Single Phase Openwell Monoblock Installation Procedure

Taro™ Pumps

Texmo Industries
Est. 1956

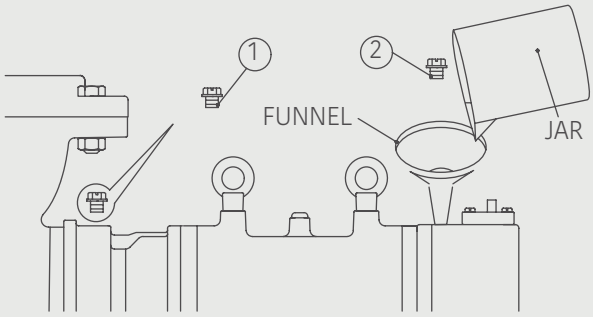
1. Topping Up The Motor

- SSM and TSSM products need to be filled with pure drinking water before installation. In the case of SSM products, unscrew plugs 1 and 2, fitted on top of the motor as shown in Fig. 1(a) below, and fill the motor with pure drinking water till it 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.

- For TSSM products, remove the eye bolts, as shown in Fig. 1(b), and repeat the process as explained above for TSSM products. After filling, replace the eye bolts.

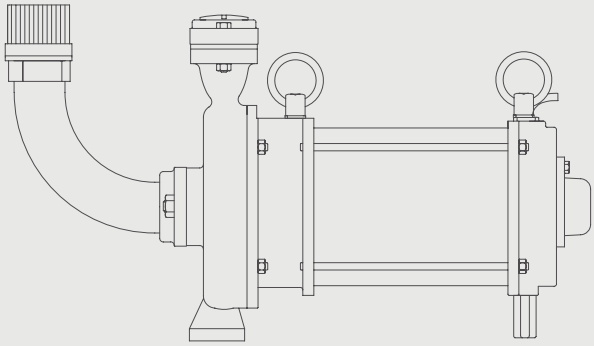
- SVSM products are prefilled with pure drinking water and dispatched from the factory. Prior to installation, referring Fig. 1(c), unscrew plugs 1 and 2, fitted on top of the motor and check whether the motor is full of water. In case the motor is not full, top up the motor with pure drinking water. Gently rock the motor to release air bubbles and further top up if necessary. Then replace the two plugs.

(a)



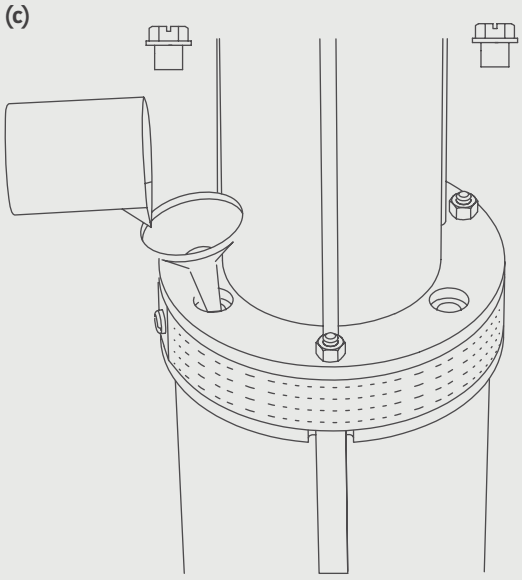
(a) SSM

(b)



TSSM

(c)



SVSM

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

Ensure both plugs are tightened to prevent leakage of water from within the motor. Check for leakages before lowering the Single Phase OWS.

2. SVSM – Horizontal Mounting

Vertical mounting is recommended, in case field condition needs horizontal mounting follow the procedure.

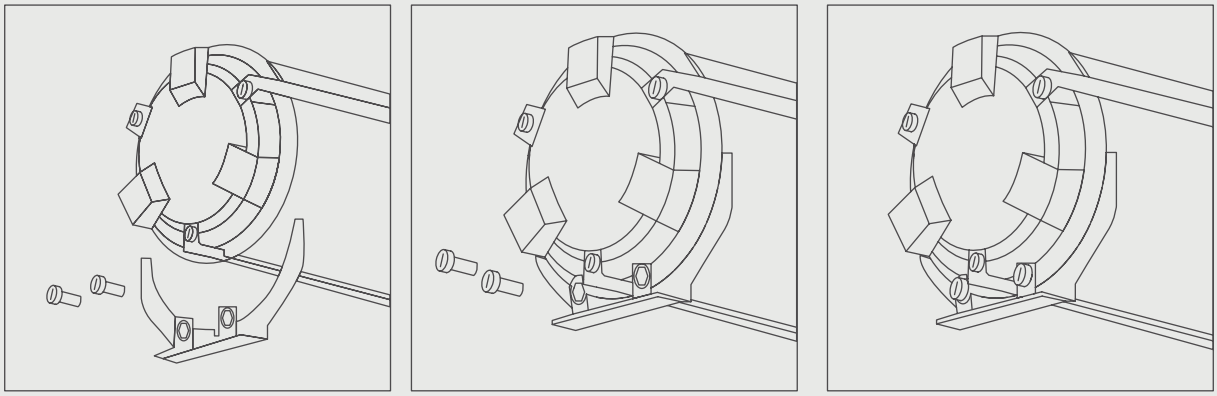
Motor And Pump Stand Assembly – Procedure

Refer Fig. 2 and Fig. 3 for the assembling the motor stand and pump stand.

- Remove the screws in the clamps (a) and insert Motor Stand in the Motor Base flange (b) as shown in above pictures and tight the screws (c).
- Similarly assemble the Pump Stand in the Delivery Flange as shown in pictures (d), (e) and (f) and tighten the screws.
- Both Motor & Pump Stands should be assembled opposite to the cable side.

Assembly Procedure – Motor Stand

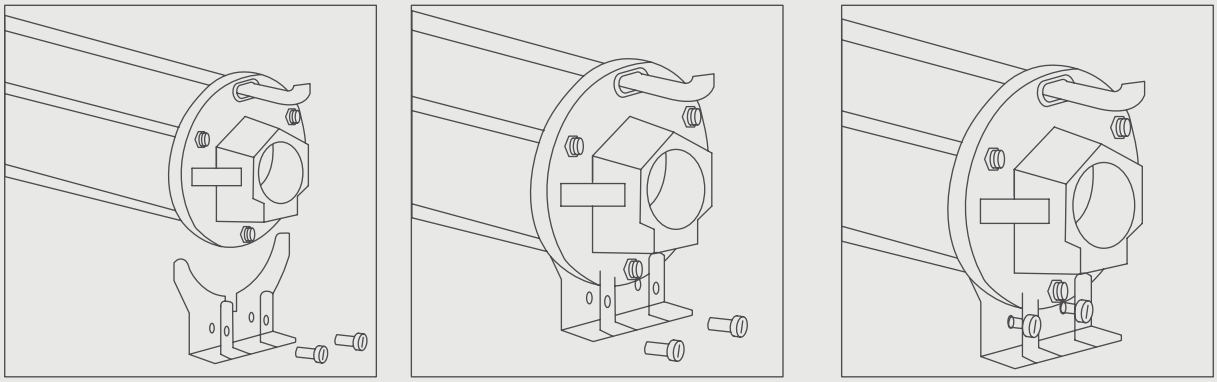
Fig.2
Assembly Procedure – Motor Stand



ASSEMBLY PROCEDURE – MOTOR STAND

Assembly Procedure – Pump Stand

Fig.3
Assembly Procedure – Pump Stand



ASSEMBLY PROCEDURE – PUMP STAND

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

4. Check the level of silt at the bottom of the well. Refer Fig. 4, shown below, for locating the OWS for operation with flooded suction

5. Use The Eye Bolts / Lifting Lugs For Lifting / Lowering The Single Phase Ows Using Appropriate Equipment

6. To Prevent The Motor From Getting Exposed During Pumping, Ensure The Suction Strainer Is Fitted Above The Level Of The Motor

This is done by fitting one end of a bend to the pump suction flange and the strainer to the other end of the bend, thereby ensuring that the level does not fall below the strainer.

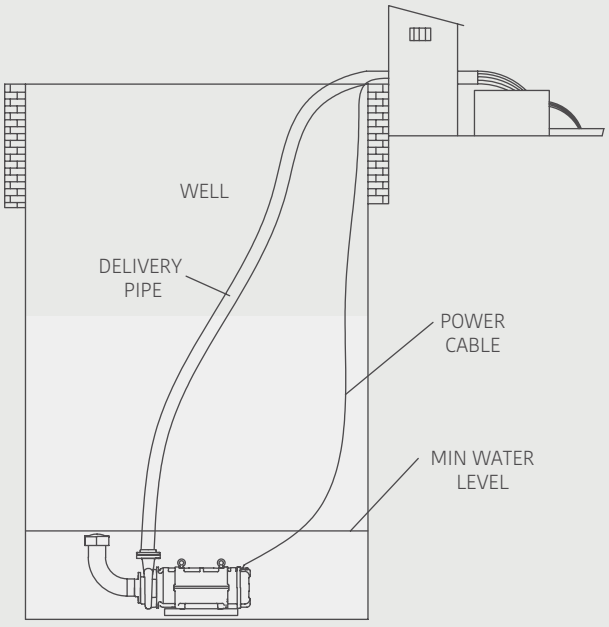


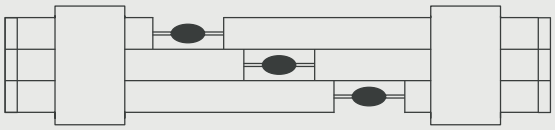
Fig.4
Ows With Flooded Suction

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

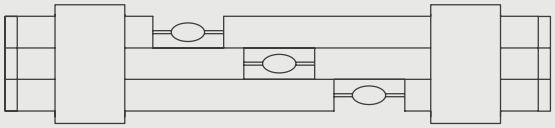
- Standard Single Phase OWS are supplied with a 3 core PVC insulated flat cable of length 3 meters.
- The free end of the 3 core cable of the motor needs to be connected to the supply cable from the control panel.
- As this joint is always nearly submerged in water, the joint needs to be water proof.

Refer the sequence shown in Fig. 5 below for insulating the cable joint for under water application:

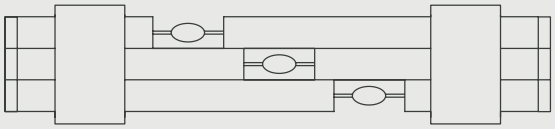
Step 1: Soldering the Copper Strands



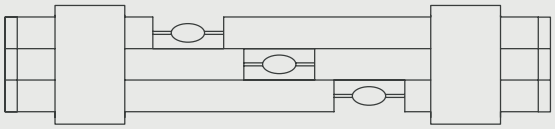
Step 2: Layer 1 - 1st layer of virgin rubber insulation



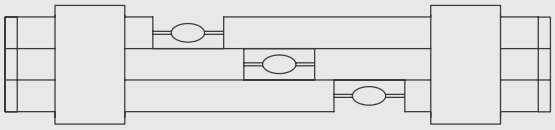
Step 3: Layer 2 - 1st layer of PVC Insulation tape



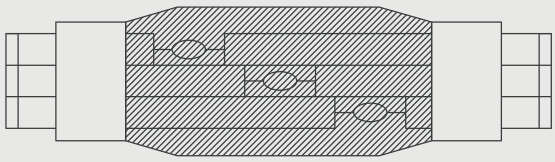
Step 4: Layer 3 - 2st layer of virgin rubber insulation



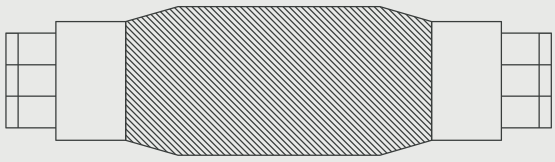
Step 5: Layer 4 - 2nd layer of PVC Insulation tape



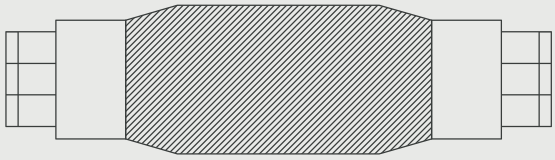
Step 6: Layer 1 - 1st layer of virgin rubber insulation



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

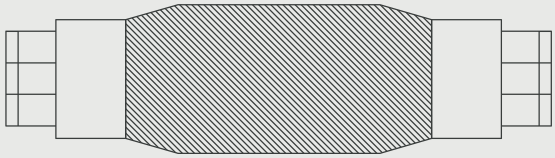
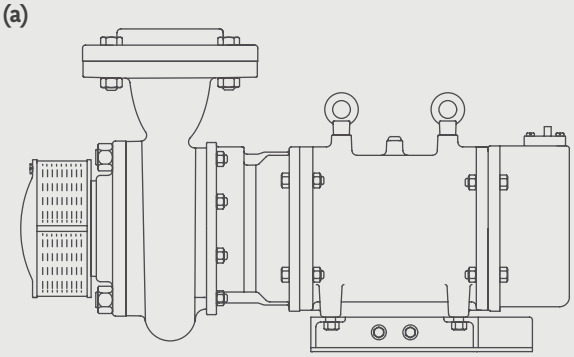


Fig. 5
Cable Joints For Under Water Application

8. Electrical Installation

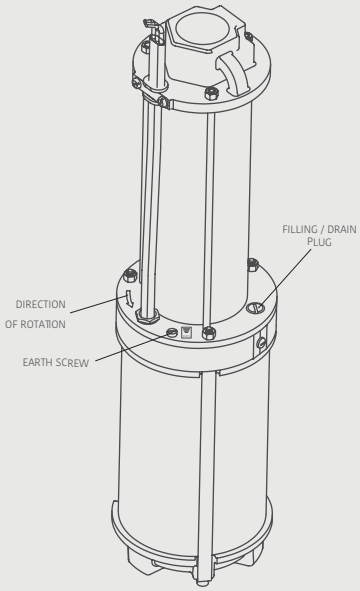
- As far as possible, do not use multiple joints in the electrical cabling while connecting the Control Panel to the OWS.
- Ground the Single Phase OWS using the two earth screws provided on the base plate of SSM and single earth screw provided on the motor body of SVSM. Refer Fig. 6, shown on the following page.
- 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.

(a)



SSM

(b)



EARTH CONNECTIONS – SVSM

Fig. 6
Earth Connections – Ssm And Svsm

9. Cable Lead Wire Connection To Control Panel

Motor Cable	Panel Terminal
Red	R
Yellow	Y
Blue	B