

'BVxH' True Multi-Way

**6,000 PSI trunnion type with stock L/T/X ball patterns;
Supports high port-to-port ΔP ; Sizes from 1/4" to 2"**

Call DMIC for pricing & availability if you require higher pressure or larger multi-way valves.



DMIC 'BV3H' and 'BV4H' series have been upgraded for superior performance and durability with DMIC's exclusive top servicable design, **SpindleStack III™ needle bearing construction**, and compatibility with many DMIC Pre-Engineered Accessories and Actuation Packages. This model is not restricted to any specific type of circuit, and incorporates **BLOCKED CENTER** (intermediate) positions.

- ☑ Three dimensional balanced sealing for near zero leakage in any circuit
- ☑ Fast availability of Ball Patterns, Stainless Steel, and Special Sealing, Made by DMIC in the U.S.A. for top quality and reliable delivery dates
- ☑ DMIC's exclusive **SpindleStack III™ Construction** incorporates **needle bearings** with **redundant sealing stages**, providing one of the lowest actuation torque and internal leakage designs on the market
- ☑ Designed for your most critical and high duty cycle projects

About 'BVxH' Series

DMIC's 'BV3H' and 'BV4H' are our "take no prisoners" design for circuits with high duty cycle, actuation, or large port-to-port ΔP differentials. There are no circuit restrictions, and these updated designs are significantly upgraded with needle bearing construction and superior Engineering safety factor to assure you will receive perhaps the finest multiway ball valves available.

Best of all, DMIC's U.S. manufacturing means that you will often benefit from cost savings and accelerated delivery relative to competing brands.



L-Bore Ball (Code A)

Standard on 3-Way 'BV3H'. On a 3-way valve with 90° action, operates as a diverter valve with **BLOCKED CENTER**. Can also be ordered in a specialty 4-way valve, with 180° action to perform in your high pressure, high volume special application. Call Factory for specials.

T-Bore Ball (Code C)
Standard on 4-way 'BV4H' with 90° action. This is the classic 4-way layout with **BLOCKED CENTER**.
Can also be ordered with 180° action (ball code D). Please see the ISO circuit schematic for application info.



X-Bore Ball (Code F)

A frequently ordered 4-way pattern with 90° action can be used for directional control with **BLOCKED CENTER**. Particularly interesting application possibilities under actuation due to convenient 90° action, please see ISO schematic.

Common Dimensions

The following specifications are common to all 'BVxH' series valves regardless of connection style. For valve length 'A' and other specific dimensions, please see Dependent Dimensions table adjacent page.

'BV3H'/'BV4H' is manufactured in threaded and flanged styles. **For expedient delivery DMIC keeps shelf stock in threaded styles only.** Low volume flanged orders are factory equipped with **'HSSW' System** adapters to achieve fast **Split & 4-Bolt Flange, Socket Weld, and ANSI/DIN Flange Connection(s) on one or more ports.** OEM volume orders are furnished with dedicated flange ports. We provide OEM version dimensions for common 3-like port valves in the Dependent Dimension tables, but this product is highly suited to customization and we invite you to call for application assistance.

BVxH Part Number	Port Size	Rated Pressure PSI (bar)	DIMENSIONS in (mm)		
			Width (Thrd) B	Bore (L-Ball) C	Handle Length D
BVxH-0250**-1111 (0375 w/reduced ports)	1/4"	6000 413.8	2.46 62.5	0.24 6.0	7.00 177.8
BVxH-0375**-1111	3/8"	6000 413.8	2.46 62.5	0.35 9.0	7.00 177.8
BVxH-0500**-1111	1/2"	6000 413.8	2.96 75.2	0.49 12.4	7.00 177.8
BVxH-0750**-1111	3/4"	6000 413.8	3.96 100.6	0.75 19.0	10.00 254.0
BVxH-1000**-1111	1"	6000 413.8	4.96 126.0	0.95 24.0	10.00 254.0
BVxH-1250**-1111	1 1/4"	6000 413.8	5.69 144.5	1.24 31.5	14.50 368.3
BVxH-1500**-1111	1 1/2"	6000 413.8	6.48 164.6	1.42 36.1	14.50 368.3
BVxH-2000**-1111	2"	6000 413.8	7.96 202.2	1.89 48.0	14.50 368.3



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Dependent Dimensions

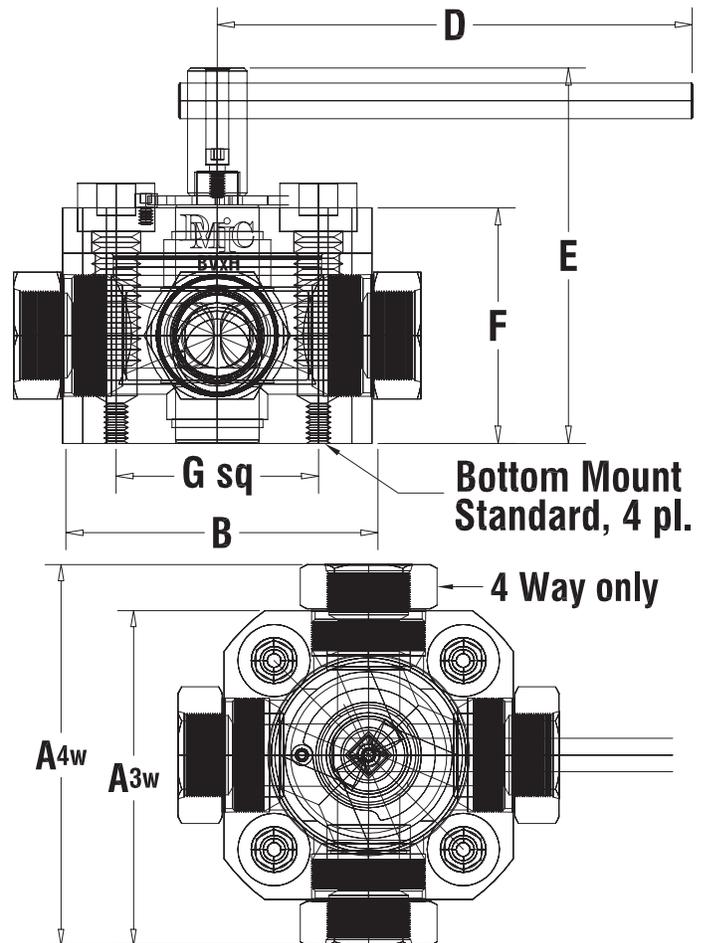
These are the valve dimensions (**OEM dedicated connection**) that vary based on your selection of a connection style. Some connection styles provide additional dimensions to those published at left; see supplemental sketches next page.

Small quantity 'BV3H' and 'BV4H' orders with flange and socket weld connections may be rapidly built using threaded valves and 'HSSW' adapters, so dimensions may vary.

To harness the full capabilities of DMIC's 'SSW' Power Unit Layout system please call DMIC Helpline at 1-800-248-3642 to obtain the Designer's Guide.

BV3H/4H Dependent Dimensions							
THREADED CONNECTION							
Dimension (inches)	A3W	A4W	E	F	G	-	
Port Code(s)	Port Size	3-Way Length	4-Way Length	Overall Height	Body Height	Bottom Mt Sq	Mtg Bolt Size UNC
N S B IU / IA Threaded Connections	1/4"	3.07	3.67	4.61	2.48	1.63	1/4-20
	3/8"	3.07	3.67	4.61	2.48	1.63	1/4-20
	1/2"	3.75	4.53	4.83	2.70	1.88	5/16-18
	3/4"	4.66	5.36	6.18	3.23	2.50	1/2-13
	1"	5.92	6.88	6.94	3.98	3.25	1/2-13
	1 1/4"	6.56	7.42	8.14	4.58	3.75	1/2-13
1 1/2"	7.47	8.46	8.64	5.08	4.25	1/2-13	
2"	9.26	10.56	10.07	6.21	5.50	1/2-13	
SAE 4-BOLT FLANGE C.61 / C.62 CONNECTION							
Dimension (inches)	A3W	A4W	E	F	G	-	
Port Code(s)	Port Size	3-Way Length	4-Way Length	Overall Height	Body Height	Bottom Mt Sq	Mtg Bolt Size UNC
FM / GM FL / FH / FK SAE 4-B Comp/Std Flange Conn	1/2"	4.18	4.61	4.83	2.70	1.88	5/16-18
	3/4"	5.09	5.53	6.18	3.23	2.50	1/2-13
	1"	6.35	6.79	6.94	3.98	3.25	1/2-13
	1 1/4"	6.99	7.42	8.14	4.58	3.75	1/2-13
	1 1/2"	7.91	8.34	8.64	5.08	4.25	1/2-13
	2"	9.70	10.13	10.07	6.21	5.50	1/2-13
SAE SPLIT FLANGE C.61 CONNECTION							
Dimension (inches)	A3W	A4W	E	F	G	-	
Port Code(s)	Port Size	3-Way Length	4-Way Length	Overall Height	Body Height	Bottom Mt Sq	Mtg Bolt Size UNC
SM CM SAE C.61 Split & Combo Flg Conn	1/2"	5.04	4.61	4.83	2.70	1.88	5/16-18
	3/4"	5.96	5.53	6.18	3.23	2.50	1/2-13
	1"	7.22	6.79	6.94	3.98	3.25	1/2-13
	1 1/4"	7.86	7.42	8.14	4.58	3.75	1/2-13
	1 1/2"	8.77	8.34	8.64	5.08	4.25	1/2-13
	2"	10.56	10.13	10.07	6.21	5.50	1/2-13
SAE SPLIT FLANGE C.62 CONNECTION							
Dimension (inches)	A3W	A4W	E	F	G	-	
Port Code(s)	Port Size	3-Way Length	4-Way Length	Overall Height	Body Height	Bottom Mt Sq	Mtg Bolt Size UNC
SH CH SAE C.62 Split & Combo Flg Conn	1/2"	6.34	5.04	4.83	2.70	1.88	5/16-18
	3/4"	7.26	5.96	6.18	3.23	2.50	1/2-13
	1"	8.52	7.22	6.94	3.98	3.25	1/2-13
	1 1/4"	9.15	7.86	8.14	4.58	3.75	1/2-13
	1 1/2"	10.07	8.77	8.64	5.08	4.25	1/2-13
	2"	11.86	10.56	10.07	6.21	5.50	1/2-13
FIXED SOCKET WELD CONNECTION							
Dimension (inches)	A3W	A4W	E	F	G	-	
Port Code(s)	Port Size	3-Way Length	4-Way Length	Overall Height	Body Height	Bottom Mt Sq	Mtg Bolt Size UNC
W4 Socket Weld Connections	1/2"	5.20	6.65	4.83	2.70	1.88	5/16-18
	3/4"	6.11	7.57	6.18	3.23	2.50	1/2-13
	1"	7.37	8.83	6.94	3.98	3.25	1/2-13
	1 1/4"	8.01	9.46	8.14	4.58	3.75	1/2-13
	1 1/2"	8.93	10.38	8.64	5.08	4.25	1/2-13
	2"	10.72	12.17	10.07	6.21	5.50	1/2-13

Dimensional Sketches



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.

'BV3H' & 'BV4H' Ball Pattern Schematics

BALL CODE	ISO CIRCUIT SCHEMATIC	BALL PATTERN	+90°	+45°	0°	-45°	-90°	STOP WASHER TYPE
A		L-Bore 90° 3-Way Std						
C		T-Bore 90° 3-Way Opt.						
D		T-Bore 180° 4-Way Std.						
F		X-Bore 90° 4-Way Opt.						

Actuation and 'BVxH'

You couldn't ask for a better actuation candidate than DMIC 'BV3H' and 'BV4H'. DMIC's 3-D balanced design and SpindleStack III™ construction result in some of the industry's lowest actuation torques at a given pressure. Add the DMIC Ultra Low Friction ball seal option for a multiway ball valve you can actuate and forget about.



'BVxH' True Multi-Way

BV3H/4H	Physical Construction
Parameter	Material
BODY	Steel Body, Endcaps & Topcap
BALL	Trunnion Type, Steel, Chrome Plated
SPINDLE SEALS	DMIC SpindleStack III™
STD HANDLE	Steel, High Torque T-Type
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

'BVxH' Accessories

DMIC 'BV3H' and 'BV4H' can be equipped with the industry's widest array of labor and cost-saving Ball Valve accessories, including:

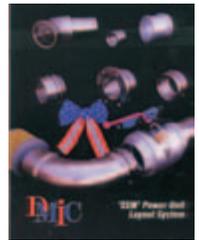
- ☑ Locking Handles, OSHA type and Security
- ☑ Limit Switch Brackets, with one of two switches, and optional locking capability
- ☑ Various Panel and Substrate mounting options
- ☑ Turnkey Actuation Packages for Pneumatic, Electric, and Hydraulic applications

High Torque "T-type" Handle is Standard

DMIC 'BV3H' and 'BV4H' now come standard with our strongest handle for safety and peace of mind in your most demanding applications.

'HSSW' Possibilities

'BVxH' can be configured with Hose Barb, 4-Bolt/Split /ANSI Flange, and Swivel Socket Weld connections. You can route mechanically rigid 'HSSW' adapters in **Inline, 45°, and 90° degree** directions with dimensional tolerances previously only dreamed of. Also, you can interchangeably assemble Imperial and Metric standard power units to the same layout dimensions. **High pressure 'HSSW' adapters** are available in frequently ordered styles, rated for 3,000 PSI.



C.61 4-BOLT FLANGE

Order 'HFMC' adapter to receive Code 61 SAE 4-Bolt Companion connections. Order 'HFMM' for Standard Flange (through bolt holes).

C.61 SPLIT FLANGE

Order 'HSFM' adapter to convert to connection code SM (C.61 Split Flange Head). Rated to 3000 PSI. Rapid order a Split Flange kit with suffix /SFK.

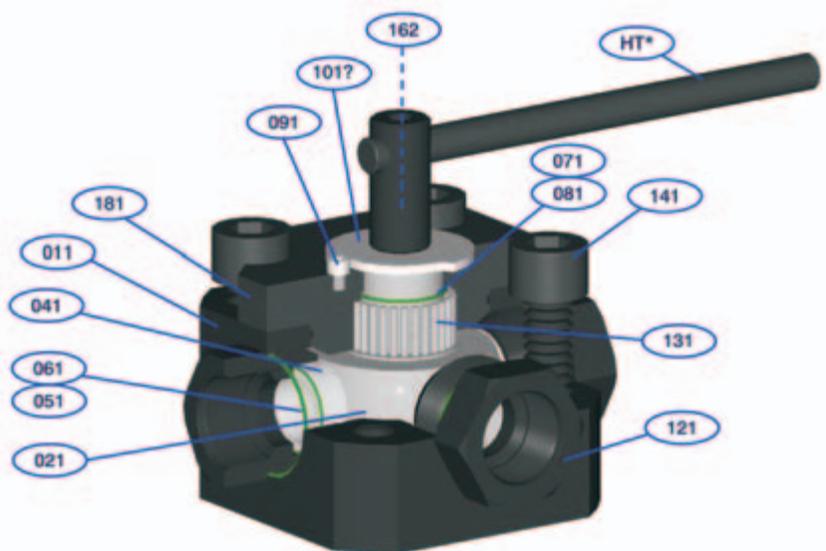


FIXED SOCKET WELD

Order adapter 'HFSW' (converts threaded port to equivalent of connection code W4) to receive "fixed" socket weld connections for pipe. HSSW rated to 3000 PSI.

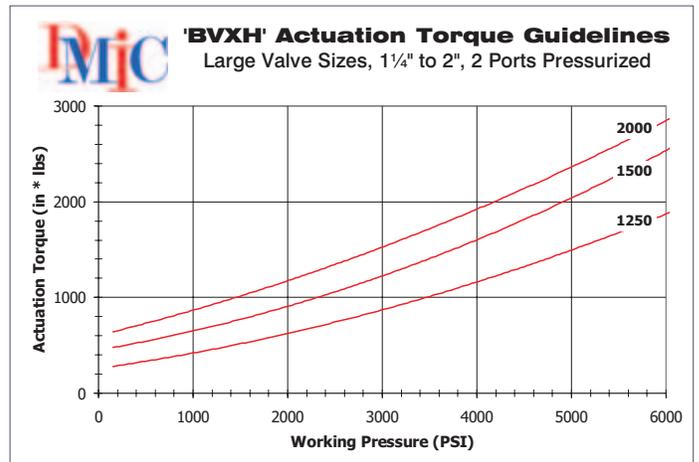
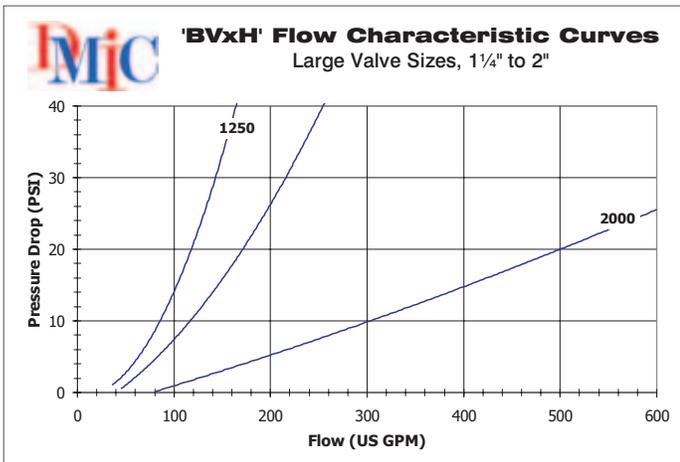
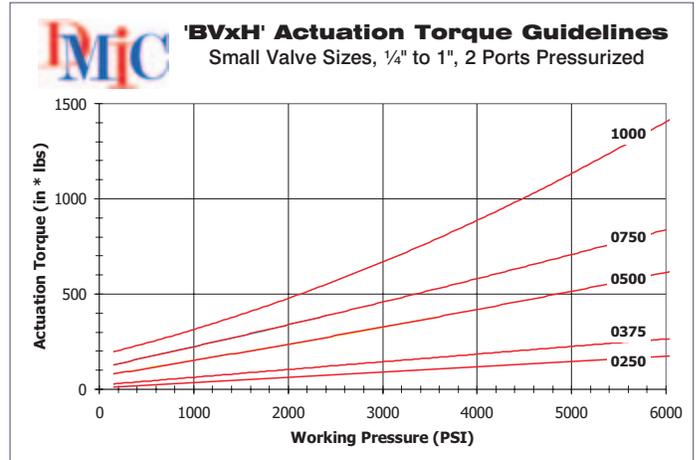
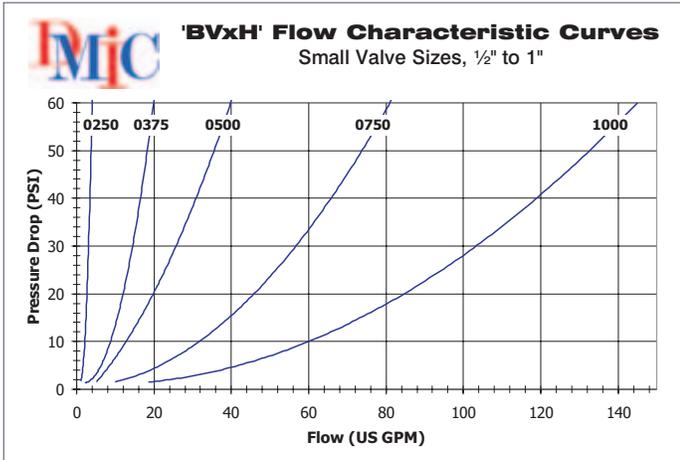
'BVxH' Service Parts BOM

BV3H/4H		Service Parts BOM
Index	Qty	Description
011	1	Valve Body
021*	1	Ball, insert code from table
031	0	(no spindle, trunnion design)
041	X	Ball Seal, Delrin
171	X	Connection BU Ring (1 1/4" & up)
061	X	Connection O-Ring
071	2	Spindle O-Ring
081	2	Spindle Backup Ring
091	1	Stop Pin (SHCS)
101*	1	Stop Washer (specify code)
111	1	Internal Glide Brg
121**	X	Connection End, add code
131	2	SpindleStack III™ Needle Brg
141	4	Top Cap SHCS
162	1	Color Code Cap
181	1	Valve Body Top Cap



'BVxH' True Multi-Way

'BVxH' Performance Curves



'BVxH' Ordering Codes Summary

Size Codes	
Code	Port Size
0250	1/4"
0375	3/8"
0500	1/2"
0750	3/4"
1000	1"
1250	1 1/4"
1500	1 1/2"
2000	2"

Thread Connections	
IMPERIAL THREADS	
Code	Desc
S	SAE ORB
N	NPT
MJ	JIC-M
METRIC THREADS	
B	BSPT - special
T	BSPT - special
D*	DIN Tube - call
ISO THREADS	
IU	ISO6149
IA	ISO1179

Ball Pattern	
Code	Description
A	L-Bore Diverter
C	T-Bore, 90° Action
D	T-Bore, 180° Action
F	X-Bore, 90° Action

Body Material	
Code	Description
1	Carbon Steel
2	Stainless Steel

Ball & Spindle Mat'l	
Code	Description
1	Carbon Steel
2	Stainless Steel

O-Ring Material	
Code	Description
1	Buna-N (Standard)
2	EPR
3	Viton
4	DMIC Hi-Temp

Ball Seal Material	
Code	Description
1	Delrin
2	PTFE Teflon
3	Peek
4	High Temperature
6	Super Low Friction

BVxH - * * * * S A - 1 1 1 1

