

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)

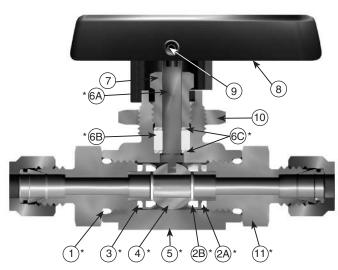
^{*} B6 Series: 6000 psig rating or 4400 psig (303 bar) CWP B8 Series: 6000 psig rating or 4000 psig (276 bar) CWP

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	ASTM B 16		
ZA	Seat netaillet	Type 316	Alloy C36000		
*2B	Seat	PTFE, PCTFE	, PEEK		
*3	Retainer Seal	PTFE**	ŧ .		
*4	Ball	316 Stainless	s Steel		
*5	Pody	ASTM A 351	ASTM B 283		
5	Body	Grade CF3M	Alloy C37700		
*6A	Stem	ASTM A 276 T	ype 316		
*6B	Stem Seal	PTFE**	ŧ .		
*6C	Stem Washer	316 Stainless	s Steel		
7	Packing Nut	ASTM A 479	ASTM B 453		
1	racking Nut	Type 316	Alloy C34000		
8	Handle	Nylon 6/	/6		
9	Handle Set Screw	Stainless S	Steel		
10	Panel Nut	Panel Nut 316 Stainles			
*11	End Connector	ASTM A 479	ASTM B 16		
	Liiu Guillegiul	Type 316	Alloy C36000		

Wetted Parts.

Hastelloy® is a registered trademark of Haynes International.

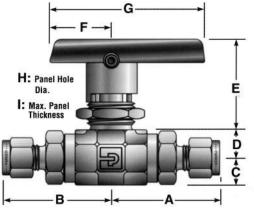
Monel® Alloy 400 is a registered trademark of Special Metals Corporation.



^{**} Optional stem seal and body seal materials are described in the How to Order section. Lubrication: Perfluorinated Polyether.

Two-Way B Series Ball Valves

Dimensions & Flow Data



Model Shown: 4A-B6LJ-SSP

			Flow	Data			Dimensions								
Port	Basic	Ori	fice			End Connections	Inches (mm)								
Size	Part #	Inch	mm	Cv	X _T *	Port 1 Port 2	A†	B†	С	D	E	F	G	Н	1
1A		0.052	1.3	0.06	0.45	1/16" A-LOK®	1.30	1.30							
1Z 2A		0.002	1.0	0.00	0.10	1/16" CPI™ 1/8" A-LOK®	(33.0)	(33.0)	ł						
2Z		0.093	2.4	0.21	0.47	1/8" CPI™	(34.5)	(34.5)							
2F	ĺ	0.165	4.2	0.93	0.43	1/8" Female NPT	1.07	1.07	1						
		0.100	12	0.50	0.10	170 101114101411	(27.2)	(27.2)	0.33	0.33	0.94	0.75	1.88	0.58	0.13
2M	B2L	0.165	4.2	0.93	0.43	1/8" Male NPT	(30.0)	(30.0)	(8.4)	(8.4)	(23.9)	(19.1)	(47.8)	(14.7)	(3.3)
4A		0.165	4.2	0.93	0.43	1/4" A-LOK®	1.48	1.48	1	` ′	` ′		` ′	, ,	` ′
4Z		0.100		-		1/4" CPI™	(37.6)	(37.6)	-						
4M		0.165	4.2	0.93	0.43	1/4" Male NPT	(34.3)	(34.3)							
M3A		0.086	2.2	0.18	0.44	3mm A-LOK®	1.37	1.37	1						
M3Z 4A		0.000			V	3mm CPI™ 1/4" A-LOK®	(34.8)	(34.8)		-	-				
4A 4Z		0.187	4.7	1.04	0.42	1/4" CPI™	(44.2)	1.74 (44.2)							
4F		0.250	6.4	2.34	0.29	1/4" Female NPT	1.51	1.51	İ						
		0.230	0.4	2.04	0.23	1/4 Telliale NI T	(38.4)	(38.4)	1						
4M		0.250	6.4	2.34	0.29	1/4" Male NPT	1.62 (41.1)	1.62 (41.1)							
4V		0.188	4.8	1.04	0.42	1/4" VacuSeal	1.75	1.75	1						
		0.100	4.0	1.04	0.42		(44.5)	(44.5)							
6A 6Z	B6L	0.250	6.4	2.34	0.29	3/8" A-LOK® 3/8" CPI™	1.80 (45.7)	1.80 (45.7)	0.42	0.47	1.53	1.00	2.50	0.77	0.25
6M	502	0.250	6.4	2.34	0.29	3/8" Male NPT	1.62	1.62	(10.7)	(11.9)	(38.9)	(25.4)	(63.5)	(19.6)	(6.4)
M6A		0.187	4.7	1.04	0.42	6mm A-LOK®	1.75	1.75	1						
M6Z		0.107	4.7	1.04	0.42	6mm CPI™	(44.5)	(44.5)							
M8A M8Z		0.250	6.4	2.34	0.42	8mm A-LOK® 8mm CPI™	1.78 (45.2)	1.78 (45.2)							
M10A						10mm A-LOK®	T		1						
M10Z		0.250	6.4	2.34	0.42	10mm CPI™	1.81 (46.0)	1.81 (46.0)							
6F		0.406	10.3	6.42	0.37	3/8" Female NPT	1.95	1.95		İ					
01		0.400	10.0	0.42	0.07	5/6 Terriale NFT	(49.5) 2.15	(49.5)	ļ						
8F		0.406	10.3	6.42	0.37	1/2" Female NPT	(54.6)	(54.6)							
8A		0.406	10.3	6.42	0.37	1/2" A-LOK®	2.34	2.34	1						
8Z		0.400	10.0	0.42	0.07	1/2" CPI™	(59.4)	(59.4)	4						
M8		0.406	10.3	6.42	0.37	1/2" Male NPT	2.22 (56.4)	2.22 (56.4)							
8V		0.406	10.3	6.42	0.37	1/2" VacuSeal	2.21	2.21	0.69	0.70	1.74	1.50	4.00	0.90	0.38
12A	B8L	0.100	10.0	0.12	0.07	3/4" A-LOK®	(56.1)	(56.1)	(17.5)	(17.8)	(44.2)	(38.1)	(101.6)	(22.9)	(9.7)
12Z		0.406	10.3	6.42	0.37	3/4" CPI™	(59.2)	(59.2)							
12F		0.406	10.3	6.42	0.37	3/4" Female NPT	2.25 (57.1)	2.25 (57.1)							
M12A M12Z	-	0.375	9.5	5.57	0.37	12mm A-LOK® 12mm CPI™	2.33	2.33							
M16A				 		16mm A-LOK®	(59.2)	(59.2)	†						
M16Z		0.406	10.3	6.42	0.37	16mm CPI™	(59.2)	(59.2)							
			L				1 (50.2)	(55.2)	<u> </u>						

 $^{^{\}star}$ Tested in accordance with ISA S75.02. Gas flow will be choked when P₁- P₂/ P₁= x_T.

Dimensions in inches/millimeters are for reference only, subject to change.



[†] For CPI™ and A-LOK®, dimensions are measured with nuts in the finger tight position

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.

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)

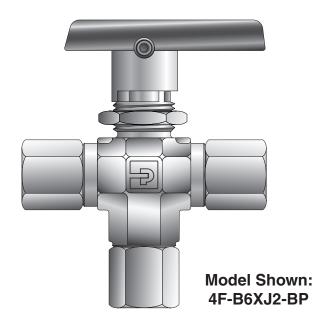
B6 Series: 6000 psig rating or 4400 psig (303 bar) CWP B8 Series: 6000 psig rating or 4000 psig (276 bar) CWP

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

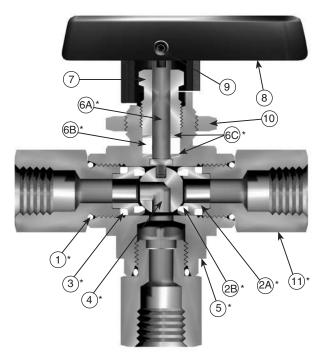
Pressure Rating and Tubing Selection

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.



Diverter Valve



Model Shown: 4F-B6XJ-SSP

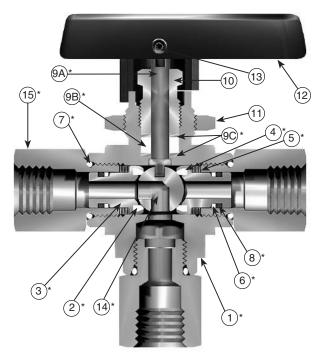
Materials of Construction

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 T	ype 316			
*6B	Stem Seal	PTFE**	r			
*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 S	Steel			
10	Panel Nut	Panel Nut 316 Stainless St				
*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.

Selector Valve



Model Shown: 4F-B6XS2-SSP

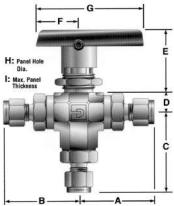
Materials of Construction

Item #	Part Description	Stainless Steel	Brass			
1	Dody	ASTM A 351	ASTM B 283			
ı	Body	Grade CF3M	Alloy C37700			
*2	Seat	PTFE, P	EEK			
*3	Seat Retainer	ASTM A 276	Type 316			
4	Spring	Stainless	Steel			
*5	Seat Retainer Washer	316 Stainles	ss Steel			
*6	Back-up Ring	PTFE				
7	Connector O-Ring	PTFE	*			
*8	Seat Retainer O-Ring	Fluorocarbon Rubber**				
*9A	Stem	ASTM A 276	Type 316			
*9B	Stem Seal	PTFE	*			
*9C	Stem Washer	316 Stainless	Steel***			
10	Dooking Nut	ASTM A 479	ASTM B 453			
10	Packing Nut	Type 316	Alloy C34000			
11	Panel Nut	316 Stainles	ss Steel			
12	Handle	Nylon 6	6/6			
13	Handle Set Screw	Stainless	Steel			
*14	Ball	316 Stainles	ss Steel			
*15	End Connector	ASTM A 479	ASTM B 16			
13	Liiu GoillieGloi	Type 316	Alloy C36000			

- * Wetted Parts.
- ** Optional stem seal and body seal materials are described in the How to Order section.
 - Lubrication: Perfluorinated Polyether.
- ***The lower stem washer material is PEEK for B8 Selector Valves. Lubrication: Perfluorinated polyether.



Dimensions & Flow Data



Model Shown: 4Z-B6XSPKR-V-SSP

						l← B →l←	——A—								
			Flow	Data							Dimension	S			
Port	Basic	Orifice				End Connections					nches (mm)			
Size	Part #	Inch	mm	Cv	X _T *	Port 1 Port 2 Port 3	A†	B†	C	D	E	F	G	Н	- 1
1A		0.052	1.3	0.06	0.56	1/16" A-LOK®	1.30	1.30	1.39						
1Z		0.002		0.00	0.00	1/16" CPI™	(33.0)	(33.0)	(35.3)						
2A 2Z	ļ	0.093	2.4	0.21	0.64	1/8" A-LOK® 1/8" CPI™	1.36 (34.5)	1.36 (34.5)	1.45 (36.8)						
	}						1.07	1.07	1.15	!					
2F		0.165	4.2	0.63	0.59	1/8" Female NPT	(27.2)	(27.2)	(29.2)						
2M	B2X	0.165	4.2	0.63	0.59	1/8" Male NPT	1.18	1.18	1.26	0.33	0.94	0.75	1.88	0.58	0.13
	B2A	0.103	7.2	0.00	0.55		(30.0)	(30.0)	(32.0)	(8.4)	(23.9)	(19.1)	(47.8)	(14.7)	(3.3)
4A 4Z	-	0.165	4.2	0.63	0.59	1/4" A-LOK® 1/4" CPI™	1.48 (37.6)	1.48 (37.6)	1.56 (39.6)						
	}		 	 	 		1.35	1.35	1.43	<u> </u> 					
4M		0.165	4.2	0.63	0.59	1/4" Male NPT	(34.3)	(34.3)	(36.3)						
МЗА]	0.086	2.2	0.18	0.63	3mm A-LOK®	1.37	1.37	1.45						
M3Z		0.000	2.2	0.10	0.00	3mm CPI™	(34.8)	(34.8)	(36.8)						
4A		0.187	4.7	0.70	0.69	1/4" A-LOK®	1.74 (44.2)	1.74 (44.2)	1.88 (47.8)						
4Z	-		 	<u> </u>	<u> </u>	1/4" CPI™	1.51	1.51	1.65	l i					
4F		0.196	5.0	0.87	0.74	1/4" Female NPT	(38.4)	(38.4)	(41.9)						
4M	1	0.196	5.0	0.87	0.74	1/4" Male NPT	1.62	1.62	1.76	İ					
4101		0.190	5.0	0.07	0.74	1/4 Wate NF1	(41.1)	(41.1)	(44.7)	ļ					
4V		0.188	4.8	0.70	0.69	1/4" VacuSeal	1.75 (35.1)	1.75 (35.1)	1.89 (37.1)						0.25
6A	-					3/8" A-LOK®	1.80	1.80	1.94	0.47	1.53	1.00	2.50	0.77	
6Z	B6X	0.196	5.0	0.87	0.74	3/8" CPI™	(45.7)	(45.7)	(49.3)	(11.9)	(38.9)	(25.4)	(63.5)	(19.6)	(6.4)
6M	1	0.196	5.0	0.87	0.74	3/8" Male NPT	1.62	1.62	1.76	(,	(33.13)	(====,	()	(,	(***)
		0.130	0.0	0.07	0.74		(41.1)	(41.1)	(44.7)						
M6A M6Z		0.187	4.7	0.70	0.69	6mm A-LOK® 6mm CPI™	1.75 (44.5)	1.75 (44.5)	1.88 (47.8)						
M8A	}					8mm A-LOK®	1.78	1.78	1.91						
M8Z	1	0.196	5.0	0.87	0.74	8mm CPI™	(45.2)	(45.2)	(48.5)						
M10A	1	0.100		0.87	0.74	10mm A-LOK®	1.81	1.81	1.95	İ					İ
M10Z]	0.196	5.0	0.87	0.74	10mm CPI™	(46.0)	(46.0)	(49.5)						
6F		0.406	10.3	3.62	0.64	3/8" Female NPT	1.95	1.95	2.29						
8A			-	-	-	1/2" A-LOK®	(49.5)	(49.5)	(58.2) 2.68	ļ					
8Z	1	0.406	10.3	3.62	0.64	1/2" CPI™	(59.4)	(59.4)	(68.1)						
8F	İ	0.406	10.2	2.60	0.64		2.15	2.15	2.49	İ					İ
δF	[0.406	10.3	3.62	0.64	1/2" Female NPT	(54.6)	(54.6)	(63.2)						
8M		0.406	10.3	3.62	0.64	1/2" Male NPT	2.22	2.22	2.59						
	l B8X						(56.4) 2.21	(56.4)	(65.8)	0.70	1.74	1.50	4.00	0.90	0.38
8V	DOV	0.406	10.3	3.62	0.64	1/2" VacuSeal	(56.1)	(56.1)	(65.0)	(17.8)	(44.2)	(38.1)	(101.6)	(22.9)	(9.7)
12A]	0.406	10.3	3.62	0.64	3/4" A-LOK®	2.33	2.33	2.68	1	,	(=3,	,	(==:0)	(=.,,
12Z		0.400	10.3	0.02	0.04	3/4" CPI™	(59.2)	(59.2)	(68.1)						
12F		0.406	10.3	6.42	0.37	3/4" Female NPT	2.25	2.25	2.59						
M12A	-					12mm A-LOK®	(57.1)	(57.1)	(65.8)						
M12Z	1	0.375	9.5	3.46	0.62	12mm CPI™	(59.2)	(59.2)	(67.8)						
M16A	1	0.406	10.2	2.60	0.64	16mm A-LOK®	2.33	2.33	2.67	1					
M16Z	1	0.406	10.3	3.62	0.64	16mm CPI™	(56.9)	(56.9)	(65.5)						ll

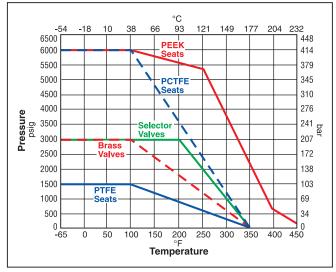
^{*} Tested in accordance with ISA S75.02. Gas flow will be choked when P_1 - P_2/P_1 = x_T .

Dimensions in inches/millimeters are for reference only, subject to change.



[†] For CPI™ and A-LOK®, dimensions are measured with nuts in the finger tight position

Pressure vs. Temperature



Note: To determine MPa, multiply bar by 0.1

Note: This Pressure versus Temperature chart reflects the maximum temperature range of indicated materials.

When combining seat and seal materials, the most restrictive temperature rating of the seats or seals becomes the limiting factor on valve temperature range.

Elastomeric stem packing and seals are recommended if the application subjects the valve to thermal cycling.

Please see pages 2 and 4 for maximum pressure ratings.

Temperature Ratings:

PTFE	-65°F	to	350°F	(-54°C	to	177	°C)
PCTFE	-65°F	to	350°F	(-54°C	to	177	°C)
PEEK	-65°F	to	450°F	(-54°C	to	232	°C)
Nitrile Rubber	-40°F	to	250°F	(-40°C	to	1219	°C)
Fluorocarbon Rubber	-15°F	to	450°F	(-26°C	to	232	°C)
Ethylene Propylene Rubber	-65°F	to	300°F	(-54°C	to	149	°C)
Highly Fluorinated							

Fluorocarbon Rubber -15°F to 200°F (-26°C to 93°C)

Flow Calculations with 1000 psig (69 bar) Inlet Pressure

Two-Way

		Pressu	Pressure Drop W				ir		
Valve	Max.	Δ	P	@ 60°F	(16°C)	@ 60°F	@ 60°F (16°C)		
Series	Cv	psig	bar	gpm	m³/hr	scfm	m³/hr		
		10	0.7	2.9	0.7	92.4	156.2		
B2L	0.93	50	3.5	6.6	1.5	200.3	338.3		
		100	6.9	9.3	2.1	272.0	458.9		
		10	0.7	7.4	1.7	231.7	391.5		
B6L	2.34	50	3.5	16.5	3.8	494.2	834.7		
		100	6.9	23.4	5.3	657.0	1107.9		
		10	0.7	20.3	4.6	637.1	1076.8		
B8L	6.42	50	3.5	45.4	10.3	1373.6	2320.3		
		100	6.9	64.2	14.6	1852.3	3124.8		

Three-Way

Valve	Max.		re Drop P		iter (16°C)	Air @ 60°F (16°C)		
Series	Cv	psig	bar	gpm	m³/hr	scfm	m³/hr	
		10	0.7	2.0	0.5	62.7	106.0	
B2X	0.63	50	3.5	4.5	1.0	137.1	231.7	
		100	6.9	6.3	1.4	188.4	317.9	
		10	0.7	2.8	0.6	86.7	146.6	
B6X	0.87	50	3.5	6.2	1.4	190.5	321.8	
		100	6.9	8.7	2.0	263.2	444.4	
		10	0.7	11.5	2.6	360.6	609.5	
B8X	3.62	50	3.5	25.6	5.9	789.7	1343.5	
		100	6.9	36.2	8.2	1087.4	1836.6	



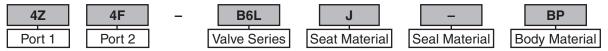
How to Order Port 2 Port 2 Port 1 **Model Shown:** Model Shown: 6A-B6LJ2-SSP 6A-B6XJ2-SSP Port 3 Valve Seat Seal **Body** Port 1 Port 2 Port 3 Material Series Material Material Valve Series Seat Material Seal Material Ports 1, 2 and 3 **Body Material** 1A B2L (Blank) PTFE 316 Stainless Steel 1/16" A-LOK® PTFE SSP B2X J2 **PCTFE** 1/16" CPI™ Fluorocarbon Rubber BP 1Z Brass 2A 1/8" A-LOK® **EPR** Ethylene Propylene Monel® Alloy 400 Rubber **2Z** 1/8" CPI™ HCP Hastelloy® C-276 BN Nitrile Rubber 2F 1/8" Female NPT ΚZ Highly Fluorinated 2M 1/8" Male NPT Fluorocarbon Rubber 1/4" A-LOK® 4A LT Live-Loaded PTFE 4Z 1/4" CPI™ Packing with PTFE 4M 1/4" Male NPT Seals МЗА 3mm A-LOK VLT Live-Loaded PTFE 3mm CPI™ M3Z Packing with Fluoro 1/4" A-LOK® B6L PTFE 4A carbon Rubber Seals 4Z 1/4" CPI™ B6X J2 **PCTFE EPRLT** Live-Loaded PTFE 4F 1/4" Female NPT S2 Spring-Loaded Packing with Ethylene 4M 1/4" Male NPT PCTFE Propylene Rubber Seals **PKR** PTFE Lubricated 41 1/4" VacuSeal PEEK BNLT Live-Loaded PTFE 6A 3/8" A-LOK® Packing with Nitrile SPKR Spring-Loaded 6Z 3/8" CPI™ Rubber Seals PTFE Lubricated 3/8" Male NPT 6M **PEEK** KZLT Live-Loaded PTFE 6mm A-LOK® M6A Packing with Highly M6Z 6mm CPI™ Flourinated Fluoro-M8A 8mm A-LOK® carbon Rubber Seals M8Z 8mm CPI™ M₁₀A 10mm A-LOK® M₁₀Z 10mm CPI™ 6F 3/8" Female NPT B₈L PTFE B8X 8A 1/2" A-LOK® J2 **PCTFE** 1/2" CPI™ 8Z **S2** Spring-Loaded PCTFE 8F 1/2" Female NPT **PKR** PTFE Lubricated 8M 1/2" Male NPT **PEEK** 8V 1/2" VacuSeal SPKR 3/4" CPI™ Spring-Loaded 12Z Notes: PTFE Lubricated 12F 3/4" Female NPT 1. Panel Mounting Nut supplied with each valve. **PEEK** M12A 12mm A-LOK® Various port combinations are available. 2. See How to order. M12Z 12mm CPI™ 3. VacuSeal is not available in Brass. M16A 16mm A-LOK® 4. 12F (3/4" Female NPT) not panel mountable. M16Z 16mm CPI™

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

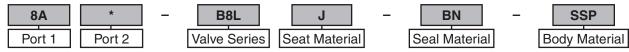


How to Order (Continued)

Examples: Two-Way Valves

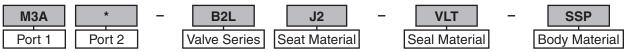


Describes a B6L ball valve with a 1/4" CPI™ end connection for port 1 and a 1/4" female NPT end connection for port 2, PTFE seats, PTFE stem and body seals, brass construction, with a panel mounting nut.



Describes a B8L ball valve with a 1/2" A-LOK® end connections for ports 1 and 2, PTFE seats, Nitrile rubber stem and body seals, stainless steel construction, with a panel mounting nut.

* Note: If ports 1 and 2 are the same, eliminate the port 2 designator.



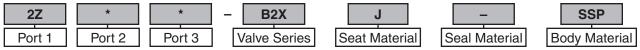
Describes a B2L ball valve with 3mm A-LOK® end connections for ports 1 and 2, PCTFE seats, fluorocarbon rubber body seals, PCTFE packing, stainless steel construction, with a panel mounting nut.

* Note: If ports 1 and 2 are the same, eliminate the port 2 designator.

Examples: Three-Way Diverter Valves



Describes a B6X ball valve with 1/4" CPI™ end connections for side ports 1 and 2, 1/4" female NPT end connection for bottom port 3, PCTFE seats, fluorocarbon rubber stem and body seals, brass construction, and a panel mounting nut.



Describes a B2X ball valve with 1/8" CPI™ end connections for ports 1, 2, and 3, PTFE seats, PTFE stem and body seals, stainless steel construction, and a panel mounting nut.

Examples: Three-Way Selector Valves



Describes a B6X ball valve with 1/4" male NPT end connections for side ports 1 and 2, 1/4" female NPT end connection for bottom port 3, spring-loaded PCTFE seats, ethylene propylene rubber stem and body seals, stainless steel construction, and a panel mounting nut.



Describes a B8X ball valve with 1/2" A-LOK® end connections for ports 1, 2, and 3, spring-loaded PCTFE seats, Nitrile rubber body seals, live loaded PTFE packing, stainless steel construction, and a panel mounting nut.

^{*} Note: If ports 1, 2, and 3 are the same, eliminate the port 2 and port 3 designators.



^{*} **Note:** If ports 1, 2, and 3 are the same, eliminate the port 2 and port 3 designators.

Options





Actuator Options



Double Acting (61AD)
Pneumatic Actuator



Spring Returns (61AC & AO)
Pneumatic Actuator



70, 80 & 90 Series Electric Actuator



O-Ring Stem Seals



Live-Loaded Stem Seals

Two-Way Valve Upstream and Downstream Drain Options

For draining upstream or downstream media on two-way valves at pressures below 150 psig (10 bar), add the suffix **–VBU** (Vented Ball Upstream) or **–VBD** (Vented Ball Downstream). Example: 4Z-B6LJ-SSP-VBU. This option is also suitable to vent the ball cavity in vacuum applications. For pressures up to 3,000 psig (207 bar), select **S2** or **SPKR** spring-loaded seats and add the suffix **–VBU** (Vented Ball Upstream) or **–VBD** (Vented Ball Downstream). Example: 4Z-B6L**S2**-SSP-**VBU**

Note: VBD and VBU are ball cavity vents only.



B Series Ball Valves

Examples

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.

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

8A-B8LPKR-BN-SS-71A

61ACX-2

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

MK-B2X-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.

For field installation, specify the actuator desired.

MK-B8L-70

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 asembled

for oxygen service in accordance with Parker Specification ES8003.

4A-B6LJ-EPR-SSP-C3

How to Order Maintenance Kits

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

Lock-Out Devices: LD-B8L

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

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

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-RD-HANDLE-GREEN

B8-OVAL-SS-HANDLE-ASSY

R6-HANDI F-RFD

Two-way Valve Seal Kits:

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

(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.)

KIT-B2LJ-SS

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

KIT-B2LJ2-BN-SS

KIT-B6XPKR-SS

KIT-B6XS2-SS

Diverter Valve Seal Kits:

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

(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.

(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),

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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.)





