



Certificate No:
TAD00001K3

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Miscellaneous

with type designation(s)
Subsea Vent Hatch Receptacle Stab System

Issued to
Premium Subsea
Tomball, TX, USA

is found to comply with
DNV offshore standards

Application :

The productions are used for offshore suction pile installation.

Issued at **Houston** on **2023-09-06**

This Certificate is valid until **2028-09-05**.

for **DNV**

DNV local unit: **Certification & Inspection Services**

Approval Engineer: **Bo Cui**

Mark Miser
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Reference Standards

- 1) DNV-OS-E301 - Position Mooring (Jul. 2018),
- 2) DNV-OS-C101 - Design of Offshore Steel Structures, General - LRFD Method (Jul. 2018),
- 3) DNV-OS-C401 - Fabrication and Testing of Offshore Structures (Jul. 2018),
- 4) DNV-OS-B101 - Metallic Materials (Jul. 2018),
- 5) DNV-ST-N001 - Marine Operations and Marine Warranty (Sep. 2018).
- 6) API Specification 6D

Product description

Vent Cap / Vent Hatch / Contingency Cover - 10 bar (12", 18", 24", 30", 36", 42", 52" Bore Diameter)

Vent Cap / Vent Hatch / Contingency Cover - 17.7 bar (18", 24", 30", 36", 42", 52" Bore Diameter)

Suction Port System – 10 bar (6" Bore Diameter)

Vent Cap	Closure plate thickness (in)	Stem nominal diameter (in)	Top plate thickness (in)	Flange bolt numbers	Flange bolt nominal size (in)	Flange wall thickness (in)
PS-12, 10 bar	1.5	1.5	1.0	3	1	0.5
PS-18, 10 bar	2.75	2.0	1.25	4	1.25	0.625
PS-24, 10 bar	2.75	2.0	1.75	5	1.25	0.625
PS-30, 10 bar	2.75	2.0	2.0	5	1.25	0.625
PS-36, 10 bar	2.75	2.5	2.25	6	1.25	0.625
PS-42, 10 bar	2.75	3.0	2.5	6	1.25	0.625
PS-52, 10 bar	3	3.5	3.0	8	1.25	0.75
PD-12, 10 bar	2.0	1.5	1.0	3	1.0	0.625
PD-18, 10 bar	2.0	2.0	1.0	3	1.25	0.625
PD-20, 10 bar	2.0	2.0	1.25	3	1.25	0.625
PD-24, 10 bar	2.0	2.0	1.25	4	1.25	0.625
PD-30, 10 bar	2.0	2.0	1.50	4	1.25	0.625
PD-36, 10 bar	2.0	2.5	1.75	5	1.25	0.625
PD-42, 10 bar	2.0	2.5	2.5	5	1.25	0.625
PD-52, 10 bar	2.5	3.0	2.5	6	1.25	0.625
PS-18, 17.7 bar	2.75	2	1.75	4	1.25	0.625
PS-24, 17.7 bar	2.75	2	1.75	5	1.25	0.625
PS-30, 17.7 bar	2.75	2.25	2.5	5	1.25	0.625
PS-36, 17.7 bar	2.75	2.75	2.75	6	1.25	0.625
PS-42, 17.7 bar	3.0	3.5	3.0	6	1.25	0.625
PS-52, 17.7 bar	3.5	4	4	9	1.25	0.75

Application/Limitation

Design Parameter	Value	(equivalent)
Design Temperature	-20°F ~ 167°F	(-29°C ~ 75°C)

Vent Cap / Vent Hatch / Contingency Cover - 10 bar (12" to 52" Bore Diameter)

Pressure Rating	145 psi	(10 bar)
Test Pressure	225 psi	(15.5 bar)
Design Lift	30 years	
Water Depth	No Limit	

Vent Cap / Vent Hatch / Contingency Cover – 17.7 bar (18" to 52" Bore Diameter)



Job Id: **262.1-040009-1**
Certificate No: **TAD00001K3**

Pressure Rating	257 psi	(17.7 bar)
Test Pressure	308 psi	(21.24 bar)
Design Life	50 years	
Water Depth	No limit	

Type Approval documentation

Tests carried out

Type test was carried out and was witnessed by Per Jørgen Tviberg dated 08/22/2023 with reference to project A1370703

Marking of product

For traceability the following marking is to be carried out on each product:

1. Serial No.
2. Manufacturer's Name or trademark
3. Marking as specified in API 8C, PSL 1
4. Additional marking at the manufacturer's discretion

Periodical assessment

For retention of the Type Approval, DNV's surveyor shall perform periodical assessment after 2 years (+/- 90 days) and after 3.5 years (+/- 90 days) in accordance with DNV's Class Program DNV-CP-0338, Section 4.

END OF CERTIFICATE