DNV·GL

Certificate No:
TAP0000158

TYPE APPROVAL CERTIFICATE

This is to certify:

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

with type designation(s)
811/811S

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

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition July 2015
DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses

Application :

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

Temperature range:	**-40°C to +100°C (see page 2)**
Max. working press.:	**4 bar to 21 bar (see page 2)**
Sizes:	**3/4",1",1 1/4",1 1/2",2",2 1/2",3",4",5"**

Issued at **Høvik** on **2017-11-21**
This Certificate is valid until **2022-06-30**.
DNV GL local station: **Milan**

Approval Engineer: **Adel Samiei**

for **DNV GL**

Marianne 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.

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Job Id: **262.1-017480-4**
Certificate No: **TAP0000158**

Product description

Hose assemblies for suction lines
Construction:

- Inner Tube: synthetic rubber
- Reinforcement: two fibre spiral, one helical wire
- Cover: Oil and weather resistant synthetic rubber
- fire sleeve: Type FS-F

Couplings (carbon Steel):

- Parker type 48: for sizes -12,-16,-20,-24,-32
- Parker type IF: for sizes -40,-48,-64,-80

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.

Hose assemblies covered by this certificate are suitable for:

- Petroleum base hydraulic fluids within a temperature range of -40°C to +100°C (*)
- Water base hydraulic fluids within a temperature range of -40°C to +70°C.
- Fresh water and compressed air within a temperature range of 0°C to +70°C.

(*) Hoses shall be used with fire sleeve.

Maximum working pressure:

Part Number	Size		Maximum working pressure	
	inch	DN	bar	MPa
811-12	¾	19	21	2.1
811-16	1	25	17	1.7
811-20	1 ¼	31	14	1.4
811-24	1 ½	38	10	1.0
811-32	2	51	7	0.7
811-40	2 ½	63	4	0.4
811-48	3	76	4	0.4
811S-64	4	100	10	1.0
811S-80	5	125	10	1.0

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.

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

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

It must be possible to shut off from the system all flexible hoses used in systems for lube oil, fuel oil and petroleum base hydraulic oil.

Type Approval documentation

Tests carried out
Fire, Burst, Impulse, Change in length, Abrasion, Adhesion, Oil resistance, Cold flexibility, Ozone resistance, Dimensional check, vacuum test

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
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.

Renewal assessment
For renewal of this certificate, during the renewal assessment (as described in DNVGL-CP-0338), burst pressure tests shall be witnessed on every 3rd sizes of each type.