

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Flexible hoses of non-metallic material without permanently fitted couplings

with type designation(s)
VOSSPlug

Issued to

VOSS Fluid GmbH
Wipperfürth, Nordrhein-Westfalen, Germany

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV class programme DNV-CP-0183 – Type approval – Flexible non-metallic hoses
DNV class programme DNV-CP-0185 – Type approval – Mechanical joints

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Temperature range: -35°C up to +120°C
Max. working press.: up to 400bar
Sizes: 6mm up to 16mm

Issued at **Hamburg** on **2021-12-16**

This Certificate is valid until **2026-12-15**.

for **DNV**

DNV local station: **Essen**

Approval Engineer: **Hagen Markus**

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Olaf Drews
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.



Product description

VOSSPlug Hydraulic hose connector for hydraulic applications.

Materials

Pipe system connection side / Plug connector	Material grade
Male plug, Plug and Press socket	Free-cutting steel with zinc-nickel corrosion protection
Sealing package	O-ring (HNBR) and support ring (PTFE)
Special snap ring (retaining element)	High-strength stainless steel
Two wedge slide elements	Polyamide (PA66-GF30)

Application/Limitation

The VOSSPlug Hydraulic hose connector is type approved in combination with DNV type approved hose types as follows:

DNV TA certificate	Hose manufacturer	Hose types / Hose standards
TAP00000D2	Manuli	1SN, 2SN, 1ST, 2ST, 1SC, 2SC, 4SP, 4SH, SAE 100 R13/15
	Alfagomma	1SN, 2SN, 1ST, 2ST, 4SP, 4SH
TAP00001V5	Semperit	1SN, 2SN, 1SN-K SEMPERPAC, 2SN-K SEMPERPAC, 1SC, 2SC, 4SP, 4SH
TAP000009S	Polimer Kaucuk	1SN, 2SN, 2SN-K1SC, 2SC, 4SP, 4SH, EN856 R13, SAE J517 100 R13/15, SAE J517 100 R16, SAE J517 100 R17, WOOD 3W ¹

Notes

¹ Acc. to manufacturers specification

Plug sizes and pressure range

The VOSSPlug Hydraulic hose connector system is type approved for the following nominal pressures PN.

Plug size mm	PN bar
6	400
8, 10, 12	370
16	350

Temperature range

-35°C up to +120°C

Assembling

The crimping of the VOSSPlug Hydraulic hose connectors is to be carried at hose assembly production places listed in the above hose type approval certificates or by DNV approved manufacturers (AoM) using same type approved hose types.

Type Approval documentation

Tests carried out

Repeat assembly test, Hydrostatic Tightness test, Burst pressure test, Impulse pressure test acc. to ISO 6803 (no flexing), Flame resistance ISO 15540/41:2016.

Marking of product

Component	Example
Male plug	VOSS
Clipp	VOSSPlug
Ferrule	VOSS-PF24

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Sec.4.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

End of certificate