

B

## Introduction

Parker manually, pneumatically, and electrically actuated two-way B Series Ball Valves provide quick 1/4 turn on-off control of fluids utilized in process and instrumentation applications. A broad selection of valve body, seat, and seal materials provide a wide range of pressures and temperatures at which the valve may be used.

## Features

- ▶ Free floating ball design provides seat wear compensation.
- ▶ Available in 316 stainless steel and brass construction. Monel® Alloy 400 and Hastelloy® C-276 construction available upon request.
- ▶ Micro-finished ball provides a positive seal.
- ▶ Straight through flow path for minimum pressure drop.
- ▶ Bi-directional flow.
- ▶ Wide variety of US Customary and SI ports.
- ▶ 90° actuation.
- ▶ Panel mountable.
- ▶ Adjustable PTFE stem seal can be maintained in-line.
- ▶ Handle indicates flow direction.
- ▶ Low operating torques.
- ▶ Positive handle stops.
- ▶ Color coded handles.
- ▶ Optional pneumatic and electric actuation.
- ▶ Optional live-loaded PTFE stem seals.
- ▶ Optional non-adjustable O-ring stem seals.
- ▶ Optional upstream and downstream drain models.
- ▶ Optional stainless steel and extended handles.

## Specifications

### Pressure Ratings:

Material	Pressure Rating	with PTFE Seats
316 Stainless Steel	6000 psig (414 bar)*	1500 psig (103 bar)
Brass	3000 psig (207 bar)	1500 psig (103 bar)
Monel® Alloy 400	3000 psig (207 bar)	1500 psig (103 bar)
Hastelloy® C-276	3000 psig (207 bar)	1500 psig (103 bar)

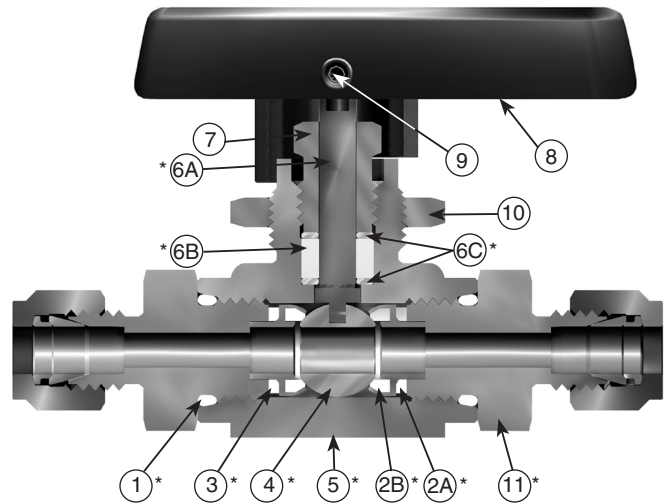
\* B6 Series: 6000 psig rating or 4400 psig (303 bar) CWP  
 B8 Series: 6000 psig rating or 4000 psig (276 bar) CWP

### Pressure Rating and Tubing Selection

For working pressures of A-LOK® and CPI™ tube connections, please see the Instrument Tubing Selection Guide (Bulletin 4200-TS), found in the Technical Section of the Parker Instrumentation Process Control Binder, or the Parker Instrument Fitting Installation Manual (Bulletin 4200-B4).

For working pressures of valves with external or internal pipe threads, please see Catalog 4260, Instrumentation Pipe Fittings.

## Materials of Construction



Model Shown: 6A-B6LJ-SSP

## Materials of Construction

Item #	Part Description	Stainless Steel	Brass
*1	Connector O-Ring	PTFE**	
*2A	Seat Retainer	ASTM A 276 Type 316	ASTM B 16 Alloy C36000
*2B	Seat	PTFE, PCTFE, PEEK	
*3	Retainer Seal	PTFE**	
*4	Ball	316 Stainless Steel	
*5	Body	ASTM A 351 Grade CF3M	ASTM B 283 Alloy C37700
*6A	Stem	ASTM A 276 Type 316	
*6B	Stem Seal	PTFE**	
*6C	Stem Washer	316 Stainless Steel	
7	Packing Nut	ASTM A 479 Type 316	ASTM B 453 Alloy C34000
8	Handle	Nylon 6/6	
9	Handle Set Screw	Stainless Steel	
10	Panel Nut	316 Stainless Steel	
*11	End Connector	ASTM A 479 Type 316	ASTM B 16 Alloy C36000

\* Wetted Parts.

\*\* Optional stem seal and body seal materials are described in the How to Order section.

Lubrication: Perfluorinated Polyether.

Hastelloy® is a registered trademark of Haynes International.  
 Monel® Alloy 400 is a registered trademark of Special Metals Corporation.



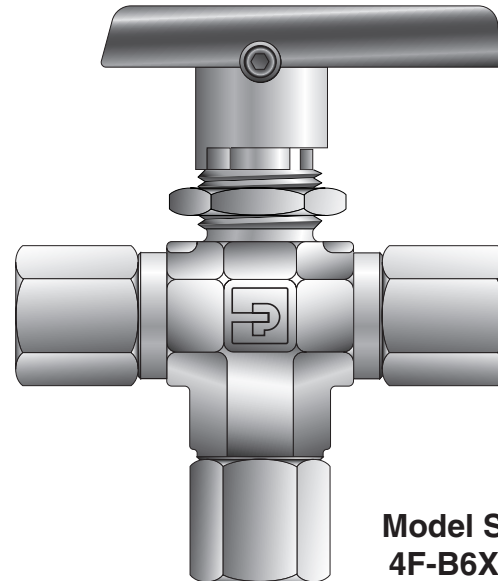
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## Introduction

Parker manually, pneumatically, and electrically actuated three-way B Series Ball Valves may be used as diverting or selecting valves for fluids utilized in process and instrumentation applications. The standard three-way diverter valve is designed to accept media through the bottom port and direct it out of two outlet ports. When equipped with spring-loaded seats, the three-way valve may be used as a selector valve, alternately accepting media from either of two inlet sources (side ports) and directing it through a single outlet (bottom port).

## Features

- ▶ Available in 316 stainless steel and brass construction. Monel® Alloy 400 and Hastelloy® C-276 construction available for Diverter Valves upon request.
- ▶ Micro-finished ball provides a positive seal.
- ▶ Wide variety of US Customary and SI ports.
- ▶ 180 degree actuation.
- ▶ Panel mountable.
- ▶ Adjustable PTFE stem seal can be maintained in-line.
- ▶ Handle indicates flow direction.
- ▶ Low operating torques.
- ▶ Positive handle stops.
- ▶ Color coded handles.
- ▶ Optional pneumatic and electric actuation.
- ▶ Optional live-loaded PTFE stem seals.
- ▶ Optional non-adjustable O-ring stem seals.
- ▶ Optional stainless steel and extended handles.



**Model Shown:  
4F-B6XJ2-BP**

## Diverter Valve Specifications

Pressure Ratings with bottom port as inlet:

Material	Pressure Rating	with PTFE Seats
316 Stainless Steel	6000 psig (414 bar)*	1500 psig (103 bar)
Brass	3000 psig (207 bar)	1500 psig (103 bar)
Monel® Alloy 400	3000 psig (207 bar)	1500 psig (103 bar)
Hastelloy® C-276	4000 psig (276 bar)	1500 psig (103 bar)

\* B6 Series: 6000 psig rating or 4400 psig (303 bar) CWP  
B8 Series: 6000 psig rating or 4000 psig (276 bar) CWP

### Pressure Rating and Tubing Selection

For working pressures of A-LOK® and CPI™ tube connections,

**Pressure Rating with side ports as inlet:**

150 psig (10 bar)

## Selector Valve Specifications

(Spring Loaded – B6 and B8 models only)

**Pressure Rating with bottom port as inlet:**

316 Stainless Steel..... 6000 psig (414 bar) CWP\*  
Brass .....3000 psig (207 bar) CWP

**Pressure Rating with side ports as inlet:**

316 Stainless Steel and Brass.....3000 psig (207 bar) CWP

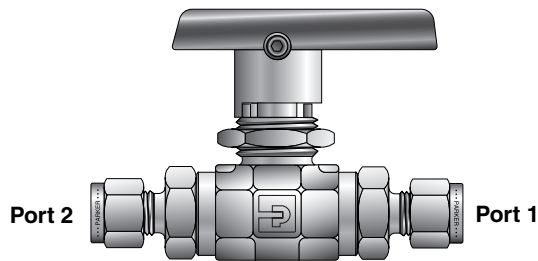
### Pressure Rating and Tubing Selection

For working pressures of A-LOK® and CPI™ tube connections, please see the Instrument Tubing Selection Guide (Bulletin 4200-TS), found in the Technical Section of the Parker Instrumentation Process Control Binder, or the Parker Instrument Fitting Installation Manual (Bulletin 4200-B4).

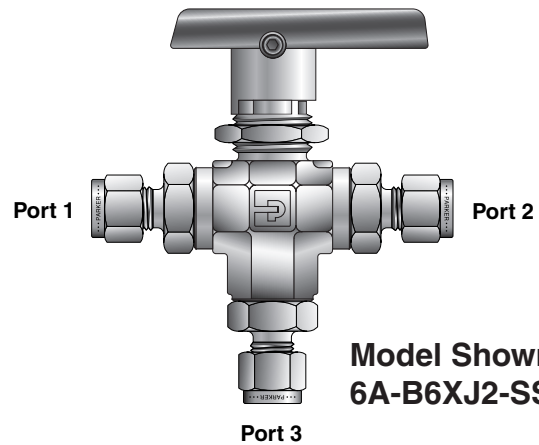
For working pressures of valves with external or internal pipe threads, please see Catalog 4260, Instrumentation Pipe Fittings.

## How to Order

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Model Shown: 6A-B6LJ2-SSP



Model Shown: 6A-B6XJ2-SSP

Ports 1, 2, and 3			Valve Series	Seat Material	Seal Material	Body Material				
<b>1A</b>	1/16" A-LOK®	<b>B6L</b> <b>B6X</b>	<b>B2L</b> <b>B2X</b>	<b>J</b> PTFE <b>J2</b> PCTFE	<b>(Blank)</b> PTFE <b>V</b> Fluorocarbon Rubber <b>EPR</b> Ethylene Propylene Rubber <b>BN</b> Nitrile Rubber <b>KZ</b> Highly Fluorinated Fluorocarbon Rubber <b>LT</b> Live-Loaded PTFE Packing with PTFE Seals <b>VLT</b> Live-Loaded PTFE Packing with Fluorocarbon Rubber Seals <b>EPRLT</b> Live-Loaded PTFE Packing with Ethylene Propylene Rubber Seals <b>BNLT</b> Live-Loaded PTFE Packing with Nitrile Rubber Seals <b>KZLT</b> Live-Loaded PTFE Packing with Highly Fluorinated Fluorocarbon Rubber Seals	<b>SSP</b> 316 Stainless Steel <b>BP</b> Brass <b>MP</b> Monel® Alloy 400 <b>HCP</b> Hastelloy® C-276				
<b>1Z</b>	1/16" CPI™									
<b>2A</b>	1/8" A-LOK®									
<b>2Z</b>	1/8" CPI™									
<b>2F</b>	1/8" Female NPT									
<b>2M</b>	1/8" Male NPT									
<b>4A</b>	1/4" A-LOK®									
<b>4Z</b>	1/4" CPI™									
<b>4M</b>	1/4" Male NPT									
<b>M3A</b>	3mm A-LOK									
<b>M3Z</b>	3mm CPI™									
<b>4A</b>	1/4" A-LOK®						<b>B8L</b> <b>B8X</b>	<b>J</b> PTFE <b>J2</b> PCTFE <b>S2</b> Spring-Loaded PCTFE <b>PKR</b> PTFE Lubricated PEEK <b>SPKR</b> Spring-Loaded PTFE Lubricated PEEK	<b>(Blank)</b> PTFE <b>V</b> Fluorocarbon Rubber <b>EPR</b> Ethylene Propylene Rubber <b>BN</b> Nitrile Rubber <b>KZ</b> Highly Fluorinated Fluorocarbon Rubber <b>LT</b> Live-Loaded PTFE Packing with PTFE Seals <b>VLT</b> Live-Loaded PTFE Packing with Fluorocarbon Rubber Seals <b>EPRLT</b> Live-Loaded PTFE Packing with Ethylene Propylene Rubber Seals <b>BNLT</b> Live-Loaded PTFE Packing with Nitrile Rubber Seals <b>KZLT</b> Live-Loaded PTFE Packing with Highly Fluorinated Fluorocarbon Rubber Seals	<b>SSP</b> 316 Stainless Steel <b>BP</b> Brass <b>MP</b> Monel® Alloy 400 <b>HCP</b> Hastelloy® C-276
<b>4Z</b>	1/4" CPI™									
<b>4F</b>	1/4" Female NPT									
<b>4M</b>	1/4" Male NPT									
<b>4V</b>	1/4" VacuSeal									
<b>6A</b>	3/8" A-LOK®									
<b>6Z</b>	3/8" CPI™									
<b>6M</b>	3/8" Male NPT									
<b>M6A</b>	6mm A-LOK®									
<b>M6Z</b>	6mm CPI™									
<b>8A</b>	1/2" A-LOK®	<b>B12L</b> <b>B12X</b>	<b>J</b> PTFE <b>J2</b> PCTFE <b>S2</b> Spring-Loaded PCTFE <b>PKR</b> PTFE Lubricated PEEK <b>SPKR</b> Spring-Loaded PTFE Lubricated PEEK	<b>(Blank)</b> PTFE <b>V</b> Fluorocarbon Rubber <b>EPR</b> Ethylene Propylene Rubber <b>BN</b> Nitrile Rubber <b>KZ</b> Highly Fluorinated Fluorocarbon Rubber <b>LT</b> Live-Loaded PTFE Packing with PTFE Seals <b>VLT</b> Live-Loaded PTFE Packing with Fluorocarbon Rubber Seals <b>EPRLT</b> Live-Loaded PTFE Packing with Ethylene Propylene Rubber Seals <b>BNLT</b> Live-Loaded PTFE Packing with Nitrile Rubber Seals <b>KZLT</b> Live-Loaded PTFE Packing with Highly Fluorinated Fluorocarbon Rubber Seals	<b>SSP</b> 316 Stainless Steel <b>BP</b> Brass <b>MP</b> Monel® Alloy 400 <b>HCP</b> Hastelloy® C-276					
<b>8Z</b>	1/2" CPI™									
<b>8F</b>	1/2" Female NPT									
<b>8M</b>	1/2" Male NPT									
<b>8V</b>	1/2" VacuSeal									
<b>12Z</b>	3/4" CPI™									
<b>12F</b>	3/4" Female NPT									
<b>M12A</b>	12mm A-LOK®									
<b>M12Z</b>	12mm CPI™									
<b>M16A</b>	16mm A-LOK®	<b>B16L</b> <b>B16X</b>	<b>J</b> PTFE <b>J2</b> PCTFE <b>S2</b> Spring-Loaded PCTFE <b>PKR</b> PTFE Lubricated PEEK <b>SPKR</b> Spring-Loaded PTFE Lubricated PEEK	<b>(Blank)</b> PTFE <b>V</b> Fluorocarbon Rubber <b>EPR</b> Ethylene Propylene Rubber <b>BN</b> Nitrile Rubber <b>KZ</b> Highly Fluorinated Fluorocarbon Rubber <b>LT</b> Live-Loaded PTFE Packing with PTFE Seals <b>VLT</b> Live-Loaded PTFE Packing with Fluorocarbon Rubber Seals <b>EPRLT</b> Live-Loaded PTFE Packing with Ethylene Propylene Rubber Seals <b>BNLT</b> Live-Loaded PTFE Packing with Nitrile Rubber Seals <b>KZLT</b> Live-Loaded PTFE Packing with Highly Fluorinated Fluorocarbon Rubber Seals	<b>SSP</b> 316 Stainless Steel <b>BP</b> Brass <b>MP</b> Monel® Alloy 400 <b>HCP</b> Hastelloy® C-276					
<b>M16Z</b>	16mm CPI™									

**Notes:**  
 1. Panel Mounting Nut supplied with each valve. Various port combinations are available.  
 2. See How to order.  
 3. VacuSeal is not available in Brass.  
 4. 12F (3/4" Female NPT) not panel mountable.

See examples on page 9. See pages 10 and 11 for information about How to Order Options and Maintenance Kits.



## How to Order Options

**Pneumatic Actuators:** For detailed actuator information, refer to the Pneumatic Actuators section of this catalog. For factory assembly, add the actuator part number as the suffix to the valve part number. For field installation, specify the actuator desired. The appropriate mounting hardware may be obtained by adding the valve series and actuator size to the prefix **MK-**.

**Electric Actuators:** For detailed actuator information refer to the Electric Actuators section of this catalog. For factory assembly, add the actuator part number as the suffix to the valve part number. For field installation, specify the actuator desired. The appropriate mounting hardware may be obtained by adding the valve series and actuator series to the prefix **MK-**.

**Oxygen Cleaning:** Add the suffix **-C3** to the end of the part number to receive valves cleaned and assembled for oxygen service in accordance with Parker Specification ES8003.

### Examples

2F-B2XJ2-V-SSP-61ACX-2  
61ACX-2  
MK-B2X-61

8A-B8LPKR-BN-SS-71A  
71A  
MK-B8L-70

4A-B6LJ-EPR-SSP-C3

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## How to Order Maintenance Kits

### Lock-Out Devices:

For field installation, simply substitute the correct valve series number after LD.

LD-B8L

**Metal Oval Handles: NOTE:** Not available in size 2.

B8-OVAL-SS-HANDLE-ASSY

**Colored Round Handle Kits:** Series-Handle-Color. (Example consists of a green handle and handle screw.)

B6-RD-HANDLE-GREEN

**NOTE:** Round handles are not recommended for B8 valves with PEEK seats.

**Stainless Steel Handle Kits:** Series-Handle-SS. (Example consists of a stainless steel handle and handle screw.)

B8-HANDLE-SS

**Colored Lever Handle Kits:** Series-Handle-Color. Black is standard. B = Blue, G = Green, R = Red (Example consists of a red handle and handle screw.)

B6-HANDLE-RED

### Two-way Valve Seal Kits:

**PTFE Stem Seal Kits:** Kit-Valve Series and Seat Material-Body Material.

KIT-B2LJ-SS

(Consists of one PTFE stem seal, two stem seal washers, two encapsulated PTFE ball seats, two end connector PTFE seals, one assembly mandrel, maintenance instructions.)

**Elastomeric Stem Seal Kits:** Kit-Valve Series and Seat Material-Elastomer Material-Body Material.

KIT-B2LJ2-BN-SS

(Consists of two stem seal Nitrile rubber O-rings, two PTFE back-up rings, two stem seal washers, two encapsulated PCTFE ball seats, two end connector Nitrile rubber O-ring seals, two seat retainer Nitrile rubber O-ring seals, stem glands and maintenance instructions.)

### Diverter Valve Seal Kits:

**PTFE Stem Seal Kits:** Kit-Valve Series and Seat Material-Body Material.

KIT-B6XPKR-SS

(Consists of one PTFE stem seal, two stem seal washers, two encapsulated PEEK ball seats, three end connector PTFE seals, one assembly mandrel, maintenance instructions.)

**Elastomeric Stem Seal Kits:** Kit-Valve Series and Seat Material-Elastomer-Body Material.

KIT-B6XJ-V-SS

(Consists of two stem seal fluorocarbon rubber O-rings, two PTFE back-up rings, two stem seal washers, two encapsulated PTFE ball seats, three end connector fluorocarbon rubber O-ring seals, two seat retainer fluorocarbon rubber O-ring seals, stem glands and maintenance instructions.)

### Selector Valve Seal Kits:

**PTFE Stem Seal Kits:** Kit-Valve Series and Seat Material.

KIT-B6XS2-SS

(Consists of one PTFE stem seal, two stem seal washers, two encapsulated spring-loaded PCTFE ball seats, two seat retainer fluorocarbon rubber O-rings, three end connector PTFE seals, one assembly mandrel, maintenance instructions.)

**Elastomeric Stem Seal Kits:** Kit-Valve Series and Seat Material-Elastomer.

KIT-B6XSPKR-V-SS

(Consists of two stem seal fluorocarbon rubber O-rings, two PTFE back-up rings, two stem seal washers, two encapsulated spring-loaded PEEK ball seat assemblies, three end connector fluorocarbon O-ring seals, two seat retainer fluorocarbon rubber O-rings, stem glands and maintenance instructions.)

### Live-loaded Seal Kits:

Kit-Valve Series and Seat Material-Seal Material-Body Material.

KIT-B6LJ2-BNLT-SS

(Consists of one live-loaded PTFE stem packing, two packing springs (B8 series valves have four springs), three packing washers, two PCTFE encapsulated ball seats, two Nitrile rubber end connector O-ring seals, two Nitrile rubber seat retainer O-ring seals, maintenance instructions.)

