

TYPE APPROVAL CERTIFICATE

This is to certify:

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

with type designation(s)
Parflex 575X

Issued to

Parker Hannifin Corporation Parflex Division
Ravenna, OH, USA

is found to comply with

DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018

Application :

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

Temperature range: -40 °C to +100 °C
Max. working press.: 345 bar
Sizes: DN 4, 6, 8, 12 and 16

This Certificate is valid until **2023-06-30**.

Issued at **Høvik** on **2019-04-23**

DNV GL local station: **New York**

for **DNV GL**

Approval Engineer: **Zeinab Sharifi**

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Marianne Spæren Marveng
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.

If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million.

In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

Certificate No: **TAP00001AU**
File No: **791.70**
Job Id: **262.1-010434-8**

Product description

Thermoplastic- and high pressure hose designed accoring to manufacturers specification, HS-575X:

Tube : Polymeric core
Reinforcement : Multiple layers of synthetic fibre braids
Outer cover : Thermoplastic abrasion resistance urethane cover (sizes 1/4", 3/8", 3/4", 1")
Thermoplastic nylon cover (size 1/2", 575XN-8)
Couplings : Parflex permanent fitted, Series CG.

Coupling Material

Carbon Steel: 1.0736, 1.07371.1193, 1.0301, 1.0402, 1.0044.
Stainless Steel: 1.4305, 1.4301, 1.4404, 1.4401, 1.4571.

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.

Maximum allowable working pressure for corresponding size:

Hose size (ID)		Hose type	
inch	DN	575X	
1/4"	4	345 bar	5000 psi
3/8"	6	345 bar	5000 psi
1/2"	8	345 bar	5000 psi
3/4"	12	345 bar	5000 psi
1"	16	345 bar	5000 psi

Hose assemblies covered by this certificate may be used in systems conveying water based hydraulic fluids, fresh water and air in the below temperature range:

- water based hydraulic fluids and air: -40°C to +100°C
- water and air: 0°C to +70°C

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 replace/be used where permanent piping is possible/required.

The hose assemblies must only be fitted in places where they are always accessible. Flexible hoses of these types are not to be used on boiler fronts.

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

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

The hose assemblies are not of fire-resistant type and are not approved for installation in piping systems for flammable media and sea water system where failure may result in flooding. This is not applicable in cases where such hoses are installed on open decks, as defined in SOLAS II-2/Reg. 9.2.3.3.2.2(10) and not used for fuel oil lines.

Production testing

All hose assemblies delivered under the DNV GL type approval scheme 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.

Type Approval documentation

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Tests carried out

Dimensional Check Test, Change in Length Test, Leakage Test, Proof Test, Burst Test, Cold Flexibility Test, Impulse Test, Fluid Resistance Test. Vacuum Test and Coupling End Pull.

Marking of product

For traceability to this Type Approval, the products are at least to be marked with:

- Hose manufacturer's name or trademark;
- Date of manufacture (month/year)
- Designation type reference
- Nominal diameter
- Pressure rating
- Temperature rating.

Periodical assessment

For retention of the Type Approval, a DNV GL 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 DNVGL-CP-0338.