



Marine & Offshore

Certificate number: 77483/A0 BV

File number: .

Product code: 2104I

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**PARKER HANNIFIN MANUFACTURING S.r.l. Polymer Hose Division Europe**  
Veniano (CO) - ITALY

*for the type of product*

**NON-METALLIC HOSES (FLEXIBLE PIPES) ASSEMBLIES**  
SR & SRI 42 Hydraulic hoses

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships  
Bureau Veritas Rules for the Classification of Offshore Units  
Bureau Veritas Rules for the Classification of Naval Ships  
Bureau Veritas Rules for the Classification of Yachts

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 17 Oct 2029**

**For Bureau Veritas Marine & Offshore,**

At BV NAPOLI, on 17 Oct 2024,

Alessandro Asbornio

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION

#### **SR & SRI 42 Hydraulic hoses**

##### 1.1 Ratings

Model	SR	SRI 42
DN (mm)	DN10 to DN51 (Size 6 to size 32)	DN 12 to DN 31 (Size 8 to size 20)
Temperature range (°C)	-40°C to 120°C	-40°C to 120°C
Max. Working Pressure (bar)	Size 6 (DN 10) : 450 Size 8 (DN 12) : 350 Size 10 (DN 16) : 350 Size 12 (DN 19) : 350 Size 16 (DN 25) : 350 Size 20 (DN 31) : 350 Size 24 (DN 38) : 290 Size 32 (DN 51) : 250	420

The Maximum Allowable Working Pressure in relation to temperature must be in conformity with manufacturer's specifications

##### 1.2 Materials

Part	Material
Tube	NBR / PVC
Reinforcement	1.4571 / 1.4401
Cover	NBR / PVC
Fittings	1.4571 / 1.4401

*When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.*

### 2. DOCUMENTS AND DRAWINGS

- Catalogue for SR and SRI 42 models N° 4400/UK dated 03/2024
- Manual of installation, use and maintenance N° CAT/4400/UK page 46 to 53 dated 03/2024
- NBR material data sheet N° 3719 Rev.1 dated 16/10/2014
- Fitting materials dated 11/09/2024

*No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.*

### 3. TEST REPORTS

3.1 - Type tests including burst test at 4 times the design pressure, visual inspection & dimensional check, change in length, impulse, cold flexibility, ozone resistance and a cover adhesion test.

- Test report N° 011-23 dated 04/07/2023 for SR DN6
- Test report N° 012-23 dated 04/07/2023 for SR DN8
- Test report N° 013-23 dated 04/07/2023 for SR DN10
- Test report N° 014-23 dated 04/07/2023 for SR DN12
- Test report N° 015-23 dated 04/07/2023 for SR DN16
- Test report N° 016-23 dated 04/07/2023 for SRI 42 DN8
- Test report N° 017-23 dated 04/07/2023 for SRI 42 DN10
- Test report N° 018-23 dated 04/07/2023 for SRI 42 DN12
- Test report N° 019-23 dated 04/07/2023 for SRI 42 DN16

3.2 - Fire resistance test report N° 1416-1417-1418-2328.0ISO210/23 & 1419-1421-1798-2329.0ISO210/23 dated 11/01/2024 performed according to ISO 15540 : 2016

#### **4. APPLICATION / LIMITATION**

4.1 - May be used on the following services on board:

- Hydraulic oil, thermal oil, fresh water, sea water

4.2 - Not to be used for fuel oil lines in accordance with the relevant requirements stated in Pt C, Ch 1, Sec 10 [2.6.4].

4.3 - End fittings as per manufacturer's catalogue. The hoses are to be entirely assembled in the manufacturer's workshop.

4.4 - The hoses assemblies are to be installed according to manufacturer's instructions and Bureau Veritas Rules

4.5 - Flexible hoses assemblies for essential services or containing either flammable or toxic media are not to exceed 1.5 meters in length. A length greater than 1.5 meters may be accepted on a case-by-case basis by the Society, provided that the installation ensures the integrity of the hose is not compromised by any external factors, that hoses are only be used where necessary to accommodate relative movement between two moving parts, and that all hot surfaces that could be exposed in case of hose failure are appropriately heat-shielded.

4.6 - The use of stainless steel is to be restricted as per the requirements of the Bureau Veritas Rules.

4.7 - Tapered threaded end fittings are not to be used in engine rooms, nor in any place containing an ignition source unless otherwise suitably screened at the Society's Surveyor satisfaction.

4.8 - Not to be used in case of high level of vibrations where fitted to engines, pumps, compressors and other sources of high vibrations.

#### **5. PRODUCTION SURVEY REQUIREMENTS**

5.1 - The products are to be supplied by **PARKER HANNIFIN MANUFACTURING S.r.l. Polymer Hose Division Europe** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product certificate is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - Each hose assembly is to be hydraulically pressure tested to 1.5 times the maximum working pressure and provided with the manufacturer's pressure test report and conformity of production.

5.5 - For information, **PARKER HANNIFIN MANUFACTURING S.r.l. Polymer Hose Division Europe** has declared to Bureau Veritas the following production site:

**PARKER HANNIFIN MANUFACTURING S.r.l. Polymer Hose Division Europe**  
**Via G.B. Pirelli,6**  
**22070 Veniano (CO)**  
**ITALY**

#### **6. MARKING OF PRODUCT**

Each flexible hose shall at least clearly and indelibly marked with:

- Manufacturer name or logo

- Date of manufacture (month/year)

- Type designation

- Nominal Diameter

- Pressure rating

- Temperature rating

- Society's brand as relevant

#### **7. OTHERS**

It is **PARKER HANNIFIN MANUFACTURING S.r.l. Polymer Hose Division Europe's** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

\*\*\* END OF CERTIFICATE \*\*\*