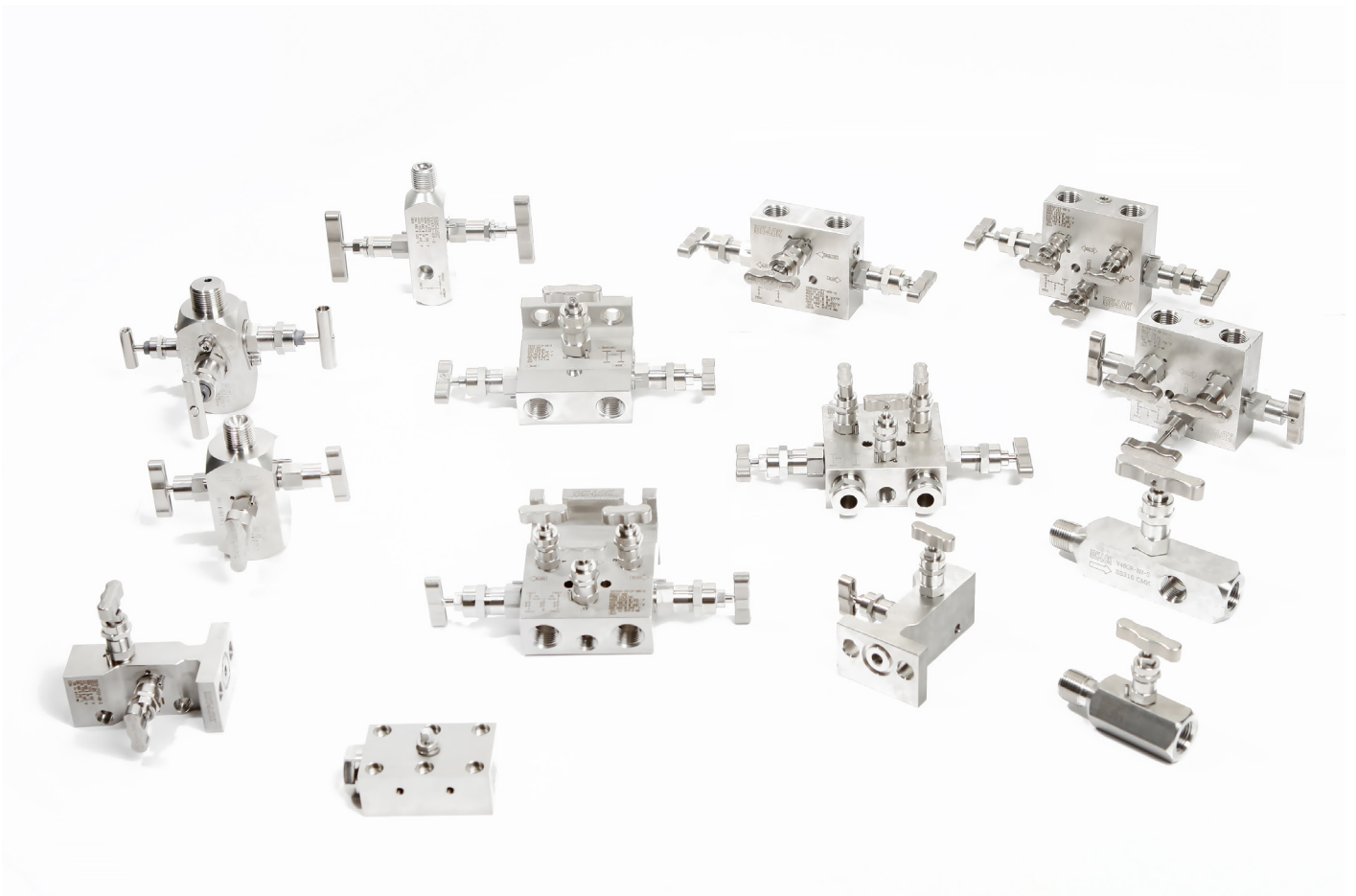




Manifolds & Gauge Root

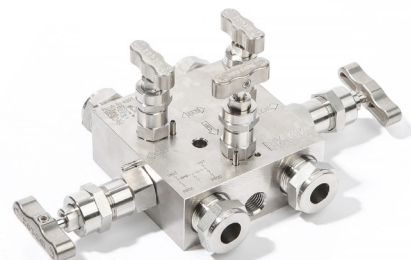
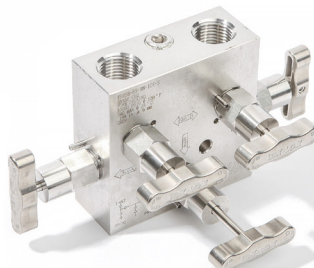
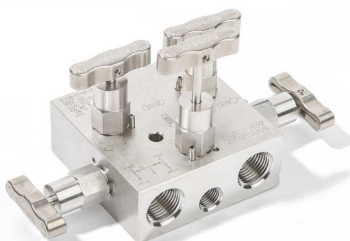
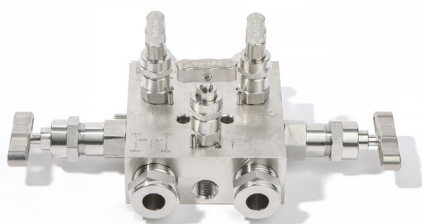
Rev. 01-02
Apr. 2025



VDK-LOK

V56,V46 Series

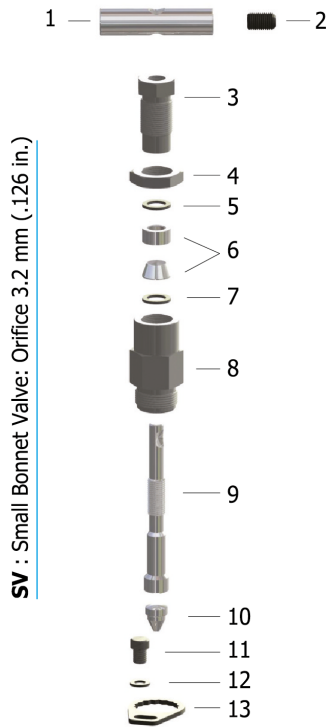
Rev. 02-01
Mar. 2024



V46 series Gauge Root Valves V56 series Instrument Manifolds

Rev. 02-01
Mar. 2024

Pressure Rating up to 6000 psig (413 bar)

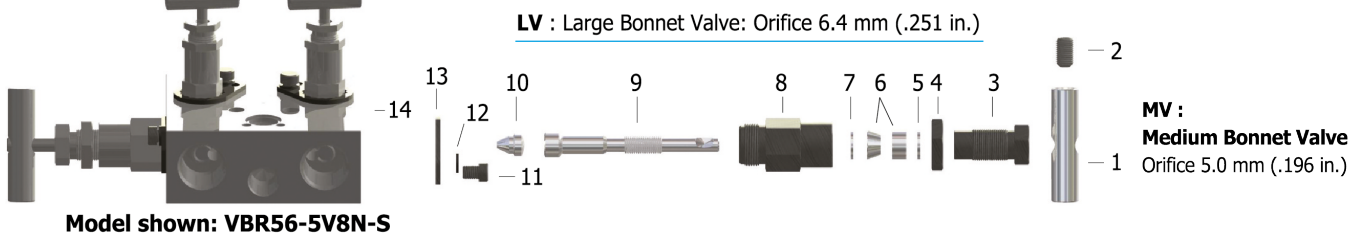


Materials of Construction

Component	Valve Body Materials	
	Stainless steel	Carbon steel
	Bonnet Valve	
	Grade/ASTM specification	
1. Handle	Stainless steel	Aluminium black anodized
2. Set screw		SS316/A276 or A479
3. Packing bolt	SS316/A276 or A479	C.Steel/A108
4. Lock nut		SS316/A276 or A479
5. Upper gland		Standard chevron PTFE packing, optional Grafoil
6. Packing		SS316/A276 or A479
7. Lower gland	SS316/A276 or A479	C.Steel/A108
8. Bonnet		SS316/A276 or A479
9. Stem		SS630/A564
10. Non-rotating stem tip	Stainless steel	
11. Lock plate bolt	Stainless steel	
12. Spring washer	Stainless steel	
13. Lock plate	Stainless steel	Carbon steel
14. Body	SS316/A276 or A479	C.Steel/A108 or A105, Yellow zinc galvanized
Flange seals (not shown)	PTFE/D1710, optional Grafoil and fluorocarbon FKM O-ring	
Flange bolts (not shown)	Stainless steel/A193	Carbon steel/A193
Lubricant	Fluorinated base with PTFE and tungsten disulfide	
	Hydrocarbon based	

Wetted components are listed in blue.

Grafoil: TM UCAR



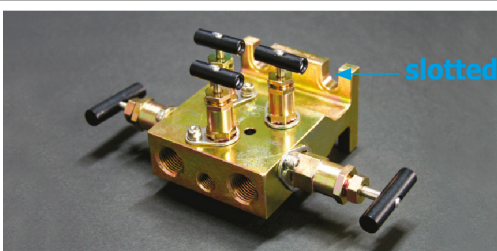
Features

- **Non-rotating stem tip** at closure for long-life and leak-tight shutoff.
- **Chevron PTFE packing** design provides far improved sealing integrity.
- **Packing** below stem threads is to isolate **threads** from system fluid and lubricant washout.
- Packing bolt permits stem **packing adjustment**.
- Standard **Lock plate** ensures the valve fastened to the body even excessive operating torque is applied.
- **One piece body construction** provides strength.
- Burr-free internal surface.



Image shown:
Bonnet Valve.

Feature of packing below stem thread maintains in small, medium and large bonnet valve on manifolds as well as on gauge root valves.



VES56 series **slotted flange** feature facilitates manifolds mounting with long stud hex nut.

Model shown: VES565-5V1F8N-C

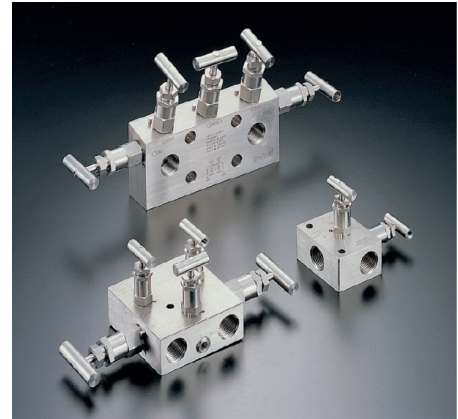
Pressure-Temperature Ratings

Manifolds and Gauge Root Valves

Body Material	Packing material	Temperature Rating	Pressure Rating @ 37 °C (100 °F)	Pressure Rating @ Max. Temp.
Stainless steel	PTFE	-54 to 232 °C (-65 to 450 °F)	413 bar (6000 psig)	285bar @ 232 °C 4130 psig @ 450 °F
	Grafoil	-54 to 648 °C (1) (-65 to 1200 °F)		118bar @ 648 °C 1715 psig @ 1200 °F
Carbon steel	PTFE	-29 to 176 °C (-20 to 350 °F)	413 bar (6000 psig)	360 bar @ 176 °C (5230 psig @ 350 °F)
	Grafoil	-29 to 176 °C (-20 to 350 °F)		

(1) Grafoil packing rating is limited to 537 °C (1000 °F) with flange end connection. In air, Grafoil rating is limited to 523 °C (975 °F), in steam it can go up to the maximum temperature of 648 °C (1200 °F).

- -28 to 204 °C (-18 to 399 °F) with optional fluorocarbon FKM flange seals.



Design

- D-Pro Manifolds and Gauge root valves are designed to ASME B16.34 Class 2500 for pressure-temperature ratings.
- Pressure boundary wetted parts are selected to Chapter III, 123 Materials of ASME B31.1.
- Valve ratings are based on ASME process piping code B31.3.
- To determine pressure rating at 37 °C (100 °F) in accordance with Power piping code B31.1, multiply by 0.94 for stainless steel.

Factory test

- Every manifolds and gauge root valve is factory tested with nitrogen @ 69 bar (1000 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
- Stem packing is tested for no detectable leakage.
- Optional hydrostatic shell test is performed with pure water at 1.5 times the working pressure.

Packing adjustment and Actuation Torque

- Extreme or rapid temperature cycle while valve in service may require packing adjustment. Tighten the packing bolt 1/16 turn clockwise.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.

Sour Gas Service

- For use valve in sour gas, materials for wetted components are selected in accordance with NACE MR0175 latest revision.

Ordering and Technical Information

Manifolds		Basic Ordering Number	End Connections		Orifice mm(in.)	Weight Kg (lb.)
			Process	Instrument		
Remote Mount		VBR56-2V8N-	1/2 in. Female NPT		3.2 (.126)	0.8 (1.8)
		VBR56-3V8N-			6.4 (.251)	2.0 (4.4)
		VBR56-5V8N-				2.2 (4.9)
Direct Mount	Single Flange	VE56-2V1F8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.0 (2.2)
		VE56-3V1F8N-			6.4 (.251)	2.2 (4.9)
		VE56-5V1F8N-				2.7 (6.0)
	Double Flange	VE56-3V2F-	Flange to Flange. Flange design meets MSS SP-99		6.4 (.251)	2.5 (5.5)
		VE56-5V2F-				2.7 (6.0)
	Single Flange with slotted feature	VES56-2V1F8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.0 (2.2)
		VES56-3V1F8N-			6.4 (.251)	2.2 (4.9)
		VES56-5V1F8N-				2.7 (6.0)
	Double Flange with slotted feature	VES56-3V2F-	Flange to Flange. Flange design meets MSS SP-99		6.4 (.251)	2.5 (5.5)
		VES56-5V2F-				2.7 (6.0)
	Vertical	VBD56-2V8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.6 (3.5)
		VBD56-3V8N-			5.0 (.196)	1.7 (3.8)
		VBD56-5V8N-			6.4 (.251)	3.3 (7.3)
		VBD56S-5V8N-			5.0 (.196)	2.7 (6.0)

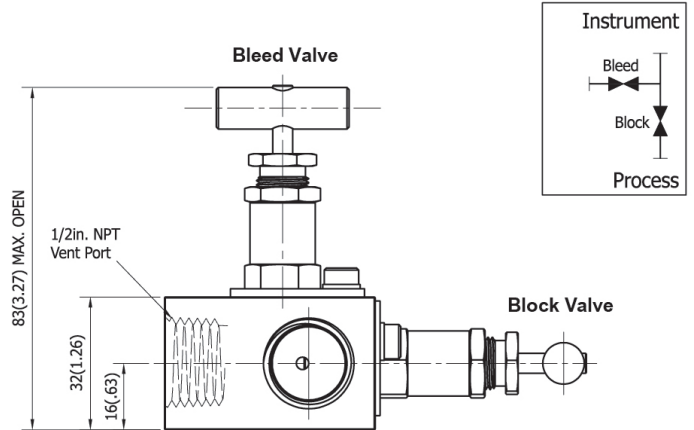
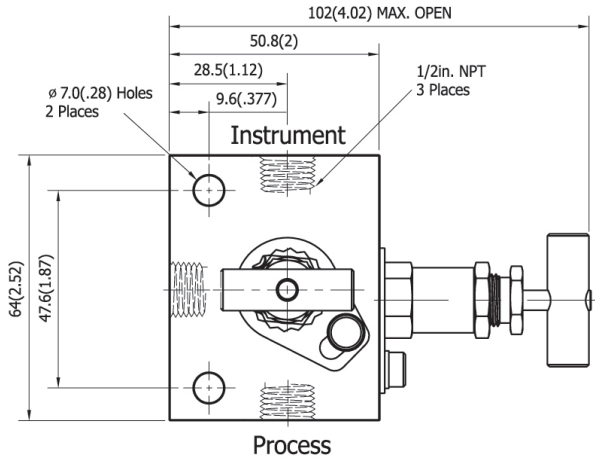
How to order manifolds with options

- To order the optional Grafoil packing, add -GF to the ordering number, i.e., VES56-3V1F8N-GF-
- To order sour gas service valve, add -SG to the ordering number. i.e., VES56-3V1F8N-GF-SG-
- To order optional GRAFOIL or FKM O-ring flange seal, add -GF or -VT to the ordering number/ i.e., VES56-3V1F8N-GF-SG-GF(or- VT)-
Flange seal designators: -GF for Grafoil, -VT for FKM O-ring.
- To complete the ordering number, select valve body material designator:
- S for SS316, - C for Carbon steel. i.e., VES56-3V1F8N-GF-SG-VT-S.

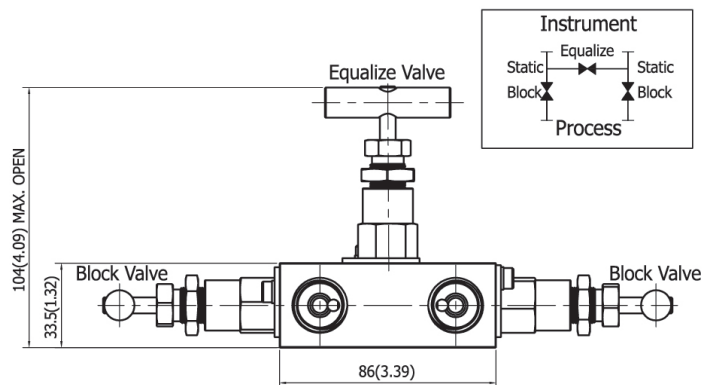
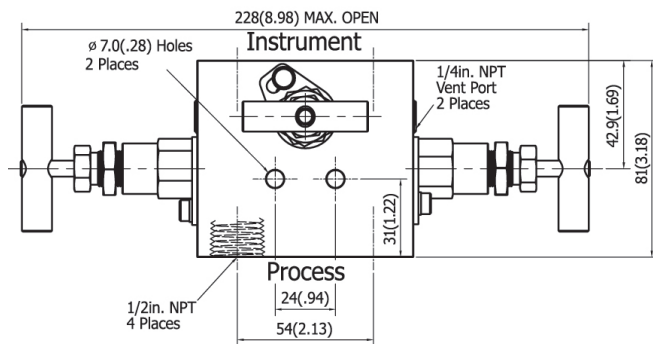
Remote mount

Unit: mm (in.)

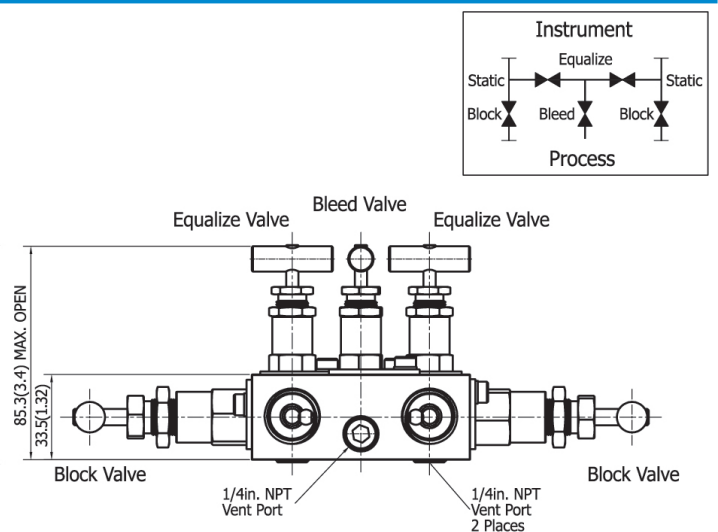
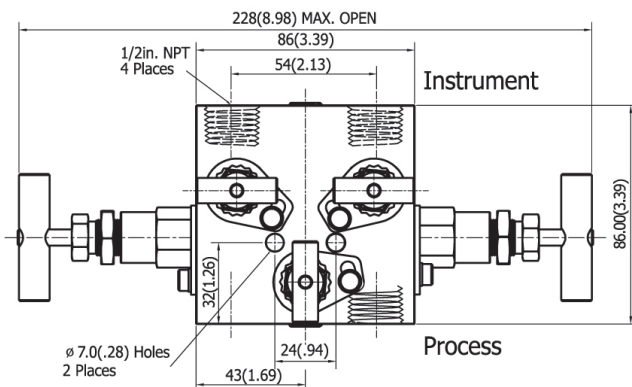
VBR56-2V8N-



VBR56-3V8N-



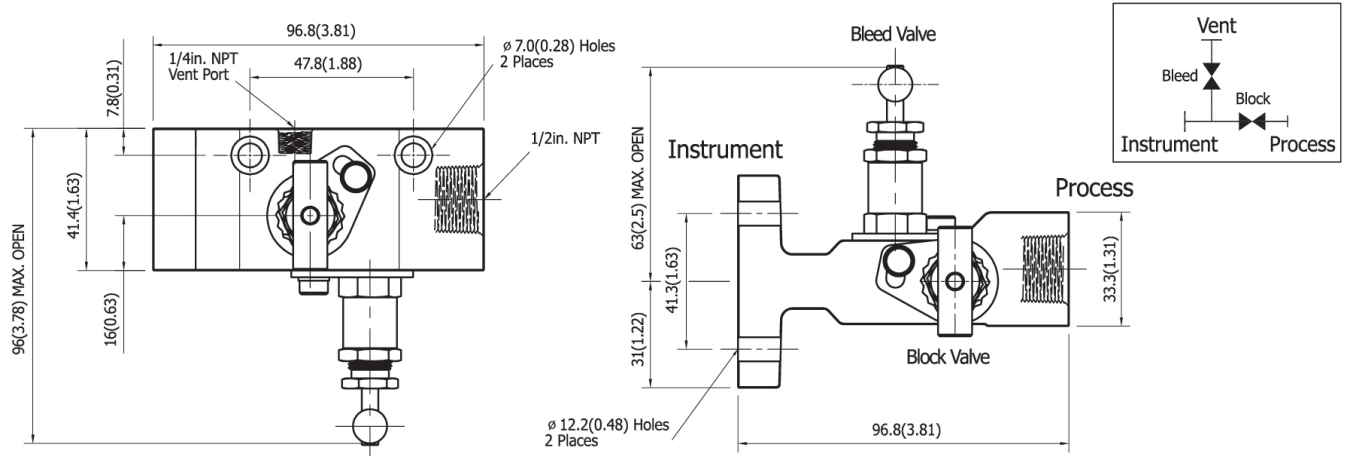
VBR56-5V8N-



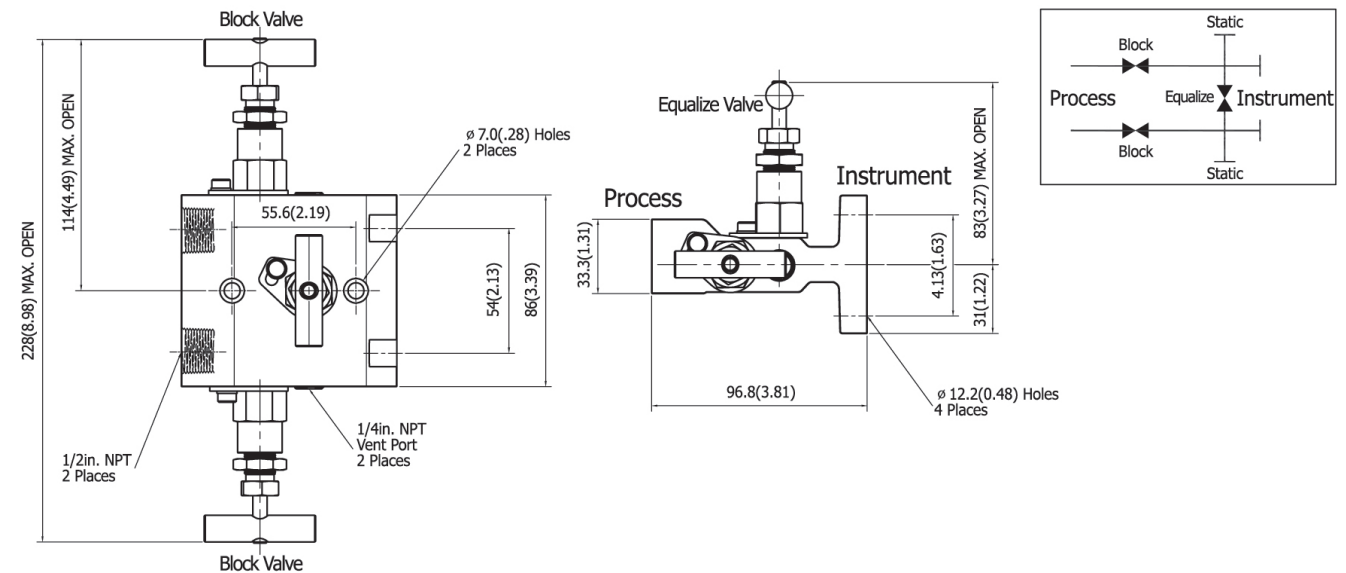
Single Flange Direct Mount

Unit: mm (in.)

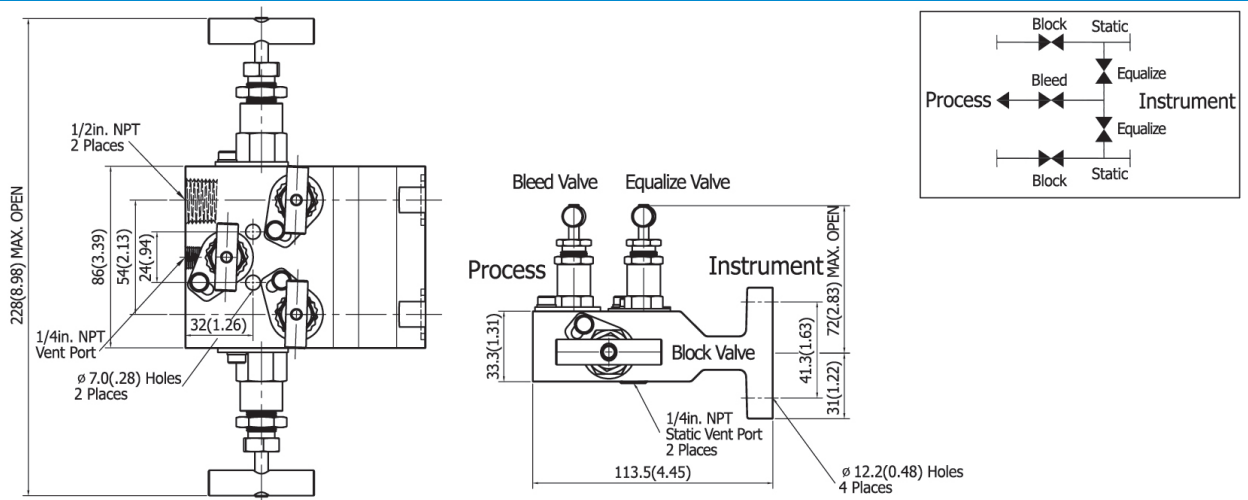
VE56-2V1F8N- / VES56-2V1F8N



VE56-3V1F8N- / VES56-3V1F8N-



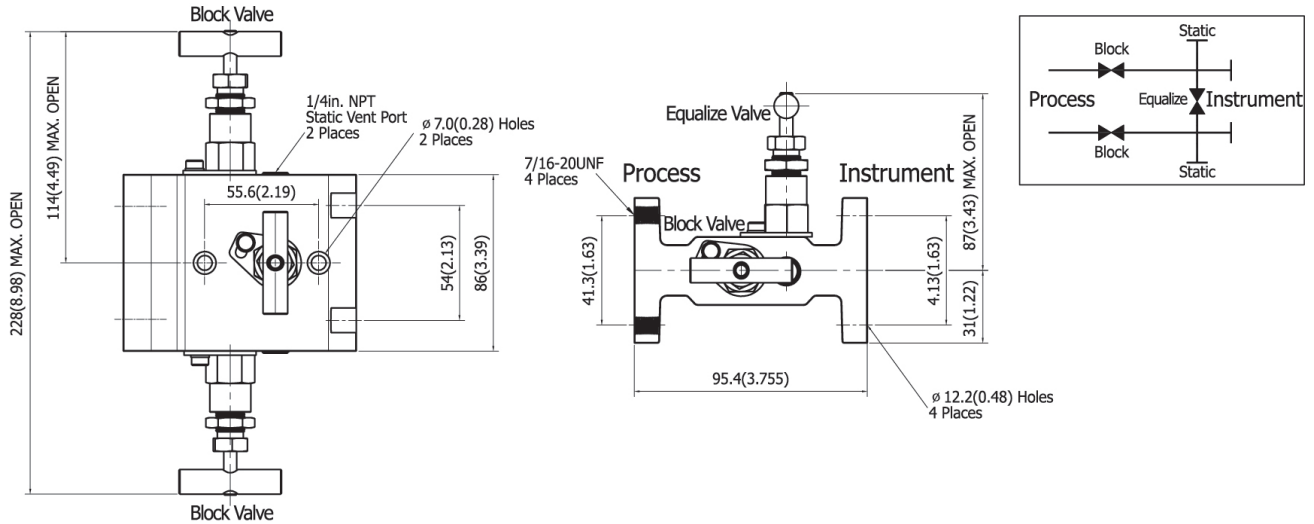
VE56-5V1F8N- / VES56-5V1F8N-



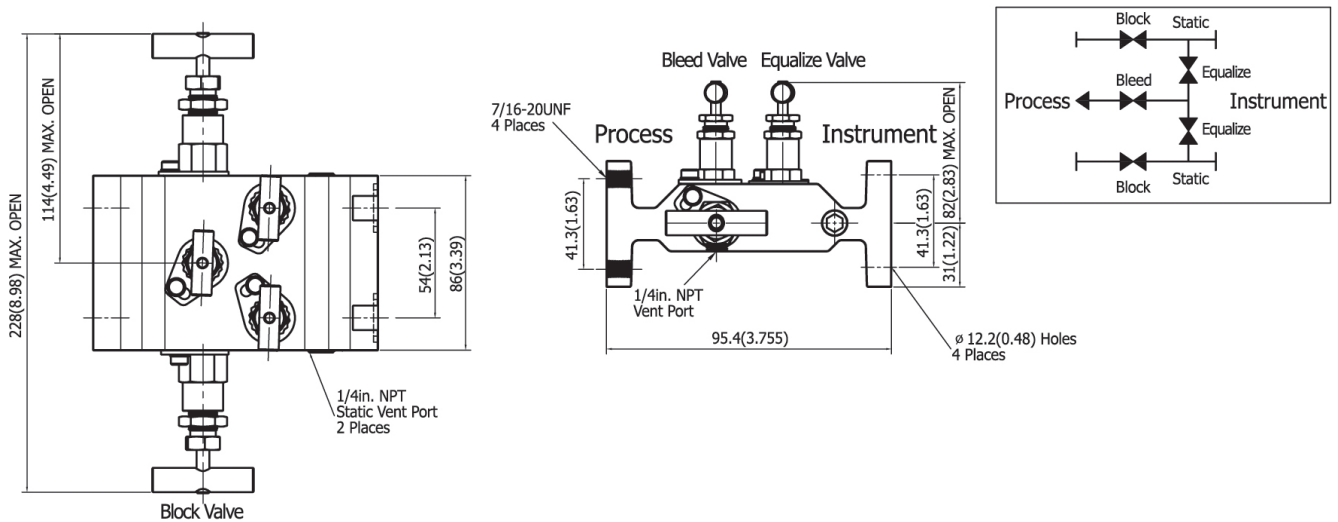
Double Flange Direct Mount

Unit: mm (in.)

VE56-3V2F- / VES56-3V2F-



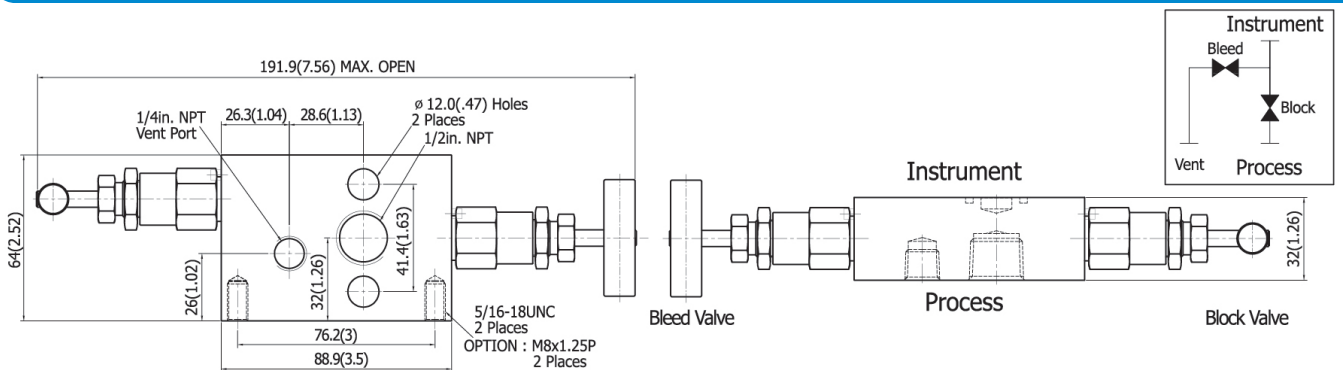
VE56-5V2F- / VES56-5V2F-



Vertical Direct Mount

Unit: mm (in.)

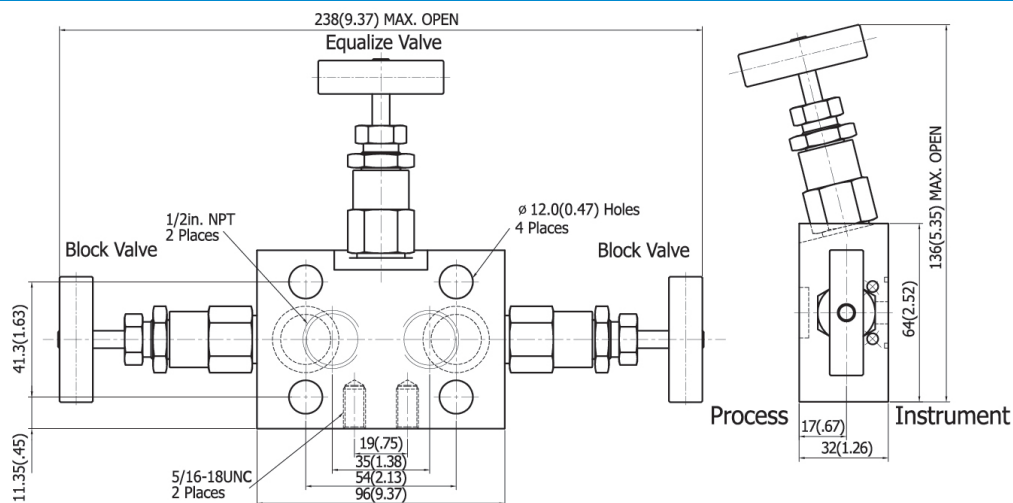
VBD56-2V8N-



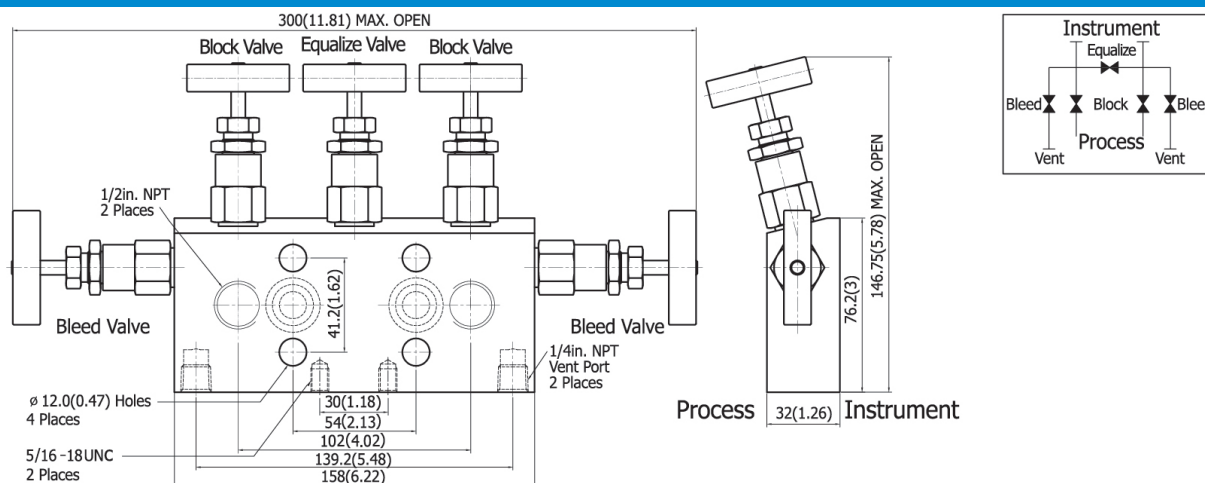
Vertical Direct Mount

Unit: mm (in.)

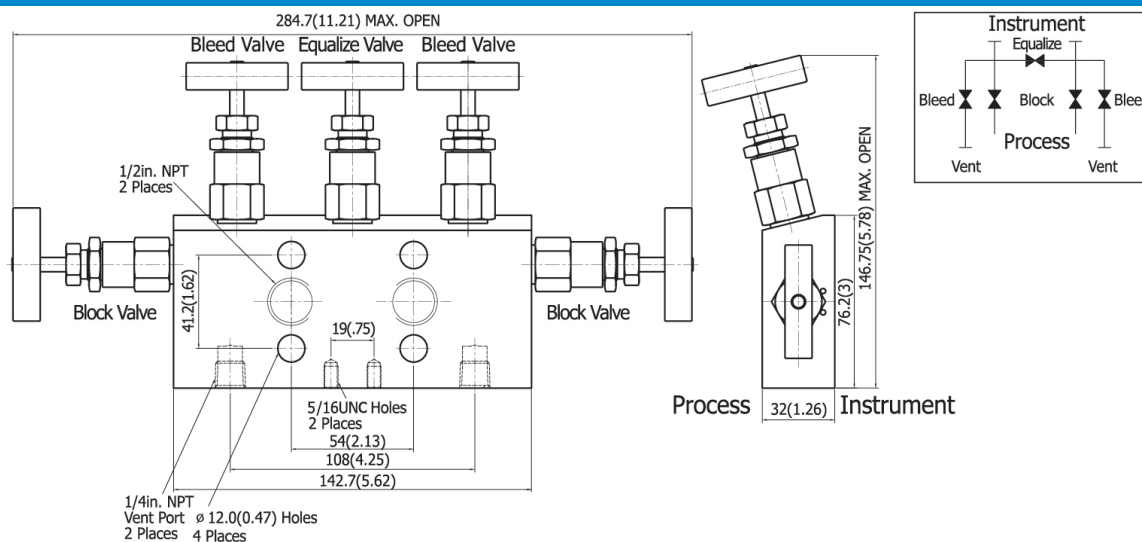
VBD56-3V8N-



VBD56-5V8N-



VBD56S-5V8N-



Manifolds Accessories

Flange Bolts

For special mounting applications optional long and short bolts are available. See flange bolt specification below.

Flange Bolt	Threads	Length mm (in.)	Hex Size mm (in.)	Basic Ordering Number	Bolt Material Designator
Standard hex bolt	7/16-20	45.0 (1.77)	15.87 (5/8)	Z56BM-	Stainless steel: S Carbon steel: C
Long stud hex nut	7/16-20	58.0 (2.28)		Z56BL-	
Short hex head bolt	7/16-20	25.0 (.98)		Z56BS-	

To order, add the material designator to the bolt ordering number. i.e., Z56BM-S

• Slotted flange manifolds is supplied with long stud hex nut: Z56BL-

Flange Seals

Flange seals are available in standard PTFE, Grafoil and fluorocarbon FKM O-ring for system compatibility.

Seal Material	Temperature Rating °C (°F)	Ordering Number
PTFE	-53 to 121 (-65 to 250)	Z56PE
Grafoil	-53 to 537 (-65 to 1000)	Z56GF
Fluorocarbon FKM (Viton)	-28 to 204 (-18 to 399)	Z56VT

To order, use the ordering number. i.e., Z56PE.

Oval Flange & Pipe Nipple

Eccentric Flanges and Pipe Nipple allow connections of flange-to-flange manifolds to process flange taps or process root valves.



Oval Flange

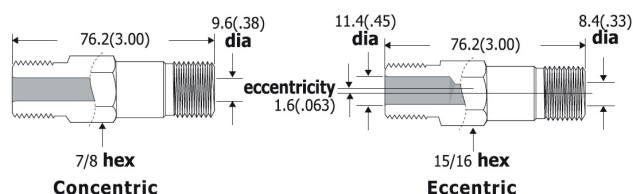
Pipe Nipple

Oval Flange Ordering Number and Technical Information

Material	End Connection	End Connection Size	Ordering Number
Stainless steel	Female NPT	1/2 in. NPT	V56OF-8N-S
Carbon steel			V56OF-8N-C

Pipe Nipple Ordering Number and Technical Information

Material	Ordering Number	Type	Pressure Rating @20°C(70°F)bar(psig)	Temperature Rating°C(°F)	Pressure Rating @ Max. Temp.
Stainless steel /A276	G56NE-8N-S	Eccentric	516 (7 500)	-53 to 648 (-65 to 1200)	147 bar @648 °C (2140 psig @1200°F)
	G56NC-8N-S	Concentric	689 (10 000)		196 bar @648 °C (2850 psig @1200 °F)

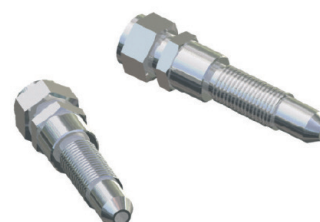


Calibration Fittings

Select DK-LOK differential pressure calibration fitting depending on the bleed port of the transmitter plug.

Ordering Number

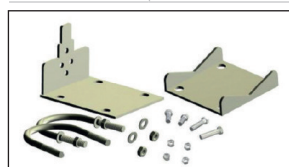
Material	Ordering Number	DK-LOK OD	Straight Male Thread
Stainless steel /A276	DPCM4-1U-S	1/4 in.	1/4-28UNF
	DPCM4-2U-S		5/16-24UNF



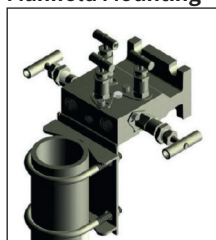
Mounting Bracket Kit

Bracket kit containing bracket, U-bolt, bolt, nut and washer allows horizontal and vertical manifold mounting.

Material	Ordering number
Stainless steel	Z56MBK-S
Carbon steel	Z56MBK-C



Manifold Mounting



Bonnet Valve Kit

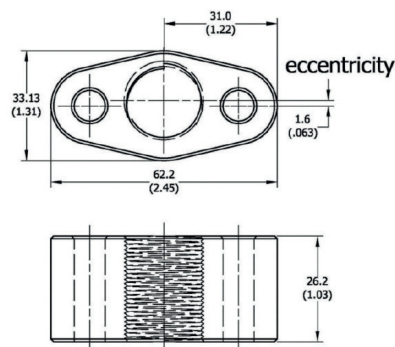
Bonnet valves are available for field assembly.

Bonnet Valve	Basic Ordering Number	Packing Material Designator	Bonnet Valve Material Designator
Small Bonnet Valve	V56SV-	PTFE: Nil Grafoil: GF	Stainless steel: S Carbon steel: C
Medium Bonnet Valve	V56MV-		
Large Bonnet Valve	V56LV-		

• Kit contains bonnet valve, lock plate and set screw.

How to order

Select designator for the desired packing and valve material. i.e., V56SV-GF-S



D-Pro V46 series Gauge Root Valves

D-Pro Gauge Root Valves offer a safe way of positioning gauges and installing pressure switches.

Features

- 1-2 in. and 3/4 in. male to 1/2 in. female end connections.
- 1/2 in. female gauge ports standard.
- Minimum schedule 160 pipe wall on valve inlet.

Ordering Information and Technical Data

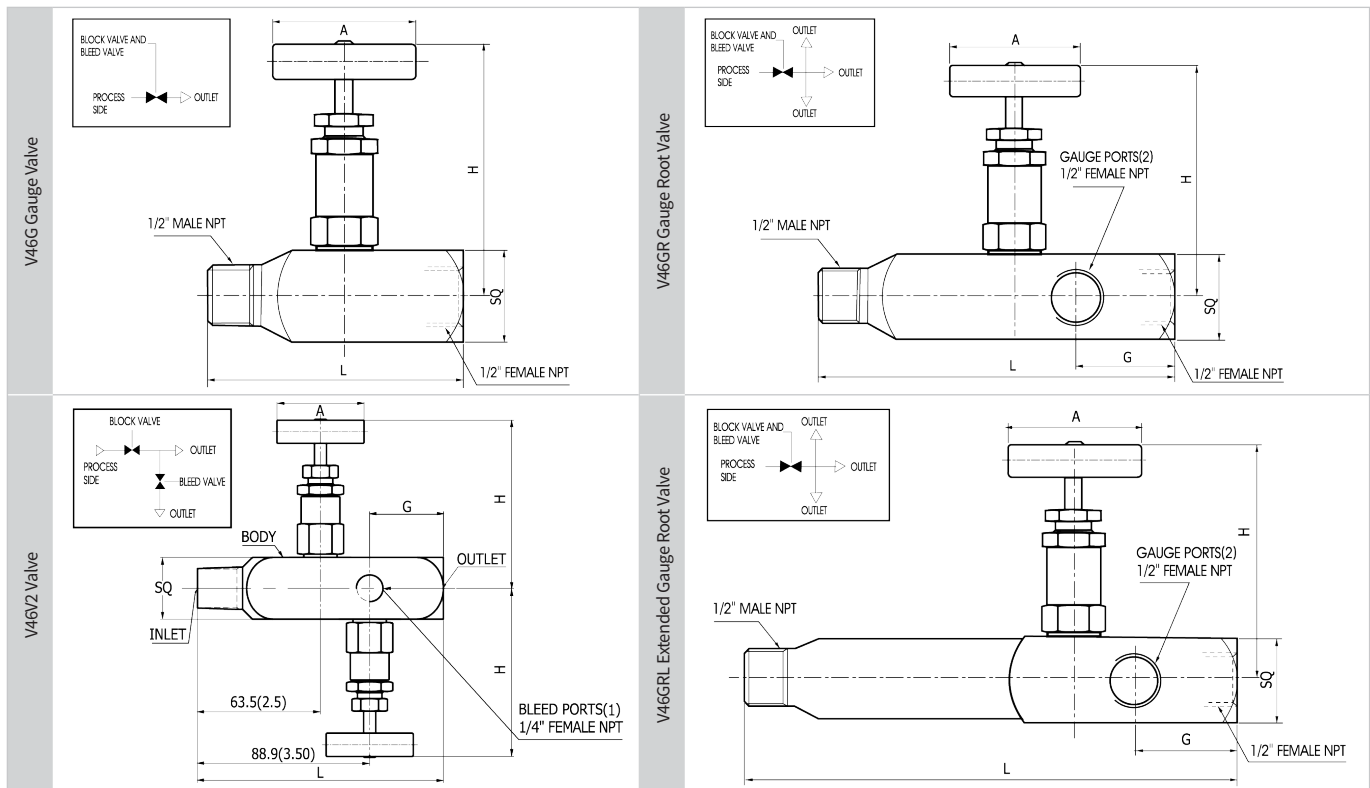
Valve Ordering Number	End Connection NPT	Orifice mm (in.)	Body Length mm (in.) L	MAX. OPEN mm (in.) H	SQ mm (in.)	G mm (in.)	A mm (in.)
V46G-8N-S	1/2 Male to 1/2 in. Female	5.0 (0.20)	90.0 (3.54)	85.9 (3.38)	32 (1.26)	38.10 (1.50)	50.00 (1.97)
V46GR-8N-S	1/2 Male to 1/2 in. Female		136.0 (5.35)				
V46GR-12N8N-S	3/4 Male to 1/2 in. Female		136.0 (5.35)				
V46GRL-8N-S	1/2 Male to 1/2 in. Female		184.0 (7.24)				
V46GRL-12N8N-S	3/4 Male to 1/2 in. Female		184.0 (7.24)				
V46V2-8N-S	1/2 Male to 1/2 in. Female		119.0 (4.68)				
V46V2-F-8N-S	1/2 Female to 1/2 in. Female		109.0 (4.29)				

- V46GRL has an extended 4.8 inch of pipe insulation.
- V46 series uses Medium Bonnet Valve: Orifice 5.0 mm (.196in.)

How to order

- To order Grafoil option, insert -GF in the ordering number. i.e., V46G-8N-GF-S
- To order sour gas service valve, insert -SG in the ordering number. i.e., V46G-8N-GF-SG-S

Unit: mm (in.)



Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

The information shown in this catalog are not for design purpose, but for reference only.
The accuracy of information is not the liability of our company.

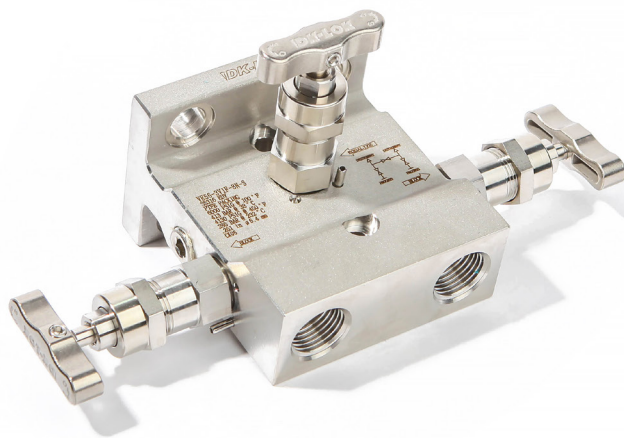
Safe Component Selection

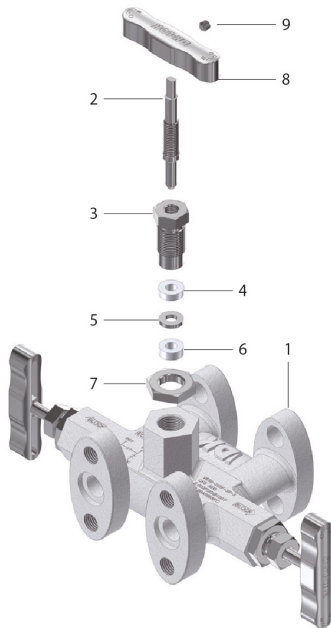
The Selection of component for any applications or system design must be considered to ensure safe performance. Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

VDK-LOK

VE56 Series

Rev. 03-01
Mar. 2025





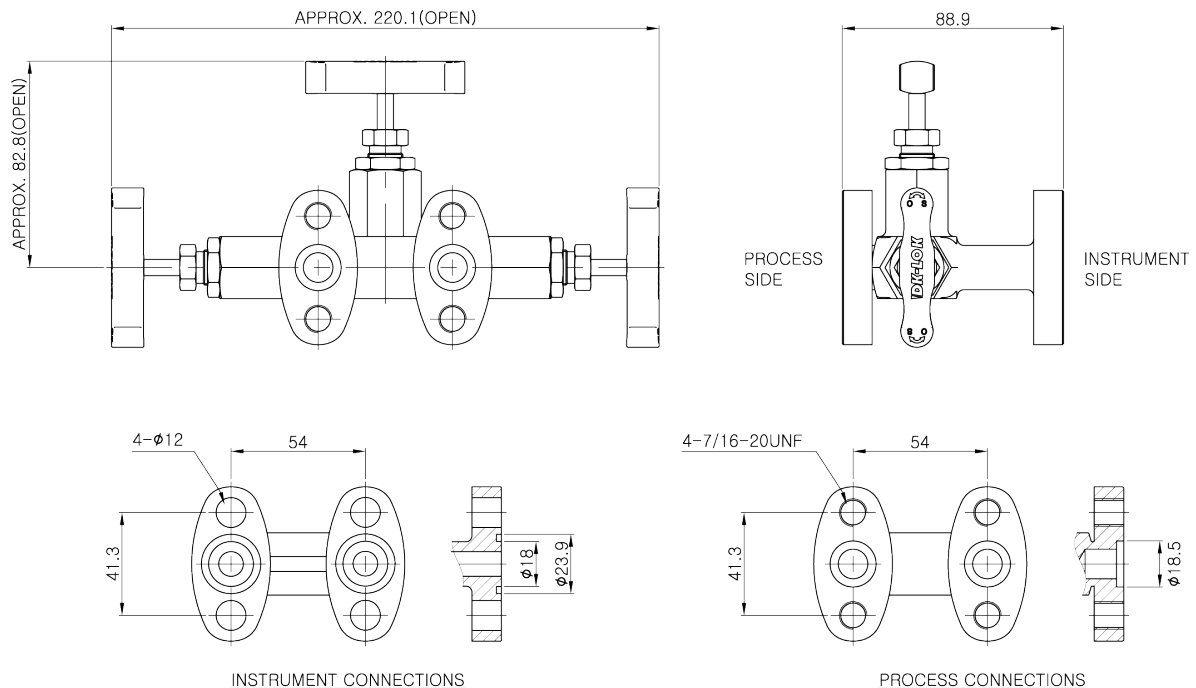
Features

- Packing below stem threads is to isolate threads from system fluid and lubricant washout.
- Bonnet permits stem packing adjustment.
- One piece body construction provides strength.
- Burr-free internal surface.

Material of Construction

Component	Material
1. Body	ASTM A351 CF8
2. Stem	ASTM A276 TYPE 316
3. Bonnet	ASTM A276 TYPE 316
4. Upper Packing	PTFE
5. Packing Gland	ASTM A276 TYPE 316
6. Lower Packing	PTFE
7. Lock Nut	ASTM A276 TYPE 316
8. Handle	Stainless Steel
9. Set Screw	Stainless Steel

Ordering Information and Dimensions



Basic Ordering Number	End Connections	
	Process	Instrument
VE56-3V2F-	Flange design meets MSS SP-99	Flange design meets IEC 61518

- Every valve is factory tested with nitrogen gas at 1,000 psig (68.9 bar) for leakage at seat to a maximum allowable leak rate of 0.1 SCCM. The packing is tested with nitrogen gas for no detectable leakage.
- Every valve is cleaned and packaged in accordance with DK cleaning standard DC-01.

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Safe Component Selection

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경상남도 김해시 주촌면 골든루트로 129번길 7 50969

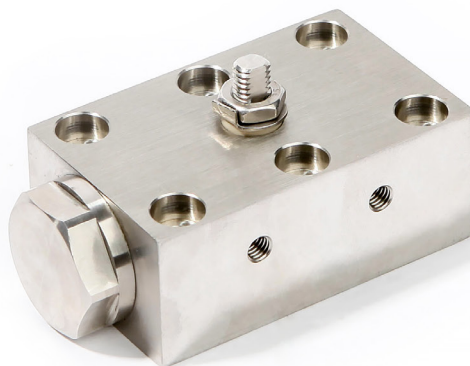
7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, South Korea. 50969

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Manifold Ball Valve V86M Series

Rev. 02-01
Mar. 2024





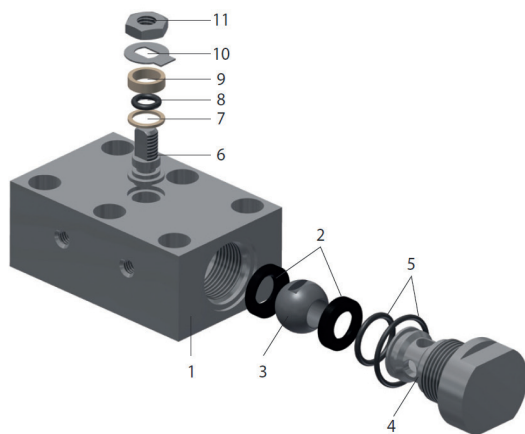
Features

- Quarter turn ball valve that provides fast on-off operation suitable for emergency on-off applications.
- Bolt-on design to insure mounting alignment and stability.
- Mounting brackets and drive dogs designed in compliance with standard ISO pattern.

Features

- Working Pressure 6000 psig (413 bar)
- Temperature Range -40 to 248°F (-40 to 120°C)
- Orifice : $\varnothing 10.0\text{mm}$

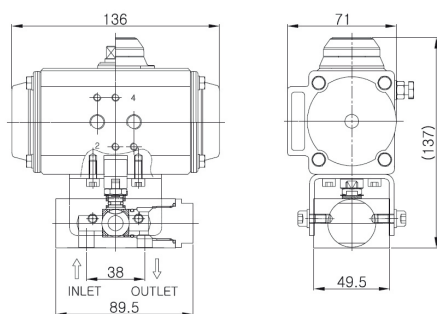
Material of Construction



V86M-FLG-6-S	
Component	Material
1. Body	ASTM A276/479 TYPE316
2. Ball Seat	POM
3. Ball	ASTM A276/479 TYPE316
4. Connector	ASTM A276/479 TYPE316
5. Connector O-ring	FKM
6. Stem	ASTM A276/479 TYPE316
7. Stem Bearing	PEEK
8. Stem O-ring	FKM
9. Grand	PEEK
10. Locking Tap	STAINLESS STEEL
11. Hex. Nut	STAINLESS STEEL

• Wetted parts and lubricants listed in blue.

Pneumatic Actuator



V86M series Pneumatic actuators are designed to accommodate remote valve actuation.

Actuator Type	Ordering Number		Moment Values (P=6 bar) Nm
	Normal Close	Normal Open	
Single Return	PCS2	POS2	5.3
Double Acting	PD1	-	14.4

Factory Test

Every valve is tested with nitrogen gas @ 1000 psig (68 bar) for leakage at the seat to maximum allowable leak rate of 0.1 SCCM. The stem packing is tested with nitrogen gas @ 1000 psig for no detectable leakage.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok Corporation accepts no liability for any improper selection, installation, operation or maintenance.

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Safe Component Selection

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경상남도 김해시 주촌면 골든루트로 129번길 7 50969

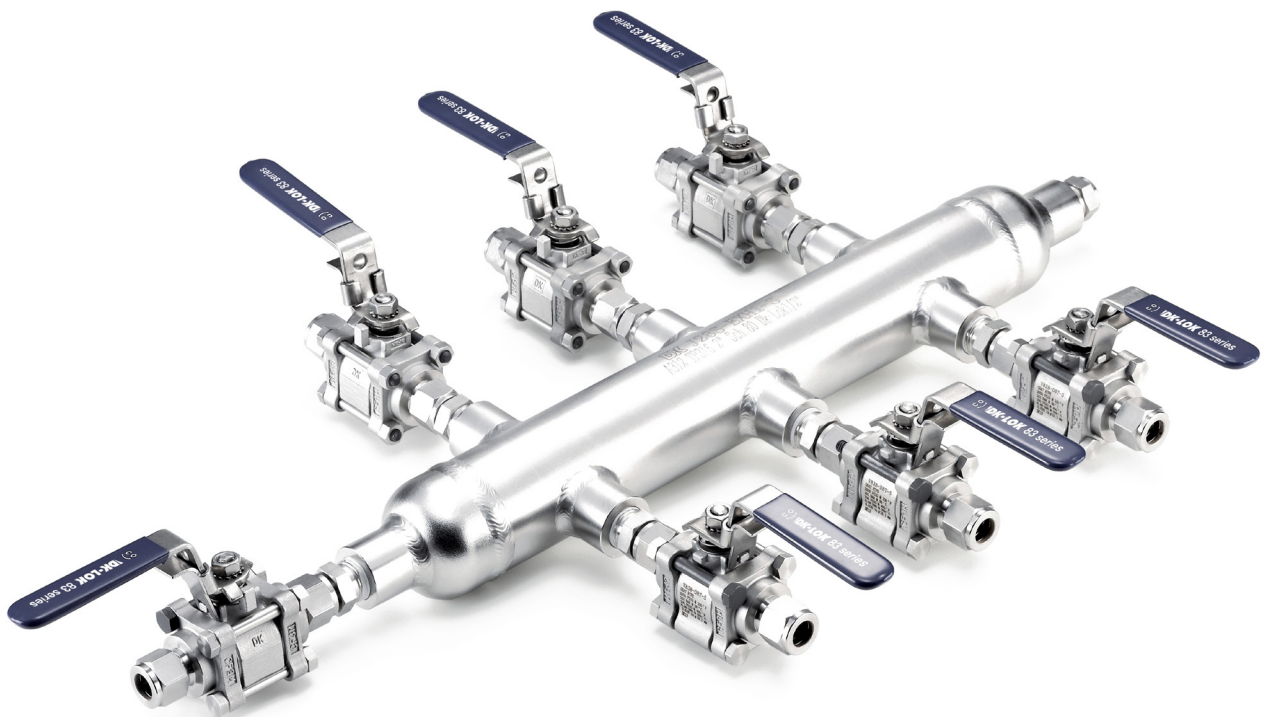
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J Series Air Distribution Manifolds

Rev. 02-01
Mar. 2024



J Series Air Distribution Manifolds are designed and configured in any layout to fit the application as per client's requirements.



Factory Test

- 100% pressure tested
- PT test standard
- RT test an option

Cleaning

- Stainless steel passivated.
- Carbon steel cleaned & galvanized.

Features and Ordering Information

To order J Series, prefix "J" and build up an ordering number by combining the designators in the sequence below.

1. Manifold Pipe Size

Pipe Size	Designator
1"	1
2"	2
3"	3
4"	4

2. Pipe Schedule

Pipe SCH	Designator
SCH40	4
SCH80, XS	8
SCH160	16
XXS	X

3. Pipe Material

Pipe	Standard	Identifier
Black & Hot Dipped Galvanized Steel Pipe	ASTM A53 Type F Grade A -Welded	CFA
	ASTM A53 Type E Grade A - Welded	CEA
	ASTM A53 Type E Grade B - Welded	CEB
	ASTM A53 Type S Grade A - Seamless	CSA
	ASTM A53 Type S Grade B - Seamless	CSB
Seamless Carbon Steel Pipe	ASTM A106 Grade A	CA
	ASTM A106 Grade B	CB
	ASTM A106 Grade C	CC
Seamless Stainless Steel Pipe	ASTM A312 TP316	S
	ASTM A312 TP316L	L
	ASTM A312 TP304	4
	ASTM A312 TP304L	4L
	ASTM A312 UNS 31254	M6
Seamless Ferritic Alloy Steel Pipe	ASTM A335 P11	C11
	ASTM A335 P22	C22
Seamless Nickel-Copper alloy Pipe	ASTM B165 UNS N04400	M
Seamless Nickel Alloy Pipe	ASTM B729 UNS N08020	L20
Seamless Carbon Steel Pipe	API 5L GR. B	A5LB

4. Inlet Port

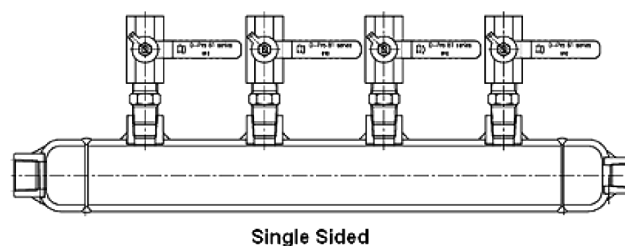
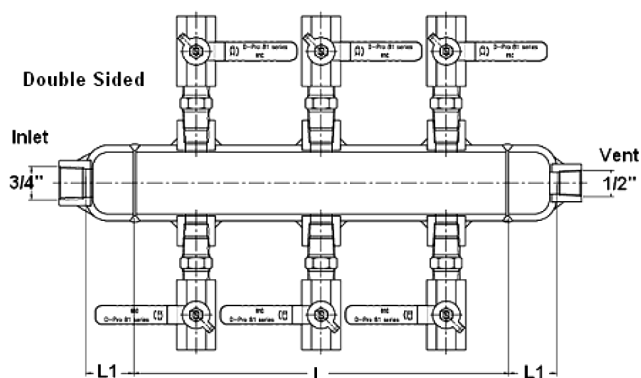
Table A: Type and Size of Inlet Port

S.No.	Size	1/4"	3/8"	1/2"	3/4"	1"
	Size Designator	4	6	8	12	16
1	DK-LOK Tube Fitting OD Designator	D4T	D6T	D8T	D12T	D16T
2	Male Tapered Pipe Thread Designator	NPT	M4N	M6N	M8N	M12N
		ISO 7-1	M4R	M6R	M8R	M12R
3	Female Tapered Pipe Thread Designator	NPT	F4N	F6N	F8N	F12N(1)
		BSPT	F4R	F6R	F8R	F12R
4	Needle valve Designator	N	Select out of above 1 thru. 3. i.e., ND4T-			
5	Ball valve Designator	B	Select out of above 1 thru. 3. i.e., BM8N			

(1) No designator is required in case F12N is inlet port.

5. Outlet Port Configuration

Outlet Port Configuration	Designator
Double sided	D
Single sided	S



6. Number of Outlet Ports

Select 2 to 20.

7. Outlet port type and size

Select from Table A.

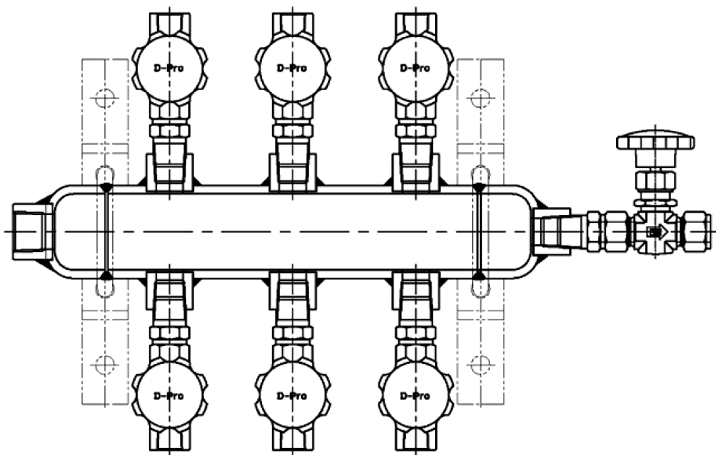
8. Vent Port

No designator is required in case F8N is vent port. For others, select from Table A.

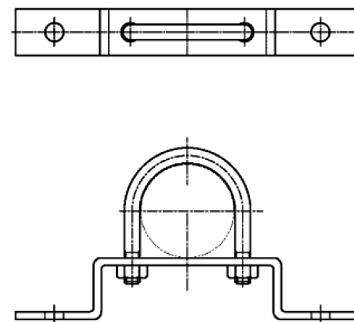
Ordering information

Example: J28S-D8NF8N-BD8TB

To order J series, prefix "J"		J
1. Manifold Pipe Size: 2"		2
2. Pipe Schedule: SCH80		8
3. Pipe Material: ASTM A312 TP316		S
4. Inlet Port: 3/4" FNPT		Nil
5. Outlet Port Configuration : Double Sided		D
6. Number of Outlet Ports: 8 numbers		8
7. Type and Size of Outlet Ports: Needle Valve 1/2" Female NPT		NF8N
8. Vent Port: Ball Valve 1/2" DK-LOK Tube Fitting		BD8T
9. Material: Select an applicable material designator of fittings and/or valves on 4. Inlet Port, 5. Outlet Ports and 8. Vent Port.		B
Designator	Material	
S	SS316	
L	SS316L	
C	Carbon Steel	
B	Brass	

J Series Mounting Bracket


Mounting Bracket: JMTB


Ordering Number of JMTB Series Mounting Bracket

Pipe Size	Basic Ordering #	Bracket Material
1	JMTB-1-	
2	JMTB-2-	S: Stainless Steel
3	JMTB-3-	C: Carbon Steel
4	JMTB-4-	

- 2 sets of mounting brackets are supplied for one unit of J Series manifold.

Two (2) sets of Mounting Bracket consists of ;

- U-Bolt x 2
- Nut x 4
- Washer x 4
- Bracket x 2



The information shown in this catalog are not for design purpose, but for reference only.
The accuracy of information is not the liability of our company.

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