

BV3L/BV3LZ 600 PSI DIVERTER

Premium Quality 3-Way Aluminum Diverter Valve

Standard PTFE Ball Seals ; L-Bore ; Sizes from ¼" to 3"

Designed as an "L-Bore" Diverter ; Optional "Near Zero Leakage" BV3LZ model.



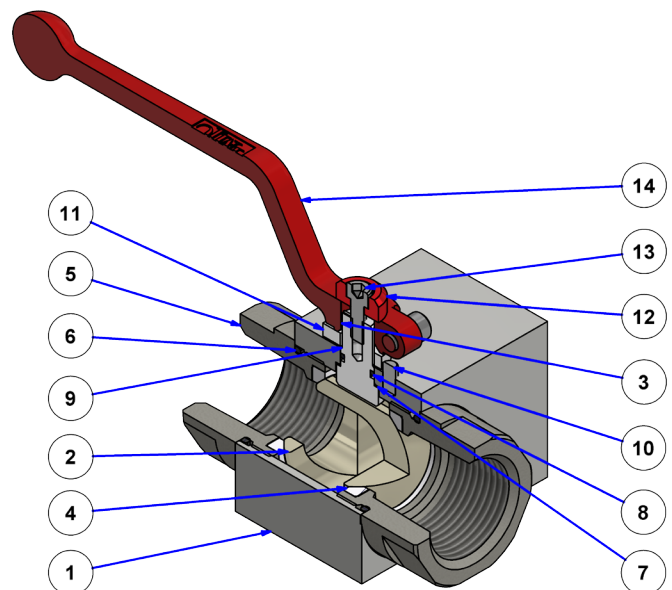
The **BV3L** is an economical U.S. made diverter valve for Filter Duplexing type applications where one input is directed to one of two outputs. Standard "L-Bore" ball with slight port overlap prevents upstream pressure spikes during phase change.

- Straight, non-spherical ball passage improves laminar flow
- Large "L-bore" standard ball porting for low Δp & improved Cv
- Engineered for reliable operation in hydraulic return line applications
- Derived from field-proven **BVAL** for 600 PSI service, Made in U.S.A.
- Standard with Teflon™ (PTFE) Ball Seals for wide fluid applicability
- Accepts full array of DMIC Pre-Engineered Accessories
- Fully serviceable o-ring sealed design, optional EPR for Skydrol systems
- ¼" to 2" rated at 600 PSI, 2½" + rated at 400 PSI.
- Valve series rating valid for near zero leak design.

Valve Cutaway View and Service Parts BOM

BV3L	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle
4	2	Ball Seal
5	2*	End Connection(s)
6	2*	End Connection O-Ring(s)
7	1	Internal Thrust Washer
8	1	Spindle O-Ring(s)
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Code Cap
13	1	Handle Screw
14	1	Handle

*Quantity depends on size and configuration



BV3L/BV3LZ 600 PSI DIVERTER

Ordering Codes

See page 14 for accessory codes

BV3LZ
or
BV3L **** S A 4 3 2 1 * * * * *

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"
2500	2 1/2"
3000	3"

Connection Types	
Imperial Threads	
Code	Description
S	SAE ORB
N	NPT
Metric Threads	
B	BSPP
ISO Threads	
IU	ISO6149
Welded	
W*	Socket Weld
Flanged	
A*	ANSI Flanges
F*	SAE 4-Bolt UNC
G*	SAE 4-Bolt Metric
S*	SAE Split

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

O-Ring Material	
Code	Description
1	Buna-N (Standard)
2	EPR
3	Viton™

Ball Seal Material	
Code	Description
2	PTFE Teflon™

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

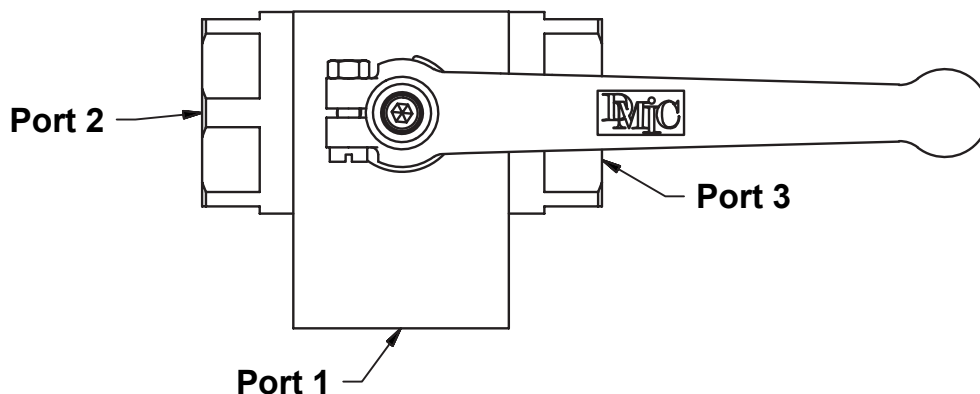
Body Material	
Code	Description
4	Aluminum

Call Factory for larger sizes 18"+

¹Aluminum or Stainless Steel may be substituted for 2 1/2"+

Note: Changes from Standard Materials may result in changes to temperature and/or pressure rating.

Note: Please refer to page 10 for customizing valve port connections



Q: Can I use a Diverter Valve or do I need a True Multi-Way Valve?

A: The "BV3LZ" version of our diverter valve can take the place of a true multi way valve in many circuits.

Specifically, the question you must ask your application is: "Will pressure ever be applied at port 2 or 3 when the valve is blocked?"

If YES, you must use a "real" 3-way valve, or the "BV3LZ" model. If NO, a Diverter such as "BV3L" or "BV3D" is acceptable.

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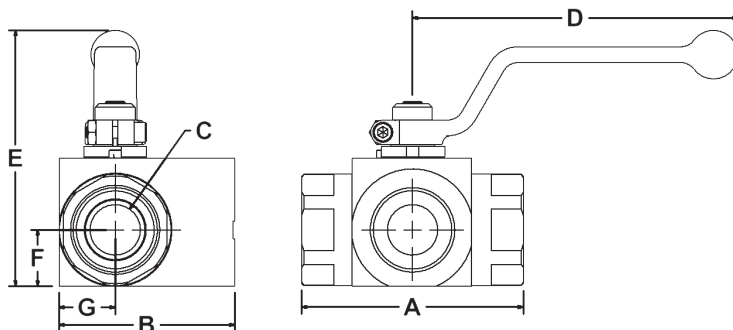


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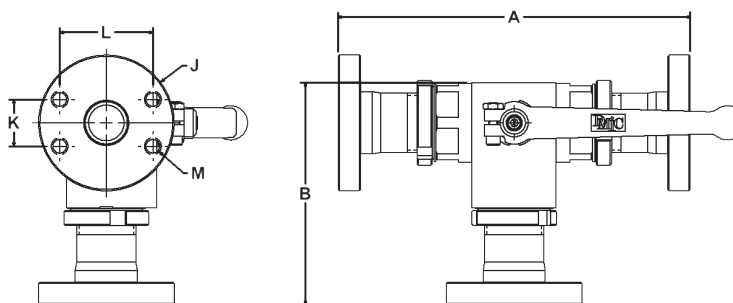
BV3L/ BV3LZ		Dependent Dimensions			
Threaded Connection					
Dimension (Inches)		A		B	
Port Code(s)	Port Size	Overall Length	Overall Length	Width Port 1	Width Port 1
N S B IU	¼"	2.64	2.26		
	⅜"	2.64	2.26		
	½"	2.64	2.26		
	¾"	3.27	2.50		
	1"	3.47	2.75		
Threaded Connections	1¼"	3.89	3.50		
	1½"	4.31	3.66		
	2"	4.90	4.13		
SAE 4-Bolt Flange Connection					
Dimension (inches)		A _{FM}	A _{FL}	B _{FM}	B _{FL}
Port Code(s)	Port Size	Overall Length	Overall Length	Width Port 1	Width Port 1
FM/GM FL	¾"	7.59	8.84	4.64	5.27
	1"	7.80	9.04	4.90	5.52
SAE 4-Bolt Comp/Std Flange Connections	1¼"	8.46	9.71	5.77	6.39
	1½"	8.88	9.88	5.94	6.44
	2"	9.47	11.22	6.41	7.29
SAE Split Flange Connection					
Dimension (inches)		A		B	
Port Code(s)	Port Size	Overall Length	Overall Length	Width Port 1	Width Port 1
SM	¾"	8.14	4.92		
	1"	8.26	5.13		
	1¼"	9.32	6.20		
	1½"	9.76	6.38		
SAE Split Flange Connections	2"	10.85	7.10		
ANSI & DIN Flange Connection					
Dimension (inches)		-	-	-	-
Port Code(s)	Port Size	Because BV3L is a low pressure valve, DMIC offers only ANSI Class 150 as a BV3L option. Please contact DMIC for a certified print.			
AA / D*	1"				
	1¼"				
	1½"				
	2"				
ANSI & DIN Flange					
Swivel Socket Weld Connection					
Dimension (inches)		A		B	
Port Code(s)	Port Size	Overall Length	Overall Length	Width Port 1	Width Port 1
W4	¾"	5.84	3.77		
	1"	6.04	4.02		
	1¼"	6.71	4.89		
	1½"	7.13	5.07		
Socket Weld Connections	2"	7.72	5.54		

BV3L/ BV3LZ		Common Dimensions					
Part Number	Port Size	Rated Pressure PSI	Dimensions IN				
			C Valve Bore	D Handle Length	E Overall Height	F Bot to Port Ctr	G Back of Body to Center of Port
BV3L-0250****	¼"	600	0.38	3.35	2.70	0.63	0.63
BV3LZ-0250****							
BV3L-0375****	⅜"		0.44	3.35	2.70	0.63	0.63
BV3LZ-0375****							
BV3L-0500****	½"		0.44	3.35	2.70	0.63	0.63
BV3LZ-0500****							
BV3L-0750****	¾"		0.67	5.09	3.76	0.76	0.81
BV3LZ-0750****							
BV3L-1000****	1"		0.79	5.09	4.01	0.88	0.88
BV3LZ-1000****							
BV3L-1250****	1¼"		1.06	6.81	5.59	1.53	1.28
BV3LZ-1250****							
BV3L-1500****	1½"	1.34	6.81	6.27	2.00	1.48	
BV3LZ-1500****							
BV3L-2000****	2"	1.69	6.81	6.91	2.31	1.74	
BV3LZ-2000****							

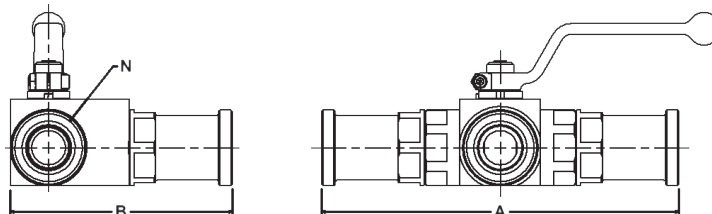
N, S, B, IU THREADED



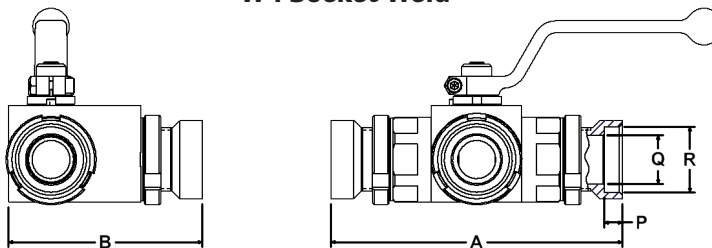
FM/GM/FL SAE 4 BOLT FLANGE (COMP & STD)



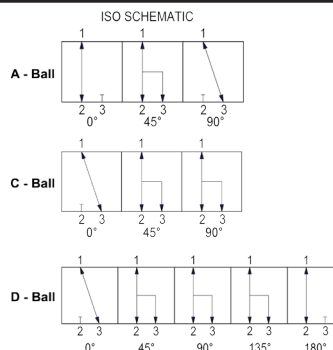
SM SAE SPLIT FLANGE HEAD



W4 Socket Weld

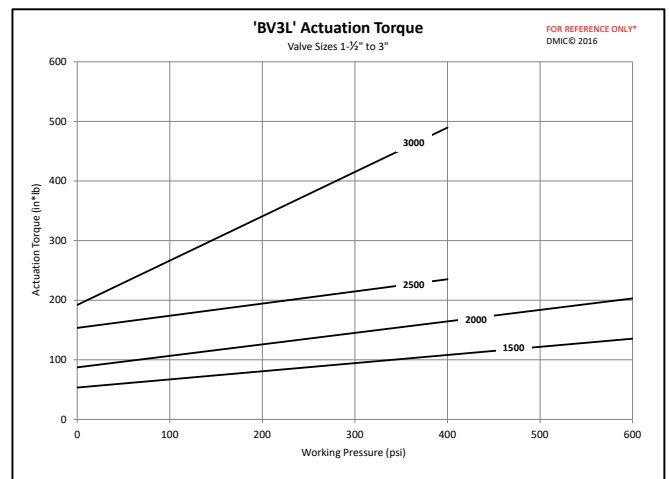
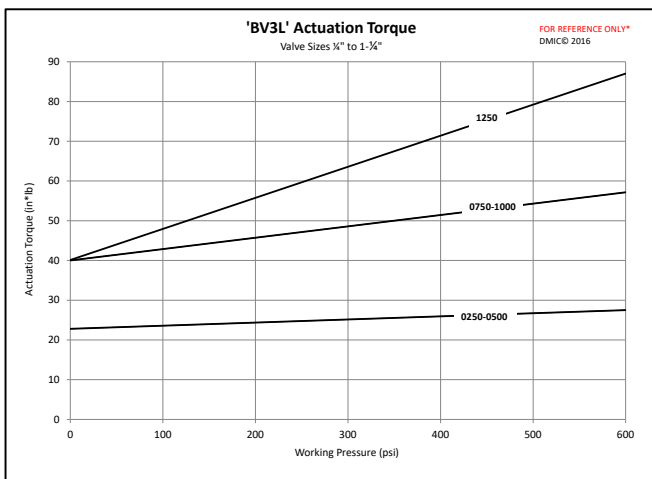
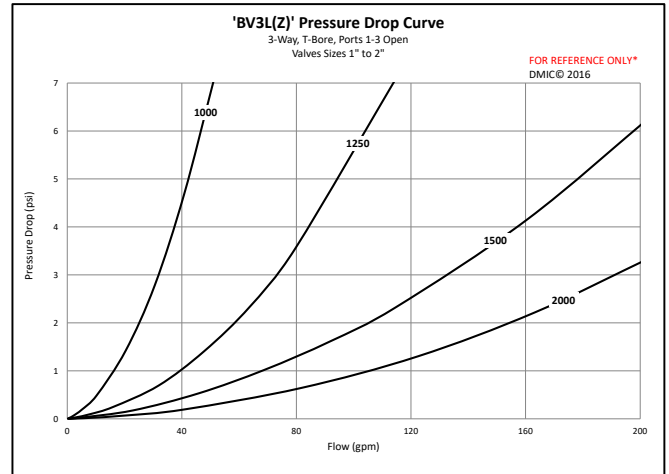
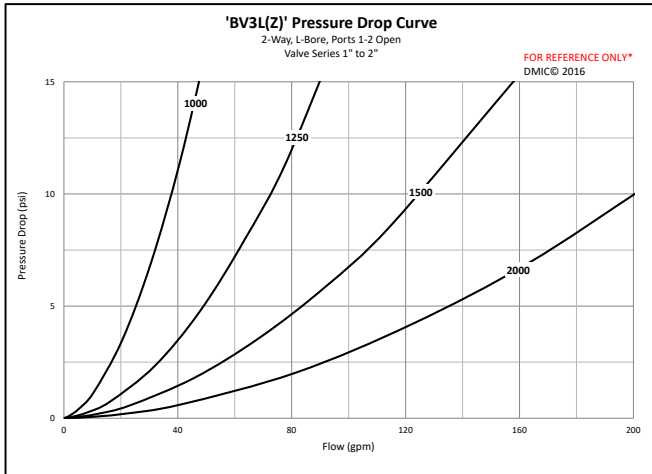
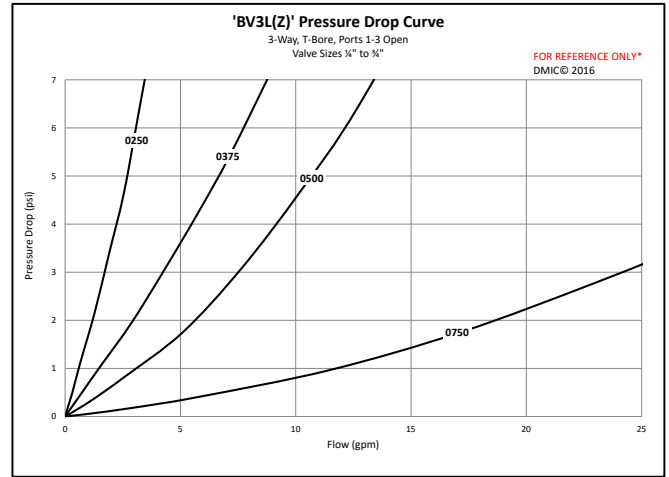
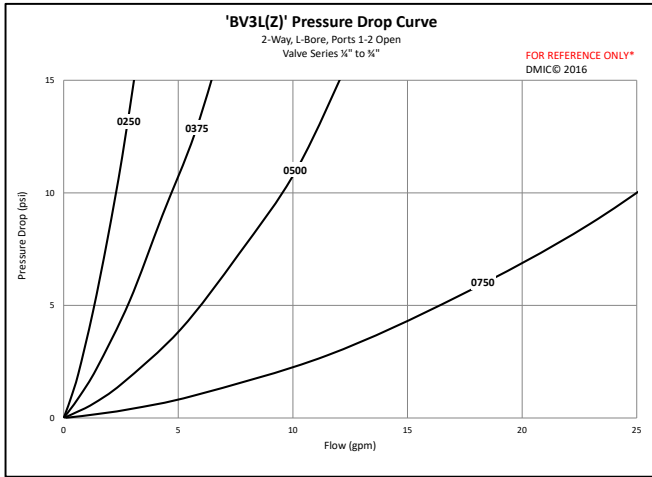


**BV3LZ & BV3L for 600 PSI
Ball Pattern Schematic**



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Flow Characteristic and Actuation Torque Curves



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