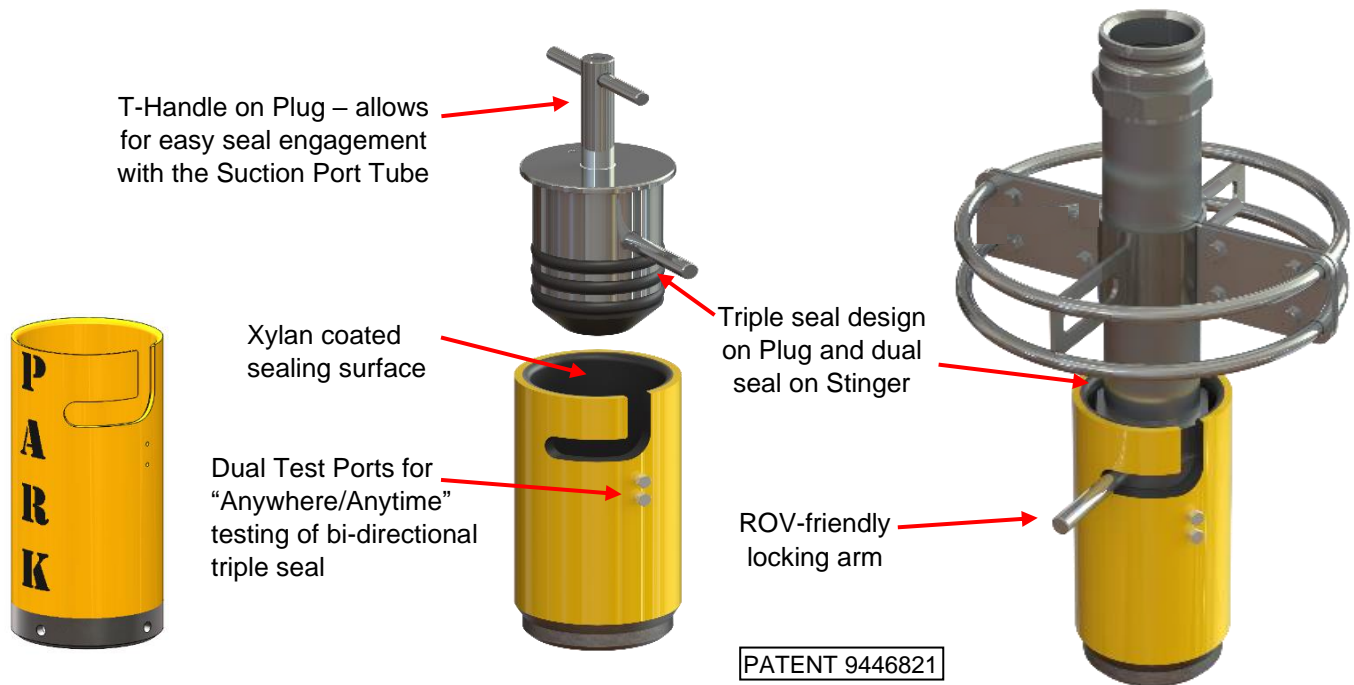


Pile Suction Port System Specifications (6" Bore Diameter) - 10 Bar

Premium's Suction Port System includes four products: Suction Port, Suction Port Plug, Plug Parking Receptacle, and Stinger. Over 1100 Venting and Suction System products have been provided to customers worldwide during the last 15 years, with **zero (0) failures**.

The Premium Suction System's **straight-forward design** is **easily operated**. No special ROV tooling is required, and a single-action movement makes insertion and closing easy. The patented "PS" design features a bi-directional multi-seal on both the Plug and the Stinger which allows seal testing **Anywhere / Anytime** (in the yard, on the dock or on the installation vessel). Specialty coatings, materials and configurations are available to meet customer requirements, including a high-pressure triple-locking arm retainer design.



Parking Receptacle

Suction Port Tube and Plug

Suction Port Tube and Stinger

Function

The Suction Port Tube is welded to the Pile to receive the Stinger for suction to embed the pile. The Parking Receptacle is welded to the pile to hold the Plug during launch. The Stinger allows the ROV to pump water into and out of the suction pile through the Suction Port Tube to control pile embedment. The Stinger is removed, and the Plug seals the pile's Suction Port Tube.

Features

System Type:	PS-06 Suction Port System: Premium Subsea proprietary design. Patent 9446821.
Function:	<ul style="list-style-type: none"> - Parking Receptacle temporarily stores Plug during pile launch - Stinger connects pile to ROV pump to remove (or add) water from/to inside of suction pile - Plug seals Suction Port Tube opening after pile installation
Turning Direction of Plug	Open: Counter-clockwise; Close: Clockwise
Orientation:	Installable and operable in any orientation
Position Indication:	Visual: Position determined from ROV camera
Locking Mechanism:	J Lock. Fully engaged by ROV
ROV Interface:	Direct drive with T-handle interface
Field Testing:	Test ports allow seal testing any time prior to use
Plug Tightening Torque	75 ft-lb [~100 N-m]
Plug Failure Torque:	250 ft-lb [~340 N-m]
Max. Allowable Plug Loosening Torque:	75 ft-lb [~100 N-m]
Est. Number of Turns: Open-to-Shut	Three (3 - 4.5) turns (approximately)

Configuration and Interface

Seals:	Buna - 3 seals on Plug (testable) 2 seals on Stinger (testable)
Tube Size:	6 in [~152 mm] bore (max hole size in pile top)
Stinger Hose Interface:	4 in [~102 mm] cam and groove hose coupling (2" and 3" optional)
Est. Weight – Suction Port Tube:	58 lb [~26 kg]
Est. Weight – Parking Receptacle:	27 lb [~12 kg]
Est. Weight – Plug:	49 lb [~22 kg]
Est. Weight – Stinger:	43 lb [~20 kg]

Standard Product PS-06 Port Tube, Plug, Parking Receptacle, and Stinger Specifications

Design Requirements

Type Service:	Seawater.
Pressure Rating:	145 psi [10 bar]
Design Pressure:	225 psi [15.5 bar]
Design Life:	30 years
Water Depth:	No limit

Design Operating Conditions

Max. Ambient Temperature:	75°C [167°F]
Min. Ambient Temperature:	-29°C [-20°F] Low temperature option available.

Materials

For detailed material information see applicable Bill of Material (BOM) drawing.

Plug System (Exposed Parts After Permanent Installation):	316 SS
Stinger:	316 SS & AISI 6061
Suction Port Tube and Parking Receptacle	ASTM A106 GR B or AISI 1018
Seals:	Nitrile (Buna)
Options:	Sour Gas and other specialty applications available

Coating

For detailed material information see applicable Coating Procedure.

General Coating System:	2-Coat Cycloaliphatic Amine Epoxy (Other systems available)
Supplier Paint Reference:	Carboline Carboguard 890 (Other paint products/brands available)
Pressure Sealing Surface Coating:	Xylan 1010

Testing - Factory Acceptance Test (FAT)

FAT is performed on 100% of completed product.

Operation (Function) Test	Stinger: Installed into and removed from Port Tube by hand
	Plug: Operate complete cycle: open and close
	Tightening torque 75 ft-lb [102 N-m] (maximum)
Seal Test (All Products)	145 psi [10 bar] (minimum) to 225 psi [15.5 bar] (maximum)
	Duration: 5-minute (minimum)
Electrical Continuity Test	Verify Continuity between Plug and Port Tube