

# Submersible Motors

BEST IN CLASS

MUNICIPALITIES

INDUSTRIAL

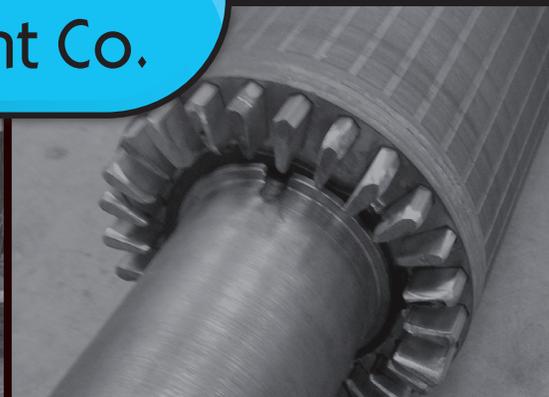
OIL & GAS

MINING

OFFSHORE

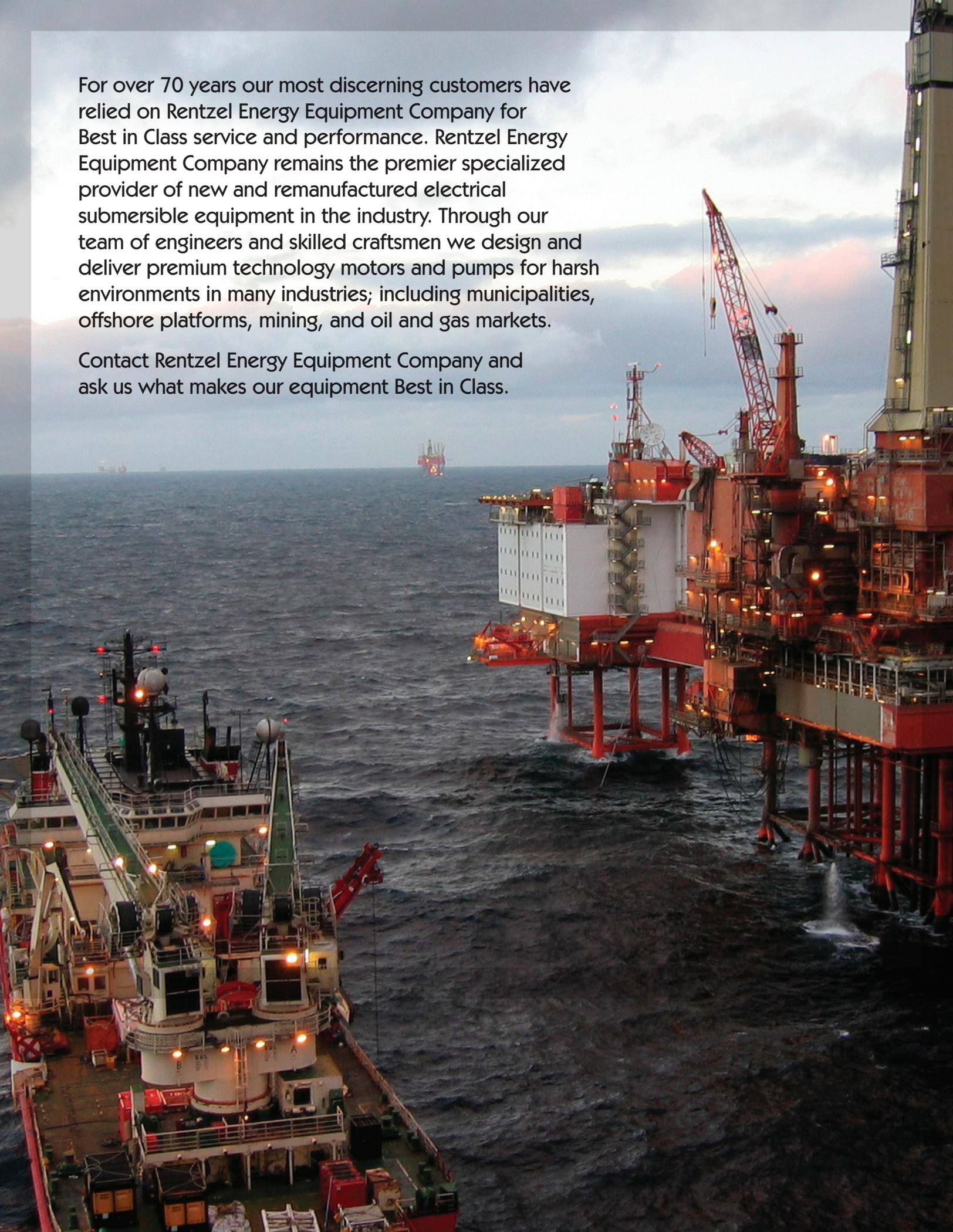


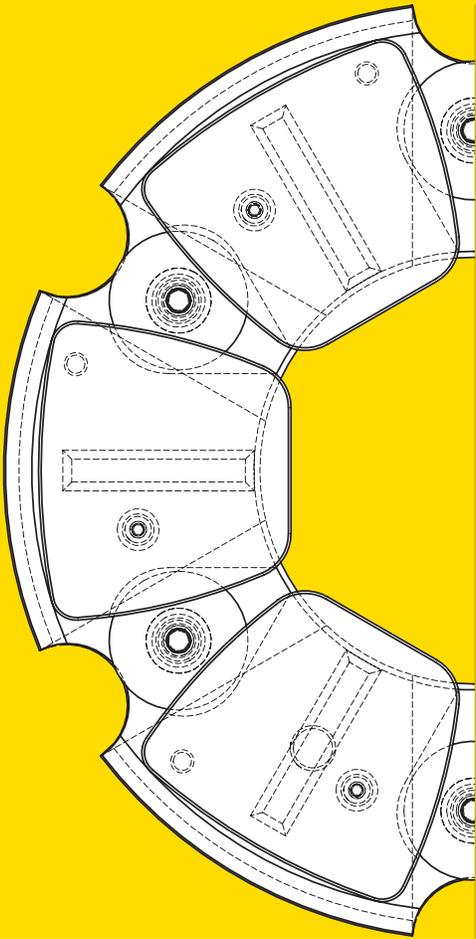
**Rentzel**  
Energy Equipment Co.



For over 70 years our most discerning customers have relied on Rentzel Energy Equipment Company for Best in Class service and performance. Rentzel Energy Equipment Company remains the premier specialized provider of new and remanufactured electrical submersible equipment in the industry. Through our team of engineers and skilled craftsmen we design and deliver premium technology motors and pumps for harsh environments in many industries; including municipalities, offshore platforms, mining, and oil and gas markets.

Contact Rentzel Energy Equipment Company and ask us what makes our equipment Best in Class.





# Thrust Bearings

Rentzel Energy Equipment Company motors are equipped with Kingsbury manufactured thrust bearings that deliver high thrust loads for years of reliable service.

## *Thrust Bearing Specifications*

Motor Size	Down Thrust	Up Thrust
10"	6,500 LBS	1,500 LBS
12"	10,000 LBS	2,000 LBS
14"	17,000 LBS	6,000 LBS
16"	27,000 LBS*	6,000 LBS

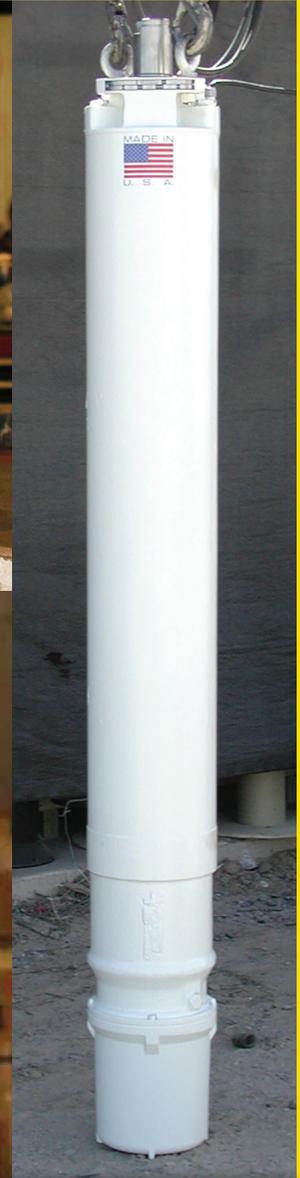
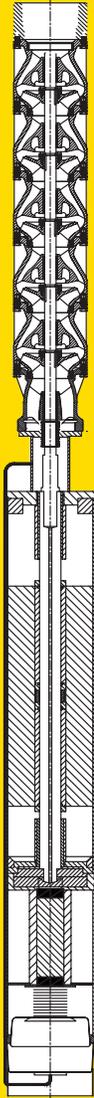
\*Upgrade to 33,000 LBS available

## *PT 100 Style Thermal Protection*

PT100 (Platinum Resistance Transducers) are an economical and accurate method of measuring temperature. The PT100 reads resistance in proportion to the temperature in the submersible motor. This provides the ability to calculate the temperature of the motor under actual operating conditions. All Rentzel Energy Equipment Company oil filled motors are equipped with four PT100 style thermal sensors. The sensors are mounted in the stator winding, each guide bearing/lower turns, and thrust bearing. The signals from the sensors interface with a temperature monitor and are compatible with SCADA systems or other PLC based equipment.

## *Temperature/Resistance Relationship for PT100 Sensors*

Temp. (°C)	Resistance (Ohms)	Temp. Error	Resist. Error
-50	80.74	+/- 0.8 °C	+/- 0.30 ohm
0	100.00	+/- 0.3 °C	+/- 0.12 ohm
100	138.51	+/- 0.8 °C	+/- 0.30 ohm
200	175.86	+/- 1.3 °C	+/- 0.48 ohm



## Submersible Motors

### *Specialist in the Engineering, Sales, and Service of submersible electric motors*

- 10" – 50 hp to 150 hp oil or water-filled
- 12" – 75 hp to 200 hp oil-filled
- 14" – 150 hp to 300 hp oil-filled
- 16" – 250 hp to 600 hp oil-filled
- 18" – 600 HP to 1500 hp oil-filled
- 22" and 24" – Custom built from 1500 hp and up
- 1200, 1800, or 3600 nominal rpm
- 460V, 2300V, or 4160V

Special Voltages Upon Request.

Special and custom motors from 50 to 1500 horsepower are available in standard, 316SS, and duplex materials.

Call for pricing information.

Contact Rentzel Energy Equipment Company for custom water-filled motors and inverted (end-suction) motors at various voltages.

# Submersible



## Repair & Remanufacturing Capabilities

Rentzel Energy Equipment Company is a factory authorized warranty repair facility for:

- Rentzel Energy Equipment Company Submersible Motors
- SAER Electric Motors

Rentzel Energy Equipment Company has the in house machining and fabrication capabilities to repair or manufacture obsolete or hard to get parts.

### *Inspection and Repair Services*

Rentzel Energy Equipment Company provides comprehensive inspection, failure analysis, and repair services for submersible motors in water well, waste water, mine dewatering and offshore applications. Rentzel Energy Equipment Company has the expertise required to repair and remanufacture all brands of submersible motors. An inventory of exchange units is maintained covering popular frame sizes and horsepower. Call for availability and pricing.



# Advantages of the Rentzel Energy Equipment Company Oil Filled Motor

The Rentzel Energy Equipment Company motor provides the most efficient motor coupled with the best bowl assembly for optimal system performance. All motors are extensively tested and documented throughout assembly to ensure the highest quality and dependability.

- Finely machined bearings for a closer tolerance fit and smoother rotor operation.
- All precision machining is completed in-house on CNC machines.
- Large radial bearing surfaces for increased radial load handling that reduces vibration.
- We increased strength of the equalizing diaphragm to ensure long life and dependable operation. This makes the motor self-contained and free from possible contamination via the product being pumped.
- Dual mechanical seals are placed back to back eliminating a cavity that collects moisture.
- We increased the size of the stator casing wall thickness, making the stator more resistant to warping and misalignment.
- M19-C5 coated and annealed laminations for stator and rotor – the highest quality laminations improve motor efficiency.
- Continuous power leads eliminate a potential failure point at the plug-in connection.
- Computerized dynamically balanced rotor to API/NEMA specifications.
- Standard NSF certified Epoxy Coating helps prevent corrosion to exposed areas of the motor.
- Our state of the art sub-flex coupling extends motor life by preventing normal pump wear from transmitting possible misalignment and vibration to the motor.
- With the Rentzel Energy Equipment Company dual pressure balancing system the windings are not exposed to external water contaminants.
- The Rentzel Energy Equipment Company motor can be installed on any NEMA standard manufactured pump without major modifications. Special mounts and adaptors are optional.
- Four thermal sensors are added, one to the Kingsbury thrust bearing and three sensors in the windings.



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For more information on our premium technology,  
please contact us or your local representative.

Your Local Representative is: