GE INDUSTRIAL MOTORS
a **WOLONG** *company*

Petroleum & Chemical

AC/DC Motors Up to 1750 HP

GEWOLONG
www.gemotorswolong.com

Small Machines Make A Big Impact

Electric motors make an average **70%** of total power cost*

$87k/hr

Average cost of unplanned downtime for a typical industrial processing plant**

Challenges

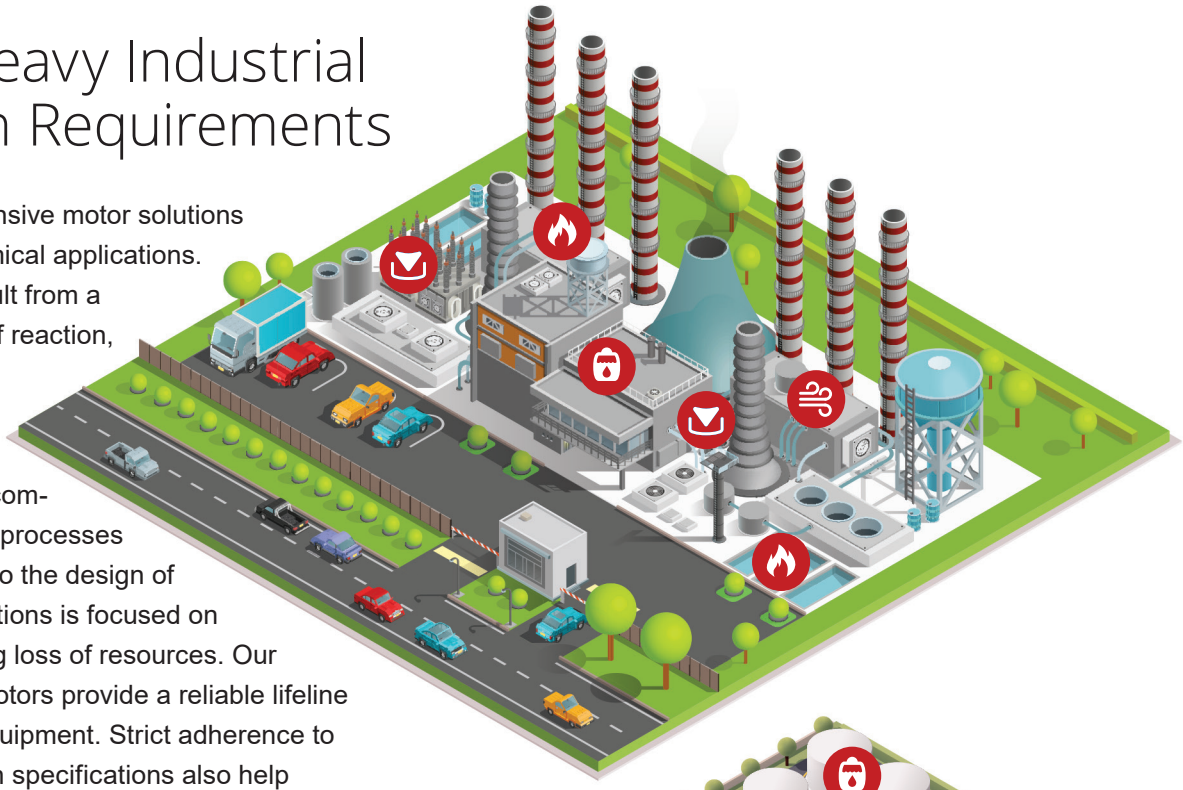
- Multiple suppliers, designs and specifications tying up resources.
- Frequent unplanned maintenance disrupting operations requiring replacement motors onsite.
- Older low efficient motors eating profits.

Our Solutions

- Frame agreements increase supply and specification efficiency freeing up resources.
- Less unplanned maintenance and downtime with more robust motor designs.
- +1% energy efficiency gains translate to less than a two year payback.

Meeting Heavy Industrial Application Requirements

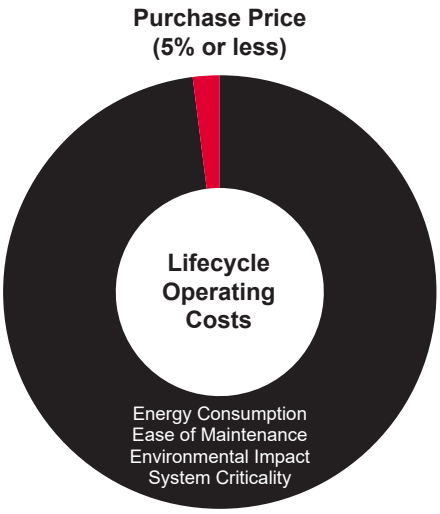
GEIM offers comprehensive motor solutions for petroleum and chemical applications. Chemical products result from a complex combination of reaction, distillation, absorption, filtration, extraction, drying, and screening operations. To remain competitive, most chemical processes must be efficient, and so the design of many production operations is focused on controlling and reducing loss of resources. Our durable and efficient motors provide a reliable lifeline to critical production equipment. Strict adherence to industry and application specifications also help ensure less downtime.

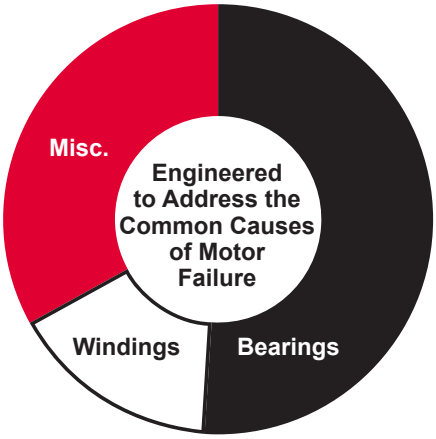


Application	Type	Requirements
Blowers	Cooling Ventilation	Starting restriction ASD Applied IEEE-841, API 541, 546, 547
Heat Exchangers	Air Cooling	Belt load specifications IEEE-841, API 661
Pumps	Booster Liquid Cooling Jockey Pipeline Seawater Lift Water Injection Transfer	Starting restrictions ASD applied Vertical thrust loads Low inrush IEEE-841, API 541, 546, 547
Compressors	Centrifugal Axial Pipeline Reciprocating	Starting restrictions/ASD applied/Low inrush/Special shaft and load designs/Torque pulsation/High rotor inertia/ API 541, 546, 547, 618

Consider Lifecycle Operating Costs First

The initial cost of an electric motor makes up 5% or less of the total cost of operation. So all aspects of the motor operation should be considered when purchasing motors.

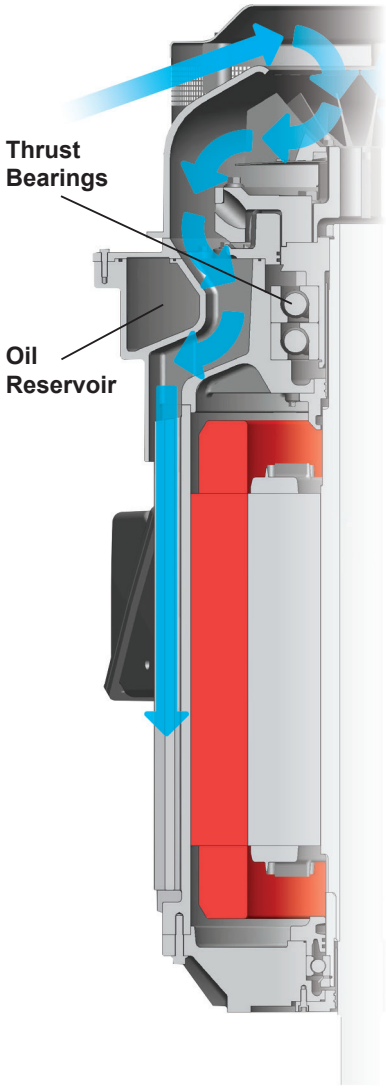




Heat	Heat
Load	Vibration
Inverters	Misalignment
Contamination	Contamination
Voltage Issues	Lubrication Issues
	Electrical Discharge
	Stress, Load, Fatigue

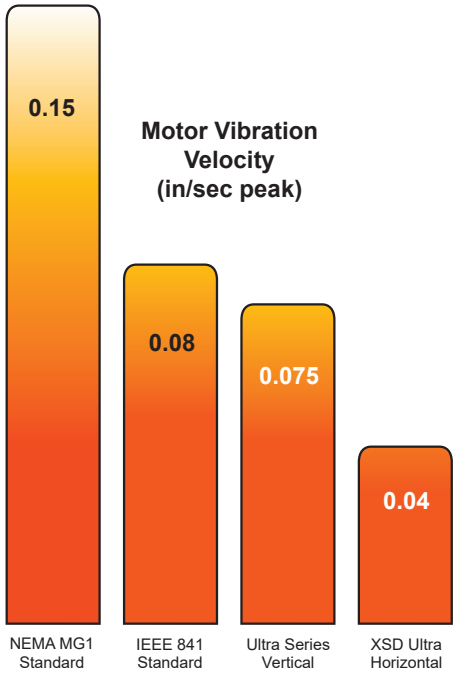
Innovative Patented Air-Cooling Technology

GE engineers found a better way to air cool bearings in larger frame vertical TEFC motors. The design improvements result in an amazing ~30OC temperature reduction helping to dramatically extend bearing and winding life.



Low Vibration Means Long Life

Vibration is bad for motors and driven equipment. Motor bearings, in particular, begin to wear faster with high vibration levels. Beyond focusing on proper alignment, base, and voltage, users should also pay more attention to the design of the motor itself. In most cases, manufacturers are content to simply stay within the NEMA or IEEE standards because many engineers, of course, specify these limits.



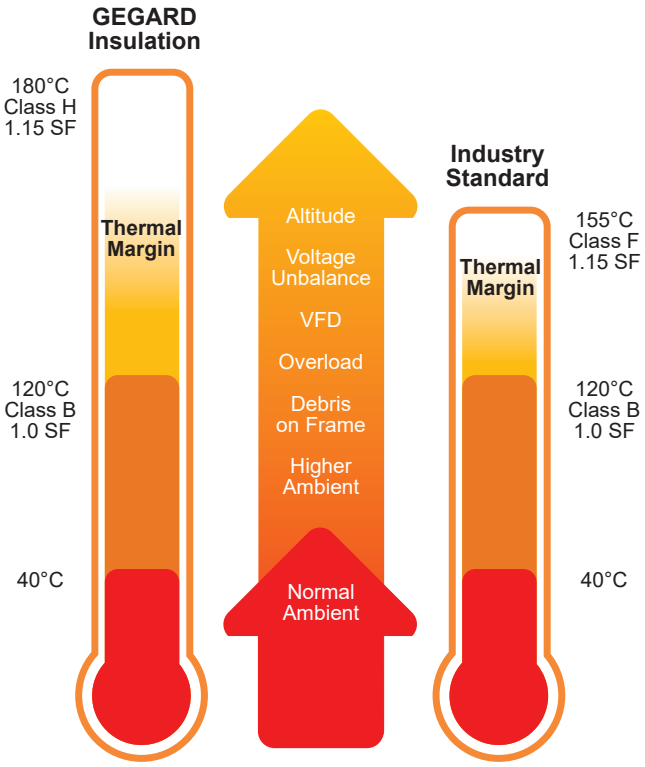
It is well documented that motors designed with low vibration have longer bearing life.

Since bearing wear is one of the leading causes of motor failure, reducing its chances reduces your unplanned downtime. Our application engineers have been told by many users that their driven equipment tends to run smoother with low vibration motors. All of this leads to lower maintenance costs on the entire drive system.

GEGARD™ Insulation offers added protection in severe applications.

Our Class H GEGARD insulation system is designed to excel in variable frequency drive applications where lesser designs often short circuit and cause overcurrent trips.

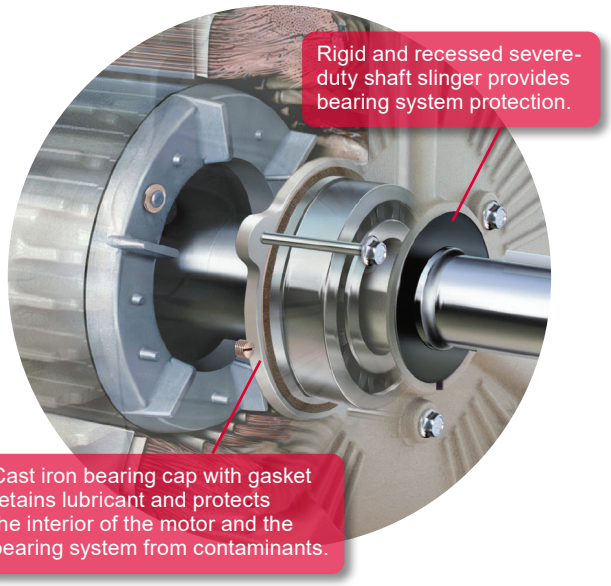
VFD READY NEMA MG1 PART 31

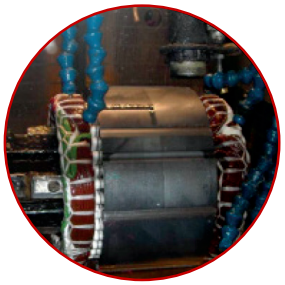


Larger Thermal Margin = Longer Motor Life

Guarding Against Bearing Failure

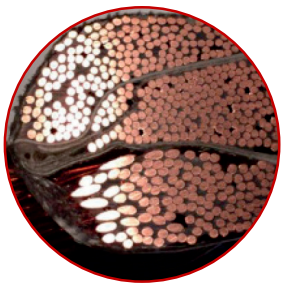
Common shaft currents create voltage spikes that reach bearings causing them to vibrate in operation. Over a short period, this vibration (fluting) will degrade bearings to the point of failure. We include bearing insulation for higher ratings and Aegis™ shaft grounding rings are optional on all ratings.





Rotational Varnish Application

Motor coils are rotationally varnished with a “Trickle Treat” process while an electric current is passed through the windings to ensure a penetrating, thorough and even coating. This proven process fills air gaps that could cause corona inception damage during operation.



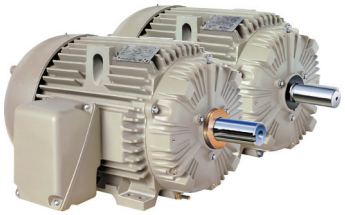
Wire Bonding

Resin penetrates deep into tightly packed coil wire creating a strong bond that guards against end-turn vibration.

Moisture Protection

Contaminants can’t penetrate carefully and tightly packed stator coils bonded by deep resin penetration into the slots.

Severe Duty NEMA IE3



NEMA Premium Efficient

This versatile and robust design is ideal for a wide range of challenging industrial applications and environments.

MODELS
- XSD Ultra
- XSD Ultra 841
- Energy Saver

Technical Capabilities

0.75-300 HP, 900-3600 RPM

230/460, 460, 575V / 60 Hz

Alternate 50 Hz data on nameplate

TEFC (IP55) and ODP

Frame sizes: 143T-449T

NEMA, UL, CSA, IEEE 45, 841, 112B, and GM 7E-TA

Division 2 applications

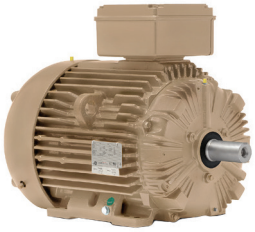
C-Face and high-torque

Design “C” models available

VFD ready with GEGARD Class H (XSD Ultra) or Class F (ES) insulation

Five (XSD Ultra) or Three (ES) Year Warranty

Severe Duty IEC IE3



Rugged and Reliable

Based on the X$D Ultra mechanical and electrical design for the global market. Ideal for extreme environments.

MODEL
- XSD Ultra 841 IEC

Technical Capabilities

0.55-220 kW, 750-3000 / 900-3600 RPM

200, 400, 400/690, 690V / 50 Hz

230/460, 460, 575, 690V / 60 Hz

TEFC (IP55)

Frame size: 90S-280H

IEC, IEEE 841, IEEE 45, ATEX, and IEC Exn

Zone II, ABS

VFD ready with GEGARD Class H insulation

Five Year Warranty

Explosion Proof NEMA

Protects Systems in Hazardous Zones

This enclosure has been specially designed to contain any sparking for hazardous environments where volatile gases may be present.

MODEL
- Energy Saver XP

Technical Capabilities

1-300 HP, 900-3600 RPM

230/460, 460, 575V / 60 Hz

Alternate 50 Hz data on nameplate

TEFC (IP55)

Frame sizes: 143T-449T

NEMA, UL, CSA, IEEE 112B

Division 1,
Class I - Groups C, D
Class II - Groups F, G

Three Year Warranty

Heat Exchange NEMA IE3

Stable, Reliable, Efficient

Specially rated and ideally suited for harsh outdoor heat exchange applications.

MODELS
- XSD Ultra 661

Technical Capabilities
0.75-300 HP, 900-3600 RPM
460, 575V / 60 Hz
TEFC (IP55)
Frame sizes: 184T-449
NEMA, UL, CSA, API 661,
IEEE 841, 45, 112B and GM 7E-TA
CE, ATEX Zone 2
Division 2 application
VFD ready with GEGARD
Class H insulation
Five Year Warranty

Vertical Pump NEMA IE3

Inverter-Duty and Efficient

Combines extra severe duty engineering with advanced thrust and cooling technologies.

MODELS
- Ultra Series Vertical
- Large Custom Vertical
- Vertical Fire Pump

Technical Capabilities
3-1000HP, 600-3600 RPM
460, 575, 2300/4160 V
60Hz or 50Hz
WPI and TEFC Enclosures
Hollow and Solid Shaft
Normal, High, and Extra High Thrusts
Frame Size: 182-5013
API 610 12th Edition
P-Base mountings
VFD ready with GEGARD
Class H insulation
Three Year Warranty

Medium Voltage NEMA

Severe Duty, Long Lasting

Designed to operate in extreme Petrochemical, Power Generation, Mining and general process environments and applications.

MODEL
- Quantum LMV

Technical Capabilities
100-1750 HP
900-3600 RPM / 60 Hz
900-3000 RPM / 50 Hz
460, 575, 2300/4000, 6600V
TEFC
Available in IEEE 841 config.
Frame sizes: 440-7000
NEMA, CSA, UL, IEEE 112B, AEx nA
API 547 and 541, Division 2, Zone 2
Class F insulation
Three Year or Five Year Warranties (IEEE 841)

Access has never been easier!

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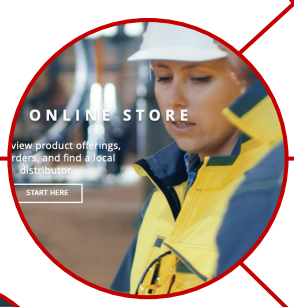

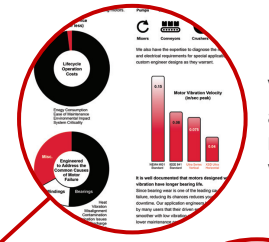

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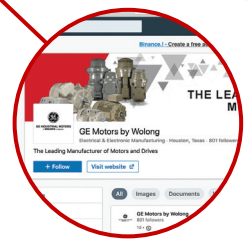

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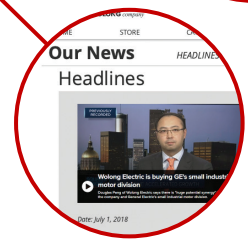

News
The latest developments, new product introductions and special industry events.