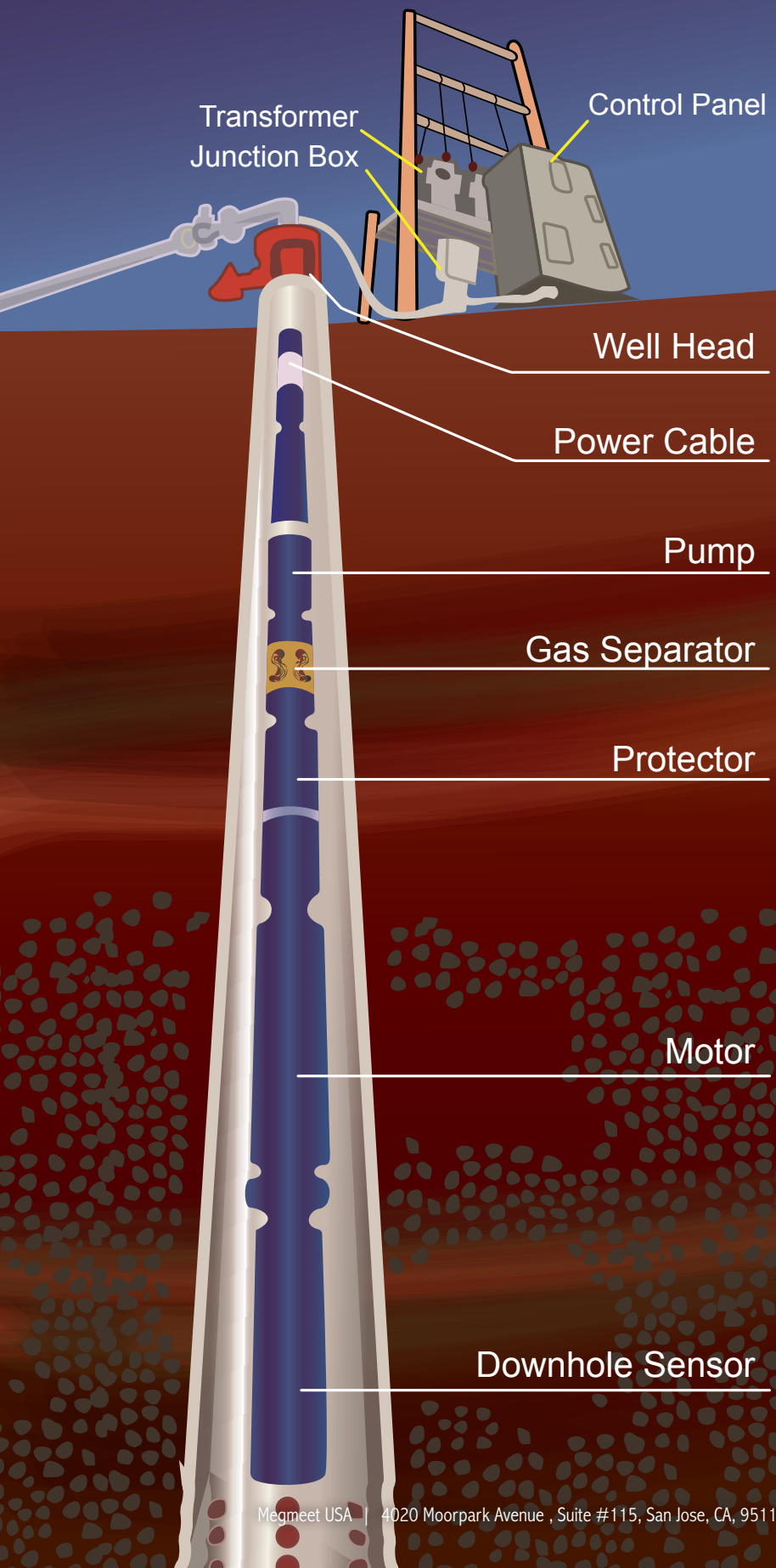
MEGMEET®

Electric Submersible Pump



The Electrical Submersible Pump (ESP) Manufacturing Plant was established in 1989 and we have been expanding and perfecting the ESP offering over the last 30 years. The technology has evolved to improve performance in a wide range of oil conditions.

Benefits

- Good sand resistance
- Rust and stain resistance
- Individualized Electrical Submersible Pump design using Well Selection software
- High temperature resistance
- High production rates up to 28,000 b/d

Applications

- Deviated and horizontal wells
- High-gas well applications
- High-temperature downhole conditions
- High-production rate wells

Specifications

Production Rate:
15 m3/d to 4500 m3/d

Max Downhole Temperature:
90°C, 120°C, 150°C, 180°C

Maximum Vertical Setting Depth:
5000 m

Gas Content by Volume:
Up to 90%

Motor Outside Diameter:
95mm, 98 mm, 107 mm, 114 mm, 138 mm, 143 mm, 187mm

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Electric Submersible Pump Component Highlights

Variable Speed Drive

The variable speed drive optimizes system operation and protects the Electrical Submersible Pump (ESP) components. Accurate control of the motor speed allows for optimal motor temperature, which can extend the life of the ESP in addition to improving gas handling capabilities. Well conditions can be monitored and the ESP adusted to control the well drawdown rate and also adjusted to match changing well conditions. The VSD protection scheme protects against short circuit, under load, over load, over voltage, phase loss, and current imbalance. The IP54-rated cabinet is designed to withstand the harsh outdoor environments of oilfields.

Submersible Centrifugal Pump

Megmeet pumps are designed for reliable downhole operation. The pump shaft is made from Monel-K500, an alloy known for its excellent corrosion resistance, strength and hardness. The number of pump stages is determined by the required lift. The pump includes a strong magnetic scale remover that can effectively prevent scale from depositing in the pump and extends pump life. Nickel-iron plating provides the pump with strong wear resistance and corrosion resistance. The impeller and diffuser geometries are designed to fit a wide range of well conditions, including viscous crude, and operate at high efficiency.

Gas Separator and Gas Handler

Well fluid enters the gas separator (where free gas is separated) and then into the gas handler where the remaining gas is compressed to a one-phase liquid prior to entering the submersible centrifugal pump. The gas separator can separate up to 90% of free gas. Multiple separators can be configured in tandem to improve the gas separation capability. For wells with sand content, some gas separator models include a high-strength sand-resistant sleeve to prevent casing fracture and pump failure.

Submersible Motor

The submersible power motor is an inductive motor that drives the multi-stage centrifugal pump. The design is optimized to fit a range of well diameters and environmental temperatures. The temperature of the motor is regulated with a high-strength, dielectric oil that aids lubrication and thermal conductivity. The heat generated by the motor is transmitted to the well fluid through the motor housing.

Megmeet offers seven series of motors with outer diameters of 95mm, 107mm, 138mm, 143 mm, and 187 mm to meet a variety of casing diameters.

Motors may be specified with one of four temperature ratings: 90°C, 120°C, 150°C, or 180°C.