Hi-Pro Ball Valve

for up to 10,000 psi/689 bar operations

Product Description

These high performance two piece bi-directional Ball Valves offer the user full cold working pressure ratings up to 10,000 psi (689 bar), giving 100% bubble tight shut off and continuous repeatable performance. The Ball Valves are suitable for the most demanding applications in the oil, gas and process control industries. All valves also meet the requirements of ANSI B31.1 for use in power plants.

By offering a true two piece design, body leakage paths are reduced to a minimum. With the added opportunity to select integral compression ends the user can eliminate the use of taper threads and thread sealant. This avoids system contamination, reduces leakage paths, installation costs, weight and space.

Specifications

- 316 Stainless steel construction
- Maximum cold working pressure rating 6,000 psi (414 bar) with P.T.F.E. seats* 
- Temperature rating PTFE seats -54°C to +204°C (-65°F to +400°F) *
- Maximum cold working pressure rating 10,000 psi (689 bar) with PEEK seats†
- Temperature rating PEEK seats -54°C to +232°C (-65°F to +450°F) *
- Cv values - 10mm, 15mm, 20mm and 25mm
* Always refer to P/T graph
† All B31.1 compliant valves are limited to a maximum working pressure of 6000psi (414 bar)

Features

- Two piece body design - minimal leakage paths
- 4:1 Pressure boundary designed safety factor
- Designed to comply with requirements of ANSI/ASME B16.34 where applicable
- Bi-directional
- PEEK and PTFE standard ball seat materials
- PHflex seats available for 25mm bore
- PTFE and Graphoil gland packings
- Bubble tight shutoff
- Floating ball principal with dynamic response seats featuring inherent self relief
- Anti blowout stem
- Integral compression ends available eliminating taper threads and thread sealants
- Low torque operation
- Quarter turn positive stop handle with ergonomically designed protective sleeve
- Full hydrostatic and low pressure air tested
- Connector thread environmentally sealed
- Anti static
- Firesafe designed to meet API 607, BS6755 Pt2 (optional)

WARNING

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any Order accepted by Parker Hannifin will be subject to our terms and conditions of sale, copy available on request.
Hi-Pro Ball Valve

for up to Class 4500 (10,000 psi/689 bar) operations (10mm bore)

Standard range part numbers 10mm bore

<table>
<thead>
<tr>
<th>Part number</th>
<th>Part number</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPBY*4FF</td>
<td>HPBY*4FFHP</td>
<td>1/4&quot; Female</td>
<td>1/4&quot; Female</td>
<td>70.0 (2.76)</td>
</tr>
<tr>
<td>HPBY*6FF</td>
<td>HPBY*6FFHP</td>
<td>3/8&quot; Female</td>
<td>3/8&quot; Female</td>
<td>71.0 (2.80)</td>
</tr>
<tr>
<td>HPBY*8FF</td>
<td>HPBY*8FFHP</td>
<td>1/2&quot; Female</td>
<td>1/2&quot; Female</td>
<td>85.0 (3.35)</td>
</tr>
<tr>
<td>HPBY*4M4F</td>
<td>HPBY*4M4FHP</td>
<td>1/4&quot; Male</td>
<td>1/4&quot; Female</td>
<td>70.0 (2.76)</td>
</tr>
<tr>
<td>HPBY*8M6F</td>
<td>HPBY*8M6FHP</td>
<td>1/2&quot; Male</td>
<td>1/2&quot; Female</td>
<td>85.0 (3.35)</td>
</tr>
</tbody>
</table>

A-LOK®

<table>
<thead>
<tr>
<th>Part number</th>
<th>Part number</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPBY*4A</td>
<td>—</td>
<td>1/4&quot; A-LOK®</td>
<td>1/4&quot; A-LOK®</td>
<td>95.0 (3.74)</td>
</tr>
<tr>
<td>HPBY*8A</td>
<td>—</td>
<td>1/2&quot; A-LOK®</td>
<td>1/2&quot; A-LOK®</td>
<td>104.7 (4.12)</td>
</tr>
<tr>
<td>HPBY*6IA</td>
<td>—</td>
<td>6mm A-LOK®</td>
<td>6mm A-LOK®</td>
<td>95.0 (3.74)</td>
</tr>
<tr>
<td>HPBY*8IA</td>
<td>—</td>
<td>8mm A-LOK®</td>
<td>8mm A-LOK®</td>
<td>96.6 (3.80)</td>
</tr>
<tr>
<td>HPBY*M10A</td>
<td>—</td>
<td>10mm A-LOK®</td>
<td>10mm A-LOK®</td>
<td>99.5 (3.92)</td>
</tr>
<tr>
<td>HPBY*M12A</td>
<td>—</td>
<td>12mm A-LOK®</td>
<td>12mm A-LOK®</td>
<td>104.7 (4.12)</td>
</tr>
</tbody>
</table>

*Insert material code - select from material matrix (B = Standard 316 Stainless Steel). For CPI™ change A to Z. “A” dimensions given for finger tight nuts. For compression ended valve pressure ratings consult tube ratings table. Combination ends are available.

Standard product specification: PTFE packing with PTFE seats, 10mm bore ball 6,000 psi (414 bar).

Standard product specification: PTFE packing with PEEK seats, 10mm bore ball 10,000 psi (689 bar).

Cold working pressures (psi/bar) in accordance with ANSI/ASME B16.34

<table>
<thead>
<tr>
<th>Material</th>
<th>Class Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>316 Stainless steel std</td>
<td>B</td>
</tr>
<tr>
<td>Alloy 400</td>
<td>D</td>
</tr>
<tr>
<td>Duplex</td>
<td>E</td>
</tr>
<tr>
<td>Super Duplex</td>
<td>F</td>
</tr>
<tr>
<td>Hasteloy</td>
<td>G</td>
</tr>
<tr>
<td>6Mo</td>
<td>K</td>
</tr>
<tr>
<td>Alloy 625</td>
<td>M</td>
</tr>
<tr>
<td>3600/248</td>
<td>6000/414</td>
</tr>
<tr>
<td>5000/345</td>
<td>9000/620</td>
</tr>
<tr>
<td>6000/414</td>
<td>10000/689</td>
</tr>
<tr>
<td>6000/414</td>
<td>10000/689</td>
</tr>
<tr>
<td>6000/414</td>
<td>10000/689</td>
</tr>
<tr>
<td>6000/414</td>
<td>10000/689</td>
</tr>
</tbody>
</table>

Available options

<table>
<thead>
<tr>
<th>Part number</th>
<th>Available options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphoil packing</td>
<td>3</td>
</tr>
<tr>
<td>PEEK seats</td>
<td>PK</td>
</tr>
<tr>
<td>Secured end connector</td>
<td>LC</td>
</tr>
<tr>
<td>Handle locking</td>
<td>HL</td>
</tr>
<tr>
<td>Spanner actuation</td>
<td>SA</td>
</tr>
<tr>
<td>Panel mounting</td>
<td>PM</td>
</tr>
<tr>
<td>Fire safe design - Graphoil packing (std)</td>
<td>FS</td>
</tr>
<tr>
<td>NACE compliant materials**</td>
<td>NC</td>
</tr>
<tr>
<td>Retro-fit handle locking kit (for site assembly)</td>
<td>HPHKIT</td>
</tr>
<tr>
<td>PFllex seats</td>
<td>PH</td>
</tr>
<tr>
<td>Base mounting holes (consult Parker)</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: Heat Code Trace (HCT) material traceability certificates available on request **Does not apply for A-LOK®/CPI™ ended valves in 316 stainless steel.
Hi-Pro Ball Valve

for up to Class 4500 (10,000 psi/689 bar) operations (15mm bore)

Standard range part numbers 15mm bore

<table>
<thead>
<tr>
<th>Part number</th>
<th>Part number</th>
<th>Inlet</th>
<th>Outlet</th>
<th>A mm (inch)</th>
<th>B mm (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPBX*8FF</td>
<td>HPBX*8FFHP</td>
<td>1/2&quot; Female</td>
<td>1/2&quot; Female</td>
<td>97.2 (3.83)</td>
<td>207.9 (8.18)</td>
</tr>
<tr>
<td>HPBX*SM8F</td>
<td>HPBX*SM8FHP</td>
<td>1/2&quot; Male</td>
<td>1/2&quot; Female</td>
<td>102.9 (4.05)</td>
<td>213.6 (8.41)</td>
</tr>
<tr>
<td>HPBX*10A</td>
<td></td>
<td>5/8&quot; A-LOK®</td>
<td>A-LOK®</td>
<td>118.0 (4.65)</td>
<td>212.6 (8.37)</td>
</tr>
<tr>
<td>HPBX*12A</td>
<td></td>
<td>3/4&quot; A-LOK®</td>
<td>3/4&quot; A-LOK®</td>
<td>121.9 (4.80)</td>
<td>214.6 (8.45)</td>
</tr>
<tr>
<td>HPBX*M16A</td>
<td></td>
<td>16mm A-LOK®</td>
<td>16mm A-LOK®</td>
<td>120.0 (4.72)</td>
<td>214.2 (8.43)</td>
</tr>
<tr>
<td>HPBX*M18A</td>
<td></td>
<td>18mm A-LOK®</td>
<td>18mm A-LOK®</td>
<td>120.0 (4.72)</td>
<td>214.2 (8.43)</td>
</tr>
<tr>
<td>HPBX*M20A</td>
<td></td>
<td>20mm A-LOK®</td>
<td>20mm A-LOK®</td>
<td>120.0 (4.72)</td>
<td>214.2 (8.43)</td>
</tr>
</tbody>
</table>

*Insert material code - select from material matrix (B = Standard 316 Stainless Steel). For CPI™ change A to Z. "A" dimensions given for finger tight nuts.

For compression ended valve pressure ratings consult tube ratings table. Combination ends are available.

Standard product specification: PTFE packing with PEEK seats, 15mm bore ball - 6,000 (414 bar) and 10,000 psi (689 bar).

Materials and options as per page 3
Hi-Pro Ball Valve

for up to Class 2500 (6,000 psi/414 bar) operations (20 & 25mm bore)

Standard range part numbers 20mm bore

<table>
<thead>
<tr>
<th>Part number</th>
<th>Part number</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1500</td>
<td>Class 2500</td>
<td>NPT</td>
<td>NPT</td>
<td></td>
</tr>
<tr>
<td>HPBW*12FFLP</td>
<td>HPBW*12FF</td>
<td>3/4 Female</td>
<td>3/4 Female</td>
<td>89.8 (3.54)</td>
</tr>
<tr>
<td>HPBW*12M12FLP</td>
<td>HPBW*12M12F</td>
<td>3/4 Male</td>
<td>3/4 Female</td>
<td>102.5 (4.04)</td>
</tr>
<tr>
<td>HPBW*14ALP</td>
<td>—</td>
<td>7/8&quot; A-LOK®</td>
<td>7/8&quot; A-LOK®</td>
<td>134.0 (5.28)</td>
</tr>
<tr>
<td>HPBW*16ALP</td>
<td>—</td>
<td>1&quot; A-LOK®</td>
<td>1&quot; A-LOK®</td>
<td>137.6 (5.42)</td>
</tr>
<tr>
<td>HPBW*M22ALP</td>
<td>—</td>
<td>22mm A-LOK®</td>
<td>22mm A-LOK®</td>
<td>133.3 (5.25)</td>
</tr>
<tr>
<td>HPBW*M25ALP</td>
<td>—</td>
<td>25mm A-LOK®</td>
<td>25mm A-LOK®</td>
<td>137.1 (5.40)</td>
</tr>
</tbody>
</table>

*Insert material code – select from material matrix (B = Standard 316 Stainless Steel). For CPI™ change A to Z. *A” dimensions given for finger tight nuts.

For compression ended valve pressure ratings consult tube ratings table. Combination ends are available.

Standard product specification: PTFE packing with PTFE seats, 20mm bore ball 3,600 psi (247 bar).

Standard product specification: PTFE packing with PEEK seats, 20mm bore ball 6,000 psi (414 bar).

Standard range part numbers 25mm bore

<table>
<thead>
<tr>
<th>Part number</th>
<th>Part number</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1500</td>
<td>Class 2500</td>
<td>NPT</td>
<td>NPT</td>
<td></td>
</tr>
<tr>
<td>HPBV*16FFLP</td>
<td>HPBV*16FF</td>
<td>1&quot; Female</td>
<td>1&quot; Female</td>
<td>128.4 (5.05)</td>
</tr>
<tr>
<td>HPBV*16M16FLP</td>
<td>HPBV*16M16F</td>
<td>1&quot; Male</td>
<td>1&quot; Female</td>
<td>132.2 (5.20)</td>
</tr>
<tr>
<td>HPBV*16ALP</td>
<td>—</td>
<td>1&quot; A-LOK®</td>
<td>1&quot; A-LOK®</td>
<td>153.2 (6.03)</td>
</tr>
<tr>
<td>HPBV*M25ALP</td>
<td>—</td>
<td>25mm A-LOK®</td>
<td>25mm A-LOK®</td>
<td>153.2 (6.03)</td>
</tr>
</tbody>
</table>

*Insert material code – select from material matrix (B = Standard 316 Stainless Steel). For CPI™ change A to Z. *A” dimensions given for finger tight nuts.

For compression ended valve pressure ratings consult tube ratings table. Combination ends are available.

Standard product specification: PTFE packing with PTFE or PEEK seats, 25mm bore ball 3,600 psi (247 bar).

PTFE packing with PHflex seats, 25mm bore ball 6,000 psi (414 bar).

Materials and options as per page 3
Hi-Pro Multi Port Gauge Valve

for up to Class 4500 (10,000 psi/689 bar) operations (10mm bore)

Standard Product Specifications

Part No. HPBYGV8: 316 Stainless Steel construction, PTFE packing, PTFE seats, 10mm bore ball, 6,000 psi (414 bar), 1/2” NPT male inlet x 3 – 1/2” NPT female outlets.

Part No. HPBYGV12: 316 Stainless Steel construction, PTFE packing, PTFE seats, 10mm bore ball, 6,000 psi (414 bar), 3/4” NPT male inlet x 3 – 1/2” NPT female outlets.

Part No. HPBYGV8HP: 316 Stainless Steel construction, PTFE packing, PEEK seats, 10mm bore ball, 10,000 psi (689 bar), 1/2” NPT male inlet x 3 – 1/2” NPT female outlets.

Part No. HPBYGV12HP: 316 Stainless Steel construction, PTFE packing, PEEK seats, 10mm bore ball, 10,000 psi (689 bar), 3/4” NPT male inlet x 3 – 1/2” NPT female outlets.

Note: To obtain optional bleed valve and/or blank plug with the gauge valve the above part number must be suffixed accordingly. If these parts are required they will be shipped loose in the box for customer assembly using their preferred thread sealant.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Part number</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Dimensions A mm (inch)</th>
<th>Dimensions B mm (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPBYGV8</td>
<td>HPBYGV8HP</td>
<td>1/2” NPT</td>
<td>3x1/2” NPT</td>
<td>116.5 (4.59)</td>
<td>188.1 (7.41)</td>
</tr>
<tr>
<td>HPBYGV12</td>
<td>HPBYGV12HP</td>
<td>3/4” NPT</td>
<td>3x1/2” NPT</td>
<td>119.5 (4.71)</td>
<td>191.1 (7.52)</td>
</tr>
</tbody>
</table>

*Insert material code - select from material matrix (B = Standard 316 Stainless Steel).

Materials and options as per page 3
Hi-Pro Ball Valve

for up to Class 4500 (10,000 psi/689 bar) operations

Part description

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>End Connector</td>
</tr>
<tr>
<td>2</td>
<td>E-seal™</td>
</tr>
<tr>
<td>3</td>
<td>Sealing washer</td>
</tr>
<tr>
<td>4</td>
<td>Seats</td>
</tr>
<tr>
<td>5</td>
<td>Body</td>
</tr>
<tr>
<td>6</td>
<td>Ball</td>
</tr>
<tr>
<td>7</td>
<td>Anti blowout stem</td>
</tr>
<tr>
<td>8</td>
<td>Thrust Seal</td>
</tr>
<tr>
<td>9</td>
<td>Gland packing</td>
</tr>
<tr>
<td>10</td>
<td>Upper gland packing</td>
</tr>
<tr>
<td>11</td>
<td>Thrust bush</td>
</tr>
<tr>
<td>12</td>
<td>Stop pin</td>
</tr>
<tr>
<td>13</td>
<td>Thrust bush</td>
</tr>
<tr>
<td>14</td>
<td>Lock nut</td>
</tr>
<tr>
<td>15</td>
<td>Locking dome nut</td>
</tr>
<tr>
<td>16</td>
<td>Handle</td>
</tr>
<tr>
<td>17</td>
<td>Handle grip</td>
</tr>
</tbody>
</table>

Handle locking (padlock not supplied)

Secured end connector (double pin)

Spanner actuation

Panel mounting (c/w nuts & bolts)
Europe, Middle East, Africa

AE – United Arab Emirates, Dubai
Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener Neustadt
Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BG – Bulgaria, Sofia
Tel: +359 2 980 1344
parker.bulgaria@parker.com

BY – Belarus, Minsk
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

CH – Switzerland, Etoy
Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budaörs
Tel: +36 23 885 470
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IL – Israel
Tel: +972 02 45 19 21
parker.israel@parker.com

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty
Tel: +7 7273 561 000
parker.easteurope@parker.com

NL – The Netherlands, Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Asker
Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Lisbon
Tel: +351 21 252 1382
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica
Tel: +421 248 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev
Tel: +38 (0)222 573 24 00
parker.poland@parker.com

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

US – USA, Cleveland
Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

CN – China, Shanghai
Tel: +86 21 2899 5000

HK – Hong Kong
Tel: +852 2428 8008

IN – India, Mumbai
Tel: +91 22 6513 7081-85

JP – Japan, Tokyo
Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul
Tel: +82 2 559 0400

MY – Malaysia, Shah Alam
Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

SG – Singapore
Tel: +65 6887 6300

TH – Thailand, Bangkok
Tel: +662 186 7000

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos Campos
Tel: +55 800 727 5374

CL – Chile, Santiago
Tel: +56 2 623 1216

MX – Mexico, Toluca
Tel: +52 72 2275 4200

© 2017 Parker Hannifin Corporation. All rights reserved.