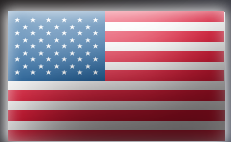




DMIC



BALL VALVES



BALL VALVES



Continuing to Redefine the Benchmark of Quality in Low, Medium, and High Pressure Ball Valves

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.

Globalization of industry in the new millennium gives Buyers more sourcing choices, predominantly in the "low cost" arena. New brands have entered the marketplace and currency fluctuations have transformed bargains into liabilities. In this transformed industrial landscape, DMIC Ball Valves are the preferred choice for OEMs and Designers who value **quality, assured supply availability, and stability of design.**

DMIC's design discipline allows buyers to specify inch or metric version valves that share common external dimensions, or flanged valves in their choice of UN or Metric bolt threads. When your product is ready to be marketed internationally, DMIC is there for you with dimensionally compatible inch/metric products and a wide selection of layout tools, pre-engineered accessories and service parts that eliminate sourcing, redesign, and warranty headaches.

Introduction to DMIC Ball Valves & Spool Valves

Buyer's Resource Guide introduces expanded Ball Valve offerings and Factory Pre-Engineered Accessories

Features of DMIC Ball Valves	6
Ordering Codes for DMIC Ball Valves	8-16
• Size Availability by Valve Series	9-10
• Specifying step-size or unlike connection special valves for fast delivery	10
• Connection Availability by Valve Series	11
• Using Construction Codes to override standard Valve and Sealing Materials	12-13
• Adding Accessory Codes to specify Factory Installed Options	14-15
Technical Appendix	92-98
• DMIC "Floating Ball" Ball Valve, Principle of Operation	92
• Estimation of Thermal Effects on Sealing Materials	93-94
• Medium Compatibility Table for Elastomer & Thermoplastic Seals	96-98
DMIC One Year Limited Warranty and Terms of Sale.....	98

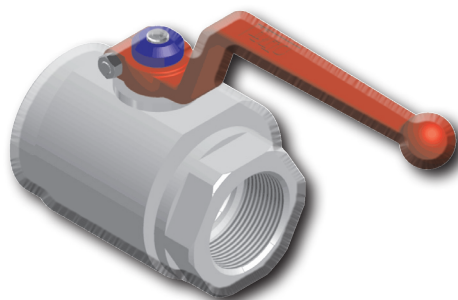
Guide to DMIC Ball Valve Accessories

The industry's most comprehensive lineup of options and accessories saves you time, money, and headaches



Locking Handles and Security Locking Handles.....	14-15
Limit Switch and Proximity Switch Brackets.....	14-15
Locking Limit Switches, 1-, 2-, and 3-way.....	14-15
Panel and Substrate Mounting, Actuator Preparation	14-15
Pneumatic & Electric Actuation, Factory Installed	14-15
Pressure Balance Option, Bleed Hole Ports	14-15
Optional Surface Finishes, Treatments, DFAR, Chromium-6 Free option.....	14-15
Spare/Optional Handles, and how to obtain replacement parts.....	14-15





Low Pressure & Suction Valves

Premium quality full bore ball valves with wide range of connection options; full compatibility with "SSW" System; PTFE ball seals; Sizes from ¼" to 6"; Rated 29"Hg-400 PSI.

BVAL	Aluminum Unrestricted Bore Valves, ¼"-6"	16
BVALP	Low Profile Suction	20-23
Ordering Codes for BVAL		17
Dimensional Info for BVAL		18
BVAL Flow Characteristic Curves and Actuation Torques		19



Medium Pressure 2000 PSI

DMIC's medium pressure valves save mass when a full pressure valve is not needed; Sizes from 2½"-6".

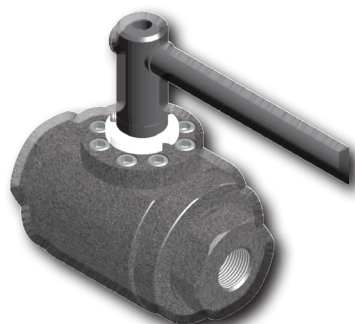
BVAM	Carbon & Stainless Steel, 2 ½"-6", to 2000 PSI	24
Ordering Codes for BVAM		25
Dimensional Info for BVAM		26
BVAM Flow Characteristic Curves and Actuation Torques		27



High Pressure for 6000 PSI

The Benchmark of Quality in High Pressure Valves
Upgraded stainless steel design ; To 6" standard size.

BVH	Block Body Ball Valves for 6000 PSI, ¼"-1"	28
BVAH	Round Body Ball Valves for 6000 PSI, 1¼"-2"	28
BVAH	Heavy Duty XL Ball Valves, 2½"-6"	28
BVHS	Stainless Steel Ball Valves for 6000 PSI, 1"-6"	32
Ordering Codes for BVH & BVAH		29
BVH & BVAH Flow Characteristic Curves and Actuation Torques		31



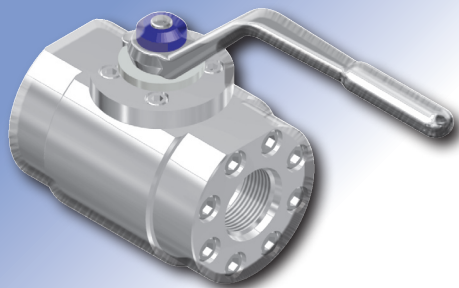
Super High Pressure 10000/15000 PSI

Redesigned and substantially strengthened for enhanced design factor at elevated operating pressures.

BVHH	Carbon Steel 10k PSI Ball Valves to 2"	36
BVHHH	Carbon Steel 15k PSI Ball Valves to 2"	40
Ordering Codes for BVHH 10,000 PSI		37
Ordering Codes for BVHHH 15,000 PSI		41
BVHH Flow Characteristic Curves and Actuation Torques		39

All DMIC valves are available in larger sizes and with custom features, on request.



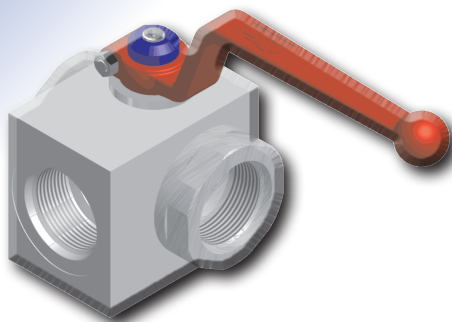


BVQ/BVQG High Pressure/High Temp 6000 PSI

Revolutionary Ultimate Quality DMIC Original Design for the most demanding applications; Engineered for high duty cycle actuation.

Optional API Certification

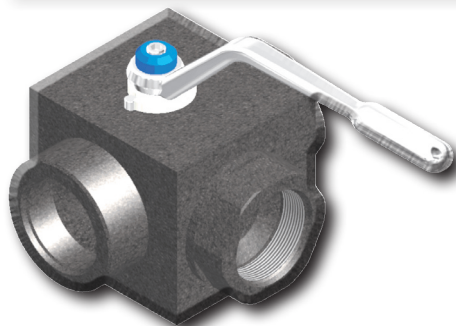
BVQ	Ultimate Quality Stainless Steel Ball Valves ¼" to 3"	44
BVQG	Gas-approved version of BVQ, API cert available	44
BVFQ	Fire Safe, API cert available	48-51
Ordering Codes for BVQ & BVQG		45
Dimensional Info for BVQ & BVQG		46
BVQ & BVQG Flow Characteristic Curves and Actuation Torques		47



Multiway Diverter Valves, Low Pressure

Exclusive offset design eliminates welded/brazed 3rd port; Optional Stainless Steel Construction: Sizes from ¼"-3".

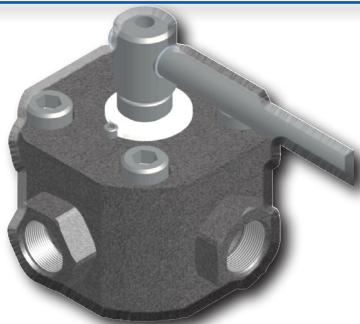
BV3L	Low-pressure L-Bore Diverter, 29"Hg-400 PSI, ¼"-3"	52
BV3LZ	Low-pressure L-Bore Diverter, 29"Hg-400 PSI, ¼"-3"	52
BV3D	Steel L-Bore Diverter for 3000 PSI, ¼"-2½"	56
BV3DZ	Steel L-Bore Diverter for 3000 PSI, ¼"-2½"	56
Ball Pattern Schematics for BV3L and BV3D		55/59
Ordering Codes / Dimensions for BV3L & BV3LZ		53/54
Ordering Codes / Dimensions for BV3D & BV3DZ		57/58



BV3V Floating Ball Multiway

Exclusive DMIC Design! Innovative manufacturing technique makes a T-bore floating ball valve possible

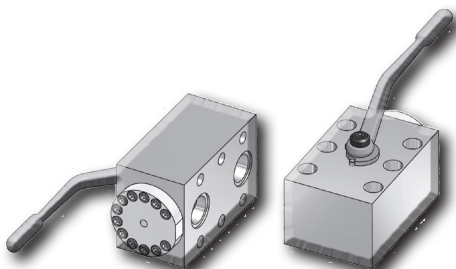
BV3V	Steel T-Bore Diverter for 3000 PSI, ¼"-2½"	Call
Ball Pattern Schematics for BV3V		Call
Ordering Codes for BV3V		Call
Dimensional Info for BV3V		Call
BV3V Flow Characteristic Curves and Actuation Torques		Call



BV3H & BV4H True Multiway, 6000 PSI

Trunnion Ball 3-Way & 4-Way Ball Valves with choice of Ball Pattern, accept high port-to-port ΔP without leakage.

BV3H	3-Way Steel Selector Ball Valves, 6000 PSI	60
BV4H	4-Way Steel Selector Ball Valves, 6000 PSI	60
Multi way Ball Portings, ISO Circuit Symbols & Handle Phase Diagram		63
Ordering Codes for BV3H & BV4H		61
Dimensional Info for BV3H & BV4H		62
BV3H/BV4H Flow Characteristic Curves and Ordering Codes		63

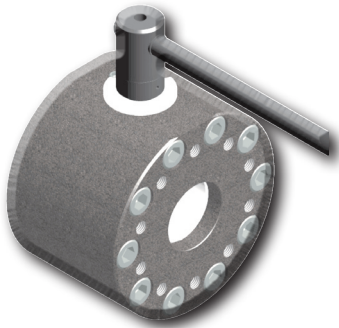


BVMM Manifold Mounted

Manifold Mounted 2-Way & 3-Way High Pressure Valves with 4th generation design for low ΔP & high energy efficiency.

BVMM	Manifold Mounted 2- & 3-Way Valves, 6000 PSI	64
BVMM-4	Lightweight Aluminum Version, 3000 PSI	64
Multi way Ball Portings, ISO Circuit Symbols & Handle Phase Diagram		66
Mounting Pad Specification for BVMM		66

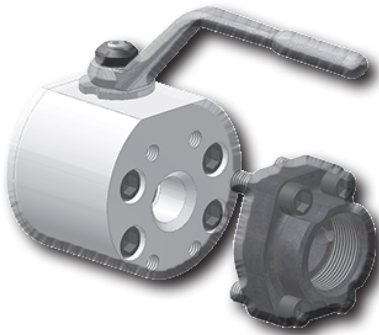




Fixed Flange XL Valves, 3000 & 6000 PSI

Large bore Fixed Flange mount ; Double Block & Bleed large bore.

BVFF	Carbon Steel and Stainless Steel from 2½"-6"	68
BVFD	DMIC Double Block & Bleed Valve - NEW	Call
DBBV-FL	Direct-fit Replacement for Import, C. 61 SAE Flange 2½"-6"72	
DBBV-S9	Direct-fit Replacement for EuroFlange, 2½"-6".....	72
Ordering Codes / Dimensions for BVFF.....		69/70
Ordering Codes / Dimensions for DBBV.....		73/74



Direct Mount Valves 3000 & 6000 PSI

DMIC Made in USA Quality and Innovation, in standard and new Captive Direct Mount Valves; Aluminum, Carbon, SS.

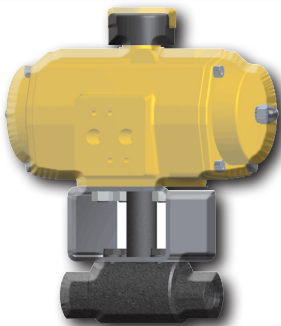
BVDM	Sandwich Direct Mt Ball Valves, ½"- 2½"	76
BVDMF	Captive Direct Mount Ball Valves, ½"- ½"	80
BVSS	Dual SAE C.61/C.62 6000 PSI Ball Valves, ½"- 2"	84
Ordering Codes / Dimensions for BVDM & BVDMF		77&81 / 76&82
Ordering Codes / Dimensions for BVSS		85/86



NEW! Spool Valves for Manifold Cavity

Ingenious DMIC design permits you to install a quality 2 or 3 way valve using an easy to machine blind hole cavity !

SV2C	Spool Inter manifold Valve, 2-way, 6000 PSI ½"-2"	88
SV3C	Spool Inter manifold Valve, 3-way, 6000 PSI ½"-2"	88
Ordering Codes for SVxC.....		89
Dimensional Info for SVxC.....		89



DMIC Hydraulic Low Profile Actuators

An ultra compact Hydraulic Alternative to standard electric or pneumatic. Dual Acting & Spring Return. Made in USA.

Actuators	Call
Dimensions	Call
Torque Output Vs. Working Pressure Charts	Call

All DMIC valves are available in larger sizes and with custom features, on request.



ABOUT BALL VALVES

DMIC's continuous development yields enhanced durability and functional improvements

Best-of-Breed Valve Designs

Continuous improvement to DMIC Ball Valves has furthered our design leadership in the marketplace and the field. DMIC full port unrestricted bore ball valves have led the way in innovative design, practical engineering & technical excellence since 1985. DMIC's expanded series continue to offer buyers the next level of innovation, technical achievement, and engineering excellence, continuing to set and elevate the standards by which competing Ball Valves are judged.

Special and Custom Products

DMIC is one of the few companies in the hydraulic valve business today that still maintains a Custom Shop. We are able to produce a low production run or even a one-off valve, and do so cost-effectively. In the DMIC Custom Shop, engineers and craftsmen with decades of experience assemble and test low volume products to ensure that they meet every operational requirement. Our customers' Special and Custom Valves receive the same attention to detail and perfection in execution, as do DMIC's own prototypes, all of which benefit from the latest CAD, FEA, and CNC machining resources available today.

Perhaps this is why DMIC is selected as the contractor for esoteric valve projects by the world's most respected military, aerospace, civil aviation, research, and manufacturing organizations. DMIC's roots run deep with the pride of not only crafting a better product, but a better value. DMIC people are perfectionists: an aspiration we hope you'll recognize in each DMIC product we offer for sale.

Multi-Stage Quality Control

Each DMIC Ball Valve undergoes very strict quality assurance checks during the manufacturing process, assembly, and at shipping. The result is a product of consistent quality, infrequent warranty returns, and reduced downtime & back-shipping expense for the Buyer.

Extensive In-House Capabilities Breed Innovation

DMIC's leadership in the Engineering arena is known throughout the fluid power sector. Our passion for excellence saves you time, money, and headaches. Because we are constantly refining our products, your valve may incorporate improvements that were not in the production channel when the catalog was printed. Running improvements are part of our continual product development. **Consistent with our policy for continuous improvement, please request a certified print.**

Thinking Like Our Customers

The DMIC Distributor and OEM is our partner in quality. Some Fluid Power houses resell whichever brand results in the largest profit margin. **The DMIC Factory refers End-User inquiries to true Distributors who promote DMIC's quality objectives wholeheartedly.** We protect and support your local Stocking Distributor with comprehensive inventory, direct line to in-house Technical Sales & Engineering, drop shipment capability, and same-day shipping of most orders. Your DMIC Distributor is the **best in the business** ... in your locale.



Respect for the Environment

All DMIC valves are tested, cleaned, and plugged air & oil-tight before they are made available for shipment. DMIC supports the environment by using only biodegradable, recyclable paper packaging. Wasteful packaging is minimized in favor of "peanut-free" shipments that arrive in excellent condition. We also offer Chromium-6 Free plating, a technically superior product that is safer for the environment.



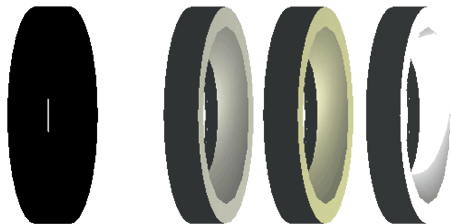
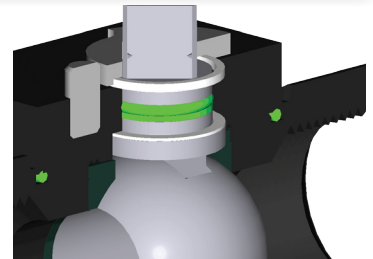
STANDARD FEATURES

**"Innovation Through Dedication" yields
a consistently high quality product, priced competitively**

America once said, "We choose to go to the moon, not because it is easy – but because it is hard." Taking the high road has its rewards, not the least of which is the pride & satisfaction of making a product that improves the quality of life for someone, somewhere - whether that be a child at Disneyland, an automaker whose production line stays up due to the absence of quality problems, or an American worker who has a job because we've chosen to do it the hard way.

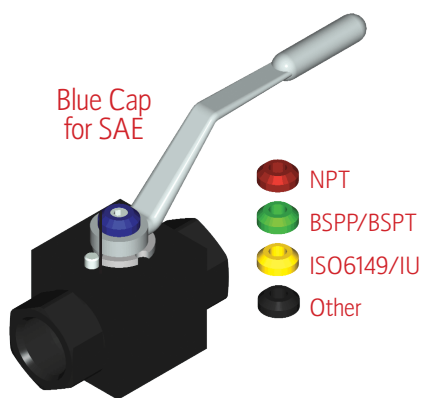
Spindle-Glide™ Construction (Eliminates metal to metal-to-metal contact)

This DMIC innovation utilizes polyamide thrust bearings both inside the valve as well as between the stop washer and body to reduce wear & friction during valve actuation. With the genuine DMIC Locking Handle Kit option, an auxiliary bearing is also installed between the base and lever plates. A factory application of synthetic lubricant* inside the valve during manufacturing, as well as within the sealed **Spindle-Glide™** system, ensures that the valve will be as smooth to operate years after it is set as it was when it was new, because you can never predict when there will be an emergency. **NOTE (*): Synthetic Lubricant deleted on EPR-optional valves.**



Wide Selection of Ball Seals

DMIC's optional ball seal thermoplastic formulation reduces actuation torque, while increasing longevity of the ball seals, resulting in reduced friction between the ball and the seals during actuation.



Pressure Balancing Orifice

DMIC refines the sealing principle of our original "floating ball" valve design by providing an orifice at the stem slot, which improves sealing while providing internal lubrication.



Color Coded By Port Thread

To simplify identification of genuine DMIC High Pressure Ball Valves in the stockroom and in the circuit, valves are factory coded according to the port thread.

Custom Mill Runs of Steel

DMIC has invested in custom engineered steels for DMIC valves.

DMIC's custom "mill runs" benefit from modern metallurgy to provide steel of additional strength, superior finish, and ultimately, quality, than lower cost general purpose steel.

Unrestricted Bore Designs

Nearly every 2-way DMIC Ball Valves are designed with an unrestricted "full" bore relative to the cross-sectional area of fluid lines connected to the valve. Additionally, DMIC only uses a STRAIGHT bore passage in every valve model to aid laminar flow (some brands use a concave, hollow ball). The result is that **the Coefficient of Flow (Cv) and Pressure Drop (ΔP) of a DMIC Ball Valve very closely approximates a like length section of fluid line. Except in fancy circuits, you can treat our valves as just the same length of pipe, due to the unrestricted bore.**

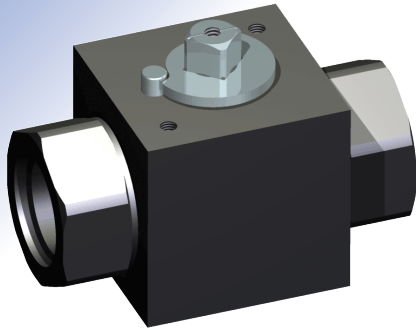
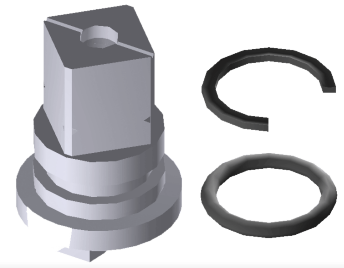


O-Ring + Backup Sealing

DMIC is one of the few manufacturers to incorporate backup rings at the stem & connection* seals, in addition to a premium brand O-Ring, in all steel Ball Valves.

The reason for deleting this very critical component is primarily cost - it takes twice the time to install **two** seals carefully. A DMIC craftsman fits each premium brand O-ring and backup by hand, while individually inspecting components for defects as the parts are matched. A factory application of synthetic lubricant during parts matching eliminates damage to stem seals, and keeps the valve internally lubricated while it awaits initial service.

NOTE (*): Connection backups now standard on valves 1¼" and larger



Comprehensive variety of mountings

DMIC is the leading supplier of panel mounting HP ball valves in North America.

DMIC's In-House Manufacturing results in fast delivery of Panel Mount, Substrate mount, and Actuator-prepped Ball Valves for industry. The design of DMIC High Pressure valves allows every model to be panel mounted.

When designing products using DMIC Panel/Substrate Mount or Actuator-Prep Ball Valves, please call DMIC HelpLine for mounting dimension prints and important information regarding valve warranty on non-DMIC actuation.

Cross-Series Accessory Solutions

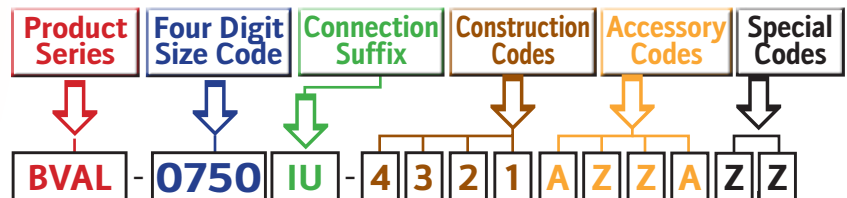
DMIC's engineering excellence has resulted in the industry's largest collection of original Pre-Engineered accessories such as Locking Handles, Limit Switch Brackets, Rotary

Actuation packages, and innovative solutions for esoteric application problems.

Buyers of DMIC Ball Valves can now leverage this time and labor saving resource across the entire project, rather than just on a few high pressure valves. All DMIC Valves share many key attributes, allowing the full range of accessories to be fitted to every series. Greater commonality and fewer part numbers to stock mean your design gets a little simpler, more elegant, and most importantly, cost efficient. **When quality overrides price in your project, insist on "DMIC - No Substitute".**

BALL VALVE ORDERING CODES

DMIC Ordering Codes allow the Buyer to easily specify any Ball Valve that is possible to manufacture. Each DMIC part number is made up of **PRODUCT SERIES, SIZE, CONNECTION, CONSTRUCTION CODE** and optional **ACCESSORY CODES**.



Product Series – PAGE 9

The entire DMIC product line is encoded to sort by product series, in increasing order of size, for easy part number searches. Each series code is a mnemonic of the item it represents, such as **BVH** for **B**all **V**alve **H**igh Pressure or **Spool Valve 3-way Cartridge**.

Four-Digit Standard, and [2+2] Size Codes – PAGE 10

DMIC's four-digit size code, in 1/1000ths of an inch, provides an easy "double-check" at-a-glance, of correct port sizing and connection thread on your BOM or P/O. For valves made to imperial units, the size code is delimited by a dash (eg. **BVAH-1500N-1113**).

Connection Suffix – PAGE 11

All DMIC Ball Valves utilize a Connection Suffix. Please see the **expanded availability of Flange types, Socket Weld and Butt Weld Connections for all currently recognized U.S. and metric pipe standards, as well as GrayLoc™ connections**. If you don't see what you need, DMIC can make it, because we **are** the Factory - please call for a quotation.

Construction & Accessory Codes – PAGES 10-13

The Buyer can specify valve options by changing the standard "-1111" suffix code. For standard ball valves, no Accessory Code is required.

The six-character Accessory Code allows Buyers to easily option a valve to their exact requirement



VALVE SERIES SELECTION

DMIC Products are grouped by Series code, which provides a mnemonic indication of their intended application

BVAL - 0750 IU - 4 3 2 1

PREMIUM QUALITY BALL VALVES - MADE IN U.S.A.																
Valve Series		Working PSI	SIZE AVAILABILITY BY VALVE SERIES													
			1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	Above 8"
Symbol Legend : ☺ - In stock, same day ship ☑ - Ships within few days ⌚ - Available with ad time ⇄ - Connection option available with SSW components																
BVAL	Low Pressure	400 PSI	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☑	☑	⌚
BVAM	Mid Pressure	2000 PSI	N/A							☺	☺	☺	☺	☺	☺	⌚
BVAH	Large Bore High Pressure	6000 PSI	N/A					☺	☺	☺	☺	☺	☺	☑	☑	⌚
BVH	Black Body High Pressure "x" 1" Reduction bore	6000 PSI	☺	☺	☺	☺	☺	☺*	☺*	N/A						
BVHS	Stainless Steel	6000 PSI	⌚	⌚	⌚	⌚	☺	☺	☺	☺	☺	☺	☑	☑	☑	⌚
BVHH	High Pressure	10000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	⌚	⌚
BVHHH	Ultra Pressure	15000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	⌚	⌚
BVQ /BVQG	High Pressure & Temp	6000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	⌚	⌚
BV3L / BV3LZ	Aluminum Diverter	400 PSI	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚
BV3D / BV3DZ	Steel Diverter	3000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	⌚	⌚
BV3V		6000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	⌚	⌚
BV3H / BV4H	True Multi way	6000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	⌚	⌚
BVMM	Manifold Mount	3000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	⌚	⌚
		6000 PSI														
BVFF	Fixed Flange	3000 PSI	N/A		⌚	⌚	⌚	⌚	⌚	⌚	☺	☺	☺	☺	☺	⌚
		6000 PSI														
DBBV FL/S9	Flange Mount	5000 PSI	N/A		⌚	⌚	⌚	⌚	⌚	⌚	☺	☺	☺	⌚	N/A	
BVDM	Direct Mount	3000 PSI	N/A		☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	N/A	
BVD MF	Captive Direct Mount	3000 PSI	N/A		☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	N/A	
BVSS	Dual Pattern SAE 4-Bolt	6000 PSI	N/A			☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚	N/A	
SV2C / SV3C	IntraManifold	6000 PSI	⌚	☺	☺	☺	☺	☺	☺	☺	☑	⌚	⌚	⌚	⌚	⌚
BVFQ	Fire Safe	6000 PSI	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	⌚	⌚	⌚	⌚

All standard DMIC Ball Valve options including Factory Actuation and special mountings can be specified through Construction and Accessory codes. Please see pages 10 through 13.



VALVE SIZE SELECTION

Stock sizes ranging from ¼" to 6"
Custom Order of ANSI & API-Cert models to 12" and above

BVAL - 1000 SM - 4 3 2 1

DMIC Ball Valves offer the industry's most flexible size range with deliveries that are often a fraction of what you would expect.

Custom and Special Purpose Valves from DMIC

When your need for a specialty ball valve meets our very reasonable production criteria, we will gladly design, prototype, test, and warranty the subject valve on an OEM basis.

The result is reduced delivery times, development expense, and a direct partnership with the manufacturer which DMIC customers value greatly in those rare instances where the need for troubleshooting and corrections arise.

DMIC especially welcomes users of high volume designs, users with difficult requirements, and users of large bore valves needing API Certification. If DFAR is needed, DMIC products are a natural choice.

Symbol Legend

- ☑ Standard feature for this series
- ⚡ Rapid Delivery Option
- ☎ Please call to confirm lead time
- ☒ Not Available

Valve Size			Size Availability By Valve Series														
Nominal			Valve Series Group														
Inch	Order Code	Metric Equiv	BVAL	BV3L BV3LZ	BVAM	BVH BV4H	BVHS	BVHH BV4HH	BVO BVQG	BV3D BV3DZ	BV3H BV4H	BVMM	BVDM BVDMF	BVSS	BVFF DBBV	BVFD	SV2C SV3C
¼"	0250	6mm	☑	☑		☑				☑	☑	☑					
⅜"	0375	10mm	☑	☑		☑				☑	☑	☑					
½"	0500	12mm	☑	☑		☑		☑	☑	☑	☑	☑	☑				☑
¾"	0750	20mm	☑	☑		☑		☑	☑	☑	☑	☑	☑	☑			☑
1"	1000	25mm	☑	☑		☑	☑	☑	☑	☑	☑	☑	☑				☑
1¼"	1250	32mm	☑	☑		☑	☑	☑	☑	☑	☑	☑	☑				☑
1½"	1500	40mm	☑	☑		☑	☑	☑	☑	☑	☑	☑	☑				☑
2"	2000	50mm	☑	☑		☑	☑	☑	☑	☑	☑	☑	☑				☑
2½"	2500	63.5mm	☑	☑	☑	☑	☎	☎	☎	☎				☑	☑		☎
3"	3000	76mm	☑	☑	☑	☑	☎	☎	☎	☎				☎	☑		☎
4"	4000	101.6mm	☑	☎	☑	☑	☎	☎	☎	☎				☎	☑		
5"	5000	127mm	☑	☎	☎	☎	☎	☎	☎	☎				☎	☑		
6"	6000	152mm	☑	☎	☎	☎	☎	☎	☎	☎				☎	☑		
8"	8000	203mm	☎	☎	☎	☎	☎		☎	☎					☎		
10"	A000	254mm	☎	☎	☎	☎	☎		☎	☎					☎		
12"	C000	304mm	☎	☎	☎	☎	☎		☎	☎					☎		

CUSTOMIZING DMIC VALVE CONNECTIONS

To specify "unlike connection" or step-size custom order valves, use DMIC "2+2" Ordering Codes

DMIC customers enjoy unparalleled availability of specialized and custom valves, in addition to stock offerings. We devised the "2+2 code" system to allow Buyers to uniformly specify unlike connections on otherwise standard valves.

Suppose you require a BV3D-1000 3-way diverter with one C.61 Split Flange connection for rigid mounting, one C.61 4-Bolt Companion port, and an ISO6149 Threaded port. Specifying this valve could become a nightmare (let alone the delivery waiting time from overseas), but not for DMIC customers.

Please follow the example at right to see how this valve is requested, and how your quotation and production will proceed using the 2+2 codes and SAN system. To formulate a "2+2" code, take the FIRST TWO digits of the SIZE and append the CONNECTION CODE (next page).

- Determine the size and connection for each port of the valve. Contract into 2+2 codes:

1000 SM → 10 SM
 1000 FM → 10 FM
 1000 IU → 10 IU

It's easy!
 Just chop the last two digits of the size code off and join up with the connection code.

- Collate the connection codes (for multiway valves, in the published port sequence for accurate positioning at the Factory):

BV3D - 10 SM - 10 FM - 10 IU

- Call your distributor or DMIC with the composite valve p/n. We will search the database and quote pricing/delivery. With your PO, if a SAN is req'd, one will be assigned, and your valve is on the way!



CONNECTION AVAILABILITY

Symbol Legend

- ☑ Standard feature for this series
- ⚡ Rapid Delivery Option
- ☎ Please call to confirm lead time
- ☒ Not Available
- ☐ Composite valve assembly

The widest variety of ball valve connection options offered in the world

**** Please note: Our valve may be rated for more PSI, but we always suggest you operate your system according to pipe schedule, ANSI, or DIN specification.**

BVAL - 1000 SM - 4 3 2 1

Connection Style		Connection Availability By Valve Series											
		Valve Series Group											
	Code	Description	BVAL	BV3L BV3LZ	BVAM	BVH BVAH	BVHS	BVHH BVHHH	BVQ BVQG	BV3D BV3DZ	BV3H BV4H	BVDM BVDMF BVSS	BVFF DBBV BVFD
THREADED CONNECTIONS	Female Threaded Connections												
	S	SAE-F ORB	☑	☑	☑	☑	☑	☑	☑	☑	☑		☎
	N	NPT-F	☑	☑	☑	☑	☑	☑	☑	☑	☑		☎
	IU	ISO6149	☑	☑	☑	☑	☑	☑	☑	☑	☑		☎
	B	BSPF-F / ISO 1179 / G-Thread	☑	☑	☑	☑	☑	☑	☑	☑	☑		☎
	T	BSPT (Tapered Pipe)	☑	☑	☑	☑	☑	☑	☑	☑	☑		☎
	Male Threaded Connections												
	J	JIC-Male	☐	☐	☑	☑	☑	☑	☑	☑	☑		
	MD	DIN2353-M Tube (Please Call)	☎	☎	☎	☎	☎	☎	☎	☎	☎		
	MS	SAE-M ORB (Custom Order)	☎	☎	☎	☎	☎	☎	☎	☎	☎		
FLANGED CONNECTIONS	MN	NPT-M	☎	☎	☎	☑	☑	☑	☑	☑	☑		
	SAE 4-Bolt Companion Flange												
	FM	C.61 Companion, UNC Bolt Holes	☐	☐	☑	☑	☑	☎	☎	☑	☑		☎
	FH	C.62 Companion, UNC Bolt Holes			☑	☑	☑	☎	☎	☑	☑		☎
	GM	C.61 Companion, Metric B/H	☐	☐	☑	☑	☑	☎	☎	☑	☑		☎
	GH	C.62 Companion, Metric B/H			☑	☑	☑	☎	☎	☑	☑		☎
	SAE 4-Bolt Standard Flange												
	FL	Universal C.61 Std., Thru B/H	☐	☐		☎	☎	☎	☎	☎	☎	☑	
	FK	Universal C.62 Std., Thru B/H				☎	☎	☎	☎	☎	☎	☑	
	SAE Split Flange Head												
	SM	SAE C.61 Split Flg Head	☐	☐	☑	☑	☑	☎	☎	☑	☑		
	SH	SAE C.62 Split Flg Head			☑	☑	☑	☎	☎	☑	☑		
	ANSI Flange (quoted pressure ratings by standard ANSI B16.5 - 1988)												
	AA	Class 150 (285 PSI @ 100°F)	☐	☐	☎	☎	☎	☎	☎	☎	☎	☎	
	AB	Class 300 (740 PSI @ 100°F)			☎	☎	☎	☎	☎	☎	☎	☎	
	AC	Class 600 (1480 PSI @ 100°F)			☎	☎	☎	☎	☎	☎	☎	☎	
	AD	Class 900 (2220 PSI @ 100°F)			☎	☎	☎	☎	☎	☎	☎	☎	
	AE	Class 1500 (3705 PSI @ 100°F)			☎	☎	☎	☎	☎	☎	☎	☎	
	AF	Class 2500 (6170 PSI @ 100°F)			☎	☎	☎	☎	☎	☎	☎	☎	
	DIN Flange												
	DA	DIN 3202-F1 Flange, 4/8 Bolt	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	
	DB	DIN 3202-F4 Flange, 4/8 Bolt	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	
SOCKET WELD	Socket Weld Connection, Valve Repairable												
	WA	Standard Pipe			☑	☑	☑	☑	☑	☑	☑		☑
	W4	Schedule 40	☐	☐	☑	☑	☑	☑	☑	☑	☑		☑
	WB	Extra Strong (XS)			☑	☑	☑	☑	☑	☑	☑		☑
	W8	Schedule 40			☑	☑	☑	☑	☑	☑	☑		☑
	WD	Schedule 120			☑	☑	☑	☑	☑	☑	☑		☑
	WF	Schedule 160			☑	☑	☑	☑	☑	☑	☑		☑
	WG	Double Extra Strong (XXS)			☑	☑	☑	☑	☑	☑	☑		☑
BUTT WELD	Butt Weld Connection, Valve Repairable												
	WBA	Standard Pipe			☑	☑	☑	☑	☑	☑	☑		☑
	WB4	Schedule 40			☑	☑	☑	☑	☑	☑	☑		☑
	WBB	Extra Strong (XS)			☑	☑	☑	☑	☑	☑	☑		☑
	WB8	Schedule 80			☑	☑	☑	☑	☑	☑	☑		☑
	WBD	Schedule 120			☑	☑	☑	☑	☑	☑	☑		☑
	WBF	Schedule 160			☑	☑	☑	☑	☑	☑	☑		☑
	WBG	Double Extra Strong (XXS)			☑	☑	☑	☑	☑	☑	☑		☑
MANIFOLD MOUNTED	Manifold Mount, 2- and 3-Way												
	DMIC 2-/3-Way Industry Std. Pad												
	DMIC Intramanifold Cavity												

Many more connection types are available. If your requirement is not listed, please call Factory.



www.dmic.com
DMIC BALL VALVES CATALOG
COPYRIGHT ©2010 DELAWARE MFG.

DBV-1005A
PAGE 11

CALL TOLL FREE 1-800-248-3642
IN CANADA 1-800-320-3642



CONSTRUCTION CODES

Buyers may easily specify optional material and physical features with the 4-digit construction code suffix

DMIC Construction Codes are designed to be as universal as possible across the Ball Valve product line. Each of four positions determines the construction of a particular part of the valve.

Refer to Spec Sheets for Standard Configuration by Valve Series

Standard materials are demonstrated in the Ordering Codes Summary for each series. Based on the service pressure and design intent of a particular valve model, DMIC supplies valves made from a wide variety of materials.

Buna-N elastomer seals are standard on all DMIC Ball Valves except valves intended for weld application, which utilize Viton.

BVAL - **1000** **SM** - **4** **3** **2** **1**

Body Material _____
 Ball & Spindle Material _____
 Ball Seal Materials _____
 O-Ring & Back-up Seal Materials _____

Symbol Legend

- ☑ Standard feature for this series
- ☞ Rapid Delivery Option
- ☎ Please call to confirm lead time
- ☒ Not Available

Material Description		Availability By Product Series												
		Low Pressure			High Pressure									
Description	Code	BVAL	BV3L BV3LZ	BVAM	BVH BVAH	BVHS	BVHH BVHHH	BVQ BVQG	BV3D BV3DZ	BV3H BV4H	BVMM	BVDM BVDMF BVSS	BVFF DBBV BVFD	SV2C SV3C
Body Material – Position 1														
Carbon Steel	1	☎	☎	☑	☑	☒	☑	☑	☑	☑	☑	☑	☑	☑
Stainless Steel 316	2	☎	☎	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Aluminum 6061-T6	4	☑	☑	☎	☎	☎	☎	☎	☎	☎	☑	☎	☎	☎
Monel 400	7	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎
Ball and Spindle Material – Position 2														
Carbon Steel	1	☎	☎	☑	☑	☒	☑	☑	☑	☑	☑	☑	☑	☑
Stainless Steel 316	2	☎	☎	☑	☑	☑	☑	☑	☑	☑	☑	☑	☞	☑
Brass or Bronze	3	☑	☑	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎
Aluminum 6061-T6	4	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎
Stainless Steel 416	6	☎	☎	☞	☑	☑	☞	☞	☑	☑	☑	☑	☞	☞
Monel 400	7	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎
Thermoplastic Ball Seal Material – Position 3														
Delrin	1	☞	☞	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
PTFE Teflon (1500 PSI max)	2	☑	☑	☞	☞	☞	☒	☞	☞	☞	☞	☞	☞	☞
PEEK High Temp	4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
Delrin AF	6	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
Glass Reinforced Teflon	7	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎
Aluminum Bronze	8	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎	☎



Material Description		Availability By Product Series												
		Low Pressure		High Pressure										
Description	Code	BVAL	BV3L BV3LZ	BVAM	BVH BVAH	BVHS	BVHH BVHHH	BVQ BVQG	BV3D BV3DZ	BV3H BV4H	BVMM	BVDM BVDMF BVSS	BVFF DBBV BVFD	SV2C SV3C
Hostile Media	9													
Carbon Reinforced PEEK	C													
PCTFE (KEL-F)	K													
Nylon	N													
Glass Reinforced PEEK	P													
Steel (4340)	S													
Vespel SP-21	V													
Elastomer O-Ring Seal Material – Position 4														
Buna-N	1	☒	☒	☒	☒	☒	☒		☒	☒	☒	☒	☒	☒
EPR	2													
Viton	3							☒					☒	
Teflon	4													
Chemraz	5													
Kalraz	6													

TEMPERATURE & PRESSURE GUIDELINES

ACCESSORY CODES

Virtually any imaginable DMIC valve, complete with options, can be specified, Factory-built, and then later re-ordered exactly the same ... with DMIC Accessory Codes

Symbol Legend

- ☑ Standard feature for this series
- ☺ Rapid Delivery Option
- ☎ Please call to confirm lead time
- ☒ Not Available

DMIC Pre-Engineered Ball Valve Accessories feature interchangeability as a hallmark of their design. The DMIC Factory furnishes valves and accessories for your most demanding applications.

DMIC products save you time and money when anything more than a cookie-cutter offshore valve with limited/zero factory support, is needed.

By adding the additional "bank" of Accessory Codes, as demonstrated on the next page, you can now directly specify the complete array of DMIC Options as components of your Factory-built valve.

Please see the worksheet on the next page for a comprehensive listing of options.

DMIC SPECIAL ASSEMBLY NUMBERS

Completely custom valves receive a DMIC "SAN" number

Valves that are completely special, or cannot be defined with Construction & Accessory codes, receive a DMIC Engineering "SAN" (Special Assembly Number).

BVAL&12345

When you accept DMIC's quotation and order the product, a "SAN" (Special Assembly Number) is assigned for each optioned valve. This part number is used to flow your order through production and precisely document it for eventual service parts.

Option Description		Availability By Valve Series							
Description of Accessory to be Factory Installed	OLD "Slash Code"	Low Pressure				High Pressure			
		BVAL BV3L	BVAM	BVH BV3D	BVAH	BVHH	BV3H BV4H	BVMM	
Locking and Security Locking Handle Kits (Lock not Included)									
Locking Handle Kit	/LH	☺	☺	☺	☺	☺	☺	☺	
Security Locking Handle Kit	/LHS	☺	☺	☺	☺	☺	☺	☺	
Limit Switch Bracket, Single and Multiway									
Limit Switch Bracket, 1-Way	/LSB1	☺	☺	☺	☺	☺	☺	☺	
Limit Switch Bracket, 2-Way	/LSB2	☺	☺	☺	☺	☺	☺	☺	
Limit Switch Bracket, 3-Way	/LSB3	☒/☺	☒	☒/☺	☒	☒	☺	☎	
Locking Limit Switch Brkt, 1-Way	/LLB1	☺	☺	☺	☺	☺	☺	☺	
Locking Limit Switch Brkt, 2-Way	/LLB2	☺	☺	☺	☺	☺	☺	☺	
Locking Limit Switch Brkt, 3-Way	/LLB3	☒/☺	☒	☒/☺	☒	☒	☺	☎	
Include Switch(es) when ordering DMIC LSB/LLB Brackets	add/S to end	☺	☺	☺	☺	☺	☺	☺	
Ball Valve Handle Overrides/Options – Replaces Standard Handle									
Forged Steel Handle	/HS	☺	☑	☑	☑	☑	☒	☑	
Flat Fabricated Steel Handle	/HA	☺	☺	☺	☺	☺	☒	☺	
Flat Anodized Aluminum Handle	/HL	☺	☺	☺	☺	☺	☒	☺	
Offset Anodized Aluminum Handle	/HK	☑	☺	☺	☺	☺	☒	☑	
T-Type High Torque Handle	/HT	☺	☺	☺	☺	☺	☑	☺	
Delete Handle (i.e. "NO" handle)	/HN	☺	☺	☺	☺	☺	☺	☺	
Handle Link Kit (specifies TWO valves connected by one handle)	/HLK	☎	☎	☎	☎	☎	☎	☎	
Valve Preparation Options – Requires DMIC Accessory Kit Order									
Distributor/OEM placing order may specify valves with factory preparation subject to DMIC's "special order" Sales Terms – please contact your Sales Associate for details.									
Equip for Actuator Mount	/AM	☺	☺	☺	☺	☺	☺	☺	
Equip for Bottom Mounting	/BM	☺	☎	☺	☺	☎	☎	☒	
Bottom & Side Mount	/BSM	☺	☎	☺	☎	☎	☎	☒	
Locking Handle Mount	/LHM	☒	☒	☒	☒	☒	☺	☒	
Equip for 1-Way Limit Switch Mt	/LM1	☺	☺	☺	☺	☺	☺	☺	
Equip for 2-Way Limit Switch Mt	/LM2	☺	☺	☺	☺	☺	☺	☺	
Equip for Panel Mounting (Top)	/PM	☺	☺	☺	☺	☺	☺	☺	
Equip for Side Mounting	/SBM	☺	☎	☺	☎	☎	☎	☒	
Equip for Security Lock Mount	/SLM	☺	☺	☺	☺	☺	☺	☺	
Factory Installed Actuator - DMIC Application Guaranteed									
Factory Pneumatic DA Actuator	/DA*	☺	☺	☺	☺	☺	☺	☺	
Factory Pneumatic SR Actuator	/SR**	☺	☺	☺	☺	☺	☺	☺	
Factory Hydraulic DA Actuator	/DA*H	☎	☎	☎	☎	☎	☎	☎	
Factory Hydraulic SR Actuator	/SR**H	☎	☎	☎	☎	☎	☎	☎	
Factory ElectricDA Actuator	/E**	☎	☎	☎	☎	☎	☎	☎	



ACCESSORY CODES, CONT.

BVAL - 0750 S - 4 3 2 1 A Z Z A Z Z

← Group 5 & 6 codes only required when an option is selected

Group I Accessories Locking Handles & Limit Switches		
Description	Accessory Code	OLD "Slash Codes"
Zero Accessory ("none")	Z	
Locking Handle	A	/LH
Security Locking Handle	B	/LHS
Limit Switch Brckt - Single	C	/LSB1
Limit Switch Brckt - Dual	D	/LSB2
Locking Limit Switch Brckt - Single	E	/LLB1
Locking Limit Switch Brckt - Dual	F	/LLB2
Security Locking Limit Switch Brckt - Single	G	/SLB1
Security Locking Limit Switch Brckt - Dual	H	/SLB2
Limit Switch Brckt - Single, with Switch	I	/LSB1 /S
Limit Switch Brckt - Dual, with Switches	J	/LSB2 /S
Locking Limit Switch Brckt - Single, w/Switch	K	/LLB1 /S
Locking Limit Switch Brckt - Dual, w/Switch	L	/LLB2 /S
Security Locking L.S. Brckt - Single, w/Switch	M	/SLB1 /S
Security Locking L.S. Brckt - Dual, w/Switch	N	/SLB2 /S
Explosion Proof Limit Switch	R	/EPLS

Group II Accessories Mounting Patterns & Accessory Preparation		
Description	Accessory Code	OLD "Slash Codes"
Zero Accessory ("none")	Z	
Actuator Bracket Mounting Holes	A	/AM
Bottom Mounting Holes	B	/BM
Bottom & Side Combination Mounting Holes	C	/BSM
Locking Handle Mount	D	/LHM
Single Limit Switch Bracket Mounting Holes	E	/LM1
Dual Limit Switch Bracket Mounting Holes	F	/LM2
Panel Mounting Holes	G	/PM
Side Mounting Holes / Side Mt. Brkt. Holes	H	/SBM
Security Lock Mount	I	/SLM
Security Lock and Single L.S. Brkt Mtg Holes	J	/SLM /LM1
Security Lock and Dual L.S. Brkt Mtg Holes	K	/SLM /LM2
Pressure Balance	P	/P
Locking Pressure Balance	Q	/PL
ROV Mount as per API 17D	V	/RVM

Group IV Accessories Handle Type		
Description	Accessory Code	OLD "Slash Codes"
Zero Accessory ("No handle")	Z	
Handle, Crank, Steel	A	/HS
Handle, Flat, Steel	B	/HA
Handle, Flat Offset, Steel	C	/HA45
Handle, High Torque, Steel	D	/HT
316 Stainless Steel Top Works (Crank Handle, Pin, Washer, & Cap)	L	/HSS
Handle, Crank, Aluminum	N	/HK
Handle, Flat, Aluminum	O	/HL
Handle, Crank, 316 Stainless Steel	R	/HSS
Handle, High Torque, 316 Stainless Steel	U	/HTS
Handle, Spring Return, High Torque	9	/HTSR
For more available options, Call DMIC Sales!		

Group V Accessories Mounting Brackets		
Description	Accessory Code	OLD "Slash Codes"
Zero Accessory ("none")	Z	
Bottom Bracket	A	/BB
Side Bracket	B	/SB
Changes any single limit switch to Normally Closed Proximity Switch Mounts - Call DMIC Sales!	C	/NC
	H-W	

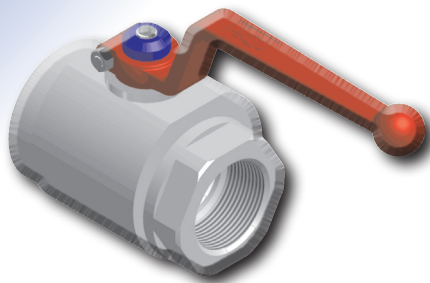
Group VI Accessories Valve Surface Finish		
Description	Accessory Code	OLD "Slash Codes"
Zero Accessory ("standard finish")	Z	
Black Oxide - override Standard	A	
Clear Anodize - override Standard	B	/AN
Nickel Plated - override Standard	C	/NP
Yellow Zinc Dichromate Plated - override Std	D	/YZP
Electroless Nickel - override Standard	E	/EP
Black Anodize - override Standard	F	/BAN
Chromium-6 Free Zinc	K	/C6F
Bleed Hole or Drain Ports - Call DMIC Sales!	N-V	

Group III Accessories Complete Actuation Packages, Pneumatic, Double Acting & Spring Return				
Description (Type of Actuator)	Accessory Code	OLD "Slash Codes"	Description (Actuator Size)	Accessory Code
Note: If an Actuator is called out, the 3rd digit in the accessory code is used to call out "Type". The 4th digit will now be overridden with "Size"				
Zero Accessory ("none")	Z		Size "A"	A
Double Acting	1	/DA*	Size "B"	B
Spring Return (4 Spring)	2	/SR*4	Size "C"	C
Single Phase Electric (AC)	3	/EA*	Size "D"	D
Electric (DC)	4	/ED*	Size "E"	E
Double Acting Hydraulic Conversion	5	/DA*H3	Size "F"	F
Spring Return (4 Spring) Hydraulic Conversion	6	/SR*H4	Size "G"	G
DMIC Hydraulic Actuator (Not all sizes available)	7	/ACD-HA*	Size "H"	H
			For any larger size Actuator, Call DMIC Sales!	I-L



'BVAL' LOW PRESSURE

Ideal from suction to 400 PSI; NPT/SAE/6149/BSP ; PTFE Ball Seals
Optimized for DMIC's "SSW" System - All sizes unrestricted bore.



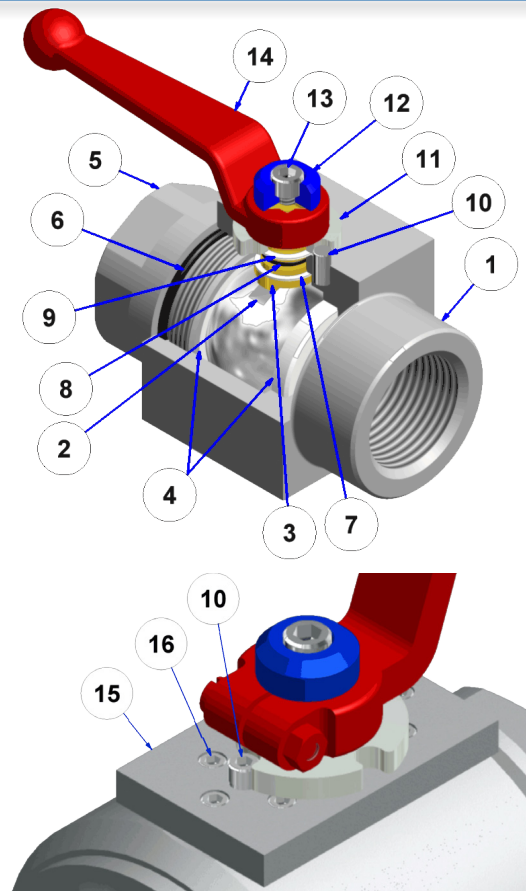
Most large bore valves sold in the hydraulic market today are simply "plumbing" valves, suitable primarily for low pressure, cold water use. DMIC's 'BVAL' is the first ball valve of its kind, specifically designed for leak-free Hydraulic Suction, Vacuum to 29" & Return line durability to 6" full bore.

- Built to take the pressure spikes, temperatures, & elevated demands of hydraulic service
- Uses top grade ball seals, with O-Ring sealing throughout.
- Suitable for actuation and panel mounting and accepts the full range of DMIC Ball Valve Accessories & Actuation Packages
- A reliable choice for Phosphate Esters, Water Glycols and other unusual media (std model ships with Teflon ball seals / Buna-N O-rings)

Valve Cutaway View & Service Parts BOM

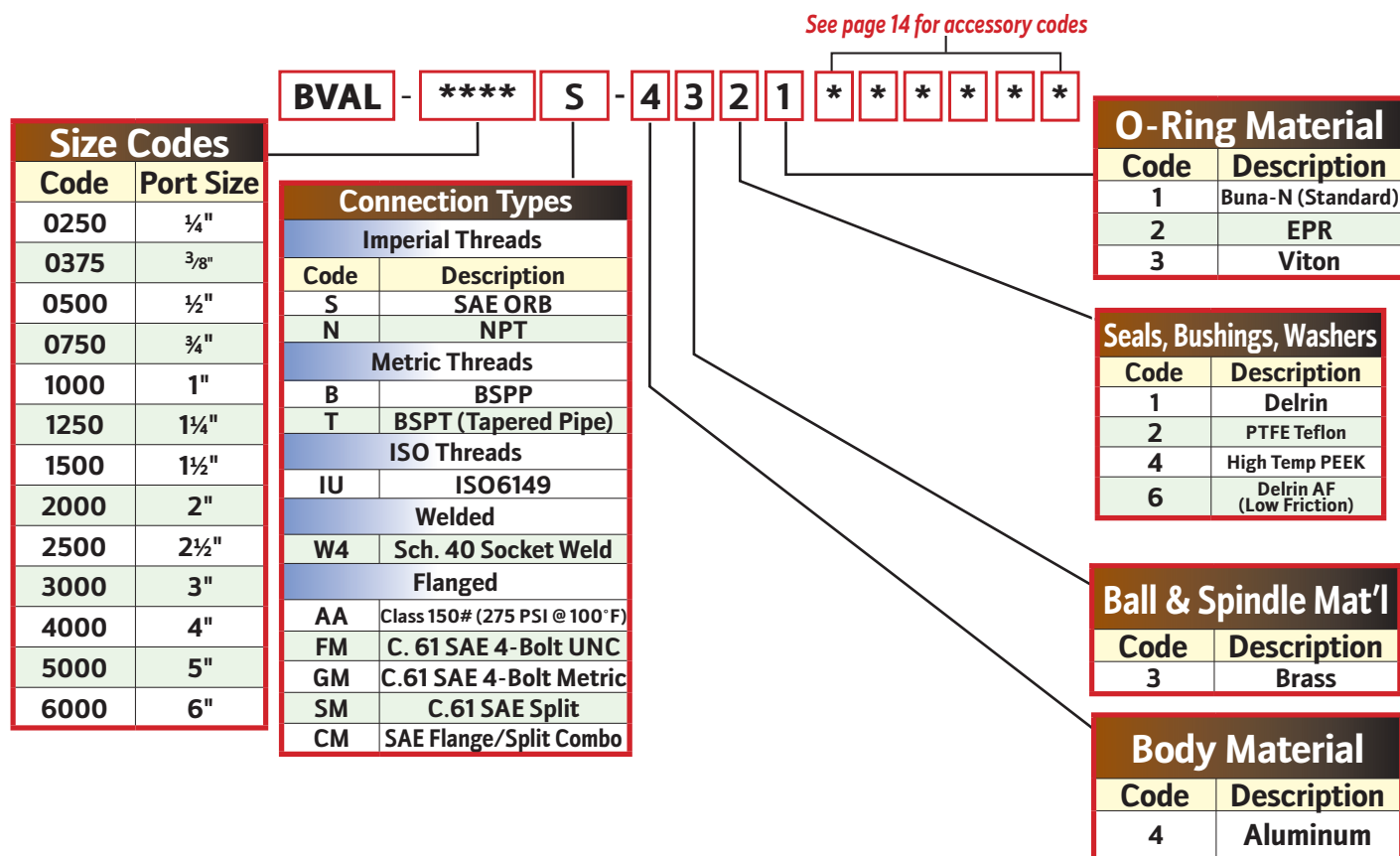
BVAL	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball, Brass
3	1	Spindle, Brass
4	2	Ball Seal
5	*	End Connection(s)
6	*	End Connection O-Rings(s)
7	1	Internal Thrust Washer
8	1	Spindle O-Rings
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Code Cap
13	1	Top Cap Screw
14	1	Handle
15	1**	Top Cap
16	6**	Top Cap Mounting Bolts

* - Quantity depends on size and combination of body
 ** - On Valve sizes 2-½ and larger



'BVAL' LOW PRESSURE

Ordering Codes Summary



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

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.

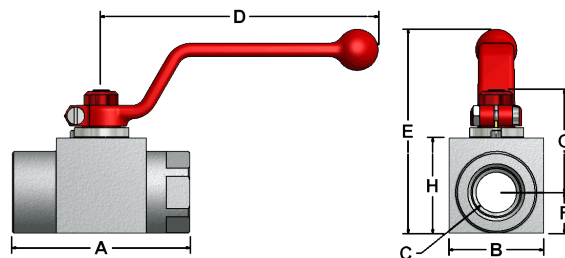


'BVAL' LOW PRESSURE

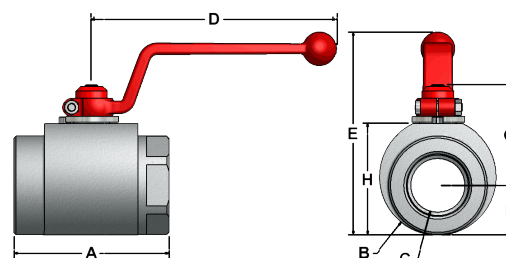
BVAL valves with flange and socket weld connections are composite valves, built using threaded valves and "SSW" adapters. To harness the full capabilities of DMIC's "SSW" Power Unit Layout system please call DMIC Helpline at 1-800-248-3642 to obtain the SSW Catalog.

BVAL		Dependent Dimensions				
Threaded Connection						
Dimension (inches)		A	E	F	G	H
Port Code(s)	Port Size	Overall Length	Overall Height	Bot to Port Ctr	Port Ctr to Top	Valve Height
N S B IU IA Threaded Connections	¾"	2.63	2.70	0.63	1.63	1.50
	⅜"	2.63	2.70	0.63	1.63	1.50
	½"	2.63	2.70	0.63	1.63	1.50
	¾"	3.28	3.77	0.76	1.86	1.75
	1"	3.48	4.01	0.88	1.98	2.00
	1¼"	3.90	5.19	1.19	2.53	2.61
	1½"	4.32	5.65	1.39	2.74	3.10
	2"	4.90	6.41	1.82	3.07	3.83
	2½"	6.00	8.00	2.50	4.11	5.34
3"	7.31	8.99	3.00	4.58	6.31	
4"	8.89	10.01	3.50	5.11	7.36	
SAE 4-Bolt Flange Connection						
Dimension (inches)		A	A	—	—	—
Port Code(s)	Port Size	Overall Length FM/GM	Overall Length FL	Flg Pad Long	Flg Pad Short	UNC Bolt Thrd
FM GM FL SAE 4-Bolt Comp/Std Flg Conn	¾"	7.65	8.78	1.88	0.88	⅝"
	1"	7.78	9.02	2.06	1.03	⅝"
	1¼"	8.45	9.56	2.31	1.19	⅞"
	1½"	8.87	9.92	2.75	1.41	½"
	2"	9.45	11.06	3.06	1.69	½"
	2½"	11.00	12.65	3.50	2.00	½"
	3"	12.61	15.16	4.19	2.44	⅝"
	4"	14.20	16.74	5.13	3.06	⅝"
SAE Split Flange Connection						
Dimension (inches)		A	—	—	—	A _{CM}
Port Code(s)	Port Size	Overall Length SM	O-Ring No.	DMIC Split Flange Kit	Length A (Combo) CM	
SM CM SAE Split & Combo Flange Connections	¾"	8.14	2-214	FSL-0750SK	7.87	
	1"	8.28	2-219	FSL-1000SK	8.03	
	1¼"	9.33	2-222	FSL-1250SK	8.89	
	1½"	9.77	2-225	FSL-1500SK	9.32	
	2"	10.85	2-228	FSL-2000SK	10.15	
	2½"	12.36	2-232	FSL-2500SK	11.68	
	3"	13.54	2-237	FSL-3000SK	13.00	
	4"	15.77	2-245	FSL-4000SK	15.83	
ANSI Flange Conn. (DIN ALSO AVAILABLE, SEE p. 24)						
Dimension (inches)		A	ANSI 150# FLANGE			
Port Code(s)	Port Size	Overall Length	Flg Diam	B/Ctr Diam	Bolt Hole Dia	# Bolt Holes
AA ANSI 150# Flange Connections (300PSI nominal)	½"	5.38	3.50	2.38	0.63	4
	¾"	7.02	3.88	2.75	0.63	4
	1"	7.28	4.25	3.12	0.63	4
	1¼"	8.13	4.62	3.50	0.63	4
	1½"	8.83	5.00	3.88	0.63	4
	2"	9.57	6.00	4.75	0.75	4
	2½"	11.24	7.00	5.50	0.75	4
	3"	12.94	7.50	6.00	0.75	4
	4"	14.76	9.00	7.50	0.75	8
SAE Split Flange Connection						
Dimension (inches)		A	—	—		
Port Code(s)	Port Size	Overall Length	Pipe OD	Socket Depth		
W4 Socket Weld Connections	¾"	5.78	1.05	0.38		
	1"	5.98	1.31	0.38		
	1¼"	6.65	1.66	0.38		
	1½"	6.95	1.91	0.38		
	2"	7.65	2.38	0.38		
	2½"	9.00	2.88	0.38		
	3"	10.56	3.50	0.50		
	4"	12.14	4.50	0.50		

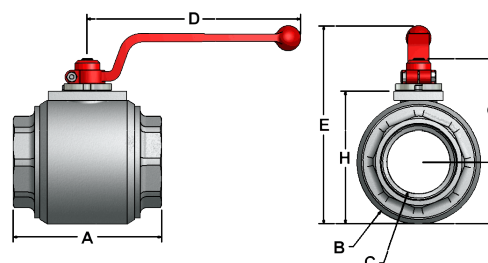
BVAL Block Body, 1/4" - 1"



BVAL Round Body, 1 1/4" - 2"



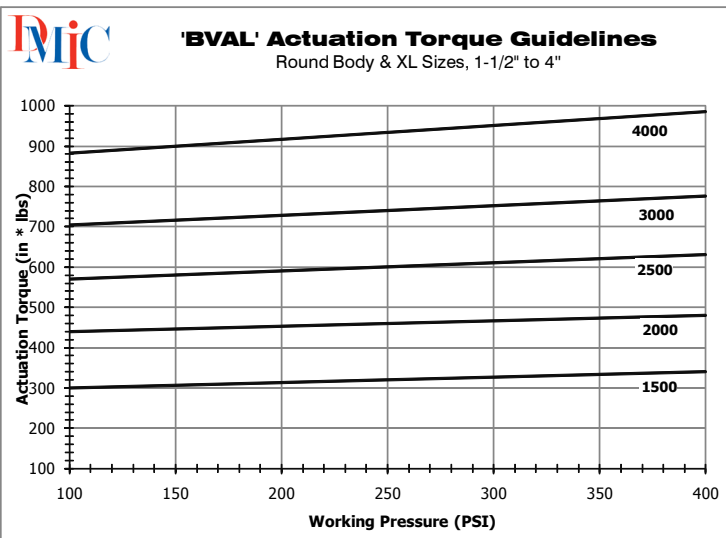
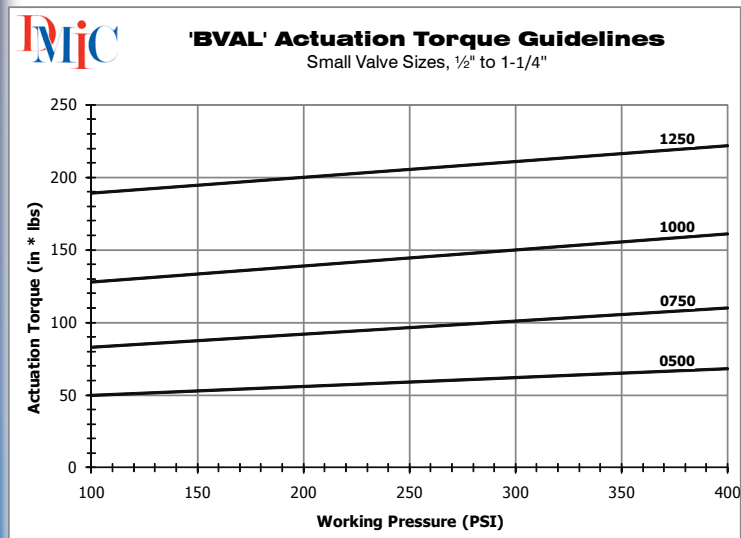
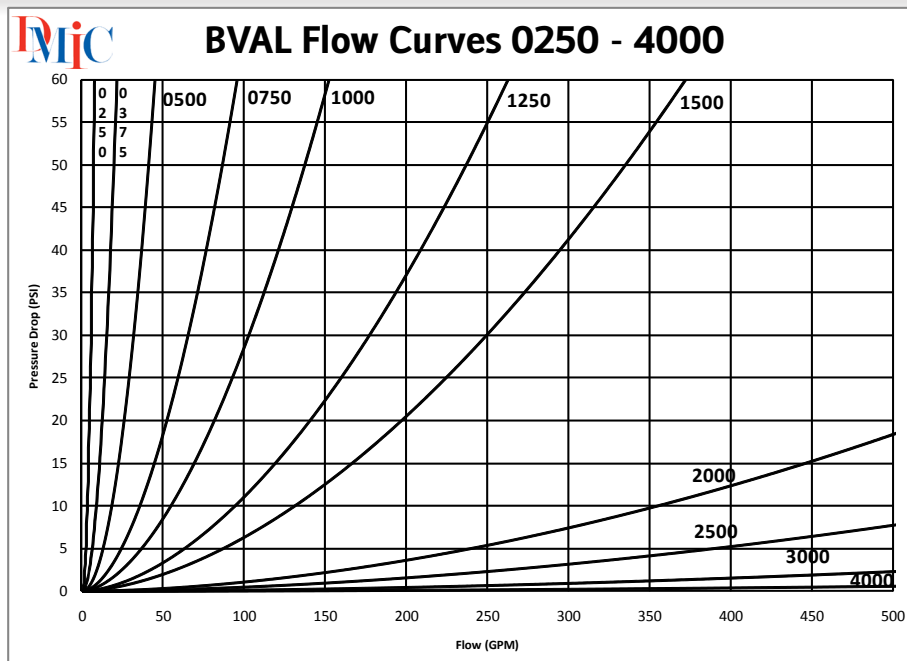
BVAL Round Body, 2 1/2" - 4" (5" and up call Factory)



BVAL		Common Dimensions				
Part Number	Port Size	Rated Pressure PSI (bar)	Dimensions IN/mm			Handle Length D
			Valve Width B	Valve Bore C	Valve Height E	
BVAL-0250****	1/4"	400 27.6	1.50 38.1	0.25 6.4	3.37 85.8	3.37 85.8
BVAL-0375****	3/8"	400 27.6	1.50 38.1	0.38 9.5	3.37 85.8	3.37 85.8
BVAL-0500****	1/2"	400 27.6	1.50 38.1	0.50 12.7	3.37 85.8	3.37 85.8
BVAL-0750****	3/4"	400 27.6	1.75 44.5	0.75 19.1	5.12 129.8	5.12 129.8
BVAL-1000****	1"	400 27.6	2.00 50.8	1.00 25.4	5.12 129.8	5.12 129.8
BVAL-1250****	1 1/4"	400 27.6	2.75 69.9	1.25 31.8	6.81 172.8	6.81 172.8
BVAL-1500****	1 1/2"	400 27.6	3.25 82.6	1.50 38.1	6.81 172.8	6.81 172.8
BVAL-2000****	2"	400 27.6	4.00 101.6	2.00 50.8	6.81 172.8	6.81 172.8
BVAL-2500****	2 1/2"	400 27.6	5.00 127.0	2.50 63.5	8.75 221.4	8.75 221.4
BVAL-3000****	3"	400 27.6	6.00 152.4	3.00 76.2	8.75 221.4	8.75 221.4
BVAL-4000****	4"	400 27.6	7.00 177.8	4.00 101.6	8.75 221.4	8.75 221.4

'BVAL' LOW PRESSURE

Flow Characteristic and Actuation Torque Curves

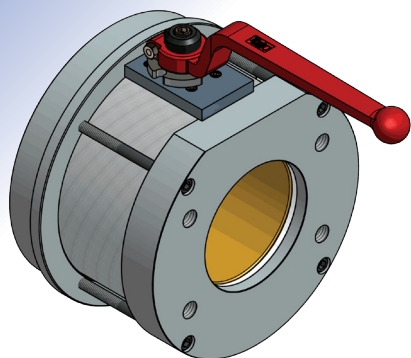


Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



'BVALP' LOW PROFILE SUCTION

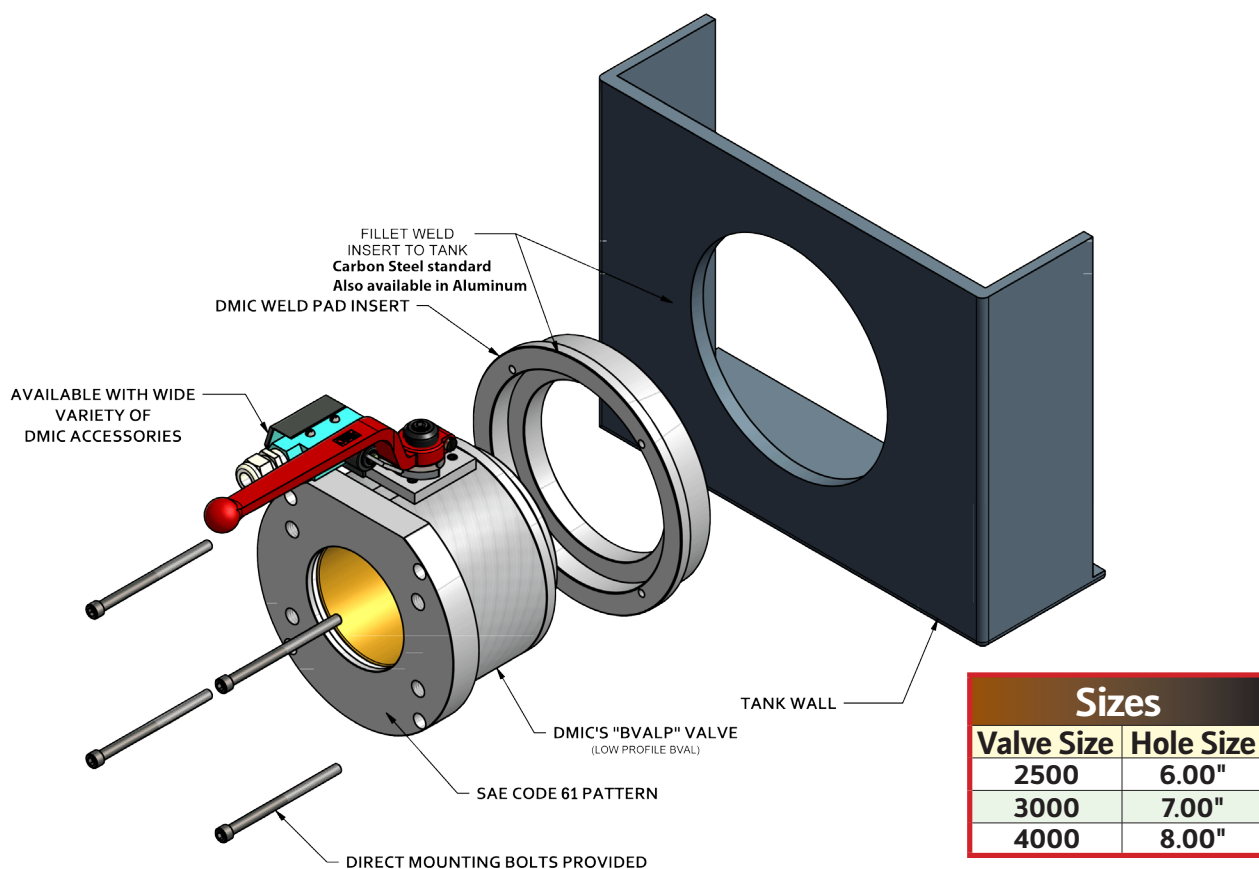
Ideal from suction to atmospheric pressure
Optimized for DMIC's "SSW" System - All sizes unrestricted bore.



Similar to DMIC's BVAL product line, but it's smaller profile allows for mounting in tight spaces. Whether you're building a new system with a tight space constraint on a valve or are looking to replace your unreliable gate or butterfly valve, make DMIC's BVALP valve your only choice.

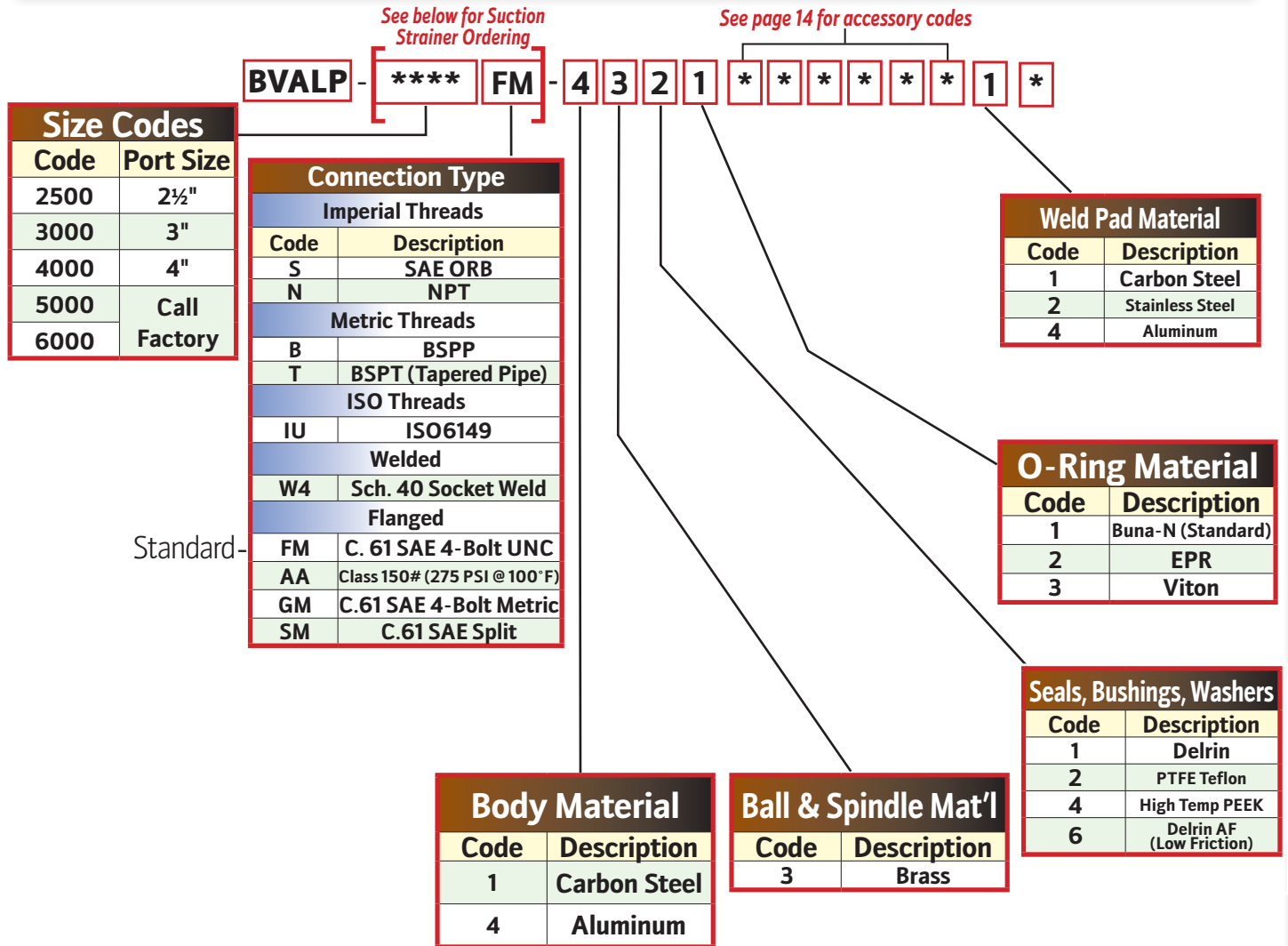
- Bore sizes range from 2½"-4", other sizes available upon request
- Tank mounted flange for weldment and removable ball valve provided
- Available directly with suction line filter port
- Capable of handling up to 250 PSI
- SAE C.61 Mounting pattern provided (standard) with additional connection availability
- Special bolt kit required and is shipped with valve

Valve Installation Guide



'BVALP' LOW PROFILE SUCTION

Ordering Codes Summary



2+2 Ordering Code Example for built in Suction Strainer Port:

[XX] [X] - [XX] [X]
Size Conn Size Conn

Inlet (Strainer side)	Inlet (Strainer side)	Outlet	Outlet See Above for available connection type
25	B	25	
30	S	30	
40	N	40	
	T		

Ordering Example:

BVALP-25N-25FM-4321AZZN

-NPT Port for Strainer

-FM Bolt Conn. on outlet side

-Standard Material Carbon Steel Weld Pad. Last 4 Accessory Codes Dropped

BVALP-30S-30FM-4321ZZNZZZ

-Weld Pad Material request is Stainless Steel

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

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.



'BVALP' Low Profile Suction

BVALP valves with flange and socket weld connections are composite valves, built using threaded valves and "SSW" adapters. 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 SSW Catalog.

*BVAL Round Body, 2 1/2" - 4"
(5" and up call Factory)*

BVALP		Dependent Dimensions				
Threaded Connection						
Dimension (inches)		A	E	F	G	H
Port Code(s)	Port Size	Overall Length	Overall Height	Bot to Port Ctr	Port Ctr to Top	Valve Height
N S B IU IA Threaded Connections	1/4"	2.63	2.70	0.63	1.63	1.50
	3/8"	2.63	2.70	0.63	1.63	1.50
	1/2"	2.63	2.70	0.63	1.63	1.50
	3/4"	3.28	3.77	0.76	1.86	1.75
	1"	3.48	4.01	0.88	1.98	2.00
	1 1/4"	3.90	5.19	1.19	2.53	2.61
	1 1/2"	4.32	5.65	1.39	2.74	3.10
	2"	4.90	6.41	1.82	3.07	3.83
	2 1/2"	6.00	8.00	2.50	4.11	5.34
	3"	7.31	8.99	3.00	4.58	6.31
4"	8.89	10.01	3.50	5.11	7.36	
SAE 4-Bolt Flange Connection						
Dimension (inches)		A	A	—	—	—
Port Code(s)	Port Size	Overall Length FM/GM	Overall Length FL	Flg Pad Long	Flg Pad Short	UNC Bolt Thrd
FM GM FL SAE 4-Bolt Comp/Std Flg Conn	3/4"	7.65	8.78	1.88	0.88	3/8"
	1"	7.78	9.02	2.00	1.03	3/8"
	1 1/4"	8.45	9.56	2.19	1.19	7/8"
	1 1/2"	8.87	9.92	2.35	1.41	1/2"
	2"	9.45	11.06	3.06	1.69	1/2"
	2 1/2"	11.00	12.61	3.50	2.00	1/2"
	3"	12.61	15.74	4.19	2.44	3/8"
4"	14.20	17.74	5.13	3.06	3/8"	
SAE Split Flange Connection						
Dimension (inches)		A	—	—	—	A _{CM}
Port Code(s)	Port Size	Length A (Combo) SM	O-Ring No.	DMIC Split Flange Kit	Length A (Combo) CM	
SM CM SAE Split & Combo Flange Connections	3/4"	8.14	2-214	FSL-0750SK	7.87	
	1"	8.28	2-219	FSL-1000SK	8.03	
	1 1/4"	9.33	2-222	FSL-1250SK	8.89	
	1 1/2"	9.77	2-225	FSL-1500SK	9.32	
	2"	10.85	2-228	FSL-2000SK	10.15	
	2 1/2"	12.36	2-232	FSL-2500SK	11.68	
	3"	13.54	2-237	FSL-3000SK	13.00	
4"	15.77	2-245	FSL-4000SK	15.83		
ANSI Flange Conn. (DIN ALSO AVAILABLE, SEE p. 24)						
Dimension (inches)		A	ANSI 150# FLANGE			
Port Code(s)	Port Size	Overall Length	Flg Diam	B/Ctr Diam	Bolt Hole Dia	# Bolt Holes
AA ANSI 150# Flange Connections (300PSI nominal)	1/2"	5.38	3.50	2.38	0.63	4
	3/4"	7.02	3.88	2.75	0.63	4
	1"	7.28	4.25	3.12	0.63	4
	1 1/4"	8.13	4.62	3.50	0.63	4
	1 1/2"	8.83	5.00	3.88	0.63	4
	2"	9.57	6.00	4.75	0.75	4
	2 1/2"	11.24	7.00	5.50	0.75	4
	3"	12.94	7.50	6.00	0.75	4
4"	14.76	9.00	7.50	0.75	8	
SAE Split Flange Connection						
Dimension (inches)		A	—	—	—	—
Port Code(s)	Port Size	Overall Length	Pipe OD	Socket Depth		
W4 Socket Weld Connections	3/4"	5.78	1.05	0.38		
	1"	5.98	1.31	0.38		
	1 1/4"	6.65	1.66	0.38		
	1 1/2"	6.95	1.91	0.38		
	2"	7.65	2.38	0.38		
	2 1/2"	9.00	2.88	0.38		
	3"	10.56	3.50	0.50		
4"	12.14	4.50	0.50			

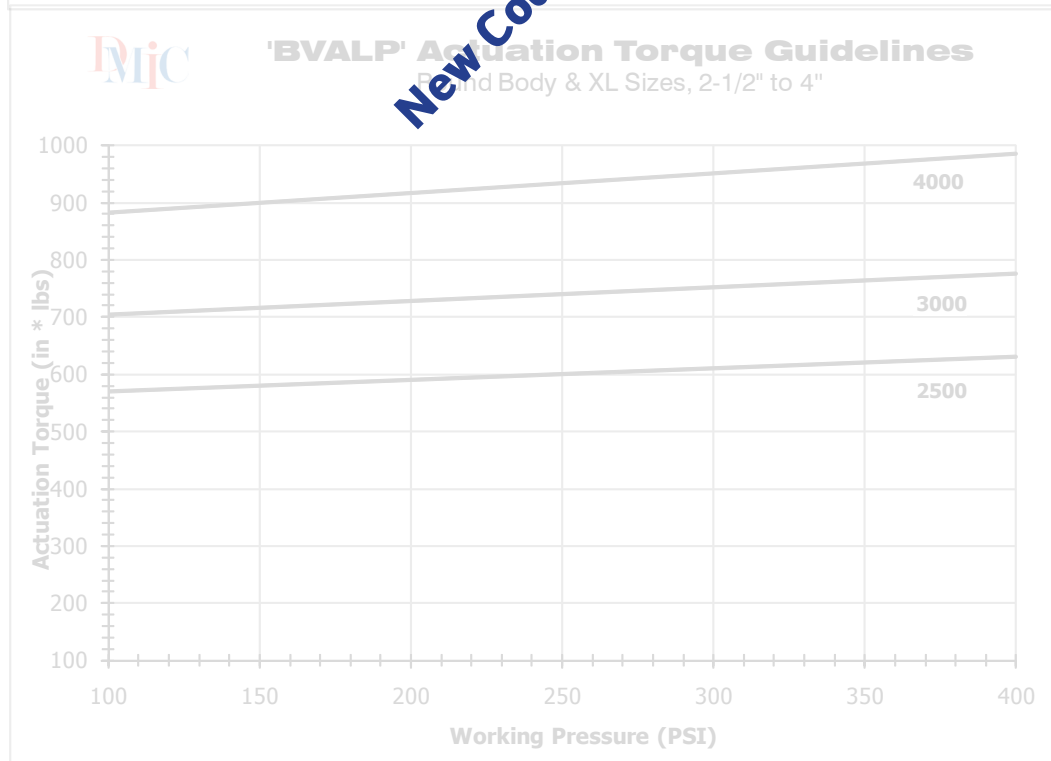
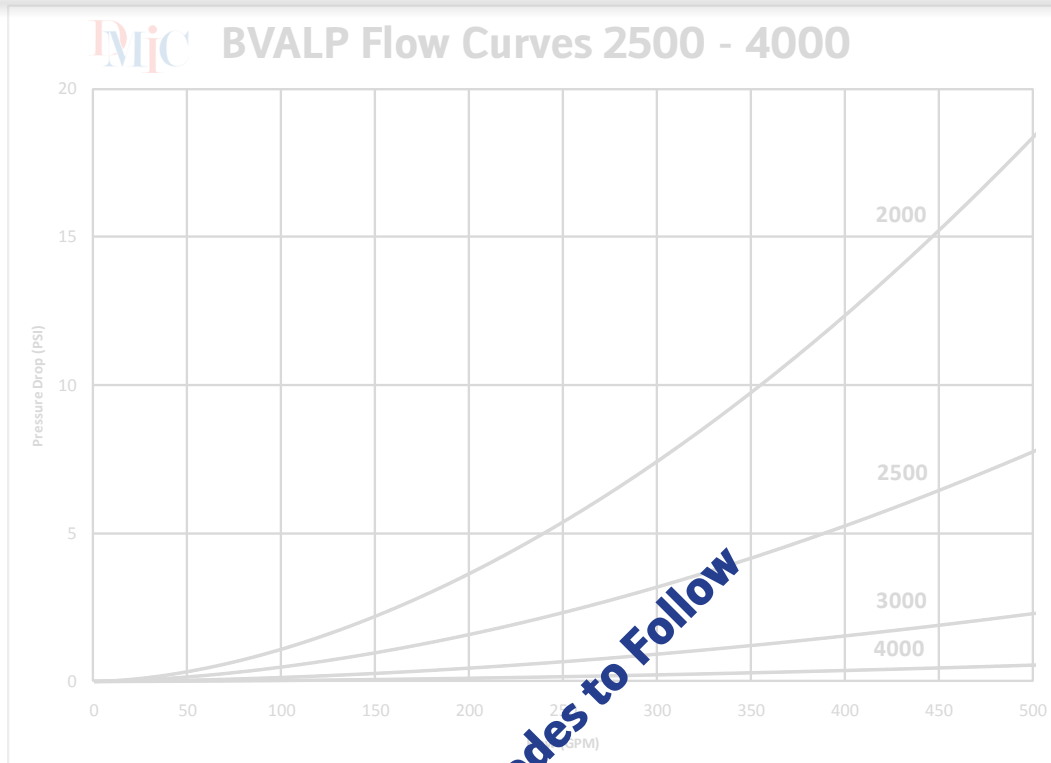
New Codes to Follow

BVALP		Common Dimensions				
Part Number	Port Size	Rated Pressure PSI (bar)	Dimensions IN/mm			Handle Length D
			Valve Width B	Valve Bore C	Valve Height E	
BVAL-0250****	1/4"	400 27.6	1.50 38.1	0.25 6.4	3.37 85.8	
BVAL-0375****	3/8"	400 27.6	1.50 38.1	0.38 9.5	3.37 85.8	
BVAL-0500****	1/2"	400 27.6	1.50 38.1	0.50 12.7	3.37 85.8	
BVAL-0750****	3/4"	400 27.6	1.75 44.5	0.75 19.1	5.12 129.8	
BVAL-1000****	1"	400 27.6	2.00 50.8	1.00 25.4	5.12 129.8	
BVAL-1250****	1 1/4"	400 27.6	2.75 69.9	1.25 31.8	6.81 172.8	
BVAL-1500****	1 1/2"	400 27.6	3.25 82.6	1.50 38.1	6.81 172.8	
BVAL-2000****	2"	400 27.6	4.00 101.6	2.00 50.8	6.81 172.8	
BVAL-2500****	2 1/2"	400 27.6	5.00 127.0	2.50 63.5	8.75 221.4	
BVAL-3000****	3"	400 27.6	6.00 152.4	3.00 76.2	8.75 221.4	
BVAL-4000****	4"	400 27.6	7.00 177.8	4.00 101.6	8.75 221.4	



'BVALP' LOW PROFILE SUCTION

Flow Characteristic and Actuation Torque Curves



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.



BVAM MID PRESSURE

An economical low mass alternative for mainstream 2000 PSI applications
From 2½" to 6"



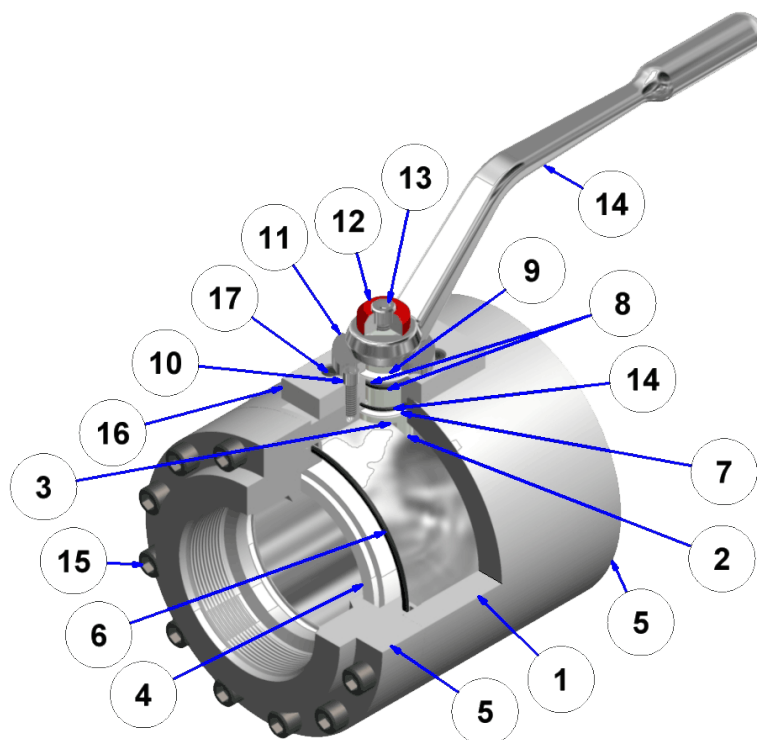
DMIC's **BVAM** series provides a cost effective, durable, high quality ball valve solution for quality oriented 2,000 PSI systems.

- DMIC's leading quality-value profile in a purpose built 2,000 PSI valve
- **Built to take the pressure spikes, temperatures, & elevated demands of hydraulic service**
- Uses top grade **ball seals**, with **O-Ring sealing** throughout
- **Suitable for actuation and panel mounting**, accepts the full range of DMIC High Pressure Ball Valve Accessories & Actuation Packages
- **A reliable choice for Phosphate Esters**, Water Glycols, and other unusual media (may require optional materials; ships with std. Buna-N seals)

Service Parts BOM

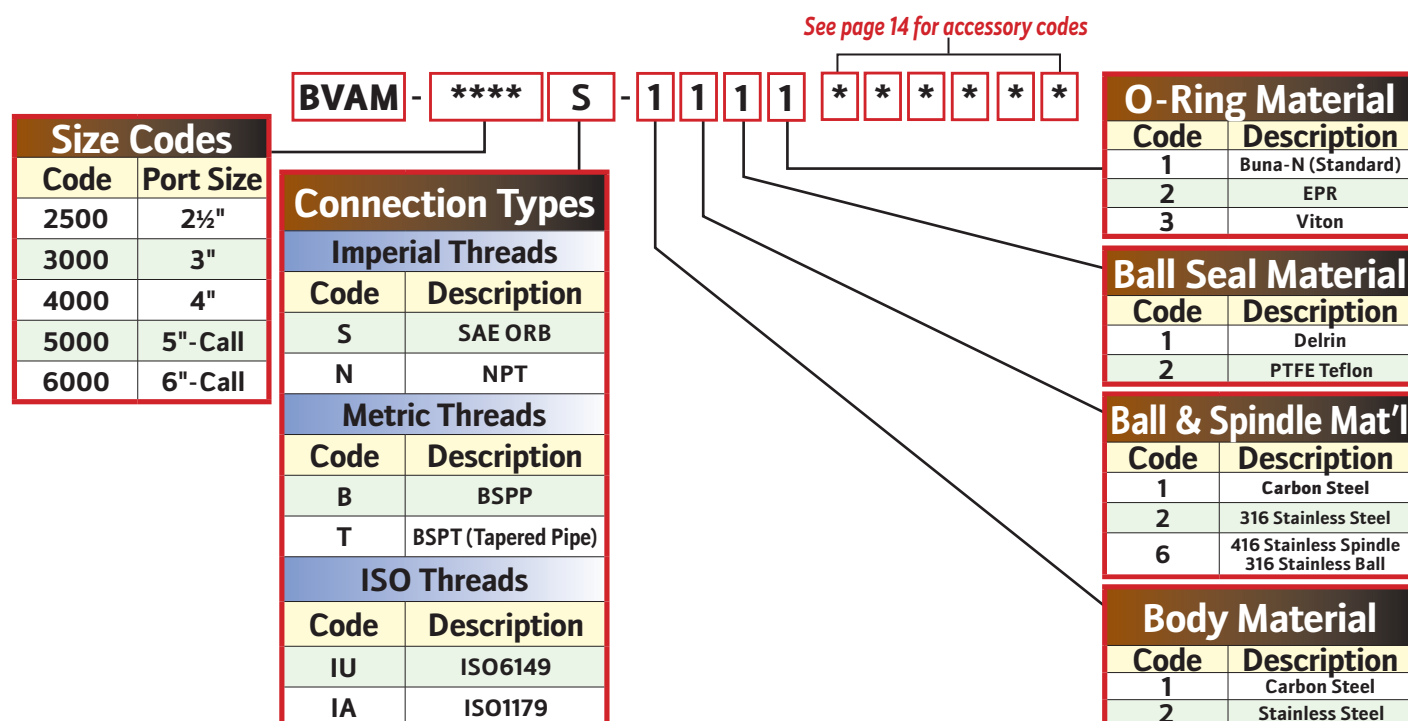
BVAM	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle, Steel
4	2	Ball Seal
5	2	End Connection
6	2	End Connection O-Ring
7	1	Internal Thrust Washer
8	1	Spindle O-Rings
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Code Cap
13	1	Color Code Cap Screw
14	1	Handle
15	*	End Connection Bolts
16	1	Top Cap
17	5	Top Cap Mounting Bolts

* - Quantity depends on size and combination of body



BVAM MID PRESSURE

Ordering Codes Summary



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

Additional Note:

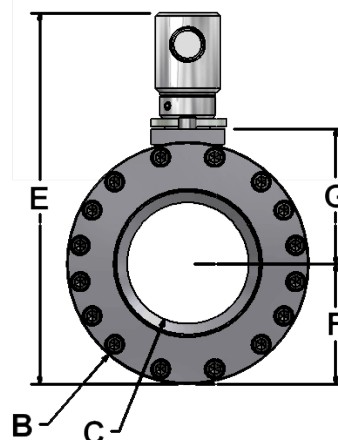
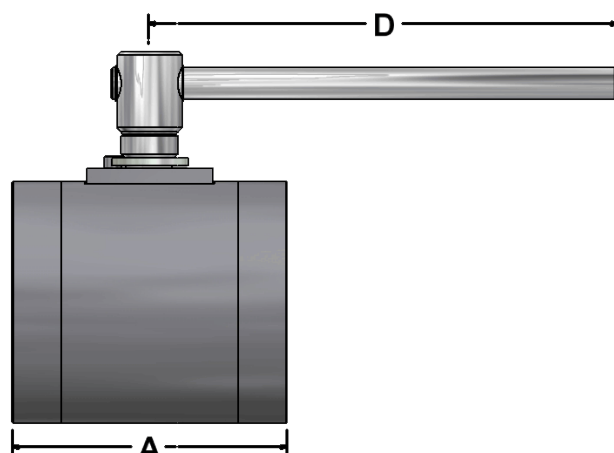
2-½" & 3" ship standard with a Crank Handle. Whereas the 4" ships with a High Torque Handle.

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.



BVAM MID PRESSURE

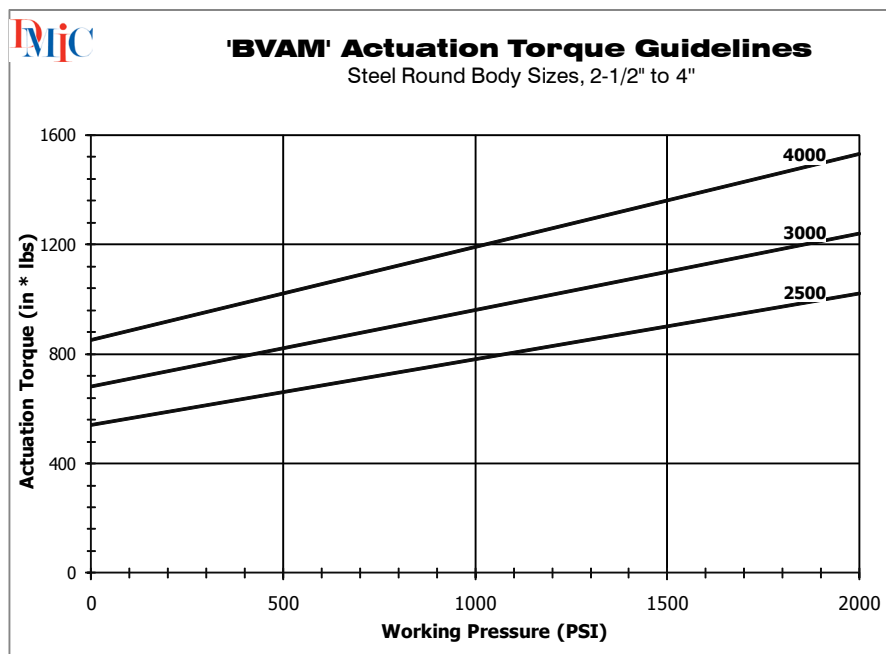
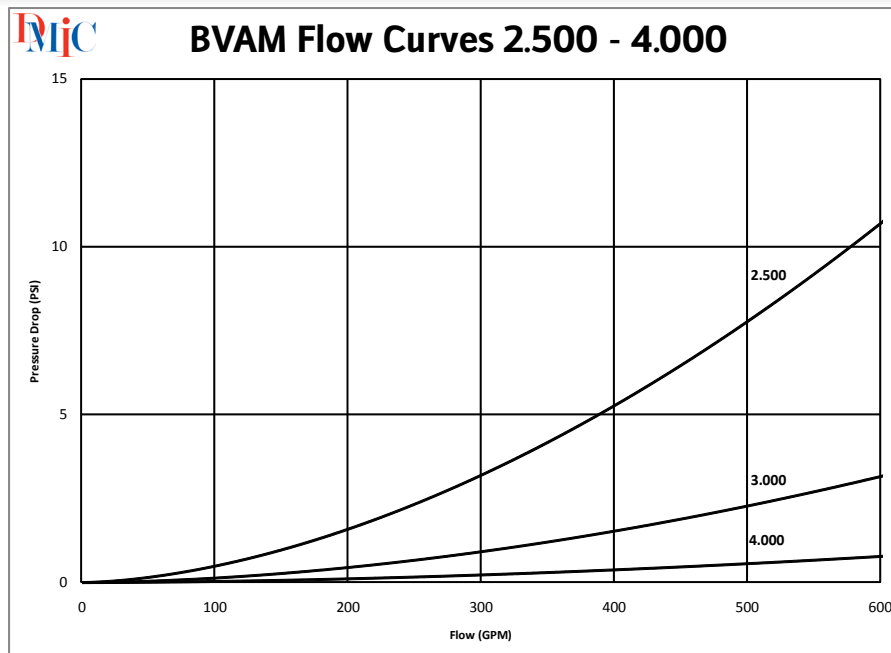
BVAM		Dependent Dimensions				
Threaded Connection						
Dimension (Inches)		A	E	F	H	-
Port Code(s)	Port Size*	Overall Length	Overall Height	Bot to CtrLine	Valve Height	-
N S B IU Threaded Connections	2½"	6.53	8.97	2.73	4.34	-
	3"	7.19	9.79	3.13	4.79	-
	4"	8.52	11.53	3.75	4.15	-
SAE 4-Bolt Flange Connection						
Dimension (inches)		A	A	—	—	—
Port Code(s)	Port Size	Overall Length FM/GM	Overall Length FL	-	-	UNC Bolt Thrd
FM GM FL SAE 4-Bolt Comp/Std Flg Conn	2½"	6.78	13.05	-	-	½"
	3"	7.19	14.86	-	-	5/8"
	4"	8.52	16.19	-	-	5/8"
SAE Split Flange Connection						
Dimension (inches)		A	—	—	—	A _{CM}
Port Code(s)	Port Size	Overall Length SM	O-Ring No.	DMIC Split Flange Kit	Length A (Combo) CM	
SM CM SAE Split & Combo Flange Connections	2½"	12.90	2-232	FSL-2500SK	9.84	
	3"	13.56	2-237	FSL-3000SK	10.37	
	4"	15.40	2-245	FSL-4000SK	11.96	
ANSI & DIN Flange Connection						
Dimension (inches)		A	—	—	—	—
Port Code(s)	Port Size	Overall Length	Call DMIC for a Certified Print			
A* D* ANSI & DIN Flange Connections	2½"	12.73				
	3"	15.26				
	4"	16.72				
Swivel Socket Weld Connection						
Dimension (inches)		A	—	—	—	—
Port Code(s)	Port Size	Overall Length	Socket OD	Socket Depth	—	—
W4 Sch. 40 Socket Weld Connection	2½"	10.72	3.02	1.18		
	3"	11.12	3.57	1.34		
	4"	12.30	4.55	1.34		



BVAM		Common Dimensions			
Part Number	Port Size	Rated Pressure PSI/bar	Dimensions IN/mm		
			Valve Width B	Valve Bore C	Handle Length D
BVAM-2500****	2½"	2000 137.9	5.46 138.7	2.50 63.5	9.86 250.4
BVAM-3000****	3"	2000 137.9	6.25 158.8	3.00 76.2	9.86 250.4
BVAM-4000****	4"	2000 137.9	7.50 190.5	3.75 95.3	14.50 368.3

BVAM MID PRESSURE

Flow Characteristic and Actuation Torque Curves



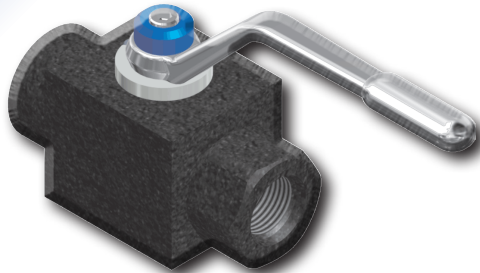
Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



BVH & BVAH 6000 PSI

The benchmark of quality and value ~ Made in U.S.A.

Widest array of sizes, connections and accessories



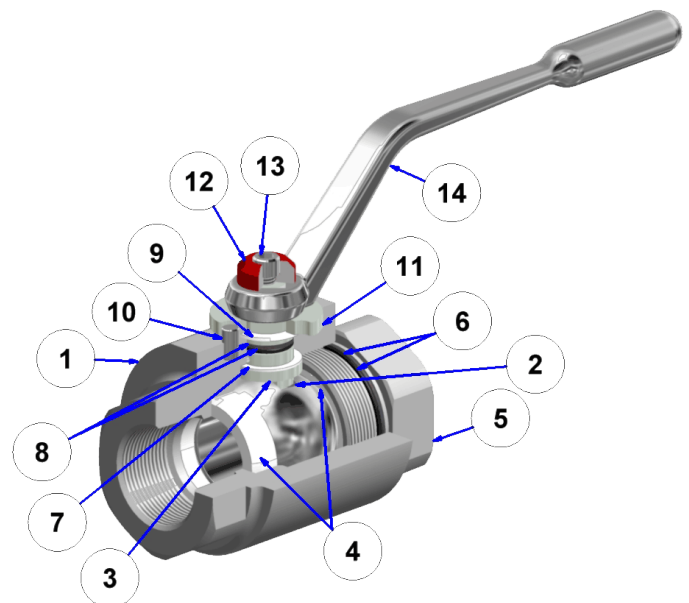
- Strictly carbon steel construction rated to 6000 PSI for continual/normal operation. **Stainless Steel available in all sizes but rated at 6000 PSI for ¼" through ¾" and 3000 PSI for 1" and up.**
- DMIC's **BVH** Block Body & **BVAH** Round Body offered in largest range of ball orifice diameters. (¼"-6")
- Unrestricted bore offered, in Carbon Steel Balls, for minimal system pressure drop
- Widest array of connection types available
- Standard Delrin Ball Seals & Buna-N Elastomer Seals. Other materials available, for full fluid compatibility range. Standard Black Oxide finish on all Carbon Steel Valves. Other finishes are available upon request.
- Temperature Range: -60°F to 400°F (Depending on material combinations)
- Extensive variety of additional accessories available
- Fast delivery on any valve contained in this series

*Please note: From the closed position, these valves cannot be opened under pressure unless pressure balance option is installed.

Service Parts BOM

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

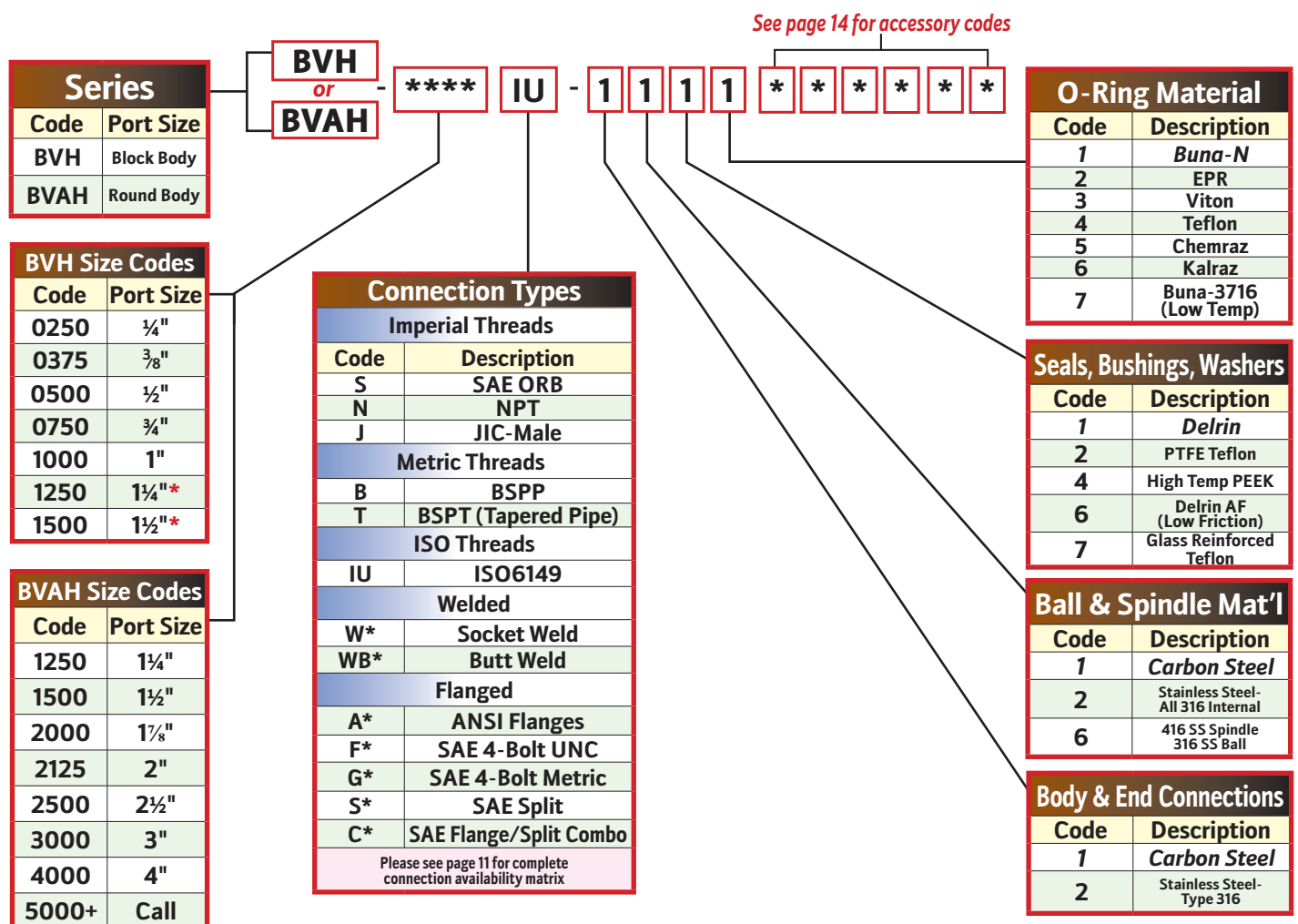
* - Quantity depends on size and combination of body



BVH & BVAH 6000 PSI

Ordering Codes Summary

Please see the expanded section on Construction Materials
and DMIC Pre-Engineered Accessories, pgs 12-15



*Restricted Bore = 1"

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

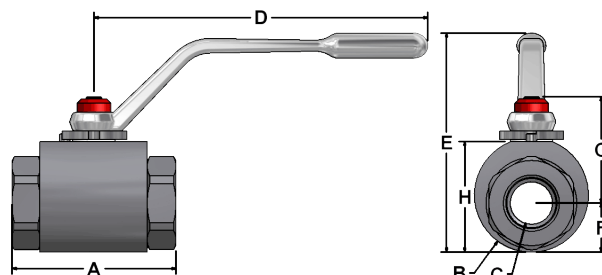
Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



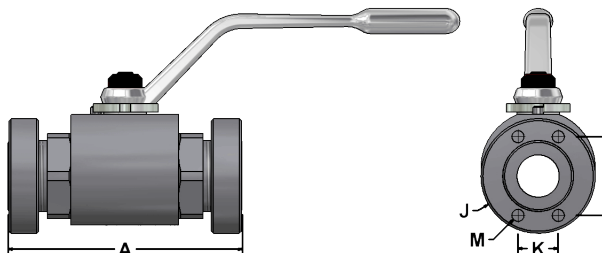
'BVH' & 'BVAH' 6000 PSI

BVH/ BVAH		Dimensions (1 of 2)							
Dimensions B,C,D,E,F,G, & H are common dimensions shared between all BVH and BVAH Valves, independent of Connection Type									
Threaded Connections (6000 PSI)									
Dimension (Inches)		A	B	C	D	E	F	G	H
Port Code(s)	Port Size	Overall Length	Body Diameter	Bore Size	Handle Length	Overall Height	Bottom to Port Center	Bottom to Top	Width
N S B IU Threaded Connections	¼"	2.74	1.38	0.31	4.50	2.99	0.61	1.38	1.38
	⅜"	2.87	1.50	0.38	4.50	3.12	0.64	1.50	1.50
	½"	3.36	1.63	0.50	4.50	3.25	0.73	1.63	1.63
	¾"	3.81	2.25	0.75	7.00	4.73	1.00	2.25	2.25
	1"	4.51	2.50	0.94	7.00	4.98	1.14	2.50	2.50
	1¼"	5.24	2.50	0.94	7.00	4.98	1.14	2.50	2.50
	1½"	5.47	2.50	0.94	7.00	4.98	1.14	2.50	2.50
	1¾"	4.84	3.38	1.25	9.85	6.45	1.45	3.26	3.38
	1½"	5.33	3.75	1.50	9.85	6.82	1.64	3.64	3.75
	2"	6.54	4.50	1.88	9.85	7.49	2.01	4.30	4.50
*Denotes BVH 1" reduced ball with 1-1/4" or 1-1/2" connections	2½"	7.50	6.94	2.50	14.50	10.24	3.29	6.61	6.94
	3"	9.29	7.50	3.00	14.50	12.64	4.35	8.37	7.50
	4"	11.21	9.94	4.00	20.00	15.31	5.77	10.94	9.94
SAE C.61 4-Bolt Flange Connections									
Dimension (inches)		-	A	C	J	K	L	M	
Port Code(s)	Port Size	Working PSI	Overall Length FM/GM	Bore Size	Flange Diameter	Flg Pad Short	Flange Pad Long	UNC Bolt Thread	Metric Bolt Thread
FM/GM SAE C.61 4-Bolt Comp Connections	½"	3000 PSI	4.26	0.50	2.13	0.69	1.50	5/16"	M8
	¾"		4.77	0.75	2.75	0.88	1.88	3/8"	M10
	1"		5.28	0.94	3.00	1.03	2.06	3/8"	M10
	1¼"		6.90	1.25	3.38	1.19	2.31	7/16"	M10
	1½"		7.09	1.50	3.75	1.41	2.75	½"	M12
	2"	2500 PSI	8.06	1.88	4.50	1.69	3.06	½"	M12
	2½"		11.25	2.50	5.00	2.00	3.50	½"	M12
	3"		13.65	3.00	7.00	-	-	½"	M16
	4"		16.22	4.00	8.50	-	-	¾"	M16
SAE C.62 4-Bolt Flange Connections (6,000 PSI)									
Dimension (inches)		-	A	C	J	K	L	M	
Port Code(s)	Port Size	Overall Length	Bore Size	Flange Diameter	Flg Pad Short	Flg Pad Long	UNC BoltThr	Metric BoltThr	
FH/GH SAE C.62 4-Bolt Comp Connections	½"	3000 PSI	4.26	0.50	2.25	0.72	1.59	5/16"	M8
	¾"		4.77	0.75	2.75	0.94	2.00	3/8"	M10
	1"		5.25	0.88	3.38	1.09	2.25	7/16"	M10
	1¼"		6.90	1.25	3.75	1.25	2.63	½"	M12
	1½"		7.09	1.50	4.50	1.44	3.12	5/8"	M16
	2"	2500 PSI	8.06	1.88	5.50	1.75	3.81	¾"	M20
	2½"		11.25	2.50	6.44	-	-	-	-
	3"		13.67	3.00	8.50	-	-	-	-
	4"		16.11	4.00	9.94	-	-	-	-
SAE C.61 Split Flange Connections									
Dimension (inches)		-	A	C	N	-		A	
Port Code(s)	Port Size	Working PSI	Overall Length	Bore Size	O-Ring No.	DMIC Split Flange Kit		Length "A" Combo	
SM/CM SAE C.61 Split & Combo	½"	3000 PSI	5.96	0.50	2-210	FSL-0500SK		5.11	
	¾"		6.38	0.75	2-214	FSL-0750SK		5.58	
	1"		6.99	0.88	2-219	FSL-1000SK		6.00	
	1¼"		7.50	1.25	2-222	FSL-1250SK		7.20	
	1½"		9.09	1.50	2-225	FSL-1500SK		8.09	
	2"	2500 PSI	9.10	1.75	2-228	FSL-2000SK		8.58	
	2½"		14.10	2.50	2-232	FSL-2500SK		12.43	
	3"		15.88	3.00	2-237	FSL-3000SK		14.83	
	4"		18.26	4.00	2-245	FSL-4000SK		17.44	
SAE C.62 Split Flange Connections (6000 PSI)									
Dimension (inches)		-	A	C	N	-		A	
Port Code(s)	Port Size	Overall Length	Bore Size	O-Ring No.	DMIC Split Flange Kit		Length "A" Combo		
SH/CH SAE C.62 Split& Combo	½"	3000 PSI	5.95	0.50	2-210	FSH-0500SK		5.11	
	¾"		6.86	0.75	2-214	FSH-0750SK		5.82	
	1"		7.79	0.88	2-219	FSH-1000SK		6.53	
	1¼"		8.77	1.25	2-222	FSH-1250SK		7.83	
	1½"		11.06	1.50	2-225	FSH-1500SK		9.08	
	2"	12.44	1.75	2-228	FSH-2000SK		10.25		

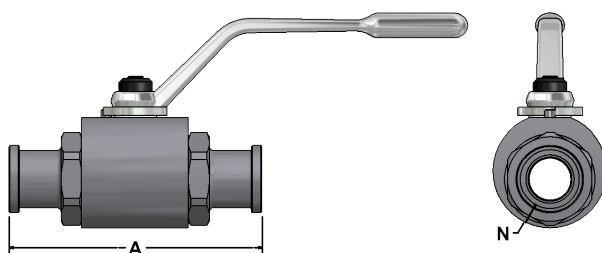
N, S, B, IU THREADED CONNECTIONS



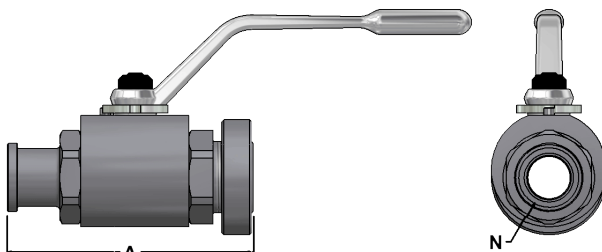
FM/FH, GH SAE 4-BOLT FLANGE (COMP & STD)



SH/SM SAE SPLIT-FLANGE HEAD



CH/CM SAE 4-BOLT & SPLIT "COMBO" FLANGE

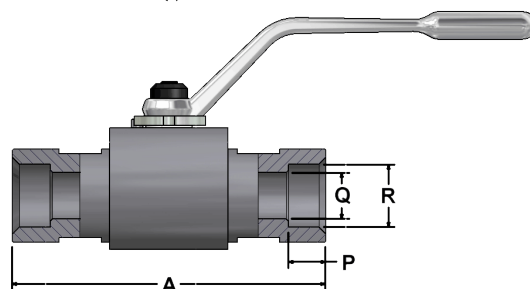


'BVH' & 'BVAH' 6000 PSI

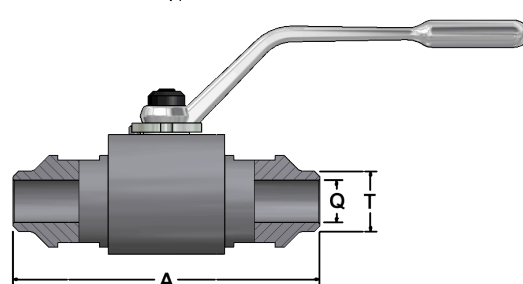
BVH/ BVAH		Dimensional Information (2 of 2)				
Fixed Socket Weld Connections (6000 PSI)						
Dimension (Inches)		A	C	P	Q	R
Port Code(s)	Port Size	Overall Length	Bore Size (Ball)	Socket Depth	Connection Inside Diameter	Inside Socket Outer Diameter
W* *4-SCH 40 *8-SCH 80 *F-SCH 160 *G-XXS More Sizes Available Upon Request	½"	6.26	0.50	0.75	Based Upon Pipe Schedule	0.87
	¾"	7.46	0.75	0.75		1.08
	1"	7.67	0.88	1.00		1.34
	1¼"	8.40	1.25	1.00		1.69
	1½"	9.47	1.50	1.00		1.94
	2"	10.60	1.75	1.00		2.41
	2½"					Call Factory
3"				Call Factory		
4"				Call Factory		
Fixed Butt-Weld Connections (6000 PSI)						
Dimension (Inches)		A	C	T	Q	
Port Code(s)	Port Size	Overall Length FM/GM	Bore Size (Ball)	Weld Neck Outside Diameter	Connection Inside Diameter	
WB* *4-SCH 40 *8-SCH 80 *F-SCH 160 *G-XXS More Sizes Available Upon Request	½"	4.26	0.50	0.84	Based Upon Pipe Schedule	
	¾"	6.35	0.75	1.05		
	1"	7.67	0.88	1.31		
	1¼"	8.35	1.25	1.66		
	1½"	9.47	1.50	1.91		
	2"	10.60	1.75	2.38		
	2½"					
3"				Call Factory		
4"				Call Factory		

***Please Note:**
Always operate System Pressure according to Pipe Schedule. DMIC BVH/AH Ball Valves are rated at 6000 PSI which may exceed Maximum Allowable due to Pipe Schedule.

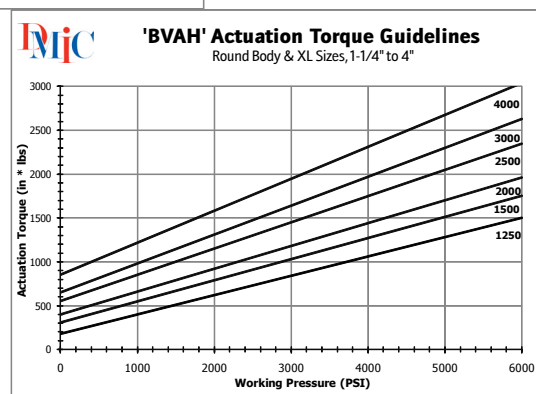
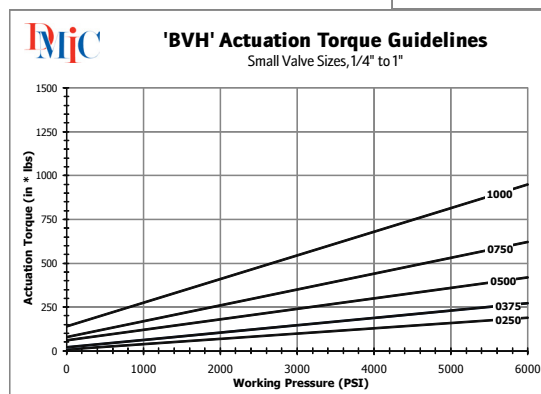
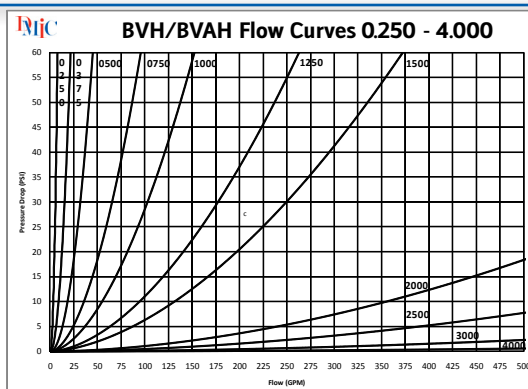
W(*) FIXED SOCKET WELD
(*) PIPE SCHEDULE CHARACTER



WB(*) FIXED BUTT WELD
(*) PIPE SCHEDULE CHARACTER



Flow Characteristic and Actuation Torque Curves

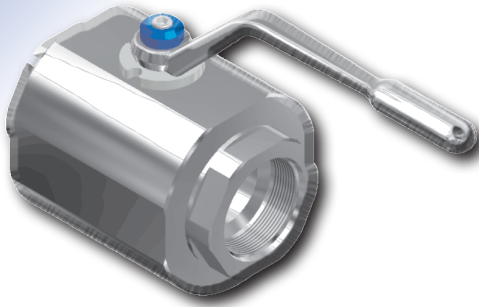


Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



'BVHS' 6000 PSI

Stainless Steel Round Body Ball Valves for 6000 PSI, 1"-6"



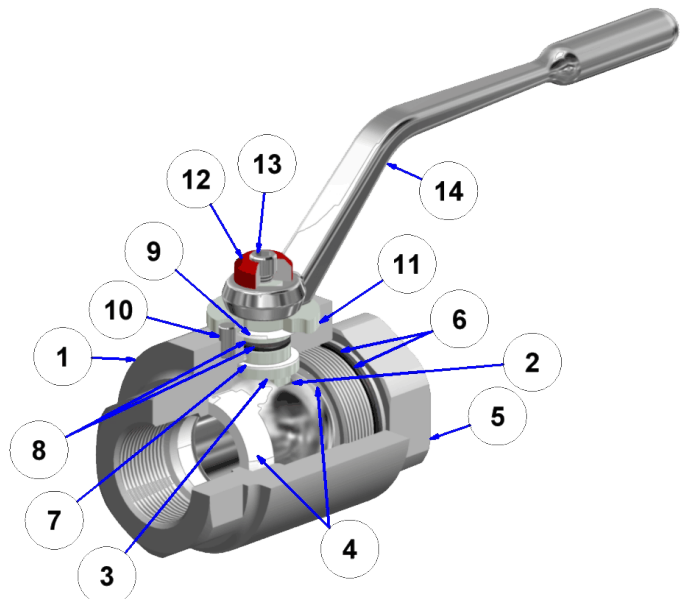
- Strictly Stainless Steel construction available in 1"-6" bore sizes
- Valves are full-pressure 6,000 PSI rated for continual/normal operation
- Resistance to extreme chemical, industrial, outdoor, and marine environments
- Widest array of connection types available
- Standard Delrin Ball Seals & Buna-N Elastomer Seals. Other materials available, for full fluid compatibility range
- Wide variety of additional accessories available

*Please note: From the closed position, these valves cannot be opened under pressure unless pressure balance option is installed.

Service Parts BOM

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

* - Quantity depends on size and combination of body

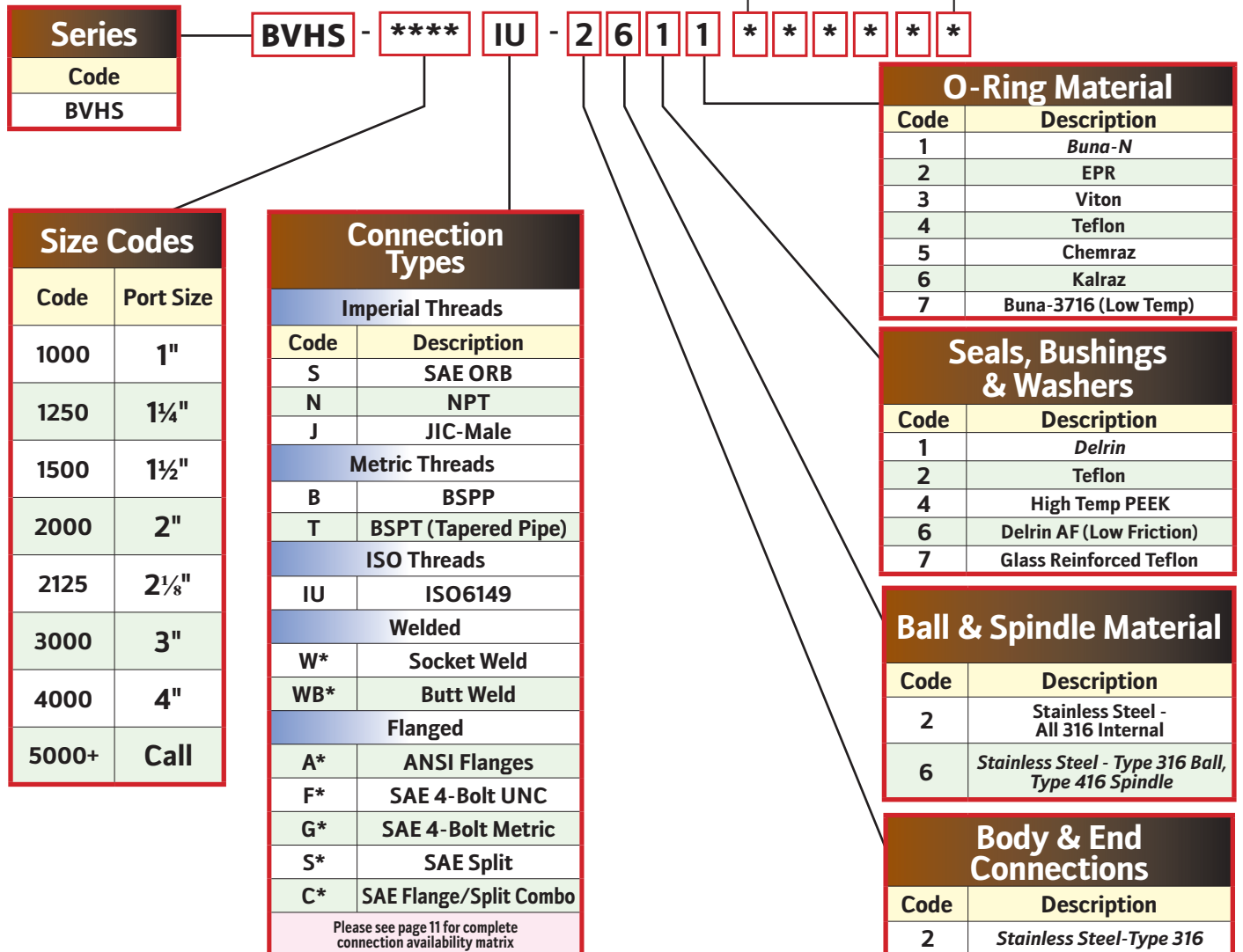


'BVHS' 6000 PSI

Ordering Codes Summary

Please see the expanded section on Construction Materials
and DMIC Pre-Engineered Accessories, pgs 12-15

See page 14 for accessory codes



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

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.



'BVHS' 6000 PSI

BVHS Dimensional Information (1 of 2)

Dimensions B,C,D,E,F,G, & H are common dimensions shared between all BVHS Valves, independent of Connection Type

Threaded Connections (6000 PSI)

Dimension (Inches)		A	B	C	D	E	F	G	H
Port Code(s)	Port Size	Overall Length	Body Diameter	Bore Size	Handle Length	Overall Height	Bottom to Port Center	Bottom to Top	Width
N S B IU Threaded Connections	1"	4.85	3.13	0.88	7.00	5.40	1.56	2.40	3.00
	1¼"	4.85	4.00	1.13	9.85	7.00	2.00	3.07	3.88
	1½"	5.46	4.25	1.31	9.85	7.34	2.09	3.28	4.13
	2"	6.54	5.00	1.75	9.85	7.99	2.50	3.55	4.75
	2⅝"	6.54	5.25	2.00	9.85	8.29	2.63	3.74	5.00
	2½"	7.50	6.94	2.25	14.50	10.24	3.29	6.61	6.94
	3"	9.29	7.50	3.00	14.50	12.64	4.35	8.37	7.50
	4"	11.21	9.94	4.00	20.00	15.31	5.77	10.94	9.94

SAE C.61 4-Bolt Flange Connections

Dimension (inches)		-	A	C	J	K	L	M
Port Code(s)	Port Size	Working PSI	Overall Length FM/GM	Bore Size	Flange Diameter	Flg Pad Short	Flg Pad Long	UNC Bolt Thread
FM/GM SAE C.61 4-Bolt Comp. Connections	1"	3000 PSI	5.28	0.88	3.00	1.03	2.06	¾"
	1¼"		6.90	1.13	3.38	1.19	2.31	7/16"
	1½"		7.09	1.31	3.75	1.41	2.75	½"
	2"		8.06	1.75	4.50	1.69	3.06	½"
	2⅝"	2500 PSI	8.06	2.00	4.50	1.69	3.06	½"
	2½"		11.25	2.25	5.00	2.00	3.50	½"
	3"		2000 PSI	Call Factory				
	4"		500 PSI	Call Factory				

SAE C.62 4-Bolt Flange Connections (6,000 PSI)

Dimension (inches)		-	A	C	J	K	L	M
Port Code(s)	Port Size	Working PSI	Overall Length	Bore Size	Flange Diameter	Flg Pad Short	Flg Pad Long	UNC Bolt Thr
FH/GH SAE C.62 4-Bolt Comp. Connections	1"	3000 PSI	5.27	0.88	3.38	2.56	2.25	7/16"
	1¼"		6.90	1.13	3.75	3.07	2.63	½"
	1½"		7.09	1.31	4.50	3.70	3.13	5/8"
	2"	2000 PSI	8.06	1.75	5.50	4.49	3.81	¾"
	2⅝"		8.06	1.75	5.50	4.49	3.81	¾"
	2½"		8.06	1.75	5.50	4.49	3.81	¾"

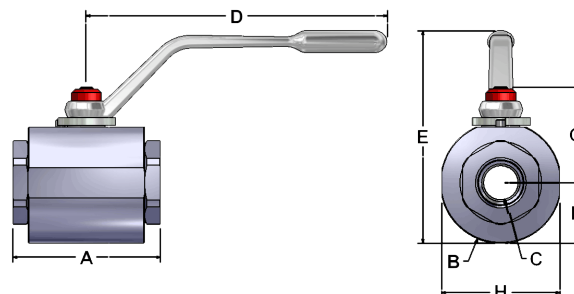
SAE C.61 Split Flange Connections

Dimension (inches)		-	A	C	N	-	A _{CM}
Port Code(s)	Port Size	Working PSI	Overall Length	Bore Size	O-Ring No.	DMIC Split Flange Kit	Length "A" Combo
SM & CM SAE C.61 Split & Flange Combo	1"	3000 PSI	6.99	0.88	2-219	FSL-1000SK	6.26
	1¼"		7.51	1.13	2-222	FSL-1250SK	7.53
	1½"		9.84	1.31	2-225	FSL-1500SK	8.84
	2"		10.12	1.75	2-228	FSL-2000SK	9.60
	2⅝"	2500 PSI	10.12	2.00	2-228	FSL-2000SK	9.60
	2½"		Call Factory				
	3"		Call Factory				
	4"		Call Factory				

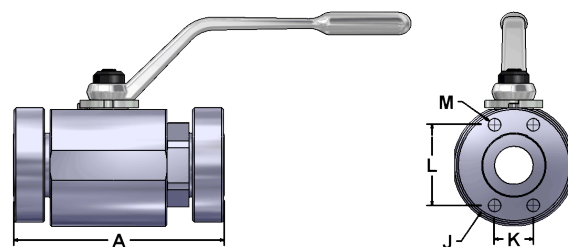
SAE C.62 Split Flange Connections (6000 PSI)

Dimension (inches)		-	A	C	N	-	A
Port Code(s)	Port Size	Working PSI	Overall Length	Bore Size	O-Ring No.	DMIC Split Flange Kit	Length "A" Combo
SH & CH SAE C.62 Split & Flange Combo	1"	3000 PSI	7.79	0.88	2-219	FSH-1000SK	6.66
	1¼"		8.77	1.13	2-222	FSH-1250SK	8.16
	1½"		11.06	1.31	2-225	FSH-1500SK	9.45
	2"	2000 PSI	12.44	1.75	2-228	FSL-2000SK	10.76
	2⅝"		12.44	2.00	2-228	FSL-2000SK	10.76
	2½"		12.44	2.00	2-228	FSL-2000SK	10.76

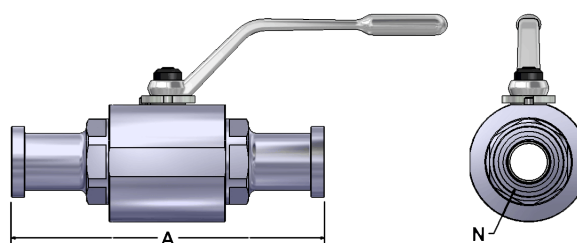
N, S, B, IU THREADED



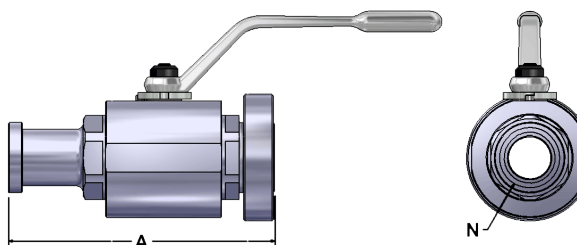
FM/FH, GH/GM, FK/FL SAE 4-BOLT FLANGE (COMP & STD)



SH/SM SAE SPLIT FLANGE HEAD



CH/CM SAE 4-BOLT & SPLIT "COMBO" FLANGE

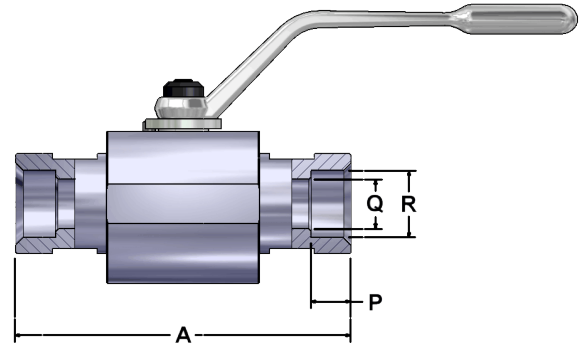


'BVHS' 6000 PSI

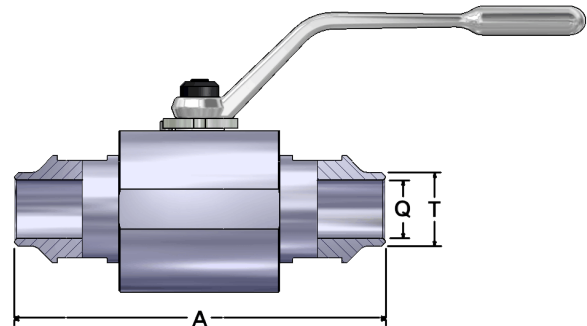
BVHS Dimensional Information (2 of 2)					
Fixed Socket Weld Connections (6000 PSI)					
Port Code(s)	Port Size	Overall Length	Bore Size (Ball)	Socket Depth	Connection Inside Diameter
W*	1"	7.67	0.88	1.00	Dependent Upon Pipe Schedule
*4-SCH 40	1 1/4"	8.40	1.13	1.00	
*8-SCH 80	1 1/2"	9.47	1.31	1.00	
*F-SCH 160	2"	10.60	1.75	1.00	
*G-XXS	2 1/8"	10.60	2.00	1.00	
More Sizes Available Upon Request	2 1/2"	11.24	2.25	1.00	
	3"	13.67	3.00	1.50	
	4"	16.1	4.00	1.50	
Fixed Butt-Weld Connections (6000 PSI)					
Port Code(s)	Port Size	Overall Length FM/GM	Bore Size	Flange Diameter	Connection Inside Diameter
WB*	1"	7.67	0.88	1.31	Dependent Upon Pipe Schedule
*4-SCH 40	1 1/4"	9.00	1.13	1.66	
*8-SCH 80	1 1/2"	9.47	1.31	1.91	
*F-SCH 160	2"	10.60	1.75	2.38	
*G-XXS	2 1/8"	10.60	2.00	2.38	
More Sizes Available Upon Request	2 1/2"	14.50	2.25	2.88	
	3"	17.29	3.00	3.50	
	4"	14.72	4.00	4.50	

***Please Note:**
Always operate System Pressure According to Pipe Schedule. DMIC BVHS Ball Valves are rated at 6000 PSI which may exceed Maximum Allowable due to Pipe Schedule.

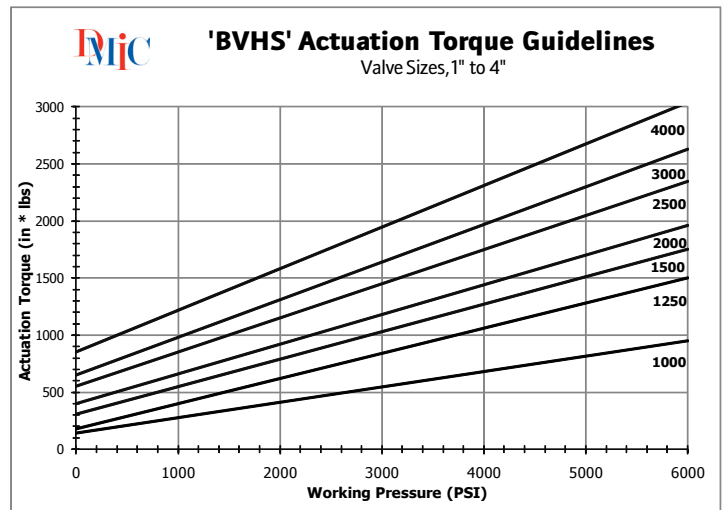
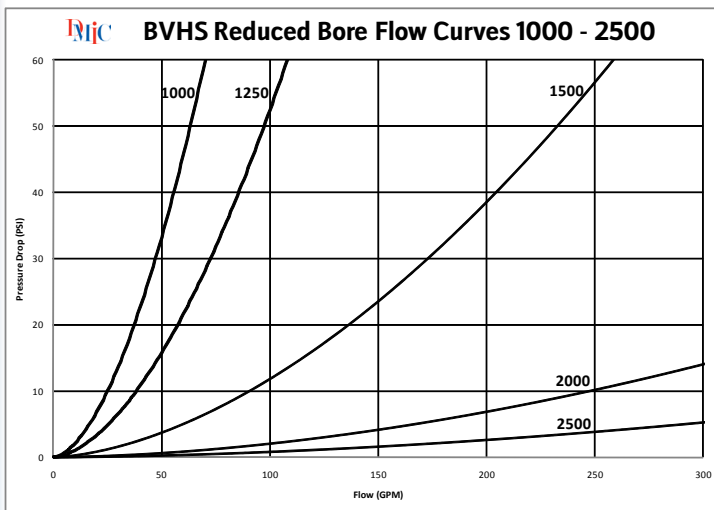
W(*) FIXED SOCKET WELD
(*) PIPE SCHEDULE CHARACTER



WB(*) FIXED BUTT WELD
(*) PIPE SCHEDULE CHARACTER



Flow Characteristic and Actuation Torque Curves



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.



BVHH SUPER HIGH PRESSURE 10,000 PSI

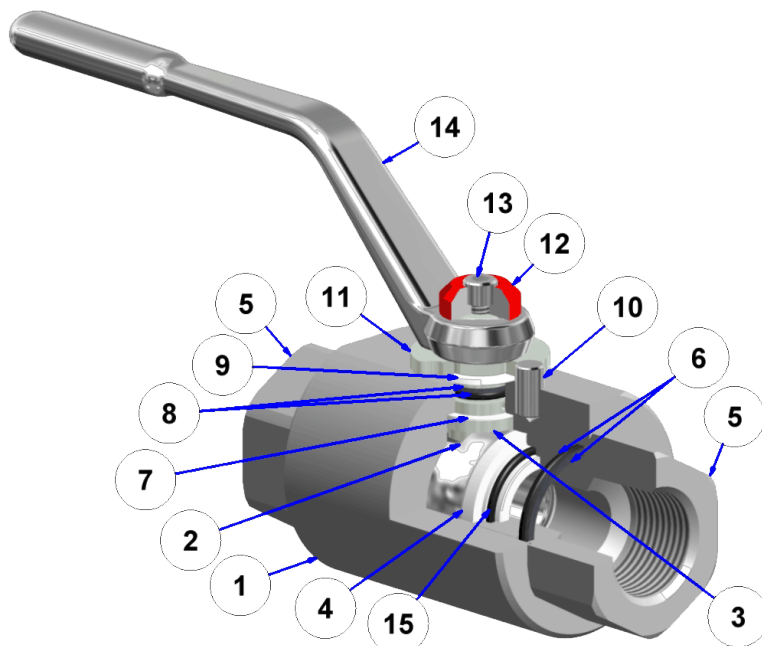
Next generation design substantially strengthened
for durability and safety factor ~ Sizes from ½" - 2"



- Special Ball Seals and heavy duty construction, superior to traditional ball seal ring reinforcement designs; Assures shutoff capability
- **Individually certified** at factory for rated pressure
- Accepts many standard DMIC Accessories and a selection of custom **BVHH** Valve Options
- Standard Buna-N sealing

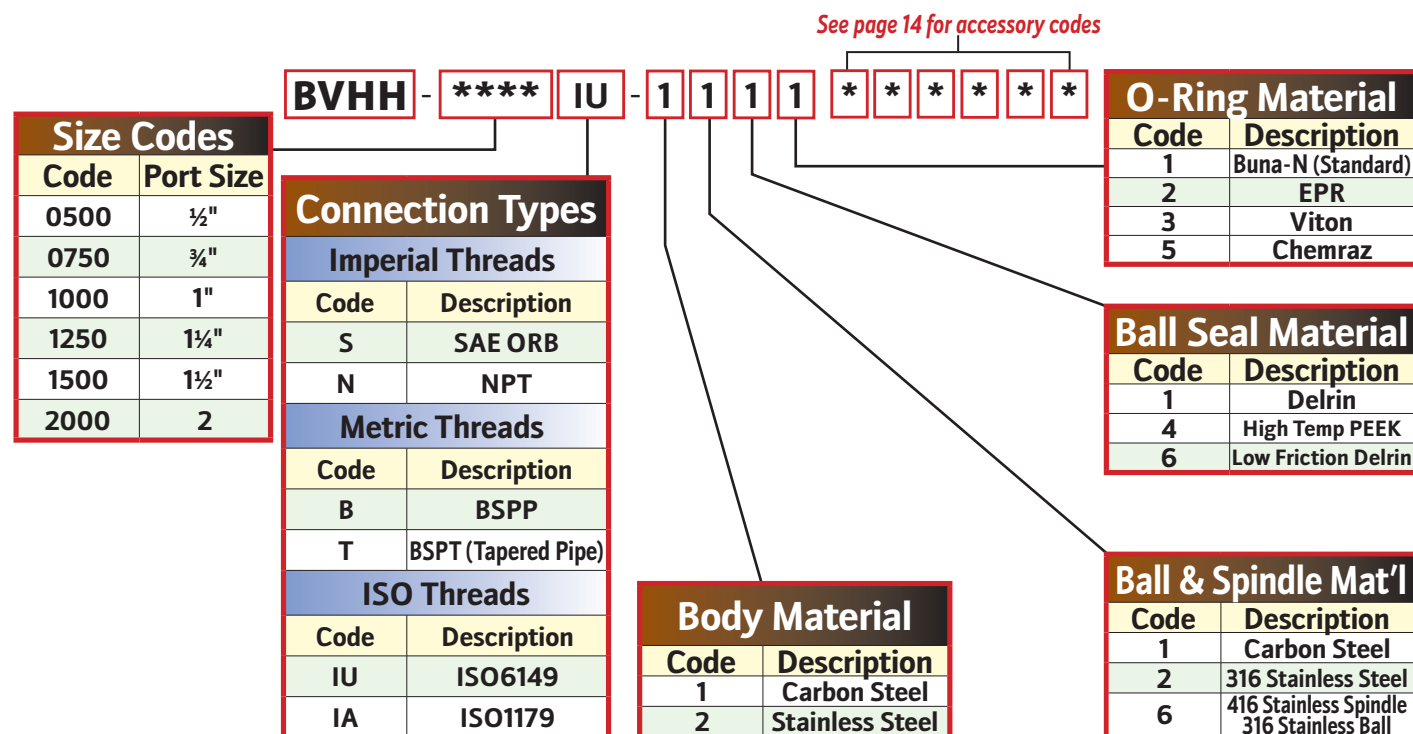
Service Parts BOM

BVHH	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle
4	2	Ball Seal
5	2	End Connection
6	1	End Connection O-Rings
7	1	Internal Thrust Washer
8	1	Spindle O-Rings
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Coded Top Cap
13	1	Top Cap Screw
14	1	Handle
15	1	Ball Seal O-Rings



BVHH SUPER HIGH PRESSURE 10,000 PSI

Ordering Codes Summary



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

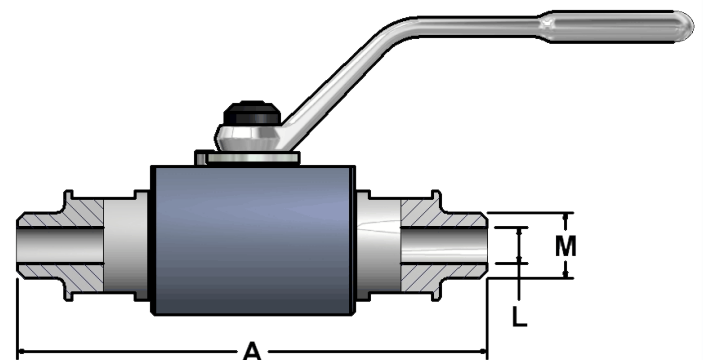
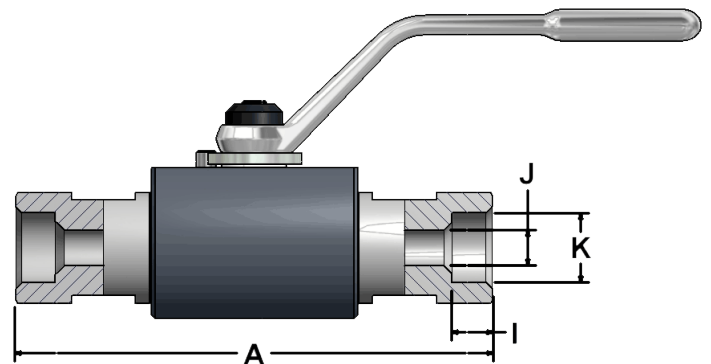
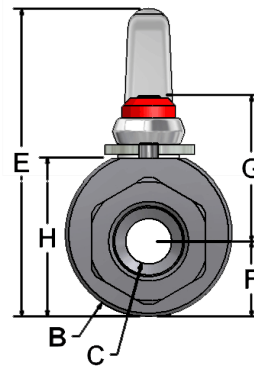
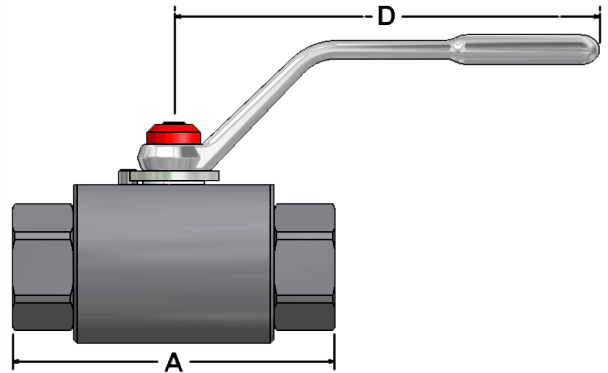
DMIC supplies various end connection styles to fit the customer's needs even though the pressure rating of some connection types may be lower than the valve. Please operate your system in accordance with the lowest rated pressure components.

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.

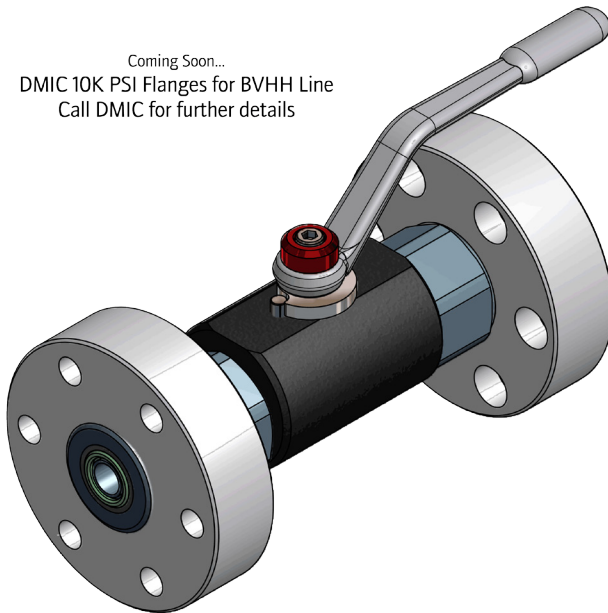


BVHH SUPER HIGH PRESSURE 10,000 PSI

BVHH		Dependent Dimensions							
Dimensions B,C,D,E,F,G,H are common dimensions									
Threaded Connections									
Dimension (Inches)		A	B	C	D	E	F	G	H
Port Code(s)	Port Size	Overall Length	Body Diameter	Bore Size	Handle Length	Overall Height	Center to Valve Bot	Center to Valve top	Valve Height
N S B IU Threaded Connections	½"	4.22	1.75	0.38	4.50	3.27	0.75	1.65	1.65
	¾"	4.72	2.5	0.56	7.00	4.84	1.11	2.25	2.37
	1"	5.32	2.75	0.75	7.00	5.09	1.25	2.35	2.61
	1¼"	6.20	3.50	0.90	9.86	6.50	1.54	3.02	3.32
	1½"	6.21	4.00	1.13	9.86	6.91	1.72	3.26	3.72
2"	7.35	4.50	1.50	9.86	7.59	2.11	3.55	4.40	
Socket Weld End Connections									
Dimension (inches)		A		J	I		K		
Port Code(s)	Port Size	Overall Length		Bore Size	Socket Depth		Inside Socket, Outer Diameter		
W* SCH.X Socket Weld End Connections	½"	6.72		0.38	0.75		0.88		
	¾"	7.47		0.56	0.63		1.10		
	1"	8.25		0.75	0.98		1.35		
	1¼"	8.95		0.90	1.00		1.69		
	1½"	9.03		1.13	1.00		1.97		
2"	11.41		1.50	1.00		2.42			
Butt Weld End Connections									
Dimension (inches)		A		J	Q		T		
Port Code(s)	Port Size	Overall Length		Bore Size	Connections Inside Dia.		Connection Outside Dia.		
WB* SCH.X Butt Weld End Connections	½"	6.22		0.38	Based Upon Pipe Sch.		0.84		
	¾"	7.47		0.56			1.05		
	1"	8.25		0.75			1.31		
	1¼"	8.95		0.90			1.66		
	1½"	9.03		1.13			1.91		
2"	11.41		1.50			2.38			

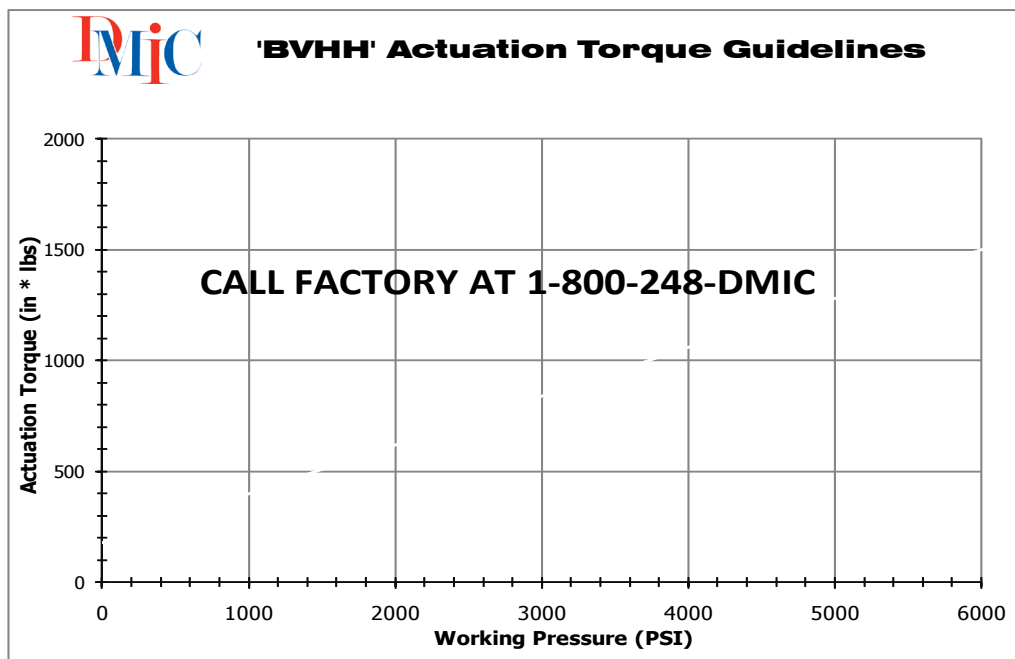
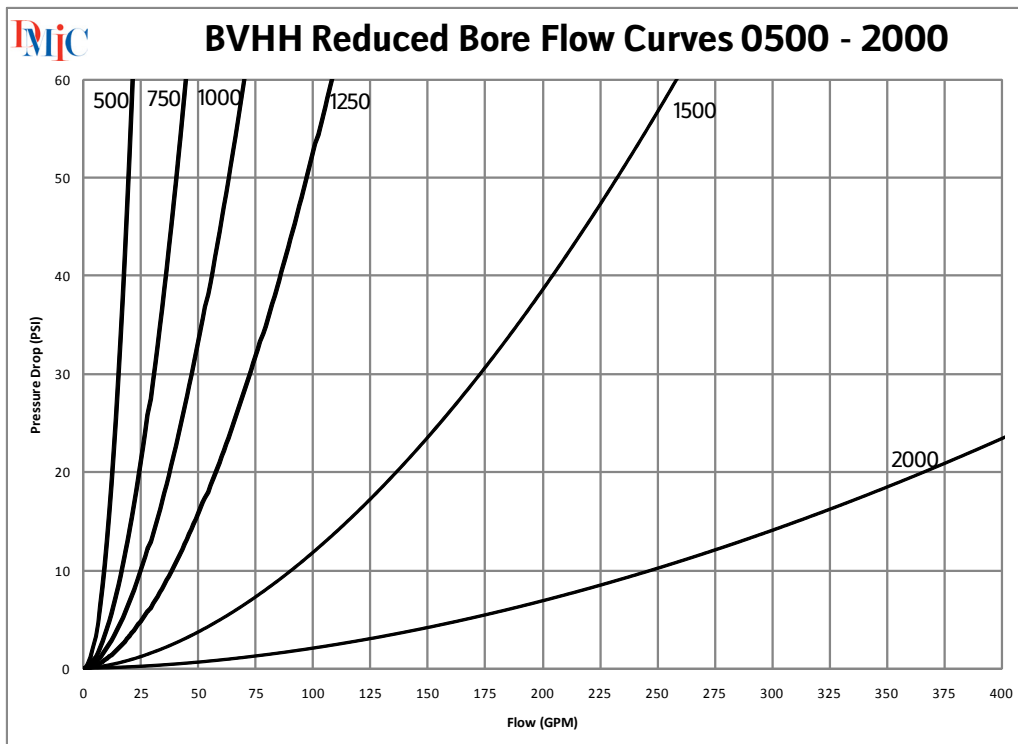


Coming Soon...
DMIC 10K PSI Flanges for BVHH Line
Call DMIC for further details



BVHH SUPER HIGH PRESSURE 10,000 PSI

Flow Characteristic and Actuation Torque Curves



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.



BVHHH ULTIMATE PRESSURE 15,000 PSI

DMIC'S 15,000 PSI Floating Ball Valve, ½" to 2"

Extreme Pressure Handling, Generous Safety Factor

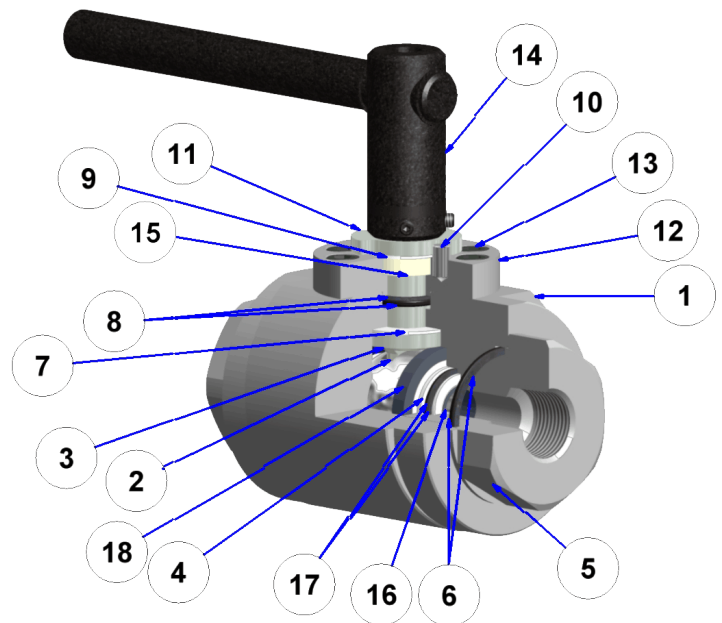


- Max Allowable working pressure up to 15,000 PSI with 3:1 safety factor
- Special reinforcements prevent collapse of ball seals ensuring that most of DMIC's ball seal materials can be used
- Designed with DMIC's standard blowout-proof stem.
- Compatible with DMIC's wide array of accessories
- Call DMIC for application support or to place order

Service Parts BOM

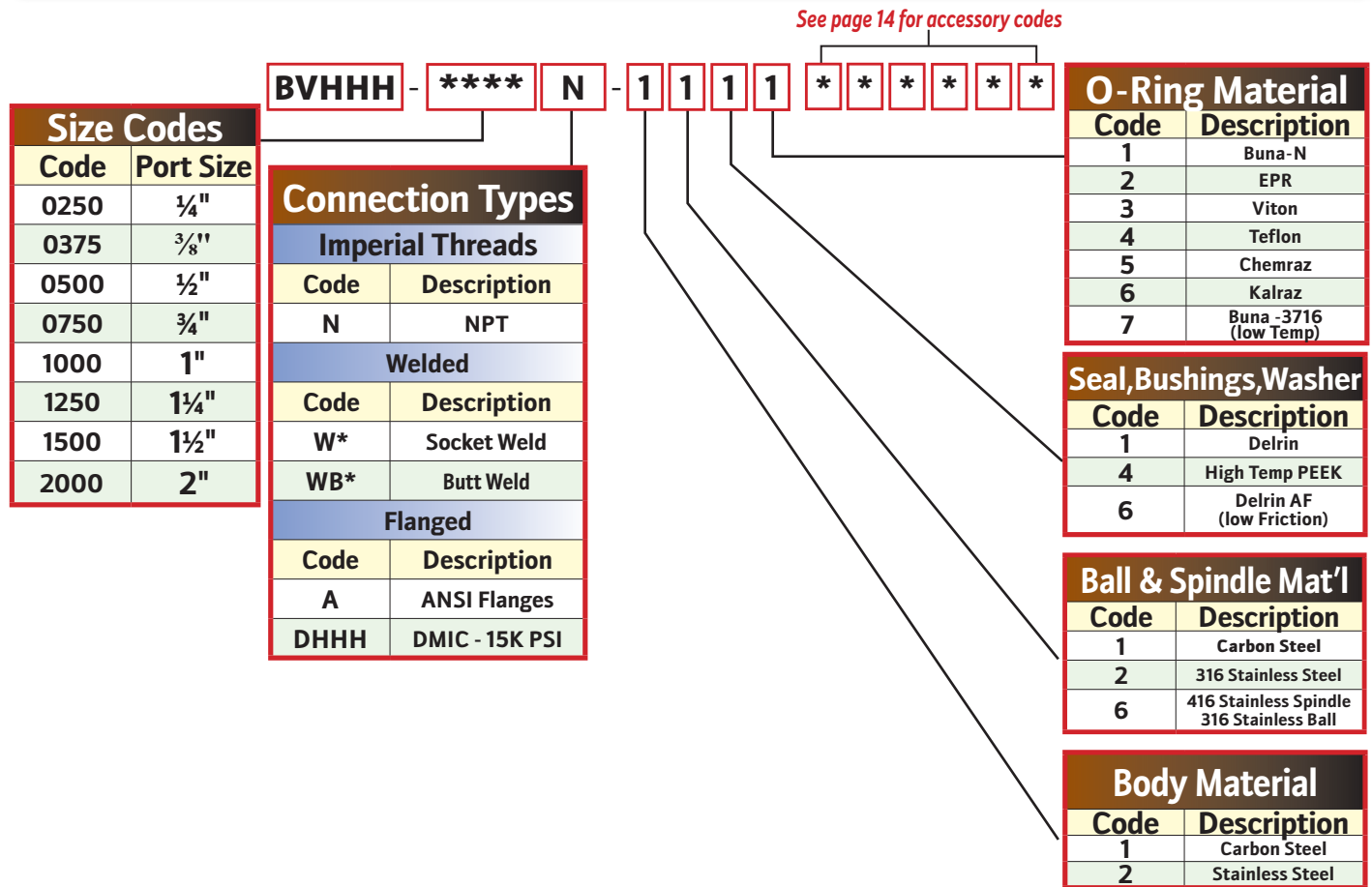
BVHHH			SERVICE PARTS BOM
Index	Qty	Description	
1	1	Valve Body	
2	1	Ball	
3	1	Spindle	
4	2	Ball Seal	
5	2	End Connection	
6	2	End Connection O-Rings	
7	1	Internal Thrust Washer	
8	1	Spindle O-Rings	
9	1	External Glide Washer	
10	1	Stop Pin	
11	1	Stop Washer	
12	1	Top Cap	
13	*	Top Cap Bolts	
14	1	Handle	
15	1	Spindle Busing	
16	2	Inner Seal Support	
17	2	Ball Seal O-Rings	
18	2	Outer Seal Support	

* - Quantity depends on size and combination of body



BVHHH ULTIMATE PRESSURE 15,000 PSI

Ordering Codes Summary



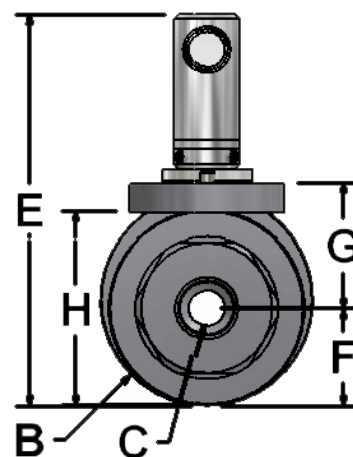
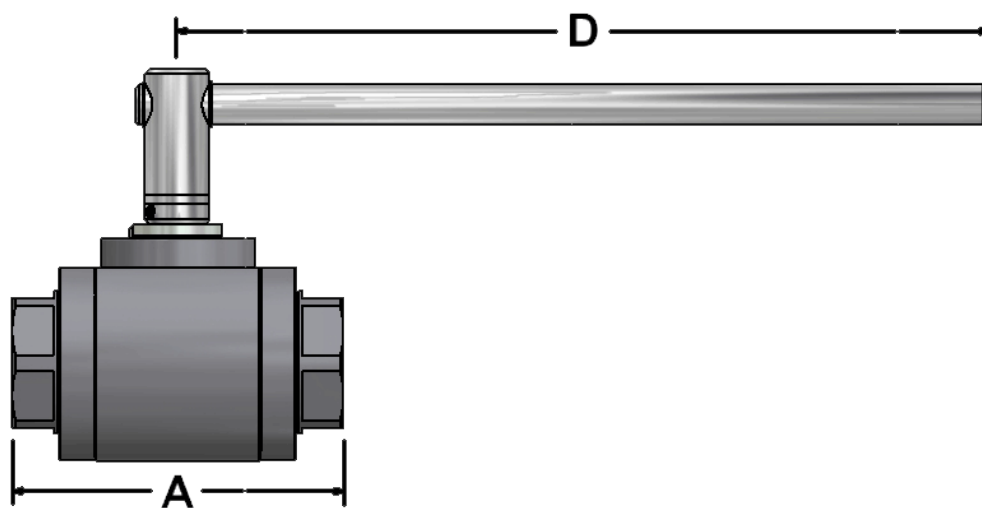
Note: Changes from Standard Materials may result in changes to temperature and/or pressure rating.

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.



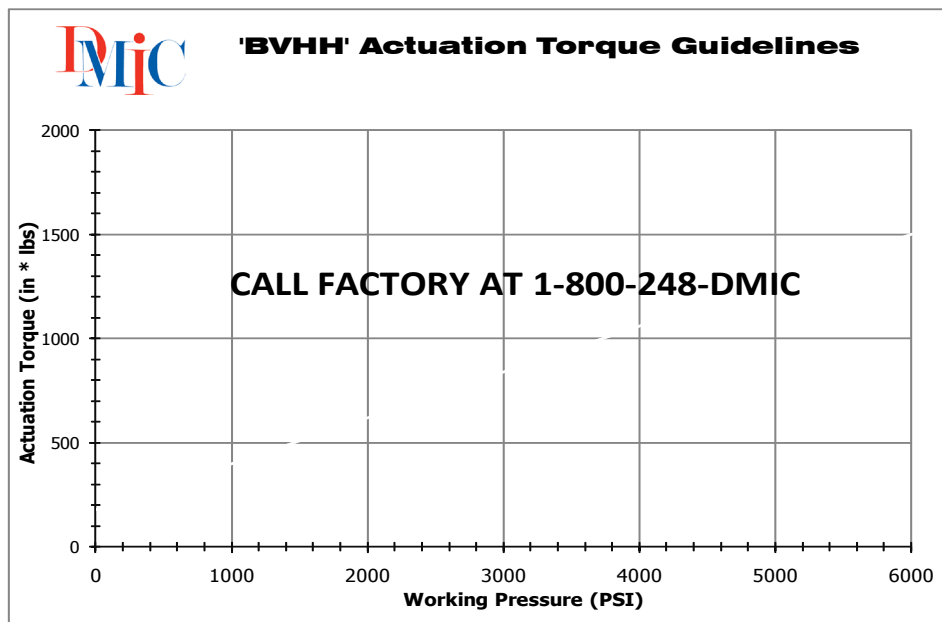
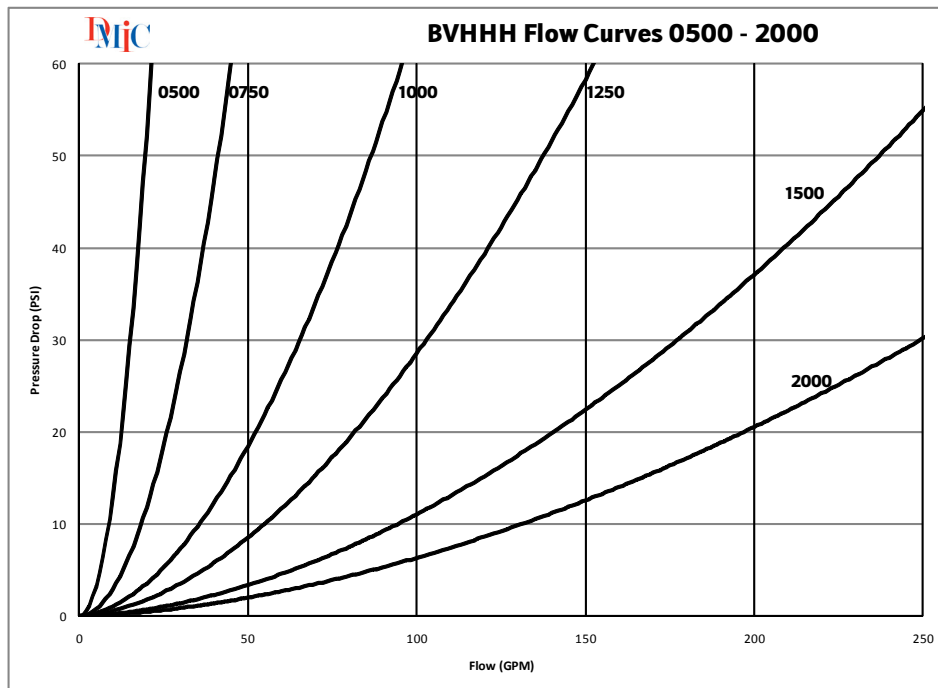
BVHHH ULTIMATE PRESSURE 15,000 PSI

BVHHH		Ball Valve Dimensions (Threaded Connections Only)							
Port Code	Port Size	Valve Dimensions (in)							
		Valve Length A	Body Diameter B	Internal Bore C	Handle Length D	Overall Height E	Bottom to Center F	Center to Mounting Pad G	Bottom to Cap H
N Threaded Connection	½"	5.98	3.25	0.375	10.00	6.68	1.63	2.19	3.07
	¾"	6.19	4.00	0.56	10.00	7.11	1.79	2.41	3.58
	1"	7.00	4.50	0.75	17.12	8.28	2.08	2.61	4.08
	1¼"	Please Call DMIC At 1-800-248-DMIC							
	1½"								
	2"	9.38	6.50	1.50	20.00	10.69	2.80	4.02	5.82



BVHHH ULTIMATE PRESSURE 15,000 PSI

Flow Characteristic and Actuation Torque Curves

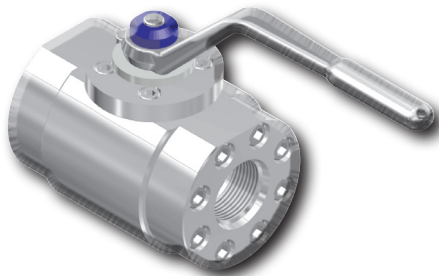


Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



BVQ/BVQG HIGH PRESSURE/ HIGH TEMP 6000 PSI

Raises every standard: thermal, quality, durability ; -20°F to 400°F
High Quality Stainless Steel Fluid & Gas Valves ½" to 6"



BVQ

- All 316 Stainless steel construction standard.
- Standard sizes range from ½" - 6" bore; Call for sizes greater than 2" bore.
- Designed for demanding applications where high performance & quality are required
- 6,000 PSI with generous design factor to eliminate damage due to pressure spikes.
- Wide variety of bolted end connections ideal for heavy industrial applications.
- Isolated spindle allows for use of 316 spindle without metal-to-metal contact; ideal for applications requiring an actuator.
- Standard High Temperature Peek ball seals & Viton seals. Other materials available for full fluid compatibility range.

BVQG ~ Gas Applications

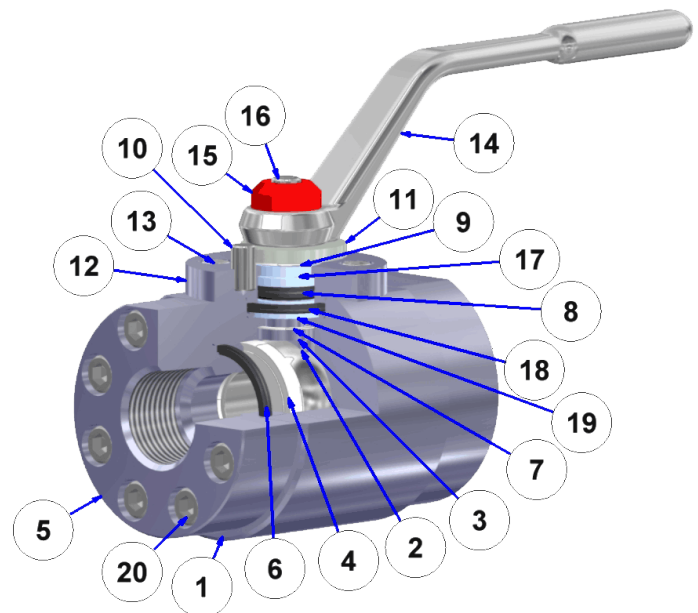
- Improved ball seals specially designed for gas applications.
- Special material coatings improves life expectancy in dry environment.

** Please note: Large valves may require pressure balance option to be opened under pressure.*

Service Parts BOM

BVQ/G	SERVICE PARTS BOM	
Index	Qty	Description
1	1	VALVE BODY
2	1	BALL
3	1	SPINDLE
4	2	BALL SEAL
5	2	END CONNECTION
6	2	END CONNECTION O-RINGS
7	1	INTERNAL THRUST WASHER
8	1	SPINDLE O-RING
9	1	EXTERNAL GLIDE WASHER
10	1	STOP PIN
11	1	STOP WASHER
12	1	TOP CAP
13	*	TOP CAP MOUNTING BOLTS
14	1	HANDLE
15	1	COLOR CODED TOP CAP
16	1	COLOR CODED TOP CAP BOLT
17	1	UPPER SPINDLE BUSHING
18	1	TOP CAP O-RINGS
19	1	LOWER SPINDLE BUSHING
20	*	END CONNECTION MOUNTING BOLTS

BVQ shown, BVQG has O-Ring behind each seal
* Depends on size



BVQ/BVQG HIGH PRESSURE/ HIGH TEMP 6000 PSI

Ordering Codes Summary

Size Codes	
Code	Port Size
0500	½"
0750	¾"
1000	1"
1250	1 ¼"
1500	1 ½"
2000	2"
2500+	2 ½" - Call

BVQ
or
BVQG

S

2

2

4

3

See page 14 for accessory codes

*

*

*

*

*

*

Connection Types

Imperial Threads

Code	Description
S	SAE ORB
N	NPT

Metric Threads

Code	Description
B	BSPP

ISO Threads

Code	Description
IU	ISO6149

Welded

W*	Socket Weld
WB*	Butt Weld

Flanged

A*	ANSI Flanges
F*	SAE 4-Bolt UNC
G*	SAE 4-Bolt Metric
S*	SAE Split

O-Rings

Code	Description
1	Buna-N
2	EPR
3	Viton
5	Chemraz
6	Kalrez
7	Buna-3716 (Low Temp)

Seals, Bushings, Washers

Code	Description
1	Delrin
4	High Temp Peek
6	Low Friction

Ball & Spindle

Code	Description
1	Carbon Steel - ASTM A108
2	Stainless Steel - 316

Body & End Connections

Code	Description
1	Carbon Steel - ASTM A108
2	Stainless Steel - 316

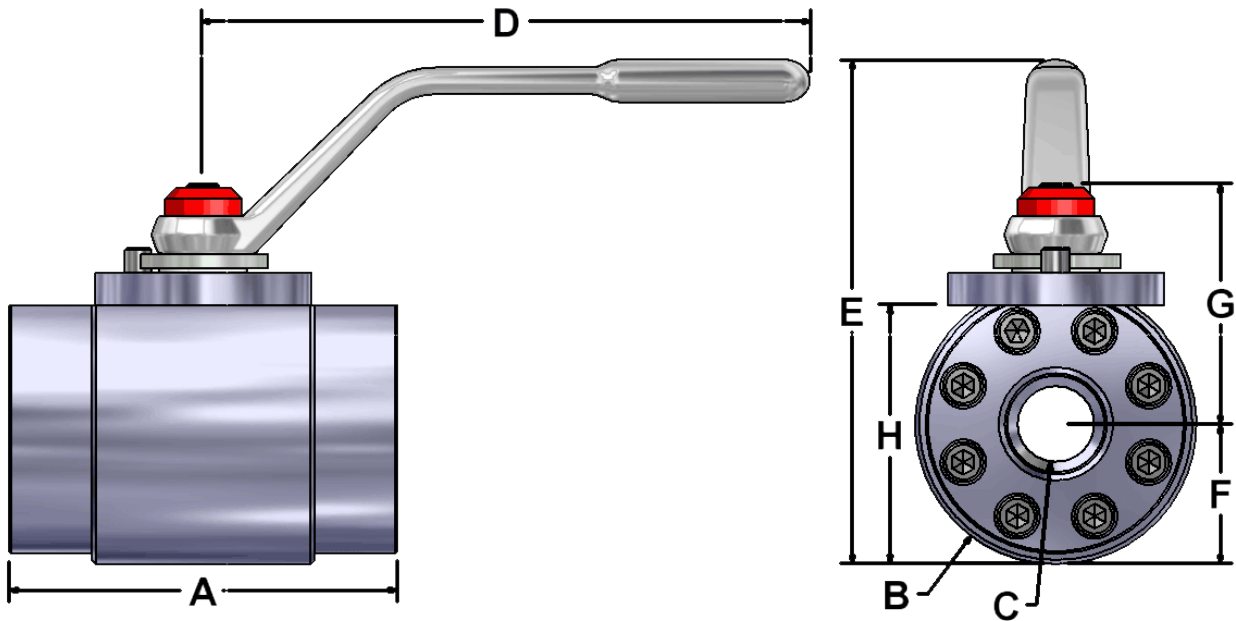
Note: Changes to Sealing Materials may result in changes to temperature and/or pressure rating.

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.



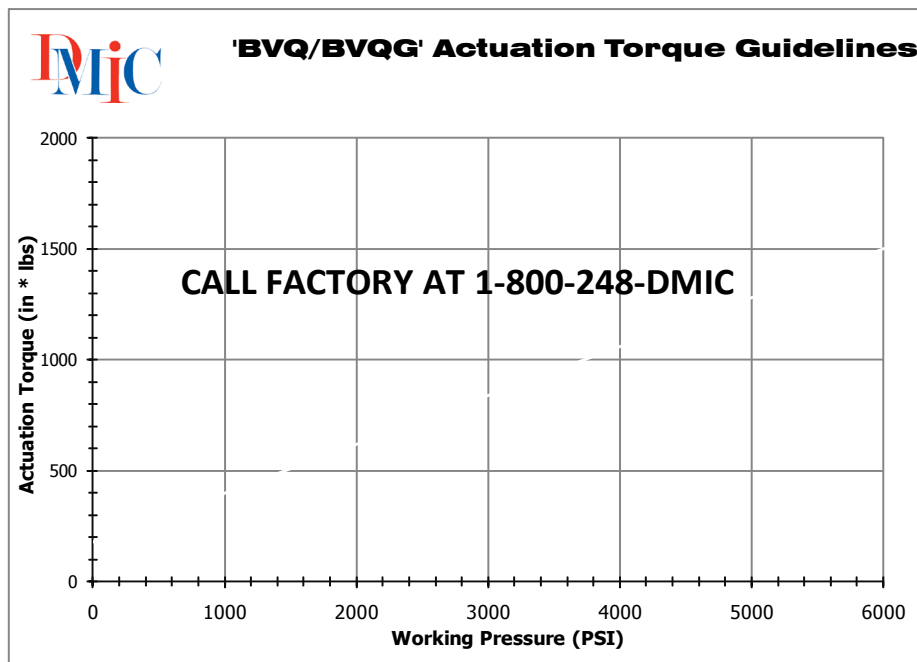
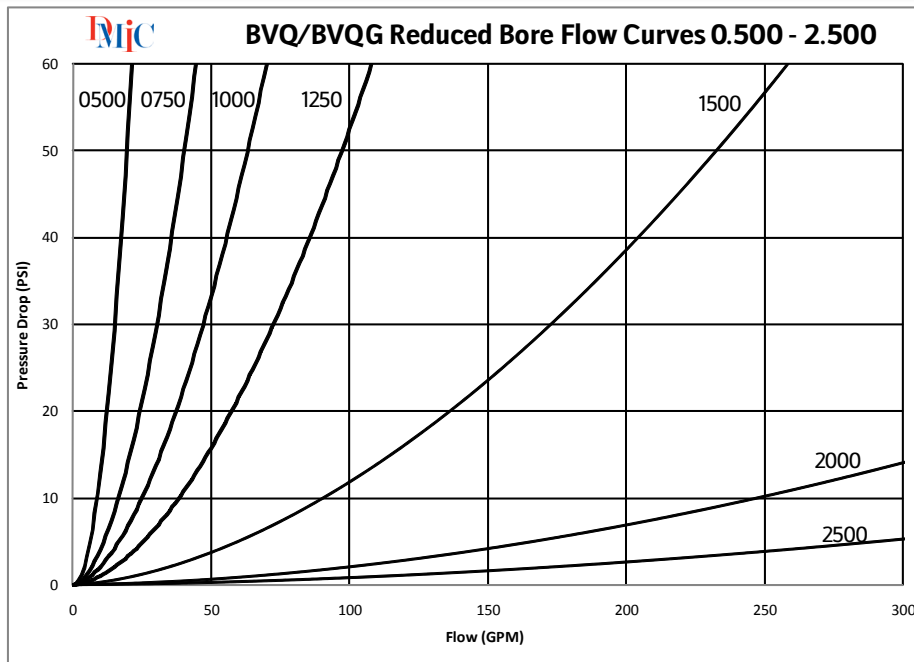
BVQ/BVQG HIGH PRESSURE/ HIGH TEMP 6000 PSI

BVQ/ BVQG	Port Size	Rated Pressure PSI Bar	Dimensions in/mm						
			A Length	B Body Diameter	ØC Bore	D Handle Length	E Height	F Bottom to Center	G Center to Cap
For Threaded Connection Type									
BVQ-0500****	½"	6000 413.7	3.11 78.9	2.25 57.2	0.38 9.5	4.50 114.3	3.90 99.0	1.13 28.6	1.91 48.5
BVQ-0750****	¾"	6000 413.7	4.35 110.4	2.75 69.9	0.63 15.9	7.00 177.8	5.33 135.4	1.22 31.0	2.62 66.5
BVQ-1000****	1"	6000 413.7	4.49 114.0	3.25 82.6	0.88 22.2	7.00 177.8	5.84 148.3	1.63 41.3	2.72 69.1
BVQ-1250****	1¼"	6000 413.7	5.02 127.5	3.63 92.2	1.10 27.9	9.86 250.4	7.24 183.9	1.88 47.8	3.43 87.1
BVQ-1500****	1½"	6000 413.7	5.35 135.8	4.25 108.0	1.31 33.3	9.86 250.5	7.71 195.8	2.13 54.0	3.65 92.7
BVQ-2000****	2"	6000 413.7	6.58 167.1	5.00 127.0	1.75 44.5	9.86 250.4	8.61 218.7	2.50 63.5	4.16 105.7



BVQ/BVQG HIGH PRESSURE/ HIGH TEMP 6000 PSI

Flow Characteristic and Actuation Torque Curves



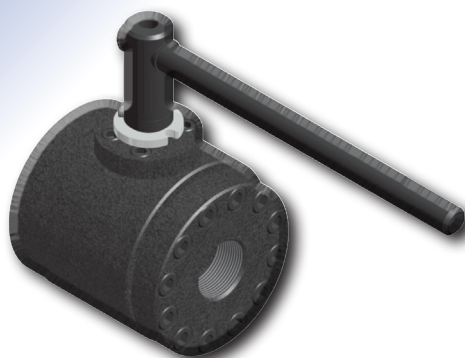
Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



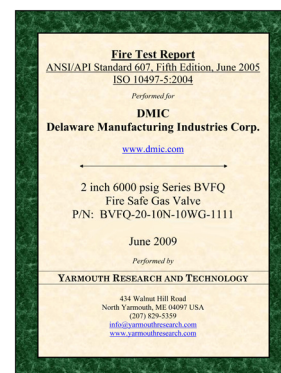
BVFQ/BVFQG

FireSafe 6000 PSI - Certified to API 607 5th Edition

DMIC BVFQ starts with the High Quality BVQ as a foundation. Then secondary sealing is added and you get DMIC's FireSafe Valve Series



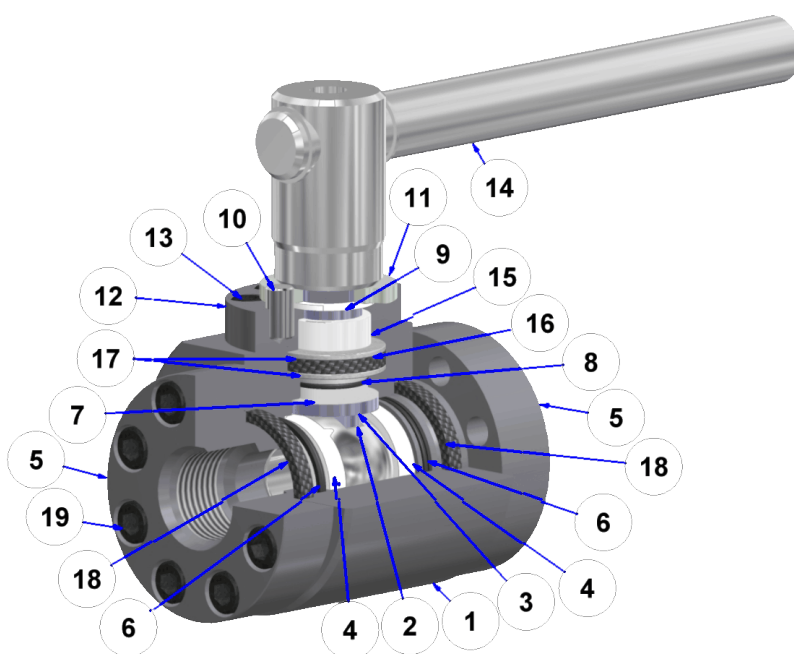
- Standard sizes range from ½" - 6" bore; Call for sizes greater than 2" bore.
- Designed for demanding applications where high performance & quality are required
- 6,000 PSI with generous design factor to eliminate damage due to pressure spikes.
- Wide variety of bolted end connections ideal for heavy industrial applications.
- Isolated spindle without metal-to-metal contact
- Secondary Sealing Material



Service Parts BOM

BVFQ/FQG SERVICE PARTS BOM		
Index	Qty	Description
1	1	VALVE BODY
2	1	BALL
3	1	SPINDLE
4	2	BALL SEAL
5	2	END CONNECTIONS
6	2	END CONNECTION O-RINGS
7	1	INTERNAL THRUST WASHER
8	1	SPINDLE O-RING
9	1	EXTERNAL GLIDE WASHER
10	1	STOP PIN
11	1	STOP WASHER
12	1	TOP CAP
13	*	TOP CAP MOUNTING BOLTS
14	1	HANDLE
15	1	SPINDLE BUSHING
16	1	FIRE SAFE SPINDLE SEAL
17	2	SEAL REINFORCEMENT RINGS
18	2	FIRE SAFE END CONNECTION SEALS
19	*	END CONNECTION MOUNTING BOLTS

* - Quantity depends on size



BVFQ/BVFQG

Ordering Codes Summary

See page 14 for accessory codes

BVFQ - **** N - 1 1 1 1 * * * * *

Size Codes	
Code	Port Size
0500	½
0750	¾
1000	1"
1250	1¼
1500	1½
2000	2"
2500	2½"-Call

Connection Types	
Imperial Threads	
Code	Description
N	NPT
Welded	
W*	Socket Weld
WB*	Butt Weld
Flanged	
A*	ANSI Flanges

O-Ring Material	
Code	Description
1	Buna-N
2	EPR
3	Viton
5	Chemraz
6	Kalrez
7	Buna-3716 (Low Temp)

Seals, Bushings, Washers	
Code	Description
1	Delrin
4	High Temp Peek
6	Low Friction

Ball & Spindle	
Code	Description
1	Carbon Steel - ASTM A108
2	Stainless Steel - 316

Body Material	
Code	Description
1	Carbon Steel - ASTM A108
2	Stainless Steel

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

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.



BVFAQ/BVFAQG

**BVFAQ
/
BVFAQG**

Dependent Dimensions

Threaded Connection

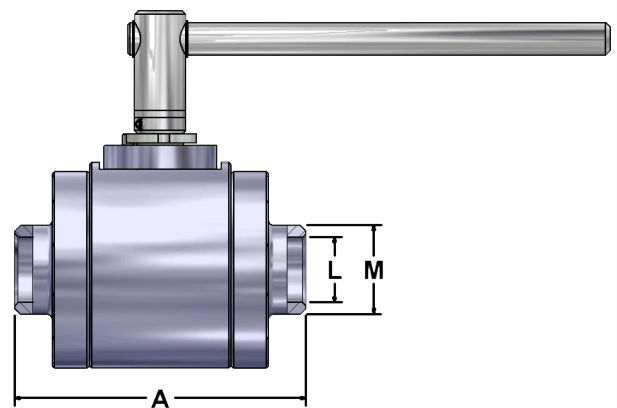
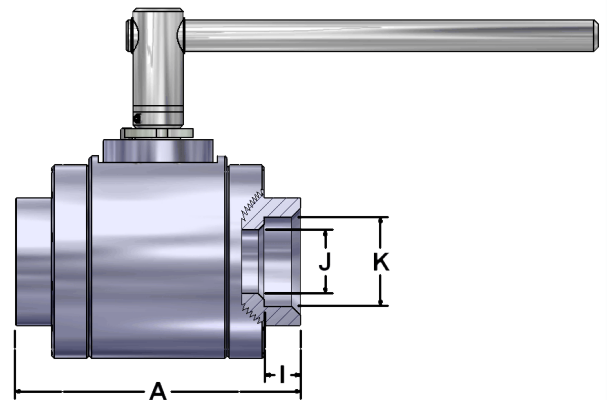
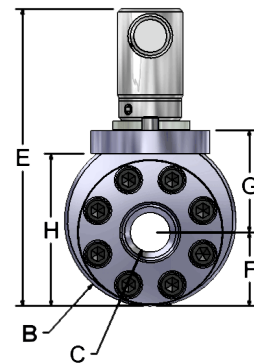
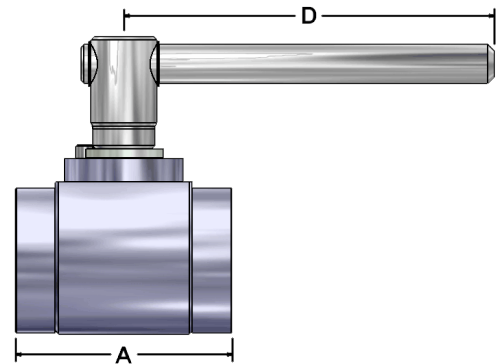
Dimension (Inches)		A	B	C	D	E	F	G	H
Port Code(s)	Port Size	Overall Length	Body Width	Bore Size	Handle Length	Overall Height	Bottom to Center of Bore	Center of Bore to Top	Body Height
N S B IU IA Threaded Connections	½"	3.21	2.75	0.50	4.50	4.40	1.15	1.63	2.33
	¾"	4.09	3.25	0.75	7.00	5.64	1.40	1.94	2.89
	1"	4.33	3.50	0.93	7.00	6.02	1.53	2.14	3.22
	1¼"	4.75	4.25	1.13	8.50	6.99	1.91	2.49	3.90
	1½"	5.09	5.00	1.31	8.50	7.86	2.25	3.01	4.64
	2"	5.78	5.50	1.75	12.00	9.53	2.63	3.31	5.50

Socket Weld Connection

Dimension (Inches)		A	I	J	K
Port Code(s)	Port Size	Overall Length	Socket Depth	Connection Inside Diameter	Inside Socket Outer Diameter
W* SCH.X Socket Weld End Connections	½"	4.71	0.75	DEPENDENT UPON PIPE SCHEDULE	0.88
	¾"	5.59	0.75		1.09
	1"	6.33	1.00		1.36
	1¼"	6.75	1.00		1.70
	1½"	7.09	1.00		1.94
	2"	7.78	1.00		2.42

Butt Weld Connection

Dimension (Inches)		A	L	M
Port Code(s)	Port Size	Overall Length	Connection Inside Diameter	Pipe Diameter
WB* SCH.X Butt Weld End Connections	½"	4.77	DEPENDENT UPON PIPE SCHEDULE	0.84
	¾"	7.98		1.05
	1"	9.18		1.32
	1¼"	9.95		1.66
	1½"	11.21		1.90
	2"	12.44		2.38

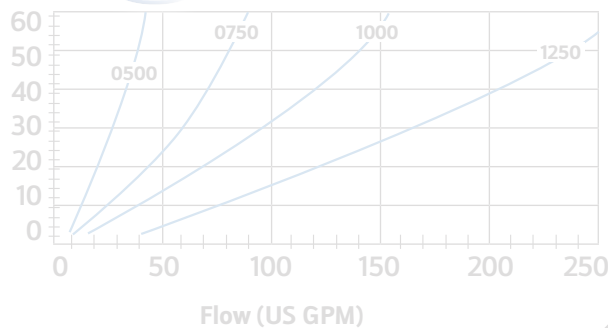


BVFQ/BVFQG

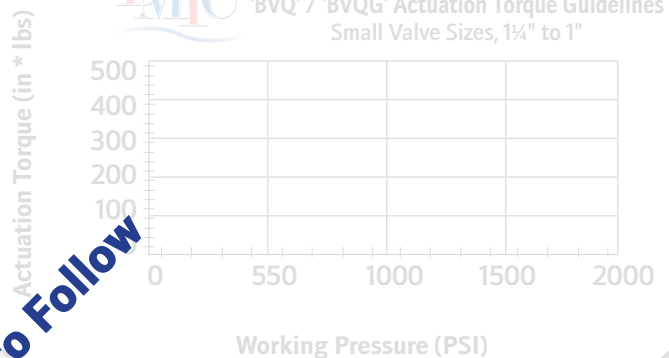
Flow Characteristic and Actuation Torque Curves



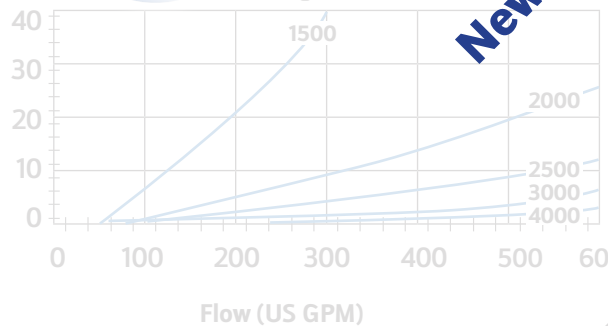
'BVQ' / 'BVQG' Flow Characteristic Curves
Small Valve Sizes, ½" to 1¼"



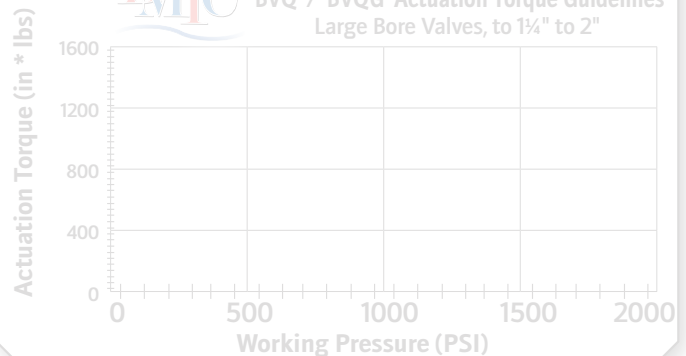
'BVQ' / 'BVQG' Actuation Torque Guidelines
Small Valve Sizes, 1¼" to 1"



'BVQ' / 'BVQG' Flow Characteristic Curves
Large Valve Sizes, 1½" to 2"



'BVQ' / 'BVQG' Actuation Torque Guidelines
Large Bore Valves, to 1½" to 2"



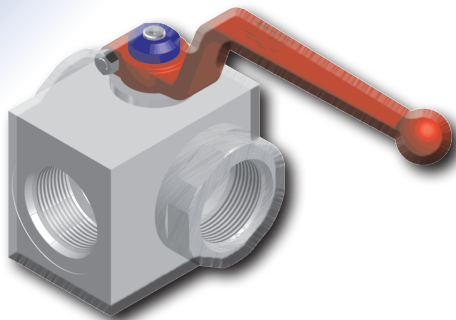
New Codes to Follow

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.



BV3L/BV3LZ 400 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" sealing.



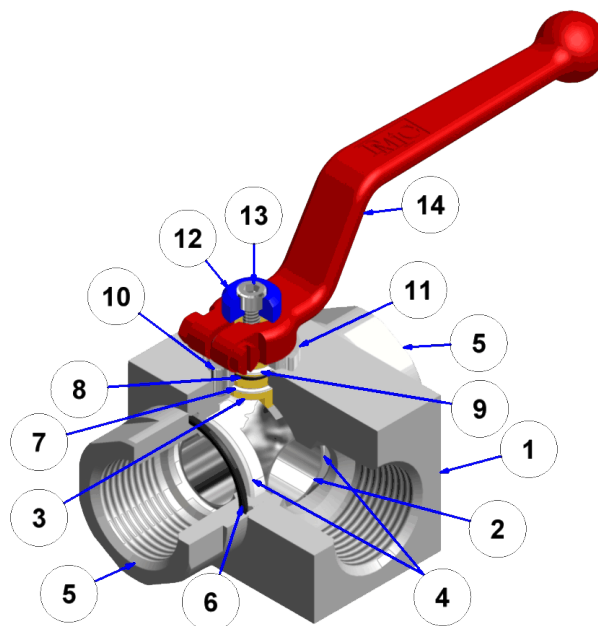
The **BV3L** is an economical U.S. made diverter valve for Filter Duplexing type applications where one input is directed to one of two outputs. Standard "L-Bore" ball with slight port overlap prevents upstream pressure spikes during phase change.

- 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 400 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

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	*	End Connection(s)
6	*	End Connection O-Ring
7	1	Internal Thrust Washer
8	1	Spindle O-Rings
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Coded Top Cap
13	1	Top Cap Screw
14	1	Handle

* - Quantity depends on size and combination of body



BV3L/BV3LZ 400 PSI DIVERTER

Ordering Codes

See page 14 for accessory codes

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
T	BSPT (Tapered Pipe)
ISO Threads	
IU	ISO6149

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

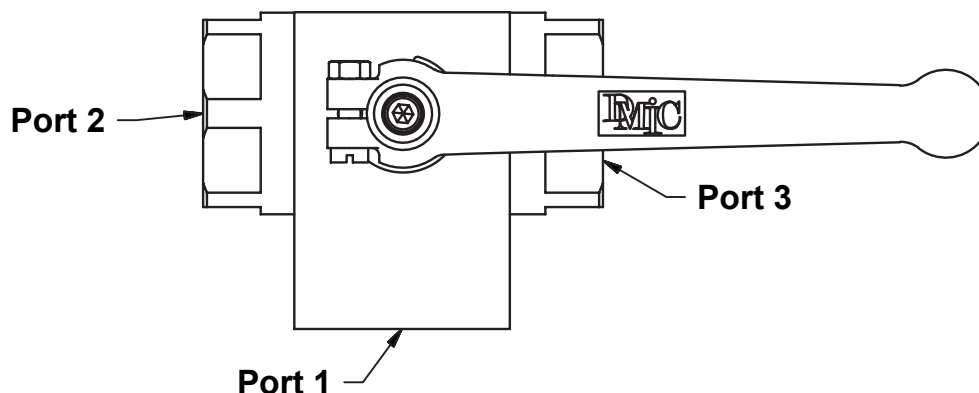
O-Ring Material	
Code	Description
1	Buna-N (Standard)
2	EPR
3	Viton

Ball Seal Material	
Code	Description
2	PTFE Teflon

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

Body Material	
Code	Description
4	Aluminum

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



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.

BV3L/BV3LZ 400 PSI DIVERTER

**BV3L/
BV3LZ**

Dependent Dimensions

Threaded Connection

Dimension (Inches)		A	B		
Port Code(s)	Port Size	Overall Length	Width Port 1		
N S B IU/IA Threaded Connections	1/4"	2.64	2.26		
	3/8"	2.64	2.26		
	1/2"	2.64	2.26		
	3/4"	3.28	2.50		
	1"	3.47	2.75		
	1 1/4"	3.89	3.50		
	1 1/2"	4.32	3.66		
	2"	4.90	4.12		

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 SAE 4-Bolt Comp/Std Flange Connections	3/4"	7.65	8.68	4.64	5.19
	1"	7.78	8.88	4.89	5.44
	1 1/4"	8.44	9.55	5.76	6.31
	1 1/2"	8.87	9.91	6.60	7.12
	2"	9.45	11.06	7.18	9.98

SAE Split Flange Connection

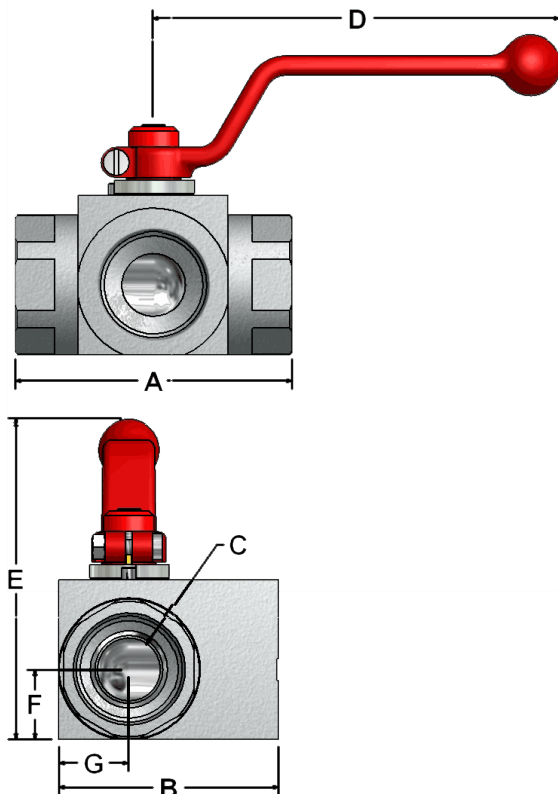
Dimension (inches)		A	B		
Port Code(s)	Port Size	Overall Length	Width Port 1		
SM SAE Split Flange Connections	3/4"	8.14	4.92		
	1"	8.26	5.13		
	1 1/4"	9.32	6.20		
	1 1/2"	9.76	7.05		
	2"	10.85	7.88		

ANSI & DIN Flange Connection

Dimension (inches)		-	-	-	-
Port Code(s)	Port Size				
AA / D* ANSI & DIN Flange	1"	Because BV3L is a low pressure valve, DMIC offers only ANSI Class 150 as a BV3L option. Please contact DMIC for a certified print.			
	1 1/4"				
	1 1/2"				
	2"				

Swivel Socket Weld Connection

Dimension (inches)		A	B		
Port Code(s)	Port Size	Overall Length	Width Port 1		
W4 Socket Weld Connections	3/4"	5.81	3.75		
	1"	6.02	4.00		
	1 1/4"	6.69	4.88		
	1 1/2"	7.12	5.72		
	2"	7.70	6.30		



**BV3L/
BV3LZ**

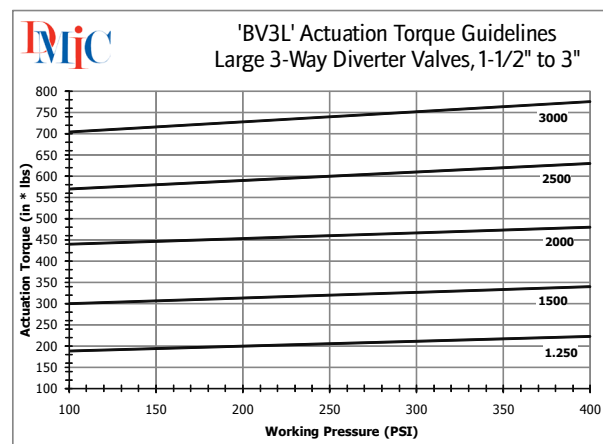
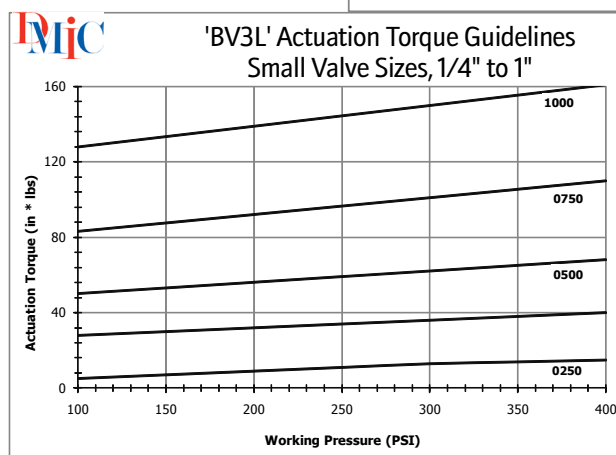
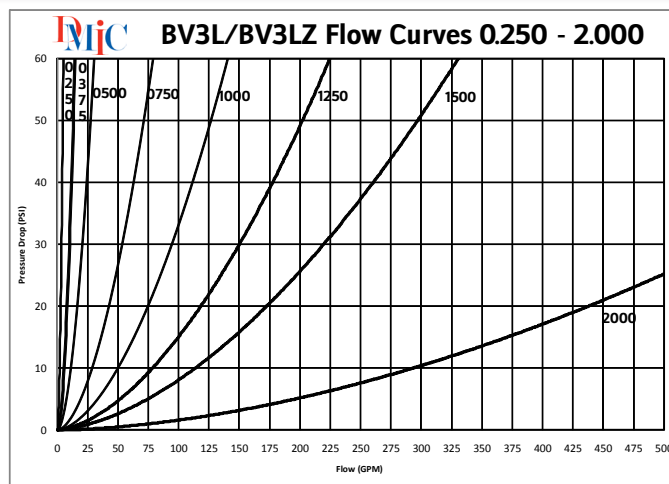
Common Dimensions

Part Number	Port Size	Rated Pressure PSI/bar	Dimensions IN/mm				
			C Valve Bore	D Handle Length	E Overall Height	F Bot to Port Ctr	G Back of Body to Center of Port
BV3L-0250****	1/4"	400 27.6	0.38	3.35	2.70	0.63	0.63
BV3LZ-0250****	1/4"	400 27.6	0.38	3.35	2.70	0.63	0.63
BV3L-0375****	3/8"	400 27.6	0.38	3.35	2.70	0.63	0.63
BV3LZ-0375****	3/8"	400 27.6	0.38	3.35	2.70	0.63	0.63
BV3L-0500****	1/2"	400 27.6	0.44	3.35	2.70	0.63	0.63
BV3LZ-0500****	1/2"	400 27.6	0.44	3.35	2.70	0.63	0.63
BV3L-0750****	3/4"	400 27.6	0.67	5.09	3.76	0.76	0.81
BV3LZ-0750****	3/4"	400 27.6	0.67	5.09	3.76	0.76	0.81
BV3L-1000****	1"	400 27.6	0.79	5.09	4.00	0.88	0.88
BV3LZ-1000****	1"	400 27.6	0.79	5.09	4.00	0.88	0.88
BV3L-1250****	1 1/4"	400 27.6	1.06	6.81	5.61	1.15	1.28
BV3LZ-1250****	1 1/4"	400 27.6	1.06	6.81	5.61	1.15	1.28
BV3L-1500****	1 1/2"	400 27.6	1.34	6.81	6.29	2.00	1.48
BV3LZ-1500****	1 1/2"	400 27.6	1.34	6.81	6.29	2.00	1.48
BV3L-2000****	2"	400 27.6	1.69	6.81	6.90	2.31	1.74
BV3LZ-2000****	2"	400 27.6	1.69	6.81	6.90	2.31	1.74



BV3L/BV3LZ 400 PSI DIVERTER

Flow Characteristic and Actuation Torque Curves



BV3L for 400 PSI Ball Pattern Schematic

BALL CODE	ISO CIRCUIT SCHEMATIC	BALL PATTERN	HANDLE PHASE	STOP WASHER TYPE
A		L-Bore Port Overlap	0° 45° 90° 135° 180°	
D		T-Bore 180°		
C		T-Bore 90°	-90° -45° 0°	

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.



BV3D/BV3DZ STEEL DIVERTER

The smart alternative to "converted 2-way" diverters
Rated for 3000 PSI ~ Sizes from ¼" to 2" NPT/SAE/BSP
Designed as an "L-Bore" Diverter



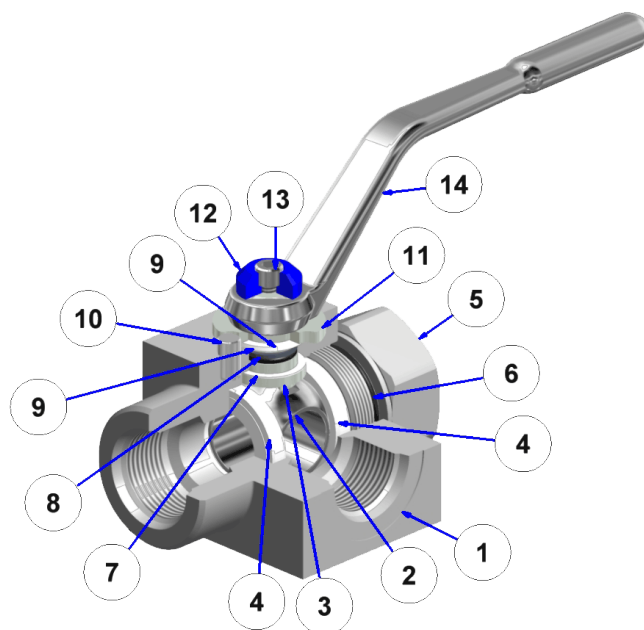
The genuine DMIC **BV3D** is a 3-way, "L-bore" diverter derived from the DMIC **BVH**. DMIC's newest high-end CNC equipment and advancements in manufacturing tolerance control allow the **BV3D** to satisfy many 3-way applications, providing a cost savings relative to a true 3-way valve. Consult DMIC Engineering for more information.

- Stocked with "L-Bore" standard ball; special "T-Bore" option available
- Slight port overlap prevents surprise upstream blowouts during shifting
- **DMIC's Innovative Spindle-Glide™** Design reduces actuation torque & increases valve longevity, especially under actuation
- **Every size can be Panel & Substrate Mounted**
- **Optional Skydrol, High Temp, Near Zero leakage configurations**

Service Parts BOM

BV3D/ BV3DZ	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle
4	2	Ball Seals
5	*	End Connection(s)
6	*	End Connection O-Ring
7	1	Internal Thrust Washer
8	1	Spindle O-Rings
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Code Cap
13	1	Top Cap Screw
14	1	Handle

* - Quantity depends on size and combination of body



BV3D/BV3DZ STEEL DIVERTER

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"

BV3DZ
or
BV3D

Connection Types

Imperial Threads		Metric Threads		ISO Threads	
S	SAE ORB	B	BSPP-special	IU	ISO6149
N	NPT	T	BSPT (Tapered Pipe)	IA	ISO1179
J	JIC-Male	D*	Din Tube-call		

SAE Flange Conn

SAE 4-Bolt Companion		SAE Split Flanges		SAE 4 Bolt Standard	
FM	SAE C61 Comp UNC	SM	SAE C61 Split Flg Head	FL	SAE C61 Std UNC/Metric
FH	SAE C62 Comp UNC	SH	SAE C62 Split Flg Head	FK	SAE C62 Std UNC/Metric
GM	SAE C61 Comp Metric				
GH	SAE C62 Comp Metric				

O-Ring Material

Code	Description
1	Buna-N (Standard)
2	EPR
3	Viton

Ball Seal Material

Code	Description
1	Delrin
2	PTFE Teflon
6	Low Friction

Ball & Spindle Mat'l

Code	Description
1	Carbon Steel
2	316 Stainless Steel
6	416 Stainless Spindle 316 Stainless Ball

Ball Pattern

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

Body Material

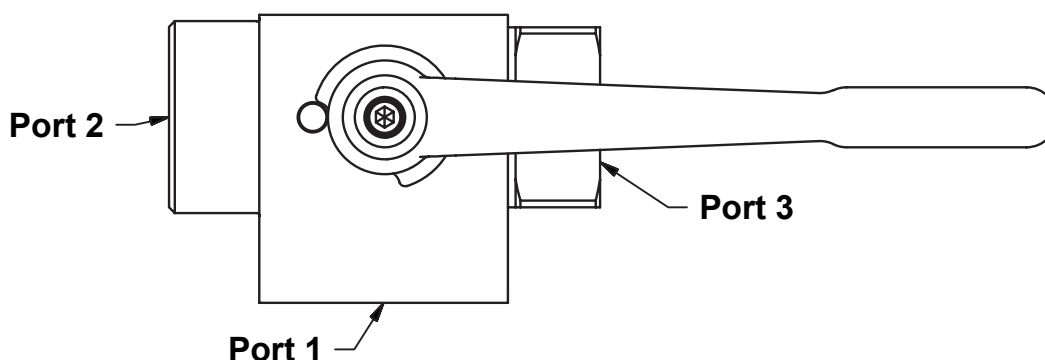
Code	Description
1	Carbon Steel
2	Stainless Steel

Ordering Code Example: BV3DZ - **** S A - 1 1 1 1 * * * * * * * *

See page 14 for accessory codes

Please see page 9 for complete connection availability matrix

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



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.



BV3D/BV3DZ STEEL DIVERTER

BV3D/ BV3DZ

Dependent Dimensions

Threaded Connection

Dimension (Inches)	A _{combo}	A _{std}	B _{combo}	B _{std}
Port Code(s)	Port Size	Overall Length	Overall Length	Width Port 1
N	1/4"	2.74	-	2.05
	3/8"	2.87	-	2.09
S	1/2"	3.36	3.36	1.98
B	3/4"	3.82	3.79	2.73
IU/IA	1"	4.49	4.45	3.00
Threaded Connections	1 1/4"	4.85	4.84	4.00
	1 1/2"	5.37	5.37	4.15
	2"	6.54	6.54	4.98

SAE 4-Bolt Flange Connection

Dimension (inches)	A	B		
Port Code(s)	Port Size	Overall Length	Width Port 1	
FM/GM	1/2"	4.26	2.82	
	3/4"	4.77	3.42	
FL	1"	5.27	3.75	
SAE 4-Bolt Comp/Std Flange Connections	1 1/4"	6.91	5.77	
	1 1/2"	7.08	6.04	
	2"	8.06	7.04	

SAE Split Flange Connection

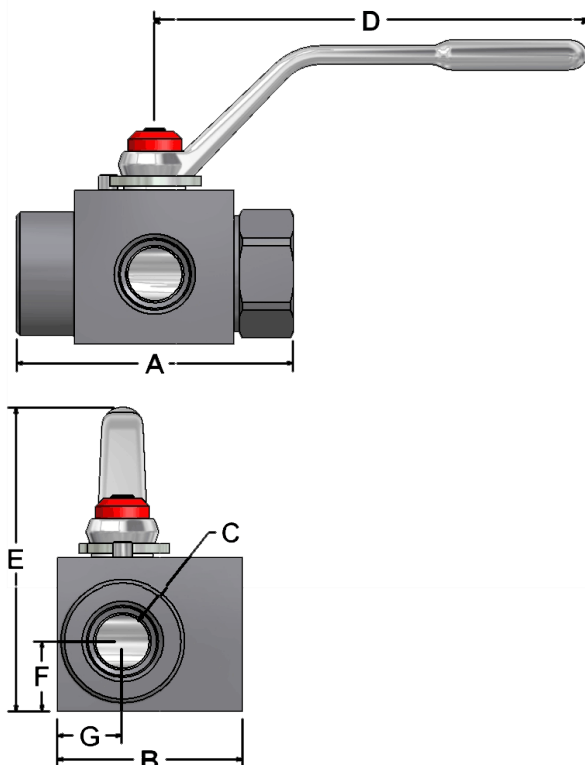
Dimension (inches)	A	B	-	-
Port Code(s)	Port Size	Overall Length(SM)	Width Port 1(SM)	Overall Length(SH)
SM	1/2"	5.95	3.23	5.95
	3/4"	6.39	4.70	6.86
CM	1"	7.00	4.95	7.79
SAE Split & Combo Flg Conn	1 1/4"	7.51	6.37	8.77
	1 1/2"	9.07	6.62	11.06
	2"	9.11	7.37	12.44

ANSI & DIN Flange Connection

Dimension (inches)	-	-	-	-
Port Code(s)	Port Size	Please call Factory to request a Certified Print.		
AA*	3/4"			
	1"			
D*	1 1/4"			
ANSI & DIN Flange Conn	1 1/2"			
	2"			

Swivel Socket Weld Connection

Dimension (inches)	A	B	-	-
Port Code(s)	Port Size	Overall Length	Width Port 1	Socket Depth
W4	1/2"	6.26	3.82	0.75
	3/4"	7.46	4.76	0.75
	1"	7.67	5.03	1.00
	1 1/4"	8.40	6.52	1.00
	1 1/2"	9.47	7.23	1.00
Socket Weld Connections	2"	10.60	8.31	1.00



BV3D/ BV3DZ

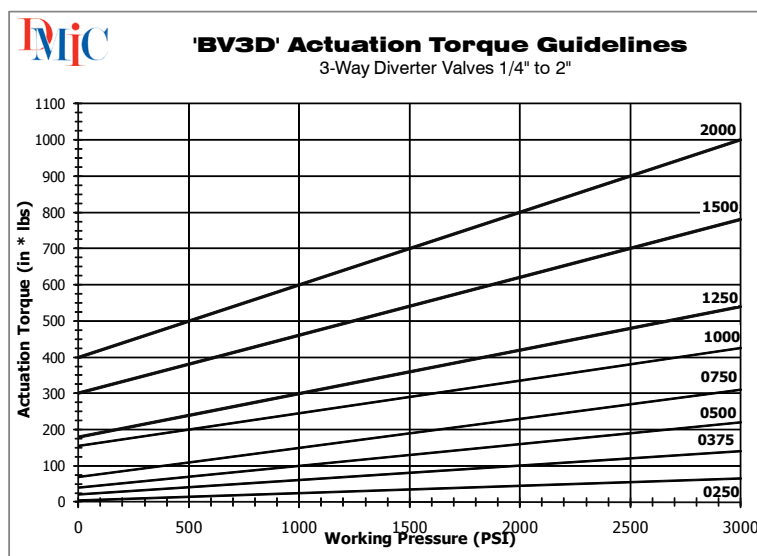
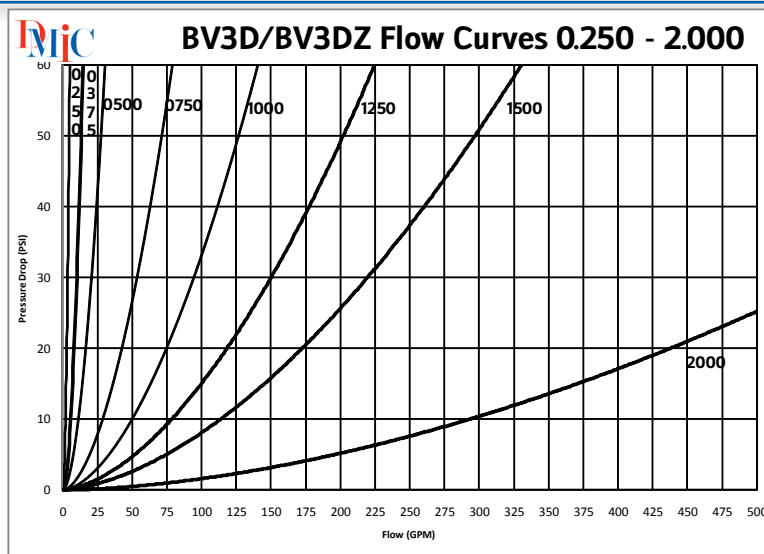
Common Dimensions

Part Number	Port Size	Rated Pressure PSI/bar	Dimensions IN				
			Valve Bore C	Handle Length D	Overall Height E	Bot To Port Ctr F	Back of body to center G
BV3D-0250****	1/4"	3000	0.25	4.50	2.98	0.61	0.60
BV3DZ-0250****							
BV3D-0375****	3/8"	3000	0.31	4.50	3.10	0.64	0.60
BV3DZ-0375****							
BV3D-0500****	1/2"	3000	0.44	4.50	3.25	0.73	0.70
BV3DZ-0500****							
BV3D-0750****	3/4"	3000	0.69	7.00	4.73	1.00	0.94
BV3DZ-0750****							
BV3D-1000****	1"	3000	0.88	7.00	4.95	1.14	1.06
BV3DZ-1000****							
BV3D-1250****	1 1/4"	3000	1.13	9.86	6.61	1.69	1.58
BV3DZ-1250****							
BV3D-1500****	1 1/2"	3000	1.38	9.86	6.69	1.50	1.63
BV3DZ-1500****							
BV3D-2000****	2"	3000	1.75	9.86	7.61	2.21	2.00
BV3DZ-2000****							



BV3D/BV3DZ STEEL DIVERTER

Flow Characteristic and Actuation Torque Curves



BV3D Steel Diverter Ball Pattern Schematic

BALL CODE	ISO CIRCUIT SCHEMATIC	BALL PATTERN	HANDLE PHASE	STOP WASHER TYPE
A		L-Bore Port Overlap	0° 45° 90° 135° 180°	
D		T-Bore 180°	0° 45° 90° 135° 180°	
C		T-Bore 90°	-90° -45° 0°	

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.

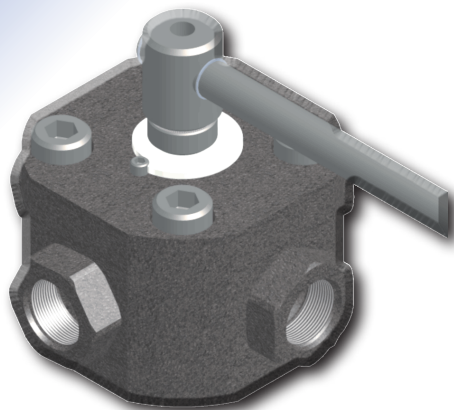


BV3H & BV4H TRUE MULTI-WAY

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.

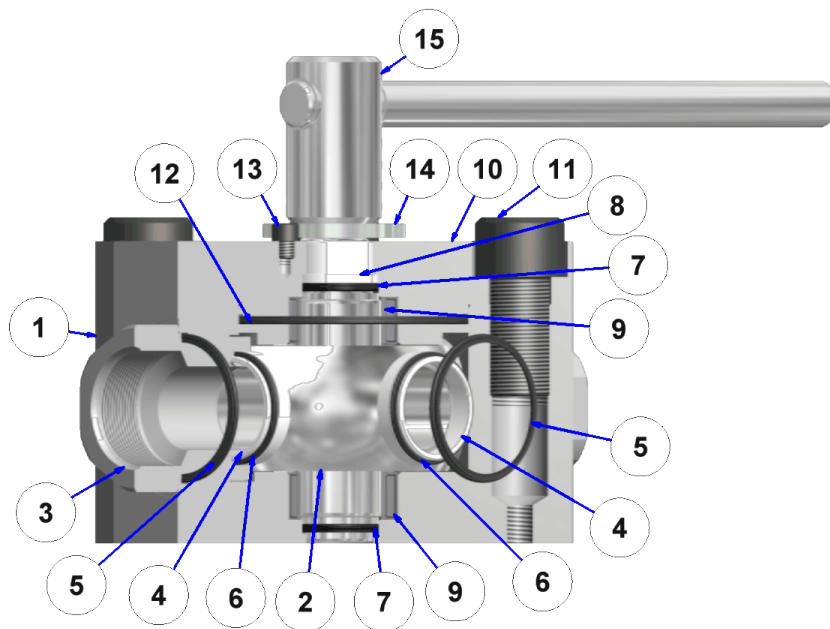


DMIC **BV3H** and **BV4H** series have been upgraded for superior performance and durability with DMIC's exclusive top servicable design, and compatibility with many DMIC Pre-Engineered Accessories and Actuation Packages. This model is not restricted to any specific type of circuit, and incorporates 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
- Provides one of the lowest actuation torque and internal leakage designs on the market
- Designed for your most critical and high duty cycle projects

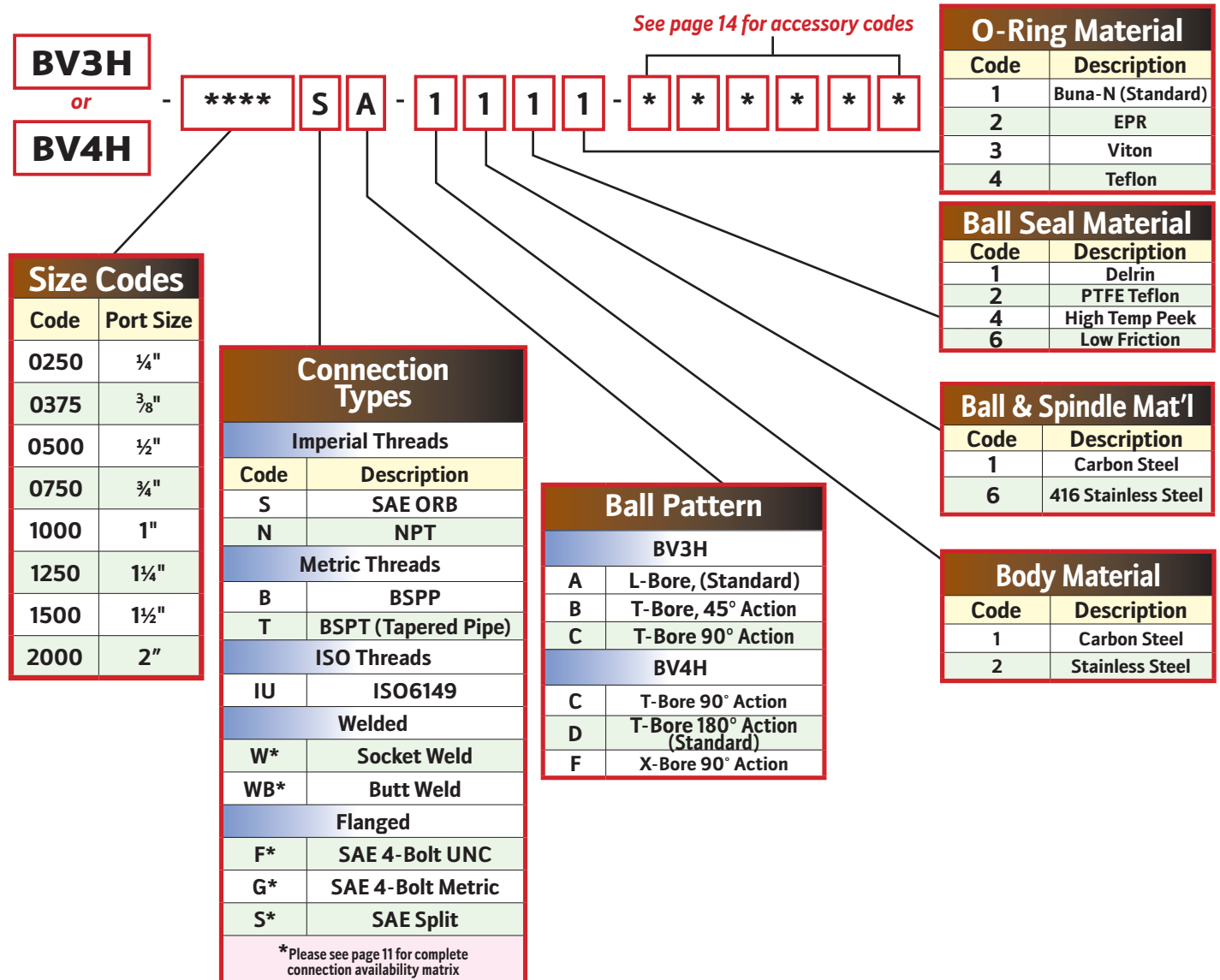
Service Parts BOM

BV3H/ BV4H	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	*	End Connection
4	*	Ball Seals
5	*	End Connection O-Rings
6	*	Ball Seal O-Rings
7	2	Shaft O-Rings
8	1	Shaft Bushing
9	2	Shaft Bearings
10	1	Top Cap
11	4	Top Cap Mounting Bolts
12	1	Top Cap O-Rings
13	1	Stop Pin
14	1	Stop Washer
15	1	Handle
Depends on 3-Way or 4-Way		



BV3H & BV4H TRUE MULTI-WAY

Ordering Codes Summary



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

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 TRUE MULTI-WAY

BV3H/4H Dependent Dimensions

Threaded Connection

Dimension (Inches)		A3W	A4W	B
Port Code(s)	Port Size	3-Way Length	4-Way Length	Width
N S B IU/IA Threaded Connections	1/4"	3.08	3.56	3.56
	3/8"	3.08	3.66	3.66
	1/2"	3.76	4.53	4.53
	3/4"	4.68	5.35	5.35
	1"	5.94	6.88	6.88
	1 1/4"	6.60	7.43	7.43
	1 1/2"	8.24	9.22	9.22
	2"	10.53	11.81	11.81

SAE 4-Bolt Flange C.61 / C.62 Connection

Dimension (inches)		A3W	A4W	B
Port Code(s)	Port Size	3-Way Length	4-Way Length	Width
FM/GM/FH SAE 4-Bolt Comp/Std Flange Connections	1/2"	4.17	5.33	5.33
	3/4"	5.30	6.59	6.59
	1"	6.33	7.66	7.66
	1 1/4"	7.63	9.48	9.48
	1 1/2"	9.12	10.98	10.98
	2"	11.29	13.33	13.33

SAE Split Flange C.61 Connection

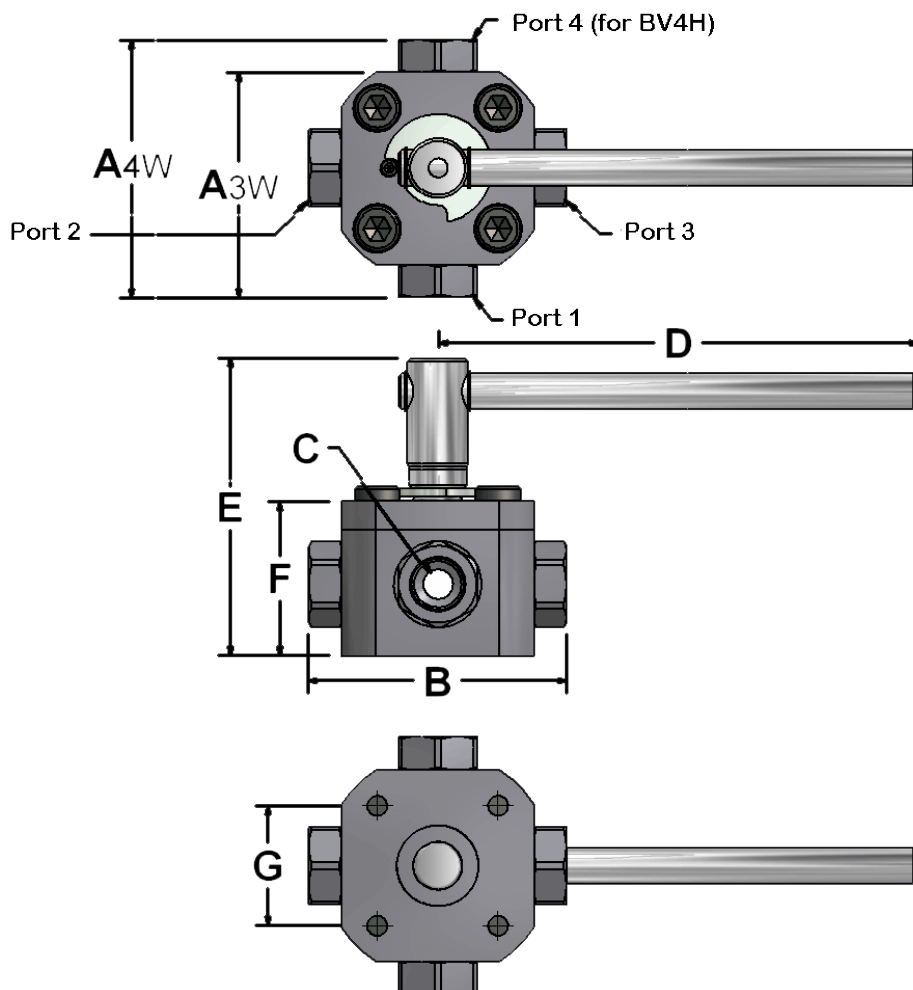
Dimension (inches)		A3W	A4W	B
Port Code(s)	Port Size	3-Way Length	4-Way Length	Width
SM SAE C.61 Split Flange Connections	1/2"	5.03	7.06	7.06
	3/4"	6.00	7.97	7.97
	1"	7.19	9.38	9.38
	1 1/4"	7.93	10.09	10.09
	1 1/2"	9.99	12.72	12.72
	2"	12.49	15.73	15.73

SAE Split Flange C.62 Connection

Dimension (inches)		A3W	A4W	B
Port Code(s)	Port Size	3-Way Length	4-Way Length	Width
SH SAE C.62 Split Flange Connections	1/2"	5.03	7.06	7.06
	3/4"	6.23	8.45	8.45
	1"	7.59	10.18	10.18
	1 1/4"	8.56	11.35	11.35
	1 1/2"	11.10	14.95	14.95
	2"	13.48	17.71	17.71

Fixed Socket Weld Connection

Dimension (inches)		A3W	A4W	B
Port Code(s)	Port Size	3-Way Length	4-Way Length	Width
W4 Socket Weld Connections	1/2"	5.19	7.37	7.37
	3/4"	6.51	9.02	9.02
	1"	7.53	10.06	10.06
	1 1/4"	8.38	10.98	10.98
	1 1/2"	10.30	13.35	13.35
	2"	12.56	15.87	15.87



BV3H/ BV4H

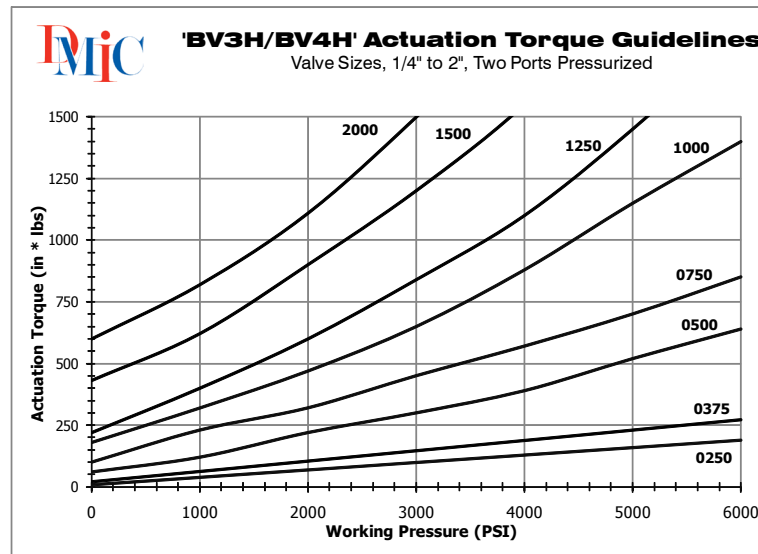
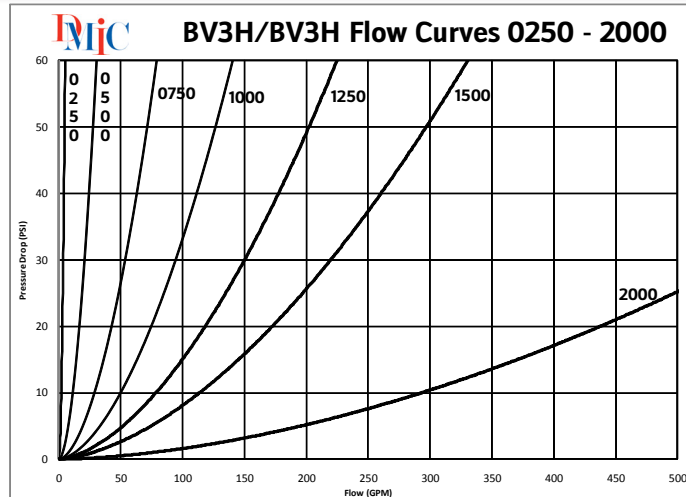
Common Dimensions

Part Number	Port Size	Rated Pressure PSI/bar	Bore (L-Ball) C	Handle Length D	Overall Height E	Body Height F	Bottom Mt Sq G	Mtg Bolt Size (UNC) Carbon Steel	Mtg Bolt Size (UNF) Stainless Steel
BV3H/4H-0250**** (0375 w/reduced ports)	1/4"	6000 413.8	0.31 6.0	7.00 177.8	4.81 117.1	2.53 63.0	1.63 41.4	1/4"	1/4"
BV3H/4H-0375****	3/8"	6000 413.8	0.31 9.0	7.00 177.8	4.81 117.1	2.53 63.0	1.63 41.4	1/4"	1/4"
BV3H/4H-0500****	1/2"	6000 413.8	0.44 12.4	7.00 177.8	5.08 122.7	2.75 68.6	1.88 47.8	5/16"	5/16"
BV3H/4H-0750****	3/4"	6000 413.8	0.63 19.0	10.00 254.0	6.19 157.0	3.23 82.0	2.50 63.5	1/2"	1/2"
BV3H/4H-1000****	1"	6000 413.8	0.88 24.0	10.00 254.0	6.94 176.3	3.98 101.1	3.25 82.6	1/2"	1/2"
BV3H/4H-1250****	1 1/4"	6000 413.8	1.13 31.5	14.50 368.3	8.14 206.8	4.58 116.3	3.75 95.3	1/2"	1/2"
BV3H/4H-1500****	1 1/2"	6000 413.8	1.31 36.1	14.50 368.3	8.64 219.5	5.08 129.0	4.25 108.0	1/2"	1/2"
BV3H/4H-2000****	2"	6000 413.8	1.75 48.0	14.50 368.3	10.20 255.8	6.33 157.7	5.50 139.7	1/2"	1/2"



BV3H & BV4H TRUE MULTI-WAY

Flow Characteristic and Actuation Torque Curves



BV3H & BV4H Ball Pattern Schematic

BALL CODE	ISO CIRCUIT SCHEMATIC	BALL PATTERN	HANDLE PHASE 0° 45° 90° 135° 180°	STOP WASHER TYPE
A		L-Bore 90° 3-Way Std.		
B		T-Bore 45°		
C		T-Bore 90° 3-Way and 3-Way Opt.		
D		T-Bore 180° 4-Way Std.		
F		X-Bore 90° 4-Way Opt.		

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.

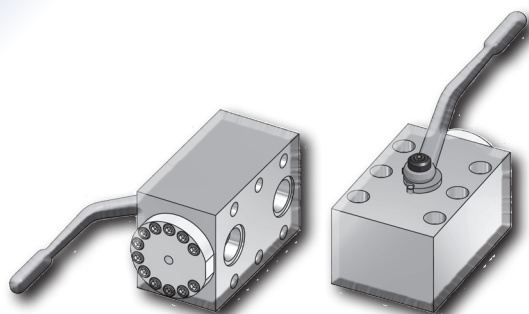


BVMM MANIFOLD MOUNT

2-and 3-Way models

3000/6000 PSI Working Pressure ~ Sizes from ¼" to 2"

Aluminum & Steel models dimensionally interchangeable ~ Near-zero leakage BVMMZ 3-way



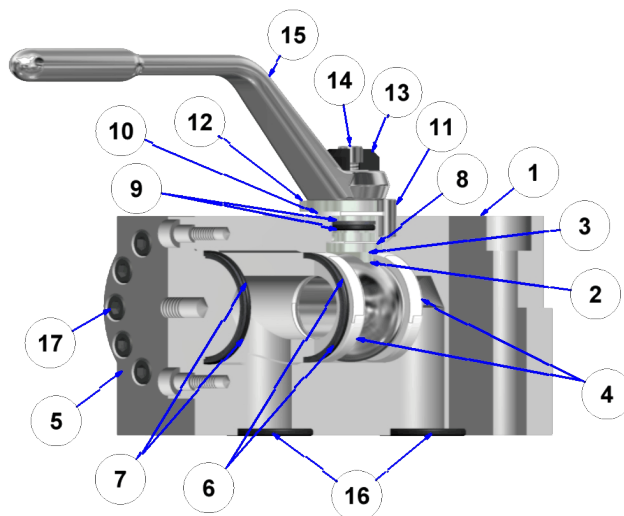
DMIC's re-engineered **BVMM** brings into the cost-competitive mainstream the possibility of surface mounting a High Pressure **2- or 3-Way** ball valve to your custom manifold, eliminating an external fluid connection and improving the integrity of your design. Choice of aluminum construction balances valve pressure characteristics with your selected manifold material. Exclusive and original DMIC design.

- Offered with "L-Bore" standard, "T" bore optional in 90° and 180° action
- **Made in our U.S. factory** for fast delivery in Steel (6000 PSI) and lightweight Aluminum model for 3000 PSI service
- **Single Bolt-On Plug Design** reduces pressure drop and valve cost

Service Parts BOM

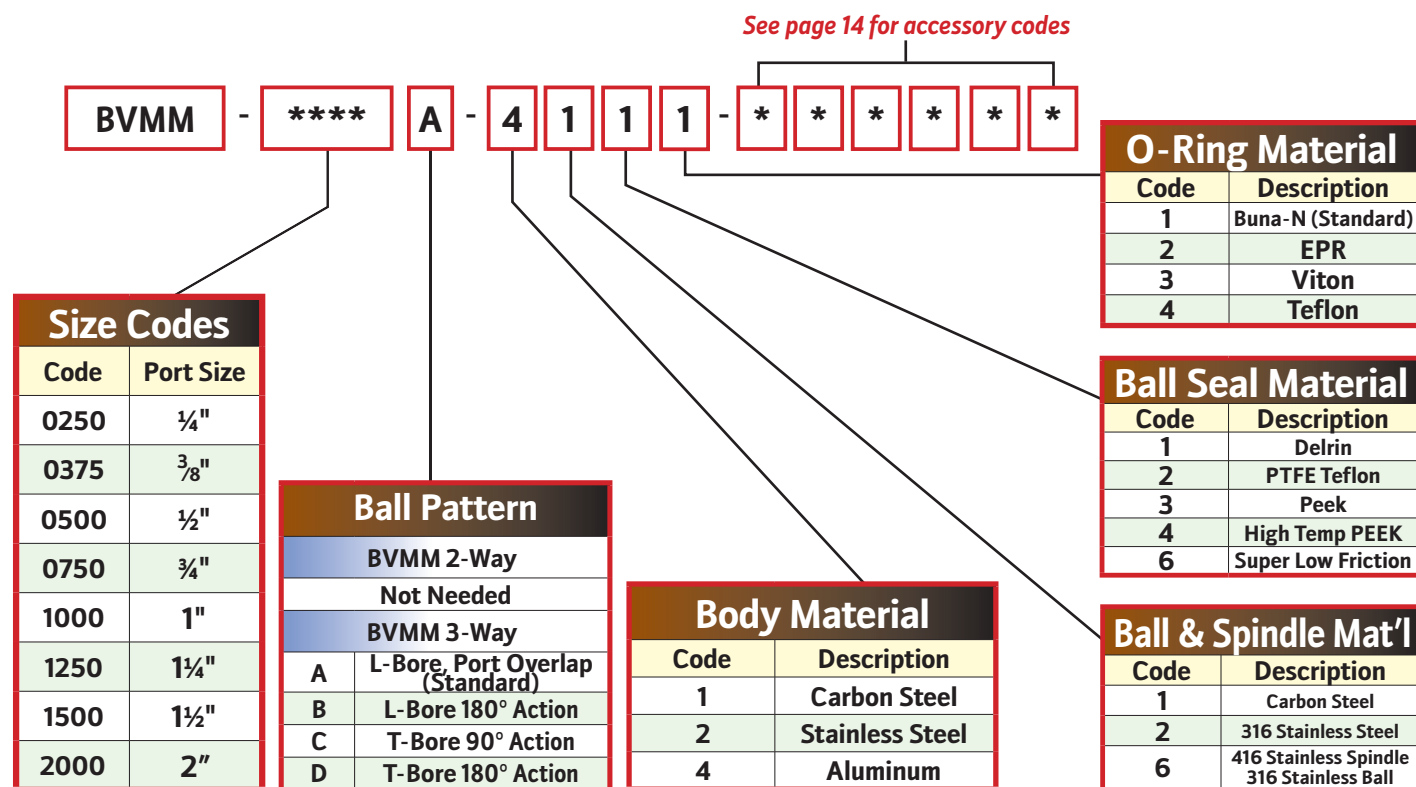
BVMM	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle
4	2	Ball Seal
5	*	End Connection(s)
6	*	Inner End Connection O-Ring
7	*	Outer End Connection O-Ring
8	1	Internal Thrust Washer
9	1	Spindle O-Rings
10	1	External Glide Washer
11	1	Stop Pin
12	1	Stop Washer
13	1	Color Code Cap
14	1	Top Cap Screw
15	1	Handle
16	1	Face O-Rings

* - Quantity depends on size and combination of body



BVMM MANIFOLD MOUNT

Ordering Codes Summary



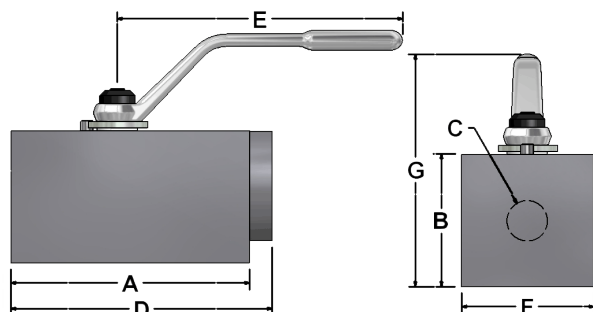
Note: Changes from standard materials may result in changes to temperature and/or pressure rating. Also, carbon and stainless steel valves come standard with a steel crank handle; while an aluminum valve comes equipped with an aluminum crank handle.

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.

BVMM MANIFOLD MOUNT

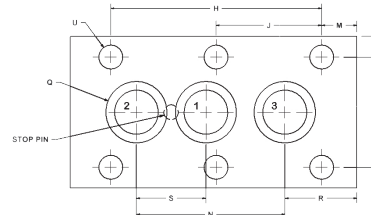
BVMM		Ball Valve Dimensions									
Part Number	Port Size	Rated Pressure PSI / bar	Valve Dimensions (in)								
			Valve Length A	Body Height B	Internal Bore C	Overall Length D	Handle Length E	Valve Width F	Overall Height G	Bolt Dist A H	Bolt Dist B J
BVMM-0250-****	1/4"	6000 413.8	2.62	1.50	0.24	3.06	4.50	2.00	3.12	1.653	These models have only 4 bolt holes
BVMM-0250-4***		3000 206.9	2.62	1.50	0.24	3.06	4.50	2.00	3.12	1.653	
BVMM-0375-****	3/8"	6000 413.8	3.22	1.70	0.38	3.66	4.50	2.25	3.32	2.165	
BVMM-0375-4***		3000 206.9	3.22	1.70	0.38	3.66	4.50	2.25	3.32	2.165	
BVMM-0500-****	1/2"	6000 413.8	3.95	2.00	0.51	4.38	4.50	2.25	3.62	3.267	1.633
BVMM-0500-4***		3000 206.9	3.95	2.00	0.51	4.38	4.50	2.25	3.62	3.267	1.633
BVMM-0750-****	3/4"	6000 413.8	5.21	2.75	0.79	5.64	7.00	2.75	5.23	3.818	1.909
BVMM-0750-4***		3000 206.9	5.21	2.75	0.79	5.64	7.00	2.75	5.23	3.818	1.909
BVMM-1000-****	1"	6000 413.8	5.85	3.25	0.94	6.41	7.00	3.25	5.73	4.528	2.264
BVMM-1000-4***		3000 206.9	5.85	3.25	0.94	6.41	7.00	3.25	5.73	4.528	2.264
BVMM-1250-****	1 1/4"	6000 413.8	7.00	3.75	1.25	7.63	10.00	4.00	6.94	5.354	2.677
BVMM-1250-4***		3000 206.9	7.00	3.75	1.25	7.63	10.00	4.00	6.94	5.354	2.677
BVMM-1500-****	1 1/2"	6000 413.8	7.45	3.94	1.50	8.20	10.00	5.00	7.13	4.409	2.199
BVMM-1500-4***		3000 206.9	7.45	3.94	1.50	8.20	10.00	5.00	7.13	4.409	2.199
BVMM-2000-****	2"	6000 413.8	9.10	4.75	1.89	8.20	10.00	6.00	7.91	5.354	2.684
BVMM-2000-4***		3000 206.9	9.10	4.75	1.89	8.20	10.00	6.00	7.91	5.354	2.684

BVMM	Manifold Mounting Pad Dimensions								
Part Number	Port Size	Mounting Pad Dimensions (in)							
		Hole Spacing K	Bolt Hole from Opposite side of Stop Pin M	Port 2 to 3 Ctr N	Cntr of Bolt Hole to Body P	O-Ring Diam/Size Q	Opposite Side of Stop Pin to Port 3 R	Port 2 to 1 Center S	Bolt Hole & Max Bolt U
Fits BVMM-0250****	¼"	1.377	0.612	1.535	0.312	0.500 2-109	0.642	0.865	0.350 5/16", M8
Fits BVMM-0375****	⅜"	1.574	0.770	1.732	0.338	0.625 2-111	0.860	0.982	0.350 5/16", M8
Fits BVMM-0500****	½"	1.770	0.293	2.283	0.240	0.750 2-113	0.947	1.040	0.350 5/16", M8
Fits BVMM-0750****	¾"	2.008	0.892	2.716	0.371	1.063 2-211	1.594	1.210	0.410 ⅜", M10
Fits BVMM-1000****	1"	2.362	0.760	3.188	0.444	1.313 2-215	1.549	1.496	0.510 ½", M12
Fits BVMM-1250****	1¼"	3.070	0.676	3.780	0.465	1.563 2-219	1.580	1.810	0.516 ½", M12
Fits BVMM-1500****	1½"	3.740	1.661	4.409	0.630	1.875 2-223	1.661	2.210	0.656 ⅝", M16
Fits BVMM-2000****	2"	4.410	2.177	5.354	0.795	2.250 2-226	2.177	2.670	0.830 ¾", M20



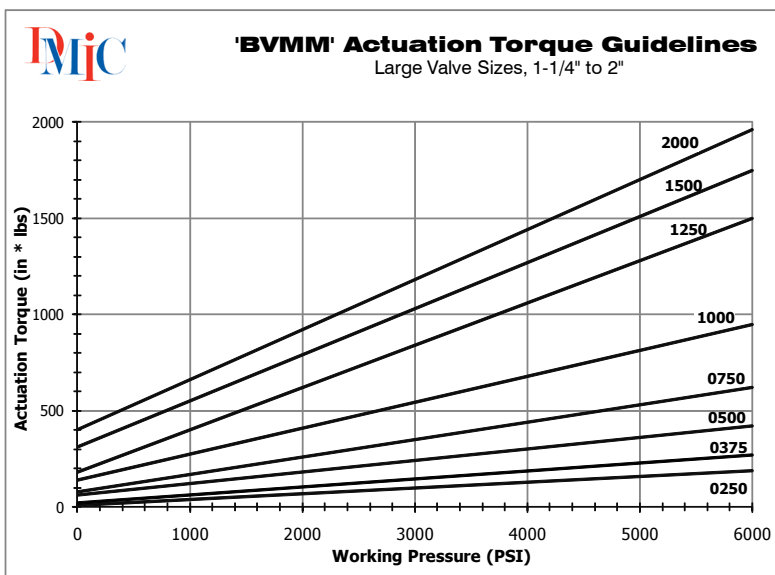
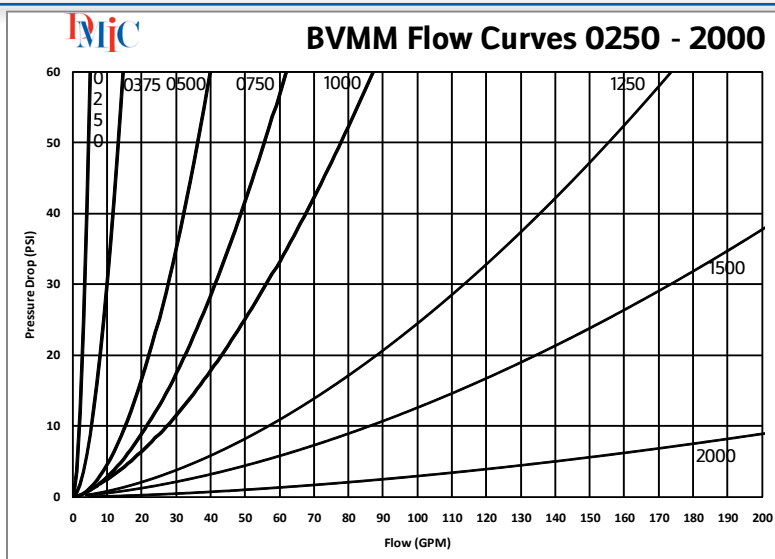
Note: the "PIN" location on the pad diagram. This is the stop pin on the valve top. DMIC ships valves with the handle pointing opposite of the pin.

Manifold Pad Dimensions



BVMM MANIFOLD MOUNT

Flow Characteristic and Actuation Torque Curves



BVMM Ball Pattern Schematic

BALL CODE	ISO CIRCUIT SCHEMATIC	BALL PATTERN	HANDLE PHASE					STOP WASHER TYPE
			0°	45°	90°	135°	180°	
A		L-Bore Port Overlap						
B		L-Bore 180°						
C		T-Bore 90°						
D		T-Bore 180°						

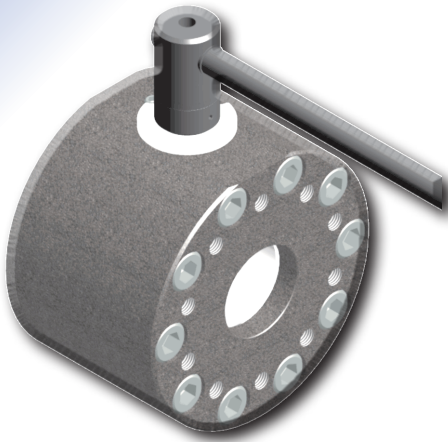
Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



BVFF FIXED FLANGE LARGE BORE

3000/6000 PSI – DM-Flange, ANSI, DIN

*Uses non-SAE high strength flanges for high working pressures ~ Sizes from 2½" to 6"
Standard with bolt-on DM-Flange, optional ANSI/DIN flange ~ Custom order to 12"+*



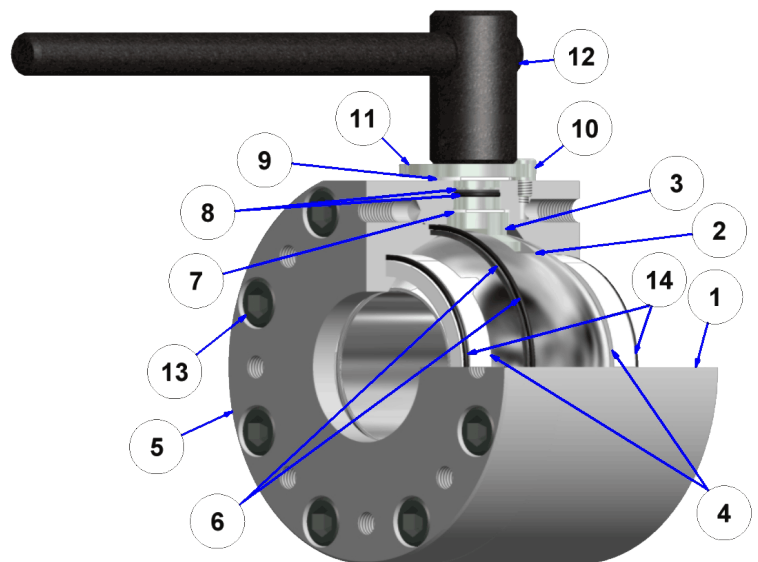
The BVFF family comprises aluminum, steel, and stainless steel versions, enabling DMIC to furnish large valves to any ANSI or DIN/ISO Flange standard. In return, this is a cost effective way of achieving the compatible connection, pressure rating, and sealing/ material specification. Standard BVFF valves are equipped for either DMIC DM (3,000 PSI) or DH (6,000 PSI) flange connections. ANSI and DIN/ISO valves are pressure rated according to the class standard.

- **Superior Field Proven Design** features Large bore, durability, and fast spare parts available from our US factory
- Delrin Ball Seals and Buna-N elastomer seals standard. All DMIC sealing and valve material options available for wide fluid compatibility range.
- **Complete array of DMIC pre-engineered accessories** including lock kits, position sensing, and actuation compliment your project.
- These valves **cannot** be opened under pressure unless the pressure balance option is installed.

Service Parts BOM

BVFF SERVICE PARTS BOM		
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle
4	2	Ball Seal
5	1	End Connection
6	1	End Connection O-Ring
7	1	Internal Thrust Washer
8	1	Spindle O-Rings
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Handle
13	*	End Connection Bolts
14	2	Ball Seal O-Rings

* - Quantity depends on size and combination of body



BVFF FIXED FLANGE LARGE BORE

Specifying ANSI or DIN Flanges

DMIC's **BVFF** Ball Valve family is ideal for systems specifying ANSI or DIN flanged connections. Because our designs span three target pressure ranges, there is always a cost effective valve for your requirement. DMIC's flexible ordering system allows any flange standard to be applied to any valve sufficiently pressure rated. *When specifying ANSI or DIN Flange models, please request the latest dimensional print.*

Fixed Flange Valves larger than 6"

An emerging market for DMIC is the manufacture of very large valves for process, petrochemical, and pipeline installations. If your organization is open to possible substantial savings, consider partnering with DMIC on your next large scale project.

Fixed SAE/ANSI/DIN/DM Flange Ball Valve Order Codes

GROUP I: LOCKING HANDLES & LIMIT SWITCH BRACKETS

Z Zero Accessory ("none")
A Locking Handle
B Security Locking Handle
C/D Limit Sw Brkt, Single/Dual
E/F Locking LimSw Brkt, Single/Dual
G/H Security Locking LSB, Single/Dual
I/J Limit Sw Brkt, Single/Dual w/Switch
K/L Locking LSB, Single/Dual w/Switch
M/N Security LLSB, Single/Dual w/Switch

GROUP IV: HANDLE TYPE

D: Handle, High Torque Steel Standard with BVFF

See page 14 for accessory codes

GROUP II: MOUNTING & PREP

Z: Zero Accessory ("none")
A: Actuator Mount
P: Pressure Balance
Q: Locking Pressure Balance

GROUP III: ACTUATION

Please consult factory for a customized actuated Ball Valve quotation. Codes A-L for Double Acting, codes M-X for Spring Return

GROUP V: MOUNTING BRKTS

Call Factory for application assistance

GROUP VI: SURFACE FINISH

(Black Oxide standard on carbon steel)
D: Yellow Zinc Dichromate
E: Electroless Nickel

Valve Series	
Code	Port Size
BVFF	Large Bore Fixed Flange SAE/ANSI/DIN/DM-Flange

Size	
Code	Port Size
25	2½"
30	3"
40	4"
50	5"
60	6"

Connection Type	
Code	Description
DM	DMIC Flange 3000 PSI
DH	DMIC Flange 6000 PSI
AA	ANSI Class 150 (275 PSI)
AB	ANSI Class 300 (720 PSI)
AC	ANSI Class 600 (1440 PSI)
AD	ANSI Class 900 (2160 PSI)
AE	ANSI Class 1500 (3600 PSI)
AF	ANSI Class 2500 (6170 PSI)
DA	DIN 3202-F1
DB	DIN 3203-F4

Body Material	
Code	Description
1	Carbon Steel
2	Stainless Steel
4	Aluminum

Ball & Stem Mat'l	
Code	Description
1	Carbon Steel
2	316 Stainless Steel
4	Aluminum Ball
6	416 Stainless Spindle 316 Stainless Ball

Ball Seal Material	
Code	Description
1	Delrin
2	PTFE Teflon
4	High Temp PEEK
6	Ultra Low Friction Glass Reinforced Teflon
7	

O-Ring Seals	
Code	Description
1	Buna-N (Standard)
2	EPR
3	Viton
4	Teflon
5	Chemraz

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

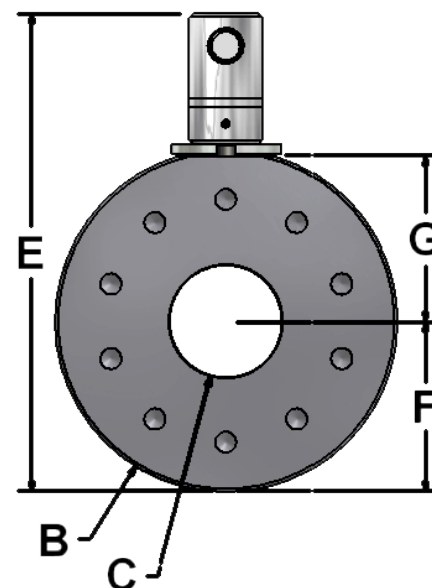
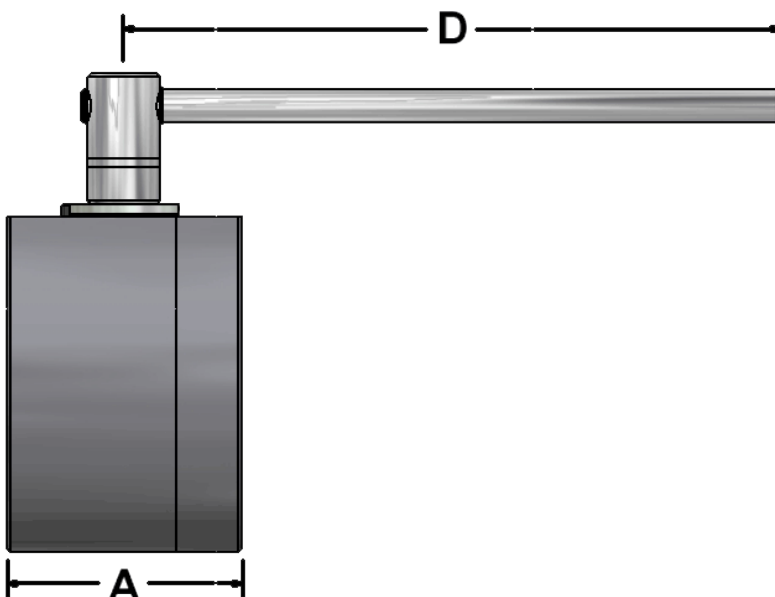
Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



BVFF FIXED FLANGE LARGE BORE

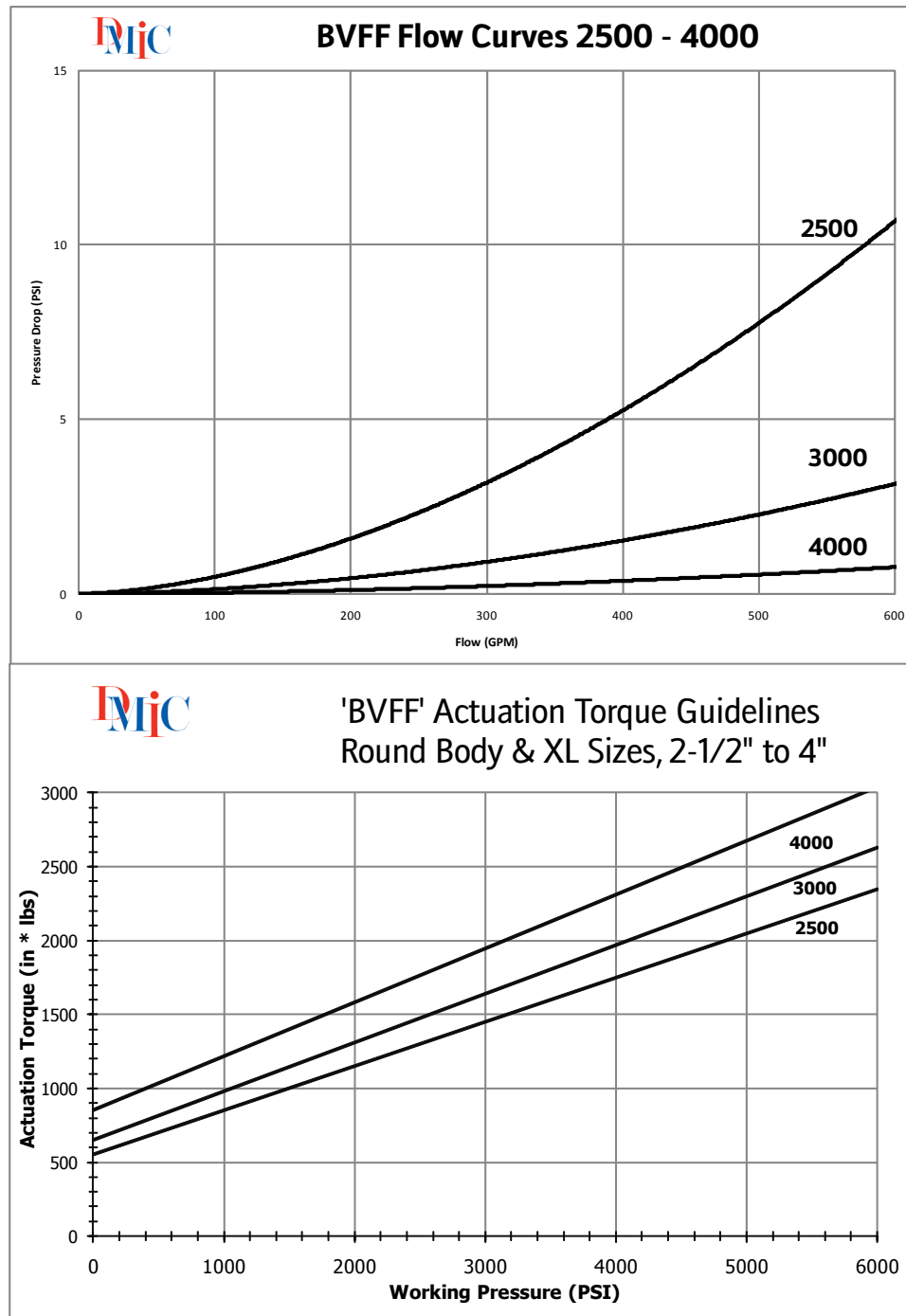
****NOTE:** Please replace ** in flange part number with W4=Sch.40, W8=Sch. 80, WF=Sch. 160, WG=XXStrong for socket weld flanges. Butt Weld flanges are as follows: B4 = Sch. 40, B8= Sch. 80, BF= Sch.160, BG = XXStrong.

BVFF	Port Size	Uses DMIC Flange	PSI Rating	Dimensions (inches)						
				A	ØB	ØC	D	E	F	G
				Overall Length	Valve Width	Valve Bore	Handle Length	Overall Height	PortCtr to Bot	PortCtr to Top
BVFF Fixed Flange, Round Body, DM Flange, 3000 PSI Rated										
BVFF-25DM**	2½"	FDM-25**-11	3000 PSI	5.00	6.44	2.50	14.50	9.93	3.22	3.09
BVFF-30DM**	3"	FDM-30**-11		5.89	7.44	3.00	14.50	10.90	3.72	3.55
BVFF-40DM**	4"	FDM-40**-11		6.88	9.00	4.00	14.50	12.62	4.50	4.25
BVFF-50DM**	5"	FDM-50**-11		9.00	12.44	5.00	20.00	16.23	6.22	6.22
BVFF-60DM**	6"	FDM-60**-11		10.63	12.94	5.19	20.00	16.74	6.47	6.47
BVFF Fixed Flange, Round H.D. Body, DH Flange, 6000 PSI										
BVFF-25DH**	2½"	FDH-25**-11	6000 PSI	6.19	7.44	2.50	14.50	10.75	3.72	3.40
BVFF-30DH**	3"	FDH-30**-11		5.89	7.94	3.00	14.50	11.41	3.97	3.81
BVFF-40DH**	4"	FDH-40**-11		7.13	10.45	3.44	20.00	14.60	5.22	5.00
BVFF-50DH**	5"	FDH-50**-11		10.25	13.44	5.00	20.00	17.25	6.72	6.72
BVFF-60DH**	6"	FDH-60**-11		11.78	14.94	5.19	20.00	18.99	7.47	7.47



BVFF FIXED FLANGE LARGE BORE

Flow Characteristic and Actuation Torque Curves



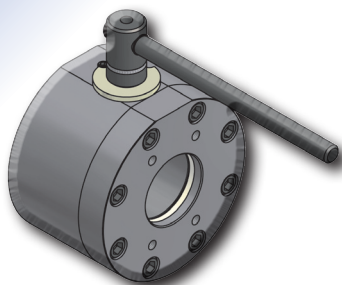
Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



DBBV FL/S9 FLANGE MOUNT

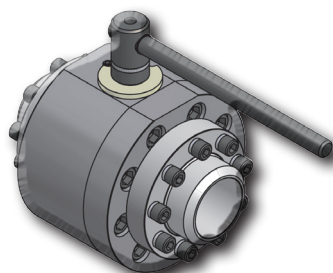
2½" - 5" Direct-fit Replacement for Large Imported Valves, Large Unrestricted Bore. Heavy Duty Fixed Flange

FL connection C.61 Pattern for Low PSI ~ Special "S9" 9-Bolt Pattern for High PSI



FL

Accommodates SAE Flanges and are pressure rated according to the connection standard (SAE Code 61)



S9

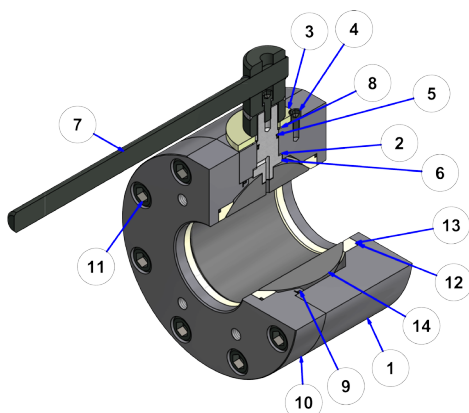
Accommodates Special Flanges for up to 5000 PSI Working Pressure

- Direct-fit replacement for imported two-way shut-off valve.
- Save installation time and improve system quality with DMIC's fixed flange large bore valves.
- Standard sizes range from 2 ½"-5" full bore, flange mount.
- Carbon steel (black oxide or zinc plated steel) construction.
- Standard Delrin ball seals & Viton seals. Other materials available for full fluid compatibility range.
- Wide variety of additional accessories available.
- Pressure balance option available. (See accessory codes pg.14)

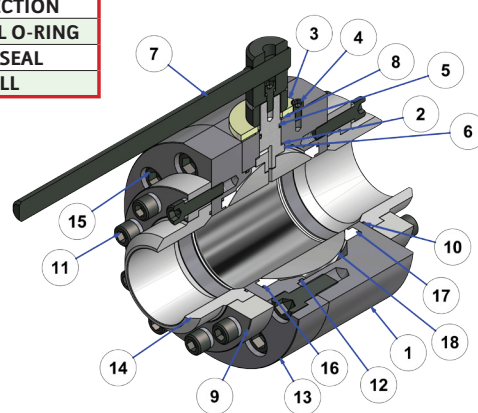
*Please note: From the closed position, these valves cannot be opened under pressure unless pressure balance option is installed.

Service Parts BOM

DBBV FL	SERVICE PARTS BOM	
Index	Qty	Description
1	1	VALVE BODY
2	1	THRUST WASHER
3	1	STOP WASHER
4	1	STOP PIN
5	1	SPINDLE O-RING + BACKUP
6	1	SPINDLE
7	1	HANDLE ASSEMBLY
8	1	GLIDE WASHER
9	1	END CONNECTION O-RING + BACKUP
10	1	END CONNECTION
11	9	BOLT-END CONNECTION
12	2	BALL SEAL O-RING
13	2	BALL SEAL
14	1	BALL



DBBV S9	SERVICE PARTS BOM	
Index	Qty	Description
1	1	VALVE BODY
2	1	THRUST WASHER
3	1	STOP WASHER
4	1	STOP PIN
5	1	SPINDLE O-RING + BACKUP
6	1	SPINDLE
7	1	HANDLE ASSEMBLY
8	1	GLIDE WASHER
9	2	FLANGE RING
10	2	FLANGE O-RING
11	18	FLANGE BOLTS
12	1	END CONNECTION O-RING + BACKUP
13	1	END CONNECTION
14	2	BUTT WELD END
15	9	BOLT-END CONNECTION
16	2	BALL SEAL O-RING
17	2	BALL SEAL
18	1	BALL



DBBV FL/S9 FLANGE MOUNT

Ordering Codes Summary

See page 14 for accessory codes

DBBV - ** **FL** or **S9** - 1 1 1 3 * * * * *

Size Codes	
Code	Port Size
25	2½"
30	3"
40	4"
50	5"
60+	Call

O-Rings	
Code	Description
1	Buna-N
2	EPR
3	Viton
5	Chemraz
6	Kalrez
7	Buna-3716 (Low Temp)

Seals, Bushings, Washers	
Code	Description
1	Delrin
4	High Temp Peek
6	Low Friction

Body & End Connections	
Code	Description
1	Carbon Steel - ASTM A108

Ball & Spindle	
Code	Description
1	Carbon Steel - ASTM A108

Connection Types				
Type	Code	Description	Max PSI	Use Flange (Sold Separately)
Std Code 61 SAE Mounting	FL	SAE C.61 Standard Pattern	Dependent Upon Bore Size	Any C.61 Standard
Special Replacement High Pressure Pattern + Butt Weld Flange	S9	9 Bolt Foreign Pattern	Dependent Upon Bore Size/ Pipe Size	FDBBVxx131 FDBBVxxWB*141 BKBBVxx1111 FLANGE RING BUTT WELD FLANGE BOLT KIT W/O-RING

xx DENOTES SIZE: 25=2½", 30=3", 40=4", 50=5"
 * DENOTES PIPE SCHEDULE: 4=SCH.40, 8=SCH.80, F=SCH.160. Other schedules available.

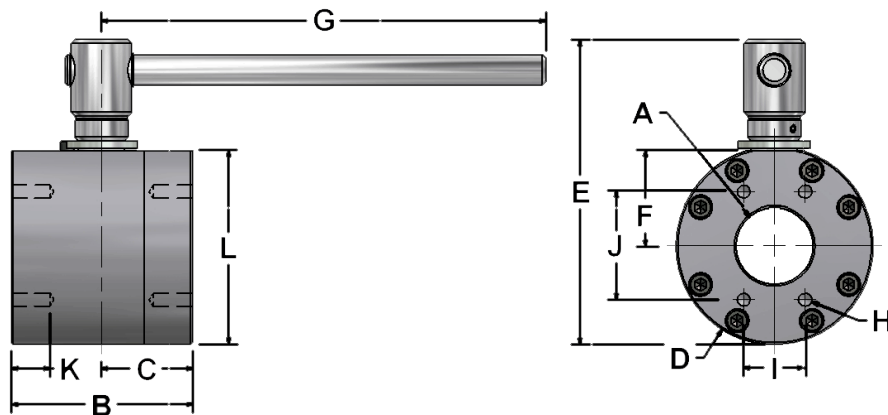
Note: Changes from Standard Materials may result in changes to temperature and/or pressure rating.

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.

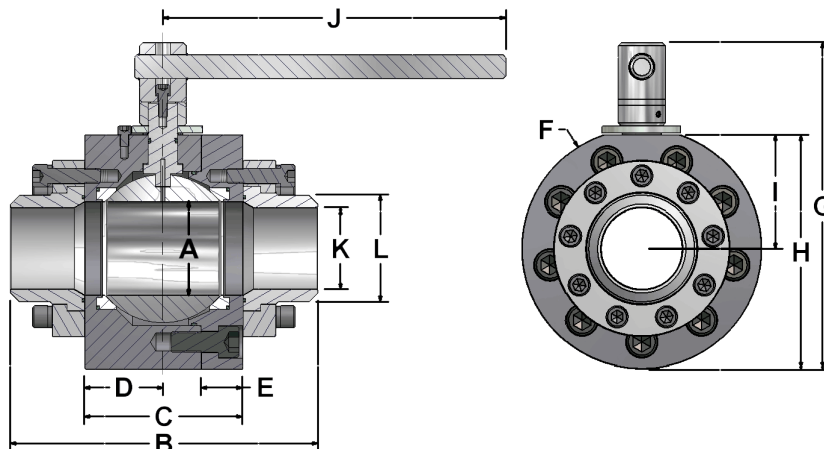


DBBV FL/S9 FLANGE MOUNT

DBBV FL	Port Size	Maximum Working Pressure	Dimensions										
			ØA in/mm	B in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	H (UN-SCREW SIZE)	I in/mm	J in/mm	K in/mm
DBBV FL Flange Mount SAE Code 61 to 2500 PSI Rated													
DBBV-25FL****	2½"	2500 PSI (C.61)	2.50 63.50	5.91 150.11	2.96 75.18	6.44 163.58	9.93 252.22	3.09 78.49	14.50 368.30	1/2"	2.00 50.80	3.50 88.90	0.88 22.35
DBBV-30FL****	3"	2000 PSI (C.61)	3.00 76.20	5.51 139.95	2.85 72.39	7.44 188.98	10.71 272.03	3.36 85.34	14.50 368.30	5/8"	2.44 61.98	4.19 106.43	0.94 23.88
DBBV-40FL****	4"	500 PSI (C.61)	3.94 100.08	6.69 169.93	3.34 84.84	10.00 254.00	13.70 347.98	4.82 122.43	14.50 368.30	5/8"	3.06 77.72	5.13 130.30	0.94 23.88
DBBV-50FL****	5"	500 PSI (C.61)	4.65 118.11	8.27 210.06	4.13 104.90	11.61 294.89	15.43 391.92	5.51 139.95	20.00 508.00	3/4"	3.63 92.20	6.00 152.40	1.18 29.97

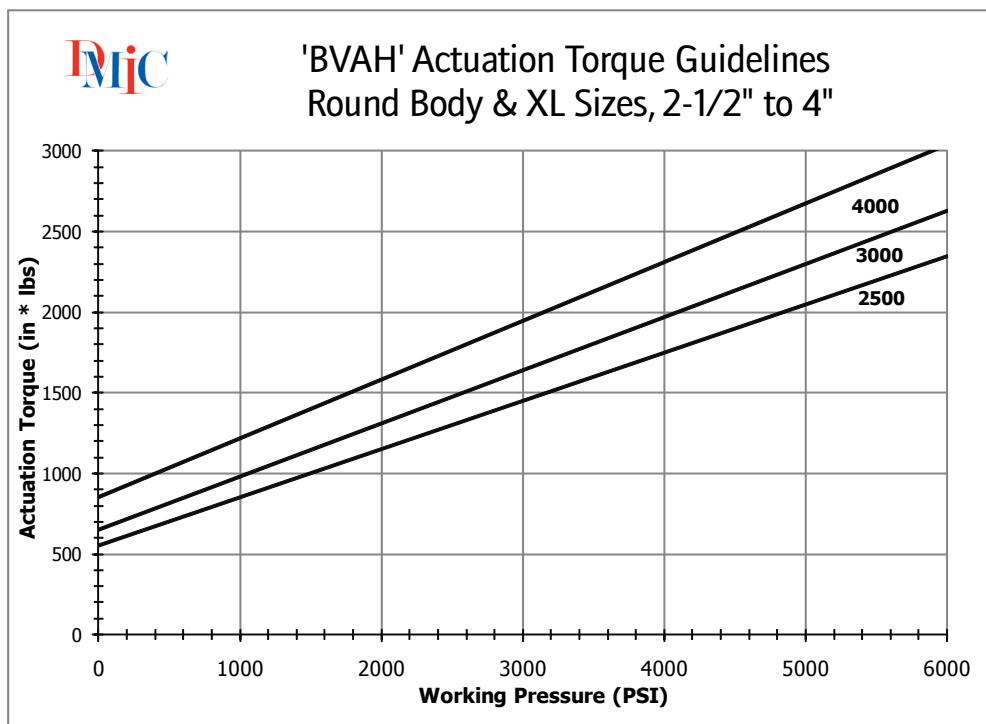
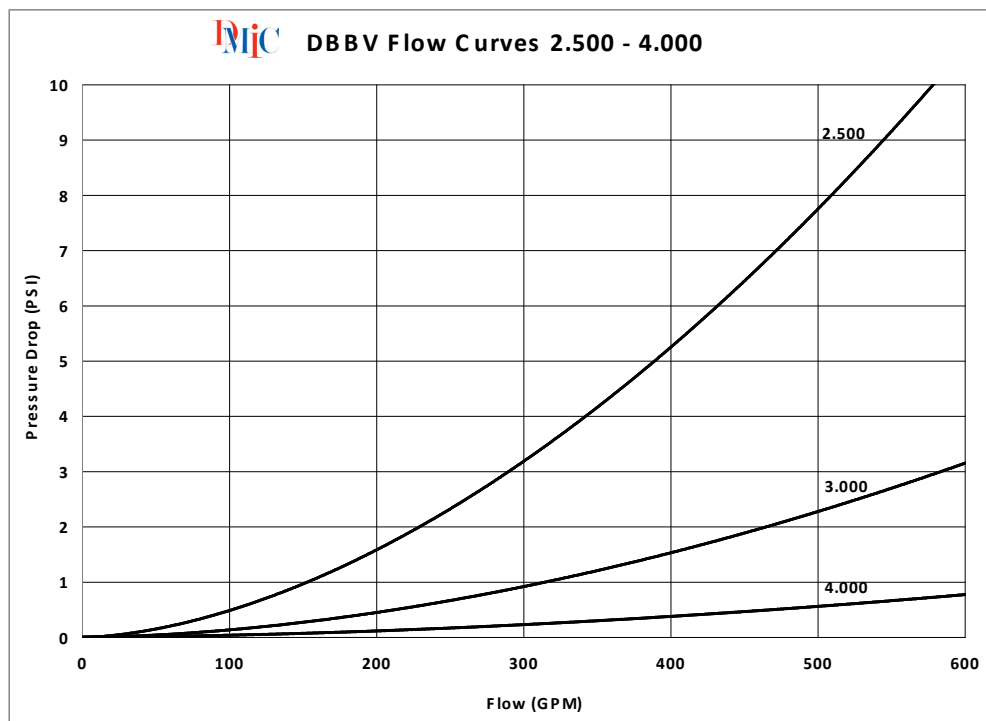


DBBV S9	Port Size	Maximum Working Pressure	Dimensions											*SPECIFY PIPE SCHEDULE WHEN ORDERING	
			ØA in/mm	B in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	H in/mm	I in/mm	J in/mm	UN-SCREW SIZE	ØK (FOR SCH.160 PIPE)*	ØL (FOR SCH.160 PIPE)*
DBBV S9 9-Bolt Pattern Flange Mount to 5000 PSI Rated															
DBBV-25S9****	2½"	4000	2.50 63.50	9.84 249.94	5.91 150.11	2.95 74.93	1.69 42.93	7.80 198.12	11.13 282.70	7.60 193.04	3.70 93.98	14.50 368.30	1/2"-13 x 1-1/2"	2.13 54.10	2.88 73.15
DBBV-30S9****	3"	4000	3.00 76.20	10.24 260.10	5.59 141.99	2.76 70.10	1.38 35.05	8.27 210.06	11.75 298.45	8.07 204.98	3.93 99.82	14.50 368.30	5/8"-11 x 2"	2.63 66.80	3.50 88.90
DBBV-40S9****	4"	4000	3.94 100.03	12.99 329.95	6.69 169.93	3.35 85.09	1.77 44.96	10.16 258.06	13.75 349.25	9.88 250.95	4.80 121.92	14.50 368.30	5/8"-11 x 2-1/2"	3.44 87.38	4.50 114.30
DBBV-50S9****	5"	4000	4.65 118.11	14.57 370.08	8.27 210.06	4.13 104.90	1.89 48.01	11.61 294.89	15.75 400.05	11.31 287.27	5.51 139.95	20.00 508.00	3/4"-10 x 2-1/2"	4.31 109.47	5.56 141.22



DBBV FL/S9 FLANGE MOUNT

Flow Characteristic and Actuation Torque Curves



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.



BVDM DIRECT MOUNT BALL VALVE

Round Body C.61/62/ANSI/DIN/DMIC

Mounts between a pressure/inlet port and the connection flange for a low-profile, localized shutoff
Models for 3000 & 6000 PSI ~ Sizes from ½" to 6"

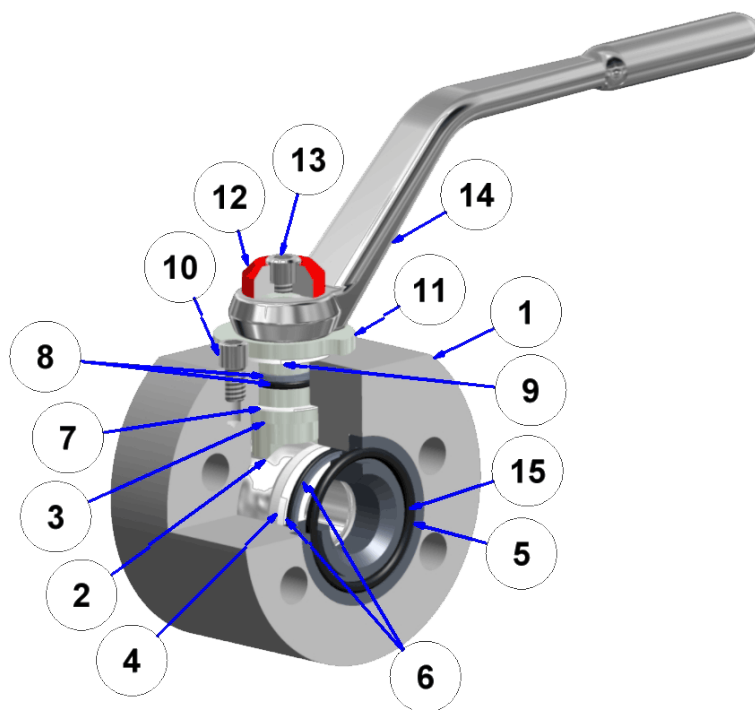


DMIC **BVDM** is the most compact and lowest cost choice when an SAE 4-Bolt or Split Flange Connection is desired. Optional stainless steel construction, wide array of sealing & options.

- **Exclusive DMIC Spindle-Glide Design** features low torque and the high duty cycle durability that differentiates DMIC from ordinary valves
- **Delrin Ball Seals** and Buna-N standard elastomer seals, with all DMIC sealing options available for wide fluid compatibility range
- **Reduced bore allows for compact, lightweight design;** all Stainless Steel construction optional, with Buyer's choice of sealing

Service Parts BOM

BVDM	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle
4	2	Ball Seal
5	1	End Connection
6	1	End Connection O-Ring
7	1	Internal Thrust Washer
8	1	Spindle O-Ring
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Code Cap
13	1	Top Cap Screw
14	1	Handle
15	1	Face O-Ring

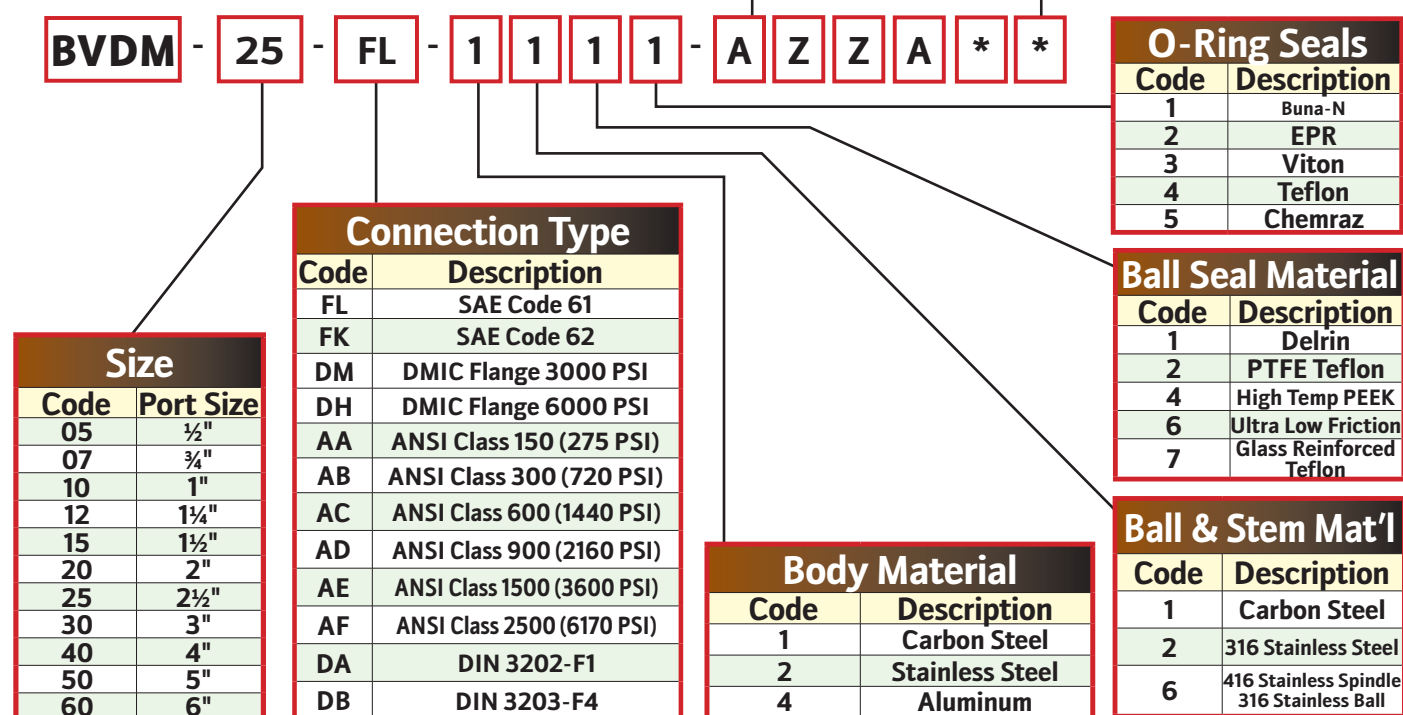


BVDM DIRECT MOUNT BALL VALVE

Ordering Codes Summary

Note: Valves larger than 2" cannot be opened under pressure

See page 14 for accessory codes



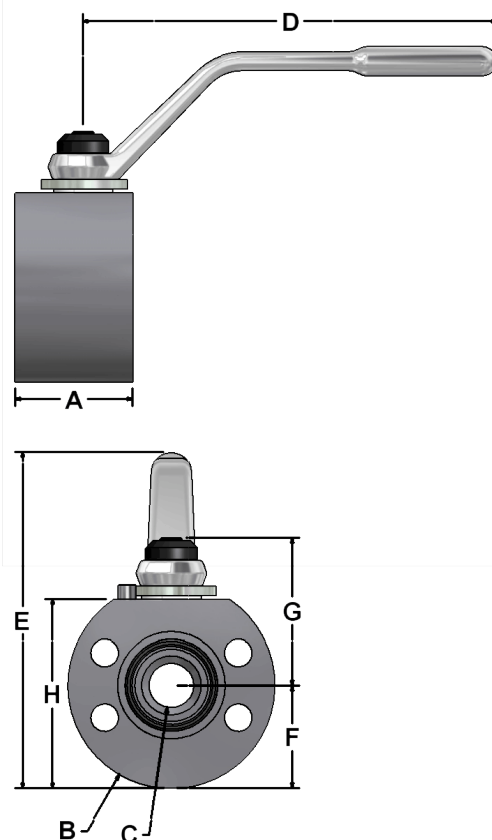
Note: Changes from Standard Materials may result in changes to temperature and/or pressure rating.

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.



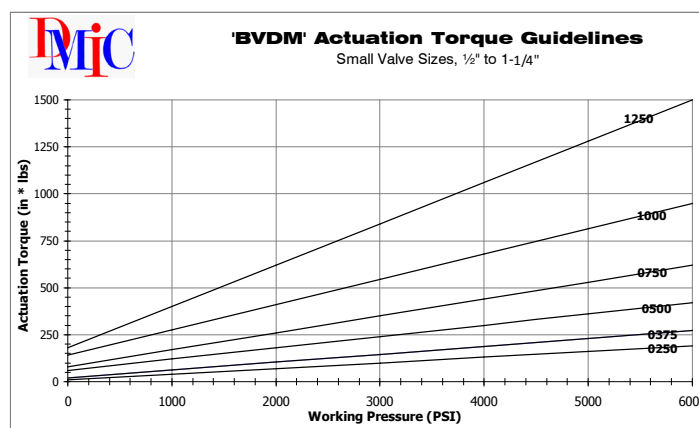
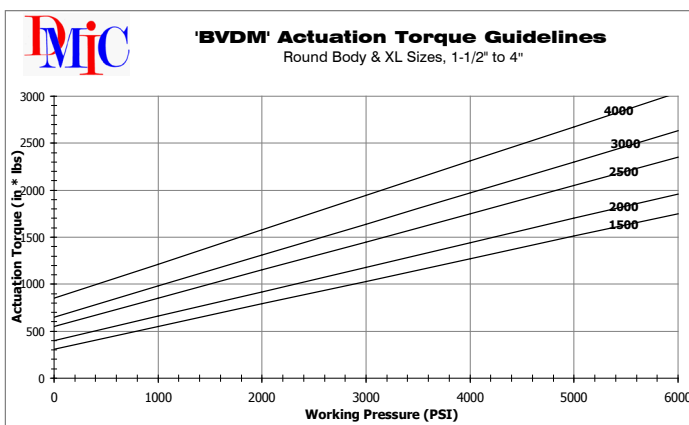
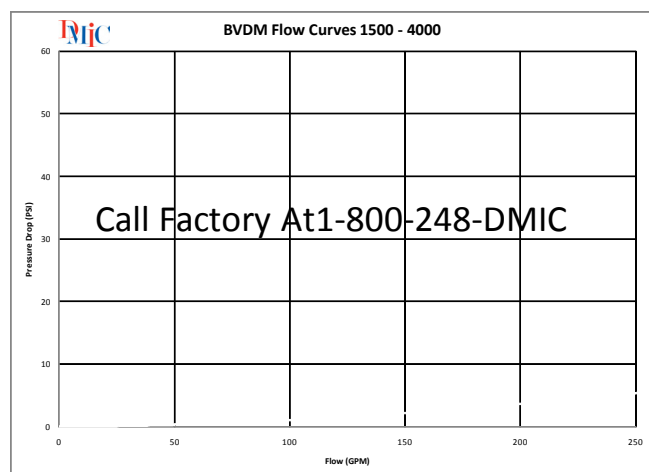
BVDM DIRECT MOUNT BALL VALVE

BVDM	Port Size	PSI Rating	Dimensions (inches)								
			A	ØB	ØC	D	E	F	G	H	O-Ring
			Valve Length	Valve Width (Dia)	Valve Bore (Dia)	Handle Length	Overall Height	Port Ctr to Bottom	Port Ctr to Top	Valve Height	-
BVDM - **FL Code 61 Direct Mount, Block Body, 3000 PSI											
BVDM-05FL****	½"	3000 PSI	1.50	2.50	0.50	4.50	3.92	1.25	1.83	2.30	2-210
BVDM-07FL****	¾"		2.00	3.25	0.75	7.00	5.37	1.63	2.31	2.90	2-214
BVDM-10FL****	1"		2.00	3.25	0.75	7.00	5.37	1.63	2.31	2.90	2-219
BVDM-12FL****	1¼"		2.25	3.50	0.94	7.00	5.58	1.75	2.34	3.10	2-222
BVDM-15FL****	1½"		2.75	4.25	1.25	9.86	7.11	2.13	3.11	3.91	2-225
BVDM-20FL****	2"		3.50	4.50	1.50	9.86	7.41	2.25	3.29	4.22	2-228
BVDM-25FL****	2½"		4.00	5.00	1.88	9.86	7.96	2.50	3.59	4.72	2-232
BVDM - **FK Code 62 Direct Mount, Block Body, 6000 PSI											
BVDM-05FK****	½"	6000 PSI	1.50	2.50	0.50	4.50	3.92	1.25	1.83	2.30	2-210
BVDM-07FK****	¾"		2.00	3.25	0.75	7.00	5.37	1.63	2.31	2.90	2-214
BVDM-10FK****	1"		2.00	3.50	0.75	7.00	5.67	1.75	2.50	3.20	2-219
BVDM-12FK****	1¼"		2.25	4.00	0.94	7.00	6.10	2.00	2.66	3.62	2-222
BVDM-15FK****	1½"		2.75	5.00	1.25	9.86	7.94	2.50	3.51	4.75	2-225
BVDM-20FK****	2"		3.50	5.50	1.50	9.86	8.23	2.75	3.61	5.04	2-228
BVDM-25FK****	2½"		CALL FACTORY								



BVDM DIRECT MOUNT BALL VALVE

Flow Characteristic and Actuation Torque Curves



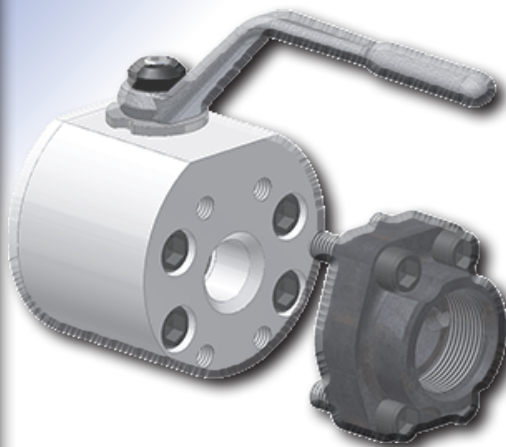
Due to our policy of continual product improvement, the specifications in this catalog may change without notice. When designing by spec, please request a certified print.



BVDMF CAPTIVE DIRECT MOUNT BALL VALVE

Round Body C.61/62/ANSI/DIN/DMIC

*Mounts between a pressure/inlet port and the connection flange for a low-profile, localized shutoff
Models for 3000 & 6000 PSI ~ Sizes from ½" to 6"*

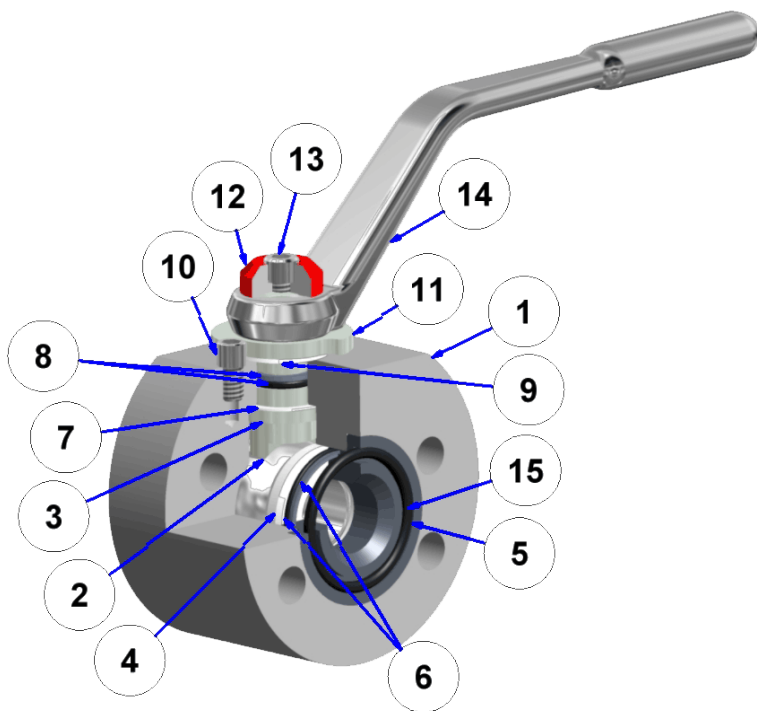


DMIC **BVDMF** is the most compact and lowest cost choice when an SAE 4-Bolt or Split Flange Connection is desired. Optional stainless steel construction, wide array of sealing & options.

- **Exclusive DMIC Spindle-Glide Design** features low torque and the high duty cycle durability that differentiates DMIC from ordinary valves
- **Delrin Ball Seals** and Buna-N standard elastomer seals, with all DMIC sealing options available for wide fluid compatibility range
- **Large ball bore** reduces pressure drop; all Stainless Steel construction optional, with Buyer's choice of sealing
- Similar to BVDM but with a threaded C.61 or C.62 SAE 4-bolt Mounting Pad

Service Parts BOM

BVDMF	SERVICE PARTS BOM	
Index	Qty	Description
1	1	Valve Body
2	1	Ball
3	1	Spindle
4	2	Ball Seal
5	1	End Connection
6	1	End Connection O-Ring
7	1	Internal Thrust Washer
8	1	Spindle O-Ring
9	1	External Glide Washer
10	1	Stop Pin
11	1	Stop Washer
12	1	Color Code Cap
13	1	Top Cap Screw
14	1	Handle
15	1	Face O-Ring

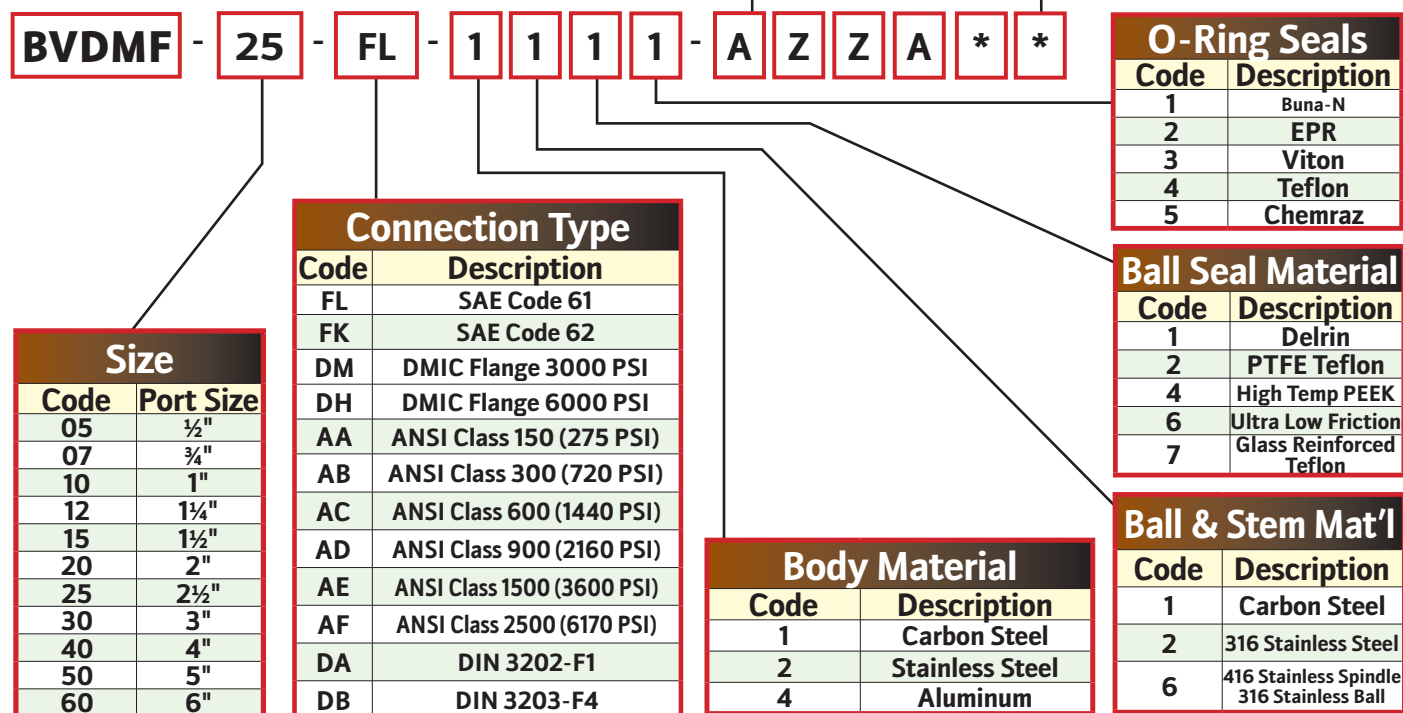


BVDMF CAPTIVE DIRECT MOUNT BALL VALVE

Ordering Codes Summary

Note: Valves larger than 2" cannot be opened under pressure

See page 14 for accessory codes



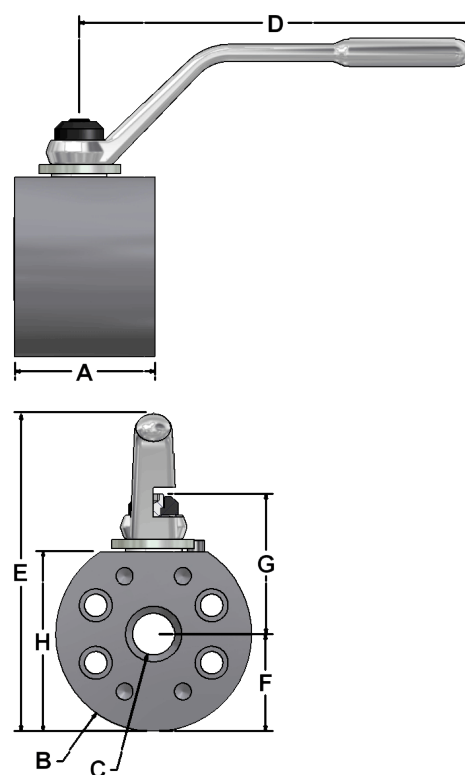
Note: Changes from Standard Materials may result in changes to temperature and/or pressure rating.

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.



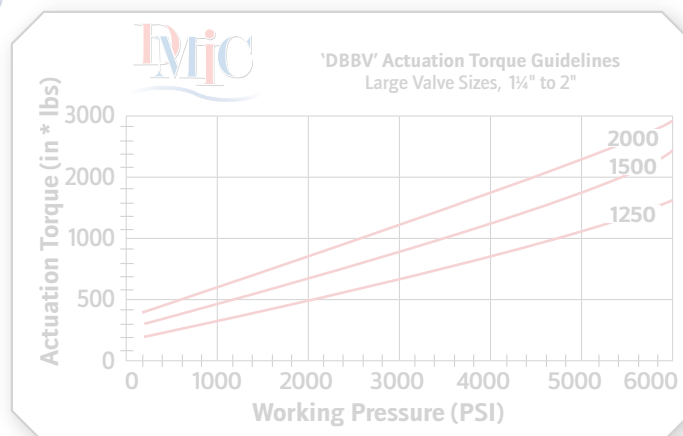
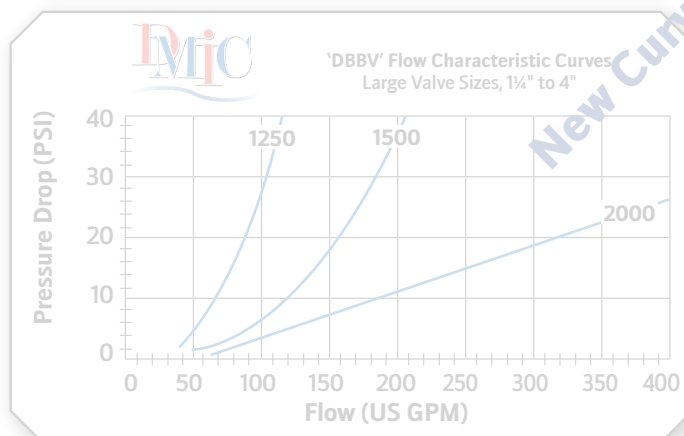
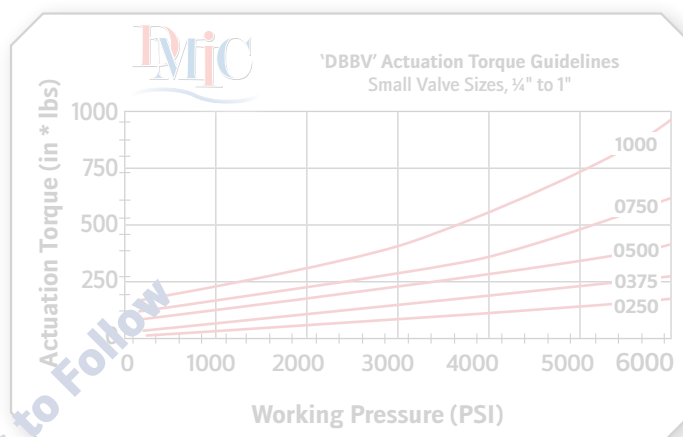
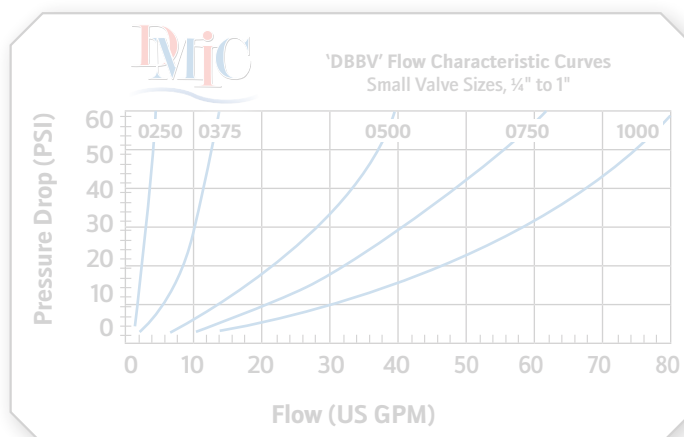
BVDMF CAPTIVE DIRECT MOUNT BALL VALVE

BVDMF	Port Size	PSI Rating	Dimensions (inches)								
			A	ØB	ØC	D	E	F	G	H	O-Ring
			Valve Length	Valve Width (Dia)	Valve Bore (Dia)	Handle Length	Overall Height	Port Ctr to Bottom	Port Ctr to Top	Valve Height	-
BVDMF - **FL Code 61 Direct Mount, Block Body, 3000 PSI											
BVDMF-05FL****	½"	3000 PSI	2.00	2.63	0.50	4.50	4.09	1.31	1.91	2.46	2-210
BVDMF-07FL****	¾"		2.50	3.50	0.75	7.00	5.71	1.75	2.49	3.24	2-214
BVDMF-10FL****	1"		2.50	3.50	0.75	7.00	5.70	1.75	2.46	3.22	2-219
BVDMF-12FL****	1¼"		3.00	4.50	0.94	7.00	6.64	2.25	2.90	4.16	2-222
BVDMF-15FL****	1½"		3.25	4.50	1.25	9.86	7.42	2.25	3.24	4.23	2-225
BVDMF-20FL****	2"		3.50	5.00	1.50	9.86	7.98	2.50	3.55	4.79	2-228
BVDMF-25FL****	2½"		CALL FACTORY								
BVDMF - **FK Code 62 Direct Mount, Block Body, 6000 PSI											
BVDMF-05FK****	½"	6000 PSI	2.00	2.75	0.50	4.50	4.15	1.38	1.91	2.53	2-210
BVDMF-07FK****	¾"		2.50	3.50	0.75	7.00	5.71	1.75	2.49	3.24	2-214
BVDMF-10FK****	1"		2.50	3.75	0.75	7.00	6.00	1.88	2.62	3.49	2-219
BVDMF-12FK****	1¼"		3.00	4.50	0.94	7.00	6.64	2.25	2.90	4.16	2-222
BVDMF-15FK****	1½"		3.25	5.00	1.25	9.86	7.94	2.50	3.51	4.75	2-225
BVDMF-20FK****	2"		4.25	6.00	1.50	9.86	8.86	3.00	3.93	5.67	2-228
BVDMF-25FK****	2½"		CALL FACTORY								



BVDMF CAPTIVE DIRECT MOUNT BALL VALVE

Flow Characteristic and Actuation Torque Curves



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.



BVSS DUAL PATTERN SAE 4-BOLT BV, C.61 & 62

Replaces expensive and long-delivery foreign valves
6000 PSI ~ Sizes from ½" to 2"



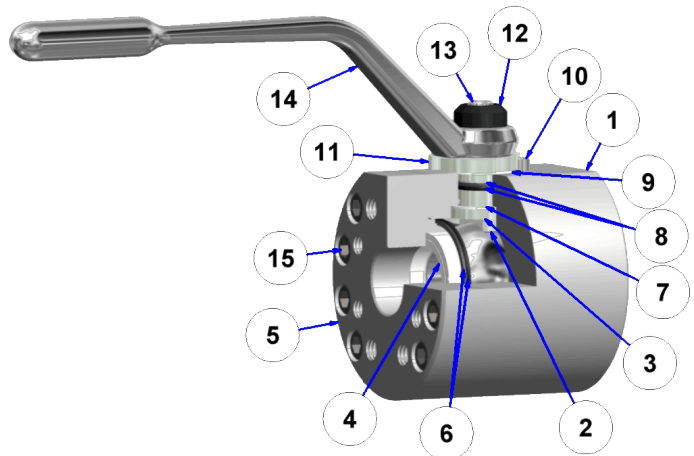
DMIC **BVSS** economically covers all the bases in SAE 4-Bolt C.61 & 62 Flange connections. This is the valve to stock if you can only keep one model, and it can bridge dissimilar flange standards.

- **Spindle-Glide Design** features low torque, high duty cycle durability
- **Delrin Ball Seals** and Buna-N standard elastomer seals, with all DMIC sealing options available for wide fluid and temperature compatibility range
- **Unrestricted bore ball** reduces pressure drop
- **Available in Stainless Steel - Fast Delivery**

Service Parts BOM

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

* - Quantity depends on size and combination of body



BVSS DUAL PATTERN SAE 4-BOLT BV, C.61 & 62

Fixed SAE/ANSI/DIN/DM Flange Ball Valve Order Codes

GROUP I: LOCKING HANDLES & LIMIT SWITCH BRACKETS

Z.....Zero Accessory ("none")
A.....Locking Handle
B.....Security Locking Handle
C/D...Limit Sw Brkt, Single/Dual
E/F....Locking LimSw Brkt, Single/Dual
G/H...Security Locking LSB, Single/Dual
I/J.....Limit Sw Brkt, Single/Dual w/Switch
K/L....Locking LSB, Single/Dual w/Switch
M/N...Security LLSB, Single/Dual w/Switch

GROUP IV: HANDLE TYPE

A: Handle, Crank, Steel
Standard with BVSS

*See page 14 for
accessory codes*

GROUP II: MOUNTING & PREP

Z: Zero Accessory ("none")
B: Bottom Mounting Holes
G: Panel Mounting Holes

GROUP III: ACTUATION

Please consult factory for
a customized actuated Ball
Valve quotation. Codes A-L
for Double Acting, codes
M-X for Spring Return

GROUP V: MOUNTING BRKTS

Call Factory for
application assistance

GROUP VI: SURFACE FINISH

Call Factory for
available surface

Valve Series	
Code	Port Size
BVSS	SAE Dual C.61/62

Size	
Code	Port Size
05	½"
07	¾"
10	1"
12	1¼"
15	1½"
20	2"

Connection Type	
Code	Description
FK	Dual SAE C.61/62 (Standard on BVSS)

Body Material	
Code	Description
1	Carbon Steel
2	Stainless Steel

Ball & Stem Mat'l	
Code	Description
1	Carbon Steel
2	Stainless Steel
6	416 Stainless Spindle 316 Stainless Ball

Ball Seal Material	
Code	Description
1	Delrin
2	PTFE Teflon
4	High Temp PEEK
6	Ultra Low Friction
7	Glass Reinforced Teflon

O-Ring Seals	
Code	Description
1	Buna-N
2	EPR
3	Viton
4	Peek
5	Chemraz

BVSS - 20 - FK - 1 1 1 1 - A Z Z A * *

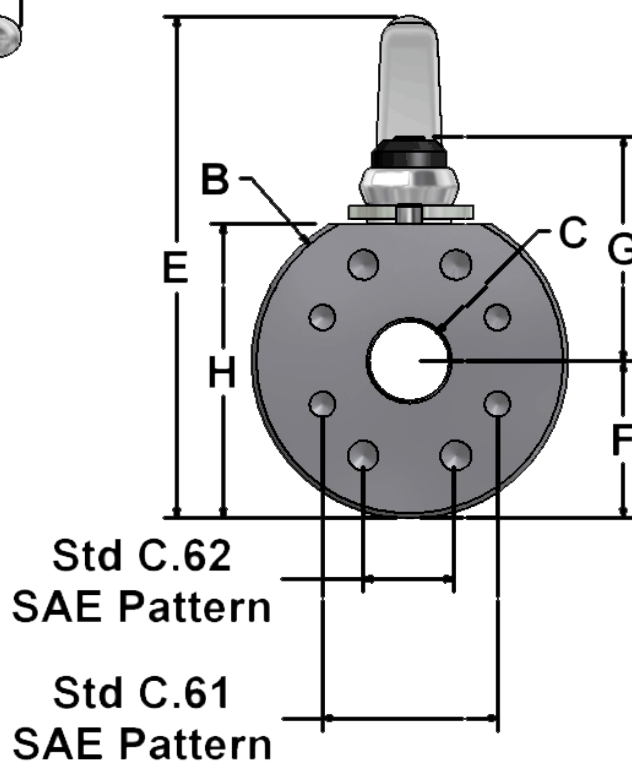
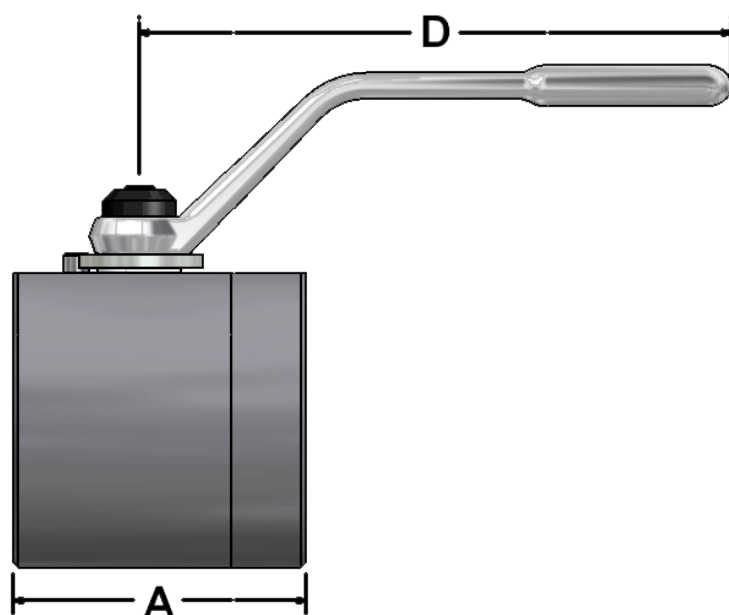
Note: Changes from Standard Materials may result in changes to temperature and/or pressure rating.
*Due to our policy of continual product improvement, the specifications in this catalog
may change without notice. When designing by spec, please request a certified print.*



BVSS DUAL PATTERN SAE

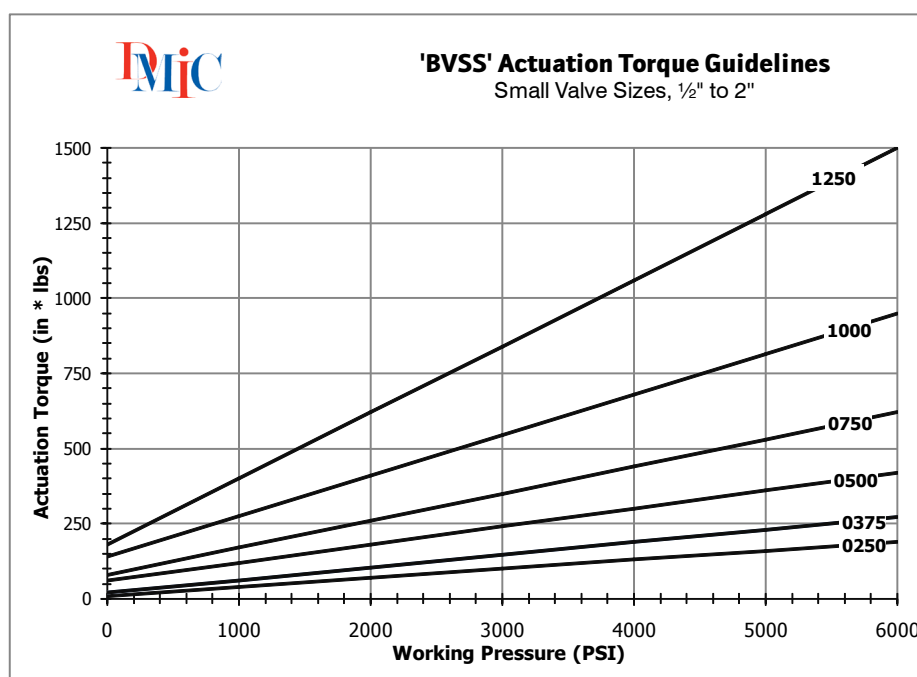
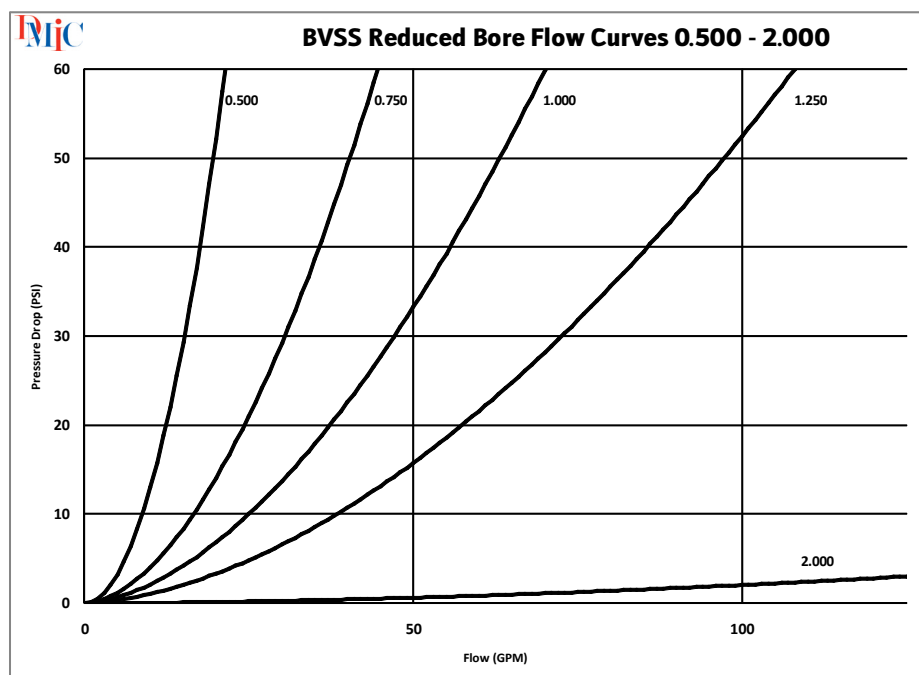
4-BOLT BV, C.61 & 62

BVSS	Dimensions (inches)										
	Port Size	PSI Rating	A Valve Length	B Valve Width	ØC Valve Bore	D Valve Height	E Overall Height	F Bot to Port Ctr	G Port Ctr to Top	H Handle Length	J Overall Length
BVSS-07FK****	¾"	C.62 6000	3.15	3.50	0.75	3.26	5.71	1.75	1.51	7.00	8.29
BVSS-10FK****	1"		3.46	3.75	0.95	3.48	5.93	1.88	1.61	7.00	8.41
BVSS-12FK****	1¼"		3.94	4.44	1.25	4.18	7.30	2.22	1.96	10.00	11.83
BVSS-15FK****	1½"		4.33	5.00	1.50	4.72	7.83	2.50	2.22	10.00	11.90
BVSS-20FK****	2"		4.57	6.00	1.88	5.50	8.61	3.00	2.50	10.00	11.83



BVSS DUAL PATTERN SAE 4-BOLT BV, C.61 & 62

Flow Characteristic and Actuation Torque Curves



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.



SV2C & SV3C

2-Way and 3-Way Intramanifold Valves



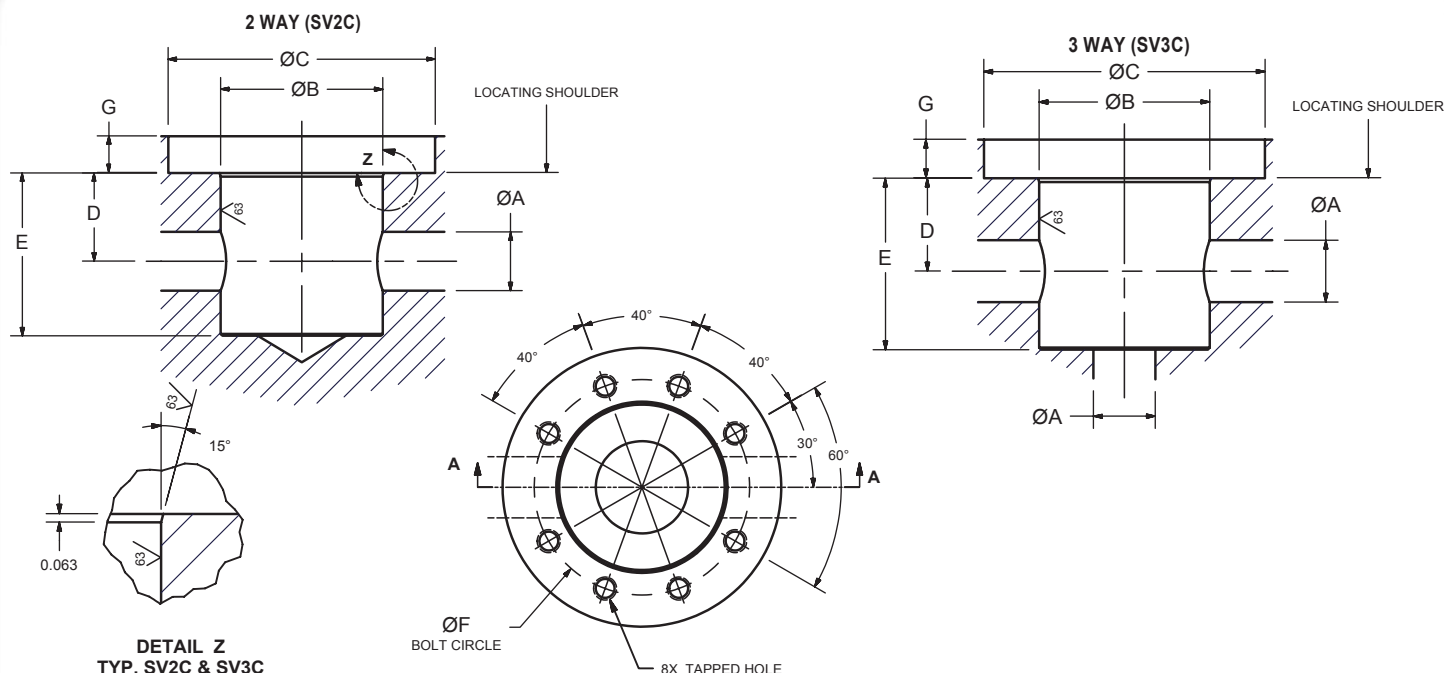
- Install this DMIC high quality valve directly into your existing or production manifold using an easy-to-machine blind hole cavity.
- DMIC's ingenious design is easy to install, eliminating the possibility of cutting o-rings on cross holes.
- Completely compatible with DMIC's full range of accessories.
- Available in sizes ranging from ½" through 2" with pressure ratings up to 6000 PSI
- Construction available in carbon or stainless steel with full line of seal and elastomer materials.
- Larger sizes available upon request.

We offer ½" through 2" but give DMIC Sales a call for any size larger!

Insert Valves	Port Size	PSI Rating	Cavity Dimensions (inches)							
			A	B	C	D	E	F	G	-
			Valve Bore (±0.010)	Cavity Bore (+0.003 /-0.000)	Shoulder Diameter (+0.015 /-0.000)	Cntr of Bore to Btm of Shoulder (±0.005)	Cavity Depth (+0.000 /-0.015)	Bolt Circle (±0.010)	Shoulder Depth (±0.005)	Mounting Bolts (8x)
SV2C-0500****	½"	6000 PSI	0.500	2.003	3.560	1.375	2.390	2.750	0.625	3/8-16UNC
SV3C-0500****										
SV2C-0750****	¾"		0.750	2.503	4.060	1.786	3.051	3.125	0.625	3/8-16UNC
SV3C-0750****										
SV2C-1000****	1"		1.000	2.753	4.560	1.875	3.265	3.500	0.625	3/8-16UNC
SV3C-1000****										
SV2C-1250****	1¼"		1.250	3.253	5.060	2.000	3.515	4.125	0.875	½-13UNC
SV3C-1250****										
SV2C-1500****	1½"		1.500	4.003	7.060	2.500	4.890	5.500	1.125	5/8-11UNC
SV3C-1500****										
SV2C-2000****	2"		2.000	5.753	8.560	2.915	5.055	7.000	1.375	¾-10UNC
SV3C-2000****										

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.





Intramanifold Valve Order Codes

See page 14 for accessory codes

SV2C
or
SV3C

**** A - 1 1 1 1 - * * * * *

Size Codes

Code	Port Size
0500	½"
0750	¾"
1000	1"
1250	1¼"
1500	1½"
2000	2"

Ball Pattern

SV2C	
	Not Needed
SV3C	
A	90° L-Bore Diverter, Port Overlap
B	L-Bore 180° Action
C	T-Bore 90° Action

O-Ring Material

Code	Description
1	Buna-N
2	EPR
3	Viton
4	Teflon
5	Chemraz
6	Kalraz
7	Buna-3716 (Low Temp)

Ball Seal Material

Code	Description
1	Delrin
2	PTFE Teflon
4	High Temp Peek
6	Delrin AF (Low Friction)
7	Glass Reinforced Teflon

Ball & Spindle Mat'l

Code	Description
1	Carbon Steel
2	316 Stainless Steel
6	416 Spindle 316 Ball

Body Material

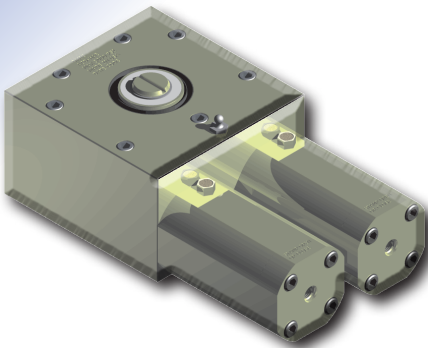
Code	Description
1	Carbon Steel
2	316 Stainless Steel

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



DMIC ACTUATORS

A Hydraulic Alternative to Standard Electric or Pneumatic 3000 PSI Max Operating Pressure ~ Dual Acting

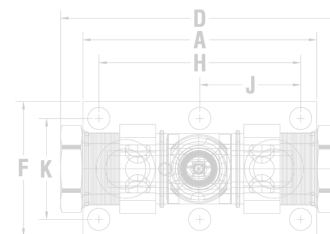
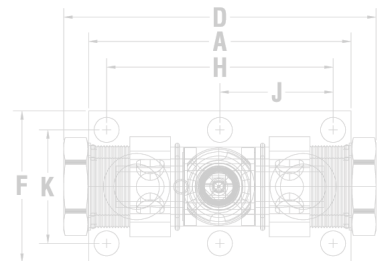


DMIC is proud to offer our line of hydraulic actuators for ¼ turn ball valves, an alternative to pneumatic or electric actuation, with high torque outputs in a small package. DMIC hydraulic actuators work with all DMIC ball valves and can easily be specified by adding the appropriate ordering codes to your ball valve selection!

DMIC actuators include these great features

- 3,000 maximum operating pressure
- Flow indicator
- Easily accepts other accessories, like limit switches or proximity sensors
- Smooth operation with dependable quality you've come to expect from DMIC
- over 1,000,000 cycles life (before repacking)

Actuators	Port Size	PSI Rating	Dimensions (inches)								
			A	B	ØC	D	E	F	G	H	OR
			Valve Length	Valve Width	Valve Bore	Valve Height	Overall Height	PortCtr to Top	Overall Length	Handle Length	O-Ring
BVFF Fixed Flange, Round Body, ANSI 150#, to 400 PSI Rated											
****	½"	3000 PSI	1.50	2.25	0.50	1.75	3.35	0.90	5.25	4.50	2-211
****	¾"		2.00	2.63	0.75	2.26	4.71	1.25	8.00	7.00	2-214
****	1"		2.00	2.82	0.79	2.26	4.71	1.25	8.00	7.00	2-219
****	1¼"		2.25	3.25	0.95	2.72	5.18	1.36	8.13	7.00	2-222
****	1½"		2.75	3.75	1.25	3.50	6.36	1.81	11.38	10.00	2-226
****	2"	2000 PSI	3.50	4.00	1.50	4.00	7.12	2.00	11.75	10.00	2-229
****	2½"		4.00	4.50	1.88	4.29	7.41	2.29	12.00	10.00	2-232
New Chart to Follow											
****		6000 PSI	1.50	2.25	0.50	1.75	3.35	0.90	5.25	4.50	2-211
****	¾"		2.00	2.81	0.75	2.26	4.71	1.25	8.00	7.00	2-214
****	1"		2.00	3.19	0.79	2.50	4.96	1.25	8.00	7.00	2-219
****	1¼"		2.25	3.75	0.95	2.72	5.18	1.36	8.13	7.00	2-222
****	1½"		2.75	4.25	1.25	3.50	6.61	1.81	11.38	10.00	2-226
****	2"		3.50	5.00	1.50	4.00	7.12	2.00	11.75	10.00	2-229
****	2½"		4.00	6.88	1.88	4.79	7.91	2.29	12.00	10.00	2-232



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.



Order Codes

Spring Crack PSI

Code	Port Size
05	5 PSI
65	65 PSI
Quick Delivery Options	
0	Zero PSI (Call)
15	15 PSI
30	30 PSI
75	75 PSI
115	115 PSI
135	135 PSI

O-Ring Face Position

Code	Description
U	O-Ring face at Inlet (std)
C	O-Ring face at Outlet
N	No O-Ring

Body Material

Code	Description
1	Carbon Steel
2	Stainless Steel
4	Aluminum

Poppet Material

Code	Description
1	Carbon Steel
2	Stainless Steel

O-Rings

Code	Description
1	Buna-N
2	EPR
3	Viton
4	Hi-Temp

Valve Series

Code	Port Size
CVDM	Direct Mount Check Valve
BVDM	Direct Mount Ball Valve

Size

Code	Port Size
05	1/2"
07	3/4"
10	1"
12	1 1/4"
15	1 1/2"
20	2"
25	2 1/2"
30	3"
40	4"
50	5"
60	6"

Connection Type

Code	Description
FL	SAE Code 61
FK	SAE Code 62
DM	DMIC Flange 3000 PSI
DH	DMIC Flange 6000 PSI
AA	ANSI Class 150 (275 PSI)
AB	ANSI Class 300 (720 PSI)
AC	ANSI Class 400 (960 PSI)
AD	ANSI Class 600 (1440 PSI)
AE	ANSI Class 900 (2160 PSI)
AF	ANSI Class 1500 (3600 PSI)
AG	ANSI Class 2500 (6000 PSI)
DA	DIN 3202-F1
DB	DIN 3203-F4

Sales: should we add these to this order codes chart as well? See page 14 for accessory codes

* * * * *

Body Material

Code	Description
1	Carbon Steel
2	Stainless Steel
4	Aluminum

Ball & Stem Mat'l

Code	Description
1	Carbon Steel
2	Stainless Steel

Ball Seal Material

Code	Description
1	Delrin
2	PTFE Teflon
4	High Temperature
6	Ultra Low Friction
7	Glass Reinforced Teflon

Orifice

Code	Description
1	None (Call for orifice options)

O-Ring Seals

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

New Codes to Follow

????

65

15

FL

U

1

1

1

1

25

FL

1

1

1

1

A

Z

Z

A

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



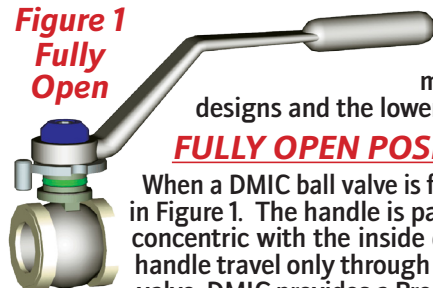
TECHNICAL APPENDIX

*A Guide for Engineers and Designers who wish to
verify technical characteristics or Engineering parameters.*



Floating Balanced Ball Design, Principles of Operation

Figure 1
Fully Open



This discussion of DMIC's Floating Balanced Ball Valve Design operation is primarily applicable to DMIC's High Pressure Ball Valves, although many aspects of operation are shared among the "trunnion ball" multiway designs and the lower pressure aluminum valves.

FULLY OPEN POSITION (Figure 1)

When a DMIC ball valve is fully open, the internal parts are aligned within the valve body as illustrated in Figure 1. The handle is parallel to the axis of fluid flow (factory default), and the ball openings are concentric with the inside diameters of the ball seals. A cam path cut into the stopwasher permits handle travel only through 90° of arc, which is why a 2-way ball valve is considered a "quarter-turn" valve. DMIC provides a Pressure Balancing Orifice in its balls which allows the medium to permeate the cavity within the valve at line pressure to moisten and prevent deterioration of valves left stationary for long periods of time.



PARTIALLY CLOSED POSITION (Figure 2)

When the handle is turned from the 0° position, the tab at the bottom of the spindle causes the ball to rotate proportionally and alters the ball valve assembly's effective cross-sectional area, thereby "closing" the valve. As the angle increases between the ball fluid passage and the axis of flow, the ball, which was previously constrained to pivot radially by the spindle tab (perpendicular to the axis of flow), is now permitted to pivot axially along the hypotenuse of a right triangle drawn between the axis of flow and the ball fluid passage (with force generated upon the ball seals proportional to the sine of the angle formed). At 90°, the sine equals one, the valve is fully closed, and all force exerted by fluid pressure acts to move the ball against the ball seals - hence, the ball is now fully "FLOATING" because it is free to pivot against and exert a force upon either downstream ball seal in response to forces arising from pressure at the upstream closing port.

Figure 3
Fully Closed



FULLY CLOSED POSITION (Figure 3)

In the fully closed position, the solid ball surface completely blocks the valve fluid passage and upstream line pressure exerts force upon the floating ball, pressing it into the downstream hard thermoplastic ball seal. With the ball's slight axial displacement toward the downstream seal, the upstream ball seal breaks contact with the ball and rides the meniscus. DMIC's innovative Pressure Balancing Orifice in each of our balls allows fluid at

upstream pressure to permeate the entire cavity of the closed valve, getting all the way around to the only ball seal that is actually sealing, and even behind it. A precision ridge machined opposite the ball seat of DMIC's Ball Seals acts as an additional surface upon which full line pressure is exerted, improving both low and high pressure sealing in DMIC Ball Valves relative to ordinary brands.

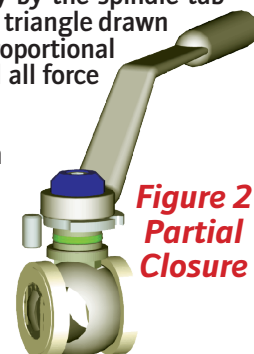


Figure 2
Partial Closure



Flow Characteristic Curves for DMIC 2-Way Ball Valves

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

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

Determining Pressure Drop at a Specific Flow Rate

DMIC Ball Valves promote smooth laminar flow with **STRAIGHT BALL PASSAGE & UNRESTRICTED BORE** design.

DMIC's 2-Way Ball Valves such as the **BVH and BVAL/M/H** series, impose so little pressure drop on their own that we include the curves with a 10 foot section of fluid line in the measurement loop.

This chart will give you a real-world indication of Ball Valve ΔP in a hypothetical 10 foot line.

DMIC's Multiway and Manifold Mounted Ball Valves introduce a pressure drop component because

instead of a straight fluid path, media must change direction as it travels through the valve. We have included valve pressure drop curves for each principal type of DMIC specialty ball valve. All flows quoted in this section taken with petroleum based fluid, 150 SUS, at 100°F (38°C).

Pressure Drop of DMIC Specialty Ball Valves

DMIC's specialty Ball Valves are precision designed to maximize available cross sectional area and minimize the protrusion of parts throughout internal fluid passages.

However, the nature of DMIC's trunnion ball multiway valves and manifold mounted valves, results in a pressure drop component that should be taken into account when designing circuits bearing these valve types. DMIC's quality oriented engineering bias results in valves which cost more to manufacture but provide among the best performance available among like valves in the field.

Please verify your application's operating conditions to confirm that the pressure drop is accounted for in your system design.



Sealing Materials Technical Data



Never operate DMIC Ball Valves outside the temperature range published below for your selected Thermoplastic & Elastomer materials, even if the combination is approved in the Media Acceptability Table (next page). You may experience valve leakage or failure, and will void the warranty.

Order Code	DMIC Description	Temperature Range		Seal Compound Identification	Acronym	Classification Synthesis	Trade Names	Chemical Resistance Examples	
		°F	°C					Suitable	Not Suitable
Ball Seal Materials (Digit 3)									
1	Delrin	-40°F to 180°F	-40°C to 82°C	Delrin Polyoxymethylene	DM POM	Thermoplastic Saturated heteropolymer of heterogeneous polymer chains	Delrin	Hydraulic Fluids Water Inert Gases Air Alcohols Glycols Petroleum based fluids	High molar acids & alkalis Fluorines Liquids for human consumption
2	PTFE Teflon™	-300°F to 450°F	-184°C to 232°C	Polytetra fluoroethylene	PTFE	Thermoplastic Homogeneous, pure polymer chains, containing fluorine	Teflon Hostaflon Fluon	Foodstuffs Acids & Alkalis Organic & Inorganic Solvents	Fluorines Liquid alkali metals
4	PEEK Hi-Temp	-76°F to 480°F	-60°C to 250°C	Polyether-ether-ketone	PEEK	Thermoplastic Aromatic Linear Polymer	Victrex	Most fluids acceptable with Delrin Moly Radioactive use	High molar acids & alkalis
6	Delrin AF Low Friction	-40°F to 180°F	-40°C to 82°C	Proprietary	PAI	Thermoplastic Combination of Teflon fibers uniformly dispersed in Delrin acetal resin.	Delrin AF	Hydraulic fluids Many acids Alcohols & organic solvents	Hot water Steam, Strong alkalis
9	Ferrous Special Applications	Call DMIC						Call DMIC	
O-Ring & Backup Seal Materials (Digit 4)									
1	Buna-N	-40°F to 250°F	-53°C to 100°C	Nitrile Butadiene rubber	NBR	Elastomer Unsaturated heteropolymer of heterogeneous polymer chains	Nitrile Perbunan Chemigum Elaprim Krynac	Petroleum based fluids Water Air Water-glycol	Phosphate esters
2	EPR	-70°F to 302°F	-57°C to 150°C	Ethylene-propylene-diene rubber	EPR EPDM	Elastomer Saturated heteropolymer utilizing double valence bands outside the primary chain	Buna AP Dutral Epcar Keltran Nordel	Phosphate esters Brake Fluid Acids & Alkalis	Petroleum based oil & grease Chlorinated hydrocarbons
3	Viton	-15°F to 400°F	-26°C to 204°C	Flurocarbon	FKM	Elastomer Multiple monomers & fluorine compounded into saturated heteropolymer	Viton Fluorel Technoflon	NBR compatible fluids Acids & alkalis	Phosphate esters
4	Teflon PTFE	-300°F to 450°F	-184°C to 232°C	Polytetrafluoroethylene	PTFE	Thermoplast Homogeneous, pure polymer chains, containing fluorine.	Teflon Hostaflon Fluon	Foodstuffs Organic & Inorganic Solvents	Fluorines Liquid alkali metals
5	Chemraz 510	-22°F to 446°F	-30°C to 230°C	Proprietary	FFKM	Perfluorolastomer Polymers of three or more monomers in which all hydrogen positions have been replaced with flourine	Chemraz	Acids Caustics Aldehydes Esters Aromatics Methanol	Fluorinated Refrigerants Perfluorinated Lubricants

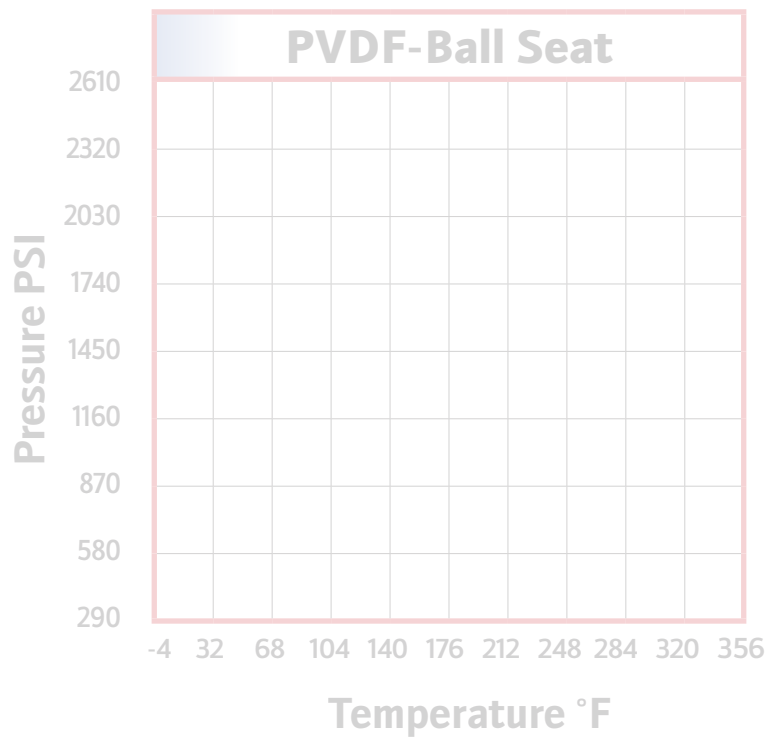
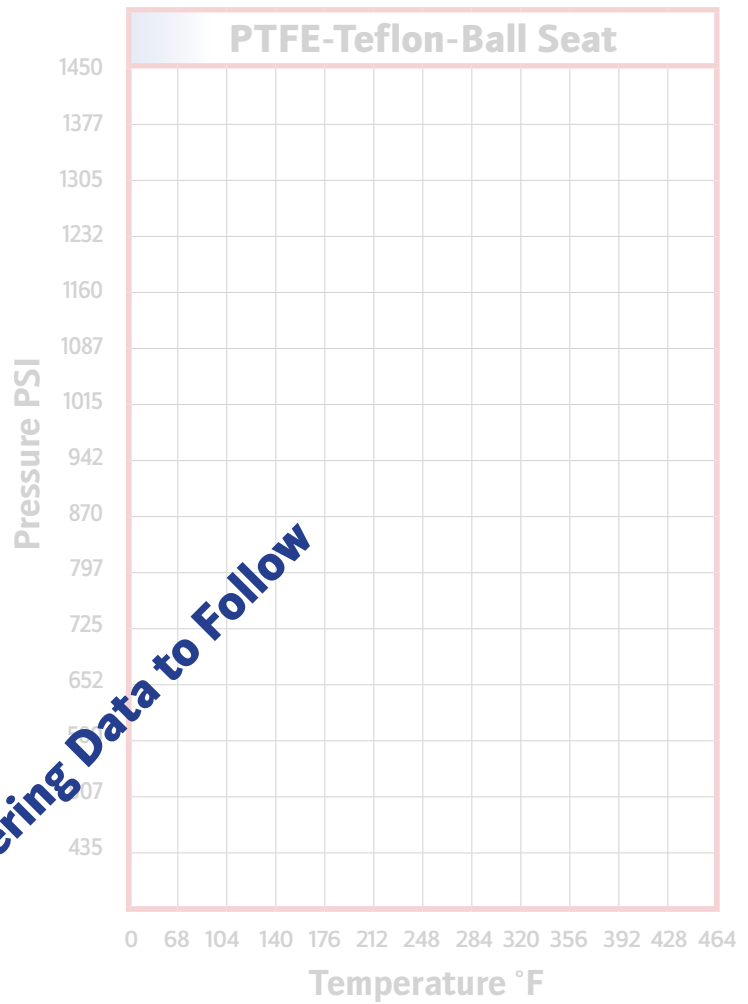
These are the main o-ring seal materials that DMIC uses. As always, if you would like another material to use for your application, call DMIC Sales. We would be more than happy to get the material you are requesting. For lower pressures (<1500 PSI) and vacuum, DMIC's softer PTFE Teflon Ball Seals are recommended.

In the BOM views for all valves, colors may have been changed for clarity.

This information provided as is, for reference purposes only. DMIC makes no guarantee as to the accuracy of this information. In the event of misapplication, the entire responsibility rests with the user. Verify your selection with your system's seal manufacturer for a final authority.



PTFE Engineering Data



Seal Compound to Media Compatibility Table

This media compatibility table is provided for your reference as an **INDICATION** of acceptable usage. Please bear in mind that DMIC relies upon suppliers of seal raw materials and premium brand O-Rings for much of this information and it is advised that you consult your system's seal supplier if there is any question or doubt. The seal manufacturer's data shall be considered a final authority in case of discrepancy.

<i>Fluid</i>	Buna-N	EPR	Viton	Teflon PTFE	Chemraz 510
Acetaldehyde	U	R	X	R	-
Acetamide	R	R	U	R	R
Acetic Acid, 5%	M	R	R	R	M
Acetone	U	R	X	R	R
Acetophenone	U	R	X	R	R
Acetylene	R	R	R	R	R
Acetylsalicylic Acid	M	X	R	-	R
Acrolein	U	R	U	-	R
Acrylic Acid	M	X	R	-	R
Air, Below 200°F	M	R	R	R	R
Air, 200°-300°F	U	M	R	R	R
Air, 300°-400°F	X	X	R	R	R
Air, 400°-500°F	X	X	U	R	M
Aluminum Hydroxide	M	R	M	-	R
Aluminum Nitrate	R	R	R	R	R
Ammonia	R	R	X	R	R
Ammonium Sulfate	R	R	X	R	R
Ammonium Sulfide	R	R	X	-	R
Ammonium Sulfite	U	R	U	-	R
Amyl Acetate	U	M	X	R	R
Anderol L-774	M	U	R	-	R
Antifreeze	R	R	U	-	R
Aniline	U	R	U	R	R
Ansul Ether	M	M	X	-	R
Argon	R	R	R	R	R
Aroclors	M	R	R	R	R
Askarel	R	U	R	R	R
Asphalt	M	X	R	-	R
ASTM #1	R	U	R	R	R
ASTM #3	R	U	R	R	R
ASTM Fuel A	R	U	R	R	R
ASTM Fuel B	R	U	R	R	R
ASTM Fuel C	R	U	R	R	R
ASTM Fuel D	M	U	R	R	R
Auto Transmission Fluid	R	U	R	R	R
Benzaldehyde	R	R	X	R	M
Benzene	U	R	R	R	R
Benzoic Acid	U	U	R	R	R
Benzophenone	-	R	R	-	R
Bezyl Alcohol	U	R	R	R	R
Bleach	R	R	R	R	R
Borax	R	U	R	-	R

<i>Fluid</i>	Buna-N	EPR	Viton	Teflon PTFE	Chemraz 510
Boric Acid	R	R	R	R	R
Brake Fluid DOT 3 & 4	U	R	X	-	R
Brake Fluid DOT 5	M	R	R	-	R
Bromine	U	R	R	R	R
Bromobenzene	U	U	R	R	R
Bunker	R	U	R	R	R
Butane	R	R	R	R	R
Butyl Acetate	U	U	X	R	R
Butyl Alcohol	R	R	R	R	R
Butyl Amine	M	U	X	-	R
Butyl Carbitol	U	M	U	R	R
Butyl Cellosolve	M	M	X	-	R
Butylaldehyde	U	U	X	X	R
Carbitol	R	R	M	R	R
Carbon Disulfide	U	U	R	R	R
Carbon Tetrachloride	R	U	R	R	R
Carbonic Acid	M	R	R	R	R
Castor Oil	R	M	R	R	R
Cellosolve	X	M	X	R	R
Chassis Grease	R	M	R	R	R
Chloric Acid	U	R	U	-	R
Chloroacetone	X	M	X	-	R
Chlordane	M	X	R	-	R
Chlorine, Dry	M	X	R	R	M
Chloroform	X	X	R	R	R
Chromic Acid	X	M	R	R	M
Citric Acid	R	R	R	R	R
Cod Liver Oil	R	R	R	R	R
Coffee	R	R	R	-	R
Corn Oil	R	U	R	R	R
Creosote, Coal Tar or Wood	R	X	R	R	R
Creosylic Acid	X	X	R	-	R
Crude Oil	M	X	R	R	R
Cyclohexane	R	X	R	R	R
Cyclohexanol	R	X	R	-	R
Decalin	X	X	R	R	R
Denatured Alcohol	R	R	R	-	R
Diacetone	X	R	X	R	R
Dialkyl Sulfates	U	R	U	-	R
Dibutyl Phthalate	X	M	U	R	R
Dichloro Aniline	U	R	U	-	R
Dichloro Butane	M	X	R	R	R

*This information provided as is, for reference purposes only. DMIC makes no guarantee as to the accuracy of this information.
In the event of misapplication, the entire responsibility rests with the user.
Verify your selection with your system's seal manufacturer for a final authority.*



Media Compatibility Table, cont.

~ Legend ~

R..... Recommended
M.... Marginal
U..... Doubtful
X..... Not Recommended
- Insufficient Data

Fluid	Buna-N	EPR	Viton	Teflon PTFE	Chemraz 510
Diesel Oil	R	X	R	R	R
Diethylamine	M	R	X	R	R
Diethyl Benzene	-	-	R	R	R
Diethylene Glycol	R	R	R	R	R
Dimethyl Ether	R	M	M	R	R
Dimethyl Formamid	M	R	X	R	M
Dimethyl Terephth	M	X	R	-	R
Dioctyl Phthalate	X	M	M	-	R
Dioxane	X	M	X	R	R
Diphenyl	X	X	R	R	R
Dow Corning 550	M	R	R	R	R
Dow Guard	R	R	R	-	R
Dowtherm A&E	X	X	R	R	R
Elco 28	R	X	R	-	R
Epoxy Resins	-	R	X	-	R
Ethane	R	X	R	R	R
Ethanol	U	R	U	R	R
Ethanolamine	M	R	X	-	R
Ethyl Acetate	X	M	X	R	R
Ethyl Benzene	X	X	R	R	R
Ethyl Cellulose	M	M	X	R	R
Ethyl Chloride	R	U	R	R	R
Ethyl Ether	U	U	X	R	R
Ethyl Formate	X	M	R	R	U
Ethyl Hexanol	R	R	R	R	R
Ethyl Mercaptan	X	-	M	R	R
Ethylene Chloride	X	X	M	R	R
Ethylene Oxide	X	U	X	R	U
Formaldehyde	U	M	X	R	R
Formic Acid	-	R	X	R	R
Freon 12	M	U	U	R	M
Fuel Oil #6	M	X	R	R	R
Furan	X	U	R	R	R
Furfural	X	M	X	R	M
Furfuryl Alcohol	X	M	-	R	R
Fyrquel EHC	U	R	R	-	-
Gallic Acid	M	M	R	R	R
Gasoline	R	X	R	R	R
Gelatin	R	R	R	R	R
Glucose	R	R	R	R	R
Glycerine	R	R	R	R	R
Helium	R	R	R	R	R

Fluid	Buna-N	EPR	Viton	Teflon PTFE	Chemraz 510
Hexaldehyde	X	R	X	-	R
Hexane	R	X	R	R	R
Hydrazine	M	R	X	R	M
Hydrochloric Acid, Concentrated @ Room Temp.	M	M	R	R	R
Iso Octane	R	X	R	R	R
Iso Phorone	X	M	X	-	R
Isopropanol	M	R	R	R	R
Isopropyl Acetate	X	M	R	R	R
JP-4(MIL-J5624)	R	X	R	R	R
JP-5(MIL-5624)	R	X	R	R	R
Kerosene	R	X	R	R	R
Lactic Acid, Hot	X	X	R	R	R
Lacquers	X	X	X	R	R
Lard	R	M	R	R	R
Linoleic Acid	M	X	M	R	R
Linseed Oil	R	U	R	R	R
Lye Solutions	M	R	M	R	R
Malathion	M	X	R	-	R
Maleic Acid	X	X	R	R	R
Mercury	R	R	R	R	R
Methane	R	X	R	R	R
Methanol	X	R	X	R	R
Methyl Acetate	X	M	X	R	R
Methyl Acrylate	X	M	X	R	R
Methyl Cellosolve	U	M	X	R	R
Methylene Chloride	X	U	R	R	R
Methyl Ethyl Ketone	X	R	X	R	R
Methyl Mercaptan	-	R	-	R	R
Milk	R	R	R	R	R
Mineral Oil	R	U	R	R	R
Mineral Spirits	X	X	R	R	R
Monovinyl Acetylene	R	R	R	-	R
Naphtha	R	X	R	R	R
Naphthalene	X	X	R	R	R
Naphthalenic Acid	X	X	R	R	R
Natural Gas	R	X	R	R	R
Neatsfoot Oil	R	M	R	R	R
Nitric Acid, Concentrated @ Room Temp.	-	X	M	R	M
Nitrobenzene	X	R	M	R	R
Nitrogen	R	R	R	R	R
Nitropropane	X	M	X	R	R



Media Compatibility Table, cont.

Fluid	Buna-N	EPR	Viton	Teflon PTFE	Chemraz 510
Octane	R	X	R	R	R
Octanal	R	X	R	-	R
Oleic Acid	U	X	M	R	R
Oxygen, Liquid	X	X	X	R	M
Phenol	X	X	R	-	R
Phenylhydrazine	X	M	R	R	R
Phosphoric Acid, Concentrated @ Room Temp.	M	R	R	R	R
Pine Oil	R	X	R	R	R
Potassium Hydroxide 50%	M	R	X	R	R
Propane	R	X	R	R	R
Propanol	R	R	R	X	R
Propyl Acetate	X	M	X	X	R
Pydraul, 115E	X	R	R	-	R
Pyranol	R	X	R	-	R
Pyridine	X	M	R	-	R
Rapeseed Oil	M	R	R	R	R
Resurcinol	U	R	U	R	R
SAE 10W30	R	X	R	R	R
Seawater	R	R	R	R	R
Silicone Grease	R	R	R	R	R
Silver Nitrate	M	R	R	R	R
Skelly Solvent	R	X	R	-	R
Skydrol 7000	X	R	M	-	R
Skydrol 500 B4	X	R	X	R	R
Sodium Hydroxide	R	R	M	R	R

Fluid	Buna-N	EPR	Viton	Teflon PTFE	Chemraz 510
Sovasol 1, 2, & 3	R	X	R	-	R
Soy Bean Oil	R	U	R	R	R
Stack-Magic ECO-F	R	R	R	R	R
Stearic Acid	M	M	-	R	R
Stoddard Solvent	R	X	R	R	R
Sucrose	R	R	R	R	R
Sulfuric Acid	U	R	U	R	R
Tannic Acid	R	R	R	R	R
Tar	M	X	R	-	R
Tartaric Acid	R	M	R	R	R
Tetrachloroethane	X	X	R	R	R
Tetralin	X	X	R	R	R
Tidewater Oil	R	X	R	-	R
Toluene	X	X	R	R	R
Trichloro Ethyloe	U	X	R	R	R
Triethanol Amine	U	M	X	R	M
Turpentine	R	X	R	R	R
Varnish	M	X	R	R	R
Vinegar	M	M	U	R	-
Water	R	R	M	R	M
Whiskey & Wine	R	R	R	R	R
Wood Oil	R	X	R	-	R

~ Legend ~

R..... Recommended

M Marginal

U..... Doubtful

X..... Not Recommended

- Insufficient Data

One Year Limited Warranty

DELAWARE MANUFACTURING INDUSTRIES CORPORATION, HEREINAFTER REFERRED TO AS DMIC, WARRANTS ITS PRODUCTS (CONSUMABLE ITEMS EXCEPTED) TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP, UNDER NORMAL USE AND SERVICE, FOR A PERIOD OF SIX MONTHS FROM DATE OF INITIAL USE, OR ONE YEAR FROM DATE OF SHIPMENT FROM FACTORY, WHICHEVER IS FIRST. THIS LIMITED WARRANTY IS EFFECTIVE ONLY IF THE EQUIPMENT OR APPARATUS IS USED AS DIRECTED, IS NOT SUBJECTED TO MISUSE, NEGLIGENCE, OR ACCIDENT, AND IS NOT ALTERED, TREATED, OR REPAIRED BY ANYONE OTHER THAN DMIC TECHNICAL STAFF.

THE BUYER'S EXCLUSIVE REMEDY FOR BREACH OF THIS LIMITED WARRANTY SHALL BE, AT THE SOLE DISCRETION OF DMIC, EITHER REPAIR OR REPLACEMENT OF THE NON-CONFORMING MATERIAL BY DMIC, OR REIMBURSEMENT BY DMIC FOR THE PRICE OF SAID NON-CONFORMING MATERIAL. IN ORDER TO OBTAIN SAID REMEDY, THE BUYER SHALL DELIVER WRITTEN NOTICE OF THE ALLEGED BREACH AND REQUEST A RETURN GOODS AUTHORIZATION ("RGA") FROM DMIC. THE BUYER SHALL RETURN THE NON-CONFORMING MATERIAL TO DMIC FREIGHT PREPAID WITHIN THIRTY DAYS AFTER THE BUYER HAS BEEN GRANTED THE RGA. NO INCIDENTAL, PROXIMATE, CONSEQUENTIAL, OR OTHER DAMAGES SHALL BE RECOVERABLE. DMIC SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITIES INCLUDING, BUT NOT LIMITED TO, LOSS OF LIFE, PERSONAL INJURY, LOSS OF CROPS, LOSS OF FIRE OR WATER PROPERTY DAMAGE, AND CONSEQUENTIAL TRADE OR OTHER COMMERCIAL LOSS ARISING OUT OF THE FAILURE OF THE DMIC PRODUCT.

ALL WARRANTIES EXPRESS OR IMPLIED ARE SET FORTH IN THIS LIMITED WARRANTY; THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS SAID LIMITED WARRANTY. DMIC MAKES NO WARRANTIES OF FREEDOM FROM PATENT INFRINGEMENT, OR MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE OR OTHER LIKE OR DIFFERENT EXPRESSED OR IMPLIED WARRANTIES, EXCEPT AS MADE ABOVE.

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.



SAVE TIME AND MONEY WITH THE "SSW" SYSTEM

~ The Quality Choice when Safety and Design Integrity Prevail over Price ~

Dual Limit Switch Bracket with Integrated Lockout

Send input to the PLC with this dual purpose accessory. Also available in single switch model. See the full range of accessories on page 14.

"SNS" Suction Line Simplifier

Installs in reservoir hole to provide valve mounting point, baffle tube/strainer internal thread. Pilot for neat positioning, swivel allows valve alignment after welding phase.

O-Ring Sealing right up to 6" bore

DMIC's ESAE Extended O-Ring Boss system allows you to completely eliminate NPT from power units!

Step size adapters

One size steps can frequently ship the same day. Designers can now maintain nominal ID's even across hose runs.

Adapters are Inline, 45° or 90° configurations

Designers of innovative power units can implement flooded suctions and ganged inlets to match any reservoir style. "SSW" adapters are dimensionally interchangeable between U.S. & Metric thread models.

WE CARE ABOUT YOU. You've selected genuine DMIC quality, and you deserve the best service. If you are unsatisfied about some aspect of your experience with DMIC products, or wish to inquire about the possibility of becoming a DMIC Distributor, please call our toll free number below. Your satisfaction is our first priority.

 Delaware Manufacturing
Industries Corporation



American
Petroleum
Institute

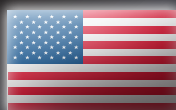


Full Member, NFPA
National Fluid Power
Association, U.S.A.

THE  **FPDA**
MOTION & CONTROL NETWORK



NACE
INTERNATIONAL



3776 Commerce Court
Wheatfield, NY U.S.A. 14120
Phone: 716-743-4360
Fax: 716-743-4370



Nieuwe Uitleg 28
2514BR The Hague
Netherlands
Phone: 31 70 392 1063
Fax: 31 70 392 1059



330 Vansickle Road—Unit 4
St. Catharines, Ontario, Canada L2R 6P7
Phone: 905-688-3642
Fax: 905-688-9993

WWW.DMIC.COM
DMIC BALL VALVES CATALOG
COPYRIGHT ©2009 DELAWARE MFG.

DFC-1001A

CALL TOLL FREE 1-800-248-3642
IN CANADA 1-800-320-3642