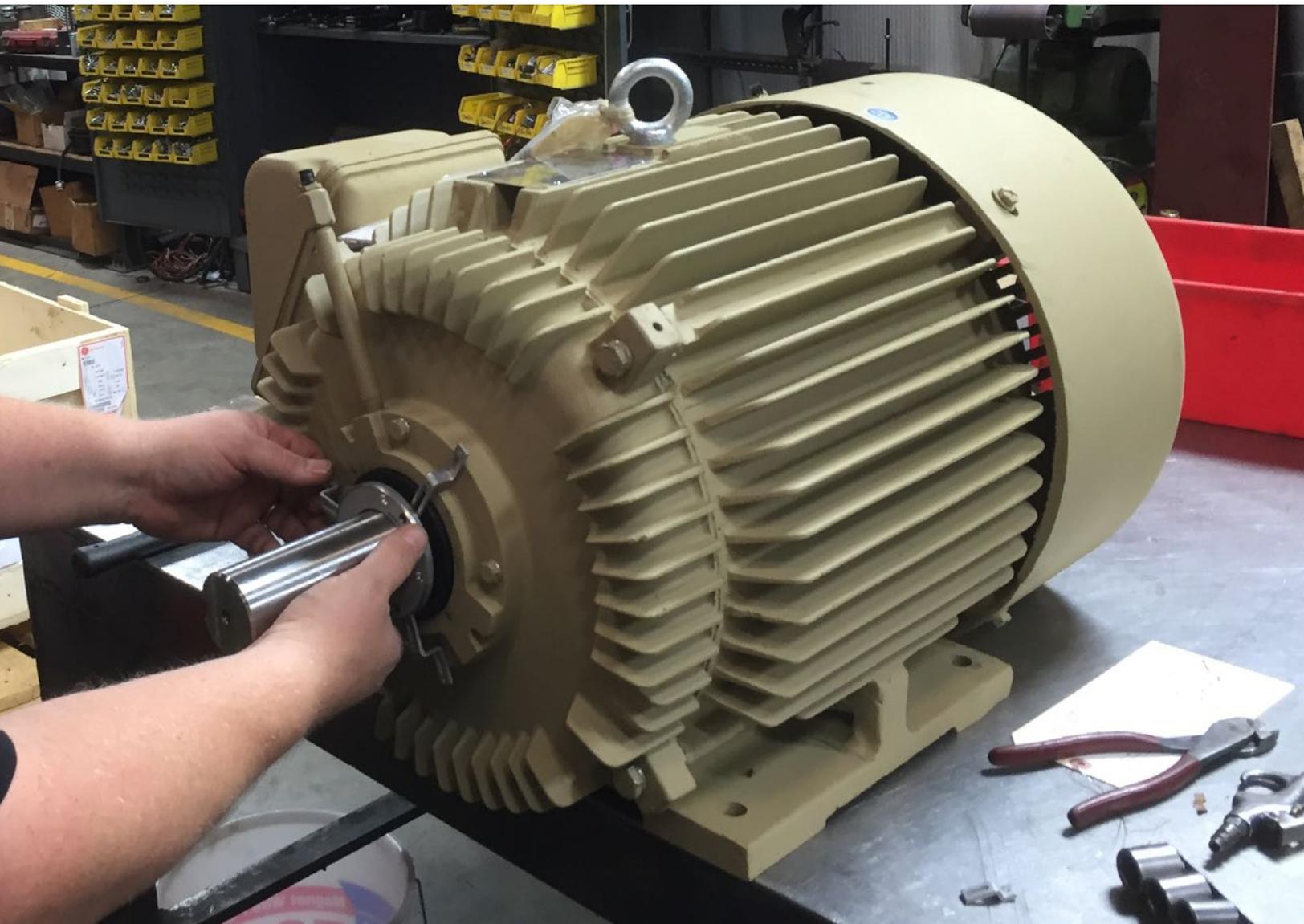




GE INDUSTRIAL MOTORS
a **WOLONG** company

MotorMod

Fast Pre-Engineered Motor Modifications
to Meet Your Application Needs



Experience and quality matters.

Motor modifications to meet your application needs.

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Purchasing dependable electric motors is an investment in the reliability of your operations. And system reliability means serious money to your bottom line.

We've engineered motors to address all of the top factors that can shorten motor life:

Bearings

Heat
Stress, Load, Fatigue
Vibration
Misalignment
Contamination
Lubrication
Electrical discharge

Windings

Heat
Inverters
Voltage problems
Load
Contamination

Reliability is built in.

When you need a modified motor right away, we can execute pre-engineered modifications to meet your specific requirements. Common modification requests were ingrained into our manufacturing process, so we are able to turnkey your specifications at a must faster rate.

Typical Lead Time

5 days from the order subject to availability of the stock motor and parts in our local warehouse.

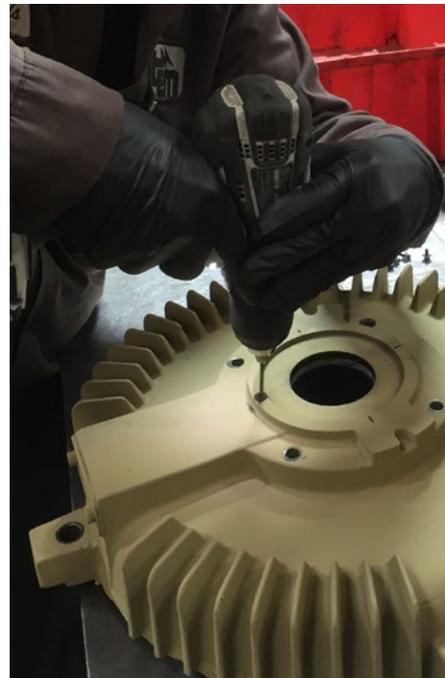
How to Order

Orders are placed by contacting a GEIM sales representative or calling us at (877) 450-6026.

Pricing

The modification prices in this document are "net" prices. To generate a quote, you simply combine these "net adders" to your motor net price.

The modification net price includes all parts necessary to complete the modification unless noted in the table.



Freight Terms

Standard terms and conditions apply.

Cancellation Policy

A motor modification order can be cancelled without penalty within the first 24 hours of order placement. Orders cancelled after 24 hours of order placement and before motor shipment are subject to an 80% cancellation charge based on the modified motor net price.

Quoting Instructions

Quoting Steps

Step 1

Find the motor list price from our catalog.

CAT# M9883 X\$D Ultra
284T Frame, List \$4,242

Step 2

Apply your multiplier to the motor list price.

Symbol G4-7U1 = 0.5
Net \$2,121

Step 3

Find the net price of the mods in this document.

TSTAT Space Heater - \$344
Shaft Labyrinth Seal - \$262

Step 4

Add the motor and mod net prices together.

Motor + Mods
Final Quote - \$2,727

Example

Product Scope



XSD Ultra Family of Horizontal Extra Severe Duty TEFC Motors



Quantum LMV Low and Medium Voltage Horizontal TEFC Motors



Ultra Series Family of Vertical Hollow and Solid Shaft WPI and TEFC P-base Motors

Modification Prices

Net price adders

Modification	Detail	Frame Sizes						
		140	180	210	250	280	320	360
Bearings/Bushings								
Drive End Ball to Roller Bearing	Pg.8		\$514	\$573	\$680	\$680	\$703	\$717
Insulated Bearing* (Horizontal Only)	Pg.8	\$313	\$323	\$420	\$480	\$480	\$800	\$852
Oil Mist Lubrication	Pg.8	\$414	\$414	\$414	\$470	\$470	\$526	\$557
Conduit Box/Condulet								
Condulet Elbow on Conduit box	Pg.8	\$246	\$246	\$246	\$246	\$246	\$284	\$300
Oversized Conduit Box	Pg.8		\$220			\$268	\$351	\$400
End Shield Kits (Drive End Only)								
C-Face Mounting**	Pg.8	\$206	\$217	\$233	\$261	\$280	\$347	\$414
D-Flange Mounting	Pg.8						\$595	Call your ISR
P-Base Change (Vertical Only)	Pg.8				\$261	\$293	\$388	
Frame								
Convert to Round Frame	Pg.8	\$248	\$248	\$248	\$303	\$498	\$498	
Drip Covers	Pg.8	\$209	\$215	\$250	\$290	\$263	\$493	
Vertical Jack Screws	Pg.8	\$609	\$609	\$609	\$720	\$720	\$748	\$755
Mounting								
F2 Mounting	Pg.9	\$164	\$192	\$192	\$192	\$192	\$192	\$200
Additional Notes								

*Pricing is for quantity 1, for quantity 2 add net adder Twice. Please specify side on QTY 1.

**Not available for 841 on frames 140-250

Can't find what you need?
Questions?

contact your GE Internal
Sales Representative



Modification	Detail	Frame Sizes					
		400	444/445	447/449	509	511	513
Bearings/Bushings							
Drive End Ball to Roller Bearing	Pg.8	\$895	\$963	\$963			
Insulated Bearing* (Horizontal Only)	Pg.8	\$895	\$918	\$918	\$1,229	\$1,229	Call your ISR
Oil Mist Lubrication	Pg.8	\$557	\$557	\$557	\$716	\$716	Call your ISR
Conduit Box/Condulet							
Condulet Elbow on Conduit box	Pg.8	\$300	\$300	\$300			
Oversized Conduit Box	Pg.8	\$522	\$522	\$522			
End Shield Kits (Drive End Only)							
C-Face Mounting**	Pg.8	\$883	\$867	\$867			
D-Flange Mounting	Pg.8	\$800	\$800	\$800			
P-Base Change (Vertical Only)	Pg.8	\$453	\$715	\$715			
Frame							
Convert to Round Frame	Pg.8	Frame conversions are available in smaller frame sizes.					
Drip Covers	Pg.8	Drip covers are available in smaller frame sizes.					
Vertical Jack Screws	Pg.8	\$767	\$767	\$767	\$936	\$936	Call your ISR
Mounting							
F2 Mounting	Pg.9	\$200	\$200	\$200			
Additional Notes							

*Pricing is for quantity 1, for quantity 2 add net adder Twice. Please specify side on QTY 1.

**Not available for 841 on frames 140-250

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Modification Prices

Net price adders

Modification	Detail	Frame Sizes						
		140	180	210	250	280	320	360
Nameplates								
Rerates/Auxiliary (Rerates don't include new datapack only performance data)	Pg.9	\$50	\$50	\$50	\$50	\$50	\$50	\$50
Shaft								
Short Shaft Trans. (T to TS NEMA Standard)	Pg.9					\$626	\$737	\$750
Shaft Labyrinth Seal Install on Drive End (INPRO SEAL)*	Pg.10	\$212	\$232	\$232	\$262	\$262	\$299	\$306
Shaft Grounding Ring								
Aegis External Mount	Pg.9	\$198	\$201	\$207	\$275	\$301	\$314	\$315
Aegis Internal Mount	Pg.9	\$364	\$372	\$372	\$401	\$401	\$551	\$598
Space Heaters								
Thermostatically controlled (Mandatory for Div 2 motors)	Pg.10		\$313	\$320	\$344	\$344	\$383	\$385
Temperature Sensing								
Bearing RTD (price includes one per bearing)	Pg.10	Bearing RTD's are available in larger frame sizes.						
Thermistors install (QTY 3)	Pg.10		\$396	\$396	\$396	\$489	\$489	\$491
Thermostat Installation (Add \$27 for additional thermostat, max 3.)	Pg.11		\$357	\$357	\$357	\$357	\$357	\$359
Winding RTD (pricing includes: 1 set for 320-449 frames & 2 sets for 500 frames)	Pg.11						\$920	\$967
Vertical Mods								
Non reverse / Self release assembly / Top Coupling Install	Pg.11			\$397	\$582	\$582	\$600	\$600
Remove Spacer and add thrust bearing for a 2 down configuration where applicable	Pg.11						\$529	\$546
Stabilizer Bushing	Pg.11			\$385	\$385	\$365	\$409	\$450
P-Base Change	Pg.8				\$261	\$293	\$388	
Additional Notes								

*Pricing is for quantity 1, for quantity 2 add net adder Twice. Please specify side on QTY 1.

**Not available for 841 on frames 140-250

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Modification	Detail	Frame Sizes					
		400	444/445	447/449	509	511	513
Nameplates							
Rerates/Auxiliary (Rerates don't include new datapack only performance data)	Pg.9	\$50	\$50	\$50	\$50	\$50	\$50
Shaft							
Short Shaft Trans. (T to TS NEMA Standard)	Pg.9	\$809	\$809	\$809			
Shaft Labyrinth Seal Install on Drive End (INPRO SEAL)*	Pg.10	\$321	\$323	\$323	\$683	\$683	Call your ISR
Shaft Grounding Ring							
Aegis External Mount	Pg.9	\$358	\$425	\$425			
Aegis Internal Mount	Pg.9	\$632	\$632	\$660	\$785	\$785	Call your ISR
Space Heaters							
Thermostatically controlled (Mandatory for Div 2 motors)	Pg.10	\$410	\$461	\$461			
Temperature Sensing							
Bearing RTD (price includes one per bearing)	Pg.10	\$646	\$802	\$802	\$843	\$843	Call your ISR
Thermistors install (QTY 3)	Pg.10	\$513	\$513	\$513	\$674	\$674	Call your ISR
Thermostat Installation (Add \$27 for additional thermostat, max 3.)	Pg.11	\$359	\$359	\$359	\$543	\$543	Call your ISR
Winding RTD (pricing includes: 1 set for 320-449 frames & 2 sets for 500 frames)	Pg.11	\$967	\$967	\$967	\$1,830	\$1,830	Call your ISR
Vertical Mods							
Non reverse / Self release assembly / Top Coupling Install	Pg.11	\$625	\$665	\$665	\$1,049	\$1,049	Call your ISR
Remove Spacer and add thrust bearing for a 2 down configuration where applicable	Pg.11	\$719	\$884	\$884			Call your ISR
Stabilizer Bushing	Pg.11	\$450	\$497	\$497			
P-Base Change	Pg.8	\$453	\$715	\$715			
Additional Notes							

*Pricing is for quantity 1, for quantity 2 add net adder Twice. Please specify side on QTY 1.

**Not available for 841 on frames 140-250

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Modification Definitions

Bearings/Bushings

Ball to Roller Bearing

This modification will change the motor's application from a direct coupled motor to a belted load by replacing the standard drive end bearing with a roller bearing and clamping the opposite bearing axially. Roller bearings have a higher radial load capability than ball bearings. However since stock motors do not have high-stress steel material, maximum belted loads for this modification are shown below and will be stamped onto the motor nameplate. [Available for all XSD Ultra motors.](#)

Frame	Max. Belted (lbs)
140	188
180	308
210	479
250	640
280	875
320	1061
360	1300
400	2115
440	3076
449	2883

Insulated Bearings

This modification will reduce the transmission of VFD shaft currents by swapping standard bearings to insulated ones. Without the protection of the insulation, bearings may be damaged by shaft currents as it will discharge through the bearings (fluting). Also see "Shaft Grounding" for additional protection of shaft currents. [Available for 180-500 frame \[and IEC equivalent\] XSD Ultra motors.](#)

Oil Mist Lubrication

This modification will change from grease lubrication to oil mist. Oil mist systems present an attractive alternative to lubrication both at low to moderate speeds and at circulating oil systems with high speed and temperature. This lubrication is ideal for applications where motors are located in isolated areas where re-lubrication maintenance would be difficult. [Available for horizontal and vertical motors.](#)

Conduit Box/Condulet

Condulet Elbow on Conduit box

This modification adds a condulet on the conduit box for accessory leads. This condulet allows the accessory leads to exit from a different side of the conduit box.

Oversized Conduit Box

GE motors have a standard conduit box size per frame; this modification swaps the conduit box to the next larger size.

End Shield Kits

C-Face Mounting

The installation of a C-face end shield allows a stock motor to be mounted with wall, floor or roof mounting. 143-256 frames will not meet NEMA "BA" dimensions. [Not available for explosion proof motors.](#)

D-Flange Mounting

Add a D-Flange to a stock motor for wall, floor or roof mounting. [Available for 320T-TS & 400T-TS to 449T-TS standard frames.](#)

P-Base Change

Change the P-Base when a different BD dimension is needed. Contact your ISR for available BD's. [Available for all vertical P-base motors.](#)

Frame

Convert to Round Frame

On horizontal motors mounted vertically this is a common modification which allows a footed frame to be modified to a round frame. Note: if motor doesn't have a mounting end shield see End Shield Kits.

[Available for 140-320 frame XSD Ultra motors.](#)

Drip Cover

A metal piece shaped like a hat installed on the opposite drive end of a horizontal motor. It will be mounted vertically shaft down to protect liquid from entering into the motor.

[Available for 140-320 frame XSD Ultra motors.](#)

Vertical Jack Screws (set of 4)

Vertical Jack screws are used to level the motor by using leveling screws on the motor's feet. [Available for all motors.](#)

Can't find what you need?
Questions?

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Grounding

Aegis™ has provided a new way of protecting bearings from high shaft currents generated from VFD driven motors. GE offers the installation of the SGR Externally with a universal kit (U Kit) and internally with a shaft grounding ring kit (SGR Kit).

U Kit - External Mount (Shaft Grounding)

This kit is available for Energy Saver products and mounted externally. Some exceptions apply for Energy Savers manufactured at the factory. See SGR Kit - Internal Mount.

SGR Kit - Internal Mount (Shaft Grounding)

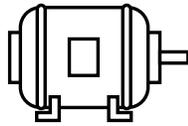
This kit is available for X\$D Ultra, 841 and Energy Saver motors manufactured at the factory. Note: motors with an SGR will have the Div 2 nameplate removed.



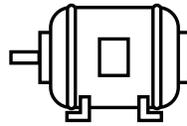
Mounting

F2 Mounting

Change the conduit box side from an F1 mounting to an F2. *Available for all motors.*



Assembly F-1



Assembly F-2

Nameplates

Auxiliary

Nameplates with additional data such as a customer part #, special tags, reference #'s, etc. can be added to the motor on an auxiliary nameplate. *Available for all motors.*

Re-Rates

Standard motors can have alternate ratings of operation. Contact your local ISR to see motor re-rated capabilities. *Available for all motors.*

Division 2 Nameplate

Class 1 Division 2 certification is available, certified by the following organizations. (where applicable)

- CSA Certified

- (GE) Self-Declare Division 2

Available for 500 frame severe duty motors. Please contact your ISR.

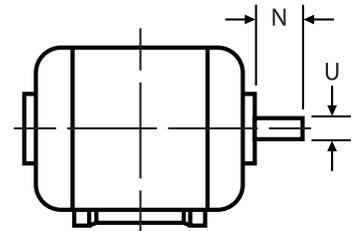


Shaft

T to TS Shaft Conversion

Converting from a standard NEMA T length to a NEMA TS. See below for dimensions that apply for each frame size. *Available for all XSD Ultra motors.*

Frame	Lgth. (N)	Dia. (U)
140T	2.25	0.875
180T	2.75	1.125
210T	3.38	1.375
250T	4.00	1.625
280T	4.62	1.875
280TS	3.25	1.625
324T	5.25	2.125
324TS	3.75	1.875
360T	5.88	2.375
360TS	3.75	1.875
400T	7.25	2.875
400TS	4.25	1.125
444/445T	8.25	3.375
444/445TS	4.75	2.375
447/449T	8.50	3.375
447/449TS	4.75	2.375



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Questions?

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Sales Representative



Modification Definitions

Shaft Labyrinth Seals

Labyrinth seals protect the bearing from the inside and outside. It prevents lubricant from leaking by capturing and returning it to the bearing housing. Outside contamination is captured by the outer part of the labyrinth and expelled through a port in the rotor.

Available for 140-250 frame standard end shield on DE and ODE; 280-449 frame standard and C-face end shield on DE and ODE; 500 frame for standard end shield DE and ODE.

Space Heaters

Space heaters are used to avoid the build-up of condensation on the winding while the motor is not running. Space heaters are available from 115V-575V.

Note: Leads are brought out to the motor conduit box, unless a separate conduit has been specified.

Available for all motors.

- Thermostatically controlled (mandatory for Div 2 motors)

Special Grease Fittings

GE offers different fittings for grease insertion.

Available for all XSD Ultra motors.

- **Standard + Auto Relief**
- **Pin Type + Auto Relief**
- **Button Head + Auto Relief**
- **Pin Type + Standard Outlet**
- **Button Head + Standard Outlet**

Thermal Protection

Bearing/Winding Resistance Temperature Detectors (RTD's)

RTD's are resistors with a temperature resistance characteristic wired to specific areas of the motor that need to be monitored. RTD's operate under a given maximum temperature and can be connected to an alarm or even shut down the motor.

Notes: Stator winding RTD's will be mounted on the winding end turn; not embedded in the windings.

Leads are brought out to the motor conduit box, unless a separate conduit has been specified.

Available for 400-449 frame standard XSD Ultra and 500 frame Quantum [Non-API] motors.

Available RTD types are shown below.

- 10 ohm (Copper)
- 100 ohm (Platinum) *most popular
- 120 ohm (Nickel)

1 set includes 4 winding RTDS, 1 per phase plus 1 spare.

A set of 6 RTD's is provided for 500 frame motors and routed to an auxiliary conduit box. Please contact your ISR for complete pricing on the auxiliary box.



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Thermistors

A thermistor is a non-linear resistance temperature detector, made from semi-conductor material. Each specific thermistor has its own unique resistance vs temperature characteristic. Standard 3-phase motors require a set of 3 thermistors (1 per phase). Available thermistor types are shown below.

Notes: Thermistors will be mounted on the winding end turns; not embedded in the windings.

Leads are brought out to the motor conduit box.

Available for all non-division 1 180-449 frames [and IEC equivalent] XSD Ultra motors.

Temp. response range 120-170°C.

- Class B
- Class H
- Class F

Thermostats

Thermostats are used as a precaution to keep the motor windings under controlled temperatures. They are normally connected on the winding end turns and their main purpose is to alert or shut down the unit when high winding temperatures are present.

Notes: Thermostats will be mounted on the winding end turns; not embedded in the windings.

Leads are brought out to the motor conduit box, unless a separate condulet has been specified.

Available for all non-division 1 180-449 frames [and IEC equivalent] XSD Ultra motors.

Available thermostat types are shown below.

- Class B Normally Closed Trip
- Class F Normally Closed Trip
- Class B Normally Closed Alarm
- Class F Normally Closed Alarm
- Class H Normally Closed Alarm
- Class B Normally Open Alarm
- Class F Normally Open Alarm
- Class H Normally Open Alarm

Vertical Motor Accessories

Vertical motor coupling kits and bushings are sold separately as a standard feature for standard motors. GE offers the opportunity of installing the coupling. The BX dimension has to be specified before order.

Non-Reverse Ratchet

GE installs non-reverse ratchets on vertical motors where water lubricated pump bearings are installed. This coupling will stop the shaft while the pump water is receding, preventing backflow that could damage the motor.

Available for all vertical hollow shaft motors.

Self-Release Coupling

This coupling will prevent the rotor from turning on reverse by uncoupling before the shaft completely unscrews. This prevents any potential damage to the pump and line shafting.

Available for all vertical hollow shaft motors.

Stabilizer Bushing

This bushing supports the shaft at the lower end of the motor to prevent it from tilting while in operation.

Available for all vertical hollow shaft motors.

2 Down (2D) Configuration

Remove Spacer and add Thrust bearing for a 2D (2-down) configuration where applicable.

Available for all vertical hollow shaft motors.

Add Thrust bearing to Vertical High Thrust (VHT)

Vertical high thrust motors are built with angular contact thrust bearings. These bearings carry the required design thrust (both mechanical weight of the stand pipe and the hydraulic pump thrust) as defined by the pump manufacturer. Our stock motors are designed for 100% high thrust. In some instances the pump thrust can be upgraded/changed to 175% by removing a bearing 'spacer' and replacing it with a second angular contact bearing.

Available for all vertical hollow shaft motors.

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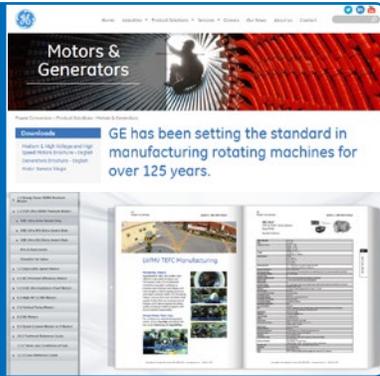
Find out more information.

Website

The latest information on custom and standard rotating machines.

e-Catalog

GE motors on your computer. Auto-update online. Can be viewed offline.



“GE Motors”

Manufacturing

Monterrey, Mexico
Employs over 500 people.
ISO9000-2008 facility
YouTube Virtual Tour



YouTube
“Monterrey
AC Capabilities”



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www.gemotors.com

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