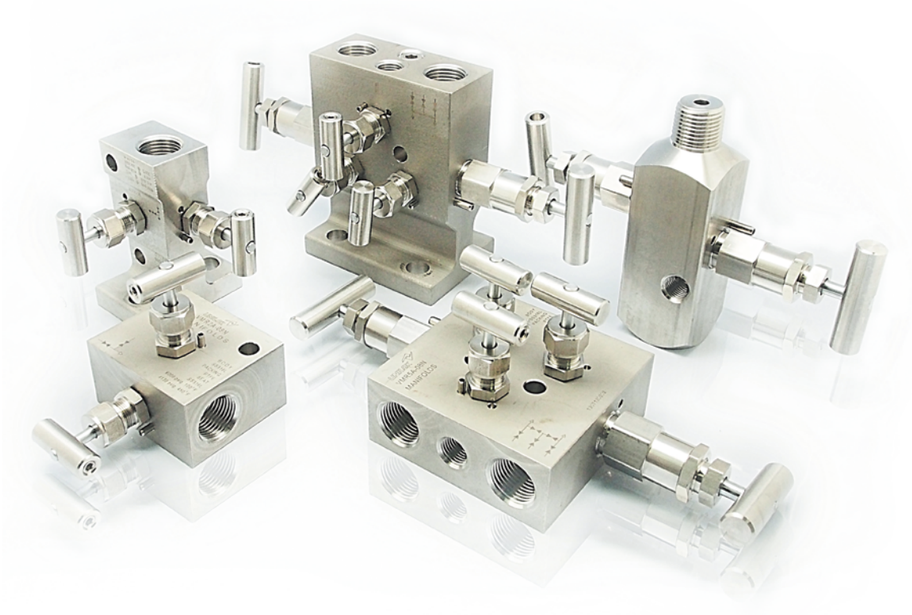
Manifolds Valve
VM



Manifolds Valve VM

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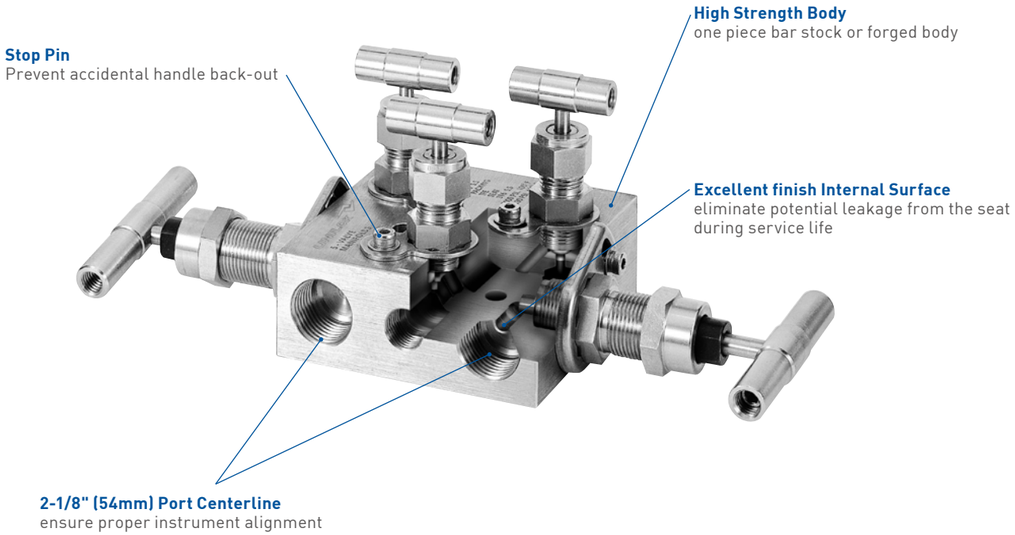
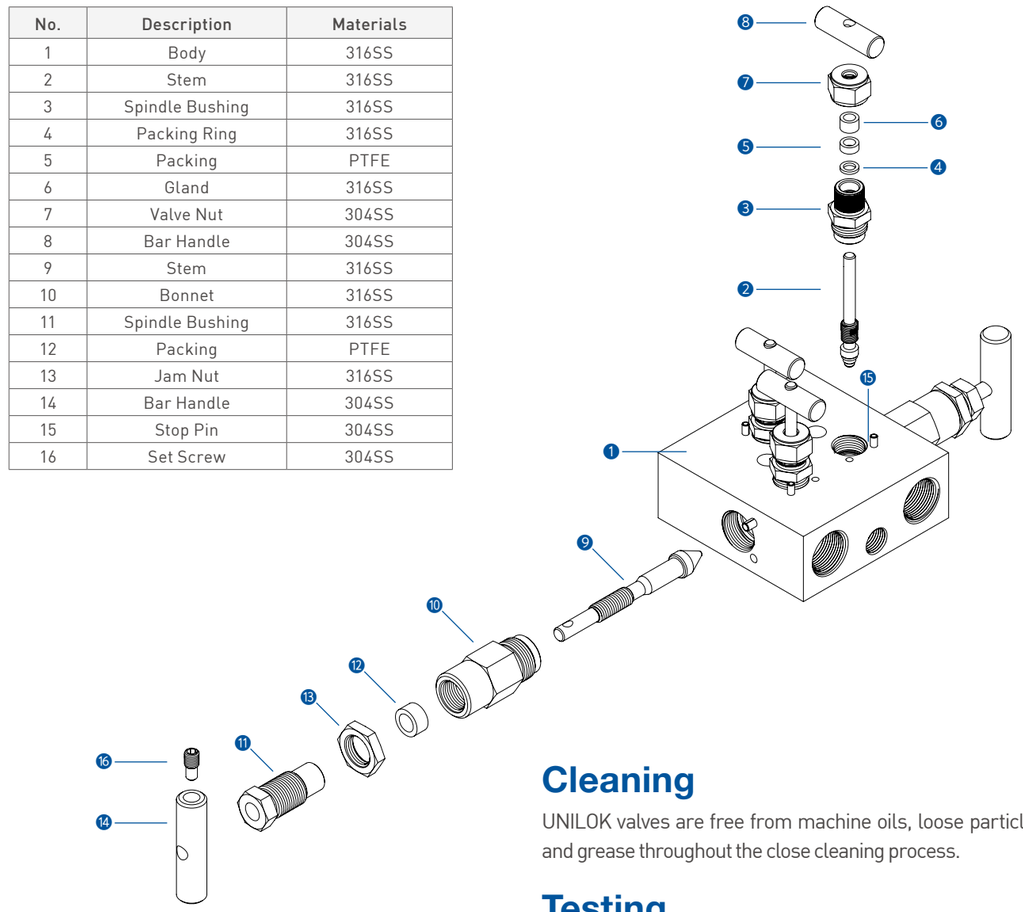
Features

Pressure rating up to 6000psig (413bar) @38℃(100℉)
Temperature rating from -53℃(-65℉) to 232℃(450℉) with standard PTFE packing, up to 648℃(1200℉) with Grafoil packing
Hardened stem threads and one piece of bar stock or forged body for long cycle life
Bonnet stop pin prevents accidental handle back-out
Non-rotating stem for leak-tight shut-off and long cycle life
Burr-free internal surface
Manifold feature a 4:1 safety factor
2-1/8"(54mm) port centerline dimension for proper alignment



Materials of Construction

No.	Description	Materials
1	Body	316SS
2	Stem	316SS
3	Spindle Bushing	316SS
4	Packing Ring	316SS
5	Packing	PTFE
6	Gland	316SS
7	Valve Nut	304SS
8	Bar Handle	304SS
9	Stem	316SS
10	Bonnet	316SS
11	Spindle Bushing	316SS
12	Packing	PTFE
13	Jam Nut	316SS
14	Bar Handle	304SS
15	Stop Pin	304SS
16	Set Screw	304SS



Application

2 Way Manifolds - Static pressure and liquid level applications

3 & 5 Way Manifolds - Most differential pressure transmitters with both female and flange process impulse line connections

Sour Environment Services

UNILOK valves are comply with NACE MR- 0175/ISO 15156 for sour oilfield application or NACE MR-0103 for petroleum refining operations.

To order, add-N to the end of part number.

Cleaning

UNILOK valves are free from machine oils, loose particles and grease throughout the close cleaning process.

Testing

Every valve is 100% factory tested with air and nitrogen at 1000psig(69bar) for leakage at the seat and packing. Each test is performed to a maximum allowable leak rate of 0.1scc/min.

Hydrostatic shell test to be performed at 1.5 time of the working pressure is available as optional

Important Notification

Proper installation, materials compatibility, operation and maintenance of these valves are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.

The packing adjustment may be required during the valve's service life.

How To Order

UNILOK VM series manifolds valves are ordered by part number as shown below.

Example: The following part number, ***VMR2A-08N-SS*** is designated for VMR series manifolds valve with both 1/2" Female NPT Threads, 316SS, PTFE packing.

V	MR	2A	-	08N	-	SS	-		-	
UNILOK Valve	Valve Type	Bonnet Number & Configuration		Connection Size		Body Materials		Packing Type		NACE

Valve Type	
MR	Remote Mounting
MD	Direct Mounting
MFL	Direct Mounting with Single Flange
MFLD	Direct Mounting with Double Flanges

Bonnet Valve Number & Configuration	
2	2 Way
3	3 Way
5	5 Way

For more details, refer to Visual Index of Manifolds Valve on page 195.

Body Materials	
SS	316SS
M0	Alloy 400

Other alloys are available upon request.

Connection Size		
Pipe Size Designation (NPT)		
Pipe Size	1/2	1/4
Designator	08N	04N

1/4" Female NPT, bleed port is available as optional.

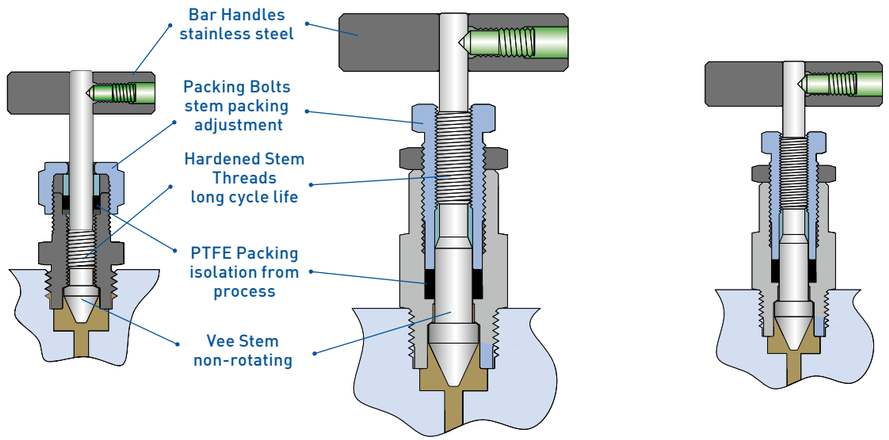
Packing Materials	
None	PTFE
GF	Grafoil

Bonnet Specification

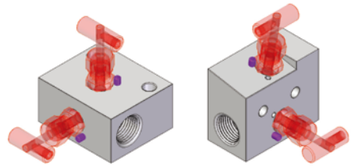
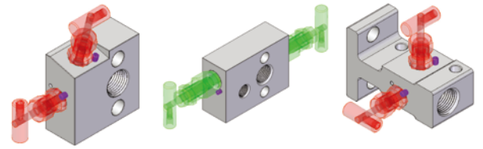
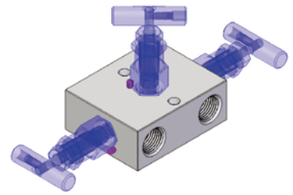
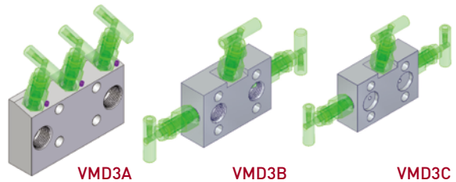
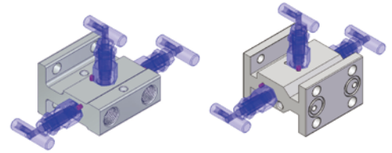
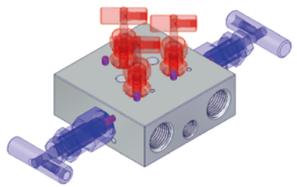
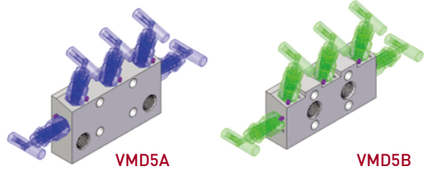
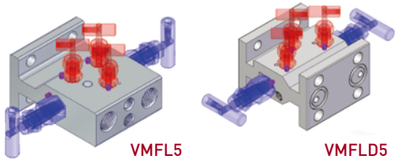
Small Bonnet Valve
Orifice - 3.2

Large Bonnet Valve
Orifice - 6.4

Medium Bonnet Valve
Orifice - 5.0

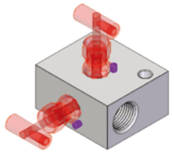


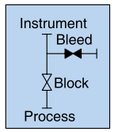
Visual Index of Manifolds Valve

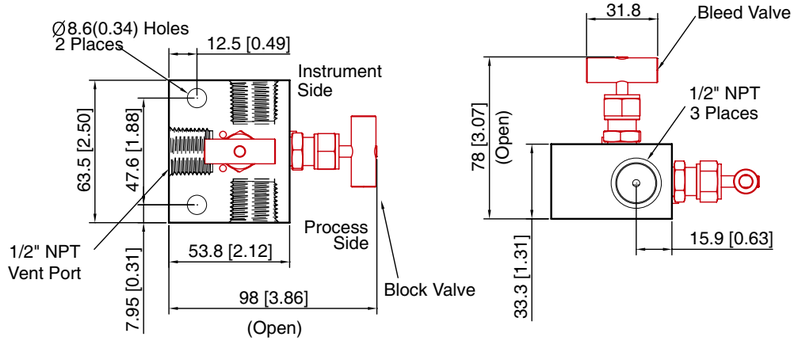
	Remote Mounting	Direct Mounting
2 Way	 VMR2A VMR2B	 VMD2A VMD2B VMFL2
3 Way	 VMR3A	 VMD3A VMD3B VMD3C  VMFL3 VMFLD3
5 Way	 VMR5A	 VMD5A VMD5B  VMFL5 VMFLD5

VMR series
(2 & 3 Way, Remote Mounting Type)

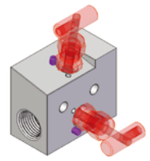
VMR2A-08N-

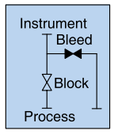


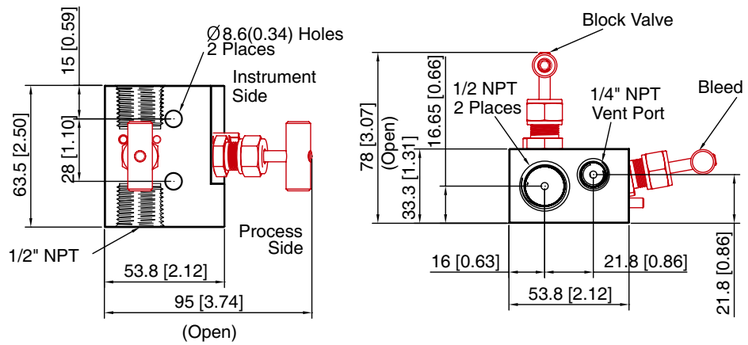




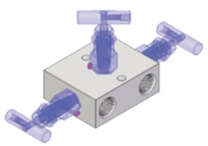
VMR2B-08N-

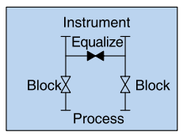


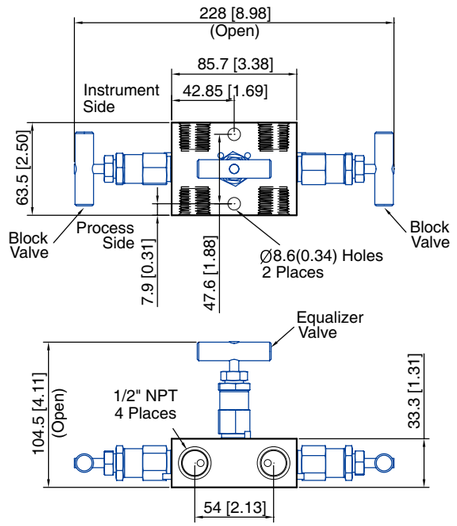




VMR3A-08N-



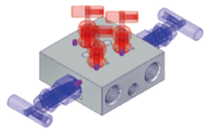


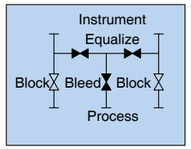


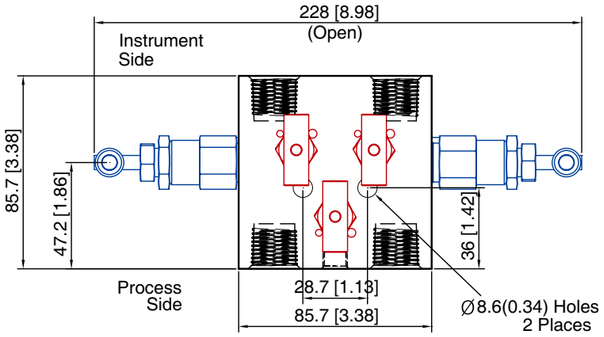
Dimensions are for reference only and are subject to change without prior notice.

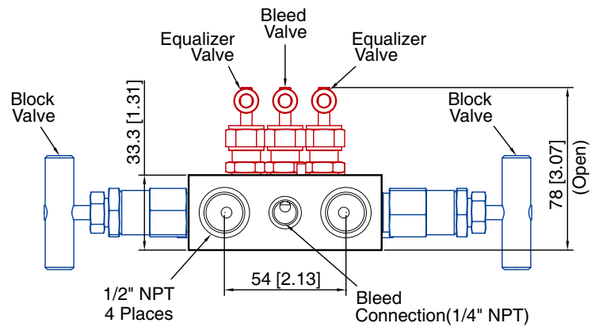
VMR series
(5Way, Remote Mounting Type)

VMR5A-08N-









Pressure- Temperature Ratings by Packing Materials

Packing Material	Body Material	Temperature Rating		Pressure Rating at 37℃ (100℉)		Pressure Rating at Maximum Temperature			
		℃	℉	psig	bar	psig	bar	℃	℉
PTFE	316SS	-54~232	-65~450	6000	413	4130	285	232	450
	Alloy 400	-54~232	-65~450	5000	345	3970	274	232	450
Grafoil	316SS	-54~648	-65~1200	6000	413	1715	118	648	1200
	Alloy 400	-54~260	-65~500	5000	345	3970	274	260	500

Alloy 400/Monel is not applicable over 260℃ (500℉).

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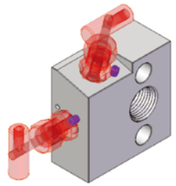
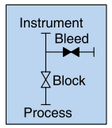
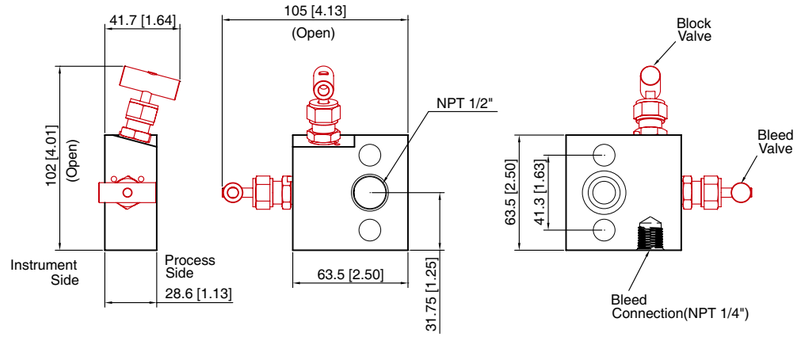
VMD series

(2 & 3 Way, Direct Mounting Type with Block Flange)

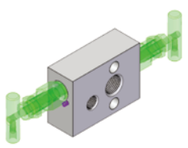
VMD2A-08N- (with single block flange)

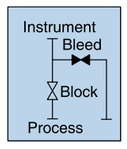


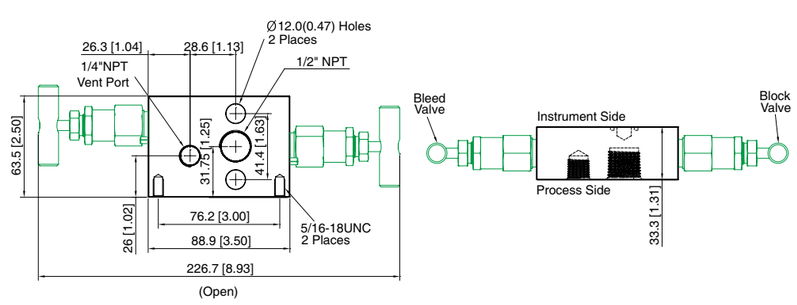




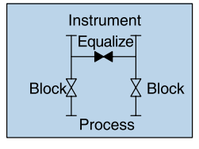
VMD2B-08N- (with single block flange)

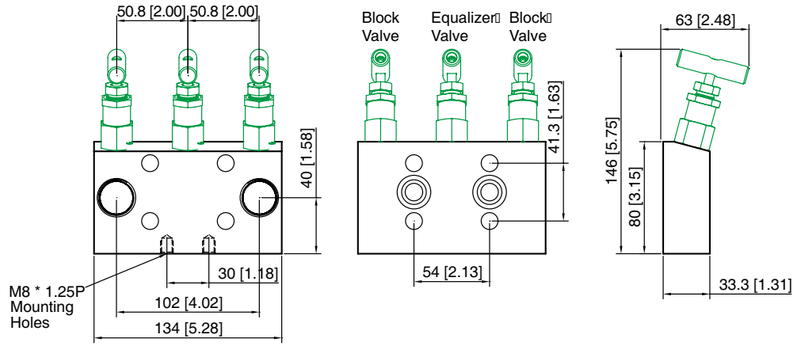






VMD3A-08N- (with single block flange)





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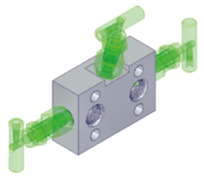
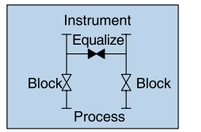
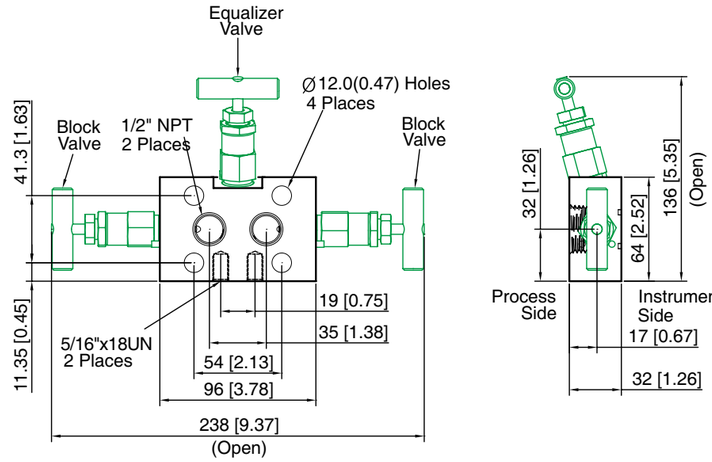
VMD series

(3Way, Direct Mounting Type with Block Flange)

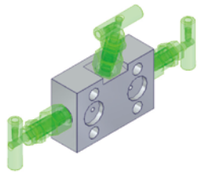
VMD3B-08N- (with single block flange)

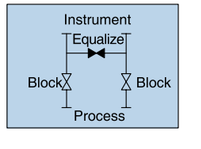


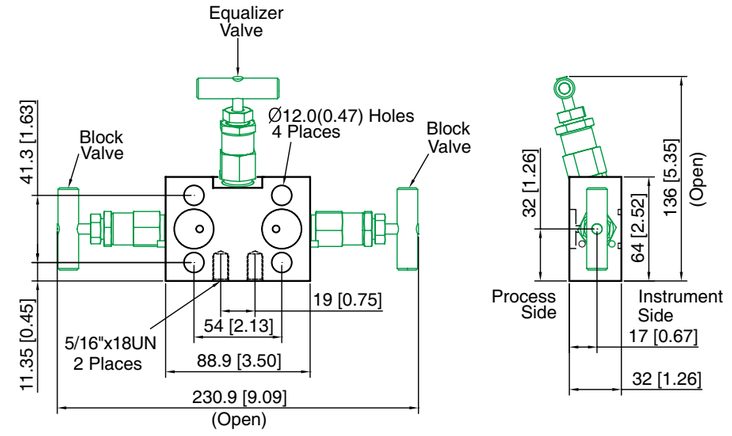




VMD3C- (with double block flange)







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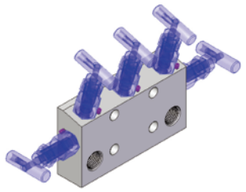
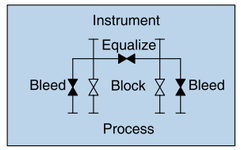
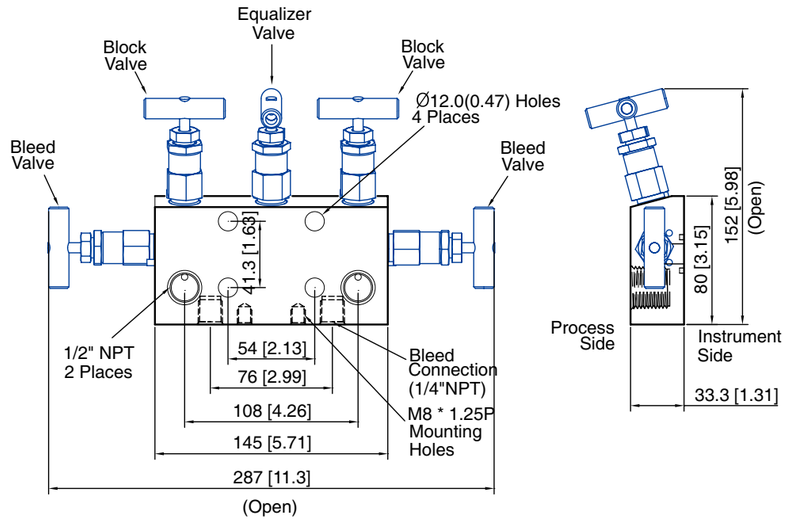
VMD series

(5Way, Direct Mounting Type with Block Flange)

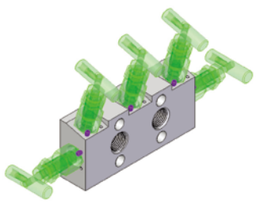
VMD5A-08N- (with single block flange)

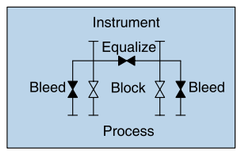


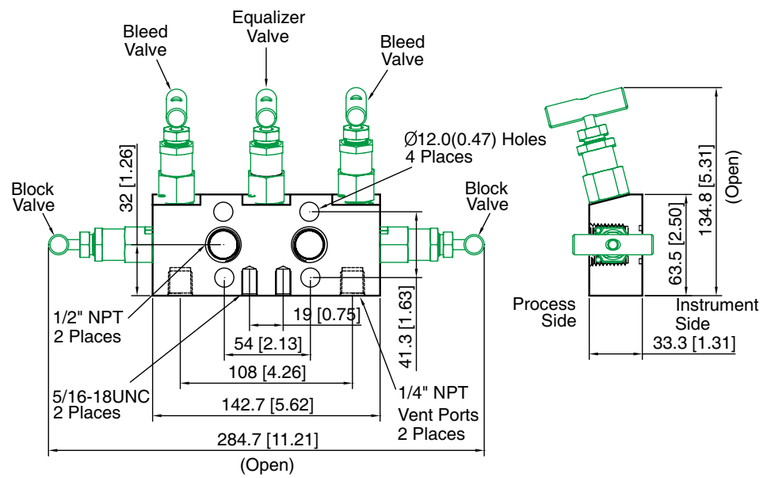




VMD5B-08N- (with single block flange)





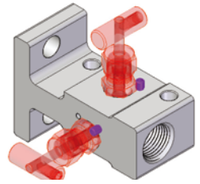


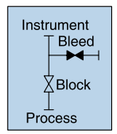
Dimensions are for reference only and are subject to change without prior notice.

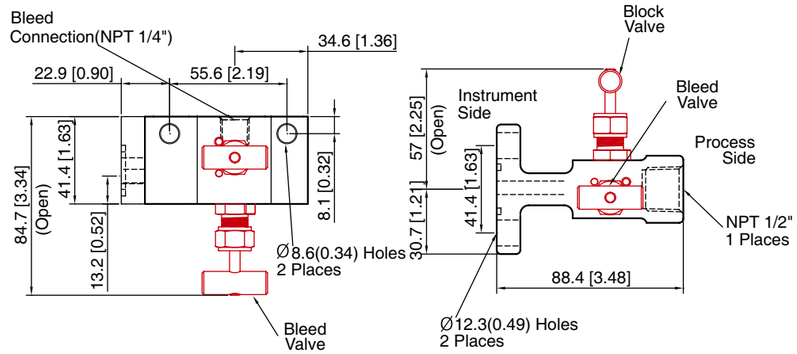
VMFL series

(2 & 3 Way, Direct Mounting Type with Flange)

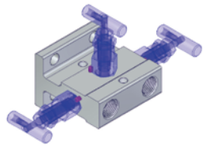
VMFL2-08N- (with single flange)

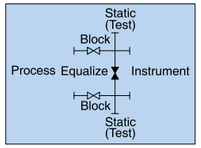


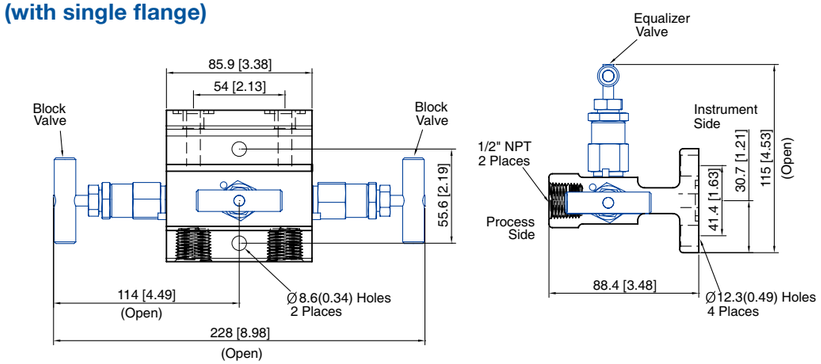




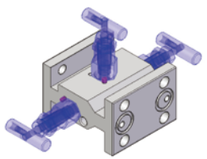
VMFL3-08N- (with single flange)

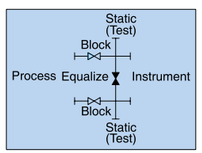


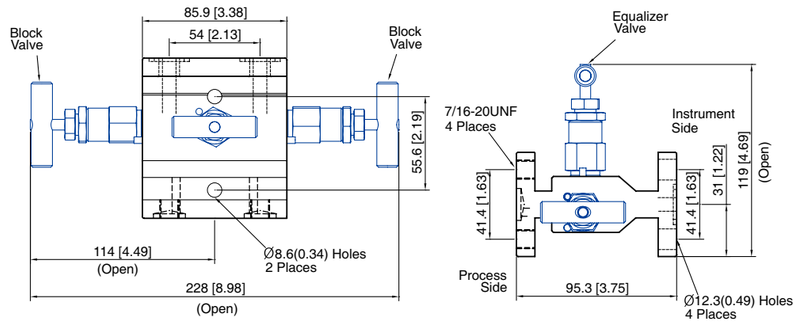




VMFLD3- (with double flange)







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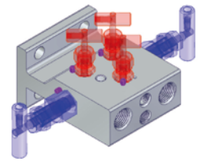
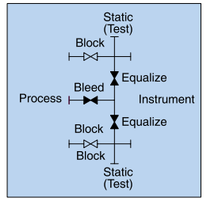
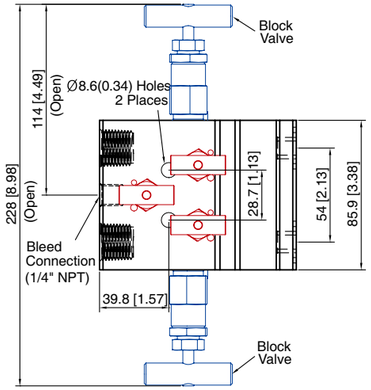
VMFL series

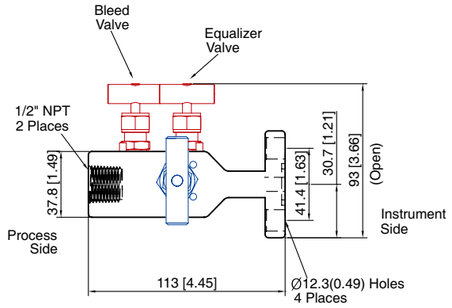
(5Way, Direct Mounting Type with Flange)

VMFL5-08N- (with single flange)

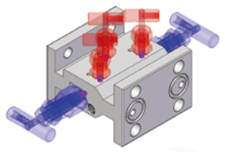


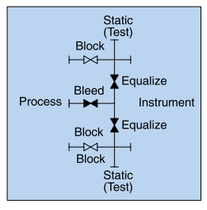


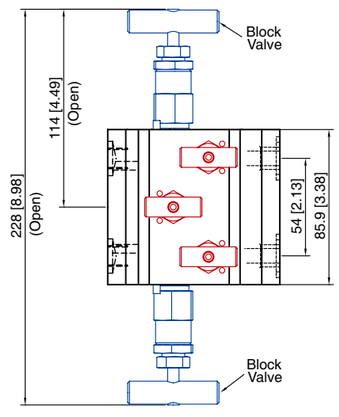


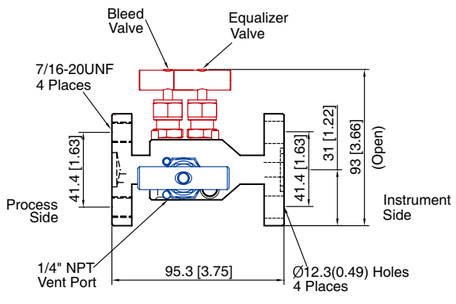


VMFLD5- (with double flange)









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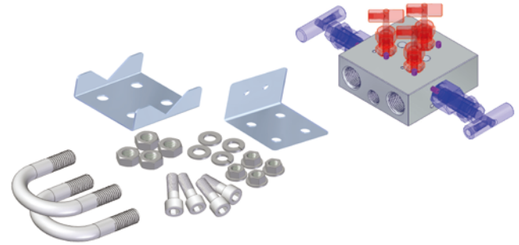
Pressure - Temperature Ratings of 316SS Construction

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

Mounting Bracket Kit

Mounting bracket kit contains bracket, U-bolt and nut, bolt, nut and washer for horizontal and vertical manifold mounting. Materials are 304SS.



Part number for ordering is VMP-BK-SS.

Bonnet Valve Kit

Bonnet valves are available for replacement.

Part Number	Bonnet Valve Size	Packing Material
VMP-BV-S	Small	PTFE
VMP-BV-M	Medium	
VMP-BV-L	Large	

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