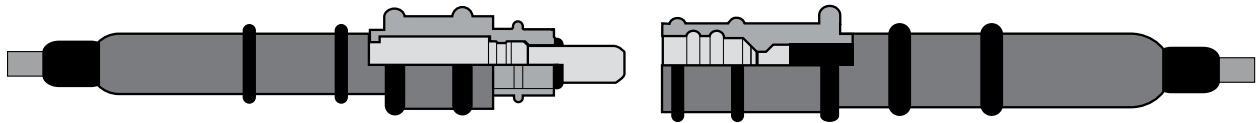
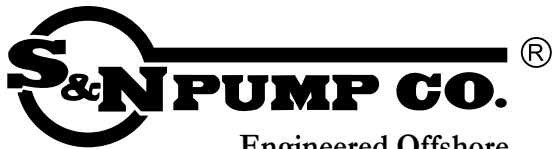


# **SNConnectors™ Sub-Sea Connector Plugs**



## **Connection & Maintenance Manual**



Engineered Offshore  
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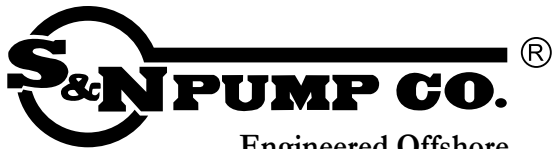
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**CONNECTION INSTRUCTIONS**

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Engineered Offshore  
Pumping Solutions

## CONNECTION & MAINTENANCE

### CONNECTION

1. Hoist the pump/motor assembly to vertical position above the well tower or leg caisson in which it is to be installed. (see recommended lifting procedures in the Installation, Operation, & Maintenance Manual for Deepwell Pumps)
2. With the first riser column joint connected to the pump outlet, band the motor lead wires to the first riser column pipe. Leave approximately (18") eighteen inches between the plugs and the bands. Assure that the plugs are positioned on the riser at least (2') two feet from the riser column flanges or collars. Care must be taken so that the bands do not pierce the jacket and/or insulation on the motor lead wires. The installation of a rubber cushion (split rubber hose) between bands, or use of S & N rubber cable bands is strongly recommended.
3. Place the cable reel on the reel stand and reel off enough cable for the mating plugs to be connected.
4. Remove the shipping caps and dust covers from the plugs.  
(The male pin is located on the motor lead wires and the female receptacle is located on the power supply cable wires)
5. Locate silicone grease inside shipping cap with female connector.
6. Assure that the copper conductor pins and receptacles are moisture and dust free.
7. Clean any grease, moisture, or foreign particles from connectors and sealing surface area.
8. In the event the internal contact surfaces are dirty or have been exposed to water, the connector should be flushed with distilled or deionized water and thoroughly dried.
9. The surface should be dried using a low pressure (15 - 25 psi) gas stream of dry nitrogen or filtered compressed air (dry nitrogen is preferred). The drying procedure ensures removal of any small foreign particles.
10. Electrically test the connector in accordance with the parameters of the system.
11. Apply a thin film of an appropriate silicone grease or spray to the sealing surface. Cover/protect the connector from foreign contaminants until ready to mate.
12. Connect the conductor pin on the power cable to the mating socket by hand. Move connection side to side while firmly pressing together to burp any trapped air from the connector.
13. Slide the plastic locking sleeves together until the threaded ends touch. Screw the locking sleeves together tightly.
14. Band the power supply cable to the riser column pipe above the plug connections. Place the bands on the jacketed or armored part of the power supply cable - not on individual conductor wires as described in Instruction #2.

### MAINTENANCE

The following procedures detail the maintenance requirements for the Rubber Molded Series and their associated parts. Even though the procedure appears simple, only qualified technicians should perform the maintenance. If connectors are periodically unmated, please follow the maintenance instructions below:

1. Before unmating, ensure connectors are free of foreign contaminants. Visually check for and note any damage or abnormalities.
2. After unmating, visually check for and note any damage, cuts, or abnormalities.

3. Clean any grease, moisture, or foreign particles from connectors and sealing surface area.
4. In the event the internal contact surfaces are dirty or have been exposed to water, the connector should be flushed with distilled or deionized water and thoroughly dried.
5. The surface should be dried using a low pressure (15 - 25 psi) gas stream of dry nitrogen or filtered compressed air (dry nitrogen is preferred). The drying procedure ensures removal of any small foreign particles.
6. Electrically test the connector in accordance with the parameters of the system.
7. Apply a thin film of an appropriate silicone grease or spray to the sealing surface. Cover/protect the connector from foreign contaminants until ready to mate.

## **INSTALLATION & TORQUE OPERATIONS**

1. Only qualified technicians should perform installation and torquing operations.
2. \*Torque values specified apply only when the connector is installed in a metal housing.
3. Torque values listed are maximum values not to be exceeded.
4. Locking sleeves are finger/hand tightened only.

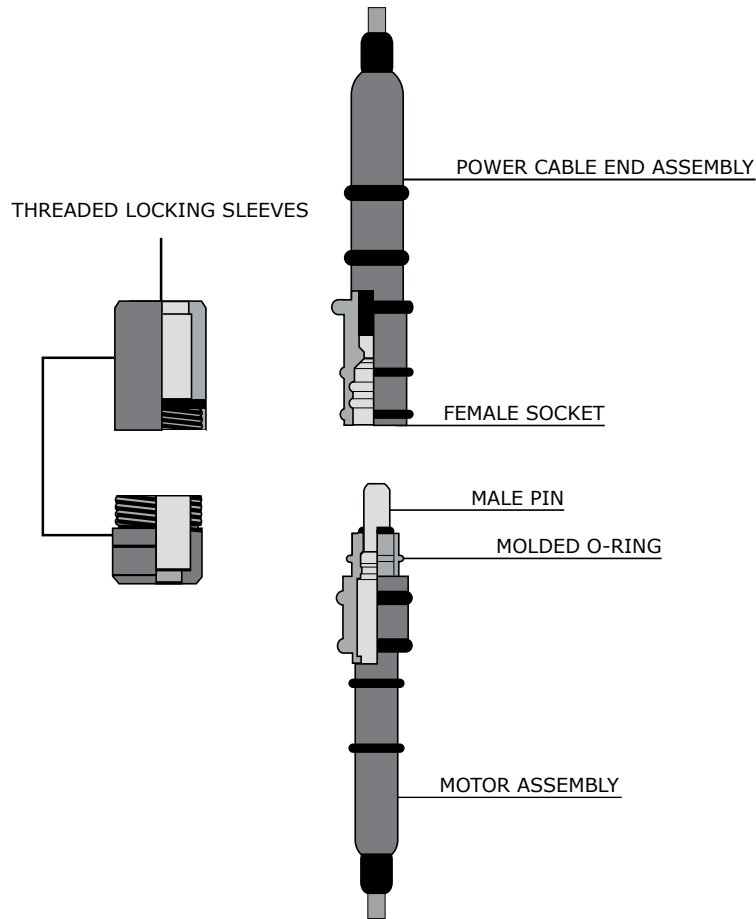
\*Torque values are noted with actual part and can be found in the pages to follow.

<h3><b>NOTE</b></h3>
Torque values referenced in this literature assume installation into dry metal threads. Please contact the factory for recommendations.

## **ADVANTAGES**

- Tools are not required for connection. Simply fit the mating plugs together by hand.
- The connectors eliminate the need for field splicing kits that require cure time prior to pump installation. Field splicing kits can prove difficult, especially in poor weather conditions.
- They eliminate the cumbersome task of handling the pump units with factory connected power supply cables.
- It reduces the chance of damage to the power supply cable. The cable is shipped on a separate spool rather than packaging the cable with the unit itself.
- Installation is made simple. The power supply cable is reeled into the well tower or leg system from the cable spool.
- The generic design allows adaptation to all manufactured power supply cables and submersible deepwell pump motors
- Determining a ground fault location is made easy. Simply un-plug the power supply cable from the motor leads and check the power cable and motor.
- When damage to the cable jacket or insulation occurs, they prevent water migration inside the power cables.
- The high amp rating and slim design makes the P-500 connector adapt to all offshore sea water lift systems.

**P-500 CONNECTOR ASSEMBLY**



**CONSTRUCTION MATERIAL DESCRIPTION**

RATED TO 500 AMPS	WET APPLICATION
BOOT	HYPALON, BLACK 80 DUROMETER
PIN & SOCKET	COPPER ALLOY & GOLD PLATED PER MIL -G-45204
LOCKING CAPS	DERLIN, BLACK
POWER CABLE	INSULATION: DLO & INDUSTRIAL MOTOR LEAD CABLE PRIMARY: ETHYLENE PROPYLENE RUBBER (EPR) SECONDARY: CHLOROSULFONATED POLYETHYLENE (CSPE) Meets or exceeds all requirements of ICEA S-68-516 NEMA WC-8 and UL Standards 44 and 854 CONDUCTOR: COPPER COATED PER ASTM B-33 OR B-189 STRANDED PER ASTM B-8

**TYPICAL DEEPWELL INSTALLATION**

