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

Pulp & Paper

AC/DC Motors Up to 1750 HP

GEINDUSTRIALMOTORSWOLONG
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 pulp and paper applications. Energy consumption is one of the largest expenses in operating a pulp processing or paper production plant. In these facilities the largest proportion of energy is used in electric drives, generally in the range of 60-70%.

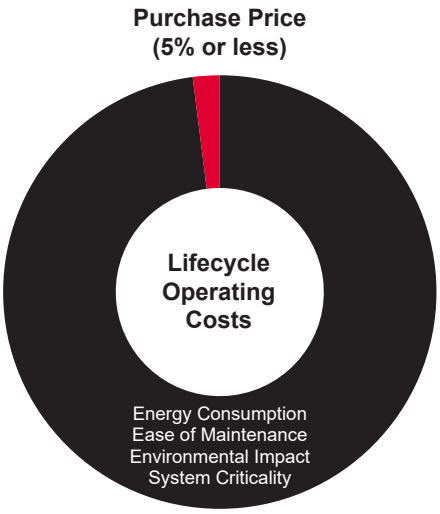
Upgrading motors can make a big difference. For instance a recent large plant audit uncovered over $930,000 of energy efficiencies.

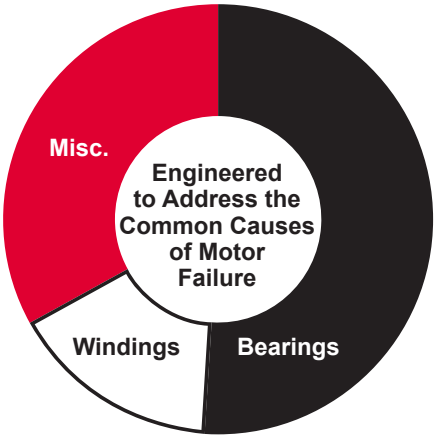
Strict adherence to industry and application specifications also help ensure less downtime.

Application	Type	Requirements
Conveyors	Dryers Coaters Winders/Rollers Wood/Pulp	Starting restrictions ASD applied IEEE-841, NEMA, IEC, ANSI
Blowers	Cooling Ventilation Aerator	Belt load specifications Starting restrictions ASD Applied IEEE-841, NEMA, ANSI
Heat Exchangers	Air Cooling	Belt load specifications IEEE-841, N
Crushers	Barker Drum Chipper Grinder	High Inertia Starting Conditions and Frequency Vibration Restrictions VFD Compatible NEMA, IEC, IEEE, ANSI
Pumps	Evaporator Refiner Vacuum Washing/Bleaching	Starting Restrictions ASD Applied Verticle thrust loads Low inrush IEEE-841, NEMA, ANSI
Mixers	Slurry thickener	Belt load specifications Starting restrictions ASD applied/Low inrush Special shaft and load designs Torque pulsation High rotor inertia IEEE-841

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.

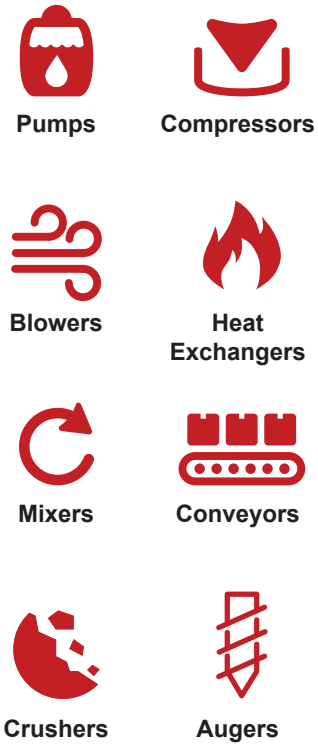




Heat	Heat
Load	Vibration
Inverters	Misalignment
Contamination	Contamination
Voltage Issues	Lubrication Issues
	Electrical Discharge
	Stress, Load, Fatigue

Engineering Requirements

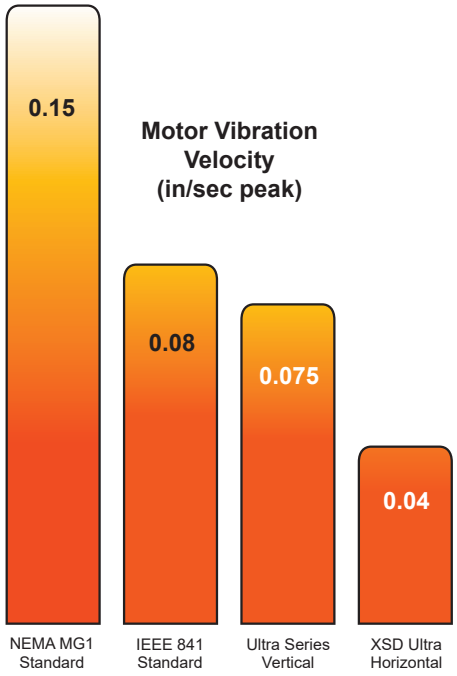
Each petroleum, chemical, power generation, pulp/paper, mining, metal, mineral, water/wastewater, and general process application has unique torque, speed, voltage, enclosure, temperature, and industry standard requirements that must be designed into motors.



We also have the expertise to diagnose the mechanical and electrical requirements for special applications and custom engineer designs as they warrant.

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.



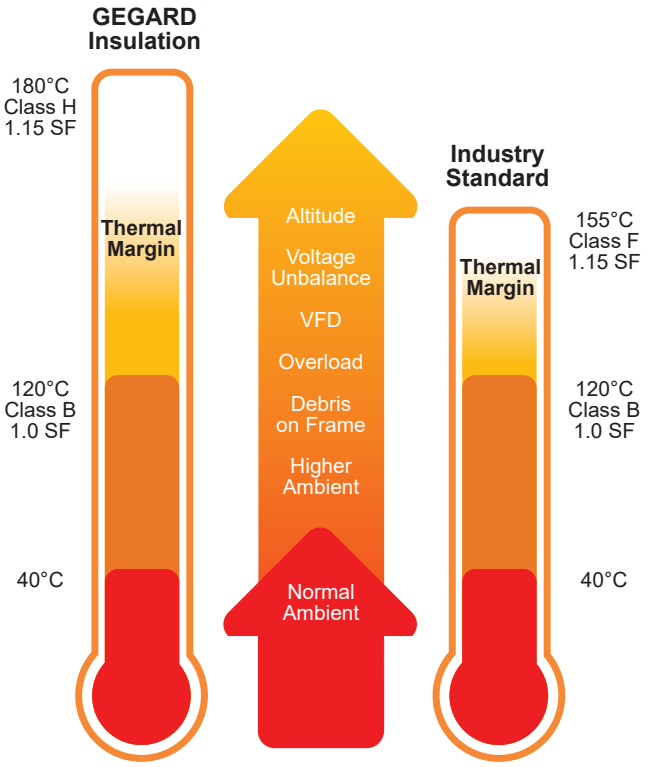
It is well documented that motors designed with low vibration have longer bearing life.

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.

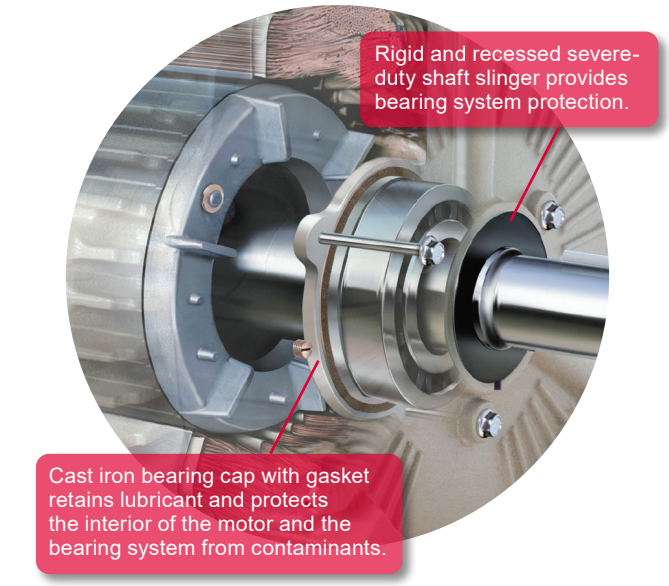
VFD READY NEMA MG1 PART 31

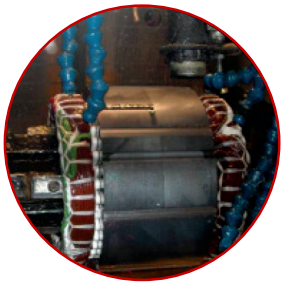


Larger Thermal Margin = Longer Motor Life

Guarding Against Bearing Failure

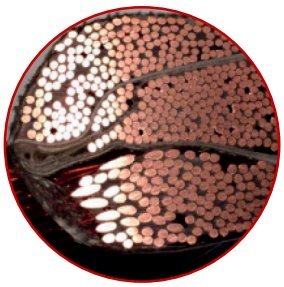
The harmonics from the drives induce a voltage on the shaft. This voltage will discharge through the bearings if the voltage is not grounded. Insulating one bearing prevents a ground loop from developing. We include bearing insulation for higher rating and Aegis shaft grounding rings are optional on 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.



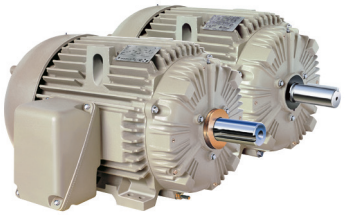
Wire Bonding

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

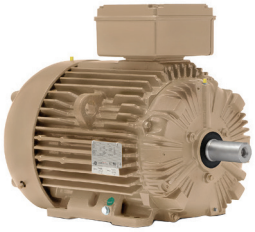
C-Face and high-torque

Design “C” models available

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

Five 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

Aerator NEMA IE3

Premium Energy Savings

One of the most robust, relaible and energy efficient aerator motors in the industry today. Engineered and built to last.

MODEL
- XSD Ultra 841 Aerator

Technical Capabilities

1-200 HP, 1200 RPM

Variable Torque Freq. 0-60 Hz

TEFC

Frame sizes: 180-449

NEMA, IEEE 841

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 580
- Quantum V

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

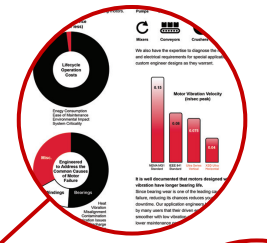
(CD6000 Series)

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

Access has never been easier!



Motor Catalog
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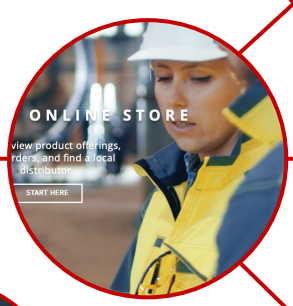

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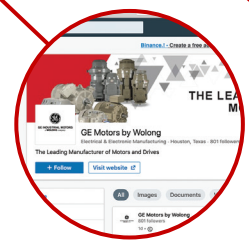

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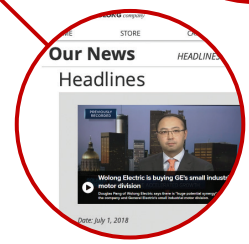

News
The latest developments, new product introductions and special industry events.