet on 447/9 and 5007/9 Frames
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- Cast Iron Frame, Fan Cover, End Brackets and Main Conduit Box
- Capable of Withstanding Explosion Force as Required by UL
- Stainless Steel Breather Drains with Bronze Filters (For Horizontal Mount Only)
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction through 449 Frame; Fabricated Copper Bar on 5000 Frame
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Blue - Munsell 5 PB 4.5/2
- Double Shielded Bearings Pre-Packed with MULTEMP SRL for F# 140T - 280T (Non-regreasable)
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM for F# 280TS and Larger
- Bronze Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps for F#280TS and Larger
- Stainless Steel Nameplate
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- UL Listed for Inverter Duty(4,5)
- Inverter Duty Magnet Wire Capable of Withstanding Voltage Spikes of up to 2200 Volts
- Inverter Duty Speed Ranges: VT = 3 - 60 Hz; CT for 140T - 210T Frames = 10 - 60 Hz; CT for 250T - 320T Frames = 13 - 60 Hz; CT for 260T - 440T Frames = 16 - 60 Hz
- 9 Leads for 5 HP and Smaller; 12 Leads for 7.5 HP to 125 HP; 6 Leads for 150 HP and Larger

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Available in 575V. TWMC carries minimal 575V stock; please check availability to ensure required motors are in stock. Ratings may be available from our Canadian warehouses and/or our factory. Pricing and leadtime may vary.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor Service Factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(6) Extras/Modification options are limited on TEXP Products. See page 147 for additional details.

TEXP EXPLOSION PROOF

AEHHXV/AEHHXU, NEMA PREMIUM [XP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
XP0014	1	1800	143T	85.5	68.0	1.61	64	716
XP0016	1	1200	145T	82.5	66.0	1.72	93	830
XP0018	1	900	182T	77.0	58.5	2.08	108	1,159
XP1/52	1.5	3600	143T	84.0	84.0	1.99	78	815
XP1/54	1.5	1800	145T	86.5	75.5	2.15	80	802
XP1/56	1.5	1200	182T	87.5	63.0	2.55	125	899
XP1/58	1.5	900	184T	78.5	60.5	2.96	120	1,299
XP0022	2	3600	145T	85.5	87.0	2.52	68	844
XP0024	2	1800	145T	86.5	78.0	2.78	80	811
XP0026	2	1200	184T	88.5	69.0	3.07	148	1,039
XP0028	2	900	213T	84.0	64.0	3.48	187	1,895
XP0032	3	3600	182T	87.5	90.0	3.57	130	972
XP0034	3	1800	182T	89.5	81.0	3.87	135	976
XP0036	3	1200	213T	89.5	80.0	3.92	240	1,314
XP0038	3	900	215T	85.5	66.0	4.98	211	2,172
XP0052	5	3600	184T	88.5	91.0	5.81	153	1,200
XP0054	5	1800	184T	89.5	84.0	6.23	145	1,129
XP0056	5	1200	215T	90.2	81.0	6.41	235	1,692
XP0058	5	900	254T	86.5	72.0	7.52	330	2,862
XP7/52	7.5	3600	213T	89.5	87.0	9.02	235	1,626
XP7/54	7.5	1800	213T	91.7	86.5	8.85	200	1,590
XP7/56	7.5	1200	254T	91.0	82.0	9.41	365	2,209
XP7/58	7.5	900	256T	86.5	81.5	11.4	376	3,410
XP0102	10	3600	215T	90.2	87.0	11.9	250	1,712
XP0104	10	1800	215T	91.7	87.5	11.7	265	1,853
XP0106	10	1200	256T	91.0	81.5	12.6	420	2,706
XP0108	10	900	284T	89.5	73.5	14.2	488	4,329
XP0152	15	3600	254T	91.0	92.0	16.8	400	2,227
XP0154	15	1800	254T	92.4	85.0	17.9	390	2,559
XP0156	15	1200	284T	91.7	83.0	18.5	575	3,695
XP0158	15	900	286T	89.5	78.0	20.1	530	4,931
XP0202	20	3600	256T	91.0	92.0	22.4	440	3,001
XP0204	20	1800	256T	93.0	85.5	23.6	455	2,999
XP0206	20	1200	286T	91.7	84.0	24.3	600	4,188
XP0208	20	900	324T	90.2	81.0	25.6	708	6,685
XP0252	25	3600	284TS	91.7	92.0	27.7	460	3,528
XP0254	25	1800	284T	93.6	85.0	29.4	585	3,707
XP0256	25	1200	324T	93.0	83.0	30.3	825	5,159
XP0258	25	900	326T	90.2	79.5	32.6	781	7,483
XP0302	30	3600	286TS	92.4	92.0	33.0	583	4,165
XP0304	30	1800	286T	93.6	85.5	34.3	565	4,293
XP0306	30	1200	326T	93.0	83.0	36.4	787	6,304
XP0308	30	900	364T	91.7	77.5	39.5	946	9,637
XP0402	40	3600	324TS	93.0	91.0	44.3	805	5,873
XP0404	40	1800	324T	94.1	85.5	46.6	708	6,103
XP0406	40	1200	364T	94.1	86.0	46.3	980	8,288
XP0408	40	900	365T	91.7	76.5	53.4	1,019	11,703
XP0502	50	3600	326TS	93.6	91.0	55.0	890	7,367
XP0504	50	1800	326T	94.5	85.5	57.9	925	7,032
XP0506	50	1200	365T	94.1	83.5	59.6	1,125	8,368
XP0508	50	900	404T	93.0	80.5	62.5	1,287	10,515

Notes:

(1) Data subject to change without notice.

TEXP EXPLOSION PROOF

AEHHXV/AEHHXU, NEMA PREMIUM [XP]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
XP0602	60	3600	364TS	93.6	93.0	64.5	1,015	8,726
XP0604	60	1800	364T	95.0	88.0	67.2	1,010	8,700
XP0606	60	1200	404T	94.5	86.0	69.1	1,322	12,136
XP0608	60	900	405T	93.0	81.0	74.6	1,408	14,791
XP0752	75	3600	365TS	93.6	93.0	80.7	1,085	10,379
XP0754	75	1800	365T	95.4	88.0	83.6	1,110	10,197
XP0756	75	1200	405T	94.5	86.5	85.9	1,540	14,254
XP0758	75	900	444T	93.0	81.0	93.2	1,650	18,678
XP1002	100	3600	405TS	94.5	92.0	108	1,495	16,076
XP1004	100	1800	405T	95.4	90.0	109	1,545	14,251
XP1006	100	1200	444T	95.0	83.5	118	1,920	18,850
XP1006R	100	1200	444T	95.0	83.5	118	1,920	18,850
XP1008	100	900	445T	93.0	81.0	124	1,800	19,958
XP1252	125	3600	444TS	95.0	86.0	143	1,800	21,376
XP1254	125	1800	444T	95.4	85.0	144	1,970	19,847
XP1254R	125	1800	444T	95.4	85.0	144	1,970	19,847
XP1256	125	1200	445T	95.0	84.0	147	2,100	25,248
XP1256R	125	1200	445T	95.0	84.0	147	2,100	25,248
XP1258	125	900	447T	93.6	82.5	152	2,500	41,762
XP1258R	125	900	447T	93.6	82.5	152	2,500	41,762
XP1502	150	3600	445TS	95.0	87.0	170	1,940	24,812
XP1504	150	1800	445T	95.8	85.0	173	2,120	24,108
XP1504R	150	1800	445T	95.8	85.0	173	2,120	24,108
XP1506	150	1200	447T	95.8	84.5	174	2,120	40,261
XP1506R	150	1200	447T	95.8	84.5	174	2,120	40,261
XP1508	150	900	449T	93.6	82.5	182	2,880	42,473
XP1508R	150	900	449T	93.6	82.5	182	2,880	42,473
XP2002	200	3600	447TS	95.4	89.0	221	2,300	37,898
XP2004	200	1800	447T	96.2	87.0	224	2,620	37,795
XP2006	200	1200	449T	95.8	85.0	230	2,850	41,694
XP2006R	200	1200	449T	95.8	85.0	230	2,450	41,694
XP2008	200	900	5007B	94.1	80.4	248	3,920	50,713
XP2008R	200	900	5007C	94.1	80.4	248	3,920	50,713
XP2502	250	3600	449TS	95.8	89.8	272	2,720	39,890
XP2504	250	1800	449T	96.2	88.0	277	2,870	40,698
XP2506	250	1200	5007B	95.8	87.0	281	4,010	56,480
XP2506R	250	1200	5007C	95.8	87.0	281	4,010	56,480
XP2508	250	900	5009B	94.5	81.0	306	4,360	54,632
XP2508R	250	900	5009C	94.5	81.0	306	4,360	54,632
XP3002	300	3600	449TS	95.8	90.2	325	2,920	41,707
XP3004	300	1800	449T	96.2	88.0	332	2,950	41,336
XP3006	300	1200	5009B	95.8	87.3	336	4,310	59,425
XP3006R	300	1200	5009C	95.8	87.3	336	4,310	59,425
XP3502	350	3600	5007A	95.8	88.0	389	4,200	54,500
XP3504	350	1800	5007B	96.2	87.7	388	4,400	54,127
XP3506	350	1200	5009B	95.8	87.4	391	4,520	62,476
XP3506R	350	1200	5009C	95.8	87.4	391	4,520	62,476
XP4002	400	3600	5009A	95.8	88.3	443	4,350	79,825
XP4004	400	1800	5009B	96.2	87.7	444	4,500	74,263

Notes:

(1) Data subject to change without notice.

TEXP EXPLOSION PROOF

AEHHXG/AEHHXF, NEMA PREMIUM, FOOTED C-FACE (1 HP - 100 HP)[XP_C]
AEUHXG/AEUHXF, NEMA PREMIUM, ROUND BODY C-FACE (1 HP - 75 HP)[XPV_C]

Effective 07-08-18
Supercedes 03-24-17

HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (460V)	APPROX. SHIPPING WT. (lbs.)	FOOTED C-FACE		ROUND BODY C-FACE	
							CATALOG NO.	LIST PRICE ($)	CATALOG NO.	LIST PRICE ($)
1	1800	143TC	85.5	73.0	1.50	64	XP0014C	1,012	XPV0014C	896
1	1200	145TC	82.5	65.5	1.70	93	XP0016C	1,155	XPV0016C	1,022
1.5	3600	143TC	84.0	83.5	2.00	78	XP1/52C	1,134	XPV1/52C	1,003
1.5	1800	145TC	86.5	78.0	2.10	80	XP1/54C	1,092	XPV1/54C	966
1.5	1200	182TC	87.5	63.5	2.50	125	XP1/56C	1,216	XPV1/56C	1,076
2	3600	145TC	86.5	86.0	2.50	68	XP0022C	1,176	XPV0022C	1,041
2	1800	145TC	86.5	78.0	2.80	80	XP0024C	1,128	XPV0024C	998
2	1200	184TC	88.5	70.5	3.00	148	XP0026C	1,396	XPV0026C	1,235
3	3600	182TC	88.5	90.0	3.50	130	XP0032C	1,309	XPV0032C	1,159
3	1800	182TC	89.5	84.0	3.70	135	XP0034C	1,318	XPV0034C	1,167
3	1200	213TC	89.5	78.0	4.00	240	XP0036C	1,825	XPV0036C	1,475
5	3600	184TC	88.5	92.5	5.70	153	XP0052C	1,539	XPV0052C	1,362
5	1800	184TC	89.5	85.5	6.10	145	XP0054C	1,530	XPV0054C	1,353
5	1200	215TC	91.0	82.5	6.20	235	XP0056C	2,200	XPV0056C	1,947
7.5	3600	213TC	91.0	89.0	8.70	235	XP7/52C	2,062	XPV7/52C	1,825
7.5	1800	213TC	91.7	86.5	8.90	200	XP7/54C	2,155	XPV7/54C	1,907
7.5	1200	254TC	91.0	80.5	9.60	365	XP7/56C	2,788	XPV7/56C	2,468
10	3600	215TC	91.0	89.5	11.50	250	XP0102C	2,575	XPV0102C	2,055
10	1800	215TC	91.7	88.0	11.60	241	XP0104C	2,508	XPV0104C	2,220
10	1200	256TC	91.0	80.5	12.80	420	XP0106C	3,388	XPV0106C	2,998
15	3600	254TC	92.4	91.5	16.60	400	XP0152C	3,106	XPV0152C	2,882
15	1800	254TC	92.4	88.0	17.30	390	XP0154C	3,114	XPV0154C	2,975
15	1200	284TC	92.4	83.5	18.20	575	XP0156C	4,598	XPV0156C	4,069
20	3600	256TC	92.4	92.5	21.90	440	XP0202C	3,743	XPV0202C	3,312
20	1800	256TC	93.0	87.5	23.00	455	XP0204C	3,756	XPV0204C	3,324
20	1200	286TC	91.7	84.0	24.30	600	XP0206C	5,230	XPV0206C	4,843
25	3600	284TSC	92.4	91.0	27.80	460	XP0252C	4,500	XPV0252C	4,166
25	1800	284TC	93.6	86.0	29.10	585	XP0254C	4,595	XPV0254C	4,255
25	1200	324TC	93.0	83.0	30.30	825	XP0256C	7,153	XPV0256C	6,624
30	3600	286TSC	92.4	91.0	33.20	583	XP0302C	5,374	XPV0302C	4,976
30	1800	286TC	93.6	87.5	34.30	565	XP0304C	5,349	XPV0304C	4,952
30	1200	326TC	93.0	80.5	37.50	787	XP0306C	8,299	XPV0306C	7,684
40	3600	324TSC	94.1	90.0	44.20	805	XP0402C	7,630	XPV0402C	6,759
40	1800	324TC	94.1	86.0	46.30	708	XP0404C	7,663	XPV0404C	7,096
40	1200	364TC	94.1	86.5	46.00	980	XP0406C	10,976	XPV0406C	10,163
50	3600	326TSC	94.1	91.0	54.70	890	XP0502C	8,833	XPV0502C	8,179
50	1800	326TC	94.5	87.0	56.90	925	XP0504C	8,700	XPV0504C	8,056
50	1200	365TC	94.1	86.0	57.80	1,125	XP0506C	13,386	XPV0506C	12,394
60	3600	364TSC	94.1	93.0	64.20	1,015	XP0602C	10,111	XPV0602C	10,288
60	1800	364TC	95.0	86.5	68.40	1,010	XP0604C	11,377	XPV0604C	10,535
60	1200	404TC	94.5	87.0	68.30	1,322	XP0606C	15,727	XPV0606C	14,562
75	3600	365TSC	94.5	93.0	79.90	1,085	XP0752C	13,724	XPV0752C	13,236
75	1800	365TC	95.4	86.5	85.1	1,110	XP0754C	13,720	XPV0754C	12,703
75	1200	405TC	94.5	86.5	85.9	1,540	XP0756C	16,054	XPV0756C	15,802
100	3600	405TSC	95.4	92.0	107.0	1,495	XP1002C	17,140	~	~
100	1800	405TC	95.4	87.5	112.0	1,545	XP1004C	17,066	~	~

Notes:

(1) Data subject to change without notice.

GLOBAL MAX WPI

AMHGTK, NEMA PREMIUM, MEDIUM VOLTAGE [PG]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Pumps
- Fans & Blowers
- Compressors

FEATURES:

- Output Range: 100 - 2000 HP
- Speed: 3600, 1800, 1200 & 900 RPM(1)
- Enclosure: Weather Protected Type I (WPI)
- Voltage: 2300/4000V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- Standard Features: 100 Ohm Platinum Stator RTD's (2 per Phase), Space Heaters (120V)
- Standard Features: Pre-Drilled & Plugged Bearing Bracket for 100 Ohm Platinum Bearing RTD's on 5000 Frames & Above
- Standard Features: Pre-Drilled & Spot Faced on Top of End Bracket for Vibration Detectors on 5000 Frames and Above
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments Fully Gasketed with NPT Threaded Entrance - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Rotation: F#447-449: Bi-Directional. F#5000-5813: Bi-Directional. 2 Pole Motors F# 5000 or Larger are Uni-Directional, Counter-Clockwise (CCW) facing the Drive End
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449T and Below
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000 and Larger
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Insulated Non-Drive End Bearing on 3600 RPM Motors; 600 HP and Larger
- Labyrinth Type Metal Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps
- Grounding Terminal Inside Main Box and on Motor Foot
- Stainless Steel Nameplate
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- 6 Leads
- Motors are CSA Approved
- 2 Pole Motors 600 HP and Larger are Form Wound and Insulated Non-Drive End Bearing.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Slower speeds available as Made to Order.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments, and for variable and constant torque speed ranges.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31. An isolation transformer or other method of mitigating common mode voltages from motor terminals must be utilized. Please refer to page 209 to check out our accompanying TEAMMaster™ starters.

GLOBAL MAX WPI

AMHGTK, NEMA PREMIUM, MEDIUM VOLTAGE [PG]

Effective 07-08-18
Supercedes 03-24-17

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
PG1002	100	3600	447TS	92.0	87.2	23.0	1,760	21,102
PG1004	100	1800	447T	93.7	82.5	24.0	2,050	23,988
PG1006	100	1200	447T	94.6	78.1	25.0	1,920	27,932
PG1008	100	900	447T	93.2	74.9	27.0	2,310	30,876
PG1252	125	3600	447TS	93.1	88.4	28.0	1,800	24,408
PG1254	125	1800	447T	94.2	80.5	31.0	2,100	26,884
PG1256	125	1200	449T	94.7	78.9	31.0	2,120	34,450
PG1258	125	900	449T	93.3	77.0	33.0	2,530	35,844
PG1502	150	3600	447TS	93.1	88.0	34.0	1,870	27,378
PG1504	150	1800	449T	94.8	83.9	35.0	2,360	31,256
PG1506	150	1200	449T	94.8	77.9	38.0	2,180	37,482
PG1508	150	900	449T	93.4	75.7	40.0	3,260	39,492
PG2002	200	3600	449TS	93.7	87.4	46.0	1,900	32,688
PG2004	200	1800	449T	94.9	82.3	48.0	2,380	34,846
PG2006	200	1200	449T	94.9	77.9	51.0	2,270	38,503
PG2008	200	900	5009B	93.5	73.0	55.0	3,550	46,080
PG2502	250	3600	449TS	94.5	89.3	55.0	2,020	37,632
PG2504	250	1800	449T	95.0	82.2	60.0	2,490	39,678
PG2506	250	1200	449T	95.0	78.4	63.0	2,340	44,245
PG2508	250	900	5009B	93.6	75.5	66.0	3,990	56,410
PG3002	300	3600	449TS	94.5	89.1	67.0	2,100	40,854
PG3004	300	1800	449T	95.0	83.8	71.0	2,550	40,508
PG3006	300	1200	449T	95.0	77.7	76.0	2,490	47,398
PG3008	300	900	5011B	93.7	75.5	79.0	4,380	66,070
PG3502	350	3600	5009A	94.5	88.1	79.0	3,580	51,606
PG3504	350	1800	5009B	95.0	84.3	82.0	3,330	49,507
PG3506	350	1200	5009B	95.0	76.5	90.0	3,770	56,386
PG3508	350	900	5011B	93.8	75.0	93.0	4,710	71,762
PG4002	400	3600	5009A	94.5	87.9	90.0	3,700	54,738
PG4004	400	1800	5009B	95.0	84.0	94.0	3,420	51,609
PG4006	400	1200	5009B	95.1	76.0	104	3,850	60,147
PG4008[3]	400	900	5012B	93.9	73.5	109	4,820	79,063
PG4502	450	3600	5009A	94.5	87.0	102	3,800	57,508
PG4504	450	1800	5009B	95.0	84.1	105	3,520	52,805
PG4506	450	1200	5011B	95.2	75.0	118	3,720	64,945
PG4508	450	900	5810B	94.0	78.5	114	6,160	88,780
PG5002	500	3600	5011A	94.5	89.2	111	3,900	60,746
PG5004	500	1800	5009B	95.0	84.8	116	3,720	56,967
PG5006	500	1200	5011B	95.3	77.0	128	3,920	68,348
PG5008	500	900	5810B	94.1	77.7	128	6,450	92,267
PG6002	600	3600	5011A	95.0	89.2	133	4,000	67,211
PG6004	600	1800	5011B	95.4	85.5	138	3,770	61,852
PG6006	600	1200	5011B	95.4	77.0	153	4,250	73,594
PG6008	600	900	5810B	94.2	78.0	153	6,600	96,838
PG7002	700	3600	5011A	95.0	89.6	154	4,200	68,573
PG7004	700	1800	5011B	95.4	85.7	161	4,100	67,476
PG7006[3]	700	1200	5012B	95.5	77.3	178	4,850	80,412
PG7008	700	900	5811B	94.3	78.0	178	6,880	102,542
PG8002	800	3600	5011A	95.0	88.6	178	4,400	71,897
PG8004[3]	800	1800	5012B	95.4	85.9	183	4,300	71,879
PG8006	800	1200	5810B	95.6	81.0	193	5,940	88,877
PG8008	800	900	5811B	94.4	79.0	201	7,100	108,206
PG9002[3]	900	3600	5012A	95.0	90.3	197	4,600	83,339
PG9004[3]	900	1800	5012B	95.4	85.5	207	4,400	79,756
PG9006	900	1200	5810B	95.7	81.5	216	6,230	96,813
PG9008	900	900	5812B	94.5	79.1	225	7,700	96,678
PG10002[3]	1000	3600	5012A	95.0	88.5	223	4,730	83,599
PG10004	1000	1800	5810B	95.5	87.9	223	6,890	72,082
PG10006	1000	1200	5811B	95.8	82.3	238	6,980	105,628
PG12502	1250	3600	5810A	95.4	88.5	278	5,740	95,542
PG12504	1250	1800	5811B	95.8	86.1	284	7,070	97,684
PG12506	1250	1200	5812B	95.9	82.9	294	7,660	117,156
PG15004	1500	1800	5812B	95.8	86.7	339	7,790	113,739
PG17504	1750	1800	5813B	95.8	87.1	393	8,390	125,116
PG20004	2000	1800	5813B	95.9	86.4	452	8,400	136,488

Notes:

(1) 1. Data subject to change without notice.
(2) All motors are NEMA B torque.
(3) F#5012 is double drilled for 5011/12 mounting holes.

GLOBAL WPI

ASHA, HIGH EFFICIENCY, MEDIUM VOLTAGE [P]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Pumps
- Fans & Blowers
- Compressors

FEATURES:

- Output Range: 100 - 1000 HP
- Speed: 3600, 1800, 1200 & 900 RPM(1)
- Enclosure: Weather Protected Type I (WPI)
- Voltage: 2300/4160V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- Standard Features: 100 Ohm Platinum Stator RTD's (2 per Phase), Space Heaters (120V)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments. Fully Gasketed with NPT Threaded Entrance - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Rotation: Bi-Directional Except 2 Pole which is Counter-Clockwise (CCW) facing the Drive End
- Cast Iron Frame and End Brackets
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449T and Below
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000 and Above
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Insulated Non-Drive End Bearing on 2 Pole Motors; 600 HP and Larger
- Labyrinth Type Metal Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps
- Grounding Terminal Inside Main Box and on Motor Foot
- Stainless Steel Nameplate
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(4,5)
- 6 Leads
- Motors are CSA Approved

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Slower speeds available as Made to Order.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments, and for variable and constant torque speed ranges.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31. An isolation transformer or other method of mitigating common mode voltages from motor terminals must be utilized. Please refer to page 209 to check out our accompanying TEAMMaster™ starters.

CATALOG NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
P1002	100	3600	444TS	91.0	90.2	22.8	1,292	16,630
P1004	100	1800	444T	91.0	87.5	23.5	1,680	17,009
P1006	100	1200	445T	91.0	80.0	25.7	2,205	21,438
P1006R	100	1200	445T	91.0	80.0	25.7	2,205	21,438
P1252	125	3600	444TS	91.0	90.2	28.5	1,370	19,593
P1254	125	1800	444T	91.0	87.5	29.4	1,490	19,232
P1256	125	1200	447T	91.7	80.0	32.0	2,139	26,604
P1256R	125	1200	447T	91.7	80.0	32.0	2,139	26,604
P1502	150	3600	445TS	91.7	90.2	34.0	1,450	22,188
P1504	150	1800	445T	91.7	87.5	35.0	1,645	22,548
P1506	150	1200	449T	91.7	80.0	38.0	2,547	30,324
P1506R	150	1200	449T	91.7	80.0	38.0	2,547	30,324
P2002	200	3600	447TS	91.7	90.2	45.0	1,733	27,295
P2004	200	1800	447T	91.7	87.5	47.0	2,050	26,246
P2004R	200	1800	447T	91.7	87.5	47.0	2,050	26,246
P2006	200	1200	5007C	91.7	81.5	50.1	3,057	34,753
P2502	250	3600	449TS	92.4	91.0	56.0	2,095	32,529
P2504	250	1800	449T	92.4	87.5	58.0	2,668	31,425
P2506	250	1200	5007B	92.4	84.0	60.3	3,362	40,674
P2506R	250	1200	5007C	92.4	84.0	60.3	3,362	40,674
P2508	250	900	5009B	92.4	78.5	64.5	3,990	48,443
P3002	300	3600	449TS	93.0	91.0	66.0	2,280	37,708
P3004	300	1800	5007B	93.0	88.5	68.3	3,255	36,231
P3006	300	1200	5009B	93.0	84.0	71.9	3,945	45,104
P3006R	300	1200	5009C	93.0	84.0	71.9	3,945	45,104
P3008R	300	900	5808C	93.0	80.0	75.5	4,515	54,348
P3502	350	3600	5007A	93.0	90.2	78.1	2,991	43,257
P3504	350	1800	5007B	93.6	88.5	79.1	3,465	41,407
P3506R	350	1200	5009C	93.0	84.0	83.9	3,938	50,276
P4002	400	3600	5009A	93.6	90.5	88.4	3,485	47,695
P4004	400	1800	5009B	93.6	89.5	89.4	4,065	45,104
P4004R	400	1800	5009C	93.6	89.5	89.4	4,065	45,104
P4006	400	1200	5808B	93.6	85.5	93.6	5,055	54,719
P4006R	400	1200	5808C	93.6	85.5	93.6	5,055	54,719
P4008	400	900	5808B	93.0	81.5	98.8	5,250	64,699
P4008R	400	900	5808C	93.0	81.5	98.8	5,250	64,699
P4502	450	3600	5808A	93.6	91.0	98.9	5,145	52,499
P4504	450	1800	5808B	93.6	88.5	102.0	4,200	48,799
P4506	450	1200	5808B	93.6	85.5	105.0	5,640	59,146
P4506R	450	1200	5808C	93.6	85.5	105.0	5,640	59,146
P5002	500	3600	5808A	94.1	91.0	109.0	4,680	56,938
P5004	500	1800	5808B	94.1	89.5	111.0	5,115	52,499
P5006	500	1200	5808B	94.1	85.5	116.0	6,038	63,587
P5006R	500	1200	5808C	94.1	85.5	116.0	6,038	63,587
P5008	500	900	5810B	93.6	82.5	121	6,325	74,678
P6002	600	3600	5808A	94.5	91.3	130	5,135	63,587
P6004	600	1800	5808B	94.1	89.5	133	5,418	59,146
P6006R	600	1200	5810C	94.1	86.5	138	6,120	69,874
P6008	600	900	6806B	94.1	84.0	142	6,983	85,034
P7002	700	3600	5810A	94.5	91.7	151	5,410	68,768
P7004	700	1800	5808B	94.5	90.2	154	5,355	65,072
P7004R	700	1800	5808B	94.5	90.2	154	5,355	65,072
P7006R	700	1200	5810C	94.5	86.5	160	6,625	75,784
P7008	700	900	6808B	94.5	84.0	165	7,860	93,907
P8002	800	3600	5810A	95.0	91.7	172	5,475	72,093
P8004	800	1800	5810B	94.5	90.2	176	5,828	70,250
P8006	800	1200	6806B	94.5	86.5	183	7,770	82,823
P8006R	800	1200	6806C	94.5	86.5	183	7,770	82,823
P8008R	800	900	6808C	94.5	84.5	188	8,820	103,890
P9002	900	3600	5810A	95.0	91.7	193	5,685	85,005
P9004	900	1800	5810B	95.0	90.2	197	6,143	76,163
P9006	900	1200	6806B	95.0	86.5	205	8,190	91,317
P10002	1000	3600	5810A	95.0	90.2	214	5,950	95,198
P10004	1000	1800	6806B	95.0	90.2	219	7,750	82,084
P10006R	1000	1200	6808C	95.0	86.5	228	8,610	97,976

Notes:

(1) Data subject to change without notice.
(2) "R" at the end of the Catalog number means motor has Roller Bearing on the Drive End.

GLOBAL XPE

AEHGTK, TEFC, NEMA PREMIUM, MEDIUM VOLTAGE (100 HP - 900 HP)[KG]
AEJHTK, TEFC, IEC, HIGH EFFICIENCY, MEDIUM VOLTAGE (800 HP - 2000 HP)[JH]

Effective 07-08-18
Supercedes 03-24-17


APPLICATIONS:

- Pumps
- Mills
- Fans & Blowers
- Grinders
- Compressors

FEATURES:

- Output Range: 100 - 2000 HP
- Speed: 3600, 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 2300/4160V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, for 5000 Frames and above, at 1.15 Service Factor is Temperature Coded T3 (125 to 400 HP); T2D (401 to 800 HP); T2B (801 to 900 HP); and at 1.0 Service Factor is T3 Only.
- CSA Certified for Class 1, Div. 2, Groups B, C, and D, for 444 Frames and above, Code T3[5]
- Standard Features: 100 Ohm Platinum Stator RTD's (2/Phase), Space Heaters (120V)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments Fully Gasketed with NPT Threaded Entrance - F1 Mounted
- Cast Iron Terminal Box on 444T - 449T Frames
- Steel Plate Terminal Box on 5000 Frames and Above
- Designed for 40˚C Ambient Temperature[1]
- Designed for 3300 ft. Elevation[2]
- Bi-Directional Rotation for all 444T - 449T Frames and for 1800 - 900RPM (4 - 8 Pole) 5007 - 6808 Frame Motors and for (4-8 Pole) 5007-6808 Frame Motors
- 5007 - 6808 Frame 3600 RPM (2 Pole) Motors have Counter-Clockwise (CCW) Rotation facing the Drive End
- Cast Iron Frame and End Brackets
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction on 444T - 449T Frames
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for on 5007 - 6808 Frames
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Labyrinth Type Metal Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps
- Grounding Terminal Inside Main Box and on Motor Foot
- Stainless Steel Nameplate
- 6 Leads, with Solderless Lug Terminals
- Motors are CSA Approved
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2[3,4,5]
- 2 Pole Motors 600 HP and Larger are Form Wound and Insulated Non-Drive Bearing

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments, and for variable and constant torque speed ranges.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31. An isolation transformer or other method of mitigating common mode voltages from motor terminals must be utilized. Please refer to page 209 to check out our accompanying TEAMMaster™ starters.
(5) Consult Stock Product Application Specialist for various temperature codes and ratings.

AEHGTK, TEFC, NEMA PREMIUM, MEDIUM VOLTAGE (100 HP - 900 HP)[KG]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
KG1002	100	3600	444TS	91.7	86.0	23.7	1,470	27,316
KG1004	100	1800	444T	93.0	79.5	25.3	2,079	26,846
KG1006	100	1200	445T	94.1	81.0	24.6	2,903	31,391
KG1006R	100	1200	445T	94.1	81.0	24.6	2,903	31,391
KG1008	100	900	447T	94.1	74.8	26.6	2,363	35,278
KG1008R	100	900	447T	94.1	74.8	26.6	2,363	35,278
KG1252	125	3600	445TS	92.9	88.0	28.6	1,838	34,128
KG1254	125	1800	445T	93.6	78.0	32.0	1,990	32,239
KG1256	125	1200	447T	94.7	80.0	30.9	2,415	37,163
KG1256R	125	1200	447T	94.7	80.0	30.9	2,415	37,163
KG1258	125	900	449T	94.7	77.0	32.1	2,835	53,088
KG1258R	125	900	449T	94.7	77.0	32.1	2,835	53,088
KG1502	150	3600	447TS	93.2	90.0	33.5	2,600	36,405
KG1504	150	1800	447T	94.1	80.7	37.0	2,375	35,947
KG1506	150	1200	449T	94.8	80.0	37.0	2,903	41,361
KG1506R	150	1200	449T	94.8	80.0	37.0	2,903	41,361
KG1508	150	900	5007B	93.6	79.5	37.7	3,780	51,990
KG1508R	150	900	5007C	93.6	79.5	37.7	3,780	51,990
KG2002	200	3600	449TS	95.0	88.0	44.8	2,495	43,080
KG2004	200	1800	449T	95.7	81.4	48.0	2,775	41,903
KG2006T	200	1200	449T	96.0	81.0	48.2	2,930	56,190
KG2006	200	1200	5007B	95.0	86.0	45.9	3,728	56,686
KG2006R	200	1200	5007C	95.0	86.0	45.9	3,728	56,686
KG2008	200	900	5009B	94.1	80.0	49.8	4,358	67,293
KG2008R	200	900	5009C	94.1	80.0	49.8	4,358	67,293
KG2502T	250	3600	449TS	95.9	88.0	55.5	2,480	51,294
KG2502[(2)]	250	3600	5007A	95.0	88.5	55.7	3,360	56,422
KG2504T	250	1800	449T	95.7	82.2	59.5	2,640	50,892
KG2504	250	1800	5007B	95.0	90.0	54.8	3,580	55,983
KG2506	250	1200	5009B	95.0	86.0	57.3	4,305	64,530
KG2506R	250	1200	5009C	95.0	86.0	57.3	4,305	64,530
KG2508	250	900	5009B	95.0	80.0	61.6	4,515	81,753
KG2508R	250	900	5009C	95.0	80.0	61.6	4,515	81,753
KG3002T	300	3600	449TS	96.0	87.0	67.3	2,950	62,176
KG3002[(2)]	300	3600	5009A	95.4	90.5	65.1	3,675	68,400
KG3004T	300	1800	449T	95.8	84.0	69.8	3,150	58,453
KG3004	300	1800	5009B	95.4	90.0	65.4	4,200	62,619
KG3006	300	1200	5009B	95.0	86.2	68.6	4,568	73,190
KG3006R	300	1200	5009C	95.0	86.2	68.6	4,568	73,190
KG3008	300	900	5011B	95.0	80.5	73.5	4,988	92,301
KG3008R	300	900	5011C	95.0	80.5	73.5	4,988	92,301
KG3502[(2)]	350	3600	5009A	95.4	90.5	75.9	3,800	74,385
KG3504	350	1800	5009B	95.4	90.0	76.4	4,568	74,810
KG3506	350	1200	5011B	95.0	86.3	79.9	4,988	83,521
KG3506R	350	1200	5011C	95.0	86.3	79.9	4,988	83,521
KG3508	350	900	5808B	95.0	81.0	85.1	5,355	106,363
KG3508R	350	900	5808C	95.0	81.0	85.1	5,355	106,363

Notes:

(1) Insulated non-drive end bearing as standard.

(2) Motors are unidirectional, with counter clockwise rotation, facing the drive end, to change please consult factory.

(3) Data subject to change without notice.

AEHGTK, TEFC, NEMA PREMIUM, MEDIUM VOLTAGE (100 HP - 900 HP)[KG]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
KG4002[2]	400	3600	5011A	95.4	91.0	86.3	5,040	81,543
KG4004	400	1800	5011B	95.4	90.0	87.2	4,890	80,875
KG4006	400	1200	5011B	95.0	86.3	91.4	4,725	91,365
KG4006R	400	1200	5011C	95.0	86.3	91.4	4,725	91,365
KG4008	400	900	5808B	95.0	81.0	97.3	5,565	121,761
KG4008R	400	900	5808C	95.0	81.0	97.3	5,565	121,761
KG4502[2]	450	3600	5011A	95.4	91.0	97.1	4,830	96,278
KG4504	450	1800	5011B	95.4	90.5	97.6	5,035	87,848
KG4506	450	1200	5808B	95.4	86.5	102	5,565	105,106
KG4506R	450	1200	5808C	95.4	86.5	102	5,565	105,106
KG4508	450	900	5810B	95.0	81.5	109	6,195	129,150
KG4508R	450	900	5810C	95.0	81.5	109	6,195	129,150
KG5002[2]	500	3600	5808A	95.4	91.0	108	5,250	105,058
KG5004	500	1800	5808B	95.8	90.5	108	5,250	101,250
KG5006	500	1200	5810B	95.4	87.0	113	6,495	119,919
KG5006R	500	1200	5810C	95.4	87.0	113	6,495	119,919
KG5008	500	900	6808B	95.4	85.0	115	7,245	158,712
KG5008R	500	900	6808C	95.4	85.0	115	7,245	158,712
KG6002[1,2]	600	3600	5810A	95.8	91.0	129	6,248	114,840
KG6004	600	1800	5810B	95.8	90.5	130	7,010	121,844
KG6006	600	1200	5810B	95.4	87.0	135	6,090	139,332
KG6006R	600	1200	5810C	95.4	87.0	135	6,090	139,332
KG6008	600	900	6808B	95.4	85.0	139	7,770	168,723
KG6008R	600	900	6808C	95.4	85.0	139	7,770	168,723
KG7002[1,2]	700	3600	5810A	96.2	91.0	150	6,760	121,551
KG7004	700	1800	5810B	95.8	90.5	151	6,038	140,677
KG7006	700	1200	6808B	95.8	87.2	157	7,403	155,014
KG7006R	700	1200	6808C	95.8	87.2	157	7,403	155,014
KG7008	700	900	6808B	95.4	86.0	160	9,083	169,919
KG7008R	700	900	6808C	95.4	86.0	160	9,083	169,919
KG8002[1,2]	800	3600	6808A	96.2	91.5	170	8,768	166,059
KG8004	800	1800	6808B	95.8	90.5	173	9,275	151,754
KG8006	800	1200	6808B	95.8	87.2	179	8,820	169,004
KG8006R	800	1200	6808C	95.8	87.2	179	8,820	169,004
KG9004	900	1800	6808B	95.8	90.5	194	8,925	160,082

Notes:

(1) Insulated non-drive end bearing as standard.

(2) Motors are unidirectional, with counter clockwise rotation, facing the drive end, to change please consult factory.

(3) Data subject to change without notice.

AEJHTK, TEFC, IEC, HIGH EFFICIENCY, MEDIUM VOLTAGE (800 HP - 2000 HP)[JH]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
JH08008	800	900	450C	95.8	87.0	180	9,030	174,046
JH09006	900	1200	450C	95.8	88.0	200	10,890	171,429
JH09008(2)	900	900	500C	95.8	87.5	201	11,550	177,338
JH10004	1000	1800	450C	96.2	90.0	216	10,635	163,577
JH10006(2)	1000	1200	500C	96.2	89.0	219	12,400	186,061
JH10008(2)	1000	900	500C	95.8	87.5	223	14,000	200,788
JH12504(2)	1250	1800	500C	96.2	90.0	270	11,550	170,317
JH12506(2)	1250	1200	500C	96.2	89.5	272	12,180	200,788
JH12508(2)	1250	900	560C	96.0	84.0	290	16,000	218,373
JH15004(2)	1500	1800	500C	96.5	90.0	323	10,600	185,398
JH15006(2)	1500	1200	560C	96.2	86.0	340	12,495	224,236
JH15008(2)	1500	900	560C	96.0	84.0	348	18,000	227,167
JH17504(2)	1750	1800	560C	96.5	90.5	375	13,230	203,716
JH17506(2)	1750	1200	560C	96.2	86.0	396	18,000	228,633
JH20004(2)	2000	1800	560C	96.5	90.5	415	17,000	225,702

Notes:

(1) Product to become obsolete. Replaced by AFHGTK. See page 113 for details.

(2) F# 500 or larger come standard with insulated bearings.

(3) Data subject to change without notice.

GLOBAL MAX

AFHGTK, NEMA PREMIUM, MEDIUM VOLTAGE (500 HP - 200 HP)[KF]
AFJHTK, IEC, NEMA PREMIUM, MEDIUM VOLTAGE (900 HP - 1750 HP)[JF]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Pumps
- Fans & Blowers
- Compressors
- Mills
- Grinders

FEATURES:

- Output Range: 500 - 2000 HP
- Speed: 3600, 1800, 1200 & 900 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 2300/4000V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Group B, C, D - Temp Code T3 Minimum
- CSA Certified for Class II, Div. 2, Group F & G - T3C Minimum
- Standard Features: Provisions for Bearing RTD's, 100 Ohm Platinum Stator RTD's(2/Phase), Space Heaters(120V)
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Fabricated Steel Main Conduit Box Rotatable in 90 Degree Increments Fully Gasketed with NPT Threaded Entrance - F1 Mounted
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Bi-Directional Rotation; except 2 Pole which is Counter-Clockwise (CCW) facing the Drive End
- Cast Iron Frame and End Brackets
- 1045 Carbon Steel Shaft
- Squirrel Cage Copper Bar Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- High Quality Ball (or Roller) Bearings Regreasable with Mobil Polyrex™ EM
- Bronze Labyrinth Type Metal Flinger on Both Ends
- Cast Iron Inner and Outer Bearing Caps
- Grounding Terminal Inside Main Box and on Motor Foot
- Stainless Steel Nameplate
- 6 Leads, with Solderless Lug Terminals
- Motors are CSA Approved
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(3,4)

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 for common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments, and for variable and constant torque speed ranges.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Motor service factor is 1.0 when operated on a VFD.
(4) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1.Part 31. An isolation transformer or other method of mitigating common mode voltages from motor terminals must be utilized. Please refer to page 209 to check out our accompanying TEAMMaster™ starters.

GLOBAL MAX

AFHGTK, NEMA PREMIUM, MEDIUM VOLTAGE (500 HP - 2000 HP)[KF]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
KF5002(1,2)	500	3600	5011A	95.0	89.5	111	5,945	95,174
KF5004	500	1800	5011B	95.0	87.9	113	5,825	88,055
KF5008	500	900	5810B	94.6	77.9	128	9,802	127,941
KF6004	600	1800	5011B	95.2	86.5	137	6,145	103,665
KF6008	600	900	5810B	94.6	77.5	154	10,740	141,013
KF7006	700	1200	5810B	95.4	81.6	168	10,068	127,269
KF8002(1,2)	800	3600	5810A	95.6	86.5	182	9,190	125,917
KF8004	800	1800	5810B	95.6	83.6	188	9,310	124,363
KF8008	800	900	6808B	95.0	74.2	214	13,081	140,814
KF9004	900	1800	5810B	95.6	83.1	212	9,656	132,001
KF9006	900	1200	6810B	95.5	82.7	213	13,606	145,891
KF9008	900	900	6810B	95.2	73.0	242	13,666	162,038
KF10004	1000	1800	6808B	95.6	80.4	245	11,471	140,512
KF10006	1000	1200	6810B	95.7	83.1	237	14,836	155,931
KF10008	1000	900	6810B	95.4	73.0	270	15,215	164,281
KF12504	1250	1800	6810B	96.0	81.2	300	13,200	158,272
KF12506	1250	1200	6811B	95.9	84.1	290	17,297	183,315
KF12508	1250	900	6812B	95.6	71.4	342	17,500	220,937
KF15004	1500	1800	6810B	96.1	82.1	356	15,362	166,761
KF15006	1500	1200	6812B	96.1	81.6	359	16,100	239,932
KF15008	1500	900	6812B	95.8	71.7	409	17,000	234,223
KF17504	1750	1800	6811B	96.3	82.4	418	16,884	179,648
KF17506	1750	1200	6812B	96.3	81.6	422	17,660	251,763
KF20004	2000	1800	6812B	96.5	82.7	472	17,395	213,501

Notes:

(1) Insulated non-drive end bearing as standard.

(2) Motors are unidirectional, with counter clockwise rotation, facing the drive end, to change please consult factory.

(3) Data subject to change without notice.

AFJHTK, IEC, NEMA PREMIUM, MEDIUM VOLTAGE (900 HP - 1750 HP)[JF]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS (2300V)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
JF09002[1]	900	3600	400C	95.9	89.6	189	8,200	206,000
JF10002[2]	1000	3600	450C	97.0	91.0	213	9,200	247,200
JF12502[3]	1250	3600	500C	96.8	91.5	264	11,500	278,100
JF15002[3]	1500	3600	560C	96.3	92.0	318	12,900	323,008
JF17502[3]	1750	3600	560C	96.5	92.0	369	13,200	343,505

Notes:

(1) 400 frame motor is standard with antifriction ball bearings.
(2) 450 frame motor is standard with sleeve bearings and non-drive end insulated bearings; self lubricated.
(3) 500 frame and above, standard with sleeve bearings and non-drive end insulated bearings; force feed lubricated.
(4) Data subject to change without notice.

VERTICAL HOLLOW SHAFT WPI
HIGH THRUST with "P" BASE - LOW VOLTAGE

AMRCNH, (MAX-VHP™) NEMA PREMIUM [VHP]*
AMRCFP, (MAX-VH™) HIGH EFFICIENCY [VH_FP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

APPLICATIONS:

- Deep Well Turbine Pumps
- Fluid Handling Systems
- Irrigation
- Water/ Waste Water
- Fire Pumps*

FEATURES:

- Output Range: 7.5 - 800 HP
- Speed: 1800 RPM
- Enclosure: Weather Protected Type I (WPI)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- New Dual Column (60/50 Hz) Design Nameplate as Standard; 50 Hz Data 190/380V at 1.0 S.F.
- Standard Features: Coupling w/ Gib Key, Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTD's and Insulated Bearing Housing
- Optional Capability for 175% High Thrust Requirement for 444 - 449TP Frames
- Motor Design Suitable to handle 2 stacked bearings; Motors will ship with 1 bearing and 1 spacer as Standard
- Class F Insulation with Phenolic Alkyd Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance
- Cast Iron Conduit Box for F#449TP and Below; Steel Plate Conduit Box for F#5000
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets
- 1045 Hollow Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449TP and Below
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color for AMRC (MAX-VH™): Dark Gray - Munsell 7.5B 3.5/0.5
- Paint Color for AMRCNH (MAX-VHP™): Blue - Munsell 5PB 3/8
- Guide Bearings: 213 - 286TP frames are Grease Pre-packed Double Shielded Bearings (MULTEMP SRL)
  324TP - 5009P frames are Re-Greasable (Mobil Polyrex EM)
- Thrust Bearings: 213 - 286TP frames are Re-Greasable Angular Contact (Mobil Polyrex EM);
  324 - 449TP frames are Oil Lubricated Angular Contact; F#5000 and Above with Spherical Roller
- Oil Sight Glass for 324TP Frames and Above
- Oil Requirements: 300 S.S.U. @100°F
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate and Rodent Screens
- 12 Leads (PWS on 230V); Wye/Delta on 230V or 460V for 210TP–400TP
- 6 Leads (PWS on 230V, Wye/Delta on 460V for 444TP-5810P)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2
  10:1 Variable Torque with NRR. 10:1 C.T., 20:1 VT without NRR Using Braking in VFD
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD at stated per NEMA MG-1, part 31 for AMRCNH and Part 30 for AMRC.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

* Fire Pump available. See product page for more details.

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.

(2) Consult a Stock Product Application Specialist for suitability at higher elevations.

(3) Suitable for Wye/Delta start at 230V or 460V.

MAX-VHP™ VERTICAL HOLLOW SHAFT WPI

AMRCNH, (MAX-VHP™) NEMA PREMIUM [VHP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	CD DIM (in.)	BX DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VHP7/54	7.5	1800	213TP	91.0	81.0	9.6	2,600	10	20.25	1.001	227	3,977
VHP0104	10	1800	215TP	91.7	84.0	12.2	2,600	10	20.25	1.001	241	4,319
VHP0154	15	1800	254TP	93.0	83.0	18.2	3,350	10	23.38	1.001	349	5,204
VHP0204	20	1800	256TP	93.0	83.0	24.3	3,350	10	23.38	1.001	373	5,308
VHP0254	25	1800	284TP	93.6	85.0	29.4	3,350	10	24.75	1.001	480	6,503
VHP0304	30	1800	286TP	94.1	86.0	34.7	3,350	10	24.75	1.001	525	6,762
VHP0404	40	1800	324TP	94.1	86.0	46.3	5,700	16.5	28.22	1.188	716	9,356
VHP0504	50	1800	326TP	94.5	85.0	58.5	5,700	16.5	28.22	1.188	777	9,875
VHP0604	60	1800	364TP	95.0	85.0	69.5	6,000	16.5	31.16	1.188	892	11,186
VHP0754	75	1800	365TP	95.0	86.0	86.0	6,000	16.5	31.16	1.188	989	11,402
VHP1004	100	1800	404TP	95.4	85.5	115	7,900	16.5	36.94	1.501	1,278	19,250
VHP1254	125	1800	405TP	95.4	84.5	145	7,900	16.5	36.94	1.501	1,398	19,776
VHP1504	150	1800	444TP	95.8	86.0	171	10,700	16.5	44.78	1.501	1,815	38,071
VHP2004	200	1800	445TP	95.8	86.5	225	10,700	16.5	44.78	1.501	1,815	39,279
VHP2504	250	1800	445TP20	95.8	86.5	284	13,400	20	44.78	1.501	2,312	45,357
VHP3004	300	1800	447TP	95.8	87.5	337	13,400	20	49.78	1.688	2,841	48,906
VHP3504	350	1800	447TP	95.8	88.0	390	13,300	20	49.78	1.688	3,335	52,435
VHP4004	400	1800	449TP	95.8	88.5	444	13,200	20	53.91	1.938	3,818	55,932
VHP4504	450	1800	5009P	96.2	88.6	494	30,900	24.5	57.06	2.188	3,940	85,956
VHP5004	500	1800	5009P	96.2	88.8	548	30,900	24.5	57.06	2.188	4,070	89,545
VHP6004	600	1800	5808P	96.2	82.0	647	30,100	30.5	61.30	2.376	5,700	103,720
VHP7004	700	1800	5810P	96.2	90.7	751	30,100	30.5	68.78	2.376	6,100	107,277
VHP8004	800	1800	5810P	96.2	90.7	859	30,100	30.5	68.78	2.376	6,400	111,079

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 - EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "VHP_FP" catalog number.

(3) See page125 in order to confirm the TWMC standard coupling size is suitable for customer requirements or to select an alternate coupling size. Required coupling size **must** be noted on all vertical hollow shaft motors orders. Coupling will be changed out prior to shipping if a non-TWMC standard coupling size is needed.

(4) All data subject to change without notice.

MAX-VHP™ VERTICAL HOLLOW SHAFT WPI

AMRCNH, (MAX-VHP™) NEMA PREMIUM [VHP_FP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

FIRE PUMP CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	CD DIM (in.)	BX DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VHP7/54FP	7.5	1800	213TP	91.0	81.0	9.6	2,600	10	20.25	1.001	227	4,176
VHP0104FP	10	1800	215TP	91.7	84.0	12.2	2,600	10	20.25	1.001	241	4,535
VHP0154FP	15	1800	254TP	93.0	83.0	18.2	3,350	10	23.38	1.001	349	5,464
VHP0204FP	20	1800	256TP	93.0	83.0	24.3	3,350	10	23.38	1.001	373	5,574
VHP0254FP	25	1800	284TP	93.6	85.0	29.4	3,350	10	24.75	1.001	480	6,828
VHP0304FP	30	1800	286TP	94.1	86.0	34.7	3,350	10	24.75	1.001	525	7,100
VHP0404FP	40	1800	324TP	94.1	86.0	46.3	5,700	16.5	28.22	1.188	716	9,824
VHP0504FP	50	1800	326TP	94.5	85.0	58.5	5,700	16.5	28.22	1.188	777	10,369
VHP0604FP	60	1800	364TP	95.0	85.0	69.5	6,000	16.5	31.16	1.188	892	11,746
VHP0754FP	75	1800	365TP	95.0	86.0	86.0	6,000	16.5	31.16	1.188	989	11,972
VHP1004FP	100	1800	404TP	95.4	85.5	115	7,900	16.5	36.94	1.501	1,278	20,213
VHP1254FP	125	1800	405TP	95.4	84.5	145	7,900	16.5	36.94	1.501	1,398	20,765
VHP1504FP	150	1800	444TP	95.8	86.0	171	10,700	16.5	44.78	1.501	1,815	39,975
VHP2004FP	200	1800	445TP	95.8	86.5	225	10,700	16.5	44.78	1.501	1,815	41,243
VHP2504FP	250	1800	445TP20	95.8	86.5	284	13,400	20	44.78	1.501	2,312	47,625
VHP3004FP	300	1800	447TP	95.8	87.5	337	13,400	20	49.78	1.688	2,841	51,352
VHP3504FP	350	1800	447TP	95.8	88.0	390	13,300	20	49.78	1.688	3,335	55,057
VHP4004FP	400	1800	449TP	95.8	88.5	444	13,200	20	53.91	1.938	3,818	58,729

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 - EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "VHP_FP" catalog number.

(3) See page 125 in order to confirm the TWMC standard coupling size is suitable for customer requirements or to select an alternate coupling size. Required coupling size **must** be noted on all vertical hollow shaft motors orders. Coupling will be changed out prior to shipping if a non-TWMC standard coupling size is needed.

(4) All data subject to change without notice.

MAX-VH™ VERTICAL HOLLOW SHAFT WPI

AMRCFP, (MAX-VH™) HIGH EFFICIENCY [VH_FP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

FIRE PUMP CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	CD DIM (in.)	BX DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VH7/54FP	7.5	1800	213TP	88.5	85.0	9.35	2,600	10	20.25	1.001	227	3,721
VH0104FP	10	1800	215TP	89.5	86.5	12.1	2,600	10	20.25	1.001	241	4,123
VH0154FP	15	1800	254TP	91.0	88.0	17.5	3,350	10	23.38	1.001	349	4,864
VH0204FP	20	1800	256TP	91.0	88.0	23.4	3,350	10	23.38	1.001	373	5,030
VH0254FP	25	1800	284TP	91.7	86.0	29.7	3,350	10	24.75	1.001	480	6,080
VH0304FP	30	1800	286TP	92.4	86.5	35.1	3,350	10	24.75	1.001	525	6,517
VH0404FP	40	1800	324TP	93.0	88.0	45.7	5,700	16.5	28.22	1.188	716	8,290
VH0504FP	50	1800	326TP	93.0	88.0	57.0	5,700	16.5	28.22	1.188	777	9,200
VH0604FP	60	1800	364TP	93.6	84.5	71.0	6,000	16.5	31.16	1.188	892	9,995
VH0754FP	75	1800	365TP	94.1	84.5	88.5	6,000	16.5	31.16	1.188	989	10,550
VH1004FP	100	1800	404TP	94.1	86.0	116	7,900	16.5	36.94	1.501	1,278	17,749
VH1254FP	125	1800	405TP	94.5	87.5	142	7,900	16.5	36.94	1.501	1,398	18,373
VH1504FP	150	1800	444TP	95.0	86.0	172	10,700	16.5	44.78	1.501	1,815	37,857
VH2004FP	200	1800	445TP	95.0	86.5	228	10,700	16.5	44.78	1.501	1,815	38,675
VH2504FP	250	1800	445TP20	95.4	86.5	284	13,400	20	44.78	1.501	2,312	43,593
VH3004FP	300	1800	447TP	95.4	87.5	337	13,400	20	49.78	1.688	2,841	45,454
VH3504FP	350	1800	447TP	95.4	88.0	390	13,300	20	49.78	1.688	3,335	49,719
VH4004FP	400	1800	449TP	95.4	88.5	444	13,200	20	53.91	1.938	3,818	51,379

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 - EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "VHP_FP" catalog number.

(3) Per DOE regulations, this High Efficiency motor line inventory will be available through June 2018, or until current inventory has been depleted, whichever occurs first.

(4) Once product listed on this page has been depleted from current stock, that model will be sold only as Fire Pump.

(5) Please see our new line of Premium Efficient motors on page 101 or contact your Application Specialist for details.

(6) See page 125 in order to confirm the TWMC standard coupling size is suitable for customer requirements or to select an alternate coupling size. Required coupling size must be noted on all vertical hollow shaft motors orders. Coupling will be changed out prior to shipping if a non-TWMC standard coupling size is needed.

(7) All data subject to change without notice.

VERTICAL HOLLOW SHAFT TEFC
HIGH THRUST with "P" BASE - LOW VOLTAGE

AEEHNH, (MAX-VHP™) NEMA PREMIUM [VHTP]

Effective 07-01-18
Supercedes 03-24-17

APPLICATIONS:

- Deep Well Turbine Pumps
- Irrigation
- Water/Wastewater

FEATURES:

- Output Range: 15 - 800 HP
- Speed: 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only
- 230/460V Motors Suitable for Partial Winding Start (at 230V Only)(3)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- CSA Certified for Class I, Div. 2, Group B, C, D - Temp Code T3 Minimum
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- New Dual Column (60/50 Hz) Design Nameplate as Standard; 50 Hz Data 190/380V at 1.0 S.F.
- Standard Features: Coupling w/ Gib Key, Non-Sparking Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTD's and Insulated Bearing Housing
- CSA Certified for Class I, Div. 2, Groups B,C, D; Temp Code T3 minimum
- Class F Insulation with Phenolic Alkyd Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance
- Cast Iron Conduit Box for F#449TP and Below; Steel Plate Conduit Box for F#5000
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets
- 1045 Hollow Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Guide Bearings: 254 - 286TP frames are Grease Pre-packed Double Shielded Bearings (MULTEMP SRL)
  324TP - 5810P frames are Re-Greasable (Mobil Polyrex EM)
- Thrust Bearings: 254 - 365TP frames are Re-Greasable Angular Contact (Mobil Polyrex EM);
  404 - 449TP frames are Oil Lubricated Angular Contact; F#5000 & Above with Spherical Roller or Angular Contact
- Oil Sight Glass for 324TP Frames and Above
- Oil Requirements: 300 S.S.U. @ 100°F
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate
- 12 Leads (PWS on 230V) on 213 - 405TP; (3) Suitable for Wye/Delta Start at 230V or 460V.
  6 Leads on 444TP to 449TP; 5000 Frames and Above with Connection Studs(4)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2 10:1 Variable Torque with NRR; 20:1 Variable Torque without NRR Using Braking in VFD 10:1 Constant Torque
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD as stated per NEMA MG-1 Part 31.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Suitable for Wye/Delta start at 230V or 460V.
(4) Suitable for Wye/Delta start at 460V.

MAX-VHP™ VERTICAL HOLLOW SHAFT TEFC

AEEHNH, (MAX-VHP™) NEMA PREMIUM [VHTP]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	CD DIM (in.)	BX DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VHTP0154	15	1800	254TP	92.4	88.0	17.3	3,350	10	22.36	1.001	350	9,694
VHTP0156	15	1200	284TP	92.4	83.5	16.4	3,850	10	24.01	1.188	460	11,074
VHTP0158	15	900	286TP	90.2	78.0	39.9	4,400	10	25.50	1.188	516	11,340
VHTP0204	20	1800	256TP	93.0	87.5	23.0	3,350	10	24.10	1.001	450	10,085
VHTP0206	20	1200	286TP	91.7	84.0	22.1	3,850	10	25.51	1.188	550	11,311
VHTP0208	20	900	324TP	91.0	81.0	50.8	6,000	16.5	27.59	1.188	550	14,532
VHTP0254	25	1800	284TP	93.6	86.0	29.1	3,350	10	24.01	1.188	520	11,072
VHTP0256	25	1200	324TP	93.0	83.0	26.9	5,200	16.5	27.60	1.188	725	14,494
VHTP0258	25	900	326TP	91.0	80.0	64.3	6,000	16.5	29.08	1.188	743	14,926
VHTP0304	30	1800	286TP	93.6	87.5	34.3	3,350	10	25.51	1.188	558	11,316
VHTP0306	30	1200	326TP	93.0	80.5	32.3	5,200	16.5	29.09	1.188	725	14,893
VHTP0308	30	900	364TP	93.0	78.0	77.4	7,500	16.5	30.26	1.188	915	16,600
VHTP0404	40	1800	324TP	94.1	86.0	46.3	4,500	16.5	27.60	1.188	720	14,504
VHTP0406	40	1200	364TP	94.1	86.5	42.3	6,600	16.5	30.26	1.188	898	16,548
VHTP0408	40	900	365TP	93.0	78.0	103.0	7,500	16.5	31.24	1.188	1001	17,088
VHTP0504	50	1800	326TP	94.5	87.0	57.0	4,500	16.5	29.09	1.188	780	14,893
VHTP0506	50	1200	365TP	94.1	86.0	53.0	6,600	16.5	31.24	1.188	1,025	17,057
VHTP0508	50	900	404TP	93.0	81.0	124.0	10,500	16.5	38.87	1.501	1,340	26,408
VHTP0604	60	1800	364TP	95.0	86.5	68.5	6,000	16.5	30.26	1.188	900	16,563
VHTP0606	60	1200	404TP	94.5	87.0	63.0	9,000	16.5	38.87	1.501	1,210	26,375
VHTP0608	60	900	405TP	93.0	81.0	149.0	10,500	16.5	40.38	1.501	1,499	27,050
VHTP0754	75	1800	365TP	95.4	86.5	85.0	6,000	16.5	31.24	1.188	970	17,049
VHTP0756	75	1200	405TP	94.5	86.5	78.5	9,000	16.5	40.39	1.501	1,340	27,000
VHTP1004	100	1800	405TP	95.4	87.5	112	7,900	16.5	40.39	1.501	1,415	26,971
VHTP1006	100	1200	444TP	95.0	79.8	123	10,100	16.5	43.03	1.501	1,990	43,239
VHTP1254	125	1800	444TP	95.4	85.6	143	8,900	16.5	43.03	1.501	2,020	43,054
VHTP1256	125	1200	445TP	95.0	79.0	155	10,100	16.5	45.00	1.501	2,080	44,632
VHTP1504	150	1800	445TP	95.8	88.0	166	8,900	16.5	45.00	1.501	2,120	44,238
VHTP1506	150	1200	447TP	95.8	77.2	189	11,500	20	45.94	1.688	2,540	50,272
VHTP2004	200	1800	447TP	96.2	82.5	235	10,100	20	45.94	1.688	2,470	52,100
VHTP2006	200	1200	449TP	95.8	76.6	254	11,500	20	53.94	2.126	2,780	52,403
VHTP2504	250	1800	449TP	96.2	83.1	292	10,100	20	53.94	2.126	2,820	55,533
VHTP2506	250	1200	449TP	95.8	74.3	328	11,500	20	53.94	2.126	2,970	60,064
VHTP3004	300	1800	449TP	96.2	83.1	351	10,100	20	53.94	2.126	3,540	59,233
VHTP3006	300	1200	5009P	95.8	84.8	345	12,400	24.5	57.20	2.188	3,800	81,961
VHTP3504	350	1800	5009P	96.2	86.3	394	10,800	24.5	57.20	2.188	4,020	75,797
VHTP3506	350	1200	5808P	95.8	80.6	424	20,400	30.5	62.09	2.376	5,700	111,307
VHTP4004	400	1800	5009P	96.2	86.6	449	10,800	24.5	57.20	2.188	4,200	93,379
VHTP4006	400	1200	5808P	95.8	80.9	482	20,400	30.5	62.09	2.376	5,950	119,441
VHTP4504	450	1800	5808P	96.2	84.0	521	10,100	30.5	62.09	2.376	5,990	113,813
VHTP4506	450	1200	5808P	95.8	80.2	547	20,400	30.5	62.09	2.376	6,150	122,638
VHTP5004	500	1800	5808P	96.2	84.0	578	10,100	30.5	62.09	2.376	6,210	116,282
VHTP5006	500	1200	5808P	95.8	81.2	601	20,400	30.5	62.09	2.376	6,600	129,534
VHTP6004	600	1800	5810P	96.2	84.0	694	10,100	30.5	67.20	2.376	6,680	126,571
VHTP6006	600	1200	5810P	95.8	81.7	717	20,400	30.5	67.20	2.376	7,090	140,404
VHTP7004	700	1800	5810P	96.2	85.0	800	10,100	30.5	67.20	2.376	7,070	133,010
VHTP7006	700	1200	5810P	95.8	81.3	840	20,400	30.5	67.2	2.376	8,670	147,469
VHTP8004	800	1800	5810P	96.2	86.0	904	10,100	30.5	67.20	2.376	9,220	150,473

Notes:

(1) See page 126 in order to confirm the TWMC standard coupling size is suitable for customer requirements or to select an alternate coupling size. Required coupling size must be noted on all vertical hollow shaft motors orders. Coupling will be changed out prior to shipping if a non-TWMC standard coupling size is needed.

(2) All data subject to change without notice.

VERTICAL HOLLOW SHAFT WPI
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AMRKNH, NEMA PREMIUM [VHKP]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Deep Well Turbine Pumps
- Irrigation
- Water/Wastewater

FEATURES:

- Output Range: 200 - 1000 HP
- Speed: 1800 & 1200 RPM
- Enclosure: Weather Protected Type I (WPI)
- Voltage: 2300/4000V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- Standard Features: Coupling w/ Gib Key, Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTD's and Insulated Bearing Housing
- Class F Insulation with VPI Epoxy Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance
- Cast Iron Conduit Box for F#449TP and Below; Steel Plate Conduit Box for F#5000
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets
- 1045 Hollow Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449TP and Below
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000 and above
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Guide Bearings: Re-Greasable with Mobil Polyrex™ EM Grease
- Thrust Bearings: 449TP frames are Oversized Angular Contact Oil Lubricated
- Thrust Bearings: 5000 Frame and above are Oil Lubricated Spherical Roller with Site Glass
- Oil Requirements: 300 S.S.U. @100°F
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate
- 6 Leads
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2 10:1 Variable Torque with NRR; 20:1 Variable Torque without NRR Using Braking in VFD
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD as stated per NEMA MG-1. Part 31.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.

VERTICAL HOLLOW SHAFT WPI
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AMRKNH, NEMA PREMIUM [VHKP]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @4160V	DOWN THRUST (lbs.)	BD DIM (in.)	CD DIM (in.)	BX DIM (IN.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VHKP2006	200	1200	449TP	94.9	81.0	25.5	11,300	20	53.91	1.938	3,420	64,976
VHKP2504	250	1800	449TP	95.0	82.2	30.0	10,100	20	53.91	1.938	3,510	59,608
VHKP2506	250	1200	449TP	95.0	80.0	31.5	11,300	20	53.91	1.938	3,730	67,161
VHKP3004	300	1800	449TP	95.0	83.8	35.5	10,100	20	53.91	1.938	3,610	59,828
VHKP3006	300	1200	5009P	95.0	77.6	38.0	33,800	24.5	57.06	2.188	4,020	91,496
VHKP3504	350	1800	5009P	95.0	86.7	40.0	30,900	24.5	57.06	2.188	3,630	94,169
VHKP3506	350	1200	5009P	95.0	75.9	45.5	33,800	24.5	57.06	2.188	4,010	98,533
VHKP4004	400	1800	5009P	95.0	86.8	45.5	30,900	24.5	57.06	2.188	3,710	95,403
VHKP4006	400	1200	5009P	95.0	75.6	52.0	33,800	24.5	57.06	2.188	4,880	100,525
VHKP4504	450	1800	5009P	95.0	87.1	51.0	30,900	24.5	57.06	2.188	3,810	96,432
VHKP4506	450	1200	5806P	95.0	80.2	55.5	33,600	30.5	55.39	2.438	4,510	112,563
VHKP5004	500	1800	5009P	95.0	87.6	56.5	30,900	24.5	57.06	2.188	3,980	101,769
VHKP5006	500	1200	5806P	95.0	80.2	61.5	33,600	30.5	55.39	2.438	4,610	114,044
VHKP6004	600	1800	5808P	95.4	86.0	69.0	30,600	30.5	61.30	2.438	5,240	124,790
VHKP6006	600	1200	5808P	95.0	80.3	73.5	33,300	30.5	61.30	2.438	5,660	118,007
VHKP7004	700	1800	5810P	95.4	86.0	80.0	30,100	30.5	68.78	2.438	5,650	128,987
VHKP7006	700	1200	5808P	95.0	81.2	85.0	33,300	30.5	61.30	2.438	5,340	125,436
VHKP8004	800	1800	5810P	95.4	86.3	91.5	30,100	30.5	68.78	2.438	5,900	132,122
VHKP8006	800	1200	5810P	95.0	80.7	97.5	33,000	30.5	68.78	2.438	5,720	131,408
VHKP9004	900	1800	5810P	95.4	86.7	103	30,100	30.5	68.78	2.438	6,160	137,013
VHKP9006	900	1200	5810P	95.0	81.5	109	33,000	30.5	68.78	2.438	5,960	138,955
VHKP10004	1000	1800	5810P	95.4	87.3	113	30,100	30.5	68.78	2.438	6,510	139,261

Notes:

(1) See page 125 in order to confirm the TWMC standard coupling size is suitable for customer requirements or to select an alternate coupling size. Required coupling size must be noted on all vertical hollow shaft motors orders. Coupling will be changed out prior to shipping if a non-TWMC standard coupling size is needed.

(2) All data subject to change without notice.

VERTICAL HOLLOW SHAFT TEFC
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AEHCNH, NEMA PREMIUM [VHKTP]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Deep Well Turbine Pumps
- Irrigation
- Water/Wastewater

FEATURES:

- Output Range: 200 - 700 HP
- Speed: 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54)
- Voltage: 2300/4000V
- Motors Suitable for Reduced Starting Voltage
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- Standard Features: Coupling w/ Gib Key, Non-Sparking Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTD's and Insulated Bearing Housing
- CSA Certified for Class I, Div. 2, Groups B,C, D; Temp Code T3 minimum
- Class F Insulation with VPI Epoxy Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance
- Steel Plate Conduit Box with Threaded Connection Opening(s)
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Oversized Angular Contact or Spherical Thrust Bearing Installed
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets
- 1045 Hollow Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449TP
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000 and Above
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Vacuum De-Gassed Re-Greasable Ball Bearings Frames -5007TP & Up with Mobil Polyrex™ EM Grease
- Guide Bearings: 324TP - 5810P Frames are Re-Greasable with Mobil Polyrex™ EM Grease
- Thrust Bearings: 449 - 5810P Frames are Oil Lubricated Angular Contact or Spherical Thrust Bearing with Site Glass
- Oil Requirements for 444TP - 5810P Frames: 300 S.S.U. @ 100°F
- Grease Discharge Fittings on Frames with Re-Greasable Motors
- Bronze Labyrinth Type Metal Flinger on Lower End Bracket
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2
- Speed Ranges: 10:1 Variable Torque
- 6 Leads
- UL Recognized and CSA Approved
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD as stated per NEMA MG-1. Part 31.
- Ball Type NRR Provided

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.

VERTICAL HOLLOW SHAFT TEFC
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AEHCNH, NEMA PREMIUM [VHKTP]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @4000V	DOWN THRUST (lbs.)	BD DIM (in.)	CD DIM (in.)	BX DIM (IN.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VHKTP1506	150	1200	449TP	95.0	80.1	18.0	11,400	20.0	53.94	2.126	2,850	65,651
VHKTP2004	200	1800	449TP	95.0	82.9	23.5	10,000	20.0	53.94	2.126	2,720	65,843
VHKTP2006	200	1200	449TP	95.0	76.2	25.5	11,400	20.0	53.94	2.126	3,700	68,797
VHKTP2504	250	1800	449TP	95.0	83.7	29.0	10,000	20.0	53.94	2.126	3,780	66,834
VHKTP2506	250	1200	5009P	95.0	81.9	30.0	12,100	24.5	57.20	2.188	3,980	88,185
VHKTP2508	250	900	5009P	95.0	79.8	30.5	13,200	24.5	57.20	2.188	4,690	94,525
VHKTP3004	300	1800	5009P	95.4	85.5	34.0	10,500	24.5	57.20	2.188	3,990	87,790
VHKTP3006	300	1200	5009P	95.0	82.4	35.5	12,100	24.5	57.20	2.188	5,530	91,580
VHKTP3008	300	900	5808P	95.0	77.3	39.0	24,300	30.5	62.09	2.376	6,300	117,448
VHKTP3504	350	1800	5009P	95.4	86.1	39.5	10,500	24.5	57.20	2.188	5,310	92,762
VHKTP3506	350	1200	5808P	95.2	80.4	42.5	22,300	30.5	62.09	2.376	5,960	113,727
VHKTP3508	350	900	5808P	95.0	77.2	44.5	24,300	30.5	62.09	2.376	6,640	121,820
VHKTP4004	400	1800	5009P	95.4	85.7	45.5	10,500	24.5	57.20	2.188	5,780	93,648
VHKTP4006	400	1200	5808P	95.4	80.8	48.5	22,300	30.5	62.09	2.376	6,300	117,452
VHKTP4008	400	900	5808P	95.0	77.3	50.5	24,300	30.5	62.09	2.376	6,980	127,947
VHKTP4504	450	1800	5808P	95.4	83.8	52.5	9,700	30.5	62.09	2.376	6,260	115,477
VHKTP4506	450	1200	5808P	95.6	80.9	54.0	22,300	30.5	62.09	2.376	6,560	120,817
VHKTP4508	450	900	5810P	95.0	77.1	57.5	24,300	30.5	67.2	2.376	7,580	132,306
VHKTP5004	500	1800	5808P	95.5	82.6	59.0	9,700	30.5	62.09	2.376	6,480	130,756
VHKTP5006	500	1200	5810P	95.8	81.6	59.5	22,300	30.5	67.20	2.376	6,880	139,406
VHKTP5008	500	900	5810P	95.4	76.8	63.5	24,300	30.5	67.20	2.376	7,790	116,762
VHKTP6004	600	1800	5810P	95.7	84.3	69.5	9,700	30.5	67.20	2.376	6,850	126,392
VHKTP6006	600	1200	5810P	96.0	81.3	71.5	22,300	30.5	67.20	2.376	9,120	134,307
VHKTP7004	700	1800	5810P	95.9	84.6	80.5	9,700	30.5	67.20	2.376	9,000	131,865

Notes:

(1) See page 126 in order to confirm the TWMC standard coupling size is suitable for customer requirements or to select an alternate coupling size. Required coupling size must be noted on all vertical hollow shaft motors orders. Coupling will be changed out prior to shipping if a non-TWMC standard coupling size is needed.

(2) All data subject to change without notice.

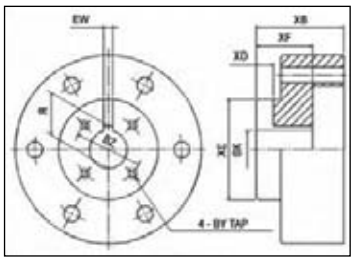
COUPLING KITS WPI

FOR VERTICAL HOLLOW SHAFT MOTORS

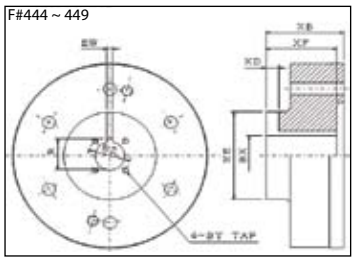
Effective 07-08-18
Supercedes 03-24-17

Notes:

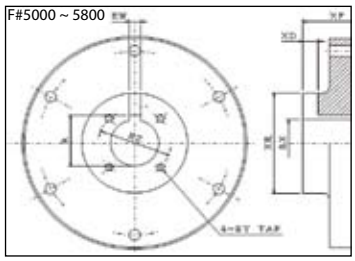
1. Tolerance on BX dimensions up to and including 1.500 inches in diameter: +0.001 inches, -0.000 inches; Larger than 1.500 inches diameter: +0.0015 in., -0.0000 in.
2. Dimension EW tolerance: +0.002 inches, -0.000 inches.
3. Dimension R tolerance: +0.010 inches, -0.000 inches.
4. **"*" in the table denotes the standard coupling size for each frame.**
5. One coupling is included with motor price. If purchased separately use list pricing.
6. Please consult Application Specialist for listings not shown.
7. Notice coupling part numbers have changed from 2015/2016 Pricebook; New design.



F#444 ~ 449



F#5000 ~ 5800



FRAME	BX	BY	BZ	EW	R	XB	XD	XE	XF	PART NO.	LIST PRICE ($)
210TP	0.751	NO. 10-32 UNF	1.375	0.188	0.845	1.750	0.406	2.000	1.125	31010D6871903	460
	0.876	NO. 10-32 UNF	1.375	0.188	0.970	1.750	0.406	2.000	1.125	31010D6872004	
	0.938	NO. 10-32 UNF	1.375	0.250	1.078	1.750	0.406	2.000	1.125	31010D6872101	
	***1.001**	NO. 10-32 UNF	1.375	0.250	1.126	1.750	0.406	2.000	1.125	**31010D6872209**	
250TP/ 280TP	0.751	NO. 10-32 UNF	1.375	0.188	0.845	2.170	0.410	2.250	1.230	31010D6872306	613
	0.876	NO. 10-32 UNF	1.375	0.188	0.970	2.170	0.410	2.250	1.230	31010D6872403	
	***1.001**	NO. 10-32 UNF	1.375	0.250	1.126	2.170	0.410	2.250	1.230	**31010D6872501**	
	1.188	1/4"-20 UNC	1.750	0.250	1.313	2.170	0.410	2.250	1.230	31010D6872608	
	1.251	1/4"-20 UNC	1.750	0.250	1.376	2.170	0.410	2.250	1.230	31010D6872705	
320TP/ 360TP	1.001	NO. 10-32 UNF	1.375	0.250	1.126	2.540	0.410	2.875	1.540	31010D6872802	920
	***1.188**	1/4"-20 UNC	1.750	0.250	1.313	2.540	0.410	2.875	1.540	**31010D6872900**	
	1.251	1/4"-20 UNC	1.750	0.250	1.376	2.540	0.410	2.875	1.540	31010D6873001	
	1.438	1/4"-20 UNC	2.125	0.375	1.625	2.540	0.470	2.875	1.540	31010D6873108	
	1.501	1/4"-20 UNC	2.125	0.375	1.688	2.540	0.470	2.875	1.540	31010D6873205	
400TP	1.188	1/4"-20 UNC	1.750	0.250	1.313	2.760	0.530	3.150	1.500	31010D6873302	1,278
	1.251	1/4"-20 UNC	1.750	0.250	1.376	2.760	0.530	3.150	1.500	31010D6873400	
	1.438	1/4"-20 UNC	2.125	0.375	1.625	2.760	0.530	3.150	1.500	31010D6873507	
	***1.501**	1/4"-20 UNC	2.125	0.375	1.688	2.760	0.530	3.150	1.500	**31010D6873604**	
	1.688	1/4"-20 UNC	2.500	0.375	1.891	2.760	0.530	3.150	1.500	31010D6873701	
	1.751	1/4"-20 UNC	2.500	0.375	1.954	2.760	0.530	3.150	1.500	31010D6873809	
444TP/ 445TP	1.188	1/4"-20 UNC	1.750	0.250	1.304	3.169	0.409	3.740	2.875	3A010C2390104	2,150
	1.251	1/4"-20 UNC	1.750	0.250	1.367	3.169	0.409	3.740	2.875	3A010C2390201	
	1.438	1/4"-20 UNC	2.125	0.375	1.605	3.169	0.531	3.740	2.875	3A010C2390309	
	***1.501**	1/4"-20 UNC	2.125	0.375	1.669	3.169	0.531	3.740	2.875	**3A010C2390406**	
	1.688	1/4"-20 UNC	2.500	0.375	1.859	3.169	0.531	3.740	2.875	3A010C2390503	
	1.751	1/4"-20 UNC	2.500	0.375	1.922	3.169	0.531	3.740	2.875	3A010C2390601	
	1.938	1/4"-20 UNC	2.500	0.500	2.160	3.169	0.689	3.740	2.875	3A010C2390708	
445TP20[A]/ 447TP[B]/ 449TP[C]	1.438	1/4"-20 UNC	2.125	0.375	1.605	3.559	0.531	4.725	3.071	3A010C2390805	2,350
	***1.501[A]**	1/4"-20 UNC	2.125	0.375	1.669	3.559	0.531	4.725	3.071	**3A010C2390902**	
	***1.688[B]**	1/4"-20 UNC	2.500	0.375	1.859	3.559	0.531	4.725	3.071	**3A010C2391003**	
	1.751	1/4"-20 UNC	2.500	0.375	1.922	3.559	0.531	4.725	3.071	3A010C2391101	
	***1.938[C]**	1/4"-20 UNC	2.500	0.500	2.160	3.559	0.689	4.725	3.071	**3A010C2391208**	
	2.001	3/8"-16 UNC	3.250	0.500	2.223	3.559	0.689	4.725	3.071	3A010C2391305	
	2.063	3/8"-16 UNC	3.250	0.500	2.287	3.559	0.689	4.725	3.071	3A010C2391402	
	2.126	3/8"-16 UNC	3.250	0.500	2.350	3.559	0.689	4.725	3.071	3A010C2391500	
	2.188	3/8"-16 UNC	3.250	0.500	2.414	3.559	0.689	4.725	3.071	3A010C2391607	
	2.251	3/8"-16 UNC	3.250	0.500	2.477	3.559	0.689	4.725	3.071	3A010C2391704	
	2.376	3/8"-16 UNC	3.250	0.625	2.651	3.559	0.815	4.725	3.071	3A010C2391801	
	2.438	3/8"-16 UNC	3.250	0.625	2.714	3.559	0.815	4.725	3.071	3A010C2391909	
	2.501	3/8"-16 UNC	3.250	0.625	2.778	3.559	0.815	4.725	3.071	3A010C2392000	
5000[A]/ 5800[B]	1.688	1/4"-20 UNC	2.500	0.375	1.859	-	0.531	4.725	3.071	3A711C1371209X001	2,650
	1.938	1/4"-20 UNC	2.500	0.500	2.160	-	0.689	4.725	3.071	3A711C1371306X001	
	2.126	3/8"-16 UNC	3.250	0.500	2.350	-	0.689	4.725	3.071	3A711C1371403X001	
	***2.188[A]**	3/8"-16 UNC	3.250	0.500	2.414	-	0.689	4.725	3.071	3A711C1371501X001	
	2.251	3/8"-16 UNC	3.250	0.500	2.477	-	0.689	4.725	3.071	3A711C1370407X001	
	2.376	3/8"-16 UNC	3.250	0.625	2.651	-	0.815	4.725	3.071	3A711C1370300X001	
	***2.438[B]**	3/8"-16 UNC	3.250	0.625	2.714	-	0.815	4.725	3.071	3A711C1370202X001	
	2.501	3/8"-16 UNC	3.250	0.625	2.778	-	0.815	4.725	3.071	3A711C1370105X001	
	BLANK1	3/8"-16 UNC	3.250	-	-	-	-	4.725	3.071	3A711C1370504X001	
	BLANK2	-	-	-	-	-	-	4.725	3.071	3A711C1370601X001	

COUPLING KITS TEFC

FOR VERTICAL HOLLOW SHAFT MOTORS

Effective 07-08-18
Supercedes 03-24-17

Notes:

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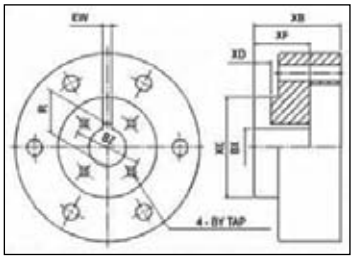
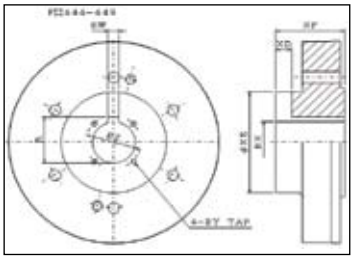
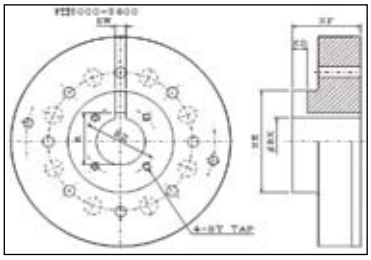
2. Dimension EW tolerance: +0.002 inches, -0.000 inches.
3. Dimension R tolerance: +0.010 inches, -0.000 inches.
4. **"*" in the table denotes the standard coupling size for each frame.**
5. One coupling is included with motor price. If purchased separately use list pricing.
6. Please consult Application Specialist for listings not shown.
7. Notice coupling part numbers have changed from 2015/2016 Pricebook; New design.





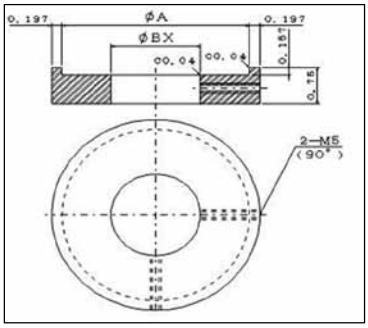


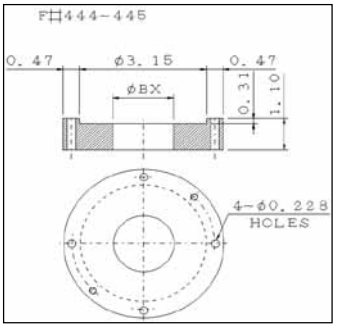
FRAME	BX	BY	BZ	EW	R	XB	XD	XE	XF	PART NO.	LIST PRICE ($)
210TP	0.751	NO. 10-32 UNF	1.375	0.188	0.845	1.750	0.343	2.000	1.125	31010D6870206	460
	0.876	NO. 10-32 UNF	1.375	0.188	0.970	1.750	0.343	2.000	1.125	31010D6870303	
	***1.001**	NO. 10-32 UNF	1.375	0.250	1.126	1.750	0.406	2.000	1.125	**31010D6870401**	
250TP	0.751	NO. 10-32 UNF	1.375	0.188	0.845	2.560	0.343	2.250	1.625	31010D6870508	613
	0.876	NO. 10-32 UNF	1.375	0.188	0.970	2.560	0.343	2.250	1.652	31010D6870605	
	***1.001**	NO. 10-32 UNF	1.375	0.250	1.126	2.560	0.406	2.250	1.625	**31010D6870702**	
	1.188	1/4"-20 UNC	1.750	0.250	1.313	2.560	0.406	2.250	1.652	31010D6870800	
280TP	0.876	NO. 10-32 UNF	1.375	0.188	0.970	2.560	0.343	2.250	1.652	31010D6870605	613
	***1.001**	NO. 10-32 UNF	1.375	0.250	1.126	2.560	0.406	2.250	1.625	**31010D6870702**	
	1.188	1/4"-20 UNC	1.750	0.250	1.313	2.560	0.406	2.250	1.652	31010D6870800	
	1.251	1/4"-20 UNC	1.750	0.250	1.376	2.560	0.406	2.250	1.652	31010D6870907	
320TP	1.001	NO. 10-32 UNF	1.375	0.250	1.126	3.331	0.406	2.875	2.331	31010D6871008	920
	***1.188**	1/4"-20 UNC	1.750	0.250	1.313	3.331	0.406	2.875	2.331	**31010D6871105**	
	1.251	1/4"-20 UNC	1.750	0.250	1.376	3.331	0.406	2.875	2.331	31010D6871202	
	1.438	1/4"-20 UNC	2.125	0.375	1.625	3.331	0.531	2.875	2.331	31010D6871300	
360TP	***1.188**	1/4"-20 UNC	1.750	0.250	1.313	3.331	0.406	2.875	2.331	**31010D6871407**	920
	1.251	1/4"-20 UNC	1.750	0.250	1.376	3.331	0.406	2.875	2.331	31010D6871504	
	1.438	1/4"-20 UNC	2.125	0.375	1.625	3.331	0.531	2.875	2.331	31010D6871601	
	1.501	1/4"-20 UNC	2.125	0.375	1.688	3.331	0.531	2.875	2.331	31010D6871709	
400TP	1.251	1/4"-20 UNC	2.125	0.375	1.688	3.543	0.531	3.150	2.441	Contact Factory	~
	1.438	1/4"-20 UNC	2.125	0.375	1.688	3.543	0.531	3.150	2.441	Contact Factory	~
	***1.501**	1/4"-20 UNC	2.125	0.375	1.688	3.543	0.531	3.150	2.441	**31010D6871806**	2,150
	1.688	1/4"-20 UNC	2.500	0.375	1.891	-	0.531	3.740	2.874	Contact Factory	~
444TP/ 445TP	1.188	1/4"-20 UNC	1.750	0.250	1.304	-	0.409	3.740	2.874	3A711C1580100X001	2,150
	1.251	1/4"-20 UNC	1.750	0.250	1.367	-	0.409	3.740	2.874	3A711C1580207X001	
	1.438	1/4"-20 UNC	2.125	0.375	1.605	-	0.531	3.740	2.874	3A711C1580304X001	
	***1.501**	1/4"-20 UNC	2.125	0.375	1.669	-	0.531	3.740	2.874	**3A711C1580401X001**	
	1.688	1/4"-20 UNC	2.500	0.375	1.859	-	0.531	3.740	2.874	3A711C1580509X001	
	1.751	1/4"-20 UNC	2.500	0.375	1.922	-	0.531	3.740	2.874	3A711C1580606X001	
	1.938	1/4"-20 UNC	2.500	0.500	2.160	-	0.689	3.740	2.874	3A711C1580703X001	
447TP[A]/ 449TP[B]	1.438	1/4"-20 UNC	2.125	0.375	1.605	-	0.531	4.725	3.071	3A711C1590105X001	2,350
	1.501	1/4"-20 UNC	2.125	0.375	1.669	-	0.531	4.725	3.071	3A711C1590202X001	
	***1.688**[A]	1/4"-20 UNC	2.500	0.375	1.859	-	0.531	4.725	3.071	**3A711C1590300X001**	
	1.751	1/4"-20 UNC	2.500	0.375	1.922	-	0.531	4.725	3.071	3A711C1590407X001	
	***1.938**[B]	1/4"-20 UNC	2.500	0.500	2.160	-	0.689	4.725	3.071	**3A711C1590504X001**	
	2.001	3/8"-16 UNC	3.250	0.500	2.223	-	0.689	4.725	3.071	3A711C1590601X001	
	2.063	3/8"-16 UNC	3.250	0.500	2.287	-	0.689	4.725	3.071	3A711C1590709X001	
	2.126	3/8"-16 UNC	3.250	0.500	2.350	-	0.689	4.725	3.071	3A711C1590806X001	
	2.188	3/8"-16 UNC	3.250	0.500	2.414	-	0.689	4.725	3.071	3A711C1590903X001	
	2.251	3/8"-16 UNC	3.250	0.500	2.477	-	0.689	4.725	3.071	3A711C1591004X001	
	2.376	3/8"-16 UNC	3.250	0.625	2.651	-	0.815	4.725	3.071	3A711C1591101X001	
	2.438	3/8"-16 UNC	3.250	0.625	2.714	-	0.815	4.725	3.071	3A711C1591209X001	
	2.501	3/8"-16 UNC	3.250	0.625	2.778	-	0.815	4.725	3.071	3A711C1591306X001	
5000[A]/ 5800-4P[B]	1.501	1/4"-20 UNC	2.125	0.375	1.669	-	0.531	4.725	3.071	3A711C1600101X001	2,650
	1.688	1/4"-20 UNC	2.500	0.375	1.859	-	0.531	4.725	3.071	3A711C1600208X001	
	1.938	1/4"-20 UNC	2.500	0.500	2.160	-	0.689	4.725	3.071	3A711C1600305X001	
	2.126	3/8"-16 UNC	3.250	0.500	2.350	-	0.689	4.725	3.071	3A711C1600402X001	
	***2.188**[A]	3/8"-16 UNC	3.250	0.500	2.414	-	0.689	4.725	3.071	**3A711C1600500X001**	
	2.376	3/8"-16 UNC	3.250	0.625	2.651	-	0.815	4.725	3.071	3A711C1600607X001	
	***2.438**[B]	3/8"-16 UNC	3.250	0.625	2.714	-	0.815	4.725	3.071	**3A711C1600704X001**	
5800-6P & ABOVE	1.501	1/4"-20 UNC	2.125	0.375	1.669	-	0.531	4.725	3.071	3A711C1630107X001	2,650
	1.688	1/4"-20 UNC	2.500	0.375	1.859	-	0.531	4.725	3.071	3A711C1630204X001	
	1.938	1/4"-20 UNC	2.500	0.500	2.160	-	0.689	4.725	3.071	3A711C1630301X001	
	2.126	3/8"-16 UNC	3.250	0.500	2.350	-	0.689	4.725	3.071	3A711C1630409X001	
	2.188	3/8"-16 UNC	3.250	0.500	2.414	-	0.689	4.725	3.071	3A711C1630506X001	
	2.376	3/8"-16 UNC	3.250	0.625	2.651	-	0.815	4.725	3.071	3A711C1630603X001	
	***2.438**	3/8"-16 UNC	3.250	0.625	2.714	-	0.815	4.725	3.071	**3A711C1630701X001**	

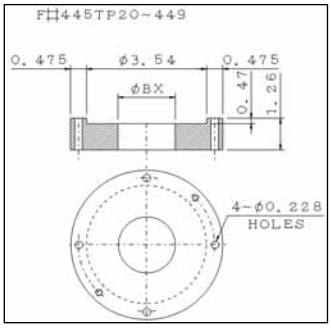
STEADY BUSHING KITS WPI

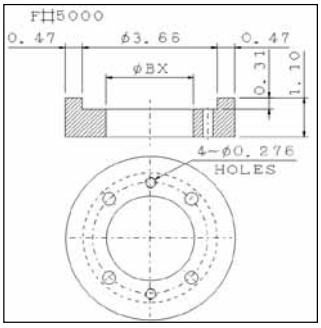
FOR VERTICAL HOLLOW SHAFT MOTORS

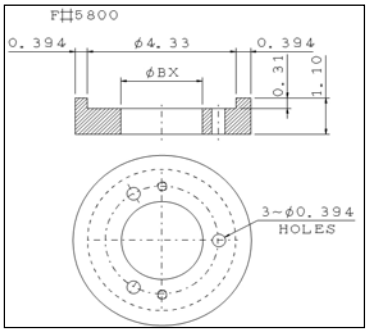
Effective 07-08-18
Supercedes 03-24-17











Notes:

1. See corresponding diagram for part detail.
2. Please consult Application Specialist for listings not shown.
3. Steady Bushing material is Bronze.
4. Kit includes hardware.
5. Notice steady bushing part numbers have changed from 2015/2016 Pricebook; New design.
6. Steady bushing kits are the same for WPI and TEFC for frames 449TP and smaller.
7. **"*" in the table denotes the standard size for each frame.**

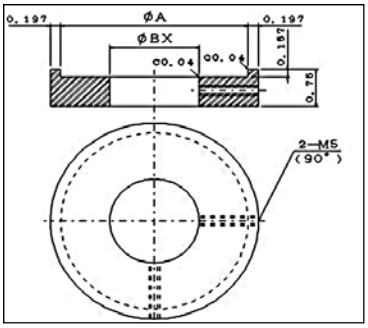
FRAME	DIMENSION		PART NO.	LIST PRICE ($)
	A	BX		
210TP	1.77	0.751	31010D4974705	100
		0.876	31010D4974802	
		0.938	31010D4974900	
		***1.001**	**31010D4975001**	
250TP	1.77	0.751	31010D4974705	100
		0.876	31010D4974802	
		***1.001**	**31010D4975001**	
		1.188	31010D4975108	
		1.251	31010D4975205	
280TP	2.17	0.751	31010D4975302	100
		0.876	31010D4975400	
		1.001	31010D4975507	
		***1.188**	**31010D4975604**	
		1.251	31010D4975701	
320TP	2.83	1.001	31010D4975809	130
		***1.188**	**31010D4975906**	
		1.251	31010D4976007	
		1.438	31010D4976104	
		1.501	31010D4976201	
360TP	3.03	1.001	31010D4976309	130
		***1.188**	**31010D4976406**	
		1.251	31010D4976503	
		1.438	31010D4976601	
		1.501	31010D4976708	
400TP	3.54	1.188	31010D4976805	150
		1.251	31010D4976902	
		1.438	31010D4977003	
		***1.501**	**31010D4977101**	
		1.688	31010D4977208	
		1.751	31010D4977305	

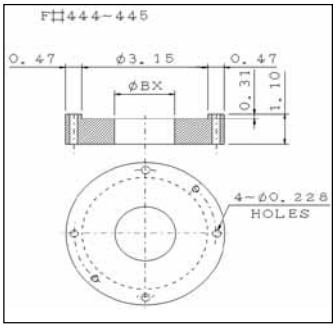
FRAME	DIMENSION		CATALOG NO.	LIST PRICE ($)
	A	BX		
444TP/ 445TP	3.15	1.188	3A702D1611403X001	175
		1.251	3A702D1611501X001	
		1.438	3A702D1611608X001	
		***1.501**	3A702D1611705X001	
		1.688	3A702D1611802X001	
		1.751	3A702D1611900X001	
		1.938	3A702D1612001X001	
445TP20[A]/ 447TP[B]/ 449TP[C]	3.54	1.438	3A702D1610105X001	210
		***1.501[A]**	3A702D1610202X001	
		***1.688[A]**	3A702D1610300X001	
		1.751	3A702D1610407X001	
		***1.938[C]**	3A702D1610504X001	
		2.001	3A702D1610601X001	
		2.063	3A702D1610709X001	
		2.126	3A702D1610806X001	
		2.188	3A702D1610903X001	
		2.251	3A702D1611004X001	
		2.376	3A702D1611101X001	
		2.438	3A702D1611209X001	
		2.501	3A702D1611306X001	
5000	3.66	1.688	3A702D1720601X001	210
		1.938	3A702D1720709X001	
		2.126	3A702D1720806X001	
		***2.188**	3A702D1720202X001	
		2.251	3A702D1720903X001	
		2.376	3A702D1720300X001	
		2.438	3A702D1720407X001	
		2.501	3A702D1720504X001	
5800	4.33	2.126	3A702D1740602X001	210
		2.188	3A702D1740505X001	
		2.251	3A702D1740408X001	
		2.376	3A702D1740301X001	
		***2.438**	3A702D1740203X001	
		2.501	3A702D1740106X001	

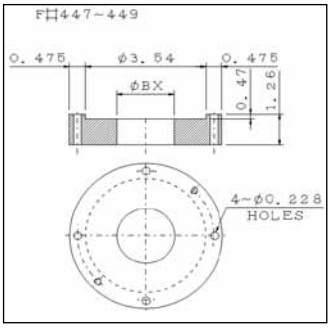
STEADY BUSHING KITS TEFC

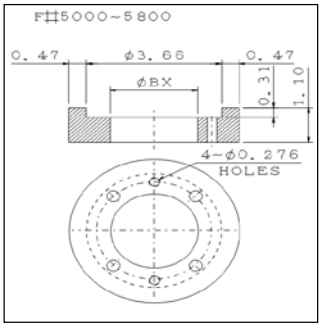
FOR VERTICAL HOLLOW SHAFT MOTORS

Effective 07-08-18
Supercedes 03-24-17









Notes:

1. See corresponding diagram for part detail.
2. Please consult Application Specialist for listings not shown.
3. Steady Bushing material is Bronze.
4. Kit includes hardware.
5. Steady bushing kits are the same for WPI and TEFC for frames 449TP and smaller.
6. **"*" in the table denotes the standard size for each frame.**

FRAME	DIMENSION		PART NO.	LIST PRICE ($)
	A	BX		
210TP	1.77	0.751	31010D4974705	100
		0.876	31010D4974802	
		0.938	31010D4974900	
		***1.001**	**31010D4975001**	
250TP	1.77	0.751	31010D4974705	100
		0.876	31010D4974802	
		***1.001**	**31010D4975001**	
		1.188	31010D4975108	
		1.251	31010D4975205	
280TP	2.17	0.751	31010D4975302	100
		0.876	31010D4975400	
		1.001	31010D4975507	
		***1.188**	**31010D4975604**	
		1.251	31010D4975701	
320TP	2.83	1.001	31010D4975809	130
		***1.188**	**31010D4975906**	
		1.251	31010D4976007	
		1.438	31010D4976104	
		1.501	31010D4976201	
360TP	3.03	1.001	31010D4976309	130
		***1.188**	**31010D4976406**	
		1.251	31010D4976503	
		1.438	31010D4976601	
		1.501	31010D4976708	
400TP	3.54	1.188	31010D4976805	150
		1.251	31010D4976902	
		1.438	31010D4977003	
		***1.501**	**31010D4977101**	
		1.688	31010D4977208	
		1.751	31010D4977305	

FRAME	DIMENSION		CATALOG NO.	LIST PRICE ($)
	A	BX		
444TP/ 445TP	3.15	1.188	3A702D1611403X001	175
		1.251	3A702D1611501X001	
		1.438	3A702D1611608X001	
		***1.501**	3A702D1611705X001	
		1.688	3A702D1611802X001	
		1.751	3A702D1611900X001	
		1.938	3A702D1612001X001	
447TP[A]/ 449TP[B]	3.54	1.438	3A702D1610105X001	210
		1.501	3A702D1610202X001	
		***1.688[A]**	3A702D1610300X001	
		1.751	3A702D1610407X001	
		***1.938[B]**	3A702D1610504X001	
		2.001	3A702D1610601X001	
		2.063	3A702D1610709X001	
		2.126	3A702D1610806X001	
		2.188	3A702D1610903X001	
		2.251	3A702D1611004X001	
		2.376	3A702D1611101X001	
		2.438	3A702D1611209X001	
		2.501	3A702D1611306X001	
5000[A]/ 5800[B]	3.66	1.688	3A702D1720601X001	210
		1.938	3A702D1720709X001	
		2.126	3A702D1720806X001	
		***2.188[A]**	3A702D1720202X001	
		2.251	3A702D1720903X001	
		2.376	3A702D1720300X001	
		***2.438[B]**	3A702D1720407X001	
		2.501	3A702D1720504X001	

MAX-PE® VERTICAL ROUND BODY SOLID SHAFT NORMAL THRUST with "P" BASE - LOW VOLTAGE

AEUH8PDP, NEMA PREMIUM, ROUND BODY [NPV_P]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Centrifugal Pumps
- Petro-Chemical
- Water/Wastewater
- Pulp and Paper

FEATURES:

- Output Range: 15 - 200 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP54)
- Voltage: 230/460V (Usable on 208V)(1)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques
- Cast Iron Frame, End Brackets, Fan Cover, Drip Cover and Main Conduit Box
- Rolled Steel, Fan Cover, Drip Cover and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 40˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Dark Gray - Munsell 7.5B 3.5/0.5
- Guide Bearings: 250HP - 449HP Frames are Single Shielded
- Thrust Bearings: 250HP - 449HP Frames are Re-Greasable Angular Contact with Mobil Polyrex™ EM
- Automatic Grease Discharge Fittings on Regreasable Motors
- Labyrinth Type Metal Flinger on Both Ends for Frames 320 HP & Larger
- Cast Iron Inner and Outer Bearing Caps for Frames 280 & Larger
- Stainless Steel Nameplate
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Duty (PWM - Pulse Width Modulation) per NEMA MG-1, Part 31(4,5)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- 12 Leads
- Dust Flinger on Drive-End for F# 140 HP - 280 HP
- NEMA Type P Base

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) Motors 7.5 HP & up are Suitable for Wye/Delta Starting.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motor service factor is 1.0 when operated on a VFD.
(5) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1. Part 31.
(6) HP Shaft is same as VP shaft dimensions per NEMA MG-1.

MAX-PE® VERTICAL ROUND BODY SOLID SHAFT NORMAL THRUST with "P" BASE - LOW VOLTAGE

AEUH8PDP, NEMA PREMIUM, ROUND BODY [NPV_P]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
NPV0156P	15	1200	284HP	92.4	83.5	18.20	1200	10.00	506	6,266
NPV0206P	20	1200	286HP	91.7	84.0	24.30	1570	10.00	605	6,709
NPV0252P	25	3600	284HP	92.4	91.0	27.80	900	10.00	490	6,262
NPV0254P	25	1800	284HP	93.6	86.0	29.10	1295	10.00	441	6,050
NPV0256P	25	1200	324HP	93.0	83.0	30.30	1750	16.5	798	8,119
NPV0302P	30	3600	286HP	93.0	91.0	33.20	960	16.5	469	6,448
NPV0304P	30	1800	286HP	93.6	87.5	34.30	1295	16.5	490	6,708
NPV0306P	30	1200	326HP	93.0	80.5	37.50	1750	16.5	853	9,104
NPV0404P	40	1800	324HP	94.1	86.0	46.30	1395	16.5	682	7,906
NPV0406P	40	1200	364HP	94.1	86.5	46.00	2200	16.5	1,078	10,736
NPV0504P	50	1800	326HP	94.5	87.0	56.90	1395	16.5	744	8,172
NPV0506P	50	1200	365HP	94.1	86.0	57.80	2200	16.5	1,215	14,006
NPV0604P	60	1800	364HP	95.0	86.5	68.40	1800	16.5	1,078	10,676
NPV0606P	60	1200	404HP	94.5	87.0	68.30	2825	16.5	1,436	14,900
NPV0754P	75	1800	365HP	95.4	86.5	85.10	1800	16.5	1,215	13,600
NPV0756P	75	1200	405HP	94.5	86.5	85.90	2825	16.5	1,584	16,844
NPV1004P	100	1800	405HP	95.4	87.5	112.00	2300	16.5	1,310	17,159
NPV1006P	100	1200	444HP	95.0	82.5	119.00	1930	16.5	1,650	21,789
NPV1252P	125	3600	444HP	95.0	86.0	143.00	1178	16.5	1,650	20,690
NPV1254P	125	1800	444HP	95.4	85.0	144.00	1530	16.5	1,650	20,664
NPV1256P	125	1200	445HP	95.0	83.0	148.00	1750	16.5	1,780	23,174
NPV1502P	150	3600	445HP	95.0	87.0	170.00	1178	16.5	1,780	21,228
NPV1504P	150	1800	445HP	95.8	85.0	172.00	1530	16.5	1,780	22,067
NPV1506P	150	1200	447HP	95.8	83.5	176.00	2230	16.5	2,270	27,035
NPV2002P	200	3600	447HP	96.2	87.0	224.00	1178	16.5	2,270	27,826
NPV2004P	200	1800	447HP	96.2	87.0	224.00	1530	16.5	2,270	28,696

Notes:

(1) These motors are not readily available from stock; must be created through our Mod Shop.
(2) Please allow 4-6 weeks for delivery if source motor is available for modification.
(3) All data subject to change without notice.

MAX-E2/841® VERTICAL ROUND BODY SOLID SHAFT NORMAL/MEDIUM THRUST with "P" BASE - LOW VOLTAGE

AEUH8BDP, NEMA PREMIUM, ROUND BODY [HBV_P]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Centrifugal Pumps
- Petro-Chemical
- Water/Wastewater
- Pulp and Paper

FEATURES:

- Output Range: 15 - 100 HP
- Speed: 3600, 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP56)
- Voltage: 460V Only(1,4)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous); 50 Hz, 1.0 Service Factor (Continuous)
- CSA Certified for Class I, Div. 2, Groups B, C, D - Temp Code T3 Minimum
- Meets or Exceeds IEEE 841 Standards
- Extended Warranty - 60 Months from Date of Manufacture
- Class F Insulation
- Class B Temperature Rise
- NEMA Design B Torques as a Minimum; Various Ratings also Meet Design C
- Cast Iron Frame, End Brackets, Fan Cover, Drip Cover and Main Conduit Box
- Grounding Terminal Inside Main Conduit Box with additional Foot Grounding Provision
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - F1 Mounted
- Designed for 50˚C Ambient Temperature(2)
- Designed for 3300 ft. Elevation(3)
- Bi-Directional Rotation
- 1045 Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: 2 Part Epoxy
- Paint Color: Blue - Munsell 5PB 3/8
- Guide Bearings: 250HP - 400HP Frames are Single Shielded
- Thrust Bearings: 250HP - 405HP Frames are Re-Greasable Angular Contact with Mobil PolyrexTM EM
- Automatic Grease Discharge Fittings
- Cast Iron Inner and Outer Bearing Caps for all frames
- VBXX INPRO™ Seals Installed on Both Ends
- Stainless Steel Nameplate and Hardware
- Stainless Steel Automatic Breather Drain (Located at both End Brackets for Vertical Mounts)
- New Dual Column Design Nameplate as Standard (60/50 Hz)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2(5,6)
- Inverter Duty Speed Range: 20:1 Variable Torque, 10:1 Constant Torque
- Motors are U.L. Recognized, CSA Approved
- 3 Leads Only
- Vibration Not to Exceed 0.08 Inches Per Second
- Noise Level Not to Exceed 85 dB(A) at 1 Meter Unloaded
- NEMA Type P Base

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) 575V motors available.
(2) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(3) Consult a Stock Product Application Specialist for suitability at higher elevations.
(4) Motors 7.5 HP & up are suitable for wye/delta starting.
(5) Motor service factor is 1.0 when operated on a VFD.
(6) Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by the VFD as stated per NEMA MG-1.
(7) HP Shaft is same as VP shaft dimensions per NEMA MG-1.

MAX-E2/841® VERTICAL ROUND BODY SOLID SHAFT NORMAL/MEDIUM THRUST with "P" BASE - LOW VOLTAGE

AEUH8BDP, NEMA PREMIUM, ROUND BODY [HBV_P]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
HBV0156P	15	1200	284HP	92.4	83.5	18.2	1200	10.00	540	8,282
HBV0206P	20	1200	286HP	91.7	84.0	24.3	1570	10.00	565	8,442
HBV0252P	25	3600	284HP	92.4	91.0	27.8	900	10.00	490	7,203
HBV0254P	25	1800	284HP	93.6	86.0	29.1	1295	10.00	555	8,574
HBV0256P	25	1200	324HP	93.0	83.0	30.3	1750	16.5	759	10,803
HBV0302P	30	3600	286HP	93.0	91.0	33.2	960	16.5	535	8,326
HBV0304P	30	1800	286HP	93.6	87.5	34.3	1295	16.5	656	8,990
HBV0306P	30	1200	326HP	93.0	80.5	37.5	1750	16.5	795	12,451
HBV0404P	40	1800	324HP	94.1	86.0	46.3	1395	16.5	740	10,765
HBV0406P	40	1200	364HP	94.1	86.5	46.0	2200	16.5	898	16,195
HBV0504P	50	1800	326HP	94.5	87.0	56.9	1395	16.5	845	12,901
HBV0506P	50	1200	365HP	94.1	86.0	57.8	2200	16.5	1,110	18,807
HBV0604P	60	1800	364HP	95.0	86.5	68.4	1800	16.5	955	16,931
HBV0606P	60	1200	404HP	94.5	87.0	68.3	2825	16.5	1,355	21,070
HBV0754P	75	1800	365HP	95.4	86.5	85.1	1800	16.5	1,040	21,302
HBV0756P	75	1200	405HP	94.5	86.5	85.9	2825	16.5	1,363	22,965
HBV1004P	100	1800	405HP	95.4	87.5	112	2300	16.5	1,385	25,176

Notes:

(1) These motors are not readily available from stock; must be created through our Mod Shop.
(2) Please allow 4-6 weeks for delivery if source motor is available for modification.
(3) All data subject to change without notice.

VERTICAL SOLID SHAFT WPI
HIGH THRUST with "P" BASE - LOW VOLTAGE

AMRCED (MAX-VSP™) NEMA PREMIUM [VSP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

APPLICATIONS:

- Deep Well Turbine Pumps
- Fluid Handling Systems
- Irrigation
- Water/Wastewater
- Fire Pumps*

FEATURES:

- Output Range: 15 - 800 HP
- Speed: 1800 & 1200 RPM
- Enclosure: Weather Protected Type I (WPI)
- Voltage: 230/460V(Usable on 208V); 150HP and Larger is 460V Only
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- New Dual Column (60/50 Hz) Design Nameplate as Standard; 50 Hz Data 190/380V at 1.0 S.F.
- Standard Features: Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTDs and Insulated Bearing Housing
- Class F Insulation with Phenolic Alkyd Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance
- Cast Iron Conduit Box for F#449VP and Below; Steel Plate Conduit Box for F#5000
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets
- 1045 Solid Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449VP and Below
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color for AMRCED (MAX-VSP™): Blue - Munsell 5PB 3/8
- Guide Bearings: 213VP - 286VP frames are Double Shielded
- Guide Bearings: 324VP - 5810 frames are Re-Greasable with Mobil Polyrex™ EM
- Thrust Bearings: 213VP - 286VP frames are Re-Greasable Angular Contact with Mobil Polyrex™ EM
- Thrust Bearings: 324VP - 405VP frames are Oil Lubricated Angular Contact with Site Glass
- Oil Requirements for 324VP-405VP - 145 to 175 S.S.U. @100°F
- Oil Requirements for 444VP-5810VP - 300 S.S.U. @100°F
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate and Rodent Screens
- 12 Leads (PWS on 230V) Wye/Delta on 230/460V for 210TP–400TP(3)
  6 Leads (PWS on 230V, Wye/Delta on 460V for 444TP–5810P)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2
  - 10:1 Variable Torque with NRR. 10:1 C.T., 20:1 VT without NRR Using Braking in VFD
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD as stated per NEMA MG-1 Part 31.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

* Fire Pump available. See product page for more details.

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.

(2) Consult a Stock Product Application Specialist for suitability at higher elevations.

(3) Suitable for Wye/Delta start at 230V or 460V.

MAX-VSP™ VERTICAL SOLID SHAFT WPI

AMRCED (MAX-VSP™) NEMA PREMIUM [VSP_FP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

FIRE PUMP CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VSP0154FP	15	1800	254VP	93.0	83.0	18.2	3,350	10.00	309	4,644
VSP0204FP	20	1800	256VP	93.0	83.0	24.3	3,350	10.00	330	4,917
VSP0254FP	25	1800	284VP	93.6	85.0	29.4	3,350	10.00	425	5,901
VSP0304FP	30	1800	286VP	94.1	86.0	34.7	3,350	10.00	465	6,283
VSP0404FP	40	1800	324VP	94.1	86.0	46.3	5,700	16.50	634	8,632
VSP0504FP	50	1800	326VP	94.5	85.0	58.5	5,700	16.50	689	9,015
VSP0604FP	60	1800	364VP	95.0	85.0	69.5	6,000	16.50	791	10,927
VSP0606FP	60	1200	404VP	94.5	85.5	69.5	9,000	16.50	1,094	19,924
VSP0754FP	75	1800	365VP	95.0	86.0	86.0	6,000	16.50	877	11,205
VSP0756FP	75	1200	405VP	94.5	86.5	86.0	9,000	16.50	1,239	20,334
VSP1004FP	100	1800	404VP	95.4	85.5	115	7,900	16.50	1,133	19,116
VSP1006FP	100	1200	444VP	95.0	82.0	120	12,000	16.50	1,450	36,637
VSP1254FP	125	1800	405VP	95.4	84.5	145	7,900	16.50	1,158	19,682
VSP1256FP	125	1200	445VP	95.0	82.0	150	11,900	16.50	1,650	37,482
VSP1504FP	150	1800	444VP	95.0	86.0	172	10,700	16.50	1,530	37,269
VSP1506FP	150	1200	445VP	95.4	82.5	178	11,800	16.50	1,890	38,746
VSP2004FP	200	1800	445VP	95.0	86.5	228	10,700	16.50	1,820	38,497
VSP2006FP	200	1200	447VP	95.4	83.0	236	14,900	20.00	2,130	44,309
VSP2504FP	250	1800	447VP20	95.8	86.5	283	13,400	20.00	1,940	43,090
VSP2506FP	250	1200	449VP	95.8	83.0	295	14,700	20.00	2,660	50,761
VSP3004FP	300	1800	447VP	95.8	87.5	335	13,400	20.00	2,470	45,616
VSP3006FP	300	1200	449VP	94.7	79.0	375	11,360	20.00	3,320	55,030
VSP3504FP	350	1800	447VP	95.8	88.0	388	13,300	20.00	2,900	49,564
VSP4004FP	400	1800	449VP	95.8	88.5	442	13,200	20.00	3,320	52,889

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 - EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "VSP_FP" catalog number.

(3) All data subject to change without notice.

MAX-VSP™ VERTICAL SOLID SHAFT WPI

AMRCED (MAX-VSP™) NEMA PREMIUM [VSP]*

Effective 07-08-18
Supercedes 03-24-17

FIRE SAFETY

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VSP0154	15	1800	254VP	93.0	83.0	18.2	3,350	10.00	309	4,423
VSP0204	20	1800	256VP	93.0	83.0	24.3	3,350	10.00	330	4,683
VSP0254	25	1800	284VP	93.6	85.0	29.4	3,350	10.00	425	5,620
VSP0304	30	1800	286VP	94.1	86.0	34.7	3,350	10.00	465	5,984
VSP0404	40	1800	324VP	94.1	86.0	46.3	5,700	16.50	634	8,221
VSP0504	50	1800	326VP	94.5	85.0	58.5	5,700	16.50	689	8,586
VSP0604	60	1800	364VP	95.0	85.0	69.5	6,000	16.50	791	10,407
VSP0606	60	1200	404VP	94.5	85.5	69.5	9,000	16.50	1,094	18,975
VSP0754	75	1800	365VP	95.0	86.0	86.0	6,000	16.50	877	10,671
VSP0756	75	1200	405VP	94.5	86.5	86.0	9,000	16.50	1,239	19,366
VSP1004	100	1800	404VP	95.4	85.5	115	7,900	16.50	1,133	18,205
VSP1006	100	1200	444VP	95.0	82.0	120	12,000	16.50	1,450	34,892
VSP1254	125	1800	405VP	95.4	84.5	145	7,900	16.50	1,158	18,745
VSP1256	125	1200	445VP	95.0	82.0	150	11,900	16.50	1,650	35,698
VSP1504	150	1800	444VP	95.0	86.0	172	10,700	16.50	1,530	35,494
VSP1506	150	1200	445VP	95.4	82.5	178	11,800	16.50	1,890	36,901
VSP2004	200	1800	445VP	95.0	86.5	228	10,700	16.50	1,820	36,664
VSP2006(4)	200	1200	447VP	95.4	83.0	236	14,900	20.00	2,130	42,199
VSP2504(4)	250	1800	447VP	95.8	86.5	283	13,400	20.00	1,940	41,038
VSP2506(4)	250	1200	449VP	95.8	83.0	295	14,700	20.00	2,660	48,344
VSP3004(4)	300	1800	447VP	95.8	87.5	335	13,400	20.00	2,470	43,444
VSP3006(4)	300	1200	449VP	94.7	79.0	375	11,360	20.00	3,320	52,410
VSP3504(4)	350	1800	447VP	95.8	88.0	388	13,300	20.00	2,900	47,204
VSP3506(4)	350	1200	5009VP	95.8	84.5	405	33,900	24.50	4,050	76,692
VSP4004(4)	400	1800	449VP	95.8	88.5	442	13,200	20.00	3,320	50,370
VSP4006(4)	400	1200	5009VP	95.8	85.0	460	33,800	24.50	4,270	84,049
VSP4504(4)	450	1800	5009VP	96.2	89.1	492	31,000	24.50	4,050	81,362
VSP4506	450	1200	5806VP	95.8	84.7	519	33,600	30.00	5,310	92,661
VSP5004(4)	500	1800	5009VP	96.2	89.2	546	30,900	24.50	4,170	84,667
VSP5006	500	1200	5806VP	95.8	85.4	572	33,500	30.00	5,430	97,137
VSP6004	600	1800	5808VP	96.2	90.6	645	30,400	30.00	5,470	98,732
VSP6006	600	1200	5808VP	95.8	85.0	690	33,300	30.00	5,600	105,766
VSP7004	700	1800	5810VP	96.2	91.1	748	30,200	30.00	5,880	102,210
VSP7006	700	1200	5808VP	95.8	85.7	798	33,100	30.00	5,830	108,972
VSP8004	800	1800	5810VP	96.2	91.0	856	30,100	30.00	6,180	106,134
VSP8006	800	1200	5810VP	95.8	86.1	908	32,900	30.00	6,210	120,048

Notes:

* Fire Pump available as made to order. Fire Pump Certificate complies with ANSI/UL 1004-5. Certificate# 20120717 - EX6569.

(1) Delivery for Fire Pump Duty motor (Catalog Number + FP) is standard 5 - 10 working days after receipt of order if standard motor is in stock.

(2) Fire Pump Duty Motor pricing includes: adding UL nameplate, restamping original nameplate to new "VSP_FP" catalog number.

(3) All data subject to change without notice.

(4) These specified ratings have larger shafts. Please make sure to check drawing and/or consult AE specialist for solutions on replacment motors.
TWMC larger shaft dimensions for reference:
445VP - U Dim=2.875" AH Dim=6.00"
449VP - U Dim=2.875" AH Dim=6.00"
5009VP - U Dim=3.375" AH Dim=6.00"

VERTICAL SOLID SHAFT TEFC
HIGH THRUST with "P" BASE - LOW VOLTAGE

AEEHED (MAX-VSP™) NEMA PREMIUM [VSTP]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Deep Well Turbine Pumps
- Irrigation
- Water/Wastewater

FEATURES:

- Output Range: 15 - 800 HP
- Speed: 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 230/460V (Usable on 208V); 150HP and Larger is 460V Only
- 230/460V Motors Suitable for Partial Winding Start (at 230V Only)(3)
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- CSA Certified for Class I, Div. 2, Group B, C, D - Temp Code T3 Minimum
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- New Dual Column (60/50 Hz) Design Nameplate as Standard; 50 Hz Data 190/380V at 1.0 S.F.
- Standard Features: Non-Sparking Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTD's and Insulated Bearing Housing
- CSA Certified for Class I, Div. 2, Groups B, C, D; Temp Code T3 minimum
- Class F Insulation with Phenolic Alkyd Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance
- Cast Iron Conduit Box for F#449TP and Below; Steel Plate Conduit Box for F#5000
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets
- 1045 Solid Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Guide Bearings: 213VP - 286VP frames are Double Shielded
- Guide Bearings: 324VP - 5810VP frames are Re-Greasable with Mobil Polyrex™ EM Grease
- Thrust Bearings: 213VP - 286VP frames are Re-Greasable Angular Contact with Mobil Polyrex™ EM Grease
- Thrust Bearings: 324VP - 5810VP frames are Oil Lubricated Angular Contact with Site Glass
- Oil Requirements for 324VP-405VP - 145 to 175 S.S.U. @100°F
- Oil Requirements for 444VP-5810VP - 300 S.S.U. @100°F
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate and Rodent Screens
- 12 Leads (PWS on 230V) on 213 - 405TP;(3)
  6 Leads on 444TP to 449TP; 5000 Frames and Above with Connection Studs(4)
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2
  - 10:1 Variable Torque with NRR. 10:1 C.T., 20:1 VT without NRR Using Braking in VFD
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD as stated per NEMA MG-1 Part 31.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.
(2) Consult a Stock Product Application Specialist for suitability at higher elevations.
(3) Suitable for Wye/Delta start at 230V or 460V.
(4) Suitable for Wye/Delta start at 460V.

MAX-VSP™ VERTICAL SOLID SHAFT TEFC

AEEHED (MAX-VSP™) NEMA PREMIUM [VSTP]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 460V	DOWN THRUST (lbs.)	BD DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VSTP0154	15	1800	254VP	92.4	88.0	17.3	3,350	10.00	350	7,134
VSTP0156	15	1200	284VP	92.4	83.5	16.4	3,850	10.00	460	8,955
VSTP0158	15	900	286VP	90.2	78.0	20.0	4,400	10.00	520	8,734
VSTP0204	20	1800	256VP	93.0	87.5	23.0	3,350	10.00	450	7,566
VSTP0206	20	1200	286VP	91.7	84.0	22.1	3,850	10.00	520	9,193
VSTP0208	20	900	324VP	91.0	81.0	25.4	6,000	16.50	700	11,014
VSTP0254	25	1800	284VP	93.6	86.0	29.1	3,350	10.00	520	8,955
VSTP0256	25	1200	324VP	93.0	83.0	26.9	5,200	16.50	700	12,248
VSTP0258	25	900	326VP	91.0	80.0	32.2	6,000	16.50	740	12,439
VSTP0304	30	1800	286VP	93.6	87.5	34.3	3,350	10.00	558	9,184
VSTP0306	30	1200	326VP	93.0	80.5	32.3	5,200	16.50	740	12,530
VSTP0308	30	900	364VP	93.0	78.0	38.7	7,500	16.50	900	15,216
VSTP0404	40	1800	324VP	94.1	86.0	46.3	4,500	16.50	720	12,249
VSTP0406	40	1200	364VP	94.1	86.5	42.3	6,600	16.50	900	14,182
VSTP0408	40	900	365VP	93.0	78.0	51.5	7,500	16.50	970	18,534
VSTP0504	50	1800	326VP	94.5	87.0	57.0	4,500	16.50	780	12,518
VSTP0506	50	1200	365VP	94.1	86.0	53.0	6,600	16.50	970	14,681
VSTP0508	50	900	404VP	93.0	81.0	62.0	10,500	16.50	1,400	23,012
VSTP0604	60	1800	364VP	95.0	86.5	68.4	6,000	16.50	900	14,179
VSTP0606	60	1200	404VP	94.5	87.0	63.0	9,000	16.50	1,400	24,191
VSTP0608	60	900	405VP	93.0	81.0	74.5	10,500	16.50	1,600	26,212
VSTP0754	75	1800	365VP	95.4	86.5	85.1	6,000	16.50	970	14,677
VSTP0756	75	1200	405VP	94.5	86.5	78.5	9,000	16.50	1,600	24,393
VSTP1004	100	1800	405VP	95.4	87.5	112	7,900	16.50	1,415	24,406
VSTP1006	100	1200	444VP	95.0	79.8	123	10,000	16.50	1,980	40,382
VSTP1254	125	1800	444VP	95.4	85.6	143	8,800	16.50	2,050	40,171
VSTP1256	125	1200	445VP	95.0	79.0	155	10,000	16.50	2,090	41,620
VSTP1504	150	1800	445VP	95.8	88.0	166	8,800	16.50	2,150	41,208
VSTP1506(2)	150	1200	447VP	95.8	77.2	189	11,400	20.00	2,110	45,266
VSTP2004(2)	200	1800	447VP	96.2	82.5	235	10,000	20.00	2,530	49,552
VSTP2006(2)	200	1200	449VP	95.8	76.6	254	11,400	20.00	2,850	49,517
VSTP2504(2)	250	1800	449VP	96.2	83.1	292	10,000	20.00	2,890	49,990
VSTP2506(2)	250	1200	449VP	95.8	74.3	328	11,400	20.00	3,040	55,956
VSTP3004(2)	300	1800	449VP	96.2	83.1	351	10,000	20.00	3,580	55,091
VSTP3006(2)	300	1200	5009VP	95.8	84.8	345	12,300	24.50	3,880	74,116
VSTP3504(2)	350	1800	5009VP	96.2	86.3	394	10,700	24.50	4,080	75,203
VSTP3506(2)	350	1200	5808VP	95.8	80.6	424	20,200	30.00	5,800	108,543
VSTP4004(2)	400	1800	5009VP	96.2	86.6	449	10,700	24.50	4,260	90,805
VSTP4006(2)	400	1200	5808VP	95.8	80.9	482	20,200	30.00	6,040	110,521
VSTP4504(2)	450	1800	5808VP	96.2	84.0	521	9,900	30.00	6,000	105,354
VSTP4506(2)	450	1200	5808VP	95.8	80.2	547	20,200	30.00	6,250	113,482
VSTP5004(2)	500	1800	5808VP	96.2	84.0	578	9,900	30.00	6,220	107,612
VSTP5006(2)	500	1200	5808VP	95.8	81.2	601	20,200	30.00	6,770	119,865
VSTP6004(2)	600	1800	5810VP	96.2	84.0	694	9,900	30.00	6,770	117,121
VSTP6006(2)	600	1200	5810VP	95.8	81.7	717	20,200	30.00	7,260	129,938
VSTP7004(2)	700	1800	5810VP	96.2	85.0	800	9,900	30.00	7,160	123,081
VSTP7006(2)	700	1200	5810VP	95.8	81.3	840	20,200	30.00	8,830	136,460
VSTP8004(2)	800	1800	5810VP	96.2	86.0	904	9,900	30.00	9,340	139,239

Notes:

(1) All data subject to change without notice.

(2) These specified ratings have larger shafts. Please make sure to check drawing and/or consult AE specialist for solutions on replacment motors.
TWMC larger shaft dimensions for reference:
447VP - U Dim=2.625" AH Dim=5.00"
449VP - U Dim=2.625" AH Dim=5.00"
5000VP - U Dim=2.875" AH Dim=5.00"
5800VP - U Dim=3.750" AH Dim=8.50"

VERTICAL SOLID SHAFT WPI
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AMRKED, NEMA PREMIUM [VSKP]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Deep Well Turbine Pumps
- Irrigation
- Water/Wastewater

FEATURES:

- Output Range: 200 - 1000 HP
- Speed: 1800, 1200 & 900 RPM
- Enclosure: Weather Protected Type I (WPI)
- Voltage: 2300/4000V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- Standard Features: Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTD's and Insulated Bearing Housing
- Class F Insulation with VPI Epoxy Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance
- Steel Plate Conduit Box for F#449-5800
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets
- 1045 Solid Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449TP and Below
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Guide Bearings: 449VP - 5810VP Frames are Re-Greasable with Mobil Polyrex™ EM Grease
- Thrust Bearings: 449VP - 5810VP Frames are Oil Lubricated Angular Contact or Spherical Thrust Bearing with Site Glass
- Oil Requirements for 444VP - 5810VP Frames: 300 S.S.U. @ 100°F
- Grease Discharge Fittings on Frames with Re-Greasable Motors
- Labyrinth Type Metal Flinger on Lower End Bracket
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2
- Speed Ranges: 10:1 VT, 4:1 CT
- 6 Leads
- UL Recognized and CSA Approved
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD as stated per NEMA MG-1 Part 31.
- Ball Type NRR Provided

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.

(2) Consult a Stock Product Application Specialist for suitability at higher elevations.

VERTICAL SOLID SHAFT WPI
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AMRKED, NEMA PREMIUM [VSKP]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 4000V	DOWN THRUST (lbs.)	BD DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VSKP2006(2)	200	1200	449VP	94.9	81.0	25.5	11,200	20.00	3,620	61,819
VSKP2008(2)	200	900	5009VP	93.6	73.0	27.5	39,500	24.50	4,210	91,635
VSKP2504(2)	250	1800	449VP	95.0	82.2	30.0	10,000	20.00	3,710	56,439
VSKP2506(2)	250	1200	449VP	95.0	80.0	31.5	11,200	20.00	3,730	63,933
VSKP2508(2)	250	900	5009VP	94.5	75.3	33.0	39,500	24.50	4,570	96,465
VSKP3004(2)	300	1800	449VP	95.0	83.8	35.5	10,000	20.00	3,810	56,719
VSKP3006(2)	300	1200	5009VP	95.0	77.6	38.0	33,800	24.50	4,230	91,298
VSKP3008	300	900	5808VP	95.0	77.0	38.5	39,200	30.00	5,520	118,215
VSKP3504(2)	350	1800	5009VP	95.0	86.7	40.0	30,900	24.50	3,730	89,237
VSKP3506(2)	350	1200	5009VP	95.0	75.9	45.5	33,800	24.50	4,110	90,601
VSKP3508	350	900	5808VP	93.6	78.0	45.0	39,200	30.00	5,770	120,935
VSKP4004(2)	400	1800	5009VP	95.0	86.8	45.5	30,900	24.50	3,820	90,639
VSKP4006(2)	400	1200	5009VP	95.0	75.6	52.0	33,800	24.50	4,190	91,635
VSKP4008	400	900	5810VP	93.6	78.0	51.5	38,600	30.00	6,160	127,100
VSKP4504(2)	450	1800	5009VP	95.0	87.1	51.0	30,900	24.50	3,910	91,574
VSKP4506	450	1200	5806VP	95.0	80.2	55.5	33,600	30.00	4,630	96,621
VSKP5004(2)	500	1800	5009VP	95.0	87.6	56.5	30,900	24.50	4,090	94,060
VSKP5006	500	1200	5806VP	95.0	80.2	61.5	33,600	30.00	4,730	119,416
VSKP6004	600	1800	5808VP	95.4	86.0	69.0	30,600	30.00	5,370	119,485
VSKP6006	600	1200	5808VP	95.0	80.3	73.5	33,300	30.00	5,180	123,799
VSKP7004	700	1800	5810VP	95.4	86.0	80.0	30,100	30.00	5,780	123,826
VSKP7006	700	1200	5808VP	95.0	81.2	85.0	33,300	30.00	5,460	126,919
VSKP8004	800	1800	5810VP	95.4	86.3	91.5	30,100	30.00	6,030	126,790
VSKP8006	800	1200	5810VP	95.0	80.7	97.5	33,000	30.00	5,850	131,492
VSKP9004	900	1800	5810VP	95.4	86.7	103	30,100	30.00	6,300	131,426
VSKP9006	900	1200	5810VP	95.0	81.5	109	33,000	30.00	6,090	131,773
VSKP10004	1000	1800	5810VP	95.4	87.3	113	30,100	30.00	6,650	131,705

Notes:

(1) All data subject to change without notice.

(2) These specified ratings have larger shafts. Please make sure to check drawing and/or consult AE specialist for solutions on replacment motors.
TWMC larger shaft dimensions for reference:
447VP - U Dim=2.875" AH Dim=6.00"
449VP - U Dim=2.875" AH Dim=6.00"
5009VP - U Dim=3.375" AH Dim=6.00"

VERTICAL SOLID SHAFT TEFC
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AEHCED, NEMA PREMIUM [VSKTP]

Effective 07-08-18
Supercedes 03-24-17

APPLICATIONS:

- Deep Well Turbine Pumps
- Irrigation
- Water/Wastewater

FEATURES:

- Output Range: 200 - 700 HP
- Speed: 1800 & 1200 RPM
- Enclosure: Totally Enclosed Fan Cooled (IP55)
- Voltage: 2300/4000V
- Three Phase, 60 Hz, 1.15 Service Factor (Continuous on Sine Wave Power)
- Inverter Duty (PWM) per NEMA® MG-1 Part 31 at 1.0 Service Factor
- Standard Features: Non-Sparking Ball Type NRR, Drip/Splash Cover, Space Heaters (120V)
- 5000 Frames and Above also include Mounting Provisions for bearing RTD's and Insulated Bearing Housing
- CSA Certified for Class I, Div. 2, Groups B, C, D; Temp Code T3 minimum
- Class F Insulation with VPI Epoxy Resin Varnish
- Class B Temperature Rise
- NEMA Design B Torques
- Fab Steel Plate Oversized Main Conduit Box Rotatable in 90 Degree Increments - Fully Gasketed with NPT Threaded Entrance.
- Steel Plate Conduit Box with Threaded Connection Opening(s)
- Designed for 40˚C Ambient Temperature(1)
- Designed for 3300 ft. Elevation(2)
- Oversized Angular Contact or Spherical Thrust Bearing Installed
- Counterclockwise (CCW) Rotation; Viewed from Top
- Cast Iron Frame & End Brackets; Steel Plate Fan Cover
- 1045 Solid Carbon Steel Shaft
- Aluminum Die Cast Squirrel Cage Rotor Construction for F#449VP and Below
- Squirrel Cage Copper or Copper Alloy Bar Rotor Construction for F#5000 and Above.
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat
- Paint Color: Blue - Munsell 5PB 3/8
- Guide Bearings: Re-Greasable with Mobil Polyrex™ EM Grease
- Thrust Bearings: Oil Lubricated Angular Contact or Spherical Thrust bearing with Site Glass
- Oil Requirements: 300 S.S.U. @ 100F
- Automatic Grease Discharge Fittings on Frames with Re-Greasable Motors
- Labyrinth Type Metal Flinger on Both Ends for Frames 320VP & Up
- Grounding Terminal Inside Main Box
- Stainless Steel Nameplate
- Suitable for Inverter Use per NEMA MG-1 Part 31.4.4.2
- Speed Ranges: 10:1 VT, 4:1 CT
- 6 Leads
- UL Recognized and CSA Approved
- Precautions should be taken to eliminate or reduce shaft currents that may be imposed on the motor by VFD as stated per NEMA-MG-1 Part 31.

EXTRAS/ OPTIONS:

Please refer to pages 147 - 154 which show common modifications that can be performed.

Notes:

(1) Consult a Stock Product Application Specialist for suitability in higher ambient environments.

(2) Consult a Stock Product Application Specialist for suitability at higher elevations.

VERTICAL SOLID SHAFT TEFC
HIGH THRUST with "P" BASE - MEDIUM VOLTAGE

AEHCED, NEMA PREMIUM [VSKTP]

Effective 07-08-18
Supercedes 03-24-17

CAT. NO.	HP	RPM	FRAME	FL EFF (%)	FL PF (%)	FL AMPS @ 4000V	DOWN THRUST (lbs.)	BD DIM (in.)	APPROX. SHIPPING WT. (lbs.)	LIST PRICE ($)
VSKTP1506(2)	150	1200	449VP	95.0	80.1	18.0	11,400	20.00	2950	63,130
VSKTP2004(2)	200	1800	449VP	95.0	82.9	23.5	10,000	20.00	2,830	63,276
VSKTP2006(2)	200	1200	449VP	95.0	76.2	25.5	11,400	20.00	3,760	66,237
VSKTP2504(2)	250	1800	449VP	95.0	83.7	29.0	10,000	20.00	3,920	64,266
VSKTP2506(2)	250	1200	5009VP	95.0	81.9	30.0	12,100	24.50	4,040	85,549
VSKTP2508(2)	250	900	5009VP	95.0	79.8	30.5	13,200	24.50	4,800	91,766
VSKTP3004(2)	300	1800	5009VP	95.4	85.8	34.0	10,500	24.50	4,050	84,998
VSKTP3006(2)	300	1200	5009VP	95.0	82.4	35.5	12,100	24.50	5,630	89,112
VSKTP3008(2)	300	900	5009VP	95.0	77.3	38.0	24,300	24.50	6,440	114,796
VSKTP3504(2)	350	1800	5009VP	95.4	86.1	39.5	10,500	24.50	5,420	87,685
VSKTP3506(2)	350	1200	5808VP	95.2	80.4	42.5	22,300	30.00	6,060	114,233
VSKTP3508(2)	350	900	5808VP	95.0	77.2	44.5	24,300	30.00	6,780	122,720
VSKTP4004(2)	400	1800	5009VP	95.4	85.7	45.5	10,500	24.50	5,890	88,330
VSKTP4006(2)	400	1200	5808VP	95.4	80.8	48.5	22,300	30.00	6,390	117,618
VSKTP4008(2)	400	900	5808VP	95.0	77.3	50.5	24,300	30.00	7,120	128,762
VSKTP4504(2)	450	1800	5808VP	95.4	83.8	52.5	9,700	30.00	6,300	115,594
VSKTP4506(2)	450	1200	5808VP	95.6	80.9	54.0	22,300	30.00	6,680	121,151
VSKTP4508(2)	450	900	5810VP	95.0	77.1	57.5	24,300	30.00	7,680	133,033
VSKTP5004(2)	500	1800	5808VP	95.5	82.6	59.0	9,700	30.00	6,530	117,193
VSKTP5006(2)	500	1200	5810VP	95.8	81.6	59.5	22,300	30.00	6,990	131,891
VSKTP5008(2)	500	900	5810VP	95.4	76.8	63.5	24,300	30.00	7,890	140,190
VSKTP6004(2)	600	1800	5810VP	95.7	84.3	69.5	9,700	30.00	6,900	126,750
VSKTP6006(2)	600	1200	5810VP	96.0	81.3	71.5	22,300	30.00	9,110	133,570
VSKTP7004(2)	700	1800	5810VP	95.9	84.6	80.5	9,700	30.00	8,950	132,859

Notes:

(1) All data subject to change without notice.

(2) These specified ratings have larger shafts. Please make sure to check drawing and/or consult AE specialist for solutions on replacment motors.
TWMC larger shaft dimensions for reference:
447VP - U Dim=2.625" AH Dim=5.00"
449VP - U Dim=2.625" AH Dim=5.00"
5000VP - U Dim=2.875" AH Dim=5.00"
5800VP - U Dim=3.750" AH Dim=8.50"

C-FLANGE KITS FOR FIELD CONVERSION

Effective 07-08-18
Supercedes 03-24-17

FRAME	LIST PRICE ($)	ODP ASHH CATALOG NO. "DHP"	MAX-PE™ AEHH8P CATALOG NO. "NP" (2)	MAX-E1® AEHE, AEHH8N CATALOG NO. "E" or "EP" (2)	MAX-E2® AEHH CATALOG NO. "HH"	MAX-E2/841® AEHH8B LIST PRICE ($) (1)	MAX-E2/841® AEHH8B CATALOG NO. "HB" (2)
140T	125	N/A	CFN140T	CFE140T	CFHH140T	350	CFHB140T
180T	180	N/A	CFN180T	CFE180T	CFHH180T	465	CFHB180T
210T	325	N/A	CFN210T	CFE210T	CFHH210T	721	CFHB210T
250T	454	CFDH250T	CFN250T	CFE250T	CFHH250T	856	CFHB250T
280TS	529	CFDH280TS	CFN280TS	CFE280TS	CFHH280TS	1,075	CFHB280TS
280T	529	CFDH280T	CFN280T	CFE280T	CFHH280T	1,075	CFHB280T
320T or TS	689	CFDH320	CFN320	CFE320	CFHH320	1,175	CFHB320
360TS	825	CFDH360TS	CFN360TS	CFE360TS	CFHH360TS	1,289	CFHB360TS
360T	825	CFDH360T	CFN360T	CFE360T	CFHH360T	1,289	CFHB360T
400TS	1,025	CFDH400TS	CFN400TS	CFE400TS	CFHH400TS	1,575	CFHB400TS
400T	1,025	CFDH400T	CFN400T	CFE400T	CFHH400T	1,789	CFHB400T
444/445TS	2,150	CFDH444/5TS	CFN444/5TS	CFE444/5TS	CFHH444/5TS	3,400	CFHB444/5TS
444/445T	2,150	CFDH444/5T	CFN444/5T	CFE444/5T	CFHH444/5T	3,705	CFHB444/5T
447/449TS	2,550	CFDH447/9TS	CFN447/9TS	CFE447/9TS	CFHH447/9TS	3,810	CFHB447/9TS
447/449T	2,550	CFDH447/9T	CFN447/9T	CFE447/9T	CFHH447/9T	3,950	CFHB447/9T
Hybrid 449TS	2,650	N/A	N/A	CFE449TS-HYBRID	N/A	N/A	N/A
Hybrid 449T	2,650	N/A	N/A	CFE449T-HYBRID	N/A	N/A	N/A

NEMA C-FLANGE KITS FOR ROLLED STEEL MOTORS

FRAME	LIST PRICE ($)	ROLLED STEEL ASGA/ASGH ASGHPE CATALOG NO. "DS", "DSP" or "DTP"	SINGLE PHASE FARM DUTY CATALOG NO. "S"	3 PHASE ROLLED STEEL AEGHPE CATALOG NO. "GH"	3 PHASE ROLLED STEEL AEGH CATALOG NO. "GP"
56	103	CFDS56	CFS56	CFG56S3 CFG56L/140(4)	N/A
140T	103	CFDT140T	CFS140T	N/A	CFG56L/140
180T	103	CFDT180T	CFS180T	N/A	CFGP180
210T	189	CFDT210T	CFS210T	N/A	CFGP210
250T	189	CFDT250T	N/A	N/A	N/A
280TS	424	CFDT280TS	N/A	N/A	N/A
280T	424	CFDT280T	N/A	N/A	N/A

C-FACE KITS FOR LARGE TEFC FRAMES

FRAME	LIST PRICE ($)	MAX-E1® AEHE, AEHH8N, AEHGTK CATALOG NO. "E", "EP", "KG"
5007A	3,600	3A103B8820103
5009A	3,600	3A103B8820201
5009B/C	3,600	3A103B5430207
5011A	3,850	3A103B8820308
5011B/C	3,850	3A103B5430304
5808A	4,300	3A103B9120202
5808B/C	4,300	3A103B6050203
5810A	5,350	3A103B9120300
5810B/C	5,350	3A103B6050301BG01

IEC B14 "C-FLANGE" KITS

FRAME	LIST PRICE ($)	METRIC AESV3W CATALOG NO. "MP"
80	125	CFM80
90	135	CFM90
100	180	CFM100
112	195	CFM112
132	325	CFM132
160	454	CFM160

Notes:

(1) For MAX-E2/841®, type AEHH8B (cat# "HB") motors, INPRO™ Bearing Isolator Seal is already included in the list price. INPRO™ Bearing Isolator Seal ships separately and will be added to order as an additional no cost line item.

(2) "TS" Flanges are for 2 pole motors only. "TS" C-flanges for 280TS - 405TS are interchangeable between MAX-E1® and MAX®-SE/PE. 444TS - 449TS C-flanges are NOT interchangeable.

(3) 56 Frame Only - Fits bearing sizes 6204ZZ

(4) 56 and 140T Frames - Fits bearing sizes 6205ZZ

(5) For frame sizes larger than 449T, please refer to an Application Specialist for availability.

(6) MAX-E1® type AEHH8N "hybrid" ratings are cat# EP3502 & EP3504.

(7) Flanges for F# 505UZ and 586/7UZ Crusher Duty "CD", type AEHHGD motors must be quoted by an Application Specialist.

D-FLANGE KITS FOR FIELD CONVERSION

Effective 07-08-18
Supercedes 03-24-17

NEMA D-FLANGE KITS FOR CAST IRON MOTORS							
FRAME	LIST PRICE ($)	ODP ASHH CATALOG NO. "DHP"	MAX-PE™ AEHH8P CATALOG NO. "NP"	MAX-E1® AEHE, AEHH8N CATALOG NO. "E" or "EP"	MAX-E2® AEHH CATALOG NO. "HH"	MAX-E2/841® AEHH8B LIST PRICE ($)	MAX-E2/841® AEHH8B CATALOG NO. "HB"
140T	299	N/A	DFN140T	DFE140T	DFHH140T	333	DFHB140T
180T	319	N/A	DFN180T	DFE180T	DFHH180T	446	DFHB180T
210T	N/A	N/A	N/A	N/A	N/A	N/A	N/A
250T	385	DFDH250T	DFN250T	DFE250T	DFHH250T	688	DFHB250T
280TS	550	DFDH280TS	DFN280TS	DFE280TS	DFHH280TS	1,053	DFHB280TS
280T	570	DFDH280T	DFN280T	DFE280T	DFHH280T	1,053	DFHB280T
320T or TS	675	DFDH320	DFN320	DFE320	DFHH320	1,153	DFHB320
360TS	750	DFDH360TS	DFN360TS	DFE360TS	DFHH360TS	1,247	DFHB360TS
360T	750	DFDH360T	DFN360T	DFE360T	DFHH360T	1,247	DFHB360T
400TS	955	DFDH400TS	DFN400TS	DFE400TS	DFHH400TS	1,548	DFHB400TS
400T	955	DFDH400T	DFN400T	DFE400T	DFHH400T	1,758	DFHB400T
444/445TS	2,695	DFDH444/5TS	DFN444/5TS	DFE444/5TS	DFHH444/5TS	3,406	DFHB444/5TS
444/445T	2,695	DFDH444/5T	DFN444/5T	DFE444/5T	DFHH444/5T	3,718	DFHB444/5T
447/449TS	3,250	DFDH447/9TS	DFN447/9TS	DFE447/9TS(6)	DFHH447/9TS(6)	3,507	DFHB447/9TS(6)
447/449T	3,250	DFDH447/9T	DFN447/9T	DFE447/9T(6)	DFHH447/9T(6)	3,819	DFHB447/9T(6)

D-FLANGE KITS FOR LARGE TEFC FRAMES		
FRAME	LIST PRICE ($)	MAX-E1® AEHE, AEHH8N, AEHGTK CATALOG NO. "E", "EP", "KG"
5007A	3,500	3A103B31010010N01
5009A	3,500	3A103B3101109
5009B/C	3,500	3A103B3100200
5011A	3,750	3A103B3101206
5011B/C	3,750	3A103B3100307
5808A	5,100	3A103B3110701
5808B/C	5,100	3A103B3110205
5810A	6,741	3A103B3110906
5810B/C	6,741	3A103B3110302

D-FLANGE KITS FOR LARGE ODP FRAMES		
5000A*	3,500	3A103B7680006BG0

IEC B5 "D-FLANGE" KITS			
FRAME	LIST PRICE ($)	METRIC AESV3W CATALOG NO. "MP"	SPECIAL NOTE
80	299	DFM80	~
90	309	DFM90	~
100	319	DFM100	~
112	329	DFM112	~
132	350	DFM132	~
160	385	DFM160	~
180	550	DFM180	~
200	675	DFM200	~
225MA	750	DFM225-2P	2 Pole Only
225SC/225MC	750	DFM225-4/6P	4 & 6 Pole Only
250SA	955	DFM250-2P	2 Pole Only
250SC	955	DFM250-4/6P	4 & 6 Pole Only

Notes:

* Part # for 2 Pole Only.

(1) For MAX-E2/841®, type AEHH8B (cat# ""HB"") motors, INPRO™ Bearing Isolator Seal is already included in the list price. INPRO™ Bearing Isolator Seal ships separately and will be added to order as an additional no cost line item.

(2) "TS" Flanges are for 2 pole motors only. "TS" c-flanges for 280TS-449TS are interchangeable between MAX-E1® and MAX®-SE/PE.

(3) 56 Frame Only - Fits bearing sizes 6204ZZ

(4) 56 and 140T Frames - Fits bearing sizes 6205ZZ

(5) For frame sizes larger than 449T, please refer to the factory.

(6) MAX-E1® type AEHH8N "hybrid" ratings are cat# EP3502 & EP3504. No D-flange is available at this time for Hybrid frames.

(7) Flanges for F# 505UZ and 586/7UZ Crusher Duty "CD", type AEHHGD motors must be quoted by an Application Specialist.

(8) Flanges for Large ODP motors above 5000 2P must be quoted by an Application Specialist.

(9) TECO Westinghouse is working towards a solution for hybrid frame D-Flanges in the future.

DRIP COVERS, PAINT, & STOCK REPLACEMENT PARTS

Effective 07-08-18
Supercedes 03-24-17

DRIP COVER/FAN COVER ASSEMBLIES				
FRAME	ROLLED STEEL CATALOG NO.	ROLLED STEEL LIST PRICE ($)	CAST IRON CATALOG NO.	CAST IRON LIST PRICE ($)
140T	RSDC140T	102	CIDC140T	312
180T	RSDC180T	135	CIDC180T	400
210T	RSDC210T	193	CIDC210T	455
250T/TS	RSDC250T	355	CIDC250T	624
280T/TS	RSDC280TS	442	CIDC280T	931
320T/TS	RSDC320T	574	CIDC320T	1,235
360T/TS	RSDC360T	1,413	CIDC360T	1,965
400T/TS	RSDC400T	1,833	CIDC400T	2,045

Notes:

(1) 56 frame drip covers available as stock items. Contact the parts department for part number and quote.
(2) Drip covers available for 440T and above as made to order. Contact part department for quote.

AEROSOL TOUCH-UP SPRAY PAINT				
MOTOR TYPE	PAINT PART NUMBER	COLOR	PAINT #	LIST PRICE ($)
MAX-E1® TEFC JP-JM LOW VOLTAGE ODP	5D98549H04	LIGHT GRAY	MUNSELL N5.0	77
MAX-E2® MAX-E2/841® METRIC IE3 MAX-VHP™ MAX-VSP™ SINGLE PHASE HVAC	5D98549H05	BLUE	MUNSELL 5PB 3/8	77
SINGLE PHASE FARM DUTY	5D98549H07	GREEN	MUNSELL 5G 4/4	77
TEXP TEFC OIL WELL PUMP	5D98549H08	DARK BLUE	MUNSELL 5PB 4.5/2	77
MAX-SE™ MAX-PE™ MAX-HT™ HIGH EFFICIENCY VERTICALS MEDIUM VOLTAGE	5D98549H03	DARK GRAY	MUNSELL 7.5B 3.5/0.5	77

Stock Replacement parts:

Contact TECO-Westinghouse for replacement part inquiries for stock product motors. Email our stock product parts group at Tframeparts@tecowestinghouse.com or call 1-800-USE-TECO and select or ask to be connected with the stock product parts group.

Most commonly replaced motor parts are stocked in limited quantities. Replacement parts are also available on a made to order basis.

To confirm the proper part is identified and quoted, the motor's catalog number AND serial number must be provided at time of inquiry. Not all currently stocked parts may be interchangeable for earlier models. Replacement parts for older models may no longer be available.

P-BASES HIGH THRUST TEFC VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)							
FRAME	TYPE	BD	AK	BB	AJ	BF	PART NUMBER
180	Standard	9.85"	8.25"	0.20"	9.125"	0.44"	31103F351X6C5
210	Standard	10"	8.25"	0.20"	9.125"	0.44"	31103F331X8C1
250	Standard	10"	8.25"	0.20"	9.125"	0.44"	31103F352X7C8
280	Standard Alternate	10" 12"	8.25" 8.25"	0.20" 0.25"	9.125" 9.125"	0.44" 0.44"	31103F354X3C0 31103F354X8C6
320	Standard	16.5"	13.5"	0.25"	14.750"	0.69"	31103B67604C0
360	Standard	16.5"	13.5"	0.25"	14.750"	0.69"	31103B67704C5
400	Standard	16.5"	13.5"	0.25"	14.750"	0.69"	31103B95105C1

P-BASES HIGH THRUST TEFC VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)								
FRAME	TYPE	BD	AK	BE	BB	AJ	BF	PART NUMBER
444-445	Standard	16.5"	13.5"	1.00"	0.25"	14.75"	0.69"	3A103F072X5A5
444/445 - WPI Only	Alternate	20"	13.5"	1.00"	0.25:	14.75"	0.69"	31010D5820701
447/449	Standard	20"	13.5"	1.00"	0.25"	14.75"	0.96"	3A103F047X4A1
445TP20/447/449	Alternate	16.5"	13.5"	1.20"	0.25"	14.75"	0.69"	3A103F052X1A7N000
5000	Standard	24.5"	13.5"	1.18"	0.25"	14.75"	0.69"	3A103C077X5A8
	Alternate	20.0"	13.5"	1.18"	0.25"	14.75" 22"	0.94"	3A103C077X6A5
	Alternate	30.5"	22"	1.18"	0.25"	26"	0.81"	3A103C077X1A9
5800	Standard	30.5"	22"	1.38"	0.25"	26"	0.81"	3A103C345X3A0
	Alternate	24.5"	13.5"	1.38"	0.25"	14.75" 22"	0.94"	3A103C345X4A7
	Alternate	36"	22"	1.38"	0.25"	32"	0.81"	3A103C345X6A1N000

P-BASES HIGH THRUST WPI VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)								
FRAME	TYPE	BD	AK	BB	AJ	BF	PART NUMBER	NOTE
210	Standard	10"	8.25"	0.22"	9.125"	0.44"	31103F412X1C0	~
250	Standard	10"	8.25"	0.25"	9.125"	0.44"	31103F406X5C6	AMRCED ONLY
	Standard	10"	8.25"	0.25"	9.125"	0.44"	31103F406X6C3	AMRCNH ONLY
	Alternate	12"	8.25"	0.25"	9.125"	0.44"	31010D5150102	AMRCNH ONLY
	Alternate	16.5"	13.5"	0.25"	14.750"	0.44"	31103F406X200	~
280	Standard	10"	8.25"	0.25"	14.750"	0.44"	31103F407X3C7	~
	Alternate	12"	8.25"	0.25"	14.750"	0.44"	31103F407X108	~
	Alternate	16.5"	13.5"	0.25"	14.750"	0.44"	31103F407X205	~
320	Alternate	12"	8.25"	0.25"	9.125"	0.44"	31103F408X103	~
	Standard	16.5"	13.5"	0.28"	14.750"	0.69"	31103F408X2C5	~
360	Alternate	12"	8.25"	0.28"	9.125"	0.69"	31103F09X109	~
	Standard	16.5"	13.5"	0.28"	14.750"	0.69"	31103F409X3C8	~
400	Standard	16.5"	13.5"	0.28"	14.750"	0.69"	31103F410X4C1	~
	Alternate	20.5"	13.5"	0.28"	14.750"	0.69"	31103F410X104	~

Notes:

(1) P-Bases require factory machine work prior to shipment/installation.

(2) Consult a Stock Product Application Specialist or T-Frame parts for P-base price and availability.

(3) P-Bases also available for MAX-PE, MAX-E1 and MAX-E2 for select ratings. Consult a Stock Product Application Specialist or T-frame parts for details.

P-BASES HIGH THRUST WPI VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)								
FRAME	TYPE	BD	AK	BE	BB	AJ	BF	PART NUMBER
444/445	Standard	16.5"	13.5"	1.00"	0.25"	14.75"	0.69"	3A103B329XSA8
445TP20/447/449	Standard	20"	13.5"	1.20"	0.25"	14.75"	0.69"	3A103B421XZA6
	Alternate	16.5"	13.5"	1.20"	0.25"	14.75"	0.69"	3A103B658X5A8N000
	Alternate	24.5"	13.5"	1.20"	0.25"	14.75"	0.69"	3A103F28300A1N000
5000	Standard	24.5"	13.5"	1.18"	0.25"	14.75" 22"	0.69" 0.94"	3A103B15564A2
	Standard	20"	13.5"	1.18"	0.25"	14.75"	0.69"	3A103B565X4A5N000
	Alternate	30.5"	22"	1.18"	0.25"	26"	0.69" 0.94"	3A103B155Y8A1N000
5800	Standard	30.5"	22"	1.38"	0.25"	26"	0.81"	3A103B41010A3
	Alternate	24.5"	13.5"	1.38"	0.25"	14.75" 22"	0.81"	3A103F126X5A8N000
	Alternate	36"	22"	1.38"	0.25"	26"	0.81"	3A103F126X6A5N000

Notes:

(1) P-Bases require factory machine work prior to shipment/installation.
(2) Consult a Stock Product Application Specialist or T-Frame parts for P-Base price and availability.
(3) P-Bases also available for MAX-PE, MAX-E1 and MAX-E2 for select ratings. Consult a Stock Product Application Specialist or T-frame parts for details.

P-BASE KITS FOR NO-THRUST TEFC FRAMES					
FRAME	LIST PRICE AEHH8P, AEHH8PCF, AEUH8PDC ($)	MAX-PE AEHH8P CATALOG NO. "NP" or "NPV"	LIST PRICE AEHH8B, , AEHH8BCF, AEUH8BDC ($)	MAX-E2/841® AEHH8B CATALOG NO. "HB" or "HBV"	BD
250T	425	PBN250T	850	PBHB250T	10"
280T	625	PBN280T	1150	PBHB280T/TS	16.5"
320T	750	PBN320T	1275	PBHB320T/TS	16.5"
360T	825	PBN360T	1375	PBHB360T	16.5"
400T	1050	PBN400T	1700	PBHB400T	16.5"
444/445T	2975	PBN444/5T	3745	PBHB444/445T	16.5"
447/449T	3575	PBN447/9T	N/A	N/A	20"

Notes:

(1) For MAX-E2/841®, type AEHH8B (cat# "HB") motors, INPRO™ Bearing Isolator Seal is already included in the list price. INPRO™ Bearing Isolator Seal ships separately and will be added to order as an additional no cost line item.

FACTORY MODIFICATION PRICING

Effective 07-08-18
Supercedes 03-24-17

MODIFICATION LEAD TIME

(1) TWMC standard lead time for all modifications is 10-12 working days. If shorter lead time is required, please contact TWMC. Expediting fees will apply. Additional 15% of purchase order total is standard.
(2) Modification lead time does not include transit time.
(3) Lead time is based upon availability of parts.
(4) M2X, M8A, M8B, M10, M11, M14A, M16, M18, M21A, M28 are the only modifications that can be done to our explosion-proof motors.
(5) Explosion Proof motors modified in Round Rock, TX Only.

MOD. NUMBER	DESCRIPTION		LIST PRICE ($)									
		NEMA FRAME:	56-180T	210T	250T	280T	320T	360T	400T	440T	5000	5800 & UP
		METRIC FRAME:	90S, 90L, 112S, 112M	132S, 132M	160M, 160L	180M, 180L	200M, 200L	225S, 225M	250S, 250M	N/A	N/A	N/A
M1	Nameplate Change		105	105	105	105	105	105	105	105	105	105
M1A	Additional Nameplate		140	140	140	140	140	140	140	140	140	140
M1B	304 Stainless Steel Hardware		N/A	N/A	2,548	2,548	2,970	2,915	3,593	3,593	3,997	4,565
M2[1]	Space Heater		464	466	644	644	669	793	921	1,004	1,678	1,906
M2A[1]	Space Heater w/ Auxiliary Box		881	881	1,136	1,136	1,152	1,228	1,535	1,615	2,118	2,351
M2X	Space Heater "Explosion Proof Motors Only"		721	721	863	1,085	1,234	1,260	1,370	2,281	N/A	N/A
M3C[2]	Installation of C-Face		330	500	877	851	905	1,152	1,623	2,852	6,138	6,906
M3C841[2]	Installation of C-Face w/ INPRO™ Seal (MAX-E2/841® only)		674	960	1,382	1,535	1,918	2,148	2,610	4,012	N/A	N/A
M3D[2, 11,12]	Installation of D-Flange		406	515	515	745	905	1,152	1,623	2,852	6,138	6,906
M3D841[2, 11]	Installation of D-Flange w/ INPRO™ Seal (MAX-E2/841® only)		674	N/A	1,382	1,535	1,918	2,148	2,610	4,122	N/A	N/A
M3P[2]	Installation of P-Base		N/A	N/A	592	645	811	1,030	1,449	1,993	N/A	N/A
M4[3]	Stator Winding RTDs, 100 Ohm Platinum (1/ Phase)		890	1,016	1,080	1,080	1,228	1,386	1,398	1,398	1,779	1,779
M4A[3]	Stator Winding RTDs w/ Auxiliary Box (1/ Phase)		N/A	N/A	N/A	N/A	N/A	1,918	1,918	1,918	2,455	2,532
M4B[3]	Stator Winding RTDs, 100 Ohm Platinum w/ Auxiliary Box (2/ Phase)		N/A	N/A	N/A	N/A	N/A	N/A	3,568	4,489	4,633	4,926
M5	Thermistors (1/ Phase)		614	922	922	922	1,228	1,228	1,228	1,228	1,535	1,535
M5A	Thermistors (1/ Phase) w/ Auxiliary Box		1,398	1,525	1,535	1,535	1,843	1,918	1,918	1,918	2,455	2,532
M6	Thermostats (1/ Phase)		559	724	724	724	852	852	889	889	962	962
M6A	Thermostats (1/ Phase) w/ Auxiliary Box		1,035	1,145	1,272	1,272	1,382	1,455	1,705	1,705	2,053	2,108
M7	Bearing RTDs, 100 Ohm Platinum Cable Type with Aux Box (2/ Motor)		N/A	N/A	N/A	N/A	N/A	N/A	5,507	5,507	5,507	5,507
M8	Bearing Conversion - Roller to Ball or Ball to Roller (2/ Motor)		N/A	N/A	N/A	N/A	N/A	3,630	4,813	5,357	9,416	9,847
M8A[4]	Convert to Ceramic or Hybrid Bearings		1,098	2,044	2,493	2,930	3,187	3,754	5,472	7,219	12,128	15,593
M8B[4]	Convert to Outer Race Insulated Bearings		924	1,039	1,815	1,878	1,878	2,459	3,646	4,295	6,063	7,797

Notes:

(1) Double the List Price for 240V Space Heaters operated at 120V.
(2) Price includes the flange.
(3) Only one per phase is available for 360T frame and smaller.
(4) Price is per bearing.
(5) Not required for MAX-E2® or MAX-E2/841®.
(6) N/A
(7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
(8) Must Start with IEEE841 motor. Must perform M17 Mod, and add extra sealant to end brackets.
(9) No Shaft Grounding Ring allowed in Div#2 Area.
(10) Must start with "VPH" NEMA Premium Series.
(11) Not available for Hybrid F# 449T/TS frames: EP3502, EP3504, HB3502, HB3504.
(12) Excludes ASHA "P" and AMHGTK "PG" 2-Pole motors. Contact Application Specialist for quote.
(13) If adding Stainless Steel Breather Drains for shaft up application see M28A.
(14) Terminal Block Not Available for 56 Frame Motors.

FACTORY MODIFICATION PRICING

Effective 07-08-18
Supercedes 03-24-17

MODIFICATION LEAD TIME

(1) TWMC standard lead time for all modifications is 10-12 working days. If shorter lead time is required, please contact TWMC. Expediting fees will apply. Additional 15% of purchase order total is standard.
(2) Modification lead time does not include transit time.
(3) Lead time is based upon availability of parts.
(4) M2X, M8A, M8B, M10, M11, M14A, M16, M18, M21A, M28 are the only modifications that can be done to our explosion-proof motors.
(5) Explosion Proof motors modified in Round Rock, TX Only.

MOD. NUMBER	DESCRIPTION		LIST PRICE ($)									
		NEMA FRAME:	56-180T	210T	250T	280T	320T	360T	400T	440T	5000	5800 & UP
		METRIC FRAME:	90S, 90L, 112S, 112M	132S, 132M	160M, 160L	180M, 180L	200M, 200L	225S, 225M	250S, 250M	N/A	N/A	N/A
M9	Change Rotation		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,846	2,846
M10	Shorten Shaft to NEMA TS Dimensions ONLY; Does Not Require TWMC Drawing		2,270	2,403	2,740	3,010	3,350	3,483	3,960	4,433	4,917	4,917
M10A	Special Keyless 4140 Shaft Ext. for 440T Frames and Above; Any Special Shaft		N/A	N/A	N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE
M10B	Any Non NEMA Special Shaft Required; Non NEMA Dim requires TWMC Drawing		N/A	N/A	N/A	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE
M10C	Drill and Tap Shaft		477	550	660	750	925	925	1,100	1,320	QUOTE	QUOTE
M11	F1 to F2 Mounting Conversion		210	264	377	377	377	503	587	733	9,486	9,486
M12	Supply Oversized Main Conduit Box		N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,620	4,620	4,620
M12A	Supply Fully Loaded Main Conduit Box		N/A	N/A	N/A	N/A	N/A	N/A	N/A	25,480	25,480	25,480
M13(13)	Stainless Steel Breather Drains		210	264	377	377	377	503	503	589	589	670
M14	Tropicalization/ Fungus Protection		435	545	545	655	765	1,021	1,498	1,755	2,525	2,525
M14A	Tropicalization/ Fungus Protection for Explosion Proof Motors ONLY		341	341	341	341	341	341	341	562	1,028	1,028
M15	Provisions for Vertical Jack Screws		N/A	N/A	N/A	N/A	N/A	N/A	1,185	1,185	Included	Included
M16	Alternate Grease		330	364	364	440	508	589	670	751	1,185	1,185
M17	Chico Motor Leads		210	264	377	377	377	503	633	633	1,243	1,563
M18A(5)	Epoxy Paint Finish		838	838	1,152	1,152	1,152	1,152	1,152	1,152	1,535	2,805
M18B	Fire Pump Red		838	838	1,152	1,152	1,152	1,152	1,152	1,152	1,535	2,805
M19(4)	Shaft INPRO™ Seals		N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,003	3,003	3,003
M20(5)	Grounding Provisions on Frame		140	140	140	140	140	140	140	Included	Included	Included
M21	Drip Cover (TEFC) Rolled Steel		347	404	578	962	1,213	1,386	2,195	N/A	N/A	N/A
M21A	Drip Cover (TEFC) Cast Iron		572	771	922	1,116	1,451	1,861	2,617	N/A	N/A	N/A
M22	Extend Leads - Connection Behind Conduit Box; Price Based on 4' Leads		733 +$1/ft	770 +$1/ft	788 +$1/ft	953 +$3.25/ft	990 +$6.50/ft	1,078 +$12.70/ft	1,503 +$19/ft	1,595 +$23/ft	2,145 +$25/ft	2,237 +$41/ft

Notes:

(1) Double the List Price for 240V Space Heaters operated at 120V.
(2) Price includes the flange.
(3) Only one per phase is available for 360T frame and smaller.
(4) Price is per bearing.
(5) Not required for MAX-E2® or MAX-E2/841®.
(6) N/A
(7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
(8) Must Start with IEEE841 motor. Must perform M17 Mod, and add extra sealant to end brackets.
(9) No Shaft Grounding Ring allowed in Div#2 Area.
(10) Must start with "VPH" NEMA Premium Series.
(11) Not available for Hybrid F# 449T/TS frames: EP3502, EP3504, HB3502, HB3504.
(12) Excludes ASHA "P" and AMHGTK "PG" motors. Contact Application Specialist for quote.
(13) If adding Stainless Steel Breather Drains for shaft up application see M28A.
(14) Terminal Block Not Available for 56 Frame Motors.

FACTORY MODIFICATION PRICING

Effective 07-08-18
Supercedes 03-24-17

MODIFICATION LEAD TIME

(1) TWMC standard lead time for all modifications is 10-12 working days. If shorter lead time is required, please contact TWMC. Expediting fees will apply. Additional 15% of purchase order total is standard.
(2) Modification lead time does not include transit time.
(3) Lead time is based upon availability of parts.
(4) M2X, M8A, M8B, M10, M11, M14A, M16, M18, M21A, M28 are the only modifications that can be done to our explosion-proof motors.
(5) Explosion Proof motors modified in Round Rock, TX Only.

MOD. NUMBER	DESCRIPTION	NEMA FRAME:	LIST PRICE ($)									
			56-180T	210T	250T	280T	320T	360T	400T	440T	5000	5800 & UP
		METRIC FRAME:	90S, 90L, 112S, 112M	132S, 132M	160M, 160L	180M, 180L	200M, 200L	225S, 225M	250S, 250M	N/A	N/A	N/A
M23[9]	Supply Shaft Grounding Ring		803	913	965	1,242	1,242	1,334	1,489	2,017	2,567	3,135
M23A[9]	Supply Internal Shaft Grounding Ring		1,300	1,485	1,485	2,485	2,485	2,650	2,950	3,175	QUOTE	QUOTE
M23B[9,10]	VHS or VSS Shaft Grounding Ring & Insulated Bearing for VFD Duty		N/A	N/A	N/A	N/A	N/A	N/A	3,037	4,869	4,869	6,288
M23H[9]	Supply Shaft Grounding Device		803	913	965	1,242	1,242	1,334	1,489	2,017	2,567	3,135
M24[4]	Provisions for Vibration Sensor Spot Face, Drill & Tap (1/4-20)		N/A	N/A	N/A	N/A	N/A	N/A	1,283	1,283	1,283	1,283
M24A[4]	Provide and Install Vibration Switch/ Transmitter Spec. (Does Not Include Cabling or Terminations)		N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE
M24B[4]	Provide our Standard METRIX # ST5484E-121-714-00 Transmitter		N/A	N/A	N/A	N/A	N/A	3,250	3,354	3,587	4,154	5,600
M25	Mill Off Motor Feet		1,632	1,676	1,768	1,856	2,038	2,310	2,764	3,216	3,750	QUOTE
M26[7]	Inline Blower for 1000:1 Speed Range		508	681	951	1,109	1,756	1,860	2,044	6,999	12,249	17,499
M26A	Provide Centrifugal (Scorpion Tail) Blower, motor, filter, and fab fan cover for 440 and above frames		N/A	N/A	N/A	N/A	N/A	N/A	N/A	9,955	15,450	19,495
M27A[7]	Installation of Dynopar Encoder		2,573	2,573	2,678	2,783	3,019	3,019	3,615	3,615	6,825	8,138
M27B[7]	Installation of Other Encoder		QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE
M28	Vertical Shaft Down - Snap Ring (Lock Nut and Washer)		N/A	N/A	N/A	N/A	N/A	3,250	3,354	3,587	4,154	5,600
M28A	Vertical Shaft Up - DE Lip Seal and Breather Drains in NDE Endframe		225	279	392	392	392	518	518	604	604	685
M29[8]	Oil Mist Ready		N/A	N/A	N/A	N/A	N/A	N/A	2,625	3,413	6,563	9,188
M30	Installation of Brake		QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE
M31[8]	Convert to IP65 or IP66		489	682	795	795	935	1,092	1,219	1,462	QUOTE	QUOTE
M32	Precision Balance		N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE
M33	175% Thrust or more on VHS on 440 Frame 200-400 HP		N/A	N/A	N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE
M34	Convert TEFC to TEAO		650	750	850	900	1,100	1,300	1,600	1,900	QUOTE	QUOTE
M35[14]	Terminal Block in Main Lead Box		458	654	654	654	890	890	905	995	N/A	N/A

Notes:

(1) Double the List Price for 240V Space Heaters operated at 120V.
(2) Price includes the flange.
(3) Only one per phase is available for 360T frame and smaller.
(4) Price is per bearing.
(5) Not required for MAX-E2® or MAX-E2/841®.
(6) N/A
(7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
(8) Must start with IEEE 841 motor. Must perform M17 Mod for IP65. Must perform M17 Mod, plus add extra sealant to end brackets, for IP66.
(9) No Shaft Grounding Ring allowed in Div#2 Area.
(10) Must start with "VHP" NEMA Premium Series.
(11) Not available for Hybrid F# 449T/TS frames: EP3502, EP3504, HB3502, HB3504.
(12) Excludes ASHA "P" and AMHGTK "PG" motors. Contact Application Specialist for quote.
(13) If adding Stainless Steel Breather Drains for shaft up application see M28A.
(14) Terminal Block Not Available for 56 Frame Motors.

FACTORY MODIFICATION DESCRIPTIONS

Effective 07-08-18
Supercedes 03-24-17

M1. Nameplate Change:

Add new nameplate displaying approved data changes such as new voltage and frequency, revised HP and service factor, higher or lower ambient temperature, etc. Information should be clearly stamped on P.O.

M1A. Additional Nameplate:

Add second data plate with customer part number, order number, or other data.

M1B. 304 Stainless Steel Hardware:

Add for 304 Stainless Steel Hardware - Bolts, Nameplate.

M2. Space Heater:

Add wrap around space heaters with leads brought out to main terminal box. Standard voltage is 120V, however other voltages are available. Please specify voltage when ordering. All heaters are single phase.

M2A. Space Heater w/ Auxiliary Box:

Same as M2, except an auxiliary terminal box is added to the side of the main terminal box and the space heater leads are brought out to the auxiliary terminal box.

M2X. Space Heater "Explosion Proof":

Add wrap around space heaters with leads brought out to main terminal box. Standard voltage is 120V, however other voltages are available. Please specify voltages when ordering. All heaters are single phase. This applies to TWMC's explosion proof line of motors.

M3C. Installation of C-Face:

Remove drive-end bracket and replace with C-Face: Modification Price includes the C-Face.

M3C841. Installation of C-Face w/ INPRO™ Seal (MAX-E2/841® only):

Remove drive-end bracket and replace with C-Face and INPRO™ Seal: Only Available on MAX-E2/841® Line.

M3D. Installation of D-Flange:

Remove drive-end bracket and replace with D-Flange: Modification Price includes the D-Flange.

M3D841. Installation of D-Flange w/ INPRO™ Seal (MAX-E2/841® only):

Remove drive-end bracket and replace with D-Flange and INPRO™ Seal: Only Available on MAX-E2/841® Line

M3P. Installation of P Base on any Horizontal Motor for Vertical Mount.

Remove drive-end bracket and install P-base.

M4. Stator Winding RTDs, 100 Ohm Platinum (1/ phase):

Provide 100 Ohm platinum resistant temperature detectors (RTDs), one per phase, on the winding end turns with leads brought out to main terminal box. Note TWMC's medium voltage line of products come standard with 100 Ohm platinum RTDs, two per phase.

M4A. Stator Winding RTDs w/ Auxiliary Box (1/ Phase):

Provide 100 Ohm platinum resistant temperature detectors (RTDs) two per phase, on the winding end turns with leads terminated in an auxiliary terminal box.

Note: On motors 449T frame and smaller, the auxiliary box will be located on the same side as the main lead box. On 5000 frames and larger, the auxiliary box will be located on the F2 side, or on the opposite side of the main lead box.

M4B. Stator Winding RTDs, 100 Ohm Platinum w/ Auxiliary Box (2/ Phase):

Provide 100 Ohm platinum resistant temperature detectors (RTDs) one per phase on the winding end turns with leads terminated in an auxiliary terminal box.

Note: On motors 360T - 449T, the auxiliary box will be located on the same side as the main lead box. On 5000 frames and larger, the auxiliary box will be located on the F2 side, or on the opposite side of the main lead box.

M5. Thermistors (1/ Phase):

Provide (3) PTC thermistors (140˚C) on the winding end turns with leads brought out to main terminal box.
Note: these are standard on Metric motors with frames 160L and larger.

M5A. Thermistors (1/ Phase) w/ Auxiliary Box:

Provide (3) PTC thermistors (140˚C) on the winding end turns with leads brought out to an auxiliary terminal box. The auxiliary box will be located on the side of the main terminal box.

M6. Thermostats (1/ Phase):

Addition of (3) normally closed thermostats (140˚C) to the winding end turns, connected in series with the leads brought out to the main terminal box. This is standard on Explosion Proof Motors.

M6A. Thermostats (1/ Phase) w/ Auxiliary Box:

Addition of (3) normally closed thermostats (140˚C) to the winding end turns, connected in series with the leads brought out to an auxiliary terminal box. The auxiliary box will be located off the side of the main terminal box.

M7. Bearing RTD's, 100 Ohm Platinum Cable Type with Aux. Box (2/ Motor):

Add 100 Ohm platinum bearing resistance temperature detectors, on both the drive and non-drive end bearing. Specify if alternate type is required.

M8. Convert Bearings - Ball to Roller or Roller to Ball (2/ Motor):

Convert from Roller Bearings to Ball Bearings or Ball Bearings to Roller Bearings. The Roller to Ball conversion requires some machining on bearing caps to allow for thermal growth.

M8A. Convert to Ceramic Hybrid Bearings:

Convert to Ceramic Hybrid Bearings: Replace existing bearing(s) with Hybrid Ceramic bearings, where the balls are ceramic. This would reduce/ eliminate shaft currents. TWMC's standard is on the Non-Drive End Bearing only.

M8B. Convert to Outer Race Insulated Bearings:

Replace existing bearing(s) with bearings that have outer race coated with insulated material like SKF "Insacote."This would be to reduce / eliminate shaft currents. TWMC's standard is on the Non-Drive End bearing only.

M9. Change Rotation:

This modification only applies to 2-Pole (3600/ 3000 RPM) motors in 5000 frames and larger. Standard direction of rotation is counter-clockwise, facing the drive-end of the motor. This modification will change either the internal or external fans for operation in the clockwise direction, facing the drive-end.

M10. Shorten Shaft to NEMA TS Dimensions ONLY; Non-NEMA Dim Requires TWMC Drawing:

Machine shafts to TS Dimensions per NEMA MG1 ONLY. This does not include new bearings. This does NOT require a TWMC drawing.

M10A. Special Keyless 4140 Shaft Extension for 5000 Frames and above; Any Special Shaft:

Extension is for 5000 frames and above, where torsional stress in the application is high, such as reciprocating gas compressors. Requires TWMC approval, quote, and drawing.

M10B. Any NON NEMA Special Shaft Required:

This requires a TWMC quote and Drawing.

M10C. Drill and Tap Shaft

M11. F1 to F2 Mounting Conversion:

Convert terminal box location from standard F1 to F2, or F2 to F1, depending on the product line. On medium voltage motors, the auxiliary terminal boxes will be on the opposite side of the main terminal box as standard. If the requirement is to have all terminal boxes on either the F1 side or the F2 side, please specify.

M12. Supply Oversized Main Conduit Box:

Replace existing conduit box with an oversized main conduit box. This would be done if the TWMC standard box does not meet customer's requirement. Mount and extend leads if necessary.

M12A. Supply Fully Loaded Main Lead Box:

Replace existing conduit box with a fully loaded box. The box will be TWMC standard size and will contain TWMC standard lightning arrestors and surge capacitors. Box is not self supporting and will require the customer to support.

M13. Stainless Steel Breather Drains:

Drill and tap the existing drain holes to accommodate a Crouse-Hinds stainless steel breather drain. Note, this is standard on MAX-E2®, MAX-E2/841® and Explosion Proof motors.

M14. Tropicalization/ Fungus Protection:

Involves disassembling the motor and spraying the internal windings.

M14A. Tropicalization/ Fungus Protection for Explosion Proof Motors ONLY:

Involves disassembling the motor and spraying the internal windings.

M15. Provisions for Vertical Jack Screws:

Drill and tap (2) holes per motor.

M16. Alternate Grease:

Purge and repack lubricant in end brackets with TWMC standard high temp. or low temp. grease. Please contact TWMC for alternates.

M17. Chico Motor Leads:

Apply a compound between terminal box and frame of motor. This feature is standard for explosion proof motors.

M18A. Epoxy Paint Finish:

Standard paint finish will be changed to Epoxy paint (e.g. MAX-E2® Epoxy Paint (Blue)).

M18B. Fire Pump Red Finish:

Standard paint finish will be changed to Fire Pump Red (e.g. PPG Pitt-Tech 90-306 Safety Red). Also requires addition of UL nameplate and Renameplate to show "FP" in catalog number.

M19. Shaft INPRO™ Seals:

Add INPRO™ seals to drive-end only of MAX-E2® motors 140T~449T/TS frames. This modification is only available for frames 440T and larger on all other product lines. The price reflects drive-end only.

M20. Grounding Provisions on Frame:

Drill and tap the motor frame. This is standard on MAX-E2®, MAX-E2/841®, Oil Well Pump motors, and motors on 5000 frames and larger. All motors have a grounding lug inside the main lead box as a standard.

M21. Drip Cover (TEFC) Rolled Steel:

Replace the existing fan cover with a rolled steel drip cover. This is only for motors mounted vertically.

M21A. Drip Cover (TEFC) Cast Iron:

Replace the existing fan cover with a cast iron drip cover. This is only for motors mounted vertically.

M22. Extend Leads - Connection Behind Conduit Box; Price Based on 4' leads:

Extend existing leads to the length specified by customer. The splice will be made behind the conduit box so it is not seen.

M23. Supply Shaft Grounding Ring:

Install AEGIS shaft grounding ring as made by ELECTRO STATIC TECHNOLOGY. Any CSA Hazardous Location nameplates must be removed. This would be to reduce or eliminate shaft currents. For other methods of shaft grounding, please contact TWMC.

M23A. Vertical Hollow Shaft Grounding Ring:

Install a Shaft Grounding Ring internally on inboard side of Guide Bearing Cap.

M23B. VHS or VSS Shaft Grounding Ring & Insulated Bearing for VFD Duty:

Must start with a VHS/VSS NEMA Premium motor. Install a SGR internally on guide bearing inboard cap, and insulated bearing.

M23H. Supply Shaft Grounding Device:

Install shaft grounding device to reduce or eliminate shaft currents. CSA Hazardous Location Nameplates must be removed.

M24. Provisions for Vibration Sensor:

Drill, tap and machine end bracket(s) to accommodate vibration sensor. Customer is required to submit specifications of vibration sensor. Price is per bracket.

M24A. Provide and Install Vibration Sensor (Does Not Include Cabling or Terminations):

Drill, tap and machine end bracket(s) to accommodate vibration sensor. TWMC standard switch will be provided as made by METRIX, ROBERTSHAW, PREDICTECH, or STI. For details or pricing to provide another brand, please contact TWMC. Price is per bracket.

M24B. Provide our Standard METRIX # ST5484E-121-714-00 Vibration Switch

M25. Mill Off Motor Feet:

TWMC will cut off the feet of a footed motor to create a round body type motor. Second lifting lug available for an additional price adder.

FACTORY MODIFICATION DESCRIPTIONS

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M26. Inline Blower for 1000:1 Speed Range:
Remove existing fan and fan cover and replace with TWMC standard inline blower/ fan cover configuration. Blower motor will require a separate power source. This modification will also require an "M8A" modification for 440TS/T frames and larger.

M26A. Installation of Centrifugal Blower:
Provide Centrifugal Blower, motor, filter, and fab fan cover for 440 and above frames.

M27A. Installation of Dynopar Encoder:
Install TWMC standard Encoder as made by Dynapar.

M27B. Installation of Other Encoder:
Please contact factory for quote.

M28. Snap Ring - Lock Nut and Washer for Mounting the Motor Vertical Shaft Down
Available on 320 frames and up.

M28A. Install Drive End Lip Seal and Stainless Steel Breather Drains for Motor Vertical Shaft Up
To prevent moisture from entering the motor in shaft up applications in an outdoor environment.

M29. Oil Mist Ready:
TWMC to prepare motors for immediate Oil Mist Lubrication. Must use MAX-E2/841® if applicable.

M30. Installation of Brake:
Modify TEFC motors such that a Brake can be attached. This must be quoted with specs and a TWMC Drawing required.

M31. Convert to IP65 or IP66:
TWMC to take IEEE 841 motor and perform M17 Mod for IP65. Must perform M17 Mod, plus add extra sealant to end brackets, for conversion to IP66.

M32. Precision Balancing for Vibration limits below what standard NEMA specification on IEEE/841 motors.

M33. 175% Thrust VHS on 440 Frame 200-400 HP:
Modify the motor adding correct bearings, parts, and oil for higher thrust

M34. Convert TEFC to TEAO

M35. Terminal Block in Main Lead Box:
Add a 6 lug terminal block into the Cast Iron or Rolled Steel Main Lead Box for motor frame sizes 143T through 449T and attach the motor leads to the terminal block.

MODIFICATION DRAWING REQUIREMENTS

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DRAWING REQUIREMENTS		
X No Drawing	● Basic Drawing	■ Modification Drawing

DRAWING REQ.	MOD CODE	MODIFICATION DESCRIPTION
X	M1	Nameplate Change
X	M1A	Additional Nameplate
X	M1B	304 Stainless Steel Hardware
●	M2	Space Heater
■	M2A	Space Heater with Aux Box
●	M2X	Space Heater "Explosion Proof Motors Only"
■	M3C	Installation of C-Face
■	M3C841	C-Face with Inpro (MAX-E2/841® only)
■	M3D	Installation of D-Flange
■	M3D841	D-Flange with Inpro (MAX-E2/841® only)
■	M3P	Installation of P-Base
X	M4	Winding RTD's 100 Ohm Platinum (1/Phase)
■	M4A	Winding RTD (2/Phase) with Auxilary Terminal Box
●	M4B	Stator Winding RTDs, 100 Ohm Platinum (2/phase)
X	M5	Thermistors (1/Phase)
■	M5A	Thermistors (1/Phase) with Auxilliary Box
X	M6	Thermostats (1/Phase)
■	M6A	Thermostats (1/Phase) with Auxilliary Box
■	M7	Bearing RTD (2/ Motor)
●	M8	Bearings Coversion: Ball to Roller/ Roller to Ball (2/ Motor)
●	M8A	Convert to Ceramic or Hybrid Bearings
●	M8B	Convert to Outer Race Insulated Bearings
X	M9	Change Rotation
●	M10	Shorten Shaft (TS Frames) Per NEMA MG-1 Dimensions (Non NEMA Dimensions Require TWMC Drawing and Approval)
■	M10A	Special Keyless 4140 Shaft Extension for 440 frames and Larger
■	M10B	Any Non NEMA Special Shaft Required; Non NEMA Dim Requires TWMC Drawing
■	M10C	Drill and Tap Motor Feet
X	M11	F1 to F2 Mounting Conversion
■	M12	Oversized Main Conduit Box - Mount and Extend Leads
■	M12A	Fully Loaded Main Conduit Box - Mount and Extend Leads
	M13	Stainless Steel Breather Drains
X	M14	Tropicalization / Fungus Protection
●	M15	Provisions for Vertical Jack Screws
X	M16	Alternate Grease
X	M17	Chico Motor Leads
X	M18A	Epoxy Paint Finish
X	M18B	Fire Pump Red Finish
●	M19	Install INPRO Seals
■	M20	Grounding Provisions on Frame
●	M21	Drip cover (TEFC)- Rolled Steel
●	M21A	Drip cover (TEFC)- Cast Iron
X	M22	Extend Leads -Connect Behind Box; Price Based on 4' Leads
X	M23	Supply Shaft Grounding Ring
X	M23A	VHS Shaft Grounding Ring
X	M23B	VHS or VSS Shaft Grounding Ring & Insulated Brg for INV Duty
■	M23H	Supply Shaft Grounding Device
■	M24	Provision for Vibration Sensor
■	M24A	Provide and Install Vibration Switch/ Transmitter Spec. (Does not Include Cabling or Terminations)
■	M24B	Provide our Standard METRIX # ST5484E-121-714-00 Vibration Switch
■	M25	Mill Off Motor Feet
■	M26	Inline Blower for 1000:1 speed range
■	M26A	Install Centrifugal Blower
■	M27A	Installation Of Dynopar Encoder
■	M27B	Installation Of Other Encoder
X	M28	Lock Nut and Washer For Vertical Shaft Down
■	M28A	Vertical Shaft up DE lip seal and breather drains in NDE endframe
■	M29	Oil Mist Ready
■	M30	Installation of Brake
X	M31	Convert to IP65 or IP66
X	M32	Precision Balance
■	M33	175% Thrust or more on VHS on 440 Frame 200-400 HP
■	M34	Convert TEFC to TEAO
X	M35	Terminal Block in Main Lead Box

DIMENSIONS - AC MACHINES

Dimensions for Foot-Mounted Machines with a Single Straight-Shaft Extension

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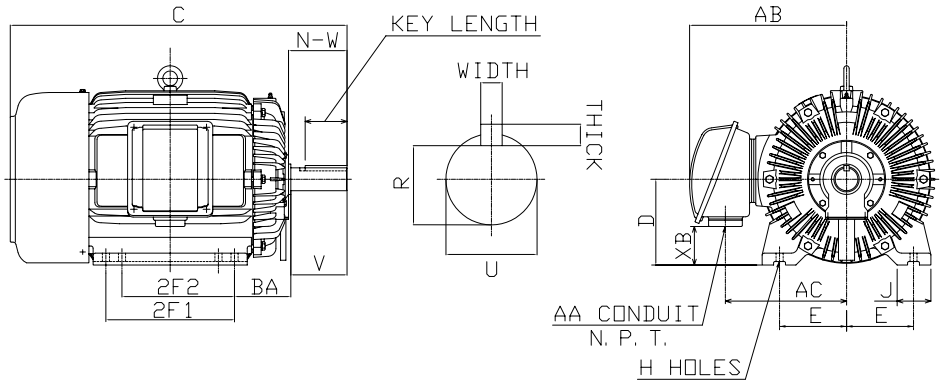
Supercedes 03-24-17



FRAME	MOUNTING							SHAFT EXTENSION			KEY & KEYSEAT				TERMINAL HOUSING			
SIZE	C	D	E	2F1	2F2	H	BA	N-W	U	V	WIDTH	THICK	LENGTH	R	AA	AB	AC	XB
143T	12.47	3.5	2.75	4	—	0.34	2.25	2.25	0.875	2.2	0.188	0.188	1.41	0.771	0.75	6.18	4.92	2.52
145T	13.46	3.5	2.75	5	4	0.34	2.25	2.25	0.875	2.2	0.188	0.188	1.41	0.771	0.75	6.18	4.92	2.52
182T	14.77	4.5	3.75	4.5	—	0.41	2.75	2.75	1.125	2.7	0.25	0.25	1.78	0.986	0.75	7.44	6.06	3.36
184T	15.79	4.5	3.75	5.5	4.5	0.41	2.75	2.75	1.125	2.7	0.25	0.25	1.78	0.986	0.75	7.44	6.06	3.36
213T	18.09	5.25	4.25	5.5	—	0.41	3.5	3.38	1.375	3.3	0.312	0.312	2.41	1.201	1	8.86	7.07	3.32
215T	19.59	5.25	4.25	7	5.5	0.41	3.5	3.38	1.375	3.3	0.312	0.312	2.41	1.201	1	8.86	7.07	3.32
254T	23.7	6.25	5	8.25	—	0.53	4.25	4	1.625	3.9	0.375	0.375	2.91	1.416	1.25	10.24	8.58	4.37
256T	25.44	6.25	5	10	8.25	0.53	4.25	4	1.625	3.9	0.375	0.375	2.91	1.416	1.25	10.24	8.58	4.37
284T	26.8	7	5.5	9.5	—	0.53	4.75	4.62	1.875	4.5	0.5	0.5	3.28	1.591	1.25	12.13	9.84	3.97
284TS	25.43	7	5.5	9.5	—	0.53	4.75	3.25	1.625	3.2	0.375	0.375	1.93	1.416	1.25	12.13	9.84	3.97
286T	28.3	7	5.5	11	9.5	0.53	4.75	4.62	1.875	4.5	0.5	0.5	3.28	1.591	1.25	12.13	9.84	3.97
286TS	26.93	7	5.5	11	9.5	0.53	4.75	3.25	1.625	3.2	0.375	0.375	1.93	1.416	1.25	12.13	9.84	3.97
324T	29.93	8	6.25	10.5	—	0.66	5.25	5.25	2.125	5.15	0.5	0.5	3.91	1.845	2	13.47	10.98	3.59
324TS	28.43	8	6.25	10.5	—	0.66	5.25	3.75	1.875	3.65	0.5	0.5	2.03	1.591	2	13.47	10.98	3.59
326T	31.42	8	6.25	12	10.5	0.66	5.25	5.25	2.125	5.15	0.5	0.5	3.91	1.845	2	13.47	10.98	3.59
326TS	29.92	8	6.25	12	10.5	0.66	5.25	3.75	1.875	3.65	0.5	0.5	2.03	1.591	2	13.47	10.98	3.59
364T	32.57	9	7	11.25	—	0.66	5.88	5.88	2.375	5.75	0.625	0.625	4.28	2.021	3	15.1	12.28	2.39
364TS	30.44	9	7	11.25	—	0.66	5.88	3.75	1.875	3.65	0.5	0.5	2.03	1.591	3	15.1	12.28	2.39
365T	33.55	9	7	12.25	11.25	0.66	5.88	5.88	2.375	5.75	0.625	0.625	4.28	2.021	3	15.1	12.28	2.39
365TS	31.42	9	7	12.25	11.25	0.66	5.88	3.75	1.875	3.65	0.5	0.5	2.03	1.591	3	15.1	12.28	2.39
404T	36.5	10	8	12.25	—	0.81	6.62	7.25	2.875	7.15	0.75	0.75	5.65	2.45	3	19.07	14.33	1.81
405T	37.99	10	8	13.75	12.25	0.81	6.62	7.25	2.875	7.15	0.75	0.75	5.65	2.45	3	19.07	14.33	1.81
405TS	34.99	10	8	13.75	12.25	0.81	6.62	4.25	2.125	4.15	0.5	0.5	2.78	1.845	3	19.07	14.33	1.81
444T	44.4	11	9	14.5	—	0.81	7.5	8.5	3.375	8	0.875	0.875	6.89	2.88	3	24	17.9	2.4
444TS	40.65	11	9	14.5	—	0.81	7.5	4.75	2.375	4.5	0.625	0.625	3.03	2.021	3	24	17.9	2.4
445T	46.4	11	9	16.5	14.5	0.81	7.5	8.5	3.375	8	0.875	0.875	6.89	2.88	3	24	17.9	2.4
445TS	42.65	11	9	16.5	14.5	0.81	7.5	4.75	2.375	4.5	0.625	0.625	3.03	2.021	3	24	17.9	2.4
447T	49.9	11	9	20	16.5	0.81	7.5	8.5	3.375	8	0.875	0.875	6.91	2.88	3	24	17.9	2.4
447TZ	51.12	11	9	20	16.5	0.81	7.5	10.12	3.375	9.62	0.875	0.875	8.5	2.88	3	24	17.9	2.4
447TS	46.15	11	9	20	16.5	0.81	7.5	4.75	2.375	4.5	0.625	0.625	3.03	2.021	3	24	17.9	2.4
449T	54.9	11	9	25	20	0.81	7.5	8.5	3.375	8	0.875	0.875	6.91	2.88	3	24	17.9	2.4
449TZ	56.12	11	9	25	20	0.81	7.5	10.12	3.375	9.62	0.875	0.875	8.5	2.88	3	24	17.9	2.4
449TS	54.51	11	9	25	20	0.81	7.5	4.75	2.375	4.5	0.625	0.625	3.03	2.021	3	24	17.9	2.4

All dimensions are in inches and for reference only.

DIMENSIONS - AC MACHINES

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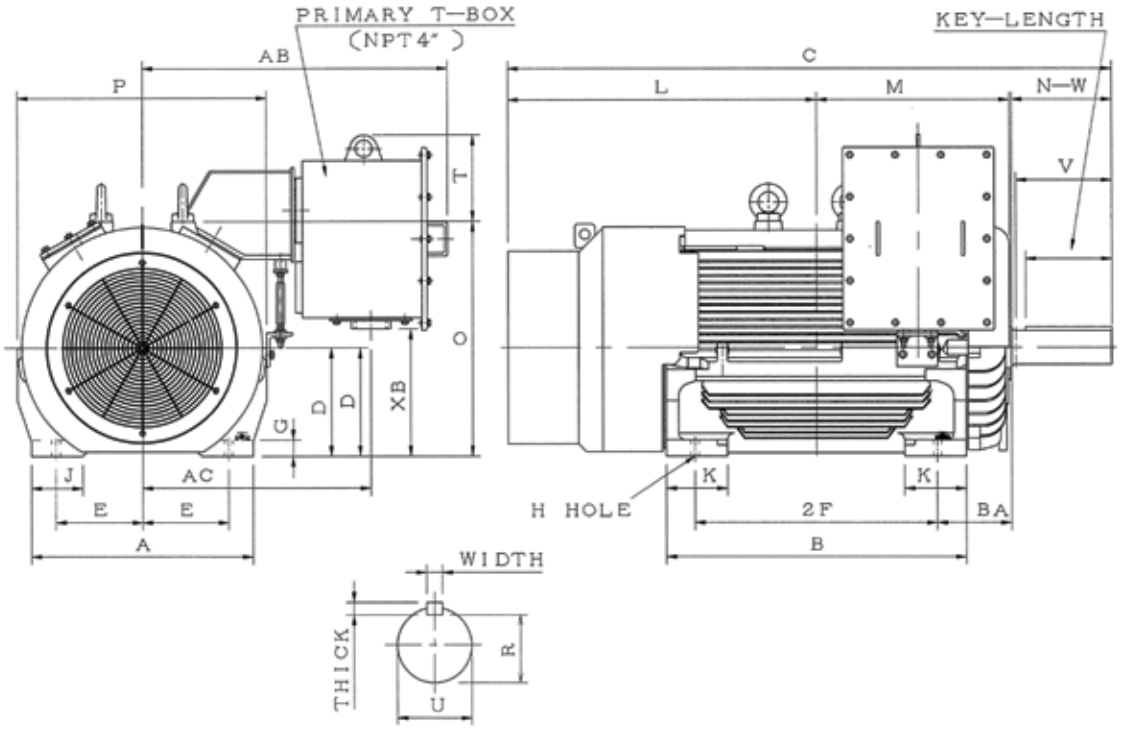

FRAME SIZE	MOUNTING						SHAFT EXTENSION			KEY & KEYSEAT				TERMINAL HOUSING				
	C	D	E	2F	H	BA	N-W	U	V	WIDTH	THICK	LENGTH	R	AA	AB	AC	XB[E1]	XB[CD]
505UZ	53.04	12.5	10.00	18.00	0.94	8.50	11.62	3.875	11.38	1.000	1.000	10.000	3.309	4	32.5	23.6	~	4.75
5007A	63.25	12.5	10.00	22.00	0.94	8.50	5.75	2.625	5.50	0.625	0.625	4.010	2.275	4	35.50	26.40	14.70	~
5007B,C	63.80	12.5	10.00	22.00	0.94	8.50	11.62	3.875	11.12	1.000	1.000	10.000	3.309	4	35.50	26.40	14.70	2.75
5009A	69.20	12.5	10.00	28.00	0.94	8.50	5.75	2.625	5.50	0.625	0.625	4.010	2.275	4	35.50	26.40	14.70	~
5009B,C	69.75	12.5	10.00	28.00	0.94	8.50	11.62	3.875	11.12	1.000	1.000	10.000	3.309	4	35.50	26.40	14.70	2.75
5011A	77.15	12.5	10.00	36.00	0.94	8.50	5.75	2.625	5.50	0.625	0.625	4.010	2.275	4	35.50	26.40	14.70	~
5011B,C	77.67	12.5	10.00	36.00	0.94	8.50	11.62	3.875	11.12	1.000	1.000	10.000	3.309	4	35.50	26.40	14.70	~
586/7UZ	64.37	14.5	11.50	22.00	1.125	10.00	11.625	4.375	11.125	1.000	1.000	8.661	3.816	2-3	29.33	23.23	~	2.96
5808B,C	74.08	14.5	11.50	28.00	1.13	10.00	11.88	4.875	11.38	1.250	1.250	10.000	4.169	2-3	37.85	28.95	19.00	2.95
5810A	81.40	14.5	11.50	36.00	1.13	10.00	5.75	2.625	5.50	0.625	0.625	4.010	2.275	2-3	37.85	28.95	19.00	2.95
5810B,C	81.81	14.5	11.50	36.00	1.13	10.00	11.88	4.875	11.38	1.250	1.250	10.000	4.169	2-3	37.85	28.95	19.00	2.95
6808A	88.43	17.0	13.50	36.00	1.38	11.50	5.75	2.625	5.50	0.625	0.625	4.010	2.275	2-3	40.30	31.40	23.80	~
6808B,C	87.68	17.0	13.50	36.00	1.38	11.50	11.88	4.875	11.38	1.250	1.250	10.000	4.169	2-3	40.30	31.40	23.80	2.95

All dimensions are in inches and for reference only

(E1) Denotes the MAX-E1® and MAX-E2® frame construction

(CD) Denotes the MAX-HT™ frame construction.

GEAR REDUCERS

Effective 07-08-18
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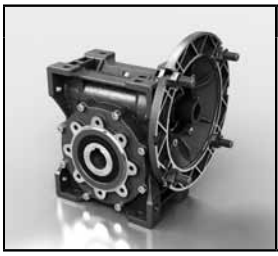
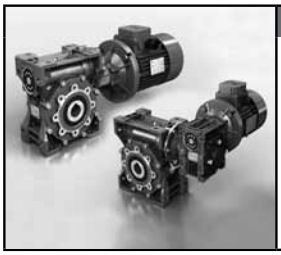
GEAR REDUCERS DRIVING INDUSTRIES

TECO-Westinghouse is excited to extend its product offering from motors and drives to power transmission systems. Motovario, a TECO Group company, manufactures products that are highly modular and inventory saving. It's designs are industry leading in efficiency and cost effectiveness. Additionally, our unique aluminum housing designs are reinforced and robust to give high performance with excellent heat dissipation that performs well in lower horsepower, higher torque applications. The Helical, Parallel Shaft and Helical Bevel products were designed to directly interchange with the critical dimensions that are commonly used in industry. The gear reducer product lines represented below can handle a broad range of power requirements from fractional to several hundred horsepower and are complementary to our motor and controls product lines, offering our customers a powerful and complete solution to drive their applications.



NMRV/ NMRV-P

- Max Torque - 13,718 in-lbs
- Aluminum Units are Supplied Complete with Synthetic Oil and Allow for Universal Mounting Positions, with No Need to Modify Lubricant Quantity
- Loading Capacity in Accordance with: ISO 14521, DIN 3996, BS 721, AGMA 6034, ISO 6336, DIN 3990, DIN 743, ISO 281



HW+NMRV-P/ NMRV+NMRV-P

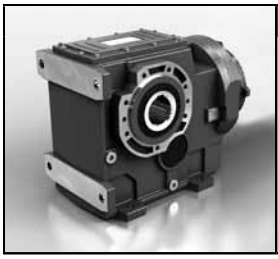
- Available with Pre-Stage Unit: PC for NMRV Series, HW for NMRV-P Series
- Double Worm Gear Reducers are Available with Different Combinations: NMRV/ NMRV, NMRV/ NMRV-P, NMRV-P/ NMRV-P, NMRV-P/ NMRV

H SERIES

- Max Torque - 70,806 in-lbs
- Cases in G200 Gray Cast Iron for High Strength and Optimized with Fem Analysis
- Excellent Mechanical Strength, Particularly Suitable to Support High Axial Loads and High Reliability
- Load Capacity Calculated to ISO 6336 and Verified According to AGMA 2001

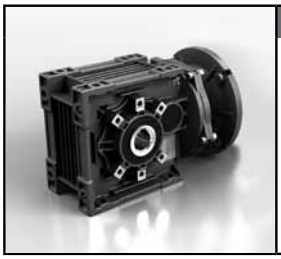
HA SERIES

- Max Torque - 4,248 in-lbs
- Cases in Die-Cast Aluminum Alloy
- Excellent Mechanical Strength while Being Particularly Lightweight
- Load Capacity Calculated to ISO 6336 and Verified According to AGMA 2001



B SERIES

- Max Torque - 120,813 in-lbs
- Gleason Spiral Bevel Gear Pairs with Run-In Profile, Mounted as Second Reduction Stage for Higher Resistance to Shock Loads
- High-Strength Casings Optimized with FEM Analysis
- Load Capacity Calculated and Verified According to ISO 6336 and AGMA 2001

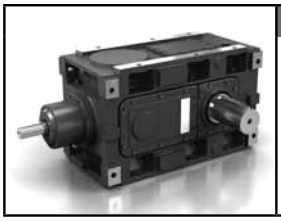


BA SERIES

- Max Torque - 4,182 in-lbs
- Universal Casing
- Hypoid Bevel Gears for Size A40 and A50, Gleason Bevel Gear Pairs for Size A70, all with Run-in profile
- Excellent Mechanical Strength while Being Particularly Lightweight
- Load Capacity Calculated and Verified According to ISO 6336 and AGMA 2001

S SERIES

- Max Torque - 84,402 in-lbs
- Universal Casing
- Cases in G200 Grey Cast Iron for High Strength and Optimized with FEM Analysis
- Load Capacity Calculated to ISO 6336 and Verified According to AGMA 2001



PBH SERIES

- Max Torque - 659,208 in-lbs
- Cast Iron Casing, Rigid, and with Great Lubricant Capacity to Enhance Thermal Capacity
- Casing Split in Two Parts, Allowing for Reduced and Direct Maintenance
- Ground Helical Cylindrical Gear Pairs
- Gleason Spiral Bevel Gear Pairs Accurately Run-in

GEAR REDUCERS WARRANTY

Motovario Group guarantees the products sold for two years from the date of delivery, considering use of two daily work-shifts. (16 hours/day)

Warranty is limited to repair or replacement, free at our plant, of defective parts due to an ascertained defect of material or manufacture. The parts replaced remain at our property. All other compensation is excluded, nor can any direct and/or indirect damage be claimed of any nature, also for the temporary lack of use of the goods purchased. Warranty is excluded for materials and parts subject to natural wear or deterioration (for example, oil seals or lubricant leakages caused by normal wear). Warranty is forfeit for products not used in conformity with our instructions or that are anyhow modified, repaired or even partially dismantled, or stored, installed, maintained or lubricated in an improper way. the warranty is also excluded for damages, defects or malfunctions caused by external components (for example, couplings, sprockets, pulleys, motors not produced by Motovario, etc.) or by incorrect installation of them. Verifying the compatibility of applications and correct mechanical couplings and electrical connections with the specifications of Motovario products, as indicated in the manufacturer's catalogues, is soley to the concern and responsibility of the buyer.

WORLD SERIES® MOTORS

Effective 07-08-18
Supercedes 03-24-17

WORLD SERIES® MOTORS: SETTING THE STANDARD OF EXCELLENCE

Building on over 100 years of Westinghouse motor experience, TECO-Westinghouse World Series® motors represent the induction motor at its highest state of evolution. We began with a product known for excellence, and through computer-aided design and the use of advanced materials, made it even better. We have made it leaner, more efficient, and highly refined. Yet the World Series® line of motors retains all the original quality features that established Westinghouse as the world leader among large motor manufacturers – features such as rugged copper bar rotor construction, Thermalastic® insulation, and heavy-duty frame construction.

At TECO-Westinghouse Motor Company, we pride ourselves on service. As our customer, you can tap the strength of our resources for superior front-end services, including engineering support, computer-aided engineering studies, product information and quotation assistance. Once your World Series® Motor is in place, you can rely on our worldwide field service and engineering network to service and protect your investment.

World Series® motors offer a full range of benefits to fill your large induction motor requirements. For more information, contact your local TECO-Westinghouse representative, or call us direct at our Round Rock, Texas headquarters: 1-800-451-8798.

WORLD SERIES® VERTICAL MOTORS FOR HIGH-THRUST CONDITIONS

A long and successful history with vertical motor construction goes into the making of every vertical motor in the World Series® line.

Used primarily for pump applications, World Series® vertical motors are designed to handle virtually any thrust load that might be imposed (loads well in excess of 100,000 lbs., continuous downward thrust). High-thrust load capability is achieved by utilizing Kingsbury-type tilting-pad thrust bearings. Both sleeve and ball bearings are available for guide bearings, depending on the application.

For long wear and reliability, the thrust bearings and guide bearings are air-cooled through constant ventilation and are oil lubricated from a large reservoir. Special water-cooling coils can also be added when needed.

World Series® vertical motors reflect the same high quality construction and insulation processes that distinguish all the various components of our horizontal motors. Our vertical motors are readily adaptable to a variety of specific needs. For example, non-reverse ratchets are available and flywheels can be included in the design when required. Our vertical motors can also be started from zero-speed or reverse-speed and can be designed to accommodate overspeed situations, as in a hydro-generator.

WORLD SERIES® MOTORS

Effective 07-08-18
Supercedes 03-24-17

QUALITY FEATURES AND TIME-TESTED PERFORMANCE

- Copper rotor bars provide high conductivity and outstanding reliability.
- High frequency induction brazing ensures uniform end ring connections.
- Swaging contributes to long motor life by minimizing rotor bar movement.
- Rugged frame construction ensures lateral and torsional stability.
- Innovative PAM motors provide two-speed operation with only one winding.
- Thermalastic® insulation provides excellent protection from environmental contaminants.
- 250 HP to 30,000 HP ranges available for a wide variety of applications.
- High operating efficiency yields low life cycle cost.
- Split-sleeve bearings offer outstanding service and are easy to inspect.
- Adjustable frequency capability is available when specified.
- Each motor is custom designed for the most demanding applications.
- Over 100 years of experience goes into every motor we produce.

AVAILABLE ENCLOSURES

World Series® motors are offered in a complete range of enclosures to meet the toughest demands of any industry. IEC enclosures are also supplied. Available NEMA enclosures include the following configurations:

- Open Drip-Proof (Guarded), IP22/ IC01
- Weather Protected Type I, IP23/ IC01
- Weather Protected Type II, IPW24/ IC01
- Totally Enclosed Water-to-Air Cooled, IP44-54/ ICW81
- Totally Enclosed Air-to-Air Cooled, IP44-54/ IC411
- Totally Enclosed Pipe Ventilated, IP44/ IC31/ 37

TERMINAL BOXES

World Series® motors feature main lead and auxiliary terminal boxes constructed of 12-gauge steel. Each terminal box is gasketed for air-tight, dust-free, and weather-proof protection of terminal leads. Available for F1 or F2 locations, terminal boxes can be modified to include any customer terminations and accessory devices.

The main lead terminal box provides termination of the motor's main power leads. Available terminal box options include lightning arresters, surge capacitors, current transformers, special grounding devices, cable or bus bar terminations, and top or bottom lead entry.

WORLD SERIES® AIR CABINETS DESIGN LIST

Effective 07-08-18
Supercedes 03-24-17

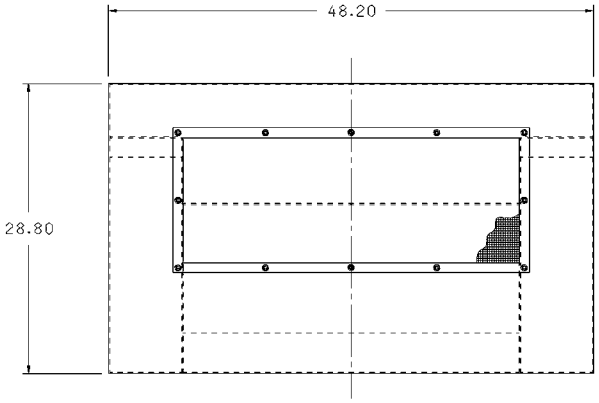
REPLACEMENT WPII AIR CABINETS FOR AGING TECO-WESTINGHOUSE AND WESTINGHOUSE MOTORS

Features and Benefits:

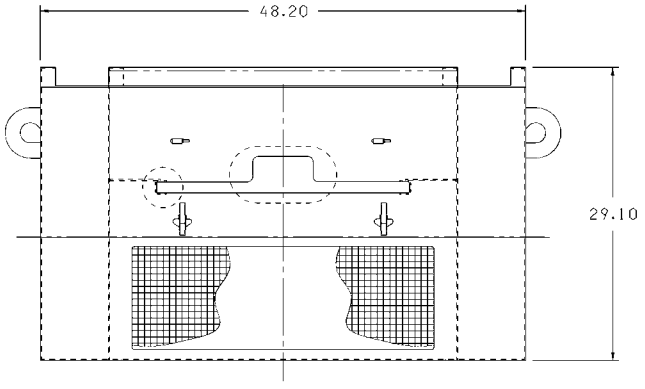
- Replacements for corroded air cabinets on aged motors
- Meets NEMA MG 1 requirements for WPI and WPII enclosures
- Tested to MIL-STD-810E for water-tightness
- Split-hinge design (Fig-2): for inlets, allowing for fast and safe filter replacement without the use of hand tools Filter replacement possible without motor shutdown.
- Air cabinet changeout achievable onsite without motor removal.
- Minimal differences in overall dimensions between old and new design. Example shown below for frame 3509; actual dimensions will vary with frame size.

Standard Construction:

- A36 carbon steel – 11 gauge
- Full acoustic lining
- #4 Mesh stainless steel screens
- Stainless steel filters included.



WORLD SERIES® DESIGN
FIGURE 1



UNIVERSAL DESIGN
FIGURE 2

WORLD SERIES® AIR CABINETS DESIGN LIST

Effective 07-08-18
Supercedes 03-24-17

WORLD SERIES® FRAME SIZE	UNIVERSAL AIR CABINET PART NUMBER
3505	2563F39G04
3506	2563F39G08
3507	2563F39G12
3508	2563F39G16
3509	2563F39G20
3510	2563F39G24
4008	2563F40G04
4009	2563F40G08
4010	2563F40G12
4011	2563F40G16
4509	2563F41G04
4510	2563F41G08
4511	2563F41G12
4512	2563F41G16
5010	2563F42G04
5011	2563F42G08
5012	2563F42G12
5014	2563F42G16
5611	2563F43G04
5612	2563F43G08
5614	2563F43G12
5616	2563F43G16

WORLD SERIES® FRAME SIZE	UNIVERSAL AIR CABINET PART NUMBER
6312	6D47635G04
6314	6D47635G08
6316	6D47635G12
6318	6D47635G16
7112	6D45158G04
7114	6D45158G08
7116	6D45158G12
7118	6D45158G16
8014	2565F19G04
8016	2565F19G08
8018	2565F19G12
8020	2565F19G16
9016	2573F69G04
9018	2573F69G08
9020	2573F69G12
9022	2573F69G16

Available Options:

- All stainless steel construction
- Differential pressure devices
- Manometers
- Air temperature devices
- Mufflers
- Heat shield

NOTE:

Universal air cabinets are also available for Westinghouse Buffalo Life Line® D Series and TECO-Westinghouse Round Rock Life Line® D Series. For information, contact the Renewal Parts team at (888) 754-5006 or visit our website at www.tecowestinghouse.com.

SYNCHRONOUS MOTORS

Effective 07-08-18
Supercedes 03-24-17

SYNCHRONOUS MACHINES: THE OPTIMAL CHOICE OF HEAVY INDUSTRY

TECO-Westinghouse Motor Company synchronous motors and generators provide superior value in terms of proven reliability, low maintenance performance, and long life in arduous applications. Our synchronous machines offer numerous benefits, including:

- Constant-speed operation
- High-efficiency ratings
- Low inrush currents
- Leading power factor (for corrective kVA capability)
- Horsepower range from 1000 HP to 100,000 HP

For more information, contact your local TECO-Westinghouse representative, or call us direct at our Round Rock, Texas headquarters: 1-800-451-8798.

PROVEN FEATURES FOR EFFICIENT SYNCHRONOUS MOTOR PERFORMANCE

TECO-Westinghouse Motor Company synchronous machines feature high efficiency designs in which great care is taken to minimize losses. To ensure maximum operating efficiencies and trouble free operations, the following features are standard on these motors:

- Airgap, slot openings, and slot ratios are selected to reduce pole face losses due to flux pulsations.
- Low loss, core-plated, non-aging, silicon steel stator punchings are used to reduce core losses.
- The stator copper is stranded to minimize eddy current losses.
- The number of stator slots, slot width, slot depth, and stator core depths are dimensioned to reduce magnetic noise.
- Pole punchings are designed for reduced pole leakage flux and field excitation to minimize field copper losses.
- Blowers are carefully selected to reduce windage loss.
- Stator end-plates are designed to ensure a tight and rigid core assembly, to minimize noise due to core distortion, and to transmit torque to the frame bulkhead.

DC MOTORS

Effective 07-08-18
Supercedes 03-24-17

DC MOTOR APPLICATIONS

TECO-Westinghouse Motor Company DC motors are ideally suited to a multitude of industrial and marine applications in which high torque and variable speed are required. These applications include ship propulsion, mine hoists, and steel rolling mills. They also drive many other types of industrial equipment such as fans, Banbury mixers, and extruders.

To meet the needs of a broad range of applications, our rugged DC motors are available in sizes ranging from 22-inch to 12-foot armature diameters, with available power ratings from 250 HP to over 35,000 HP.

For more information, contact your local TECO-Westinghouse representative, or call us direct at our Round Rock, Texas headquarters: 1-800-451-8798.

CUSTOM DESIGNS AS A STANDARD FEATURE

TECO-Westinghouse Motor Company DC motors are designed and built for long life and minimum maintenance. Over 100 years of motor industry experience has yielded design features that add up to precision, performance, and reliability.

Our DC motors and generators are custom engineered to meet your specified needs. We can incorporate existing foundations, space limitations, service conditions, and enhanced sparing capabilities into our motor and generator designs. In addition, you can apply TECO-Westinghouse DC machines to any quality brand of controls with total confidence.

SERVICE

Effective 07-08-18
Supercedes 03-24-17

LARGE MOTOR REPAIR

At TECO-Westinghouse, size or complexity are never an issue. With a 200 ton lifting capacity and 90 feet under hook, TWMC can handle almost any large motor repair. Our service team, backed by a full staff of motor design and manufacturing engineers, can perform for you! Our range of services extends from basic motor maintenance to complete redesigns and rebuilds. Each repair is customized to meet your needs and work is performed via a carefully controlled process dictated by industry standards as well as to your specifications. At TWMC, we don't just put your motor back together the way we found it, we use sound engineering judgment, extensive manufacturing and design experience, and the same ISO 9001 quality system incorporated into new motor manufacturing, to ensure that the machine will perform as originally designed, if not better.

Each motor is carefully disassembled and rigorously inspected for mechanical or electrical issues, with digital photographs taken during the process. A full battery of non-destructive electrical tests are performed, and a detailed inspection report is generated and supplied for your review along with recommendations for repairs and improvements. Recommendations are often made for improvements to the machine from an operational or reliability viewpoint. Upon authorization to proceed, a detailed "project control plan" is developed by one of our service engineers advising of the work to be done and specifying the parts to be used in the repairs or modifications. All work is performed by factory trained technicians with years of experience in both motor repair and in manufacturing the quality machines that the Westinghouse and TECO-Westinghouse names have come to represent.

Our asset reliability based **Quick Turn Rewind (QTR)** initiative is the leading repair service for large MV and HV motors. These engineered rewinds are performed on all manufacturers motors around the clock to our ISO 9001 quality system with deliveries that meet or exceed customer expectations. Utilizing our in-house coil manufacturing and 12-foot VPI tank, TWMC's proven long life Thermalastic® epoxy insulation system, developed by Westinghouse for reliability.

If the motor repair or engineered component opportunity exceed your experience, expertise, or capacity, give TECO-Westinghouse a call. We pay finder's fees for all referrals that result in an order. Payments are made 45 days after completion and invoicing of the repair.

ORDER SIZE ($)	FINDERS FEES (%)	MAXIMUM PAYOUT ($)
≤ 99k	8	7,920
100k - 299k	6	17,940
300k - 499k	5	24,950
≥ 500k	3	50,000

FIELD SERVICE/ FACTORY TECHNICAL SUPPORT

The Service and Repair Group has you covered from the time the motor leaves our state of the art manufacturing facility. Our highly qualified staff of Field Service Engineers is ready to be dispatched throughout the world to support all of your field needs, and our Technical Support Staff is equipped to answer your questions, with the additional backing of our Design Center engineering personnel. Whether it be start-up and commissioning, preventative/ predictive maintenance, testing, installation and removal assistance, troubleshooting, consulting services, alignments, vibration analysis, dynamic balancing, turnkey projects or training, only our engineers are at the ready to tackle your most challenging needs.

Effective 07-08-18
Supercedes 03-24-17

RENEWAL PARTS AND ENGINEERED COMPONENTS

TECO-Westinghouse Motor Company supplies genuine OEM replacement parts for large Westinghouse/ TECO-Westinghouse AC and DC motors manufactured from 1900 to present. If you have any vintage or large Westinghouse motor in your plant, odds are that we have all the design and manufacturing data for your motor and can supply any part you may need, from nuts and bolts, to a complete drop in spare armature, rotor, or stator. Have an ongoing operation or maintenance concern? Let us know about it! Many older components can be, or have been, analyzed and redesigned for improved performance and maintainability. Need a large component for a non-Westinghouse machine? We may be able to design a drop in replacement.

ENGINEERING STUDIES

Would you like to get more horsepower out of your existing motor? Curious if it can be driven by a VFD? Have a nagging maintenance problem that just won't go away? Through an engineering study, we can research these and other questions, and provide you with viable solutions and answers. With our full complement of skilled design and manufacturing engineers, we can perform a broad spectrum of analyses and offer a complete solution that you won't find elsewhere!

3D MODELING & FINITE ELEMENT ANALYSIS

Using the most up to date tools, we can perform complete electrical, magnetic, thermal, and mechanical analyses. Our fully staffed Design and R&D Centers have the expertise to analyze and review the most complex motor designs.

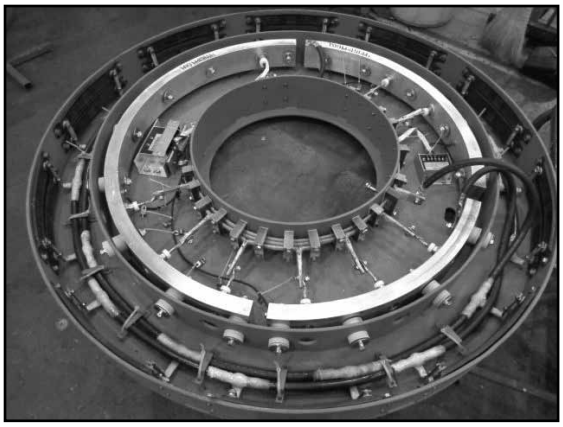
FAILURE ANALYSIS

Want to avoid recurring failures and improve reliability? Complete motor failure analysis can be performed and root cause often determined for many types of electrical and mechanical motor problems. TWMC is fully equipped to gather the facts, perform diagnostic or material testing, review results for design, manufacturing or operational issues, and provide a detailed written report of findings.

Effective 07-08-18
Supercedes 03-24-17

Refurbishing/ Retrofitting Control Wheels

Before

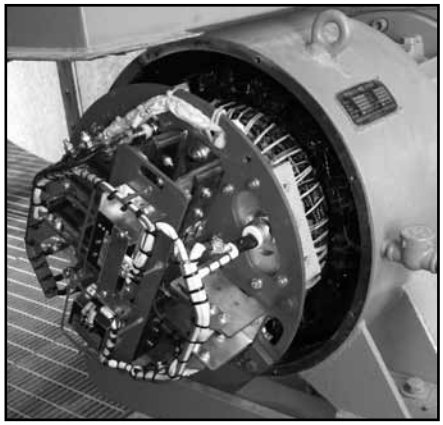


All new components, heat sinks, conductors, insulators, fasteners, lugs, etc. built on a mock-up wheel

After

Everything on the mock-up transferred to the existing control wheel chassis

A TECO-Westinghouse control wheel customized to fit onto an other OEM motor



A TECO-Westinghouse control wheel customized to fit onto an other OEM motor

Brushless Control Wheel Replacements and Retrofits

- Convert other OEM unsupported control wheels to a TWMC design
- On-site troubleshooting, repairs, and rebuilds
- In stock renewal parts

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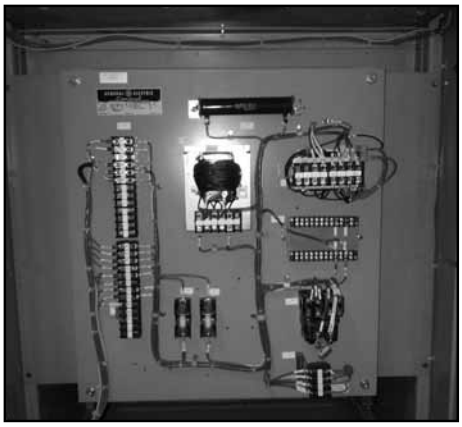
Supercedes 03-24-17

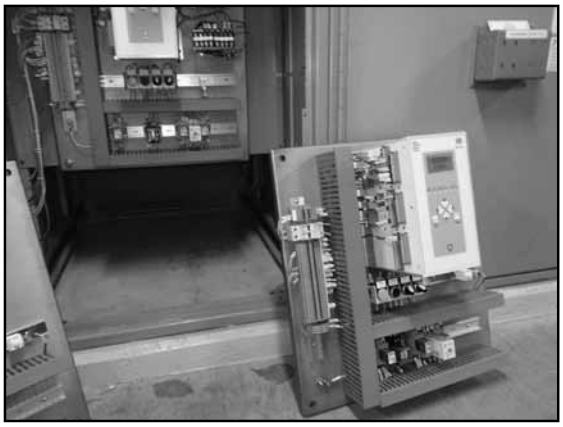
Exciter Control Panel Upgrades

Before



An analog, manual only, exciter control panel

After



The same panel space fitted with a new digital exciter and power factor controller

Before

A typical '80s analog exciter control panel crowded with obsolete components

After

The same line-up with only a few components remaining

Exciter Control Panel Upgrades

- Replace outdated Analog Controls with a modern Digital System using the same panel space
- Superior control and accuracy of Voltage, VAR, and Power Factor Regulation
- Enhanced system response
- Advanced motor protection
- Reliable system operation

SERVICE - PREDICTIVE MAINTENANCE

Effective 07-08-18
Supercedes 03-24-17

Caught off guard by unforeseen equipment failures? Identify costly repairs in advance and avoid unplanned forced outages with a TECO-Westinghouse predictive maintenance program. Our team of factory engineers and field service technicians make implementing and managing a condition based maintenance program easy and cost effective.

TECO-WESTINGHOUSE PREDICTIVE MAINTENANCE PROGRAM

- Vibration route setup, data collection and analysis
- Offline electrical testing of motors and drives
- Online testing and analysis of motors and drives
- Thermography survey and analysis
- Oil sample collection and analysis

BENEFITS OF A PREDICTIVE MAINTENANCE PROGRAM

- Improved uptime and reliability
- Efficient utilization of labor resources
- Increased human and environmental safety
- Reduced inventory costs
- Enhanced outage planning
- Increased product quality and customer satisfaction

TECO-WESTINGHOUSE FIELD SERVICES

- Start-up and commissioning services for motors and drives
- Troubleshooting and repairs for motors and drives
- Turn-key projects: remove, repair/replace, reinstall
- Vibration, operation deflection shape, and modal analysis
- Balancing
- Laser alignment
- Borescope inspection
- Filter inspection and maintenance
- Synchronous exciter control panel & diode control wheel rebuild/ retrofits
- Digital Pulse-Syn Module upgrades
- Factory technical support and training

For 24/7 service response, call us at 888-754-5006.

PRO-3200 ALL-SMART PORTABLE VIBRATION DIAGNOSIS INSTRUMENT

Effective 07-08-18
Supercedes 03-24-17

The "All-Smart Portable Vibration Diagnosis Instrument" is a next generation vibration measurement instrument for anti-friction bearing machine equipment. The portable case contains an IoT (Internet of Things) gateway, smart vibration sensors and a standard mobile power pack. This allows technicians to carry the device onsite for measurement diagnosis operations.

The gateway connects 4 sensors and built-in WiFi allows multiple technicians to use it simultaneously for analysis.

The application of IoT technology to the Smart Vibration Sensors creates a "Breakthrough Change" in the field of vibration measurements making it the next generation of vibration monitoring devices.

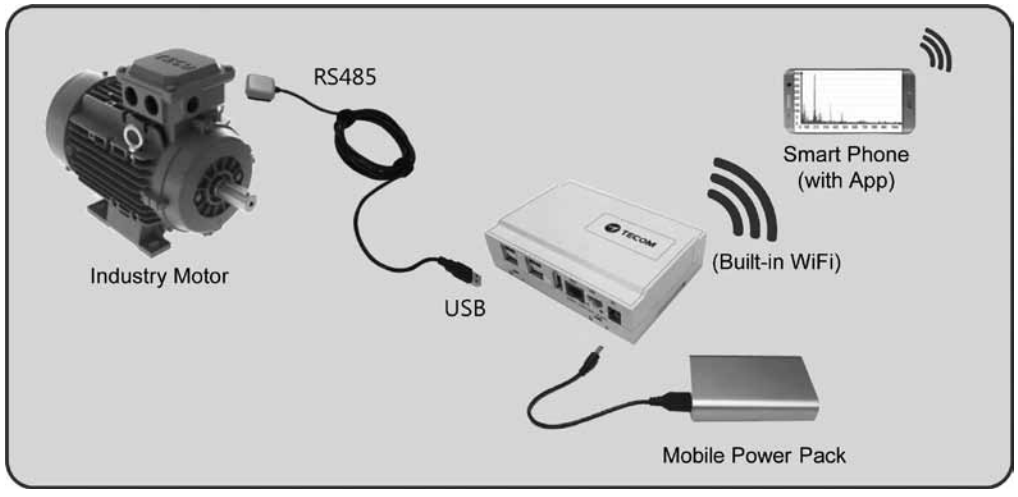
IMPORTANT FEATURES

- **Time-Frequency Selectable** - The gateway provides both time-domain and frequency-domain vibration signals that are selectable via smart phones.
- **Replaces Typical Frequency Analyzers** - Working together, the smart vibration sensors, IoT Gateway and smart phones represent a replacement of expensive and complicated Frequency Analyzers virtually anywhere, any time.
- **All-in-One** - The Pro-3200 integrates three operations: vibration measurement, analysis and diagnosis all into one operation; moreover, the diagnosis is operated interactively, in real time.
- **Plug-and-Play** - All operations are powered by a mobile power pack and the diagnosis is delivered via wireless WiFi connections. No power cords or network wires are needed, just plug and play: amazingly easy to use.

The new generation IoT features strong interactive analysis, diagnosis capabilities and enhances onsite maintenance efficiency. It will quickly become indispensable for any maintenance personnel.

ONSITE INSTRUMENT USE

- Measures 3-axis RMS values and compares against the motor vibration specifications
- Presents the FFT data so that the vibration energy distributions on frequency domains can be reviewed and diagnosed for the four possible defects: bearing defects, misalignment, unbalance and soft foot, which are 90% of a motor's mechanical failures.
- IoT and Smart Phones can work together on an interactive diagnosis.
- Record all measured data and diagnosis results for future motor health reference



Smart vibration sensors are virtually connected to selected smart phones so that vibration measurements and diagnosis happen interactively and in real time.

PART NUMBER	DESCRIPTION	LIST PRICE ($)
31912D0070007	Pro-3200 Portable Vibe/Diagnosis instrument	2900

USEFUL FORMULAS

Effective 07-08-18
Supercedes 03-24-17

kW	=	HP * .746
Torque in lb-ft	=	$\frac{\text{HP} * 5250}{\text{RPM}}$
Motor synchronous speed in RPM	=	$\frac{120 * \text{Hz}}{\text{Number of Poles}}$
Three-Phase Full-Load Amp	=	$\frac{\text{HP} * .746}{1.73 * \text{kV} * \left(\frac{\text{Efficiency}}{100}\right) * \left(\frac{\text{Power Factor}}{100}\right)}$
Rated Motor kVA	=	$\frac{\text{HP} * .746}{\text{Efficiency} * \text{Power Factor}}$
kW Loss	=	$\frac{(\text{HP} * .746) * (1.0 - \text{Efficiency})}{\text{Efficiency}}$
Wk^2 Referred to Motor Shaft Speed	=	[Driven Machine Wk^2 (Driven Machine RPM/ Motor RPM)^2]+ Gear Wk^2 at Motor Speed
Accelerating Time	=	$\frac{0.462\ (Wk^2 \text{ of Motor and Load})\ \text{RPM}^2}{\text{Motor Rated kW} * 104 * \text{Per-Unit Effective Accelerating Torque}}$
kVA inrush	=	Percent Inrush * Rated kVA
Approximate Voltage Drop (%)	=	$\frac{\text{Motor kVA Inrush}}{\text{Transformer kVA}}$ * Transformer Impedance (Normally 5% to 7%)
Stored Kinetic Energy in kW-sec	=	2.31 * (Total Wk^2) * RPM^2 x 10^{-7}
Inertia Constant (H) in Seconds	=	$\frac{\text{Stored Kinetic Energy in kW Seconds}}{\text{HP} * .746}$
Conversion Factors:		
CV	=	(Metric HP) = 735.5 Watts = 75 KW-m/sec
Wk^2 (lb-ft)	=	5.93 x GD^2 ($kg\text{-}m^2$)

Derating motor for change in elevation: For each 330 foot increase in elevation above 3300 feet above sea level, derate motor horsepower by 1 percent.
Cooling-water requirements: 2 gpm of water for each kW of loss
Ventilating-air requirements: 100-125 cfm of 40˚C air at 1/2 water pressure for each W of loss

AC DRIVES/ SOLID STATE STARTERS SECTION

Effective 07-08-18
Supercedes 03-24-17

AC DRIVES PACKAGING CAPABILITIES

Effective 07-08-18
Supercedes 03-24-17

PACKAGED DRIVES

- NEMA 1, 12 , 3R, 4, 4X (4, 4X are custom engineered packages)
- Bypass: Two and three contactor
  - Fused disconnects or circuit breakers
  - Soft start on bypass transfer
  - Automatic or manual bypass transfer
  - Fireman's override
  - Damper actuation circuit
  - Electrical and mechanical interlocks

OPTION CABINETS

- Fused disconnects or circuit breakers
- Wall mount or free standing

SPECIAL APPLICATIONS

- Power conditioning via harmonic filters or 12, 18 pulse systems
- Multiple motors on drive (bypass and options)
- Manual, duplex, triplex
- RS-485 Protocols
  - Modbus
  - BACNet
  - Johnson Metasys
  - Ethernet
  - Profibus
  - SCADA
- High elevations
- Surge suppression
- Phase monitoring
- RFI/ EMI Filtering

MOTOR AND DRIVE COMBINATION PACKAGES

Effective 07-08-18
Supercedes 03-24-17

Premium Efficient Motor and Drive Combination Packages developed for both constant and variable torque applications

APPLICABLE MOTORS

- Rolled Steel and Cast Iron ODP
  - 143T through 5009B Frame
  - 1 to 500 HP
  - 1200, 1800, and 3600 RPM
- MAX-E1® type AEHE, AEHH8N
  - 143T through 6808B Frame
  - 1 to 800 HP
  - 900, 1200, 1800, and 3600 RPM
  - 230VAC to 125 HP, 460VAC to 800 HP

APPLICABLE VARIABLE FREQUENCY DRIVES PRODUCTS

- EQ7 or A510 Drives for Constant Torque Applications
- EQ7 or F510 Drives for Variable Torque Applications
- 230VAC to 125 HP, 460VAC to 800 HP

- Single Source Reliability
- Contact your local TECO representative for additional discounts and warranties when purchasing matching motor and drive sets
- Select any combination of ODP or MAX-E1® premium Efficient Motors with any power-matched A510, F510, or EQ7 VFD

MOTOR AND DRIVE COMBINATION PACKAGES WARRANTY

Effective 07-08-18
Supercedes 03-24-17

WARRANTY INFORMATION

All TECO-Westinghouse brand Motor and Drive Combination Packages sold by TECO-Westinghouse Motor Company ("TWMC") are warranted to be free from defects in material and workmanship. Contact factory for information on our extended warranty.

This warranty is conditioned upon the installation, operation, and maintenance of the motors and control products in accordance with TECO-Westinghouse Motor Company's recommendations, ***Application Guidelines For Packaged Combo Motor/VFD***, and the motors and control products have at all times been operated or used under normal operating conditions for which they were designed. This warranty will not be applicable to products that have been altered without written permission from TWMC.

TWMC shall, at its sole option and expense, either repair or replace, FOB warehouse or TWMC designated service center, any such motor, motor part, or control product which is defective within the warranty period.

In the event of warranty claims, TWMC must be notified promptly following any motor or control product failure. The motor or control product shall be sent to a TWMC authorized service center for diagnosis on the cause of failure. For motor and control products if the failure is due to defective material and/or workmanship, TWMC will replace or repair the defective motor, motor part, or control product at its discretion.

The repair or replacement of defective material and workmanship shall constitute complete fulfillment of TECO-Westinghouse Motor Company's warranty liability whether the warranty claims are based on contract, tort (including neglegence and strict liability), or otherwise. **THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, AND ALL WARRANTIES ARISING FROM COURSE OF DEALING AND USAGE OF TRADE. UNDER NO CIRCUMSTANCES SHALL TECO-WESTINGHOUSE MOTOR COMPANY BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING FREIGHT.**

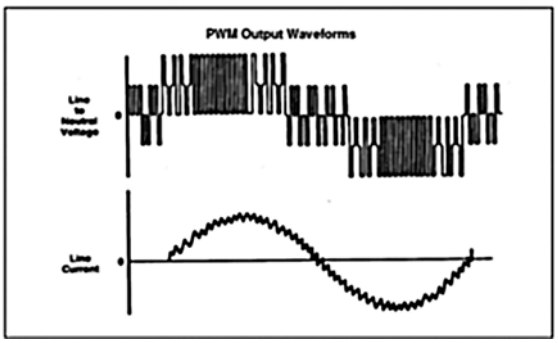
APPLICATION GUIDELINES FOR PACKAGED COMBO MOTOR/VFD'S

Effective 07-08-18
Supercedes 03-24-17

VARIABLE FREQUENCY DRIVES

A Variable Frequency Drive (VFD) is a type of controller used to vary the speed of an electric motor. Input to the VFD is a fixed Power supply that the VFD with then use to control the speed and Torque of a given motor. Motor Speed can be varied by changing the frequency of the power supply waveform. Output Speed is:

$$\text{Speed} = \frac{120 * \text{Frequency}}{\text{Number of motor Poles}}$$



VFD Operation

A VFD takes the fixed Input Frequency and Voltage Power supply and converts it to a controlled Output PWM Waveform at a Voltage and Frequency that is determined by the VFD. In so doing the rotational speed of the motor can be controlled by the Speed relationship indicated above.

VFD & MOTOR COMPATIBILITY

Motor and Drive compatibility can be complex. Many variables should be considered when determining the suitability of a particular motor for use with a VFD. These variables include:

Extremes in some or all of these factors will add to the severity of the application and can result in premature motor failure.

- Torque requirements (constant or variable)
- Speed Range for control
- Line/System Voltage
- Drive switching (carrier) frequency
- Motor Construction
- Cable Length and type of cable used between VFD and motor
- VFD dv/dt
- Temperature and Humidity
- Grounding System

VFD EFFECTS ON THE MOTOR

When a motor is powered by a PWM waveform the motor windings very often see a large differential voltage, either from phase to phase or turn to turn. When the voltage differential becomes great enough, Ozone is created and there is a corona or partial discharge inside the motor. This energy is corrosive to the varnish on the motor windings. PWM waveforms can also magnify shaft voltages which lead to arcing across the bearing and causing a phenomena called fluting in the bearing race. This can lead to premature bearing failure and needs to have corrective action taken in order to avoid any issues.

INVERTER DUTY MOTORS

An Inverter Duty Motor is defined as a motor that helps mitigate potential failure modes of a motor that is powered by a VFD. Inverter duty motor windings should be able to withstand the voltage spikes per NEMA MG1 Part 31 and protect against overheating when the motor is run at slow speeds. On thrust bearings it is apparent that the bearings require additional protection. Inverter Duty vertical motor should have a shaft grounding device to protect the motor bearings from fluting due to voltage discharge through the bearing. On larger motors (100HP and larger) the shaft should also be electrically isolated from the frame in order to aid the shaft grounding ring in discharging the shaft voltages to ground.

BEARING CURRENTS RELATED TO PWM WAVEFORMS

The following requirements are for cases where the purchaser has indicated that the motor will be operated on a VFD. These requirements must be met for the motor to be eligible for warranty on bearing fluting issues:

- For 400 frame and larger motors being operated on a VFD, TWMC requires the installation of (1) insulated bearing on non-drive end, a shaft ground brush on the DE, or a common mode filter, or choke on the output side of the VFD.
- For 215 frame up to 360 frame, TWMC requires installing a shaft ground brush on the DE, or a common mode filter, or choke on the output side of the VFD. **Note:** Shaft ground devices are considered wear items and must be serviced and/or replaced once it is detected that the device no longer reduces shaft current and prevents electrical discharging.
- In Div 2 hazardous locations where grounding brushes are not allowed TWMC requires 1 insulated bearing on the NDE for frames 444/449 and larger and either (1) insulated bearing and common mode filter, or choke on the output side of the VFD.

It is recommended that the end user provide a common mode voltage mitigation device such as an isolation transformer, common mode filter, or choke, if shaft current and electrical discharging measurements on the VFD and motor application dictate more motor protection.

APPLICATION GUIDELINES FOR PACKAGED COMBO MOTOR/VFD'S

Effective 07-08-18
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THERMAL OVERLOADS AND SINGLE PHASE MOTORS

Motors with Thermal Overloads may not operate properly on a VFD. The current carrying thermal overload is designed for a Sine Wave Power Supply and will be subject to rapid overheating when applied on PWM. Thermostats or thermistors that are independent of the motor leads and connected correctly to the VFD should provide suitable thermal overload protection when operating on a VFD (consult codes for installation requirements).

Single Phase motors are not designed for inverter operation. Do not use a VFD to Power a Single Phase motor.

GROUNDING AND CABLE INSTALLATION GUIDELINES

Proper output winding and grounding practices can be instrumental in minimizing motor related failures. VFD cable is critical for maximizing uptime and increasing the life cycle of motor systems. But, not all cables are VFD cables. Cabling in a VFD system must carry power from AC drive systems to AC motors. As a result, the cables must not only handle high power current, but also the high voltage that can occur.

In the past, typical cabling solutions have included unshielded tray cables, single-conductor THHN wire or continuously welded armored cable (CCW). Not only do these products require complex, costly installation and introduce potential reliability problems, they also have proven to be ineffective in handling common mode current (noise) and voltage spikes or protecting against capacitive coupling. Most, including CCW, contain only the minimum ground copper required to comply with the NEC standards. THHN solid conductor therefore not recommended. Use of stranded copper conductor wire is the recommended cable for use with Teco Westinghouse Variable Frequency drives.

SPECIAL GROUNDING CONSIDERATIONS FOR MOTORS OPERATING ON A VARIABLE FREQUENCY DRIVE (VFD)

When operating the motor with a VFD, special care must be taken for proper grounding to reduce the risk of bearing damage. Since their switching patterns are not sinusoidal, all VFD's produce a high frequency zero sequence voltage called common mode voltage (CMV). This CMV can cause damaging bearing currents in both the motor and the driven equipment. The VFD manufacturer should provide installation instructions that include the necessary cabling and grounding practices to ensure trouble free operation at the CMV levels generated by their VFD. CMV will travel through the lowest impedance path from the motor leads back to the VFD's ground bus. Due to the extremely high frequencies of the CMV waveform, it can travel across air gaps and insulation similar to how high frequency current flows across a capacitor. To reduce the risk that this path will include the motor or driven equipment bearings, a low impedance (at high frequency) ground conductor should be utilized to connect the motor frame to the VFD ground bus. It is recommended to utilize ground conductors within the motor cable bundle for providing this low impedance path to the VFD ground bus. The ground conductors and/or shield should have a maximum AC impedance at 1 MHz of 10 times the power conductor's DC resistance. If the high frequency impedance cannot be measured, then a ground conductor and/or shield DC resistance of a maximum of 2 times the power conductor's DC resistance should be sufficient. These ground conductors must be properly grounded to both the motor and the VFD ground bus. For applications (such as a pump) where the driven equipment offers a very low impedance path to ground, the CMV may generate current that flows across the shaft coupling to the driven equipment. This current may flow across the motor bearings and/or the driven equipment bearings, potentially causing damage. It is therefore recommended in such cases to either use an insulated coupling or to install a high frequency grounding strap between the motor and driven equipment frames to provide a path to the driven equipment's ground that does not involve the bearings. For additional information on recommended cable types and proper grounding methods for VFD operation, refer to IEC 60034-25.

MULTIPLE MOTORS ON A SINGLE VFD

Special considerations are required when multiple motors are powered from a single VFD. The VFD will typically not be able to distinguish one motor form another so overload protection will need to be provided for each individual motor. Starting and stopping the motors should be done simultaneously unless the VFD has been sized appropriately. Cable runs from the VFD and each motor can create conditions that will cause extra stress on the motor winding which may require filters to provide maximum motor life.

HUMIDITY AND NON-OPERATIONAL CONDITIONS

The possible build-up of condensation inside the motor due to storage in an uncontrolled environment or non-operational periods in an installation, can lead to an increased rate premature winding or bearing failure when combined with PWM waveform characteristics. Moisture and condensation in and on the motor winding over time can cause provide tracking paths to ground, lower the resistance of the motor winding to ground, and lower the Corona Inception Voltage (CIV) level of the winding. Proper storage and maintenance guidelines are important to minimize the potential for premature failures. Space heaters or trickle voltage heating methods are the common methods for drying out a winding that has low resistance readings. Damage or failure as a result of not following the application guideline as outlined in this document, are not covered by the limited warranty provided for the motor unless appropriate heating methods are utilized during non-operational periods and prior to motor startup.

APPLICATION GUIDELINES FOR PACKAGED COMBO MOTOR/VFD'S

Effective 07-08-18
Supercedes 03-24-17

WARRANTY GUIDELINES

The information in this section refers to the motor and VFD application limitations on warranty.

After date of failure there is a 30 day period in which to file and process a claim.

HAZARDOUS LOCATION MOTORS

Consult Teco Westinghouse Motor Company prior to use of a Variable Frequency Drive on Teco Westinghouse motors intended for use in a Class 1 Division 2 or Class 1 Division 1. Those motors listed as Class 1 will need to have bearing shaft current issues addressed in such way as to mitigate shaft current without the use of grounding rings or brushes. Grounding rings or brushes are not permitted on hazardous location motors.

INPUT POWER AND MOTOR CABLE LENGTH

The length of the cable runs between Input Power Source and /or VFD to motor can cause significant Phase to Phase voltage reduction due to voltage drop across the cables. To calculate use the formula:

$$V(\text{drop}) = \sqrt{3} * \textit{resistance of cable} \left(\frac{\Omega}{km}\right) * \textit{length of line}\ (m) * \textit{current}\ (\text{Amps})$$

CABLE DISTANCE - VFD TO MOTOR				
Cable Length VFD to motor in m (ft)	≤ 30m -100	30 – 50m (100 – 165)	50 – 100 (166 – 328)	≥100 -329
Carrier Frequency	16kHz (max)	10kHz (max)	5kHz (max)	2kHz (max)

Additional filter may be recommended for Cable lengths in excess of 400 ft. on 460V or greater VFD. The AC Products within this catalog which include a turn down ratio were constructed to meet NEMA MG-1 Part 31 standard. As such they are Inverter Duty motors and are warranty covered for 3 years (36 months) from date of sale if applied within this guideline as well as the nameplate information attached with each motor.

L510 MICRO DRIVE

MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

A compact, low cost, and versatile AC Drive that is easy to program and ideal for OEM's.

APPLICATIONS:

- Mixing
- Fans
- Small Conveyors
- Treadmills
- AC Contactor Replacement
- Pumps
- Lathes
- Milling

FEATURES:

- Chassis Style Enclosure (IP20)
- Sensorless Vector or V/ Hz with Auto Torque Boost Feature
- 0.25 to 1 HP, 115V, 50/ 60Hz, 1-Phase
- 0.25 to 3 HP, 230V, 50/ 60Hz, 1-Phase
- 0.5 to 3 HP, 230V, 50/ 60Hz, 3-Phase
- 1 to 3 HP, 460V, 50/ 60Hz, 3-Phase
- Extensive Diagnostic and Monitoring Capabilities
- Din Rail Option
- PID Control
- 8 Preset speeds
- Two Multi-Function Analog Input/ Qty 1 Analog Output
- Built-in Modbus or BACnet Protocol Via RJ 45 Interface
- UL, cUL, and CE Approved

L510 MICRO DRIVE

MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

115V 1-Phase Input/ 3-Phase 230V Output

MODEL NO.	HP CONSTANT TORQUE	DRIVE AMPS CONSTANT TORQUE	DIMENSIONS (in.)			APPROX. WT. (lbs.)	LIST PRICE ($)
			HEIGHT	WIDTH	DEPTH		
L510-1P2-H1-U	.25	1.8	5.55	2.83	5.48	2	262
L510-1P5-H1-U	.50	2.6	5.55	2.83	5.48	2	268
L510-101-H1-U	1	4.3	5.67	4.65	5.80	3.5	290

230V 1-Phase Input/ 3-Phase Output

MODEL NO.	HP CONSTANT TORQUE	DRIVE AMPS CONSTANT TORQUE	DIMENSIONS (in.)			APPROX. WT. (lbs.)	LIST PRICE ($)
			HEIGHT	WIDTH	DEPTH		
L510-2P2-H1-U	.25	1.8	5.55	2.83	5.48	2	246
L510-2P5-H1-U	.50	2.6	5.55	2.83	5.48	2	258
L510-201-H1-U	1	4.3	5.55	2.83	5.48	2	266
L510-202-H1-U	2	7.5	5.67	4.65	5.80	3.5	366
L510-203-H1-U	3	10.5	5.67	4.65	5.80	3.5	438

230V 3-Phase Input/ 3-Phase Output

MODEL NO.	HP CONSTANT TORQUE	DRIVE AMPS CONSTANT TORQUE	DIMENSIONS (in.)			APPROX. WT. (lbs.)	LIST PRICE ($)
			HEIGHT	WIDTH	DEPTH		
L510-2P5-H3-U	.50	2.6	5.55	2.83	5.48	2	258
L510-201-H3-U	1	4.3	5.55	2.83	5.48	2	266
L510-202-H3-U	2	7.5	5.67	4.65	5.80	3.5	360
L510-203-H3-U	3	10.5	5.67	4.65	5.80	3.5	400

460V 3-Phase Input/ 3-Phase Output

MODEL NO.	HP CONSTANT TORQUE	DRIVE AMPS CONSTANT TORQUE	DIMENSIONS (in.)			APPROX. WT. (lbs.)	LIST PRICE ($)
			HEIGHT	WIDTH	DEPTH		
L510-401-H3-U	1	2.3	5.67	4.65	5.80	3.5	370
L510-402-H3-U	2	3.8	5.67	4.65	5.80	3.5	406
L510-403-H3-U	3	5.2	5.67	4.65	5.80	3.5	492

Notes:

H1 = 1-Phase
H3 = 3-Phase

All Digital Inputs are Sinked to Control Power Common

L510 BRAKE RESISTORS & OPTIONS

Effective 07-08-18
Supercedes 03-24-17

All resistor sets are not in an enclosure (chassis)

460V 3-Phase *

AC DRIVE HP RATING	BRAKING TRANSISTOR			BRAKING RESISTOR							
	MODEL NO.	QTY USED	LIST PRICE ‡	MODEL NO.	QTY	RESISTANCE OHMS - WATTS		ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	-	-	-	JNBR-150W750	1	750	150	12"L x 5"W x 5"D	126	10	30
2	-	-	-	JNBR-150W400	1	400	150	12"L x 5"W x 5"D	119	10	35
3	-	-	-	JNBR-260W250	1	250	260	12"L x 5"W x 5"D	126	10	50

Notes:

Transistor built-in for all L510 460V ratings (braking resistors externally mounted)

* Option only available for 460V ratings

‡ Pricing is for the quantity of one (1) unit.

Options

PART NUMBER	DESCRIPTION	LIST PRICE ($)
JN5-CB-01M	Extension wire (1M)	25
JN5-CB-02M	Extension wire (2M)	27
JN5-CB-03M	Extension wire (3M)	30
JN5-CB-05M	Extension wire (5M)	35
JN5-CM-USB	USB cable to connect PC	80
JN5-CU	Copy module (Also usable as a remote LED operator)	95
JN5-DIN-L01	DIN RAIL, L510, FRAME 1	25
DINE2-201	DIN RAIL, L510, FRAME 2 (Plastic only)	35

E510 COMPACT DRIVE

MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

The E510 Compact AC Drive is an easily configured drive that controls many applications. From simple fixed speed set ups to applications requiring PM motors, the E510 meets the application challenge. This product replaces our legacy product the N3.

APPLICATIONS:

- Conveyors
- Mixing Equipment
- Fans and Blowers
- Pumps
- Lathes
- AC Contactor Replacement
- Compact size is convenient for retrofitting/ replacing an older generation VFD

FEATURES:

- 0.5 to 3 HP (CT), 230V, 50/ 60Hz, 1-Phase
- 0.5 to 40 HP (CT), 460V, 50/ 60Hz, 3-Phase
- 1 to 75 HP (CT), 460V, 50/ 60Hz, 3-Phase
- Parameters Grouped by function
- Built-in PLC Functionality
- PID Process Control Loop
- Built-in Modbus & BACnet Protocols
- 5 Digit Operator's Keypad with Speed Pot
- Digital and Analog Inputs and Outputs have Extremely Fast (~4 msec) Update Time
- Auto Run Mode (Cyclic Operation)
- Power Loss Ride Through
- Automatic Voltage Regulation (AVR)
- Complies with IEC 60018-2-78, UL, cUL, CE, & RoHS

E510 COMPACT DRIVE

MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

230V 1/3-Phase

MODEL NO.	HP		DRIVE AMPS		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	HEIGHT	WIDTH	DEPTH		
E510-2P5-H-U	0.5	0.5	3.1	3.1	6.46	3.57	5.96	3.5	390
E510-201-H-U	1	1	4.5	4.5	6.46	3.57	5.96	3.5	415
E510-202-H-U	2	2	7.5	7.5	7.39	5.07	6.00	5.5	530
E510-203-H-U	3	3	10.5	10.5	7.39	5.07	6.00	5.5	670

230V 3-Phase

MODEL NO.	HP		DRIVE AMPS		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	HEIGHT	WIDTH	DEPTH		
E510-205-H3-U	5	5	17.5	17.5	7.39	5.07	6.00	5.5	680
E510-208-H3-U	7.5	7.5	26	26	10.27	7.36	7.98	14.3	950
E510-210-H3-U	10	10	35	35	10.27	7.36	7.98	14.3	1,100
E510-215-H3-U	15	15	48	48	12.66	8.84	8.11	22.3	1,751
E510-220-H3-U	20	20	64	64	12.66	8.84	8.11	22.9	1,945
E510-225-H3-U	25	25-30	73	80	14.17	10.43	9.38	22.1	2,528
E510-230-H3-U	30	40	85	110	20.67	11.28	10.62	66.1	3,524
E510-240-H3-U	40	50	115	138	20.67	11.28	10.62	66.1	4,751

460V 3-Phase

MODEL NO.	HP		DRIVE AMPS		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	HEIGHT	WIDTH	DEPTH		
E510-401-H3-U	1	1	2.5	2.5	6.46	3.57	5.96	3.8	440
E510-402-H3-U	2	2	3.8	3.8	6.46	3.57	5.96	3.8	475
E510-403-H3-U	3	3	5.3	5.3	7.39	5.07	6.00	5.5	650
E510-405-H3-U	5	5	9.2	9.2	7.39	5.07	6.00	5.5	710
E510-408-H3-U	7.5	7.5	13	13	10.27	7.36	7.98	14.3	990
E510-410-H3-U	10	10	17.5	17.5	10.27	7.36	7.98	14.3	1,150
E510-415-H3-U	15	15	24	24	10.27	7.36	7.98	14.3	1,275
E510-420-H3-U	20	20	32	32	12.66	8.84	8.11	23.2	1,977
E510-425-H3-U	25	25	40	40	12.66	8.84	8.11	23.2	2,488
E510-430-H3-U	30	30-40	45	58	14.17	10.43	9.38	22.1	2,737
E510-440-H3-U	40	50	60	73	20.67	11.28	10.62	66.1	3,600
E510-450-H3-U	50	60	75	88	20.67	11.28	10.62	66.1	4,415
E510-460-H3-U	60	75	91	103	20.67	11.28	10.62	66.1	5,017
E510-475-H3-U	75	100	118	145	20.67	11.28	10.62	77.2	5,763

E510 COMPACT DRIVE

MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

E510 COMPACT DRIVE PERIPHERALS ONLY

MODEL NO.	DESCRIPTION	LIST PRICE ($)
JN5-CB-01M	Extension wire (1M)	25
JN5-CB-02M	Extension wire (2M)	27
JN5-CB-03M	Extension wire (3M)	30
JN5-CB-05M	Extension wire (5M)	35
JN5-NK-E01	E510 frame 1 NEMA1 KIT* (Replacement)	40
JN5-NK-E02	E510 frame 2 NEMA1 KIT* (Replacement)	55
JN5-NK-E03	E510 frame 3 NEMA1 KIT* (Replacement)	65
JN5-NK-E04	E510 frame 4 NEMA1 KIT* (Replacement)	77
JN5-CM-USB	USB cable to connect PC	80
JN5-OP-A02	IP20 LCD operator panel mount (Remote use only)	135
JN5-KEYBOX	Remote keypad holder (For LED keypad only)	33
JN5-CU	Copy module only	95
JN5-CMI-PDP	PROFIBUS communication interface module	350
JN5-CMI-TCPIP	TCPIP card	410
JN5-CMI-DNET	DeviceNet card	220
JN5-CMI-CAN	CanOpen card	220
JN5-DINF1	Din Rail option kit frame 1	43
JN5-DINF2	Din Rail option kit, frame 2	59

Notes:

* E510 Frame 1~4 NEMA Kits are standard for all models.

E510 COMPACT DRIVE BRAKE MODULES AND RESISTORS

MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

All resistor sets are not in an enclosure (chassis)

230V 1/3-Phase

AC DRIVE HP RATING	BRAKING TRANSISTOR			BRAKING RESISTOR						
	MODEL NO.	QTY USED	LIST PRICE ($)‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	X	-	-	JNBR-150W200	1	200	150	12"L x 5"W x 5"D	117	10	30
2	X	-	-	JNBR-150W100	1	100	150	12"L x 5"W x 5"D	117	10	35
3	X	-	-	JNBR-260W70	1	70	260	12"L x 5"W x 5"D	112	10	50

230V 3-Phase

AC DRIVE HP RATING	BRAKING TRANSISTOR			BRAKING RESISTOR						
	MODEL NO.	QTY USED	LIST PRICE ($)‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
5	X	-		JNBR-390W40	1	40	390	12"L x 5"W x 5"D	117	10	70
7.5	X	-		JNBR-520W30	1	30	520	12"L x 7"W x 5"D	123	10	125
10	X	-		JNBR-780W20	1	20	780	12"L x 7"W x 5"D	117	10	150
15	X	-		JNBR-2R4KW13R6	1	13.6	2400	19"L x 10"W x 5"D	100	10	450
20	X	-		JNBR-2R4KW13R6	1	13.6	2400	19"L x 13"W x 5"D	100	10	450
25	X	-		JNBR-4R8KW8	1	8	4800	26.5"L x 10"W x 5"D	119	10	940
30	X	-		JNBR-4R8KW6R8	1	6.8	4800	26.5"L x 10"W x 5"D	117	10	955
40	JNTBU-230	2	475	JNBR-3KW10	2	10	3000	19"L x 13"W x 5"D	119	10	575

460V 3-Phase

AC DRIVE HP RATING	BRAKING TRANSISTOR			BRAKING RESISTOR						
	MODEL NO.	QTY USED	LIST PRICE ($)‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	X	-		JNBR-150W750	1	750	150	12"L x 5"W x 5"D	123	10	30
2	X	-		JNBR-150W400	1	400	150	12"L x 5"W x 5"D	117	10	35
3	X	-		JNBR-260W250	1	250	260	12"L x 5"W x 5"D	123	10	50
5	X	-		JNBR-400W150	1	150	400	12"L x 5"W x 5"D	123	10	75
7.5	X	-		JNBR-600W130	1	130	600	12"L x 7"W x 5"D	123	10	125
10	X	-		JNBR-800W100	1	100	800	12"L x 7"W x 5"D	117	10	150
15	X	-		JNBR-1R6KW50	1	50	1600	12"L x 10"W x 5"D	149	10	300
20	X	-		JNBR-1R5KW40	1	40	1500	12"L x 13"W x 5"D	100	10	300
25	X	-		JNBR-4R8KW32	1	32	4800	26.5"L x 13"W x 5"D	120	10	900
30	X	-		JNBR-4R8KW27R2	1	27.2	4800	26.5"L x 13"W x 5"D	117	10	900
40	X	-		JNBR-6KW20	1	20	6000	26.5"L x 13"W x 5"D	117	10	1,100
50	JNTBU-430	2	605	JNBR-4R8KW32	2	32	4800	28"L x 10"W x 10"D	117	10	900
60	JNTBU-430	2	605	JNBR-4R8KW27R2	2	27.2	4800	28"L x 10"W x 10"D	117	10	900
75	JNTBU-430	2	605	JNBR-6KW20	2	20	6000	26.5"L x 13"W x 5"D	117	10	1,100

Notes:

All brake resistor units include thermal overload switches.
X = Transistor Built-in for all E510 Compact Drives at these ratings
‡ = Pricing is for the quantity of one (1) unit.

E510 NEMA 4, 4X/12

INDOOR USE ONY/ MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

A versatile AC Drive that can control today's demanding motor driven applications, this highly flexible drive has multiple control modes and built-in PLC functionality.

APPLICATIONS:

- Mixers
- Conveyors
- Machine Tools
- Pumps (Centrifugal, Positive Displacement, Metering, etc.)
- Packaging Machines
- Fans

FEATURES:

- Control Modes for V/F, and Sensorless Vector
- Simple PLC Function Built-in
- .5 to 20 HP (CT), 230V, 50/ 60Hz, 3-Phase
- 1 to 25 HP (CT), 460V, 50/ 60Hz, 3-Phase
- Conformal Coating on PC Boards
- LED Keypad with 5 Digits
- Flexible Input/ Output Configurations that Accept Normally Open or Normally Closed Signals
- 0 to 599 Hz Speed Range
- PID Control
- Diagnostics Registers for Troubleshooting
- Built-in Modbus Protocol via (RJ45 Interface)
- Dedicated Pulse Follower Signal
- UL, cUL, and CE Approved

E510 NEMA 4, 4X/12 WITH DISCONNECT SWITCH

INDOOR USE ONLY/ MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

230V 1-Phase Input/ 3-Phase Output

MODEL NO.	CONSTANT TORQUE		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	HP	DRIVE AMPS	HEIGHT	WIDTH	DEPTH		
E510-2P5-H1FN4S-U	0.5	2.6	9.79	5.94	7.87	6	665
E510-201-H1FN4S-U	1	4.5	9.79	5.94	7.87	6	700
E510-202-H1FN4S-U	2	7.5	13.19	7.80	9.26	13	899
E510-203-H1FN4S-U	3	10.5	13.19	7.80	9.26	13	1,050

460V 3-Phase Input/ 3-Phase Output

MODEL NO.	CONSTANT TORQUE		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	HP	DRIVE AMPS	HEIGHT	WIDTH	DEPTH		
E510-401-H3FN4S-U	1.0	2.3	9.79	5.94	7.87	6	840
E510-402-H3FN4S-U	2	3.8	9.79	5.94	7.87	6	905
E510-403-H3FN4S-U	3	5.2	13.19	7.80	9.26	13	1,080
E510-405-H3FN4S-U	5	8.8	13.19	7.80	9.26	13	1,350
E510-408-H3FN4S-U	7.5	13	18.11	8.77	10.37	28	1,820
E510-410-H3FN4S-U	10	17.5	18.11	8.77	10.37	28	1,965
E510-415-H3FN4S-U	15	25	18.11	8.77	10.37	28	2,320

E510 NEMA 4, 4X/12 WITHOUT DISCONNECT SWITCH

INDOOR USE ONLY/ MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

230V 3-Phase Input/ 3-Phase Output

MODEL NO.	CONSTANT TORQUE		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	HP	DRIVE AMPS	HEIGHT	WIDTH	DEPTH		
*E510-2P5-HN4R-U	0.5	2.6	9.79	5.94	7.87	6	650
*E510-201-HN4R-U	1	4	9.79	5.94	7.87	6	690
*E510-202-HN4R-U	2	8	13.19	7.80	9.26	13	860
*E510-203-HN4R-U	3	11	13.19	7.80	9.26	13	1,025
E510-205-H3N4-U	5	18	13.19	7.80	8.60	13	1,387
E510-208-H3N4-U	8	26	18.11	8.77	9.71	28	1,555
E510-210-H3N4-U	10	35	18.11	8.77	9.71	28	1,860
E510-215-H3N4-U	15	48.0	18.11	8.77	9.71	28	2,310
E510-220-H3N4-U	20	64.0	18.11	8.77	9.71	28	2,420

460V 3-Phase Input/ 3-Phase Output

MODEL NO.	CONSTANT TORQUE		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	HP	DRIVE AMPS	HEIGHT	WIDTH	DEPTH		
E510-401-H3N4-U	1	2.3	9.79	5.94	7.20	6	830
E510-402-H3N4-U	2	3.8	9.79	5.94	7.20	6	885
E510-403-H3N4-U	3	5.2	13.19	7.80	8.60	13	1,050
E510-405-H3N4-U	5	8.8	13.19	7.80	8.60	13	1,275
E510-408-H3N4-U	7.5	13	18.11	8.77	9.71	28	1,700
E510-410-H3N4-U	10	17.5	18.11	8.77	9.71	28	1,890
E510-415-H3N4-U	15	25	18.11	8.77	9.71	28	2,075
E510-420-H3N4-U	20	32	18.11	8.77	9.71	28	2,563
E510-425-H3N4-U	25	40	18.11	8.77	9.71	28	2,665

***Can Supply Either Single or Three Phase 230V Input. Also includes speed pot mounted on front cover.**

E510 NEMA 4, 4X/12 OPTIONS

INDOOR, MEDIUM DUTY

Effective 07-08-18
Supercedes 03-24-17

Options

PART NUMBER	DESCRIPTION	LIST PRICE ($)
JN5-CM-PDP	PROFIBUS Communication Interface Module	350
JN5-CM-USB	USB Cable to Connect PC	80
JN5-CU	Copy Module only	95

E510 NEMA 4, 4X/12 BRAKE MODULES AND RESISTORS

Effective 07-08-18
Supercedes 03-24-17

MEDIUM DUTY

All resistor sets are not in an enclosure (chassis)

230V 3-Phase

AC DRIVE HP RATING CONSTANT TORQUE	BRAKING TRANSISTOR			BRAKING RESISTOR							
	MODEL NO.	QTY USED	LIST PRICE ($)‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
.5-1	X	-	-	JNBR-150W200	1	200	150	9.88"L x 1.10"W x 2.36"D	119	10	30
2	X	-	-	JNBR-150W100	1	100	150	9.88"L x 1.10"W x 2.36"D	119	10	35
3	X	-	-	JNBR-260W70	1	70	260	10.79"L x 1.34"W x 3.07"D	115	10	50
5	X	-	-	JNBR-390W40	1	40	390	10.79"L x 1.34"W x 3.07"D	119	10	70
7.5	X	-	-	JNBR-520W30	1	30	520	15.7"L x 1.57"W x 3.94"D	108	10	125
10	X	-	-	JNBR-780W20	1	20	780	15.7"L x 1.57"W x 3.94"D	119	10	150
15	X	-	-	JNBR-2R4KW13R6	1	13.6	2400	21.1"L x 1.96"W x 4.33"D	117	10	450
20	X	-	-	JNBR-3KW10	1	10	3000	24.21"L x 1.96"W x 4.33"D	119	10	575

460V 3-Phase

AC DRIVE HP RATING CONSTANT TORQUE	BRAKING TRANSISTOR			BRAKING RESISTOR							
	MODEL NO.	QTY USED	LIST PRICE ($)‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	X	-	-	JNBR-150W750	1	750	150	9.88"L x 1.10"W x 2.36"D	126	10	30
2	X	-	-	JNBR-150W400	1	400	150	9.88"L x 1.10"W x 2.36"D	119	10	35
3	X	-	-	JNBR-260W250	1	250	260	10.79"L x 1.34"W x 3.07"D	126	10	50
5	X	-	-	JNBR-400W150	1	150	400	10.79"L x 1.34"W x 3.07"D	126	10	75
7.5	X	-	-	JNBR-600W130	1	130	600	15.7"L x 1.57"W x 3.94"D	102	10	125
10	X	-	-	JNBR-800W100	1	100	800	24.21"L x 1.96"W x 4.33"D	99	10	150
15	X	-	-	JNBR-1R6KW50	1	50	1600	24.21"L x 1.96"W x 4.33"D	126	10	300
20	X	-	-	JNBR-1R5KW40	1	40	1500	24.21"L x 1.96"W x 4.33"D	119	10	300
25	JNTBU-430	1	605	JNBR-4R8KW32	1	32	4800	21.1"L x 1.96"W x 4.33"D	119	10	900

Notes:

X = Transistor Built-in for all E510 Nema 4, 4X/12 drives at these ratings

‡ = Pricing is for the quantity of one (1) unit.

A510

HEAVY DUTY

Effective 07-08-18
Supercedes 03-24-17

A versatile AC Drive that can control todays demanding motor driven applications, this highly flexible drive has multiple control modes.

APPLICATIONS:

- Mixing
- Conveyors
- Packaging Machines
- Machine Tools
- Fans
- Compressors
- Pumps (Centrifugal, Positive Displacement, Metering, etc.)
- Extrusion and Injection Molding
- Winders/ Unwinders
- Crushers/ Grinders
- Crain/ Hoist

FEATURES:

- Control Modes for V/F, V/F with PG feedback, Sensorless Vector, and Closed Loop Vector
- Simple PLC Function Built-in
- Advanced Regenerative Load Handling Capability
- 1 to 100 HP (CT), 230V, 50/ 60Hz, 3-Phase
- 1 to 125 HP(VT), 230V, 50/ 60Hz,3-Phase
- 1 to 400 HP (CT), 460V, 50/ 60Hz,3-Phase
- 1 to 400 HP (VT), 460V, 50/ 60Hz,3-Phase
- 1 to 10 HP (CT/VT), 575V, 50/ 60Hz,3-Phase
- 15 to 250 HP (CT), 690V, 50/ 60Hz,3-Phase
- 15 to 270 HP (VT), 690V, 50/ 60Hz,3-Phase
- Conformal Coating on PC Boards
- LCD Keypad that is Remotely Mountable
- Flexible Input/ Output Configurations that Accept Normally Open or Normally Closed Signals
- 0 to 599 Hz Speed Range
- PID Control
- Diagnostics Registers for Troubleshooting
- Built-in RS485 Modbus Protocol
- Enhanced Design for Quiet Motor Operation
- Pulse Output and Pulse Follower
- Select Between Closed-Loop Speed and Torque Control in Vector Mode
- UL, cUL, and CE approved

A510

HEAVY DUTY

Effective 07-08-18
Supercedes 03-24-17

230V 3-Phase

MODEL NO.	HP		DRIVE AMPS		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	HEIGHT	WIDTH	DEPTH		
‡*A510-2001-C-U	1	1	5.0	6.0	9.61	5.12	5.91	6	620
‡*A510-2002-C-U	2	2-3	8.0	9.6	9.61	5.12	5.91	6	650
‡*A510-2003-C-U	3	3	11.0	12.0	12.40	5.51	6.97	9	800
*A510-2005-C3-U	5	5-7.5	17.5	22.0	12.40	5.51	6.97	9	840
*A510-2008-C3-U	7.5	10	25.0	30.0	12.40	5.51	6.97	10	1,220
*A510-2010-C3-U	10	15	33.0	42.0	11.80	8.27	8.46	10	1,320
*A510-2015-C3-U	15	20	47.0	56.0	14.20	10.43	8.86	20	1,750
*A510-2020-C3-U	20	25	60.0	69.0	14.20	10.43	8.86	20	2,120
*A510-2025-C3-U	25	30	73.0	79.0	14.20	10.43	8.86	20	2,730
A510-2030-C3-U	30	40	85.0	110.0	20.70	11.20	9.92	70	4,310
A510-2040-C3-U	40	50	115.0	138.0	20.70	11.20	9.92	70	5,330
**A510-2050-C3-U	50	60	145.0	169.0	22.80	13.54	11.81	90	6,200
**A510-2060-C3-U	60	75	180.0	200.0	22.80	13.54	11.81	90	7,250
**A510-2075-C3-U	75	100	215.0	250.0	31.10	18.10	12.80	200	8,800
**A510-2100-C3-U	100	125	283.0	312.0	31.10	18.10	12.80	200	11,000

460V 3-Phase

MODEL NO.	HP		DRIVE AMPS		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	HEIGHT	WIDTH	DEPTH		
*A510-4001-C3-U	1	1	3.4	4.1	9.61	5.12	5.91	6	640
*A510-4002-C3-U	2	2-3	4.2	5.4	9.61	5.12	5.91	6	670
*A510-4003-C3-U	3	3	5.5	6.9	9.61	5.12	5.91	6	810
*A510-4005-C3-U	5	5-7.5	9.2	12.1	12.40	5.51	6.97	9	900
*A510-4008-C3-U	7.5	10	14.8	17.5	12.40	5.51	6.97	9	1,310
*A510-4010-C3-U	10	15	18.0	23.0	11.80	8.27	8.46	10	1,500
*A510-4015-C3-U	15	20	24.0	31.0	11.80	8.27	8.46	10	1,800
*A510-4020-C3-U	20	25	31.0	38.0	11.80	8.27	8.46	10	2,150
*A510-4025-C3-U	25	30	39.0	44.0	14.20	10.43	8.86	20	2,680
*A510-4030-C3-U	30	40	45.0	58.0	14.20	10.43	8.86	20	2,850
A510-4040-C3-U	40	50	60.0	73.0	20.70	11.20	9.92	70	3,780
A510-4050-C3-U	50	60	75.0	88.0	20.70	11.20	9.92	70	4,560
A510-4060-C3-U	60	75	91.0	103.0	20.70	11.20	9.92	70	5,200
**A510-4075-C3-U	75	100	118.0	145.0	20.70	13.54	11.81	77	6,500
**A510-4100-C3-U	100	125	150.0	168.0	22.80	13.54	11.81	90	9,980
**A510-4125-C3-U	125	150	180.0	208.0	31.10	18.10	12.80	200	12,800
**A510-4150-C3-U	150	175	216.0	250.0	31.10	18.10	12.80	200	14,800
**A510-4215-C3-U	215	250	295.0	328.0	31.10	18.10	12.80	200	17,200
**A510-4270-C3-U	250	250	380.0	435.0	39.37	27.16	16.14	405	21,500
**A510-4300-C3-U	300	300	450.0	575.0	39.37	27.16	16.14	405	21,950
**A510-4375-C3-U	350	400	523.0	585.0	39.37	27.16	16.14	405	25,600
**A510-4425-C3-U	400	400	585.0	585.0	39.37	27.16	16.14	405	37,500

Notes:

* Includes Dynamic Braking Transistor

** Includes DC Bus Link Reactor

‡ Operates on single or three phase inputs at specified rating
1 - 40 HP NEMA 1, 230V, 50 HP and above protected chassis, 1 - 75 HP NEMA 1, 460V, 100 HP and above protected chassis

A510

HEAVY DUTY

Effective 07-08-18
Supercedes 03-24-17

‡ 575V 3-Phase

MODEL NO.	HP		DRIVE AMPS		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	HEIGHT	WIDTH	DEPTH		
*A510-5001-C3-U	1	2	1.7	3.0	12.4	5.51	6.96	8	1,150
*A510-5002-C3-U	2	3	3.0	4.2	12.4	5.51	6.96	8	1,200
*A510-5003-C3-U	3	4	4.2	5.8	12.4	5.51	6.96	8	1,290
*A510-5005-C3-U	5	5	6.6	8.8	11.81	8.26	8.46	10	1,320
*A510-5008-C3-U	7.5	7.5-10	9.9	12.2	11.81	8.26	8.46	10	1,450
*A510-5010-C3-U	10	10	11.4	14.5	11.81	8.26	8.46	10	1,500

*****690V 3-Phase**

MODEL NO.	HP		DRIVE AMPS		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	HEIGHT	WIDTH	DEPTH		
*A510-6015-C3-U	15	20	15.0	19.0	14.17	10.43	8.85	20	2,125
*A510-6020-C3-U	20	25	22.0	22.0	14.17	10.43	8.85	20	2,500
*A510-6025-C3-U	25	30	22.0	27.0	14.17	10.43	8.85	20	3,125
*A510-6030-C3-U	30	40	27.0	34.0	14.17	10.43	8.85	20	3,200
A510-6040-C3-U	40	50	34.0	42.0	14.17	10.43	8.85	20	4,100
A510-6050-C3-U	50	60	42.0	52.0	20.66	11.18	9.92	70	4,900
A510-6060-C3-U	60	75	54.0	62.0	20.66	11.18	9.92	70	6,100
**A510-6075-C3-U	75	100	62.0	80.0	20.66	11.18	9.92	70	7,100
**A510-6100-C3-U	100	125	86.0	99.0	22.83	13.54	11.81	90	8,630
**A510-6125-C3-U	125	150	99.0	125.0	22.83	13.54	11.81	90	11,950
**A510-6150-C3-U	150	175	131.0	147.0	22.83	13.54	11.81	90	13,950
**A510-6215-C3-U	200	250	163.0	212.0	31.10	18.07	12.77	200	20,500
**A510-6250-C3-U	250	270	193.0	216.0	31.10	18.07	12.77	200	22,733

Notes:

* Includes Dynamic Braking Transistor
** Includes DC Bus Link Reactor
*** Consult factory when applying 575V to 690V models
‡ Do not apply 690V to these models
1-10 HP NEMA 1: 575V, 15-75 HP; NEMA 1: 690V, 100 HP and above, protected chassis

A510 OPTIONS

HEAVY DUTY

Effective 07-08-18
Supercedes 03-24-17

Options

PART NUMBER	DESCRIPTION	LIST PRICE ($)
JN5-CB-01M	Remote Wire for Keypad (1M)	25
JN5-CB-02M	Remote Wire for Keypad (2M)	27
JN5-CB-03M	Remote Wire for Keypad (3M)	30
JN5-CB-05M	Remote Wire for Keypad (5M)	35
JN5-CM-PDP	PROFIBUS Communication Interface Module	350
JN5-CM-USB	USB Cable to Connect PC	80
JN5-CU	Copy Module Only	95
JN5-NK-A06	A510 Frame 6 NEMA1 KIT 50, 60 HP 230V; 75,100 HP 460V, 100, 125, 150 HP 690V	475
JN5-NK-A07	A510 Frame 7 NEMA1 KIT 75,100 HP 230V; 125, 150, 200 HP 460V; 200, 250 HP 690V	690
JN5-NK-A08	A510-Frame 8 NEMA 1 KIT 250, 300, 350, 400 HP 460V	710
JN5-OP-A01	LED Operator	75
JN5-OP-A02	LCD Operator Replacement*	135
JN5-OP-A03	Blank Operator	25
JN5-PG-L	Line Driver Speed Feedback Card	130
JN5-PG-O	Open Collector Speed Feedback Card	160
JN5-PG-PM	Synchronous Motor Line Driver Speed Feedback Card	140

* LCD Operator is standard on all A510 models

A510 BRAKE MODULES AND RESISTORS

Effective 07-08-18
Supercedes 03-24-17

HEAVY DUTY

All resistor sets are not in an enclosure (chassis)

230V 3-Phase

AC DRIVE HP RATING CONSTANT TORQUE	BRAKING TRANSISTOR			BRAKING RESISTOR							
	MODEL NO.	QTY USED	LIST PRICE ($) ‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	X	-	-	JNBR-150W200	1	200	150	9.88"L x 1.10"W x 2.36"D	119	10	30
2	X	-	-	JNBR-150W100	1	100	150	9.88"L x 1.10"W x 2.36"D	119	10	35
3	X	-	-	JNBR-260W70	1	70	260	10.79"L x 1.34"W x 3.07"D	115	10	50
5	X	-	-	JNBR-390W40	1	40	390	10.79"L x 1.34"W x 3.07"D	119	10	70
7.5	X	-	-	JNBR-520W30	1	30	520	15.7"L x 1.57"W x 3.94"D	108	10	125
10	X	-	-	JNBR-780W20	1	20	780	15.7"L x 1.57"W x 3.94"D	119	10	150
15	X	-	-	JNBR-2R4KW13R6	1	13.6	2400	21.1"L x 1.96"W x 4.33"D	117	10	450
20	X	-	-	JNBR-3KW10	1	10	3000	24.21"L x 1.96"W x 4.33"D	119	10	575
25	X	-	-	JNBR-4R8KW8	1	8	4800	21.1"L x 1.96"W x 4.33"D	119	10	940
30	JNTBU-230	1	475	JNBR-4R8KW6R8	1	6.8	4800	21.1"L x 1.96"W x 4.33"D	117	10	955
40	JNTBU-230	2	475	JNBR-3KW10	2	10	3000	24.21"L x 1.96"W x 4.33"D	119	10	575
50	JNTBU-230	2	475	JNBR-3KW10	2	10	3000	24.21"L x 1.96"W x 4.33"D	99	10	575
60	JNTBU-230	2	475	JNBR-4R8KW6R8	2	6.8	4800	21.1"L x 1.96"W x 4.33"D	117	10	955
75	JNTBU-230	2	475	JNBR-4R8KW6R8	2	6.8	4800	21.1"L x 1.96"W x 4.33"D	98	10	955
100	JNTBU-230	3	475	JNBR-4R8KW6R8	3	6.8	4800	21.1"L x 1.96"W x 4.33"D	108	10	955

460V 3-Phase

AC DRIVE HP RATING CONSTANT TORQUE	BRAKING TRANSISTOR			BRAKING RESISTOR							
	MODEL NO.	QTY USED	LIST PRICE ($) ‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	X	-	-	JNBR-150W750	1	750	150	9.88"L x 1.10"W x 2.36"D	126	10	30
2	X	-	-	JNBR-150W400	1	400	150	9.88"L x 1.10"W x 2.36"D	119	10	35
3	X	-	-	JNBR-260W250	1	250	260	10.79"L x 1.34"W x 3.07"D	126	10	50
5	X	-	-	JNBR-400W150	1	150	400	10.79"L x 1.34"W x 3.07"D	126	10	75
7.5	X	-	-	JNBR-600W130	1	130	600	15.7"L x 1.57"W x 3.94"D	102	10	125
10	X	-	-	JNBR-800W100	1	100	800	24.21"L x 1.96"W x 4.33"D	99	10	150
15	X	-	-	JNBR-1R6KW50	1	50	1600	24.21"L x 1.96"W x 4.33"D	126	10	300
20	X	-	-	JNBR-1R5KW40	1	40	1500	24.21"L x 1.96"W x 4.33"D	119	10	300
25	X	-	-	JNBR-4R8KW32	1	32	4800	21.1"L x 1.96"W x 4.33"D	119	10	900
30	X	-	-	JNBR-4R8KW27R2	1	27.2	4800	21.1"L x 1.96"W x 4.33"D	117	10	900
40*	X	-	-	JNBR-6KW20	1	20	6000	24.21"L x 1.96"W x 4.33"D	119	10	1,100
50	JNTBU-430	2	605	JNBR-4R8KW32	2	32	4800	21.1"L x 1.96"W x 4.33"D	119	10	900
60	JNTBU-430	2	605	JNBR-4R8KW27R2	2	27.2	4800	21.1"L x 1.96"W x 4.33"D	117	10	900
75	JNTBU-430	2	605	JNBR-6KW20	2	20	6000	24.21"L x 1.96"W x 4.33"D	126	10	1,100
100	JNTBU-430	3	605	JNBR-6KW20	3	20	6000	24.21"L x 1.96"W x 4.33"D	139	10	1,100
125	JNTBU-430	3	605	JNBR-6KW20	3	20	6000	24.21"L x 1.96"W x 4.33"D	115	10	1,100
150	JNTBU-430	4	605	JNBR-6KW20	4	20	6000	24.21"L x 1.96"W x 4.33"D	125	10	1,100
200	JNTBU-430	5	605	JNBR-6KW20	5	20	6000	24.21"L x 1.96"W x 4.33"D	99	10	1,100
250	JNTBU-430	6	605	JNBR-6KW20	6	20	6000	24.21"L x 1.96"W x 4.33"D	120	10	1,100
300	JNTBU-430	6	605	JNBR-6KW20	6	20	6000	24.21"L x 1.96"W x 4.33"D	99	10	1,100
350	JNTBU-430	8	605	JNBR-6KW20	8	20	6000	24.21"L x 1.96"W x 4.33"D	105	10	1,100
400	JNTBU-430	9	605	JNBR-6KW20	9	20	6000	24.21"L x 1.96"W x 4.33"D	104	10	1,100

Notes:

X Transistor Built-in for all A510 drives at these ratings

* Please consult factory when applying braking capabilities.
Please contact factory for external brakes, external braking transistors, and braking capabilities on 575V/ 690V products

‡ Price is for the quantity of one (1) unit

F510

FAN & PUMP

Effective 07-08-18
Supercedes 03-24-17

A versatile AC Drive that is easily configured and handles almost any fan, blower, or centrifugal pump application.

APPLICATIONS:

- Fans
- Blowers
- Water and Wastewater Industries
- Centrifugal Pumps
- HVAC Industries
- Irrigation

FEATURES:

- Control Modes for V/F, Sensorless Vector, Sensorless Vector with Permanent Magnet Motor
- Built-in PLC as Standard
- Operation and Engineering Units Standard
- LCD Keypad with Remote Mounting Capabilities
- PID Control with Advanced Diagnostics and Sleep Mode
- 1 to 150 HP (Variable Torque), 230V, 50/ 60Hz, 3-Phase
- 1 to 800 HP (Variable Torque), 460V, 50/ 60Hz, 3-Phase
- Plenum Rated
- Diagnostics Registers for Troubleshooting
- Flexible Input/ Output Configurations that Incorporate Normally Open or Normally Closed Signals
- 0 to 400 Hz Speed Range
- Built-in Modbus, BACnet, and Metasys (N2) Protocols via (RS485 or RJ45 Interface)
- Enhanced Design for Smoother and Quieter Motor Operation
- Real Time Clock (Standard on Models with LCD Keypad)
- PTC Input Available for Direct Thermal Protection of the Motor
- Thermal Management on the Heat Sink for Overtemperature Fault Avoidance
- Master-Follower Control Mode Built-in
- EMI Protection that Complies with EM61800-3 with Optional Filter
- EMS Protection that Follows EN61800-3
- UL, cUL, and CE Approved

F510

FAN & PUMP

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230V 3-Phase

MODEL NO.	VARIABLE TORQUE		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	HP	DRIVE AMPS	HEIGHT	WIDTH	DEPTH		
‡*F510-2001-C-U	1	5.0	9.61	5.12	5.91	6	580
‡*F510-2002-C-U	2	7.5	9.61	5.12	5.91	6	615
‡*F510-2003-C-U	3	10.6	9.61	5.12	5.91	6	650
*F510-2005-C3-U	5	14.5	12.4	5.51	6.97	8.4	795
*F510-2008-C3-U	7.5	21.0	12.4	5.51	6.97	8.4	810
*F510-2010-C3-U	10	30.0	11.81	8.27	8.46	13.6	1,150
*F510-2015-C3-U	15	40.0	11.81	8.27	8.46	13.6	1,275
*F510-2020-C3-U	20	56.0	14.17	10.43	8.86	22	1,600
*F510-2025-C3-U	25	69.0	14.17	10.43	8.86	22	2,000
*F510-2030-C3-U	30	79.0	14.17	10.43	8.86	22	2,570
F510-2040-C3-U	40	110.0	20.67	11.18	9.92	66.1	3,500
**F510-2050-C3-U	50	138.0	20.67	11.18	9.92	66.1	4,100
**F510-2060-C3-U	60	169.0	22.83	13.54	11.81	89.3	5,838
**F510-2075-C3-U	75	200.0	22.83	13.54	11.81	89.3	6,412
**F510-2100-C3-U	100	250.0	31.10	18.08	12.78	162.8	8,400
**F510-2125-C3-U	125	312.0	31.10	18.08	12.78	162.8	10,500
**F510-2150-C3-U	150	400.0	39.37	27.16	16.14	405	21,000

460V 3-Phase Input

MODEL NO.	VARIABLE TORQUE		DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	HP	DRIVE AMPS	HEIGHT	WIDTH	DEPTH		
*F510-4001-C3-U	1	3.4	9.61	5.12	5.91	6	600
*F510-4002-C3-U	2	4.1	9.61	5.12	5.91	6	635
*F510-4003-C3-U	3	5.4	9.61	5.12	5.91	6	640
*F510-4005-C3-U	5	9.2	12.4	5.51	6.97	8.8	775
*F510-4008-C3-U	7.5	11.1	12.4	5.51	6.97	8.8	854
*F510-4010-C3-U	10	17.5	12.4	5.51	6.97	8.8	1,250
*F510-4015-C3-U	15	23.0	11.81	8.27	8.46	13.6	1,400
*F510-4020-C3-U	20	31.0	11.81	8.27	8.46	13.6	1,715
*F510-4025-C3-U	25	38.0	14.17	10.43	8.86	22	2,018
*F510-4030-C3-U	30	44.0	14.17	10.43	8.86	22	2,510
*F510-4040-C3-U	40	54.0	14.17	10.43	8.86	22	2,700
F510-4050-C3-U	50	72.0	20.67	11.18	9.92	66.1	3,445
F510-4060-C3-U	60	88.0	20.67	11.18	9.92	66.1	4,300
F510-4075-C3-U	75	103.0	20.67	11.18	9.92	66.1	4,725
**F510-4100-C3-U	100	145.0	22.83	13.7	11.81	89.3	5,990
**F510-4125-C3-U	125	165.0	22.83	13.7	11.81	89.3	8,500
**F510-4150-C3-U	150	208.0	31.10	18.08	12.78	163.1	11,778
**F510-4215-C3-U	200	250.0	31.10	18.08	12.78	163.1	15,449
**F510-4250-C3-U	250	328.0	31.10	18.08	12.78	163.1	16,590
**F510-4300-C3-U	300	435.0	39.37	27.16	16.14	405	20,342
**F510-4375-C3-U	350	515.0	39.37	27.16	16.14	405	22,000
**F510-4425-C3-U	400	585.0	39.37	27.16	16.14	405	24,700
***F510-4535-C3-U	500	690.0	53.38	37.79	24.88	640	55,000
***F510-4670-C3-U	600/650	840.0	53.38	37.79	24.88	640	63,500
***F510-4800-C3-U	800	960.0	53.38	37.79	24.88	640	69,700

Notes:

* Includes Dynamic Braking Transistor
** Includes DC Bus Link Reactor
*** External DC Link Reactor
‡ Operates on single or three phase inputs at specified rating
(1) 1-50 HP NEMA 1: 230V, 60HP & above protectected chassis; 1-75 HP NEMA 1: 460V, 100 HP & above protected chassis

F510 PERIPHERALS

FAN & PUMP

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Supercedes 03-24-17

Options:

PART NUMBER	DESCRIPTION	LIST PRICE ($)
JN5-CB-01M	Remote Wire for Keypad (1M)	25
JN5-CB-02M	Remote Wire for Keypad (2M)	27
JN5-CB-03M	Remote Wire for Keypad (3M)	30
JN5-CB-05M	Remote Wire for Keypad (5M)	35
JN5-CM-PDP	PROFIBUS Communication Interface Module	350
JN5-CM-USB	USB Cable to Connect PC	80
JN5-CU	Copy Module only	95
JN5-NK-A06	F510 Frame 6 NEMA1 KIT 60, 75HP 230V; 100, 125HP 460V	475
JN5-NK-A07	F510 Frame 7 NEMA1 KIT 100,125HP 230V; 150, 200, 250 HP 460V	690
JN5-NK-A08	F510 Frame 8 NEMA1 KIT 150HP 230V, 300, 350, 400 HP 460V	710
JN5-NK-A09	F510 Frame 9 NEMA1 KIT 500, 600/650, 800 HP 460V	920
E015	NEMA 1 KITS FOR DC LINK 500-800HP	3800
JN5-OP-F01	LED Operator	75
4KA41S1139T01	LCD Operator Replacement*	148
JN5-OP-A03	Blank Operator	25
JN5-IO-8DO	1 to 8 Pump Card	150

Notes:

*LCD Operator is standard on all F510 models

F510 BRAKE MODULES AND RESISTORS

Effective 07-08-18
Supercedes 03-24-17

All resistor sets are not in an enclosure (chassis)

230V 3-Phase

AC DRIVE HP RATING	BRAKING TRANSISTOR			BRAKING RESISTOR							
	MODEL NO.	QTY USED	LIST PRICE ($) ‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	X	-	-	JNBR-150W200	1	200	150	9.88"L x 1.10"W x 2.36"D	119	10	30
2	X	-	-	JNBR-150W100	1	100	150	9.88"L x 1.10"W x 2.36"D	119	10	35
3	X	-	-	JNBR-260W70	1	70	260	10.79"L x 1.34"W x 3.07"D	115	10	50
5	X	-	-	JNBR-390W40	1	40	390	10.79"L x 1.34"W x 3.07"D	126	10	70
7.5	X	-	-	JNBR-520W30	1	30	520	15.7"L x 1.57"W x 3.94"D	114	10	125
10	X	-	-	JNBR-780W20	1	20	780	15.7"L x 1.57"W x 3.94"D	126	10	150
15	X	-	-	JNBR-2R4KW13R6	1	13.6	2400	21.1"L x 1.96"W x 4.33"D	124	10	450
20	X	-	-	JNBR-3KW10	1	10	3000	24.21"L x 1.96"W x 4.33"D	126	10	575
25	X	-	-	JNBR-4R8KW8	1	8	4800	21.1"L x 1.96"W x 4.33"D	126	10	940
30	X	-	-	JNBR-4R8KW6R8	1	6.8	4800	21.1"L x 1.96"W x 4.33"D	124	10	955
40	JNTBU-230	2	475	JNBR-3KW10	2	10	3000	24.21"L x 1.96"W x 4.33"D	126	10	575
50	JNTBU-230	2	475	JNBR-3KW10	2	10	3000	24.21"L x 1.96"W x 4.33"D	105	10	575
60	JNTBU-230	2	475	JNBR-4R8KW6R8	2	6.8	4800	21.1"L x 1.96"W x 4.33"D	124	10	955
75	JNTBU-230	3	475	JNBR-4R8KW6R8	3	6.8	4800	21.1"L x 1.96"W x 4.33"D	124	10	955
100	JNTBU-230	3	475	JNBR-4R8KW6R8	3	6.8	4800	21.1"L x 1.96"W x 4.33"D	116	10	955
125	JNTBU-230	4	475	JNBR-4R8KW6R8	4	6.8	4800	21.1"L x 1.96"W x 4.33"D	119	10	955
150	JNTBU-230	5	475	JNBR-4R8KW6R8	5	6.8	4800	21.1"L x 1.96"W x 4.33"D	108	10	955

460V 3-Phase

AC DRIVE HP RATING	BRAKING TRANSISTOR			BRAKING RESISTOR							
	MODEL NO.	QTY USED	LIST PRICE ($) ‡	MODEL NO.	QTY USED	RESISTANCE OHMS	WATTS	ENCLOSURE DIMENSIONS (in.)	BRAKING TORQUE (%)	DUTY CYCLE (%)	LIST PRICE ($) ‡
1	X	-	-	JNBR-150W750	1	750	150	9.88"L x 1.10"W x 2.36"D	126	10	30
2	X	-	-	JNBR-150W400	1	400	150	9.88"L x 1.10"W x 2.36"D	119	10	35
3	X	-	-	JNBR-260W250	1	250	260	10.79"L x 1.34"W x 3.07"D	126	10	50
5	X	-	-	JNBR-400W150	1	150	400	10.79"L x 1.34"W x 3.07"D	133	10	75
7.5	X	-	-	JNBR-600W130	1	130	600	15.7"L x 1.57"W x 3.94"D	107	10	125
10	X	-	-	JNBR-800W100	1	100	800	24.21"L x 1.96"W x 4.33"D	105	10	150
15	X	-	-	JNBR-1R6KW50	1	50	1600	24.21"L x 1.96"W x 4.33"D	133	10	300
20	X	-	-	JNBR-1R5KW40	1	40	1500	24.21"L x 1.96"W x 4.33"D	126	10	300
25	X	-	-	JNBR-4R8KW32	1	32	4800	21.1"L x 1.96"W x 4.33"D	126	10	900
30	X	-	-	JNBR-4R8KW27R2	1	27.2	4800	21.1"L x 1.96"W x 4.33"D	124	10	900
40	X	-	-	JNBR-6KW20	1	20	6000	24.21"L x 1.96"W x 4.33"D	124	10	1,100
50	JNTBU-430	2	605	JNBR-4R8KW32	2	32	4800	21.1"L x 1.96"W x 4.33"D	126	10	900
60	JNTBU-430	2	605	JNBR-4R8KW27R2	2	27.2	4800	21.1"L x 1.96"W x 4.33"D	124	10	900
75	JNTBU-430	2	605	JNBR-6KW20	2	20	6000	24.21"L x 1.96"W x 4.33"D	133	10	1,100
100	JNTBU-430	3	605	JNBR-6KW20	3	27.2	4800	21.1"L x 1.96"W x 4.33"D	113	10	1,100
125	JNTBU-430	3	605	JNBR-6KW20	3	20	6000	24.21"L x 1.96"W x 4.33"D	121	10	1,100
150	JNTBU-430	4	605	JNBR-6KW20	4	20	6000	24.21"L x 1.96"W x 4.33"D	104	10	1,100
200	JNTBU-430	5	605	JNBR-6KW20	5	27.2	4800	21.1"L x 1.96"W x 4.33"D	107	10	1,100
250	JNTBU-430	5	605	JNBR-6KW20	5	20	6000	24.21"L x 1.96"W x 4.33"D	105	10	1,100
300	JNTBU-430	6	605	JNBR-6KW20	6	20	6000	24.21"L x 1.96"W x 4.33"D	99	10	1,100
350	JNTBU-430	8	605	JNBR-6KW20	8	20	6000	24.21"L x 1.96"W x 4.33"D	105	10	1,100
400	JNTBU-430	9	605	JNBR-6KW20	9	20	6000	24.21"L x 1.96"W x 4.33"D	104	10	1,100
500	JNTBU-430	10	605	JNBR-6KW20	10	20	6000	24.21"L x 1.96"W x 4.33"D	96	10	1,100
600	JNTBU-430	11	605	JNBR-6KW20	11	20	6000	24.21"L x 1.96"W x 4.33"D	87	10	1,100
650	JNTBU-430	11	605	JNBR-6KW20	11	20	6000	24.21"L x 1.96"W x 4.33"D	87	10	1,100
800	JNTBU-430	13	605	JNBR-6KW20	13	20	6000	24.21"L x 1.96"W x 4.33"D	86	10	1,100

Notes:

X = Transistor Built-in for all E510 Nema 4, 4X/12 drives at these ratings

* = All brake modules and resistors are chassis (not in an enclosure)

‡ = Pricing is for the quantity of one (1) unit.

EQ7

MULTIPLE DUTY

Effective 07-08-18
Supercedes 03-24-17

A rugged and versatile drive with a wide range of ratings ideal for both simpler and more demanding applications.

APPLICATIONS:

- Crushers, Grinders
- Compressors
- Reciprocating Machinery
- Dynamometers
- Water and Wastewater Industries
- Injection Molding
- Centrifugal Pumps
- Positive Displacement Pumps
- High Torque Mixing
- Material Handling
- Extruders
- Chillers and Refrigeration
- Fans

FEATURES:

- Designed for Constant / Variable Torque Applications
- V/F, Dynamic Torque, Sensorless and Sensor (Encoder Feedback) Vector mode
- Backlit LCD / English Language with LED Monitor Display / Selections for 6 Languages
- Keypad May be Used as Copy Unit / Remote Mounting Options
- Extensive Diagnostic Information on LCD Display
- State-of-the-Art Torque Limit and Control Features
- PID Control with Sleep Mode Function
- Provided with low-noise control power supply
- 1 to 125 HP @ 230V (Constant Torque)
- 1 to 150 HP @ 230V (Variable Torque)
- 1 to 900 HP @ 460V (Constant Torque)
- 1 to 1000 HP @ 460V (Variable Torque)
- Extensive I/O Capabilities
- Encoder Feedback Option for Applications Requiring Precise Speed Control
- Conformal Coating on PC Boards, Tin Plating on DC Bus
- External Mounting of Heatsink When Installed in Control Panels (>40 HP); Option Kit Available (<= 40 HP)
- All Units are IP20 at 40hp and below and IP00 at ratings >40HP (NEMA 1 Option Kits Available)
- Built-in RS485 Protocol (Modbus)/ Options Profbus-DP, DeviceNet, EtherNet
- DC Link Chokes Included in 75 HP and Above Units are Shipped Loose as Chassis Item Inside Crate
- uL and CE Approved

EQ7

MULTIPLE DUTY

Effective 07-08-18
Supercedes 03-24-17

230V 3-Phase Input/ 3-Phase Output ***

MODEL NO.	HP		DRIVE AMPS		APPROXIMATE DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	HEIGHT	WIDTH	DEPTH		
EQ7-2001-C ‡	1	1	5	5	10.24	4.33	5.71	4.4	950
EQ7-2002-C ‡	2	2	8	8	10.24	5.91	5.71	6.2	1,080
EQ7-2003-C ‡	3	3	11	11	10.24	5.91	5.71	6.6	1,180
EQ7-2005-C ‡	5	5	18	18	10.24	5.91	5.71	6.6	1,350
EQ7-2007-C ‡	7.5	7.5	27	27	10.24	8.66	7.68	14.3	1,680
EQ7-2010-C ‡	10	7.5	29	27	10.24	8.66	7.68	14.3	1,780
EQ7-2015-C ‡	15	10	42	37	10.24	8.66	7.68	14.3	1,890
EQ7-2020-C ‡	20	15	55	49	10.24	8.66	7.68	12.8	2,170
EQ7-2025-C ‡	25	20	68	63	15.75	9.84	7.68	20.9	2,600
EQ7-2030-C ‡	30	25	80	76	15.75	9.84	7.68	20.9	3,100
EQ7-2040-C ‡	40	30	107	90	15.75	12.6	7.68	22	3,950
EQ7-2050-C	50	40	146	119	21.65	13.98	10.04	55.1	6,530
EQ7-2060-C	60	50	180	146	24.21	13.98	10.63	70.6	7,500
EQ7-2075-C	75	60	215	180	29.13	13.98	10.63	92.6	8,750
EQ7-2100-C	100	75	283	215	29.13	13.98	10.63	94.8	10,075
EQ7-2125-C	125	100	346	283	29.53	20.87	11.22	137	14,500
EQ7-2150-C	150	125	415	346	34.65	24.80	14.17	231	18,700

460V 3-Phase Input/ 3-Phase Output

MODEL NO.	HP		DRIVE AMPS		APPROXIMATE DIMENSIONS (Inches)			APPROX. WT. (lbs.)	LIST PRICE ($)
	VARIABLE TORQUE	CONSTANT TORQUE	VARIABLE TORQUE	CONSTANT TORQUE	HEIGHT	WIDTH	DEPTH		
EQ7-4001-C ‡	1	1	2.5	2.5	10.24	4.33	5.71	4.4	910
EQ7-4002-C ‡	2	2	4.0	4.0	10.24	5.91	5.71	5.7	1,005
EQ7-4003-C ‡	3	3	5.5	5.5	10.24	5.91	5.71	6	1,200
EQ7-4005-C ‡	5	5	9.0	9.0	10.24	5.91	5.71	6.6	1,320
EQ7-4007-C ‡	7.5	7.5	13.5	13.5	10.24	8.66	7.68	14.3	1,850
EQ7-4010-C ‡	10	7.5	16.5	13.5	10.24	8.66	7.68	14.3	1,930
EQ7-4015-C ‡	15	10	23	18.5	10.24	8.66	7.68	14.3	1,975
EQ7-4020-C ‡	20	15	30.5	24.5	10.24	8.66	7.68	12.8	2,280
EQ7-4025-C ‡	25	20	37	32	15.75	9.84	7.68	20.9	2,490
EQ7-4030-C ‡	30	25	45	39	15.75	9.84	7.68	20.9	3,125
EQ7-4040-C ‡	40	30	60	45	15.75	9.84	7.68	22	4,379
EQ7-4050-C	50	40	75	60	21.65	12.6	10.04	55.1	5,590
EQ7-4060-C	60	50	91	75	21.65	12.6	10.04	57.3	6,900
EQ7-4075-C	75	60	112	91	24.21	13.98	10.63	68.3	7,200
EQ7-4100-C	100	75	150	112	26.57	13.98	10.63	72.8	9,200
EQ7-4125-C	125	100	176	150	29.13	13.98	10.63	93	11,400
EQ7-4150-C*	150	125/150	210	210**	29.13	20.87	12.4	137	14,540
EQ7-4200-C*	200	200	253	253**	29.13	20.87	12.4	141	15,500
EQ7-4250-C*	250	250	304	304**	39.37	20.87	14.17	207	19,200
EQ7-4300-C*	300	300	377	377**	39.37	20.87	14.17	216	21,200
EQ7-4350-C*	350	350	415	415**	39.37	26.77	14.17	284	24,900
EQ7-4450-C*	400/450	350	520	468**	39.37	26.77	14.17	309	29,500
EQ7-4500-C*	500	400/450	650	585**	55.12	26.77	17.32	540	57,000
EQ7-4600-C*	600	500	740	650**	55.12	26.77	17.32	540	59,555
EQ7-4700-C*	700	600	840	740**	55.12	34.68	17.32	805	71,000
EQ7-4800-C*	800	700	960	840**	55.12	34.68	17.32	805	73,950
EQ7-4900-C	900	800	1170	960	61.02	39.37	19.69	1170	128,000
EQ7-41000-C	1000	900	1370	1170	61.02	39.37	19.69	1170	137,300

Notes:

* Marked items are suitable for constant torque V/F control.
** Please consult factory for vector control full load amps for these models.
*** Do Not Apply Single Phase Input Power to these Models
‡ Dynamic braking transistor built-in

EQ7 PERIPHERALS

MULTIPLE DUTY

Effective 07-08-18
Supercedes 03-24-17

OPTION TYPE	MODEL	DESCRIPTION	LIST PRICE ($)
NEMA1 Kit	NEMA1-0.75G1-24	1 HP 230V,460V	50
	NEMA1-3.75G1-24	2,3,5 HP 230V,460V	65
	NEMA1-11G1-24	7.5,10,15,20 HP 230V,460V	110
	NEMA1-22G1-24	25,30 HP 230V, 25,30,40 HP 460V	130
	NEMA1-22G1-2	40 HP 230V	150
	NEMA1-37G1-24	50 HP, 230V,50,60 HP 460V	800
	NEMA1-75G1-24	60,75,100 HP 230V, 75,100,125 HP 460V	1,050
	NEMA1-75G1-2	125 HP 230V	1,615
	NEMA1-110G1-4	150,200 HP 460V	1,400
	NEMA1-160G1-4	250,300 HP 460V	1,725
	NEMA1-220G1-24	150 HP 230V, 350,450 HP 460V	1,800
	NEMA1-315G1-4	500,600 HP 460V	1,100
	NEMA1-400G1-4	700,800 HP 460V	1,275
	NEMA1-630G1-4	900,1000 HP 460V	2,100
DC Bus Choke UL Type 1 Enclosure	E012	100,125,150 HP 230V,100 HP 460V	625
	E013	125 - 350 HP 460V	1,150
	E014	450 - 700 HP 460V	2,400
	E015	800 - 1000 HP 460V	3,800
Braking Unit	BU37-2C	230V 50 HP - 60 HP	1,675
	BU55-2C	230V 75 HP - 100 HP	2,200
	BU90-2C	230V 125 - 150 HP	3,040
	BU37-4C	460V 50 HP - 60 HP	1,726
	BU55-4C	460V 75 HP - 100 HP	2,325
	BU90-4C	460V 125 HP - 150 HP	3,040
	BU132-4C	460V 200 HP - 250 HP	4,175
	BU220-4C	460V 300 HP - 450 HP CONSULT FACTORY for applications above 450 HP	6,075
Braking Resistor	DB0.75-2C	230V 1 HP and below	100
	DB2.2-2C	230V 2 HP - 3 HP	125
	DB3.7-2C	230V 5 HP	175
	DB5.5-2C	230V 7.5 HP - 10 HP	265
	DB7.5-2C	230V 15 HP	307
	DB11-2C	230V 20 HP	388
	DB15-2C	230V 25 HP	555
	DB22-2C	230V 30 HP - 40 HP	915
	DB30-2C	230V 50 HP	1,432
	DB37-2C	230V 60 HP	1,850

Notes:

(1) HP indication of Braking Unit & Braking Resistor are for VT HP of dual rating drives. Conditions are the same as drive.

EQ7 PERIPHERALS

MULTIPLE DUTY

Effective 07-08-18
Supercedes 03-24-17

OPTION TYPE	MODEL	DESCRIPTION	LIST PRICE ($)
Braking Resistor	DB45-2C	230V 75HP	2,265
	DB55-2C	230V 100HP	2,450
	DB75-2C	230V 125HP	3,800
	DB90-2C	230V 150HP	4,200
	DB0.75-4C	460V 1HP	129
	DB2.2-4C	460V 2HP - 3HP	134
	DB3.7-4C	460V 7.5HP	199
	DB5.5-4C	460V 10HP	263
	DB7.5-4C	460V 15HP	308
	DB11-4C	460V 20HP	429
	DB15-4C	460V 25HP	590
	DB22-4C	460V 30HP - 40HP	978
	DB30-4C	460V 50HP	1,163
	DB37-4C	460V 60HP	1,873
	DB45-4C	460V 75HP	2,156
	DB55-4C	460V 100HP	1,854
	DB75-4C	460V 125HP	3,290
	DB110-4C	460V 150HP - 200HP	3,755
	DB132-4C	460V 250HP	4,500
	DB160-4C	460V 300HP	5,425
	DB200-4C	460V 350HP	5,900
	DB220-4C	460V 400 HP - 450 HP CONSULT FACTORY for applications above 450 HP	7,540
Options and Accessories	OPC-ETH	EtherNet card	500
	OPC-G1-DEV	DeviceNet card	1,350
	OPC-G1-CCL	CC-link card	1,200
	OPC-G1-PDP2	PROFIBUS-DP card	1,500
	OPC-PRT2	PROFINET card	1,000
	OPC-G1-COP	CANopen	1,800
	OPC-G1-TL	T-link interface card	1,105
	OPC-G 1-PG	PG interface card (12V)	190
	OPC-G1-PG2	PG interface card (5V)	225
	OPC-G1-PG22	PG Synchronization card	470
	OPC-G1-DI	Digital input interface card	495
	OPC-G1-DO	Digital output interface card	495
	OPC-G1-AIO	Analog input/output interface card	500
	OPC-G1 -RY	Relay communication card	140
	TP-G1W-J1	Standard Keypad (LCD)	450
	TP-E1 U	Keypad (with USB Port) LED Only	130
Keypad Extension Cable	EQ7-3S	3 ft, Cable	60
	EQ7-7S	7 ft. Cable	65

Notes:

(1) The HP indication of Braking Units and Braking Resistors are for VT HP of dual rating drives. Conditions are the same as drive.

LINE REACTORS

230V

Effective 07-08-18
Supercedes 03-24-17

Low priced and easy to install, Line Reactors provide input transient protection from harmonic distortion. When applying a reactor between the drive output and the motor, please contact the Factory.

3% IMPEDANCE, 230V

HP	AMPS	ULCHASSIS UNIT				UL TYPE 1 ENCLOSURE			
		MODEL NO.	DIMENSIONS W x H x D (in.)	WEIGHT (lbs.)	LIST PRICE	MODEL NO.	DIMENSIONS H x W x D (in.)	WEIGHT (lbs.)	LIST PRICE ($)
1	5.5	KDRULA25L	4.00 x 4.18 x 3.75	4	166	KDRULA25LE01	12.25 x 12.50 x 6.75	14.5	445
1.5	8	KDRULA26L	4.00 x 4.18 x 3.75	4	175	KDRULA26LE01	12.25 x 12.50 x 6.75	14.5	454
2	10	KDRULA27L	4.00 x 4.18 x 3.75	4	177	KDRULA27LE01	12.25 x 12.50 x 6.75	14.5	459
3	12	KDRULA28L	4.00 x 4.18 x 3.75	4	201	KDRULA28LE01	12.25 x 12.50 x 6.75	14.5	477
5	19	KDRULB22L	5.00 x 6.00 x 4.00	8	284	KDRULB22LE01	12.25 x 12.50 x 6.75	18.5	567
7.5	25	KDRULB23L	5.00 x 6.00 x 4.00	8	305	KDRULB23LE01	12.25 x 12.50 x 6.75	18.5	589
10	34	KDRULD25L	5.75 x 7.20 x 4.25	12	319	KDRULD25LE01	12.25 x 12.50 x 6.75	22.5	606
15	48	KDRULD24L	5.75 x 7.20 x 4.25	12	338	KDRULD24LE01	12.25 x 12.50 x 6.75	22.5	613
20	62	KDRULD26L	5.75 x 7.20 x 4.25	12	361	KDRULD26LE01	12.25 x 12.50 x 6.75	22.5	636
25	80	KDRULC22L	5.75 x 7.20 x 5.00	15	546	KDRULC22LE01	12.25 x 12.50 x 6.75	25.5	804
30	100	KDRULF24L	7.00 x 9.00 x 6.00	33	582	KDRULF24LE01	19.13 x 15.43 x 15.43	67	1,082
40	118	KDRULF25L	7.00 x 9.00 x 6.00	33	814	KDRULF25LE01	19.13 x 15.43 x 15.43	67	1,314
50	152	KDRULF26L	7.00 x 9.00 x 6.00	36	948	KDRULF26LE01	19.13 x 15.43 x 15.43	67	1,443
60	180	KDRULH22L	9.00 x 11.00 x 7.00	51	1,093	KDRULH22LE01	22.12 x 20.43 x 24.37	113	2,010
75	211	KDRULI23L	9.00 x 11.00 x 7.00	56	1,126	KDRULI23LE01	22.12 x 20.43 x 24.37	117	2,062
100	280	KDRULI24L	9.00 x 11.00 x 7.00	56	1,237	KDRULI24LE01	22.12 x 20.43 x 24.37	117	2,165
125	377	KDRULG22L	9.00 x 11.00 x 9.00	74	1,727	KDRULG22LE01	22.12 x 20.43 x 24.37	132	2,680
150	420	KDRULJ23L	9.00 x 11.00 x 11.50	80	1,907	KDRULJ23LE01	22.12 x 20.43 x 24.37	137	2,866

5% IMPEDANCE, 230V

HP	AMPS	UL CHASSIS UNIT				UL TYPE 1 ENCLOSURE			
		MODEL NO.	DIMENSIONS W x H x D (in.)	WEIGHT (lbs.)	LIST PRICE	MODEL NO.	DIMENSIONS H x W x D (in.)	WEIGHT (lbs.)	LIST PRICE ($)
1	5.5	KDRULA25H	4.00 x 4.18 x 3.75	4	175	KDRULA25HE01	12.25 x 12.50 x 6.75	14.5	474
1.5	8	KDRULA27H	4.00 x 4.18 x 3.75	4	192	KDRULA27HE01	12.25 x 12.50 x 6.75	14.5	495
2	10	KDRULA26H	4.00 x 4.18 x 3.75	4	197	KDRULA26HE01	12.25 x 12.50 x 6.75	14.5	500
3	12	KDRULA28H	4.00 x 4.18 x 3.75	4	213	KDRULA28HE01	12.25 x 12.50 x 6.75	14.5	508
5	19	KDRULB25H	5.00 x 6.00 x 4.00	8	289	KDRULB25HE01	12.25 x 12.50 x 6.75	18.5	571
7.5	25	KDRULB26H	5.00 x 6.00 x 4.00	8	320	KDRULB26HE01	12.25 x 12.50 x 6.75	18.5	618
10	34	KDRULD21H	5.75 x 7.20 x 4.25	12	327	KDRULD21HE01	12.25 x 12.50 x 6.75	22.5	621
15	48	KDRULD22H	5.75 x 7.20 x 4.25	12	429	KDRULD22HE01	12.25 x 12.50 x 6.75	22.5	716
20	62	KDRULC22H	5.75 x 7.20 x 5.00	15	486	KDRULC22HE01	12.25 x 12.50 x 6.75	25.5	794
25	80	KDRULF28H	7.00 x 9.00 x 6.00	30	585	KDRULF28HE01	19.13 x 15.43 x 15.43	67	1,155
30	100	KDRULF25H	7.00 x 9.00 x 6.00	33	665	KDRULF25HE01	19.13 x 15.43 x 15.43	67	1,263
40	118	KDRULF26H	7.00 x 9.00 x 6.00	33	866	KDRULF26HE01	19.13 x 15.43 x 15.43	67	1,433
50	152	KDRULH24H	9.00 x 11.00 x 7.00	40	1,052	KDRULH24HE01	19.13 x 15.43 x 15.43	70	1,598
60	180	KDRULH23H	9.00 x 11.00 x 7.00	51	1,211	KDRULH23HE01	19.13 x 15.43 x 15.43	81	2,036
75	211	KDRULI22H	9.00 x 11.00 x 7.00	56	1,515	KDRULI22HE01	22.12 x 20.43 x 24.37	117	2,526
100	280	KDRULI21H	9.00 x 11.00 x 7.00	56	1,835	KDRULI21HE01	22.12 x 20.43 x 24.37	117	2,835
125	377	KDRULG25H	9.00 x 11.00 x 9.00	74	1,881	KDRULG25HE01	22.12 x 20.43 x 24.37	132	2,912
150	420	KDRULJ22H	9.00 x 11.00 x 9.75	79	2,036	KDRULJ22HE01	22.12 x 20.43 x 24.37	136	3,026

LINE REACTORS

460V

Effective 07-08-18
Supercedes 03-24-17

3% IMPEDANCE, 460V

HP	AMPS	CHASSIS UNIT				UL TYPE 1 ENCLOSURE			
		MODEL NO.	DIMENSIONS W x H x D (in.)	WEIGHT (lbs.)	LIST PRICE ($)	MODEL NO.	DIMENSIONS W x H x D (in.)	WEIGHT (lbs.)	LIST PRICE ($)
1	2.1	KDRULA8L	4.00 x 4.18 x 3.75	4	151	KDRULA8LE01	12.25 X 12.50 X 6.75	14.5	443
2	6.4	KDRULA1L	4.00 x 4.18 x 3.75	4	159	KDRULA1LE01	12.25 X 12.50 X 6.75	14.5	455
3	6	KDRULA2L	4.00 x 4.18 x 3.75	4	175	KDRULA2LE01	12.25 X 12.50 X 6.75	14.5	474
5	9.6	KDRULA3L	4.00 x 4.18 x 3.75	4	180	KDRULA3LE01	12.25 X 12.50 X 6.75	14.5	482
7.5	14	KDRULA4L	4.00 x 4.18 x 3.75	4	203	KDRULA4LE01	12.25 X 12.50 X 6.75	14.5	496
10	14	KDRULA5L	4.00 x 4.18 x 3.75	5	261	KDRULA5LE01	12.25 X 12.50 X 6.75	14.5	553
15	30	KDRULB2L	5.00 x 6.00 x 4.00	8	299	KDRULB2LE01	12.25 X 12.50 X 6.75	18.5	593
20	30	KDRULB1L	5.00 x 6.00 x 4.00	8	325	KDRULB1LE01	12.25 X 12.50 X 6.75	18.5	619
25	50	KDRULD1L	5.75 x 7.20 x 4.25	10	351	KDRULD1LE01	12.25 X 12.50 X 6.75	20.5	639
30	45	KDRULD2L	5.75 x 7.20 x 4.25	10	433	KDRULD2LE01	12.25 X 12.50 X 6.75	20.5	725
40	55	KDRULC1L	5.75 x 7.20 x 5.00	15	479	KDRULC1LE01	12.25 X 12.50 X 6.75	25.5	769
50	65	KDRULF2L	7.00 x 9.00 x 6.00	25	567	KDRULF2LE01	19.13 X 15.43 X 15.43	67.0	1,159
60	77	KDRULF4L	7.00 x 9.00 x 6.00	25	593	KDRULF4LE01	19.13 X 15.43 X 15.43	67.0	1,175
75	110	KDRULF3L	7.00 x 9.00 x 6.00	33	873	KDRULF3LE01	19.13 X 15.43 X 15.43	67.0	1,459
100	150	KDRULH3L	7.00 x 9.00 x 7.00	46	1,007	KDRULH3LE01	19.13 X 15.43 X 15.43	78.0	1,588
125	165	KDRULH2L	9.00 x 11.00 x 7.00	46	1,206	KDRULH2LE01	19.13 X 15.43 X 15.43	78.0	1,797
150	185	KDRULH1L	9.00 x 11.00 x 7.00	46	1,397	KDRULH1LE01	22.12 X 20.43 X 24.37	108.0	2,526
200	240	KDRULG3L	9.00 x 11.00 x 8.00	74	1,845	KDRULG3LE01	22.12 X 20.43 X 24.37	131.0	2,869
250	340	KDRULG1L	9.00 x 11.00 x 8.00	74	1,990	KDRULG1LE01	22.12 X 20.43 X 24.37	132.0	3,062
300	370	KDRULG2L	9.00 x 11.00 x 8.00	74	2,072	KDRULG2LE01	22.12 X 20.43 X 24.37	132.0	3,093
350	500	KDRULJ2L	9.00 x 11.00 x 9.00	80	2,402	KDRULJ2LE01	22.12 X 20.43 X 24.37	150.0	3,531
400	520	KDRULJ1L	9.00 x 11.00 x 9.00	80	2,670	KDRULJ1LE01	22.12 X 20.43 X 24.37	150.0	3,711
450	610	KDRULL1L	11.38 x 14.50 x 9.50	120	3,077	KDRULL1LE01	22.12 X 20.43 X 24.37	190.0	4,103
500	610	KDRULL2L	11.38 x 14.50 x 9.50	120	4,485	KDRULL2LE01	22.12 X 20.43 X 24.37	190.0	5,567
600	720	KDRULL3L	11.38 x 14.50 x 9.50	164	6,082	KDRULL3LE01	48.00 X 36.27 X 36.27	748	9,588
700	840	KDRULS1L	11.38 x 15.00 x 13.25	180	6,649	KDRULS1LE01	48.00 X 36.27 X 36.27	872	10,309
800	965	KDRULX2L	18.50 x 21.00 x 18.00	290	9,278	KDRULX2LE01	48.00 X 36.27 X 36.27	997	12,887

Notes:

(1) Contact factory for 900 HP and 1000 HP applications

LINE REACTORS

460V

Effective 07-08-18
Supercedes 03-24-17

5% IMPEDANCE, 460V

HP	AMPS	CHASSIS UNIT				UL TYPE 1 ENCLOSURE			
		MODEL NO.	DIMENSIONS W x H x D (in.)	WEIGHT (lbs.)	LIST PRICE ($)	MODEL NO.	DIMENSIONS H x W x D (in.)	WEIGHT (lbs.)	LIST PRICE ($)
1	2.1	KDRULA8H	4.00 x 4.18 x 3.75	4	175	KDRULA8HE01	12.25 x 12.50 x 6.75	14.5	454
2	6.4	KDRULA1H	4.00 x 4.18 x 3.75	4	180	KDRULA1HE01	12.25 x 12.50 x 6.75	14.5	464
3	6	KDRULA2H	4.00 x 4.18 x 3.75	4	232	KDRULA2HE01	12.25 x 12.50 x 6.75	14.5	515
5	9.6	KDRULA3H	4.00 x 4.18 x 3.75	4	268	KDRULA3HE01	12.25 x 12.50 x 6.75	14.5	552
7.5	14	KDRULA4H	4.00 x 4.18 x 3.75	5	299	KDRULA4HE01	12.25 x 12.50 x 6.75	15.5	591
10	14	KDRULA5H	4.00 x 4.18 x 3.75	5	371	KDRULA5HE01	12.25 x 12.50 x 6.75	15.5	649
15	30	KDRULB2H	5.00 x 6.00 x 4.00	7	381	KDRULB2HE01	12.25 x 12.50 x 6.75	17.5	660
20	30	KDRULC3H	5.75 x 7.20 x 5.00	15	428	KDRULC3HE01	12.25 x 12.50 x 6.75	25.5	701
25	50	KDRULC1H	5.75 x 7.20 x 5.00	15	515	KDRULC1HE01	12.25 x 12.50 x 6.75	25.5	784
30	45	KDRULE2H	5.75 x 7.20 x 5.00	16	588	KDRULE2HE01	12.25 x 12.50 x 6.75	26.5	856
40	55	KDRULF4H	7.00 x 9.00 x 6.00	25	608	KDRULF4HE01	19.13 x 15.43 x 15.43	67.0	1,186
50	65	KDRULF1H	7.00 x 9.00 x 6.00	25	825	KDRULF1HE01	19.13 x 15.43 x 15.43	67.0	1,418
60	77	KDRULF2H	7.00 x 9.00 x 6.00	25	876	KDRULF2HE01	19.13 x 15.43 x 15.43	67.0	1,443
75	110	KDRULH2H	9.00 x 11.00 x 7.00	52	1,052	KDRULH2HE01	19.13 x 15.43 x 15.43	82.0	1,629
100	150	KDRULI2H	9.00 x 11.00 x 7.00	52	1,268	KDRULI2HE01	19.13 x 15.43 x 15.43	82.0	1,784
125	165	KDRULG3H	9.00 x 11.00 x 8.00	57	1,448	KDRULG3HE01	22.12 x 20.43 x 24.37	122.0	2,448
150	185	KDRULG1H	9.00 x 11.00 x 8.00	60	1,701	KDRULG1HE01	22.12 x 20.43 x 24.37	127.0	2,742
200	240	KDRULJ1H	9.00 x 11.00 x 9.00	75	2,299	KDRULJ1HE01	22.12 x 20.43 x 24.37	136.0	3,351
250	340	KDRULL1H	11.38 x 14.50 x 9.50	105	2,526	KDRULL1HE01	22.12 x 20.43 x 24.37	162.0	3,505
300	370	KDRULL2H	11.38 x 14.50 x 9.31	105	2,577	KDRULL2HE01	22.12 x 20.43 x 24.37	162.0	3,582
350	500	KDRULL3H	11.38 x 14.50 x 9.31	109	2,974	KDRULL3HE01	22.12 x 20.43 x 24.37	166.0	3,892
400	520	KDRULL4H	11.38 x 14.50 x 9.50	135	3,814	KDRULL4HE01	22.12 x 20.43 x 24.37	176.0	4,742
450	610	KDRULL5H	11.38 x 14.50 x 11.00	135	4,010	KDRULL5HE01	36.00 x 28.39 x 30.19	295.0	6,082
500	610	KDRULL6H	11.38 x 14.50 x 11.00	135	4,923	KDRULL6HE01	36.00 x 28.39 x 30.19	295.0	7,010
600	720	KDRULS1H	11.38 x 15.00 x 13.25	272	6,186	KDRULS1HE01	48.00 X 36.27 X 36.27	685	9,691
700	840	KDRULS2H	11.38 x 15.00 x 13.25	280	7,098	KDRULS2HE01	48.00 X 36.27 X 36.27	685	10,928
800	965	KDRULX2H	18.50 X 21.00 X 18.00	305	9,794	KDRULX2HE01	48.00 X 36.27 X 36.27	715	13,299

Notes:

(1) Contact factory for 900 HP and 1000 HP applications

OUTPUT REACTORS/ LOW PASS FILTER COMBINATIONS

460V

Effective 07-08-18
Supercedes 03-24-17

Output Reactors/ Low Pass Filter Combinations (DV/DT) installed between an AC Drive and a motor limit the magnitude of voltage spikes at the motor. The filter also protects cables and the motor's insulation from damage caused by PWM reflected waves.

OUTPUT REACTOR/ LOW PASS FILTER COMBINATION, 460V

HP	AMPS	CHASSIS UNIT				UL TYPE 1 ENCLOSURE			
		MODEL NO.	DIMENSIONS W x H x D (in.)	WEIGHT (lBS.)	LIST PRICE ($)	MODEL NO.	DIMENSIONS H x W x D (in.)	WEIGHT (lBS.)	LIST PRICE ($)
1	3	V1K3A00	9.00 x 5.50 x 7.25	8	546	V1K3A01	9.00 x 5.50 x 10.00	11	856
2	4	V1K4A00	9.00 x 5.50 x 7.25	8	557	V1K4A01	9.00 x 5.50 x 10.00	11	866
3	6	V1K6A00	9.00 x 5.50 x 7.25	8	567	V1K6A01	9.00 x 5.50 x 10.00	11	887
5	8	V1K8A00	9.00 x 5.50 x 8.25	8	577	V1K8A01	9.00 x 5.50 x 10.00	11	902
7.5	12	V1K12A00	9.00 x 5.50 x 8.25	8	608	V1K12A01	9.00 x 5.50 x 10.00	11	928
10	18	V1K18A00	9.00 x 5.50 x 8.25	12	668	V1K18A01	9.00 x 5.50 x 10.00	15	1,005
15	25	V1K25A00	9.00 x 5.50 x 8.25	12	807	V1K25A01	9.00 x 5.50 x 10.00	15	1,082
20	27	V1K27A00	9.00 x 5.50 x 8.25	14	851	V1K27A01	9.00 x 5.50 x 10.00	15	1,108
25	35	V1K35A00	12.00 x 8.00 x 9.00	17	876	V1K35A01	12.00 x 8.00 x 11.50	23	1,134
30	45	V1K45A00	12.00 x 8.00 x 9.00	17	918	V1K45A01	12.00 x 8.00 x 11.50	23	1,211
40	55	V1K55A00	12.00 x 8.00 x 9.00	23	938	V1K55A01	12.00 x 8.00 x 11.50	23	1,322
50	80	V1K80A00	12.00 x 8.00 x 9.00	23	1,336	V1K80A01	12.00 x 8.00 x 11.50	29	1,699
60	80	V1K80A00	12.00 x 8.00 x 9.00	23	1,336	V1K80A01	12.00 x 8.00 x 11.50	29	1,699
75	110	V1K110A00	12.00 x 8.00 x 10.25	40	1,572	V1K110A01	16.50 x 18.00 x 15.00	68	2,338
100	130	V1K130A00	8.50 x 11.75 x 9.50	55	1,856	V1K130A01	16.50 x 18.00 x 15.00	83	2,561
125	160	V1K160A00	8.50 x 11.75 x 10.50	60	2,004	V1K160A01	16.50 x 18.00 x 15.00	83	2,672
150	200	V1K200A00	8.50 x 11.75 x 9.25	60	2,268	V1K200A01	16.50 x 18.00 x 15.00	93	2,887
200	250	V1K250A00	8.50 x 11.75 x 9.25	65	2,371	V1K250A01	16.50 x 18.00 x 15.00	93	2,990
250	305	V1K305A00	8.75 x 11.75 x 12.25	80	2,449	V1K305A01	16.50 x 18.00 x 30.00	117	3,093
300	362	V1K362A00	8.75 x 11.75 x 12.00	80	2,861	V1K362A01	16.50 x 18.00 x 30.00	117	3,299
350	420	V1K420A00	10.00 x 11.75 x 13.75	95	3,299	V1K420A01	16.50 x 18.00 x 30.00	132	3,814
400	480	V1K480A00	10.00 x 11.75 x 13.75	100	3,563	V1K480A01	16.50 x 18.00 x 30.00	138	4,124
500	600	V1K600A00	12.75 x 15.00 x 13.75	130	3,674	V1K600A01	16.50 x 18.00 x 30.00	168	4,536
600	750	V1K750A00	12.75 x 15.00 x 14.50	135	5,901	V1K750A01	16.50 x 18.00 x 30.00	180	7,835

Notes:

(1) Contact factory for applications above 600 HP

SOLID STATE STARTERS SECTION

Effective 07-08-18
Supercedes 03-24-17

TEAMMASTER™

LOW VOLTAGE SOLID STATE STARTERS (LVSS)

Effective 07-08-18
Supercedes 03-24-17

TECO-Westinghouse can supply low voltage solid state starters for a variety of applications such as pumping, compression, saws (woodworking), crushing and grinding operations

COMBINATION PANELS INCLUDE:

- NEMA 3R enclosure
- Circuit breaker with flanged disconnect (service entrance rated)
- EMX3 heavy duty solid state starter
- Panel mounted switch: Soft Start/OFF/Line Start
- 110V control power transfomer
- Space heater with thermostat
- Door Mounted: Keypad
  - Start / Stop Pushbutton
  - Local / Remote Switch
  - Reset Pushbutton
  - Power On Light
  - Run Light
  - Fault Light

STANDARD STARTER FEATURES (CHASSIS):

- Voltage Ratings: 208, 230, 460, 575 or 690VAC
- 15-1200HP (Standard duty)
- Constant Current, Current Ramp, XLR-8 Adaptive Acceleration, Kickstart
- LCD Keypad with real time monitoring and event log:
  - Graphical Display
  - User Friendly
  - Copy program setting between starters
  - Removable for remote mounted
- Emergency Run Mode
- RS 485 Communications via optional Modules
- - Modbus, Profibus, ProfiNET, DeviceNET, Modbus TCP, Ethernet IP
- PC Configuration Software Available

ENGINEERED PACKAGES:

- Fused disconnect or circuit breaker disconnect
- Internal shunt bypass or continuous duty
- Light, standard and heavy duty ratings
- Operator devices and pilot lights
- Fans, filters and enclosure modifiers
- Door-Mounted LCD Keypad

Effective 07-08-18
Supercedes 03-24-17

CHASSIS - W / BUILT-IN BYPASS

MODEL NO.	LIGHT DUTY		STANDARD DUTY		HEAVY DUTY		DIMENSIONS (in.)			WEIGHT (lbs.)	LIST PRICE ($)
	HP	MAX AMPS	HP	MAX AMPS	HP	MAX AMPS	HEIGHT	WIDTH	DEPTH		
*EMX3-0023B	15	23	15	21	10	16	11.6	6.2	7.6	9.3	2,100
*EMX3-0043B	30	43	25	39	20	29	11.6	6.2	7.6	9.3	2,275
*EMX3-0050B		50	30	46	25	35	11.6	6.2	7.6	9.3	2,300
*EMX3-0053B	40	53	40	53	30	45	11.6	6.2	7.6	9.3	2,450
*EMX3-0076B	60	76	50	63		46	11.6	6.2	8.8	9.9	2,475
*EMX3-0097B	75	97	60	79	40	58	11.6	6.2	8.8	10	2,900
*EMX3-0100B		100		84	50	65	11.6	6.2	8.8	10	3,350
*EMX3-0105B		105	75	105	60	79	11.6	6.2	8.8	10	3,790
*EMX3-0145B	100	145	100	123		90	17.2	11.1	9.8	30.9	4,215
*EMX3-0170B	125	170		141	75	110	17.2	11.1	9.8	31.3	4,400
*EMX3-0200B	150	200	125	159	100	135	17.2	11.1	9.8	33.1	4,855
*EMX3-0220B		220	150	178	125	156	17.2	11.1	9.8	33.1	6,420
*EMX3-0255B	200	255		205	150	180	17.3	16.7	11.7	57.3	7,115
*EMX3-0350B	300	350	250	287	200	240	17.3	16.7	11.7	64.8	7,890
*EMX3-0425B	350	425	300	359	250	302	17.3	16.7	11.7	64.8	9,230
*EMX3-0500B	450	500		384		324	25.2	16.9	11.7	110.2	9,770
*EMX3-0580B	500	580	350	426	300	360	25.2	16.9	11.7	110.2	10,000
*EMX3-0700B		700	400	513	350	431	25.2	16.9	11.7	140	10,855
*EMX3-0820B	600	820	500	605	400	509	25.2	16.9	11.7	140	13,230
*EMX3-0920B	700	920		673	500	590	25.2	16.9	11.7	141.1	14,788
*EMX3-1000B	800	1000	600	783	600	720	25.2	16.9	11.7	141.1	15,320
NOTE: Units below are "C" models and do not have built in ByPass											
EMX3-0255C	200	242	150	200	125	160	16.4	15.4	11.2	50.7	6,300
EMX3-0360C	300	360	250	302	200	242	21.8	16.9	11.9	79.4	6,515
EMX3-0380C		380		341		272	21.8	16.9	11.9	79.4	6,540
EMX3-0430C	350	430	300	360	250	302	21.8	16.9	11.9	79.4	8,533
EMX3-0620C	500	620	400	493	300	394	21.8	16.9	11.9	87	10,600
EMX3-0650C		650	450	515	350	414	21.8	16.9	11.9	87	12,125
EMX3-0790C	600	790	500	661	450	527	21.8	16.9	11.9	87	13,190
EMX3-0930C	700	930	600	751	500	597	21.8	16.9	11.9	113.5	14,555
EMX3-1200C	1000	1200	900	1148	800	932	29.5	22.6	14.2	283.2	22,800
EMX3-1410C	1100	1410	1000	1200	900	979	29.5	22.6	14.2	286.6	26,760
EMX3-1600C	1300	1600	1200	1444	1000	1181	29.5	22.6	14.2	308.7	31,000

Notes:

* Includes integral bypass for 'B' models.

(1) Built-to-order: Please allow 1-2 weeks for shipment of complete TEAMMaster™ unit when ordering these options to a stock starter.

(2) Engineered Packages are not standard stock; Contact Factory for Lead Times

(3) All Models listed are for 460 VAC input and based on Standard Duty FLA. Contact factory for other ratings. Dimensions and weights are approximate.

COMBINATION STARTERS W/ CIRCUIT BREAKERS - LOW VOLTAGE HEAVY DUTY

Effective 07-08-18
Supercedes 03-24-17

HEAVY DUTY WITH ACROSS -THE-LINE BYPASS

MODEL NO.	HP	FLA AMPS	DIMENSIONS (in.)			WEIGHT (lbs.)	LIST PRICE ($)
			HEIGHT	WIDTH	DEPTH		NEMA 3R
*TWE-0014B-4-HD	10	14	36	32	12	220	8,500
*TWE-0027B-4-HD	20	27	36	32	12	220	8,750
*TWE-0034B-4-HD	25	34	36	32	12	220	8,931
*TWE-0040B-4-HD	30	40	36	32	12	220	9,025
*TWE-0052B-4-HD	40	52	36	32	12	220	9,060
*TWE-0065B-4-HD	50	65	36	32	12	240	9,777
TWE-0077C-4-HD	60	77	36	32	12	240	11,300
TWE-0096C-4-HD	75	96	48	38	16	295	11,655
TWE-0125C-4-HD	100	125	48	38	16	295	13,433
TWE-0156C-4-HD	125	156	48	38	16	320	14,225
TWE-0180C-4-HD	150	180	48	38	16	340	15,780
TWE-0240C-4-HD	200	240	48	38	16	355	18,500
TWE-0302C-4-HD	250	302	48	38	16	360	21,000
TWE-0360C-4-HD	300	360	48	38	16	370	21,465
TWE-0414C-4-HD	350	414	72	38	16	550	27,640
TWE-0477C-4-HD	400	477	90	40	16	800	29,400
TWE-0515C-4-HD	450	515	90	40	18	800	31,005
TWE-0590C-4-HD	500	590	90	40	18	850	35,300
TWE-0720C-4-HD	600	720	90	40	18	850	39,010
TWE-0840C-4-HD	700	840	90	40	18	850	57,000
TWE-0960C-4-HD	800	960	90	72	20	1100	67,500
TWE-1080C-4-HD	900	1080	90	72	20	1100	73,000
TWE-1200C-4-HD	1000	1200	90	72	20	1100	81,500

Notes:

* Includes integral bypass for 'B' models.

(1) Built-to-order: Please allow 1-2 weeks for shipment of complete TEAMMaster™ unit when ordering these options to a stock starter.

(2) Engineered Packages are not standard stock; Contact Factory for Lead Times.

(3) All Models listed are for 460 VAC input . Contact factory for other ratings. Dimensions and weights are approximate
NEMA 3R = 3R

TEAMMASTER™ MEDIUM VOLTAGE

MCB PACKAGES with DISCONNECT

Effective 07-08-18
Supercedes 03-24-17

Engineered to provide solutions for a variety of heavy duty applications, TEAMMASTER™ Medium Voltage Soft Starters are feature loaded. They are an excellent solution to Crushers, Grinders, Ball & Hammer Mills, Compressors, Centrifuges, plus many other options.

COMBINATION PANELS INCLUDE:

- NEMA 12, NEMA 3R, NEMA 3ROD (door in door design), and Custom
- UL 347 Listed 6th Edition, Class E2
- 60kV BIL
- Short Circuit Fault Rated 200MVA (2300V), 350MVA (4160V)
- 6500 PIV, UL347 – 6th Edition Certified and Listed at 2.4kV
- 13,000 PIV, UL347 – 6th Edition Certified and Listed at 4.16kV
- Fiber-Optic Firing
- 500% - 30 Second Rated (adjustable and customizable per applications)
- Load Break 5kV Switch, w/Viewing Window, Grounding Assembly, and Mechanically Interlocked Lockable Handle.
- Load matched Class R Fusing
- Fixed mounted Vacuum Contactors (Line Isolation & Bypass) Full Horsepower Rated
- Smart keypad/HMI with multiline display
- Simulation Mode Feature for "quick commissioning"
- Sim Card data logging for remote factory assistance
- Emergency Full Voltage Switch (located in LV compartment for Across Line Starting backup)
- Adjustable Electronic Overload for Emergency mode
- 120V Control Power Transformer
- Door Mounted: Start/Stop Pushbutton, Emergency Stop Pushbutton, and Run/Stop/Fault Lights
- Additional Options Adders :
  - Door Mounted Keypad
  - Communications: Modbus, Modbus TCP, USB, DeviceNet, Profibus, Profinet, Ethernet IP
  - Top Hat and/or Horizontal Bussing
  - Space Heater with Thermostat

TEAMMASTER™ - STANDARD PACKAGE

MEDIUM VOLTAGE CRUSHER DUTY

Effective 07-08-18
Supercedes 03-24-17

ACROSS -THE-LINE BYPASS

2300 VOLT NEMA 12							
MODEL NO.	HP	FLA AMPS	DIMENSIONS (in.)			WEIGHT (lbs.)	NEMA 12
			HEIGHT	WIDTH	DEPTH		LIST PRICE ($)
TMVE-0110-V02-N12	500	110	92.5	36	30	1800	64,500
TMVE-0200-V02-N12	900	200	92.5	36	30	1800	65,700
TMVE-0360-V02-N12	1750	360	92.5	36	30	1800	67,100

4160 VOLT NEMA 12							
MODEL NO.	HP	FLA AMPS	DIMENSIONS (in.)			WEIGHT (lbs.)	NEMA 3R
			HEIGHT	WIDTH	DEPTH		LIST PRICE ($)
TMVE-0110-V04-N12	900	110	92.5	36	30	1800	68,100
TMVE-0200-V04-N12	1500	200	92.5	36	30	1800	70,000
TMVE-0360-V04-N12	3000	360	92.5	36	30	1800	73,200

2300 VOLT NEMA 3R							
MODEL NO.	HP	FLA AMPS	DIMENSIONS (in.)			WEIGHT (lbs.)	NEMA 12
			HEIGHT	WIDTH	DEPTH		LIST PRICE ($)
TMVE-0110-V02-N3R	500	110	92.5	36	30	2000	65,700
TMVE-0200-V02-N3R	900	200	92.5	36	30	2000	67,350
TMVE-0360-V02-N3R	1750	360	92.5	36	30	2000	69,090

4160 VOLT NEMA 3R							
MODEL NO.	HP	FLA AMPS	DIMENSIONS (in.)			WEIGHT (lbs.)	NEMA 3R
			HEIGHT	WIDTH	DEPTH		LIST PRICE ($)
TMVE-0110-V04-N3R	900	110	92.5	36	30	2000	70,800
TMVE-0200-V04-N3R	1500	200	92.5	36	30	2000	71,500
TMVE-0360-V04-N3R	3000	360	92.5	36	30	2000	74,700

MODULAR OPTIONS

MODEL	STANDARD OPTIONS	LIST PRICE ($)
ES	E-Stop (Red Mushroom Head)	350
RTD	12 – RTD input	2,900
TP	Top Entry Top Hat (18" x 36" x 20")	1,770
DN	DeviceNet Interface	560
PB	Profibus Interface	690
PN	Profinet Interface	1,570
IP	Ethernet IP Interface	1,260
TCP	Modbus TCP Interface	1,200
MB	Modbus Interface	375

Notes:

(1) Starters are top entry. Bottom exit available upon request. Dimensions and weights are approximate.
(2) Power fuses ship loose. Please provide motor full load amps at time of order for proper fuse sizing.
(4) The TEAMMaster™ series was designed as an integrated package.
Listed above are the available modular options. For systems requiring more extensive requirements, please call the factory.
(6) Built-to-order: Please allow 1-2 weeks for shipment of complete TEAMMaster™ unit when ordering these options to a stock starter.

MEDIUM VOLTAGE DRIVES

Effective 07-08-18
Supercedes 03-24-17

VERSABRIDGE® FEATURES

Effective 07-08-18
Supercedes 03-24-17

With over 100 years of experience in motor design and application, TECO-Westinghouse Motor Company is a premier supplier of AC and DC motors and generators. Ranging from fractional HP ratings to 100,000 HP, these high-quality machines are used in a variety of rugged applications across several industries throughout the world.

TECO-Westinghouse comprises the experience of Westinghouse, a leader in the motor industry since 1888, and TECO Electric & Machinery Co, Ltd., a multinational conglomerate with over 50 years of manufacturing experience. Together, TECO-Westinghouse embodies the capabilities and proud traditions of excellence from both companies and carries them forward.

In keeping with this idea, TECO-Westinghouse is pleased to now offer a complete package of Variable Speed Drive (VSD) systems that includes an Input/ Output Switchgear, Medium Voltage Drive (MVD), and motors.

VersaBridge® MVDs provide reliable motor control for a variety of industry specific and general purpose applications including Oil & Gas, Utility/ Power Generation, Metals and Mines. These patented MVDs are designed utilizing a multilevel H-Bridge topology that reduces the harmonic levels to extremely low levels. The modular design facilitates ease of installation, commissioning and maintenance. The VersaBridge® is an innovative product that combines reliable, simple, and compact solutions with the latest power electronics and cooling technologies.

FEATURES

Modularity: Modular design with common building blocks (Mains, Slices, Cubes) make VersaBridge® MVD scalable for different power and voltage ratings with fewer spare parts required. Power switching modules (Cubes) can be easily removed in the event of a failure.

Quick and Easy Installation: VersaBridge® MVD provides both top and bottom cable entry as standard on all models. All shipping sections are delivered to the customer pre-terminated, making field assembly fast and efficient.

Serviceability: VersaBridge® power cubes are interchangeable and can be easily replaced within 30 minutes. Additionally, the modular design of VersaBridge® MVD requires few spare parts since the parts are universal and can be used in any configuration regardless of the voltage or power class.

Multi-level, Cascaded H-Bridge Topology produces near sinusoidal voltage output which reduces motor harmonics and torque pulsations, even at low speeds with virtually no cable length restriction. VersaBridge® MVD produces an output voltage which has at least 7 levels measured line-to-neutral and 13 levels measured line-to-line, allowing VersaBridge MVDs to be applied to new or existing motors having standard insulation systems without the need for harmonic mitigation.

Ultra Low Utility-Side Harmonics exceed the IEEE-519 Standard requirements without any additional components.

Power Cube Bypass: VersaBridge® MVD keeps your system running reliably by automatically bypassing failed power cubes and continuing operation within ¼ of a second of the initiating fault event. VersaBridge® cube bypass is software configurable to be Automatic or Manual. Both modes of bypass are designed to eliminate unnecessary voltage stress on the motor by keeping the neutral voltage balanced.

N+1…N+N Redundancy: Due to the modularity of VersaBridge® MVD, redundant Slices can be added to any system (new installation or retrofit) to achieve N+1 or more redundancy. This ensures that the process continues to operate at full rated power after a power cube bypass event.

Flying Start into a Spinning Load: VersaBridge® MVD offers the ability to smoothly catch and accelerate a spinning load without producing any severe torque, voltage, or current transients on the driven equipment.

Power Dip Ride-Through: VersaBridge® MVD provides greater than five cycle power loss ride-through to keep the process running without the need for auxiliary UPS systems.

One Drive for Multiple Motors: Using the VersaBridge® MVDs' Synchronous Transfer feature, multiple motors can be started and synchronously transferred from the drive bus to the utility bus (Up Transfer) or from the utility bus to the drive bus (Down Transfer).

Industry Standard Modbus TCP Communication: Standard protocols allow the VersaBridge® MVDs to easily integrate with various SCADA or DCS systems using Ethernet.

VERSABRIDGE® SPECIFICATIONS

Effective 07-08-18
Supercedes 03-24-17

Electrical

Output voltage	0 – 13.8 kV
Output frequency Min - Max	0 – 120 Hz
Auxiliary Supply	200 – 240 V, 1φ std; optional configurations available
Rated Supply Voltage	2.3 – 13.8 kV ±10%
Rated System Frequency	60 Hz ±5%
Voltage Variation	-30% to +10% for 30 line cycles
Input Current Harmonics THD	≤ 2% exceeds IEEE-519 requirements (36-pulse)
Inverter Topology	IGBT H-Bridge
Cooling	Advanced 2-phase cooling, forced-air cooling
Capacitors	Film
Regulatory Compliance	IEEE, ANSI, NEMA, CSA, cUL (listed), UL (listed)
Controls	V/Hz, Vector
Speed Regulation	0.1% with feedback, 0.5% without feedback
Connection	Top, bottom or both cable entry/exit
Power Ride Through	Minimum 5 cycles
Peak Efficiency	97%
Power Factor	≥97%
Output Current Harmonics THD	<1%
Power Transformer Topology	Modular, multi-pulse, phase-shifted, isolated
Power Transformer Rating	750 kVA / Slice
Spinning Load	Catch a spinning load
Power Cube Bypass	Auto Bypass and restart, Manual Bypass modes
Synchronous Transfer	Automatically transfer the motor to/from the utility bus
Control Isolation	Fiber optic cable
Service Duty	CT: 150% , VT: 110% for 1 min every 10 min
HMI	7" TFT color LCD screen, LED backlighting
Communication Interface	Modbus TCP/IP (Ethernet), RS-232 , and RS-485, PLC I/O, Others Available Upon Request

Mechanical

Standard Rating	NEMA 1, NEMA 3R
Cabinet Dimension (Mains or Slice)	H: 105" x W: 25" x D: 68.4"
Material	ASTM A366 steel
Color	Light Grey
Total Weight	Mains: 1,289 lbs, Slice: 4,852 lbs

Environmental Condition

Ambient Temperature	-20 to +40 ˚C (lower/higher temperatures*)
Altitude	0 – 1000m (higher elevations*)
Humidity	95%, non-condensing
Noise Level	≤ 78 dB

* Consult factory for extended temperature or altitude ranges

Cooling System

Transformer	Choice of forced-air cooling or advanced 2-phase cooling options
Electronics	Advanced 2-phase cooling
Cooling Unit	Choice of integral or remote unit options

CONTROLS RMA RETURN PROCEDURE

Effective 07-08-18
Supercedes 03-24-17

DRIVE RMA RETURN PROCEDURE

- Contact a Drives Engineer for technical troubleshooting/ RMA Qualification
- TECO-Westinghouse will email or fax a request for RMA Form to complete.
- Completed RMA Request Form should be returned via e-mail to controlswarranty@tecowestinghouse.com or faxed to 512-218-7378 for processing.
- An RMA number will be issued and sent via e-mail or fax.
- Detailed instructions on where to ship the drive for warranty evaluation/ repair will be included with the RMA number.

******** IF PRODUCT IS NOT RETURNED WITHIN 30 DAYS, THE RMA WILL BE CLOSED. ********

- The Drive will be evaluated and a Service Report generated detailing the failure.
- A copy of the Service Report will be sent to the requesting party via e-mail or fax.
- If the Drive is determined to have failed under Warranty, either of the following will take place, whichever is deemed more appropriate:
  1. The drive will be repaired and returned to the customer.
  2. The drive will be determined to be un-repairable and will be replaced.
  3. If the drive is determined to be functioning properly, the drive will be returned to the customer and considered non-warranty.

****** If credit is being issued, the Controls Group will fax a copy to the customer. ******

If the failure/problem is determined to be a non-warranty situation, there is a $250.00 inspection fee for the evaluation and one of the following three actions will take place.

1. The drive will be returned to the customer via freight collect no later than 60 days after disposition.
2. If the drive is repairable, an estimate will be sent. TECO-Westinghouse will have to receive a PO before any repairs are completed. If TECO-Westinghouse repairs the drive, the $250.00 will be credited to the repair charges.
3. If the drive is un-repairable or TECO-Westinghouse is directed to not repair the unit, TWMC will return the drive via freight collect at the customer's option no later than 60 days after disposition.

Please Note: All repairable and properly functioning drives will be returned even if an offsetting order has been made for a replacement unit.

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APPLICATION CHECKLIST FOR
TWMC VARIABLE FREQUENCY DRIVES

The following checklist is provided to gather the necessary information to ensure that our product will meet your requirements and we can provide the most cost effective solution for your application.

** Please complete with as much detail as possible and fax this form to 512-218-7378. **

DATE:_____

General Information

Customer: _____

Contact Information - Name: _____ Phone: _____

Fax: _____ Email: _____

TWMC Salesperson: _____

Application Description: _____

_____

Quote Due Date _____

Driven Load Information/ Details

Quantity: _____ HP _____ HP (unit 2) _____ HP (unit 3) _____ HP (unit 4) _____

Load Description ☐ Variable Torque ☐ Constant Torque Machine Type: _____

Accel time: _____ sec from _____ RPM to _____ RPM

Decel time: _____ sec from _____ RPM to _____ RPM

Ratio or Minimum Speed _____ Maximum Speed _____

Duty Cycle Information _____

Vertical Load? ☐ Yes ☐ No If yes, please indicate weight of load _____

AC Motor Details

☐ New ☐ Existing Manufacturer _____ Model # _____

HP _____ Rated Speed _____ Rated Frequency _____ Rated Voltage _____ Frame _____

FLA _____ Service Factor _____ Insulation Class _____ Enclosure _____

Number of Motors: _____ Cable Distance from Motor to Drive: _____

☐ Tach/ Generator/ Encoder: _____ Pulses per Revolution ☐ Single Channel ☐ Dual Channel

Line Power Supply

Voltage _____ Frequency _____

Generator Power ☐ Yes ☐ No If yes, indicate generator capacity: _____

Reactors or isolation transformer required? _____ Existing? _____

Serial Communications

☐ Modbus ☐ Johnson Metasys ☐ Profibus ☐ BACNet ☐ LonWorks ☐ Siemens FLN ☐ Other _____

Monitor only or control? _____ Baud Rate _____

Drive Enclosure/ Environment

NEMA Rating ☐ NEMA 1 ☐ NEMA 12 ☐ NEMA 3R ☐ NEMA 4 ☐ NEMA 4X

(See attachment for NEMA definitions.)

☐ Wall Mounted ☐ Free Standing ☐ Installed Units in MCC ☐ Indoor Installation ☐ Outdoor Installation

Ambient Temperature Range: _____

Elevation _____

AC Drive Control Characterisics

Speed Reference Source*: _____ (4-20mA, 0-10VDC, Keypad, Speed Pot, Serial)

Run/ Stop Command Source*: _____ (Keypad, Terminal I/O, Serial)

Stop Function Types*: _____ (E-stop, Coast to Stop, Interlocks)

PID Control Based on Process ☐ Input ☐ Pressure ☐ Temperature Other _____

Protective Function: _____ (Motor Thermostat, PTC, RTD)

Braking Requirements: _____ (Dynamic Braking, Mechanical, or Other)

Other Inputs: _____ (Reset, Auto Restart, Encoder)

Analog Outputs: _____ (4-20mA, 0-10VDC, Pulse)

Digital Outputs: _____ (Run, Fault, High or Low Speed, etc.)

Two or Three Wire Start: _____ (Applies to Terminal I/O Only)

Communications: _____ (Telephone Modem, Wireless Modem, Ethernet)

Options: _____ (Analog, Serial, Relay)

*Indicate if Door Mounted

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ENCLOSURE OPTIONS AND MODIFICATIONS

Auxiliary Equipment
(Mounted and wired in an enclosure as specified per the NEMA rating selected.)
☐ Manual or Automatic Bypass ☐ 3-Contactor ☐ 2-Contactor
☐ Motor Overload Relay
☐ Input Circuit Breaker ☐ Input Disconnect ☐ Fused ☐ Non-fused
☐ AC Drive Fuses ☐ Blower Motor Starter
☐ Output Load Reactors ☐ Output Contactor
☐ dV/dt Filters ☐ Dynamic Braking
☐ Control Power Transformer ☐ Secondary Volts _____ ☐ Capacity _____ VA
☐ Interior Mounted 120VAC Power Outlet ☐ Interior Cabinet Lighting
☐ Additional Power Supply ☐ Interior Cabinet Lighting ☐ 120VAC ☐ 240VAC ☐ Other _____
☐ Heat Sink Extension

Auxiliary Controls (Please specify devices in the Project Description below.)
☐ Operator Controls ☐ Door Mounted ☐ Remote
☐ Control Terminals ☐ Pilot Lights
☐ Pushbuttons ☐ Speed Potentiometer
☐ Control Power Supply Volts _____ Capacity _____ mA
☐ Transfer to Bypass on Fault ☐ Fireman's Override
☐ Damper Actuation on Start ☐ Time Delay on Bypass Transfer

Input Power Quality Conditioning
☐ Line Reactors ☐ Isolation Transformers
☐ Active Harmonics Filter ☐ EMC Suppression
☐ EMF/ RFI Filters ☐ Line Noise Filter
☐ Lightning Arrestors

Documentation Number of Copies _____
☐ Wiring Diagrams ☐ Dimensional Drawings
☐ Cabinet Layout Drawings ☐ Additional Instruction Manuals

Support Services
☐ Spare Parts List ☐ Service/ Start up Assistance
☐ Witness Testing

Special Optional Requirements_____
_____

PROJECT DESCRIPTION

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NEMA ENCLOSURE RATING DESCRIPTIONS

NEMA 1 – Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dirt.

NEMA 3R – Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, and snow; and that will be undamaged by the external formation of ice on the enclosure.

NEMA 4 – Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water, and hose-directed water; and that will be undamaged by the external formation of ice on the enclosure. Contact the factory if NEMA 4 is required for your application.

NEMA 4X – Same as NEMA 4, but also including protection against corrosion. Contact the factory if NEMA 4X is required for your application.

NEMA 12 (UL1) – Enclosures constructed (without knockouts) for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against circulating dust, lint, fibers, and flyings; and against dripping and light splashing of liquids.