Confirmation of Product Type Approval

Company Name: PREMIUM SUBSEA LLC

Address: 22502 PARK ROAD TX 77377 United States

Product: Vent Hatch Receptacle Stab System

Model(s): For Pile Venting: • PS Vent Cap / Vent Hatch / Contingency Cover o Type: # Rising Stem # Non-rising Stem o Configuration: # Double Seal # Triple Seal o Bore Diameter: # 12" thru 52" For Pile Suction: • PS Suction Port System o Type: # Receptacle # Stab o Configuration: # PS Port Tube (a.k.a. Stab Receptacle) # PS Parking Receptacle (a.k.a. Dummy Stab Receptacle) # PS Plug Assembly (a.k.a. Blind Stab) # PS Stinger (a.k.a. Suction Stab) o Bore Diameter: # 6” o Pump Interface: # 2” Cam-And-Grove Hose Coupling Plug # 3” Cam-And-Grove Hose Coupling Plug # 4” Cam-And-Grove Hose Coupling Plug

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	22-2240341-PDA	13-MAY-2022	12-MAY-2027
Manufacturing Assessment (MA)	22-5269676	16-MAY-2022	15-MAY-2027
Product Quality Assurance (PQA)	NA	NA	NA

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3 - Type Approved, unit certification not required

Intended Service
Marine and Offshore Applications: The PS Vent Cap and PS Suction Port are used during pile deployment of deep-water mooring and/or foundation anchors.

Description
The PS Vent Cap allows controlled flow of air and sea water during suction pile deployment of deep-water mooring and/or foundation anchors. The PS Vent Cap is fully opened before deployment and remains open during pile launch. Once self-penetration stops, an ROV closes the PS Vent Cap by turning the stem handle clockwise until the closure plate O-rings are compressed into the flange and seals off the suction pile. Then the ROV places the PS Stinger into the PS Suction Port Tube and pumps the remaining water out of the suction pile forcing it deeper into the seabed until the desired depth is reached. Once the suction process is complete, the ROV removes the PS Stinger, retrieves the PS Suction Port Plug from the PS Parking Receptacle, and places it into the PS Suction Port Tube. The ROV turns the stem handle on the PS Plug clockwise, compressing the O-rings and sealing the PS Suction Port Tube. If needed, the suction pile can be retrieved by pumping water into the suction pile and reversing the installation process. Should the PS Vent Cap lose functionality during the installation process, the ROV may remove the PS Vent Cap by loosening its perimeter bolts and then replacing and tightening the PS Contingency Cover onto the flange.

Ratings

PS Vent Cap:

• Vent Hatch internal interface diameter: 12 through 52 inches

• Design Pressure: 7-10 bar internal and external pressure

• Water Depth Range: unlimited – history of use up to 9850 ft (3000 m)

• Design Operating Temperature Range: -30°F (-34°C) to 167°F (75°C)

• Operating Interface: T-Handle, D-Handle, Torque bucket operated by ROV manipulator, Open: Counter-clockwise, Close: Clockwise

• Operating Torque: 75 ft-lb (100 N-m) to 90 ft-lb (122 N-m)

• Max Allowable Torque: 350 ft-lb (475 N-m) [damage torque: 700 ft-lb (950 N-m)]

• Contingency Option Available: Sizes 12 through 52 inch

PS Suction Port System:

• Port Tube internal interface diameter: 6 in

• Design Pressure: 10 bar operating pressure

• Water Depth Range: unlimited – history of use up to 9850 ft (3000 m)

• Design Operating Temperature Range: -30°F (-34°C) to 167°F (75°C)

• Operating Interface: T-Handle operated by ROV manipulator

o Tighten: Clockwise

o Loosen: Counterclockwise

• Operating Torque: 75 ft-lb (100 N-m)

• Max Allowable Loosening Torque: 75 ft-lb (100 N-m)

• Max Allowable Tightening Torque: 250 ft-lb (339 N-m)

Service Restrictions

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

2. Suction Pile and ROV are not covered in the scope of this PDA Certificate.

Comments

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

2. Materials used are to be traceable and the certified material test reports are to be made available upon request.

3. Functional Test and Seal Test at the manufacturer's shop [Factory Acceptance Test -(FAT)] are to be performed in accordance with the manufacturer's procedures and witnessed by surveyor / end-user representative upon request.

4. Field test and Installation of piles are to be verified by attending Surveyor in accordance with FPI

Rules 7-1-3/7.1 and 7-1-3/9.

Notes, Drawings and Documentation
ISO 9001:2015 Certificate

Premium Subsea Products – Overview Presentation

PS Vent Cap / Vent Hatch / Contingency Cover - All Types, Configuration & Bore Diameter Sizes:

• PSVU-00-GA-01 R0 : General Arrangement for PS Vent Cap

• DPSV-PDS-00-ABS-000 R0 : Data Sheet for PS Vent Cap

• DPSV-DVT-00-ABS-000 R0 : Design Validation Report for PS Vent Cap

• DPSV-DSA-00-ABS-000 R0 : Design Analysis Report for PS Vent Cap

PS-06 Suction Port System - All Types, Configuration & Bore Diameter Sizes:

• PSPS-06-GA-01 R2 General Arrangement Drawing for PS Suction Port System

• DPSS-PDS-06-ABS-000 R0 Data Sheet for PS Suction Port System

• DPSP-DVT-06-ABS-000 R0 Design Validation Report for PS Suction Port System

• DPSP-DSA-06-ABS-000 R0 Design Analysis Report for PS-06 Suction Port System

Term of Validity
This Product Design Assessment (PDA) Certificate remains valid until 12/May/2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules
Rules for Conditions of Classification, Part 1 - 2022 Offshore Units and Structures: 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2022 Rules for Building and Classing Floating Production Installations: 6-1-2/7, 6-1-2/9, 6-1-3, 7-1-3/7.1

2022 Rules for Building and Classing Single Point Moorings: 3-4-1/3

International Standards
NA

EU-MED Standards
NA

National Standards
API RP 2SK - Design and Analysis of Station-keeping Systems for Floating Structures, 3rd Edition, Reaffirmed 2015

API RP 2T - Planning, Designing and Constructing Tension Leg Platforms, 3rd Edition, Reaffirmed 2015

API Spec 6D - Specification for Pipeline and Piping Valves, 25th Edition, 2021

Government Standards
NA

Other Standards
NA

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 19-Jul-2022 1:38

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the “Intended Service” details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.