

DE-LOK[®]

Fittings & Valves

- Instrumentation Valve
Ball/Globe/Needle
Angle/Check
- Tube Fitting
For Inch and Metric
- Precision Pipe Fitting

DBL3 Series One Piece Type Ball Valve

Features

- Simple design with one piece body
- Tight and smooth, low torque and easy operation
- One piece ball and stem
- Panel mountable
- Variety of end connections
- Straight, Angle and 3-way flow patterns
- Each and every valves is tested at the factory

Specifications

Pressure Rating	3000psig (206bar) @ 70°F(21°C)
Temperature Rating	50 to 150°F(10-65°C) with PTFE seat and packing
Body Material	316 Stainless Steel and Brass
Port Connections	1/16" to 3/4" and 3mm to 12mm
Orifice	0.052" and 0.406" (1.3mm to 10.3mm)

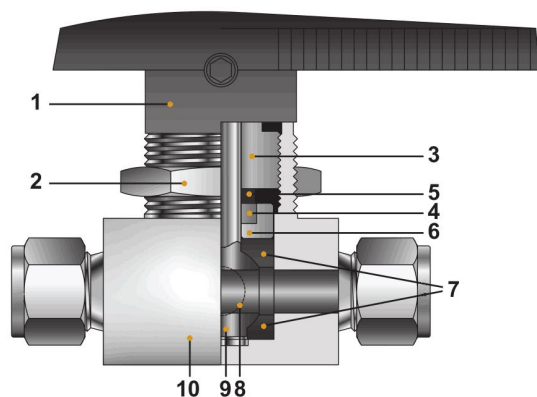
Testing

- Each Valve tested with nitrogen at 1000psig (69bar) to maximum allowable leak rate 0.1 SCCM

Packing Adjustment

- Valve are adjust for factory testing at 1000psig (69bar)
- Packing must be readjusted for service at higher pressure

Materials of Construction

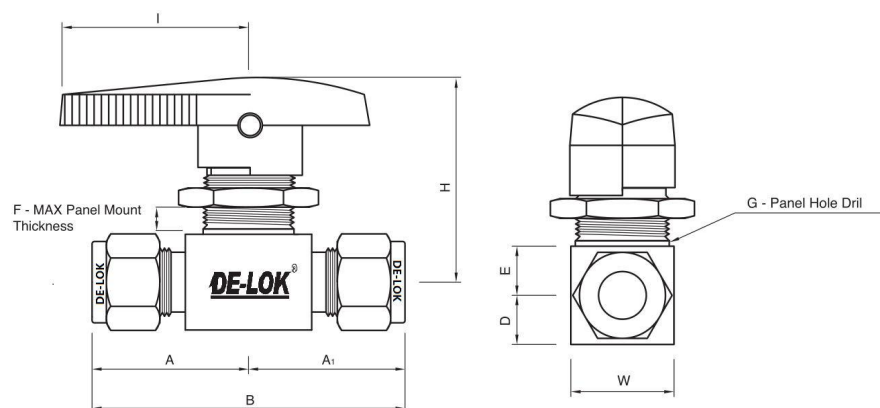


No.	Component	Material Grade/ASTM Specification	
		Stainless	Brass
1	Handle	Bakelite	
	Set Screw	Stainless Steel	
2	Panel Nut	Stainless Steel	Brass
3	Packing Bolt	SS316/A182	Brass/B16
4	Packing	PTFE	
5	Upper Packing Gland	SS316/A182	
6	Lower Packing Gland		
7	Upper&Lower Ball Seal	PTFE	
8	Side Disc	SS316 - Sintered	
	Side Ring		
9	Ball Stem	SS316/A182	
10	Body	SS316/A182	Brass/B16

- Wetted components are marked “*”

DBL3 Series – 2 Way (Shut-off Valve)

Straight Type



Angle Type

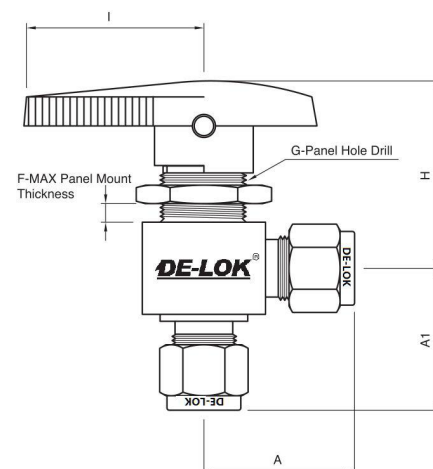


Table of Dimensions

Order Number		Orifice	Cv	End Connections		Dimensions (mm)																
Series	Part No.			Inlet	Outlet	A	A1	B	D	E	F	G	H	I	W							
DBL3M H1	1-1	1.3	0.1	1/16" DE-LOK		21.3	21.3	42.6	7.1	8.7	6.4	15.0	36.0	29.0	15.0							
	3M-3M	2.4	0.2	3mm DE-LOK		25.4	25.4	50.8														
	2-2		0.2	1/8" DE-LOK																		
	2N-2N	3.2	0.5	1/8" Female NPT		20.6	20.6	41.2														
	6M-6M		0.6	6mm DE-LOK		27.7	27.7	55.4														
	4-4		0.6	1/4" DE-LOK																		
DBL3M H2	2N-2N	4.8	1.2	1/8" Female NPT		25.4	25.4	50.8	9.4	11.2	4.8	19.8	43.7	38.5	19.8							
	4N-4N		0.9	1/4" Female NPT		26.2	26.2	52.4														
	4R-4R		0.9	1/4" ISO Female																		
	4N-4N		1.2	1/4" Male NPT		25.4	25.4	50.8														
	4-4N		1.6	1/4" Male NPT	1/4" DE-LOK	25.4	30.2	55.6														
	6M-6M		2.4	6mm DE-LOK		30.2	30.2	60.4														
	4-4		2.4	1/4" DE-LOK																		
	8M-8M		1.5	8mm DE-LOK		31.0	31.0	62.0														
	6-6		1.5	3/8" DE-LOK		32.5	32.5	65.0														
DBL3M H3	4N-4N	7.1	3.0	1/4" Female NPT		31.8	31.8	63.6	14.2	14.2	9.4	28.5	56.1	51.0	28.5							
	6N-6N		2.6	3/8" Female NPT																		
	6R-6R		2.6	3/8" ISO Female																		
	6-6		6.0	3/8" DE-LOK		38.9	38.9	77.8														
	10M-10M		6.0	10mm DE-LOK																		
DBL3M H4	8N-8N	10.3	6.3	1/2" Female NPT		39.6	39.6	79.2	17.5	17.5	9.4	38.1	71.8	75.0	38.1							
	8R-8R		6.3	1/2" ISO Female																		
	12M-12M		12.0	12mm DE-LOK		50.0	50.0	100														
	8-8		12.0	1/2" DE-LOK																		
	12-12		6.4	3/4" DE-LOK																		

- Dimensions shown with DE-LOK nuts measure in the finger-tight, where applicable.
- All dimensions are for reference only, subject to change.

DBL3 Series – 3 Way (Switching Valve)

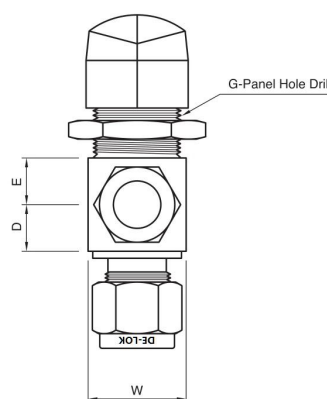
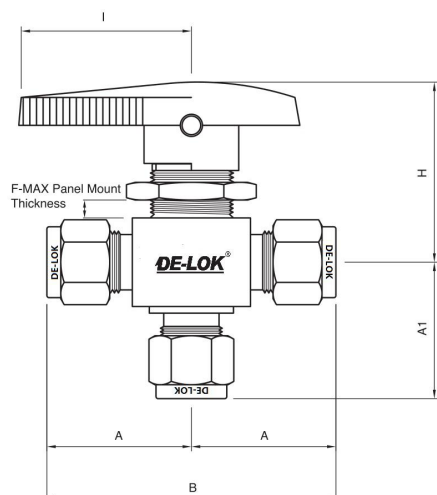


Table of Dimensions

Order Number		Orifice	Cv	End Connections		Dimensions (mm)									
Series	Part No.			Inlet	Outlet	A	A1	B	D	E	F	G	H	I	W
DBL3W3M H1	1-1	1.3	0.08	1/16" DE-LOK		21.3	20.6	42.6	7.1	8.7	6.4	15.0	36.0	29.0	15.0
	3M-3M	2.4	0.15	3mm DE-LOK		25.4	24.6	50.8							
	2-2		0.15	1/8" DE-LOK											
	2N-2N	3.2	0.3	1/8" Female NPT		20.6	20.6	41.2							
	6M-6M		0.35	6mm DE-LOK		27.7	26.9	55.4							
	4-4		0.35	1/4" DE-LOK											
DBL3M3W H2	2N-2N	4.8	0.75	1/8" Female NPT		26.2	26.2	52.4	9.4	11.2	4.8	19.8	43.7	38.5	19.8
	4N-4N			1/4" Female NPT											
	4R-4R		0.8	1/4" ISO Female		25.4	30.2	55.6							
	4N-4N		0.9	1/4" Male NPT		30.2	30.2	60.4							
	4-4N			1/4 Male NPT	1/4" DE-LOK										
	6M-6M		0.8	6mm DE-LOK		31.0	31.0	62.0							
DBL3M3W H3	4N-4N	7.1	1.7	1/4" Female NPT		31.8	31.8	63.6	14.2	14.2	9.4	28.5	56.1	51.0	28.5
	6N-6N		1.5	3/8" Female NPT											
	6R-6R			3/8" ISO Female											
	6-6		2.0	3/8" DE-LOK		38.9	38.9	77.8							
	10M-10M			10mm DE-LOK											
DBL3M3W H4	8N-8N	10.3	3.5	1/2" Female NPT		39.6	39.6	79.2	17.5	17.5	9.4	38.1	71.8	75.0	38.1
	8R-8R			1/2" ISO Female											
	12M-12M		4.6	12mm DE-LOK		50.0	50.0	100							
	8-8			1/2" DE-LOK											
	12-12		3.8	3/4" DE-LOK											

- Dimensions shown with DE-LOK nuts measure in the finger-tight, where applicable.
- All dimensions are for reference only, subject to change.

Pressure Rating

Valve	2-Way Straight Pattern psig (bar)	2-Way Angle Pattern psig (bar)	3-Way psig (bar)
DBL3-H1	2500 (172)	2500 (172)	2500 (172)
DBL3-H2	3000 (206)	2500 (172)	2500 (172)
DBL3-H3	2500 (172)	1500 (103)	1500 (103)
DBL3-H4	2500 (172)	1500 (103)	1500 (103)

Flow Data at 70°F(21°C)

CV	Pressure Drop to Atmosphere(Δ p) psi					
	10	50	100	10	50	100
	Air Flow, SCFM			Water Flow, US GPM		
0.50	6.9	19.1	33.9	1.6	3.5	5.0
0.60	8.3	23.0	40.7	1.9	4.2	6.0
0.90	12.0	34.0	61.0	2.8	6.4	9.0
1.2	17.0	46.0	81.0	3.8	8.5	12.0
1.5	21.0	57.0	100.0	4.7	11.0	15.0
1.6	22.0	61.0	110.0	5.0	11.0	16.0
2.4	33.0	92.0	160.0	7.6	17.0	24.0
2.6	36.0	99.5	176.0	8.2	18.0	26.0
3.0	41.5	115.0	203.0	9.5	21.0	30.0
6.0	83.0	230.0	407.0	19.0	42.0	60.0
6.3	87.2	241.0	427.0	19.9	44.5	63.0
6.4	88.6	245.0	434.0	20.2	45.3	64.0
12	166.0	459.0	814.0	38.0	85.0	120.0

CV	Pressure Drop to Atmosphere(Δ p) psi					
	10	50	100	10	50	100
	Air Flow, SCFM			Water Flow, US GPM		
0.30	4.2	11.5	20.3	0.9	2.1	3.0
0.35	4.8	13.4	23.7	1.1	2.4	3.5
0.75	10.0	29.0	51.0	2.3	5.3	7.5
0.80	11.0	31.0	54.0	2.5	5.6	8.0
0.90	12.0	34.0	61.0	2.8	6.3	9.0
1.5	20.6	57.4	102.0	4.7	11.0	15.0
1.7	23.5	65.0	115.0	5.3	12.0	17.0
2.0	27.7	76.5	136.0	6.3	14.0	20.0
3.5	48.4	134.0	237.0	11.0	25.0	35.0
3.8	52.6	145.0	258.0	12.0	27.0	38.0
4.6	63.7	176.0	312.0	15.0	33.0	46.0

Ordering Information

Example: $\frac{D}{1}$ $\frac{BL}{2}$ $\frac{3M}{3}$ $\frac{8-8}{4}$

1. Brand: DE-LOK

2. Valve Type:

- BL: 2-Way Straight Ball Valve
- BL9A: 2-Way Angle Type Ball Valve
- BL3W: 3-Way Ball Valve

3. Working Pressure: 3000psig

4. End Connection Size

-Tube OD Designation

Tube O.D (inch)	1/16	1/8	1/4	3/8	1/2
Designation	1	2	4	6	8
Tube O.D (mm)	3	6	8	10	12
Designation	3M	6M	8M	10M	12M

-Pipe Thread Designation

Size (inch)	1/8	1/4	3/8	1/2
Screwed NPT	2N	4N	6N	8N
Screwed BSPT	2R	4R	6R	8R

DBL6 Series Three Piece Type High Pressure Ball Valve

Features

- Compact design
- High flow rate with maximum orifice
- Variety of end connections
- Anti blow-out stem design
- Each and every valves is tested at the factory

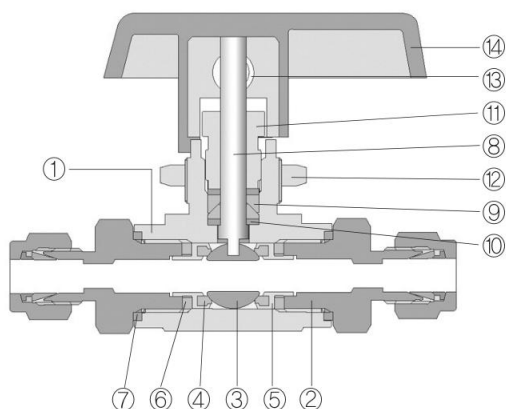
Specifications

Pressure Rating	6000psig (414bar) @ 70°F(21°C)
Temperature Rating	-22 to 265°F(-30-130°C) with PVDF seat -65 to 500°F(-54-260°C) with PEEK seat
Body Material	316 Stainless Steel and Brass
Port Connections	1/4" to 1" and 6mm to 25mm
Orifice	10mm to 19mm

Testing

- Each Valve tested with nitrogen at 1000psig (69bar) to maximum allowable leak rate 0.1 SCCM
- Hydrostatic shell test is performed at 1.5 times of the working pressure. (Option)

Materials of Construction



No.	Component	Material Grade/ASTM Specification
1	Body	SS316/A182
2	End Connector	SS316/A182
3	Ball	SS316/A182
4	Seats	PCTFE, optional PTFE, PEEK
5	Retainer	SS316/A182
6	Retainer Seal	PTFE
7	End Seals	PTFE
8	Stem	SS316/A182
9	Stem Packing	PTFE
10	Stem Washer	SS316
11	Packing Bolt	SS316/A182
12	Lock Nut	SS316/A182
13	Set Screw	Stainless Steel
14	Handle	Bakelite

- Wetted components are marked “*”

DBL6 Series – 2 Way (Shut-off Valve)

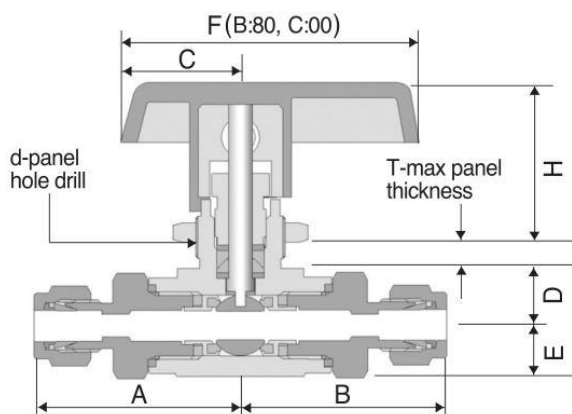


Table of Dimensions

Order Number		Orifice	Cv	End Connections		Dimensions (mm)								
Series	Part No.			Inlet	Outlet	A	B	D	E	H	C	F	d	T
DBL6M 01	1-1	1.3	0.06	1/6" DE-LOK		33.0	33.0	8.5	10.0	23.2	18.0	47.0	16.3	3.3
	2-2	2.4	0.21	1/8" DE-LOK		34.5	34.5							
	2N-2N	4.2	0.93	1/8" Female NPT		27.2	27.2							
	2MN			1/8" Male NPT		29.9	29.9							
	4-4			1/4" DE-LOK		37.6	37.6							
	4MN			1/4" Male NPT		34.3	34.3							
	3M-3M	2.2	0.18	3mm DE-LOK		34.8	34.8							
DBL6M 02	2-2	2.4	0.26	1/8" DE-LOK		41.9	41.9	11.9	10.7	38.9	30.0	78.0	19.6	6.4
	4-4	4.8	1.04	1/4" DE-LOK		44.2	44.2							
	4-4MN			1/4" Male NPT	1/4" DE-LOK		41.1							
	4-4N			1/4" Female NPT	1/4" DE-LOK	38.4								
	4N-4N	6.4	2.34	1/4" Female NPT		38.4	38.4							
	4MN			1/4" Male NPT		41.1	41.1							
	4N-4MN			1/4" Male NPT	1/4" Female NPT	38.4								
	6-4MN			1/4" Male NPT	3/8" DE-LOK	45.7								
	6-4N			1/4" Female NPT	3/8" DE-LOK		45.7							
	6-6			3/8" DE-LOK		41.1	41.1							
	6MN			3/8" Male NPT		44.5	44.5							
	6M-6M	4.8	1.04	6mm DE-LOK		45.2	45.2							
	8M-8M	6.4	2.34	8mm DE-LOK		46.0	46.0							
	10M-10M			10mm DE-LOK		49.5	49.5							
DBL6M 03	6N-6N	10.3	6.42	3/8" Female NPT		54.6	54.6	17.8	17.5	44.2	38.1	99.0	22.9	9.7
	8N-8N			1/2" Female NPT		59.4	59.4							
	8-8			1/2" DE-LOK		56.4	56.4							
	8MN			1/2" Male NPT		59.2	59.2							
	12-12			3/4" DE-LOK		59.2	59.2							
	12M-12M	9.5	5.57	12mm DE-LOK										
	16M-16M	10.3	6.42	16mm DE-LOK										

- Dimensions shown with DE-LOK nuts measure in the finger-tight, where applicable.
- All dimensions are for reference only, subject to change.

DBL6 Series – 3 Way (Switching Valve)

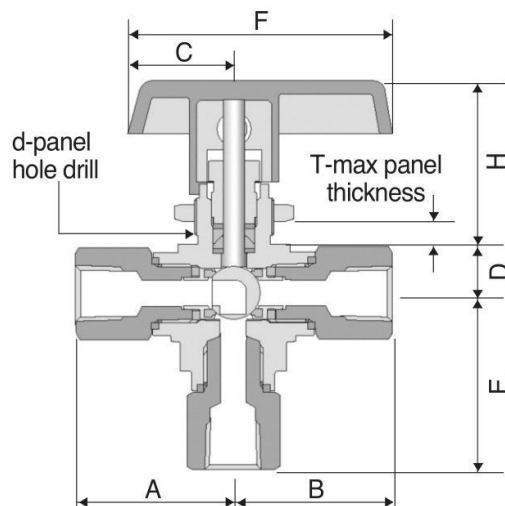


Table of Dimensions

Order Number		Orifice	Cv	End Connections		Dimensions (mm)								
Series	Part No.			Inlet	Outlet	A	B	E	D	H	C	F	d	T
DBL3W6M 01		1.3	0.06	1/6" DE-LOK		33.0	33.7	8.5	23.2	18.0	47.0	16.3	3.3	
		2.4	0.21	1/8" DE-LOK		34.5	36.4							
		4.2	0.63	1/8" Female NPT		27.2	29.9							
				1/8" Male NPT		29.9	29.9							
				1/4" DE-LOK		37.6	37.2							
				1/4" Male NPT		34.3	29.9							
		2.2	0.18	3mm DE-LOK		34.8	36.4							
DBL3W6M 02		2.4	0.21	1/8" DE-LOK		41.9	45.5	11.9	38.9	30.0	78.0	19.6	6.4	
		4.8	0.70	1/4" DE-LOK		44.2	47.8							
		5.0	0.87	1/4" Female NPT		38.4	41.9							
		5.0	0.87	1/4" Male NPT		41.1	44.7							
				3/8" DE-LOK		45.7	49.3							
				3/8" Male NPT		41.1	44.7							
		4.8	0.70	6mm DE-LOK		44.5	47.8							
		5.0	0.87	8mm DE-LOK		45.	48.5							
				10MM DE-LOK		46.0	49.5							
DBL3W6M 03		10.3	3.62	3/8" Female NPT		49.5	58.2	17.8	44.2	38.1	99.0	22.9	9.7	
				1/2" Female NPT		54.6	63.2							
				1/2" DE-LOK		59.4	68.1							
				1/2" Male NPT		56.4	65.8							
				3/4" DE-LOK		59.2	68.1							
		9.5	3.46	12mm DE-LOK			67.8							
		10.3	3.62	16mm DE-LOK		56.9	65.5							

- Dimensions shown with DE-LOK nuts measure in the finger-tight, where applicable.
- All dimensions are for reference only, subject to change.

Pressure Rating

2-Way Straight

Valve Series	Material			Pressure Rating @ -54°C to 21°C (-65°F to 70°F)	Temperature Rating
	Seat	Stem Packing	End Connector Seal		
DBL6M-01	PVDF	PTFE		6000psig (413bar)	-30°C to 130°C (-22°F to 265°F)
	PCTFE				-30°C to 150°C (-22°F to 355°F)
	PEEK			10000psig (689bar)	-54°C to 230°C (-65°F to 466°F)
DBL6M-02	PVDF			5000psig (344bar)	-23°C to 191°C (-10°F to 375°F)
DBL6M-03	PCTFE				
	PEEK			6000psig (413bar)	

2-Way Angle & 3-Way

Valve Series	Material			Pressure Rating @ -54°C to 21°C (-65°F to 70°F)	Temperature Rating
	Seat	Stem Packing	End Connector Seal		
DBL3W6M-01	PVDF	PTFE	VITON	4000psig (275bar)	-30°C to 130°C (-22°F to 265°F)
DBL9A6M-01	PCTFE				-30°C to 150°C (-22°F to 355°F)
	PEEK			6000psig (413bar)	-54°C to 230°C (-65°F to 466°F)
DBL3W6M-02	PVDF			3000psig (206bar)	-23°C to 191°C (-10°F to 375°F)
DBL3W6M-03	PCTFE				
DBL9A6M-02	PEEK				
DBL9A6M-03		4000psig (275bar)			

Ordering Information

Example: $\frac{D}{1}$ $\frac{BL}{2}$ $\frac{6M}{3}$ $\frac{8-8}{4}$

1. Brand: DE-LOK

2. Valve Type:

- BL: 2-Way Straight Ball Valve
- BL9: 2-Way Angle Type Ball Valve
- BL3W: 3-Way Ball Valve

3. Working Pressure: 6000psig

4. End Connection Size

-Tube OD Designation

Tube O.D (inch)	1/4	3/8	1/2	5/8	3/4	1
Designation	4	6	8	10	12	16

-Pipe Thread Designation

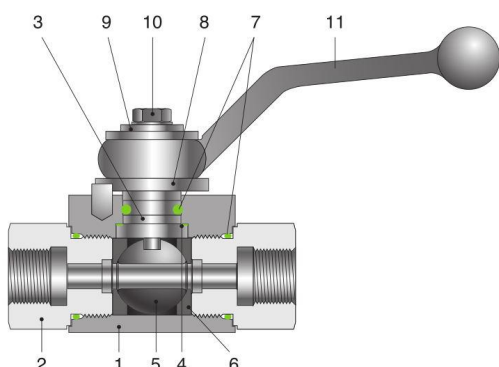
Size (inch)	1/4	3/8	1/2	3/4	1
Screwed NPT	4N	6N	8N	12N	16N
Screwed BSPT	4R	6R	8R	12R	16R

DDBV Series DIN Standard Ball Valve

Features

- Pressure rating up to 500barg @ 21°C
- Temperature rating from -20°C to 100°C with POM and NBR standard.
- Conforms to DIN standard
- Compact design with maximum orifice
- Variety of end connections such as DIN2353 "L" & "S" series, Male & Female DIN/ISO/BSP and NPT threads
- Handle is only available in cast stainless steel standard.
- Every valve is 100% factory tested with the Nitrogen @ 1000psig (68barg)

Materials of Construction



No.	Component	Material Grade/ASTM Specification
1	Body	SS316/A182 DIN17440/14751
2	End Connector	
3	Stem	
4	Stem Bearing	PTFE
5	Ball	SS316 Stainless Steel
6	Ball Seats	POM – MoS2 (Standard)
7	Stem & End Seals	Fluorocarbon FKM O-ring
8	Locking Device	Stainless Steel
9	Upper Washer	Stainless Steel
10	Bolt	Stainless Steel
11	Handle	Stainless Steel

- Wetted components are marked “*”

Materials of Construction

Seals

Material	Temperature Rating
NBR	-23°C to 121°C
FKM	-23°C to 200°C
EPDM	-46°C to 149°C

Ball Seats

Materials	Temperature Rating
POM – MoS2	-30°C to 100°C
PTFE	-54°C to 65°C

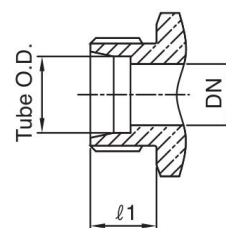
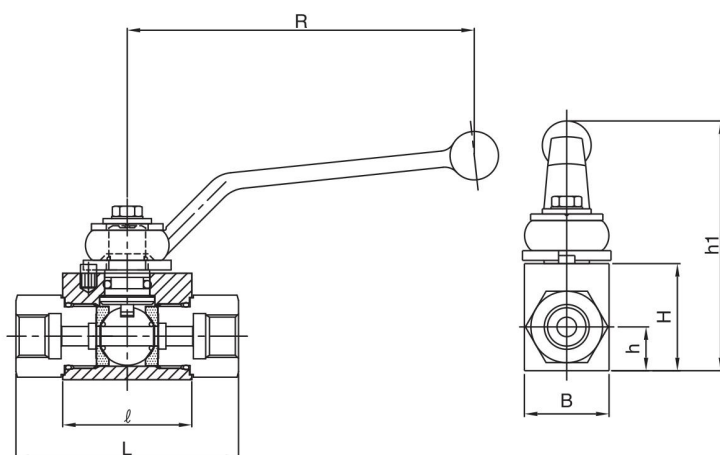
Test

- Every Valve is factory tested with bubble-tight leakage test at both seat and stem packing with nitrogen at 1000psig (69barg)
- Hydraulic shell test is performed at 1.5 times the working pressure
- Seats have a maximum allowable leakage rate of 0.1 SCCM optional tests are available upon request

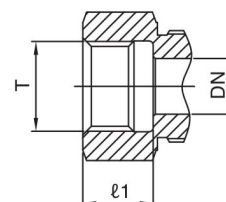
Safety in Valve Selection

When selecting a valve, the total system design must be considered to ensure safe, trouble-free performance.

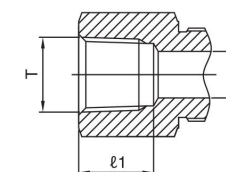
Valve functions, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibility of the system designer and user.

Table of Dimensions


Tube Connection
DIN2353
Light Series (L)
Heavy Series (S)



Female Thread
BSP
DIN/ISO 228 BSP



Female Thread
NPT
ASME/ANSI B1.20.1

DIN2353 Light (L) Tube Series

Order Number	End Connection	DN	PB	Dimensions (mm)								Weight (KG)
	Inlet & Outlet			B	H	h	h1	L	φ	φ1	R	
DDBL6L	6MM	4	315	26	33	13.5	82	67	40	10	115	0.4
DDBL8L	8MM	6	315	26	33	13.5	82	67	40	10	115	0.4
DDBL10L	10MM	8	315	26	33	13.5	82	74	40	11	115	0.5
DDBL12L	12MM	10	315	32	38	17.5	87	74	43	11	115	0.6
DDBL315L	15MM	13	315	35	40	19	89	82	48	12	115	0.7
DDBL318L	18MM	13	315	35	40	19	89	82	48	12	115	0.8
DDBL422L	22MM	20	160	49	57	24.5	114	101	62	14	159	2.1
DDBL528L	28MM	25	160	58	65	29.5	122	108	66.2	14	159	2.3
DDBL535L	35MM	25	160	58	65	29.5	122	112	66.2	16	159	2.3

DIN2353 Light (L) Tube Series

Order Number	End Connection	DN	PB	Dimensions (mm)								Weight (KG)
	Inlet & Outlet			B	H	h	h1	L	φ	φ1	R	
DDBL8S	8MM	4	500	26	33	13.5	82	73	40	12	115	0.4
DDBL10S	10MM	6	500	26	33	13.5	82	73	40	12	115	0.4
DDBL12S	12MM	6	500	32	38	13.5	82	76	43	12	115	0.5
DDBL14S	14MM	10	500	32	38	17.5	87	80	43	14	115	0.6
DDBL16S	16MM	13	400	35	40	19	89	86	48	14	115	0.7
DDBL20S	20MM	13	400	35	40	19	89	90	48	16	115	0.8
DDBL25S	25MM	20	315	49	57	24.5	114	109	62	18	159	2.1
DDBL30S	30MM	25	315	58	65	29.5	122	120	66.2	20	159	2.3
DDBL38S	38MM	25	315	58	65	29.5	122	124	66.2	22	159	2.3

Female DIN / ISO 228 / BSP

Order Number	End Connection	DN	PB	Dimensions (mm)								Weight (KG)
	Inlet & Outlet			B	H	h	h1	L	φ	φ1	R	
DDBL2G	1/8"	6	500	26	33	13.5	82	68.8	40	10	115	0.4
DDBL4G	1/4"	6	500	26	33	13.5	82	68.8	40	14	115	0.4
DDBL6G	3/8"	10	500	32	38	17.5	87	71.9	43	14	115	0.6
DDBL8G	1/2"	13	500	35	40	19	89	82.3	48	16.5	115	0.7
DDBL12G	3/4"	20	315	49	57	24.5	114	95.4	62	18	159	1.6
DDBL16G	1"	25	315	58	65	29.5	122	112.7	66.2	20	159	2.3
DDBL20G	1-1/4"	32	315	75	82	37.5	165	121.6	68	22	260	4.36
DDBL24G	1-1/2"	38	315	95	99.1	47.5	182	130.2	85	24	260	6.8
DDBL32G	2"	50	315	115	115.2	57.5	198	140	100	26	260	9.44

Female NPT (ANSI/ASME B1.20.1)

Order Number	End Connection	DN	PB	Dimensions (mm)								Weight (KG)
	Inlet & Outlet			B	H	h	h1	L	φ	φ1	R	
DDBL4N	1/4"	6	500	26	33	13.5	82	68.8	40	15	115	0.4
DDBL6N	3/8"	10	500	32	38	17.5	87	78	43	15	115	0.6
DDBL8N	1/2"	13	500	35	40	19	89	104	48	20.5	115	0.7
DDBL12N	3/4"	20	315	49	57	24.5	114	102	62	21.5	159	1.6
DDBL16N	1"	25	315	58	65	29.5	122	119	66.2	25.4	159	2.3
DDBL20N	1-1/4"	32	315	75	82	37.5	165	-	68	-	260	-
DDBL24N	1-1/2"	38	315	95	99.1	47.5	182	-	85	-	260	-
DDBL32N	2"	50	315	115	115.2	57.5	198	-	100	-	260	-

■ All dimensions are for reference only, subject to change.

Applications

■ Hydraulic Fluids, Compressed Air, Lubricants, and Fuel Oil System.

Sour Gas Service

■ Is provided to meet NACE standard MR0175

Ordering Information

Example: $\frac{D}{1}$ $\frac{D}{2}$ $\frac{BL}{3}$ $\frac{8L}{4}$

1. **Brand:** DE-LOK
2. **D:** DIN Standard
3. **Valve Type:** 2-Way Ball Valve
4. **End Connection Size:**

- Tube O.D Designation

Tube O.D (inch)	6MM	8MM	10MM	12MM	15MM	18MM	22MM	28MM	35MM
Light (L)	6L	8L	10L	12L	15L	18L	22L	28L	35L

- Tube O.D Designation

Tube O.D (mm)	8MM	10MM	12MM	14MM	16MM	20MM	25MM	30MM	38MM
Designation	8S	10S	12S	14S	16S	20S	25S	30S	38S

- Pipe Thread Designation

Size (inch)	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Screwed NPT	4N	6N	8N	12N	16N	20N	24N	32N
Screwed BSP	4G	6G	8G	12G	16G	20G	24G	32G

DTBL Series Trunnion High Pressure Ball Valve

Instruction:

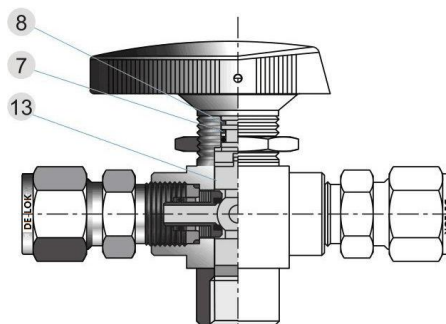
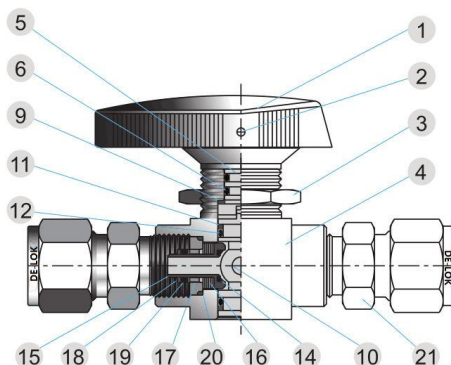
DE-LOK High Pressure Ball Valve provide reliable shut-off or switching functions. The upper and lower trunnion bearings enhance the resistance of the trunnions against seizure. and increase the Valve life in extreme applications. The compact and rugged design employs spring-loaded seats for high cycle life and low operating torques at pressure up to 10000psig (689bar)

Features

- PEEK trunnion bearings for longer cycle life
- Two-way and three way designs
- Below-out resistant two-piece ball/stem
- Low operating torque
- Panel mountable to 9.7mm thickness
- Handle indicates direction of flow
- Positive handle stops
- 100% factory tested
- Compact, maximum flow design

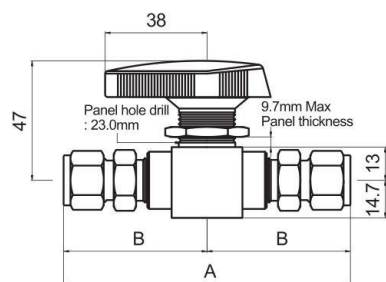
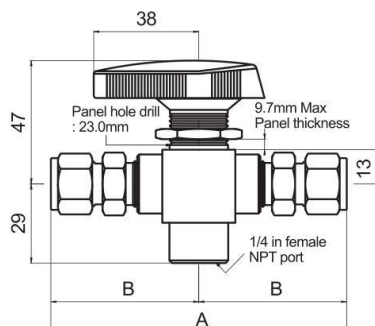
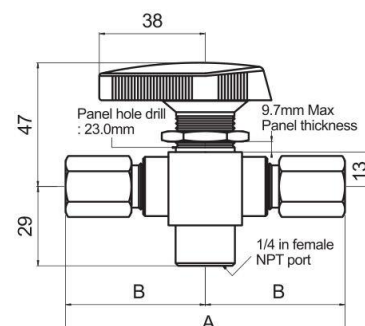
Specifications

- Pressure Rating: 10000psig(689bar) with PEEK seats
6000psig(414bar) with PCTFE seats
- Temperature Rating: -0 to 450°F(-17-232°C)
- Body material: Stainless Steel
- Body configurations: Two-way and three-way
- Port connections: 1/8" to 1/2" and 6mm to 12mm
DE-LOK Tube Fitting or Female NPT end connections



Materials of Construction

No.	Component	BT Series (6000psig)		BTH Series (10000psig)	
		2-Way	3-Way	2-Way	3-Way
		Material Grade/ASTM Specification		Material Grade/ASTM Specification	
1	Handle	Phenolic with Brass insert		Phenolic with Brass insert	
2	Set Screw	Stainless Steel		Stainless Steel	
3	Panel Nut	SS316/A182		SS316/A182	
4	Body	SS316/A182		SS316/A182	
5	Stem	SS316/A182		SS316/A182	
6	Stem O-Ring	Viton		Viton	
7	Stem backup ring 1	-	PEEK	PEEK	
8	Stem backup ring 2	-	PTFE	PTFE	
9	Stem bearing	PEEK		PEEK	
10	Trunnion Ball	SS316/A182		SS316/A182	
11	Trunnion backup ring	R-PTFE	R-PTFE	-	
12	Trunnion O-Ring	Viton	Viton	-	
13	Trunnion bearing	-	-	-	
14	Ball seal	PCTFE/PTFE/PEEK		PEEK	
15	Seal retainer	SS316/A182		SS316/A182	
16	Seal spring	Stainless Steel		Stainless Steel	
17	Seal guide	SS316/A182		SS316/A182	
18	Retainer backup ring	R-PTFE		R-PTFE	
19	Retainer O-Ring	Viton		Viton	
20	Connection seal	PTFE		PTFE	
21	End connection	SS316/A182		SS316/A182	

DTBL6M Series 2-Way

DTBL3W6M Series 3-Way

DTBL10M Series 3-Way

2 WAY VALVE ORIFICE: 4.8mm

DTBL Series Order Number	BTBL10 Series Order Number	End Connection	CV	Dimensions (mm)	
		Inlet & Outlet		A	B
DTBL6M2N-2N	DTBL10M2N-2N	1/8" Female NPT	1.2	74.7	37.3
DTBL6M4N-4N	-	1/4" Female NPT	1.0	74.7	37.3
-	DTBL10M4N-4N	1/4" Female NPT	1.0	99.8	50.0
DTBL6M4-4	DTBL10M4-4	1/4" DE-LOK	1.6	105	52.6
DTBL6M6-6	DTBL10M6-6	3/8" DE-LOK	1.4	112	55.6
DTBL6M8-8	DTBL10M8-8	1/2" DE-LOK	1.0	117	58.4
DTBL6M6M-6M	DTBL10M6M-6M	6mm DE-LOK	1.6	105	52.6
DTBL6M8M-8M	DTBL10M8M-8M	8mm DE-LOK	1.5	105	52.6
DTBL6M10M-10M	DTBL10M10M-10M	10mm DE-LOK	1.3	112	55.9
DTBL6M12M-12M	DTBL10M12M-12M	12mm DE-LOK	1.0	117	58.4

3 WAY VALVE ORIFICE: 4.8mm

DTBL3W6M-2N	DTBL3W10M-2N	1/8" Female NPT	0.75	74.7	37.3
DTBL3W6M-4N	-	1/4" Female NPT		74.7	37.3
-	DTBL3W10M-4N	1/4" Female NPT		99.8	50.0
DTBL3W6M-4	DTBL3W10M-4	1/4" DE-LOK		105	52.6
DTBL3W6M-6	DTBL3W10M-6	3/8" DE-LOK		112	55.6
DTBL3W6M-8	DTBL3W10M-8	1/2" DE-LOK		117	58.4
DTBL3W6M-6M	DTBL3W10M-6M	6mm DE-LOK		105	52.6
DTBL3W6M-8M	DTBL3W10M-8M	8mm DE-LOK		105	52.6
DTBL3W6M-10M	DTBL3W10M-10M	10mm DE-LOK		112	55.9
DTBL3W6M-12M	DTBL3W10M-12M	12mm DE-LOK		117	58.4

■ Dimensions shown with DE-LOK nuts finger-tight. Dimensions in millimeters are reference only and are subject to change

Technical Data

Seat Material	Temperature Rating °F(°C)	Pressure Rating at 100°F(37°C) Psig(bar)
		Stainless Steel
DTBL6M		
PCTFE	0 to 250 (-17 to 121)	6000 (413)
PEEK	0 to 450 (-17 to 232)	
PTFE		1500 (103)
DTBL10M		
PEEK	0 to 450 (-17 to 232)	6000 to 10000 (413 to 689) Depending on end connection

Pressure-Temperature Rating

DTBL6M Series

Material		SS316		
Seat Material		PCTFE	PTFE	PEEK
Temperature °F(°C)		Working Pressure, psig (bar)		
0(-17) to	100 (37)	6000 (413)	1500 (103)	6000 (413)
	150 (65)	3000 (206)	1125 (77.5)	5800 (399)
	200 (93)	2000 (137)	750 (51.6)	5000 (344)
	250 (121)	1000 (68.9)	625 (43.0)	4100 (282)
	300 (148)	-	500 (34.4)	3200 (220)
	350 (176)	-	375 (25.8)	2300 (158)
	400 (204)	-	250 (17.2)	1400 (96.4)
	450 (232)	-	125 (8.6)	500 (34.4)

DTBL10M Series

Material		SS316					
End Connections		Female 1/8", 1/4" DE-LOK 1/4", 6mm	DE-LOK 8mm	DE-LOK 12mm	DE-LOK 3/8"	DE-LOK 1/2"	DE-LOK 10mm
Temperature °F(°C)		Working Pressure, psig (bar)					
0(-17) to	100 (37)	10000 (689)	7500 (516)	6600 (454)	6500 (454)	6700 (461)	6000 (413)
	150 (65)	7500 (516)	7500 (516)	6600 (454)	6500 (454)	6700 (461)	5900 (406)
	200 (93)	5000 (344)	5000 (344)	5000 (344)	5000 (344)	5000 (344)	5000 (344)
	250 (121)	4100 (282)	4100 (282)	4100 (282)	4100 (282)	4100 (282)	4100 (282)
	300 (148)	3200 (220)	3200 (220)	3200 (220)	3200 (220)	3200 (220)	3200 (220)
	350 (176)	2300 (158)	2300 (158)	2300 (158)	2300 (158)	2300 (158)	2300 (158)
	400 (204)	1400 (96.4)	1400 (96.4)	1400 (96.4)	1400 (96.4)	1400 (96.4)	1400 (96.4)
	450 (232)	500 (34.4)	500 (34.4)	500 (34.4)	500 (34.4)	500 (34.4)	500 (34.4)

Testing

- Every valve is factory tested with nitrogen at 1000psig (68bar). Seats and body seals are required to have less than 0.1 SCCM leakage
- Hydrostatic shell test is performed at 1.5 times the working pressure as an option
- Optional testing is available upon request

Ordering Information

Example: **D** **T** **BL** **6M** **8-8**
1 **2** **3** **4** **5**

1. Brand: DE-LOK

2. T: Trunnion

3. Valve Type:

- BL: 2-Way Straight Ball Valve
- BL3W: 3-Way Ball Valve

4. Working Pressure: 6M: 6000psig, 10M: 10000psig

5. End Connection Size

-Tube OD Designation

Tube O.D (inch)	1/8"	1/4"	3/8"	1/2"	6mm	8mm	10mm	12mm
Designation	2	4	6	8	6M	8M	10M	12M

-Pipe Thread Designation

Size (inch)	1/8"	1/4"	3/8"	1/2"
Screwed NPT	2N	4N	6N	8N

DFNV Series Integral Bonne Forged Body Needle Valve

Features

- Compact design
- Low operating torques
- Panel mountable
- Variety of stem tips
- Variety end connections
- Straight and Angle flow patterns
- Each and every valve is tested at the factory

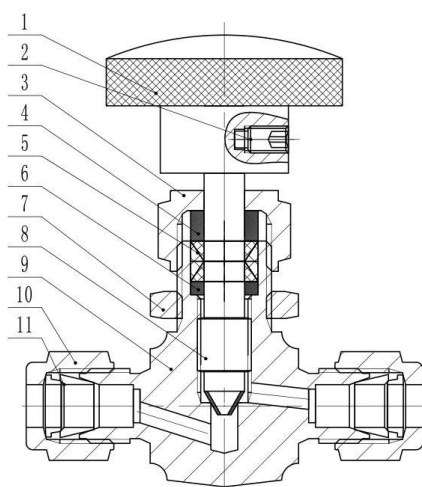
Specifications

Pressure Rating	5000psig (345bar) @ 100°F(38°C)
Temperature Rating	-65 to 450°F(-54 to 232°C) with PTFE packing and 600°F(315°C) with PEEK packing
Body Material	316 Stainless Steel, alloy 400 and Brass
Port Connections	1/8" to 3/4" and 3mm to 12mm variety end connections
Orifice	0.08" and 0.375" (2.0mm to 9.5mm)

Testing

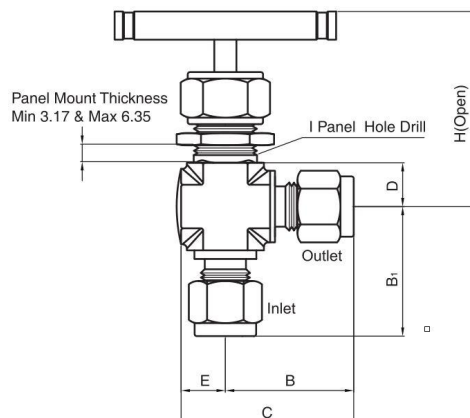
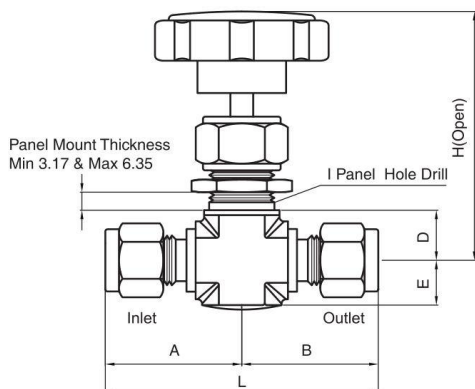
- Each Valve tested with nitrogen at 1000psig (69bar) to maximum allowable leak rate 0.1 SCCM
- Hydrostatic shell test is performed at 1.5 times of the working pressure. (Option)

Materials of Construction



No.	Component	Material Grade/ASTM Specification		
		S. Steel	Brass	Alloy 400
1	Knob Handle	Bakelite with Brass insert		
2	Set Screw	SS304/A182		
3	Press Nut	SS316/A182		
4	Packing Gland	SS316/A182	Brass 360/B16	Alloy R405/B164
5	Packing	PTFE(Standard), PEEK(Optional)		
6	Packing Gland	SS316/A182	Brass 360/B16	Alloy R405/B164
7	Panel Nut	SS316/A182	Brass 360/B16	Alloy R405/B164
8	Vee Stem	Chrome Plated SS316/A182	SS316/A182	Alloy R405/B164
	Regulating Stem			
	Soft Seat Stem With PCTFE			
9	Body	SS316/A182	Brass377/B283	Alloy R400/B564
10	Tube Nut	SS316/A182	Brass377/B283	Alloy R400/B564
11	Ferrule	SS316/A182	Brass377/B283	Alloy R400/B564

- Wetted components are marked “*”
- SS Bar handle is available

DFNV Series Needle Valve

Table of Dimensions

Order Number		Orifice	Cv	End Connections		Dimensions (mm)										
Series	Part No.			Inlet	Outlet	L	A	B	B1	C	D	E	F	I	H	
DFNV6M 01	2N-2N	2.0	0.09	1/8" Female NPT		47.8	23.9	23.9	23.9	21.8	11.2	7.9	32.0	11.9	55.0	
	-2MN			1/8" Male NPT		38.1	19.1	19.1	19.1	27.0						
	2-2MN			1/8" Male NPT	1/8" DE-LOK	43.8										
	2-2			1/8" DE-LOK		49.4	24.7	24.7	24.7	32.6						
	3M-3M			3mm DE-LOK												
DFNV6M 02	2N-2N	4.4	0.37	1/8" Female NPT		41.2	20.6	20.6	20.6	30.3	11.2	9.7	45.0	13.5	51.5	
	-2MN			1/8" Male NPT												
	-4MN			1/4" Male NPT		49.8	24.9	24.9	24.9	34.6						
	4-4MN			1/4" Male NPT	1/4" DE-LOK											53.6
	6M-6M			6mm DE-LOK		57.4	28.7	28.7	28.7	38.4						
	4-4			1/4" DE-LOK												
	8M-8M			8mm DE-LOK		59.4	29.7	29.7	29.7	39.4						
DFNV6M 03	4N-4N	6.3	0.73	1/4" Female NPT		53.8	26.9	26.9	26.9	39.6	12.7	12.7	64.0	20.0	63.5	
	4R-4R			1/4" ISO Female												
	4N-4MN			1/4" Male NPT	1/4" Female NPT	55.6	32.8	28.7	28.7	41.4						
	6-4MN			1/4" Male NPT	3/8" DE-LOK											61.5
	-6MN			3/8" Male NPT		57.4	28.7	28.7	28.7	41.4						
	6-6MN			3/8" Male NPT	3/8" DE-LOK											61.5
	8-6MN			3/8" Male NPT	1/2" DE-LOK	64.3	35.6	35.6	35.8	48.3	14.2					
	10M-10M			10mm DE-LOK		66.0	33.0	33.0	33.0	45.7	12.7					
	6-6			3/8" DE-LOK		65.6	32.8	32.8	32.8	45.5						
	12M-12M			12mm DE-LOK		71.2	35.6	35.6	35.8	48.3	14.0					
	8-8			1/2" DE-LOK												
DFNV6M 04	6N-6N	8.5	1.80	3/8" Female NPT		76.2	38.1	38.1	38.1	57.2	19.1	19.1	76.0	26.2	99.5	
	6R-6R			3/8" ISO Female												
	8N-8N			1/2" Female NPT												
	8R-8R			1/2" ISO Female												
	-8MN			1/2" Male NPT		96.6	48.3	48.3	48.3	67.4						
	8N-8MN			1/2" Male NPT	1/2" Female NPT											
	8-8			1/2" DE-LOK												
	12-12			3/4" DE-LOK												

- Dimensions shown with DE-LOK nuts measure in the finger-tight, where applicable.
- All dimensions are for reference only, subject to change.

Technical Data

Temperature and Pressure Rating

Body Material	Stem	Pressure Rating	Pressure Rating @ -54°C to 38°C (-65°F to 100°F)
SS316	Vee & Regulating	-54°C to 232°C (-65°F to 450)	5000psig (345bar)
	Soft Seat	-54°C to 93°C (-65°F to 200°F)	
Brass	Vee & Regulating	-54°C to 204°C (-65°F to 400)	3000psig (207bar)
	Soft Seat	-54°C to 93°C (-65°F to 200°F)	
Alloy 400 (Monel)	Vee & Regulating	-54°C to 232°C (-65°F to 450)	3000psig (207bar)
	Soft Seat	-54°C to 93°C (-65°F to 200°F)	

*The above rating are for a standard valve with PTFE packing. *Extreme temperature fluctuation may require packing adjustment.

Temperature VS Working Pressure

Temperature Rating		Pressure psig(bar) @ Temperature Rating		
		SS316	Brass	Alloy 400 (Monel)
-65°F (-54°C) to	100°F (38°C)	5000psig (345bar)	3000psig (207bar)	3000psig (207bar)
	200°F (93°C)	4290psig (296bar)	2600psig (179bar)	2640psig (182bar)
	300°F (148°C)	3870psig (267bar)	2210psig (152bar)	2470psig (170bar)
	350°F (176°C)	3710psig (256bar)	1470psig (101bar)	2430psig (167bar)
	400°F (204°C)	3560psig (245bar)	740psig (51bar)	2390psig (165bar)
	450°F (232°C)	3430psig (236bar)		2380psig (163bar)

Packing and Body materials VS Temperature and Pressure Rating

Packing Material	Body Material	Temperature Rating	Pressure Rating @ Max. Temperature
PTFE (Standard)	SS316	-54°C to 232°C (-65°F to 450°F)	3430psig (236bar)
	SS316	-54°C to 315°C (-65°F to 600°F)	3130psig (216bar)
PEEK (Optional)	Alloy 400	-54°C to 260°C (-65°F to 500°F)	2370psig (163bar)

*PEEK is not recommended for service aromatic heat transfer or concentrated and nitric acids. Other limitations may apply.

Ordering Information

Example: D F NV 6M 2-2
2 **3** **4** **5**

1. **Brand:** DE-LOK
2. **Body:** Forged Body
3. **Valve Type:** Needle Valve
4. **Working Pressure:** 6000psig
5. **End Connection Size:**

-Tube OD Designation

Tube O.D (inch)	1/8	1/4	3/8	1/2	3/4
Designation	2	4	6	8	12
Tube O.D (mm)	3	6	8	10	12
Designation	3M	6M	8M	10M	12M

-Pipe Thread Designation

Size (inch)	1/8	1/4	3/8	1/2
Screwed NPT	2N	4N	6N	8N
Screwed ISO	2R	4R	6R	8R

DBNV Series Bar Stock Body Needle Valve

Features

- Non-rotating stem tip
- Straight-through orifice for maximum flow
- Stem dust seal protects threads from external contamination
- Replaceable seals, seta and stem tip
- Panel mounting option
- Gauge port option

Specifications

Pressure Rating	6000psig(413bar) @ 100°F(37°C)
Temperature Rating	-20 to 400°F(-28 to 204°C)
Body Material	316 Stainless Steel
Orifice	4.8mm, 6.4mm

Testing

- Each Valve tested with nitrogen at 1000psig (69bar) to maximum allowable leak rate 0.1 SCCM

Technical Data

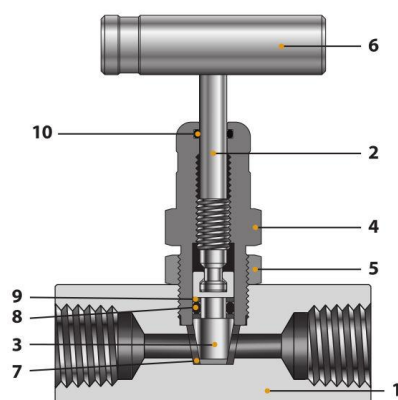
Pressure – Temperature Ratings

Body Material	316 Stainless Steel	
Seat Material	Acetal	PEEK
Temperature Rating °F(°C)	Working Pressure psig (bar)	
-20 to 100 (-28 to 37)	6000 (413)	6000 (413)
200 (93)	2650 (182)	3000 (206)
250 (121)	1000 (68.9)	1600 (110)
300 (148)		1300 (89.5)
350 (176)		1200 (82.6)
400 (204)		1000 (68.9)

O-Ring Material	Temperature Rating °F(°C)
Viton	-20 to 400 (-28 to 204)
Buna-N	-20 to 250 (-28 to 121)
Ethylene Propylene	-20 to 250 (-28 to 121)
Kalrez	-20 to 400 (-28 to 204)

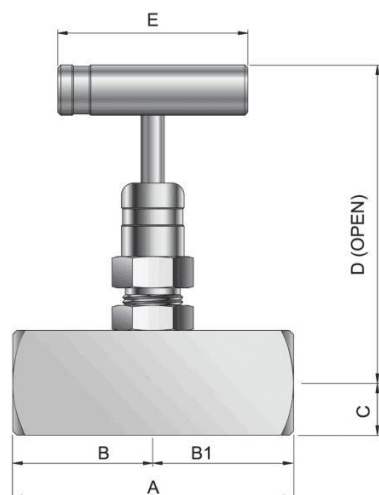
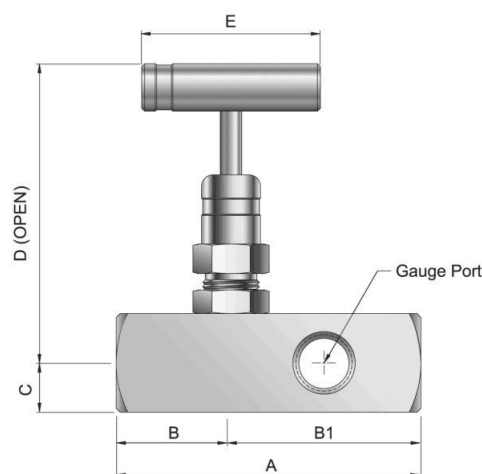
*Viton O-ring is standard

Materials of Construction



No.	Component	Material Grade/ASTM Specification
		Stainless Steel
1	Body	SS316/A182
2	Stem	S17400/A564
3	Stem Tip	SS316/A182
4	Bonnet	SS316/A182
5	Lock Nut	SS316/A182
6	Handle	SS316/A182
7	Seat	Acetal
8	Stem Seal	Viton
9	Back-up Ring	PTFE
10	Dust Seal	Viton

- Wetted components are marked “*”

DBNV Series Needle Valve

Standard Type

Gauge Port Type
Table of Dimensions

Order Number		Orifice	Cv	End Connections		Dimensions (mm)								
Series	Part No.			Port 1	Port 2	A	B	B1	C	D	E			
DBNV 01	4N-4N	4.8	0.63	1/4" Female NPT		62.0	31.0	31.0	12.7	96.3	60.0			
	4N-4MN			1/4" Male NPT	1/4" Female NPT	76.2	45.2							
	4N-8MN			1/2" Male NPT	1/4" Female NPT	81.1	50.1							
DBNVG 01	4N-4N	4.8	0.63	1/4 Female NPT		78.0	31.0	47.0	12.7	96.3		60.0		
	4N-4MN			1/2" Male NPT	1/4" Female NPT	97.1	50.1							
DBNV 02	8N-8N	6.4	1.80	1/2" Female NPT		84.0	42.0	42.0	16.0	96.9			60.0	
	8N-8MN			1/2" Male NPT	1/2" Female NPT	103.1	61.1							
	8N-12MN			3/4" Male NPT	1/2" Female NPT	103.1	61.1							
DBNVG 02	8N-8N	6.4	1.80	1/2" Female NPT		107.4	42.0	65.4	16.0	96.9				60.0
	8N-8MN			1/2" Male NPT	1/2: Female NPT	126.5	61.1							
	8N-12MN			3/4" Male NPT	1/2" Female NPT	126.5	61.1							

Ordering Information

Example: **D** **B** **NV** **6M** **4N-4N**
1 **2** **3** **4** **5**

- Brand:** DE-LOK
- Body:** Square body
- Valve Type:** Needle Valve
- Working Pressure:** 6000psig
- End Connection Size:**
-Pipe Thread Designation

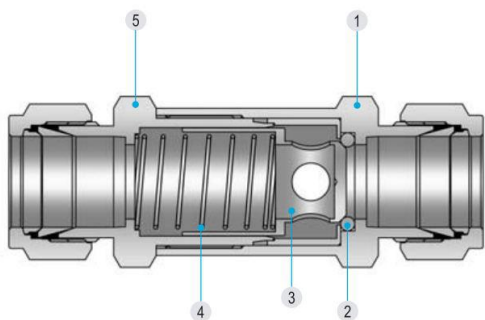
Size (inch)	1/4	1/2	3/4
Screwed NPT	4N	8N	12N
Screwed BSPT	4R	8R	12R

DCV3M Series Check Valves

Features

- Fixed cracking pressure.
- Pressure rating up to 3000psig @70°F(21°C)
- Temperature rating up to 375°F(191°C) with viton o-ring
- Variety of end connections.
- Each and every valves are tested at the factory

Materials of Construction



No.	Component	Material
1	Inlet Body	ASTM A182 SS316
2	O-Ring	Viton
3	Poppet	ASTM A182 SS316
4	Spring	304 Stainless Steel
5	Outlet Body	ASTM A182 SS316

O-ring

O-ring Material	Temperature Rating 70°F(21°C)	Designator
Buna N	-10 to 250 (-23 to 121)	-N
Ethylene Propylene	-70 to 250 (-57 to 121)	-E
Viton (Fluorocarbon)	-10 to 375 (-23 to 191)	Standard
Kalrez	-15 to 500 (-26 to 260)	-K
Neoprene	-35 to 225 (-37 to 107)	-P

Back Pressure

- Back pressure may be required to reseat the valves with nominal cracking pressure of 5psi or lower

Example

For a valve with a spring having a rated cracking pressure of 25psig (1.72bar), the actual cracking pressure ranges between 22 and 28psig (1.52 to 1.93bar). The re-seal pressure range would be 16 to 22 psig (1.10 to 1.52bar). Check valves having springs with rated cracking pressure of 3psig (0.21bar) or less may require up to 4psig (0.28bar) back pressure to re-seal bubble-tight.

DCV3M Series Check Valve

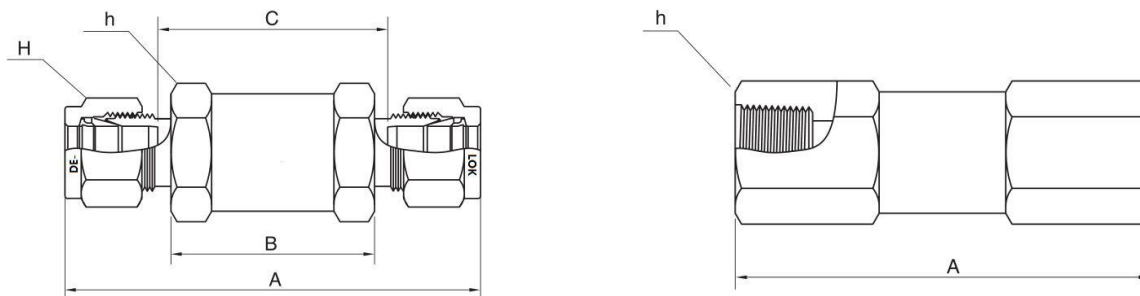


Table of Dimensions

Order Number		End Connection	Dimensions				
Series	Part No.		A	B	C	h	H
DCV3M	2-2	1/8" DE-LOK	57.15	26.6	31.2	15.88	11.11
	2N-2N	1/8" Female NPT	50.00	-	-	15.88	-
	4-4	1/4" DE-LOK	62.16	26.6	31.4	15.88	14.28
	4N-4N	1/4" Female NPT	57.10	-	-	19.02	-
	6-6	3/8" DE-LOK	76.20	37.6	42.4	22.22	17.46
	6N-6N	3/8" Female NPT	73.90	-	-	22.22	-
	8-8	1/2" DE-LOK	86.58	42.9	40.8	25.40	22.22
	8N-8N	1/2" Female NPT	90.60	-	-	27.00	-
	10-10	5/8" DE-LOK	91.68	48.0	42.8	28.50	25.4
	12-12	3/4" DE-LOK	99.78	56.1	51.1	31.80	28.57
	12N-12N	3/4" Female NPT	99.78	-	-	31.80	-
	16-16	1" DE-LOK	111.22	58.4	48.9	38.10	38.1
	16N-16N	1" Female NPT	114.30	-	-	41.27	-

■ All dimensions are for reference only, subject to change.

Technical Data

- Cracking pressure - the upstream pressure at which the first indication of flow occurs.
- Reseal pressure – the pressure at which there is no indication of flow.

Size	Maximum Flow Coefficient (CV)	Nominal Cracking Pressure psig (bar)	Downstream Pressure @ 70°F (20°C) psig (bar)
1/8"	0.10	1/3, 1, 10, 25 (0.03, 0.07, 0.68, 1.8)	1000 (68.9)
1/4"	0.47		
3/8"	1.47		200 (13.7)
1/2"	1.68		
3/4", 1"	4.48		

*For cracking pressure of 25psig (1.8bar), downstream pressure is 3000psig (206bar)

Ordering Information

Example: D CV 3M 2-2
 1 2 3 4

1. Brand: DE-LOK
2. Valve Type: Check Valve
3. Working Pressure: 3000psig
4. End Connection Size:

-Tube OD Designation

Tube O.D (inch)	1/8	1/4	3/8	1/2	5/8	3/4	1
Designation	2	4	6	8	10	12	16

-Pipe Thread Designation

Size (inch)	1/8	1/4	3/8	1/2	3/4	1
Screw NPT	2N	4N	6N	8N	12N	16N

DCV6M Series High Pressure Check Valves

Features

- Pressure rating up to 6000psig (413bar) @100°F(37°C)
- Temperature rating up to 375°F(190°C) with viton seal standard
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7bar)
- Variety of end connections.
- 316 stainless steel body material as standard
- Each and every valves are tested at the factory

Technical Data

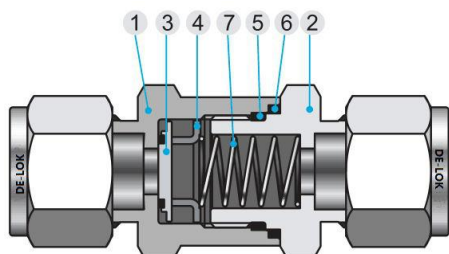
Size	Orifice (m)	Working and Back Pressure @70°F (20°C)	Flow Coefficient CV	Nominal Cracking Pressure
DCV6M-01	4.8	6000psig (413bar)	0.67	1/2, 1, 5, 10, 25psig (0.02, 0.06, 0.34, 0.68, 1.7bar)
DCV6M-02	7.8		1.80	
DCV6M-03	15.0	5000psig (344bar)	4.70	

Seal Materials

Material	Temperature Rating	Designator
Viton	-10 to 375°F (-23 to 190°C)	Standard
NBR	-10 to 250°F (-23 to 121°C)	N
Ethylene Propylene	-50 to 300°F (-45 to 148°C)	E

Nominal Spring Size psig(bar)	Cracking Pressure Range psig(bar)	Min. Reseal Pressure psig(bar)	Designator
1/2 (0.02)	0-3 (0-0.20)	6(0.41)	0.3P
1 (0.068)	0-4 (0-0.27)	5(0.34)	1P
5 (0.34)	3-9 (0.20-0.62)	2(0.13)	5P
10 (0.68)	7-15 (0.48-1.0)	3(0.20)	10P
25 (1.7)	20-30 (1.3-2.0)	17(1.1)	25P

Materials of Construction



No.	Component	Material
1	Inlet Body	ASTM A182/SS316
2	Outlet Body	ASTM A182/SS316
3	Poppet	Viton-bonded SS316
4	Poppet Stopper	ASTM A182/SS316
5	O-ring	Viton Standard
6	Packing	PTFE
7	Spring	SS304

Testing

- Each Valve are tested for cracking pressure and reseal performance

DCV6M Series Check Valve

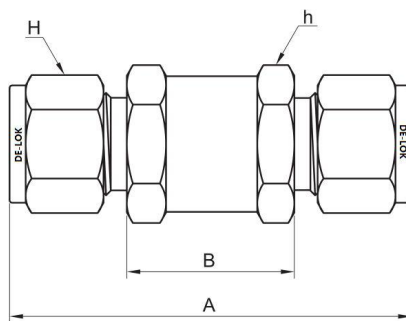


Table of Dimensions

Order Number		Orifice (mm)	CV Max	End Connection	Pressure Rating Psig (bar)	Dimensions (mm)			
Series	Part No.					A	B	H	h
DCV6M 01	2-2	4.8	0.67	1/8" DE-LOK	6000 (413)	57.7	26.4	11.1	17.5
	4-4			1/4" DE-LOK		61.7		14.3	
	6M-6M			6mm DE-LOK				14	
	4N-4N			1/4" Female NPT		54.1	-	-	
	2MN			1/8" Male NPT		45.5	26.4		
	4MN			1/4" Male NPT		55.1			
DCV6M 02	6-6	7.8	1.8	3/8" DE-LOK	6000 (413)	69.9	31.2	17.5	25.4
	8-8			1/2" DE-LOK		75.2		22.2	
	8M-8M			8mm DE-LOK		68.6		16	
	10M-10M			10mm DE-LOK		71.1		19	
	12M-12M			12mm DE-LOK		75.2		22	
	6N-6N			3/8" Female NPT	5000 (344)	64.8	-	-	26.9
	8N-8N			1/2" Female NPT	4600 (316)	77.0			
	6MN			3/8" Male NPT	6000 (413)	59.9			
	8MN			1/2" Male NPT		69.3			
DCV6M 03	12-12	15	4.7	3/4" DE-LOK	5000 (344)	89.4	45.5	28.6	41.3
	16-16			1" DE-LOK	4700 (323)	98.6	45.5	38.1	
	22M-22M			22mm DE-LOK	5000 (344)	88.4		32	
	25M-25M			25mm DE-LOK		98.6		40	
	12N-12N			3/4" Female NPT	4300 (296)	82.0	-	-	
	16N-1N			1" Female NPT	4100 (282)	97.3			
	12MN			3/4" Male NPT	5000 (344)	83.6	45.5		
	16MN			1" Male NPT		93.2	45.7		

- Dimensions, shown on the above table, are measured based on finger-tight
- All dimensions are for reference only, subject to change

Ordering Information

Example: D CV 6M 2-2
 1 2 3 4

1. **Brand:** DE-LOK
2. **Valve Type:** Check Valve
3. **Working Pressure:** 6000psig
4. **End Connection Size:**

-Tube OD Designation

Table 02 Designation									
Tube O.D (inch)	1/8		1/4	3/8		1/2	3/4"		1
Designation	2		4	6		8	12		16
Tube O.D (mm)	6mm	8mm	10mm	12mm	16mm	18mm	20mm	22mm	25mm
Designation	6M	8M	10M	12M	16M	18M	20M	22M	25M

-Pipe Thread Designation

Size (inch)	1/8	1/4	3/8	1/2	3/4	1
Screw NPT	2N	4N	6N	8N	12N	16N

DOCV3M Series One-Piece Check Valves

Features

- One-piece body
- Working pressure up to 3000psig (206bar)
- Temperature rating up to 375°F(190°C) with viton seal standard
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7bar)
- NPT and ISO pipe end connections
- 316 stainless steel body and brass materials
- Each and every valves are tested at the factory

Technical Data

Nominal Cracking Pressure	1/3, 1, 10 and 25psig (0.02, 0.06, 0.68, 1.7bar)
Maximum Working Pressure @70°F(20°C)	3000psig (206bar)
Maximum Back Pressure @70°F(20°C)	3000psig (206bar)
Flow Coefficient (CV)	DOCV3M01 / DOCV3M02: 0.35 DOCV3M03 / DOCV3M04: 1.20
Temperature Rating	Viton O-Ring: -10 to 375°F(-23 to 190°C) NBR O-Ring: -10 to 250°F(-23 to 121°C)

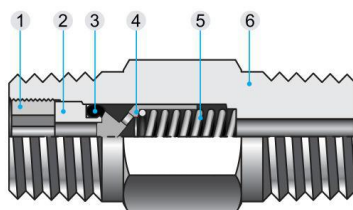
Technical Data

- DOCV series Valves with nominal cracking pressure of 20psig (1.3bar) or lower may require back pressure to reseal bubble-tight.

Testing

- Each Valve are tested for cracking pressure and reseal performance

Materials of Construction



No.	Component	Material	
		Stainless Steel	Brass
1	Insert Lock Screw	ASTM A182/SS316	Brass
2	Insert	ASTM A182/SS316	Brass
3	O-Ring	Viton	NBR
4	Poppet	ASTM A182/SS316	Brass
5	Spring	SS304	
6	Body	ASTM A182/SS316	Brass

DOCV3M Series Check Valve

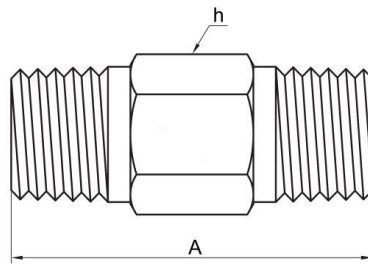


Table of Dimensions

Order Number		End Connection	A (mm)	h HEX mm (in)
Series	Part No.			
DOCV3M-01	4MN	1/4" Male NPT	41.1	14.3 (9/16)
	4MR	1/4" Male ISO	41.1	14.3 (9/16)
DOCV3M-02	4N-4N	1/4" Female NPT	75.7	19.1 (3/4)
DOCV3M-03	8MN	1/2" Male NPT	65.0	22.2 (7/8)
	8MR	1/2" Male ISO	65.0	22.2 (7/8)

■ All dimensions are for reference only, subject to change

Ordering Information

Example: D O CV 3M 4N-4N
 1 2 3 4 5

1. **Brand:** DE-LOK
2. **Body:** One-piece body
3. **Valve Type:** Check Valve
4. **Working Pressure:** 3000psig
5. **End Connection Size:**
-Pipe Thread Designation

Size (inch)	1/4"	3/8"	1/2"
Screwed NPT	4N	6N	8N
Screwed ISO	4R	6R	8R

DPV3M Series Plug Valve

Features

- Working pressure up to 3000psig (206bar) 70°F(21°C)
- Temperature rating from -10 to 400°F(-23 to 204°C) with PTFE coated Viton seal.
- Small and compact design
- Easy maintenance and cleaning
- Size available up to 1/2" tube and pipe
- 316 stainless steel body and brass materials

Pressure-Temperature Rating

Series	Valve Material	Pressure Rating		Temperature Rating	Plug Orifice mm (in)
		psig	bar		
DPV3M 01	SS316 Brass	3000	206	-10 to 400°F (-23 to 204°C)	4.4 (0.17)
DPV3M 02	SS316 Brass				7.2 (0.28)

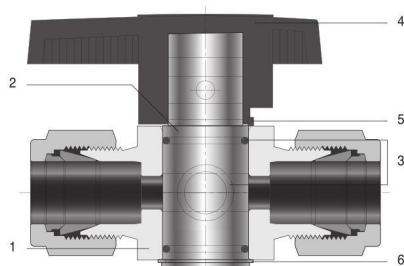
- Differential pressure is limited to maximum 150psig(10.3bar) when reverse flow occurs.
- Throttling reverse flow may damage O-ring.

Optional O-Ring Material

O-Ring Material	Temperature Range
Standard PTFE – coated Viton	-20 to 400°F(-28 to 204°C)
PTFE – coated NBR	-20 to 400°F(-28 to 204°C)
PTFE – coated EPDM	-20 to 400°F(-28 to 204°C)

- PTFE – coated Viton is standard. Choose optional O-ring material for fluid compatibility and system temperatures.

Materials of Construction



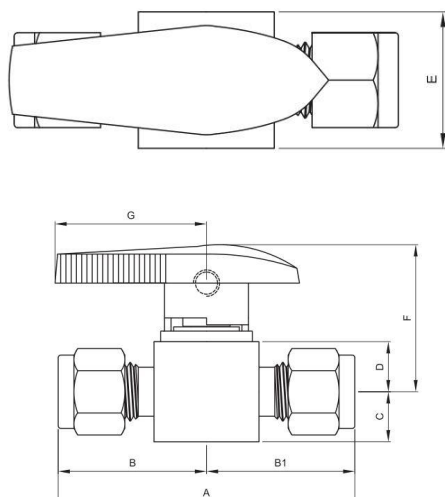
No.	Component	Material	
		Stainless Steel	Brass
		Grade/ASTM Specification	
1	Body	ASTM A182/SS316	Brass/B16
2	Plug	PTFE – coated ASTM A182/SS316	PTFE – coated Brass/B16
3	O-ring	PTFE – coated Viton Standard	
4	Handle	Nylon	
5	Pin	ASTM A182/SS316	
6	Snap Pin	Stainless Steel	

* Wetted components are marked “*”

Testing

- Each Valve are factory tested for shut off at 600psig (41bar)

Standard Style



Panel Mounting Style

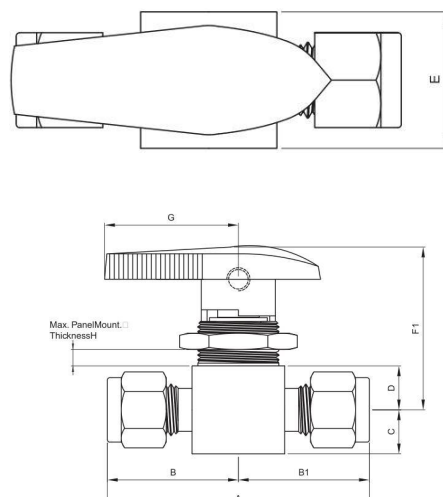


Table of Dimensions

Order Number		Orifice	Cv	End Connections		Dimensions (mm)									
Series	Part No.			Inlet	Outlet	A	B	B1	C	D	E	F	F1	G	H
DPV3M 01	2N-2N	4.4	1.2	1/8" Female NPT		45.2	22.6	22.6	9.5	9.5	20.0	27.9	35.5	28.9	6.4
	4N-4N		0.9	1/4" Female NPT		53.1	26.6	26.6							
	4N-4MN		0.9	1/4" Male NPT	1/4" Female NPT	50.8	24.2	26.6							
	2MN		1.0	1/8" Male NPT		39.0	19.5	19.5							
	4MN		1.0	1/4" Male NPT		48.4	24.2	24.2							
	4-4MN		0.9	1/4" Male NPT	1/4" DE-LOK	51.2	24.2	27.6							
	2-2	2.3	0.1	1/8" DE-LOK		50.5	25.3	25.3							
	4-4	4.4	1.6	1/4" DE-LOK		55.1	27.6	27.6							
DPV3M 02	6M-6M		1.6	6mm DE-LOK		55.1	27.6	27.6							
	4N-4N	7.2	4.3	1/4" Female NPT		60.5	30.3	30.3	14.0	14.0	(30)	41.6	53.2	51.7	9.4
	8N-8N		2.7	1/2" Female NPT		73.2	36.6	36.6							
	8MN		2.4	1/2" Male NPT		67.1	33.5	33.5							
	8M-8M		6.4	8mm DE-LOK		67.6	33.8	33.8							
	10M-10M		6.4	10mm DE-LOK		68.1	34.1	34.1							
	12M-12M		4.8	12mm DE-LOK		75.2	37.6	37.6							
	6-6		6.4	3/8" DE-LOK		67.6	33.8	33.8							
	8-8		4.4	1/2" DE-LOK		73.2	36.6	36.6							

- Dimensions, shown on the above table, are measured based on finger-tight
- All dimensions are for reference only, subject to change

Ordering Information

Example: $\frac{D}{1} \quad \frac{PV}{2} \quad \frac{3M}{3} \quad \frac{4-4}{4}$

1. **Brand:** DE-LOK
2. **Valve Type:** Plug Valve
3. **Working Pressure:** 3000psig
4. **End Connection Size:**

-Tube OD Designation

Tube O.D	1/8	1/4	3/8	1/2	6mm	8mm	10mm	12mm
Designation	2	4	6	8	6M	8M	10M	12M

-Pipe Thread Designation

Size (inch)	1/8"	1/4"	3/8"	1/2"
Screw NPT	2N	4N	6N	8N

DRV Series Relief Valve

Features

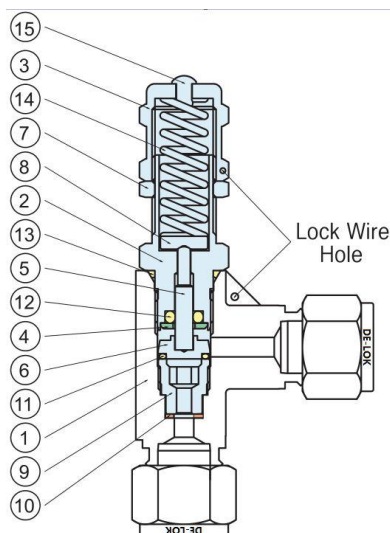
- Compact design
- Cracking pressure adjustable externally
- Lock wire feature secures a given pressure setting
- Each and every valve is tested at the factory

Set Pressure

- Set pressure is the upstream pressure at which the first at which the first indication of flow occurs. Set pressure of each valve after initial relief is repeatable within $\pm 5\%$ at room temperature.

DRVL Series

Low Pressure Relief Valve



Technical Data

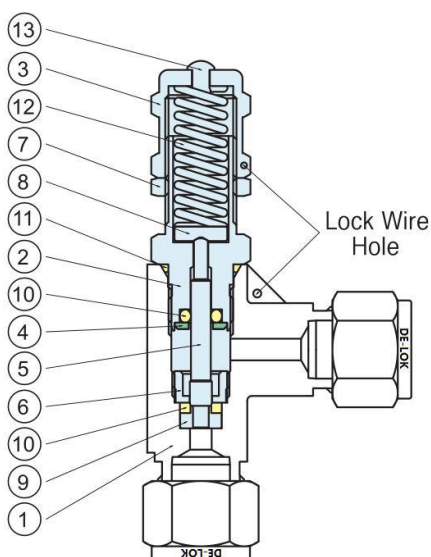
- Maximum working pressure: 300psig (20.6bar)
- Cracking pressure range: 10-250psig (0.69-17.2bar)
- Orifice size: 4.8mm
- One spring for the full set pressure range
- If require spring kit, mention part no: DVL-SG

Material of Construction

No.	Description	Material	No.	Description	Material
1	Body	SS316	9	Seat Retainer	SS316
2	Bonnet	SS316	10	Seat	PTFE
3	Cracking pressure Adjusting Nut	SS316	11	O-Ring	Viton
4	Retainer	SS316	12	O-Ring	Viton
5	Stem Shaft	SS316	13	O-Ring	Viton
6	Stem	SS316	14	Spring	SS304
7	Lock Nut	SS316	15	Cap	Polypropylene
8	Spring Support	SS316			

DRVH Series

High Pressure Relief Valve



Technical Data

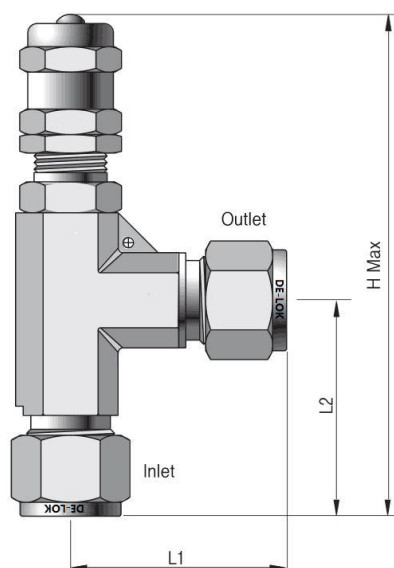
- Maximum working pressure : 6000psig (413bar)
- Cracking Pressure Range : 225-600psig (15.5-41.4bar)
- Orifice size: 4.8mm
- Multiple spring for a selection of set pressure range

DRVH Series

Spring	Spring Color	Cracking Pressure	
		psig	bar
Y	Yellow	225-750	15.5-51.5
P	Purple	750-1500	51.5-103
O	Orange	1500-2250	103-155
B	Brown	2250-3000	155-206
W	White	3000-4000	206-275
R	Red	4000-5000	275-344
G	Green	5000-6000	344-414

Material of Construction

No.	Description	Material	No.	Description	Material
1	Body	SS316	8	Spring Support	SS316
2	Bonnet	SS316	9	Stem Retainer	SS316
3	Cracking pressure Adjusting Nut	SS316	10	O-Ring	Viton
4	Retainer	SS316	11	O-Ring	Viton
5	Stem Shaft	SS316	12	Spring	SS304
6	Stem Guide	SS316	13	Cap	Polypropylene
7	Lock Nut	SS316			

DRV Series Relief Valve

Table of Dimensions

Part Number		Orifice (mm)	End Connection		Dimensions (mm)		
			Inlet	Outlet	L1	L2	H
DRVH	4-4	4.8	1/4" DE-LOK		38.7	38.7	104.6
	6M-6M		6mm DE-LOK		38.7	38.7	104.6
	8M-8M		8mm DE-LOK		38.7	38.7	104.6
	6-6		3/8" DE-LOK		44.4	44.4	111.7
	8-8		1/2" DE-LOK		46.7	46.7	114.0
Or	12M-12M		12mm DE-LOK		46.7	46.7	114.0
DRVH	8-8MN		1/2" Male NPT	1/2" DE-LOK	46.7	35.7	103.0
	12M-8MN		1/2" Male NPT	12mm DE-LOK	46.7	35.7	103.0
	4N-4MN		1/4" Male NPT	1/4" Female NPT	30.0	32.2	99.5
	6N-6MN		3/8" Male NPT	3/8" Female NPT	34.5	32.2	99.5
	8N-8MN		1/2" Male NPT	1/2" Female NPT	38.0	35.7	103.0

- Dimensions, shown on the above table, are measured based on finger-tight
- All dimensions are for reference only, subject to change

Ordering Information

Example: **D** **RV** **H** **Y** **4-4**
1 **2** **3** **4** **5**

- Brand:** DE-LOK
- Valve Type:** Relief Valve
- Valve Series:** H: High Pressure, L: Low Pressure
- Spring Designator:**

Y: 225-750 psig	O: 1500-2250 psig	W: 3000-4000 psig	G: 5000-6000 psig
P: 750-1500 psig	B: 2250-3000 psig	R: 4000-5000 psig	

- End Connection Size:**

-Tube OD Designation

Tube O.D (inch)	1/4	3/8	1/2
Designation	4	6	8
Tube O.D (mm)	6	8	12
Designation	6M	8M	12M

-Pipe Thread Designation

Size (inch)	1/4	3/8	1/2
Screwed NPT	4N	6N	8N
Screwed ISO	4R	6R	8R

DTF Series Micron Tee Filter

Features

- Remove system particulate contaminants
- The Filter element can be replaced without removing the body in the system
- Replaceable sintered filter element
- Maximum operating pressure 6000psig (414bar) 70°F(21°C)
- Temperature rating range: -40 to 250°F(-40 to 121°C) with PTFE coated Viton seal.

Technical Data

Temperature and Pressure Rating

Filter Series	STD1 & STF2	
Material	SS316	Brass
Temperature °F(°C)	Working Pressure psig (bar)	
-20(-28) to 100(37)	6000(413)	2000(137)
-20(-28) to 200(93)	5160(355)	1730(119)
-20(-28) to 300(148)	4660(321)	1470(101)
-20(-28) to 400(204)	4280(294)	-
-20(-28) to 500(260)	3980(274)	-
-20(-28) to 600(315)	3760(259)	-
-20(-28) to 650(343)	3700(254)	-
-20(-28) to 700(371)	3600(248)	-
-20(-28) to 750(398)	3520(242)	-
-20(-28) to 800(426)	3460(238)	-
-20(-28) to 850(454)	3380(232)	-
-20(-28) to 900(482)	3280(225)	-

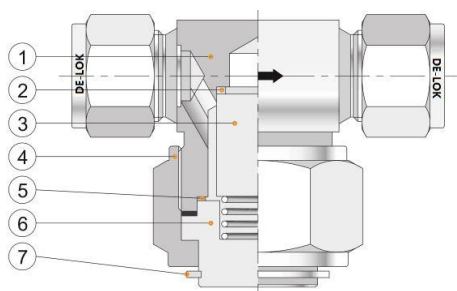
Effective Filtration Area

Filter Series	Sintered Element in (mm)
DTF-01	1.3 (830)
DTF-02	2.0 (1280)

Filter Elements

Nominal Pore Size	Pore Size Range
0.5	0.5 to 2
2	1 to 4
7	5 to 10
15	11 to 25
60	50 to 75
90	75 to 100

Materials of Construction



No.	Component	Material
1	Body	ASTM A182/SS316
2	Packing	PTFE
3	Filter Elements	SS316/Sintered
4	Nut	ASTM A182/SS316
5	Gasket	SS316/Silver Plated
6	Cap	ASTM A182/SS316
7	Snap Ring	Stainless Steel

Flow Data @ 70°F(21°C)

Nominal Element Port Size	Inlet Pressure, psig(bar)						Pressure Drop, psig(bar)					
	5 (0.34)		10 (0.68)		15 (1.0)		10 (0.68)		50 (3.4)		100 (6.8)	
	TF-01	TF-02	TF-01	TF-02	TF-01	TF-02	TF-01	TF-02	TF-01	TF-02	TF-01	TF-02
	Air Flow, L/min						Water Flow, L/min					
0.5	3.4	10	7.3	24	13	45	0.15	3.4	0.64	1.5	1.0	2.8
2	17	39	39	79	65	110	0.9	0.98	3.2	4.1	4.9	6.0
7	39	51	82	119	130	190	1.5	2.4	4.9	8.3	7.5	13
15	34	51	82	130	130	220	1.8	3.1	4.9	9.8	7.9	15
60	87	140	160	280	240	420	3.0	5.6	10.	18	14	25
90	110	170	210	310	280	450	4.1	6.4	12	20	18	28

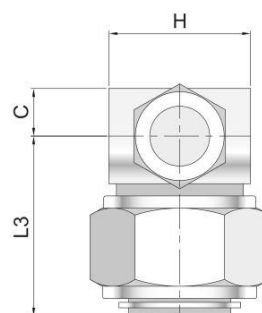
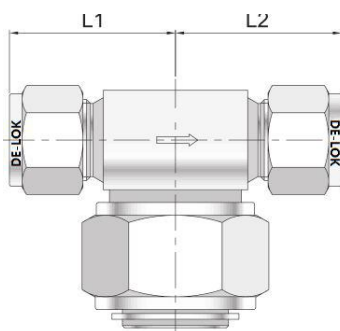


Table of Dimensions

Part Number		Orifice	End Connection	Dimension				
Series	Part No.		Inlet/Outlet	L1	L2	L3	C	H
DTF 01	4MN	4.4	1/4" Male NPT	27.7	27.7	43.4	9.7	27.0
	2N-2N		1/8" Female NPT	25.9	25.9			
	4-4		1/4" DE-LOK	31.3	31.3			
	6M-6M		6mm DE-LOK	31.2	31.2			
DTF 02	6MN	6.4	3/8" Male NPT	31.2	31.2	44.2	11.7	34.0
	8MN		1/2" Male NPT	36.1	36.1			
	6-6		3/8" DE-LOK	36.3	36.3			
	8-8		1/2" DE-LOK	39.1	39.1			

- Dimensions, shown on the above table, are measured based on finger-tight
- All dimensions are for reference only, subject to change

Ordering Information

Example:	<u>D</u>	<u>TF</u>	<u>4-4</u>	<u>F7</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>

1. **Brand:** DE-LOK
2. **Valve Type:** Tee Filter
3. **End Connection Size:**
-Tube OD Designation

Tube O.D	1/8	1/4	3/8	1/2	6mm
Designation	2	4	6	8	6M

-Pipe Thread Designation

Size (inch)	1/8"	1/4"	3/8"	1/2"
Screwed NPT	2N	4N	6N	8N

4. **Filter Elements:**

0.5: 0.5 Micron	2: 2 Micron	7: 7 Micron
15: 15 Micron	60: 60 Micron	90: 90 Micron

Integral Block & Bleed Valves

Introduction

DE-LOK's response to the demand for reduction in leakage paths has been the combination of primary and secondary valves into one compact unit. The combining of piping and instrument valves into a single unit has benefited various markets.

DE-LOK can offer the special combination of double block and bleed valve systems together with fittings.

Choice of this combination results in the elimination of tapered thread connections and the need for thread sealant.

Application & Installation

Solutions

DE-LOK instrumentation products provided the ultimate suitable solutions for an integral block & bleed valves, which consists of a one piece forged body, featuring a choice of end connections and body style.

Conventional Installation <1>

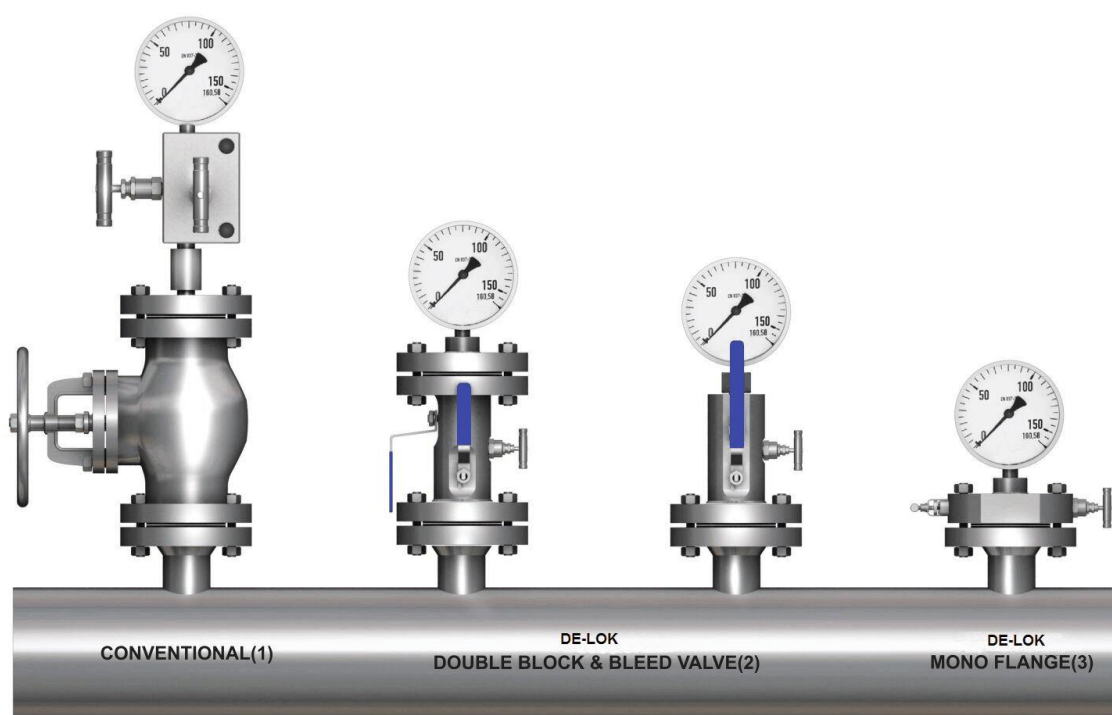
- A welded flange, connected to a primary ANSI class isolating valve. The primary valve will be connected to a secondary instrument valve. A pressure gauge or transmitter will then be installed downstream of the instrument valve.

DE-LOK Block & Bleed Valve <2>

- A one-piece integral forging incorporating up to 3 ball valve or mixture of ball and needle design.
- Improved safety: leak paths reduced by up to 60%
- Reduced costs: installation and components costs reduce by up to 70%
- Reduce weight: by up to 80%
- Reduce susceptibility to problems cause by vibration.

DE-LOK Monoflange <3>

- More compact then DE-LOK DBB Valve, adding future space weight saving possibilities.
- Improved safety: lead paths reduce by up to 60%, less susceptibility to vibration.
- Reduced costs: installation and component costs saving up to 80%
- Reduce weight: up to 85%

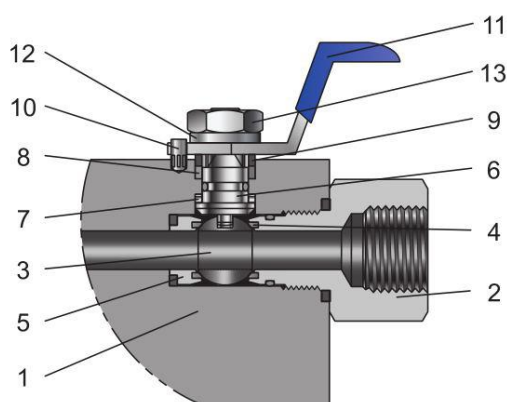


Specification

Design Codes

- ANSI/ASME B16.34 – Designed to meet the pressure and temperature requirements.
- ANSI/ASME B16.5 – Flange dimensions
- ANSI/ASME B1.20.1 – National pipe threads
- API607/BS6755 – Fire safe designed

Ball Valve

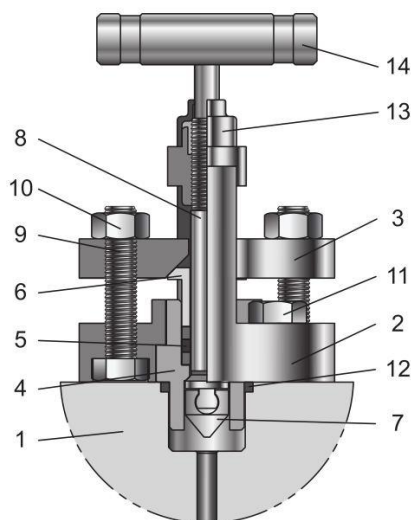


No.	Component			
		Stainless Steel	Carbon Steel	Duplex Stainless Steel
1	Body	A182 F316	A350 LF2	A182 F51
2	Outlet Connector	A182 F316	A350 LF2	A182 F51
3	Ball	A182 F316		S31803
4	Ball Seal	PTFE/RPTFE/PEEK		
5	Seat Capsule	A182 F316		S31803
6	Stem	A182 F316		S31803
7	Lower Stem Seal	PTFE		
8	Upper Stem Seal	Graphite		
9	Packing Gland	A182 F316		S31803
10	Stop Pin	A182 F316		S31803
11	Handle	SS316		
12	Stem Washer	SS316		
13	Stem Nut	A194 8M		

- 316 Stainless Steel as standard.
- Pressure rating up to 10000psig (690bar)
- Temperature rating -71 to 482°F (-57 to 250°C)

Features

- One piece or two piece body design – minimize leakage paths.
- Ball seat choice of seat materials: PTFE (virgin or filled), PCTFE, PEEK.
- End connector threads are fully isolated from process.
- Fully encapsulated ball seat.
- Superior finished ball for low operating torque.
- Floating ball design providing seat wear compensation.
- Anti static design as standard.
- Blowout proof stem design.
- Color coded & function identified handle.
- Bore size: Full bore, Reduce bore, 10mm, 14mm, 20mm
- Optional: handle locking available, NACE compliance.

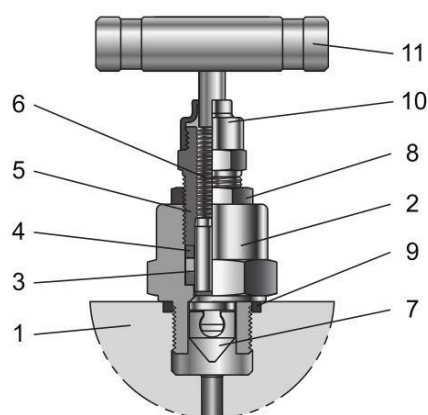
Outside Screw and Yoke (OS&Y) Needle Valve

No.	Component			
		Stainless Steel	Carbon Steel	Duplex Stainless Steel
1	Body	A182 F316	A350 LF2	A182 F51
2	OS&Y Bonnet	A351 CF8M	A352 LLC	A182 F51
3	Gland Flange	A351 CF8M	A352 LLC	A182 F51
4	Insert	A182 F316		S31803
5	Packing	Graphite		
6	Bushing	A182 F316		S31803
7	Vee Tip	SS630 + Hard Cr		
8	Stem	A182 F316		S31803
9	Flange Bolt	A193 B8M	A320 L7M	A453 GR.660
10	Flange Nut	A194 8M	A194 GR.7	
11	Bonnet Bolt	A193 B8M	A320 L7M	
12	Bonnet Seal	Graphite		
13	Dust Cap	Nylon		
14	Bar Handle	A182 F316		S31803

- 316 Stainless Steel as standard.
- Pressure rating up to 6000psig (413bar)
- Temperature rating -65 to 1000°F (-54 to 538°C)

Features

- Externally adjustable gland
- PTFE or Graphite packing for bubble tight sealing.
- Self centering crimped needle tip for bubble tight shut off and repeatability.
- Back seat design provides secondary stem sealing and prevents stem blow out.
- Color coded close contact dust cap and function label for easy identification.
- Bonnet seal ensures a bubble tight between body and bonnet.
- Stem threads are completely isolated from the process.
- Yoke of investment casting is precision casted for strength and perfect stem alignment.
- Bolter bonnet for strength.

Globe Style Needle Valve

No.	Component			
		Stainless Steel	Carbon Steel	Duplex Stainless Steel
1	Body	A182 F316	A350 LF2	A182 F51
2	Bonnet	A182 F316	A350 LF2	A182 F51
3	Packing	Graphite		
4	Packing Gland	A182 F316		S31803
5	Packing Bolt	A182 F316	A350 LF2	S31803
6	Stem	A182 F316		S31803
7	Vee Tip	SS630 + Hard Cr		
8	Lock Nut	A182 F316	A350 LF2	S31803
9	Bonnet Seal	Graphite		
10	Dust Cap	Nylon		
11	Bar Handle	A182 F316		S31803

- 316 Stainless Steel as standard.
- Pressure rating up to 10000psig (690bar)
- Temperature rating -65 to 1000°F (-54 to 538°C)

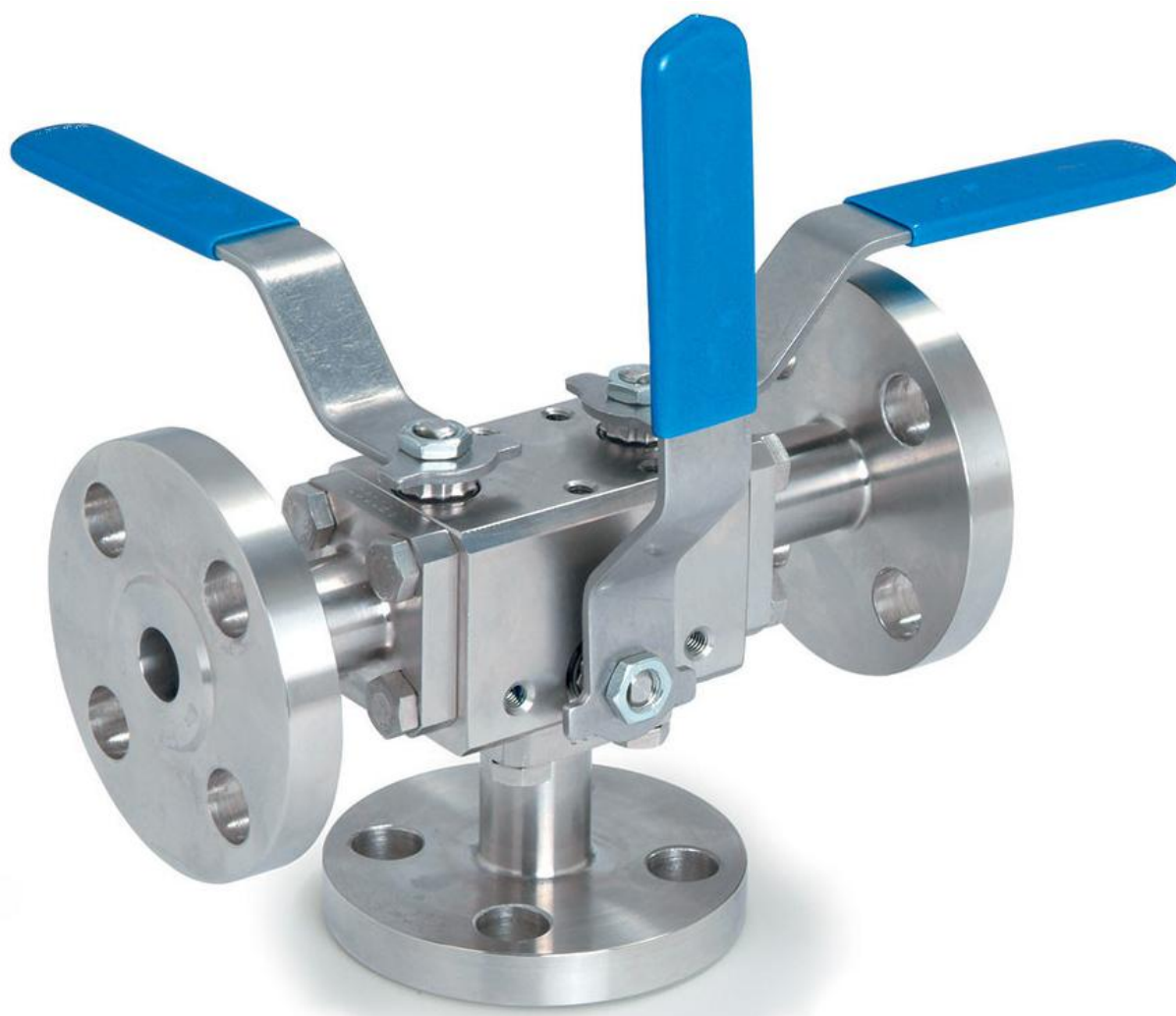
Features

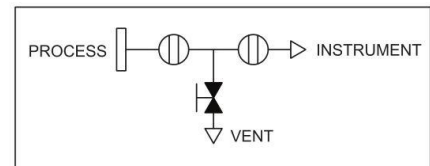
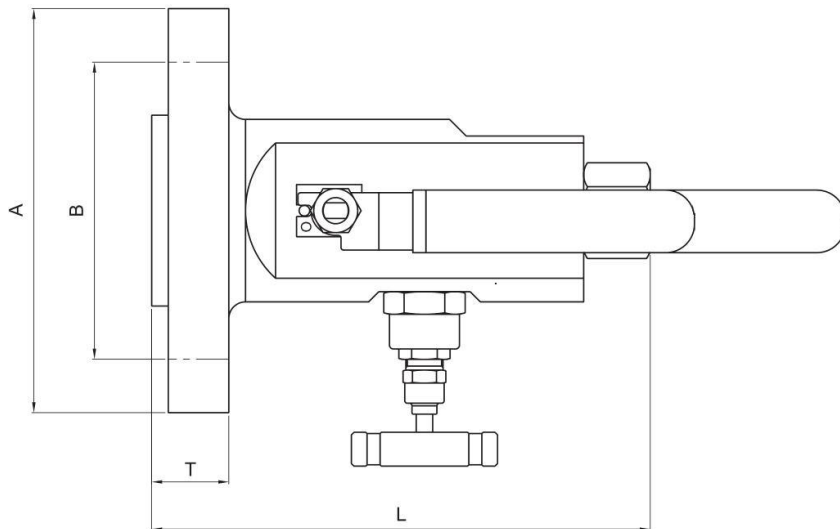
- Rolled stem operating threads for low torque operation.
- Gland packing in PTFE or Graphite for bubble tight sealing.
- Color coated close contact dust cap and function label for easy identification.
- Self centering crimped needle tip for bubble tight seat sealing.
- Close contact dust cap for operating thread protection.
- Back seat design provides secondary stem sealing and prevents stem blow out.
- Stem threads are completely isolated from the process.
- Packing bolt with east access.
- Lock nut for vibration protection.

Block & Bleed Valve

Features

- ANSI B16.5 flanged inlet connections 1/2" to 3" sizes
Class 150 rated to class 2500 rated.
- 1/2" – 1" FNPT Thread outlet to ANSI/ASME B1.20.1
(depending on bore size).
- 1/2" FNPT thread vent connection to ANSI/ASME B1.20.1
- Standard materials of Stainless Steel
ASTM A182 F316/F316L, Carbon Steel ASTM A350
LF2/A105, Duplex ASTM A182 F51.
- Optional material include Super Duplex, Monel,
Hastelloy, Inconel.
- Raised Face and ring type joint flange styles.
- One-piece forged construction flange as standard.
- Fire safe designed (and tested) to meet
BS6755 Part 2/API607
- DBB & SBB Products meet the relevant code
Requirement of ASME VIII, ASME B16.34, B16.5
B31.3 and API6D.
- Bubble tight shut off.
- Locking and anti tamper devices for all valve
Types available option.
- Positive level stop
- User preferred handles.
- Permanent affixed reference label.



DB1 Series

Dimensions
(10mm Bore)

Size (inch)	Rating (lb)	Dimensions (mm)			
		L (RF)	A	B	T
1/2 (DN15)	150	170	89	60.3	11.2
	300		96	66.7	14.2
	600	179			20.6
	900/1500	186	121	82.5	28.8
	2500		134	88.9	36.6
3/4 (DN20)	150	175	99	69.8	12.7
	300		118	82.5	15.7
	600				22.1
	900/1500	179	130	88.9	21.8
	2500	186	140	95.2	38.2
1 (DN25)	150	170	108	79.4	14.2
	300		124	88.9	17.5
	600	179			23.9
	900/1500	186	150	101.6	34.8
	2500		159	108.0	41.5
1-1/2 (DN40)	150	170	127	98.4	17.5
	300	179	156	114.3	20.6
	600				28.8
	900/1500	186	178	124.0	38.2
	2500	200	203	146.1	50.9
2 (DN50)	150	179	152	120.6	19.1
	300		165	127.0	22.4
	600	186			31.8
	900/1500	200	216	165.1	44.5
	2500	208	235	171.5	57.2

*Dimensions are for reference only and are subject to change.

Dimensions

(14mm Bore)

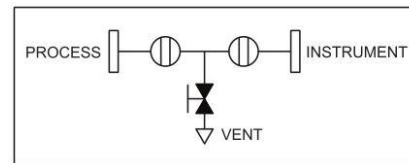
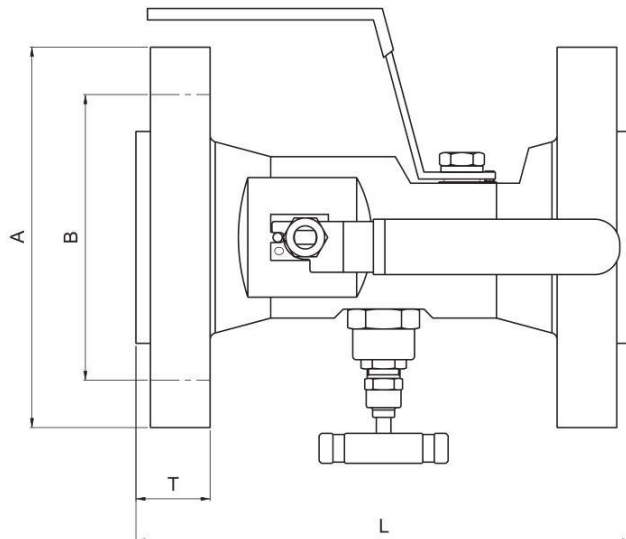
Size (inch)	Rating (lb)	Dimensions (mm)			
		L (RF)	A	B	T
3/4 (DN20)	150	208	99	39.8	12.7
	300		118	82.5	15.7
	600				22.1
	900/1500	218	130	88.9	31.8
	2500	224	140	95.2	38.2
1 (DN25)	150	208	108	79.4	14.2
	300		124	88.9	17.5
	600	218			23.9
	900/1500	224	150	101.6	34.8
	2500	227	159	108.0	41.5
1-1/2 (DN40)	150	208	127	98.4	17.5
	300	218	156	114.3	20.6
	600				28.8
	900/1500	224	178	124.0	38.2
	2500	238	203	146.1	50.9
2 (DN50)	150	218	152	120.6	19.1
	300		165	127.0	22.4
	600	224			31.8
	900/1500	238	216	165.1	44.5
	2500	246	235	171.5	57.2

*Dimensions are for reference only and are subject to change.

(20mm Bore)

Size (inch)	Rating (lb)	Dimensions (mm)			
		L (RF)	A	B	T
1 (DN25)	150	235	108	79.4	14.2
	300		124	88.9	17.5
	600				23.9
	900/1500	251	150	101.6	34.8
	2500		159	108.0	41.5
1-1/2 (DN40)	150	235	127	98.4	17.5
	300	244	156	114.3	20.6
	600				28.8
	900/1500	251	178	124.0	38.2
	2500	265	203	146.1	50.9
2 (DN50)	150	244	152	120.6	19.1
	300		165	127.0	22.4
	600	251			31.8
	900/1500	265	216	165.1	44.5
	2500	273	235	171.5	57.2

*Dimensions are for reference only and are subject to change.

DB2 Series

Dimensions
(10mm Bore)

Size (inch)	Rating (lb)	Dimensions (mm)			
		L (RF)	A	B	T
1/2 (DN15)	150	235	89	60.3	11.2
	300		96	66.7	14.2
	600				20.6
	900/1500	254	121	82.5	28.8
	2500	267	134	88.9	36.6
3/4 (DN20)	150	235	99	69.8	12.7
	300		118	82.5	15.7
	600				22.1
	900/1500	254	130	88.9	31.8
	2500	267	140	95.2	38.2
1 (DN25)	150	235	108	79.4	14.2
	300		124	88.9	17.5
	600	254			23.9
	900/1500	267	150	101.6	34.8
	2500		159	108.0	41.5
1-1/2 (DN40)	150	235	127	98.4	17.5
	300	254	156	114.3	20.6
	600				28.8
	900/1500	267	178	124.0	38.2
	2500	314	203	146.1	50.9
2 (DN50)	150	254	152	120.6	19.1
	300		165	127.0	22.4
	600	267			31.8
	900/1500	314	216	165.1	44.5
	2500	334	235	171.5	57.2

*Dimensions are for reference only and are subject to change.

Dimensions

(14mm Bore)

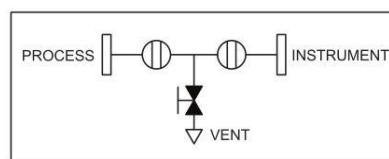
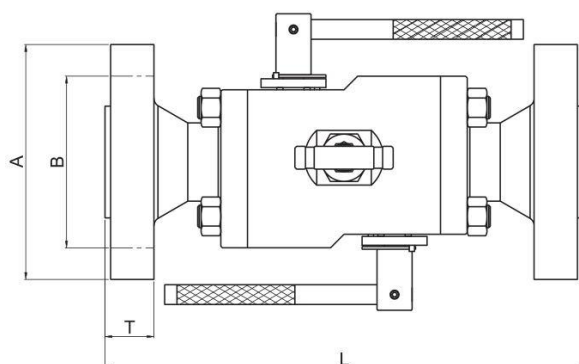
Size (inch)	Rating (lb)	Dimensions (mm)			
		L (RF)	A	B	T
3/4 (DN20)	150	235	99	69.8	12.7
	300		118	82.5	15.7
	600				22.1
	900/1500	254	130	88.9	31.8
	2500	267	140	95.2	38.2
1 (DN25)	150	235	108	79.4	14.2
	300		124	88.9	17.5
	600	254			23.9
	900/1500	267	150	101.6	34.8
	2500	273	159	108.0	41.5
1-1/2 (DN40)	150	235	127	98.4	17.5
	300	254	156	114.3	20.6
	600				28.8
	900/1500	267	178	124.0	38.2
	2500	334	203	146.1	50.9
2 (DN50)	150	254	152	120.6	19.1
	300		165	127.0	22.4
	600	267			31.8
	900/1500	334	216	165.1	44.5
	2500		235	171.5	57.2

*Dimensions are for reference only and are subject to change.

(20mm Bore)

Size (inch)	Rating (lb)	Dimensions (mm)			
		L (RF)	A	B	T
1 (DN25)	150	235	108	79.4	14.2
	300		124	88.9	17.5
	600				23.9
	900/1500	267	150	101.6	34.8
	2500	273	159	108.0	41.5
1-1/2 (DN40)	150	235	127	98.4	17.5
	300	254	156	114.3	20.6
	600				28.8
	900/1500	268	178	124.0	38.2
	2500	334	203	146.1	50.9
2 (DN50)	150	254	152	120.6	19.1
	300		165	127.0	22.4
	600	273			31.8
	900/1500	334	216	165.1	44.5
	2500		235	171.5	57.2

*Dimensions are for reference only and are subject to change.



Dimensions

(Reduce Bore)

Size (inch)	Bore (mm)	Rating (lb)	Dimensions (mm)					
			RF Flange		RTJ Flange		A	B
			L	T	L	T		
1-1/2 (DN40)	25.4	150	280	17.5	290	22.3	127	98.4
		300	285	20.6	295	25.4	156	114.3
		600	300	28.8	300	28.8		
		900/1500	370	38.2	370	38.2	178	124.0
		2500	400	50.9	403	52.4	203	146.1
2 (DN50)	38.1	150	365	19.1	375	23.9	152	120.6
		300	375	22.4	388	28.7	165	127.0
		600	390	31.8	393	33.3		
		900/1500	415	44.5	418	46.0	216	165.1
		2500	475	57.2	478	58.7	235	171.5
3 (DN80)	50.8	150	400	23.9	413	28.7	191	152.4
		300	410	28.4	423	34.7	210	168.1
		600	430	38.2	433	39.7		
		900/1500	440	54.2	443	55.7	241/267	190.5/203.2
		2500	500	72.9	506	76.1	305	228.6

*Dimensions are for reference only and are subject to change.

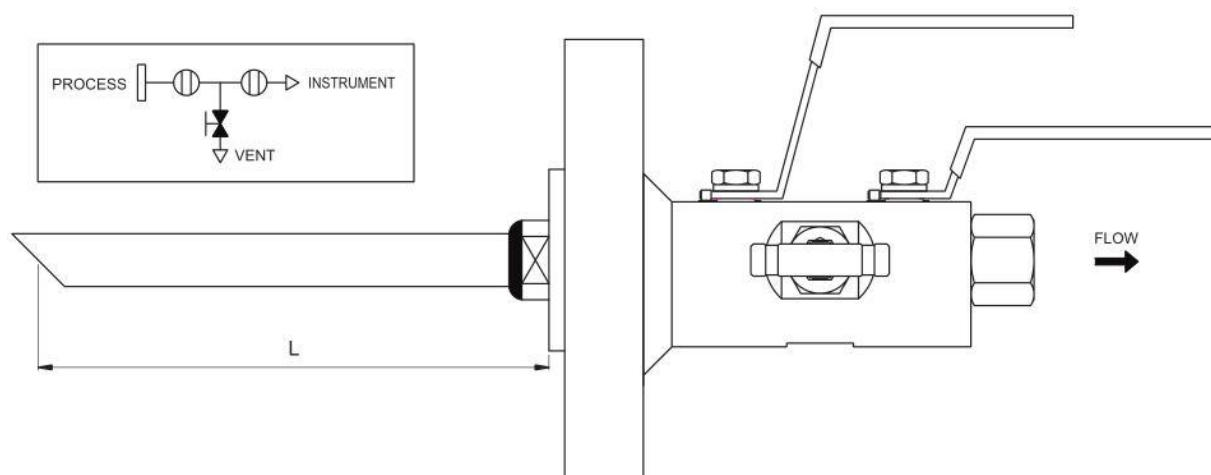
(Full Bore)

Size (inch)	Bore (mm)	Rating (lb)	Dimensions (mm)					
			RF Flange		RTJ Flange		A	B
			L	T	L	T		
1 (DN25)	25.4	150	270	14.2	280	19.0	108	79.4
		300	280	17.5	290	22.3	124	88.9
		600	290	23.9	290	23.9		
		900/1500	365	34.8	365	34.8	150	101.6
		2500	380	41.5	380	41.5	159	108.0
1-1/2 (DN40)	38.1	150	360	17.5	370	22.3	127	98.4
		300	370	20.6	380	25.4	156	114.3
		600	385	28.8	385	28.8		
		900/1500	400	38.2	400	38.2	178	124.0
		2500	460	50.9	463	52.4	203	146.1
2 (DN50)	50.8	150	390	19.1	400	23.9	152	120.6
		300	400	22.4	413	28.7	165	127.0
		600	415	31.8	418	33.3		
		900/1500	480	44.5	483	46.0	216	165.1

*Dimensions are for reference only and are subject to change.

Sampling Valve

This manifold range is designed to replace conventional multiple-valve installations where sampling of the process stream is required. This design has been developed to remove a sample directly from the process stream at full system pressure.

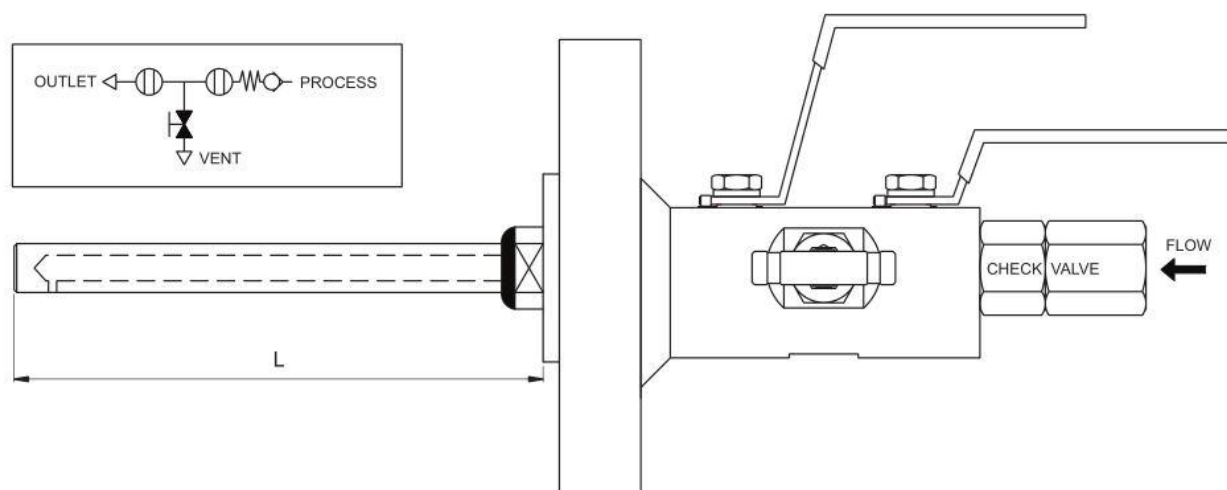


Sampling probe

The probe length must be specified from the raised face to the end of the probe in mm, to the nearest mm. Probes are supplied to suit the insertion length required by the pipeline and thus be specified by the customer.

Chemical Injection Valve

This manifold range is designed to replace conventional multiple-valve installations where injection into the process stream is required. This design has been developed to remove a sample directly from the process stream at full system pressure.



Injection Quill

The probe length must be specified from the raised face to the end of the probe in mm. Probes length shall be decided in consideration of injection insert length in the pipeline and customer's request.

Non Return Check Valve

This poppet type spring return valve has a viton soft seal

Fugitive Emission

ISO 15848 parts 1&2 (defining a classification system and qualification procedures, and production acceptance test of industrial valves, respectively)

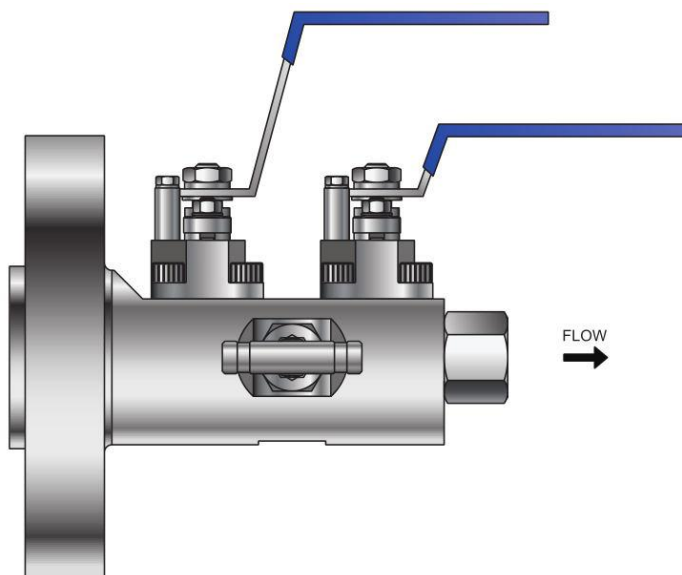
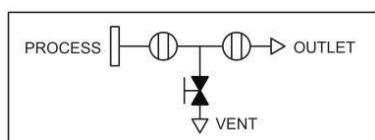
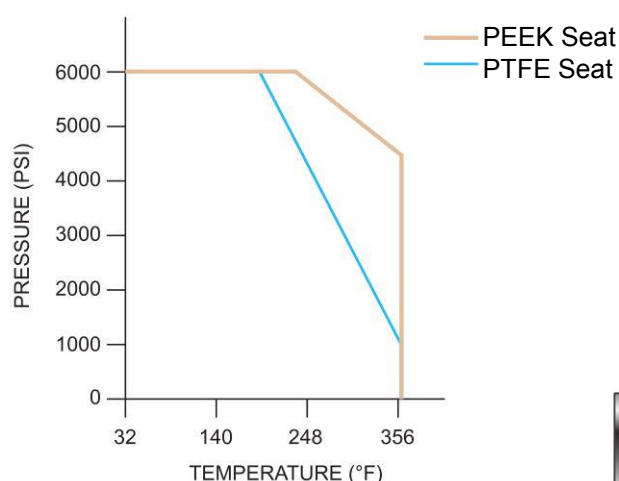
Specify new ultra low standards for emissions, This standard is becoming the requirement for oil and gas petrochemical organizations worldwide, The standard was originally created for process valves and control valves but is now being applied to Instrument valves which include primary isolation valves, especially on environmentally sensitive projects.

meeting these low levels in a challenge, which BMT Instrument has solved with the new ball and needle Valve designs meet the highest class 'A' level over the temperature range -29°C to +180°C, alongside the standard instrumentation manifold pressure ranges,

Production testing and certification is available upon request. Please specify sample quantity required for production testing with your order

Valve Specification

- Tightness class A > 1×10^{-6} mg.s-1.m-1.
- Maximum cold working pressure rating 6000psig
- Temperature rating -50°C to 180°C (-58°F to 356°F)
- ISO15848-1 prototype tested using global helium vacuum method.



The ISO 15848 standard effectively sets a requirement for zero emissions for processes Involving volatile air pollutants and hazardous fluids. This design has been developed to minimize fugitive emissions.

Ordering Information

Example -1): D DB 2 1 1 - R8 C - B111 - LF2
1 2 3 4 5 6 7 8 9

Example -2): D SB 1 1 1 - R8 A8 - D111 - AB
1 2 3 4 5 6 7 8 9

1. Brand: DE-LOK

2. Valves:

DB: Double Block & Bleed Valve
SB: Single Block & Bleed Valve

4. Valve Type:

1. FLANGE X FNPT
2. FLANGE X FLANGE
3. MNPT X FNPT
4. FNPT X FNPT
5. MSW X FNPT
6. SW X FNPT

5. Bore Size (mm):

(Blank) – 10mm (Standard)

- | | |
|----------|----------|
| 1 - 14mm | 4 - 32mm |
| 2 - 20mm | 5 - 38mm |
| 3 - 25mm | 6 - 50mm |

3. Valve Series:

Identify		1 st Isolate	2nd Isolate	Vent
Single Block Type	1	Ball	-	Needle
	2			OS & Y
	3			Ball
	4	Needle		Needle
	5	OS & Y		
	6			
Double Block Type	1	Ball	Ball	Needle
	2			OS & Y
	3			Ball
	4	Needle	Needle	Needle
	5	OS & Y	OS & Y	Needle
	6			OS & Y
	7			Needle
	8	TR Ball	TR Ball	OS & Y
*A		Fugitive Emission CL-A		
*B		Fugitive Emission CL-B		

*to select the Fugitive Emission type, pls add suffix of "A"
"B" to the part number of valve series

6. Connection Size:

R: Raised Face Flange	4-1/4"
J: Ring Joint Flange	6-3/8"
F: Flat Face Flange	8-1/2"
AF: AP168 Flange	12-3/4"
SA: SAE J518 Flange	16"-1"
IS: ISO6164 Flange	24-1-1/2"
JF: JIS Flange	32-2"
	48-3"

7. Pressure Class

A - 150	
B - 300	
C - 600	G - 2000psi
D - 900	H - 3000psi
E - 1500	I - 5000psi
F - 2500	J - 10000psi
S - 800	

9. Body Material

(Blank) - SS316
15-A105
LF2-A350 LF2
F51-A182 F51
M40-Monel Alloy 400

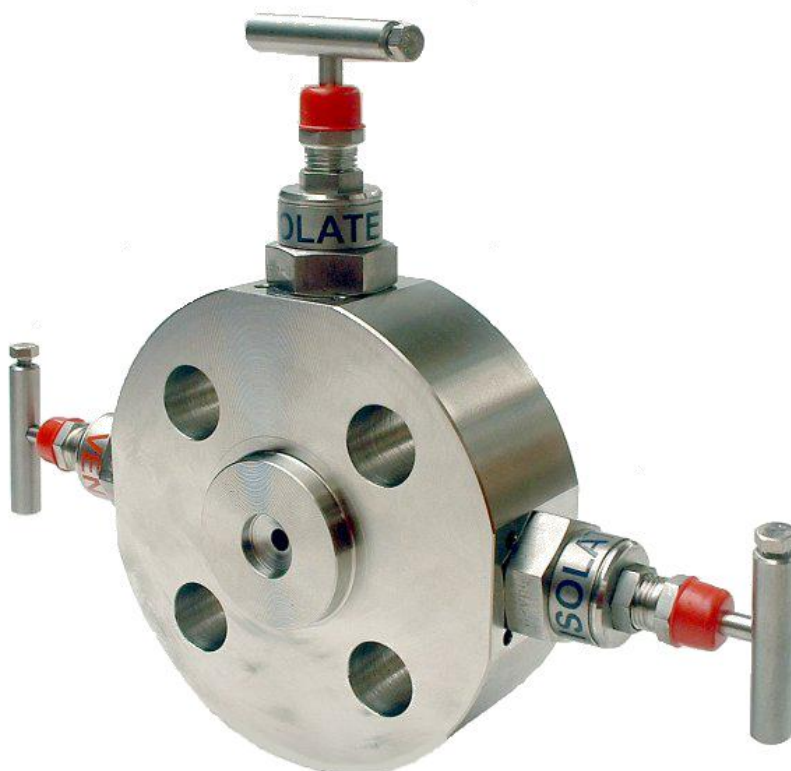
8. Option + Trim + Seat + O-Ring

Option		Trim		Seat		O-Ring	
Type	Identify	Type	Identify	Type	Identify	Type	Identify
Standard	Blank	Body = Trim	Blank(0)	PTFE	Blank(0)	NBR	Blank(0)
Sampling Probe	B	SS316	1	RPTFE + Glass	1	VITON	1
Chemical Injection	C	CF8M	2	RPTFE + Carbon	2	EPDM	2
Locking Device	D	SS316L	3	PEEK	3	KALREZ	3
Anti Tamper Key	E	SS304	4	PCTFE	4	CR	4
-	-	A105 + ENP	5	POM	5	SILICON	5
-	-	A105 + Cr	6	DEVILON - V	6	AED	6
-	-	Monel 400	7	Delin	7	HNBR	7
-	-	316 + Stellite	8	Metal	8		

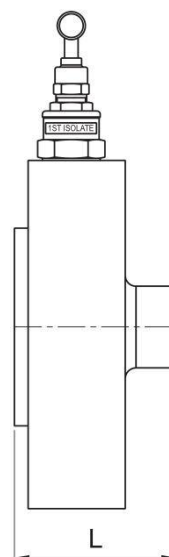
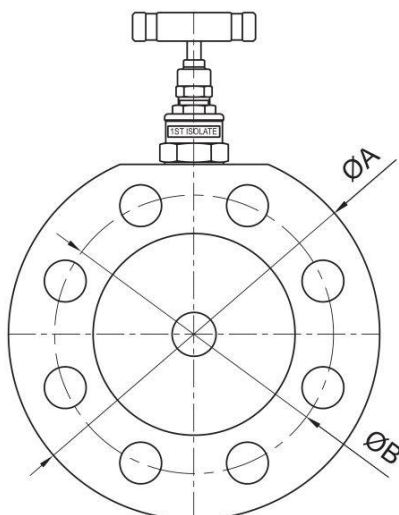
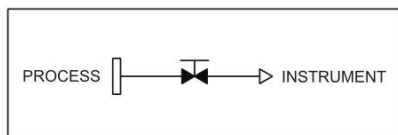
Monoflange Valve

Features

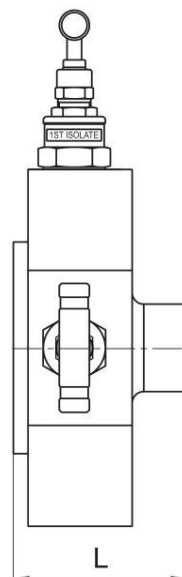
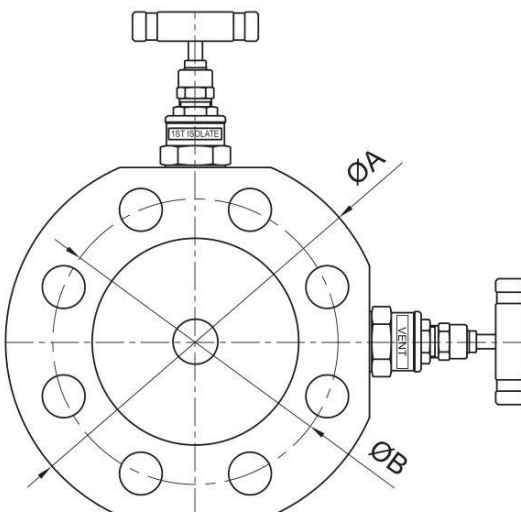
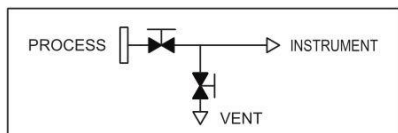
- ANSI B16.5 flange inlet connections 1/2" to 2" sizes
Class 150 rated to class 2500 rated.
- 1/2" -14 NPT(female) standard outlet.
- 1/4" -18 NPT(female) standard vent.
- Standard materials of Stainless Steel
ASTM A182 F316/F316L, Carbon Steel ASTM
A350 LF2/A105, Duplex ASTM A182 F51
- Optional materials include Super Duplex, Monel,
Hastelloy, Inconel.
- Combined needle and OS & Y Valves available.
- Raised face and ring type joint flange styles.
- One-piece forged construction flange as standard.
- Fire safe designed to meet BS 6755 Part 2 / API607.
(As Option)
- Pressure boundary designs calculated to ASME
VII Div 1 and verified by testing
- Heat code traceable material to EN 10204.3.1
- Bubble tight shut off valve seat 17-4 PH tips
Standard
- Color coded functional valves
- Locking and anti tamper devices for all valve
Types available. (as option)
- Permanent marked body with full order and
Specification details.



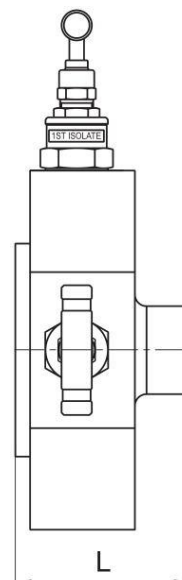
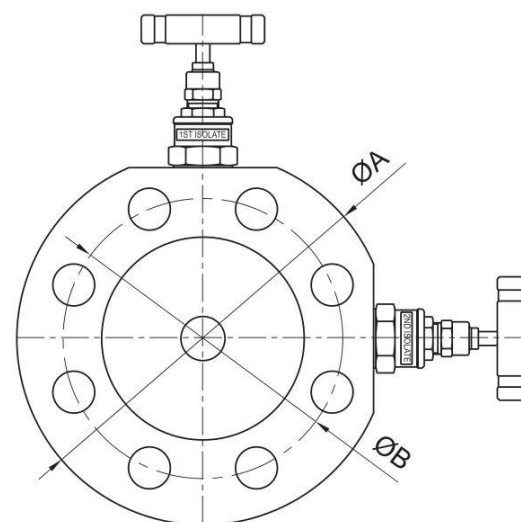
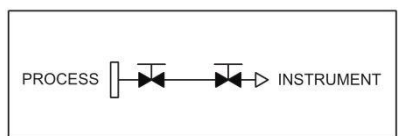
MF1V1 Series

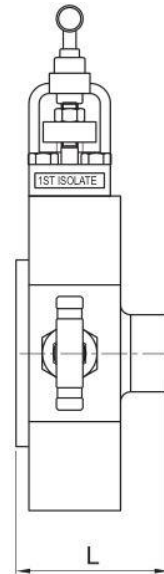
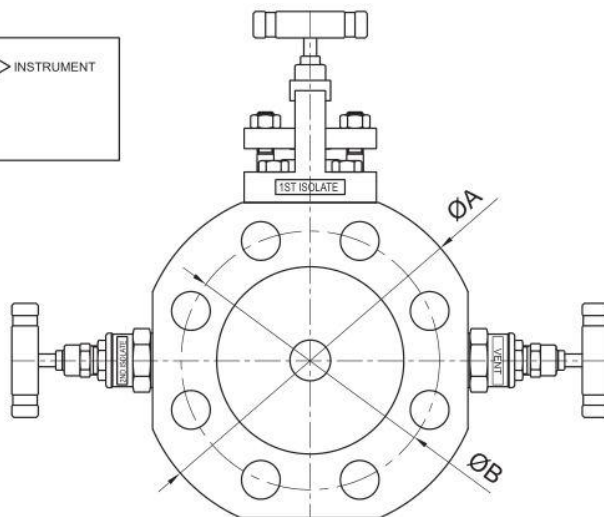
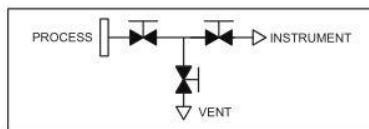


MF1V2 Series



MF1V3 Series



MF1V4 Series

Dimensions

Size (inch)	Rating (lb)	Dimension (mm)			
		L(RF)	L(RTJ)	A	B
1/2 (DN15)	150	64	-	89	60.3
	300		64	96	66.7
	600	121		82.5	
	900/1500	134		88.9	
	2500				
3/4 (DN20)	150	64	-	99	69.8
	300		68	118	82.5
	600	130		88.9	
	900/1500	140		95.2	
	2500	73		73	
1 (DN25)	150	64	68	108	79.4
	300			124	88.9
	600	68			
	900/1500	73	73	150	101.6
	2500			159	108.0
1-1/2 (DN40)	150	64	68	127	98.4
	300	69	69	156	114.3
	600	73	73		
	900/1500			178	123.8
	2500	82	84	203	146.1
2 (DN50)	150	69	73	152	120.6
	300		75	165	127.0
	600	73			
	900/1500	82	84	216	165.1

*Dimensions are for reference only and are subject to change.

Ordering Information

Example -1): D MF 1V41 - J8 C 8 - E - AB
1 2 3 4 5 4 6 7

Example -2): D MF 1V11 - R8 C 8 - LF2
1 2 3 4 5 4 7

1. Brand

DE-LOK

2. Valves

MF – MONO FLANGE

3. Valve Type

IDENTIFY			1 st ISOLATE	2 nd ISOLATE	VENT
1 - Flange X FNPT 2- Flange X Flange	V1	1	Needle	-	-
		2	OS & Y		
	V2	1	Needle	-	Needle
		2	OS & Y		
	V3	1	Needle	Needle	-
		2	OS & Y		
	V4	1	Needle	Needle	Needle
		2	OS & Y	Needle	
		3		OS & Y	

4. Connection Size

R-Raised Face Flange (Blank)	8-1/2"
J-Ring Joint Flange	12-3/4"
F-Flat Face Flange	16-1"
AF-API16B Flange	24-1-1/2"
SA-SAE J518 Flange	32-2"
IS-ISO6164 Flange	48-3"
JF-JIS Flange	

5. Pressure Class

A-150
B-300
C-600
D-900
E-1500
F-2500

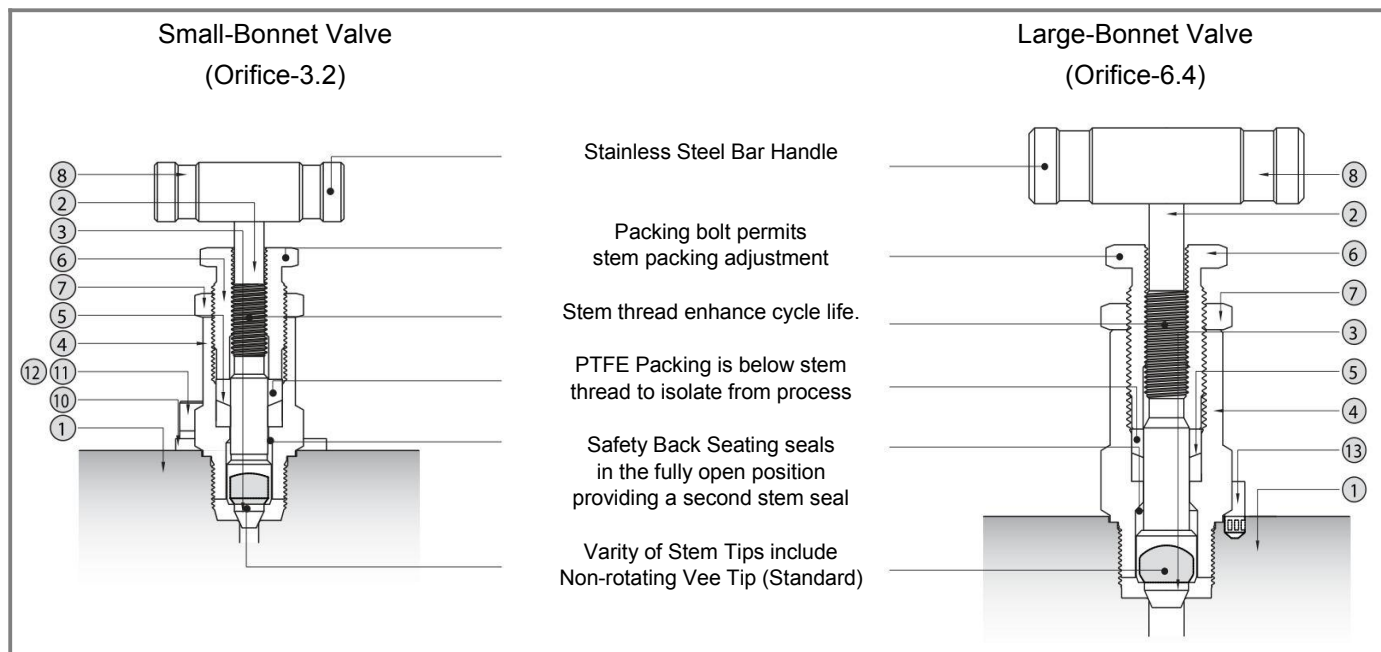
6. Options

A-Standard (Fire Safety)
D-Locking Device
E-Anti Tamper Key
F-Bolted Bonnet

7. Body Material

(Blank)-SS316
15-A105
LF2-A350 LF2
F51-A182 F51
M40-Monel Alloy 400

Instrument Manifolds



Technical Data

Material Instruction

Component	Material Grade
1 Body	SS316 / A276 or A479
2 Stem	SS316 / A276 or A479
3 Vee Tip	SS316 / A479
4 Bonnet	SS316 / A276 or A479
5 Packing	PTFE Grafoil (Optional)
6 Packing Bolt	SS316 / A276 or A479
7 Lock Nut	SS316 / A276 or A479
8 Handle	Stainless Steel
9 Set Screw	Stainless Steel
10 Locking Plate	Stainless Steel
11 Wrench Bolt	Stainless Steel
12 Spring Washer	Stainless Steel
13 Stop Pin	Stainless Steel

Orifice

3.2mm(0.125in)	2-Valve Manifold Block, Bleed Valve 5-Valve Manifold Equalizer, Bleed Valve
6.4mm(0.250in)	3-Valve Manifold Block, Equalizer Valve 5-Valve Manifold Block Valve

Features

- 2-,3-, 5-Valves Instrument Manifold Valves.
- Pressure Rating up to 6000psig(413bar) @ 100°F(37°C)
- Temperature up to 1200°F(648°C) with optional Grafoil packing
- All 316 Stainless Steel Construction with PTFE packing

Testing

Each valve on every manifold factory tested with nitrogen gas
The test is performed to a maximum allowable leak rate of 0.1scc

Pressure-Temperature Rating

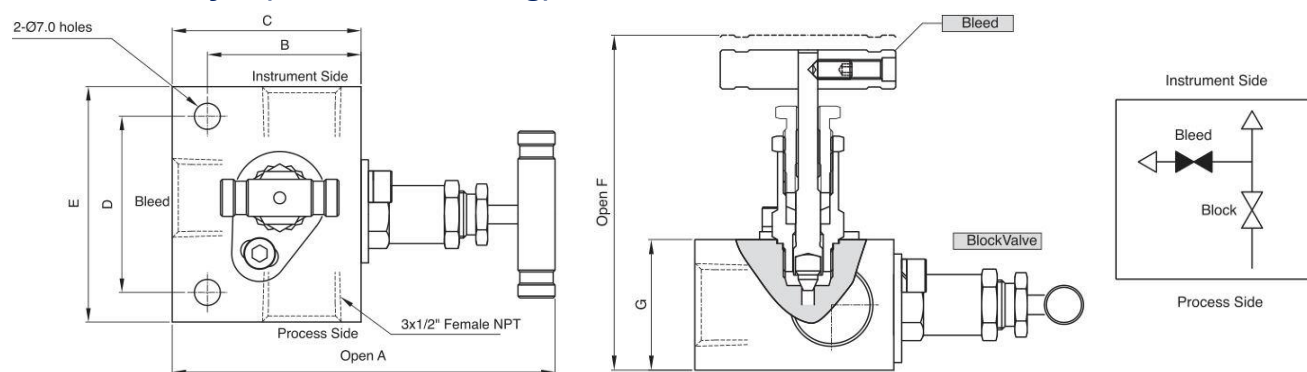
Body Material	SS316	
Packing Material	PTFE	Grafoil
Temperature(°C)	Working Pressure psig(bar)	
-65(-53) to 100(37)	6000(413)	6000(413)
200(93)	5160(355)	5160(355)
250(121)	4910(338)	4910(338)
300(148)	4660(321)	4660(321)
350(176)	4470(307)	4470(307)
400(204)	4280(294)	4280(294)
450(232)	4130(284)	4130(284)
500(260)	-	3980(274)
550(287)	-	3870(266)
600(315)	-	3760(259)
650(343)	-	3700(254)
700(371)	-	3600(248)
750(398)	-	3520(242)
800(426)	-	3460(235)
850(454)	-	3380(232)
900(482)	-	3280(225)
950(510)	-	3220(221)
1000(537)	-	3030(208)
1050(565)	-	3000(206)
1100(593)	-	2685(184)
1150(621)	-	2285(157)
1200(648)	-	1715(118)

*Note

450°F(232°C) with standard PTFE packing

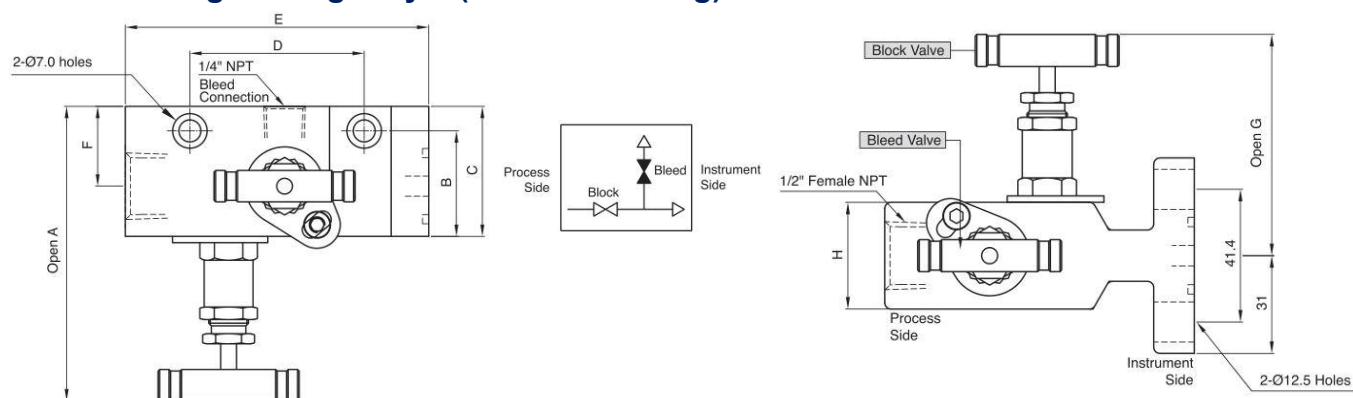
1200°F(648°C) with optional Grafoil packing

2-Valve Manifold Horizontal Style (Remote Mounting)



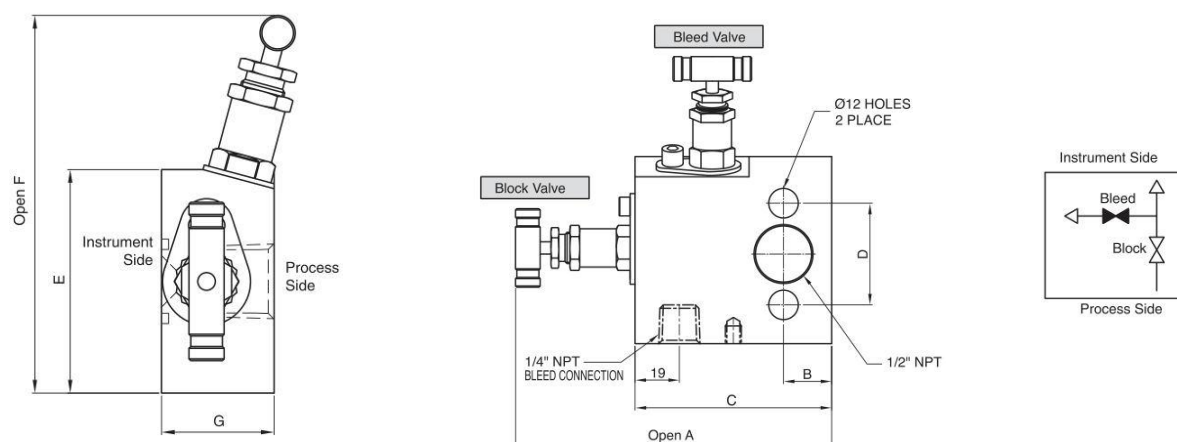
Ordering No.	End Connection			Dimensions(mm)						
	Process	Instrument	Bleed	A	B	C	D	E	F	G
	1/2 Female NPT			103.5	41.5	51	47.5	63.5	85.9	33.5

Horizontal Single Flange Style (Direct Mounting)



Ordering No.	End Connection			Dimensions(mm)							
	Process	Instrument	Bleed	A	B	C	D	E	F	G	H
	1/2\" NPTF	Flange	1/4\" NPTF	93.8	33.6	41.4	47.8	97.0	25.4	69.0	31.8

Vertical Style (Direct Mounting)

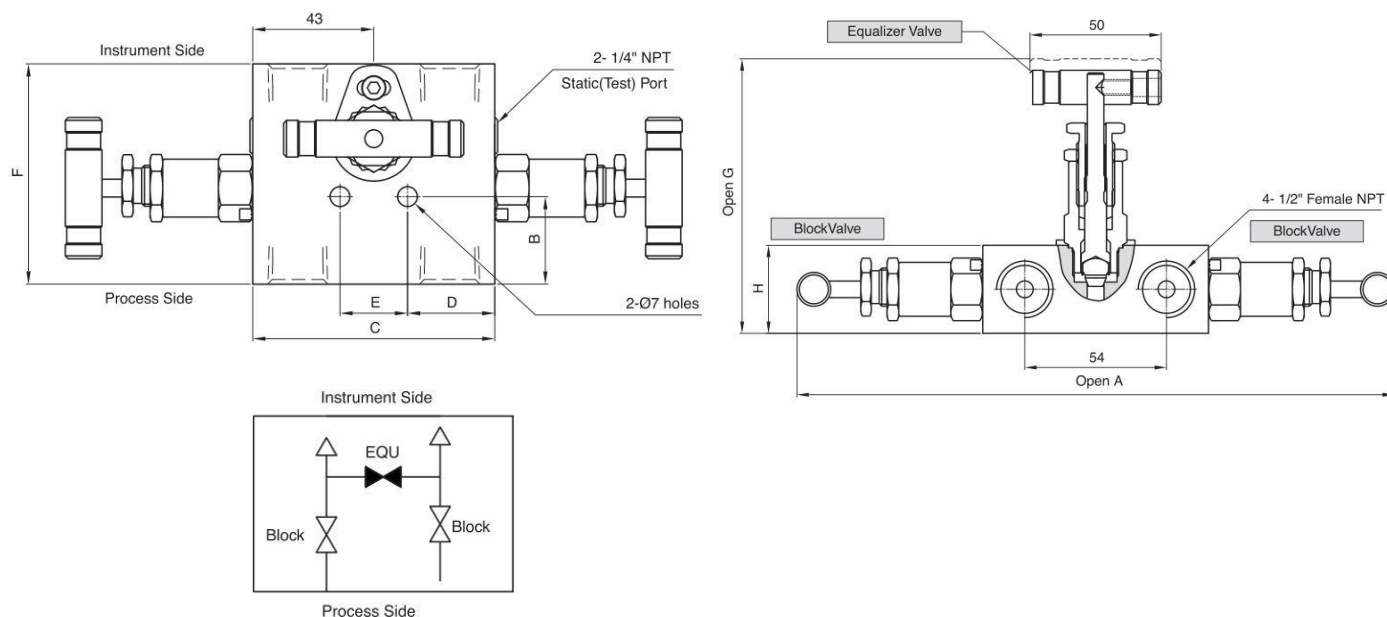


Ordering No.	End Connection			Dimensions(mm)						
	Process	Instrument	Bleed	A	B	C	D	E	F	G
	1/2\" NPTF	Flange	1/4\" NPTF	116.0	17.0	63.5	41.4	63.5	115.0	28.6

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

3-Valve Manifold Horizontal Style (Remote Mounting)

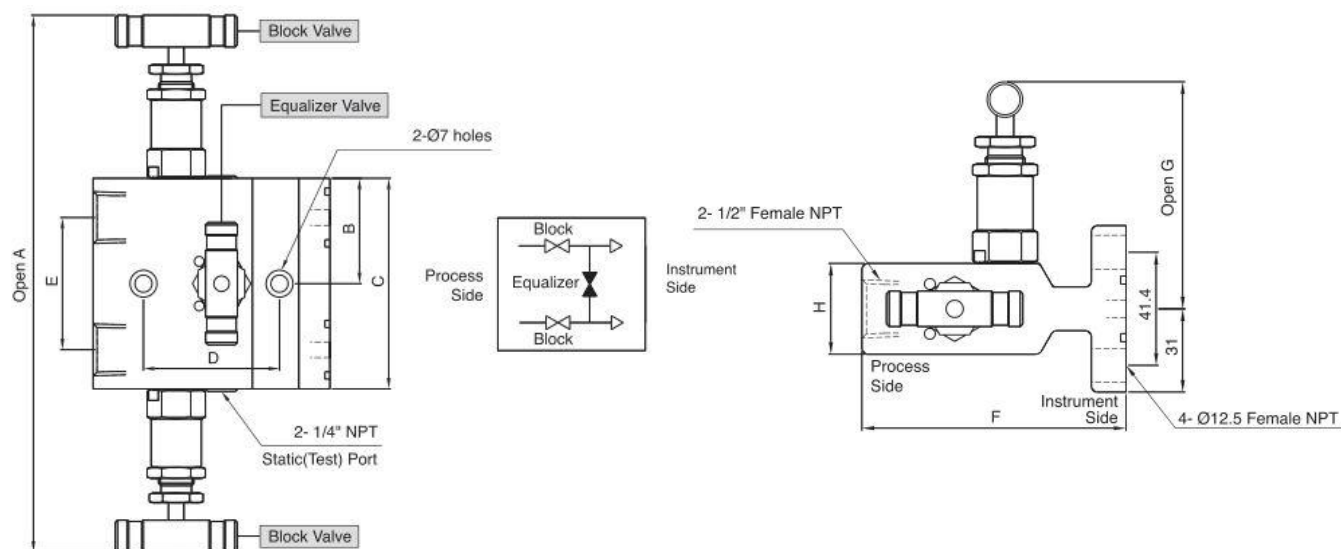


Ordering No.	End Connection		Dimensions(mm)							
	Process	Instrument	A	B	C	D	E	F	G	H
	1/2" Female NPT		228.0	31.0	86.0	31.0	24.0	78.0	106.0	33.5

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

Horizontal Single Flange Style (Direct Mounting)

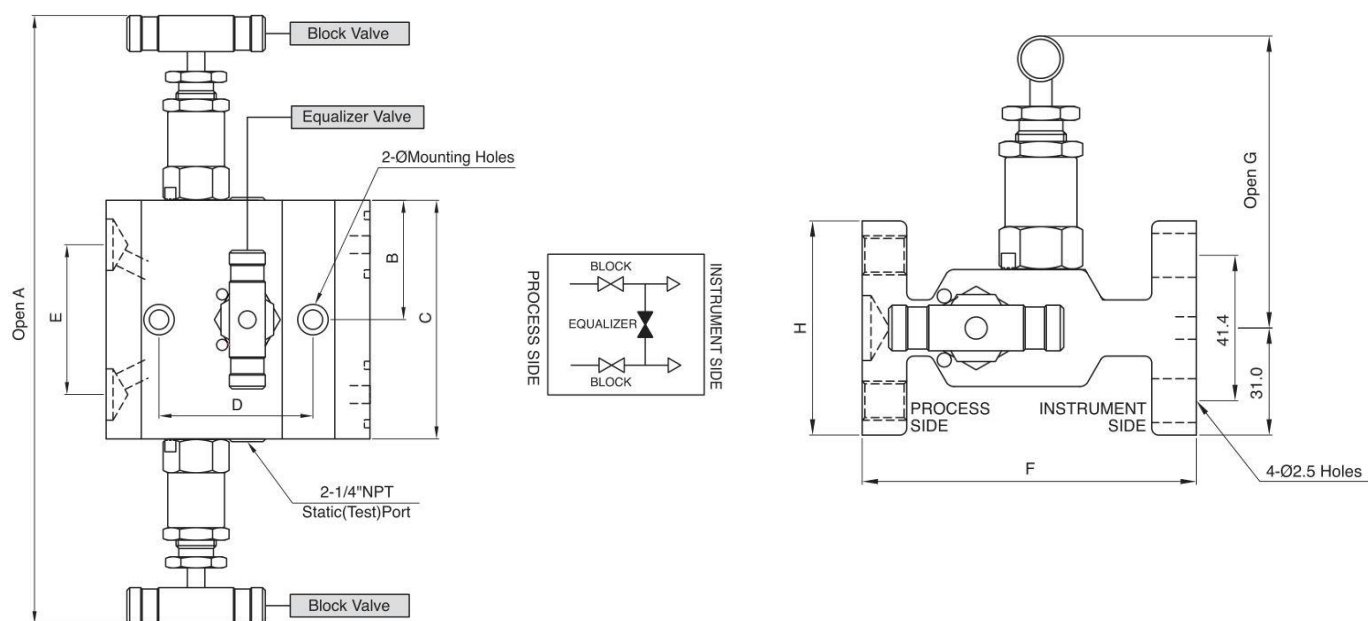


Ordering No.	End Connection		Dimensions(mm)							
	Process	Instrument	A	B	C	D	E	F	G	H
	1/2" NPTF	Flange	228.0	43.0	86.0	55.6	54.0	97.0	87.7	31.8

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

Horizontal Dual Flange Style (Direct Mounting)

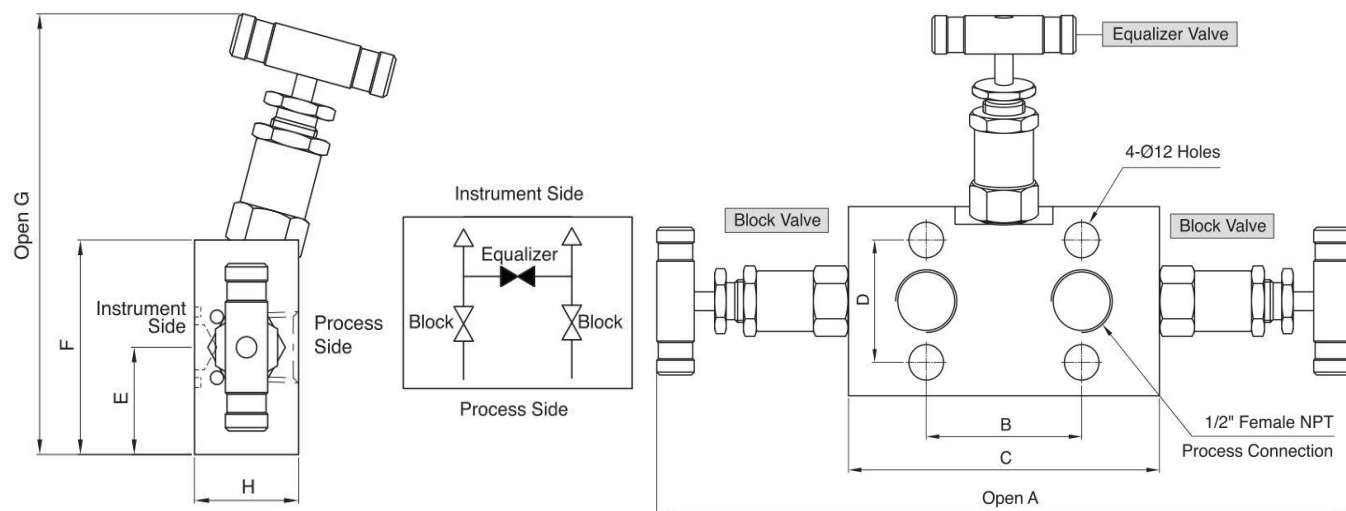


Ordering No.	End Connection		Dimensions(mm)							
	Process	Instrument	A	B	C	D	E	F	G	H
	Flange	Flange	228.0	43.0	86.0	55.6	54.0	96.4	87.7	62.0

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

Vertical Style (Direct Mounting)

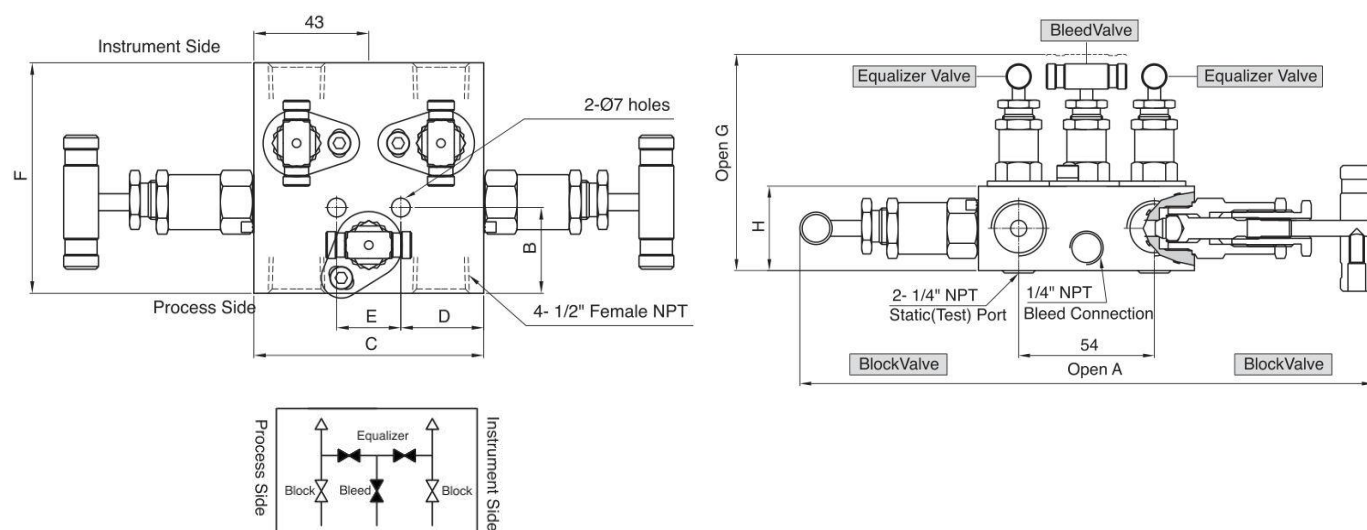


Ordering No.	End Connection		Dimensions(mm)							
	Process	Instrument	A	B	C	D	E	F	G	H
	1/2\" NPTF	Flange	250.0	54.0	108.0	41.4	32.0	64.0	136.0	32.0

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

5-Valve Manifold Horizontal Style (Remote Mounting)

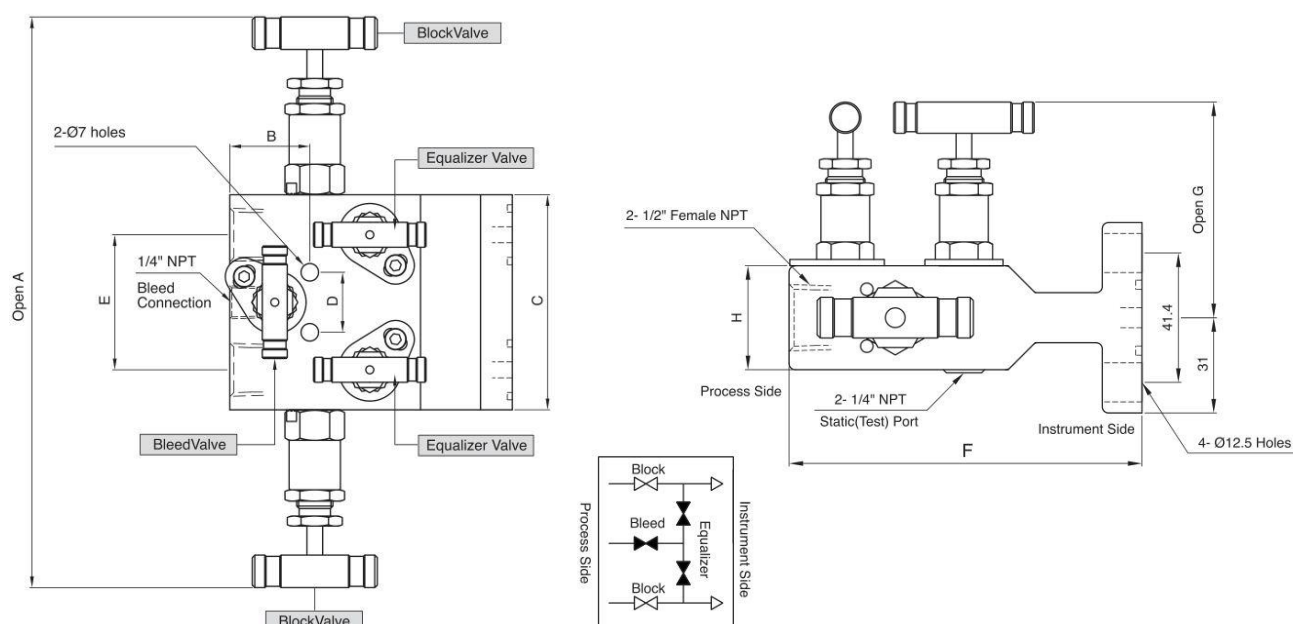


Ordering No.	End Connection			Dimensions(mm)							
	Process	Instrument	Bleed	A	B	C	D	E	F	G	H
	1/2" NPTF		1/4" NPTF	228.0	32.0	86.0	31.0	24.0	86.0	85.9	33.5

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

Horizontal Single Flange Style (Direct Mounting)

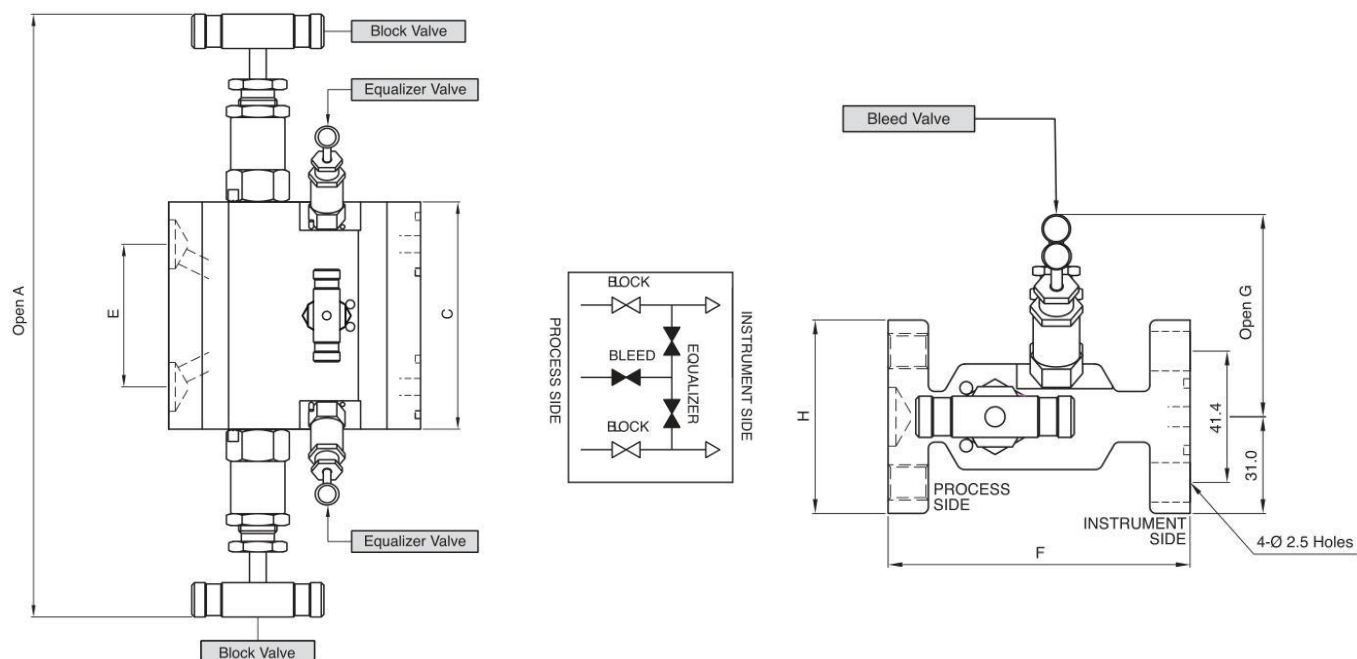


Ordering No.	End Connection			Dimensions(mm)							
	Process	Instrument	Bleed	A	B	C	D	E	F	G	H
	1/2" NPTF	Flange	1/4" NPTF	228.0	40.0	86.0	24.0	54.0	102.0	69.0	31.8

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

Horizontal Dual Flange Style (Direct Mounting)

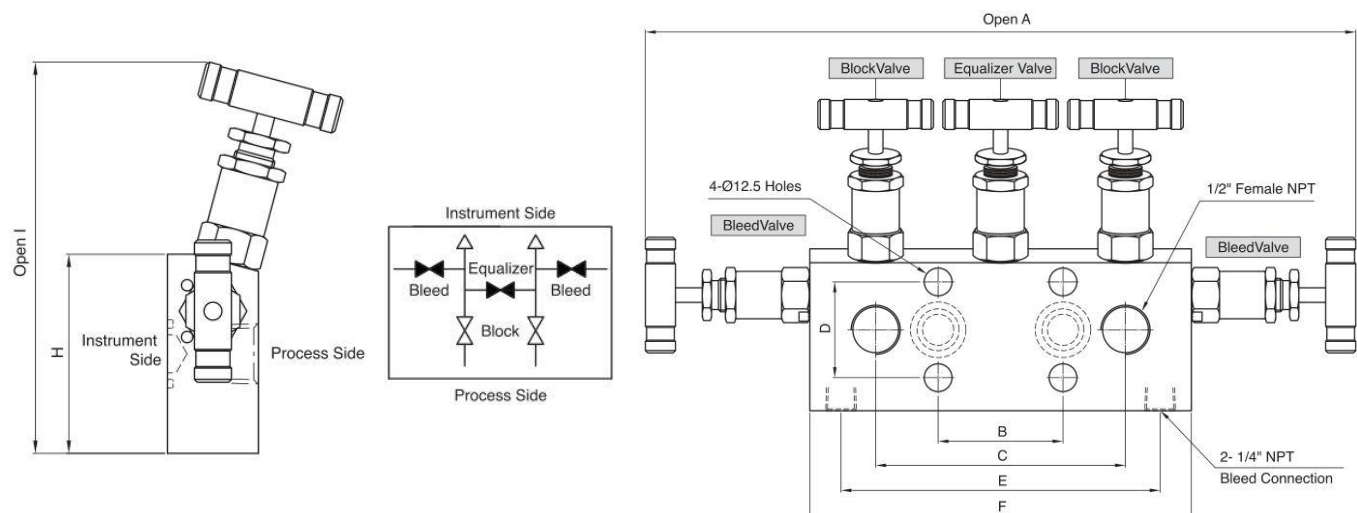


Ordering No.	End Connection			Dimensions(mm)							
	Process	Instrument	Bleed	A	B	C	D	E	F	G	H
	Flange	Flange	1/4"NPTF	228.0	32.0	86.0	24.0	54.0	86.4	69.0	61.0

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

Vertical Style (Direct Mounting)



Ordering No.	End Connection			Dimensions(mm)								
	Process	Instrument	Bleed	A	B	C	D	E	F	G	H	I
	1/2" NPTF	Flange	1/4"NPTF	312.0	54.0	102.0	41.4	138.0	158.0	148.0	76.2	32.0

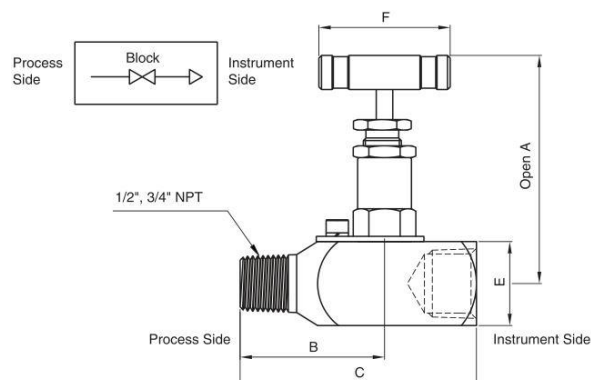
* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

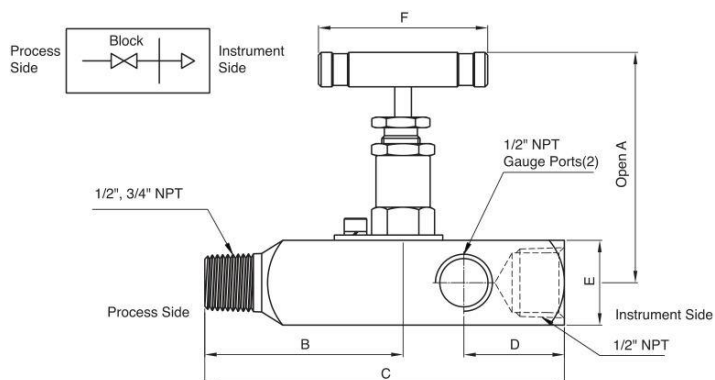
Features

- Stainless Steel Construction.
- 1/2 in. and 3/4 in. male to 1/2 in. female end connections
- 1/2 in. female gauge ports standard

DGBV (Gauge Valve)



DGRV (Gauge Root Valve)

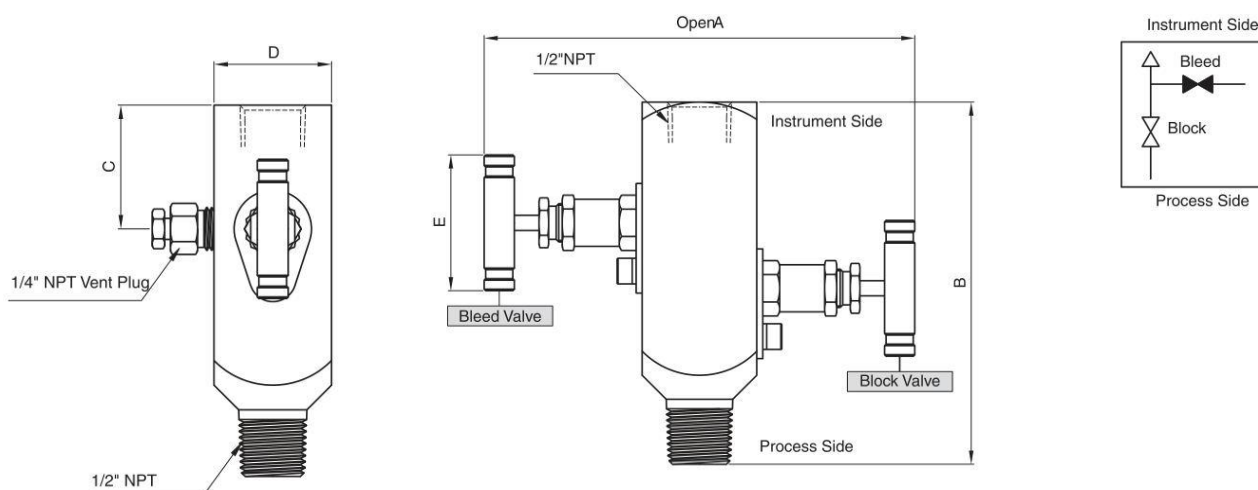


Ordering No.	End Connection		Dimensions(mm)					
	Process	Instrument	A	B	C	D	E	F
DGBVMF8N-8N	1/2" Male NPT	1/2" Female NPT	87.0	54.0	90.0	-	32.0	45.0
DGBVMF12N-8N	3/4" Male NPT	1/2" Female NPT						
DGRVMF8N-8N	1/2" Male NPT	1/2" Female NPT	87.0	75.0	136.0	38.1	32.0	45.0
DGRVMF12N-8N	3/4" Male NPT	1/2" Female NPT						

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

DGBV2 (Gauge Valve)

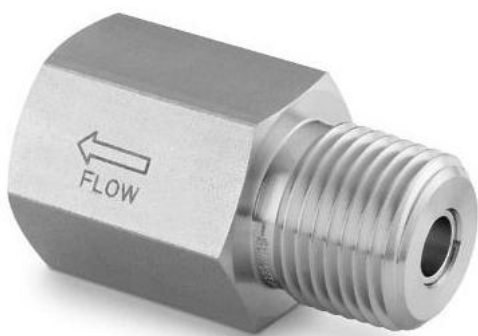


Ordering No.	End Connection		Dimensions(mm)				
	Process	Instrument	A	B	C	D	E
DGBV2MF8N-8N	1/2" Male NPT	1/2" Female NPT	142.0	120.0	40.0	38.0	45.0

* Dimension for reference only and are subject to change.

*To order a manifold with optional Grafoil packing, add-G to the manifold ordering number.

Pressure Gauge Snubber

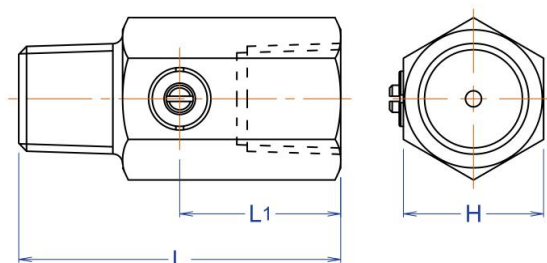


Features

- Maximum working pressure:
6000psig (414bar) at 100°F(37°C)
- Working temperature:
25°F(-4°C) to 250°F(121°C)
- Utilized to protect pressure gauges from damage caused by pressure pulses and pressure peaks.
- Provided with an adjustable needle valve that enables the operator to restrict the flow when operating conditions may demand even when the snubber is in service.

Material of Construction

Component	Material Grade (ASTM Specification)
Body	SS316 / ASTM A479
Bonnet	SS316 / ASTM A276
Stem	SS316 / ASTM A276
O-ring	Viton



Ordering No.	End Connection		Dimensions(mm)		
	Inlet	Outlet	L	L1	H
DPGS4FN-4MN	1/4" Male NPT	1/4" Female NPT	52.0	25.0	27.0
DPGS8FN-8MN	1/2" Male NPT	1/2" Female NPT	62.0	30.0	27.0