



Based on the reverse Moineau pump principle Prime Horizontal positive displacement motors deliver predictable torque and RPM directly to the bit. With a full range of motor diameters from 2 7/8" up to 8".

These versatile motors can be configured to meet drilling requirements for steerability, build rates, torque, bit speed, flow rate and string rotation. A variety of configurations are available for steerable drilling and long, medium and short radius drilling.

### Benefits

- Easy to set adjustable bent housing:
  - 0-3 degrees on motors larger than 3 3/4"
  - 0-4 degrees on 3 3/4" motors
- Motor catch device (sizes larger than 3 3/4")
- Variety of lobe configurations
- Mud lubricated bearing assembly
- In-house maintenance
- Low flow high torque power sections
- Short radius drilling motors
- Time/date of usage reporting

The choice of Prime Horizontal power sections (stator/ rotor) determine the bit speed and torque output of the motor.

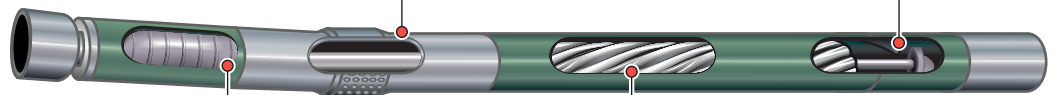
Generally the motors are classified as low to medium speed, and within each category a wide range of power sections are available.

### Adjustable bent housing

The adjustable bent housing is available in 0°-3° settings (with a 0°-4° on 3 3/4" motors). The housing is easily adjustable and allows the operator to reset angles on the rig, eliminating the need to change assemblies or motors. Always follow the specifications for proper torquing of the assembly.

### Motor catch device

The motor catch device prevents leaving the motor downhole in the unlikely situation of a motor connection failure. The catch device reduces the chance for possible fishing operations.

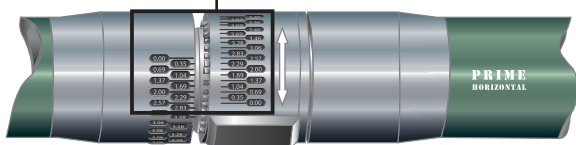
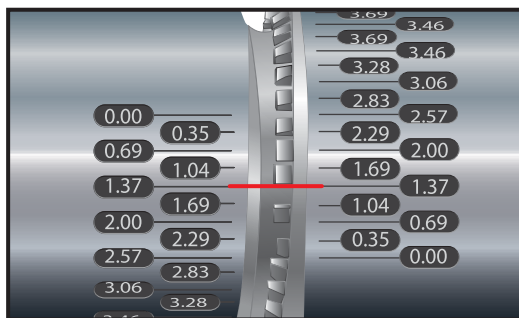


### Bearing assembly

Each motor comes equipped with a specially designed thrust bearing stack for axial loading and radial bearings to support radial loading. A small percentage of the drilling fluids (5% - 7%) bypasses the bearings to cool and lubricate the thrust and radial bearings. The remaining drilling fluid exits through the nozzle ports of the drill bit.

### Power section

The power section is made up of a lobed rotor that fits inside a elastomer lined housing (stator). The rotor has one less lobe than the stator, creating a continuously sealing chamber. Drilling fluid is forced through the motor, thereby turning the rotor and generating torque. The lower the speed (higher number of lobes), the more torque is provided, and vice versa.



Adjustable section



9/10 lobe – (Low speed motor feature High Torque output, which is ideal for use in steerable applications.)



5/6 lobe – (Medium speed motor increase rate of penetration while maximizing the bit life, primarily in long interval drilling.)



4/5 lobe – (Medium speed motor increase rate of penetration while maximizing the bit life, primarily in long interval drilling.)

### Lobe configurations in stock

- 2 7/8" - 5/6 lobe 3.0 stage
- 2 7/8" - 7/8 lobe 4.0 stage
- 3 1/8" - 5/6 lobe 3.0 stage
- 3 1/8" - 5/6 lobe 4.0 stage
- 3 3/4" - 5/6 lobe 3.0 stage
- 3 3/4" - 9/10 lobe 4.0 stage
- 4 3/4" - 7/8 lobe 5.0 stage
- 4 3/4" - 9/10 lobe 4.0 stage
- 5 3/4" - 5/6 lobe 3.3 stage
- 6 3/4" - 7/8 lobe 4.0 stage
- 6 3/4" - 9/10 lobe 4.0 stage
- 7 3/4" - 9/10 lobe 4.0 stage
- 8" - 9/10 lobe 4.0 stage