



The type "D" motor is a water filled, high efficiency, submersible motor. All exposed metal components are 300 series stainless steel. The motor is completely sealed and employs an internal pressure balancing system. The mounted flange dimensions ensure a standard fit to most pump manufacturers. The type "D" motor is designed for "across-the-line" and reduced voltage starting. It is also approved for operation with IGBT type Variable Frequency Drives (VFD). Additional features, materials, sizes and configurations are available upon request.

1 SHAFT SEAL(S)

The standard type "D" motor uses a double rubber lip seal for sealing at the shaft. This configuration ensures the highest reliability in conditions of suspended solids. The motor is also available in a single or double mechanical seal design.

2 MOTOR LEADS

Type "D" motor leads are internally connected to the winding and the individual cables extend through the compression fittings in the mounting bracket. This maintains a completely sealed unit. Lead cables are sized for submerged operation and extend to a length of 16 feet outside the motor. Longer continuous lengths are available on request.

3 INTERNAL PRESSURE BALANCING SYSTEM

Internal and external motor pressures are balanced by means of an expansion diaphragm. The diaphragm allows for internal fluid expansion during operation and prevents the exchange of internal and external fluids.

4 WINDING

Water tight class Y winding material are used in all standard type "D" motors. Our special winding wire has an epoxy enamel layer over the conductor, surrounded by waterproof polypropylene (460 volt) or polyethylene (2300-4160 volt) insulation layer. An outer nylon sheath applied over the insulation provides additional mechanical protection.

5 STATOR

The all stainless steel stator shell provides superior protection against erosion and corrosion of the exterior shell. This allows for larger diameter stator laminations and superior motor cooling capabilities.

6 INTERNAL FLUID

The motor is initially filled with a solution of fresh, potable water and FDA approved, food grade, propylene glycol. This mixture prevents fluid freezing during transport and storage.



7 GUIDE BEARINGS

Replaceable, carbon composite guide bearings are located at each end of the rotor lamination stack. This material allows for close bearing clearances while providing critical rotor alignment.

8 ROTOR

The rotor shaft is a two piece shaft composed of high strength magnetic steel and a 316 stainless steel stub shaft that extends through the mounting bracket. The squirrel cage rotor assembly is dynamically balanced to operate with minimum vibration.

9 GUIDE BEARING JOURNALS

Guide bearing journals are replaceable chromed sleeves. These sleeves provide exceptional wear characteristics and easy replacement.

10 THRUST BEARINGS

The thrust bearing is a proven pivotal shoe design with polished stainless steel shoes, and a polished phenolic-resin, or carbon composite rotating driver face.