

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings**

with type designation(s)
Stainless Steel Hose Couplings with or without Wire Trap Area

issued to
PH Industrie-Hydraulik GmbH und Co. KG
Ennepetal, 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

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Issued at **Hamburg** on **2024-07-26**

This Certificate is valid until **2029-07-25**.

DNV local unit: **Essen**

for **DNV**

Approval Engineer: **Christian Kaemmer**

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

Skive, No-Skive and Interlock Ferrules – Hose Couplings /- (Hose Fittings) – Universal Tapered Nipples, Tapered Nipples with O-Ring

Hose Couplings: without Wire Trap Area
According to PH-Catalogue Section 2
Ferrules: Materials; 1.4571 / 1.4404 (AISI 316Ti / 316L)

with Wire Trap Area – Interlock Series
According to PH-Catalogue Section 3
Interlock-Ferrules: Materials: 1.4571 / 1.4404 (AISI 316Ti / 316L)

Hoses:

PH - Designation	Hose-Designation	Manufacturer
1SN	Rockmaster / 1SN	Manuli
2SN	Rockmaster / 2SN	Manuli
1SC	Rockmaster / 1SC	Manuli
2SC	Rockmaster / 2SC	Manuli
4SP	Rockmaster / 4SP	Manuli
R13	Rockmaster / 13	Manuli
R15	Rockmaster / 15	Manuli

Application/Limitation

Hose couplings covered by this type approval certificate are type approved for the use in combination with type approved hoses manufactured by Manuli Hydraulics.

For the determination of the maximum operating pressure of the hose assembly, the maximum operating pressure of the hose-coupling (by PH-Hydraulic) and of the hose (by the hose manufacturer) must be considered.

Flexible hoses are only to be used in short lengths where it is necessary due to vibrations or flexible mounting of the machinery. The hoses shall not be used where permanent piping is possible/required.

Installation

The hose assemblies must only be fitted in places where they are always accessible. Flexible hoses are not to be used on boiler fronts. It must be possible to shut off from the system all flexible hoses used in systems for compressed air, fresh water cooling applications, lube oil, fuel oil and petroleum base hydraulic oil. The cover on hoses for gaseous applications shall be pin-pricked.

Type Approval documentation

Tests carried out

Production testing

All hose assemblies shall be subject to a pressure test at 1.5 times the maximum working pressure and shall be delivered with the pressure test report with reference to the type approval certificate.

Marking of product

For traceability to this type approval, hose coupling is to be marked with:

Marking	Example
Manufacturer's Code	PH
Material Trace Code	457051

Periodical assessment

For retention of the Type Approval, a DNV 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>