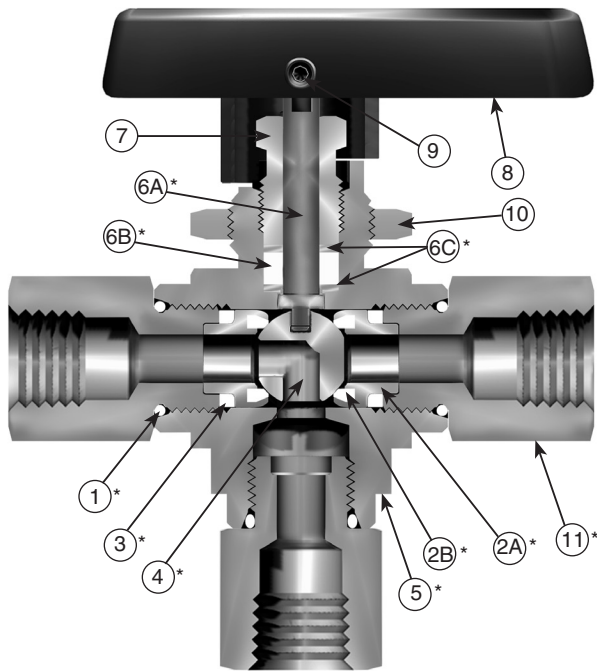
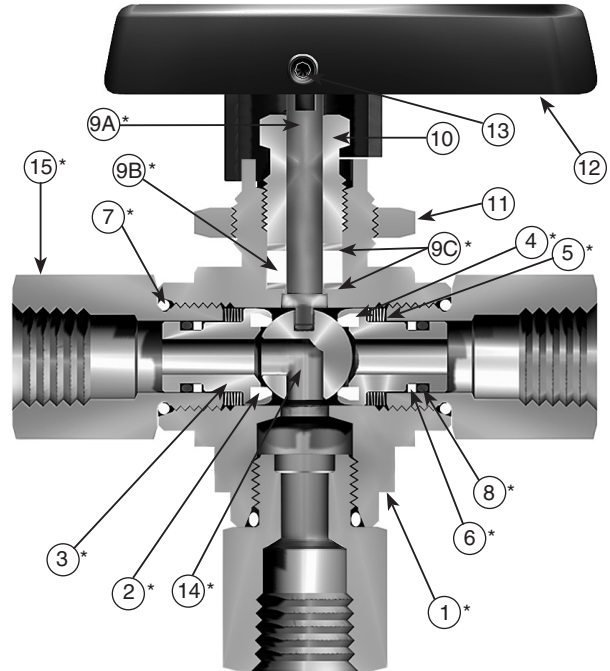


## Diverter Valve



Model Shown: 4F-B6XJ-SSP

## Selector Valve



Model Shown: 4F-B6XS2-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.

### Materials of Construction

Item #	Part Description	Stainless Steel	Brass
1	Body	ASTM A 351 Grade CF3M	ASTM B 283 Alloy C37700
*2	Seat	PTFE, PEEK	
*3	Seat Retainer	ASTM A 276 Type 316	
4	Spring	Stainless Steel	
*5	Seat Retainer Washer	316 Stainless 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	Packing Nut	ASTM A 479 Type 316	ASTM B 453 Alloy C34000
11	Panel Nut	316 Stainless Steel	
12	Handle	Nylon 6/6	
13	Handle Set Screw	Stainless Steel	
*14	Ball	316 Stainless Steel	
*15	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.

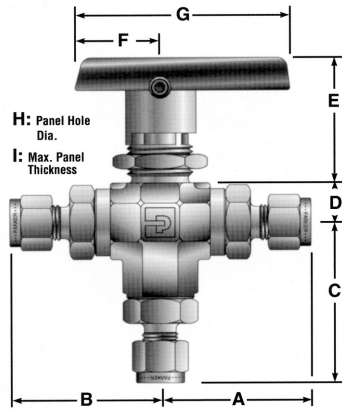
Lubrication: Perfluorinated Polyether.

\*\*\*The lower stem washer material is PEEK for B8 Selector Valves.

Lubrication: Perfluorinated polyether.

## Dimensions & Flow Data

B



**Model Shown:  
4Z-B6XSPKR-V-SSP**

Port Size	Basic Part #	Flow Data				End Connections			Dimensions Inches (mm)						
		Orifice		Cv	X <sub>T</sub> *	Port 1	Port 2	Port 3	A†	B†	C	D	E	F	G
Inch	mm														
1A	B2X	0.052	1.3	0.06	0.56	1/16" A-LOK®	1.30	1.30	1.39	0.33 (8.4)	0.94 (23.9)	0.75 (19.1)	1.88 (47.8)	0.58 (14.7)	0.13 (3.3)
1Z						1/16" CPI™	(33.0)	(33.0)	(35.3)						
2A		0.093	2.4	0.21	0.64	1/8" A-LOK®	1.36	1.36	1.45						
2Z						1/8" CPI™	(34.5)	(34.5)	(36.8)						
2F		0.165	4.2	0.63	0.59	1/8" Female NPT	1.07	1.07	1.15						
2M						1/8" Male NPT	(27.2)	(27.2)	(29.2)						
4A		0.165	4.2	0.63	0.59	1/4" A-LOK®	1.18	1.18	1.26						
4Z						1/4" CPI™	(30.0)	(30.0)	(32.0)						
4M		0.165	4.2	0.63	0.59	1/4" Male NPT	1.48	1.48	1.56						
M3A						3mm A-LOK®	(37.6)	(37.6)	(39.6)						
M3Z		0.086	2.2	0.18	0.63	3mm CPI™	1.35	1.35	1.43						
4A						1/4" A-LOK®	(34.3)	(34.3)	(36.3)						
4Z	0.187	4.7	0.70	0.69	1/4" CPI™	1.37	1.37	1.45							
4F					1/4" Female NPT	(34.8)	(34.8)	(36.8)							
4M	0.196	5.0	0.87	0.74	1/4" Male NPT	1.74	1.74	1.88							
4V					1/4" VacuSeal	(44.2)	(44.2)	(47.8)							
6A	0.196	5.0	0.87	0.74	3/8" A-LOK®	1.51	1.51	1.65							
6Z					3/8" CPI™	(38.4)	(38.4)	(41.9)							
6M	0.196	5.0	0.87	0.74	3/8" Male NPT	1.62	1.62	1.76							
M6A					6mm A-LOK®	(41.1)	(41.1)	(44.7)							
M6Z	0.187	4.7	0.70	0.69	6mm CPI™	1.75	1.75	1.89							
M8A					8mm A-LOK®	(35.1)	(35.1)	(37.1)							
M8Z	0.196	5.0	0.87	0.74	8mm CPI™	1.80	1.80	1.94							
M10A					10mm A-LOK®	(45.7)	(45.7)	(49.3)							
M10Z	0.196	5.0	0.87	0.74	10mm CPI™	1.62	1.62	1.76							
6F					3/8" Female NPT	(41.1)	(41.1)	(44.7)							
8A	0.406	10.3	3.62	0.64	1/2" A-LOK®	1.75	1.75	1.89							
8Z					1/2" CPI™	(44.5)	(44.5)	(47.8)							
8F	0.406	10.3	3.62	0.64	1/2" Female NPT	1.78	1.78	1.91							
8M					1/2" Male NPT	(45.2)	(45.2)	(48.5)							
8V	0.406	10.3	3.62	0.64	1/2" VacuSeal	1.81	1.81	1.95							
12A					3/4" A-LOK®	(46.0)	(46.0)	(49.5)							
12Z	0.406	10.3	3.62	0.64	3/4" CPI™	1.95	1.95	2.29							
12F					3/4" Female NPT	(49.5)	(49.5)	(58.2)							
M12A	0.375	9.5	3.46	0.62	12mm A-LOK®	2.22	2.22	2.59							
M12Z					12mm CPI™	(56.4)	(56.4)	(65.8)							
M16A	0.406	10.3	3.62	0.64	16mm A-LOK®	2.21	2.21	2.55							
M16Z					16mm CPI™	(56.1)	(56.1)	(65.0)							

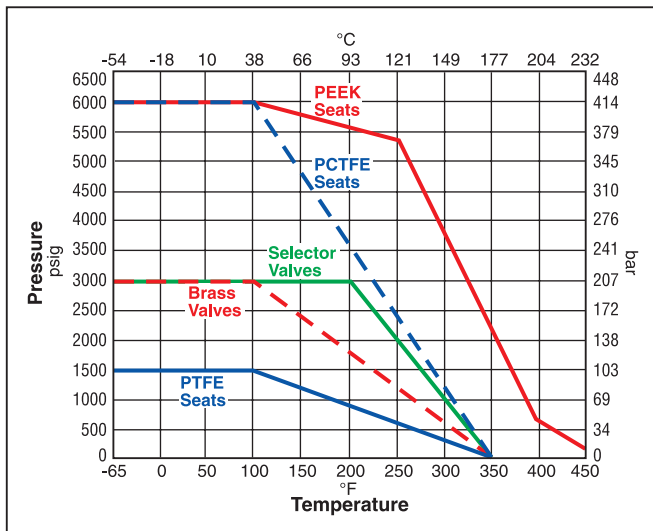
\* Tested in accordance with ISA S75.02. Gas flow will be choked when  $P_1 - P_2 / P_1 = x_T$ .

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

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



## 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 121°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

Valve Series	Max. Cv	Pressure Drop ΔP		Water @ 60°F (16°C)		Air @ 60°F (16°C)	
		psig	bar	gpm	m <sup>3</sup> /hr	scfm	m <sup>3</sup> /hr
B2L	0.93	10	0.7	2.9	0.7	92.4	156.2
		50	3.5	6.6	1.5	200.3	338.3
		100	6.9	9.3	2.1	272.0	458.9
B6L	2.34	10	0.7	7.4	1.7	231.7	391.5
		50	3.5	16.5	3.8	494.2	834.7
		100	6.9	23.4	5.3	657.0	1107.9
B8L	6.42	10	0.7	20.3	4.6	637.1	1076.8
		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 Series	Max. Cv	Pressure Drop ΔP		Water @ 60°F (16°C)		Air @ 60°F (16°C)	
		psig	bar	gpm	m <sup>3</sup> /hr	scfm	m <sup>3</sup> /hr
B2X	0.63	10	0.7	2.0	0.5	62.7	106.0
		50	3.5	4.5	1.0	137.1	231.7
		100	6.9	6.3	1.4	188.4	317.9
B6X	0.87	10	0.7	2.8	0.6	86.7	146.6
		50	3.5	6.2	1.4	190.5	321.8
		100	6.9	8.7	2.0	263.2	444.4
B8X	3.62	10	0.7	11.5	2.6	360.6	609.5
		50	3.5	25.6	5.9	789.7	1343.5
		100	6.9	36.2	8.2	1087.4	1836.6