

REDA Maximus Motors

Bolt-on single and tandem motor designs

APPLICATIONS

- ESP systems across all applications and conditions, including extreme weather

BENEFITS

- Improved reliability with reduced risk of installation-related failures and more robust rotor bearings
- Streamlined installation, reducing costly NPT and allowing early ESP startup
- Optimized production with real-time downhole monitoring capabilities

FEATURES

- Simplified, reliable, and less weather-dependent plug-and-play design
- Mechanically locked-in rotor bearings with self-lubricating, polymer-lined bushings
- Plug-in pothead connection with MaxLok* or Trident ESP motor lead extension
- Quick and reliable motor and protector connections with MaxJoint* ESP flange connection technology
- Direct measurement of motor-winding temperature
- Gauge-ready base (GRB) fully compatible with any Phoenix* downhole sensor
- Variable-rating motor with high efficiency and power through the operating range
- Involute spline shafts to provide maximum torque capacity

REDA* Maximus* ESP motors are the latest technological evolution of Dominator* submersible pump motors. They combine the strength and reliability of the proven REDA motor technology with an innovative, plug-and-play concept. Maximus motors are handwound, two-pole, three-phase, squirrel-cage induction type. Heat generated by the motor is transferred to the well fluid as it flows by the motor housing, and the motor thrust bearing carries the load of the rotors.

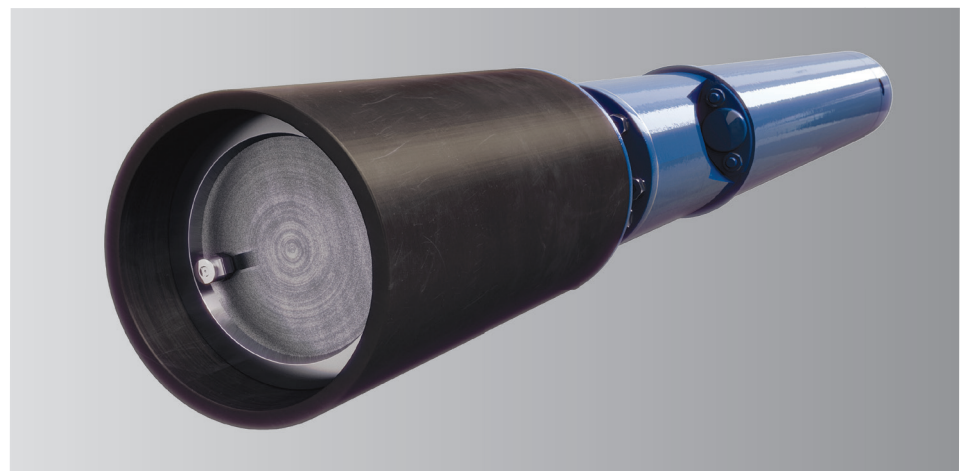
Oil filling of the motors is performed in the controlled environment of a Schlumberger manufacturing plant or service center, away from the potentially adverse conditions of the wellsite. The motors are factory vacuum-filled with highly refined mineral oil to provide dielectric strength, lubrication for bearings, and thermal conductivity. MaxJoint connection technology features a leak-tight seal and a compensating shipping cap that ensures the right amount of oil is contained at all times. Making up the pothead to the motor is now a quick and easy plug-and-play connection with the MaxLok motor lead extension, which eliminates the taping process of the pothead terminals at the wellsite.

Along with this streamlined motor design, key internal components have been enhanced for reliable operation in severe conditions. For example, all radial bearings in Maximus motors

feature hardened shaft sleeves running in self-lubricating, polymer-lined bushings with high load and temperature capacity under diminished oil lubricity.

Maximus motors that include the GRB offer the highest flexibility, as they are compatible with any Phoenix downhole sensor for real-time monitoring of ESP and reservoir parameters. A temperature-sensing device directly connected to the motor winding enables real-time monitoring of the motor-winding temperature throughout all stages of operation. The GRB allows direct connection (no adapters required) of the downhole gauge to the motor either in the shop or at the wellsite without having to refill the motor. Motors with the GRB can be run without a downhole sensor, if needed.

REDA Maximus motors improve total ESP system run time while reducing installation time. Once at the wellsite, Maximus ESP motors are installed quickly and easily, allowing earlier release of workover crews and earlier oil production.



Factory-filled REDA Maximus motors incorporate MaxJoint connection technology sealed with a special compensating shipping cap to maintain the contamination-free oil during transportation and storage.

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Maximus Motor Specifications

Motor Series	375	456	562
Casing OD, in [mm]	3.75 [95.25]	4.56 [115.8]	5.62 [142.7]
Power range: single section hp at 60 Hz [kW at 50 Hz]	14.3 to 71.4 [8.9 to 44.4]	30 to 270 [18.6 to 167.8]	37.5 to 563 [23.3 to 350]
Power range: max. tandem hp at 60 Hz [kW at 50 Hz]	285.6 [177.5]	540 [335.6]	1,126 [700]
Rotor bearing type	Self-locking (SLK)	Self-locking and self-lubricating with polymer lining (SLK-PL)	SLK-PL
Max. winding operating temperature, degF [degC]	400 [204]	400 [204]	400 [204]
Shipping and storage temperature, degF [degC]	-40 to 176 [-40 to 80]	-40 to 176 [-40 to 80]	-40 to 176 [-40 to 80]
Operating frequency	30 to 90	30 to 90	30 to 90
Metallurgy	Carbon steel (CS), CS with Monel® trim (CS M-TRM), Redalloy* high-chrome alloy	CS, CS M-TRM, Redalloy high-chrome alloy	CS, CS M-TRM, Redalloy high-chrome alloy
Protector and tandem motor connection	MaxJoint plug-and-play design	MaxJoint plug-and-play design	MaxJoint plug-and-play design
Motor lead extension connection	MaxLok plug-in	MaxLok plug-in	MaxLok plug-in, Trident plug-in
Sensor connection options	Adaptor to sensor	GRB with factory-installed motor winding thermocouple or built-in sensor	GRB with factory-installed motor winding thermocouple or built-in sensor
Oil-filling process	Factory vacuum filled with degassed oil specified for the application and sealed with compensating shipping cap (no additional oil-filling required upon installation).	Factory vacuum filled with degassed oil specified for the application and sealed with compensating shipping cap (no additional oil-filling required upon installation).	Factory vacuum filled with degassed oil specified for the application and sealed with compensating shipping cap (no additional oil-filling required upon installation).

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