



GE INDUSTRIAL MOTORS
a WOLONG company



Mining & Minerals

AC/DC Motors Up to 1750 HP



EYMAQ

GEWOLONG
www.gemotorswolong.com



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

\$87k/hr

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

Challenges

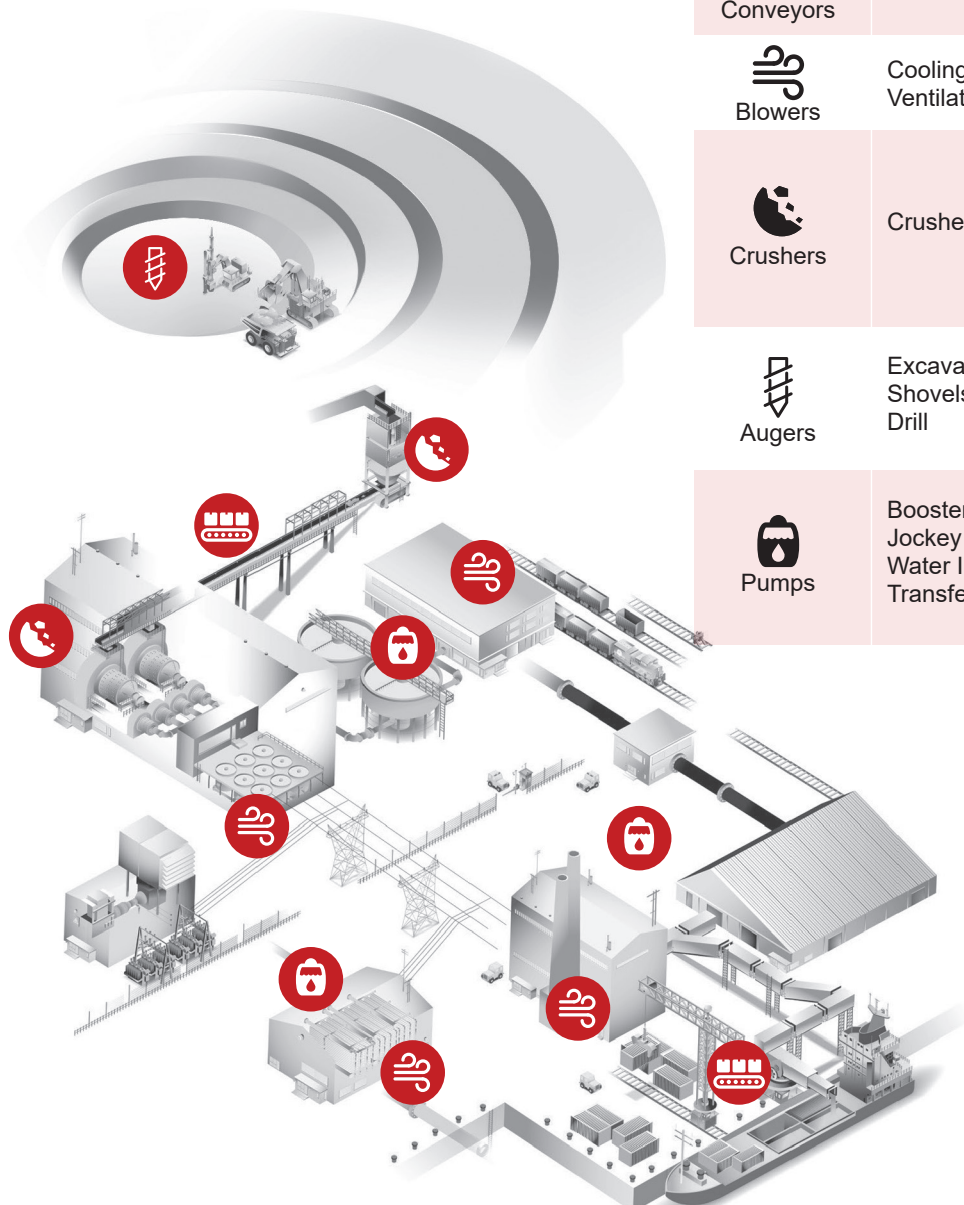
- Multiple suppliers, designs and specifications tying up resources.
- Frequent unplanned maintenance disrupting operations requiring replacement motors onsite.
- Older low efficient motors eating profits.






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 mining process applications. With an increasing global demand for metals and minerals, mining environments are becoming more extreme. They may be in a remote underground mine in Mongolia or in the mountains of Chile. They may be in the extreme cold of Alaska and the Canadian North or the blazing Australian Outback. 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.

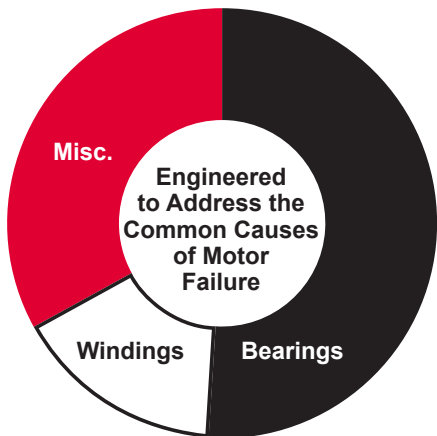
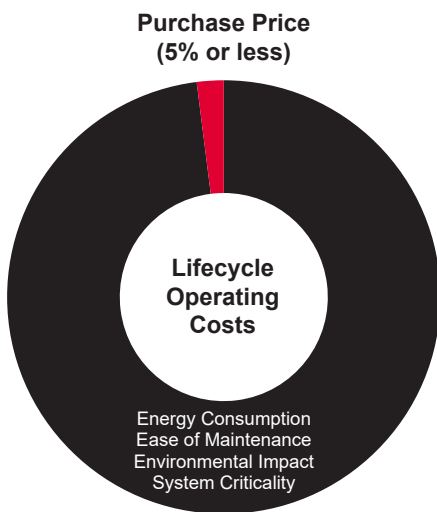


Application	Type	Requirements
 Conveyors	Earth Moving	Starting restrictions ASD applied IEEE-841, NEMA, IEC, ANSI
 Blowers	Cooling Ventilation	Belt load specifications IEEE-841, NEMA, ANSI
 Crushers	Crushers	High Inertia Starting Conditions and Frequency Vibration Restrictions VFD Compatible NEMA, IEC, IEEE, ANSI
 Augers	Excavators Shovels Drill	Starting Conditions and Frequency VFD Compatible NEMA, IEEE, ANSI, AISE
 Pumps	Booster Jockey Water Injection Transfer	Starting restrictions ASD applied Vertical thrust loads Low inrush IEEE-841, NEMA, ANSI

4 Application Considerations

Consider Lifecycle Operating Costs First

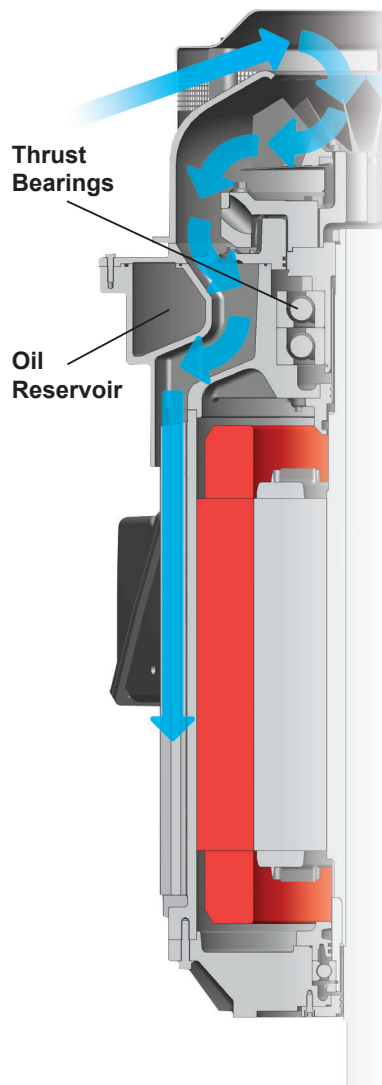
The initial cost of an electric motor makes up 5% or less of the total cost of operation. So all aspects of the motor operation should be considered when purchasing motors.



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

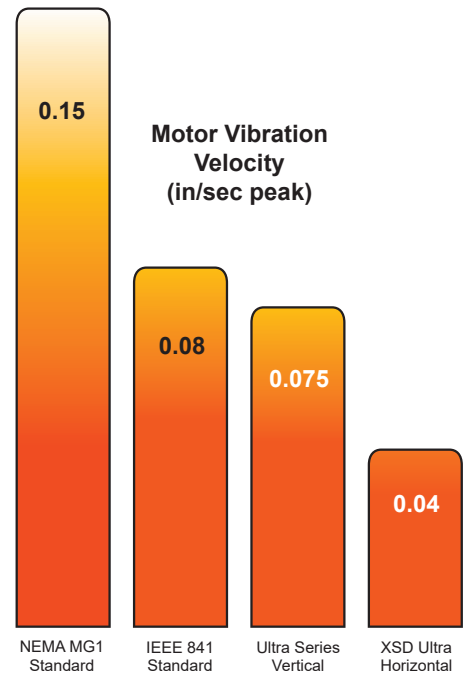
Innovative Patented Air-Cooling Technology

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.

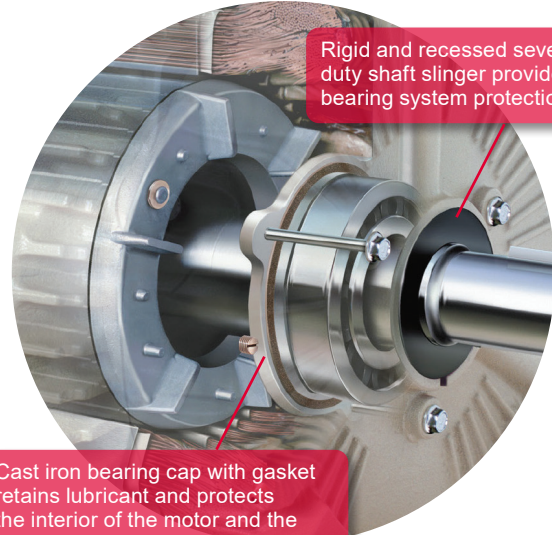


It is well documented that motors designed with low vibration have longer bearing life.

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.

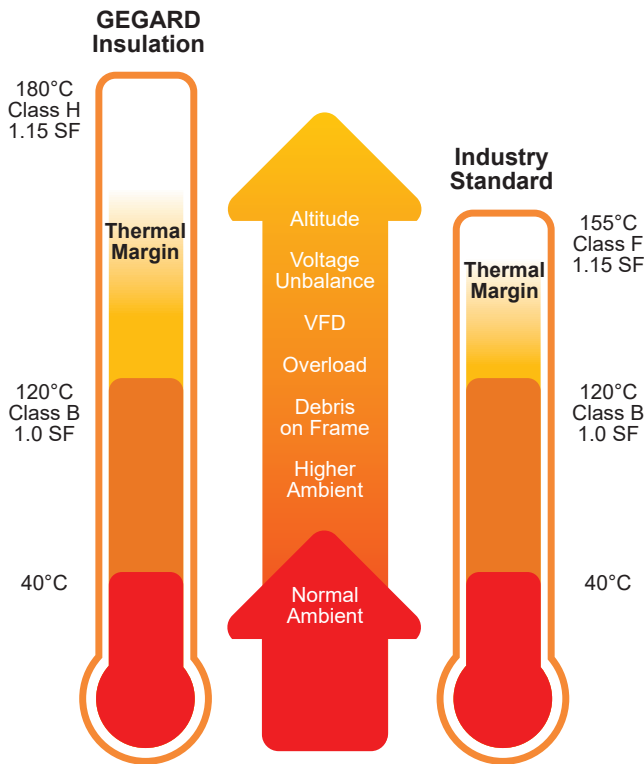
GEGARD™ Insulation offers added protection in severe applications.

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.



Rigid and recessed severe-duty shaft slinger provides bearing system protection.

Cast iron bearing cap with gasket retains lubricant and protects the interior of the motor and the bearing system from contaminants.



Larger Thermal Margin = Longer Motor Life

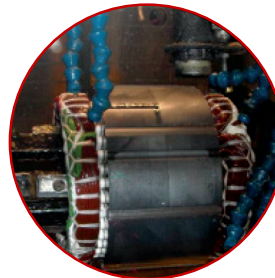
Guarding Against Bearing Failure

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.



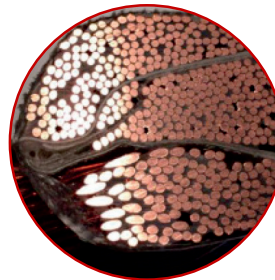
Rotational Varnish Application

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.



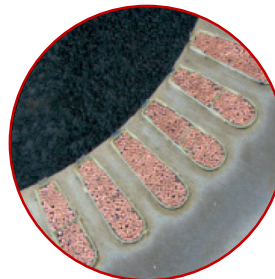
Wire Bonding

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

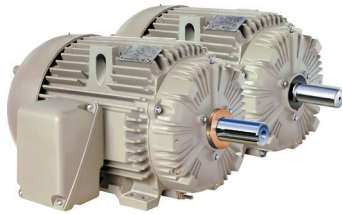


Moisture Protection

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.

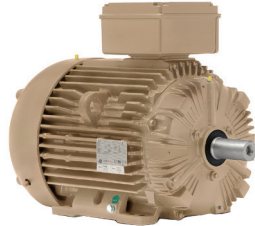
MODELS

- 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 XSD 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

**Adjustable Speed
NEMA**



**Excels in Constant
Torque Applications**

Optimized performance in metal processing, plastic extrusion, winders, test stands, crane and hoist and material handling.

MODEL

- ASD Ultra

Technical Capabilities

1.5-300 HP, 1800 RPM
230/460, 460, 575V / 60 Hz
TEFC, TEBC, TENV (IP55)
Frame sizes: 143TC-449T
NEMA, IEEE 841, IEEE 112B
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
- ULTRASNOW-V 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
- Quantum V
- Quantum 580

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)

Direct Current



Reliable Workhorses

A reliable lifeline to driven equipment and backbone for production and operation.

MODEL

- Kinamatic
- CD6000 Series
- Mill Duty

Technical Capabilities

1-500 HP, 300-3600 RPM
Armature voltage: 180, 240, 500
Field voltage: 300/150, 240/120
DPFG, DPFG-BV, TE, and Explosion proof
TREC coils on large frames
Two Year Warranty
(CD6000 Series)
500-2000 HP, 300-1750 RPM
Armature voltage: 500, 600
(Mill Duty)
5-500 HP, 340-1025 RPM
Armature and Field voltage: 230, 460
Meets AIST standard

