

## 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

B

## 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.)



## Introduction

Parker High Pressure HB4 Series Ball Valves provide reliable shut-off or switching functions. The upper and lower trunnion bearings enhance the resistance of the trunnions against seizure, and increase the valve life in extreme applications. The compact and rugged design employs spring-loaded seats for high cycle life and low operating torques at pressures up to 10,000 psig (689 bar).

## Features

- ▶ PEEK trunnion bearings for longer cycle life
- ▶ Two-way and three-way designs
- ▶ Compact FNPT version for tight work areas
- ▶ Blow-out resistant two-piece ball/stem
- ▶ Full operating pressure at any port
- ▶ Low operating torque
- ▶ Manual, electric or pneumatic actuation
- ▶ Panel mountable to 3/8" (9.6mm) thickness
- ▶ No packing to adjust
- ▶ Color coded fracture resistant handles
- ▶ Handle indicates direction of flow
- ▶ Positive handle stops
- ▶ Wide variety of US customary and SI ports
- ▶ Top of stem marked to indicate flow direction
- ▶ 100% factory tested
- ▶ Compact package
- ▶ Heat code traceability

## Specifications

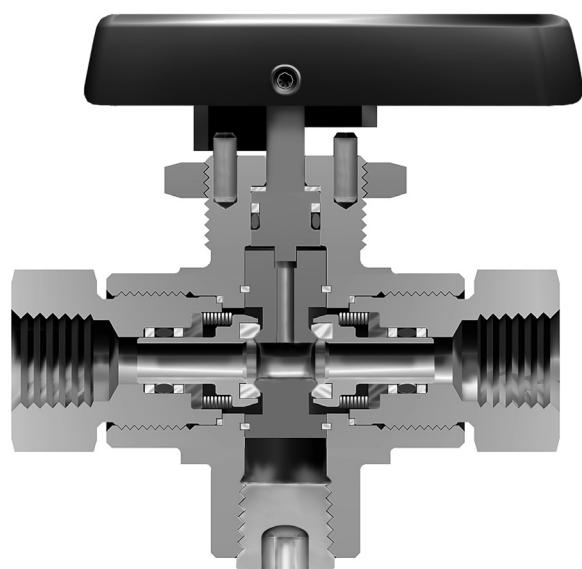
<b>Pressure Rating</b>	10,000 psig (689 bar) CWP with PEEK (PKR) Seats 6,000 psig (414 bar) CWP with PCTFE (K) Seats
<b>Temp. Rating</b>	-65°F to 400°F (-54°C to 204°C)
<b>Body Materials</b>	Stainless steel
<b>Body Config.</b>	Two-way and three-way
<b>Port Connections</b>	Tube compression (CPI™/A-LOK®) Short and long female NPT
<b>Port Size</b>	1/8" – 1/2" (6 mm to 12 mm)

## Flow Data

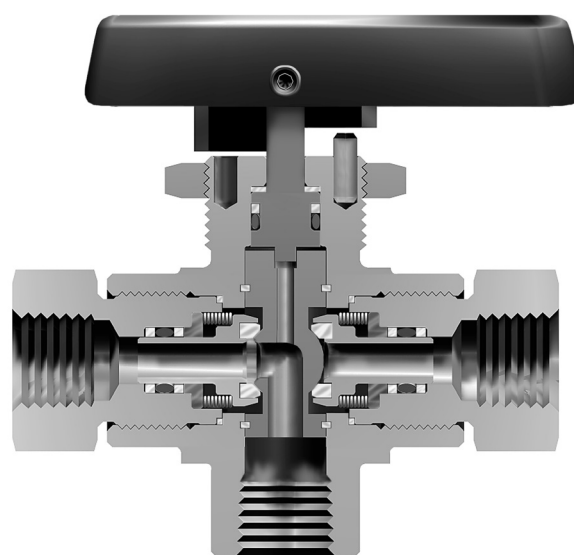
	Two-Way HB4L	Three-Way HB4X
<b>C<sub>v</sub></b>	1.02	0.62
<b>X<sub>T</sub></b>	0.42	0.71
<b>Orifice</b>	0.188" (4.8mm)	0.188" (4.8mm)

Tested in accordance with ISA S75.02. Gas flow will be choked when  $P_1 - P_2 / P_1 = x_T$ .

HB



Two-Way HB4L Design



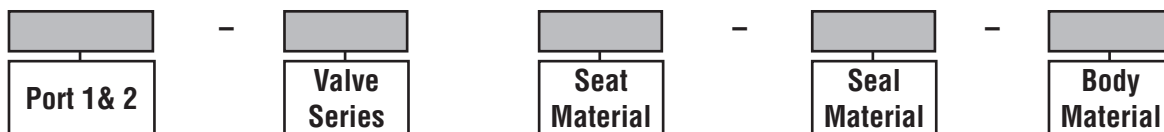
Three-Way HB4X Design

## How to Order

The correct part number is easily derived from the following example and ordering chart. The five product characteristics required are coded as shown in the chart.

Example below describes a HB4X, three-way ball valve with 1/4" CPI™ compression end connections for ports 1 and 2, PEEK seats and fluorocarbon rubber seals, stainless steel body construction, and a panel mounting nut. Port 3 is always a 1/4" Female NPT port.

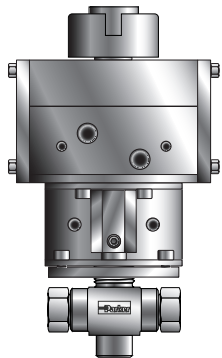
**Example 1:**                      **4Z**                      -                      **HB4XPKR**                      -                      -                      **SSP**



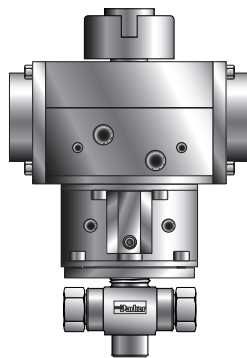
Port 1 & 2		Valve Series	Seat Material	Seal Material	Body Material
<b>2F</b>	1/8" Female NPT	<b>HB4L</b> 2-way	<b>PKR</b> PEEK – Polyetheretherketone	<b>Blank</b> Fluoro-carbon Rubber	<b>SSP</b> Stainless Steel with Panel Nut
<b>4F</b>	1/4" Female NPT	<b>HB4X</b> 3-way	<b>K</b> PCTFE – Polychloro-trifluoroethylene	<b>BN</b> Nitrile Rubber	
<b>4FL</b>	1/4" Female NPT (Long)			<b>EPR</b> Ethylene Propylene Rubber	
<b>4A</b>	1/4" A-LOK® Compression				
<b>4Z</b>	1/4" CPI™ Compression				
<b>4MP7</b>	1/4" MPI™ Compression				
<b>6A</b>	3/8" A-LOK® Compression				
<b>6Z</b>	3/8" CPI™ Compression				
<b>6MP7</b>	3/8" MPI™ Compression				
<b>8A</b>	1/2" A-LOK® Compression				
<b>8Z</b>	1/2" CPI™ Compression				
<b>M6A</b>	6 mm A-LOK® Compression				
<b>M6Z</b>	6 mm CPI™ Compression				
<b>M8A</b>	8 mm A-LOK® Compression				
<b>M8Z</b>	8 mm CPI™ Compression				
<b>M10A</b>	10 mm A-LOK® Compression				
<b>M10Z</b>	10 mm CPI™ Compression				
<b>M12A</b>	12 mm A-LOK® Compression				
<b>M12Z</b>	12 mm CPI™ Compression				

HB

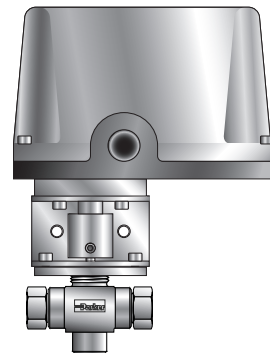
## Actuator Options



**Double Acting (61AD)  
Pneumatic Actuator**



**Spring Return  
(61AC & AO)  
Pneumatic Actuator**



**70, 80 & 90 Series  
Electric Actuator**

## How to Order Options

**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.

**Example:** 4A-HB4LPKR-EPR-SSP-**C3**

**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.

**Example:** 4FL-HB4XK-SSP-**61ACX-2**

For field installation, specify the actuator desired. **Example:** **61ACX-2**

The appropriate mounting hardware may be obtained by adding the valve series and actuator size to the prefix **MK-**. **Example:** **MK-HB4X-61**

**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.

**Example:** 6A-HB4XPKR-SSP-**71XA**

For field installation, specify the actuator desired **Example:** **71XA**

The appropriate mounting hardware may be obtained by adding the valve series and actuator series to the prefix **MK-**. **Example:** **MK-HB4X-70**

## How to Order Maintenance Kits

### Lock-Out Devices

For field installation, simply substitute the correct valve series number after LD. **Example:** **LD-HB4L**

**Handle Kits:** HB4-Handle-Color (**Example:** HB4-HANDLE-RED) – Consists of a red handle and handle screw.

**Two-way Seal Kits:** KIT-HB4LPKR-SS or KIT-HB4LK-SS – Consists of a two-way trunnion, springs, stem washers, stem seal, back-up ring, end connector seals, seat springs, seat retainer seals, seat retainer back-up rings, and seat assemblies.

**Three-way Seal Kits:** KIT-HB4XPKR-SS or KIT-HB4XK-SS – Consists of a three-way trunnion, springs, stem washers and stem seal, back-up ring, end connector seals, seat springs, seat retainer seals, seat retainer back-up rings, and seat assemblies.

HB