

CERTIFICATE NUMBER 19-GE1872365-PDA

EFFECTIVE DATE 29-Jul-2019

EXPIRATION DATE 28-Jul-2024

ABS TECHNICAL OFFICE GENOA ENGINEERING

CERTIFICATE OF

Product Design Assessment

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

PARKER HANNIFIN MANUFACTURING SRL. HOSE PRODUCTS DIVISION EUROPE

located at

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 Hose, Rubber Flexible Hose

Model Parker Hose Style R42-R42TC-R42ST

This Product Design Assessment (PDA) Certificate remains valid until 28 July 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, Senior Engineer

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)

PARKER HANNIFIN MANUFACTURING SRL

HOSE PRODUCTS DIVISION EUROPE

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Italy 22070

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Fax: +39031936664 Email: info@parker.com Web: www.parker.com

Tier: 3 - Type Approved, unit certification not required

Product:

Hose, Rubber Flexible Hose

Model:

Parker Hose Style R42-R42TC-R42ST

Intended Service:

Petroleum Base Hydraulic Fluid and Lubricant Oils - Water, Water/Oil Emulsion and Water/Glycol Hydraulic Fluids -Compressed Air.

Description:

Oil-resistant synthetic rubber hoses reinforced with four or six high tensile steel wires, covered with a synthetic rubber sheath. R42 standard hose, R42TC flame resistant cover, R42ST abrasion resistant cover.

See Attached Table 1. Manufacturer recommended fittings V4 and V6 series

Temperature range:

- Petroleum Base Hydraulic Fluid and Lubricant Oils, -40 deg C to +121 deg C;

- Water. Water/Oil Emulsion and Water/Glycol Hydraulic Fluids up to +85 deg C;

- Compressed Air, up to +70 deg C.

Service Restriction:

- 1) Unit Certification is not required for this product. If the manufacturer or purchaser requests 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 complete 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 limitation of the ABS Marine Vessels Rules (4-6-
- 2/5.5.4, 4-6-2/5.5.5, 4-6-7/3.5.1, 4-6-7/5.3.2).
 4) Hose assemblies are to be installed only where flexibility is required, in clearly visible and readily accessible locations, 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 used in high pressure fuel oil injection systems, steam systems or oil supply lines to boilers.

6) Not to be used for installations where repeated and/or frequent flexing is expected.

Comments:

- 1) For traceability to this type approval the final 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
- 2) In general, flexible hoses are to be limited to a length necessary to provide for relative movement between fixed and flexibly mounted items of machinery, equipment or systems.
- 3) The manufacturer has provided a declaration about the control of, or the lack of asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. 3, R42 TS-ST Declaration of conformity letter, Revision: 0, Pages: 1
Drawing No. 4, Test ISO 3862-type R15 STR R42 at Parker, dated 4 Feb 2019Revision: 0, Pages: 6

Drawing No. Form ABS PDA xR42 - rev May2019, new request form, Revision: 1, Pages: 1

Drawing No. IC-40-26 (630), USMSHA Certificate, Revision: 1, Pages: 1
Drawing No. Parker R42 Declaration of conformity, Revision: 0, Pages: 1
Drawing No. R42, Burst test report signed by DNV at Parker, dated 25 Jul 2017, Revision: 0, Pages: 6

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Drawing No. Table 1, Hose Specification Table 1, Revision: 1, Pages: 1

Terms of Validity:

This Product Design Assessment (PDA) Certificate 19-GE1872365-PDA, dated 29/Jul/2019 remains valid until 28/Jul/2024 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

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

2019 Marine Vessels Rules 4-6-2/5.7

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

2019 Offshore Support Vessels, 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 type R15 (2017 edition)

Government:

NA

EUMED:

NA

OTHERS:

NA