

General Description

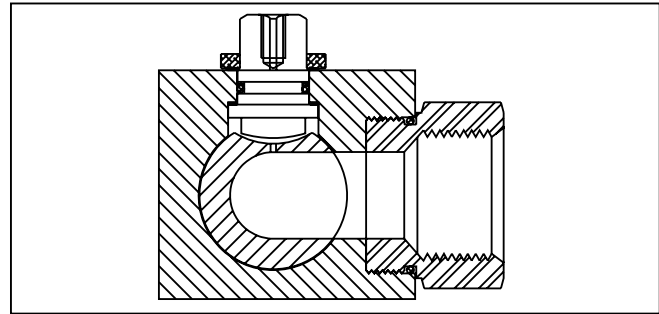
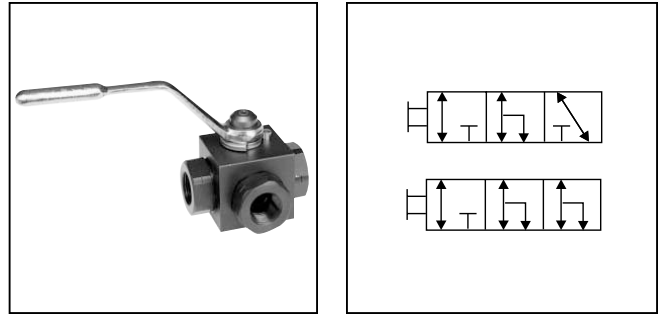
Series BV3D is a 3-way diverter. The product is rated at 207 Bar (3000 PSI) and designed to economically satisfy many 3-way applications.

Operation

The BV3D Series operates by rotating the handle 90° or 180° depending on the chosen ball pattern. There is a slight port to port overlap. Pressure is applied to Port 1.

Specifications

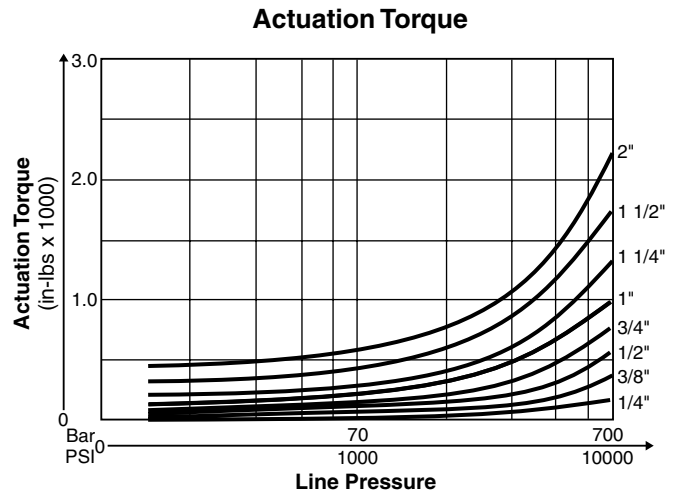
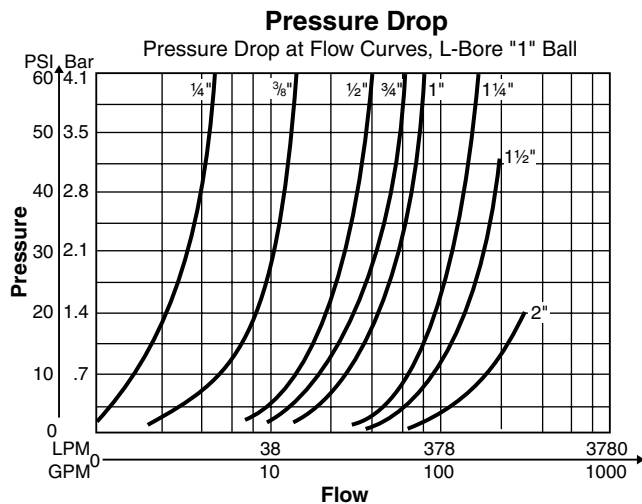
Maximum Pressure	207 Bar (3000 PSI)
Body Material	Carbon Steel, Black Oxide, Stainless Steel
Ball Material	Steel, Chrome Plated, Stainless Steel
Stem Material	Steel, Zinc Plated, Stainless Steel
Standard Handle	Steel Offset, Nickel Plated
Ball Seals	Delrin + MoS ₂
Spindle Seals	O-Ring & Backup, Nitrile
Operating Temperature	-30°C to +100°C (-22°F to +212°F)

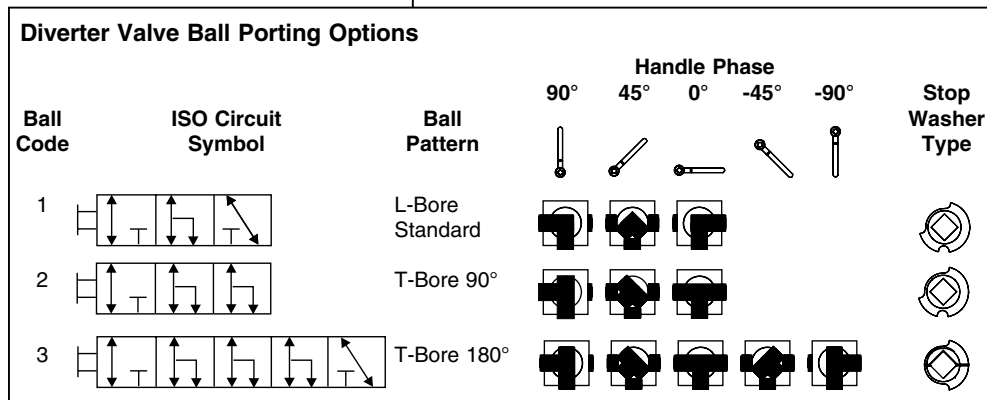
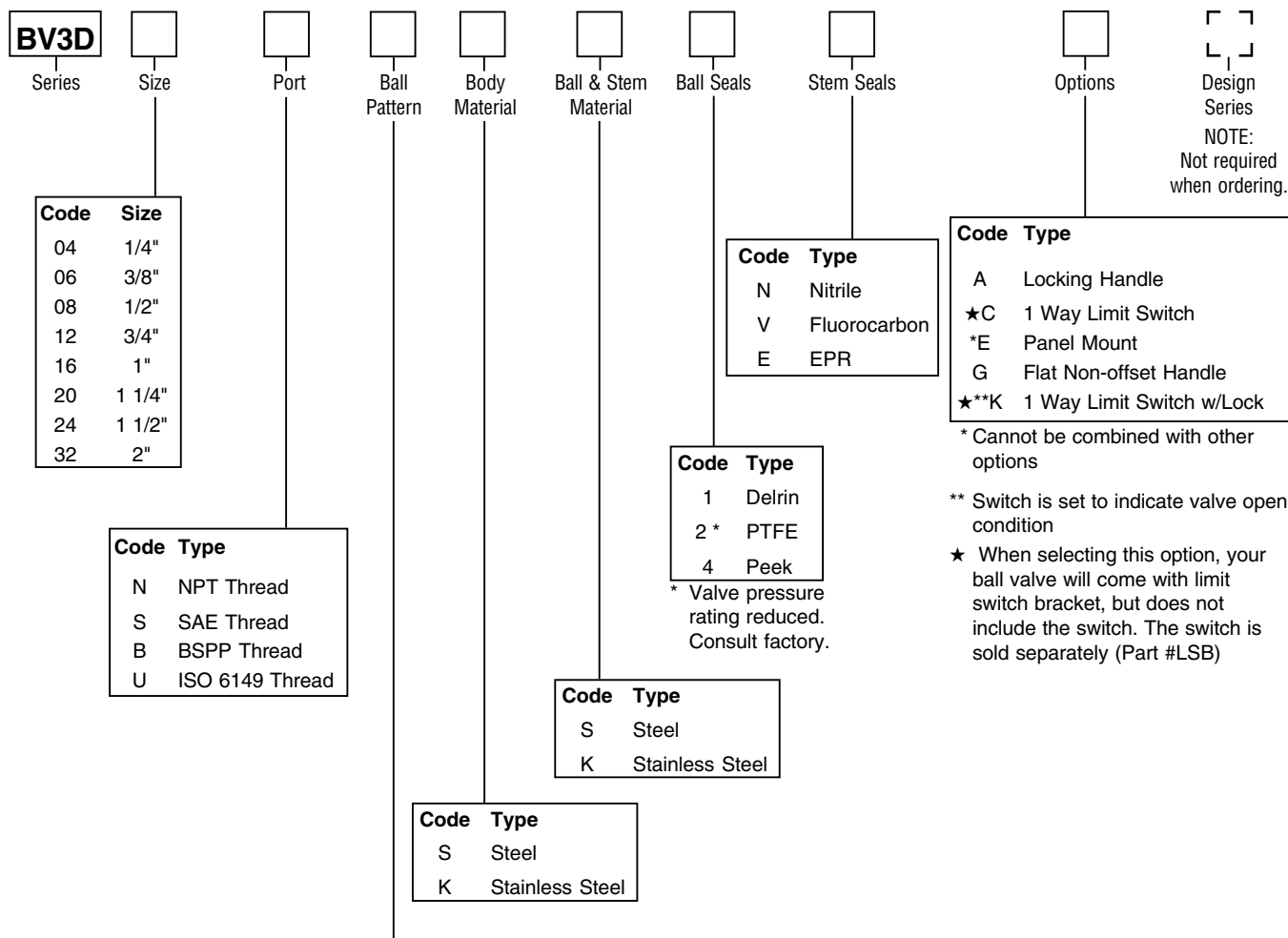


Features

- The standard L-bore ball and T-bore option allows the valve to be utilized in a variety of applications.
- Slight port overlap reduces upstream shock during shifting.
- Utilizing the unique spindle thrust bearing design reduces actuation torque.
- The BV3D can be panel mounted which allows a variety of installation options.
- Delrin seals with molybdenum disulphide (MoS₂) results in lower actuation torque and will increase high duty life cycle expectancy.

Performance Curves





Pressure is applied to Port 1.

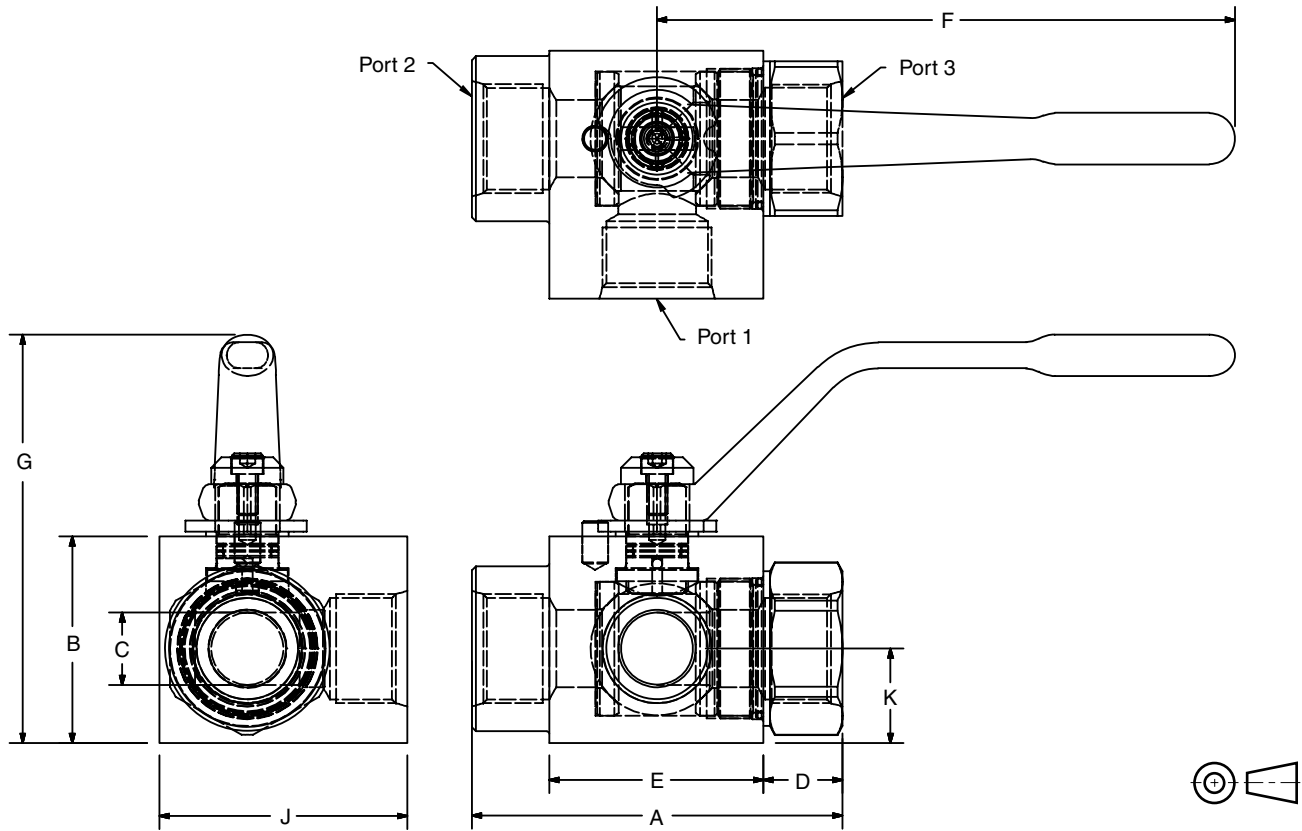
ISO 6149-1 Port Dimensions (inches)

Weights

Code	kg (lbs.)	Code	kg (lbs.)
04	0.7 (1.5)	16	3.4 (7.5)
06	0.9 (2.0)	20	4.5 (10.0)
08	1.1 (2.5)	24	6.4 (14.0)
12	2.7 (6.0)	32	9.5 (21.0)

Size	Thread
04	M12 x 1.5
06	M16 x 1.5
08	M18 x 1.5
12	M27 x 2
16	M33 x 2
20	M42 x 2
24	M48 x 2
32	M60 x 2
40	M76 x 2
48	M90 x 2
64	M114 x 2

Threaded Ports



Port 1 is the pressure port.

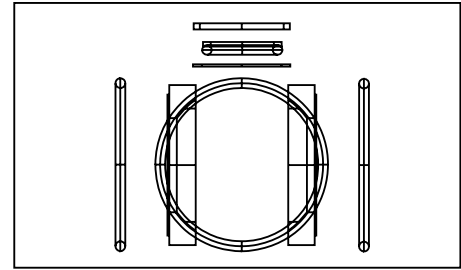
Code	Port Thread Size	Working Pressure	Dimensions mm (in)									
			A	B	C _L	C _T	D	E	F	G	J	K
NPT and SAE Thread												
04	1/4"	207 Bar (3000 PSI)	69.6 (2.74)	38.1 (1.50)	6.4 (0.25)	6.4 (0.25)	17.3 (0.68)	35.6 (1.40)	114.3 (4.50)	78.2 (3.08)	44.5 (1.75)	18.8 (0.74)
06	3/8"	207 Bar (3000 PSI)	72.6 (2.86)	44.5 (1.75)	7.9 (0.31)	7.9 (0.31)	15.5 (0.61)	42.2 (1.66)	114.3 (4.50)	84.6 (3.33)	50.8 (2.00)	22.6 (0.89)
08	1/2"	207 Bar (3000 PSI)	84.6 (3.33)	44.5 (1.75)	11.2 (0.44)	11.2 (0.44)	18.5 (0.73)	46.7 (1.85)	114.3 (4.50)	84.6 (3.33)	57.2 (2.25)	21.6 (0.85)
12	3/4"	207 Bar (3000 PSI)	96.5 (3.80)	63.5 (2.50)	17.5 (0.69)	17.5 (0.69)	17.8 (0.70)	59.7 (2.35)	177.8 (7.00)	125.7 (4.95)	63.5 (2.50)	31.8 (1.25)
16	1"	207 Bar (3000 PSI)	114.0 (4.49)	63.5 (2.50)	22.4 (0.88)	22.4 (0.88)	24.4 (0.96)	65.8 (2.59)	177.8 (7.00)	125.7 (4.95)	76.2 (3.00)	29.0 (1.14)
20	1 1/4"	207 Bar (3000 PSI)	126.2 (4.97)	88.9 (3.50)	28.7 (1.13)	28.7 (1.13)	21.6 (0.85)	79.5 (3.13)	242.6 (9.55)	167.9 (6.61)	101.6 (4.00)	43.0 (1.69)
24	1 1/2"	207 Bar (3000 PSI)	139.4 (5.49)	88.9 (3.50)	35.1 (1.38)	35.1 (1.38)	25.1 (0.99)	85.9 (3.38)	242.6 (9.55)	167.9 (6.61)	114.3 (4.50)	39.1 (1.54)
32	2"	207 Bar (3000 PSI)	160.0 (6.30)	114.3 (4.50)	44.5 (1.75)	44.5 (1.75)	33.0 (1.30)	95.3 (3.75)	242.6 (9.55)	193.3 (7.61)	127.0 (5.00)	56.1 (2.21)



Seal Kit Accessories

Ball Valve Seal Kits restore a ball valve to factory specifications, providing no erosion or metal-to-metal wear has taken place.

The Seal Kit includes all the o-rings, ball seals and thrust bearings that were originally installed at the factory. A sketch of these parts is provided at the right.



Seal Kit Ordering Information

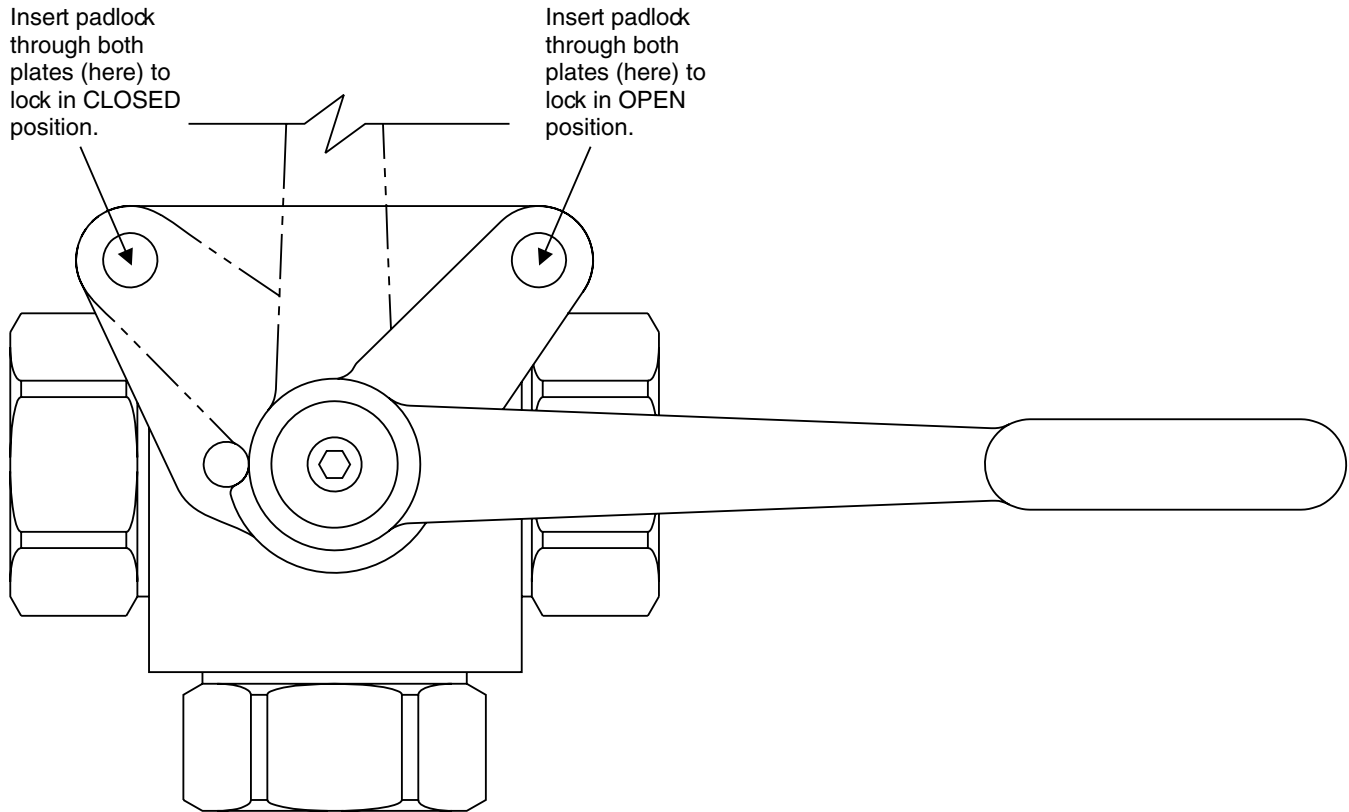
<div style="border: 1px solid black; padding: 2px; width: 40px; margin: 0 auto;">SK</div> <p>Accessory</p>	<div style="border: 1px solid black; padding: 2px; width: 60px; margin: 0 auto;">BV3D</div> <p>Series</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p>Size</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p>Port</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p>Ball Pattern</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p>Body Material</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p>Ball & Stem Material</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p>Ball Seals</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p>Stem Seals</p>	<div style="border: 1px dashed black; width: 30px; height: 30px; margin: 0 auto;"></div> <p>Design Series</p>
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<table border="1"> <thead> <tr><th>Code</th><th>Type</th></tr> </thead> <tbody> <tr><td>SK</td><td>Seal Kit</td></tr> </tbody> </table>	Code	Type	SK	Seal Kit	<table border="1"> <thead> <tr><th>Code</th><th>Size</th></tr> </thead> <tbody> <tr><td>04</td><td>1/4"</td></tr> <tr><td>06</td><td>3/8"</td></tr> <tr><td>08</td><td>1/2"</td></tr> <tr><td>12</td><td>3/4"</td></tr> <tr><td>16</td><td>1"</td></tr> <tr><td>20</td><td>1 1/4"</td></tr> <tr><td>24</td><td>1 1/2"</td></tr> <tr><td>32</td><td>2"</td></tr> </tbody> </table>	Code	Size	04	1/4"	06	3/8"	08	1/2"	12	3/4"	16	1"	20	1 1/4"	24	1 1/2"	32	2"	<table border="1"> <thead> <tr><th>Code</th><th>Type</th></tr> </thead> <tbody> <tr><td>N</td><td>NPT Thread</td></tr> <tr><td>S</td><td>SAE Thread</td></tr> <tr><td>B</td><td>BSPP Thread</td></tr> <tr><td>U</td><td>ISO 6149 Thread</td></tr> </tbody> </table>	Code	Type	N	NPT Thread	S	SAE Thread	B	BSPP Thread	U	ISO 6149 Thread	<table border="1"> <thead> <tr><th>Code</th><th>Type</th></tr> </thead> <tbody> <tr><td>S</td><td>Steel</td></tr> <tr><td>K</td><td>Stainless Steel</td></tr> </tbody> </table>	Code	Type	S	Steel	K	Stainless Steel	<table border="1"> <thead> <tr><th>Code</th><th>Type</th></tr> </thead> <tbody> <tr><td>1</td><td>Delrin</td></tr> <tr><td>2 *</td><td>PTFE</td></tr> <tr><td>4</td><td>Peek</td></tr> </tbody> </table> <p>* Valve pressure rating reduced. Consult factory.</p>	Code	Type	1	Delrin	2 *	PTFE	4	Peek	<table border="1"> <thead> <tr><th>Code</th><th>Type</th></tr> </thead> <tbody> <tr><td>N</td><td>Nitrile</td></tr> <tr><td>V</td><td>Fluorocarbon</td></tr> <tr><td>E</td><td>EPR</td></tr> </tbody> </table> <p>NOTE: Not required when ordering.</p>	Code	Type	N	Nitrile	V	Fluorocarbon	E	EPR
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Diverter Valve Ball Porting Options

Ball Code	ISO Circuit Symbol	Ball Pattern	Handle Phase					Stop Washer Type
			90°	45°	0°	-45°	-90°	
1		L-Bore Standard						
2		T-Bore 90°						
3		T-Bore 180°						

BVHPLK: Standard Series 'BVHPLK-*' kit replaces the stopwasher with a stationary and moving plate, as illustrated below. As the handle is actuated, the moving plate aligns with one of the two locking positions in the stationary plate, enabling the valve to be locked in either **fully closed** or **fully open** position.



Ordering Information

BV3D		Standard Locking
Code	Size	(Part Number)
04	1/4"	BVHPLK-1
06	3/8"	BVHPLK-1
08	1/2"	BVHPLK-1
12	3/4"	BVHPLK-2
16	1"	BVHPLK-2
20	1 1/4"	BVHPLK-3
24	1 1/2"	BVHPLK-3
32	2"	BVHPLK-3

