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High Pressure Ball Valves

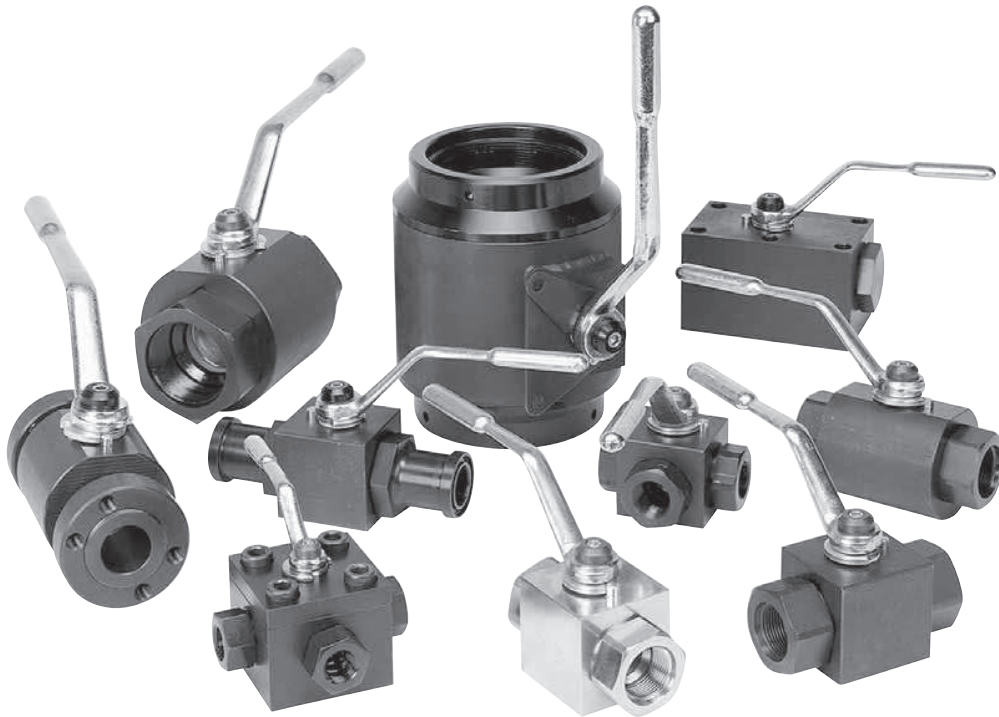
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The Parker High Pressure Ball Valve Product Line serves in applications ranging from 3000 to 10,000 PSI. Included in this section is the Series BVAL, especially designed for leak-free hydraulic suction and return line applications.



Features

- Full Ported*
- Polyamide Thrust Bearings and Ball Seal Compounds*
- Unique Rotating 4-Bolt SAE Flange Design*

- Wide Variety of Port Configurations*

Advantages

- Very low pressure drop*
- Low actuation torque and high cycle expectancy*
- Easy alignment, reducing potential leaks and installation costs*

- Applicable to most system requirements*

General Description

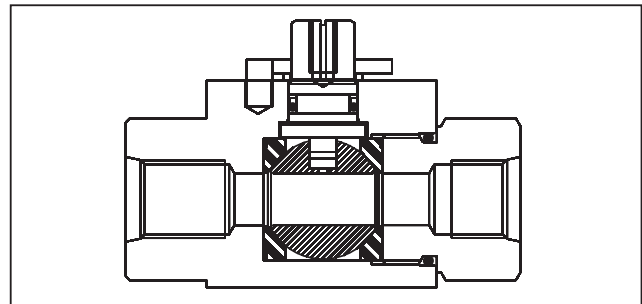
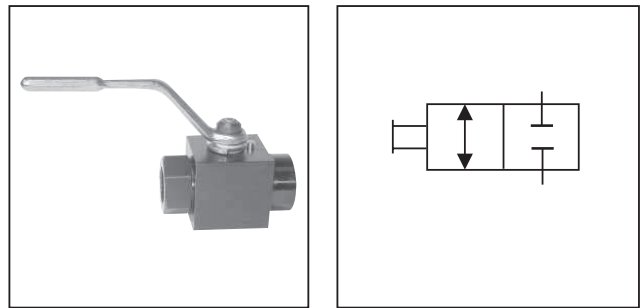
Series BVHP valves are used for shut-off applications and are rated at 414 Bar (6000 PSI). The wide variety of porting options plus the wide range of accessories make the BVHP the choice for high pressure systems with ports up to 1".

Operation

Parker's 2-way ball valves operate to either off or full flow by rotating the handle 90°. Ball valves are not designed to be a metering or flow control device.

Specifications

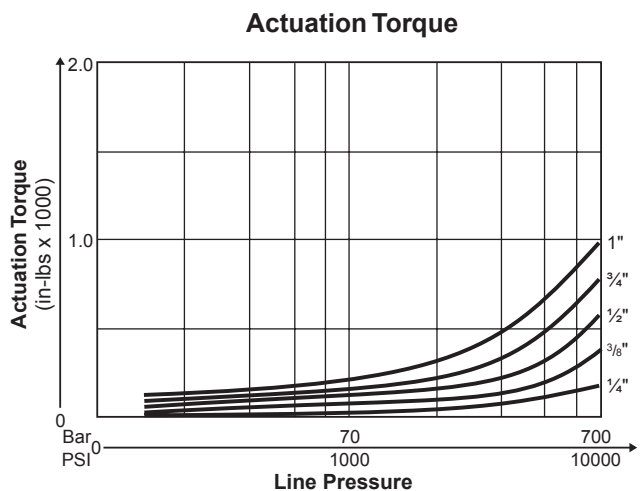
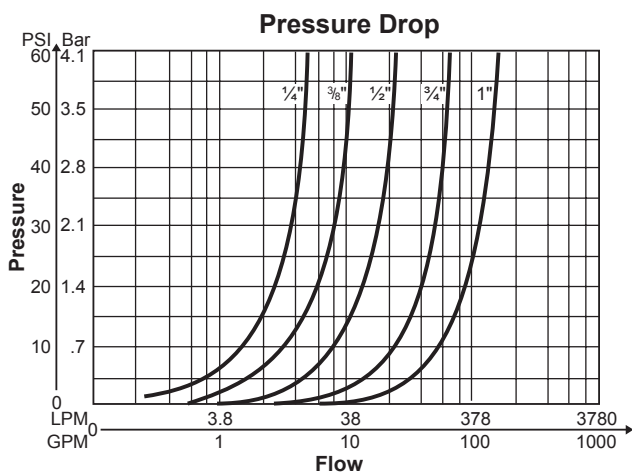
Maximum Pressure	414 Bar (6000 PSI)
Body Material	Carbon Steel, Black Oxide, Stainless Steel
Ball Material	Steel, Chrome Plated, Stainless Steel
Stem Material	Steel, Zinc Plated, Stainless Steel
Standard Handle	Steel Offset, Nickel Plated
Ball Seals	Delrin + MoS ₂
Spindle Seals	O-ring & Backup, Nitrile
Operating Temperature	-30°C to +100°C (-22°F to +212°F)

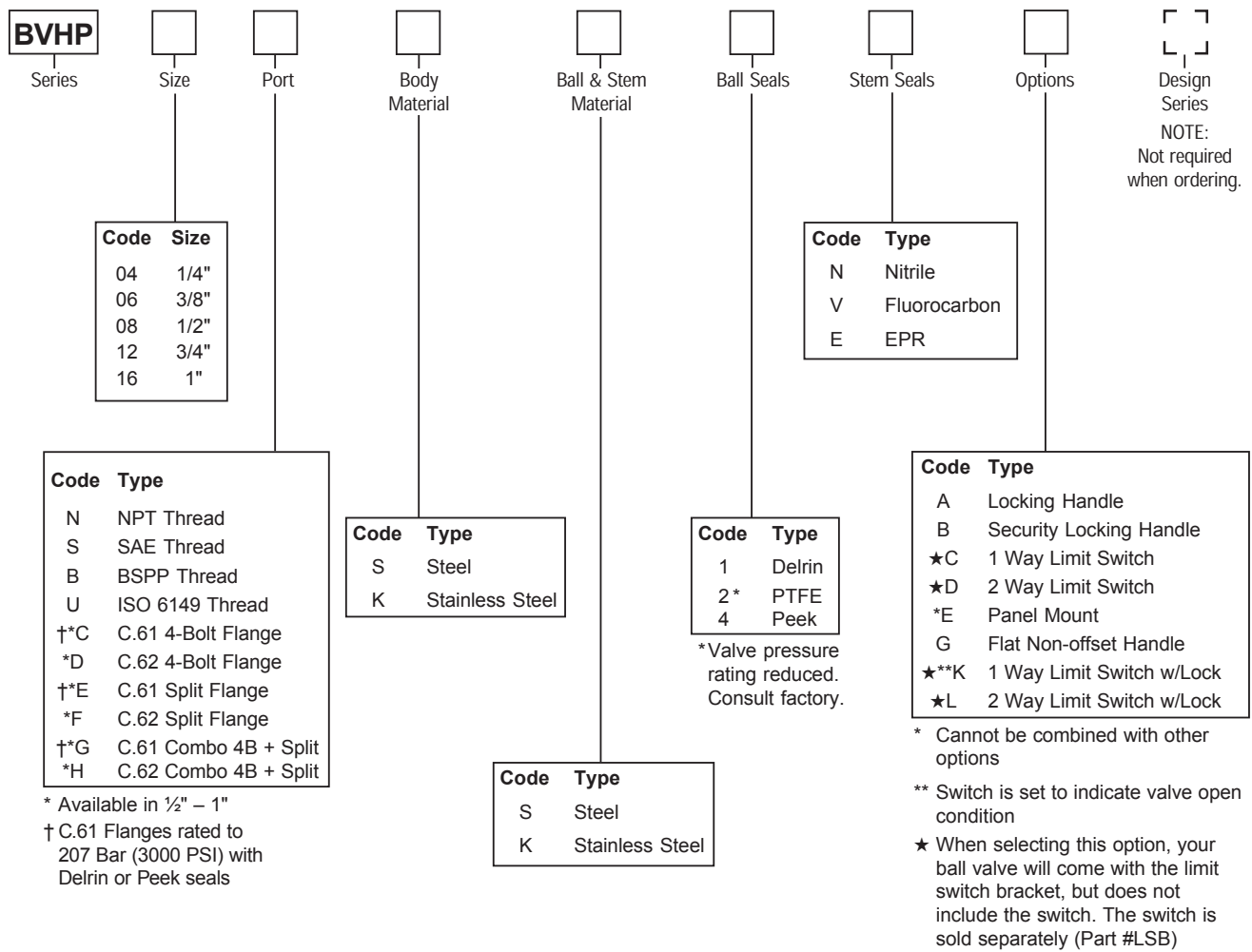


Features

- The use of nylon thrust bearings and synthetic lube packing reduces the actuation torque and helps prevent valve seizures even after long term exposure.
- Delrin™ seals with molybdenum disulphide (MoS₂) results in lower actuation torque and will increase high duty life cycle expectancy.
- BVHP products are full ported, which means an unrestricted bore which results in C_v and ΔP closely approximating a like length section of fluid line.
- Code 61 and 62 rotating flange design allows easy alignment with mating flanges.
- Limit switch is NEMA 4 with CSA/UL approval.

Performance Curves





ISO 6149-1 Port Dimensions (inches)

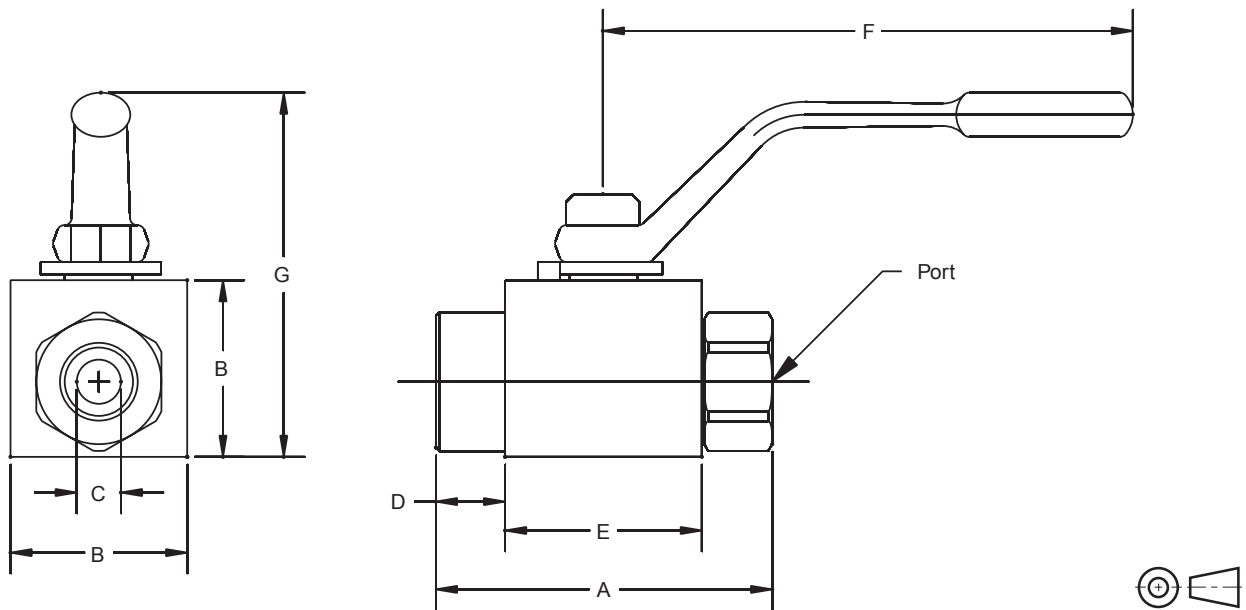
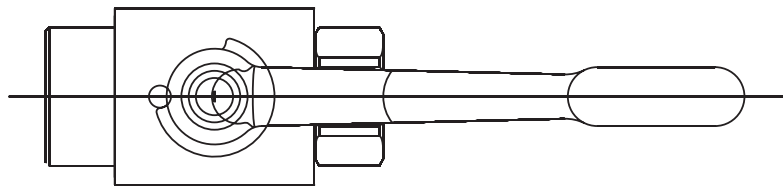
Size	Thread
04	M12 x 1.5
06	M16 x 1.5
08	M18 x 1.5
12	M27 x 2
16	M33 x 2
20	M42 x 2
24	M48 x 2
32	M60 x 2
40	M76 x 2
48	M90 x 2
64	M114 x 2

Replacement Handles Standard Steel Offset	
Series	Part Number
BVHP04	BVH-HS1
BVHP06	BVH-HS1
BVHP08	BVH-HS1
BVHP12	BVH-HS2
BVHP16	BVH-HS2

Weights

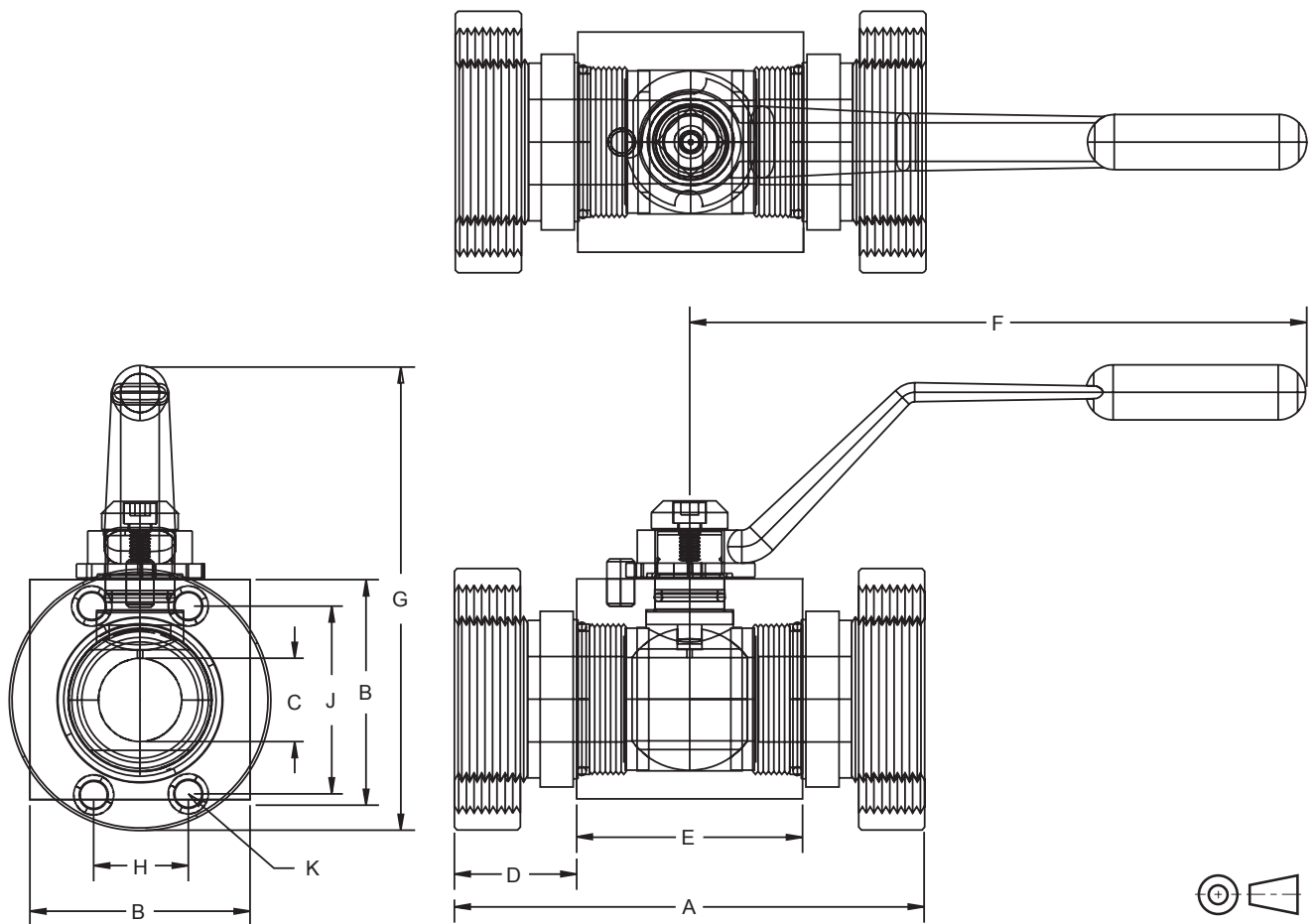
Code	Threaded kg (lbs.)	C.61, 3000 psi kg (lbs.)	C.62, 6000 psi kg (lbs.)
04	0.5 (1.0)	—	—
06	0.7 (1.5)	—	—
08	0.9 (2.0)	1.7 (3.5)	1.8 (3.9)
12	1.8 (4.0)	2.7 (6.0)	2.9 (6.4)
16	2.3 (5.0)	3.6 (8.0)	4.0 (8.8)

Threaded Ports



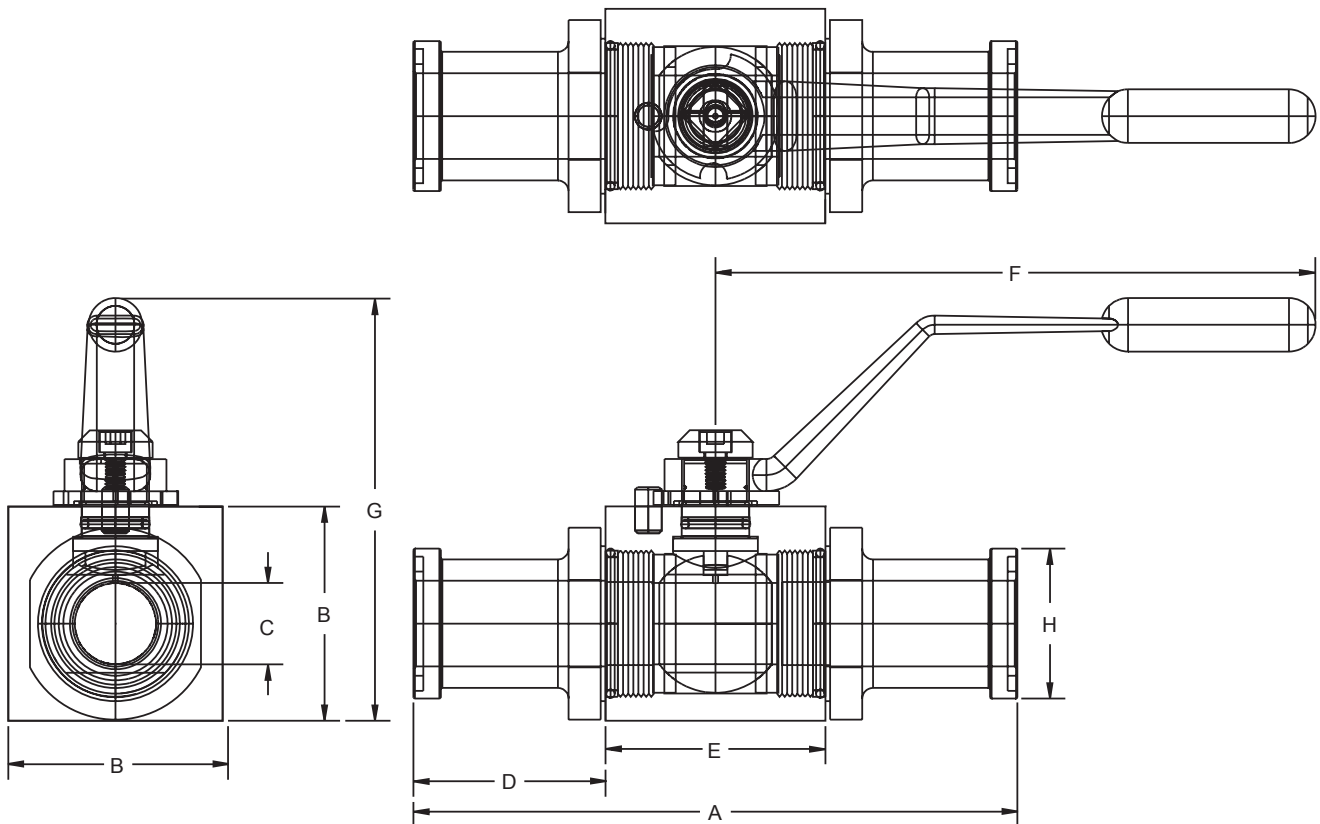
Code	Port Thread Size	Working Pressure	Dimensions mm (in)						
			A	B	C	D	E	F	G
NPT and SAE Thread									
04	1/4"	414 Bar (6000 PSI)	69.6 (2.74)	35.1 (1.38)	7.9 (0.31)	17.5 (0.69)	35.6 (1.40)	114.3 (4.50)	74.9 (2.95)
06	3/8"	414 Bar (6000 PSI)	72.9 (2.87)	38.1 (1.50)	9.7 (0.38)	14.2 (0.56)	42.4 (1.67)	114.3 (4.50)	78.7 (3.10)
08	1/2"	414 Bar (6000 PSI)	85.1 (3.35)	41.4 (1.63)	12.7 (0.50)	19.1 (0.75)	47.5 (1.87)	114.3 (4.50)	81.3 (3.20)
12	3/4"	414 Bar (6000 PSI)	95.0 (3.74)	57.2 (2.25)	19.1 (0.75)	17.5 (0.69)	61.5 (2.42)	177.8 (7.00)	119.4 (4.70)
16	1"	414 Bar (6000 PSI)	114.0 (4.49)	63.5 (2.50)	23.9 (0.94)	23.9 (0.94)	65.8 (2.59)	177.8 (7.00)	125.7 (4.95)

SAE 4-Bolt Flange



Code	Flange Size	Working Pressure	Dimensions mm (in)									
			A	B	C	D	E	F	G	H	J	K
SAE 4-Bolt C.61 Companion												
08	1/2"	207 Bar (3000 PSI)	105.7 (4.16)	41.4 (1.63)	13.0 (0.51)	29.5 (1.16)	47.0 (1.85)	114.3 (4.50)	82.0 (3.23)	17.5 (0.69)	38.1 (1.50)	5/16"-18 5/16"-18
12	3/4"	207 Bar (3000 PSI)	119.6 (4.71)	57.2 (2.25)	20.1 (0.79)	29.5 (1.16)	61.0 (2.40)	177.8 (7.00)	119.4 (4.70)	22.2 (0.88)	47.6 (1.88)	3/8"-16 3/8"-16
16	1"	207 Bar (3000 PSI)	129.8 (5.11)	63.5 (2.50)	24.9 (0.98)	32.3 (1.27)	65.3 (2.57)	177.8 (7.00)	125.7 (4.95)	26.2 (1.03)	52.6 (2.07)	3/8"-16 3/8"-16
SAE 4-Bolt C.62 Companion												
08	1/2"	414 Bar (6000 PSI)	105.7 (4.16)	41.4 (1.63)	13.0 (0.51)	29.5 (1.16)	47.0 (1.85)	114.3 (4.50)	82.0 (3.23)	18.3 (0.72)	40.4 (1.59)	5/16"-18 5/16"-18
12	3/4"	414 Bar (6000 PSI)	119.6 (4.71)	57.2 (2.25)	20.1 (0.79)	29.5 (1.16)	61.0 (2.40)	177.8 (7.00)	119.4 (4.70)	23.9 (0.94)	50.8 (2.00)	3/8"-16 3/8"-16
16	1"	414 Bar (6000 PSI)	129.8 (5.11)	63.5 (2.50)	24.9 (0.98)	32.3 (1.27)	65.3 (2.57)	177.8 (7.00)	125.7 (4.95)	27.8 (1.10)	57.1 (2.25)	7/16"-14 7/16"-14

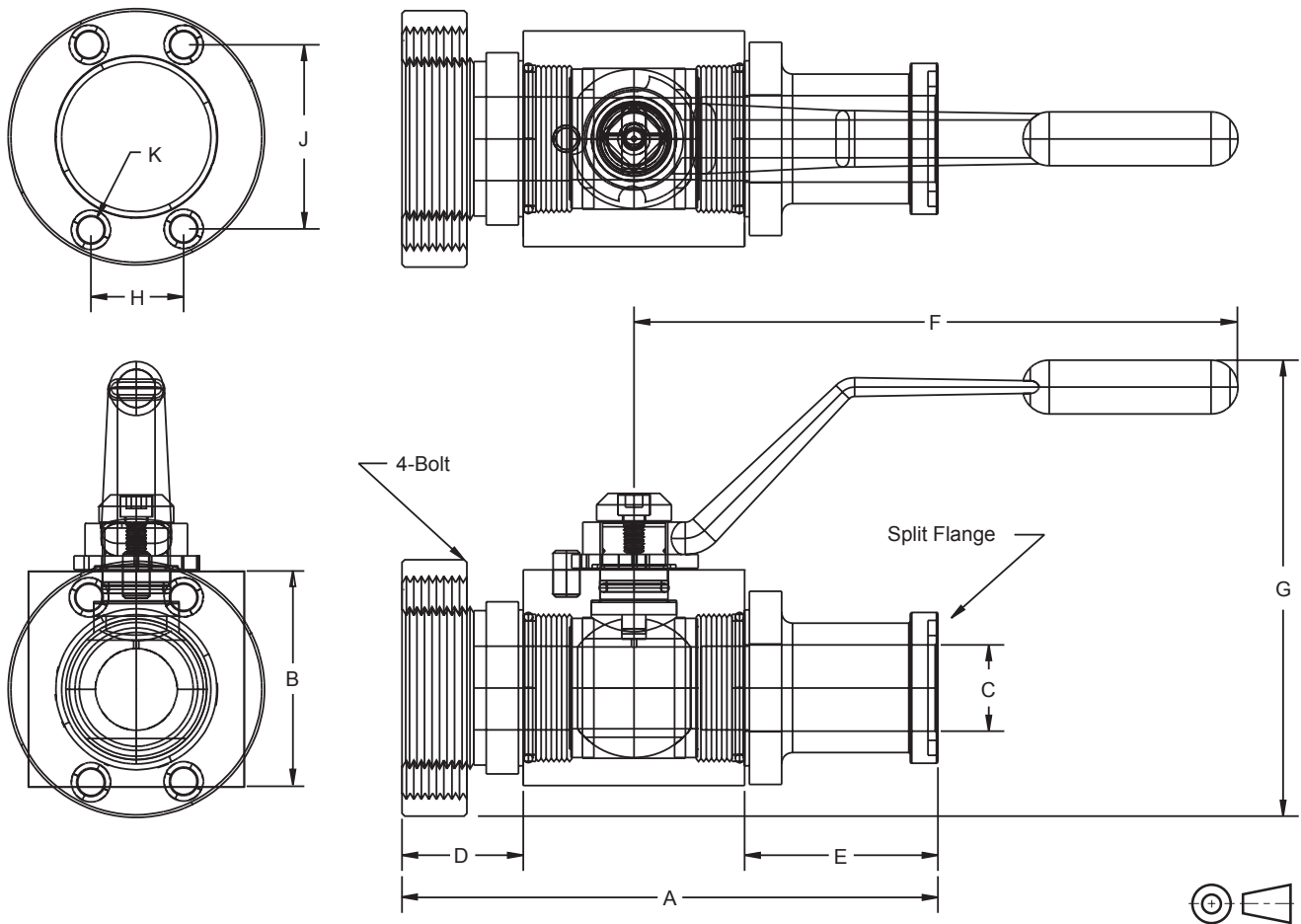
SAE Split Flange



Code	SAE Split Flange Size	Working Pressure	Dimensions mm (in)							
			A	B	C	D	E	F	G	H
SAE Split Flange C.61 Companion										
08	1/2"	207 Bar (3000 PSI)	151.1 (5.95)	41.4 (1.63)	13.0 (0.51)	5.21 (2.05)	47.0 (1.85)	114.3 (4.50)	82.0 (3.23)	30.2 (1.19)
12	3/4"	207 Bar (3000 PSI)	162.1 (6.38)	57.2 (2.25)	20.1 (0.79)	50.5 (1.99)	61.0 (2.40)	177.8 (7.00)	119.4 (4.70)	38.1 (1.50)
16	1"	207 Bar (3000 PSI)	177.6 (6.99)	63.5 (2.50)	24.9 (0.98)	56.1 (2.21)	65.3 (2.57)	177.8 (7.00)	125.7 (4.95)	44.4 (1.75)
SAE Split Flange 4-Bolt C.62 Companion										
08	1/2"	414 Bar (6000 PSI)	151.1 (5.95)	41.4 (1.63)	13.0 (0.51)	52.1 (2.05)	47.0 (1.85)	114.3 (4.50)	82.0 (3.23)	31.8 (1.25)
12	3/4"	414 Bar (6000 PSI)	174.2 (6.86)	57.2 (2.25)	20.1 (0.79)	56.6 (2.23)	61.0 (2.40)	177.8 (7.00)	119.4 (4.70)	41.4 (1.63)
16	1"	414 Bar (6000 PSI)	197.9 (7.79)	63.5 (2.50)	24.9 (0.98)	66.3 (2.61)	65.3 (2.57)	177.8 (7.00)	125.7 (4.95)	47.5 (1.87)

Dimensions

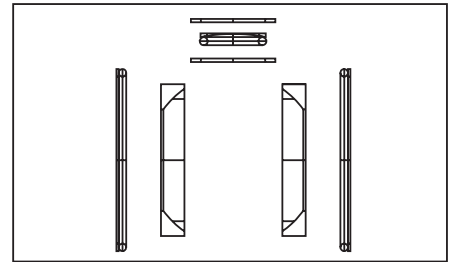
Combination SAE 4-Bolt and SAE Split Flange



Code	SAE Flange Size	Working Pressure	Dimensions mm (in)									
			A	B	C	D	E	F	G	H	J	K
SAE 4-Bolt + Split C.61 Companion												
08	1/2"	207 Bar (3000 PSI)	128.5 (5.06)	41.4 (1.63)	13.0 (0.51)	29.5 (1.16)	52.1 (2.05)	114.3 (4.50)	82.0 (3.23)	17.5 (0.69)	38.1 (1.50)	5/16"-18 5/16"-18
12	3/4"	207 Bar (3000 PSI)	141.0 (5.55)	57.2 (2.25)	20.1 (0.79)	29.5 (1.16)	50.6 (1.99)	177.8 (7.00)	119.4 (4.70)	22.2 (0.88)	47.6 (1.88)	3/8"-16 3/8"-16
16	1"	207 Bar (3000 PSI)	153.7 (6.05)	63.5 (2.50)	24.9 (0.98)	32.3 (1.27)	56.1 (2.21)	177.8 (7.00)	125.7 (4.95)	26.2 (1.03)	52.6 (2.07)	3/8"-16 3/8"-16
SAE 4-Bolt + Split C.62 Companion												
08	1/2"	414 Bar (6000 PSI)	128.5 (5.06)	41.4 (1.63)	13.0 (0.51)	29.5 (1.16)	52.1 (2.05)	114.3 (4.50)	82.0 (3.23)	18.3 (0.72)	40.4 (1.59)	5/16"-18 5/16"-18
12	3/4"	414 Bar (6000 PSI)	147.1 (5.79)	57.2 (2.25)	20.1 (0.79)	29.5 (1.16)	56.6 (2.23)	177.8 (7.00)	119.4 (4.70)	23.9 (0.94)	50.8 (2.00)	3/8"-16 3/8"-16
16	1"	414 Bar (6000 PSI)	163.8 (6.45)	63.5 (2.50)	24.9 (0.98)	32.3 (1.27)	66.3 (2.61)	177.8 (7.00)	125.7 (4.95)	27.8 (1.10)	57.1 (2.25)	7/16"-14 7/16"-14

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

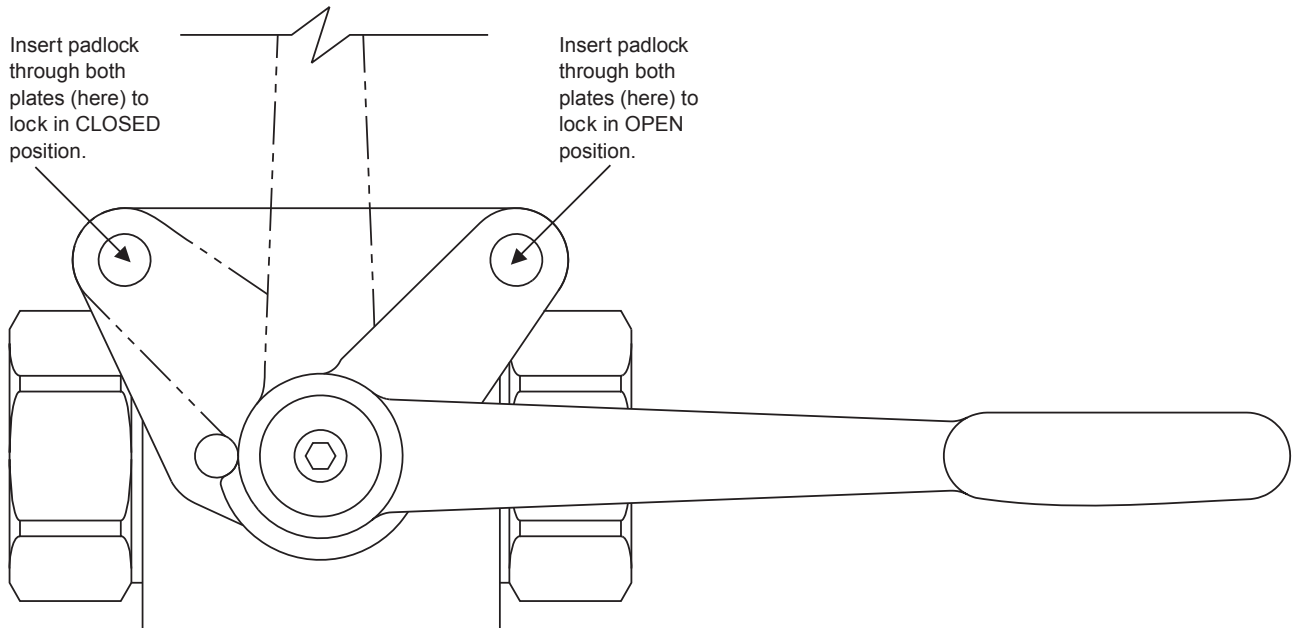
The Seal Kit includes all the o-rings, ball seals and thrust bearings that were originally installed at the factory. A sketch of these parts for most 2-way valves is provided at the right.



Ordering Information

<div style="border: 1px solid black; padding: 2px; width: 40px; margin: 0 auto;">SK</div> <p style="text-align: center; font-size: small;">Accessory</p>	<div style="border: 1px solid black; padding: 2px; width: 60px; margin: 0 auto;">BVHP</div> <p style="text-align: center; font-size: small;">Series</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center; font-size: small;">Size</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center; font-size: small;">Port</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center; font-size: small;">Body Material</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center; font-size: small;">Ball & Stem Material</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center; font-size: small;">Ball Seals</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center; font-size: small;">Stem Seals</p>	<div style="border: 1px dashed black; width: 30px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center; font-size: small;">Design Series</p> <p style="text-align: center; font-size: x-small;">NOTE: Not required when ordering.</p>																																							
<table border="0" style="width: 100%; font-size: x-small;"> <tr><th style="text-align: left;">Code</th><th style="text-align: left;">Type</th></tr> <tr><td>SK</td><td>Seal Kit</td></tr> </table>	Code	Type	SK	Seal Kit		<table border="0" style="width: 100%; font-size: x-small;"> <tr><th style="text-align: left;">Code</th><th style="text-align: left;">Size</th></tr> <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> </table>	Code	Size	04	1/4"	06	3/8"	08	1/2"	12	3/4"	16	1"				<table border="0" style="width: 100%; font-size: x-small;"> <tr><th style="text-align: left;">Code</th><th style="text-align: left;">Type</th></tr> <tr><td>1</td><td>Delrin</td></tr> <tr><td>2 *</td><td>PTFE</td></tr> <tr><td>4</td><td>Peek</td></tr> </table> <p style="font-size: x-small;">* Valve pressure rating reduced. Consult factory.</p>	Code	Type	1	Delrin	2 *	PTFE	4	Peek	<table border="0" style="width: 100%; font-size: x-small;"> <tr><th style="text-align: left;">Code</th><th style="text-align: left;">Type</th></tr> <tr><td>N</td><td>Nitrile</td></tr> <tr><td>V</td><td>Fluorocarbon</td></tr> <tr><td>E</td><td>EPR</td></tr> </table>	Code	Type	N	Nitrile	V	Fluorocarbon	E	EPR								
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04	1/4"																																														
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1	Delrin																																														
2 *	PTFE																																														
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			<table border="0" style="width: 100%; font-size: x-small;"> <tr><th style="text-align: left;">Code</th><th style="text-align: left;">Type</th></tr> <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> <tr><td>†C</td><td>C.61 4-Bolt Flange</td></tr> <tr><td>†E</td><td>C.61 Split Flange</td></tr> <tr><td>F</td><td>C.62 Split Flange</td></tr> <tr><td>†G</td><td>C.61 Combo 4B + Split</td></tr> <tr><td>H</td><td>C.62 Combo 4B + Split</td></tr> </table> <p style="font-size: x-small;">† C.61 Flanges rated to 207 Bar (3000 PSI) with Delrin or Peek seals</p>	Code	Type	N	NPT Thread	S	SAE Thread	B	BSPP Thread	U	ISO 6149 Thread	†C	C.61 4-Bolt Flange	†E	C.61 Split Flange	F	C.62 Split Flange	†G	C.61 Combo 4B + Split	H	C.62 Combo 4B + Split	<table border="0" style="width: 100%; font-size: x-small;"> <tr><th style="text-align: left;">Code</th><th style="text-align: left;">Type</th></tr> <tr><td>S</td><td>Steel</td></tr> <tr><td>K</td><td>Stainless Steel</td></tr> </table>	Code	Type	S	Steel	K	Stainless Steel			<table border="0" style="width: 100%; font-size: x-small;"> <tr><th colspan="2" style="text-align: left;">Replacement Handles Standard Steel Offset</th></tr> <tr><th style="text-align: left;">Series</th><th style="text-align: left;">Part Number</th></tr> <tr><td>BVHP04</td><td>BVH-HS1</td></tr> <tr><td>BVHP06</td><td>BVH-HS1</td></tr> <tr><td>BVHP08</td><td>BVH-HS1</td></tr> <tr><td>BVHP12</td><td>BVH-HS2</td></tr> <tr><td>BVHP16</td><td>BVH-HS2</td></tr> </table>	Replacement Handles Standard Steel Offset		Series	Part Number	BVHP04	BVH-HS1	BVHP06	BVH-HS1	BVHP08	BVH-HS1	BVHP12	BVH-HS2	BVHP16	BVH-HS2
Code	Type																																														
N	NPT Thread																																														
S	SAE Thread																																														
B	BSPP Thread																																														
U	ISO 6149 Thread																																														
†C	C.61 4-Bolt Flange																																														
†E	C.61 Split Flange																																														
F	C.62 Split Flange																																														
†G	C.61 Combo 4B + Split																																														
H	C.62 Combo 4B + Split																																														
Code	Type																																														
S	Steel																																														
K	Stainless Steel																																														
Replacement Handles Standard Steel Offset																																															
Series	Part Number																																														
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BVHP08	BVH-HS1																																														
BVHP12	BVH-HS2																																														
BVHP16	BVH-HS2																																														

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

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

General Description

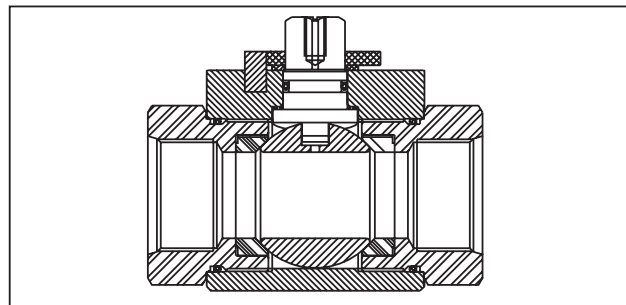
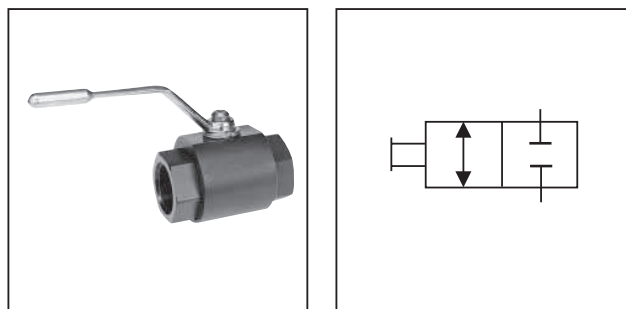
Series BVAH are 414 Bar (6000 PSI) ball valves with ports from 1¼" to 2". Series BVAH are 2-way shut-off valves to use in those applications with large ports. A variety of porting options are available including threaded, SAE 4-bolt flange, split flange and a combination of the two.

Operation

Parker's 2-way ball valves operate to either off or full flow by rotating the handle 90°. Ball valves are not designed to be a metering or flow control device.

Specifications

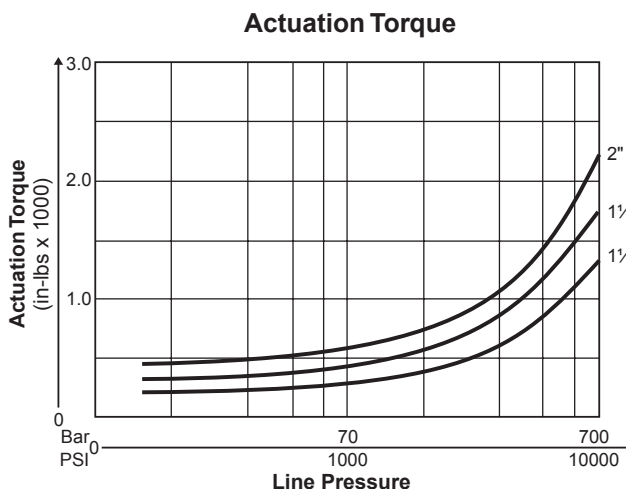
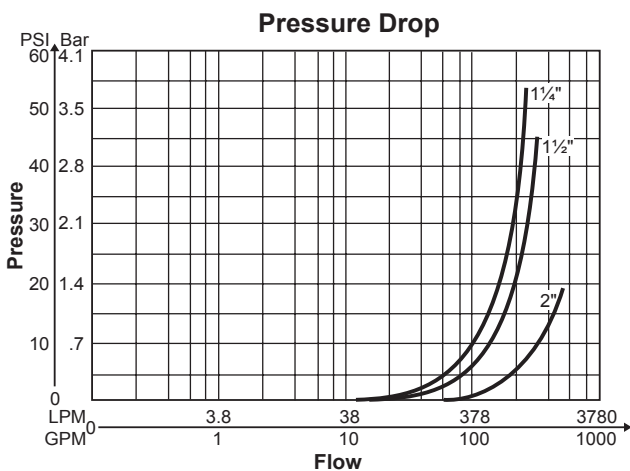
Maximum Pressure	414 Bar (6000 PSI)
Body Material	Carbon Steel, Black Oxide, Stainless Steel
Ball Material	Steel, Chrome Plated, Stainless Steel
Stem Material	Steel, Zinc Plated, Stainless Steel
Standard Handle	Steel Offset, Nickel Plated
Ball Seals	Delrin + MoS ₂
Spindle Seals	O-ring & Backup, Nitrile
Operating Temperature	-30°C to +100°C (-22°F to +212°F)



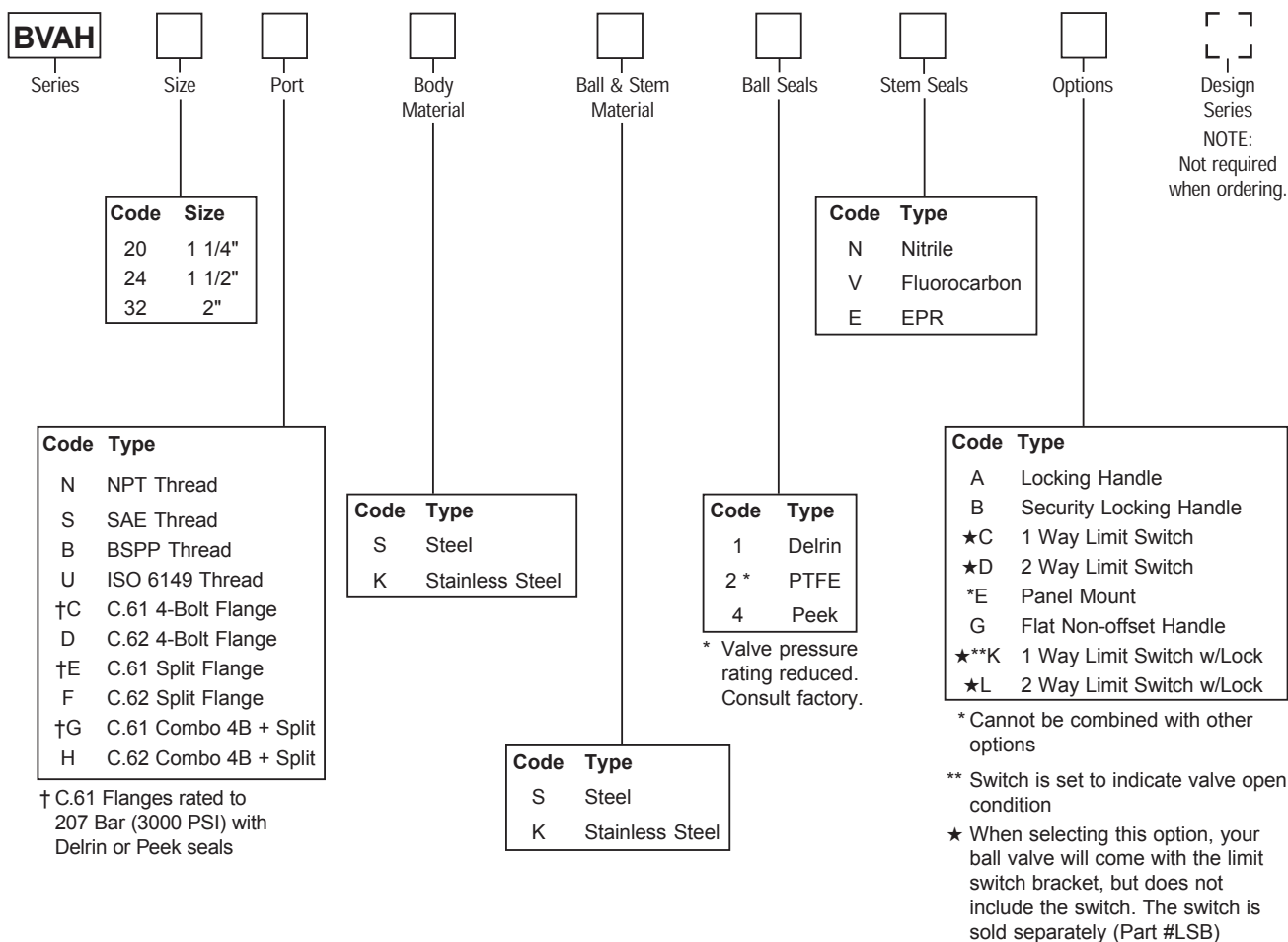
Features

- Thrust bearings and synthetic lubrication in the spindle results in one of the lowest torque requirements in the industry.
- A wide variety of porting options and mounting options make the BVAH suitable for all mounting applications.
- Delrin seals with molybdenum disulphide (MoS₂) results in lower actuation torque and will increase high duty life cycle expectancy.
- The variety of spindle and ball sealing options makes the BVAH suitable for most media applications.
- Limit switch is NEMA 4 with CSA/UL approval.

Performance Curves



3300-2.p65, dd



ISO 6149-1 Port Dimensions (inches)

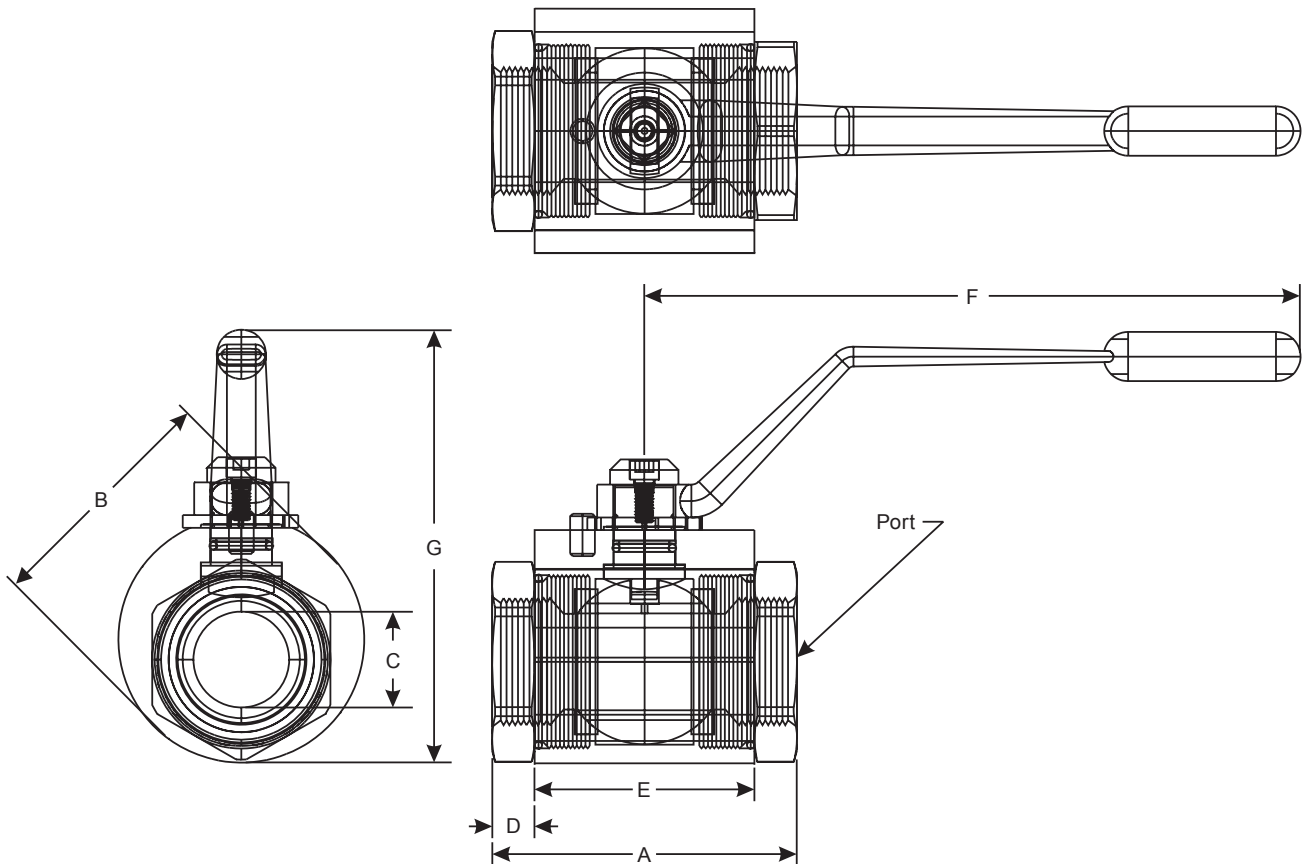
Size	Thread
04	M12 x 1.5
06	M16 x 1.5
08	M18 x 1.5
12	M27 x 2
16	M33 x 2
20	M42 x 2
24	M48 x 2
32	M60 x 2
40	M76 x 2
48	M90 x 2
64	M114 x 2

Replacement Handles Standard Steel Offset	
Series	Part Number
BVAH20	BVH-HS3
BVAH24	BVH-HS3
BVAH32	BVH-HS3

Weights

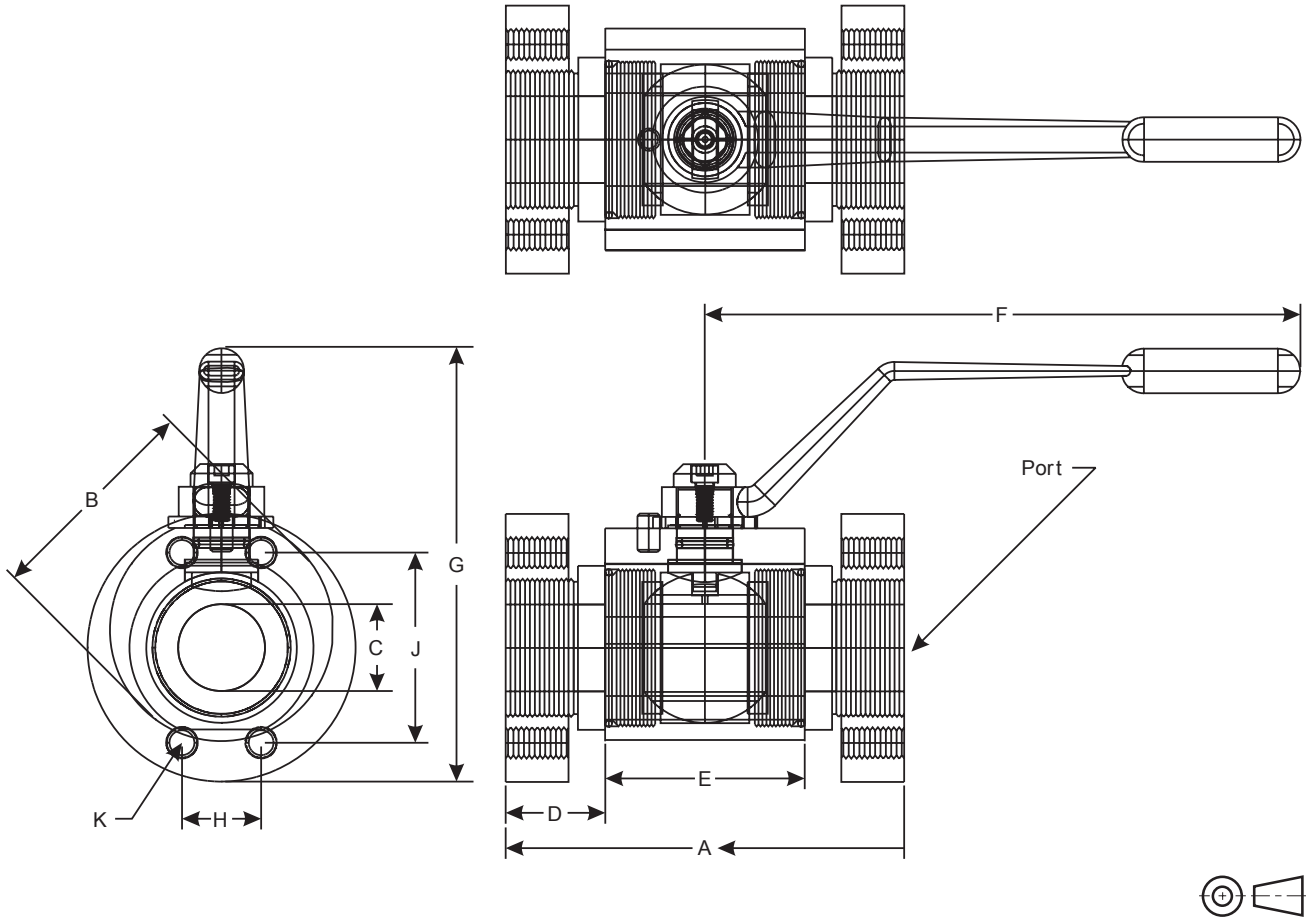
Code	Threaded kg (lbs.)	C. 61 kg (lbs.)	C. 62 kg (lbs.)
20	3.2 (7.0)	5.0 (11.0)	5.2 (12.9)
24	4.5 (10.0)	7.0 (15.5)	7.3 (16.5)
32	10.5 (23.0)	10.4 (26.2)	7.0 (15.5)

Threaded Ports



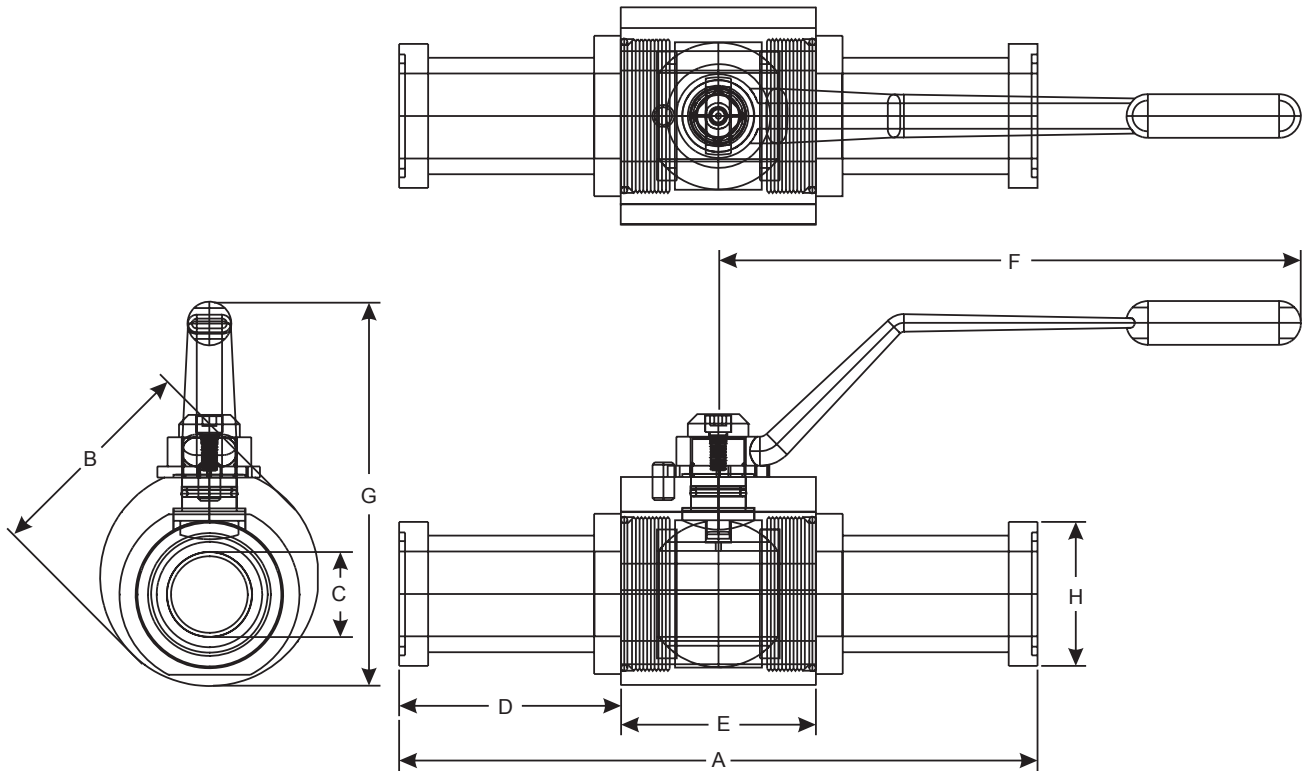
Code	Port Thread Size	Working Pressure	Dimensions mm (in)						
			A	B	C	D	E	F	G
NPT Thread and BSPP Thread									
20	1 1/4"	414 Bar (6000 PSI)	122.9 (4.84)	82.6 (3.25)	32.0 (1.26)	21.6 (0.85)	80.0 (3.15)	254.0 (10.00)	160.3 (6.31)
24	1 1/2"	414 Bar (6000 PSI)	135.4 (5.33)	95.3 (3.75)	38.1 (1.50)	25.1 (0.99)	85.1 (3.35)	254.0 (10.00)	171.7 (6.76)
32	2"	414 Bar (6000 PSI)	166.1 (6.54)	114.3 (4.50)	48.0 (1.89)	33.0 (1.30)	100.1 (3.94)	254.0 (10.00)	188.5 (7.42)
SAE Thread									
20	1 1/4"	414 Bar (6000 PSI)	122.9 (4.84)	88.9 (3.50)	32.0 (1.26)	21.6 (0.85)	80.0 (3.15)	254.0 (10.00)	160.3 (6.31)
24	1 1/2"	414 Bar (6000 PSI)	135.4 (5.33)	95.3 (3.75)	38.1 (1.50)	25.1 (0.99)	85.1 (3.35)	254.0 (10.00)	171.7 (6.76)
32	2"	414 Bar (6000 PSI)	166.1 (6.54)	114.3 (4.50)	48.0 (1.89)	33.0 (1.30)	100.1 (3.94)	254.0 (10.00)	188.5 (7.42)

SAE 4-Bolt Flange



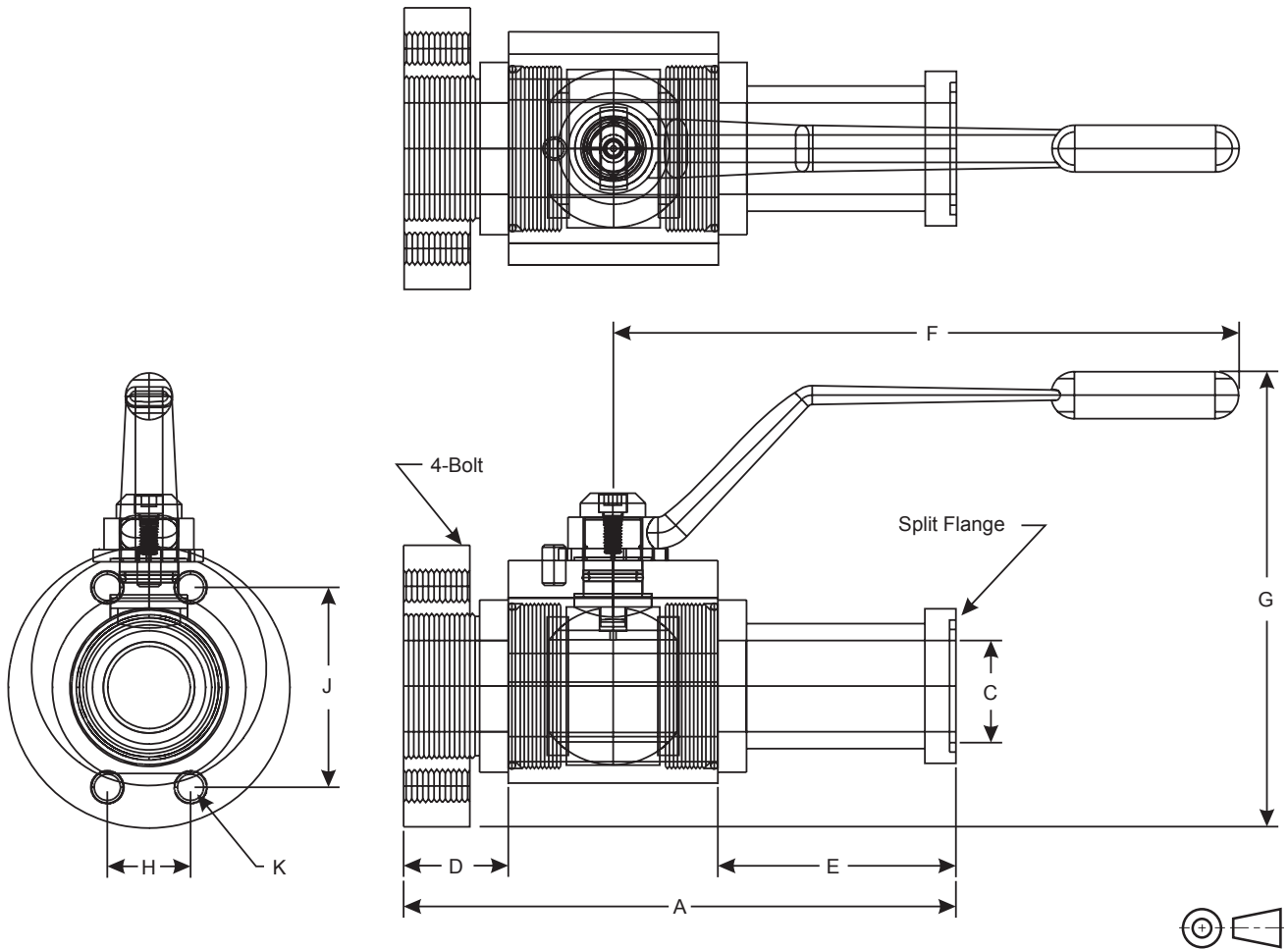
Code	SAE 4-B Flange Size	Working Pressure	Dimensions mm (in)									
			A	B	C	D	E	F	G	H	J	K
SAE 4-Bolt C.61 Companion												
20	1 1/4"	207 Bar (3000 PSI)	175.3 (6.90)	82.6 (3.25)	32.0 (1.26)	47.8 (1.88)	80.0 (3.15)	254.0 (10.00)	160.3 (6.31)	30.2 (1.19)	58.7 (2.31)	7/16"-14 7/16"-14
24	1 1/2"	207 Bar (3000 PSI)	180.3 (7.10)	95.3 (3.75)	38.1 (1.50)	47.8 (1.88)	85.1 (3.35)	254.0 (10.00)	171.7 (6.76)	35.7 (1.41)	69.8 (2.75)	1/2"-13 1/2"-13
32	2"	207 Bar (3000 PSI)	204.7 (8.06)	114.3 (4.50)	48.0 (1.89)	52.3 (2.06)	100.1 (3.94)	254.0 (10.00)	188.5 (7.42)	42.9 (1.69)	77.9 (3.06)	1/2"-13 1/2"-13
SAE 4-Bolt C.62 Companion												
20	1 1/4"	414 Bar (6000 PSI)	175.3 (6.90)	82.6 (3.25)	32.0 (1.26)	47.8 (1.88)	80.0 (3.15)	254.0 (10.00)	160.3 (6.31)	31.8 (1.25)	66.7 (2.63)	1/2"-13 1/2"-13
24	1 1/2"	414 Bar (6000 PSI)	180.3 (7.10)	95.3 (3.75)	38.1 (1.50)	47.8 (1.88)	85.1 (3.35)	254.0 (10.00)	171.7 (6.76)	36.4 (1.44)	79.4 (3.13)	5/8"-11 5/8"-11
32	2"	414 Bar (6000 PSI)	204.7 (8.06)	114.3 (4.50)	48.0 (1.89)	52.3 (2.06)	100.1 (3.94)	254.0 (10.00)	188.5 (7.42)	44.4 (1.75)	96.8 (3.81)	3/4"-10 3/4"-10

SAE Split Flange



Code	Split Flange Size	Working Pressure	Dimensions mm (in)							
			A	B	C	D	E	F	G	H
SAE Split Flange C.61 Companion										
20	1 1/4"	207 Bar (3000 PSI)	190.8 (7.51)	82.6 (3.25)	32.0 (1.26)	55.4 (2.18)	80.0 (3.15)	254.0 (10.00)	160.3 (6.31)	50.8 (2.00)
24	1 1/2"	207 Bar (3000 PSI)	230.9 (9.09)	95.3 (3.75)	38.1 (1.50)	72.9 (2.87)	85.1 (3.35)	254.0 (10.00)	171.7 (6.76)	60.2 (2.37)
32	2"	207 Bar (3000 PSI)	231.7 (9.12)	114.3 (4.50)	48.0 (1.89)	65.8 (2.59)	100.1 (3.94)	254.0 (10.00)	188.5 (7.42)	71.4 (2.81)
SAE Split Flange C.62 Companion										
20	1 1/4"	414 Bar (6000 PSI)	222.8 (8.77)	82.6 (3.25)	32.0 (1.26)	71.4 (2.81)	80.0 (3.15)	254.0 (10.00)	160.3 (6.31)	54.1 (2.13)
24	1 1/2"	414 Bar (6000 PSI)	281.2 (11.07)	95.3 (3.75)	38.1 (1.50)	98.0 (3.86)	85.1 (3.35)	254.0 (10.00)	171.7 (6.76)	63.5 (2.50)
32	2"	414 Bar (6000 PSI)	316.0 (12.44)	114.3 (4.50)	48.0 (1.89)	108.0 (4.25)	100.1 (3.94)	254.0 (10.00)	188.5 (7.42)	79.5 (3.13)

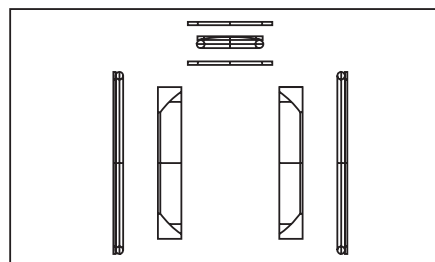
Combination SAE 4-Bolt and SAE Split Flange



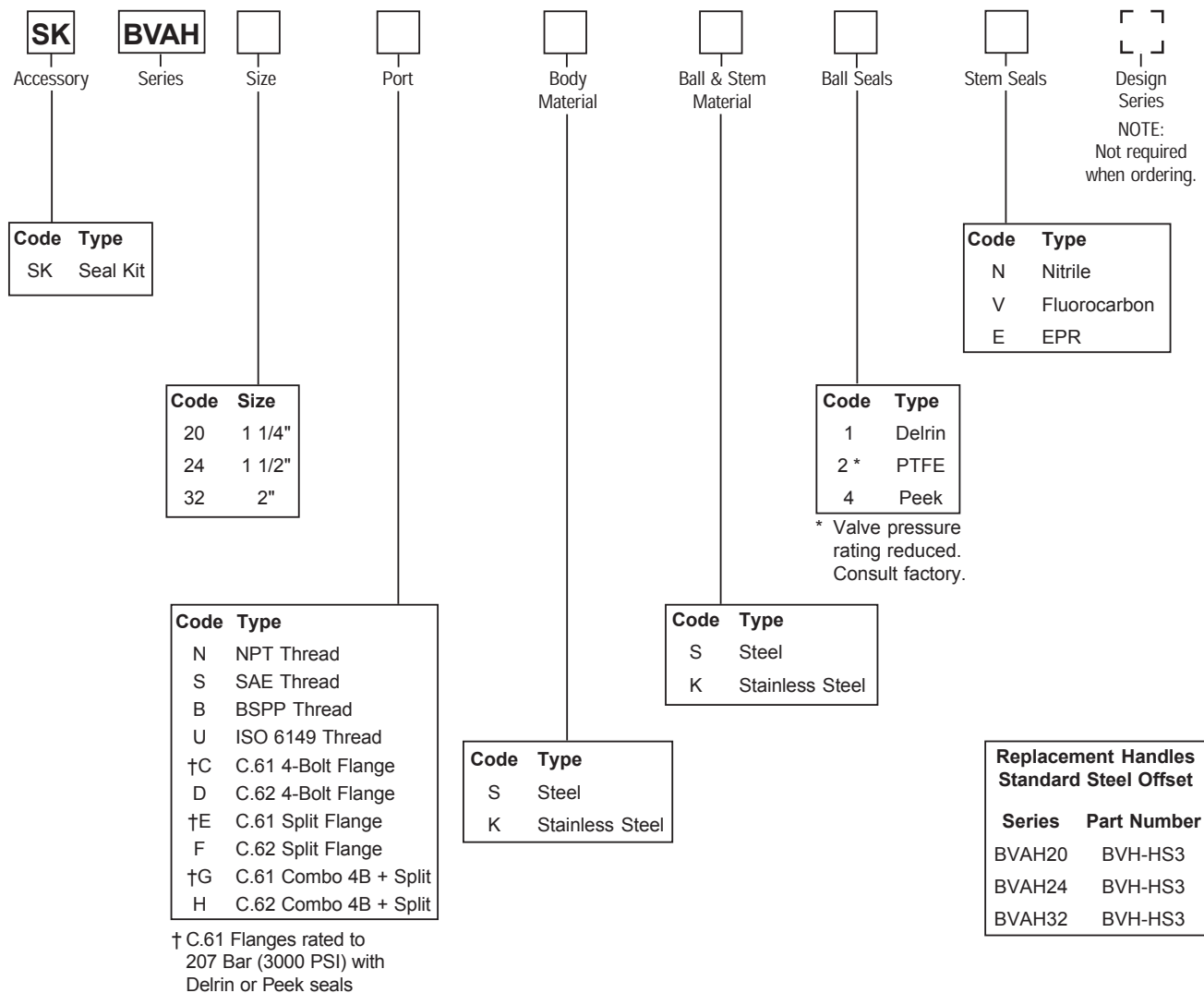
Code	SAE Flange Size	Working Pressure	Dimensions mm (in)									
			A	B	C	D	E	F	G	H	J	K
SAE 4-Bolt + Split, C.61 Companion												
20	1 1/4"	207 Bar (3000 PSI)	183.9 (7.24)	82.6 (3.25)	32.0 (1.26)	47.8 (1.88)	55.4 (2.18)	254.0 (10.00)	160.3 (6.31)	30.2 (1.19)	58.7 (2.31)	7/16"-14 7/16"-14
24	1 1/2"	207 Bar (3000 PSI)	205.5 (8.09)	95.3 (3.75)	38.1 (1.50)	47.8 (1.88)	72.9 (2.87)	254.0 (10.00)	171.7 (6.76)	35.7 (1.41)	69.8 (2.75)	1/2"-13 1/2"-13
32	2"	207 Bar (3000 PSI)	218.2 (8.59)	114.3 (4.50)	48.0 (1.89)	52.3 (2.06)	68.3 (2.69)	254.0 (10.00)	188.5 (7.42)	42.9 (1.69)	78.0 (3.07)	1/2"-13 1/2"-13
SAE 4-Bolt + Split, C.62 Companion												
20	1 1/4"	414 Bar (6000 PSI)	198.9 (7.83)	82.6 (3.25)	32.0 (1.26)	47.8 (1.88)	71.4 (2.81)	254.0 (10.00)	160.3 (6.31)	31.8 (1.25)	66.7 (2.63)	1/2"-13 1/2"-13
24	1 1/2"	414 Bar (6000 PSI)	230.6 (9.08)	95.3 (3.75)	38.1 (1.50)	47.8 (1.88)	98.0 (3.86)	254.0 (10.00)	171.7 (6.76)	36.4 (1.44)	79.4 (3.13)	5/8"-11 5/8"-11
32	2"	414 Bar (6000 PSI)	260.4 (10.25)	114.3 (4.50)	48.0 (1.89)	52.3 (2.06)	108.0 (4.25)	254.0 (10.00)	188.5 (7.42)	44.4 (1.75)	96.8 (3.81)	3/4"-10 3/4"-10

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

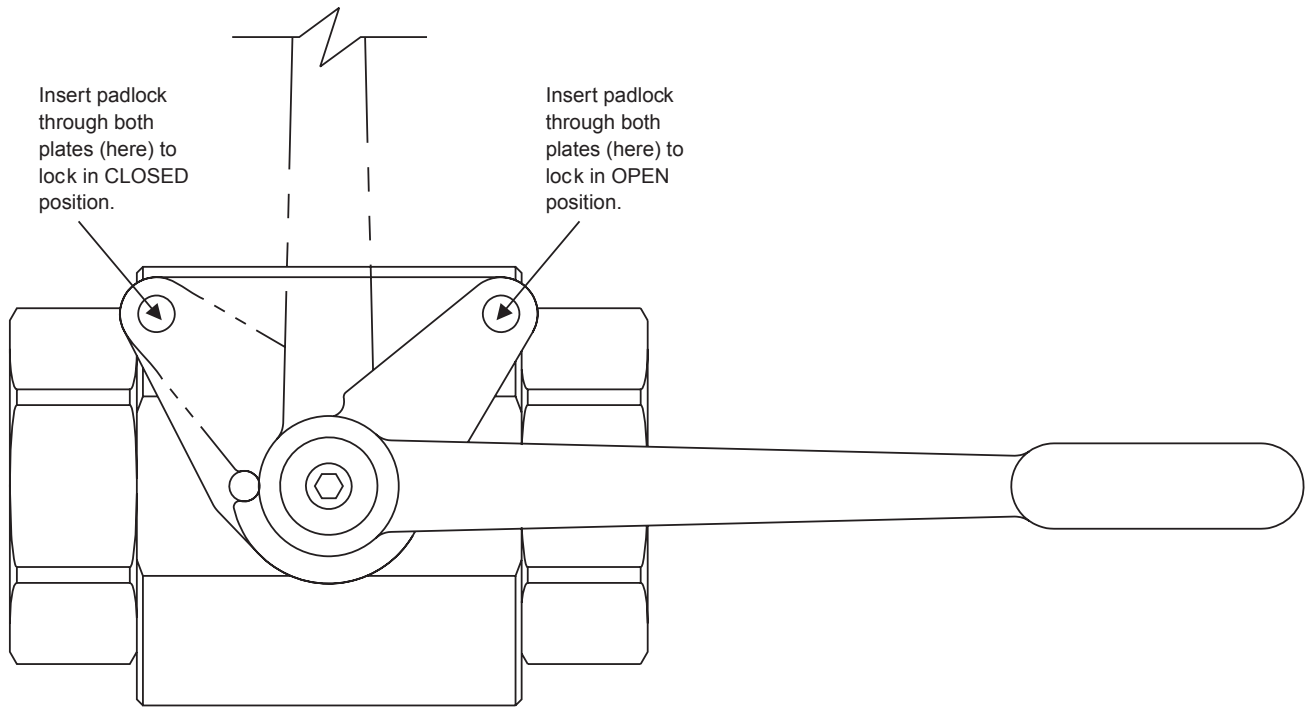
The Seal Kit includes all the o-rings, ball seals and thrust bearings that were originally installed at the factory.



Ordering Information



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

BVAH		Standard Locking (Part Number)
Code	Size	
20	1 1/4"	BVHPLK-3
24	1 1/2"	BVHPLK-3
32	2"	BVHPLK-3

General Description

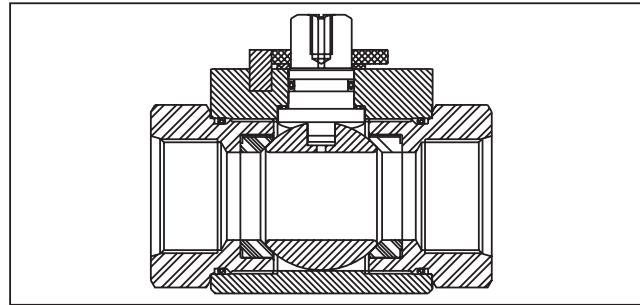
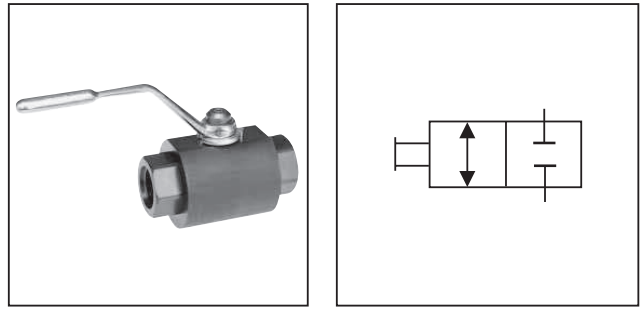
Series BVHH valves are used for shut-off applications and are rated at 690 Bar or 10,000 PSI. These valves represent the strongest ball valve in the industry. Series BVHH valves come in ports 1/2" to 2" and SAE, NPT and BSPP ports.

Operation

Parker's 2-way ball valves operate to either off or full flow by rotating the handle 90°. Ball valves are not designed to be a metering or flow control device.

Specifications

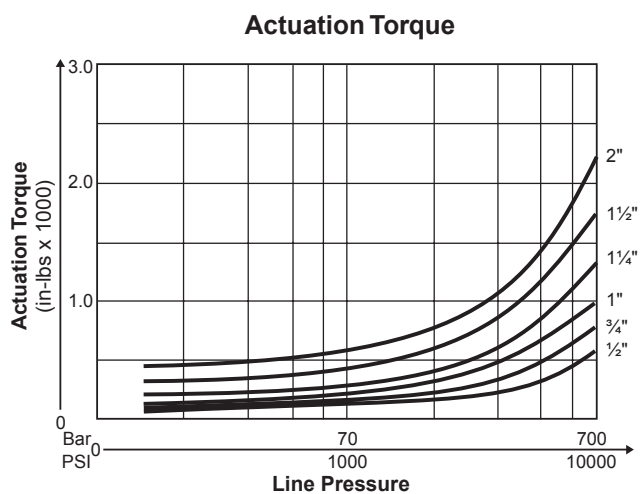
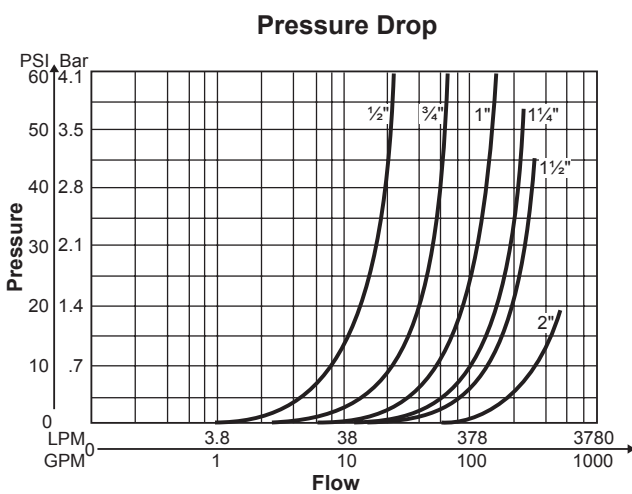
Maximum Pressure	690 Bar (10,000 PSI)
Body Material	Carbon Steel, Black Oxide
Ball Material	Steel, Chrome Plated, Stainless Steel
Stem Material	Steel, Zinc Plated, Stainless Steel
Standard Handle	Steel Offset, Nickel Plated
Ball Seals	Delrin + MoS ₂
Spindle Seals	O-ring & Backup, Nitrile
Operating Temperature	-30°C to +100°C (-22°F to +212°F)

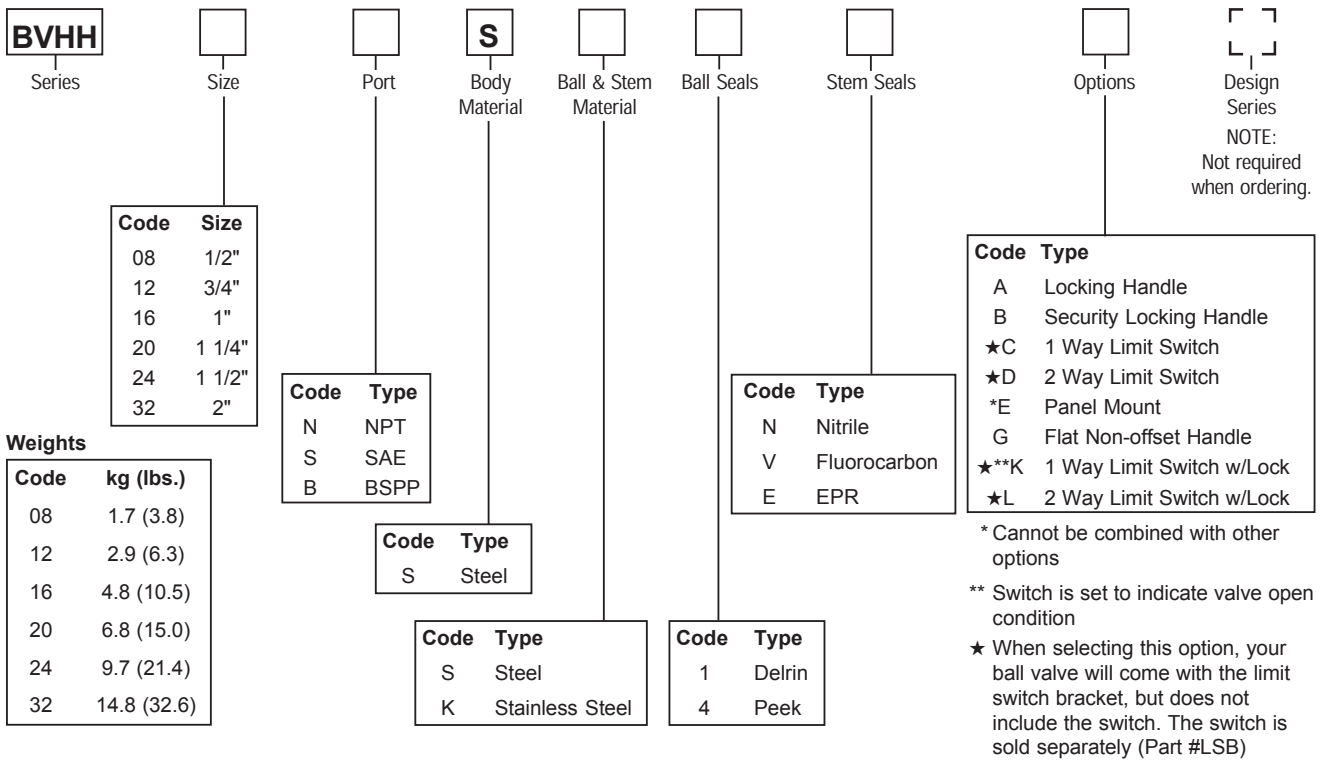


Features

- Encased Delrin moly ball seals increase the reliability compared to ring reinforcement designs.
- The BVHH is fully ported resulting in very low pressure drop.
- Nitrile seals are standard with fluorocarbon and EPR as options.
- The BVHH is available with options found in the 404 Bar (6000 PSI) models.

Performance Curves

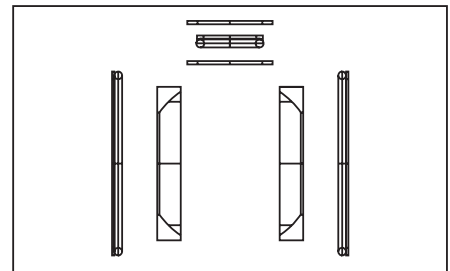




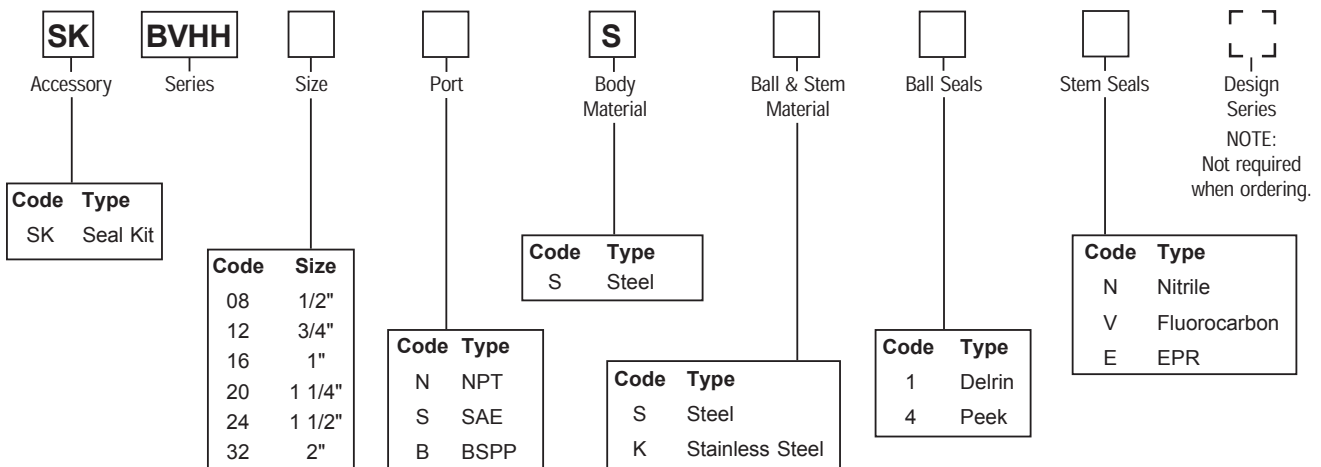
Seal Kit Accessories

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

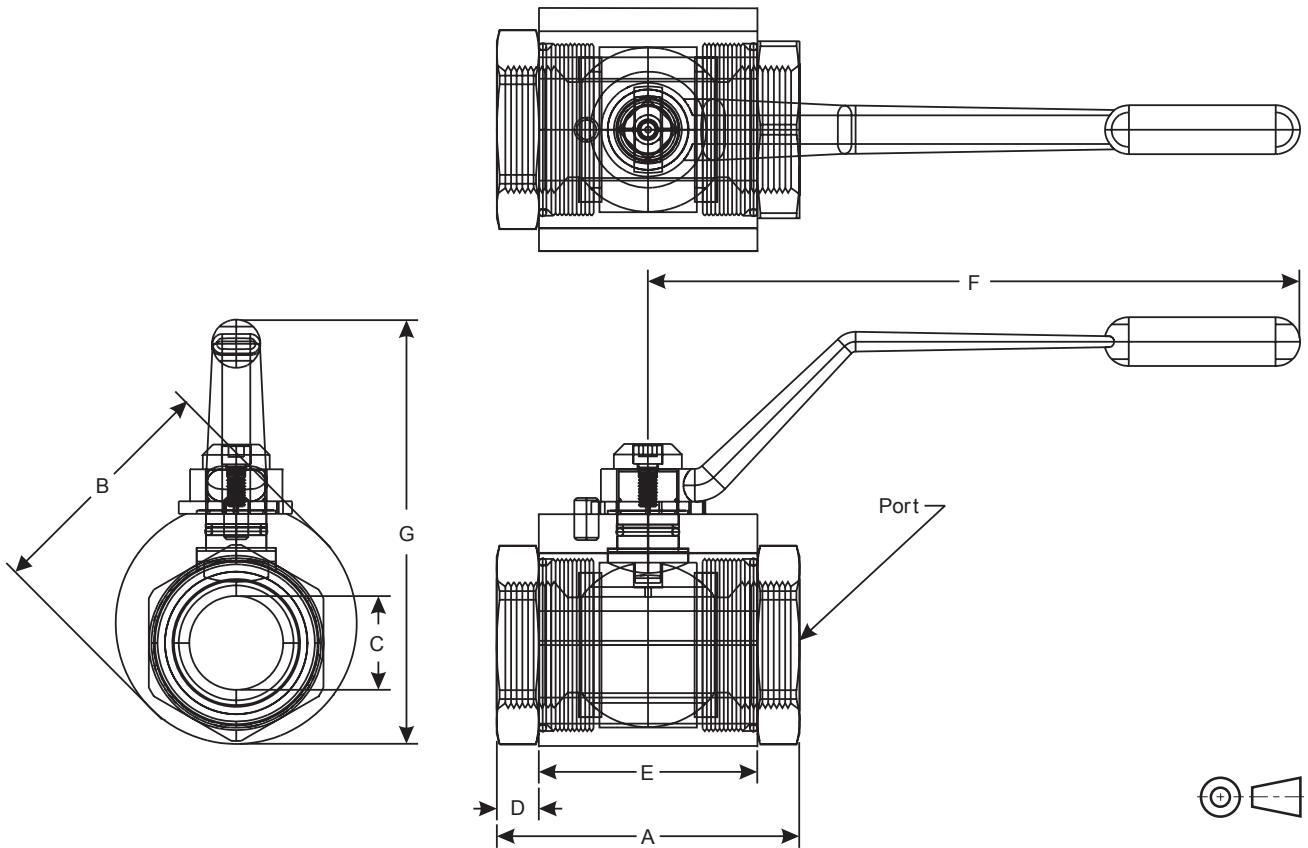
The Seal Kit includes all the o-rings, ball seals and thrust bearings that were originally installed at the factory. A sketch of these parts is provided at the right.



Ordering Information

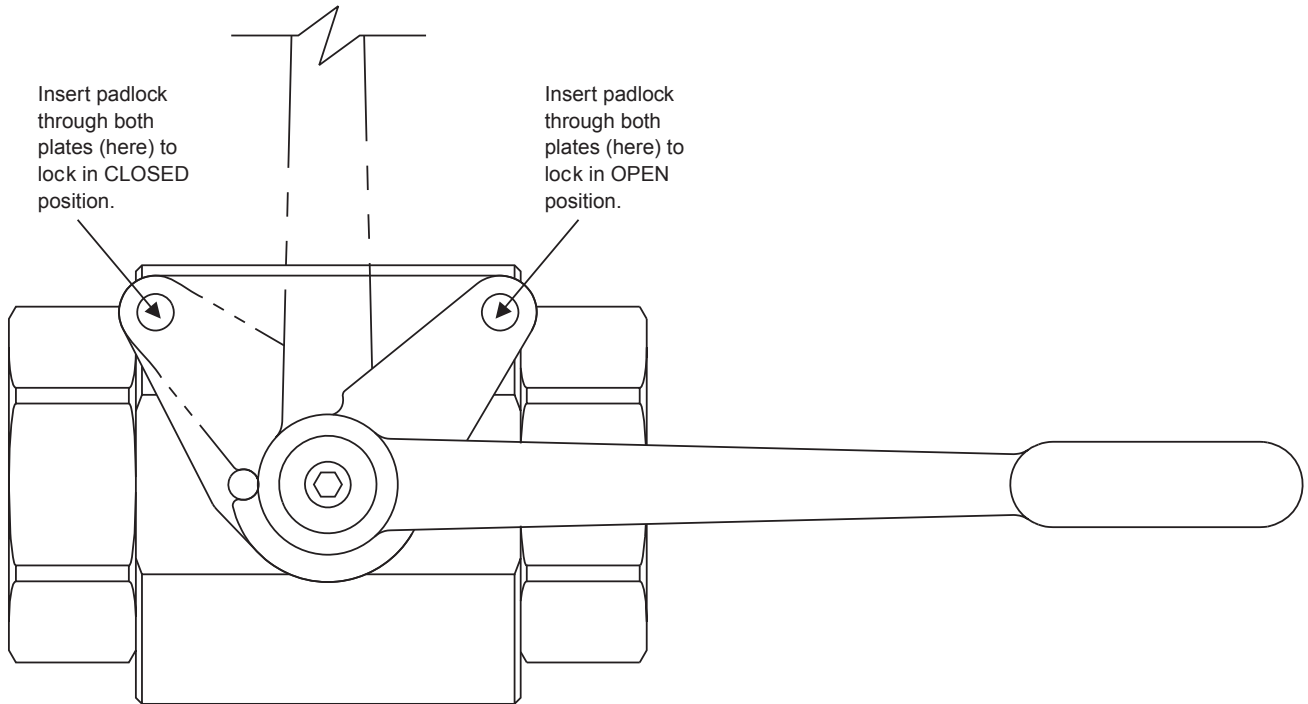


Threaded Ports



Code	Port Thread Size	Working Pressure	Dimensions mm (in)						
			A	B	C	D	E	F	G
NPT and SAE									
08	1/2"	690 Bar (10,000 PSI)	107.9 (4.25)	50.8 (2.00)	11.9 (0.47)	22.9 (0.90)	63.5 (2.50)	114.3 (4.50)	72.4 (2.85)
12	3/4"	690 Bar (10,000 PSI)	114.3 (4.50)	63.5 (2.50)	18.5 (0.73)	22.9 (0.90)	70.1 (2.76)	155.7 (6.13)	91.4 (3.60)
16	1"	690 Bar (10,000 PSI)	133.3 (5.25)	76.2 (3.00)	24.4 (0.96)	27.9 (1.10)	77.5 (3.05)	155.7 (6.13)	107.9 (4.25)
20	1 1/4"	690 Bar (10,000 PSI)	139.7 (5.50)	88.9 (3.50)	30.7 (1.21)	30.5 (1.20)	78.7 (3.10)	210.8 (8.30)	124.5 (4.90)
24	1 1/2"	690 Bar (10,000 PSI)	152.4 (6.00)	101.6 (4.00)	36.1 (1.42)	34.3 (1.35)	83.8 (3.30)	210.8 (8.30)	139.7 (5.50)
32	2"	690 Bar (10,000 PSI)	165.1 (6.50)	120.6 (4.75)	48.5 (1.91)	38.1 (1.50)	88.9 (3.50)	210.8 (8.30)	167.6 (6.60)

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

BVHH Code	Size	Standard Locking (Part Number)
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

General Description

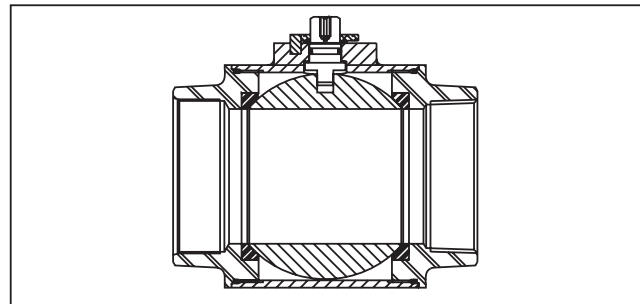
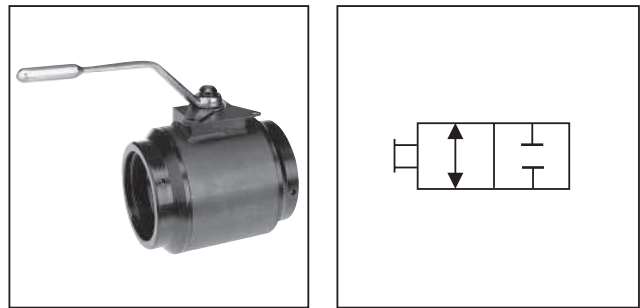
Series BVAM are 2-way ball valves rated at 138 Bar (2000 PSI). This product provides a cost effective solution where 414 Bar (6000 PSI) is not required. Many features found on the 414 Bar (6000 PSI) unit are incorporated in this cost effective product.

Operation

Parker's 2-way ball valves operate to either off or full flow by rotating the handle 90°. Ball valves are not

Specifications

Maximum Pressure	138 Bar (2000 PSI)
Body Material	Carbon Steel, Black Oxide
Ball Material	Steel, Chrome Plated
Stem Material	Steel, Zinc Plated
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)



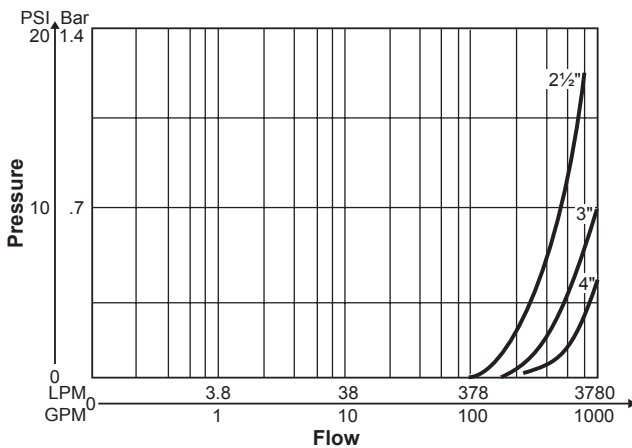
designed to be a metering or flow control device.

Features

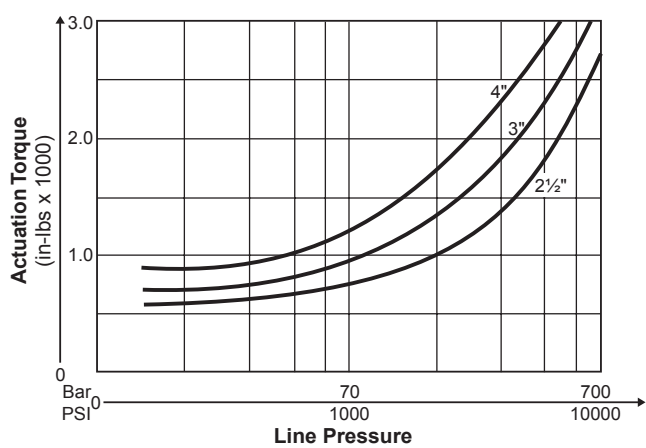
- A full range of threaded porting options allows mounting in most applications.
- The use of MoS₂ mounted ball seals and synthetic lubricant creates a low actuation torque and ensures long life.
- The wide range of spindle and ball sealing materials allows use in most known fluid applications.

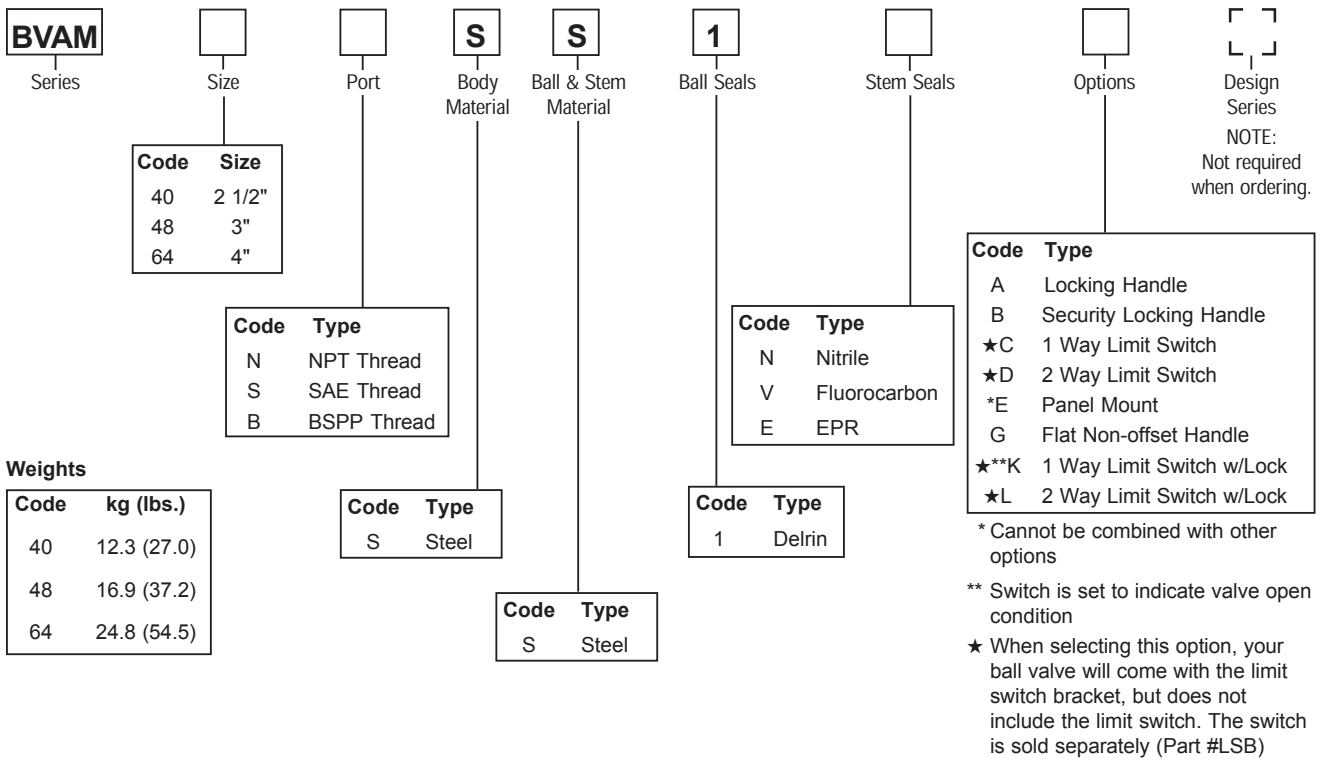
Performance Curves

Pressure Drop



Actuation Torque

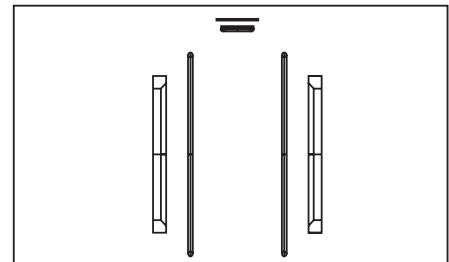




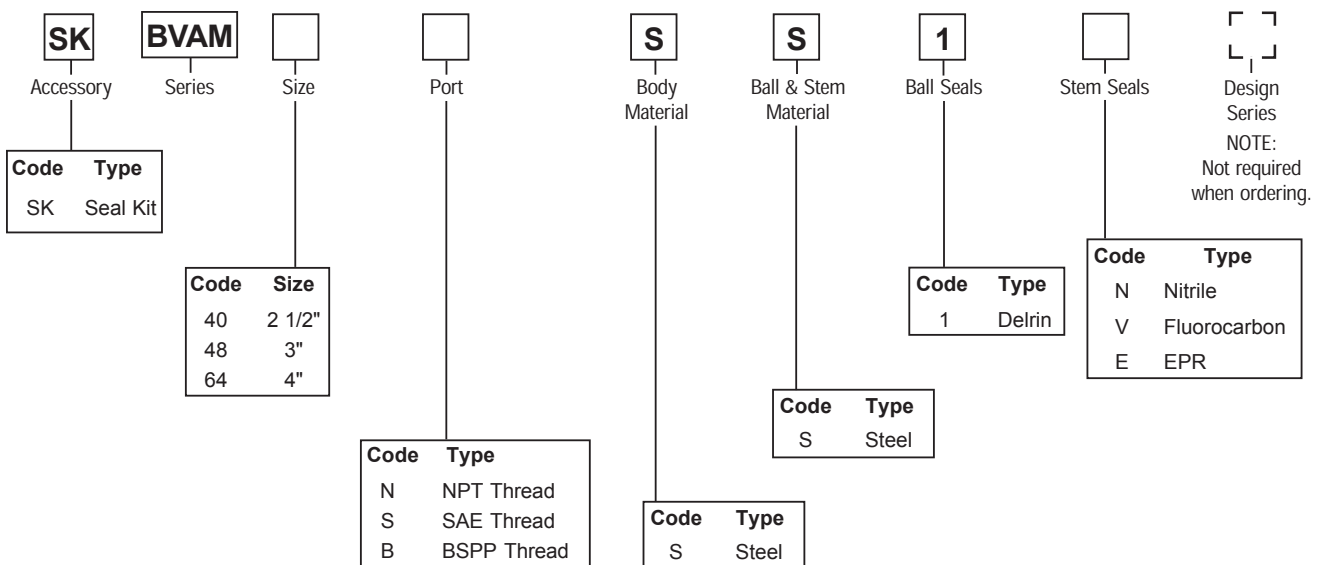
Seal Kit Accessories

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

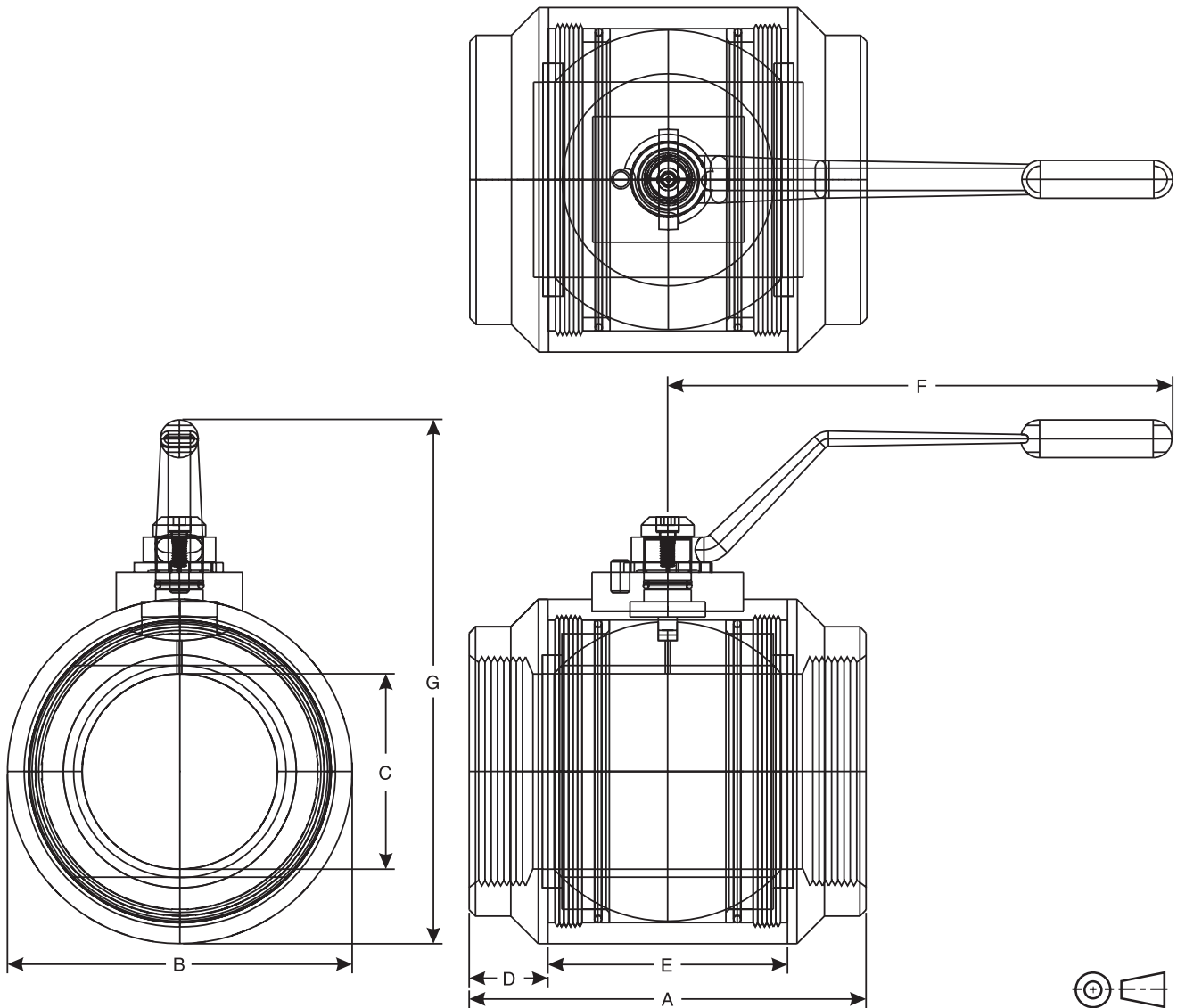
The Seal Kit includes all the o-rings, ball seals and thrust bearings that were originally installed at the factory.



Seal Kit Ordering Information

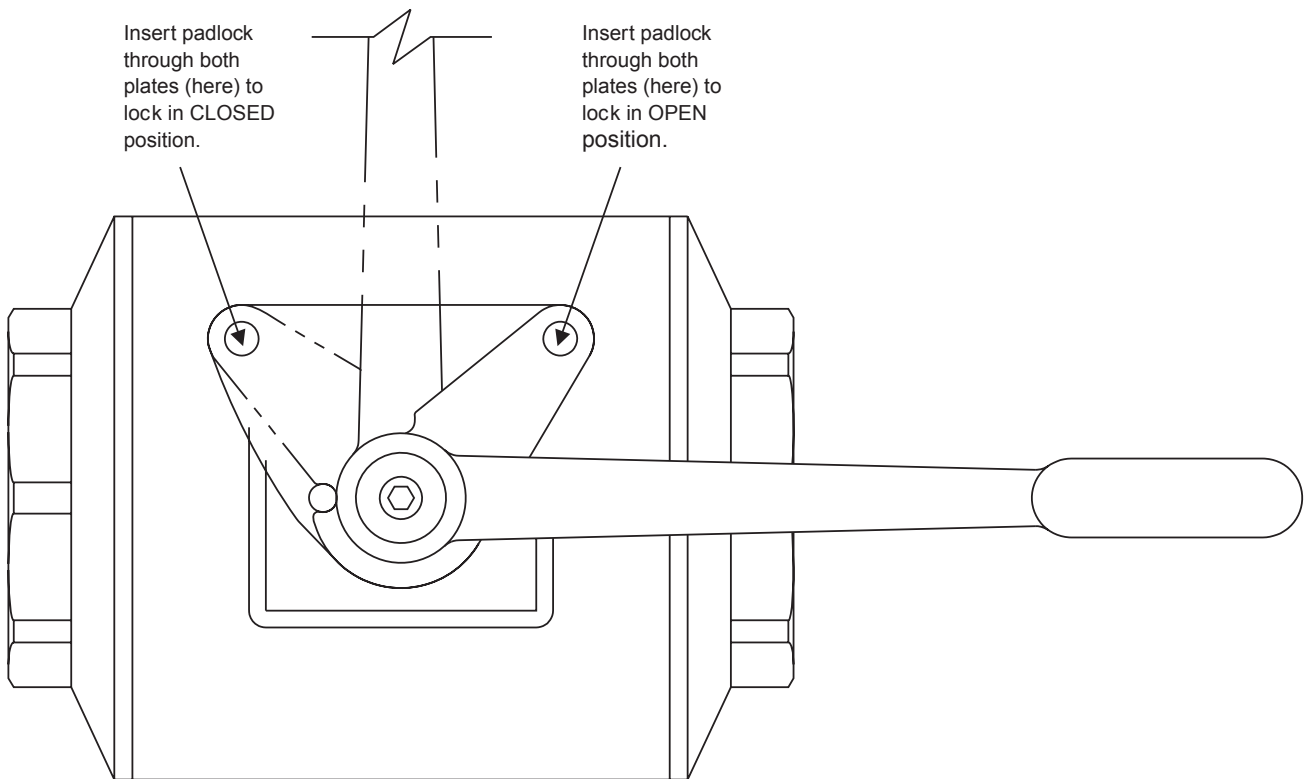


Threaded Ports



Code	Port Thread Size	Working Pressure	Dimensions mm (in)						
			A	B	C	D	E	F	G
40	2 1/2"	138 Bar (2000 PSI)	184.2 (7.25)	133.4 (5.25)	63.5 (2.50)	28.7 (1.13)	127.0 (5.00)	254.0 (10.00)	228.3 (8.99)
48	3"	138 Bar (2000 PSI)	221.2 (8.71)	158.8 (6.25)	76.2 (3.00)	35.1 (1.38)	151.4 (5.96)	254.0 (10.00)	253.7 (9.99)
64	4"	138 Bar (2000 PSI)	248.9 (9.80)	184.2 (7.25)	101.6 (4.00)	38.1 (1.50)	172.7 (6.80)	254.0 (10.00)	279.1 (10.99)

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

BVAM Code	Size	Standard Locking (Part Number)
40	2 1/2"	BVHPLK-4
48	3"	BVHPLK-4
64	4"	BVHPLK-4

General Description

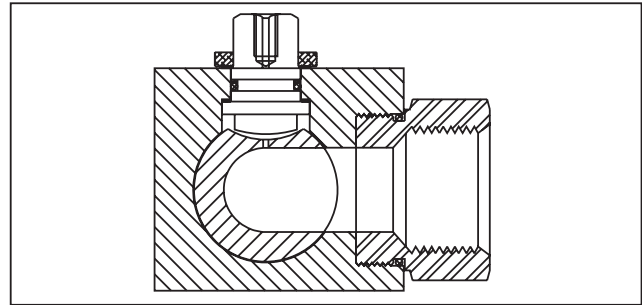
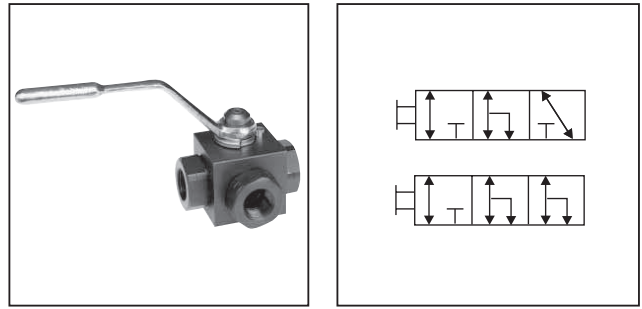
Series BV3D is a 3-way diverter. The product is rated at 207 Bar (3000 PSI) and designed to economically satisfy many 3-way applications.

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

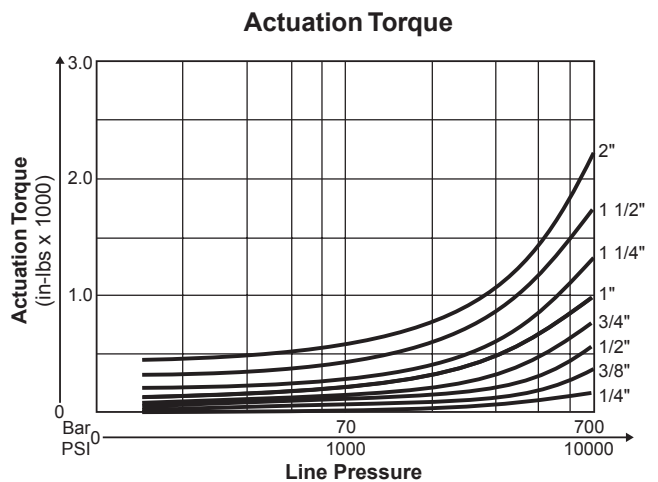
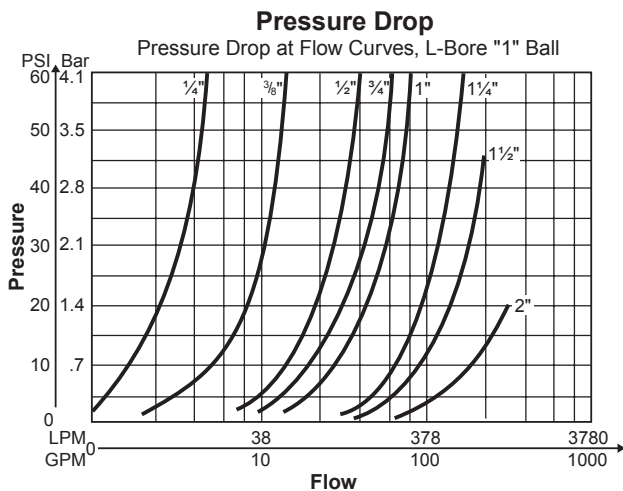
Maximum Pressure	207 Bar (3000 PSI)
Body Material	Carbon Steel, Black Oxide, Stainless Steel
Ball Material	Steel, Chrome Plated, Stainless Steel
Stem Material	Steel, Zinc Plated, Stainless Steel
Standard Handle	Steel Offset, Nickel Plated
Ball Seals	Delrin + MoS ₂
Spindle Seals	O-ring & Backup, Nitrile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



Features

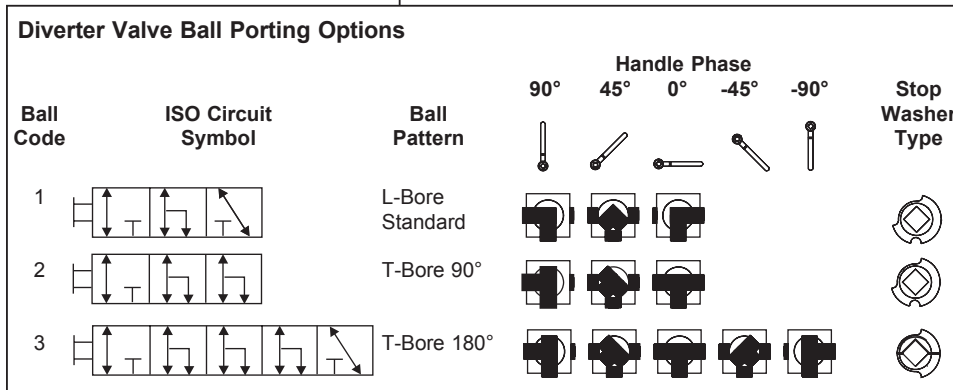
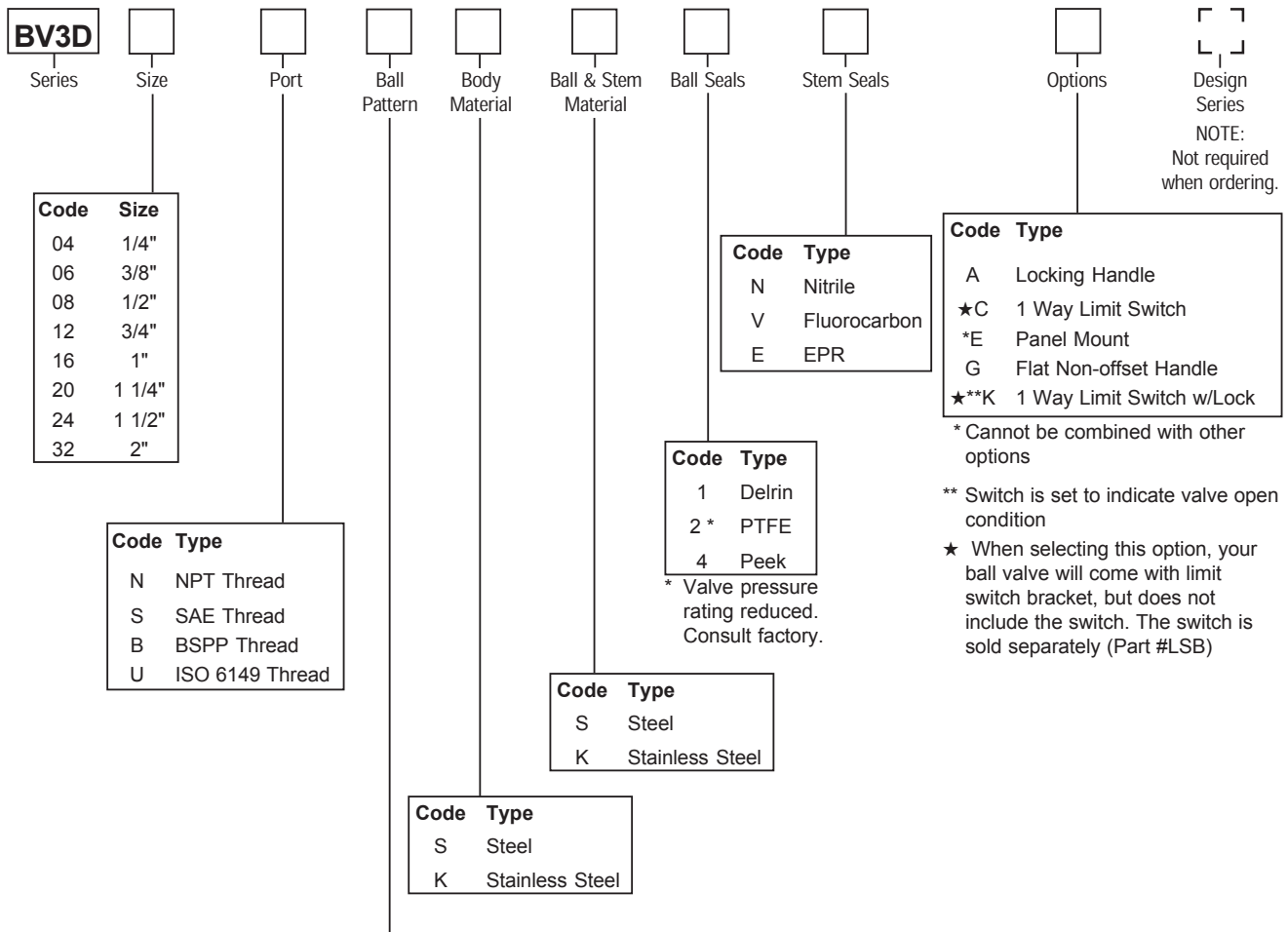
- The standard L-bore ball and T-bore option allows the valve to be utilized in a variety of applications.
- Slight port overlap reduces upstream shock during shifting.
- Utilizing the unique spindle thrust bearing design reduces actuation torque.
- The BV3D can be panel mounted which allows a variety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

Performance Curves



3300-2.p65, dd





Pressure is applied to Port 1.

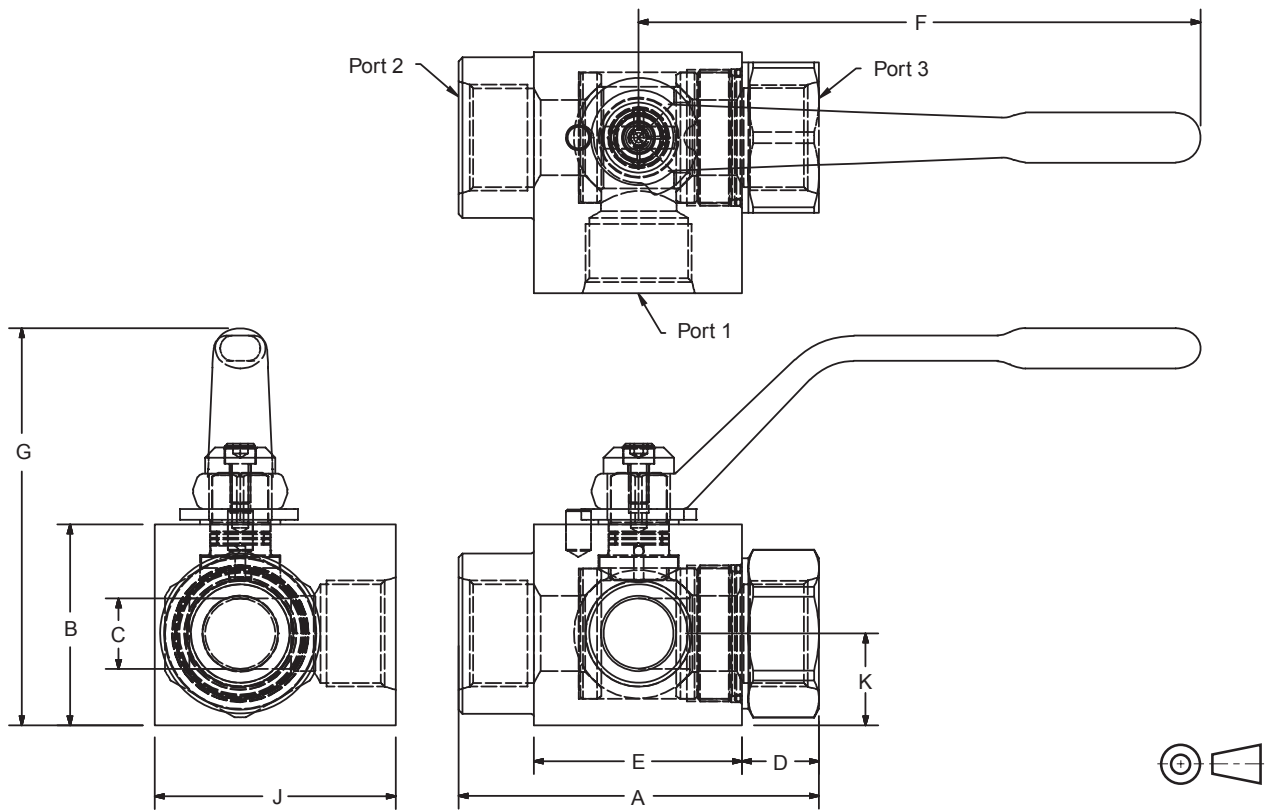
ISO 6149-1 Port Dimensions (inches)

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



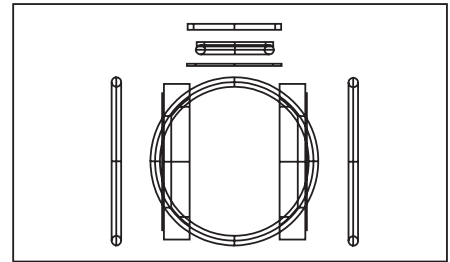
Port 1 is the pressure port.

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

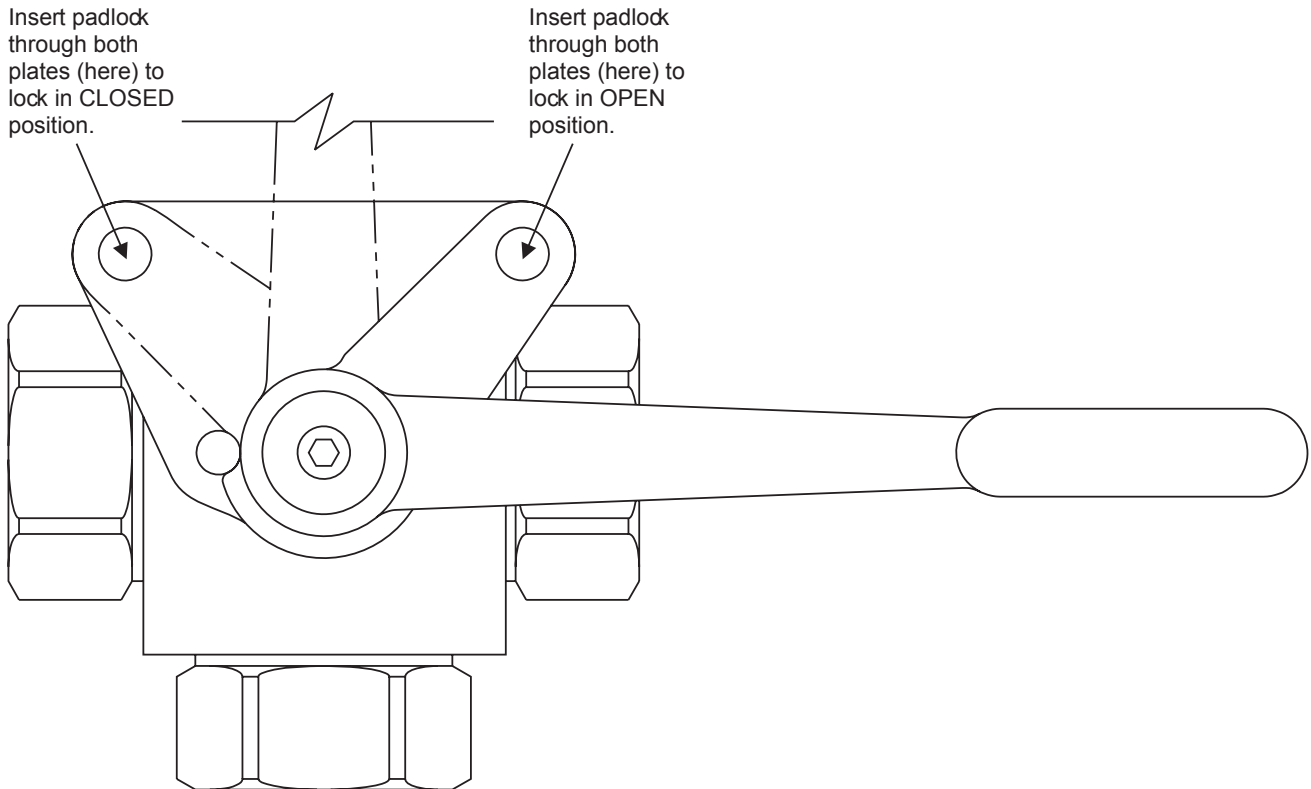
<div style="border: 1px solid black; padding: 2px; width: 40px; margin: 0 auto;">SK</div> <p>Accessory</p>	<div style="border: 1px solid black; padding: 2px; width: 60px; margin: 0 auto;">BV3D</div> <p>Series</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div> <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> <p>NOTE: Not required when ordering.</p>
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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

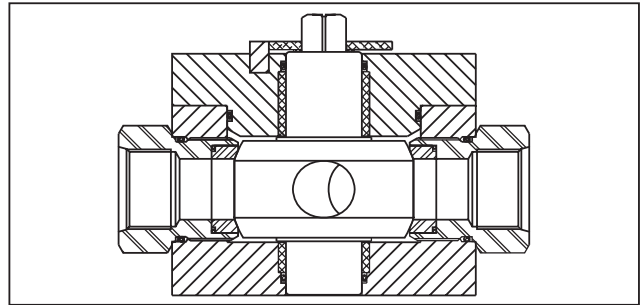
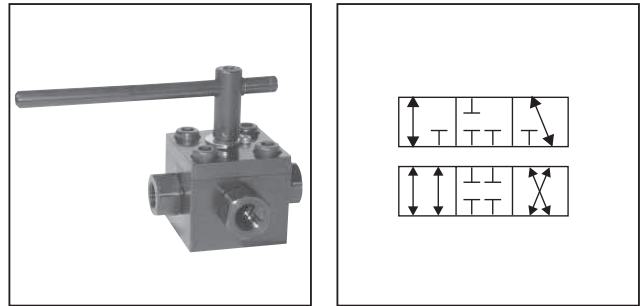
BV3D		Standard Locking
Code	Size	(Part Number)
04	1/4"	BVHPLK-1
06	3/8"	BVHPLK-1
08	1/2"	BVHPLK-1
12	3/4"	BVHPLK-2
16	1"	BVHPLK-2
20	1 1/4"	BVHPLK-3
24	1 1/2"	BVHPLK-3
32	2"	BVHPLK-3

General Description

Series BV3H and BV4H are true 3-way and 4-way high pressure valves, incorporating many of the advanced features of the 2-way product. These products come in steel and are rated at 414 Bar (6000 PSI). Ports range from 1/4" to 2" with a variety of porting options.

Operation

The BV3H Series operates by rotating the handle 90° and BV4H operates through 180° rotation of the handle, depending on the flow path. A BV4H with ball #4 is 90° operation. There is no port-to-port overlap during transition.



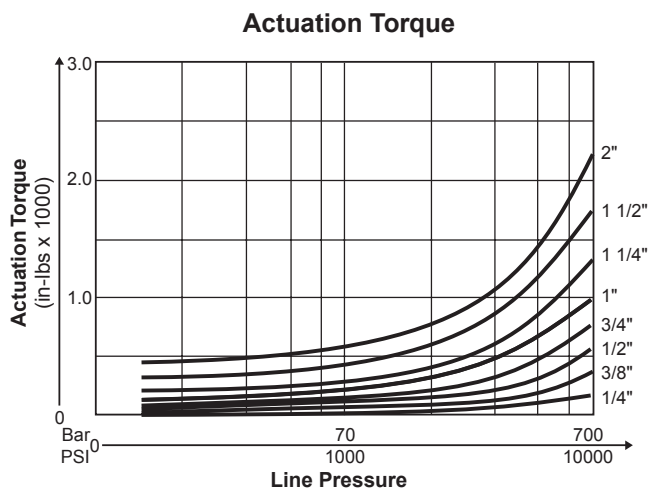
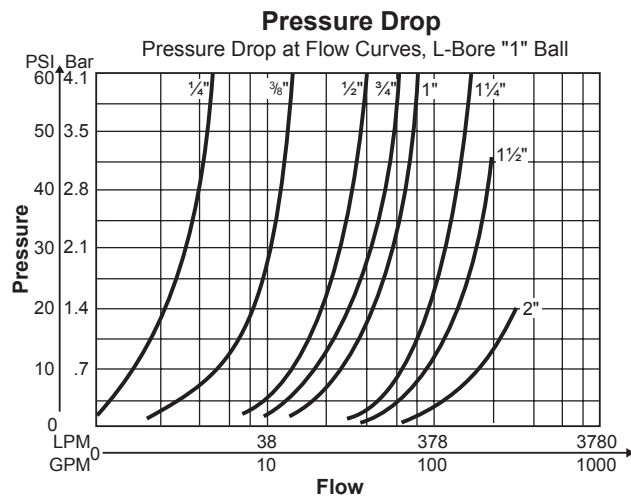
Specifications

Maximum Pressure	414 Bar (6000 PSI)
Body Material	Carbon Steel, Black Oxide
Ball Material	Steel, Chrome Plated, Trunnion mount
Standard Pattern	"L" Bore (3W), "T" Bore (4W)
Spindle Material	Steel, Zinc Plated
Standard Handle	T-Type Handle
Ball Seals	Delrin + MoS ₂
Spindle Seals	O-rings + Bearing Stacks
Operating Temperature	-30C° to +100°C (-22°F to +212°F)

Features

- Three dimensional balanced sealing for near zero leakage in any circuit.
- The unique thrust bearing spindle design reduces actuation torque and reduces the chance of the valve seizing when inactive for periods of time.
- Special seal design enables high port to port ΔP application suitability.
- A variety of ball patterns allows flexibility in many applications.

Performance Curves



3300-2.p65, dd



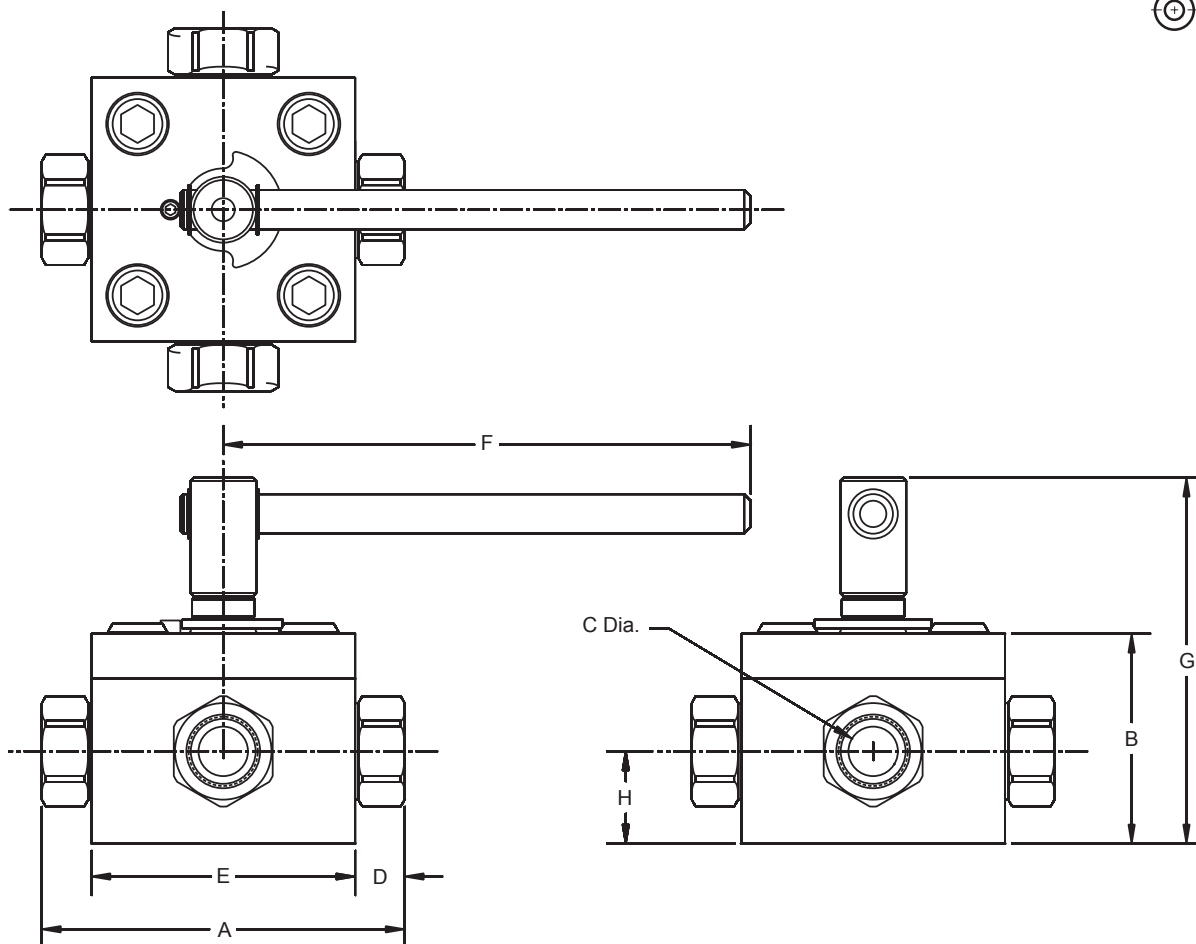
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Multiway Manifold Mount Valve Porting Options

BV3H and BV4H valves are designed with no port-to-port overlap (see ISO symbols) during transition. Use the table below to select the ball pattern ordering code.

Ball Code	ISO Circuit Symbol	Ball Pattern	Handle Phase					Stop Washer Type
			90°	45°	0°	-45°	-90°	
1		L-Bore 3-Way Std						
2		T-Bore 90° 3-Way Opt						
3		T-Bore 180° 4-Way Std						
4		X-Bore 90° 4-Way Opt						

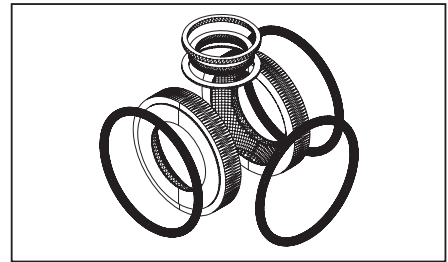
Threaded Ports



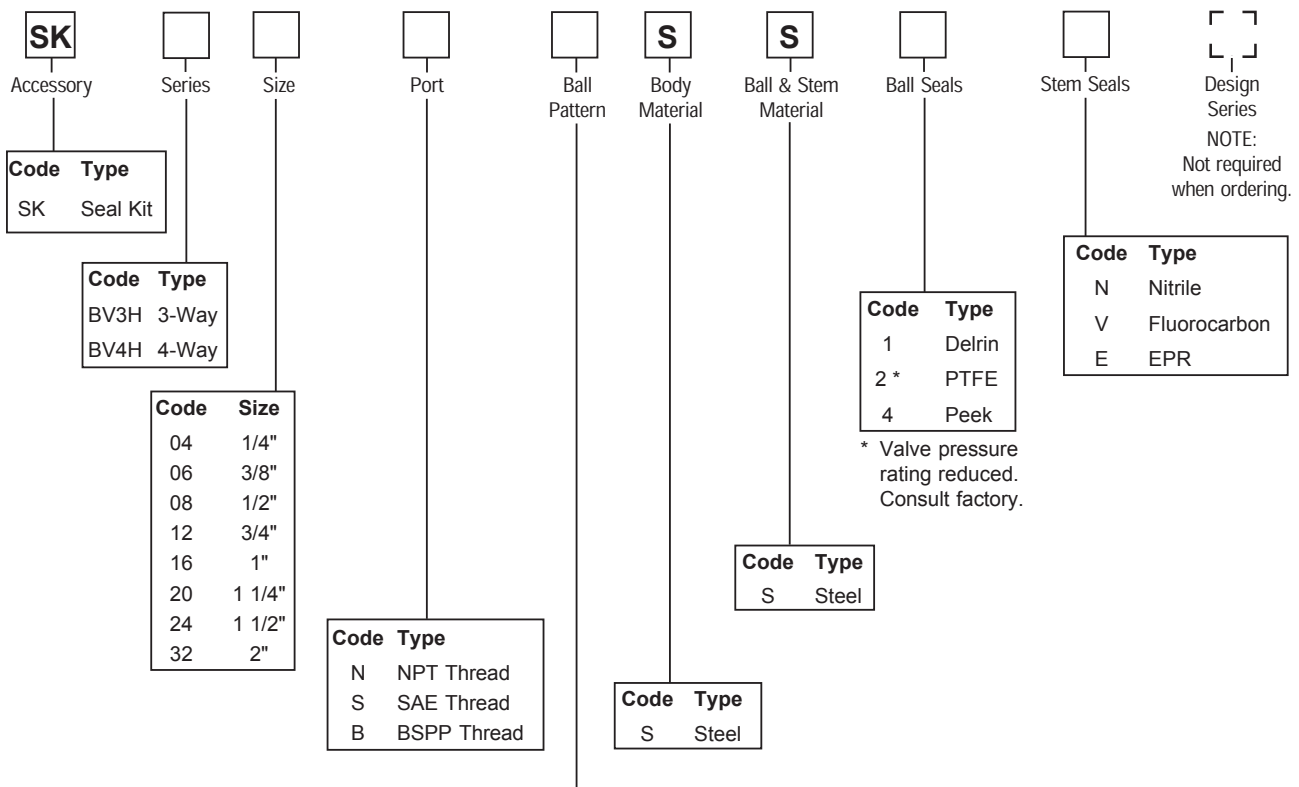
Code	Port Size	Working Pressure	Dimensions mm (in)							
			A	B	C-Dia.	D	E	F	G	H
NPT and SAE Thread										
04	1/4"	414 Bar (6000 PSI)	87.9 (3.46)	63.0 (2.48)	7.9 (0.31)	12.2 (0.48)	63.5 (2.50)	177.8 (7.00)	122.2 (4.81)	31.0 (1.22)
06	3/8"	414 Bar (6000 PSI)	87.9 (3.46)	63.0 (2.48)	7.9 (0.31)	12.2 (0.48)	63.5 (2.50)	177.8 (7.00)	122.2 (4.81)	31.0 (1.22)
08	1/2"	414 Bar (6000 PSI)	115.6 (4.55)	69.9 (2.75)	11.2 (0.44)	19.6 (0.77)	76.2 (3.00)	177.8 (7.00)	127.0 (5.00)	33.8 (1.33)
12	3/4"	414 Bar (6000 PSI)	136.1 (5.36)	82.0 (3.23)	16.0 (0.63)	17.3 (0.68)	101.6 (4.00)	254.0 (10.00)	157.2 (6.19)	38.1 (1.50)
16	1"	414 Bar (6000 PSI)	174.8 (6.88)	101.1 (3.98)	22.4 (0.88)	23.9 (0.94)	127.0 (5.00)	254.0 (10.00)	176.3 (6.94)	44.5 (1.75)
20	1 1/4"	414 Bar (6000 PSI)	188.7 (7.43)	116.6 (4.59)	28.7 (1.13)	21.1 (0.83)	146.6 (5.77)	368.3 (14.50)	206.5 (8.13)	52.8 (2.08)
24	1 1/2"	414 Bar (6000 PSI)	233.4 (9.19)	129.0 (5.08)	33.3 (1.31)	24.6 (0.97)	184.2 (7.25)	368.3 (14.50)	219.2 (8.63)	57.7 (2.27)
32	2"	414 Bar (6000 PSI)	300.0 (11.81)	157.7 (6.21)	44.5 (1.75)	32.5 (1.28)	235.0 (9.25)	368.3 (14.50)	256.0 (10.08)	68.8 (2.71)

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

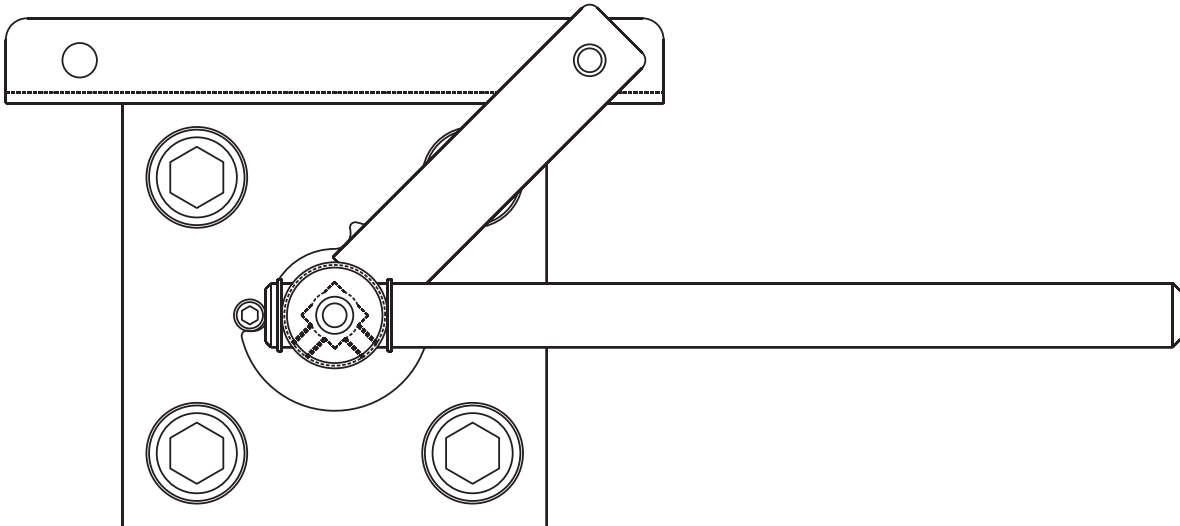


Multway Manifold Mount Valve Porting Options

BV3H and BV4H valves are designed with no port-to-port overlap (see ISO symbols) during transition. Use the table below to select the ball pattern ordering code.

Ball Code	ISO Circuit Symbol	Ball Pattern	Handle Phase					Stop Washer Type
			90°	45°	0°	-45°	-90°	
1		L-Bore 3-Way Std						
2		T-Bore 90° 3-Way Opt						
3		T-Bore 180° 4-Way Std						
4		X-Bore 90° 4-Way Opt						

BVHPLH: Standard Series 'BVHPLH-*' 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

BV3H and BV4H		Standard Locking
Code	Size	(Part Number)
04	1/4"	BVHPLH-2
06	3/8"	BVHPLH-2
08	1/2"	BVHPLH-3
12	3/4"	BVHPLH-4
16	1"	BVHPLH-5
20	1 1/4"	BVHPLH-6
24	1 1/2"	BVHPLH-7
32	2"	BVHPLH-8

General Description

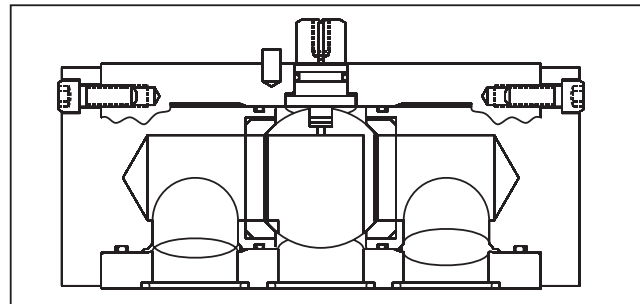
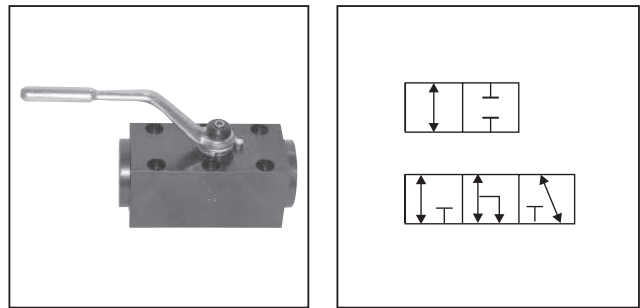
Series BVMM is a manifold mounted high pressure 414 Bar (6000 PSI) 2 or 3-way ball valve. Manifold mounting eliminates an external fluid connection.

Operation

Series BVMM valves operate through either 90° or 180° depending on the ball pattern chosen. For 3-way valves, pressure is applied to Port 1.

Specifications

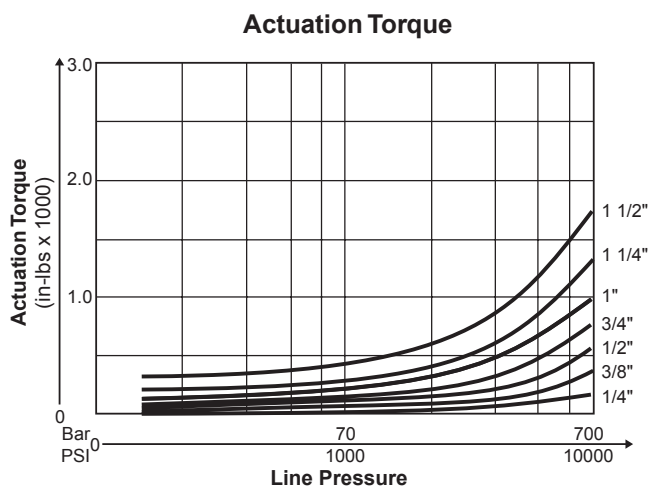
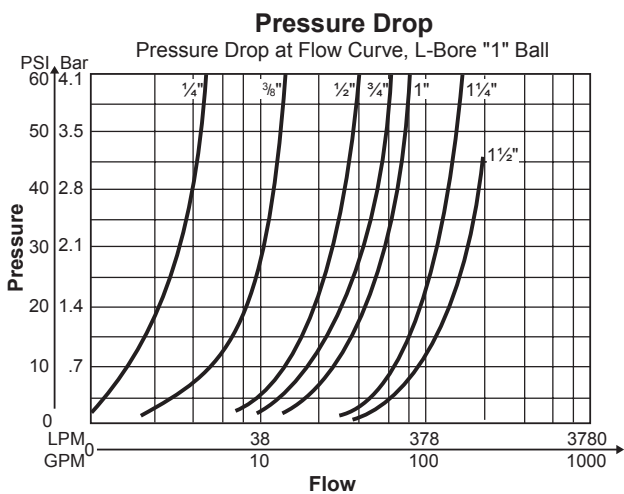
Maximum Pressure	414 Bar (6000 PSI)
Body Material	Carbon Steel, Black Oxide
Ball Material	Steel, Chrome Plated
Spindle Material	Steel, Nickel Plated
Standard Handle	Steel, Offset, Nickel Plated
Ball Seals	Delrin + MoS ₂
Spindle Seals	O-rings & Backup, Nitrile
Operating Temperature	-30°C to +100°C (-22°F to +212°F)



Features

- Variety of ball patterns allow for different flow paths and flexibility for many applications.
- Thrust bearings in the spindle and delrin moly ball seals result in low actuation torque as well as extended service life.

Performance Curves



BVMM Series	<input type="checkbox"/> Size	<input type="checkbox"/> Ball Pattern	S Body Material	S Ball & Stem Material	<input type="checkbox"/> Ball Seals	<input type="checkbox"/> Stem Seals	<input type="checkbox"/> Options	<input type="checkbox"/> Design Series NOTE: Not required when ordering.
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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	Type
N	Nitrile
V	Fluorocarbon
E	EPR

Code	Type
1	Delrin
2 *	PTFE
4	Peek

* Valve pressure rating reduced. Consult factory.

Code	Type
S	Steel

Code	Type
S	Steel

Code	Type
A	Locking Handle
★C	1 Way Limit Switch
G	Flat Non-offset Handle
★*K	1 Way Limit Switch w/Lock

* 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)

Weights		
Code	kg	(lbs.)
04	1.1	(2.5)
06	2.0	(4.4)
08	2.3	(5.1)
12	3.4	(7.5)
16	5.2	(11.5)
20	10.5	(23.1)
24	15.1	(33.3)
32	24.0	(52.9)

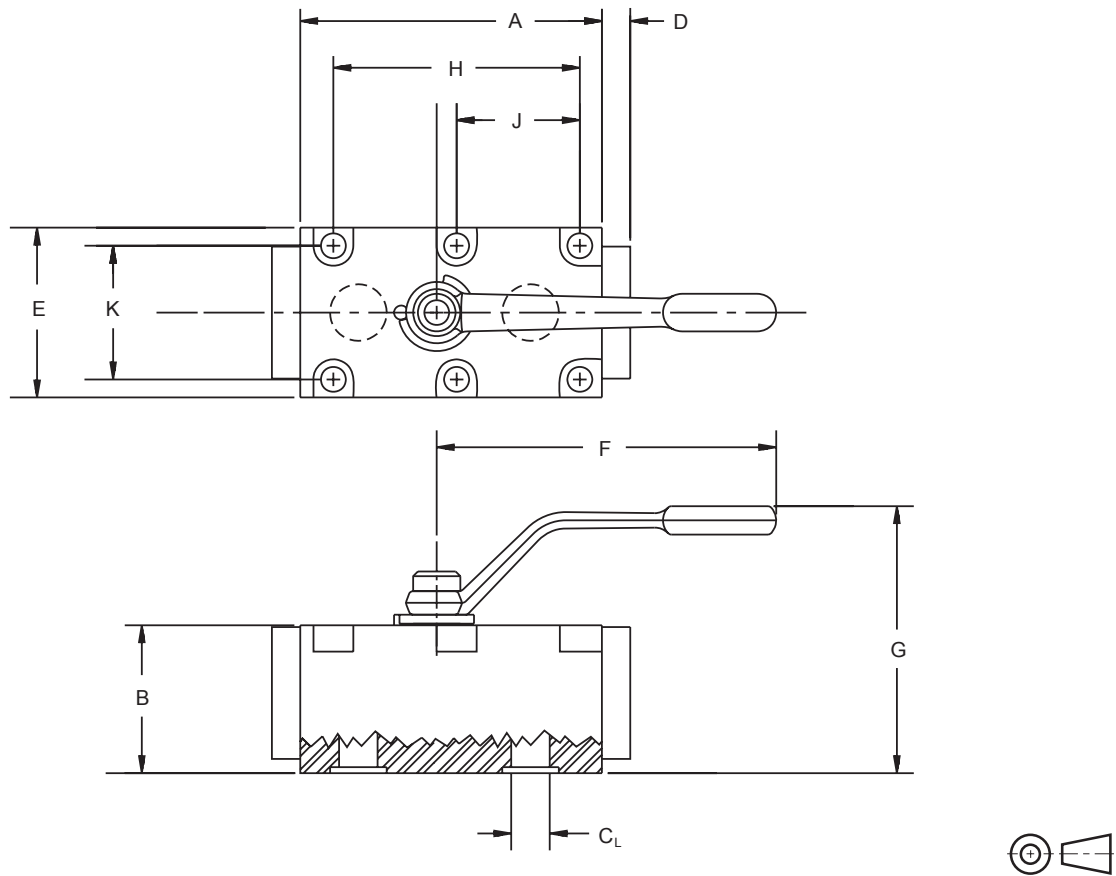
Multiway Manifold Mount Valve Porting Options

Ball Code	ISO Circuit Symbol	Ball Pattern	Handle Phase					Stop Washer Type
			90°	45°	0°	-45°	-90°	
1		2-Way						
2		L-Bore Port Overlap						
3		L-Bore No Overlap						
4		T-Bore 90°						
5		T-Bore 180°						

Please request a certified print before building a manifold.

For 3-way valves, pressure is applied to Port 1.

Manifold Mounted



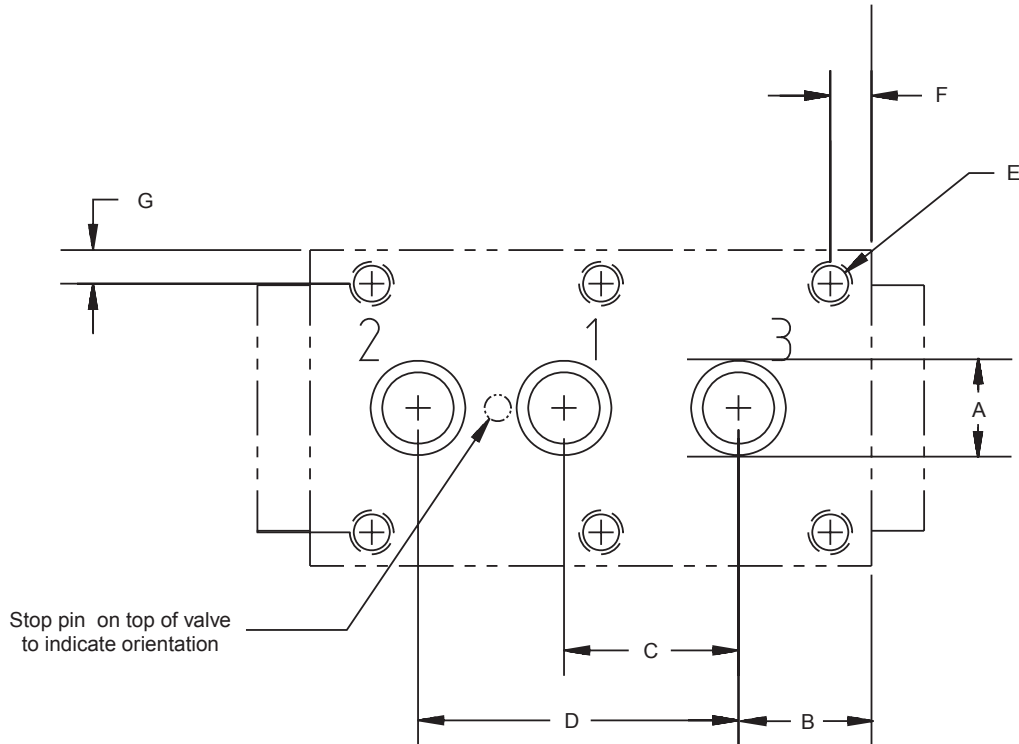
Please request a certified print before building a manifold.

Code	Port Size	Working Pressure	Dimensions mm (in)									
			A	B	C _L	D	E	F	G	H	J	K
BVMM 2-Way and 3-Way Manifold Mounted												
04 ¹	1/4"	414 Bar (6000 PSI)	66.5 (2.62)	38.1 (1.50)	6.1 (0.24)	9.5 (0.375)	50.8 (2.00)	114.3 (4.50)	78.2 (3.08)	42.0 (1.653)	n/a (n/a)	35.0 (1.377)
06 ¹	3/8"	414 Bar (6000 PSI)	81.8 (3.22)	50.0 (1.97)	9.7 (0.38)	9.5 (0.375)	57.2 (2.25)	114.3 (4.50)	90.2 (3.55)	55.0 (2.165)	n/a (n/a)	40.0 (1.575)
08	1/2"	414 Bar (6000 PSI)	106.1 (4.00)	50.0 (1.97)	13.0 (0.51)	9.5 (0.375)	57.2 (2.25)	114.3 (4.50)	89.9 (3.54)	83.0 (3.267)	41.5 (1.634)	45.0 (1.771)
12	3/4"	414 Bar (6000 PSI)	141.5 (5.57)	69.3 (2.73)	20.1 (0.79)	9.5 (0.375)	69.9 (2.75)	177.8 (7.00)	131.6 (5.18)	97.0 (3.818)	48.5 (1.909)	51.0 (2.007)
16	1"	414 Bar (6000 PSI)	156.5 (6.16)	81.0 (3.19)	23.9 (0.94)	9.5 (0.375)	82.6 (3.25)	177.8 (7.00)	143.0 (5.63)	115.0 (4.528)	57.5 (2.264)	60.0 (2.362)
20	1 1/4"	414 Bar (6000 PSI)	180.3 (7.10)	100.1 (3.94)	31.8 (1.25)	12.7 (0.50)	101.6 (4.00)	254.0 (10.00)	179.1 (7.05)	136.0 (5.354)	68.0 (2.677)	78.0 (3.070)
24	1 1/2"	414 Bar (6000 PSI)	196.1 (7.72)	100.3 (3.95)	38.1 (1.50)	17.5 (0.69)	127.0 (5.00)	254.0 (10.00)	179.6 (7.07)	112.0 (4.409)	55.9 (2.199)	95.0 (3.740)
32	2"	414 Bar (6000 PSI)	246.9 (9.72)	124.0 (4.88)	47.8 (1.88)	22.4 (0.88)	152.4 (6.00)	254.0 (10.00)	202.9 (7.99)	136.0 (5.354)	68.2 (2.684)	112.0 (4.409)

NOTES: (1) These sizes use only the four outside mounting holes. Dimension J is not applicable.
 (2) Ball portings for multiway valves are somewhat smaller than their 2-way counterparts. Please refer to dimension C to confirm suitability.

3300-2.p65, dd

Manifold Porting Specifications

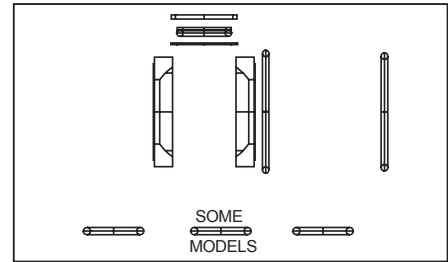


For 3-way valves, pressure is applied to Port 1.
Please request a certified print before building a manifold.

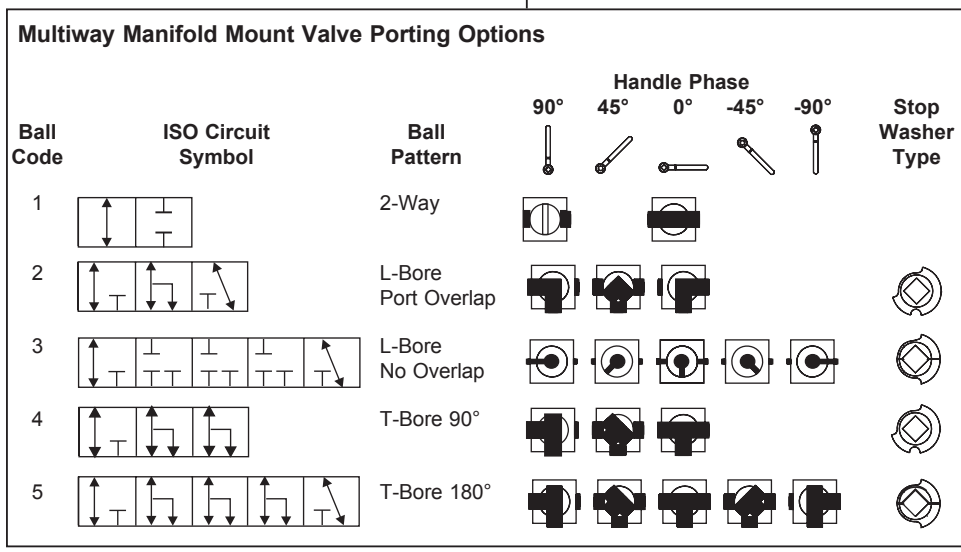
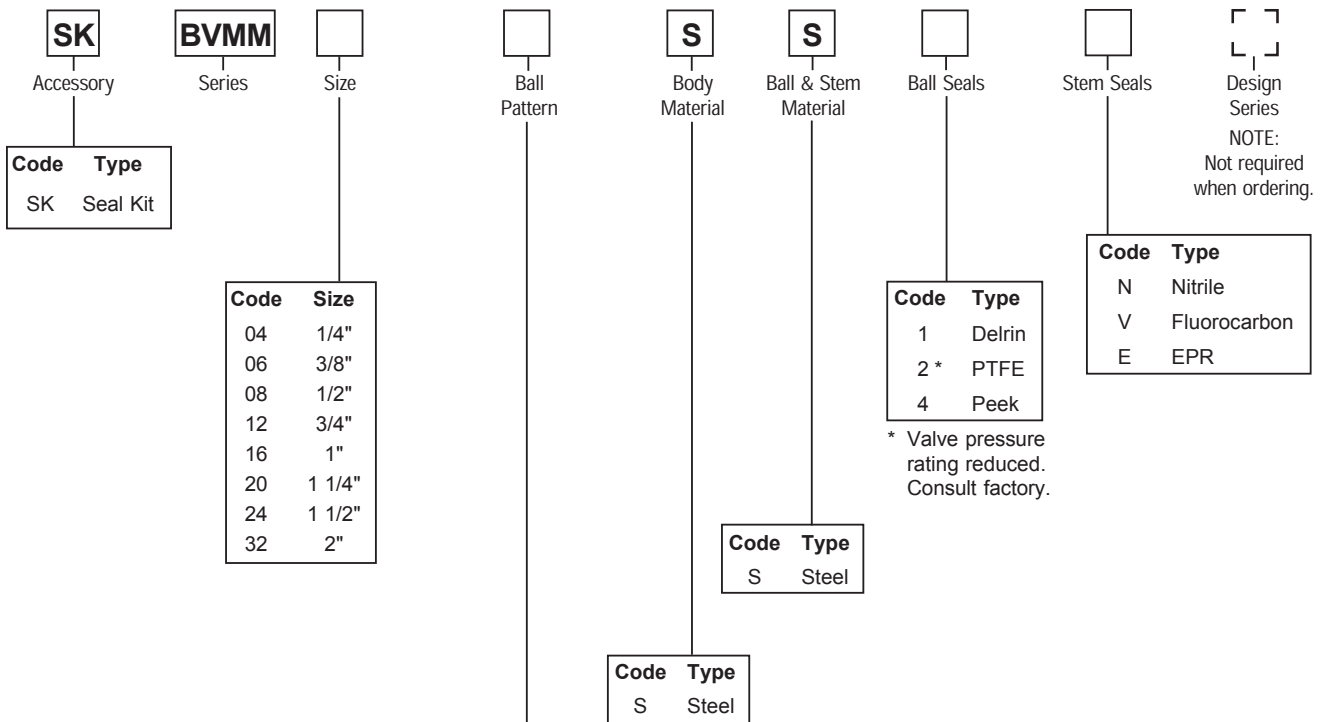
Code	Port Size	A	B	C	D	E	F	G
BVMM Mounting Pad Specifications								
04	1/4"	12.7 (0.500)	16.3 (0.642)	17.0 (0.670)	39.0 (1.535)	8.4 (0.330)	15.5 (0.612)	7.9 (0.312)
06	3/8"	15.9 (0.625)	21.8 (0.860)	19.1 (0.750)	44.0 (1.732)	8.4 (0.330)	19.6 (0.770)	8.6 (0.340)
08	1/2"	19.1 (0.750)	24.1 (0.947)	31.6 (1.243)	58.0 (2.283)	8.4 (0.330)	7.4 (0.293)	6.1 (0.240)
12	3/4"	27.0 (1.063)	40.5 (1.594)	38.3 (1.506)	69.0 (2.716)	10.4 (0.410)	22.7 (0.892)	9.4 (0.372)
16	1"	33.4 (1.313)	39.3 (1.549)	43.0 (1.692)	81.0 (3.188)	13.0 (0.510)	19.3 (0.760)	11.3 (0.444)
20	1 1/4"	39.7 (1.563)	40.1 (1.580)	50.0 (1.970)	96.0 (3.780)	13.0 (0.510)	17.2 (0.676)	11.8 (0.465)
24	1 1/2"	47.6 (1.875)	42.2 (1.661)	55.9 (2.199)	112.0 (4.409)	16.8 (0.660)	42.2 (1.661)	16.0 (0.630)
32	2"	57.2 (2.250)	55.3 (2.176)	68.2 (2.684)	136.0 (5.354)	20.6 (0.810)	55.3 (2.178)	20.2 (0.796)

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

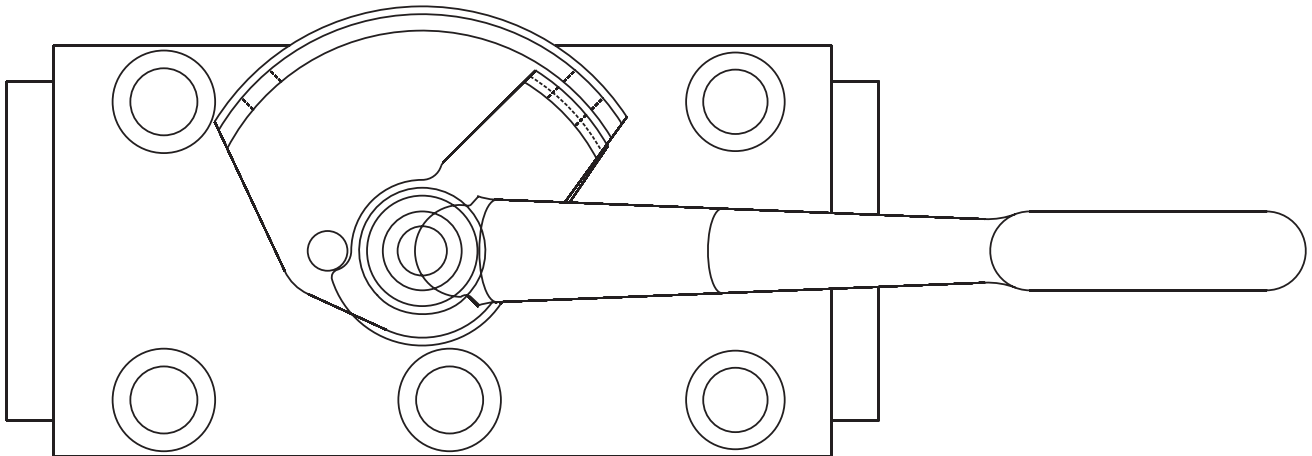
The Seal Kit includes all the o-rings, ball seals and thrust bearings that were originally installed at the factory. A sketch of these parts is provided at the right.



Ordering Information



BVMM2LK: Standard Series 'BVMM2LK-*' 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

BVMM		Standard Locking
Code	Size	(Part Number)
04	1/4"	BVMM2LK-1
06	3/8"	BVMM2LK-2
08	1/2"	BVMM2LK-3
12	3/4"	BVMM2LK-4
16	1"	BVMM2LK-5
20	1 1/4"	BVMM2LK-6
24	1 1/2"	BVMM2LK-7
32	2"	BVMM2LK-8

3300-2.p65, dd

General Description

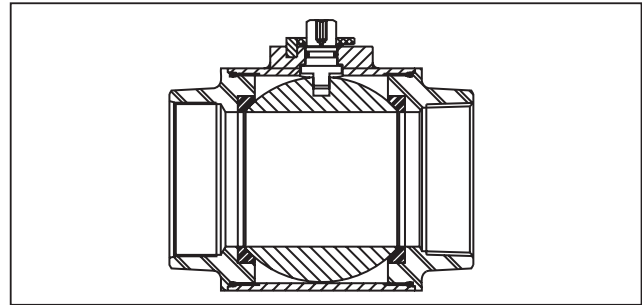
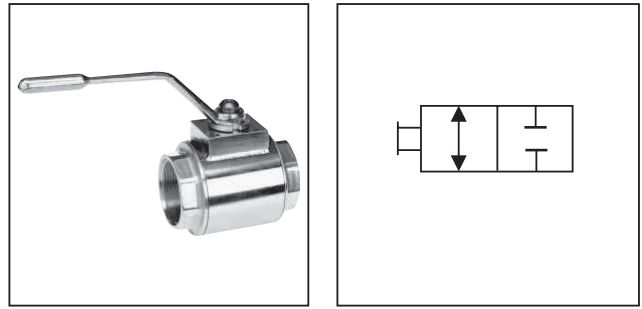
Series BVAL ball valves are designed to meet the needs of suction line and low pressure applications. This series is available from 1/4" to 4" ports NPT, SAE and BSPP, and is designed to assure leak free hydraulic suction and return line durability.

Operation

Parker's 2-way ball valves operate to either off or full flow by rotating the handle 90°. Ball valves are not designed to be a metering or flow control device.

Specifications

Maximum Pressure	28 Bar (400 PSI)
Body Material	Aluminum
Ball Material	Brass, Chrome Plated
Stem Material	Brass, Oversize Bearing Area
Standard Handle	Steel Offset, Nickel Plated
Ball Seals	PTFE standard
Spindle Seals	O-ring & Backup, Nitrile
Operating Temperature	-30°C to +100°C (-22°F to +212°F)

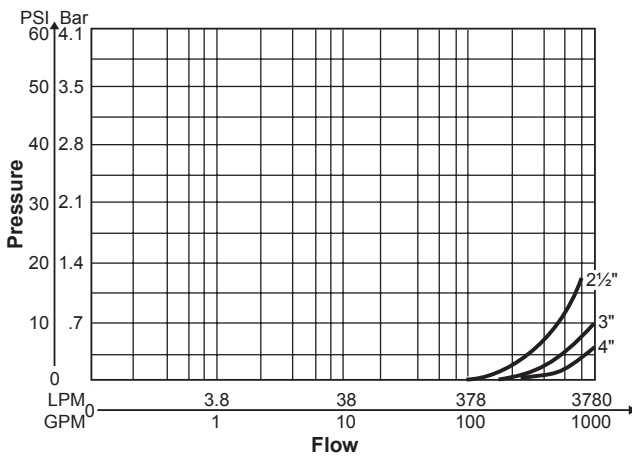


Features

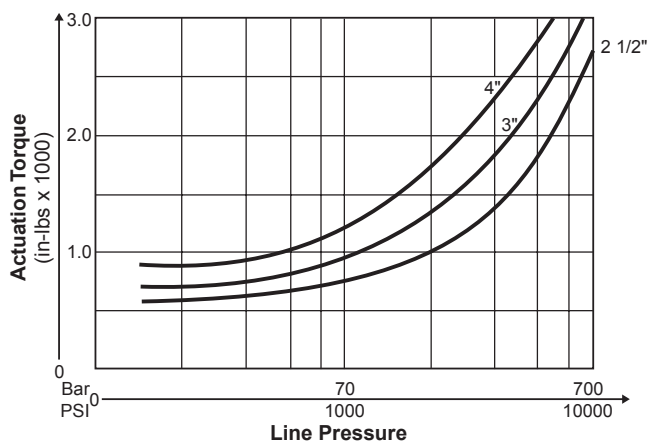
- Unrestricted bore from 1/4" to 4".
- Unrestricted flow and cavitation eliminated.
- Availability of NPT, SAE and BSPP o-ring sealed ports assure leak-free service.
- Choice of optional seal materials allows use with phosphate esters, water glycols and other media.
- Utilizes top grade PTFE ball seats with o-ring seals throughout to assure smooth and leak-free operation.

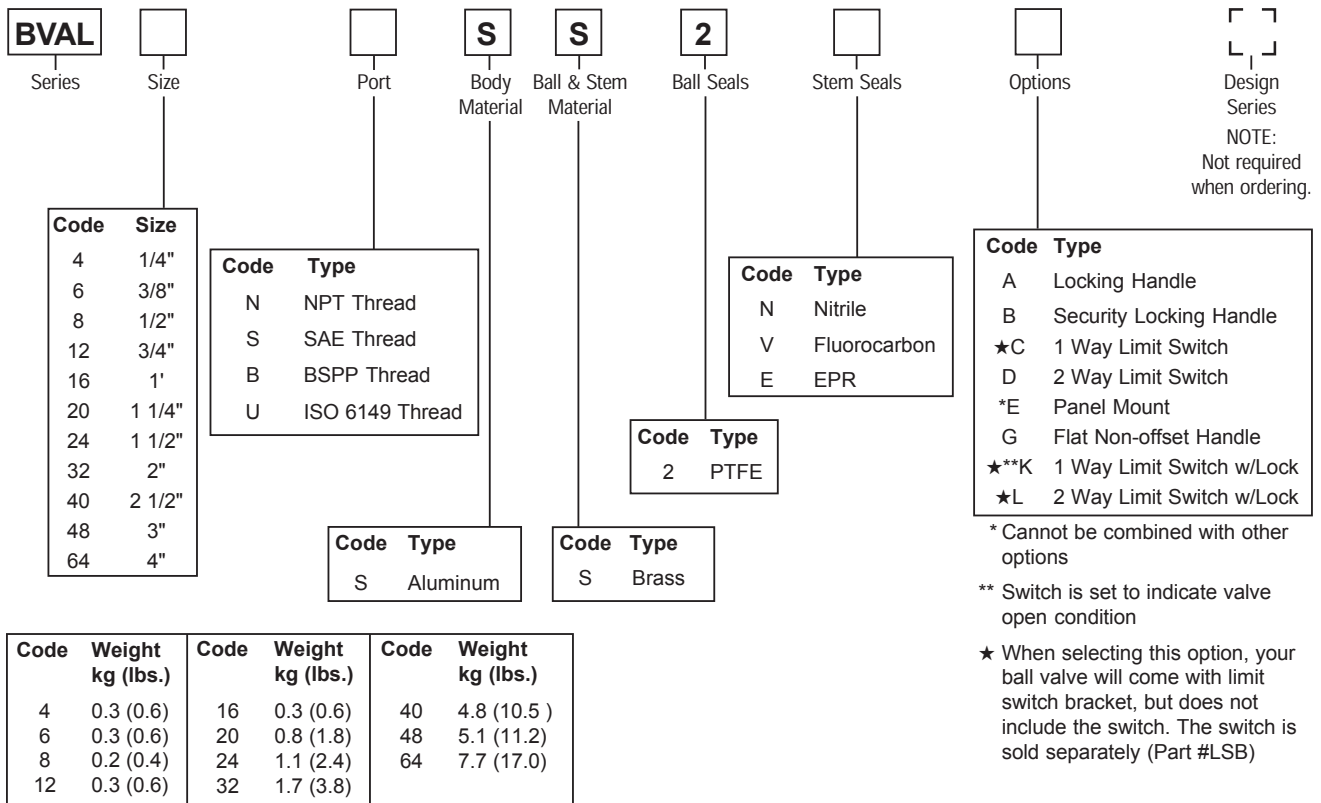
Performance Curves

Pressure Drop



Actuation Torque

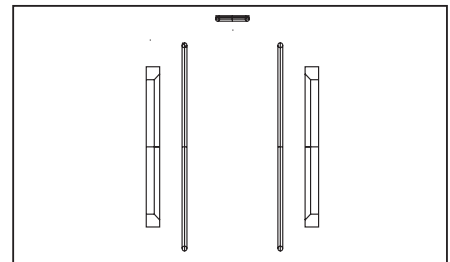




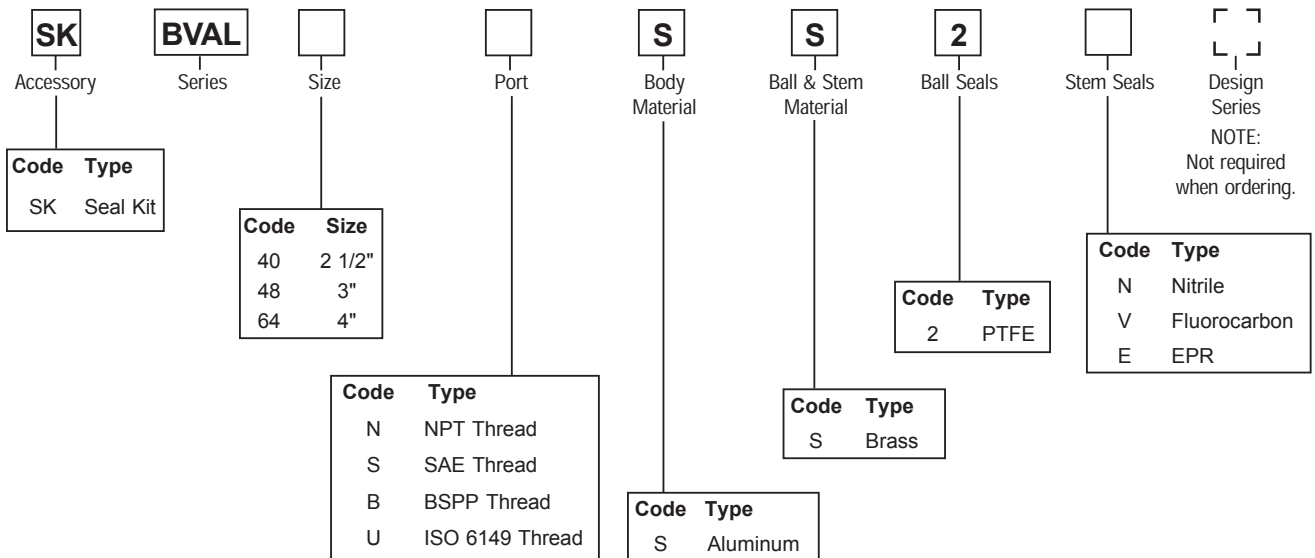
Seal Kit Accessories

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

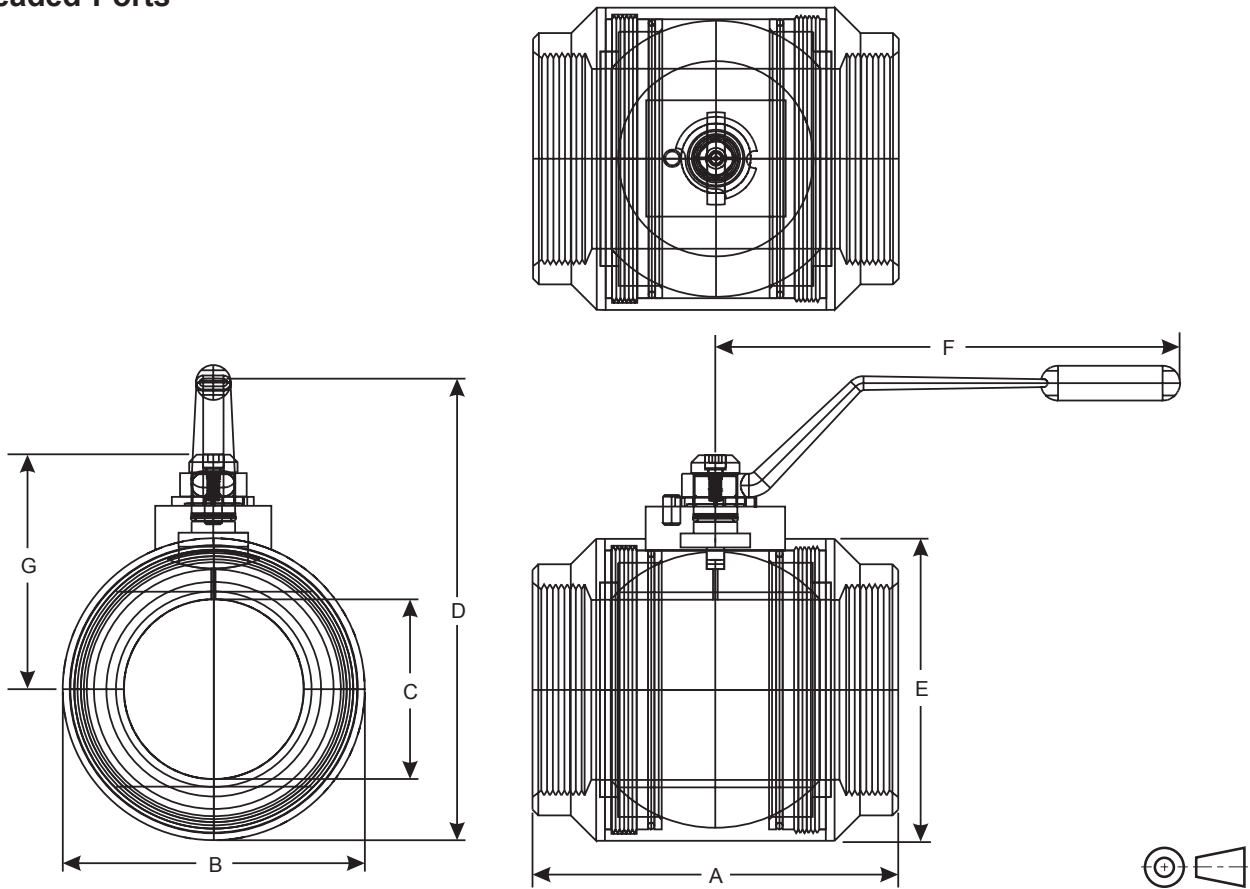
The Seal Kit includes all the o-rings, ball seals and thrust bearings that were originally installed at the factory. A sketch of these parts for most 2-way valves is provided at the right.



Seal Kit Ordering Information

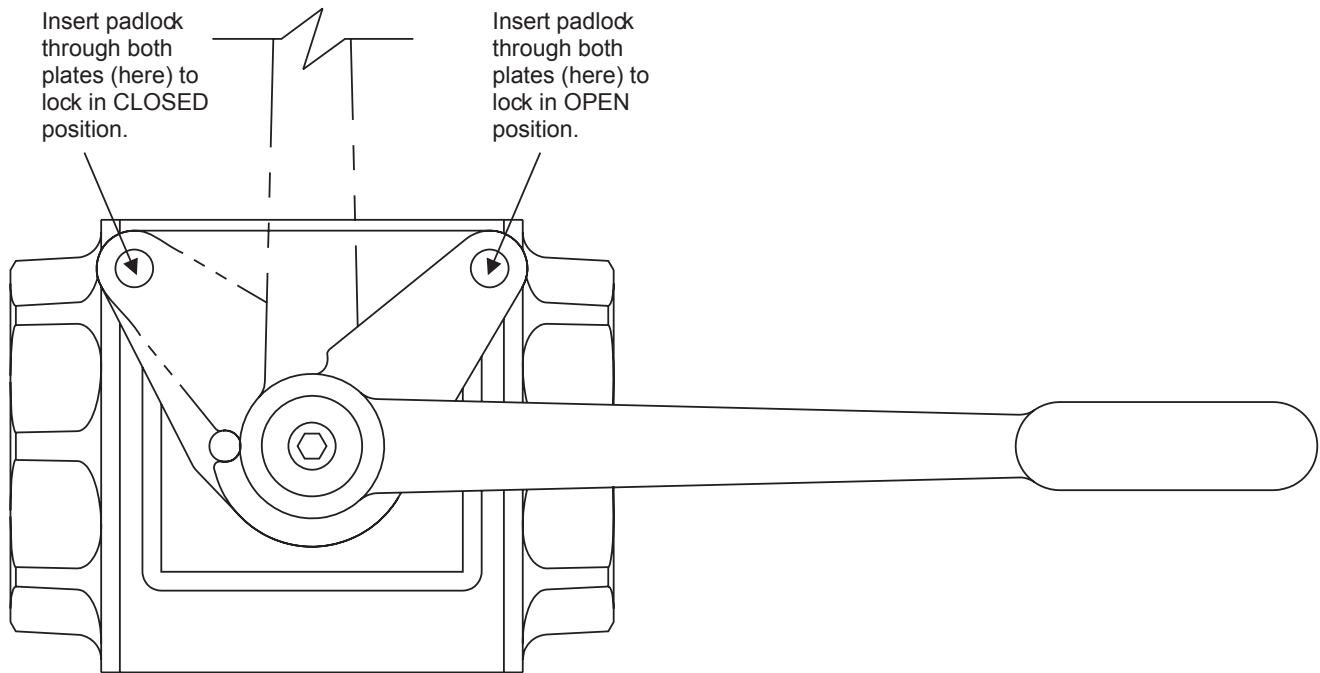


Threaded Ports



Code	Port Thread Size	Working Pressure	Dimensions mm (in)						
			A	B	C	D	E	F	G
NPT and SAE Thread									
4	1/4"	28 Bar (400 PSI)	66.8 (2.63)	38.1 (1.50)	6.4 (0.25)	65.8 (2.59)	38.1 (1.50)	85.6 (3.37)	33.3 (1.31)
6	3/8"	28 Bar (400 PSI)	66.8 (2.63)	38.1 (1.50)	9.7 (0.38)	65.8 (2.59)	38.1 (1.50)	85.6 (3.37)	33.3 (1.31)
8	1/2"	28 Bar (400 PSI)	66.8 (2.63)	38.1 (1.50)	12.7 (0.50)	65.8 (2.59)	38.1 (1.50)	85.6 (3.37)	33.3 (1.31)
12	3/4"	28 Bar (400 PSI)	83.3 (3.28)	44.5 (1.75)	19.1 (0.75)	95.8 (3.77)	44.5 (1.75)	130.0 (5.12)	36.3 (1.43)
16	1"	28 Bar (400 PSI)	88.4 (3.48)	50.8 (2.00)	25.4 (1.00)	102.1 (4.02)	50.8 (2.00)	130.0 (5.12)	39.6 (1.56)
20	1 1/4"	28 Bar (400 PSI)	99.1 (3.90)	69.9 (2.75)	31.8 (1.25)	129.8 (5.11)	66.3 (2.61)	173.0 (6.81)	53.8 (2.12)
24	1 1/2"	28 Bar (400 PSI)	109.7 (4.32)	82.6 (3.25)	38.1 (1.50)	142.2 (5.60)	78.7 (3.10)	173.0 (6.81)	59.9 (2.36)
32	2"	28 Bar (400 PSI)	124.5 (4.90)	101.6 (4.00)	50.8 (2.00)	160.8 (6.33)	97.3 (3.83)	173.0 (6.81)	67.3 (2.65)
40	2 1/2"	28 Bar (400 PSI)	152.4 (6.00)	127.0 (5.00)	63.5 (2.50)	200.4 (7.89)	135.9 (5.35)	222.3 (8.75)	92.2 (3.63)
48	3"	28 Bar (400 PSI)	185.7 (7.31)	152.4 (6.00)	76.2 (3.00)	224.8 (8.85)	160.3 (6.31)	222.3 (8.75)	103.9 (4.09)
64	4"	28 Bar (400 PSI)	225.8 (8.89)	177.8 (7.00)	101.6 (4.00)	251.5 (9.90)	186.9 (7.36)	222.3 (8.75)	117.6 (4.63)

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.



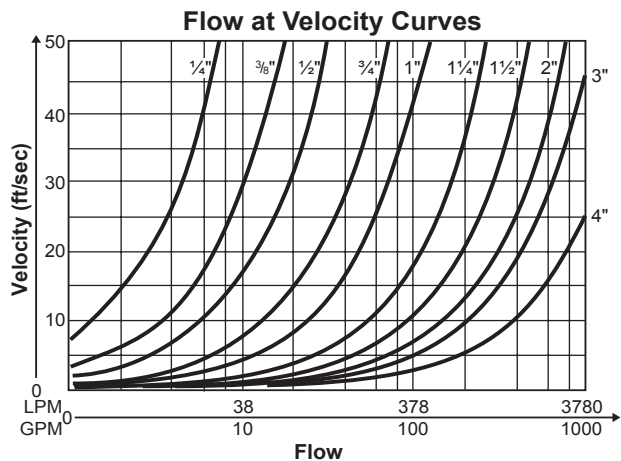
Ordering Information

BVAL		Standard Locking
Code	Size	(Part Number)
4	1/4"	BVHPLK-1
6	3/8"	BVHPLK-1
8	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
40	2 1/2"	BVHPLK-4
48	3"	BVHPLK-4
64	4"	BVHPLK-4

Ball Valve Sizing Chart (2-Way)

Parker's unrestricted bore ball valves provide a fluid path which, in most cases, imposes no discernable pressure drop in standard hydraulic circuits. As a result, you can treat our valves as just like a length of fluid line, unless you are working with closed loop or other circuits where a tiny pressure drop carries a price tag in heat generation, etc.

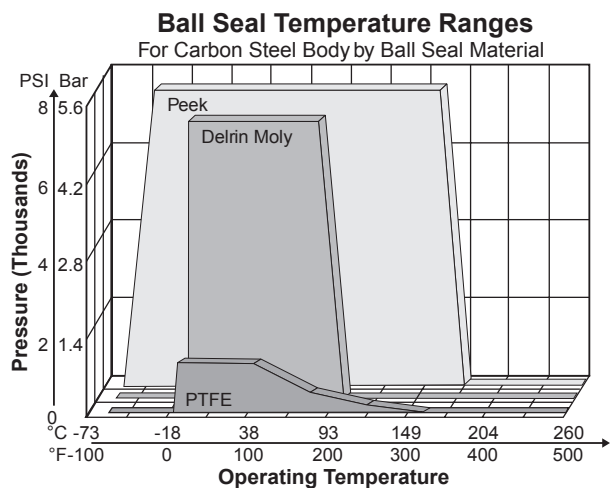
The selection chart at the right may be used as a guide for confirming your choice of ball valve fluid line size relative to the expected flow in LPM (GPM) at a given velocity.



Ball Seals and Internal O-Rings

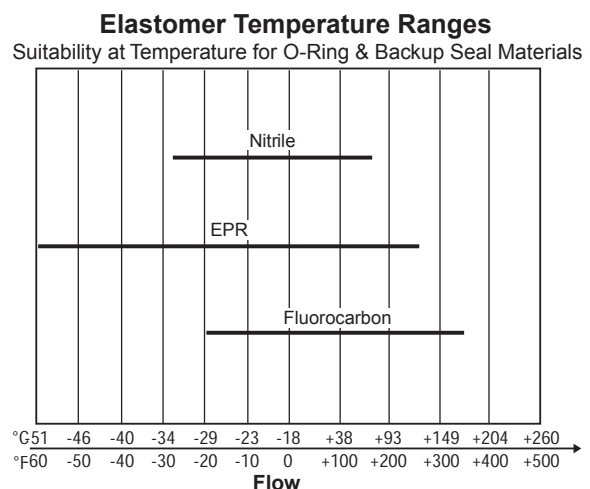
Standard Ball Seal Materials: Most application needs can be met by specifying one of the following ball seal materials:

- **Delrin™ Moly:** Standard with most ball valves. High pressure, moderate temperature range.
- **PTFE:** Excellent for suction and low pressure use. Inert to most substances and safe for food/water use.
- **Peek Hi-Temp:** Cost effective, provides additional temperature range up to 176.7°C (350°F). Best results with fluorocarbon sealing.



O-Ring and Backup Ring Material

- **Nitrile:** The industry standard for hydraulics using petroleum based fluids. Not suitable above 100°C (212°F).
- **EPR:** For use with Phosphate Esters ("Skydrol"), strong acids and bases, and other hostile media. Not compatible with petroleum based fluids. Good temperature range.
- **Fluorocarbon:** Extends temperature range to 350°F (176.7°C) with most Nitrile compatible media. Somewhat resistant to hostile media.

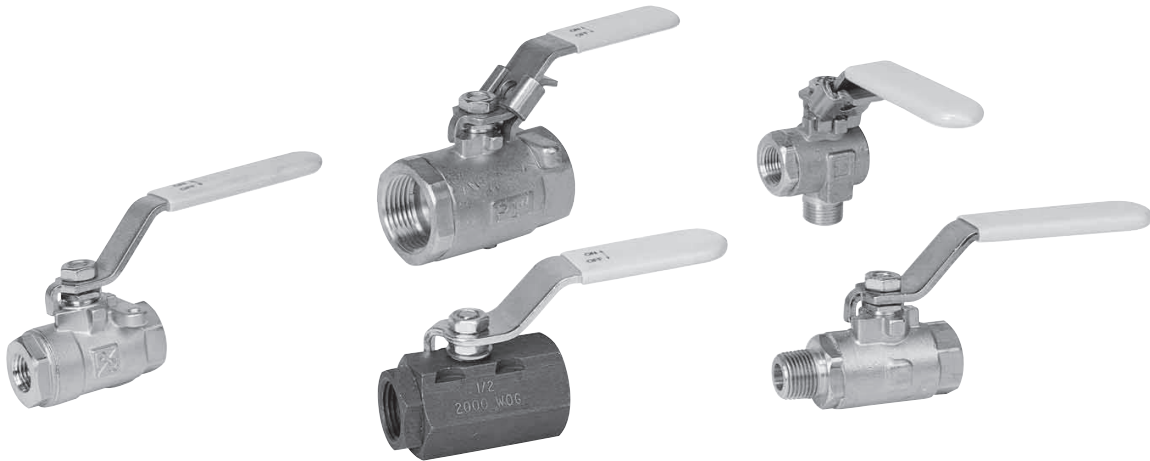


Sealing Materials Technical Data

Never operate Parker Ball Valves outside the temperature range published below for your selected thermoplastic and elastomer materials, even if the combination is approved in the Media Acceptability Table. You may experience valve leakage or failure.

	Ball Seal Materials (Box 6)			O-Ring & Backup Seal Materials (Digit 4)		
Order Code	1	2	4	N	E	V
Description	Delrin™ Moly	PTFE	PEEK Hi-Temp	Nitrile	EPR	Fluorocarbon
Temperature Range	-30°C to +100°C (-22°F to +212°F)	-60°C to +180°C (-76°F to +356°F)	-40°C to +250°C (-40°F to +482°F)	-30°C to +100°C (-22°F to +212°F)	-50°C to +150°C (-58°F to +302°F)	-25°C to +250°C (-13°F to +482°F)
Seal Compound Identification	Delrin+MoS2 Polyoxymethylene impregnated with Molybdenum Disulphide	Polytetra- fluoroethylene	Polyether-ether- ketone	Nitrile Butadiene rubber	Ethylene- polypropylene- diene rubber	Fluoropropylene methylene
Acronym	DM	PTFE	PEEK	NBR	EPR EPDM	FPM
Classification Synthesis	Thermoplast Saturated heteropolymer of heterogeneous polymer chains compounded with sulphide of molyb- denum metal for lubrication	Thermoplast Homogeneous, pure polymer chains, contain- ing fluorine	Thermoplast Aromatic linear polymer	Elastomer Unsaturated heteropolymer compounded from acrylonitrile and butadiene	Elastomer Saturated heteropolymer utilizing double valence bands outside the primary chain	Elastomer Multiple monomers & fluorine com- pounded into saturated hetero- polymer
Commercial Trade Names	Made to Parker's specifications	PTFE Hostafion Fluon	Victrex	Nitrile Perbunan Chemigum Elaprim Krynac	Buna AP Dutral Epcar Keltran Nordel	Viton Fluorel Technoflon
Chemical Resistance Examples						
Suitable	Hydraulic fluids Water Inert Gases Air Alcohols Glycols Petroleum based fluids	Foodstuffs Acids & Alkalis Organic & inorganic solvents	Most fluids acceptable with Delrin Moly	Hydraulic fluids (except Skydrol) Water Air Petroleum based fluids	Phosphate esters Brake fluid Acids & Alkalis	NBR compatible fluids Acids & Alkalis
Not suitable	High molar acids & alkalis Fluorines Liquids for human consumption	Fluorines Liquid alkali metals	High molar acids & alkalis	Phosphate esters	Petroleum based oil & grease Chlorinated hydrocarbons	Phosphate esters

The Parker Low Pressure Ball Valve Product Line serves in applications ranging from 600 to 2,000 PSI.



Features

- Packing Nut Stem*
- PTFE Seals*
- Full Optimum Flow*
- Blow Out Proof Stem*
- Brass, Carbon Steel, and Stainless Steel Bodies*

Advantages

- Seals leak by tightening*
- High resistance to corrosion*
- Maximum system efficiency*
- Safety and reliability*
- One ball valve source*

General Description

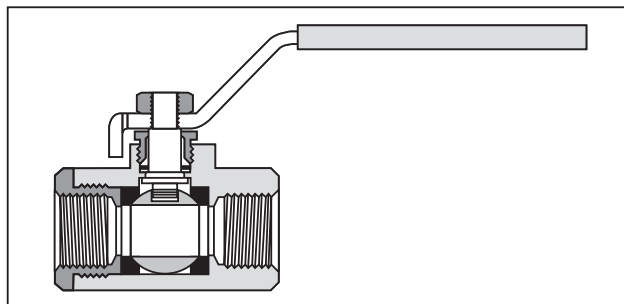
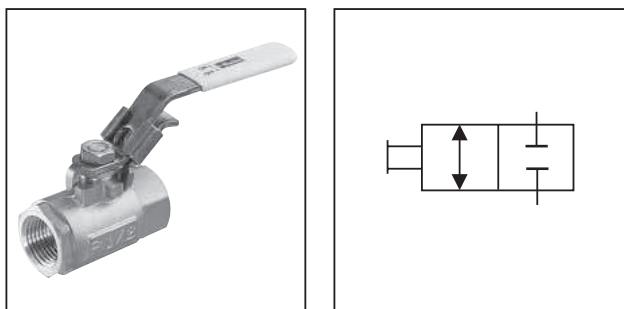
Series 500 low pressure ball valves provide total shut-off capability for services up to 41 Bar (600 PSI). Series 500 consists of NPT female/female ports, Series 510 and 501 are male/female in SAE and NPT respectively, and Series 506 are female/female in SAE. Series 502 features panel mounting capability.

Operation

A quarter turn of the handle is on or off. Ball valves are not intended for use as a throttling valve. Attempting to use it in these applications may result in premature seal failure and/or inability to turn the valve handle.

Features

- Ball valve bodies are machined from high quality CA377 forgings which provide extended service life and resist failure caused by severe temperature conditions.
- Highly inert PTFE seats and seals provide resistance to chemical corrosion.
- Blowout proof stem design, chrome plated brass ball and a special design handle enable increased turn and leverage for ease of opening and closing.
- Padlocking handle option provides lock-out capability where required.
- Venting option relieves downstream pressure in pneumatic applications.



Specifications

Maximum Pressure	41 Bar (600 PSI)
Vented Up To	17 Bar (250 PSI)
Working Pressure	Saturated steam 10 Bar (150 PSI) and 204°C (400°F) Vacuum 29 in. Hg

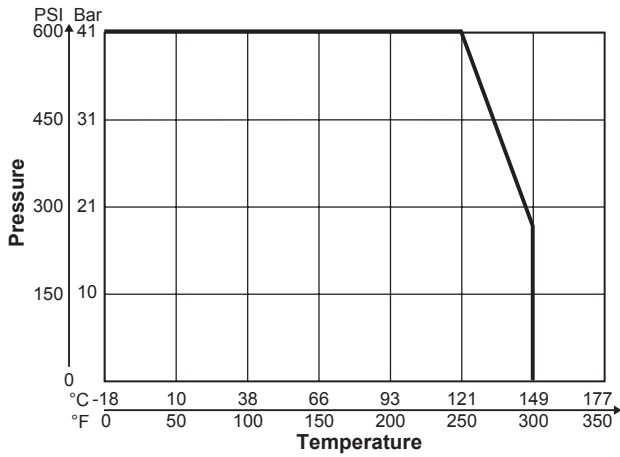
Ordering Information

<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> □ </div> <p style="text-align: center;">Style</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Code Type</p> <p>V Valve</p> <p>VP * Valve, Padlocking Handle</p> <p>VV ** Valve, Vented</p> <p>VVP ** Valve Vented, Padlocking Handle</p> </div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> □ </div> <p style="text-align: center;">Type</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Code Type</p> <p>500 Female/Female NPT Ports</p> <p>501 Male/Female NPT Ports</p> <p>502 Female/Female NPT Ports Panel Mount</p> <p>506 Female/Female Straight Thread O-ring Ports</p> <p>510 Male/Female Straight Thread O-ring Ports</p> </div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> P </div> <p style="text-align: center;">Material</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Code Type</p> <p>P Brass</p> </div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> □ </div> <p style="text-align: center;">Size</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Size</th> </tr> <tr> <td>4</td> <td>1/4" NPT</td> </tr> <tr> <td>6</td> <td>3/8" NPT</td> </tr> <tr> <td>8</td> <td>1/2" NPT</td> </tr> <tr> <td>12</td> <td>3/4" NPT</td> </tr> <tr> <td>16</td> <td>1" NPT</td> </tr> <tr> <td>20*</td> <td>1 1/4" NPT</td> </tr> <tr> <td>24*</td> <td>1 1/2" NPT</td> </tr> <tr> <td>32*</td> <td>2" NPT</td> </tr> </table> </div>	Code	Size	4	1/4" NPT	6	3/8" NPT	8	1/2" NPT	12	3/4" NPT	16	1" NPT	20*	1 1/4" NPT	24*	1 1/2" NPT	32*	2" NPT	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> □ </div> <p style="text-align: center;">Options</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Code Type</p> <p>01 Stainless Steel Ball & Stem (-4 to -16)</p> <p>02 Stainless Steel Handle & Nut</p> <p>03 Stainless Steel Ball, Stem, Handle & Nut (-4 to -16)</p> </div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> □ </div> <p style="text-align: center;">Design Series</p> <p style="text-align: center;">NOTE: Not required when ordering.</p>
Code	Size																						
4	1/4" NPT																						
6	3/8" NPT																						
8	1/2" NPT																						
12	3/4" NPT																						
16	1" NPT																						
20*	1 1/4" NPT																						
24*	1 1/2" NPT																						
32*	2" NPT																						

* Only available up to #16 SAE in Series 506.
 ** Not available in Series 506.

* Available only in 500 Type

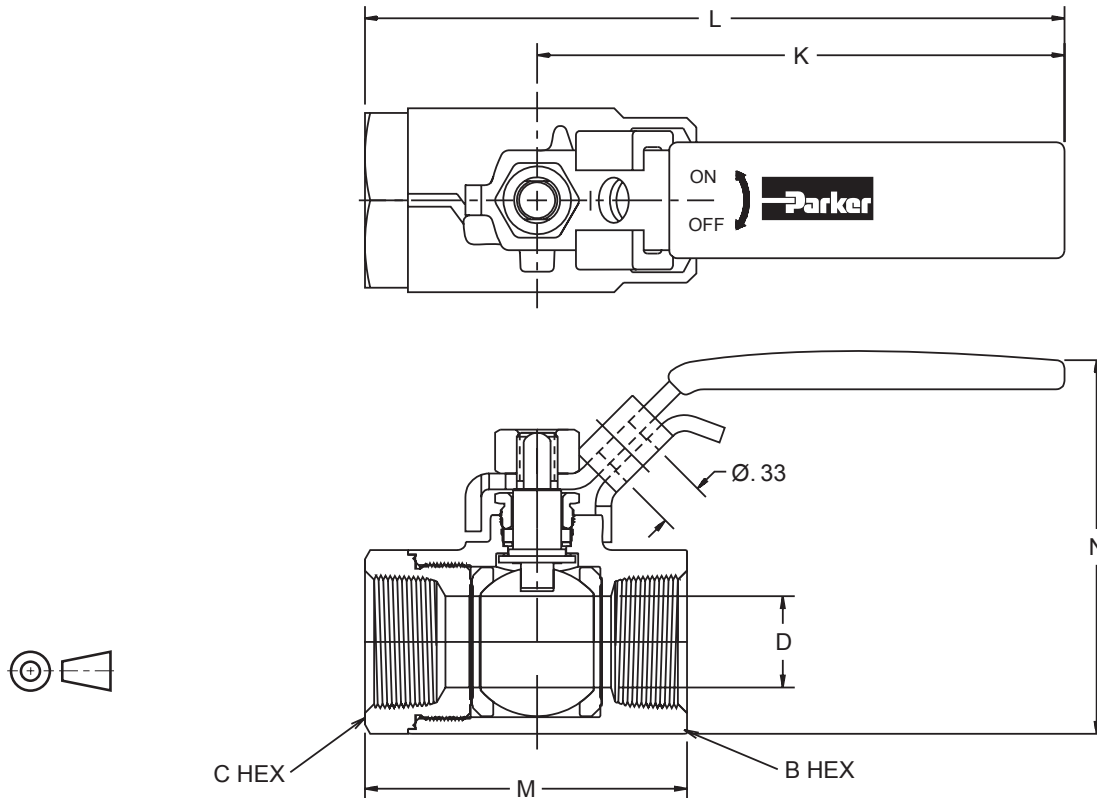
Performance Curve



Flow Data

Type 500, 502		Type 510		Type 501		Type 506	
Valve Size	C _v	Valve Size	C _v	Valve Size	C _v	Valve Size	C _v
1/4"	4.0	#4	0.8	1/4"	6.3	#4	4.0
3/8"	5.8	#6	2.1	3/8"	5.7	#6	5.8
1/2"	12.0	#8	5.3	1/2"	10.0	#8	12.0
3/4"	35.0	#12	13.0	3/4"	25.0	#12	25.0
1"	54.0	#16	33.0	1"	35.0	#16	35.0
1-1/4"	57.0	—	—	—	—	#20	57.0
1-1/2"	92.0	—	—	—	—	#24	92.0
2"	224.0	—	—	—	—	#32	224.0

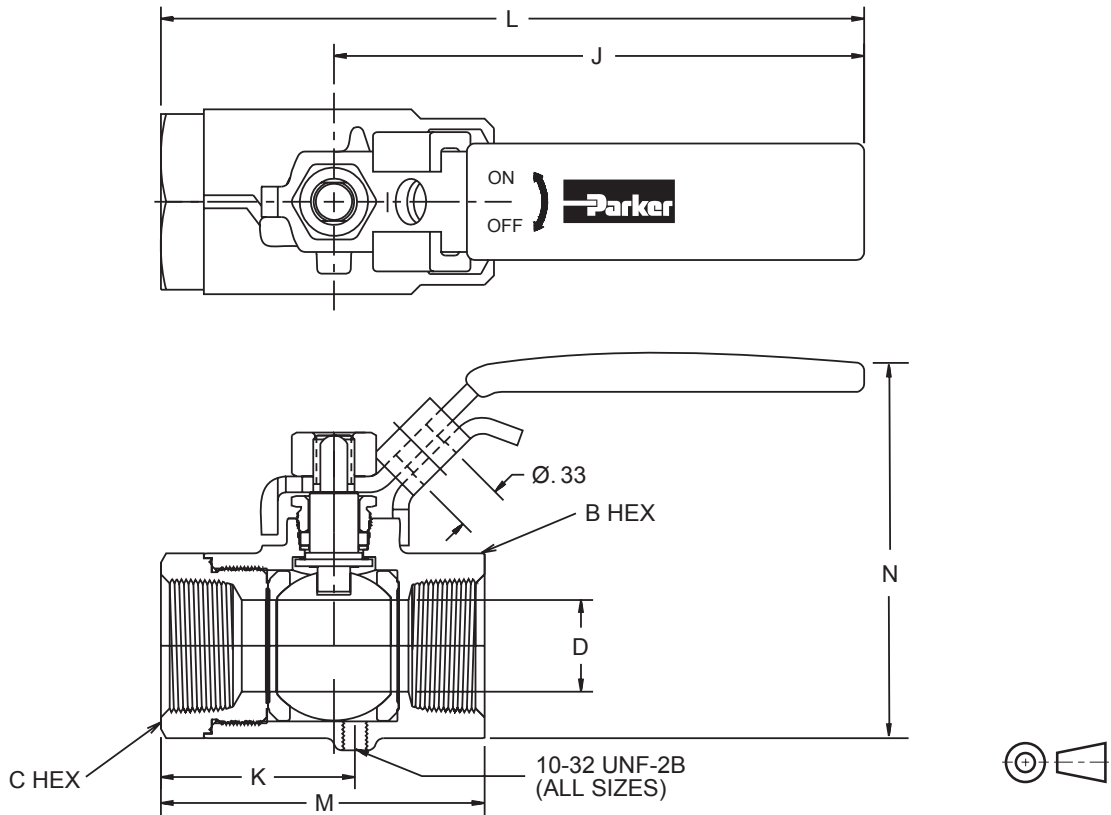
Model V500P and VP500P



Part Number	Pipe Thread (PTF)	B Hex	C Hex	Dimensions mm (in)				D Flow Ø
				K	L	M	N	
Female-Female Pipe Ends V500P								
V500P4	1/4"	15/16"	15/16"	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
V500P6	3/8"	15/16"	15/16"	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
V500P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
V500P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
V500P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)
Locking Handle, Female Pipe Ends VP500P (Shown above)								
VP500P4	1/4"	15/16"	15/16"	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VP500P6	3/8"	15/16"	15/16"	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VP500P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
VP500P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
VP500P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)

Locking handle parts: For use with 5/16" Ø shank lock; 33Ø

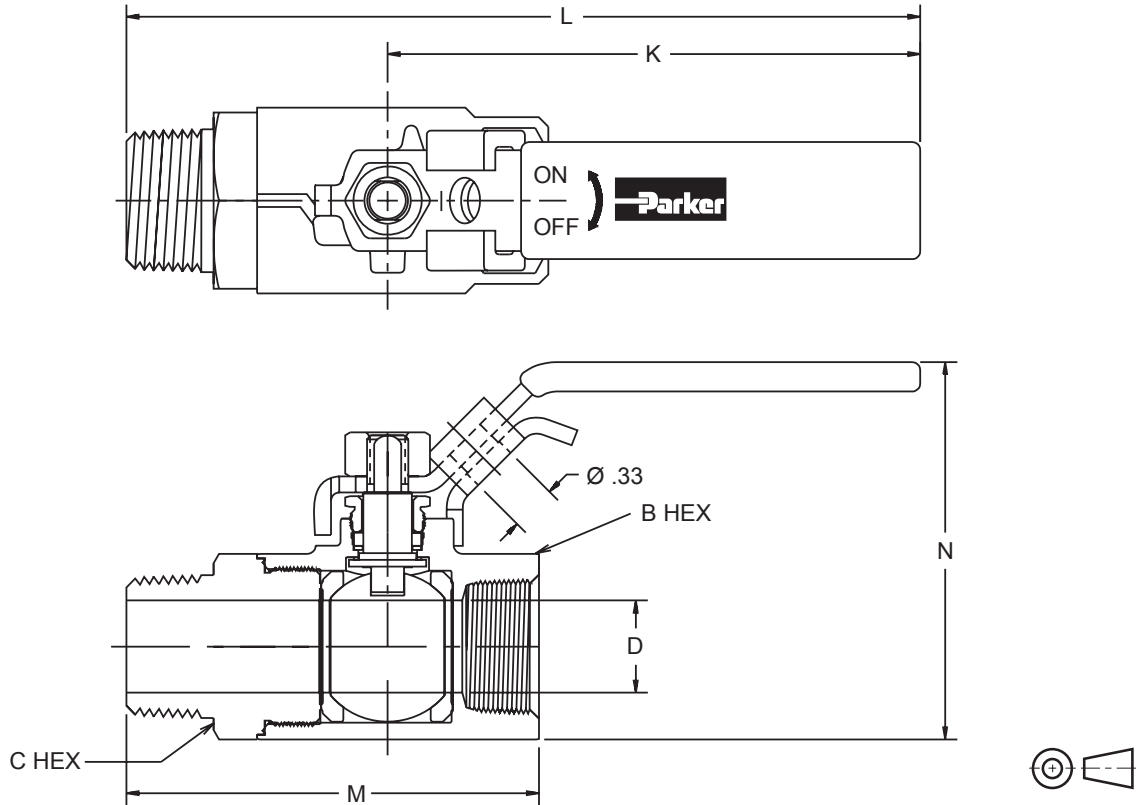
Model VV500P and VVP500P



Part Number	Pipe Thread	B Hex	C Hex	Dimensions mm (in)					D Flow Ø
				J	K	L	M	N	
Vented, Female Pipe Ends VV500P									
VV500P4	1/4"	15/16"	15/16"	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VV500P6	3/8"	15/16"	15/16"	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VV500P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	31.2 (1.23)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
VV500P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	36.8 (1.45)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
VV500P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	40.1 (1.58)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)
OSHA 29 CFR Part 1910 Vented, Locking Handle, Female Pipe Ends VVP500P (Shown above)									
VVP500P4	1/4"	15/16"	15/16"	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VVP500P6	3/8"	15/16"	15/16"	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VVP500P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	31.2 (1.23)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
VVP500P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	36.8 (1.45)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
VVP500P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	40.1 (1.58)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)

Locking handle parts: For use with 5/16" Ø shank lock

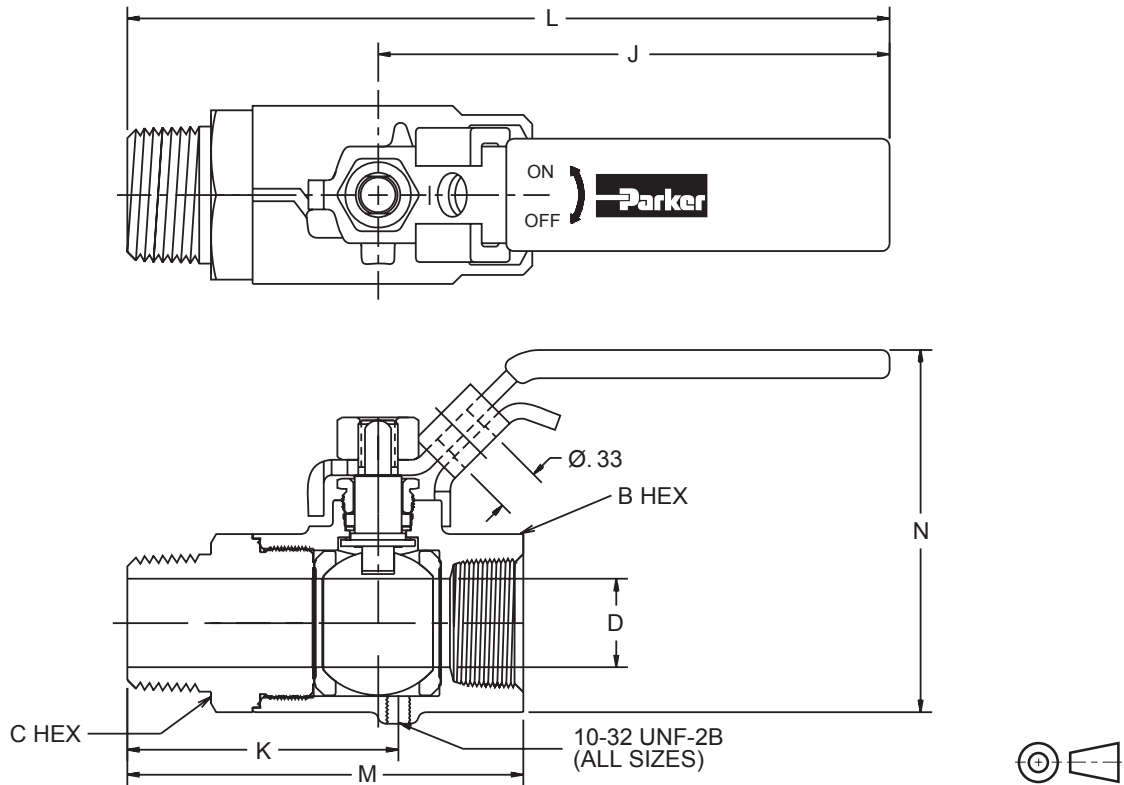
Model V501P and VP501P



Part Number	Pipe Thread	B Hex	C Hex	Dimensions mm (in)				D Flow Ø
				K	L	M	N	
Male-Female Pipe Ends V501P								
V501P4	1/4"	15/16"	15/16"	100.6 (3.96)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	8.7 (.344)
V501P6	3/8"	15/16"	15/16"	100.6 (3.96)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	9.5 (.375)
V501P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	146.1 (5.75)	74.9 (2.95)	65.5 (2.58)	12.7 (.500)
V501P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	148.1 (5.83)	76.2 (3.00)	71.4 (2.81)	17.4 (.685)
V501P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	157.2 (6.19)	91.4 (3.60)	78.2 (3.08)	22.2 (.875)
Locking Handle, Male-Female Pipe Ends VP501P (Shown above)								
VP501P4	1/4"	15/16"	15/16"	100.6 (3.96)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	8.7 (.344)
VP501P6	3/8"	15/16"	15/16"	100.6 (3.96)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	9.5 (.375)
VP501P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	146.1 (5.75)	74.9 (2.95)	65.5 (2.58)	12.7 (.500)
VP501P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	148.1 (5.83)	76.2 (3.00)	71.4 (2.81)	17.4 (.685)
VP501P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	157.2 (6.19)	91.4 (3.60)	78.2 (3.08)	22.2 (.875)

Locking handle parts: For use with 5/16" Ø shank lock

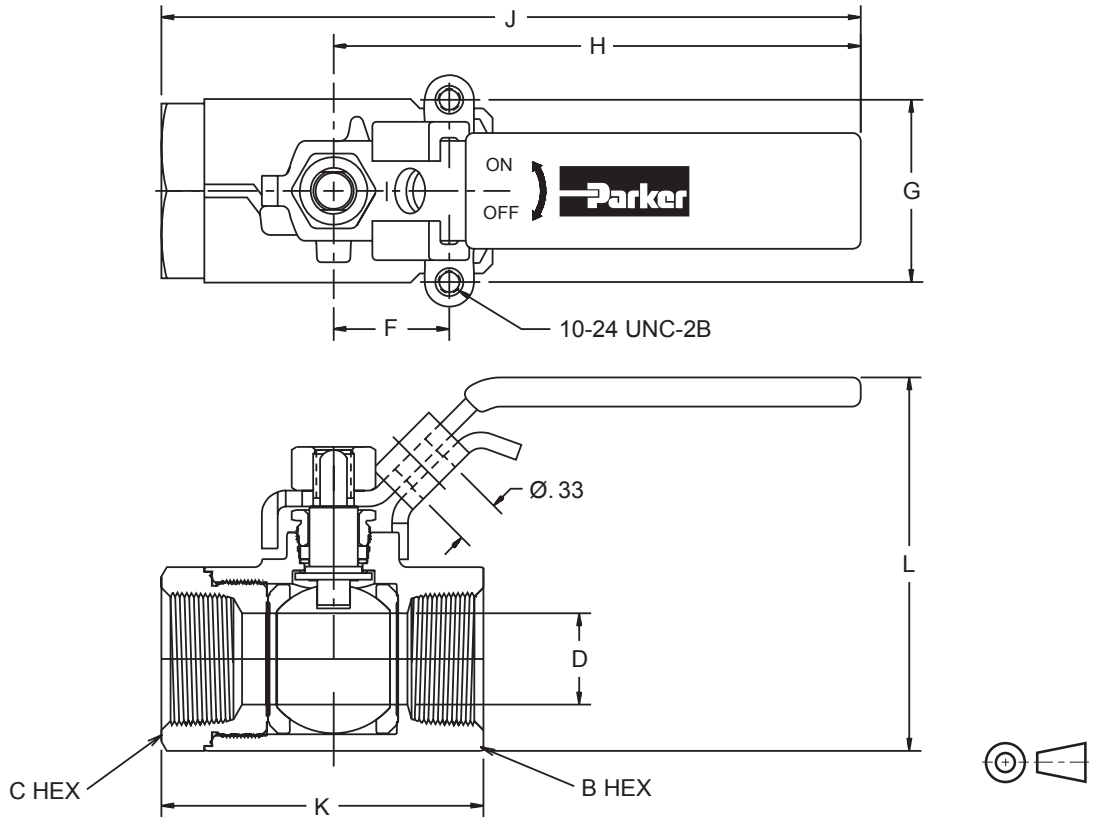
Model VV501P and VVP501P



Part Number	Pipe Thread (PTF)	B Hex	C Hex	Dimensions mm (in)					D Flow Ø
				J	K	L	M	N	
Vented, Male-Female Pipe Ends VV501P									
VV501P4	1/4"	15/16"	15/16"	100.6 (3.96)	42.4 (1.67)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	8.7 (.344)
VV501P6	3/8"	15/16"	15/16"	100.6 (3.96)	42.4 (1.67)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	9.5 (.375)
VV501P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	50.3 (1.98)	146.1 (5.75)	74.9 (2.95)	65.5 (2.58)	12.7 (.500)
VV501P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	51.6 (2.03)	148.1 (5.83)	76.2 (3.00)	71.4 (2.81)	17.4 (.685)
VV501P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	61.7 (2.43)	157.2 (6.19)	91.4 (3.60)	78.2 (3.08)	22.2 (.875)
OSHA 29 CFR Part 1910 Vented, Locking Handle, Male-Female Pipe Ends VVP501P (Shown above)									
VVP501P4	1/4"	15/16"	15/16"	100.6 (3.96)	42.4 (1.67)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	8.7 (.344)
VVP501P6	3/8"	15/16"	15/16"	100.6 (3.96)	42.4 (1.67)	138.7 (5.46)	65.8 (2.59)	62.7 (2.47)	9.5 (.375)
VVP501P8	1/2"	1-1/16"	1-1/16"	100.6 (3.96)	50.3 (1.98)	146.1 (5.75)	74.9 (2.95)	65.5 (2.58)	12.7 (.500)
VVP501P12	3/4"	1-1/4"	1-5/16"	100.6 (3.96)	51.6 (2.03)	148.1 (5.83)	76.2 (3.00)	71.4 (2.81)	17.4 (.685)
VVP501P16	1"	1-1/2"	1-9/16"	100.6 (3.96)	61.7 (2.43)	157.2 (6.19)	91.4 (3.60)	78.2 (3.08)	22.2 (.875)

Locking handle parts: For use with 5/16" Ø shank lock

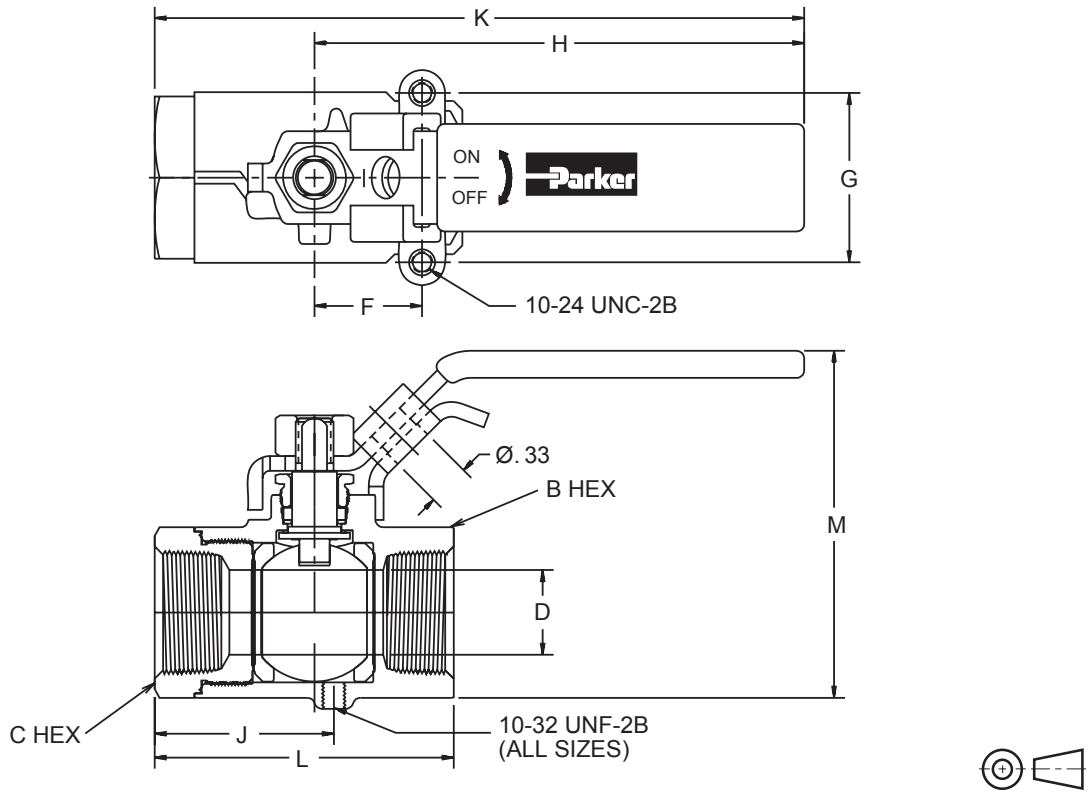
Model V502P and VP502P



Part Number	Size	B Hex	C Hex	Dimensions mm (in)						D Flow Ø
				F	G	H	J	K	L	
Female-Female Pipe Ends, Panel Mount V502P										
V502P4	1/4"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
V502P6	3/8"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
V502P8	1/2"	1-1/16"	1-1/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
V502P12	3/4"	1-1/4"	1-5/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
V502P16	1"	1-1/2"	1-9/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)
Locking Handle, Female Pipe Ends, Panel Mount VP502P (Shown above)										
VP502P4	1/4"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VP502P6	3/8"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VP502P8	1/2"	1-1/16"	1-1/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
VP502P12	3/4"	1-1/4"	1-5/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
VP502P16	1"	1-1/2"	1-9/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)

Locking handle parts: For use with 5/16" Ø shank lock

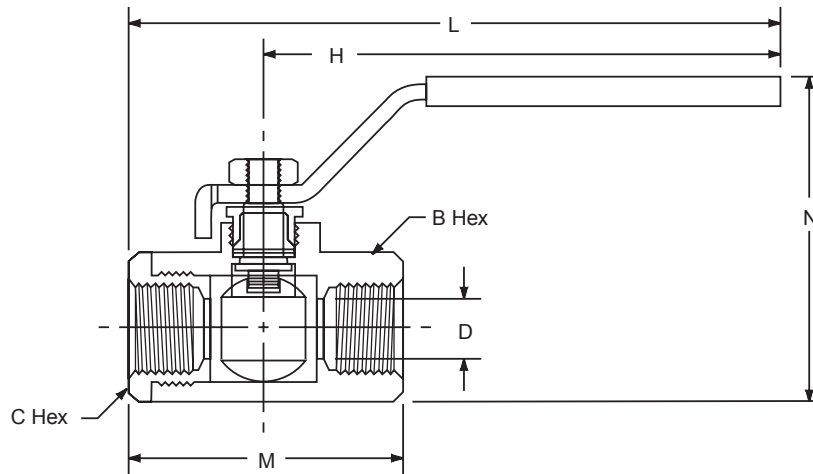
Model VV502P and VVP502P



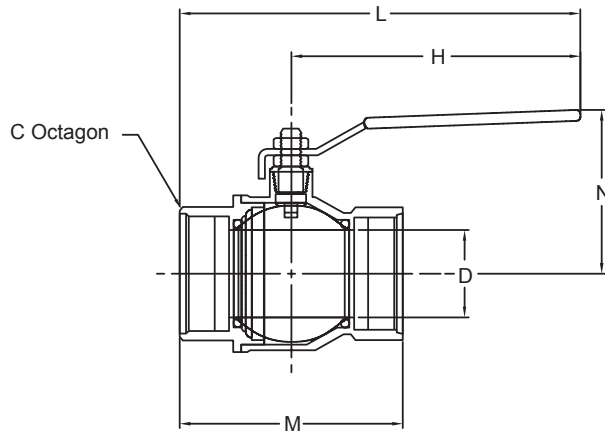
Part Number	Pipe Thread	B Hex	C Hex	Dimensions mm (in)							D Flow Ø
				F	G	H	J	K	L	M	
Vented, Female-Female Pipe Ends, Panel Mount VV502P											
VV502P4	1/4"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VV502P6	3/8"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VV502P8	1/2"	1-1/16"	1-1/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	31.2 (1.23)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
VV502P12	3/4"	1-1/4"	1-5/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	36.8 (1.45)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
VV502P16	1"	1-1/2"	1-9/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	40.1 (1.58)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)
OSHA 29 CFR Part 1910 Vented, Locking Handle, Female Pipe Ends, Panel Mount VVP502P (Shown above)											
VVP502P4	1/4"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VVP502P6	3/8"	15/16"	15/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	28.2 (1.11)	124.5 (4.90)	51.6 (2.03)	62.7 (2.47)	9.5 (.375)
VVP502P8	1/2"	1-1/16"	1-1/16"	12.7 (0.50)	28.4 (1.12)	100.6 (3.96)	31.2 (1.23)	127.0 (5.00)	55.9 (2.20)	65.5 (2.58)	12.7 (.500)
VVP502P12	3/4"	1-1/4"	1-5/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	36.8 (1.45)	133.4 (5.25)	61.5 (2.42)	71.4 (2.81)	17.4 (.685)
VVP502P16	1"	1-1/2"	1-9/16"	22.1 (0.87)	34.8 (1.37)	100.6 (3.96)	40.1 (1.58)	135.6 (5.34)	69.9 (2.75)	78.2 (3.08)	22.2 (.875)

Locking handle parts: For use with 5/16" Ø shank lock

Model V506P



Part Number	Straight Thread	B Hex	C Hex	Dimensions mm (in)				D Flow Ø
				H	L	M	N	
Female/Female, Straight Thread O-Ring Port V506P								
V506P4	7/16-20	15/16"	15/16"	100.6 (3.96)	127.3 (5.01)	55.9 (2.20)	62.7 (2.47)	9.5 (.375)
V506P6	9/16-18	15/16"	15/16"	100.6 (3.96)	128.8 (5.07)	57.4 (2.26)	62.7 (2.47)	9.5 (.375)
V506P8	3/4-16	1 1/16"	1 1/16"	100.6 (3.96)	131.6 (5.18)	61.5 (2.42)	66.0 (2.60)	12.7 (.500)
V506P12	1 1/16-12	1 1/4"	1 5/16"	100.6 (3.96)	149.1 (5.87)	87.9 (3.46)	71.4 (2.81)	17.4 (.685)
V506P16	1 5/16-12	1 1/2"	1 9/16"	100.6 (3.96)	151.4 (5.96)	93.5 (3.68)	78.2 (3.08)	22.2 (.875)

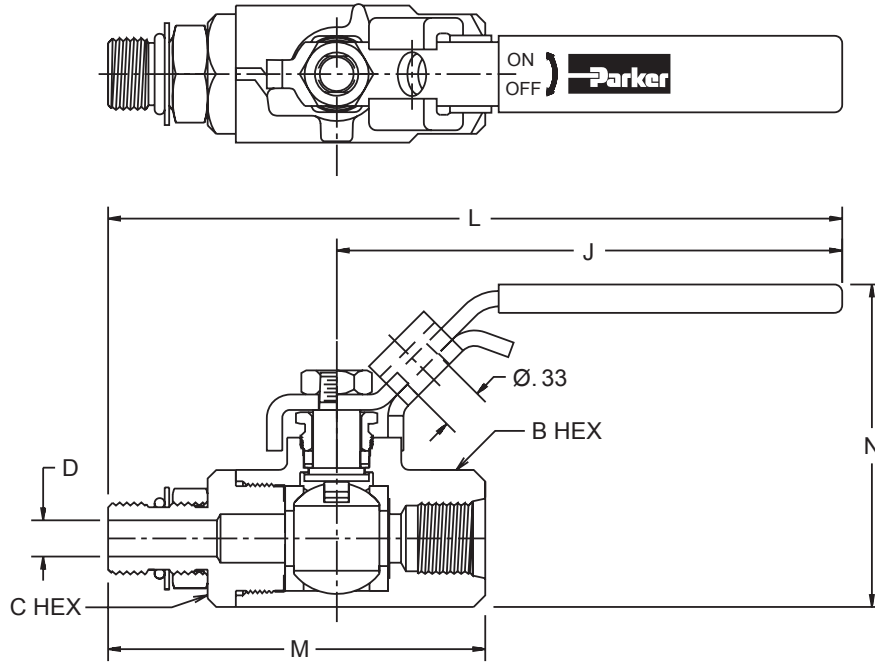


Part Number	Straight Thread	B Hex	C Hex	Dimensions mm (in)				D Flow Ø
				H	L	M	N	
Female/Female, Straight Thread O-Ring Port V506P								
V506P20	1 5/8-12	49.0 (1.93)	49.0 (1.93)	158.0 (6.22)	204.5 (8.05)	93.0 (3.66)	76.5 (3.01)	30.0 (1.18)
V506P24	1 7/8-12	54.1 (2.13)	54.1 (2.13)	158.0 (6.22)	209.0 (8.23)	102.1 (4.02)	82.6 (3.25)	38.1 (1.50)
V506P32	2 1/2-12	72.4 (2.85)	72.4 (2.85)	158.0 (6.22)	218.4 (8.60)	120.9 (4.76)	89.4 (3.52)	48.0 (1.89)

3300-2.p65, dd

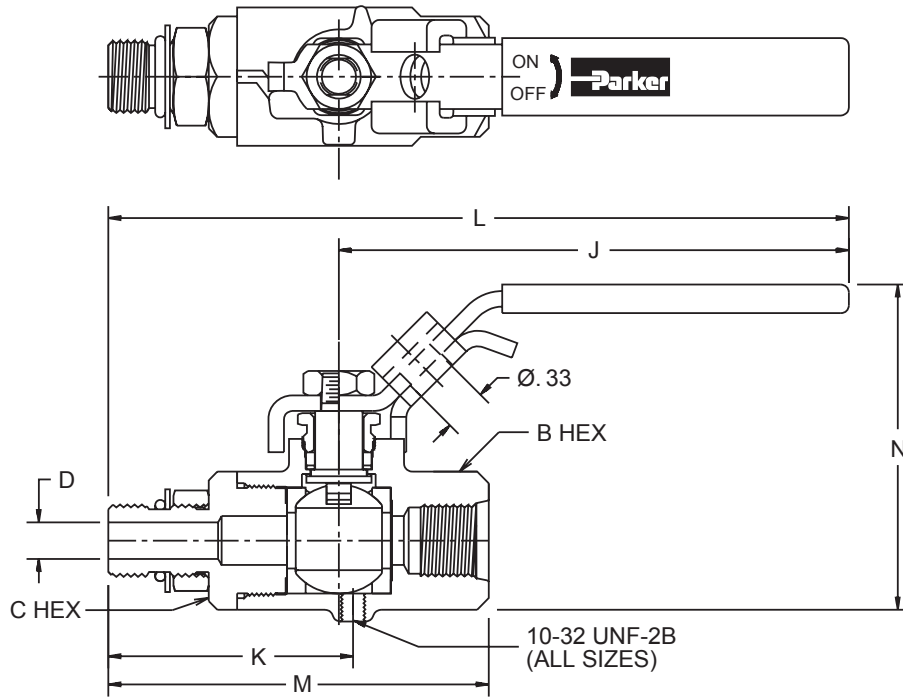


Model V510P and VP510P



Part Number	Straight Thread	B Hex	C He	Dimensions mm (in)				D Flow Ø
				K	L	M	N	
Male-Female, Straight Thread O-Ring Port V510P								
V510P4	7/16-20	15/16"	15/16"	100.6 (3.96)	142.5 (5.61)	72.4 (2.85)	62.7 (2.47)	4.8 (.188)
V510P6	9/16-18	15/16"	15/16"	100.6 (3.96)	144.3 (5.68)	74.2 (2.92)	62.7 (2.47)	7.1 (.281)
V510P8	3/4-16	1-1/16"	1-1/16"	100.6 (3.96)	149.4 (5.88)	80.5 (3.17)	65.5 (2.58)	10.7 (.422)
V510P12	1-1/16-12	1-1/4"	1-5/16"	100.6 (3.96)	163.6 (6.44)	102.4 (4.03)	71.4 (2.81)	16.7 (.656)
V510P16	1-5/16-12	1-1/2"	1-9/16"	100.6 (3.96)	166.6 (6.56)	108.7 (4.28)	78.2 (3.08)	22.2 (.875)
Locking Handle, Straight Thread O-Ring Port VP510P (Shown above)								
VP510P4	7/16-20	15/16"	15/16"	100.6 (3.96)	142.5 (5.61)	72.4 (2.85)	62.7 (2.47)	4.8 (.188)
VP510P6	9/16-18	15/16"	15/16"	100.6 (3.96)	144.3 (5.68)	74.2 (2.92)	62.7 (2.47)	7.1 (.281)
VP510P8	3/4-16	1-1/16"	1-1/16"	100.6 (3.96)	149.4 (5.88)	80.5 (3.17)	65.5 (2.58)	10.7 (.422)

Model VV510P and VVP510P



Part Number	Straight Thread	B Hex	C Hex	Dimensions mm (in)					D Flow Ø
				J	K	L	M	N	
Vented, Straight Thread O-Ring Port VV510P									
VV510P4	7/16-20	15/16"	15/16"	100.6 (3.96)	46.2 (1.82)	142.5 (5.61)	72.4 (2.85)	62.7 (2.47)	4.8 (.188)
VV510P6	9/16-18	15/16"	15/16"	100.6 (3.96)	48.0 (1.89)	144.3 (5.68)	74.2 (2.92)	62.7 (2.47)	7.1 (.281)
VV510P8	3/4-16	1-1/16"	1-1/16"	100.6 (3.96)	53.8 (2.12)	149.4 (5.88)	80.5 (3.17)	65.5 (2.58)	10.7 (.422)
VV510P12	1-1/16-12	1-1/4"	1-5/16"	100.6 (3.96)	67.1 (2.64)	163.6 (6.44)	102.4 (4.03)	71.4 (2.81)	16.7 (.656)
OSHA 29 CFR Part 1910									
Vented, Locking Handle, Male-Female, Straight Thread O-Ring Port VV510P (Shown above)									
VVP510P4	7/16-20	15/16"	15/16"	100.6 (3.96)	46.2 (1.82)	142.5 (5.61)	72.4 (2.85)	62.7 (2.47)	4.8 (.188)
VVP510P6	9/16-18	15/16"	15/16"	100.6 (3.96)	48.0 (1.89)	144.3 (5.68)	74.2 (2.92)	62.7 (2.47)	7.1 (.281)
VVP510P8	3/4-16	1-1/16"	1-1/16"	100.6 (3.96)	53.8 (2.12)	149.4 (5.88)	80.5 (3.17)	65.5 (2.58)	10.7 (.422)

General Description

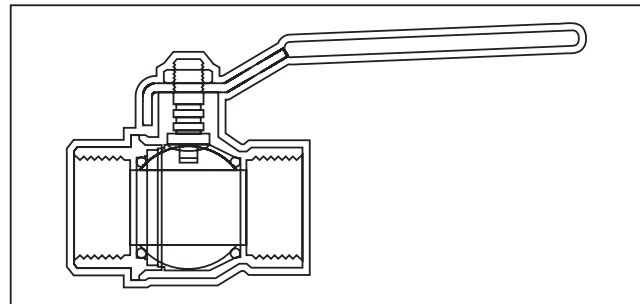
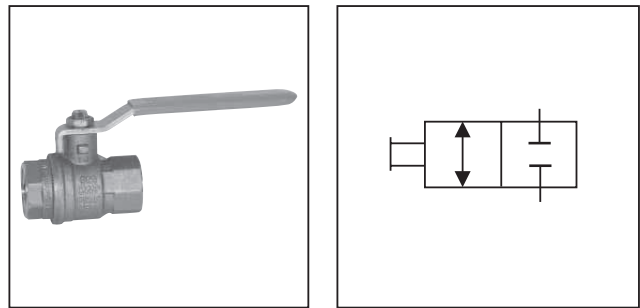
Series 520 low pressure ball valves provide total shut-off capability for services up to 41 Bar (600 PSI). This economical ball valve is available in female pipe sizes.

Operation

A quarter turn of the handle is on or off. Ball valves are not intended for use as a throttling valve. Attempting to use it in these applications may result in premature seal failure and/or inability to turn the valve handle.

Features

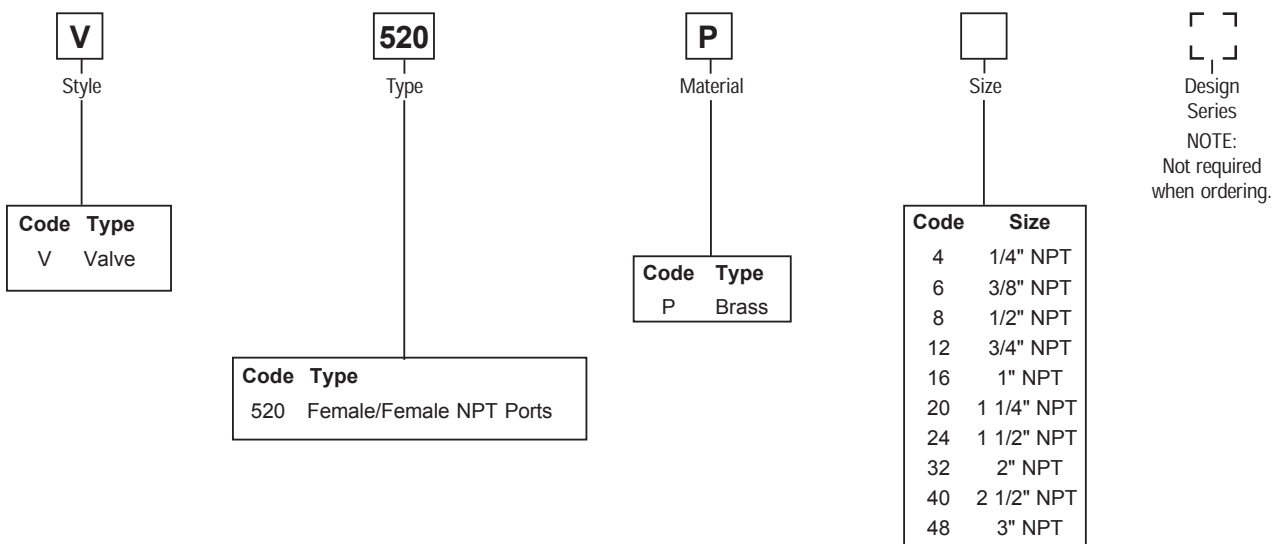
- Ball valve bodies are machined forgings which provide extended service life and resist failure caused by severe temperature conditions.
- Full flow design assures maximum system efficiency.
- Highly inert PTFE seats provide resistance to chemical corrosion.
- Two fluorocarbon o-rings at the stem provide maximum safety with no maintenance.
- Blowout proof stem design, chrome plated brass ball and a special design handle enable increased turn and leverage for ease of opening and closing.



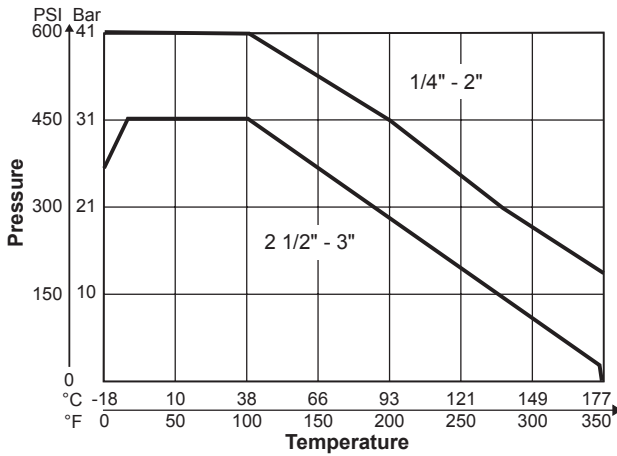
Specifications

Maximum Pressure	41 Bar (600 PSI)
Working Pressure	Saturated steam 10 Bar (150 PSI) and 177°C (350°F) Vacuum 29 in. Hg

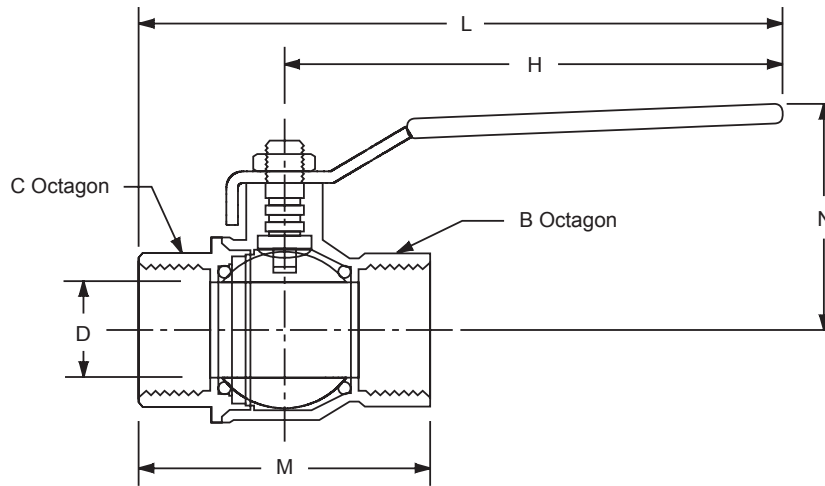
Ordering Information



Performance Curves



Dimensions



Part Number	Pipe Thread	B Octagon	C Octagon	Dimensions mm (in)				D Flow Ø
				H	L	M	N	
Brass Ball Valve V520P								
V520P4	1/4-18	20.1 (0.79)	20.1 (0.79)	100.1 (3.94)	122.7 (4.83)	45.0 (1.77)	38.1 (1.50)	7.9 (.310)
V520P6	3/8-18	20.1 (0.79)	20.1 (0.79)	100.1 (3.94)	122.7 (4.83)	45.0 (1.77)	38.1 (1.50)	10.2 (.400)
V520P8	1/2-14	24.9 (0.98)	24.9 (0.98)	100.1 (3.94)	129.5 (5.10)	58.9 (2.32)	42.9 (1.69)	15.2 (.600)
V520P12	3/4-14	31.0 (1.22)	31.0 (1.22)	119.9 (4.72)	151.9 (5.98)	64.0 (2.52)	50.0 (1.97)	20.1 (.790)
V520P16	1 -11.5	39.9 (1.57)	39.9 (1.57)	119.9 (4.72)	160.5 (6.32)	81.0 (3.19)	54.1 (2.13)	25.4 (1.000)
V520P20	1 1/4	49.0 (1.93)	49.0 (1.93)	158.0 (6.22)	204.5 (8.05)	93.0 (3.66)	71.6 (2.82)	31.8 (1.250)
V520P24	1 1/2	54.1 (2.13)	54.1 (2.13)	158.0 (6.22)	209.0 (8.23)	102.1 (4.02)	77.7 (3.06)	39.9 (1.570)
V520P32	2	68.3 (2.69)	68.3 (2.69)	158.0 (6.22)	217.9 (8.58)	120.9 (4.76)	84.6 (3.33)	50.8 (2.000)
V520P40	2 1/2	85.1 (3.35)	85.1 (3.35)	255.0 (10.04)	333.0 (13.11)	156.0 (6.14)	132.1 (5.20)	64.0 (2.520)
V520P48	3	98.8 (3.89)	98.8 (3.89)	255.0 (10.04)	343.4 (13.52)	177.0 (6.97)	140.0 (5.51)	76.2 (3.000)

General Description

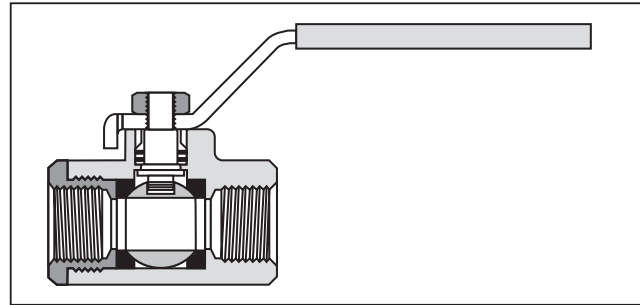
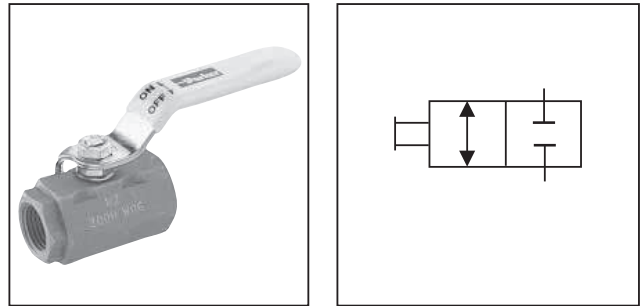
Series 500CS low pressure carbon steel ball valves provide total shut-off capability for services up to 138 Bar (2000 PSI).

Operation

A quarter turn of the handle is on or off. Ball valves are not intended for use as a throttling valve. Attempting to use it in these applications may result in premature seal failure and/or inability to turn the valve handle.

Features

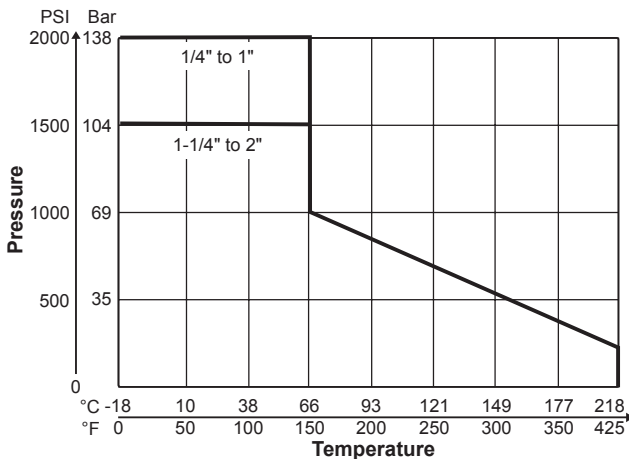
- Ball valve bodies are machined from high quality carbon steel and phosphate coated forgings providing superior corrosion resistance.
- Highly inert PTFE seats and seals provide resistance to chemical corrosion.
- Blowout proof stem design, chrome plated brass ball and a special design handle enable increased turn and leverage for ease of opening and closing.
- Padlocking handle options provides lock-out capability where required.
- In-line or panel mount options provide installation flexibility.



Specifications

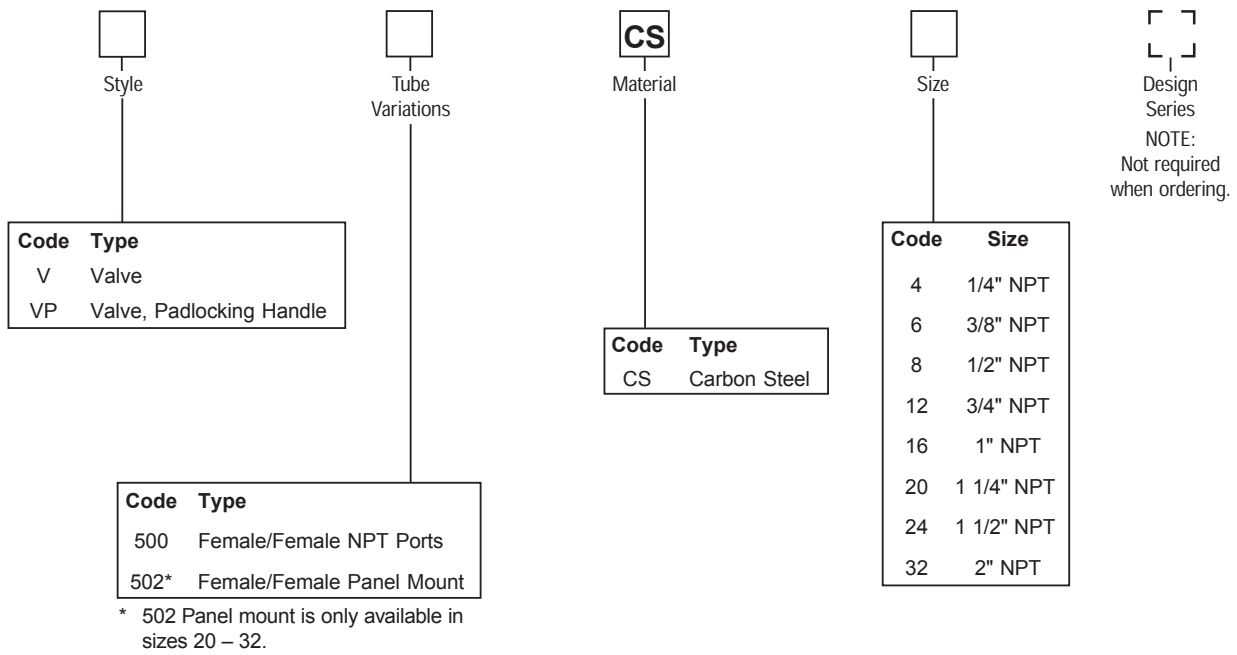
Working Pressure	138 Bar (2000 PSI)
Saturated Steam Service	10 Bar (150 PSI)
Body Material	Carbon Steel Phosphate Coated

Performance Curves

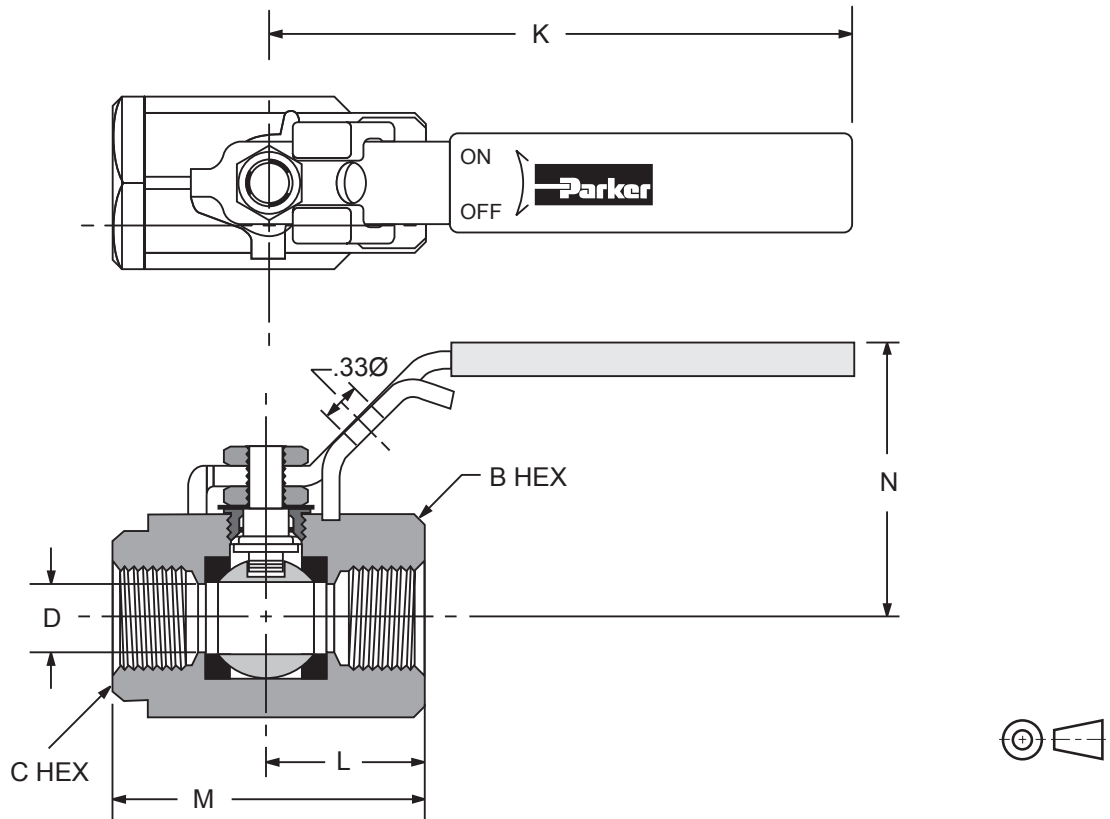


Flow Data

Type 500CS, 502CS	
Valve Size	C _v
1/4"	6.0
3/8"	12.0
1/2"	15.0
3/4"	23.0
1"	36.0
1-1/4"	44.0
1-1/2"	64.0
2"	114.0

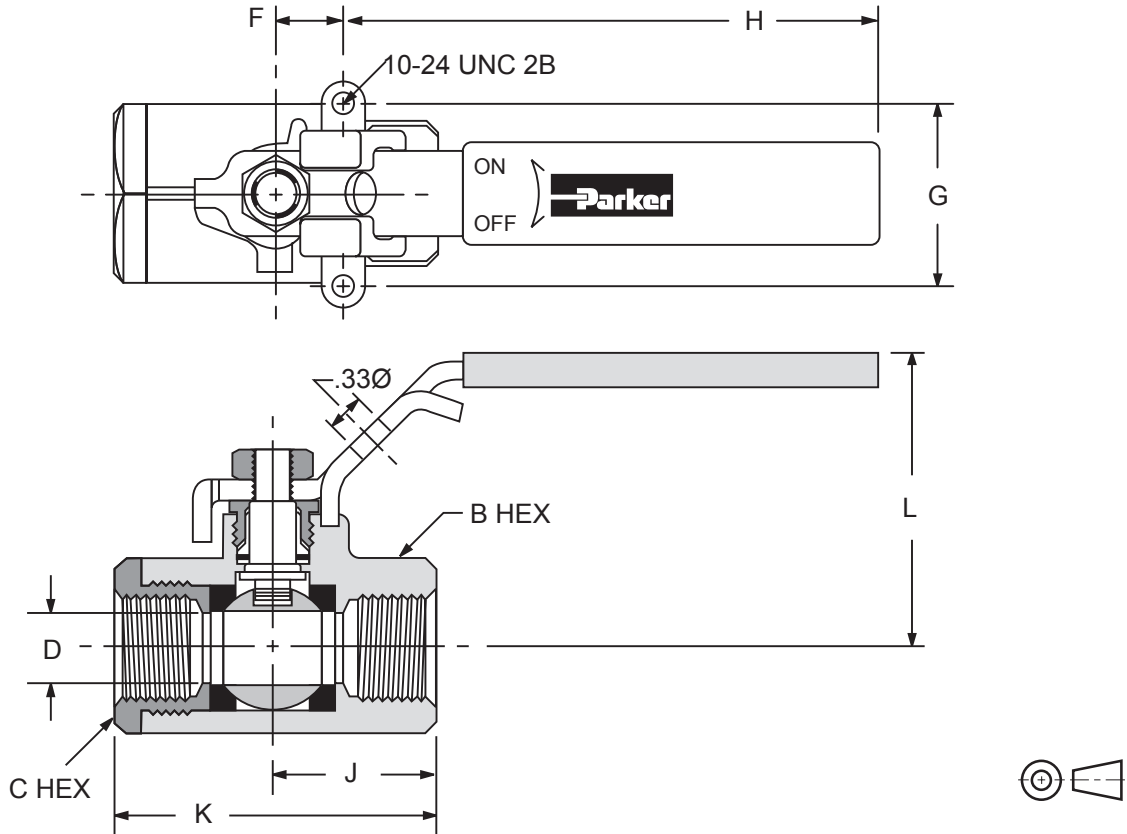


Model V500CS and VP500CS



Part Number	Pipe Thread	B Hex	C Hex	Dimensions mm (in)				D Flow Ø
				K	L	M	N	
Female-Female Pipe Ends V500CS								
V500CS4	1/4"	1-1/16"	15/16"	96.0 (3.78)	25.4 (1.00)	50.8 (2.00)	41.4 (1.63)	10.2 (.400)
V500CS6	3/8"	1-1/16"	15/16"	96.0 (3.78)	25.4 (1.00)	50.8 (2.00)	41.4 (1.63)	10.2 (.400)
V500CS8	1/2"	1-1/4"	1-1/16"	96.0 (3.78)	31.8 (1.25)	60.2 (2.37)	43.9 (1.73)	13.7 (.540)
V500CS12	3/4"	1-5/8"	1-3/8"	129.5 (5.10)	38.1 (1.50)	73.7 (2.90)	52.8 (2.08)	17.3 (.680)
V500CS16	1"	2"	1-5/8"	129.5 (5.10)	44.7 (1.76)	86.6 (3.41)	58.4 (2.30)	22.4 (.880)
Locking Handle, Female Pipe Ends VP500CS (Shown above)								
VP500CS4	1/4"	1-1/16"	15/16"	104.9 (4.13)	25.4 (1.00)	50.8 (2.00)	56.6 (2.23)	10.2 (.400)
VP500CS6	3/8"	1-1/16"	15/16"	104.9 (4.13)	25.4 (1.00)	50.8 (2.00)	56.6 (2.23)	10.2 (.400)
VP500CS8	1/2"	1-1/4"	1-1/16"	104.9 (4.13)	31.8 (1.25)	60.2 (2.37)	56.6 (2.33)	13.7 (.540)
VP500CS12	3/4"	1-5/8"	1-3/8"	127.0 (5.00)	38.1 (1.50)	73.7 (2.90)	71.1 (2.80)	17.3 (.680)
VP500CS16	1"	2"	1-5/8"	127.0 (5.00)	44.7 (1.76)	86.6 (3.41)	75.4 (2.97)	22.4 (.880)

Model V502CS and VP502CS



Part Number	Pipe Thread	B Hex	C Hex	Dimensions mm (in)						D Flow Ø
				F	G	H	J	K	L	
Female-Female Pipe Ends, Panel Mount V502CS										
V502CS20	1-1/4"	2"	2-1/4"	23.9 (0.94)	38.1 (1.50)	154.9 (6.10)	47.5 (1.87)	96.5 (3.80)	70.1 (2.76)	25.4 (1.000)
V502CS24	1-1/2"	2-5/16"	2-1/2"	23.9 (0.94)	38.1 (1.50)	154.9 (6.10)	57.7 (2.27)	115.6 (4.55)	75.7 (2.98)	31.8 (1.250)
V502CS32	2"	2-3/4"	3"	26.2 (1.03)	50.8 (2.00)	218.4 (8.60)	61.5 (2.42)	122.7 (4.83)	89.9 (3.54)	38.1 (1.500)
Locking Handle, Female Pipe Ends, Panel Mount VP502CS (Shown above)										
VP502CS20	1-1/4"	2"	2-1/4"	23.9 (0.94)	38.1 (1.50)	190.5 (7.50)	47.5 (1.87)	96.5 (3.80)	80.0 (3.15)	25.4 (1.000)
VP502CS24	1-1/2"	2-5/16"	2-1/2"	23.9 (0.94)	38.1 (1.50)	190.5 (7.50)	57.7 (2.27)	115.6 (4.55)	85.6 (3.37)	31.8 (1.250)
VP502CS32	2"	2-3/4"	3"	26.2 (1.03)	50.8 (2.00)	222.3 (8.75)	61.5 (2.42)	122.7 (4.83)	87.9 (3.46)	38.1 (1.500)

General Description

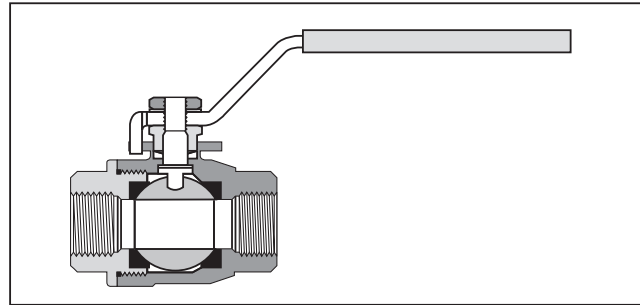
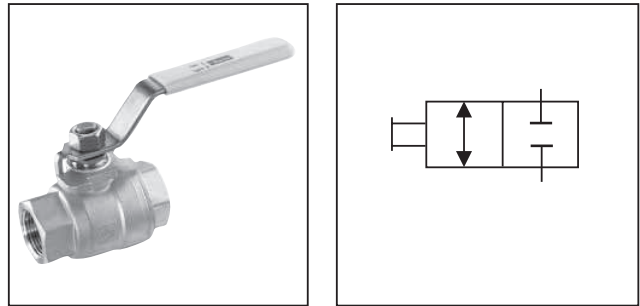
Series 50*SS low pressure, stainless steel ball valves provide total shut-off capability for services up to 138 Bar (2000 PSI).

Operation

A quarter turn of the handle is on or off. Ball Valves are not intended for use as a throttling valve. Attempting to use it in these applications may result in premature seal failure and/or inability to turn the valve handle.

Features

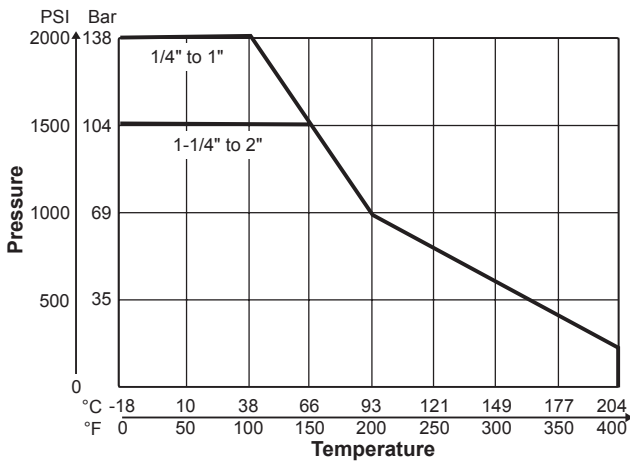
- Ball valve bodies are machined from CF-8M stainless steel castings, equivalent of 316 stainless steel which is suited for corrosive environments.
- Highly inert PTFE seats and seals provide resistance to chemical corrosion.
- Blowout proof stem design, 316 stainless ball and a special design handle enable increased turn and leverage for ease of opening and closing.
- Padlocking handle option provides lock-out capability where required.
- Style 502 allows panel mounting for installation flexibility.



Specifications

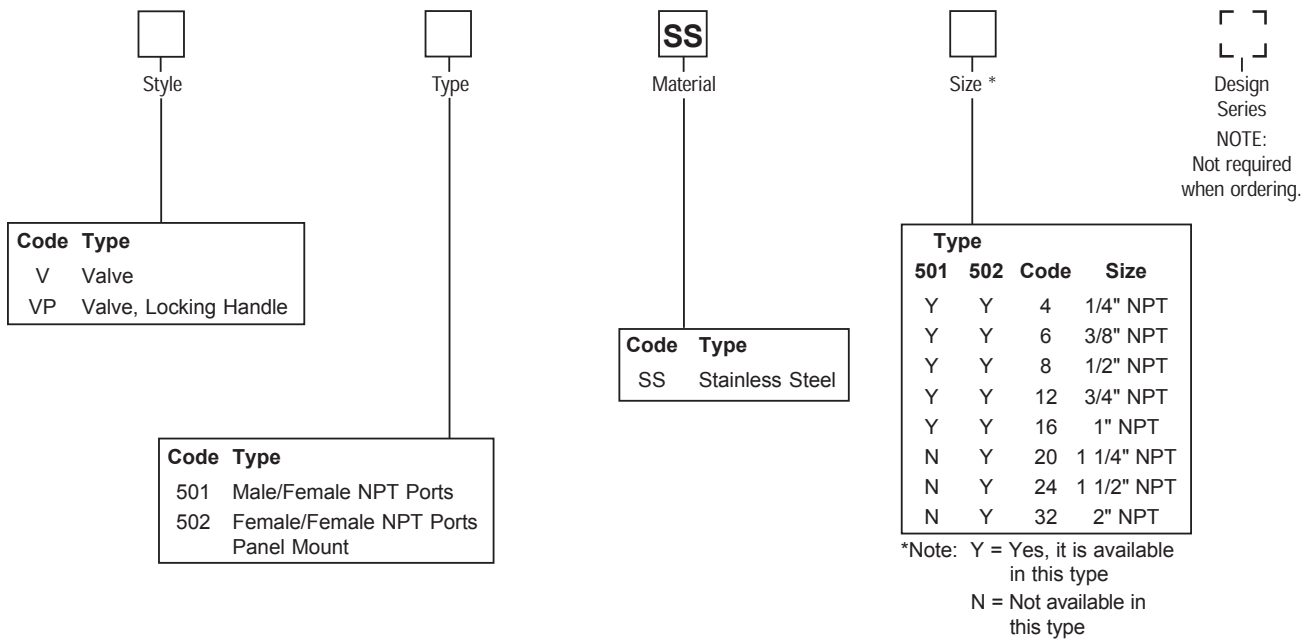
Working Pressure	138 Bar (2000 PSI)
Body Material	CF-8M Stainless Steel 316SS Cast Equivalent
Ball and Stem Material	316 Stainless Steel

Performance Curves

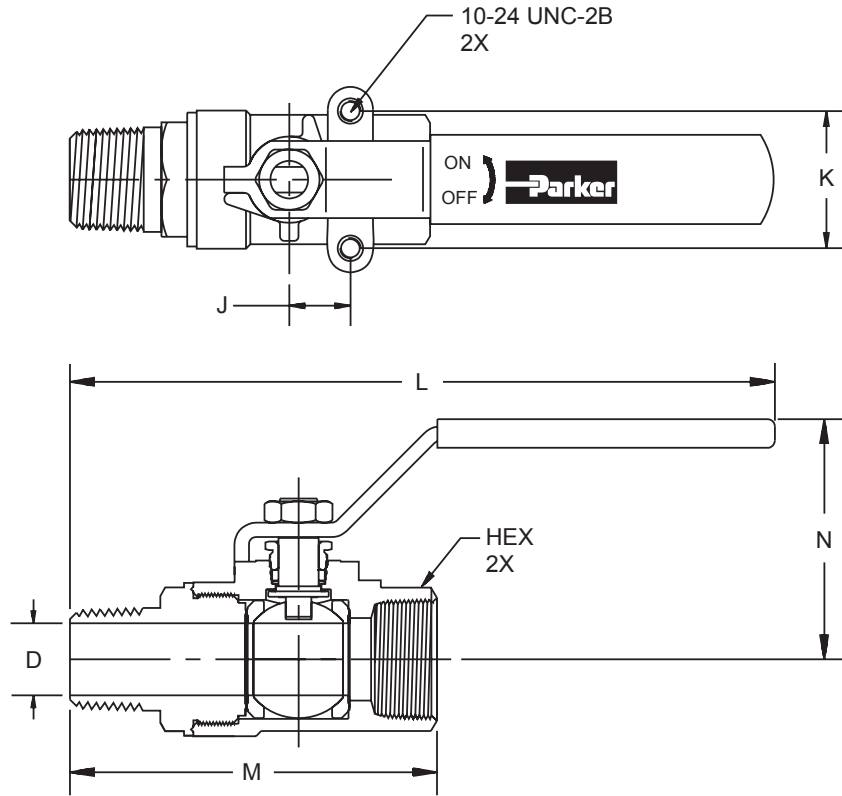


Flow Data

Type 501SS		Type 502SS	
Valve Size	C _v	Valve Size	C _v
1/4"	4.0	1/4"	4.0
3/8"	6.0	3/8"	6.0
1/2"	14.0	1/2"	14.0
3/4"	35.0	3/4"	35.0
1"	54.0	1"	54.0
		1-1/4"	74.0
		1-1/2"	120.0
		2"	226.0

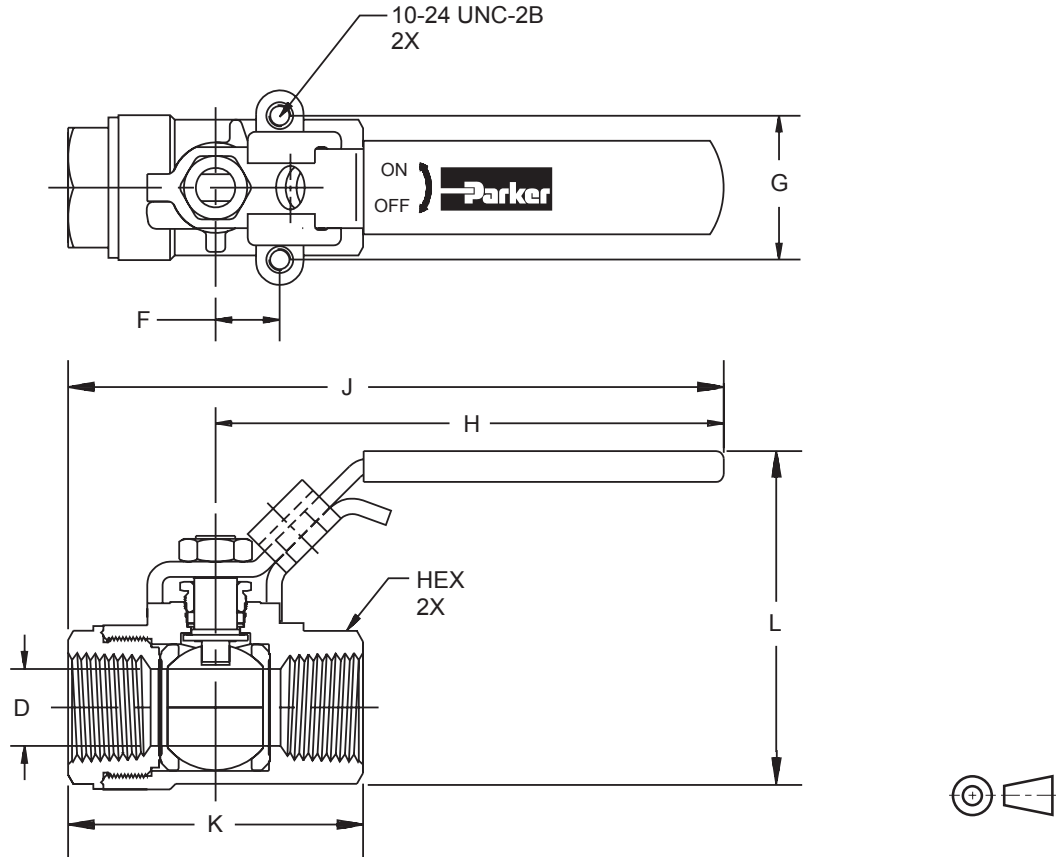


Model V501SS



Part Number	Pipe Thread	Hex	Dimensions mm (in)					D Flow Ø
			J	K	L	M	N	
Male-Female Pipe Ends V501SS								
V501SS4	1/4"	15/16"	12.7 (.50)	28.4 (1.12)	142.2 (5.60)	67.3 (2.65)	50.0 (1.97)	7.1 (.280)
V501SS6	3/8"	15/16"	12.7 (.50)	28.4 (1.12)	142.2 (5.60)	67.3 (2.65)	50.0 (1.97)	9.5 (.375)
V501SS8	1/2"	1-1/16"	12.7 (.50)	28.4 (1.12)	148.6 (5.85)	77.5 (3.05)	50.8 (2.00)	12.7 (.500)
V501SS12	3/4"	1-3/8"	22.4 (.88)	34.8 (1.37)	184.7 (7.27)	97.8 (3.85)	64.8 (2.55)	18.3 (.720)
V501SS16	1"	1-5/8"	22.4 (.88)	34.8 (1.37)	190.0 (7.48)	108.0 (4.25)	68.1 (2.68)	23.9 (.940)

Model V502SS and VP502SS



Part Number	Size	B/C Hex	F	Dimensions mm (in)					D Flow Ø	Panel Mount Thread
				G	H	J	K	L		
Female to Female Panel Mount										
V*502SS4	1/4"	15/16"	12.7 (0.50)	28.6 (1.13)	101.6 4.00	127.8 (5.03)	52.6 (2.07)	64.0 (2.52)	9.5 (0.38)	10-24 UNC
V*502SS6	3/8"	15/16"	12.7 (0.50)	28.6 (1.13)	101.6 4.00	127.8 (5.03)	52.6 (2.07)	64.0 (2.52)	9.5 (0.38)	10-24 UNC
V*502SS8	1/2"	1-1/16"	12.7 (0.50)	28.6 (1.13)	101.6 4.00	130.3 (5.13)	57.7 (2.27)	67.3 (2.65)	12.7 (0.50)	10-24 UNC
V*502SS12	3/4"	1-3/8"	22.2 (0.88)	34.9 (1.38)	127.0 (5.00)	169.4 (6.67)	85.1 (3.35)	87.9 (3.46)	20.1 (0.79)	10-24 UNC
V*502SS16	1"	1-5/8"	22.2 (0.88)	34.9 (1.38)	127.0 (5.00)	172.0 (6.77)	89.9 (3.54)	95.0 (3.74)	25.4 (1.00)	10-24 UNC
V*502SS20	1-1/4"	2"	25.4 (1.00)	38.1 (1.50)	177.8 (7.00)	228.6 (9.00)	101.6 (4.00)	115.6 (4.55)	31.8 (1.25)	1/4-20 UNC
V*502SS24	1-1/2"	2-3/8"	25.4 (1.00)	38.1 (1.50)	177.8 (7.00)	182.6 (7.19)	111.3 (4.38)	137.7 (5.42)	38.1 (1.50)	1/4-20 UNC
V*502SS32	2"	3"	25.4 (1.00)	38.1 (1.50)	177.8 (7.00)	247.7 9.75	139.7 (5.50)	144.3 (5.68)	50.8 (2.00)	1/4-20 UNC

Locking handle parts: For use with 5/16" diameter shank lock

General Description

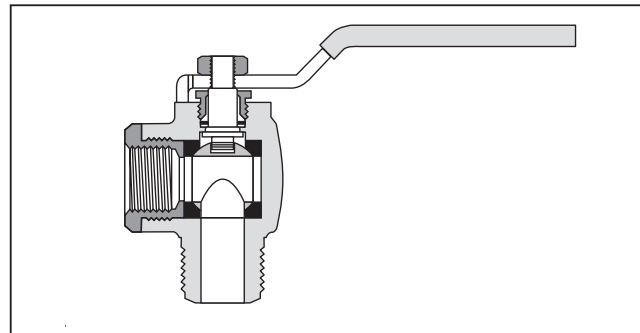
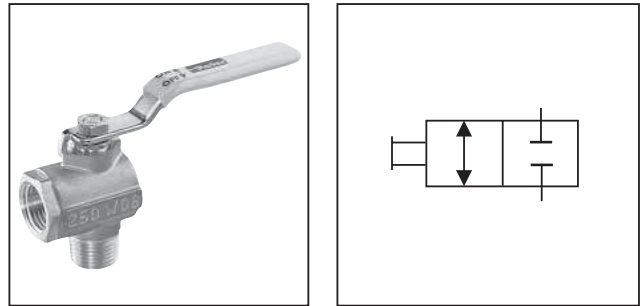
Series 590 low pressure 90° ball valves provide total shut-off capability for services up to 17 Bar (250 PSI).

Operation

A quarter turn of the handle is on or off. Ball valves are not intended for use as a throttling valve. Attempting to use it in these applications may result in premature seal failure and/or inability to turn the valve handle.

Features

- Ball Valve bodies are machined from high quality CA377 forgings which provide extended service life and resist failure caused by severe temperature conditions.
- Highly inert PTFE seats and seals provide resistance to chemical corrosion.
- Blowout proof stem design, chrome plated brass ball and a special design handle enable increased turn and leverage for ease of opening and closing.



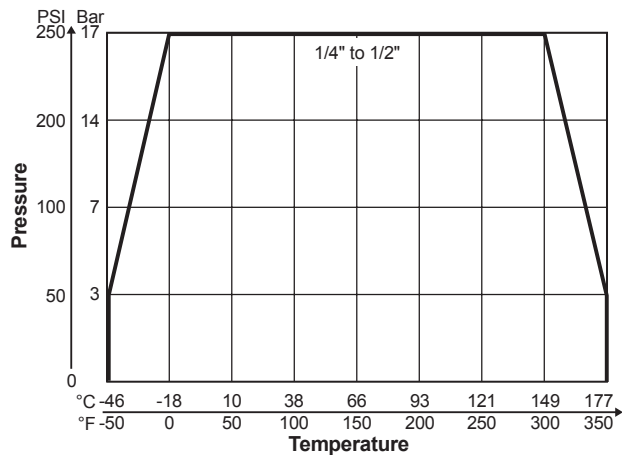
Specifications

Working Pressure	17 Bar (250 PSI)
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Ordering Information

<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">V</div> <p>Style</p>	<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> <p>Type</p>	<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">P</div> <p>Material</p>	<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> <p>Size</p>	<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> <p>Design Series</p>																			
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Code</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>590</td> <td>90° Male/Female NPT Ports</td> </tr> <tr> <td>591</td> <td>90° Male/Male NPT Ports</td> </tr> </tbody> </table>		Code	Type	590	90° Male/Female NPT Ports	591	90° Male/Male NPT Ports	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Code</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>P</td> <td>Brass</td> </tr> </tbody> </table>		Code	Type	P	Brass	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Code</th> <th>Size</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>1/4" NPT</td> </tr> <tr> <td>6</td> <td>3/8" NPT</td> </tr> <tr> <td>8</td> <td>1/2" NPT</td> </tr> </tbody> </table>	Code	Size	4	1/4" NPT	6	3/8" NPT	8	1/2" NPT	<p>NOTE: Not required when ordering.</p>
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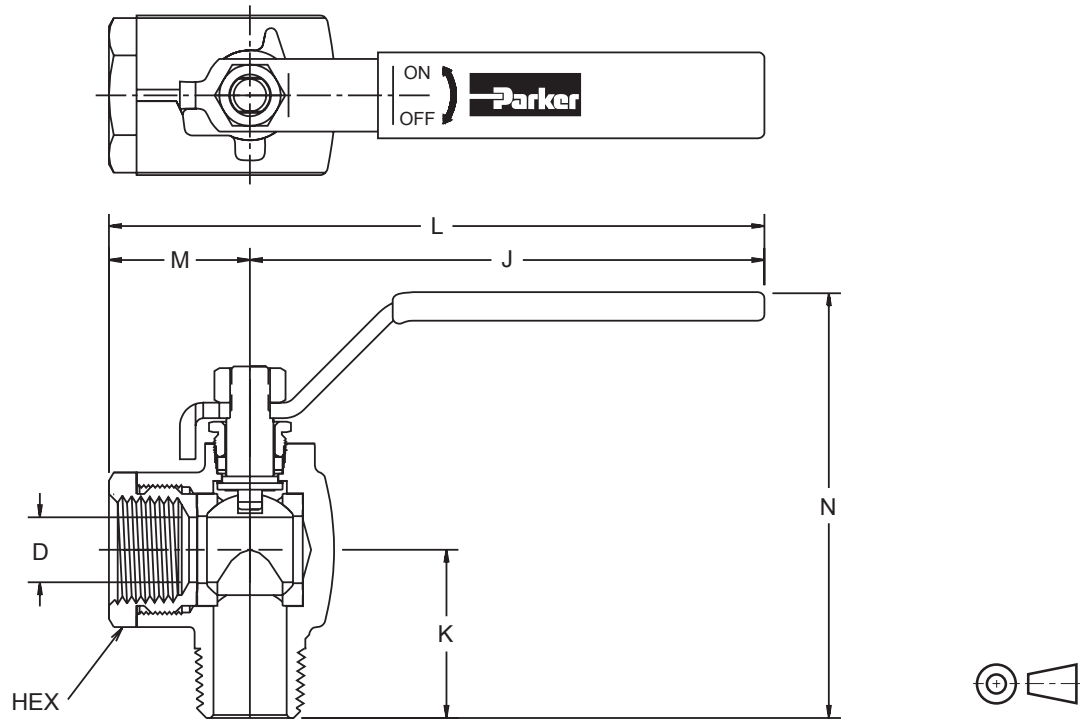
Performance Curve



3300-2.p65, dd

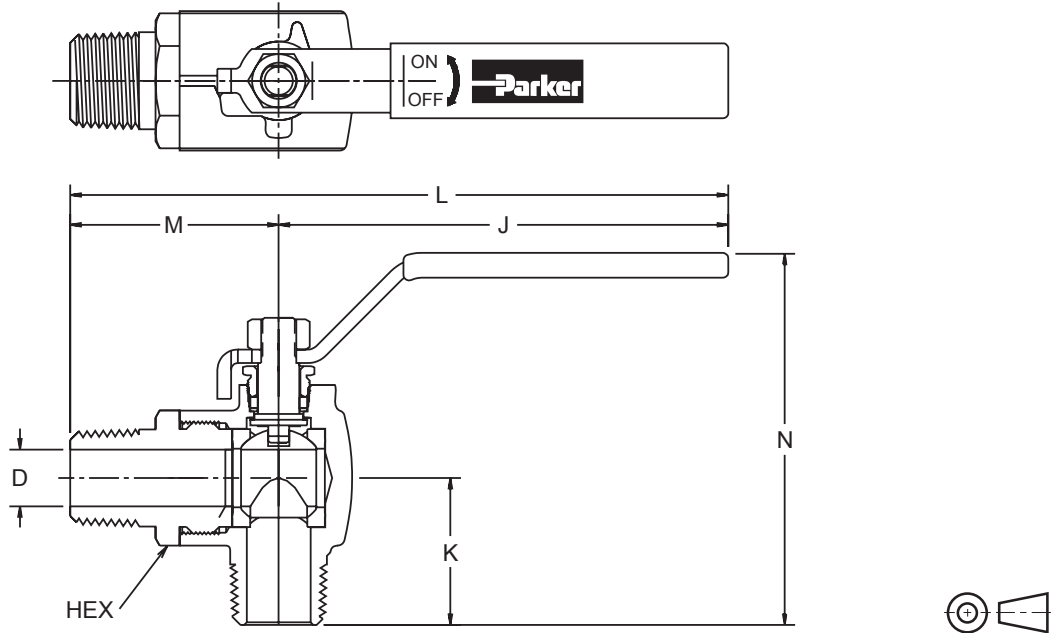


Model V590P



Part Number	Pipe Thread	Hex	Dimensions mm (in)					D Flow Ø
			J	K	L	M	N	
Lever Handle, 90° Flow, Male-Female Pipe Ends V590P								
V590P4	1/4"	15/16"	100.6 (3.96)	27.4 (1.08)	126.0 (4.96)	25.4 (1.00)	76.7 (3.02)	9.5 (.375)
V590P6	3/8"	15/16"	100.6 (3.96)	27.7 (1.09)	126.0 (4.96)	25.4 (1.00)	77.0 (3.03)	9.5 (.375)
V590P8	1/2"	1-1/16"	96.5 (3.80)	33.0 (1.30)	128.3 (5.05)	27.7 (1.09)	74.9 (2.95)	12.7 (.500)

Model V591P



Part Number	Pipe Thread (PTF)	B Hex	Dimensions mm (in)					D Flow Ø
			J	K	L	M	N	
Lever Handle, 90° Flow, Male-Male Pipe Ends V591P*								
V591P4	1/4"	15/16"	100.6 (3.96)	27.4 (1.08)	140.2 (5.52)	39.6 (1.56)	76.7 (3.02)	8.7 (.344)
V591P6	3/8"	15/16"	100.6 (3.96)	27.7 (1.09)	140.2 (5.52)	39.6 (1.56)	77.0 (3.03)	9.5 (.375)
V591P8	1/2"	1-1/16"	100.6 (3.96)	33.0 (1.30)	147.3 (5.80)	46.7 (1.84)	83.3 (3.28)	12.7 (.500)