



CERTIFICATE NUMBER	19-GE1919237-PDA
EFFECTIVE DATE	02-Dec-2019
EXPIRY DATE	01-Dec-2024
ABS TECHNICAL OFFICE	Genoa Engineering Department

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

### **PARKER HANNIFIN MANUFACTURING SRL**

located at

**HOSE PRODUCTS DIVISION EUROPE, VIA G.B. PIRELLI, 6,  
VENIANO (CO), Italy, 22070**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

#### **Product Non-Metallic Flexible Hoses with End Fittings**

**Model R50TC/R56TC**

This Product Design Assessment (PDA) Certificate remains valid until 01/Dec/2024 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Cristina Generale, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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Email: info@parker.com

Web: www.parker.com

**Tier: 3 - Type Approved, unit certification not required**

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**Product:** Non-Metallic Flexible Hoses with End Fittings

**Model:** R50TC/R56TC

**Intended Service:**

Hydraulic fluids, mineral oil-basis, water-glycol and lubricating oils, air, water.

**Description:**

Synthetic rubber inner tube with four (R50TC) or six (R56TC) spiral high tensile steel wires covered with abrasion resistance MSHA rubber.

**Rating:**

From DN6 to DN31, constant pressure 56 MPa or 50 MPa based on model.

For additional details refer to the attachment.

Temperature range: -40°C to +100°C, air max +70°C, water max +85°C.

**Service Restriction:**

- 1) Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
- 2) Hoses are to be completed with factory assembled end fittings or factory supplied end fittings installed in accordance with manufacturer's specifications.
- 3) End connections are to comply with applicable requirements and limitations of the Rules for the intended service (e.g. Marine Vessels Rules 4-6-7/3.5.1)
- 4) Hose assemblies are to be installed only where flexibility is required and are not to be subject to torsional deflection under normal conditions; hose length is to be limited to that required by flexibility only.
- 5) Not to be installed in applications where flexing in service is expected.
- 6) For air above 1,7 MPa the hose cover must be pin pricked ad per Manufacturer's recommendations.
- 7) Not to be used in high pressure fuel oil injection systems, steam systems or oil supply lines to boilers.
- 8) Flexible hoses are to be permanently marked by the manufacturer with the following details:
  - Hose manufacturer's name or trademark
  - Date of manufacture (month/year)
  - Designation type reference
  - Nominal diameter
  - Pressure rating
  - Temperature rating

**Comments:**

- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- Manufacturer recommended fittings as per attachment.

**Notes/Drawing/Documentation:**

- Drawing No. 1, ABS Form R%0-R56, Revision: 00, Pages: 3
- Drawing No. 10, V5 fittings, Revision: 00, Pages: 1
- Drawing No. 2, PDA ABS Form R50-R56, Revision: 00, Pages: 3
- Drawing No. 3, Burst pressure test R50-R56 at Parker dated 02 Aug 2019, Revision: 00, Pages: 9
- Drawing No. 4, STR R50-R56 burst test at Parker dated 02 Aug 2019, Revision: 00, Pages: 6
- Drawing No. 5, Fire test LAPI R56-6 Report No. 1268/19/AC at LAPI dated 17 Sept 2019, Revision: 00, Pages: 11
- Drawing No. 6, Fire test LAPI R50TC-12 Report No. 1269/19/AC at LAPI dated 17 Sept 2019, Revision: 00, Pages: 11
- Drawing No. 7, Fire test LAPI R50TC-20 Report No. 1270/19/AC at LAPI dated 17 Sept 2019, Revision: 00, Pages: 11
- Drawing No. 8, R50-R56 TC CATALOGUE PAGE, Revision: 00, Pages: 1

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Drawing No. 9, V4-V6 fittings, Revision: 00, Pages: 2

**Terms of Validity:**

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**STANDARDS**

**ABS Rules:**

Rules for Conditions of Classification, Part I - 2019, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2019 Steel Vessels Rules 4-6-2/5.7, 4-6-7/3.5.1

2019 Marine Vessels Rules 4-6-2/5.7, 4-6-7/3.5.1

2019 Steel Vessels Under 90 Meters (295 Feet) in Length Rules, 4-1-1/9.19

2019 Offshore Support Vessels Rules, 4-6-2/5.7

Rules for Conditions of Classification, Part I - 2019 Rules for Building and Classing Mobile Offshore Units 1-1-4/9.7,

1-1-A2, 1-1-A3, which covers the following:

2019 Mobile Offshore Units Rules 4-2-1/11.29

**National:**

NA

**International:**

ISO 3862:2017

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA

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ATTACHMENT TO PDA No. 19-GE1919237-PDA  
ISSUED: 02 DECEMBER 2019  
EXPIRING: 01 DECEMBER 2024

PART No.	Ref. Standard	DN	Max Pressure [Mpa]	Fittings
R56TC-4	exceed ISO 3862 Type R15	6	56,0	V5
R56TC-6	exceed ISO 3862 Type R15	10	56,0	V5
R56TC-8	exceed ISO 3862 Type R15	12	56,0	V5
R50TC-10	exceed ISO 3862 Type R15	16	50,0	V4
R50TC-12	exceed ISO 3862 Type R15	19	50,0	V4
R50TC-16	exceed ISO 3862 Type R15	25	50,0	V4
R50TC-20	exceed ISO 3862 Type R15	31	50,0	V6