RAIL HOSE
The Hose Range
for European Rail Transportation

Parker Fluid Connectors
Group Europe

Parker Hannifin Ges. mbH
AT - 2700 Wiener Neustadt
Tel: +43 (0) 26 22 23 501

Parker Hannifin Corporation
AE - Abu Dhabi
Tel: +971 2 678 8587

Parker Hannifin Corporation
AZPAR - Techn. Repr. for Parker Hannifin plc
AZ - 1000 Baau
Tel: +994 12 598 3966

Parker Hannifin S.A.-N.V.
BE - 1400 Nivelles
Tel: +32 (0) 67 280 900

Parker Hannifin Corporation
BY - 220030 Minsk
Tel: +375 17 209 9399

Parker Hannifin s.r.o.
CZ - 250 67 Klecany
Tel: +420 284 083 111

Parker Hannifin GmbH & Co. KG
DE - 41564 Kaarst
Tel: +49 (0) 2131 40 16 0

Parker Hannifin Danmark A/S
DK - 2750 Ballerup
Tel: +45 43 56 04 00

Parker Hannifin España S.A
ES - 28660 Torrejón de Ardoz
(Madrid)
Tel: +34 91 675 73 00

Parker Hannifin Corporation
EG - Cairo
Tel: +20 2 519 4018

Parker Hannifin France SAS
FR - 74130 Gentilly-sur-Orne
Tel: +33 (0) 4 50 25 89 23

Parker Hannifin Oy
FI - 51520 Vanta
Tel: +358 (0) 20 763 1500

Parker Hannifin Corporation
GR - 171 21 Athens
Tel: +30 210 933 6450

Parker Hannifin Corporation
HU - 1149 Budapest
Tel: +36 (1) 1 220 4155

Parker Sales (Ireland) Ltd
IE - Ballymore, Co. Dublin
Tel: +353 (0) 1 466 6370

Parker Hannifin S.p.A.
IT - 20094 Corsico (MI)
Tel: +39 02 451 921

Parker Hannifin Corporation
Gateways Ventures Co Ltd
KZ - 480100 Aamaly
Tel: +7 327 2 595 600

Parker Hannifin Corporation
LV - 1007 Riga
Tel: +371 74 52 601

Parker Hannifin A/S
NO - 1402 Ski
Tel: +47 64 91 10 00

Parker Hannifin Oy
NL - 7570 AH Oldenzaal
Tel: +31 (0) 541 585 000

Parker Hannifin Sp. o.o.
PL - 00-236 Warszawa
Tel: +48 (0) 22 573 24 00

Parker Hannifin Portugal Lda
PT - 4450-625 Leça da Palmeira
Tel: +351 22 999 7380

Parker Hannifin Corporation
Hidro Consulting Impex Srl
RO - 021381 Bucharest
Tel: +40 21 252 1382

Parker Hannifin LLC
RU - 125030 Moscow
Tel: +7 495 645 2156

Parker Hannifin Corporation
RU - 693012 Yuzhno-Sakhalinsk
Tel: +7 4242 42 35 27

Parker Hannifin LLC
RU - 197348 St. Petersburg
Tel: +7 812 320 49 30

Parker Hannifin LLC
RU - 660049 Krasnoyarsk
Tel: +7 3912 52 73 35

Parker Hannifin AB
SE - 163 08 Sjöänga
Tel: +46 (0) 8 579 50 00

Parker Hannifin Corporation
SI - 8000 Novo Mesto
Tel: +386 (0) 20 537 55 55

Parker Hannifin Corporation
TR - 34067 Mersin/Istanbul
Tel: +90 212 482 91 06/07

Parker Hannifin Ltd.
UK - Darby DE4 3JA
Tel: +44 (0) 1332 36 36 36

Parker Hannifin Africa
ZA - Kempton Park
Tel: +27 11 961 0700

Internet: http://www.parker.com/europe
For further information on other Parker Products, call the European Product Information Centre free of charge on 00800 27 27 5374.
441RH No-Shive
Hi-Pac Compact
for European Rail Transportation

- Medium-pressure hydraulics
- Water and oil cooling circuits
- Air-brake systems
- Fire retardant special rubber outer cover
441RH – No-Skive Compact Hose
with fire-retardant cover

The fire-retardant special rubber cover of the 441RH hose contributes to increased safety in rail transportation as it minimises the release of harmful substances in the case of fire. The Hi-Pac construction of the wire reinforcement allows the 441RH hose to meet the technical specification of a 2 wire SAE 100 R16 hose but provides higher flexibility and thus makes installation faster and easier.

Properties
• One braided wire layer – same performance as with 2 braided layers
• Working temperature +125 °C
• Suitable for use with No-Skive fittings of the 46 and 48 series with chromium(VI)-free surface – safe and reliable

Certifications
• German Standard: DIN 5510-2
• French Standard: NFF16-101/102
• British Standard: BS 6853

441RH – No-Skive 1-Layer Compact Hose

Primary Applications
General medium-pressure hydraulic and pneumatic systems as well as water and oil cooling circuits

Applicable Specifications
Parker specification
Working pressure to SAE 100 R2
Bend radius to SAE 100 R16

Hose Construction
Tube: Synthetic rubber
Reinforcement: One compact braided layer of steel wire (Hi-Pac) steel wire
Cover: Fire retardant synthetic rubber

Recommended Fluids
Hydraulic fluids based on petroleum or water-glycol, lubricant oils, air and water. For air and gas applications at pressures exceeding 1.7 MPa, the cover needs to be perforated.

For further information please contact the Engineering Department of the Hose Products Division Europe at HPDE@Parker.com

Temperature Range
-40 °C up to +125 °C

Exception: Air .................................. max. +70 °C
Water ...................................... max. +85 °C

Fitting Series
46 48

The combination of high temperature and high pressure could reduce the hose life.
421RH
No-Skive Hose
for European Rail Transportation

- Medium-pressure hydraulics
- Water and oil cooling circuits
- Air-brake systems
- Fire retardant special rubber outer cover
**421RH – No-Skive Hose**

with fire-retardant cover

The fire-retardant special rubber cover of the 421RH hose contributes to increased safety in rail transportation as it minimises the release of harmful substances in the case of fire. Its nitrile inner tube provides high chemical resistance, including biodegradable hydraulic oils. The 421RH hose complements the medium pressure range of the RH hose series with larger nominal diameters.

**Properties**
- Nitrile (NBR) inner tube with high chemical resistance. Also resistant against biodegradable oils
- Suitable for use with No-Skive Parkrimp fittings of the 48 series with chromium(VI)-free surface – safe and reliable

**Certifications**
- German Standard: DIN 5510-2
- French Standard: NFF16-101/102
- British Standard: BS 6853

---

**421RH – No-Skive Hose**

**Primary Applications**

General medium-pressure hydraulic and pneumatic systems as well as water and oil cooling circuits

**Applicable Specifications**

EN 853 1SN – ISO 1436 Typ 1 – SAE100R1AT

**Hose Construction**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>DN</th>
<th>Inch</th>
<th>Size</th>
<th>mm</th>
<th>Hose O.D.</th>
<th>mm</th>
<th>max. dynamic working pressure</th>
<th>MPa</th>
<th>psi</th>
<th>min. burst pressure</th>
<th>MPa</th>
<th>psi</th>
<th>min. bend radius</th>
<th>mm</th>
<th>Weight</th>
<th>kg/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>421RH-20</td>
<td>32</td>
<td>1.1/4</td>
<td>-20</td>
<td>31,8</td>
<td>44,8</td>
<td>6,3</td>
<td>900</td>
<td>25,0</td>
<td>3600</td>
<td>420</td>
<td>1,19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>421RH-24</td>
<td>40</td>
<td>1.1/2</td>
<td>-24</td>
<td>38,1</td>
<td>51,1</td>
<td>5,0</td>
<td>725</td>
<td>20,0</td>
<td>2900</td>
<td>500</td>
<td>1,49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>421RH-32</td>
<td>50</td>
<td>2</td>
<td>-32</td>
<td>50,8</td>
<td>64,7</td>
<td>4,0</td>
<td>575</td>
<td>16,0</td>
<td>2300</td>
<td>630</td>
<td>2,23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The combination of high temperature and high pressure could reduce the hose life.

---

**Recommended Fluids**

Hydraulic fluids based on petroleum or water-glycol, lubricant oils, air and water. For air and gas applications at pressures exceeding 1.7 MPa, the cover needs to be perforated.

For further information please contact the Engineering Department of the Hose Products Division Europe at HPDE@Parker.com.

**Temperature Range**

-40 °C up to +100 °C

Exception: Air ...................................... max. +70 °C
Water ........................................... max. +85 °C

**Fitting Series**

48

---

**Parkrimp fittings and hose crimpers**

The 421RH hose can be assembled with chromium(VI)-free fittings of the 48 series and the hose crimpers of the Parkrimp system – the portable KarryKrimp for assembly on site, the stationary Parkrimp for the workshop and the fast assembly PHastkrimp for series production. A wide range of fittings with over 60 end configurations together with Parker hose and Parker hose crimpers allow safe and easy assembly – no matter where or when.
High-pressure hydraulics in the 4SP working pressure range
Fire retardant special rubber outer cover

372RH No-Skive
3Layer Compact
for European Rail Transportation
372RH – No-Skive Compact Hose

with fire-retardant cover

The fire-retardant special rubber cover of the 372RH hose contributes to increased safety in rail transportation as it minimises the release of harmful substances in the case of fire.

This hose type convinces through its compact design and the resulting small bend radii. Its nitrile inner tube provides high chemical resistance, including biodegradable hydraulic oils. Its high working pressure ratings complement the superior hose properties, making the 372RH a premium product for the rail transportation market.

Properties
• Nitrile (NBR) inner tube for increased chemical resistance
• Small bend radii
• Suitable for use with No-Skive fittings of the 70 series with chromium(VI)-free surface

Certifications
• German Standard: DIN 5510-2
• French Standard: NFF16-101/102
• British Standard: BS 6853

372RH – No-Skive Compact Hose

Primary Applications
Dynamic and static high-pressure hydraulic systems

Applicable Specifications
Parker specifications – Working pressure and outer diameter to EN 856 – 4 SP

Hose Construction
Tube: Nitrile (NBR)
Reinforcement: Three braided layers of highly tensile steel wire
Cover: Fire retardant synthetic rubber

Recommended Fluids
Hydraulic fluids based on petroleum or water-glycol, lubricant oils, air and water. For air and gas applications at pressures exceeding 1.7 MPa, the cover needs to be perforated.

For further information please contact the Engineering Department of the Hose Products Division Europe at HPDE@Parker.com

Temperature Range
-40 °C up to +100 °C
Exception: Air .................................. max. +70 °C
                Water ............................ max. +85 °C

Fitting Series
70

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Hose I.D.</th>
<th>Hose O.D.</th>
<th>max. dynamic working pressure</th>
<th>min. burst pressure</th>
<th>min. bend radius</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DN Inch</td>
<td>Size mm</td>
<td>mm</td>
<td>MPa psi</td>
<td>MPa psi</td>
<td>mm</td>
</tr>
<tr>
<td>372RH-6</td>
<td>10 3/8</td>
<td>-6 9,5</td>
<td>21,4</td>
<td>44,5 6500</td>
<td>180,0 25800</td>
<td>120</td>
</tr>
<tr>
<td>372RH-8</td>
<td>12 1/2</td>
<td>-8 12,7</td>
<td>24,6</td>
<td>41,5 6000</td>
<td>166,0 24000</td>
<td>160</td>
</tr>
<tr>
<td>372RH-10</td>
<td>16 5/8</td>
<td>-10 15,9</td>
<td>28,2</td>
<td>35,0 5000</td>
<td>140,0 20000</td>
<td>210</td>
</tr>
<tr>
<td>372RH-12</td>
<td>20 3/4</td>
<td>-12 19,1</td>
<td>32,2</td>
<td>35,0 5000</td>
<td>140,0 20000</td>
<td>260</td>
</tr>
<tr>
<td>372RH-16</td>
<td>25 1</td>
<td>-18 25,4</td>
<td>39,7</td>
<td>28,0 4000</td>
<td>112,0 16000</td>
<td>310</td>
</tr>
</tbody>
</table>

The combination of high temperature and high pressure could reduce the hose life.
681DB No-Skive 2TE Hose for European Rail Transportation

- Low-pressure hydraulics
- Pressurised-air applications (from size -6)
- Water and oil cooling circuits
- Fire retardant special rubber outer cover
681DB – No-Shive 2TE Hose
with fire-retardant cover

The fire-retardant special rubber cover of the 681DB hose contributes to increased safety in rail transportation as it minimises the release of harmful substances in the case of fire. Due to its high flexibility and small bend radii the hose is perfectly suitable for compact installation. It has proven a reliable hose in this market segment for many years and is mainly used in low-pressure hydraulic systems and water cooling circuits.

Properties
• Small bend radii
• Suitable for use with No-Shive with chromium(VI)-free surface

Certifications
• German Standard: DIN 5510-2
• French Standard: NFF16-101/102
• British Standard: BS 6853

Parker Fitting/Crimping Instructions
Nipple: 47 series
Shell: 64 series

681DB – No-Shive 2TE Hose

Primary Applications
Low-pressure hydraulic and pneumatic systems as well as water and oil cooling circuits

Applicable Specifications
EN 854-2TE

Hose Construction
Tube: Synthetic rubber
Reinforcement: Two braided layers of textile-fibre
Cover: Fire retardant synthetic rubber

Recommended Fluids
Hydraulic fluids based on petroleum or water-glycol and water-oil emulsions, lubricant oils, crude oils and fuels, air and water.

For further information please refer to the Chemical Compatibility chart in Catalogue 4400 on page Ab-16.

Temperature Range
-40 °C up to +100 °C

Exception: Air: max. +70 °C
Water: max. +85 °C

Fitting Series
Two-piece fittings (nipple series 47, shell 10064). Can only be processed on adjustable hose crimpers.

The combination of high temperature and high pressure could reduce the hose life.
Even today, rail transportation manufacturers have to consider the various national safety requirements of their European customers.

As a pan-European standard may not be expected in the foreseeable future, the nationally applicable standards will remain in force. The three most requested standards in Europe are the German, the French and the British standards.

The new Parker RH hose range meets and is certified by all three of these standards.

**German Standard DIN 5510 Part 2**
Tests the fire behaviour and fire effluents of the hose assemblies.
Test item: The smallest and largest nominal width of a specific hose type
- Inflammability class S4 (S3)
- Smoke development class SR2
- Drop-forming class ST2

**French Standard NFF-16-101/102**
Tests the fire behaviour and fire effluents of the hose cover material.
Test item: Rubber material of the hose cover
- Flame resistance class I2
  - Smoke toxicity class F3

**British Standard BS 6853**
Tests the fire behaviour and fire effluents of the hose cover material.
Test item: Rubber material of the hose cover
- Smoke behaviour
- Release of toxins meet the limit values in table 4.