SUBMERSIBLE V4

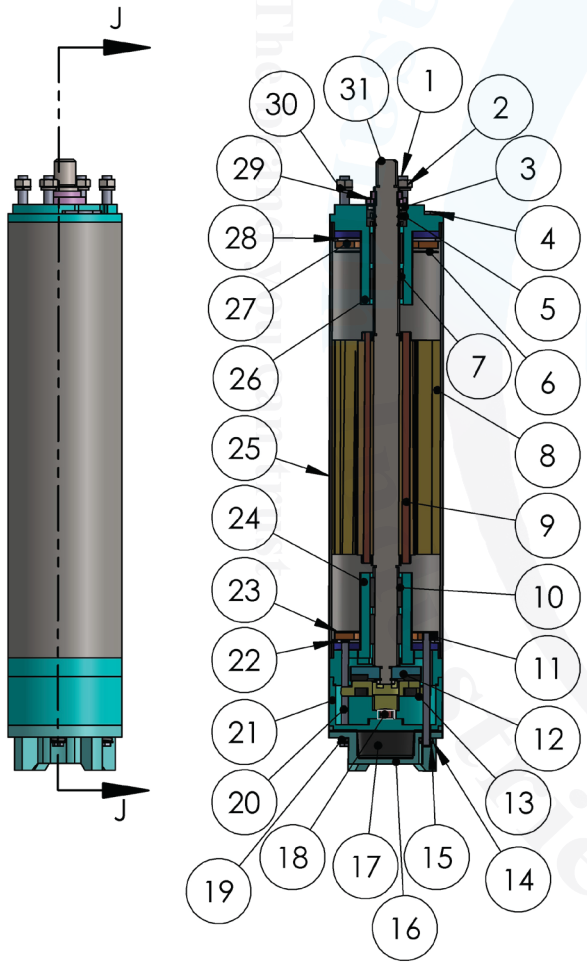
- MOTOR DRAWING
- PUMP DRAWING
- ASSEMBLY DRAWING
- BOM

OPI TECHNICAL DRAWING

V3 SUBMERSIBLE PUMP

OPI V3 TECHNICAL DRAWING

11. SECTION VIW OF V4 SUBMERSIBLE MOTOR



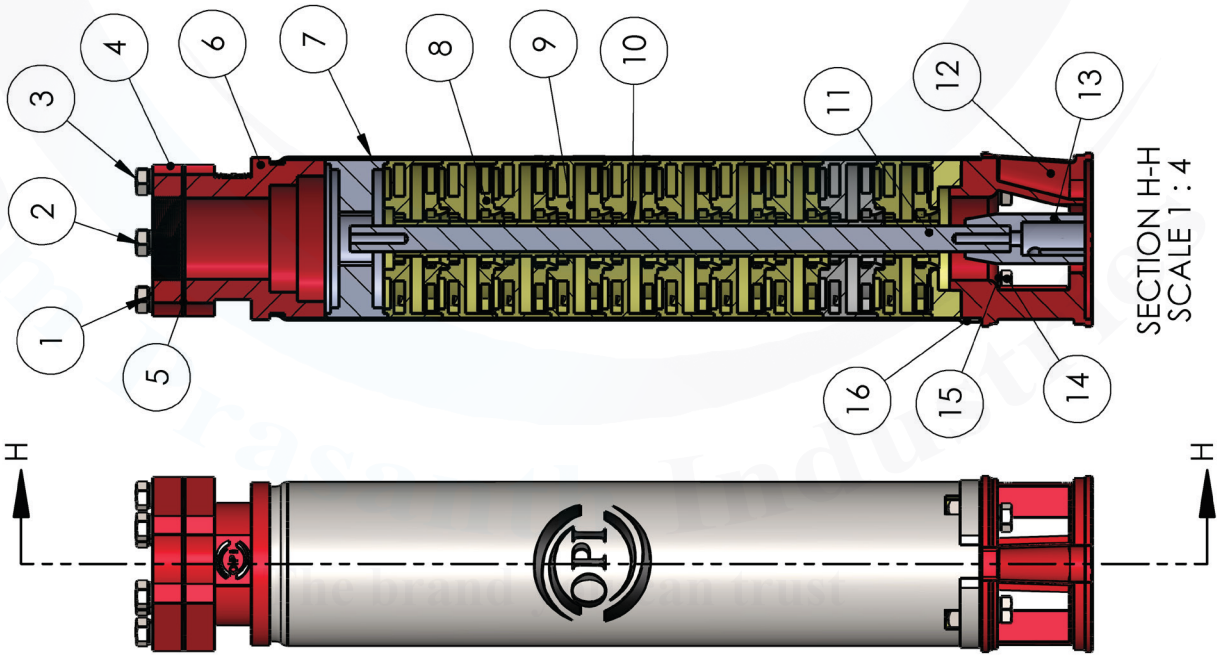
SECTION J-J
SCALE 1 : 6

ITEM NO.	PART NUMBER
1	STUD - 8mm
2	NUT - 8mm
3	SS SAND GAURD
4	SS CABLE GAURD
5	OIL SEAL
6	UPPER COIL SAFETY RUBBER
7	CARBON BUSH
8	STATOR STAMPING
9	COPPER ROTOR STAMPING
10	CARBON BUSH
11	LOWER STUD RING
12	THRUST PAD
13	BEARING
14	SS WASER
15	NUT - 6mm
16	LEG
17	DIAPHRAGM RUBBER
18	GRUB SCREW
19	TAPER "O" RING
20	LEG STUD - 6mm

ITEM NO.	PART NUMBER
21	OPI BEARING HOUSING
22	BODY CIRCLIP
23	LOWER COIL SAFETY RUBBER
24	OPI LOWER HOUSING
25	SS MOTOR BODY
26	OPI UPPER HOUSING
27	UPPER STUD RING
28	BODY CIRCLIP
29	RUBBER SAND GAURD
30	8mm SPRING WASER
31	ROTOR SHAFT

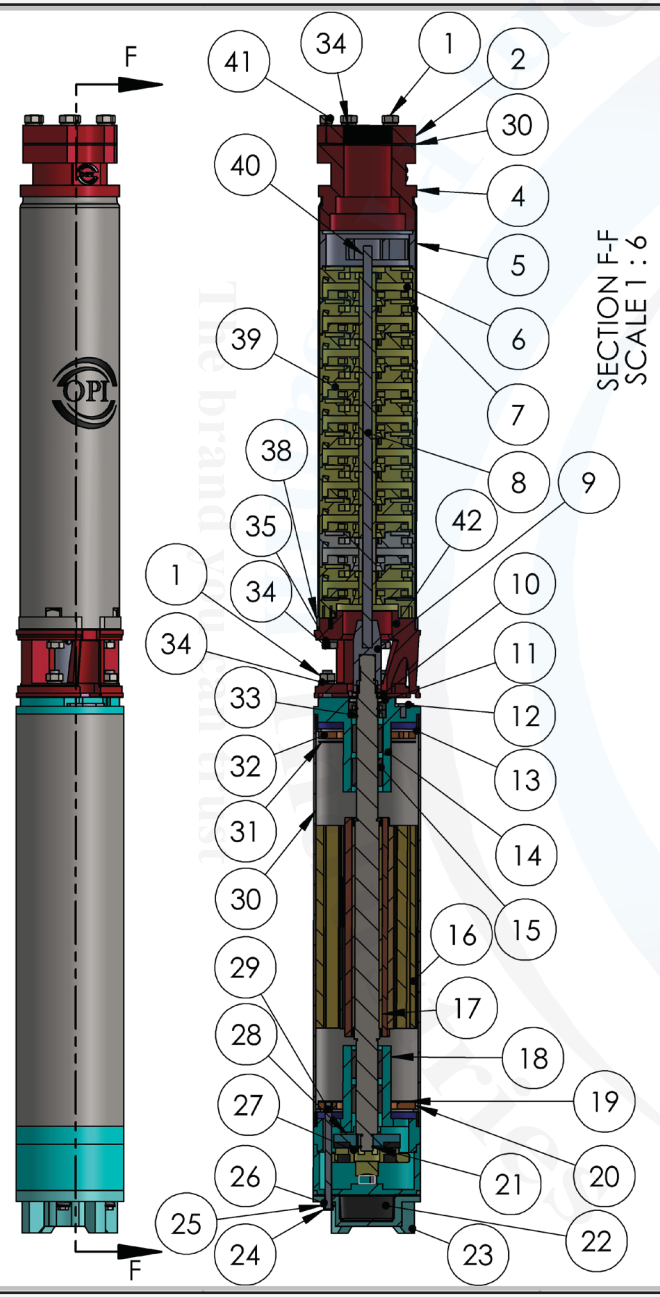
12. SECTION VIW OF V4 SUBMERSIBLE PUMP

ITEM NO.	PART NUMBER
1	SPRING WASER - 8mm
2	HEX NUT - 8mm
3	NRV STUD
4	NRV FLANGE
5	NRV FLANGE WASER
6	NRV
7	PUMP BODY
8	PUMP IMPELLER
9	PUMP BOWL
10	PUMP SLEEVE
11	PUMP SHAFT
12	IP
13	PUMP COUPLING
14	HEX BOLT - 8mm
15	SPRING WASER - 8mm
16	SQUARE NUT - 8mm
17	TOP DOL



OM PRASANTH INDUSTRIES

13. SECTION VIW OF V4 SUBMERSIBLE PUMP AND MOTOR ASSEMBLY



ITEM NO.	PART NUMBER
1	NRV STUD
2	NRV FLANGE
3	NRV FLANGE WASER
4	NRV
5	PUMP BODY
6	PUMP IMPELLER
7	PUMP BOWL
8	PUMP SHAFT
9	PUMP COUPLING
10	MOTOR SAND GAURD
11	SS SAND GAURD
12	SS SAND GAURD
13	BODY CIRCLIP
14	UPPER HOUSING
15	CARBON BUSH
16	STATOR
17	COPPER ROTOR WITH SHAFT
18	LOWER HOUSING
19	LOWER COIL SAFETY RUBBER
20	LOWER STUD RING
21	BEARING CIRCLIP
22	DIAPHRAGM RUBBER
23	LEG
24	NUT - 6mm
25	PLATE WASER

ITEM NO.	PART NUMBER
26	TAPER "O" RING
27	BEARING
28	THRUST PAD
29	LEG STUD
30	MOTOR BODY
31	UPPER COIL SAFETY RUBBER
32	UPPER STUD RING
33	OIL SEAL
34	SPRING WASER - 8mm
35	HEX BOLT - 8mm
38	SQUARE NUT- 8mm
39	IMPELLER
40	PUMP SHAFT
41	NRV STUD

SUBMERSIBLE V3

TOOLS REQUIRED

PRE INSTALL

CABLE JOINT

ERECTION PROCESS

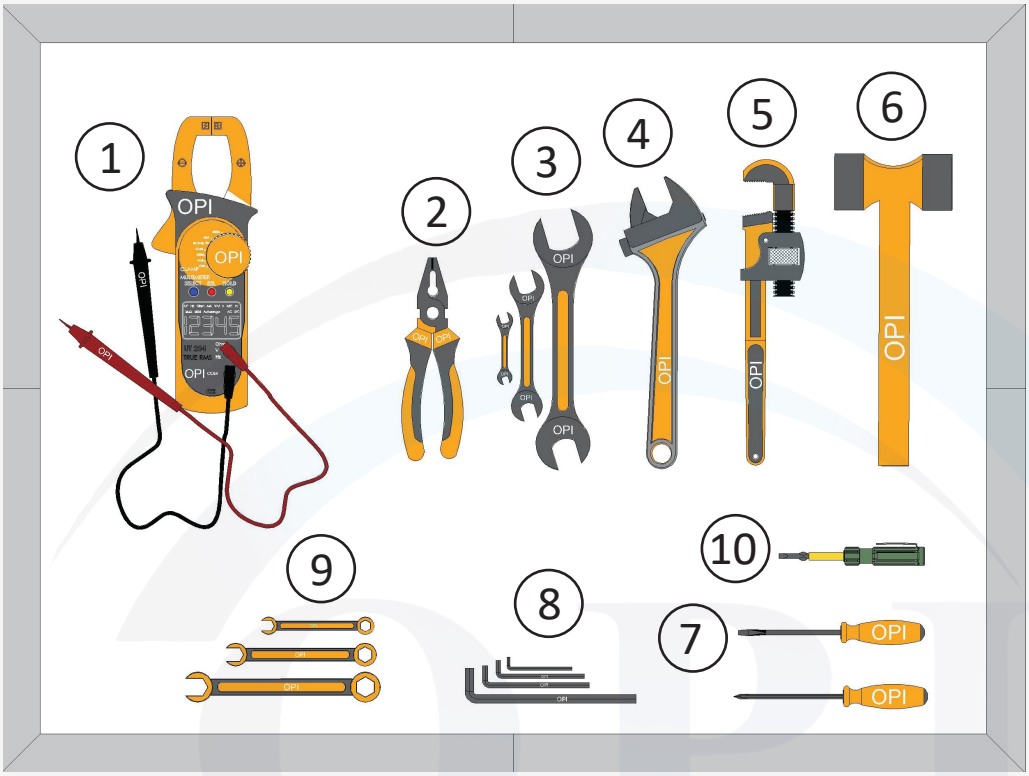
OPI INSTALLATION GUIDE

HOW TO INSTALL V3 SUBMERSIBLE PUMP

OPI V3 INSTALLATION MANUAL

14. TOOLS AND THEIR USES IN SUBMERSIBLE PUMP ERECTION

The following tools play a crucial role in the erection process of a submersible pump. Each tool is designed to assist in specific tasks, ensuring proper installation, connection, and testing.



PART NO	PART NAME
1	CLAMP METER
2	COMBINATION PLIERS
3	DOUBLE ENDED SPANNERS
4	ADJUSTABLE WRENCH
5	PIPE WRENCH
6	NYLON HAMMER
7	SCREW DRIVERS
8	ALLEN KEY SET
9	TORQUE WRENCHES
10	ELECTRICAL TESTER

1. Clamp Meter

✅ **Purpose:**

• Measures electrical parameters such as current, voltage, and resistance during motor testing and setup.

📝 **Notes:**

Always use the clamp meter to verify electrical conditions for safe operation.

⚠️ **Caution:**

Improper use can lead to incorrect readings or potential electrical hazards.

---

2. Combination Pliers

✅ **Purpose:**

• Used for cutting, bending, and securing electrical cables.

• Tightens or adjusts small fittings during assembly.

📝 **Notes:**

Ensure the pliers' grip is firm when tightening or cutting cables.

⚠️ **Caution:**

Sharp edges or excessive force may cause injury or damage to components.

---

3. Open-End and Ring Spanners

✅ **Purpose:**

• Tightens or loosens nuts and bolts on flanges, clamps, and pipe joints.

📝 **Notes:**

Use the correct size spanner to avoid damage to bolts and nuts.

⚠️ **Caution:**

Over-tightening can cause damage to the flanges or threads.

---

4. Adjustable Wrench

✅ **Purpose:**

• Provides versatility for applications where bolt sizes vary.

• Useful for assembling or disassembling delivery pipe joints.

📝 **Notes:**

Ensure the adjustable wrench is securely fitted before applying force.

⚠️ **Caution:**

Misuse can cause slipping, leading to injury or damage to joints.

---

5. Pipe Wrench

✅ **Purpose:**

• Essential for gripping and tightening threaded pipe joints during delivery pipe assembly.

📝 **Notes:**

Make sure the wrench is properly adjusted to fit the pipe size.

⚠️ **Caution:**

Improper handling can cause damage to pipe threads and fittings.

---

6. Nylon Hammer

✅ **Purpose:**

• Aligns flanges or gently taps pipe connections into position without causing damage.

📝 **Notes:**

Use controlled force to avoid damaging sensitive components.

⚠️ **Caution:**

Excessive force can damage components or cause injury.

---

7. Screwdrivers (Flathead and Phillips)

✅ **Purpose:**

• Secures screws in electrical terminals or flange covers.

• Used during control panel wiring and fastening.

📝 **Notes:**

Ensure the screwdriver is in good condition to prevent stripping screws.

⚠️ **Caution:**

Do not force a screwdriver into tight screws, as this can cause injury or damage.

---

8. Allen Keys

✅ **Purpose:**

• Tightens or loosens hexagonal bolts, commonly used in motor mounts or coupling assembly.

📝 **Notes:**

Ensure the Allen key fits snugly into the bolt to prevent damage.

⚠️ **Caution:**

Over-torquing may cause bolts to break or deform the key.

---

9. Double-Ended Spanners

✅ **Purpose:**

• Ideal for tasks requiring two different sizes of bolts or nuts during pump installation.

📝 **Notes:**

Use the appropriate end for each bolt size to maintain proper torque.

⚠️ **Caution:**

Incorrect use can damage bolts and nuts or cause injury.

---

10. Tightening Torque Wrenches

✅ **Purpose:**

• Ensures precise tightening of bolts to avoid over-tightening or loose connections.

📝 **Notes:**

Always follow the manufacturer's specified torque values.

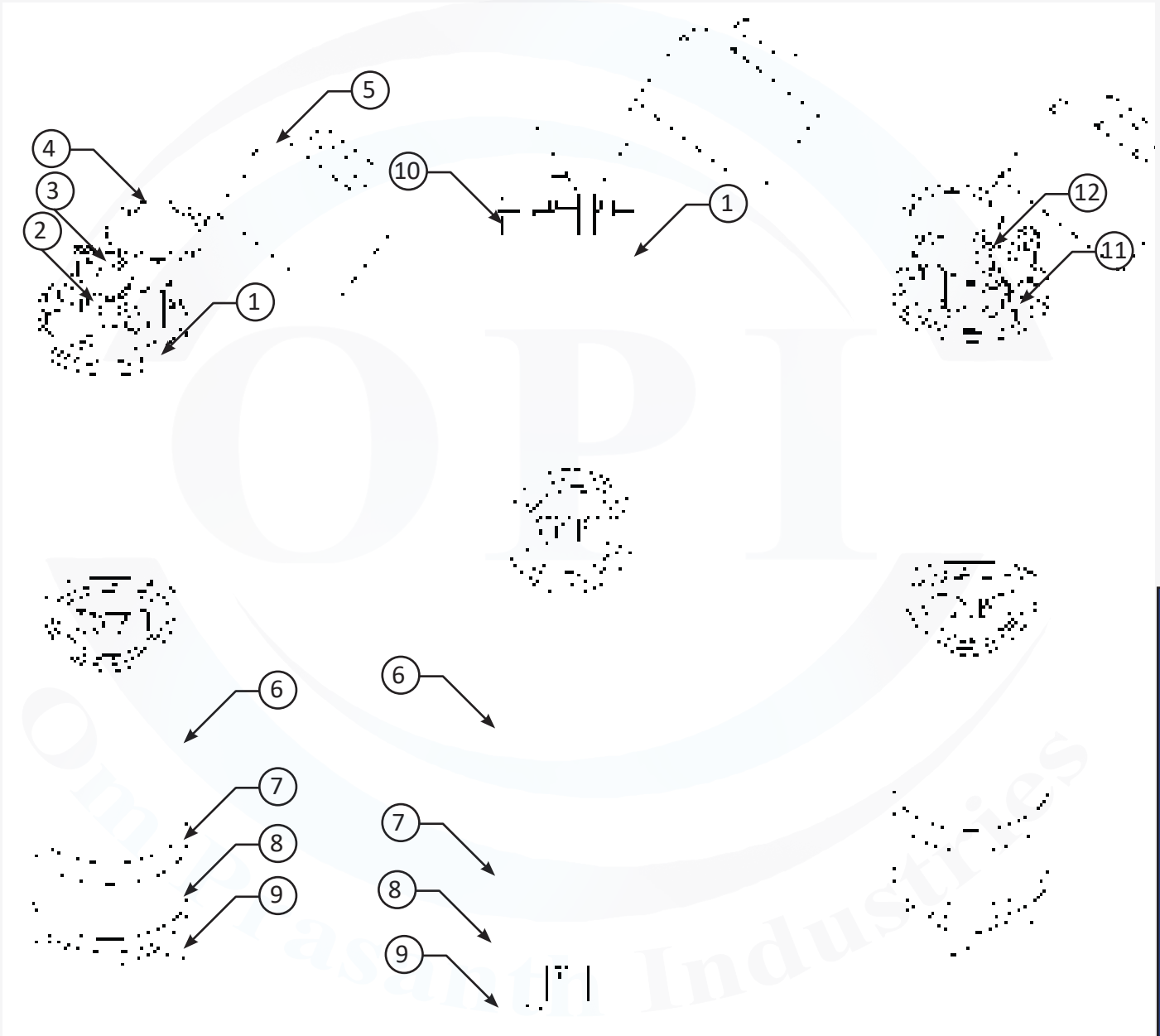
⚠️ **Caution:**

Failure to use a torque wrench properly can lead to under-tightening or over-tightening, both of which could impact the system's safety and performance.

---

15. SCHEMATIC INSTALLATION :

The V3 submersible motor comes pre-filled with a mixture of clear cold drinking water and anti-corrosive liquid. To ensure proper operation and durability, follow the steps below before installation.



PART NO	PART NAME
1	UPPER HOUSING
2	SANDGAURD RUBBER
3	ROTOR SHAFT
4	FUNNEL

PART NO	PART NAME
5	CUP
6	MOTOR BODY
7	LOWER HOUSING
8	BEARING HOUSING

PART NO	PART NAME
9	LEG
10	STUD AND NUT
11	CABLE OUTPUT
12	DRY PLUG NUT

16. SCHEMATIC INSTALLATION PROCEDURE :

The V3 submersible motor comes pre-filled with a mixture of clear cold drinking water and anti-corrosive liquid. To ensure proper operation and durability, follow the steps below before installation.

Step 1: Position the Motor

✅ **Action:** Place the motor vertically on a stable and level base.

📝 **Notes:**

- Ensure the motor remains upright during the entire installation process to avoid internal component damage.

⚠️ **Caution:** Tilting the motor can cause uneven water distribution and potential damage to internal parts.

Step 2: Check the Fasteners

✅ **Action:**Inspect all visible fasteners and screws on the motor.

📝 **Notes:**

- Tighten any loose bolts or screws using appropriate tools.
- Pay special attention to the top and bottom flanges to ensure they are securely fastened.

⚠️ **Caution:** Loose fasteners can lead to vibrations and improper motor operation.

Step 3: Remove Threaded Plugs

✅ **Action:** Identify the two threaded plugs located on the top or circumference of the motor casing.

📝 **Instructions:**

- Carefully unscrew and remove the plugs using a wrench, as shown in Fig. 1 below.

⚠️ **Caution:** Do not overtighten when removing plugs, as this may damage the threads.

Step 4: Top Up with Pure Drinking Water

🔷 **Filling Process:**

- Using a clean funnel, pour clear cold drinking water into the motor through the plug openings.
- Gently rock the motor back and forth to release trapped air bubbles.
- Recheck the water level after air bubbles escape and top up if necessary.

📝 **Important Notes:**

- Always use clean, potable water to maintain internal motor integrity.
- Avoid overfilling the motor. The water level should just reach the recommended mark.

Step 5: Reassemble the Threaded Plugs

✅ **Action:** Once the motor is filled, reinsert the threaded plugs.

📝 **Notes:**

- Tighten the plugs securely to prevent water leakage.

⚠️ **Caution:** Improper tightening of the plugs may cause leaks and reduce motor performance.

Step 6: Inspect for Leakage

✅ **Action:** Dry the motor's exterior with a clean cloth and inspect for water leakage.

📝 **Checklist:**

- If leakage is detected, recheck the threaded plugs and tighten as needed.
- Ensure no water escapes from any motor joints or seals.

⚠️ **Caution:** Do not proceed with installation if leakage persists. This can compromise motor performance.

Step 7: Prepare for Coupling

✅ **Action:** Align the motor shaft keyway with the pump coupling.

📝 **Steps:**

- Carefully slide the coupling over the motor shaft until it rests securely on the sand guard.
- Ensure proper alignment for smooth operation.

⚠️ **Caution:** Misalignment of the coupling may cause vibration and reduce system efficiency.

Visual Reference: Fig. 1 – Filling the Motor

(Add a diagram showing the threaded plugs being removed and water being filled with a funnel, similar to the original image.)

Final Checklist

Before proceeding to install the motor with the pump:

✅ Ensure the motor is upright and securely positioned.

✅ Verify that no water is leaking from the motor.

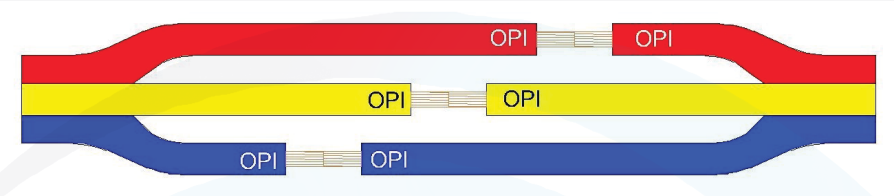
✅ Confirm that the coupling is properly aligned and tightly fastened.

17. CABLE JOINT PROCEDURE :

Procedure for Joining and Insulating the 3-Core Conductors

This guide outlines the step-by-step process for securely joining and insulating 3-core conductors, ensuring long-term performance and safety in underwater applications. Each step includes precautions to maintain proper insulation and prevent water ingress.

Step 1: Conductor Preparation and Jointing



✅ **Action:**

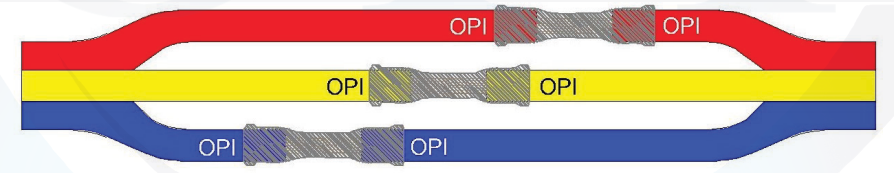
- Solder or knot the copper strands of each core to ensure a **solid electrical connection**.

📝 **Notes:**

- Align the cores properly to prevent overlapping or improper positioning.
- Use high-quality solder or secure mechanical knots for durability.

⚠️ **Caution:** Poor alignment or weak soldering can lead to electrical failure or overheating.

Step 2: Layer 1 – Virgin Rubber Insulation



✅ **Action:**

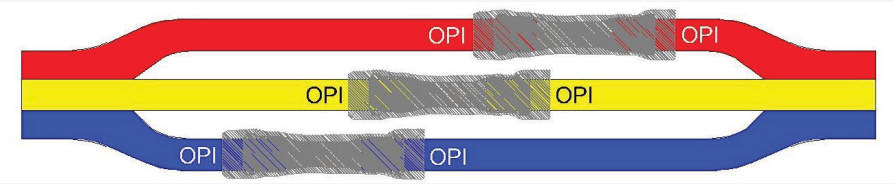
- Wrap the first layer of **virgin rubber insulation** tightly around each conductor joint.

📝 **Notes:**

- Ensure the wrapping **slightly overlaps** beyond the conductor's insulation ends to maintain uniform thickness.

⚠️ **Caution:** Gaps in the rubber insulation can expose the joint, leading to water ingress or short circuits.

Step 3: Layer 2 – PVC Insulation Tape



✅ **Action:**

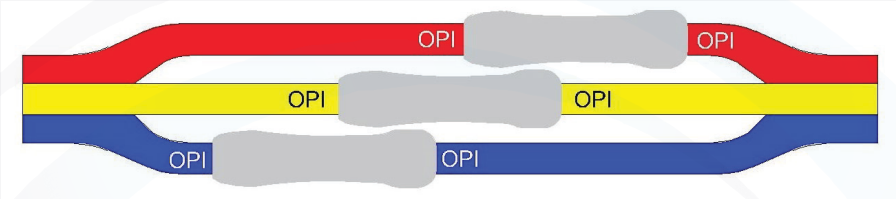
- Apply the first layer of **PVC insulation tape** over the virgin rubber insulation.

📝 **Notes:**

- Start wrapping from one end of the joint and overlap evenly to create a **seamless layer**.

⚠️ **Caution:** Poor alignment or weak soldering can lead to electrical failure or overheating.

Step 4: Layer 3 – Virgin Rubber Insulation



✅ **Action:**

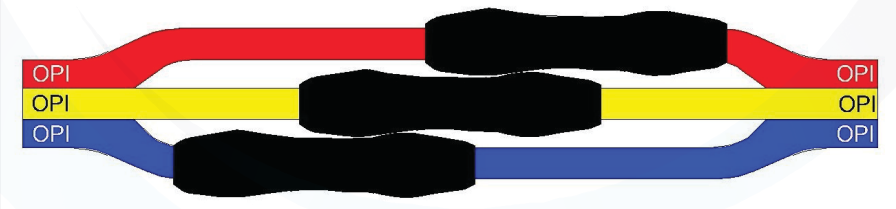
- Add a second layer of **virgin rubber insulation** over the PVC tape for **enhanced insulation**.

📝 **Notes:**

- Ensure complete coverage with no gaps or exposed areas.

⚠️ **Caution:** Missing areas or inconsistent wrapping can compromise insulation quality.

Step 5: Layer 4 – PVC Insulation Tape



✅ **Action:**

- Apply a second layer of **PVC insulation tape** as the **final protective layer** for each core.

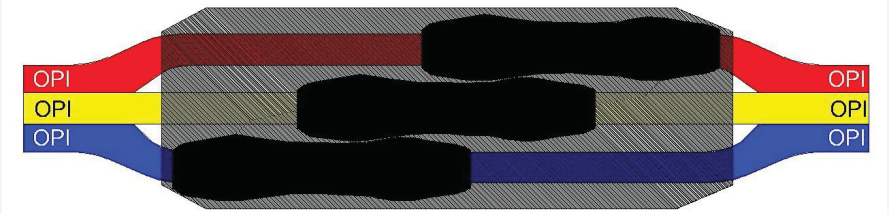
📝 **Notes:**

- Use consistent tension during wrapping to avoid wrinkling or loose sections.

⚠️ **Caution:** Loose sections can allow moisture to seep into the joint, causing failure.

Procedure for Joining and Insulating the Cable Joint for Underwater Application

Step 6: Layer 1 – Virgin Rubber Insulation (Cable Level)



✅ **Action:**

- Wrap a layer of **virgin rubber insulation** tightly around the **entire cable joint**, covering all cores.

📝 **Notes:**

- Ensure the layer is smooth and free from gaps to **prevent water ingress.**

⚠️ **Caution:** Inadequate insulation at this stage may lead to water penetration and system damage.

Step 7: Layer 2 – PVC Insulation Tape (Cable Level)

✅ **Action:**

- Apply the first layer of **PVC insulation tape** over the virgin rubber insulation for **added strength and water resistance.**

📝 **Coverage:**

- Extend the wrapping slightly beyond the ends of the virgin rubber layer.

⚠️ **Caution:** Overlapping inconsistently may leave weak spots in the insulation.

Step 8: Layer 3 – PVC Insulation Tape (Final Layer)

✅ **Action:**

- Add a **second layer of PVC insulation tape** to complete the joint insulation.

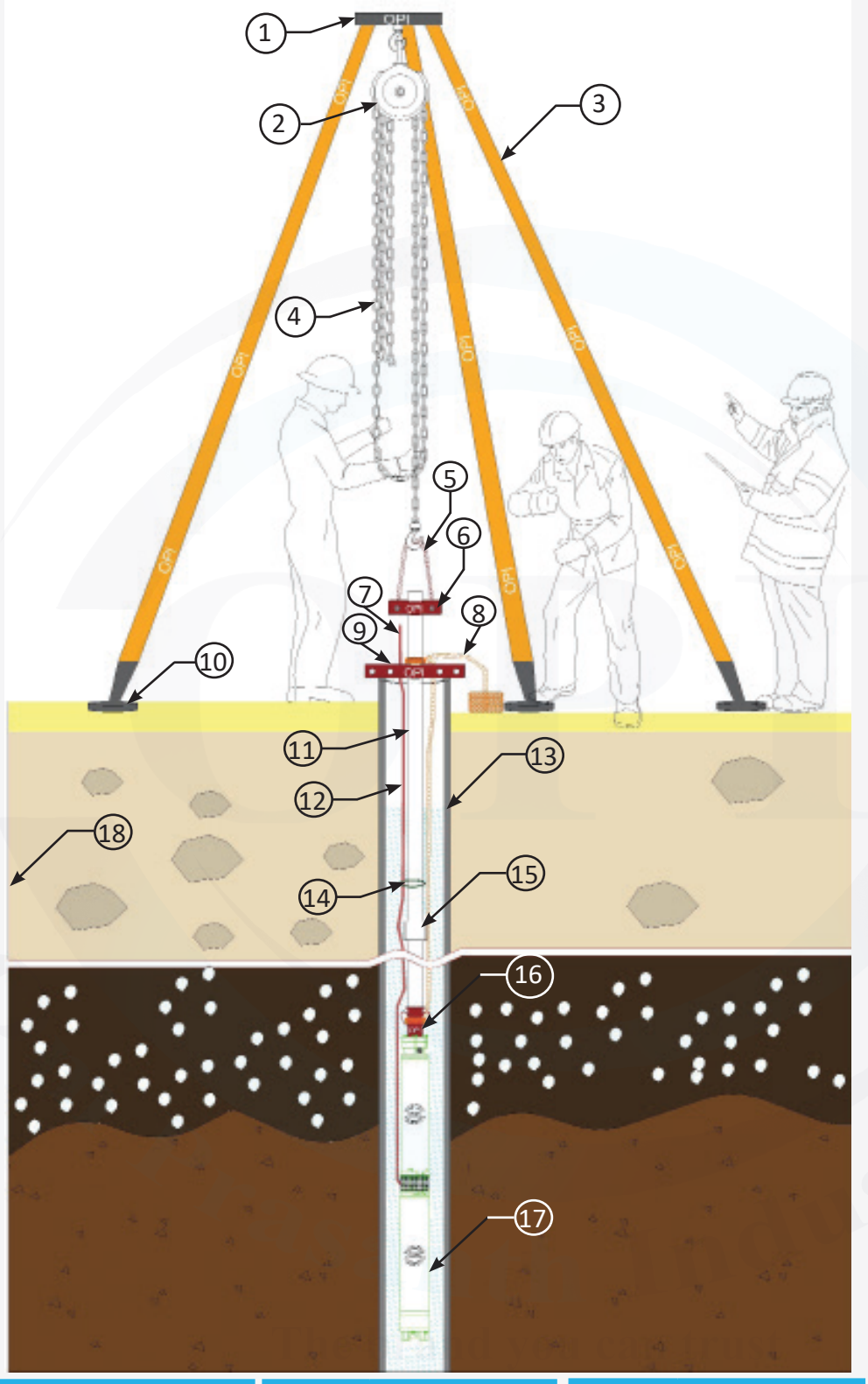
📝 **Notes:**

- Wrap tightly with adequate overlap to ensure a **secure seal**.

⚠️ **Caution:** Improper sealing of the final layer can lead to insulation failure, especially in underwater applications.

---

18. ERECTION DIAGRAM FOR SUBMERSIBLE "V6"- (RADIAL FLOW)



PART NO	PART NAME
1	WINCH HEAD
2	WINCH
3	TRIPOD
4	CHAIN
5	STEEL ROPE

PART NO	PART NAME
6	SUPPORT CLAMP
7	CABLE
8	NYLON ROPE
9	CLAMP
10	TRIPOD BASE

PART NO	PART NAME
11	DELIVERY PIPE
12	CABLE
13	CASING PIPE
14	CABLE CLIP
15	TRIPOD BASE

PART NO	PART NAME
16	ADAPTOR
17	OPI PUMPSETS
18	SAND LAYERS

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19. ERECTION INSTRUCTUION FOR A SUBMERSIBLE PUMP :

Follow these steps to ensure the safe and proper erection of a submersible pump. Safety precautions and critical warnings are marked with a caution symbol (⚠️).

Pre-Erection Preparations

1. Verify Components :

✅ **Inspect the Equipment:**

- Check the pump, motor, delivery pipe, and all accessories for any signs of damage or defects.

✅ **Ensure Tool Availability:**

- Gather all necessary tools, including a **tripod, chain pulley, clamps, and safety gear**.

⚠️ **Caution:** Ensure all components are compatible and free from visible defects. Using damaged equipment can lead to operational failure.

---

2. Inspect the Borewell

✅ **Check Dimensions:**

- Measure the **borewell depth and diameter** to confirm compatibility with the pump and motor assembly.

✅ **Clean the Borewell:**

- Ensure the borewell is free of debris or obstructions to facilitate smooth installation.

⚠️ **Caution:** Ensure the borewell is structurally sound to prevent collapse during pump installation.

---

3. Set Up the Lifting System

✅ **Assemble the Lifting System:**

- Install a stable **tripod with a chain pulley hoist** above the borewell.

✅ **Ensure Safety:**

- Verify the lifting setup can handle the pump's weight and movement safely.

⚠️ **Caution:** Double-check the lifting system's load capacity before use. An unstable setup may cause accidents.

---

4. Safety Measures

✅ **Wear Protective Gear:**

- Equip all team members with **helmets, gloves, and boots** for safety.

✅ **Assign a Team Leader:**

- Designate a leader to ensure clear communication and coordination during the process.

⚠️ **Caution:** Keep non-essential personnel away from the work area to avoid accidents.

Erection Process

Step 1: Assemble the Pump and Motor

✅ **Couple the Pump and Motor:**

- Securely connect the pump and motor according to the manufacturer's instructions.

✅ **Check Alignment:**

- Ensure the pump shaft rotates freely and is properly aligned.

⚠️ **Caution:** Improper alignment can cause vibration and reduce the lifespan of the pump.

Step 2: Connect the Delivery Pipe

✅ **Attach the First Pipe Section:**

- Connect the first section of the delivery pipe to the pump's discharge outlet.

✅ **Ensure Leak-Proof Connections:**

- Use a rubber gasket or **Teflon tape** to create a tight, leak-proof seal.

⚠️ **Caution:** Over-tightening connections may damage threads or cause leaks.

Step 3: Prepare the Cable

✅ **Connect the Submersible Cable:**

- Attach the submersible cable to the motor terminals securely.

✅ **Protect the Cable:**

- Secure the cable to the delivery pipe using **cable clips or guards** at regular intervals to prevent damage during installation.

⚠️ **Caution:** Ensure cable insulation is intact to avoid electrical hazards.

Step 4: Lower the Pump into the Borewell

✅ **Secure the Lifting Hook:**

- Attach a lifting hook or clamp to the delivery pipe and secure it to the chain pulley system.

✅ **Lower Carefully:**

- Gradually lower the pump into the borewell, ensuring the cable and pipe remain straight and free from kinks.

⚠️ **Caution:** Do not allow the pump to hit the borewell walls, as this may damage the pump or misalign the motor.

Step 5: Install Riser Pipe Sections

✅ **Add Pipe Sections as Needed:**

- As the pump is lowered, connect additional riser pipe sections one at a time.

✅ **Tighten Joints Securely:**

- Ensure all pipe joints are tightened firmly to prevent leaks or instability.

⚠️ **Caution:** Use proper tools to avoid over-tightening or damaging pipe threads.

Step 6: Secure the Pump at the Surface

✅ **Fasten at the Borewell Opening:**

- Once the pump is at the desired depth, secure the top of the riser pipe with a flange or clamp at the borewell opening.

✅ **Secure the Cable:**

- Ensure the cable and pipe are safely fastened to prevent movement or damage.

⚠️ **Caution:** Verify that all clamps and fastenings are secure to avoid accidental displacement during operation.

Post-Erection Steps

1. Electrical Connections

✅ **Connect to the Control Panel:**

- Attach the submersible cable to the control panel and ensure proper earthing.

✅ **Test Motor Direction:**

- Briefly run the motor to verify it rotates in the correct direction.

⚠️ **Caution:** Incorrect motor wiring may damage the pump or reduce efficiency. Double-check connections before testing.

---

2. System Testing

✅ **Check Water Flow:**

- Open the delivery pipe outlet and run the pump briefly to check water flow and pressure.

✅ **Inspect for Issues:**

- Look for leaks, unusual noises, or vibrations during operation.

⚠️ **Caution:** Do not run the pump for an extended time during testing without proper water flow.

---

3. Final Adjustments

✅ **Secure All Components:**

- Fasten all clamps, cable guards, and control panel wiring securely.

✅ **Seal the Borewell Opening:**

- Ensure proper sealing at the borewell opening to prevent contamination.

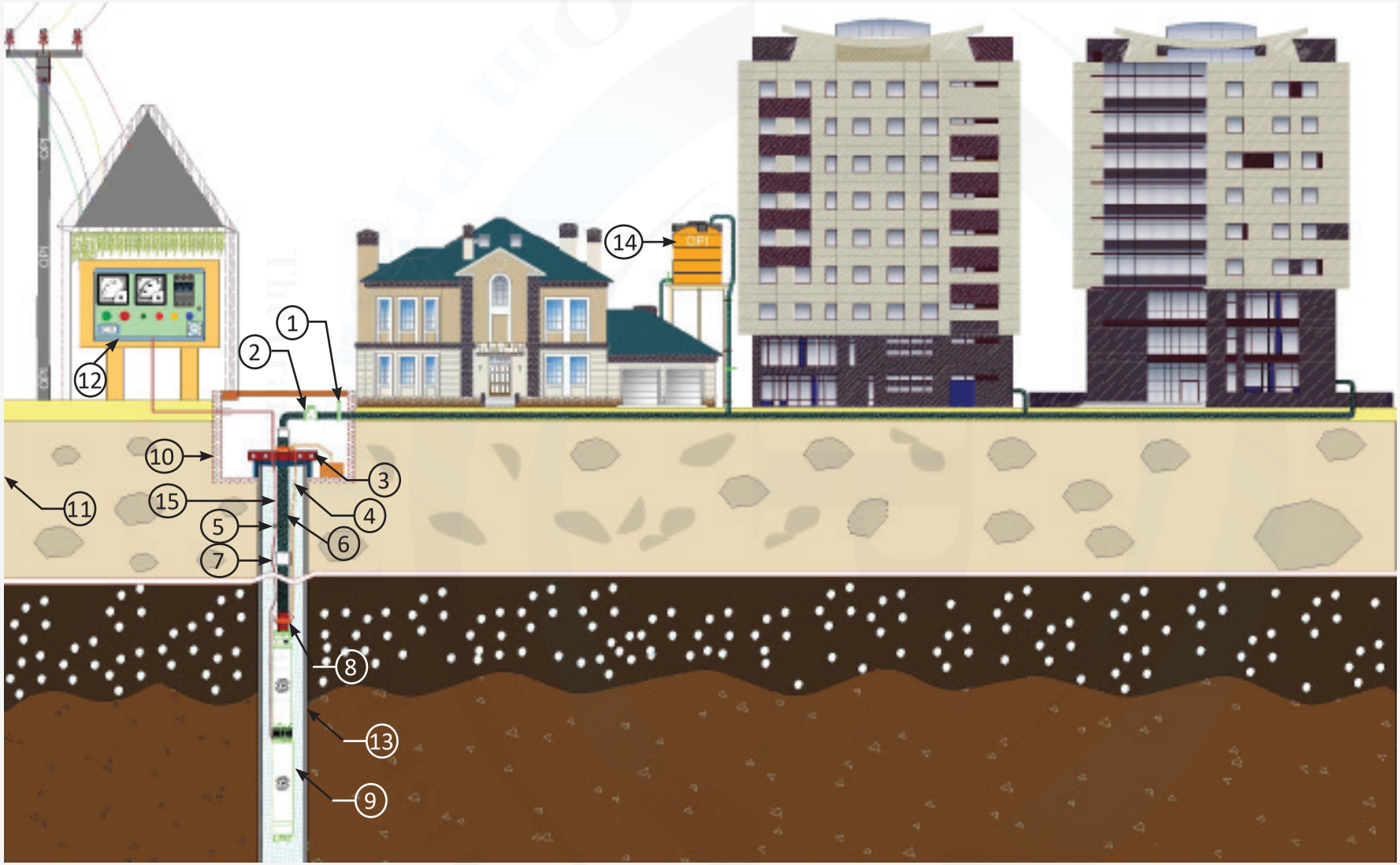
⚠️ **Caution:** Ensure the borewell sealing material is non-reactive and does not degrade over time.

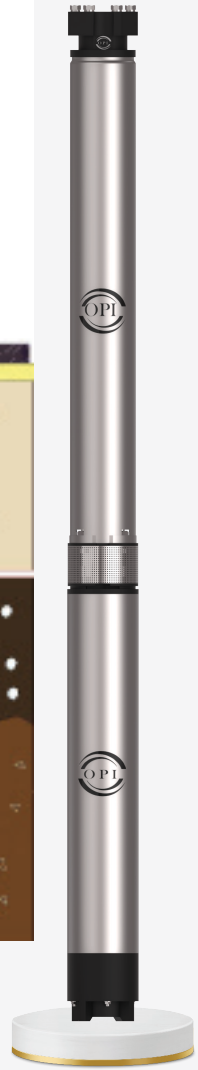
Maintenance Tips

- Conduct periodic inspections of the cable, pipe joints, and motor performance.
- Avoid running the pump in dry conditions to prevent damage to the motor and impellers.
- Clean or replace NRVs and other fittings as required to maintain efficiency.

⚠️ Caution: Regular maintenance is essential to prevent operational failures and extend the

20. INSTALLATION SCHEMATIC DIAGRAM FOR OPI SUBMERSIBLE PUMP "V4"





PART NO	PART NAME
1	GATE VALVE (OR) BALL VALVE
2	NRV (NON RETURN VALVE
3	CLAMP
4	NYLON ROPE

PART NO	PART NAME
5	CABLE CLIP
6	DELIVERY PIPE
7	COUPLING
8	ADAPTOR

PART NO	PART NAME
9	OPI SUBMERSIBLE V4
10	BORE MANUAL
11	SAND LAYERS
12	OPI CONTROL PANEL

PART NO	PART NAME
13	CASING PIPE
14	OVER HEAD TANK
15	CABLE

3" BOREWELL SUBMERSIBLE PUMPSET -OPI V3

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21. INSTALLATION CHECKLIST AND PROCEDURE :

1. Check Power Supply Stability

⚡ **Confirm Voltage Regulation:**

• Measure voltage fluctuation levels to ensure a steady supply within motor tolerance.

⚠️ **Caution:** Unstable voltage can lead to motor burnout or erratic operation.

---

2. Prepare Installation Environment

🔧 **Inspect Site Accessibility:**

• Ensure the borewell surroundings are clean, stable, and accessible for tools and personnel.

✅ **Evaluate Ambient Conditions:**

• Ensure the area is free of moisture or electrical hazards during wiring connections.

⚠️ **Caution:** A cluttered or unsafe environment can compromise worker safety.

Installation Steps

1. Mount Control Panel

✅ **Securely Install Panel:**

• Mount the control panel on a wall or stand within easy access but away from direct sunlight or moisture.

✅ **Verify Circuit Breaker Connections:**

• Confirm that the main breaker and motor protection relays are properly connected.

⚠️ **Caution:** Improper wiring can result in short circuits or equipment failure.

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2. Connect Additional Monitoring Systems

✅ **Install Safety Devices:**

• Integrate overload protection, dry-run sensors, and thermal cut-outs.

✅ **Test Alarm Systems:**

• Activate the alarms for low water levels and high motor temperatures.

⚠️ **Caution:** Failure to implement safety monitoring may void warranties and increase risk.

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3. Priming Water Discharge System

✅ **Bleed Air from Pipes:**

• Open the delivery valve slightly to remove air pockets from the pipe system.

⚠️ **Caution:** Entrapped air can lead to inefficient operation or water hammer effects.

4. Ensure Proper Cable Route

✅ **Organize Cables:**

• Arrange and secure electrical cables neatly to avoid contact with sharp edges or heat sources.

⚠️ **Caution:** Avoid loose or entangled cables that can pose tripping hazards or lead to insulation damage.

Post-Installation Steps

1. Environmental Testing

✅ **Check System Integrity:**

• Monitor the system under operational conditions to ensure vibration dampers and clamps remain secure.

✅ **Analyze Water Quality:**

• Ensure that the initial discharge water is free of contaminants such as sand or sediment.

⚠️ **Caution:** Persistently dirty water may indicate installation issues or borewell contamination.

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2. Documentation and Handover

✅ **Record Installation Parameters:**

• Log key metrics like pump depth, motor amperage, and voltage readings during the trial run.

✅ **Provide User Training:**

• Educate the user on operating procedures, control panel usage, and basic troubleshooting.

⚠️ **Caution:** Lack of proper documentation or training can lead to user errors or maintenance delays.

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25. Piping and Valve Placement Guidelines for Submersible Pump Output

1. Distance Between Pipe Bends and Valves

✅ **Valve Placement Near Bends**

📝 Install the first valve (such as a gate or ball valve) at a distance of at least 2–3 feet from the bend to ensure smooth flow and reduce turbulence.

⚠️ **Caution:** Placing valves too close to bends can result in uneven flow and potential wear on the valve.

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2. Pipe to Valve Distances

✅ **First Valve from Pump Outlet**

📝 Place the first control valve (e.g., a gate valve) within 4–6 feet from the pump outlet to facilitate maintenance and flow control.

✅ **Additional Valves**

📝 For longer pipelines, place valves at intervals of 50–60 feet to allow for easier maintenance and flow regulation.

⚠️ **Caution:** Ensure the pipeline remains accessible for valve operation.

3. Non-Return Valve (NRV) Placement

✅ **Location for NRV**

📝 Install the NRV directly above the pump outlet to prevent water backflow and pressure loss.

⚠️ **Caution:** Ensure the NRV is securely fastened and positioned correctly to avoid leakage.

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4. Support and Stability

✅ **Pipe Clamp Distance**

📝 Provide pipe clamps or supports every 10–12 feet along the delivery pipe to prevent sagging or misalignment.

✅ **Anchor Near Valves and Bends**

📝 Use additional supports near valves and bends to handle vibrations and prevent displacement.

⚠️ **Caution:** Loose clamps may lead to pipe damage or disconnections over time.

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6. Final Delivery Pipe Connection

✅ **Delivery to Distribution Point**

📝 Ensure the output pipe is directed to the distribution point with a gradual slope to avoid water hammer or sudden pressure changes.

✅ **Flexible Joint**

📝 Use a flexible coupling or joint near the pump outlet to accommodate minor vibrations and movement.

✅ **Joining Standards:**

📝 For threaded pipes, use Teflon tape or pipe sealant to avoid leaks. For HDPE pipes.

3" BOREWELL SUBMERSIBLE PUMPSET -OPI V3

OM PRASANTH INDUSTRIES