

# 'BVH' & 'BVAH' High Pressure for 6,000 PSI

The benchmark of quality and value ; Made in U.S.A. ; Widest array of sizes, connections, and accessories.



DMIC 'BVH' and 'BVAH' valves set the standard by which other high pressure valves are judged. Obsessive attention to detail and years of continuous refinement have brought the real world performance of DMIC 'BVH' Block and 'BVAH' round body valves beyond the ordinary.

- ☑ **Exclusive Spindle-Glide™ Design** incorporates nylon thrust bearings and Synthetic lube packing to further reduce actuation torque, improve tactile feel, and help prevent valve seizure even after long-term outdoor exposure
- ☑ The latest **Delrin Ball Seal** formulation lowers actuation torque, optional **Super Low Friction** ball seals for high duty cycle & actuated applications
- ☑ **Custom Mill Runs** of special steel made to DMIC's specifications results in valves of superior material strength, quality, finish, and integrity
- ☑ Expanded array of labor-saving **DMIC Pre-Engineered Accessories**

## About 'BVH' & 'BVAH'

DMIC's 'BVH' Block Body and 'BVAH' round body valves are now unified under the 'BVAH' banner. Like the lower pressure 'BVAL' and 'BVAM', the 'BVAH' series is available in three geometries to span our largest production size range from 1/4" to 6" unrestricted bore. 'BVAH' valves are full pressure 6,000 PSI steel valves designed for superlative durability and high duty cycle applications. Please call for latest specifications of 5" and 6" sizes.



### BVH 1/4" to 1" (1 1/2")

The original DMIC steel square body style. The 1/4" and 1/2" sizes restricted to 1" internal bore. Rated for 6000 PSI working pressure.

### BVAH 1 1/4" to 2"

Innovative round body in steel or stainless steel permits panel & precision accessory mtg. Extensive actuation possibilities. Fast delivery in stainless steel.

### BVAH 2 1/2" to 4"

Bulletproof XL full pressure design with unrestricted bore. The 2 1/2" size is a floating ball design; 3 inch and above utilize a reinforced trunnion ball design. Available with actuation and full array of accessories. Made in U.S.A. Max 6000 PSI. Call for dimensions of 5" & 6" sizes.

## Common Dimensions

For valve length 'A' and other specific dimensions, plus sketches of specialty valves, please see the Dependent Dimensions tables on page 23 and 24.

BVH/BVAH	Common Dimensions				
	Part Number	Port Size	Rated Pressure PSI (bar)	DIMENSIONS in (mm)	
Valve Width B				Valve Bore C	Handle Length D
BVH-0250*-1111	1/4"	6000 413.8	1.38 34.9	0.25 6.4	4.50 114.3
BVH-0375*-1111	3/8"	6000 413.8	1.50 38.1	0.38 9.5	4.50 114.3
BVH-0500*-1111	1/2"	6000 413.8	1.63 41.3	0.50 12.7	4.50 114.3
BVH-0750*-1111	3/4"	6000 413.8	2.25 57.2	0.75 19.1	7.00 177.8
BVH-1000*-1111	1"	6000 413.8	2.50 63.5	1.00 25.4	7.00 177.8
BVH-1250*-1111 Restricted to 1"	1 1/4"	6000 413.8	2.50 63.5	1.00 25.4	7.00 177.8
BVH-1500*-1111 Restricted to 1"	1 1/2"	6000 413.8	2.50 63.5	1.00 25.4	7.00 177.8
BVAH-1250*-1111	1 1/4"	6000 413.8	3.38 85.7	1.25 31.8	10.00 254.0
BVAH-1500*-1111	1 1/2"	6000 413.8	3.75 95.3	1.50 38.1	10.00 254.0
BVAH-2000*-1111	2"	6000 413.8	4.50 114.3	2.00 50.8	10.00 254.0
BVAH-2500*-1111	2 1/2"	6000 413.8	6.50 165.1	2.50 63.5	14.00 355.6
BVAH-3000*-1111	3"	6000 413.8	7.50 190.5	3.00 76.2	14.50 368.3
BVAH-4000*-1111	4"	6000 413.8	10.00 254.0	4.00 101.6	14.50 368.3



# 'BVH' & 'BVAH' 6000 PSI

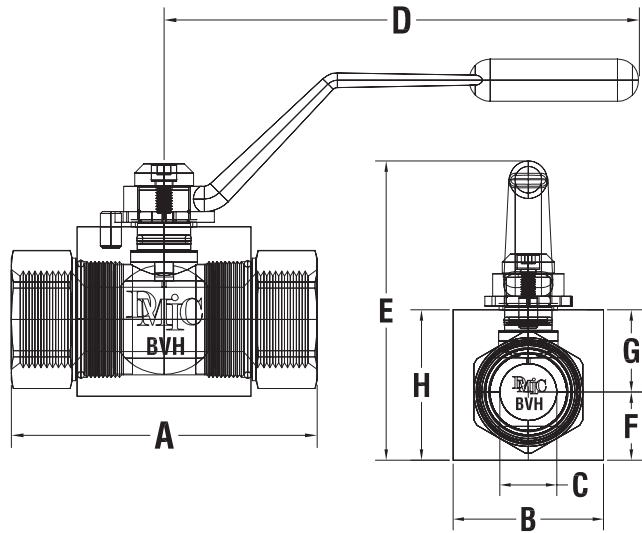
## Dependent Dimensions

These are the valve dimensions that vary based on your selection of a connection style. Some connection styles provide additional dimensions to those published at left; please see supplemental sketches next page for more configurations and specs.

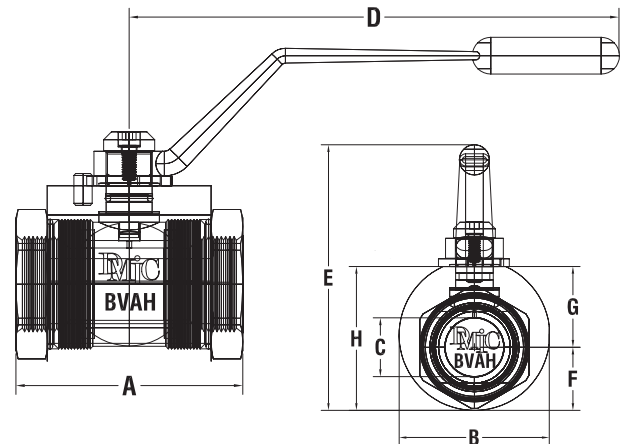
BVH/BVAH		Dependent Dimensions (1 of 3)				
THREADED CONNECTION						
Dimension (inches)		A	E	F	G	H
Port Code(s)	Port Size	Overall Length	Overall Height	Bot to PortCtr	PortCtr to Top	Valve Height
<b>N S B I U IA</b> Threaded Connections	1/4"	2.74	2.98	0.61	0.77	1.38
	3/8"	2.87	3.11	0.64	0.86	1.50
	1/2"	3.35	3.23	0.73	0.90	1.63
	3/4"	3.80	4.70	1.00	1.26	2.25
	1"	4.49	4.95	1.14	1.36	2.50
	1 1/4"	5.24	4.95	1.14	1.36	2.50
	1 1/2"	5.49	4.95	1.14	1.36	2.50
	1 3/4"	4.84	6.38	1.45	1.81	3.26
	2"	5.33	6.76	1.64	2.00	3.64
	2 1/2"	6.54	7.42	2.01	2.29	4.30
3"	7.50	9.81	2.95	3.18	6.13	
4"	9.28	12.72	4.43	4.43	8.86	
4"	11.21	15.31	5.77	5.67	11.44	
SAE C.61 4-BOLT FLANGE CONNECTION						
Dimension (inches)		A	J	K	L	
Port Code(s)	Port Size	Overall Length	Flg Pad Long	Flg Pad Short	UNC BoltThrd	Metric BoltThrd
<b>FM GM FL</b> SAE C.61 4-Bolt Comp/Std Flange Connections	1/2"	4.22	1.50	0.69	7/16"	M8
	3/4"	4.77	1.88	0.88	3/8"	M10
	1"	5.27	2.06	1.03	3/8"	M10
	1 1/4"	6.90	2.31	1.19	7/16"	M10
	1 1/2"	7.10	2.75	1.41	1/2"	M12
	2"	8.06	3.06	1.69	1/2"	M12
2 1/2"	10.75	3.50	2.00	1/2"	M12	
3"	13.78	4.19	2.44	5/8"	M16	
4"	16.21	5.13	3.06	5/8"	M16	
SAE C.62 4-BOLT FLANGE CONNECTION						
Dimension (inches)		A	J	K	L	
Port Code(s)	Port Size	Overall Length	Flg Pad Long Side	Flg Pad Short Side	UNC BoltThr	Metric BoltThr
<b>FH / GH FK</b> SAE C.62 4B Comp/Std	1/2"	4.22	1.59	0.72	7/16"	M8
	3/4"	4.77	2.00	0.94	3/8"	M10
	1"	5.27	2.25	1.09	7/16"	M12
	1 1/4"	6.90	2.63	1.25	1/2"	M14
	1 1/2"	7.10	3.12	1.44	5/8"	M16
2"	8.06	3.81	1.75	3/4"	M20	
SAE C.61 SPLIT FLANGE CONNECTION						
Dimension (inches)		A	-	-	-	A <sub>CM</sub>
Port Code(s)	Port Size	Overall Length	O-Ring No.	DMIC Split Flange Kit	Length A Combo	
<b>SM CM</b> SAE C.61 Split & Combo	1/2"	5.95	2-210	FSL-0500SK	5.09	
	3/4"	6.38	2-214	FSL-0750SK	5.58	
	1"	6.99	2-219	FSL-1000SK	6.13	
	1 1/4"	7.51	2-222	FSL-1250SK	7.20	
	1 1/2"	9.09	2-225	FSL-1500SK	8.09	
	2"	9.11	2-228	FSL-2000SK	8.59	
	2 1/2"	14.10	2-232	FSL-2500SK	12.43	
	3"	15.88	2-237	FSL-3000SK	14.83	
4"	18.26	2-245	FSL-4000SK	17.44		
SAE C.62 SPLIT FLANGE CONNECTION						
Dimension (inches)		A	-	-	-	A <sub>CH</sub>
Port Code(s)	Port Size	Overall Length	O-Ring No.	DMIC Split Flange Kit	Length A Combo	
<b>SH / CH</b> SAE C.62 Split & Combo	1/2"	5.95	2-210	FSH-0500SK	5.09	
	3/4"	6.86	2-214	FSH-0750SK	5.82	
	1"	7.79	2-219	FSH-1000SK	6.53	
	1 1/4"	8.77	2-222	FSH-1250SK	7.83	
	1 1/2"	11.07	2-225	FSH-1500SK	9.08	
2"	12.44	2-228	FSH-2000SK	10.25		

## Dimensional Sketches

'BVH' Block Body, 1/4" - 1"

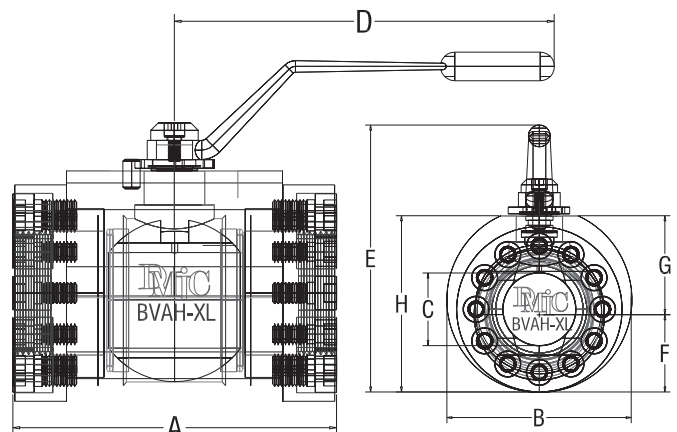


'BVAH' Round Body, 1 1/4" - 2"



'BVAH' XL Round Body, 2 1/2"

(Models 3" and up call Factory for certified print)



Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



# 'BVH' & 'BVAH' 6000 PSI

## Dependent Dimensions

These are the valve dimensions that vary based on your selection of a connection style. Please see supplemental sketches on the next page for a representative drawing and extra tabular dimensions which define your selected connection style.

BVH/BVAH Dependent Dimensions (2 of 3)						
ANSI CLASS 150# CONNECTION						
See 'BVAL' model (page 15) for ANSI Class 150# valves & flange dimensions						
ANSI CLASS 300# CONNECTION						
Dimension (inches)		A	G	F	H	J
Port Code(s)	Port Size	Overall Length	Flange Diam	B/Ctr Diam	Bolt Hole Dia	# Bolt Holes
<b>AB</b> ANSI Class 300 (750 PSI nominal)	1/2"	To Fit	3.75	2.63	0.63	4
	3/4"	To Fit	4.63	3.25	0.75	4
	1"	To Fit	4.87	3.50	0.75	4
	1 1/4"	To Fit	5.25	3.87	0.75	4
	1 1/2"	To Fit	6.13	4.50	0.87	4
	2"	To Fit	6.50	5.00	0.75	8
	2 1/2"	To Fit	7.50	5.87	0.87	8
	3"	To Fit	8.25	6.63	0.87	8
4"	To Fit	10.00	7.87	0.87	8	
ANSI CLASS 600# CONNECTION						
Dimension (inches)		A	G	F	H	J
Port Code(s)	Port Size	Overall Length	Flange Diam	B/Ctr Diam	Bolt Hole Dia	# Bolt Holes
<b>AC</b> ANSI Class 600 (1500 PSI Nom.)	1/2"	To Fit	3.75	2.63	0.63	4
	3/4"	To Fit	4.63	3.25	0.75	4
	1"	To Fit	4.87	3.50	0.75	4
	1 1/4"	To Fit	5.25	3.87	0.75	4
	1 1/2"	To Fit	6.13	4.50	0.87	4
	2"	To Fit	6.50	5.00	0.75	8
	2 1/2"	To Fit	7.50	5.87	0.87	8
	3"	To Fit	8.25	6.63	0.87	8
4"	To Fit	10.75	8.50	1.00	8	
ANSI CLASS 900# CONNECTION						
Dimension (inches)		A	G	F	H	J
Port Code(s)	Port Size	Overall Length	Flange Diam	B/Ctr Diam	Bolt Hole Dia	# Bolt Holes
<b>AD</b> ANSI Class 900 (2250 PSI Nom.)	1/2"	To Fit	4.75	3.25	0.87	4
	3/4"	To Fit	5.13	3.50	0.87	4
	1"	To Fit	5.87	4.00	1.00	4
	1 1/4"	To Fit	6.25	4.37	1.00	4
	1 1/2"	To Fit	7.00	4.87	1.13	4
	2"	To Fit	8.50	6.50	1.00	8
	2 1/2"	To Fit	9.63	7.50	1.13	8
	3"	To Fit	9.50	7.50	1.00	8
4"	To Fit	11.50	9.25	1.25	8	
ANSI CLASS 1500# CONNECTION						
Dimension (inches)		A	G	F	H	J
Port Code(s)	Port Size	Overall Length	Flange Diam	B/Ctr Diam	Bolt Hole Dia	# Bolt Holes
<b>AE</b> ANSI Cls. 1500 (3750 PSI Nom.)	1/2"	To Fit	4.75	3.25	0.87	4
	3/4"	To Fit	5.13	3.50	0.87	4
	1"	To Fit	5.87	4.00	1.00	4
	1 1/4"	To Fit	6.25	4.37	1.00	4
	1 1/2"	To Fit	7.00	4.87	1.13	4
	2"	To Fit	8.50	6.50	1.00	8
	2 1/2"	To Fit	9.63	7.50	1.13	8
	3"	To Fit	10.50	8.00	1.25	8
4"	To Fit	12.25	13.44	1.37	8	
ANSI CLASS 2500# CONNECTION						
Dimension (inches)		A	G	F	H	J
Port Code(s)	Port Size	Overall Length	Flange Diam	B/Ctr Diam	Bolt Hole Dia	# Bolt Holes
<b>AF</b> ANSI Cls. 2500 (6300 PSI Nom.)	1/2"	To Fit	5.25	3.50	0.87	4
	3/4"	To Fit	5.50	3.75	0.87	4
	1"	To Fit	6.25	4.25	1.00	4
	1 1/4"	To Fit	7.25	5.13	1.13	4
	1 1/2"	To Fit	8.00	5.75	1.25	4
	2"	To Fit	9.25	6.75	1.13	8
	2 1/2"	To Fit	10.50	7.75	1.25	8
	3"	To Fit	12.00	9.00	1.37	8
4"	To Fit	14.00	10.75	1.63	8	

JIC-M (37° FLARE) CONNECTION					
Dimension (inches)		A	E	J	K
Port Code(s)	Port Size	Overall Length	Overall Height	JIC Thrd Depth	JIC Thrd Pitch
<b>J</b> JIC Male Connections	3/8"	2.94	2.98	0.55	9/16-20
	1/2"	3.35	3.11	0.65	3/4-16
	3/4"	4.31	3.23	0.86	1-1/16-12
	1"	4.97	4.70	0.91	1-5/16-12
	1 1/4"	5.72	4.95	0.95	1-5/8-12
	1 1/2"	6.47	6.38	1.16	1-7/8-12
2"	7.79	6.76	1.38	2-1/2-12	

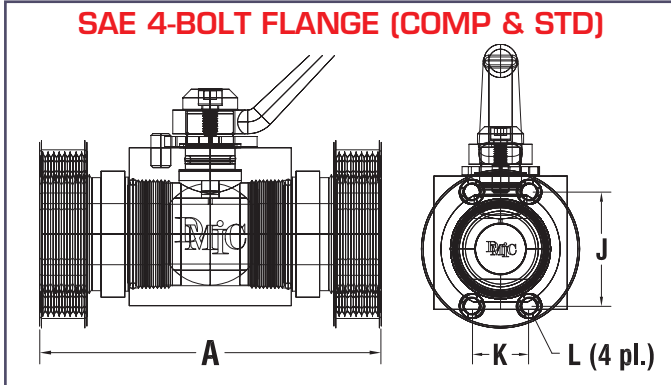
BVH/BVAH Dependent Dimensions (3 of 3)						
FIXED SOCKET WELD CONNECTION						
Dimension (inches)		A	J	K		
Port Code(s)	Port Size	Overall Length	Pipe OD	Socket Depth		
<b>W4</b> Socket Weld Connections	1/2"	6.26	0.84	0.75		
	3/4"	7.46	1.05	0.75		
	1"	7.66	1.32	1.00		
	1 1/4"	8.40	1.66	1.00		
	1 1/2"	9.46	1.90	1.00		
2"	10.60	2.88	1.00			
DIN FLANGE PN10/16 - 16 BAR						
Dimension (mm)		A	G	F	H	J
Port Code(s)	Port Size	Length	Flange Diam	Bolt Ctr Diam	Bolt Hole	# Bolt Holes
<b>DA</b> DIN Class 16 (240 PSI Nom.) Supplied on 'BVAL' series	15mm (1/2")	To Fit	95.0	65.0	14.0	4
	20mm (3/4")	To Fit	105.0	75.0	14.0	4
	25mm (1")	To Fit	115.0	85.0	14.0	4
	32mm (1 1/4")	To Fit	140.0	100.0	18.0	4
	40mm (1 1/2")	To Fit	150.0	110.0	18.0	4
	50mm (2")	To Fit	165.0	125.0	18.0	4
	65mm (2 1/2")	To Fit	185.0	145.0	18.0	8
	80mm (3")	To Fit	200.0	160.0	18.0	8
100mm (4")	To Fit	220.0	180.0	18.0	8	
DIN FLANGE PN25/40 - 40 BAR						
Dimension (mm)		A	G	F	H	J
Port Code(s)	Port Size	Length	Flange Diam	Bolt Ctr Diam	Bolt Hole	# Bolt Holes
<b>DB</b> DIN Class 40 (600 PSI Nom.)	15mm (1/2")	To Fit	105.0	75.0	14.0	4
	25mm (1")	To Fit	140.0	100.0	18.0	4
	40mm (1 1/2")	To Fit	170.0	125.0	22.0	4
	50mm (2")	To Fit	195.0	145.0	26.0	4
DIN FLANGE PN63/100 - 100 BAR						
Dimension (mm)		A	G	F	H	J
Port Code(s)	Port Size	Length	Flange Diam	Bolt Ctr Diam	Bolt Hole	# Bolt Holes
<b>DC</b> DIN Class 100 (1500 PSI Nom.)	15mm (1/2")	To Fit	105.0	75.0	14.0	4
	25mm (1")	To Fit	140.0	100.0	18.0	4
	40mm (1 1/2")	To Fit	170.0	125.0	22.0	4
	50mm (2")	To Fit	195.0	145.0	26.0	4
DIN FLANGE PN160 - 160 BAR						
Dimension (mm)		A	G	F	H	J
Port Code(s)	Port Size	Length	Flange Diam	Bolt Ctr Diam	Bolt Hole	# Bolt Holes
<b>DD</b> DIN Class 160 (2400 PSI Nom.)	15mm	To Fit	105.0	75.0	14.0	4
	25mm	To Fit	140.0	100.0	18.0	4
	40mm	To Fit	170.0	125.0	22.0	4
	50mm	To Fit	195.0	145.0	26.0	4
DIN FLANGE PN250 - 250 BAR						
Dimension (mm)		A	G	F	H	J
Port Code(s)	Port Size	Length	Flange Diam	Bolt Ctr Diam	Bolt Hole	# Bolt Holes
<b>DE</b> DIN Class 250	15mm	To Fit	130.0	90.0	18.0	4
	25mm	To Fit	150.0	105.0	22.0	4
	40mm	To Fit	185.0	135.0	26.0	4
	50mm	To Fit	200.0	150.0	26.0	8
DIN FLANGE PN315 - 315 BAR						
Dimension (mm)		A	G	F	H	J
Port Code(s)	Port Size	Length	Flange Diam	Bolt Ctr Diam	Bolt Hole	# Bolt Holes
<b>DF</b> DIN Class 315	15mm	To Fit	130.0	90.0	18.0	4
	25mm	To Fit	160.0	115.0	22.0	4
	40mm	To Fit	195.0	145.0	26.0	4
	50mm	To Fit	210.0	160.0	26.0	8
DIN FLANGE PN400 - 400 BAR						
Dimension (mm)		A	G	F	H	J
Port Code(s)	Port Size	Length	Flange Diam	Bolt Ctr Diam	Bolt Hole	# Bolt Holes
<b>DG</b> DIN Class 400	15mm	To Fit	145.0	100.0	22.0	4
	25mm	To Fit	180.0	130.0	26.0	4
	40mm	To Fit	220.0	165.0	30.0	4
	50mm	To Fit	235.0	180.0	30.0	8



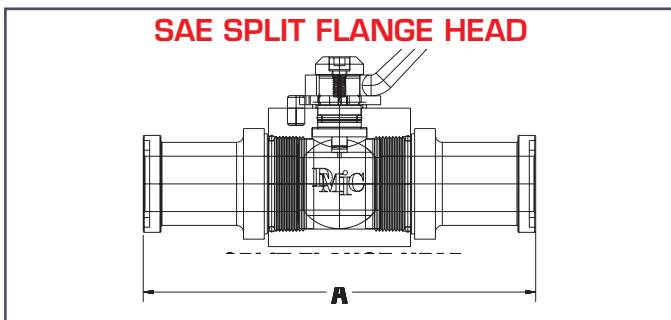
# 'BVH' & 'BVAH' 6000 PSI

## Supplemental Sketches

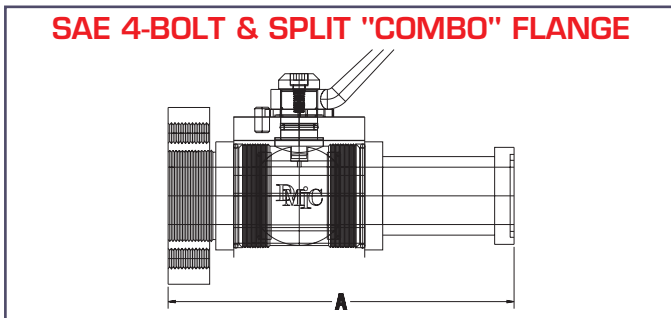
**SAE 4-BOLT FLANGE (COMP & STD)**



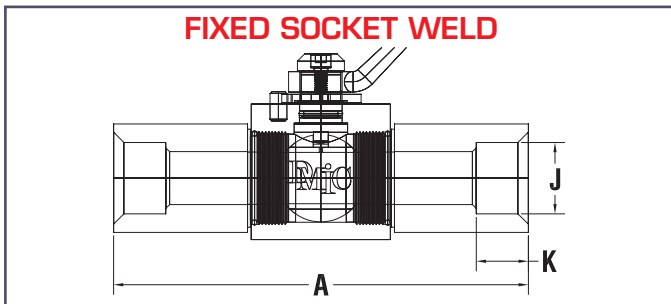
**SAE SPLIT FLANGE HEAD**



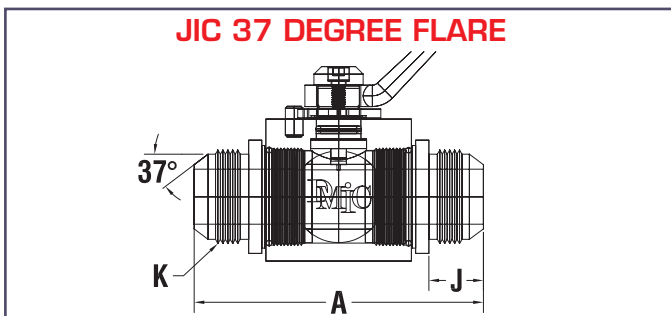
**SAE 4-BOLT & SPLIT "COMBO" FLANGE**



**FIXED SOCKET WELD**



**JIC 37 DEGREE FLARE**



BVH/BVAH	Physical Construction
Parameter	Material
BODY	Steel Body & Endcaps
BALL	Steel, Chrome Plated
SPINDLE	Steel, Zinc Plated
STD HANDLE	Forged Steel, Nickel Plated
BALL SEALS	Delrin, optional Teflon and PEEK
O-RINGS	O-Ring + BU, Buna-N std.
TEMP RANGE	-22°F to 212°F (-30°/100°C)
LIFE EXPECTANCY	Over 1,000,000 cycles

## 'BVH/AH' Accessories

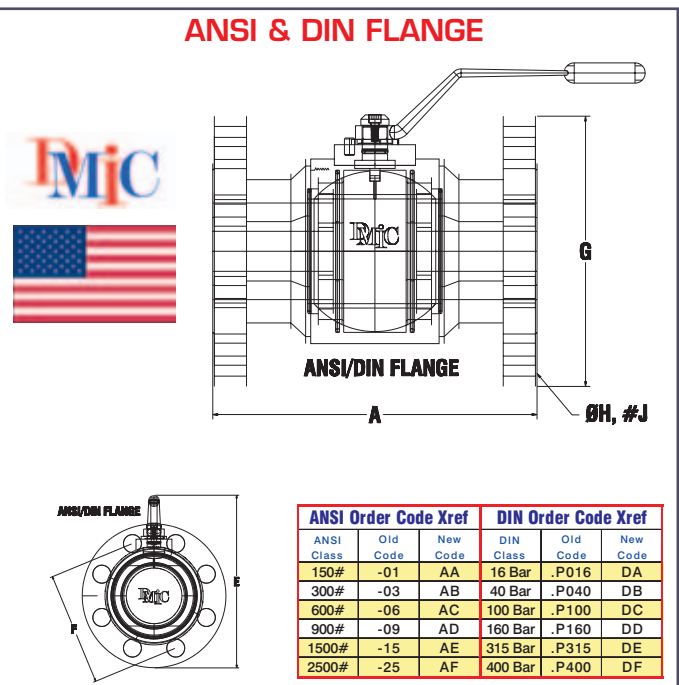
DMIC 'BVH' and 'BVAH' can be equipped with the industry's widest array of labor and cost-saving Ball Valve accessories, including:

- Locking Handles, OSHA type and Security
- Limit Switch Brackets, with one of two switches, and optional locking capability
- Various Panel and Substrate mounting options
- Turnkey Actuation Packages for Pneumatic, Electric, and Hydraulic applications

## New Simplified Accessory Codes

For 2001, we've made it even easier to get exactly the Ball Valve you need for rapid delivery. Please see page 12.

**ANSI & DIN FLANGE**

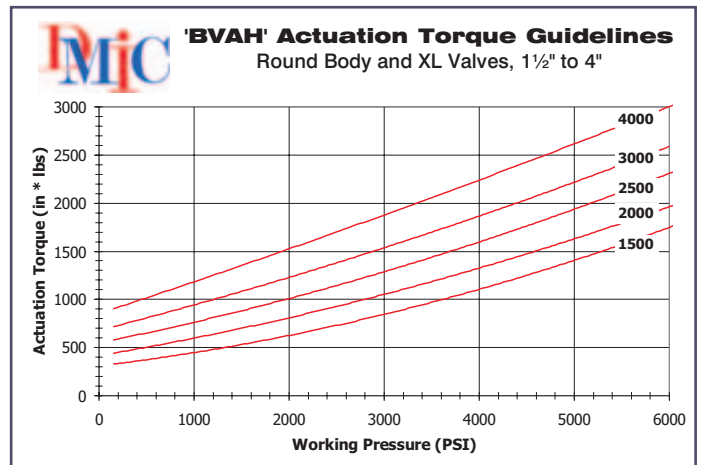
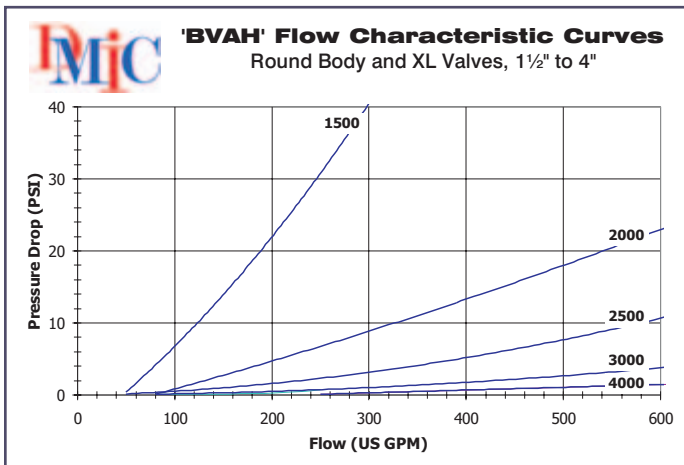
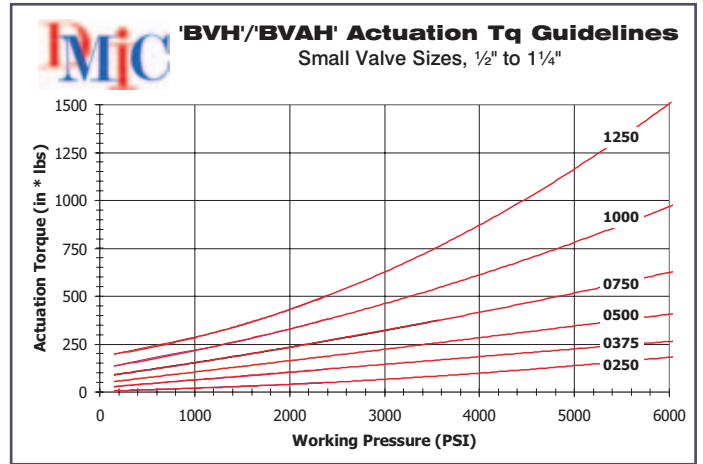
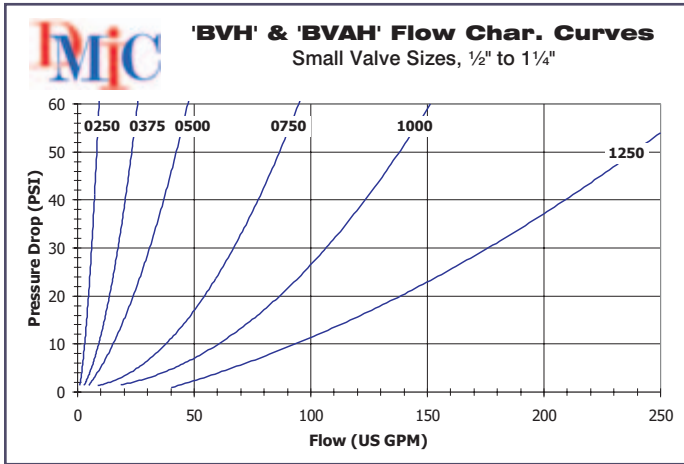


ANSI Order Code Xref			DIN Order Code Xref		
ANSI Class	Old Code	New Code	DIN Class	Old Code	New Code
150#	-01	AA	16 Bar	.P016	DA
300#	-03	AB	40 Bar	.P040	DB
600#	-06	AC	100 Bar	.P100	DC
900#	-09	AD	160 Bar	.P160	DD
1500#	-15	AE	315 Bar	.P315	DE
2500#	-25	AF	400 Bar	.P400	DF



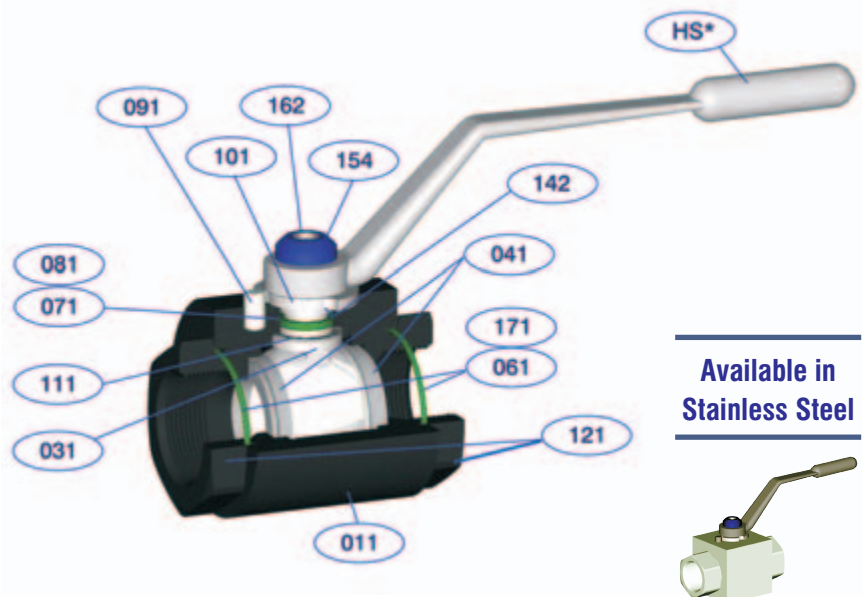
# 'BVH' & 'BVAH' 6000 PSI

## 'BVH' and 'BVAH' Performance Curves



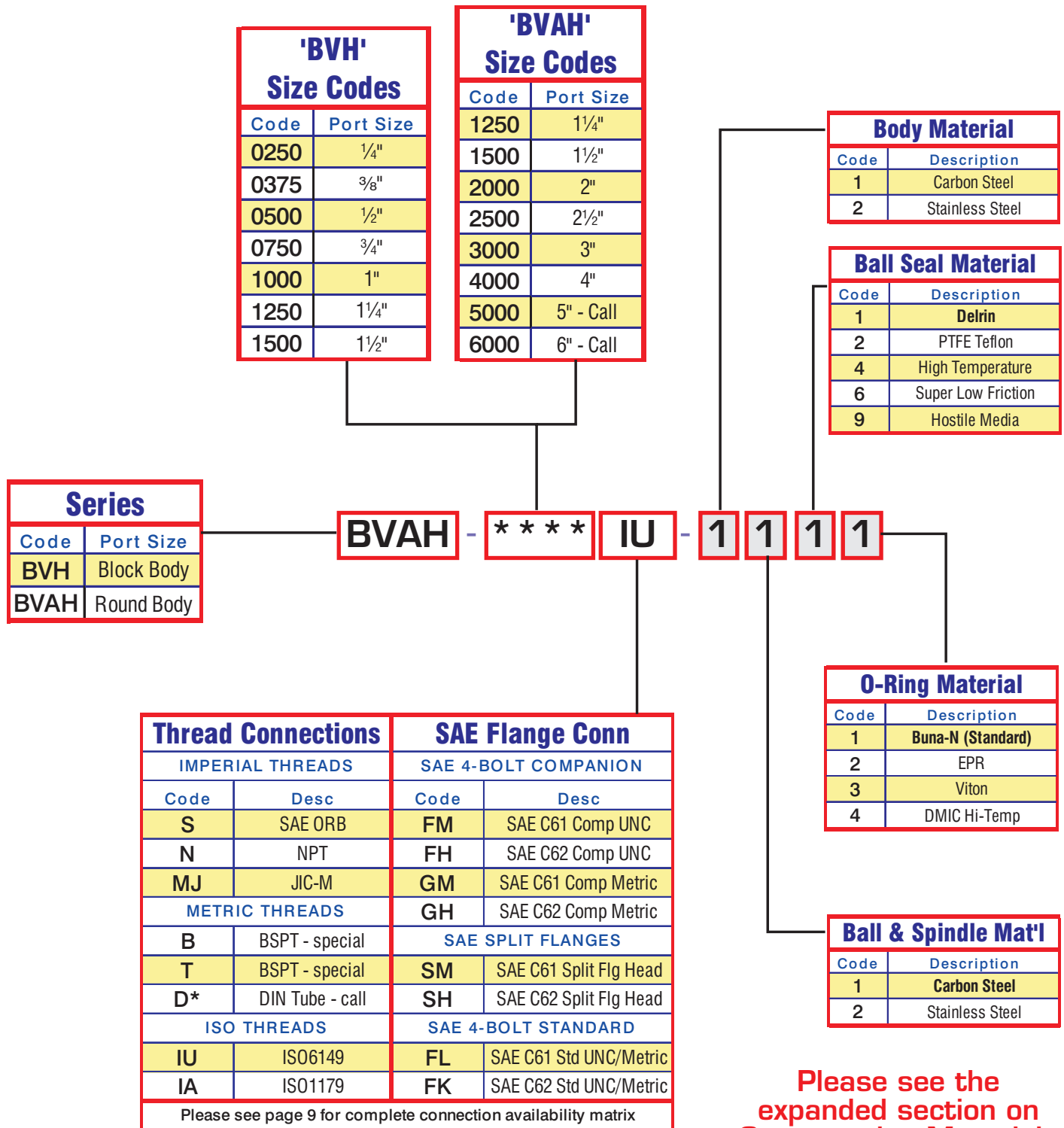
## 'BVH' and 'BVAH' Service Parts BOM

BVH/BVAH		Service Parts BOM
Index	Qty	Description
011	1	Valve Body
021	1	Ball
031	1	Spindle, HP Steel
04*	2	Ball Seal
171	2	Connection Backup
061	2	Connection O-Ring
071	1	Spindle O-Ring
081	1	Spindle Backup
091	1	Stop Pin
101	1	Stop Washer
111	1	Internal Glide Brg
121**	2	Connection End
142	1	Spindle Glide Brg
154	1	Color Code Cap
162	1	Handle Bolt
181	1	Top Cap (XL sizes only)
211	6	Top Cap SHCS (XL sizes only)



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## 'BVH' and 'BVAH' Ordering Codes Summary



Please see the expanded section on Construction Materials and DMIC Pre-Engineered Accessories, pages 10-13.

