

BV3V 5,000 PSI DIVERTER

Rated for 5000 PSI ~ Sizes from ¼" to 2" NPT/SAE/BSP
Designed as an inverse "T-Bore" Diverter for straight flow normal operation

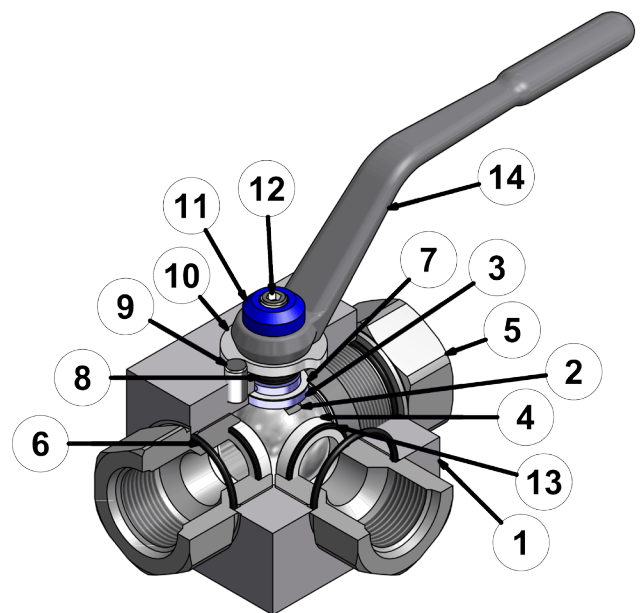


The DMIC **BV3V** is a 3-way, "inverse T-Bore" diverter derived from the DMIC **BV3D**. DMIC's newest high-end CNC equipment and advancements in manufacturing tolerance control allow the **BV3V** to satisfy many normal 2-way with 3 way divert option. Consult DMIC Engineering for more information.

- Similar to BV3D, but offers a straight flow path for normal operation
- Can be used as a compact 2-way ball valve with test point outlet
- Standard DMIC Blow-out proof stem design
- Ordering codes similar to BV3D line
- Standard reduced Bore design
- Zero leakage design is a standard

Service Parts BOM

| BV3V | SERVICE PARTS BOM | |
|-------|-------------------|------------------------|
| Index | Qty | Description |
| 1 | 1 | Valve Body |
| 2 | 1 | Ball |
| 3 | 1 | Spindle |
| 4 | 3 | Ball Seals |
| 5 | 3 | End Connection(s) |
| 6 | 3 | End Connection O-Ring |
| 7 | 1 | Internal Thrust Washer |
| 8 | 1 | Spindle O-Rings |
| 9 | 1 | Stop Pin |
| 10 | 1 | Stop Washer |
| 11 | 1 | Color Code Cap |
| 12 | 1 | Top Cap Screw |
| 13 | 3 | Seal O-Ring |
| 14 | 1 | Handle |



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Ordering Codes Summary

| Size Codes | |
|------------|-----------|
| Code | Port Size |
| 0250 | ¼" |
| 0375 | ⅜" |
| 0500 | ½" |
| 0750 | ¾" |
| 1000 | 1" |
| 1250 | 1¼" |
| 1500 | 1½" |
| 2000 | 2" |

Call Factory for larger sizes 18"+



| Connection Types | | SAE Flange Conn | |
|-------------------------|---------------------|-----------------------------|------------------------|
| Imperial Threads | | SAE 4-Bolt Companion | |
| Code | Description | Code | Description |
| S | SAE ORB | FM | SAE C61 Comp UNC |
| N | NPT | FH | SAE C62 Comp UNC |
| J | JIC-Male | GM | SAE C61 Comp Metric |
| Metric Threads | | GH | SAE C62 Comp Metric |
| B | BSPP-special | SAE Split Flanges | |
| T | BSPT (Tapered Pipe) | SM | SAE C61 Split Flg Head |
| | | SH | SAE C62 Split Flg Head |
| ISO Threads | | SAE 4 Bolt Standard | |
| IU | ISO6149 | FL | SAE C61 Std UNC/Metric |
| - | - | FK | SAE C62 Std UNC/Metric |

Please see page 11 for complete connection availability matrix

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

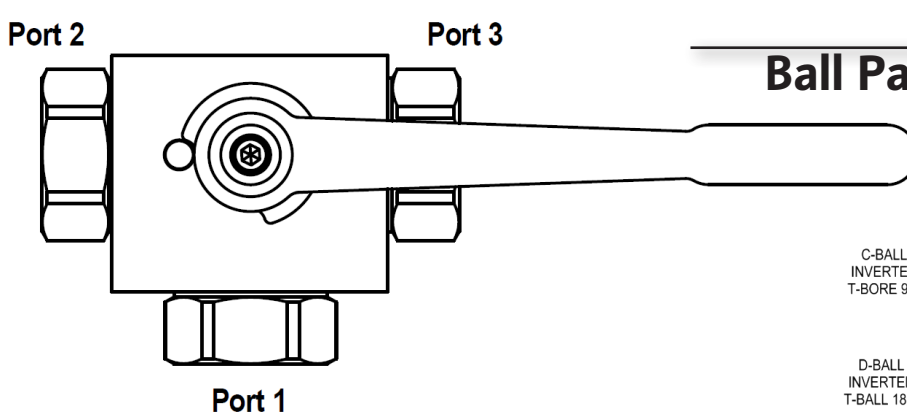
| Ball Seal Material | |
|--------------------|-----------------------------|
| Code | Description |
| 1 | Delrin™ |
| 2 | PTFE Teflon™ (1500 PSI MAX) |
| 4 | Peek |
| 6 | Delrin™ AF (low Friction) |

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

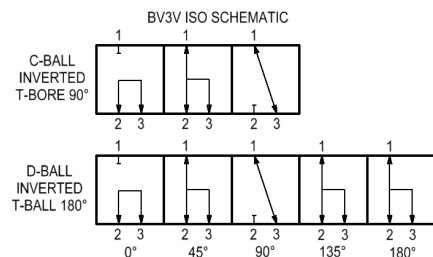
| Ball Pattern | |
|--------------|----------------------------|
| Code | Description |
| C | Inverted T-Bore 90° Action |
| D | T-Bore 180° Action |

| Body Material | |
|---------------|-----------------|
| Code | Description |
| 1 | Carbon Steel |
| 2 | Stainless Steel |

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



BV3V Ball Pattern Schematic



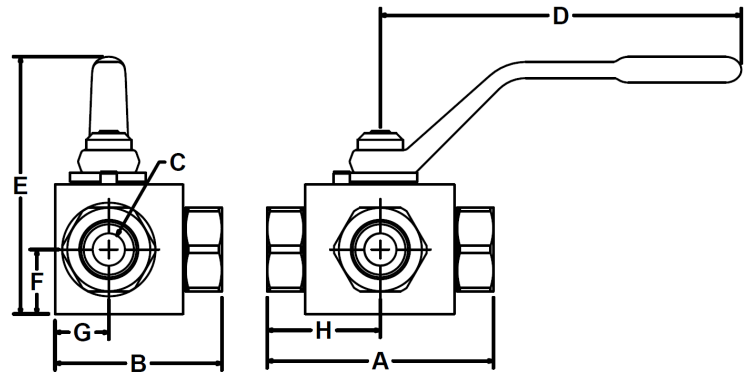
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Common Dimensions

| Port Size | Rated Pressure PSI | Dimensions IN | | | | | | | |
|-----------|--------------------|------------------|----------------|--------------|-----------------|------------------|-------------------|--------------------------|-----------------|
| | | Overall Length A | Width Port 1 B | Valve Bore C | Handle Length D | Overall Height E | Bot To Port Ctr F | Back of body to center G | Center to end H |
| ¼" | 5000 | 3.41 | 2.48 | 0.31 | 4.50 | 3.37 | 0.85 | 0.77 | 1.71 |
| ⅜" | | 3.41 | 2.48 | 0.31 | 4.50 | 3.37 | 0.85 | 0.77 | 1.71 |
| ½" | | 3.41 | 2.48 | 0.38 | 4.50 | 3.37 | 0.85 | 0.77 | 1.71 |
| ¾" | | 4.39 | 3.24 | 0.63 | 7.00 | 4.97 | 1.25 | 1.04 | 2.19 |
| 1" | | 5.20 | 3.91 | 0.81 | 7.00 | 5.47 | 1.64 | 1.31 | 2.60 |
| 1¼" | | 5.69 | 4.32 | 1.00 | 9.86 | 6.70 | 1.69 | 1.47 | 2.85 |
| 1½" | | 6.05 | 5.1 | 1.25 | 9.86 | 7.17 | 1.97 | 2.08 | 3.02 |
| 2" | | 8.00 | 6.28 | 1.63 | 9.86 | 7.70 | 2.21 | 2.28 | 4.00 |



SAE C.61 Split Flange Head Dimension

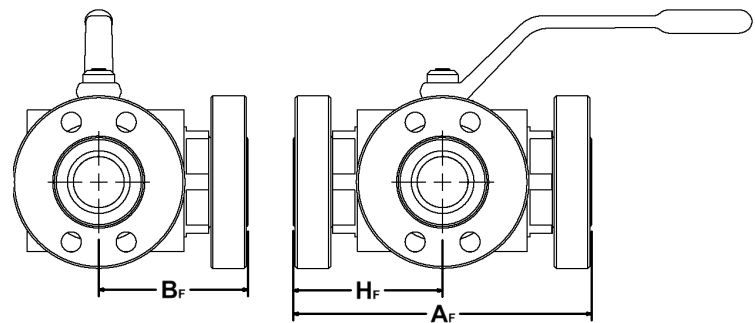
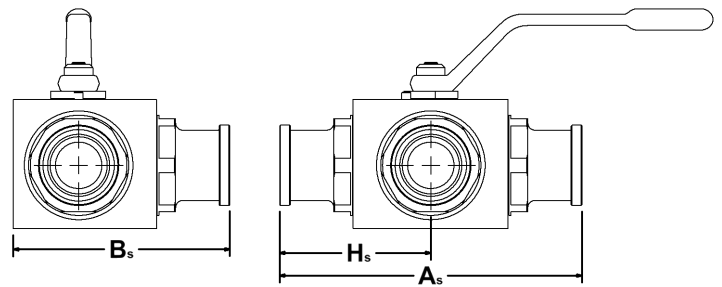
| Dimension (inches) | Rated Pressure PSI | Overall Length A _s | Width Port 1 B _s | Center to end H _s |
|--------------------|--------------------|-------------------------------|-----------------------------|------------------------------|
| ½" | 5000 | 6.00 | 3.77 | 3.00 |
| ¾" | | 6.86 | 4.47 | 3.43 |
| 1" | | 7.69 | 5.15 | 3.85 |
| 1¼" | 4000 | 8.34 | 5.64 | 4.17 |
| 1½" | 3000 | 10.29 | 7.22 | 5.14 |
| 2" | | 10.56 | 7.56 | 5.28 |

SAE C.62 Split Flange Head Dimension

| Dimension (inches) | Rated Pressure PSI | Overall Length A _s | Width Port 1 B _s | Center to end H _s |
|--------------------|--------------------|-------------------------------|-----------------------------|------------------------------|
| ½" | 5000 | 6.00 | 3.77 | 3.00 |
| ¾" | | 7.34 | 4.71 | 3.67 |
| 1" | | 8.50 | 5.56 | 4.25 |
| 1¼" | | 9.62 | 6.28 | 4.81 |
| 1½" | | 12.27 | 8.21 | 6.13 |
| 2" | | 13.86 | 9.21 | 6.93 |

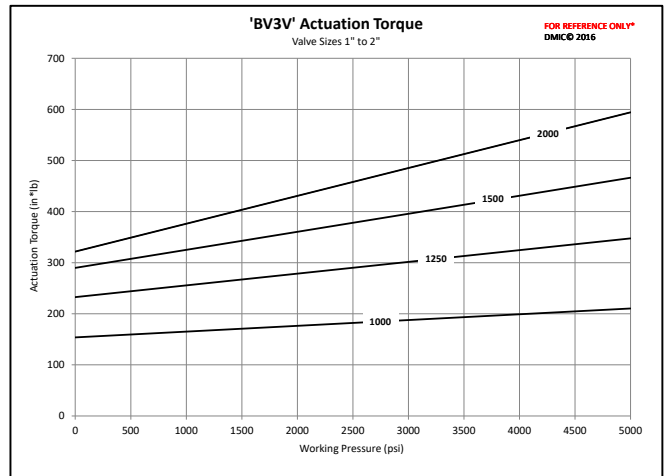
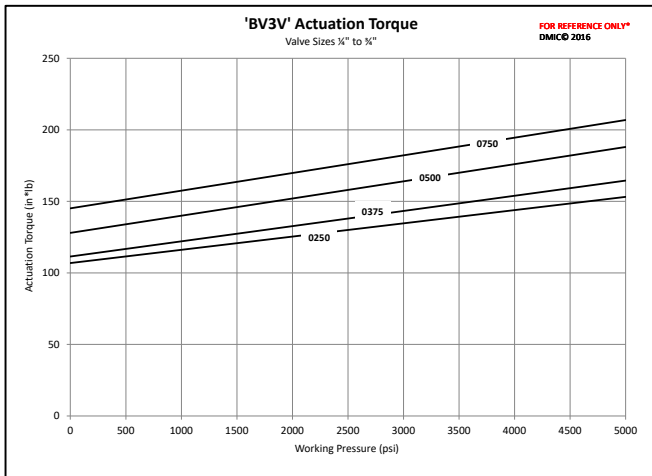
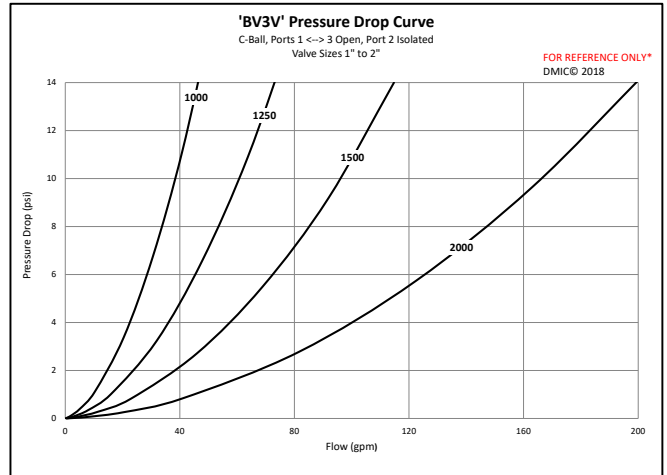
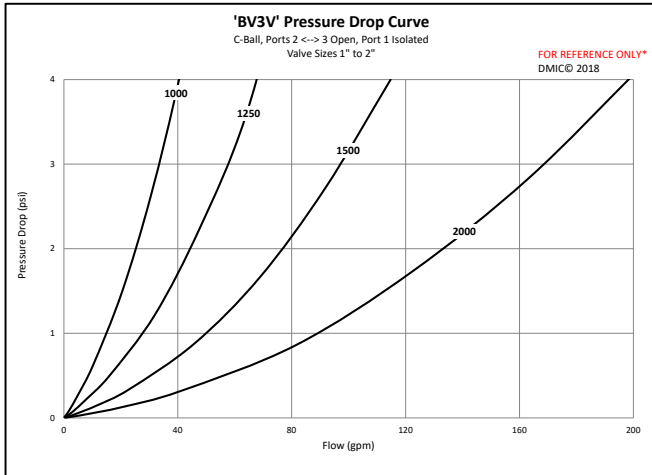
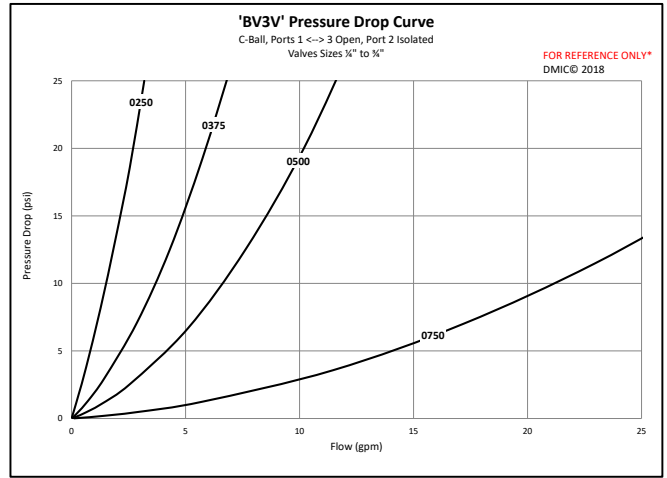
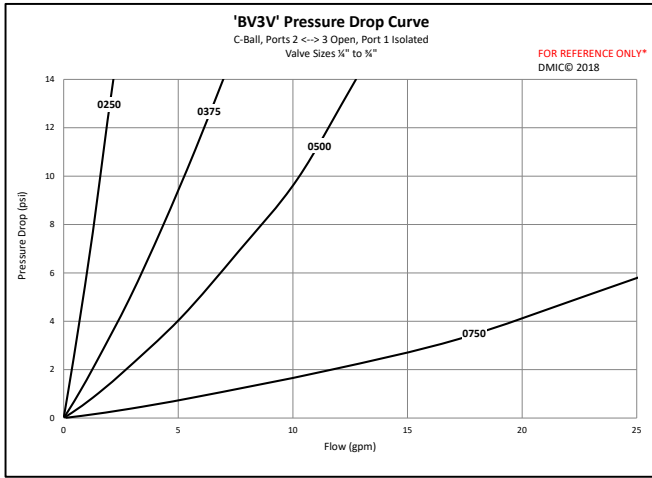
SAE C.61 & C.62 Bolt Flange Dimension

| Dimension (inches) | Rated Pressure PSI C.61 | Rated Pressure PSI C.62 | Overall Length A _f | Width Port 1 B _f | Center to end H _f |
|--------------------|-------------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|
| ½" | 5000 | 5000 | 4.31 | 2.16 | 2.16 |
| ¾" | | | 5.25 | 2.62 | 2.62 |
| 1" | | | 5.98 | 2.99 | 2.99 |
| 1¼" | 4000 | 3000 | 7.75 | 3.88 | 3.88 |
| 1½" | 8.29 | | 4.14 | 4.14 | |
| 2" | 9.52 | | 4.76 | 4.76 | |



BV3V 5,000 PSI DIVERTER

Flow Characteristic and Actuation Torque Curves



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