



**TYPE APPROVAL CERTIFICATE**  
**No. MAC241320CS/002**

**This is to certify** that the product identified below is in compliance with the regulations herewith specified.

<i>Description</i>	<b>Non metallic flexible hoses</b>
<i>Type</i>	<b>421SN</b>
<i>Applicant</i>	<b>PARKER HANNIFIN MANUFACTURING SRL VIA G.B. PIRELLI, 6 22070 VENIANO (CO) ITALY</b>
<i>Manufacturer</i>	<b>PARKER HANNIFIN MANUFACTURING SRL</b>
<i>Place of manufacture</i>	<b>VIA G.B. PIRELLI, 6 22070 VENIANO (CO) ITALY</b>
<i>Reference standards</i>	<b>RINA Rules for the Type Approval of Flexible Hoses and Expansion Joints</b>

*Issued in* **Genoa** on **November 23, 2020**. *This Certificate is valid until* **November 22, 2025**

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**RINA Services S.p.A.**  
**Marco Dardano**

This certificate consists of this page and 1 enclosure

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### Reference documents

Parker Hannifin specifications nos. Hs-421SN and HS-K48  
Test Reports Nos. 1364, 1365, 1366 and 1367 of 03/08/2004.  
Test Report No. 2009/CS/4434 of 11/02/2010 of RINA Milan Office.  
Catalogue 4400/UK - Cab-9

### Reference Standard

EN 853 / ISO 1436 - 1SN.

### Materials/components

Lining:

Nitrile based synthetic rubber oil resistant

Reinforcement:

One braid of high tensile steel wire

Cover:

Black synthetic rubber resistant to oils and weathering

End fittings:

Parker 48 series - Material: Steel (9SMnPb28 UNI 4838 or equivalent) - Stainless steel (316).

### Technical characteristics

Maximum allowable working pressure at ambient temperature according to the following table:

Item	Nominal Diameter (mm)	Inside Diameter (mm)	Max. working pressure (N/mm <sup>2</sup> )
-3	5	4.6	25
-4	6.3	6.2	22.5
-5	8	7.7	21.5
-6	10	9.3	18
-8	12.5	12.3	16
-10	16	15.5	13
-12	19	18.6	10.5
-16	25	25.0	8.8
-20	31.5	31.4	6.3
-24	38	37.7	5
-32	51	50.4	4

Working temperature: -40°C to +100°C

### Fields of application

Hydraulic systems with a hydraulic oil having a flash point not less than 150°C.

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*Acceptance Conditions*

The installation on board of the piping system is to be carried out by qualified personnel in accordance with the manufacturer's instructions.

The flexible hoses are to be installed in order to satisfy the requirements of para. 5.9.3 of Part C, Ch 1, Sec 10 of RINA Rules.

The acceptance of the a.m. products on board ship and other units classified with RINA is subject to the satisfactory outcome of testing as per RINA Rules.

The product (hose and fittings) is to be marked, for traceability, with the following data: nominal diameter, design conditions, Manufacturer's name or trademark, designation type reference.

*Remarks*

This certificate annuls and replaces the previous certificate No. MAC176015CS/004 issued on 24/07/2015.

**Genoa 23/11/2020**