

General Description

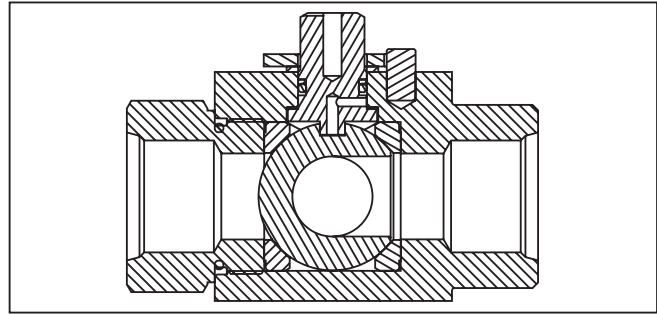
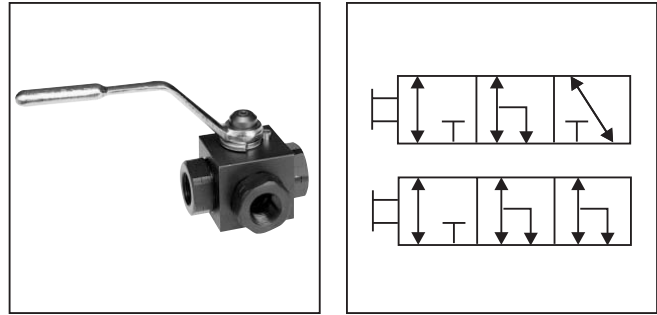
Series BV3D is a 3-way diverter. The product is rated at 207 Bar (3000 PSI) and designed to economically satisfy many 3-way applications.

Operation

Series BV3D 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

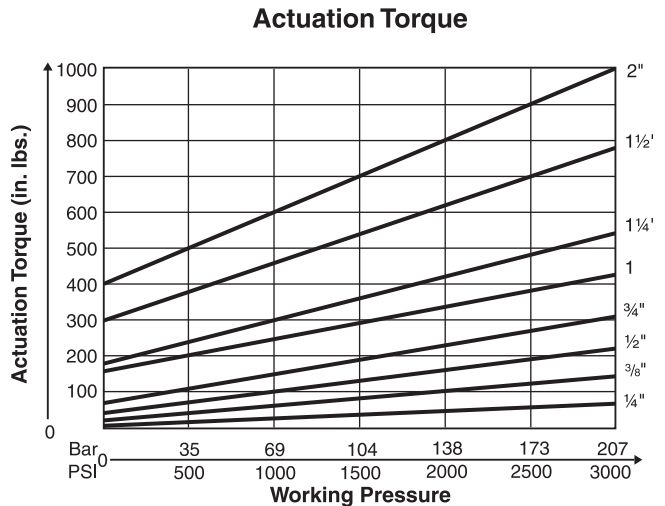
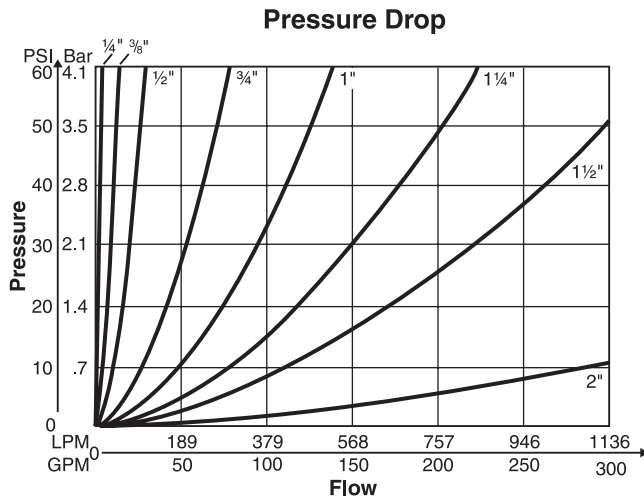
Maximum Pressure	207 Bar (3000 PSI)
Body Material	Carbon Steel, Black Oxide Stainless Steel
Ball Material	Steel, Chrome Plated
Stem Material	Steel, Zinc Plated Stainless Steel
Standard Handle	Steel Offset, Nickel Plated
Standard Ball Seals	Delrin + MoS ₂
Standard Shaft Seals	O-Ring & Backup, Nitrile
Temperature Range with Standard Seals	-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



BV3D										
Series	Size	Port	Ball Pattern	Body Material	Ball & Stem Material	Ball Seals	Shaft Seals	Options	Design Series	NOTE: Not required when ordering.

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"

Code	Description
N	NPT Thread
S	SAE Thread
B	BSPP Thread
U	ISO 6149 Thread

Code	Description
N	Nitrile
V	Fluorocarbon
E	EPR

Code	Description
1	Delrin
2 *	PTFE
4 †	Peek

* Valve pressure rating reduced. Consult factory.
 † Typically not available with Nitrile. Consult factory.

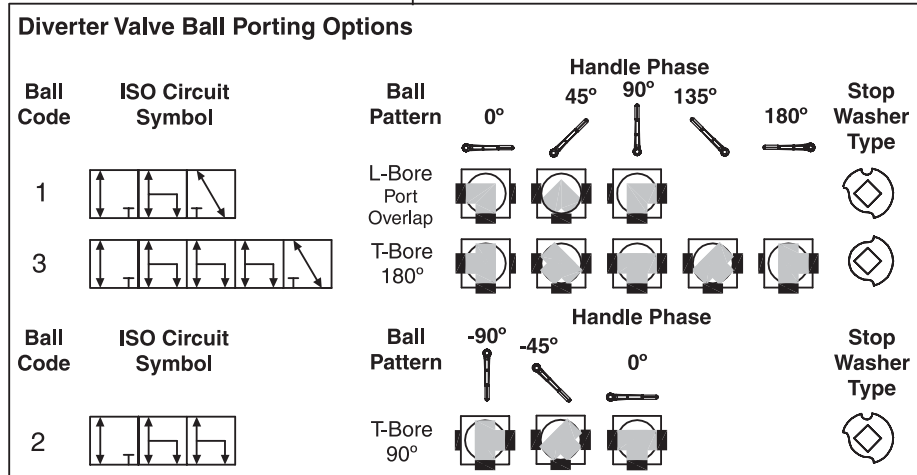
Code	Description
S	Steel
K	Stainless Steel

Code	Description
S	Steel
K	Stainless Steel

Code	Description
S	Steel
K	Stainless Steel

Code	Description
Omit	No Options
A	Locking Handle
★C	1-Way Limit Switch
*E	Panel Mount
G	Flat Non-offset Handle
★**K	1-Way Limit Switch w/Lock

* Cannot be combined with other options
 ** Switch is set to indicate valve open condition
 ★ When selecting this option, your ball valve will come with limit switch bracket, but does not include the switch. The switch is sold separately (Part #LSB)



Pressure is applied to Port 1.

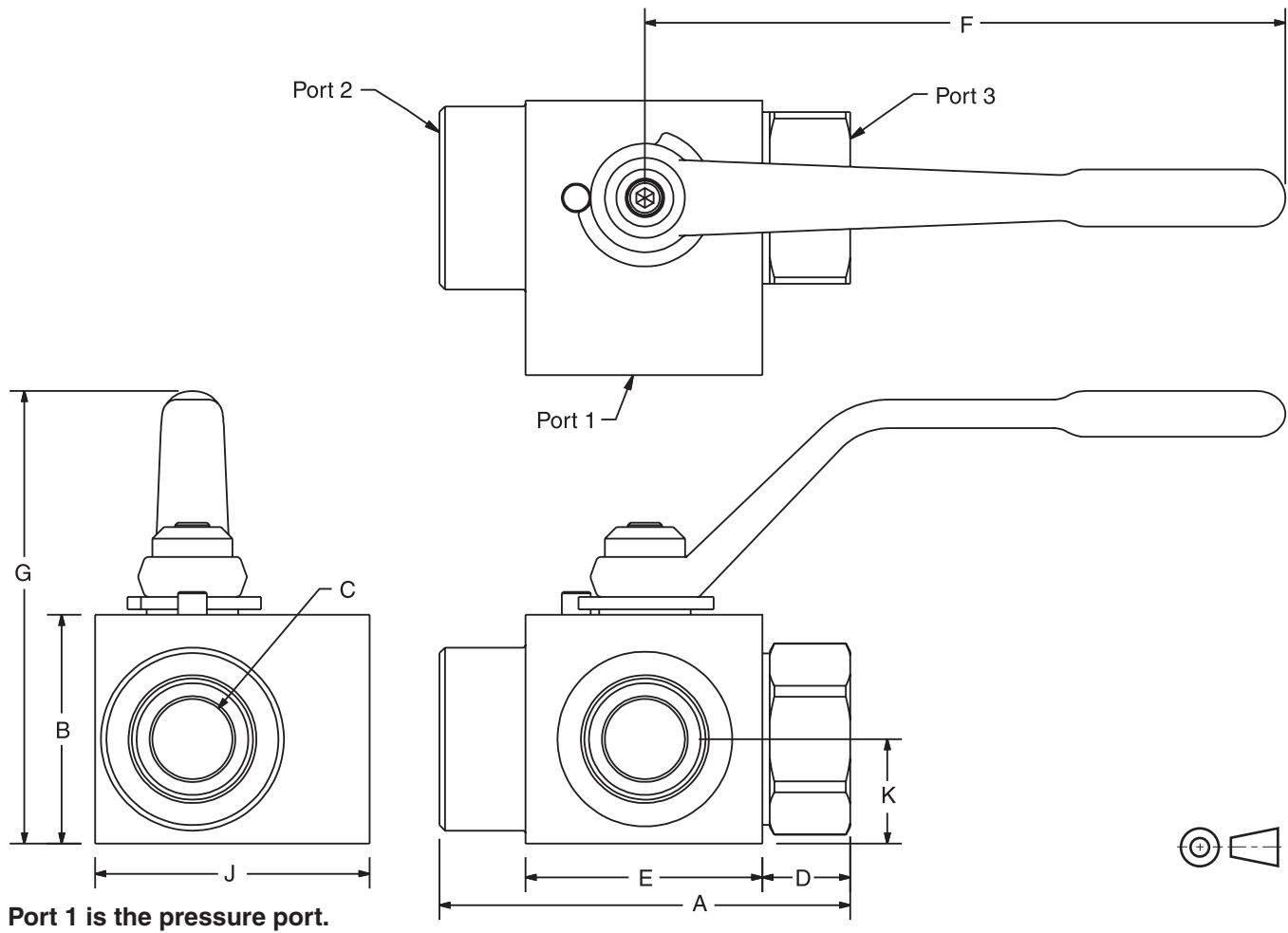
ISO 6149-1 Port Dimensions (inches)

Weights

Code	kg (lbs.)	Code	kg (lbs.)
04	0.6 (1.25)	16	2.7 (6.0)
06	0.7 (1.5)	20	6.2 (13.75)
08	0.9 (2.0)	24	6.8 (15.0)
12	1.9 (4.25)	32	11.1 (24.5)

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

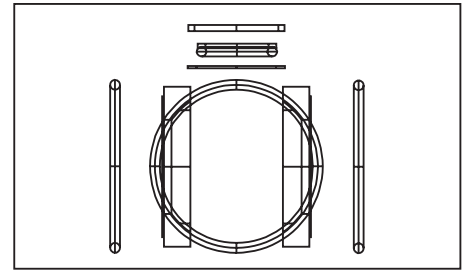
Threaded Ports



Code	Port Thread Size	Working Pressure	Dimensions mm (in)								
			A	B	C	D	E	F	G	J	K
BV3D – NPT, SAE, and BSPP											
04	1/4"	207 Bar (3000 PSI)	69.6 (2.74)	35.1 (1.38)	6.4 (0.25)	17.3 (0.68)	35.7 (1.40)	114.3 (4.50)	75.7 (2.98)	52.1 (2.05)	15.5 (0.61)
06	3/8"	207 Bar (3000 PSI)	72.9 (2.87)	38.1 (1.50)	7.9 (0.31)	15.5 (0.61)	42.4 (1.67)	114.3 (4.50)	78.7 (3.10)	53.1 (2.09)	16.3 (0.64)
08	1/2"	207 Bar (3000 PSI)	85.3 (3.36)	41.4 (1.63)	11.2 (0.44)	19.3 (0.76)	47.5 (1.87)	114.3 (4.50)	82.6 (3.25)	59.9 (2.36)	18.5 (0.73)
12	3/4"	207 Bar (3000 PSI)	97.0 (3.82)	57.2 (2.25)	17.5 (0.69)	17.5 (0.69)	61.5 (2.42)	177.8 (7.00)	120.1 (4.73)	74.2 (2.92)	25.4 (1.00)
16	1"	207 Bar (3000 PSI)	114.0 (4.49)	63.5 (2.50)	22.4 (0.88)	24.4 (0.96)	65.8 (2.59)	177.8 (7.00)	125.7 (4.95)	87.4 (3.44)	29.0 (1.14)
20	1 1/4"	207 Bar (3000 PSI)	123.2 (4.85)	88.9 (3.50)	28.7 (1.13)	21.6 (0.85)	80.5 (3.17)	250.4 (9.86)	167.9 (6.61)	120.4 (4.74)	42.9 (1.69)
24	1 1/2"	207 Bar (3000 PSI)	136.4 (5.37)	88.9 (3.50)	35.1 (1.38)	25.1 (0.99)	85.6 (3.37)	250.4 (9.86)	169.9 (6.69)	105.9 (4.17)	38.1 (1.50)
32	2"	207 Bar (3000 PSI)	166.1 (6.54)	114.3 (4.50)	44.5 (1.75)	33.0 (1.30)	100.1 (3.94)	250.4 (9.86)	193.3 (7.61)	159.5 (6.28)	56.1 (2.21)

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.



Ordering Information

SK	BV3D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessory	Series	Size	Ball Pattern	Ball Seals	Shaft Seals	Design Series	NOTE: Not required when ordering.

Code	Description
SK	Seal Kit

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"

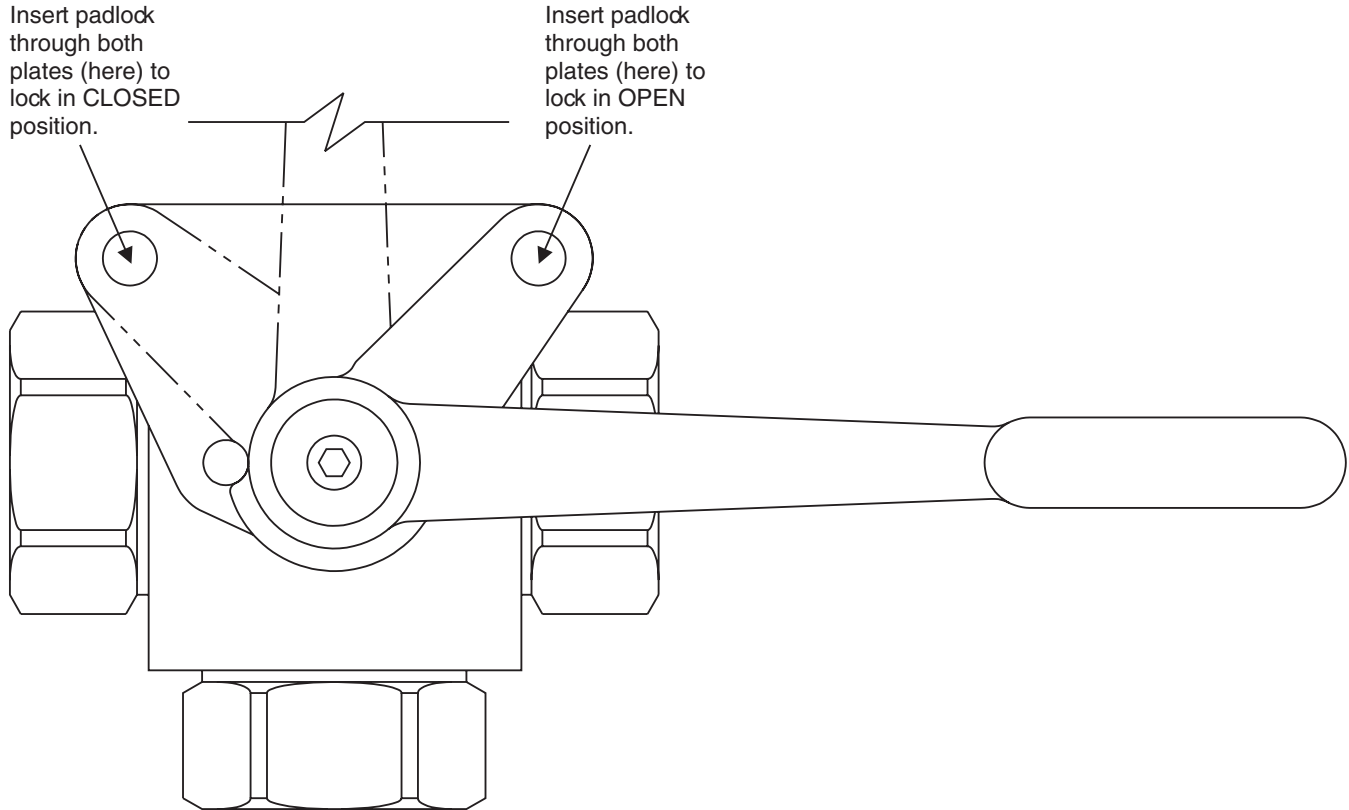
Code	Description
1	Delrin
2 *	PTFE
4 †	Peek

* Valve pressure rating reduced. Consult factory.
 † Typically not available with Nitrile. Consult factory.

Code	Description
N	Nitrile
V	Fluorocarbon
E	EPR

Ball Code	ISO Circuit Symbol	Ball Pattern
1		L-Bore Port Overlap
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 Code	Size	Standard Locking (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