BOPM offers World-Leading Direct-Drive Permanent Magnet® AC Motor Technology

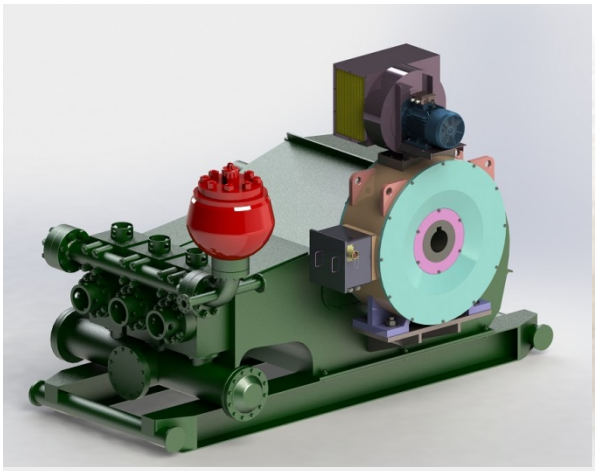
---The most efficient &compact AC motor Solution for onshore & offshore mud pumps---

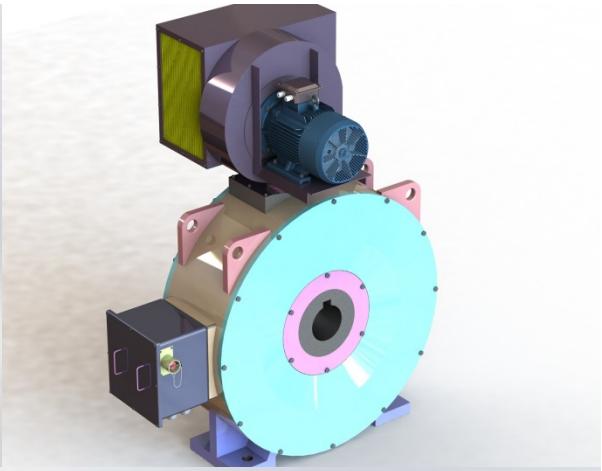
At BOPM, We proudly offer cutting-edge Direct Drive Technology for any mud pump in the market. Our Direct Drive Permanent Magnet (DDPM) AC motor is designed to maximize the benefits of a direct drive mud pump configuration. Inherently more efficient than a belt drive configuration; DDPM motor significantly reduces fuel consumption, reduces parts and maintenance expenditures and reduces the footprint and weight of the pump package.

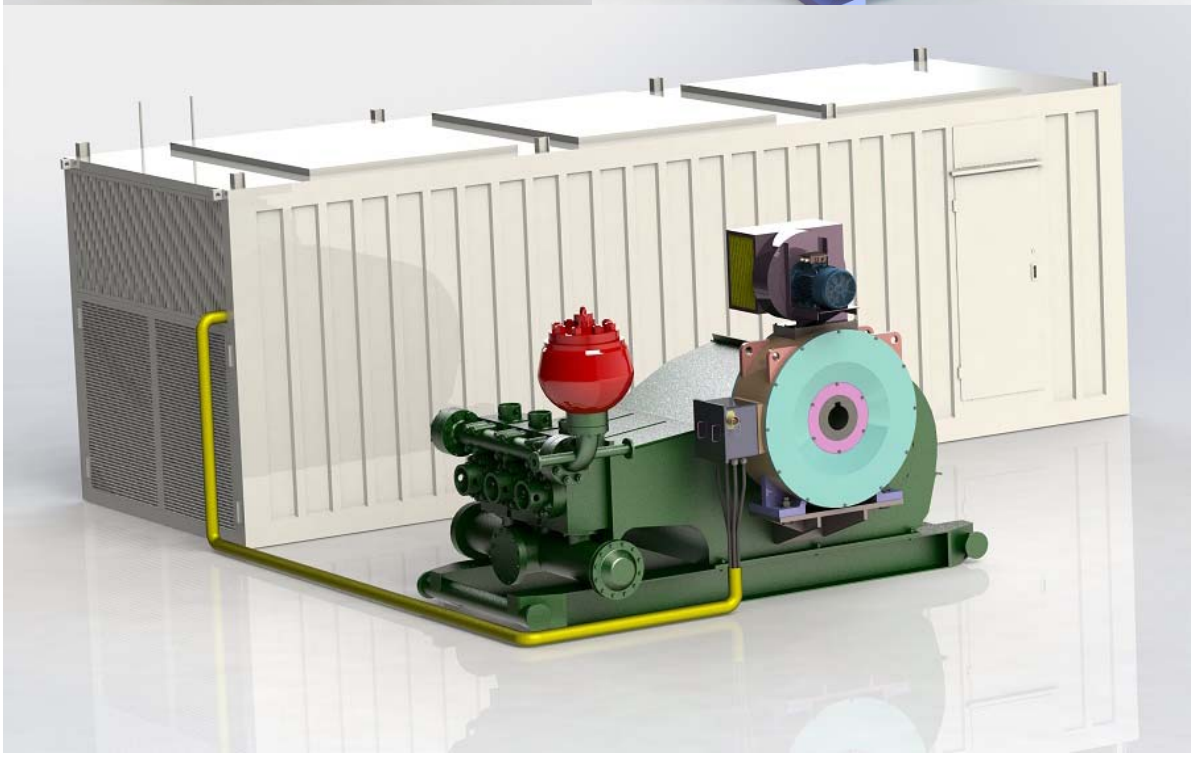
Since 2002, BOPM has been building PM motor and providing rugged motors for drilling applications including mud pump, drawworks, PCP pump, Sucker Rod Pump. BOPM is a world leader in the design and manufacture of Permanent Magnet motors focused on providing machines for demanding jobs where efficient performance and precise control are required. BOPM is the FIRST Company who successfully applies high torque PM motors into oil & gas industry.

Benefits

- **Reduced Maintenance-no belt, sheaves, guard**
- **Easy field Installation and field maintenance**
- **Direct Drive configuration reduces fuel consumption**
- **Higher motor efficiency; Higher Overload Capacity**
- **Increased safety-no belt, sheaves**
- **Less noise, less vibration**
- **Approx. 15% lower weight & 25% lower size volume**
- **Increased longevity of pinion shaft, bull gear and bearings**
- **Can be configured for any pump model in the market**







Product Models (for Mud Pump and Drawworks)

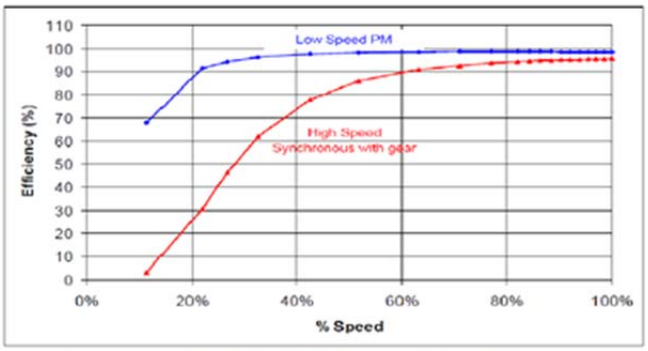
- **BOPM 275HP Direct-Drive Permanent Magnet AC Motor**
- **BOPM 550HP Direct-Drive Permanent Magnet AC Motor**
- **BOPM 1150HP Direct-Drive Permanent Magnet AC Motor**
- **BOPM 1600HP Direct-Drive Permanent Magnet AC Motor**
- **BOPM 2250HP Direct-Drive Permanent Magnet AC Motor**

Why Permanent Magnet Motors?

Improved Efficiency
- 2-4 % full load
- 15-30% part load

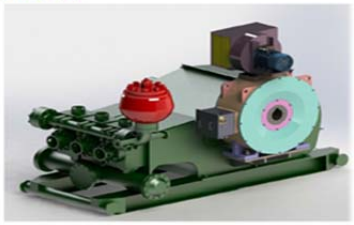
Smaller and Lighter
- Up to 50%

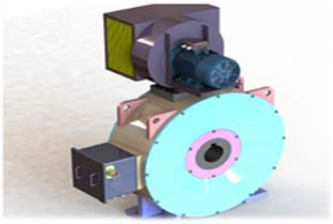
Robust
- Larger Rotor to Stator Gaps



When Permanent Magnet Motors Work Best

- Application requires VFD
- Efficiency a main driver
- Size and weight a main driver
- Rotor dynamics are an issue
- Rotor losses (heating) an issue
- Higher speed-power product desirable (e.g. to match compressor performance)
- High starting or stall torque
- To eliminate gears
- Very high reliability
- Unique geometry (L/D) necessary





BOSS OILWELL®
Products & Manufacturing Inc

----------Performance Matter, Service Count----------