



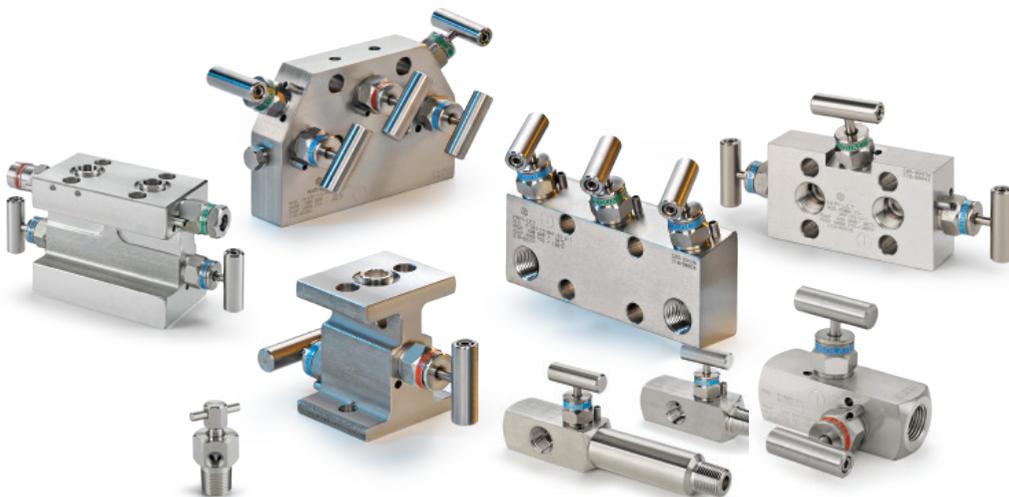
HAM-LET MANIFOLDS

1|2|3|4|5

WAY MANIFOLDS



- ✓ Ceramic stem ball tip Al₂O₃
- ✓ Working pressure up to 10.000 psig (690 bar)
- ✓ Wide variety of sealing materials



OVERVIEW

UCT offers a broad line of 1,2,3,4,5 instrument manifolds, all available in a wide range of materials that are fully compatible with the requirements of the oil & gas, petro-chemical and chemical industries.

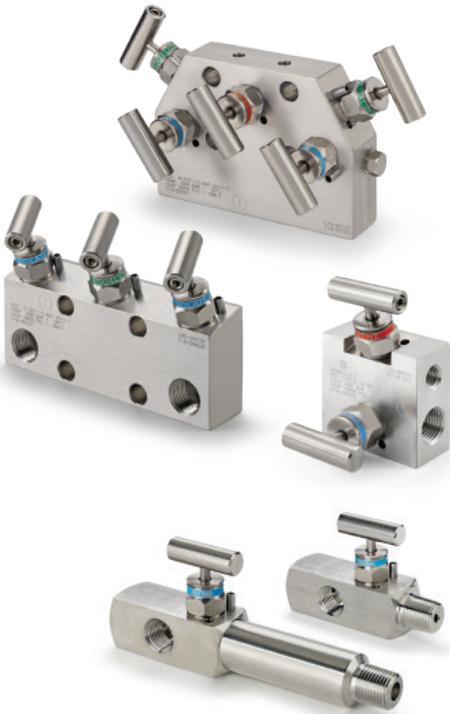
In addition to this standard range of products, UCT has over 3,500 different types of valves and manifolds available.

UCT has a solid engineering heritage, offering a broad range of products. Our portfolio includes valves and manifolds suitable for gas and liquid services as well as full-service solutions that include custom engineering, design and manufacture of instrument enclosures, modular mounting systems, hook-ups and interlocking solutions for critical conditions and temperatures.

As a customer-focused company, UCT provides high-quality products and engineering solutions that address our customers' business and technical requirements. For the UCT line, we can offer scalability to design:

- Choice of materials from AISI 316 to special alloy solutions for highly toxic areas
- Connections, pressure and temperature rating varieties
- Bonnet assemblies offer different stem, seal and material selections
- Option for standard packing, o-ring sealing and fugitive emissions bonnets
- Extensive range of valve configurations and flow schemes
- Fully equipped instrument enclosures

With decades of designing and manufacturing reliable products and solutions, UCT has acquired an outstanding reputation for quality and customer service. We are always inspired by the need to evolve and stay ahead of the ever changing marketplace.

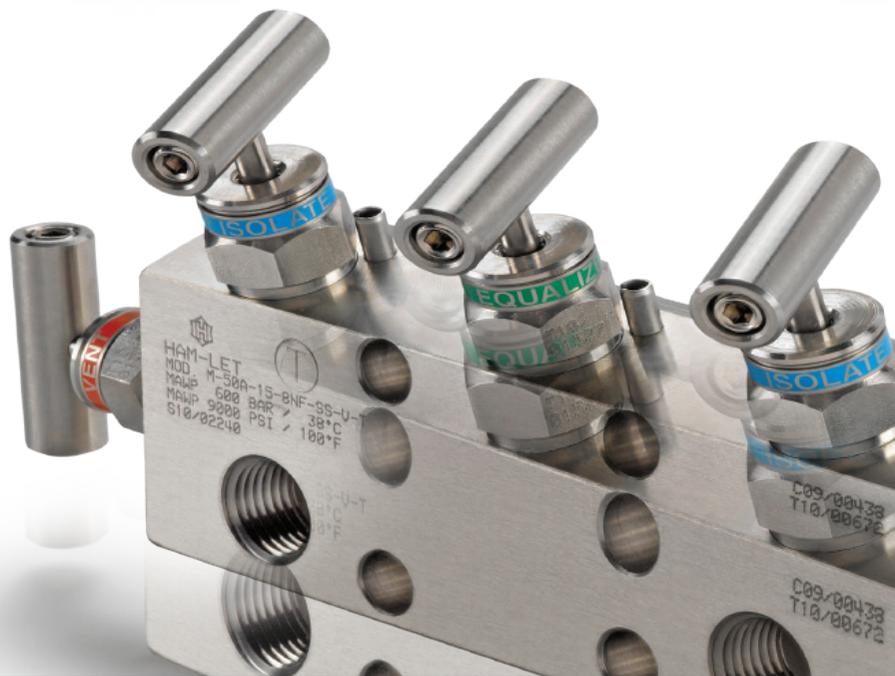


1|2|3|4|5

WAY MANIFOLDS



Our Manifolds are certified to ISO 15848-1, ensuring the lowest fugitive emissions rates and maximum safety for hydrogen handling.



MANIFOLD FEATURES AND BENEFITS

The following unique features of the UCT Line of Instrument Manifolds enable tailoring our high-quality products to the exact requirement of the customer and application.

NACE MR-01-75 / MR-01-03

All manifolds comply to NACE MR-01-75/MR-01-03 as standard.

FULL TRACEABILITY

All products are fully traceable to its components.

WIDE VARIETY OF SEALING MATERIALS

- PTFE; Grafoil®
- Fluorocarbon FKM
- NBR
- EPDM
- Silicon perfluorelastomer – provides wide coverage of application

CERAMIC STEM BALL TIP Al_2O_3

Superior hardness prevents deformation of the sealing tip and wear, significantly increasing the lifetime of the product for isolation purposes.



BONNET SELECTIONS

O-ring stem-seal bonnet

1. No packing adjustment
2. Extremely low operating torque
3. Compact design
4. Long life cycle
5. Sealing below stem thread
6. Metal-to-metal bonnet option

Packing stem-seal bonnet

1. Wide chemical compatibility range
2. High temperature option (Grafoil®)
3. Low operating torque
4. Sealing below stem thread

STEM MATERIAL

SST. 316 Ti with chromium carbide diffusion coating

1. Long life cycle
2. Prevents galling

FEATURES

- Certified for ISO 15848-1:2006(E), (with PEEK or polyimide seals)
- Blowout-proof stem
- Integrated back seat on stem for a secondary seal in the fully opened position
- Safety stop pin prevents the bonnet from detaching due to vibration
- Stem seals below stem threads
- A choice of o-ring materials
- Oxygen clean per ASTM G-93 as an option
- 100% factory tested compliance with MSS-SP-99
- Direct mount flange design per IEC61518 / DIN19213 (MAWP 6,000 psig)
- Working pressure range up to 690 bar (10,000 psig)
- Working temperature range up to 550°C (1022°F)

Grafoil —TM GrafTech International Holdings, Inc.

BONNET AND STEM CONCEPT

THE SPECIAL SEALING DESIGN APPLIED IN ALL UCT INSTRUMENT MANIFOLDS FEATURES A NON-ROTATING CERAMIC BALL TIP.

The chemical composition of a ceramic ball tip is superior in hardness and functionality to a metal ball tip, eliminating sealing tip deformation and significantly increasing the lifetime of the product. The stem threads are rolled and an integrated back seat design is applied to the packing type of bonnet.

Applying a stainless steel 316 Ti stem with a chromium carbide diffusion coating results in maximum operation cycles and minimal risk of stem galling.

Both packing and o-ring bonnets are designed with sealing below stem threads for maximum protection of the stem threads. For maximum safety, the bonnet design prevents stem blowout, and a locking pin prevents unintentional disassembling of the bonnet.

UCT'S VALVE BONNETS HAVE COLOR CODED RING LABELS FOR SERVICE IDENTIFICATION

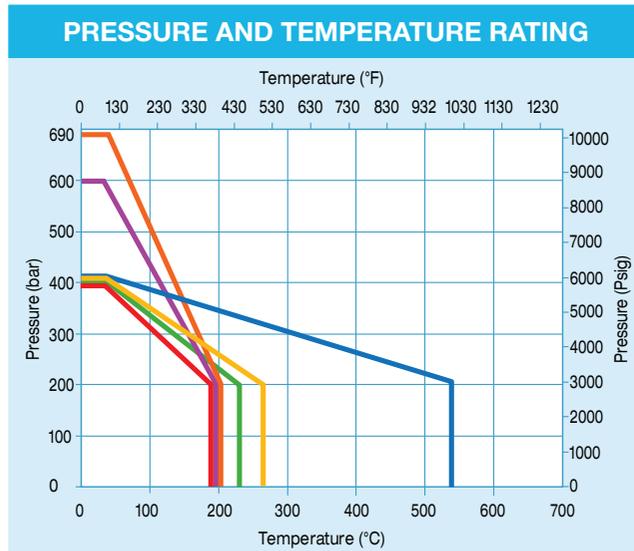


Red:
Vent Valves

Blue:
Isolate Valves

Green:
Equalize Valves

For severe service applications, UCT manifolds can be configured with a metal-to-metal seal below the bonnet thread. A dust-ring is attached to the bonnet thread or tack weld on the locking pin for extreme vibrating conditions.



¹Not included in order of Anti-Tampered bonnet manifold. This key should be separately ordered.

Packing Material	Grafoil®	Down to -60°C (-76°F)
	PTFE	Down to -60°C (-76°F)
	PEEK	Down to -60°C (-76°F)
	Polyimide	Down to -10°C (14°F)

O-Ring Material	Fluorocarbon FKM	Down to -20°C (-4°F)
	NBR	Down to -34°C (-29°F)
	Perfluor	Down to -40°C (-40°F)
	EPDM	Down to -45°C (-49°F)

10,000 psi (690 bar) Available upon request

HANDLE OPTIONS

The standard handle of the UCT line of instrument manifolds is a stainless steel t-bar. For high pressure applications of 10,000 psi (690 bar) an extended t-bar or hand wheel can be applied. anti-tamper bonnet and key* lock options assure that the manifold is operated by qualified personnel only.

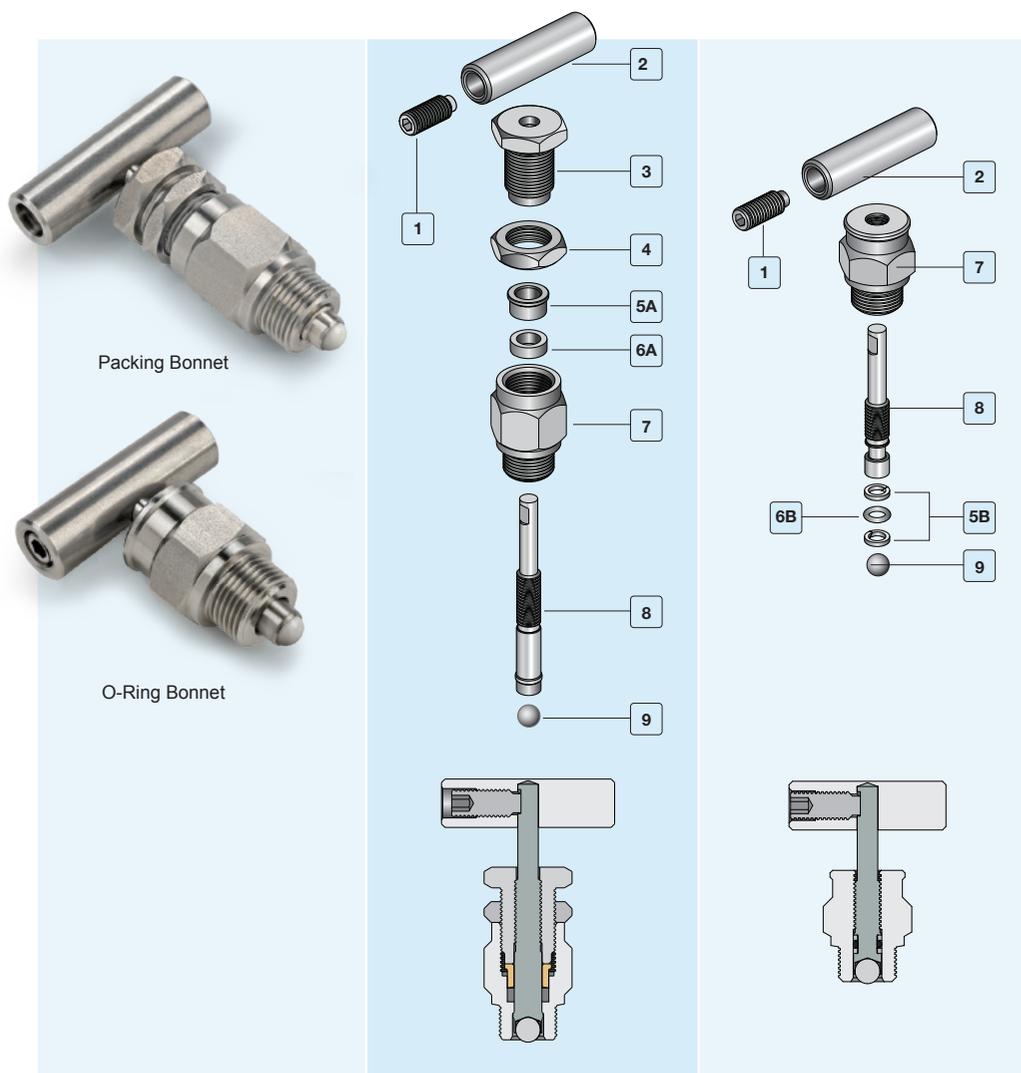
CLEANING

All UCT instrument manifolds are cleaned in accordance with ASTAVA cleaning procedure WIQ-016. Oxygen clean is available in accordance with ASTM G-93.

TESTING

All UCT instrument manifolds are factory tested with nitrogen at 800 psig (55 bar) based on MSS-SP-99. Seats have a maximum allowable leak rate of 0.1 std cm³/min. The hydrostatic and helium leak test is available upon request.

MATERIALS OF CONSTRUCTION



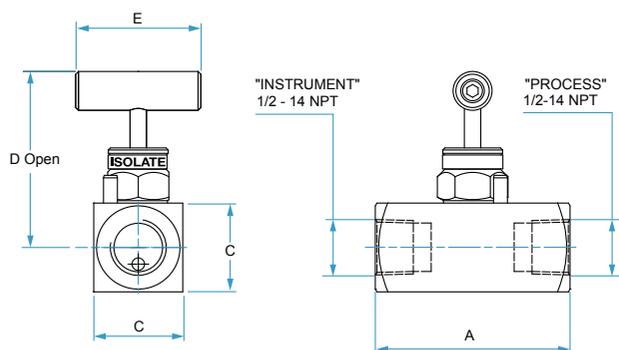
		Packing Bonnet		O-Ring Bonnet	
No	Part	Qty.	Material	Qty.	Material
1	Set screw	1	SST 304	1	SST 304
2	Bar handle	1	SST 316L	1	SST 316L
3	Gland	1	SST 316L	-	-
4	Locking nut	1	SST 316L	-	-
5A	Pressure ring	1	SST 316L	-	-
5B	Back-Up ring	-	-	2	Virgin PTFE
6A	Stem packing	1	Virgin PTFE	-	-
6B	Stem O-ring	-	-	1	Fluorocarbon FKM
7	Bonnet	1	SST 316L	1	SST 316L
8	Stem	1	SST 316Ti chrome-carbide diffusion coated	1	SST 316Ti chrome-carbide diffusion coated
9	Ball	1	Ceramic	1	Ceramic
10	Dust protector	-	-	-	-

STANDARD CONFIGURATION DIMENSIONS 1-WAY MANIFOLDS

Instrument Mount Type	End Connection			Ordering Description	Dimensions									
					A		B		C		D		E	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in
Remote Mount	1/2" FNPT	1/2" FNPT	-	M-10S-10-8N-SS-V-T	52.0	2.04	-	-	32.0	1.26	63.0	2.48	45.0	1.77
	1/2" FNPT	1/2" FNPT	-	M-10S-10-8N-SS-T-T	52.0	2.04	-	-	32.0	1.26	79.0	3.11	50.0	1.97
	1/2" MNPT	1/2" FNPT	1/2" FNPT	M-11S-85-8N-SS-V-T	96.0	3.78	38.0	1.50	32.0	1.26	63.0	2.48	45.0	1.77
	1/2" MNPT	1/2" FNPT	1/2" FNPT	M-11S-85-8N-SS-T-T	96.0	3.78	38.0	1.50	32.0	1.26	79.0	3.11	50.0	1.97

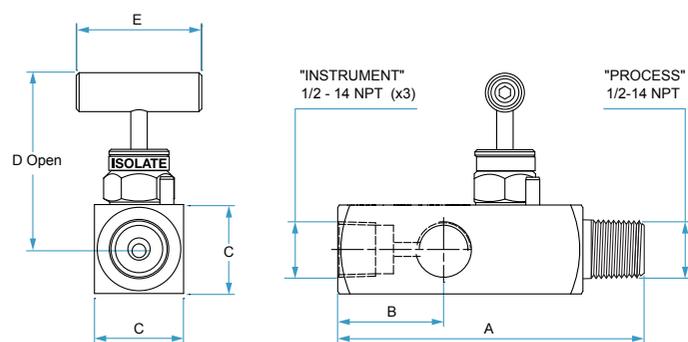
NEEDLE VALVE

M-10S-10-8N-SS-V-T



MULTI-PORT VALVE

M-11S-85-8N-SS-V-T

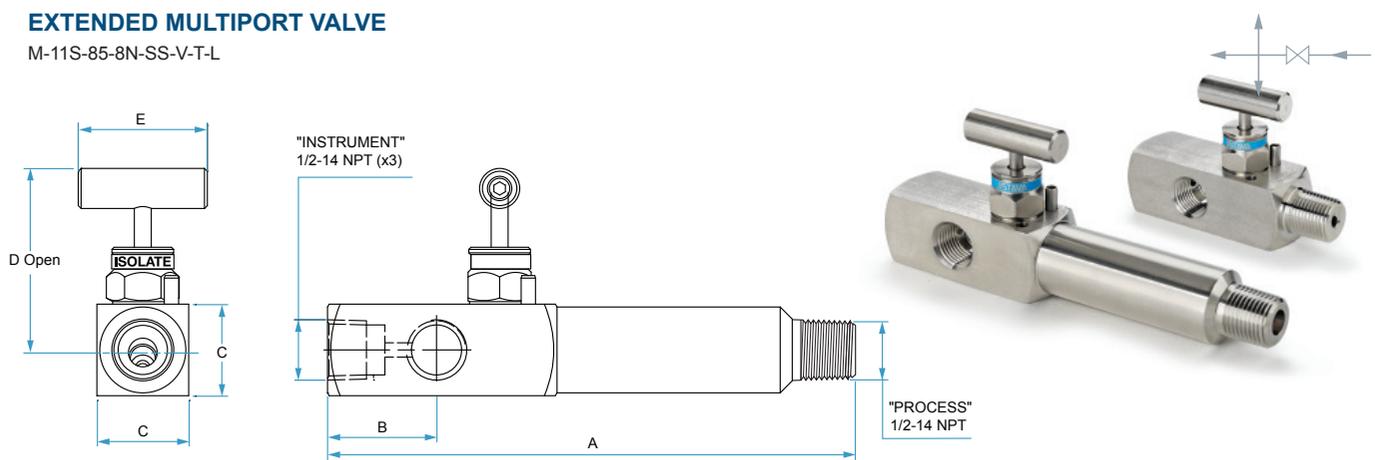


STANDARD CONFIGURATION DIMENSIONS
1-WAY MANIFOLDS

Instrument Mount Type	End Connection			Ordering Description	Dimensions									
					A		B		C		D		E	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in
Remote Mount	1/2" MNPT	1/2" FNPT	1/2" FNPT	M-11S-85-8N-SS-V-T-L	184.0	7.24	38.0	1.50	32.0	1.26	63.0	2.48	45.0	1.77
	1/2" MNPT	1/2" FNPT	1/2" FNPT	M-11S-85-8N-SS-T-T-L	184.0	7.24	38.0	1.50	32.0	1.26	79.0	3.11	50.0	1.97
	1/2" MNPT	1/2" FNPT	1/4" FNPT	M-12M-85-8N-SS-V-T-P	90.0	3.93	30.0	1.18	32.0	1.26	63.0	2.48	45.0	1.77
	1/2" MNPT	1/2" FNPT	1/4" FNPT	M-12M-85-8N-SS-T-T-P	90.0	3.93	30.0	1.18	32.0	1.26	79.0	3.11	50.0	1.97

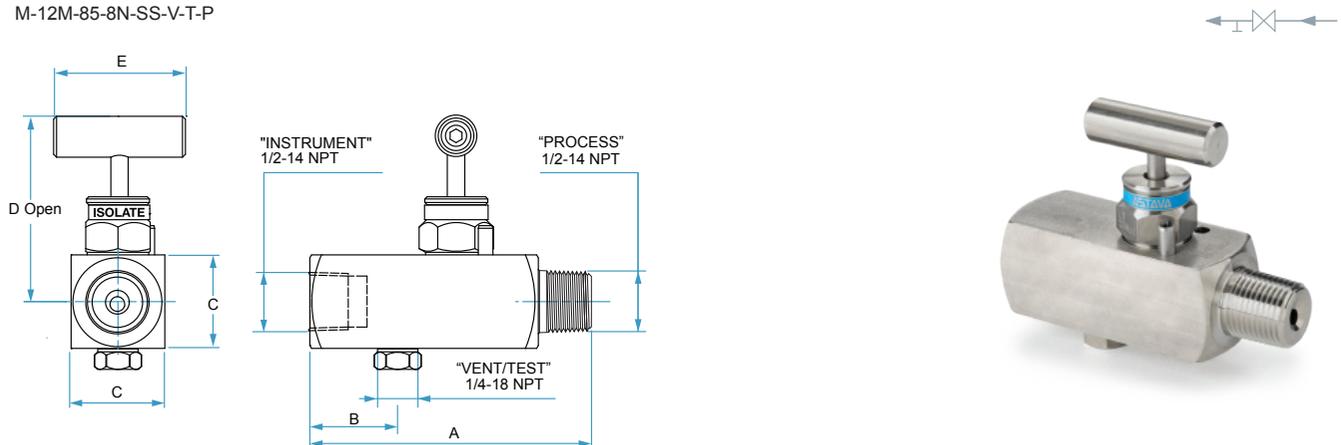
EXTENDED MULTIPORT VALVE

M-11S-85-8N-SS-V-T-L



GAUGE VALVE

M-12M-85-8N-SS-V-T-P



ORDERING INFORMATION 1-WAY MANIFOLDS

Family	End Connection	Type End Connection	Body Material	Packing	Option
M-1 1-way manifo	00 Female integral Let-Lok*	N NPT	SS SST 316	T PTFE	OC Oxygen clean
Flow Scheme	05 Female integral Let-Lok to female socket weld	G BSPP	M Alloy 400	G Grafoil®	HYD Hydrostatic pressure test
0S Straight	10 Female to female	R BSPT	HC Alloy C-276	PK PEEK	K 10,000 psi (690 bar)
1S Straight	80 Male to male	L Female integral Let-Lok		PI Polyimide	L Extended inlet
2M Angle square (See table A)	85 Male to female			V Fluorocarbon FKM	B Bleed valve
	75 Female to male			EP EPDM	P Blind plug
	Size			BU NBR	
	4 1/4"			KZ Perfluorelastomer	
	6 3/8"			Handle	
	8 1/2"			T T-bar	
	10 10 mm			AT Anti tamper ¹	
	12 12 mm			LD Locking device ¹	
	16 1"				

¹Key should be separately ordered

TABLE A: FLOW SCHEMATIC AND VALVE POSITION

Designator	Flow Schematic	Sketch
0S		
1S		
2M		

Warning!

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.

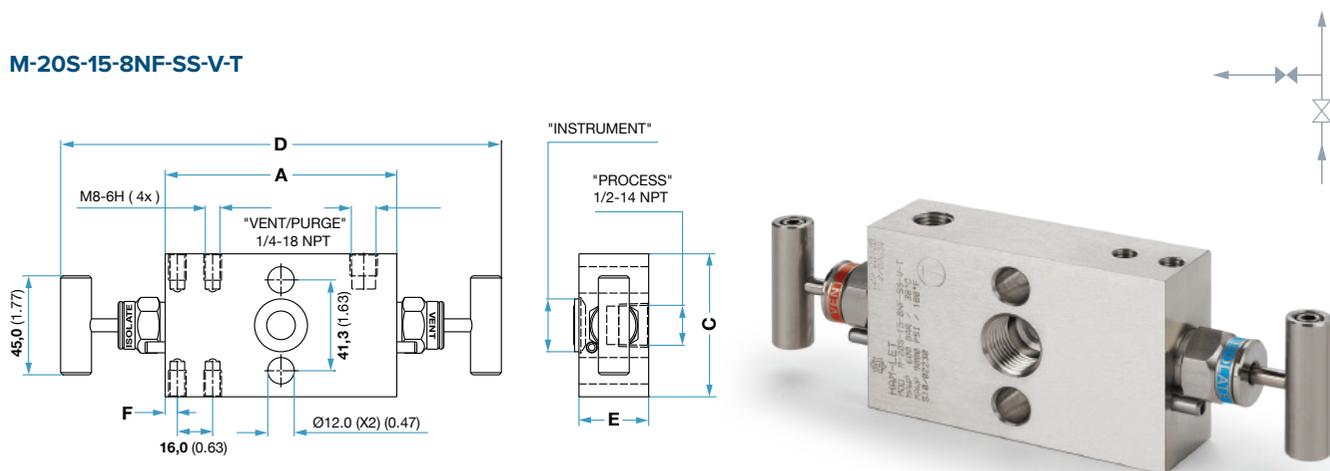
STANDARD CONFIGURATION DIMENSIONS

2-WAY DIRECT MOUNT

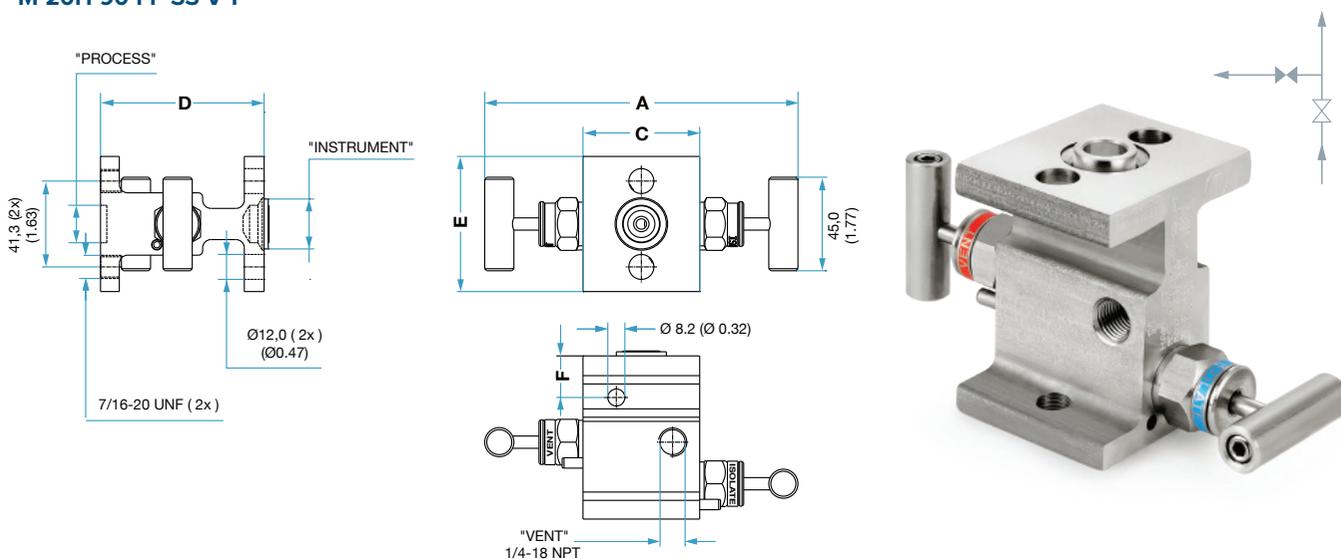
Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent / Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Direct Mount	1/2" FNPT	Flange ¹	1/4" FNPT	M-20S-15-8NF-SS-V-T	85	3.35	-	-	65.0	2.56	182	7.17	32.0	1.26	5.0	0.20
	Flange ¹	Flange ¹	1/4" FNPT	M-20H-90-FF-SS-V-T	153	6.02	-	-	56.0	2.20	78	3.07	65.0	2.56	20.0	0.79

¹Flange Standard per IEC 61518-A

M-20S-15-8NF-SS-V-T



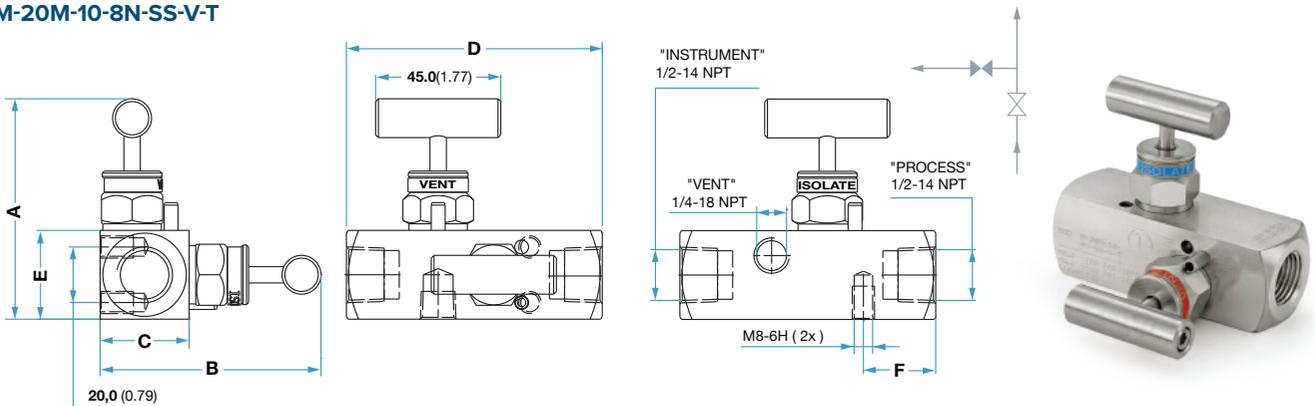
M-20H-90-FF-SS-V-T



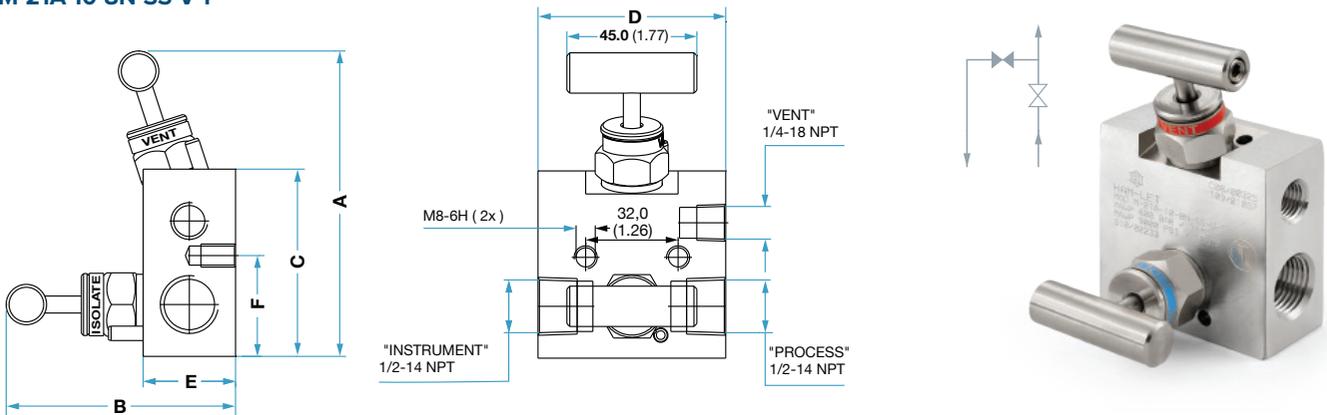
STANDARD CONFIGURATION DIMENSIONS 2-WAY REMOTE MOUNT

Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent / Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Remote Mount	1/2" FNPT	1/2" FNPT	1/4" FNPT	M-20M-10-8N-SS-V-T	79	3.11	79.0	3.11	32.0	1.26	78.0	3.07	32	1.26	26	1.02
	1/2" FNPT	1/2" FNPT	1/4" FNPT	M-21A-10-8N-SS-V-T	107	4.21	79.4	3.13	65.0	2.56	65.0	2.56	32	1.26	35	1.38
	1/2" FNPT	1/2" FNPT	1/4" FNPT	M-21S-10-8N-SS-V-T	156	6.14	-	-	65.0	2.56	59.0	2.32	32	1.26	18	0.71

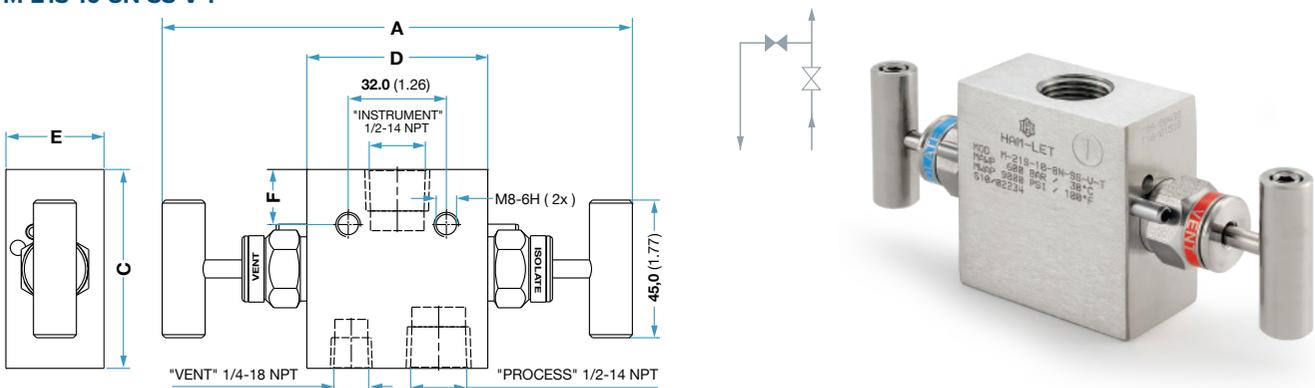
M-20M-10-8N-SS-V-T



M-21A-10-8N-SS-V-T



M-21S-10-8N-SS-V-T

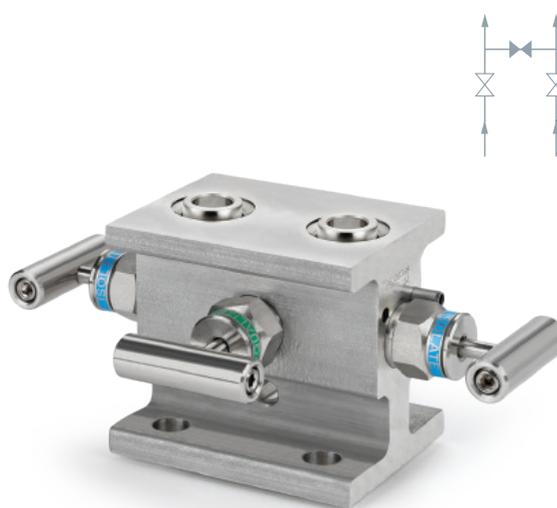
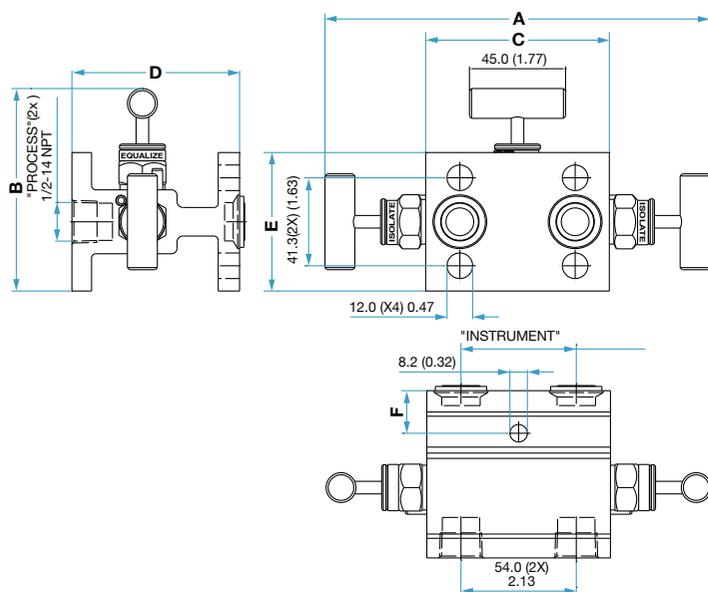


STANDARD CONFIGURATION DIMENSIONS 3-WAY DIRECT MOUNT

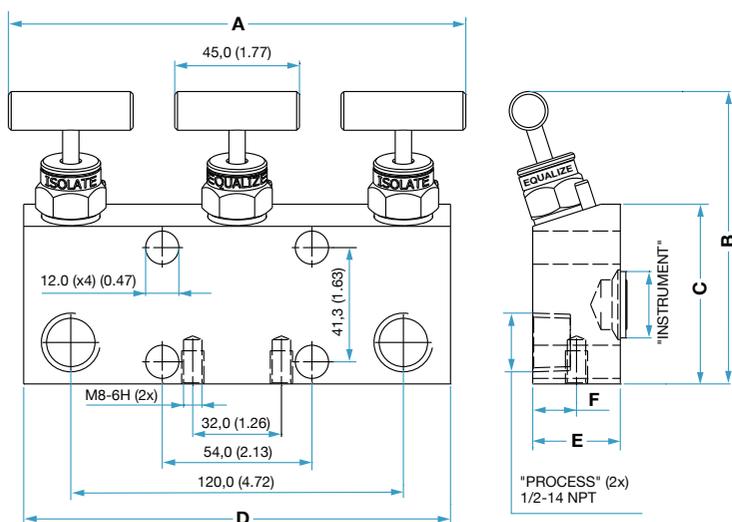
Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Direct Mount	1/2" FNPT	Flange ¹	-	M-30H-15-8NF-SS-V-T	181.0	7.13	95.0	3.74	86.0	3.39	79.0	3.11	66.0	2.60	20.0	0.79
	1/2" FNPT	Flange ¹	-	M-30I-15-8NF-SS-V-T	161.0	6.34	107.0	4.21	65.0	2.56	150.0	5.91	32.0	1.26	16.0	0.63

¹Flange Standard per IEC 61518-A

M-30H-15-8NF-SS-V-T



M-30I-15-8NF-SS-V-T

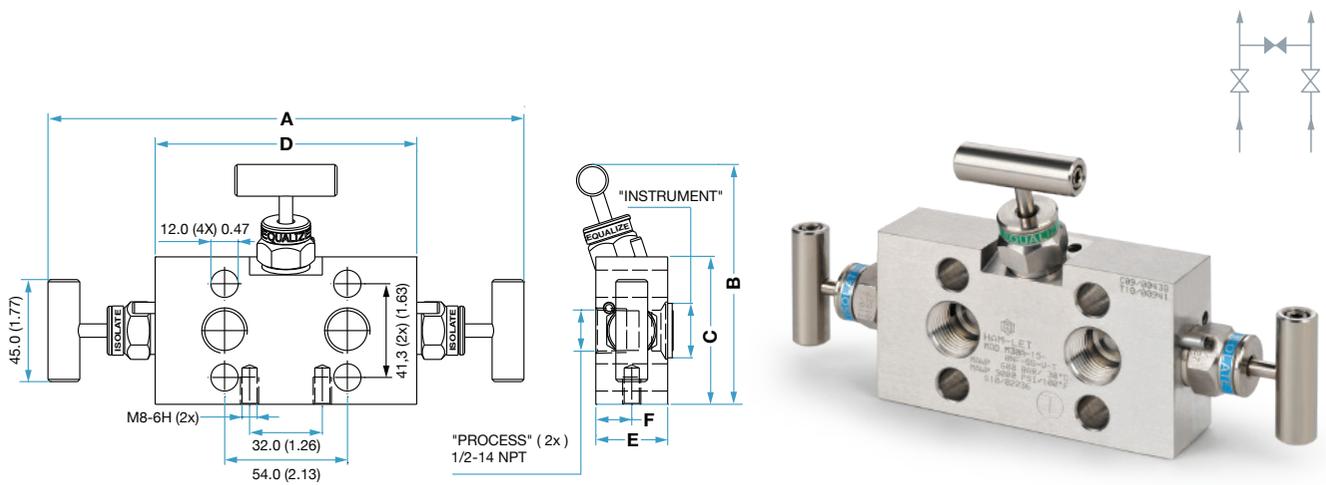


STANDARD CONFIGURATION DIMENSIONS
3-WAY DIRECT MOUNT

Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent / Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Direct Mount	1/2" FNPT	Flange ¹	-	M-30A-15-8NF-SS-V-T	210.0	8.27	106.0	4.17	65.0	2.56	115.0	4.53	32.0	1.26	16.0	0.63
	Flange ¹	Flange ¹	-	M-30H-90-FF-SS-V-T	181.0	7.13	95.0	3.74	86.0	3.39	79.0	3.11	66.0	2.60	-	-

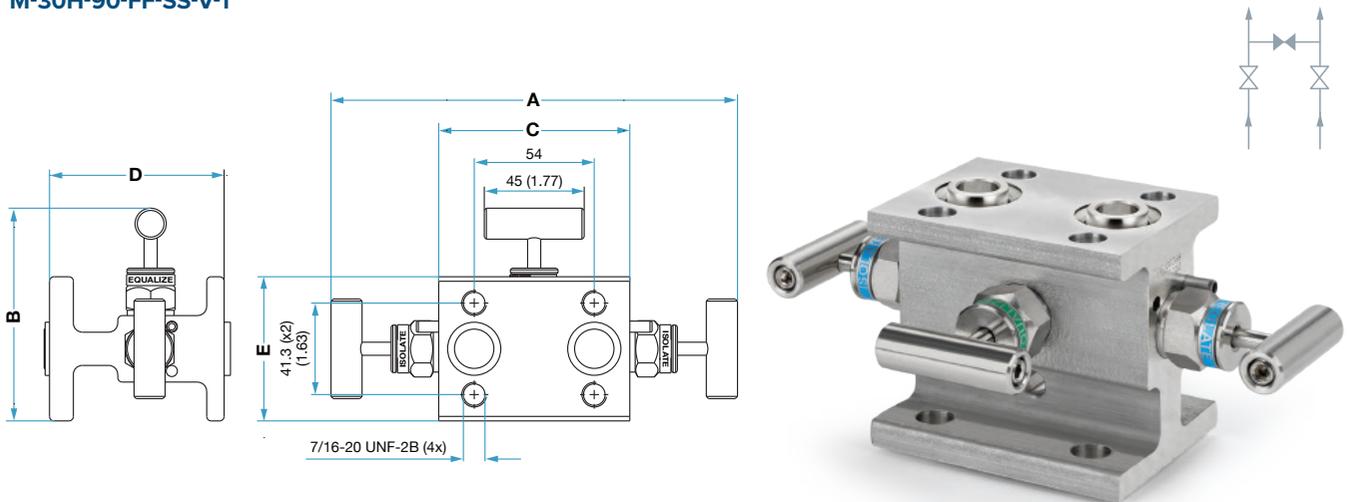
¹Flange Standard per IEC 61518-A

M-30A-15-8NF-SS-V-T



* Optimal vent / test ports

M-30H-90-FF-SS-V-T

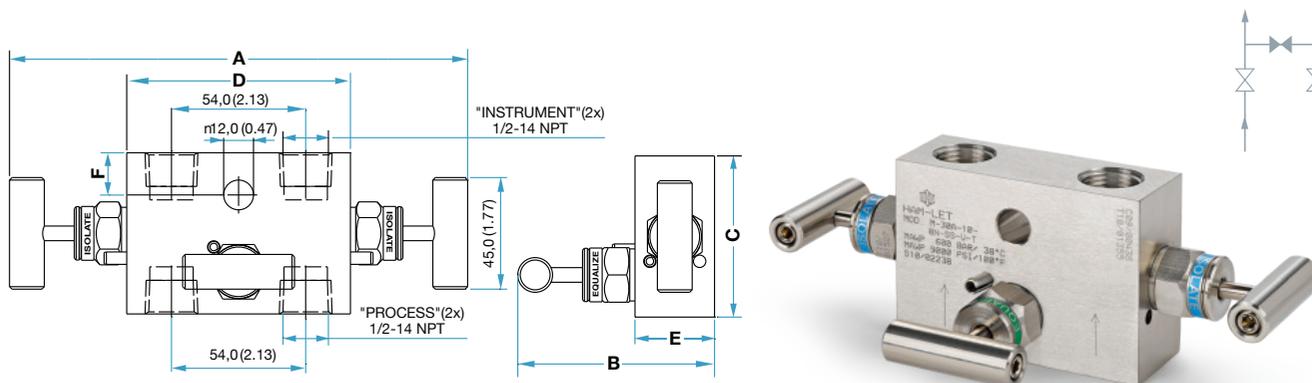


STANDARD CONFIGURATION DIMENSIONS

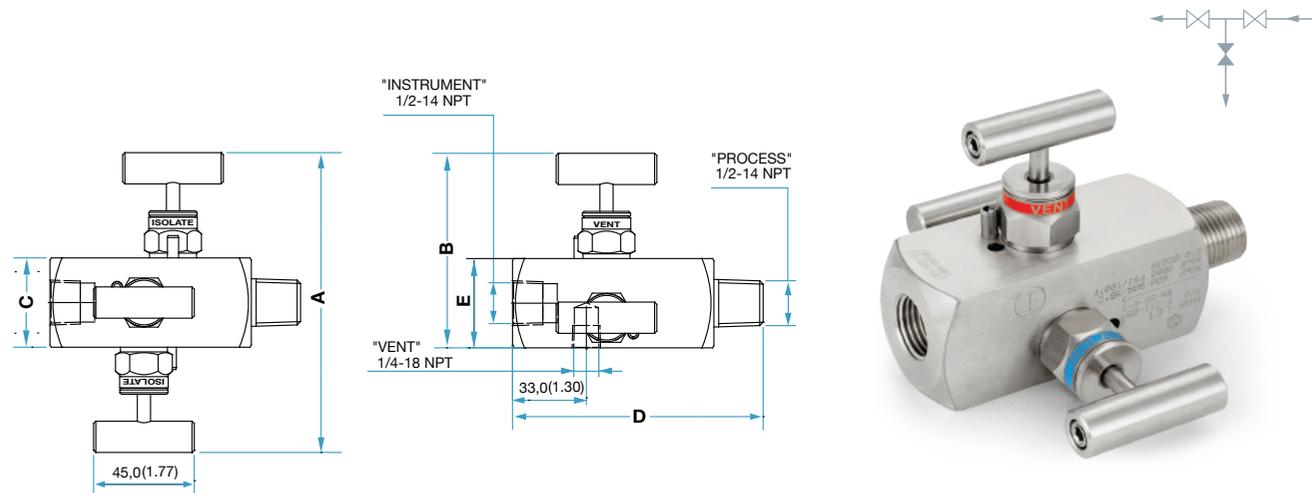
3-WAY REMOTE MOUNT

Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Remote Mount	1/2" FNPT	1/2" FNPT	-	M30S-10-8N-SS-V-T	185.0	7.28	79.0	3.11	65.0	2.56	90.0	3.54	32.0	1.26	17.0	0.67
	1/2" MNPT	1/2" FNPT	1/4" FNPT	M32M-85-8N-SS-V-T	135.0	5.31	87.0	3.43	40.0	1.57	112.0	4.41	40.0	1.57	-	-

M-30S-10-8N-SS-V-T



M-32M-85-8N-SS-V-T-K



ORDERING INFORMATION 3-WAY MANIFOLDS

M-3		0S		10		8		N		SS		T		LD		OC	
Family		End Connection		Type End Connection		Body Material		Packing		Option		Handle					
M-3 3-Way manifold		00 Female integral Let-Lok		FF Flange*		SS SST 316		T PTFE		OC Oxygen clean		T T bar					
		10 Female to female		N NPT		M Alloy 400		G Grafoil®		HYD Hydrostatic pressure test		AT Anti tamper ³					
		25 Male to flange IEC 61518		G BSPP		HC Alloy C-276		PK PEEK		K 10,000 psi (690 bar)		LD Locking device ³					
		35 Male to rotatable female		R BSPT				PI Polyimide		V Vent port 1/2"							
		80 Male to male ¹		NF NPT to flange ²				V Fluorocarbon FKM		KZ Perfluorelastomer							
		85 Male to female ¹		RF BSPT to fFlange ²				EP EPDM									
		15 Female to flange		GF BSPP to fFlange ²				BU NBR									
		90 Flange to flange						KZ Perfluorelastomer									

Flow Scheme	
0A	Angle flat
0S	Straight
0I	In-line
0H	H- type
1I	In - line
2M	Angle square

(See table A)

¹M-32M only
²Flange standard per IEC 61518-A
³Key should be separately ordered

Size	
4	1/4"
6	3/8"
8	1/2"
12	3/4"
16	1" 16 mm
M20	M20x1.5

TABLE A: FLOW SCHEMATIC AND VALVE POSITION

Designator	Flow Schematic	Valves Position	Sketch
0S		S	
0H		H	
0I		I	
0A		A	
1I		I	
2M		M	

Warning!

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.

STANDARD CONFIGURATION DIMENSIONS

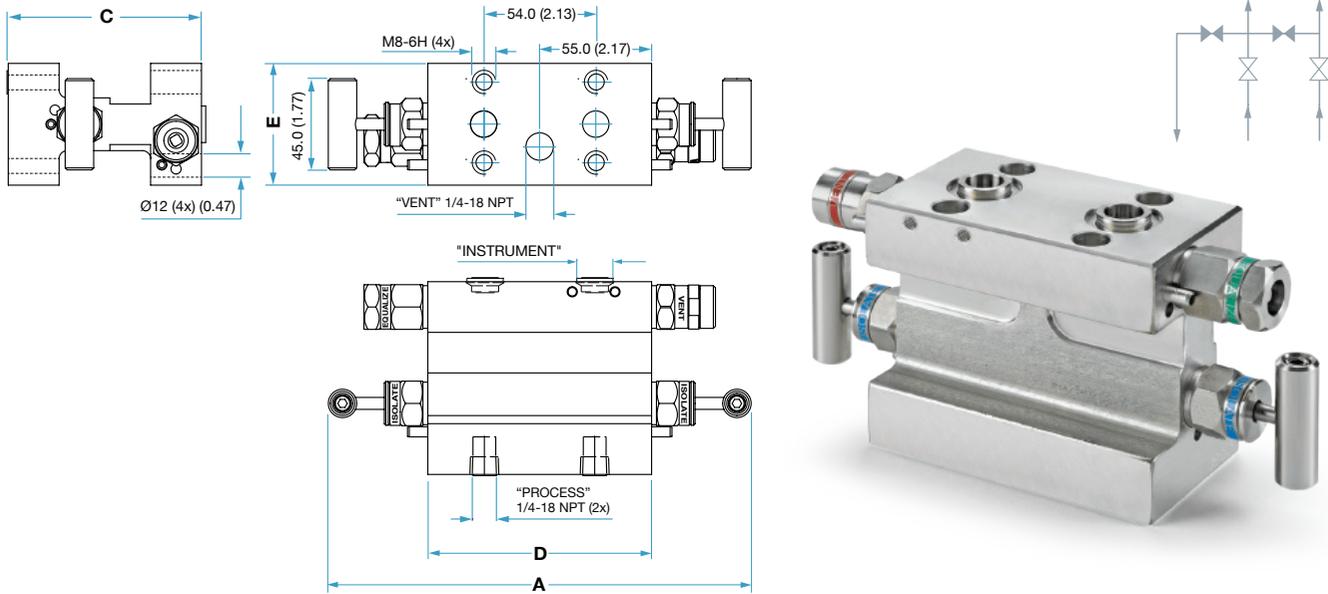
4-WAY REMOTE MOUNT



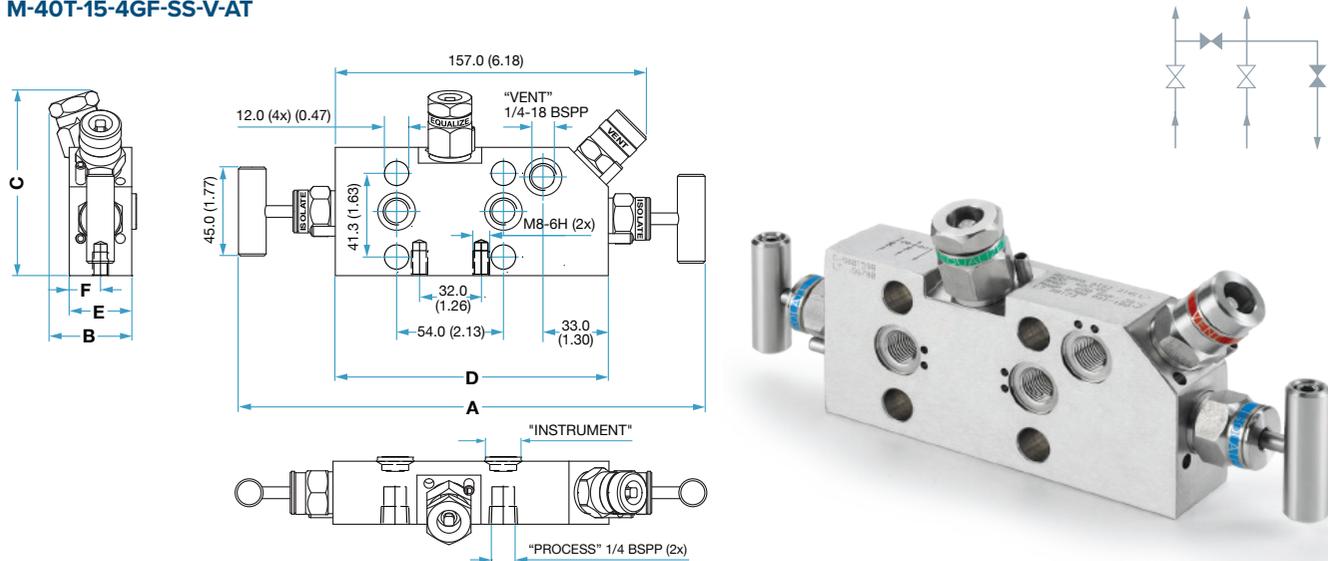
Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Direct Mount	1/4" FNPT	Flange ¹	1/4" FNPT	M-40H-15-4NF-SS-V-AT	208.0	8.18	-	-	95.0	3.74	110.0	4.33	60.0	2.36	-	-
	1/4" BSPP	Flange ¹	1/4" BSPP	M-40T-15-4GF-SS-V-AT	236.0	6.29	42.0	1.65	94.0	3.69	138.0	5.43	32.0	1.24	16.0	0.63

¹Flange standard per IEC 61518-A

M-40H-15-4NF-SS-V-AT



M-40T-15-4GF-SS-V-AT

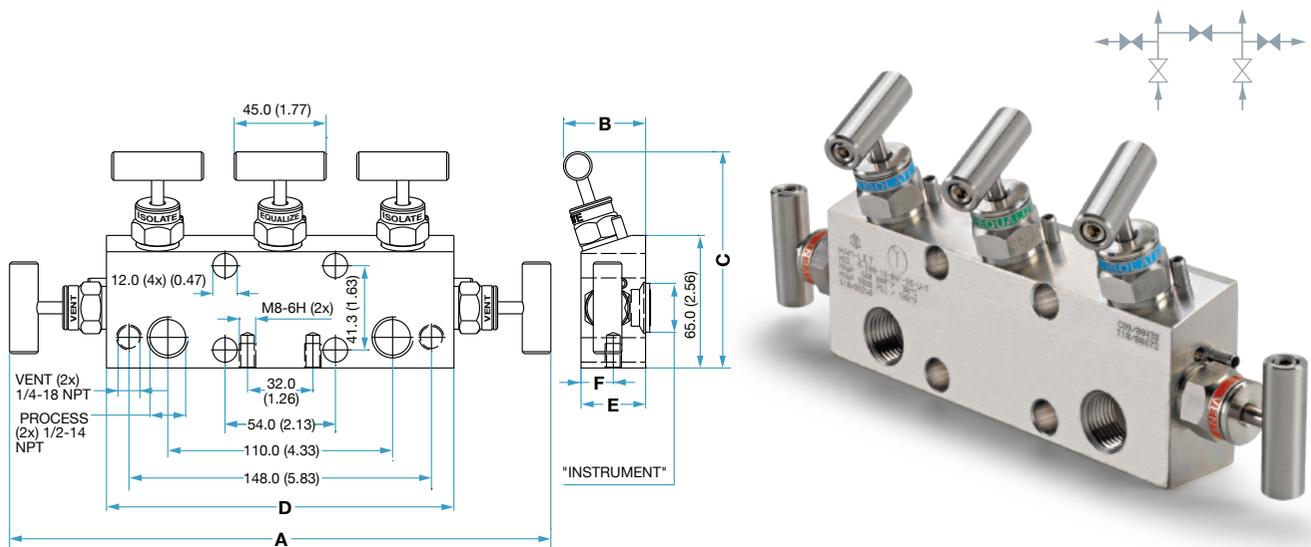


STANDARD CONFIGURATION DIMENSIONS 5-WAY DIRECT MOUNT

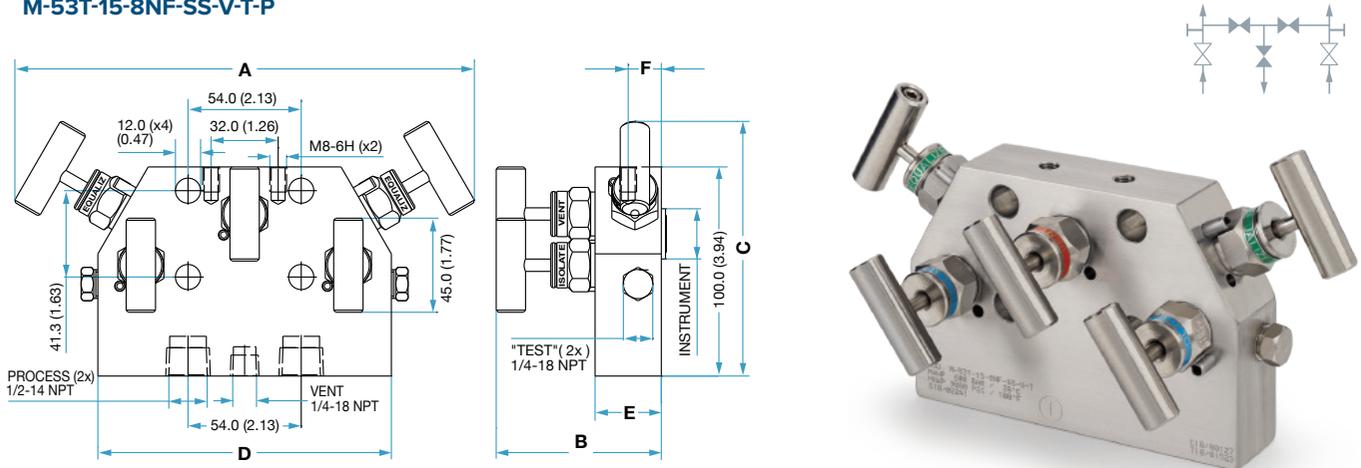
Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Direct Mount	1/2" FNPT	Flange ¹	1/4" FNPT	M-50A-15-8NF-SS-V-T	265.0	10.43	41.0	1.61	106.0	4.17	174.0	6.85	32.0	1.26	16.0	0.63
	1/2" FNPT	Flange ¹	1/4" FNPT	M-53T-15-8NF-SS-V-T	220.0	8.66	79.0	3.11	122.0	4.80	140.0	5.51	32.0	1.26	16.0	0.63

¹Flange standard per IEC 61518-A

M-50A-15-8NF-SS-V-T



M-53T-15-8NF-SS-V-T-P

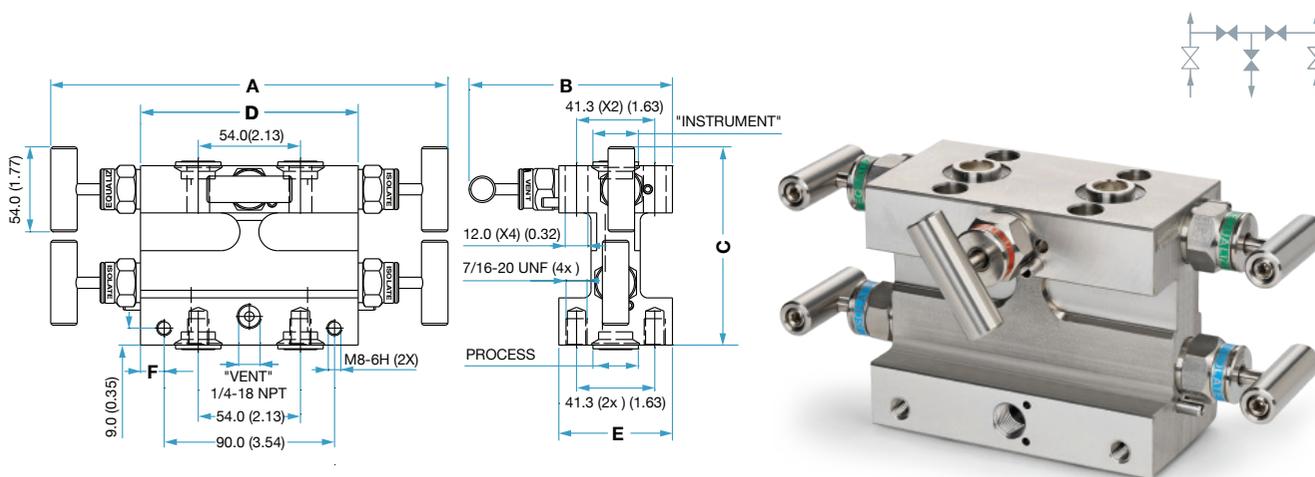


STANDARD CONFIGURATION DIMENSIONS
5-WAY DIRECT MOUNT

Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Direct Mount	Flange ¹	Flange ¹	1/4" FNPT	M-54H-90-FF-SS-V-T	210.0	8.27	108.0	4.25	105.0	4.13	115.0	4.53	60.0	2.36	12.5	0.49

¹Flange Standard per IEC 61518-A

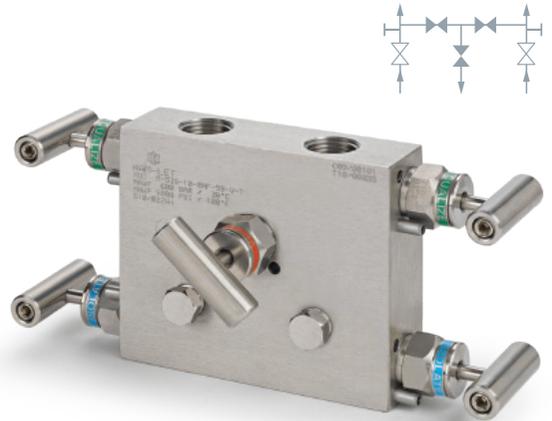
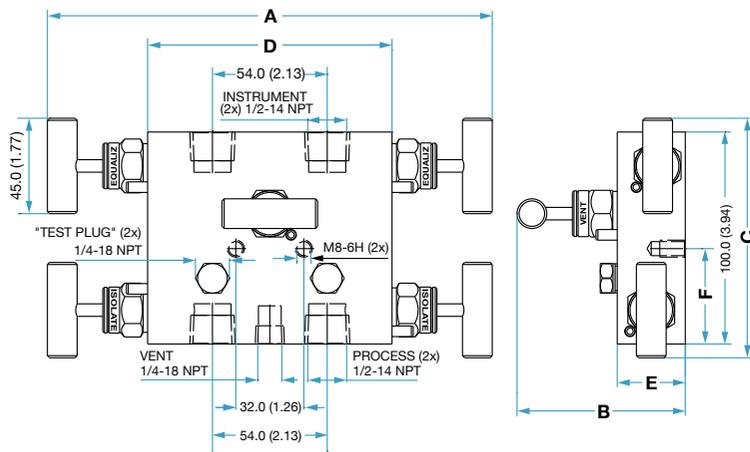
M-54H-90-FF-SS-V-T



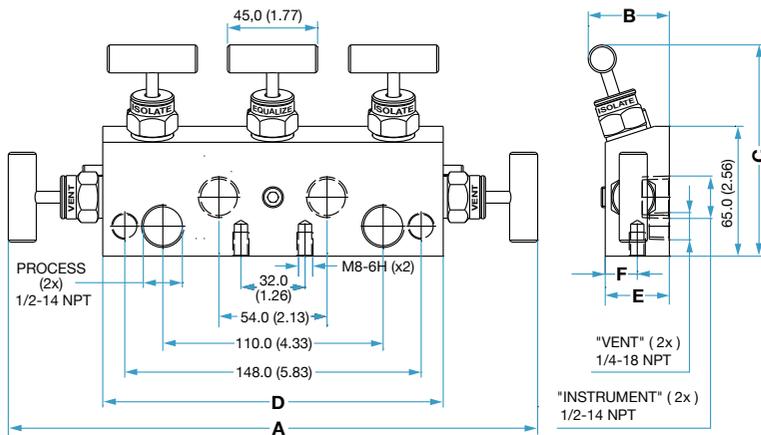
STANDARD CONFIGURATION DIMENSIONS 5-WAY REMOTE MOUNT

Instrument Mount Type	End Connection			Ordering Description	Dimensions											
					A		B		C		D		E		F	
	Process	Instrument	Vent/Bleed		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Remote Mount	1/2" FNPT	1/2" FNPT	1/4" FNPT	M-53S-10-8N-SS-V-T	210.0	8.27	80.0	3.15	113.0	4.45	115.0	4.53	32.0	1.26	45.0	1.77
	1/2" FNPT	1/2" FNPT	1/4" FNPT	M-50A-10-8N-SS-V-T	265.0	10.43	41.0	1.61	106.0	4.17	174.0	6.85	32.0	1.26	16.0	0.63

M-53S-10-8N-SS-V-T-P



M-50A-10-8N-SS-V-T



Family	End Connection	Type End Connection	Body Material	Packing	Option
M-5 5-way manifold	10 Female to female	FF Flange ¹	SS SST 316	T PTFE	OC Oxygen clean
Flow Scheme	15 Female to flange	N NPT	M Alloy 400	G Grafoil®	HYD Hydrostatic pressure test
	75 Female to male	G BSPP	HC Alloy C-276	PK PEEK (H ₂)	K 10,000 psi (690 bar)
	90 Flange to flange	R BSPT		PI Polyimide (H ₂)	V Vent port 1/2"
		NF NPT to flange ¹		V Fluorocarbon FKM	P Blind plug
0A Angle flat	Size	GF BSPP to flange ¹			Handle
1A Angle flat		4 1/4"		T T bar	
2T Taper		6 3/8"		AT Anti tamper ²	
3T Taper		8 1/2"		LD Locking device ²	
3S Straight	12 3/4" 12 mm				
4H H-type					
4A Angle flat					
4I In-line					

(See table A)

TABLE A: FLOW SCHEMATIC AND VALVE POSITION

Designator	Flow Schematic	Sketch
0A		
1A		
2T		
3T		
3S		
4H		
4A		
4I		

¹Flange standard per IEC 61518-A
²Key should be separately ordered

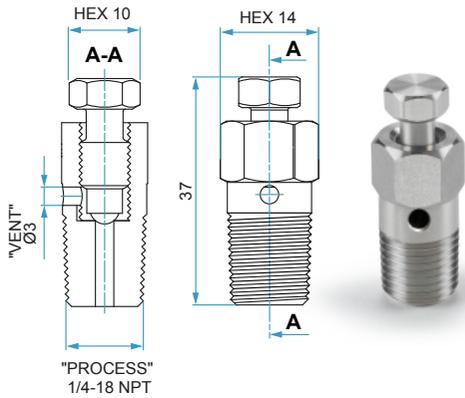
Warning!

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.

BLEED VALVE

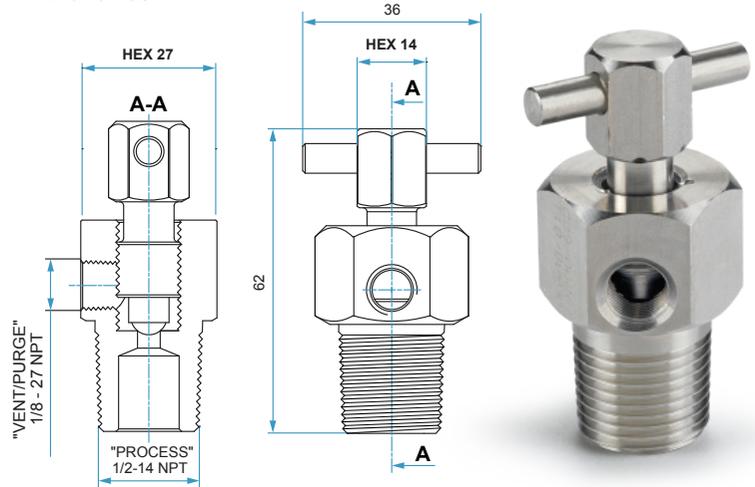
1/4" MNPT

M-01-4N-SS



1/2" MNPT

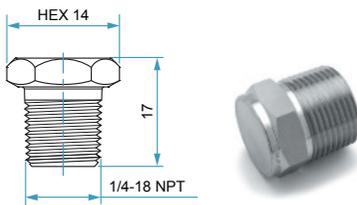
M-01-8N-SS



BLIND PLUG

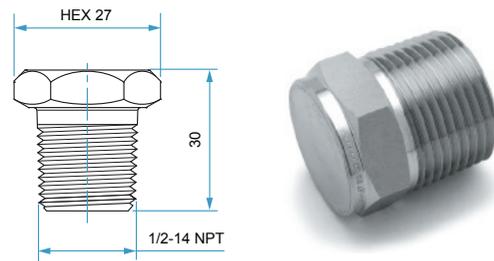
1/4" MNPT

M-02-4N-SS



1/2" MNPT

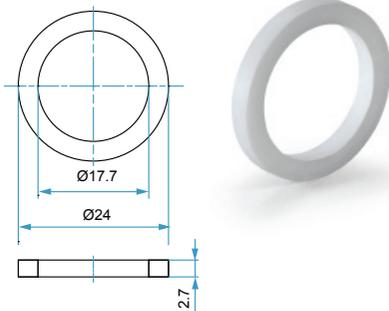
M-02-8N-SS



MOUNTING GASKET IEC 61518-A

PTFE

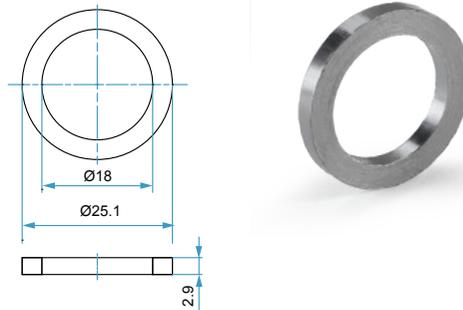
M-03-GK-IECA-T



Kit contains: Two Gaskets

GRAFOIL®

M-03-GK-IECA-G



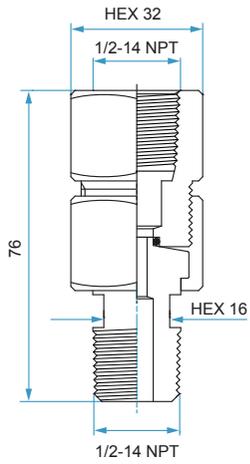
Kit contains: Two Gaskets

GAUGE CONNECTOR



360° POSITIONING MALE TO FEMALE

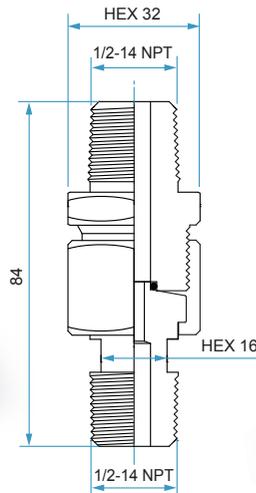
M-05-85-8N-SS-V



Fluorocarbon FKM O-ring

360° POSITIONING MALE TO MALE

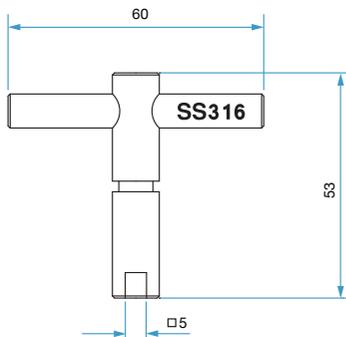
M-05-80-8N-SS-V



ANTI TAMPER KEY

5 MM

M-06-KEY-5MM-SS



Not included in order of anti-tampered bonnet manifold.
This key should be separately ordered.

HAM-LET MANIFOLDS January 2025