Three Phase Openwell Monoblock Installation Procedure

Taro™ Pumps

Texmo Industries
Est. 1956

1. Topping Up The Motor

Unscrew the Brass Plugs 1 and 2, fitted on top of the motor as shown in Fig. 1 below, and fill the motor with pure drinking water till water overflows from the other filling hole. Gently rock the motor to release air bubbles and further top up if necessary. Then replace the two plugs.

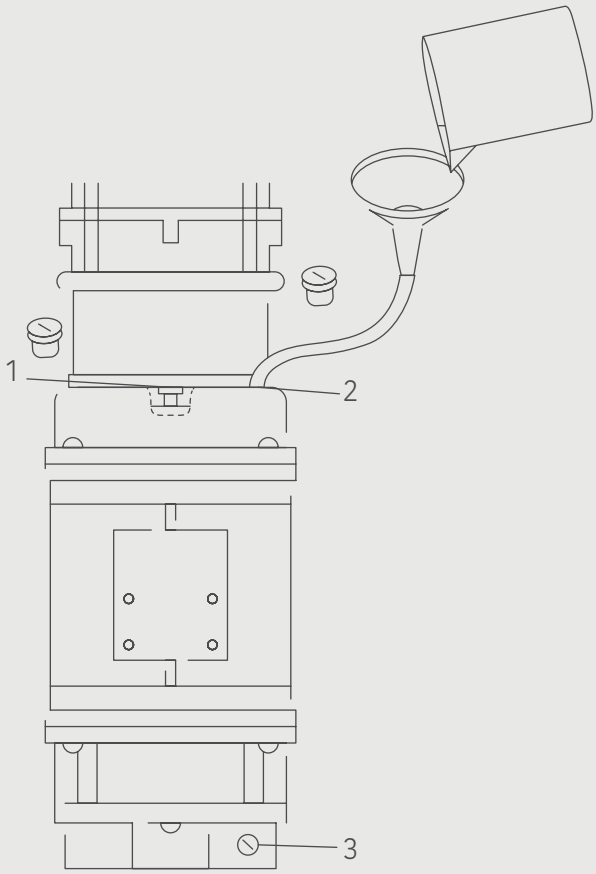


Fig. 1
Filling The Motor Of OWS With Pure Drinking Water

The Brass Plug 3, located on the Motor Base, is used for draining the water from within the motor. Ensure all three Brass Plugs are tightened to prevent leakage of water from within the motor. Check for leakages before lowering the pump set.

2. Use Prescribed Pipe Sizes As Mentioned On The Product Name Plate

3. Check The Level Of Silt At The Bottom Of The Well. Refer Fig. 2, Shown Below, For Locating The Ows For Operation With Flooded Suction

4. Use The Eye Bolts / Lifting Lugs For Lifting / Lowering The Single Phase Ows Using Appropriate Equipment. Keep The Wire Ropes Remains Tied For Lifting Of The Pump Set For Future

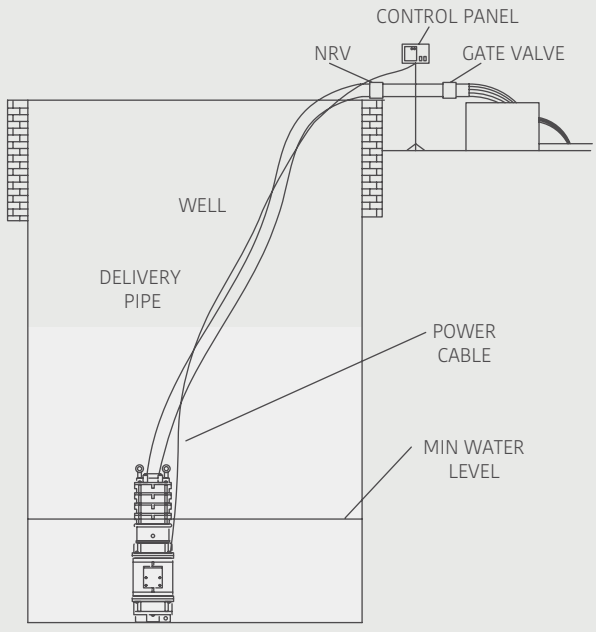


Fig. 2
OWS With Flooded Suction

5. Water Proofing The Submersible Motor Cable – Supply Cable Joint

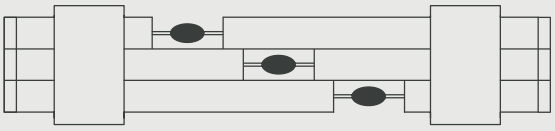
• DOL OWS Motors are supplied with a single 3 core PVC insulated flat cable of length 3 meters.

• The free end of the 3 core cable of the motor needs to be connected to the supply cable from the control panel.

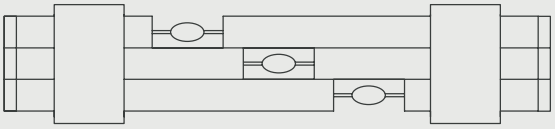
• As this joint is always nearly submerged in water, the joint needs to be water proof.

Refer the sequence shown in Fig. 3 below for insulating the cable joint for under water application:

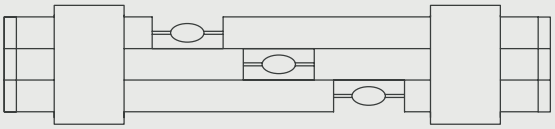
Step 1: Soldering the Copper Strands



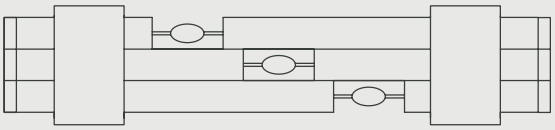
Step 2: Layer 1 - 1st layer of virgin rubber insulation



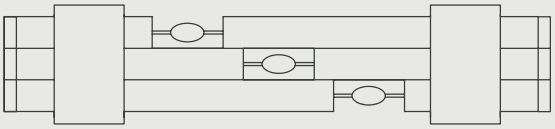
Step 3: Layer 2 - 1st layer of PVC Insulation tape



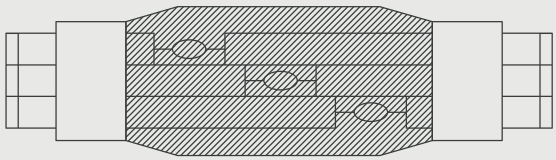
Step 4: Layer 3 - 2st layer of virgin rubber insulation



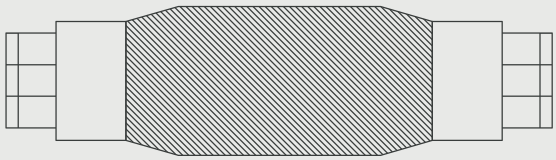
Step 5: Layer 4 - 2nd layer of PVC Insulation tape



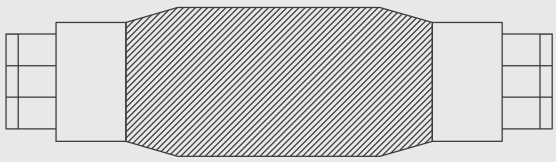
Step 6: Layer 1 - 1st layer of virgin rubber insulation



Step 7: Layer 2 - 1st layer of PVC Insulation tape



Step 8: Layer 3 - 1st layer of virgin rubber insulation



Step 9: Layer 4 - 2nd layer of PVC Insulation tape

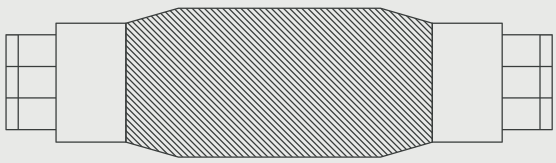


Fig. 3
Cable Joints For Under Water Application

• SD OWS Motors are provided with two separate 3 core PVC insulated flat cable, each of 3 meters length.

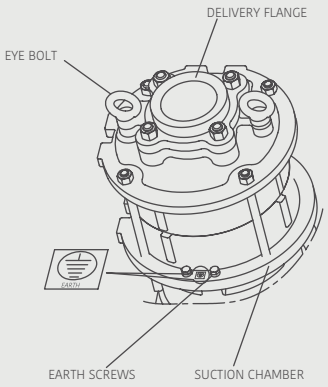
• Repeat the procedure for both 3 core PVC flat cables from the motor to the two cables from the Control Panel.

6. Electrical Installation

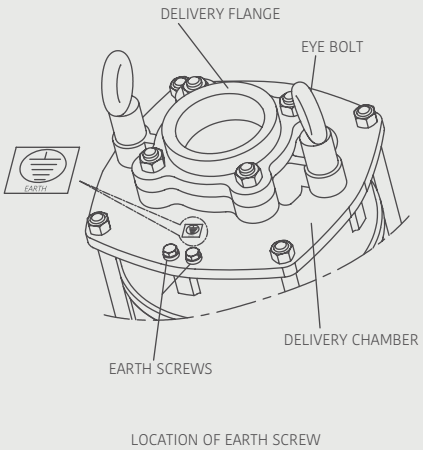
• As far as possible, do not use multiple joints in the electrical cabling while connecting the Control Panel to the OWS.

• Ground the Pump set using the two earth screws provided on the pump set . Refer Fig. 4(a) and Fig. 4(b), shown below, for location of earth screws on the TVSM-RC and TVSM-S products:

Fig 4
Location Of Earth Screw



(a) TVSM-RC



(b) TVSM-S

• Ensure electrical joints, if any, are properly and adequately insulated.

• Connect the cable properly to the starter terminals to avoid loose connections.

• Factor in low voltage operation while selecting cable size.

7. Checking Direction Of Rotation Of OWS

• Power up the OWS and observe the discharge from the pump

• Next interchange any two phase wires, power up the OWS and observe the discharge from the pump

• In case the discharge is more after interchanging any two phase wires, then the impeller is rotating in the correct direction within the volute casing.

• If the discharge after interchanging any two phase wires is lower, then the previous phase wire connection was correct. Now revert back to the old phase wire connection.

9. Cable Lead Wire Connection To Starter

Direct On Line Starter

Cable	Terminal
Red	A1
Yellow	B1
Blue	C1

Star Delta Starter

Cable	Terminal 1	Terminal 2
Red	A1	A2
Yellow	B1	B2
Blue	C1	C2