



Submersible Pump Specification

Submersible Dewatering Pump Design:

Portable Slim-Line Top Discharge Submersible pumps shall be suitable for use in Corrosive and Abrasive dewatering service with ambient temperatures at 104F.

Materials of Construction:

- Wetted Parts: Epoxy Coated Aluminum/Steel.
(Spot Welded 'Rolled SS' Sheets are unacceptable)
- Shaft: 431 SS
- Impeller: 410SS Hardened to 55 Rockwell Minimum.
- Diffuser: Field Adjustable Nitrile Rubber lined.
- Wear Plate: Nitrile Rubber lined or 410 Hardened Stainless Steel.
- Seals: Two Independent Tandem TC/TC and TC/TC Mechanical Seals enclosed in a pressure compensated Oil Chamber. Double Mechanical Seals with common spring unacceptable.
- Sand Guard: Seal housing should be equipped with an external Sand Guard behind Impeller to prevent sand/debris from collecting outside the outer seal face when pump is in operation.
- Bearings: The rotor shall rotate on two permanently greased Ball/Angular Contact Bearings containing special anti-corrosion additive.
- Hardware: All exposed nuts, bolts and washers shall be AISI 304 SS or better.
- Motor: Continuous Duty Rated Squirrel Cage Induction Motor conforming to IP 68 - completely submersible with a minimum H Class Insulation (180C) triple dipped and epoxied end windings. Maximum 15 start/stops per hour. Pump and motor are one integral unit. No couplings allowed.

- Cathodic Protection: Pumps shall be equipped with Sacrificial Zinc Anodes to protect aluminum from galvanic corrosion.
- Oil: The Oil Chamber shall be filled with FDA approved white/paraffin oil.
- Strainer: The pump shall be equipped with a Stainless Steel Suction Strainer to prevent large solids from entering the hydraulic fluid end.
- Outlet: A removable Cast/Fabricated Stainless Steel Male NPT/Hose/BSP Outlet shall be provided. Integral Outlets welded/cast on the main pump body are unacceptable.
- Cable: Submersible Type SOOW/HO7RNF Cable shall be used.
- Cable Entry: The Cable entry seal design shall preclude any specific torque requirements to insure a watertight and submersible seal. A Water Dam type Sealing system shall be employed where the cable OD will be sealed using one rubber grommet and each individual core of the cable will be sealed using a secondary grommet. This ensures no water ingress even in the event of the cable outer sheath being cut. Epoxies, Silicones or other sealing systems shall not be considered acceptable.
- Cable Grip: A one Meter Long SS Cable sheath terminated at the cable gland shall be provided for strain relief.
- Lifting Eyes: Integral lifting eyes in top bracket of pump or Stainless Steel handle/ Lifting Eye bolts shall be provided.
- pH of Fluid: 5 – 8
- Max Sp. Gravity: 1.1