



TYPE APPROVAL CERTIFICATE

Certificate No:
TAP000016X
Revision No:
1

This is to certify:

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

with type designation(s)
372/372TC

Issued to
Parker Hannifin Manufacturing S.r.l.
Veniano, CO, Italy

is found to comply with
DNV class programme DNV-CP-0183 – Type approval – Flexible non-metallic hoses
DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021

Application :

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

Temperature range: -40°C to +100°C (dependent on the medium)
Max. working press.: 210 bar to 445 bar (dependent on size)
Sizes: DN10, 12, 16, 19, 25, 31

Issued at **Høvik** on **2022-10-14**

This Certificate is valid until **2027-06-30**.

for **DNV**

DNV local station: **Italy/Malta CMC**

Approval Engineer: **Jane Lozanov**

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Sinisa Sedlan
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

Hose assemblies made of rubber hoses with synthetic rubber inner tube, three braids of high tensile steel wire reinforcement separated by a synthetic rubber layer. Oil, weather, fire and abrasion resistant synthetic black rubber cover. (constructed according to EN856-4SP)

Couplings: Parker coupling series 70 made of carbon Steel or 316 stainless steel
 Hoses made by: Parker Hannifin, Italy
 Couplings made by: Parker Hannifin, Germany

Application/Limitation

This certificate is valid for the specific assembly of hose and coupling type as specified, assembled and delivered by the holder (named as manufacturer) of this certificate.

The hose may be used for the following application: Petroleum base hydraulic fluids, water glycol and water oil emulsion hydraulic fluids, compressed air & fresh water.

Maximum working pressure:

Type	Hose size (DN)	Max working pressure (bar)
372-6	372TC-6	445
372-8	372TC-8	415
372-10	372TC-10	350
372-12	372TC-12	350
372-16	372TC-16	280
372-20	372TC-20	210

Temperature range:

Medium	Temperature range
Petroleum base hydraulic fluids	- 40 °C to +100°C
Water and water based hydraulic fluids	- 40 °C to +85°C
Compressed air	- 40 °C to +70°C

Each hose assembly is before delivery to be hydraulic pressure tested to 1.5 times the maximum working pressure and to be delivered with the pressure test report with reference to this type approval certificate.

Flexible hoses are only to be used where it is necessary due to vibrations or flexible mounting of the machinery. The hoses shall not replace/be used where permanent piping is possible/required and must only be fitted in places where they are always accessible.

Flexible hoses of these types are not to be used in boiler fronts.

Hoses covered by this certificate shall not be installed in systems with pressure below atmospheric or vacuum conditions.

The hoses are to be mounted in accordance with the manufacturer's instructions.

The cover of hoses for gaseous applications shall be pin-pricked.

Type Approval documentation

Tests carried out

Fire, Burst, Impulse, Change in length, Abrasion, Adhesion, Oil resistance, Cold flexibility, Ozone resistance, Dimensional check.

Marking of product

For traceability to this type approval the products are at least to be marked with:

- manufacturer's name or trade mark
- type designation
- maximum working pressure
- size

Periodical assessment



Job Id: **262.1-026614-2**
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For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.