Performance
Under Pressure

Aptek™

ISO 9001 : 2008 | PED 97/23/EC

Instrumentation Valves, Fittings & Accessories

INDEX

General Technical Information

Applications

Aptek products are mainly instrumentation accessories used for critical applications in the field of oil and gas, Petrochem, Chemical, Pharma, Food, Pulp & paper & many more where pressure parameters are measured or monitored.

Different applications are

- Isolation (Throttling & ON- OFF)
- Isolation & drain
- Isolation & calibration
- Differential pressure measurement
- Distribution

Standards

Aptek follows ISO 9001:2008 quality system for manufacturing & supply of all the products.The entire product range is certified under PED 97/23/EC. However different standards are used as mentioned below.

Raw material standards

- ASTM A 105, ASTM A 182 F 304, 304 L, F 316, F 316 L
- ASTM A 351
- ASTM A 479- 304, 304 L, 316, 316 L
- ASTM A 312
- NACE M R 0175 - latest version

Manufacturing & testing standards

- MSS - SP 99 for instrument valves
- MSS - SP - 110 for Instruments ball valves
- ASTM F1387- Compression Fittings & Threaded Fittings
- ASME B 16.5
- ASME B 16.34
- ANSI/ASME B 1.20.1

Testing Procedure

All the Aptek products are tested as per the relevant standards for hydraulic & pneumatic pressure.

Certification

Each & every product is supplied with the certificates for the wetted parts & the pressure test. The general format is EN 10204 3.1

Marking

All Aptek products are supplied with laser marking.
The marking is done in accordance with MSS- SP -25


CERTIFICATE TUV NORD

DIN EN ISO 9001 : 2008


DNV

DET NORSKE VERITAS

STATEMENT OF COMPLIANCE

Pressure Accessory – Valves & Manifolds

Aptek Instrumentation Pvt. Ltd.


DNV

DET NORSKE VERITAS

STATEMENT OF COMPLIANCE

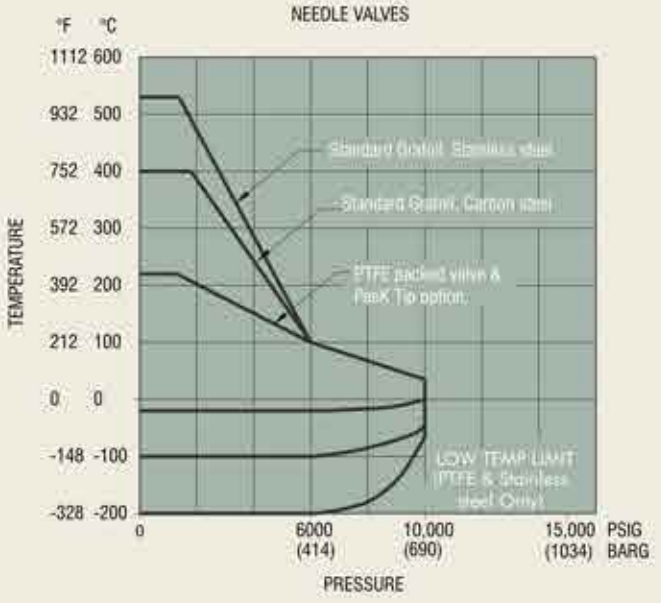
Fittings

Aptek Instrumentation Pvt. Ltd.

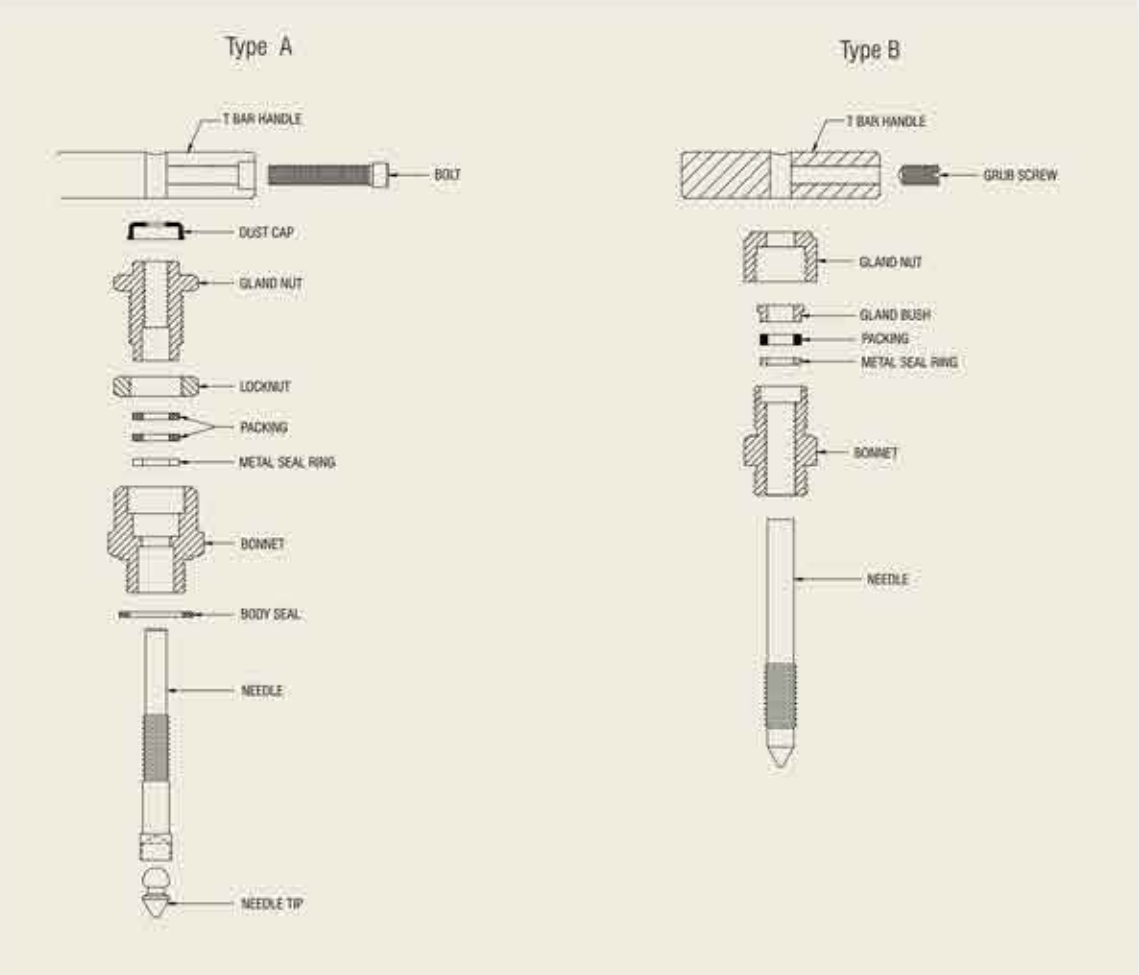
Technical information on valve heads of Needle valves, Gauge valves & manifold valves

ISO 9001 : 2008 I PED 97/23/EC

Pressure temperature chart



Valve heads or bonnet assemblies



Needle Valves

ANV 1

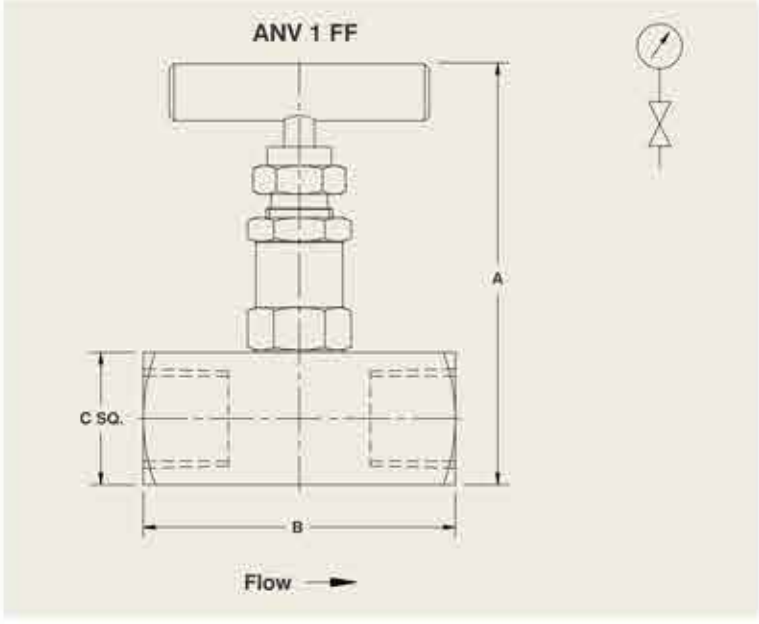
These needle valves are an ideal option for isolating or throttling applications. The self centering, non rotating stem ensures perfect seating. The rigid design gives repetitive bubble tight shut off, easy maintenance & long trouble free life. maintenance & long trouble free life.

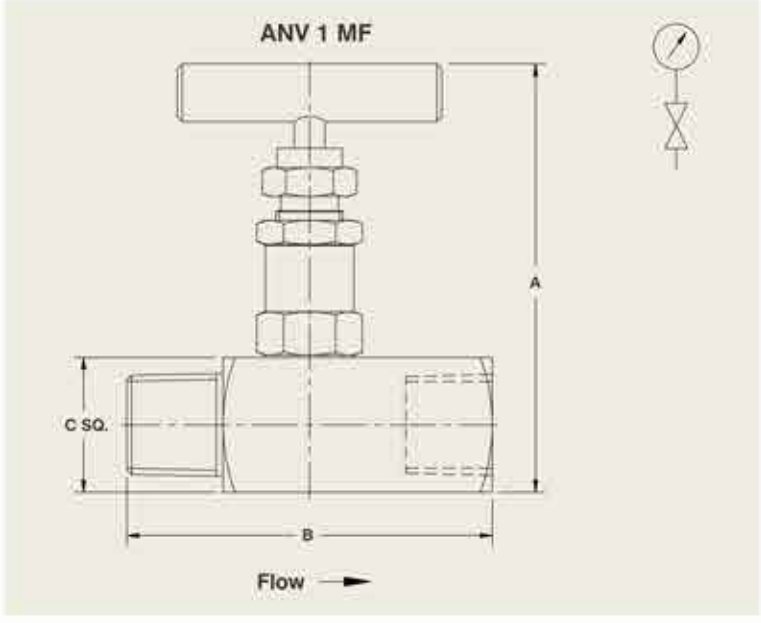
Standard Specifications :

End connection : NPT / BSPP / BSPT
Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite

ANV 1 FF

SIZE	A	B	CSQ	WEIGHT (kg)
1/4"	93	55	25	0.36
3/8"	93	55	25	0.37
1/2"	95	66	28	0.46
3/4"	109	70	38	0.8
1"	117	80	45	1.3



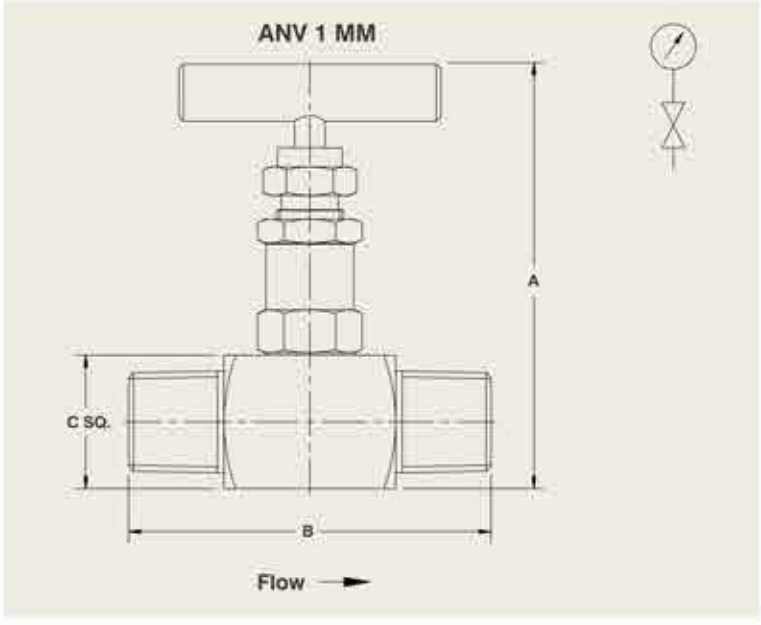


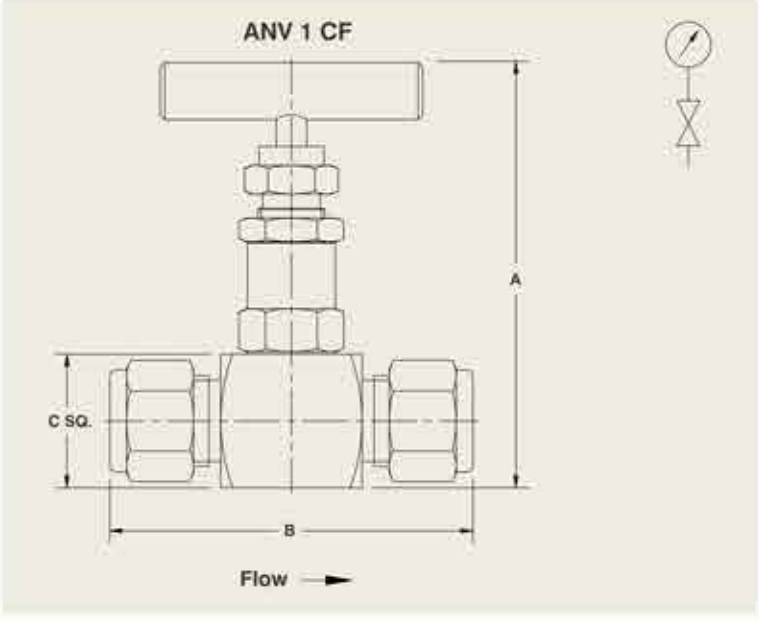
ANV 1 MF

SIZE	A	B	CSQ	WEIGHT (kg)
1/4"	93	65	25	0.45
3/8"	93	65	25	0.45
1/2"	95	76	28	0.56
3/4"	109	80	38	0.9
1"	117	95	45	1.4

ANV 1 MM

SIZE	A	B	CSQ	WEIGHT (kg)
1/4"	93	65	25	0.4
3/8"	93	65	25	0.4
1/2"	95	76	28	0.5
3/4"	109	80	38	0.8
1"	117	95	45	1.3





ANV 1 CF

SIZE	A	B	CSQ	WEIGHT (kg)
1/4"	93	70	25	0.3
3/8"	93	72	25	0.32
1/2"	95	76	28	0.4
6mm	93	70	25	0.3
10mm	93	72	25	0.4
12mm	95	76	28	0.4

ANV 2 FF

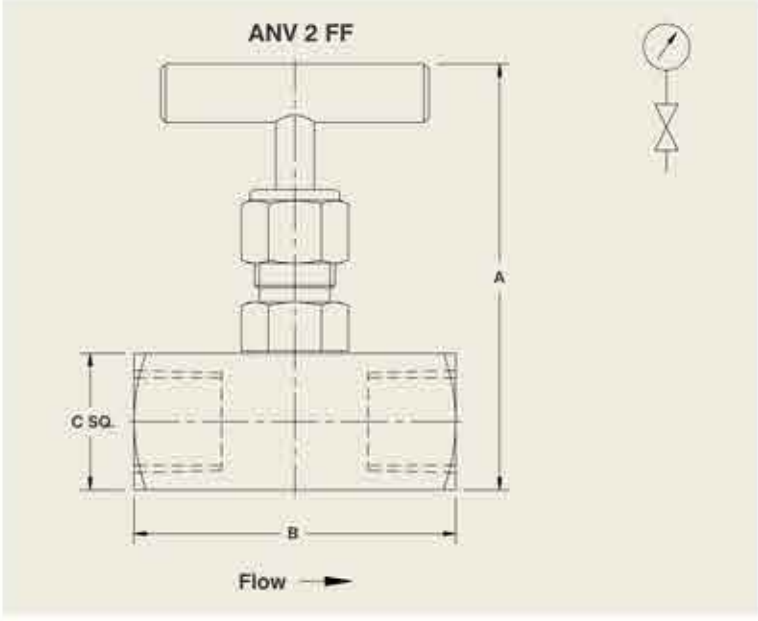
SIZE	A	B	CSQ	WEIGHT (kg)
1/4"	90	55	25	0.4
3/8"	90	55	25	0.4
1/2"	93	66	28	0.5
3/4"	100	70	38	0.8
1"	110	80	45	1.4

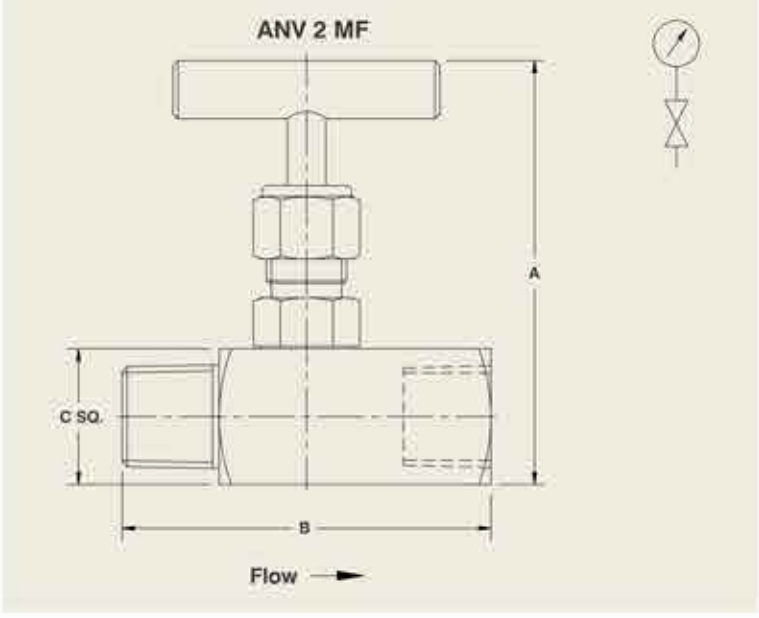
ANV 2

These valves provide economical & reliable option for isolation & throttling applications. The bonnet assembly has a compact design with one piece rotating stem which is V tipped for accurate flow control.

Standard Specifications :

End connection : NPT / BSPP / BSPT
Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite



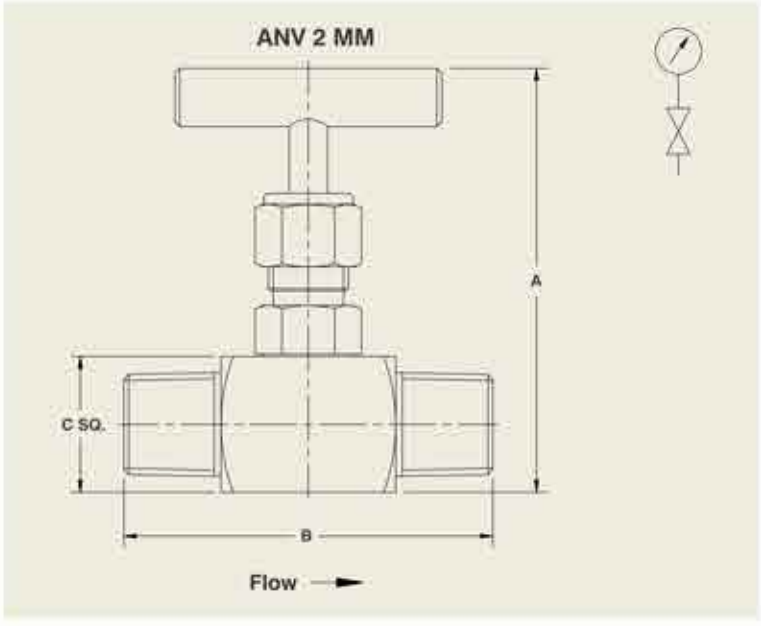


ANV 2 MF

SIZE	A	B	CSQ	WEIGHT (kg)
1/4"	90	65	25	0.45
3/8"	90	65	25	0.45
1/2"	93	76	28	0.56
3/4"	100	80	38	0.9
1"	110	95	45	1.5

ANV 2 MM

SIZE	A	B	CSQ	WEIGHT (kg)
1/4"	90	65	25	0.45
3/8"	90	65	25	0.45
1/2"	93	76	28	0.56
3/4"	100	80	38	0.9
1"	110	95	45	1.4

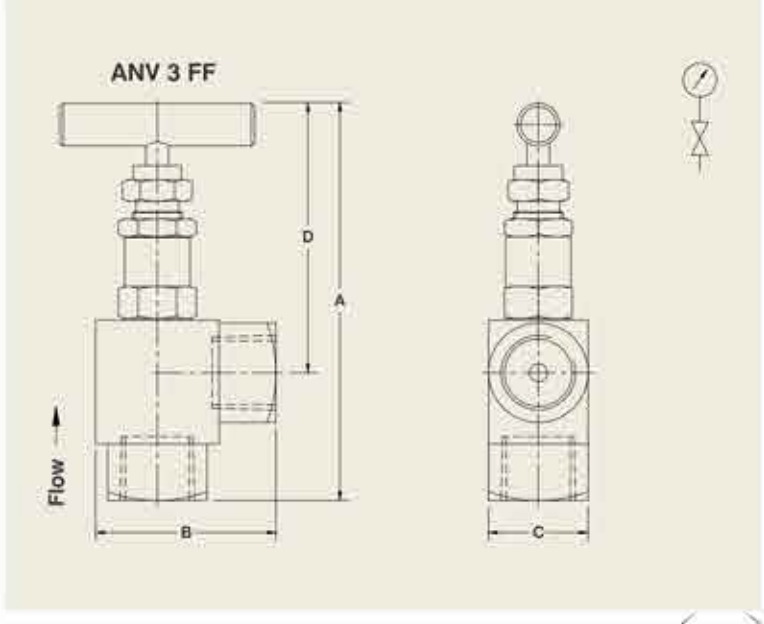


ANV 3

These valves provide angular end connections of 90 degree for specific application.
The other design features for this applications are similar to type ANV 1

Standard Specifications :

End connection : NPT / BSPP / BSPT
Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Valves for 10000 PSI working pressure are also available

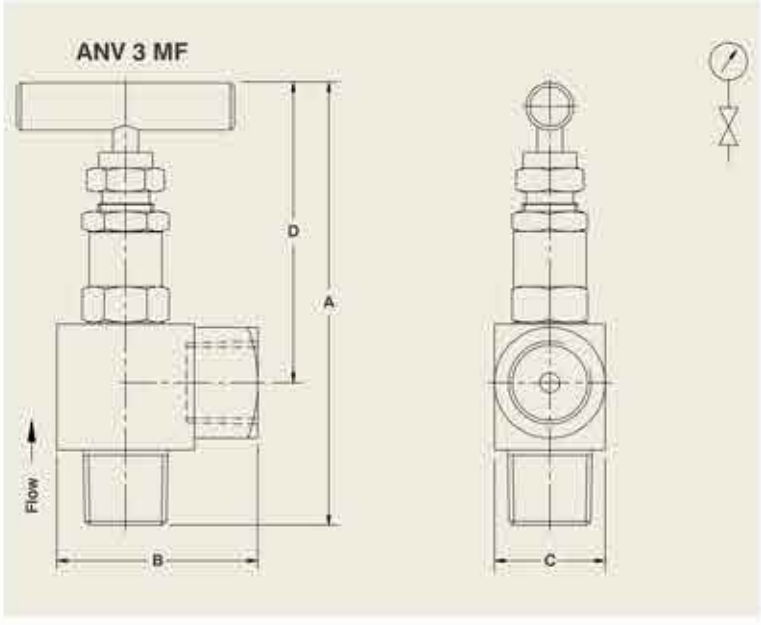


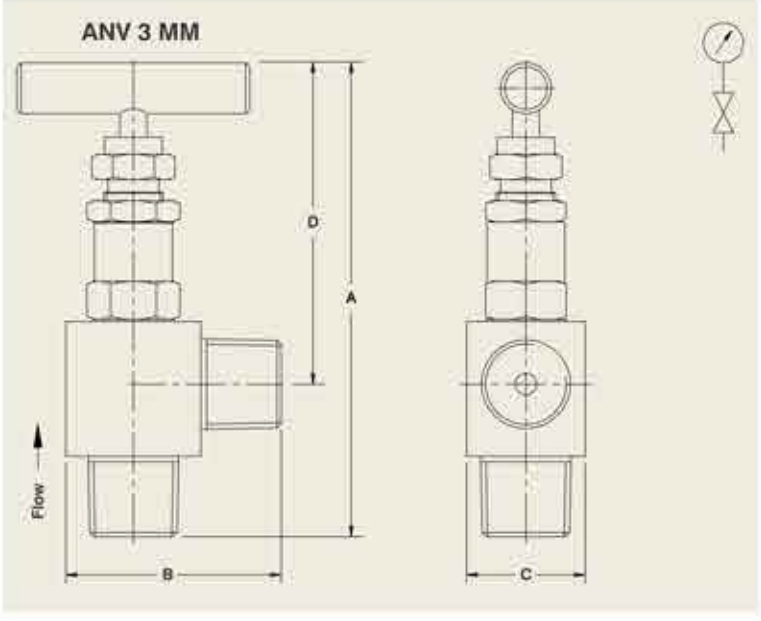
ANV 3 FF

SIZE	A	B	C	D	WEIGHT (kg)
1/4"	101	38	25	76	0.45
3/8	101	38	25	76	0.45
1/2"	115	50	28	76	0.575

ANV 3 MF

SIZE	A	B	C	D	WEIGHT (kg)
1/4"	101	38	25	76	0.45
3/8	101	38	25	76	0.45
1/2"	115	50	28	76	0.575





ANV 3 MM

SIZE	A	B	C	D	WEIGHT (kg)
1/4"	101	38	25	76	0.45
3/8	101	38	25	76	0.45
1/2"	115	50	28	76	0.575

ANV 4 FF

ANV 4

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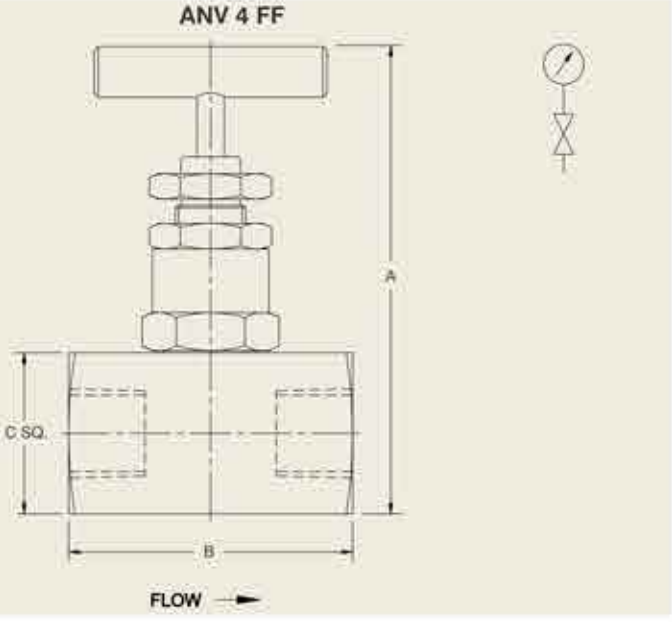
These valves are designed for high pressure applications.
These valves are also used in high pressure testing equipments.
Other design features are similar to ANV 1

Standard Specifications :

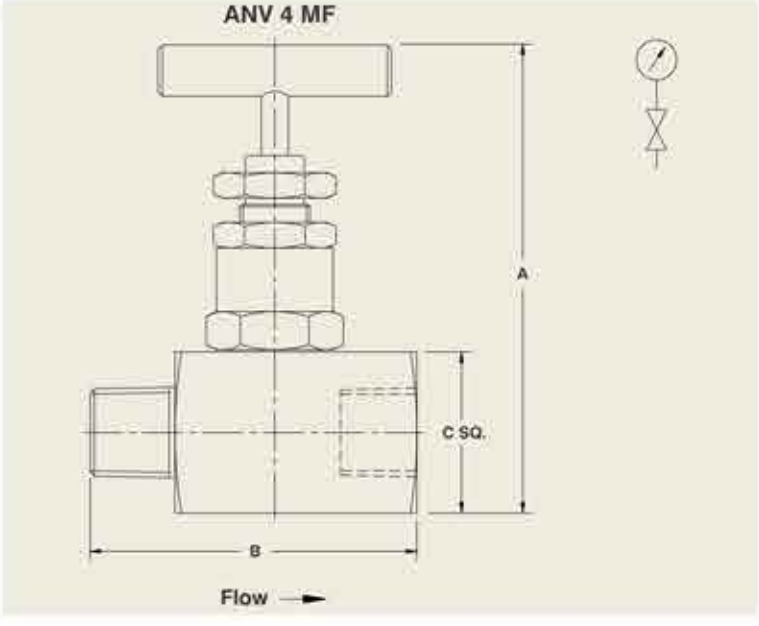
End connection : NPT / BSPP / BSPT
Maximum working pressure : 690 bar / 10,000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite

SIZE	A	B	C(Sq)	WEIGHT (kg)
1/4"	93	55	28	0.44
3/8"	93	55	28	0.44
1/2"	111	67	38	0.85

ANV 4 FF



ANV 4 MF



ANV 4 MF

SIZE	A	B	C(Sq)	WEIGHT (kg)
1/4"	93	65	28	0.45
3/8"	93	65	28	0.45
1/2"	111	76	38	0.88

Gauge Valves

These valves are designed for safe installations of Pressure gauges. The suitable model can be selected for isolation, calibration or drain purpose. The bleed screw, vent plug & multiport options are to choose from.

AGV 1 Guage Bleed Valve

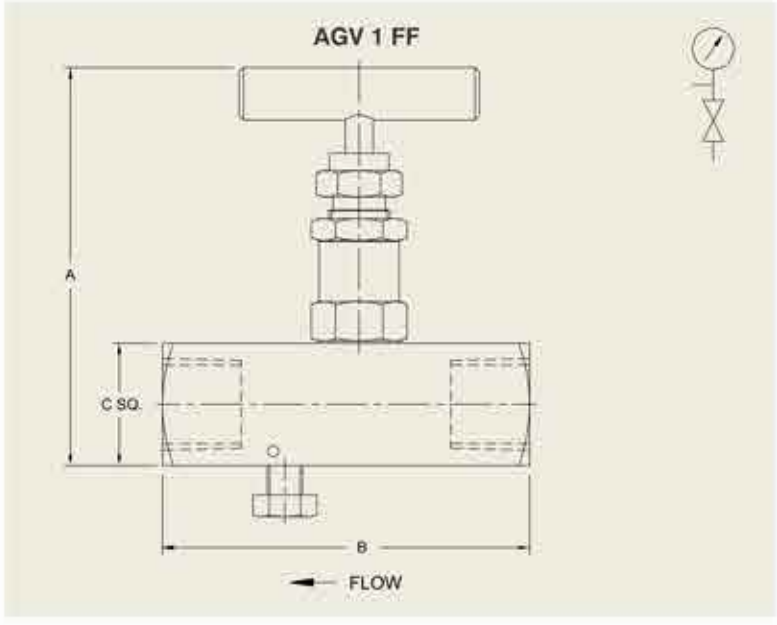
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
End connections : ¼" NPT / G ¼ / ½" BSPT
Valves for 10000 PSI working pressure are also available

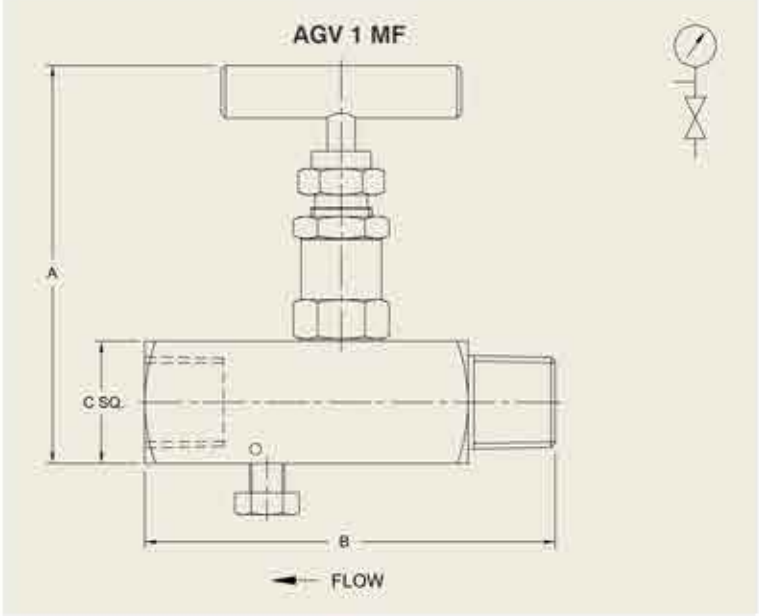
Weight : 0.530 kg

AGV 1 FF

SIZE	A	B	B SQ.	WEIGHT
1/4"	93	70	25	0.43
3/8"	93	70	25	0.43
1/2"	93	80	28	0.53



AGV 1 MF



Weight : 0.60 kg

SIZE	A	B	B SQ.	WEIGHT
1/4"	93	75	25	0.50
3/8"	93	75	25	0.50
1/2"	93	94	28	0.60

AGV 2 Gauge Vent Valve

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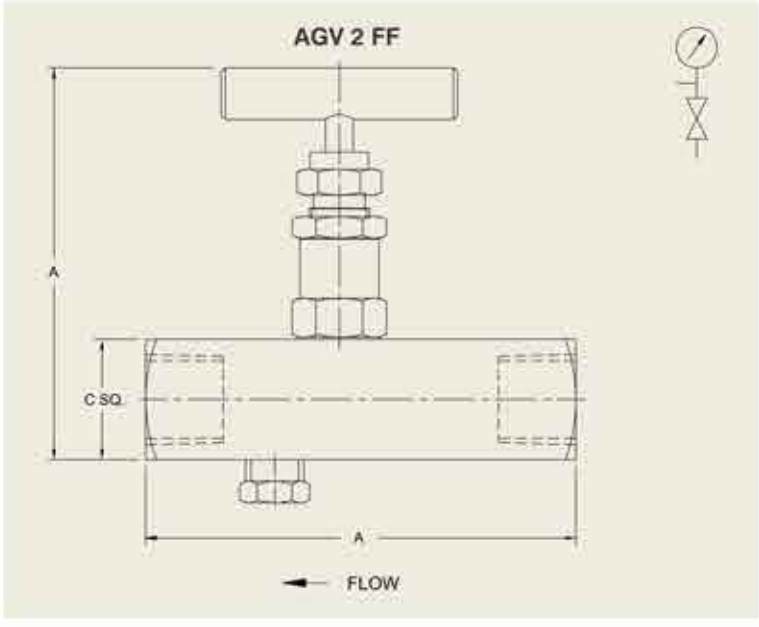
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS /Carbon steel
MOC in accordance with NACE MR0175 is available on request
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
End connections : ½" NPT / G ½ / ½" BSPT
Valves for 10000 PSI working pressure are also available

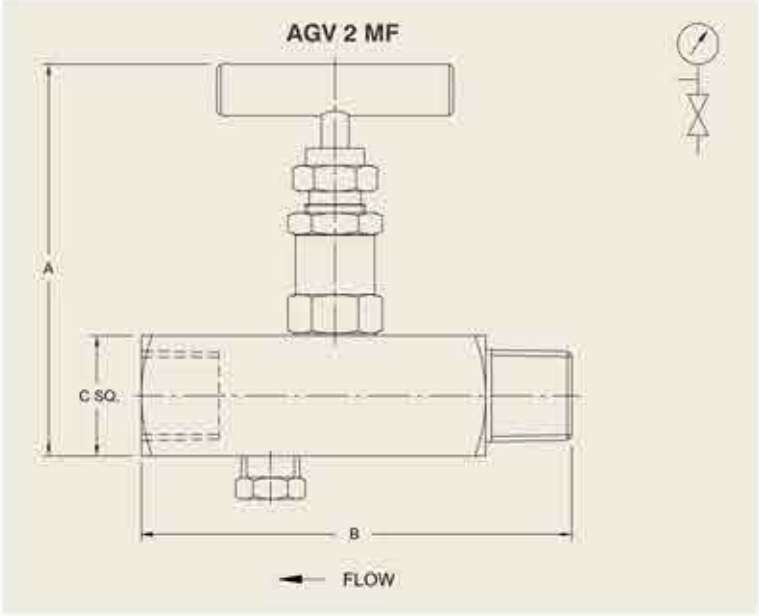
Weight : 0.55 kg

AGV 2 FF



SIZE	A	B	B SQ.	WEIGHT
1/4"	93	80	25	0.45
3/8"	93	80	25	0.45
1/2"	95	90	28	0.55

AGV 2 MF



Weight : 0.60 kg

SIZE	A	B	B SQ.	WEIGHT
1/4"	93	80	25	0.50
3/8"	93	80	25	0.50
1/2"	95	100	28	0.60

AGV 3 Multiport Gauge Valves

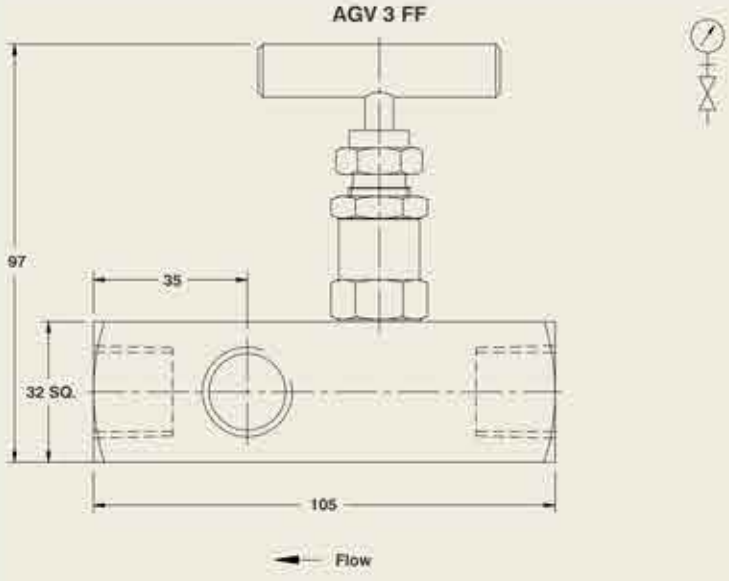
Multiport or gauge root valves facilitate different positioning of Pressure gauge or Pressure switch without disturbing the main line. The blind plug & the vent plug are supplied with the valve.

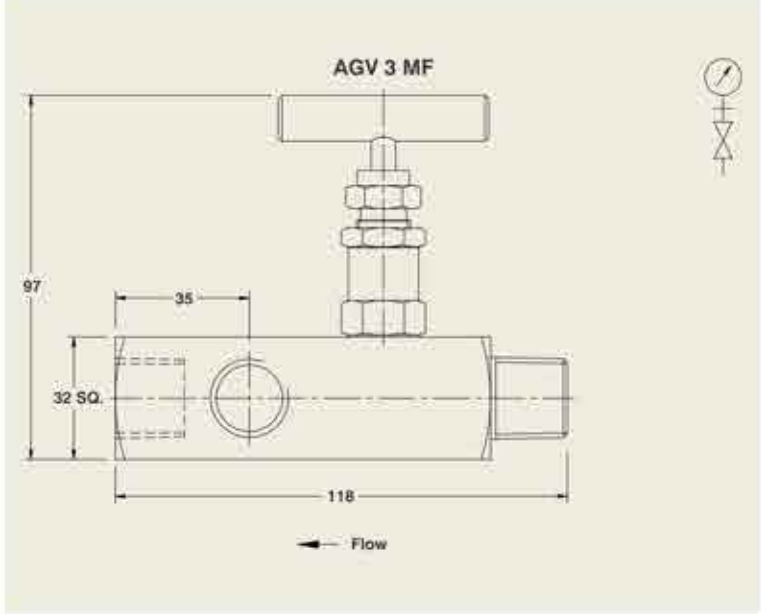
Standard Specifications :

Maximum working pressure : 413 bar/6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Inlet : ½" or ¾" NPT male or ½" NPT Female
Outlet : ½" NPT F x 3
Valves for 10000 PSI working pressure are also available

Weight : 0.95 kg

AGV 3 FF





Weight : 1.00 kg

AGV 3 MF

AGV 4 Forged Body Gauge Valve

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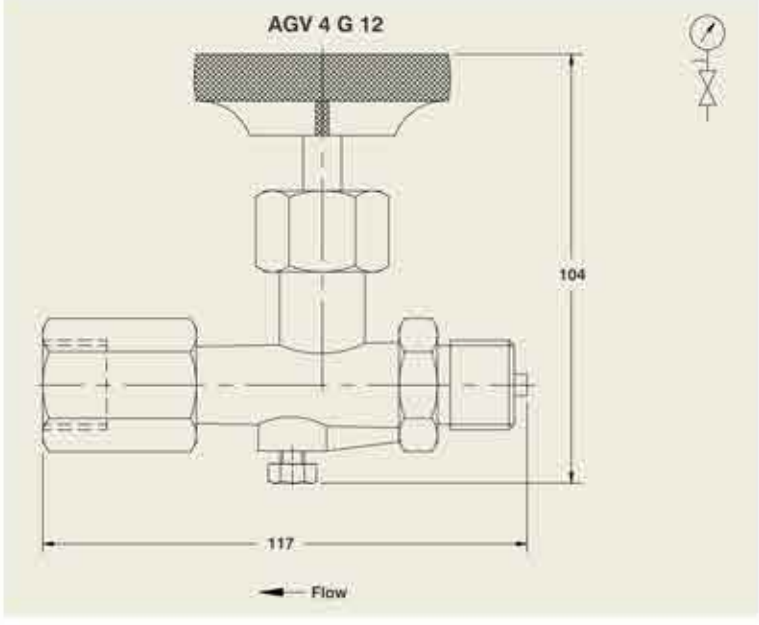
These valves are specially designed in accordance with DIN 16270.
The body is forged in union bonnet pattern. The G ½ connection provides swivel female outlet for suitable positioning of Pressure gauge. Bleed screw is provided for Vent.

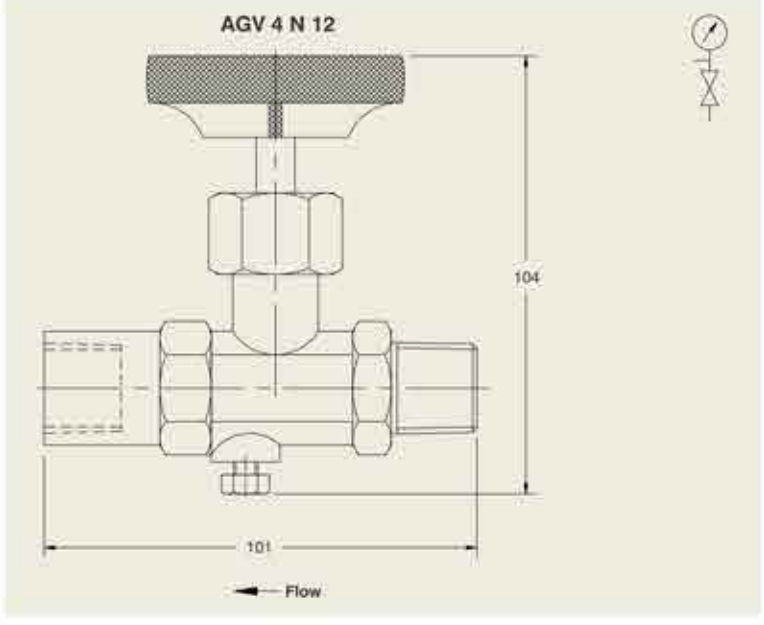
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel / Brass
Gland packing : PTFE / Graphite

Weight : 0.50 kg

AGV 4 G 12





AGV 4 N 12

Weight : 0.50 kg

2 Valve Manifold - Remote Mounting

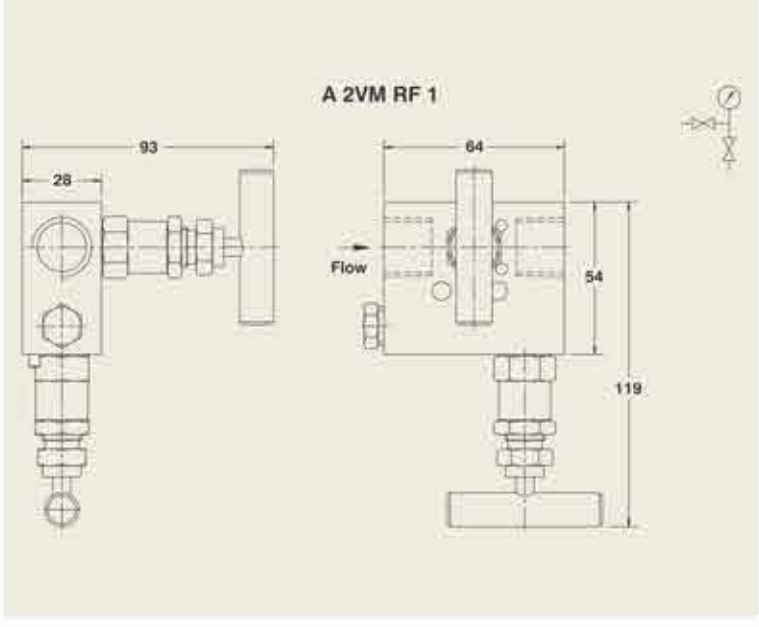
These manifolds are having one Isolation valve of ½" connection & one drain valve of ¼" or ½" connection. The outlet of drain valve can be used for calibration. Compact unit saves space, reduces number of joints resulting in cost reduction. These manifolds are used with Pressure gauges, switches or transmitters. Different models are available as shown below.

Standard Specifications :

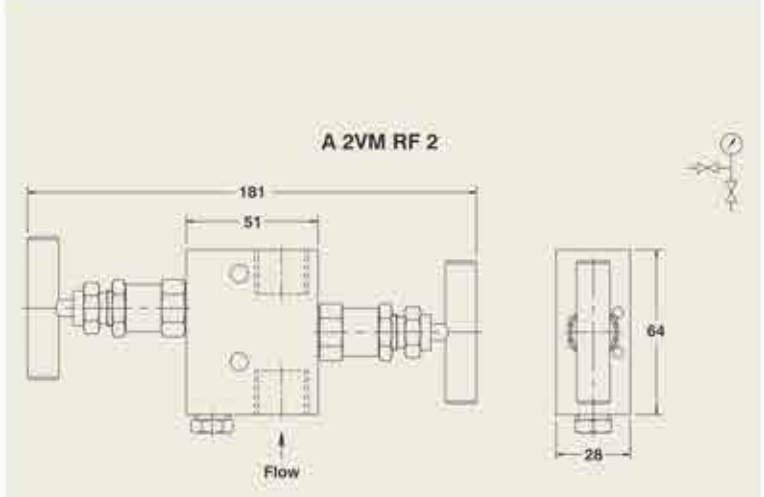
Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard instruments connection : ½" NPT F
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.00 kg

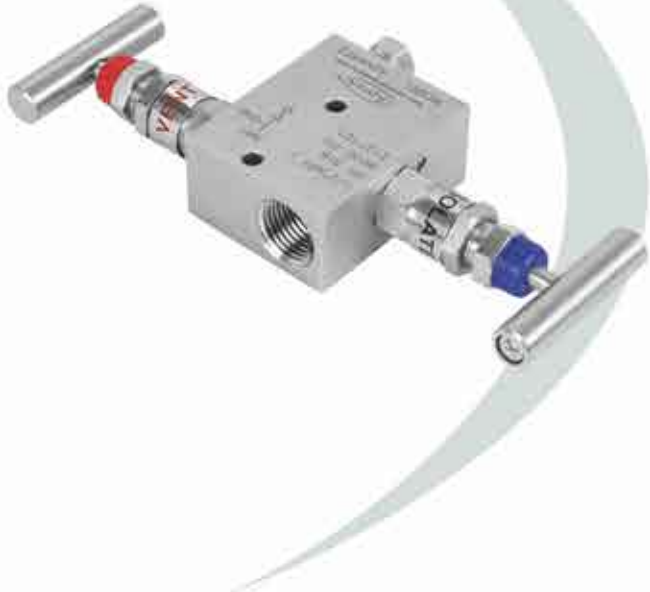
A 2VM RF 1



A 2VM RF 2



Weight : 1.00 kg

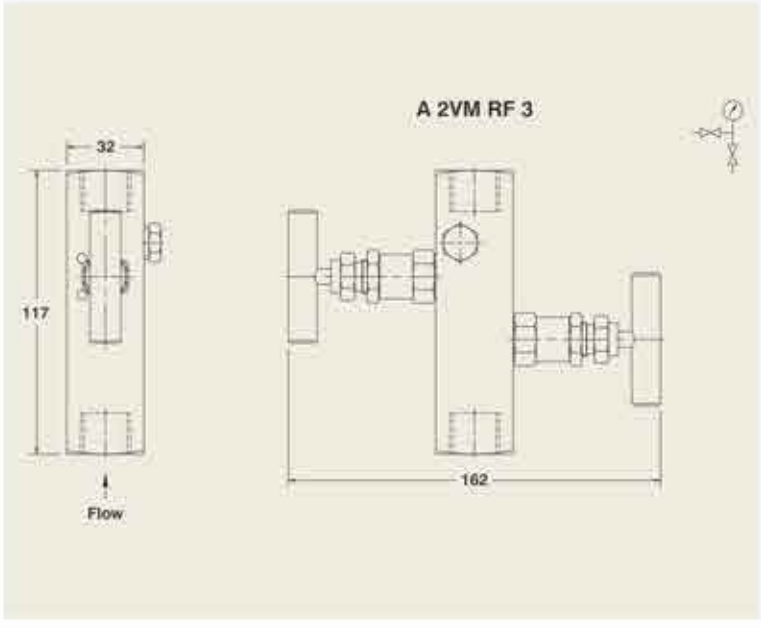


A 2VM RF 3

Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard instruments connection : ½" NPT F
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.10 kg

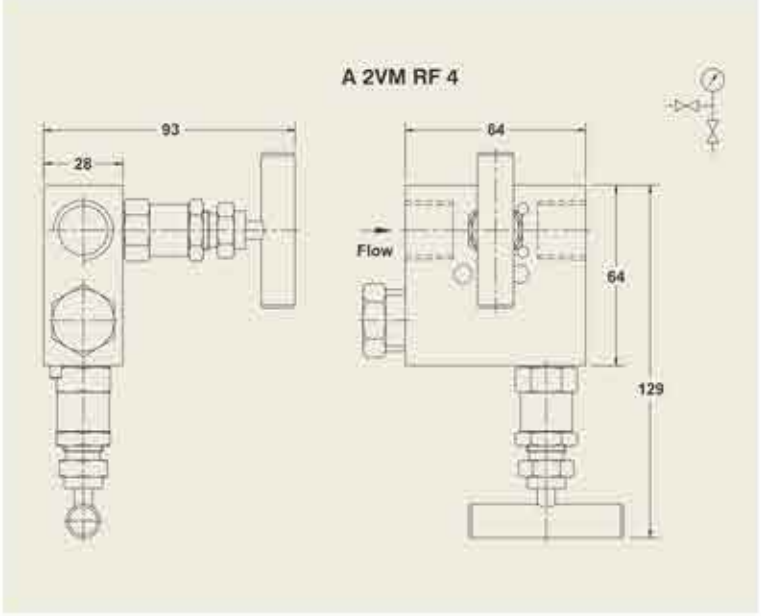


A 2VM RF 4

Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard instruments connection : ½" NPT F
Drain : ½" NPT F (supplied with ½" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.10 kg

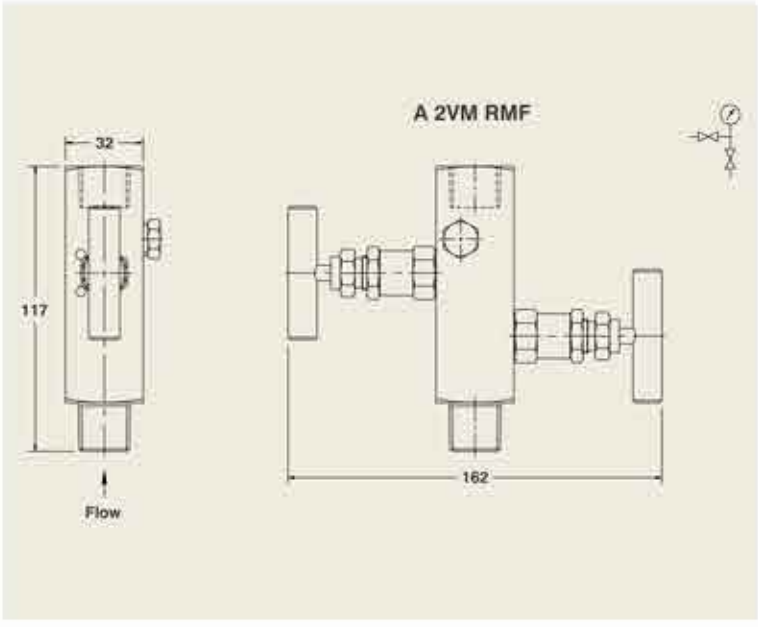


A 2VM RMF

Standard Specifications :

Maximum working pressure : 413 bar/6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT M
Standard instruments connection : ½" NPT F
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.10 kg

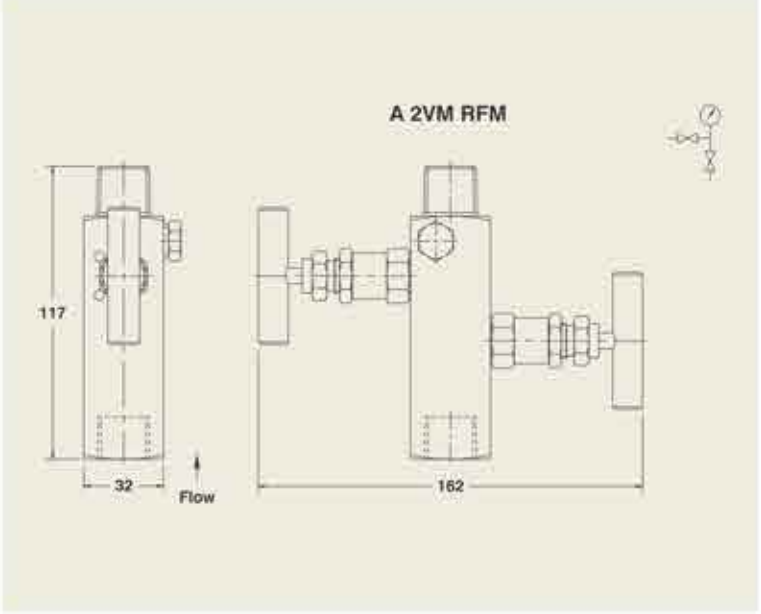


A 2VM RFM

Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard instruments connection: ½" NPT M
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.10 kg



2 Valve Manifold - Direct Mounting

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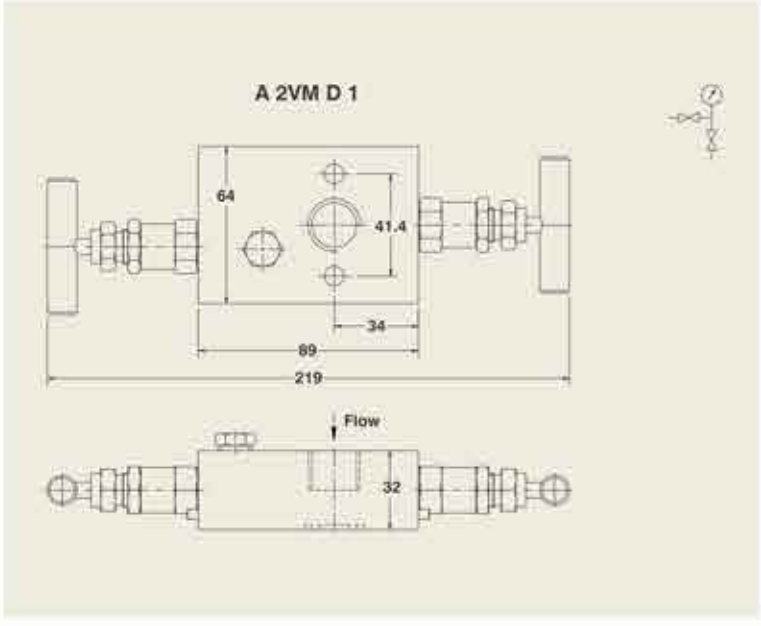
These manifolds provide a direct mounting feature with isolation & drain/calibration in a single unit. These type of manifolds can be directly mounted on the static pressure transmitter to eliminate several parts & joints. Different models available as shown below.

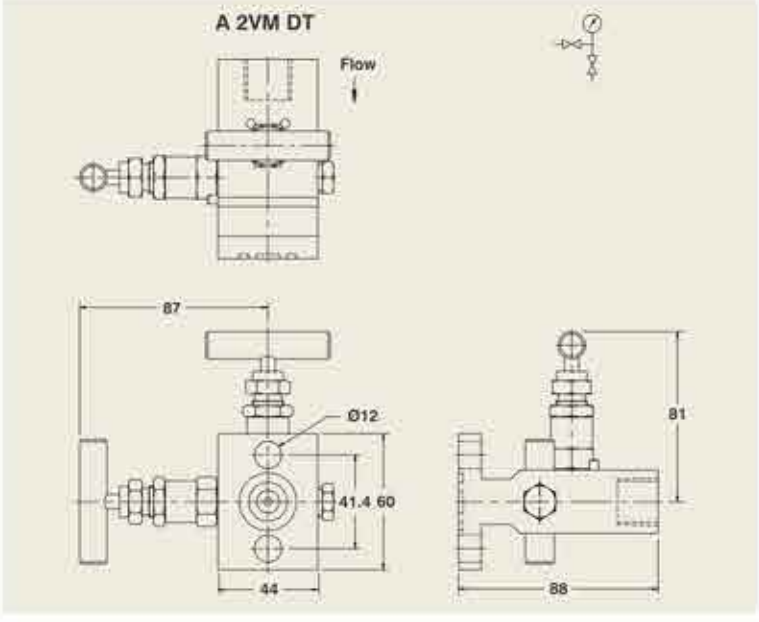
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard instruments connection: Flanged
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.60 Kg

(A 2VM D 1)





(A 2VM DT)

Weight : 1.40 kg

3 Valve Manifold - Remote Mounting

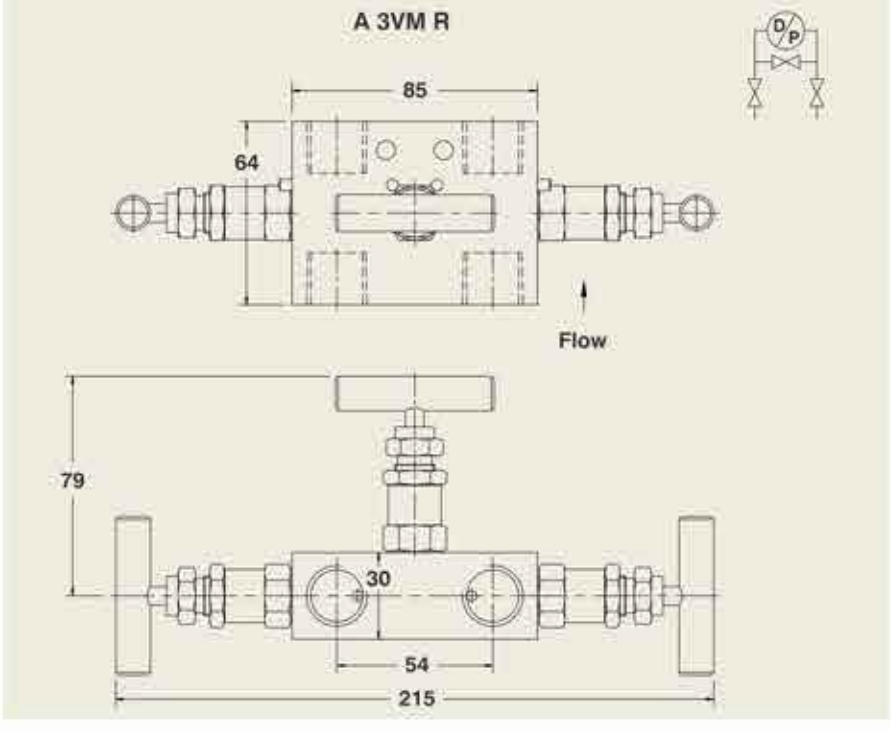
These manifolds are generally used in differential pressure application with Pressure gauges, Pressure switches & pressure trasmitters. Two isolation valves & one equilizing valve is provided.
The standard connections are ½" NPTF.
The drain connection of ¼" NPT is provided as an option.
The different models are available as mentioned below.

Standard Specifications :

Maximum working pressure : 413 bar/6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : ½" NPT F
Valves for 10000 PSI working pressure are also available

Weight : 1.50 kg

(A 3VM R)

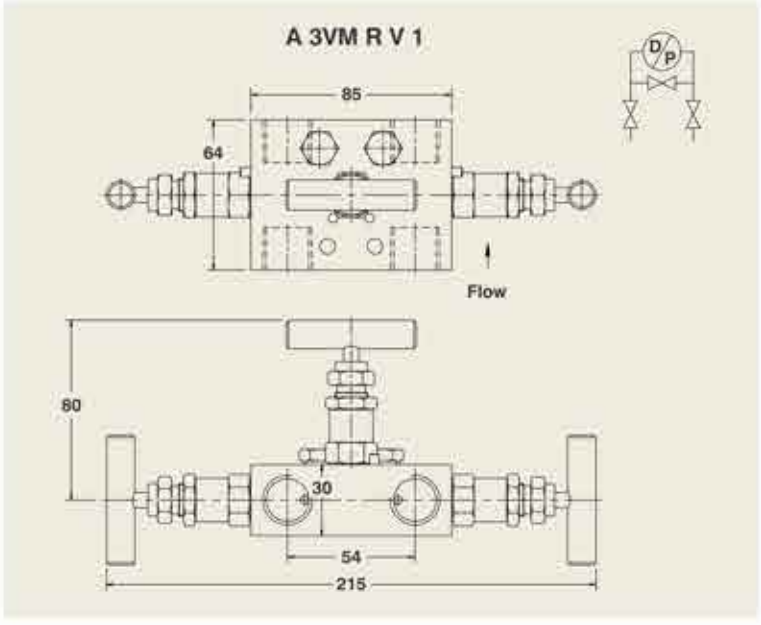


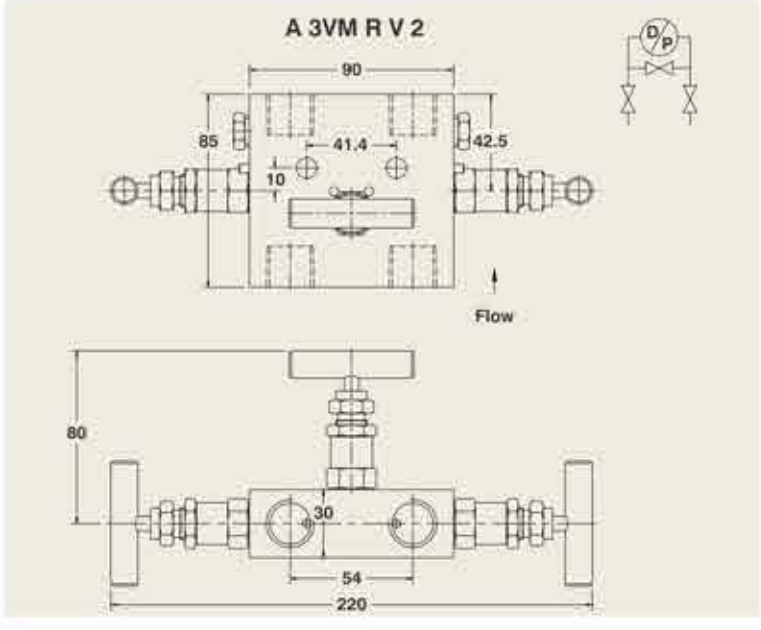
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE/Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : ½" NPT F
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.56 kg

A 3VM R V 1





A 3VM R V 2

Weight : 2.00 kg

3 Valve Manifold - Direct Mounting

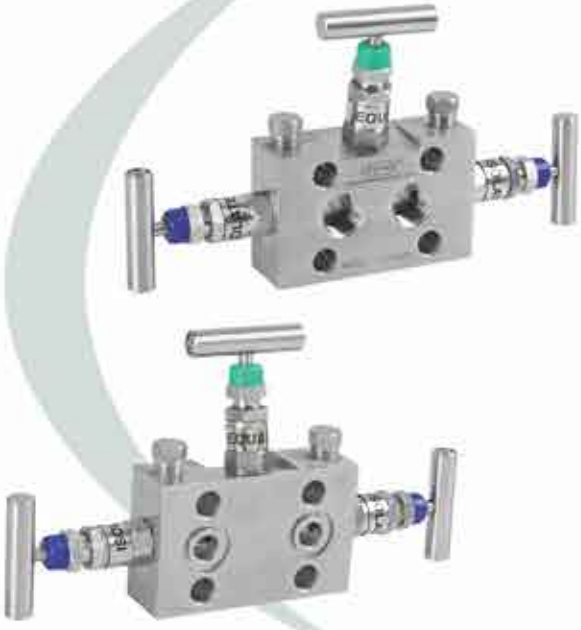
These manifold can be directly mounted on the transmitter having 54 mm or 32 mm center to center connections. The inlet is either ½" NPT F or flanged. Two isolation valves & one equalizer valve is provided along with 1/4" NPT F drain as an option. These valves are mainly used with Dp transmitters. Different options are available as shown.

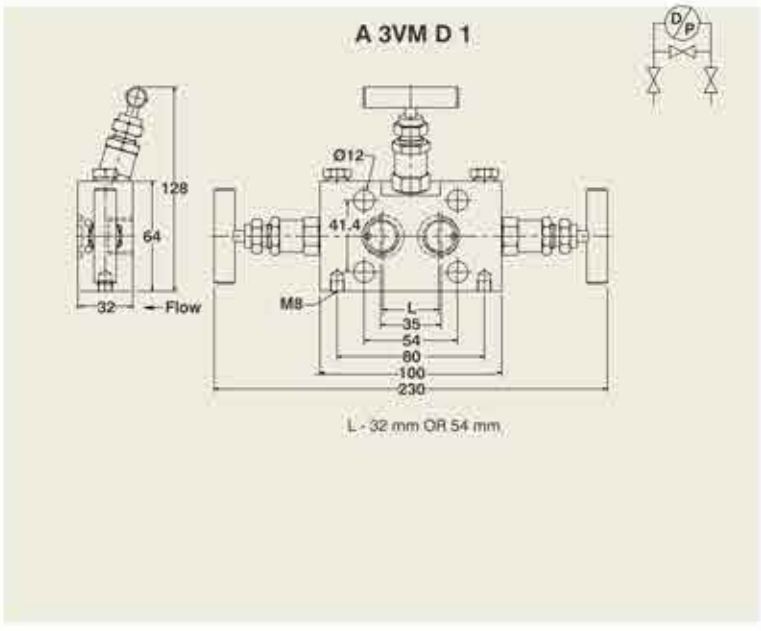
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : Flanged
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

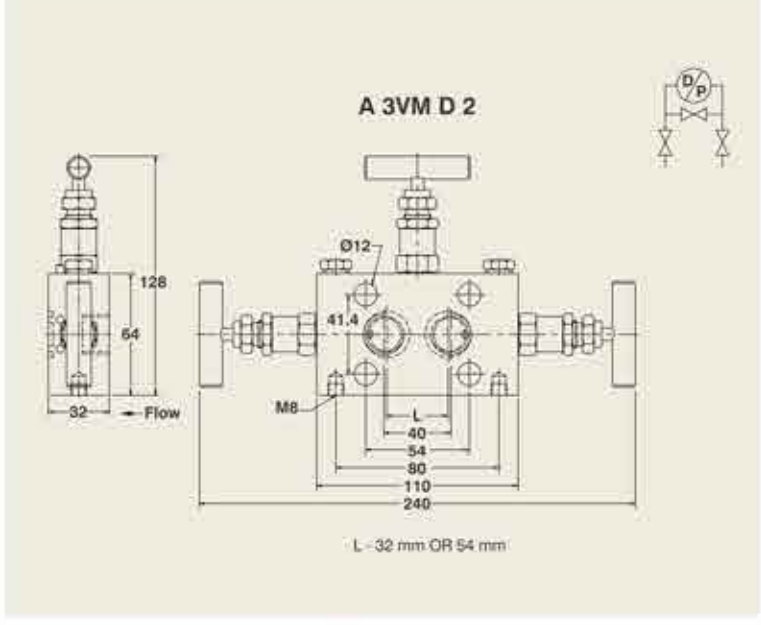
Weight : 2.00 kg

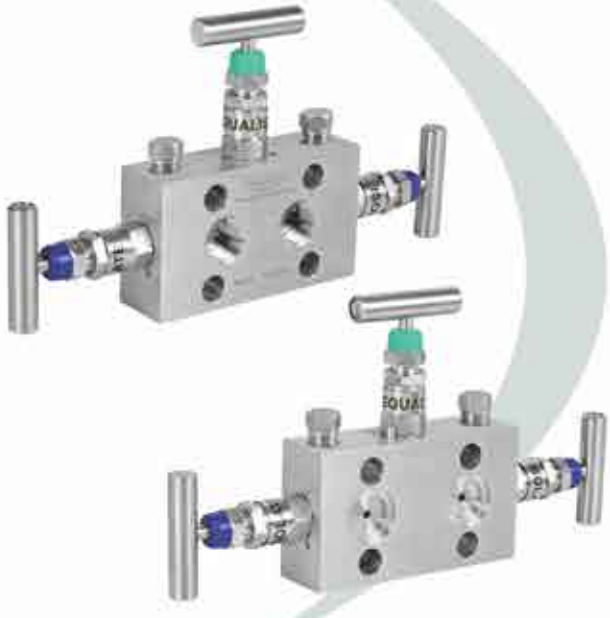
A 3VM D 1





A 3VM D 2





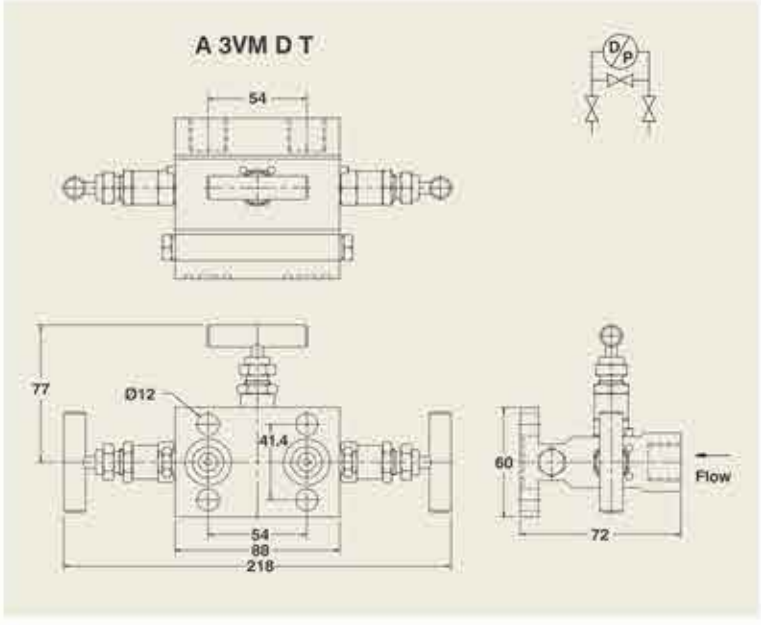
Weight : 2.00 kg

A 3 VM DT

Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : Flanged
Drain : ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 1.90 kg

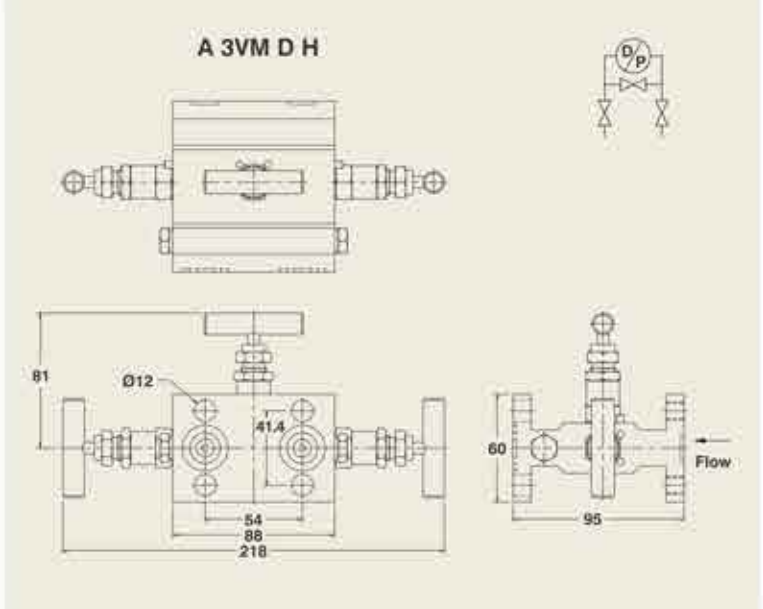


A 3VM D H

Standard Specifications :

Maximum working pressure : 413 bar/6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : Flanged
Standard Instrument connection : Flanged
Drain: ¼" NPT F (supplied with ¼" NPT blind plug)
Valves for 10000 PSI working pressure are also available

Weight : 2.56 kg



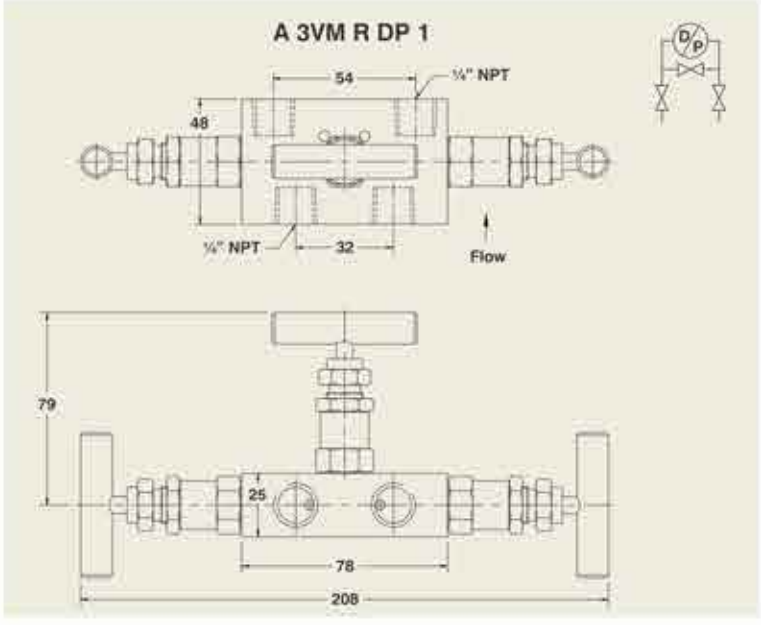
Special Manifolds for DP Gauges

Standard Specifications :

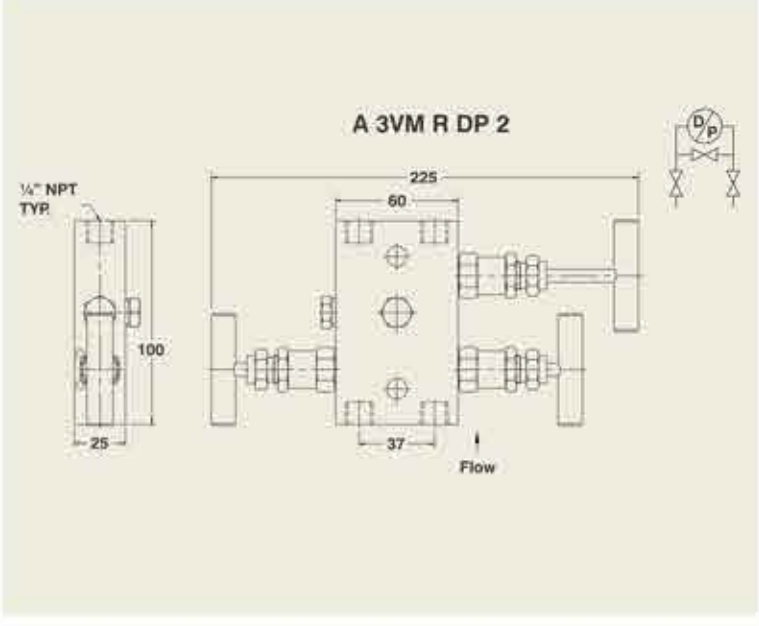
Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ¼" NPT F
Standard Instrument connection : ¼" NPT F
Valves for 10000 PSI working pressure are also available

Weight : 1.00 kg

A 3VM R DP 1



A 3VM R DP 2



Weight : 1.40 kg

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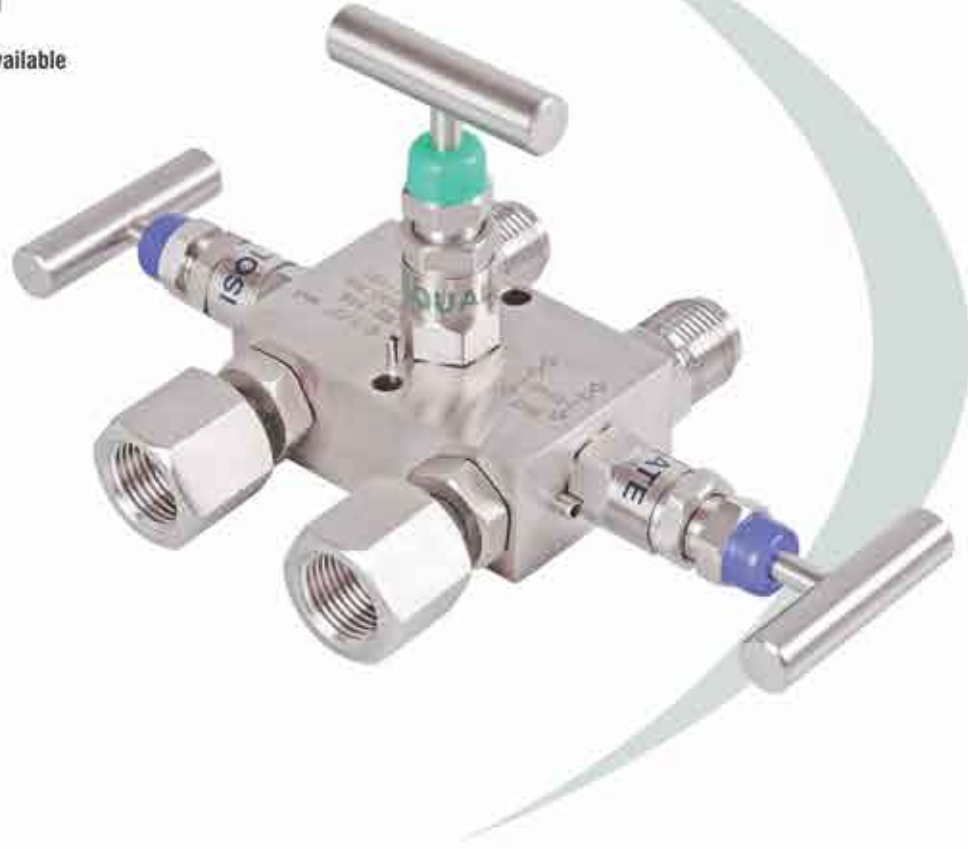
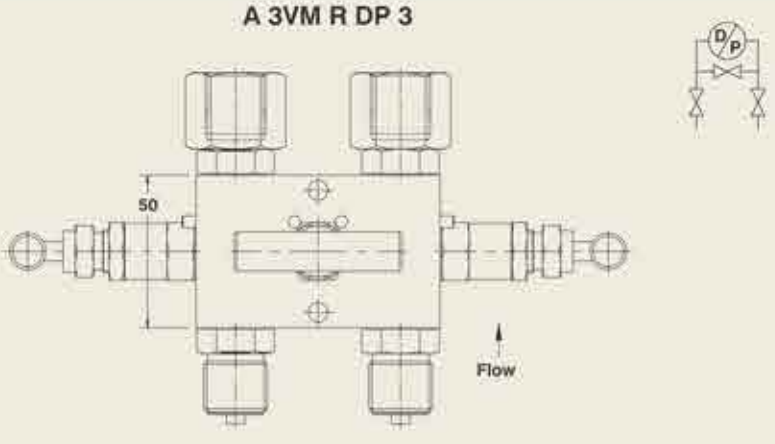
Standard Specifications :

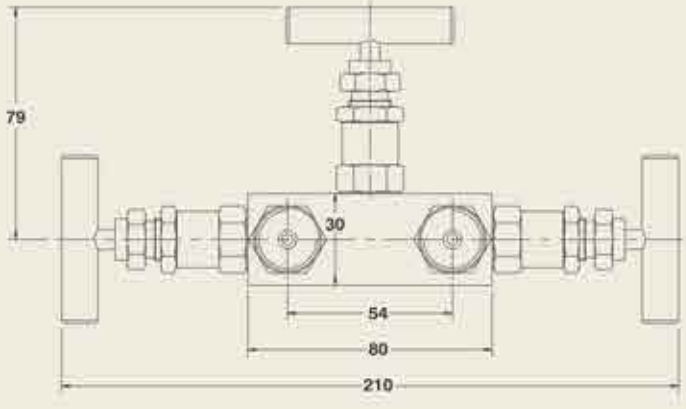
Maximum working pressure: 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : G ½" M or ½" NPT M
Standard Instrument connection : G ½" F Swivel
Valves for 10000 PSI working pressure are also available

Weight : 1.90 kg



A 3VM R DP 3





5 Valve Manifold - Remote Mounting

These manifolds are designed for remote mounting on instruments using threaded instrument & process connections. These valves are having two isolation, one equilizer & two drain/calibration valves. The standard process & instrument connections are ½" NPT F & the drain connections are ¼" NPT F. The blanking plugs are provided. The instruments connections are positioned at 54 mm center distance but can also be used for other center distances with the help of screwed fittings. Different models are available as shown below.

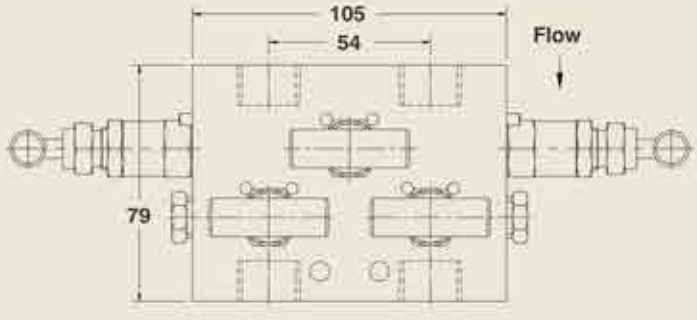
A 5VM R 1

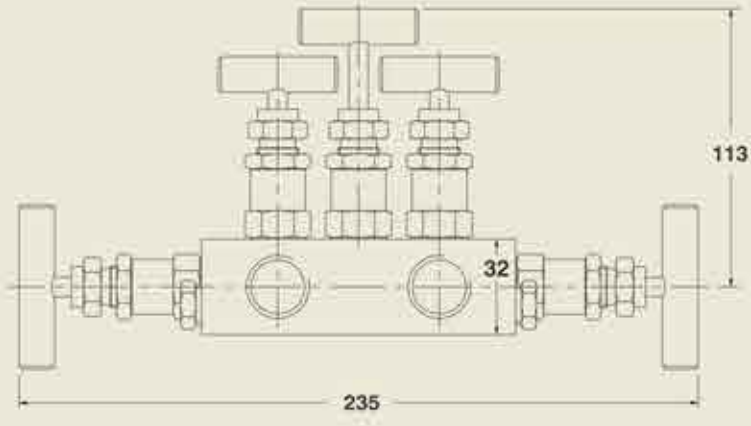
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : ½" NPT F
Drain : ¼" NPT F
Valves for 10000 PSI working pressure are also available

Weight : 2.70 kg

A 5VM R 1





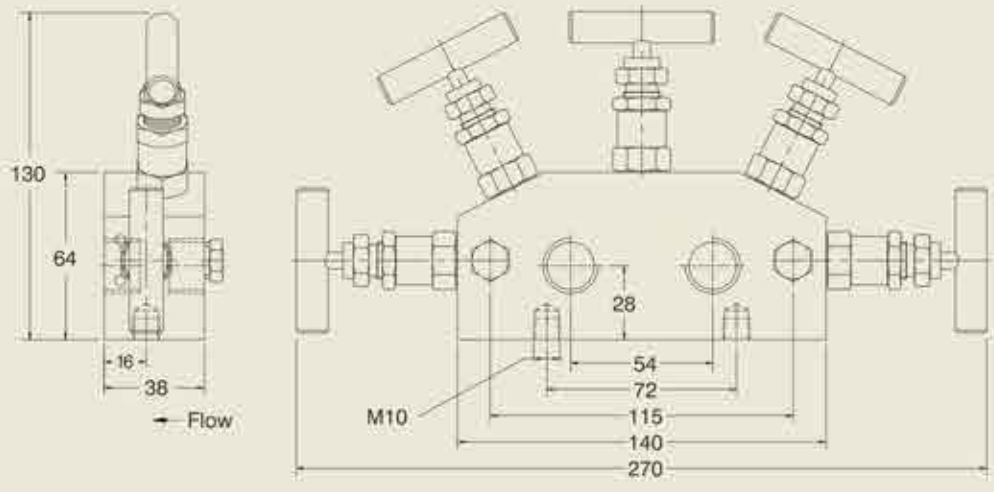
ISO 9001 : 2008 | PED 97/23/EC

Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : ½" NPT F
Drain : ¼" NPT F
Valves for 10000 PSI working pressure are also available

Weight : 3.30 kg

A 5VM R 2



5 Valve Manifolds - Direct Mounting

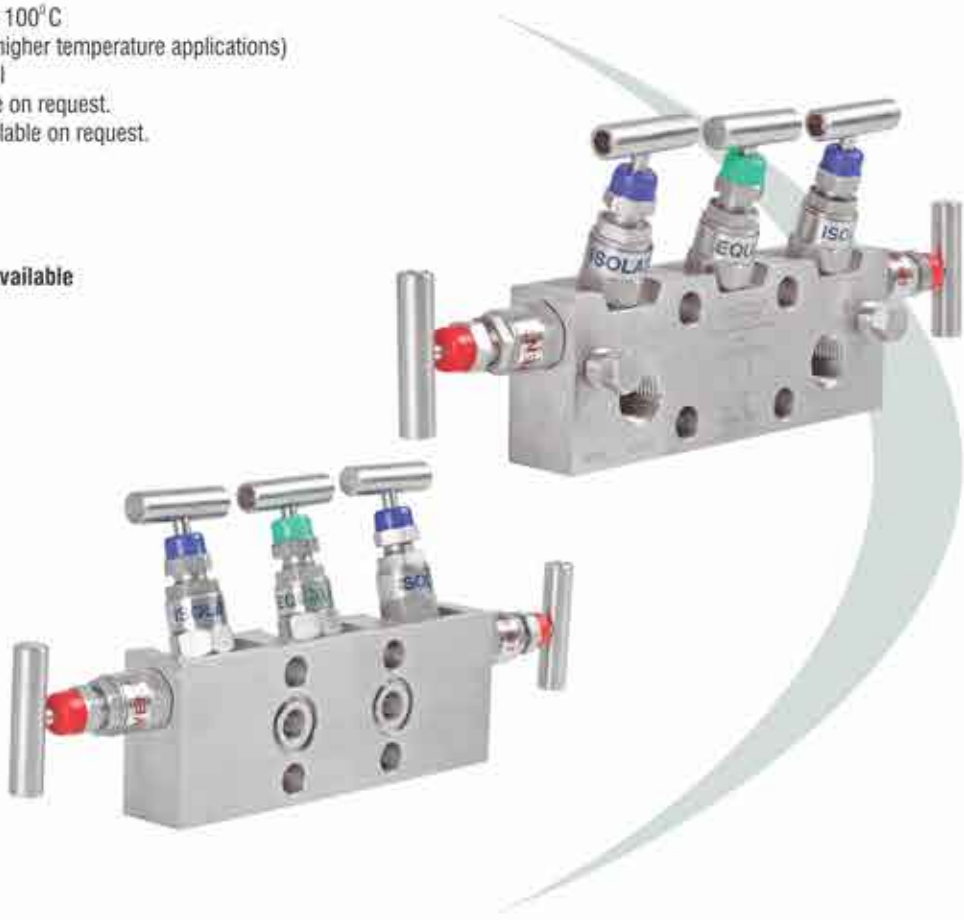
These valves are designed for direct mounting to differential pressure transmitter. The instrument side is provided with a standard flange of 54 mm or 32 mm center distance. These valves are having two isolation, one equalizer & two vent / calibration valves. The standard process & instruments connections are ½" NPT. Two vent connections are ¼" NPT in all manifolds & provided with blanking plugs. Different models are available as shown.

(A 5VM D 1)

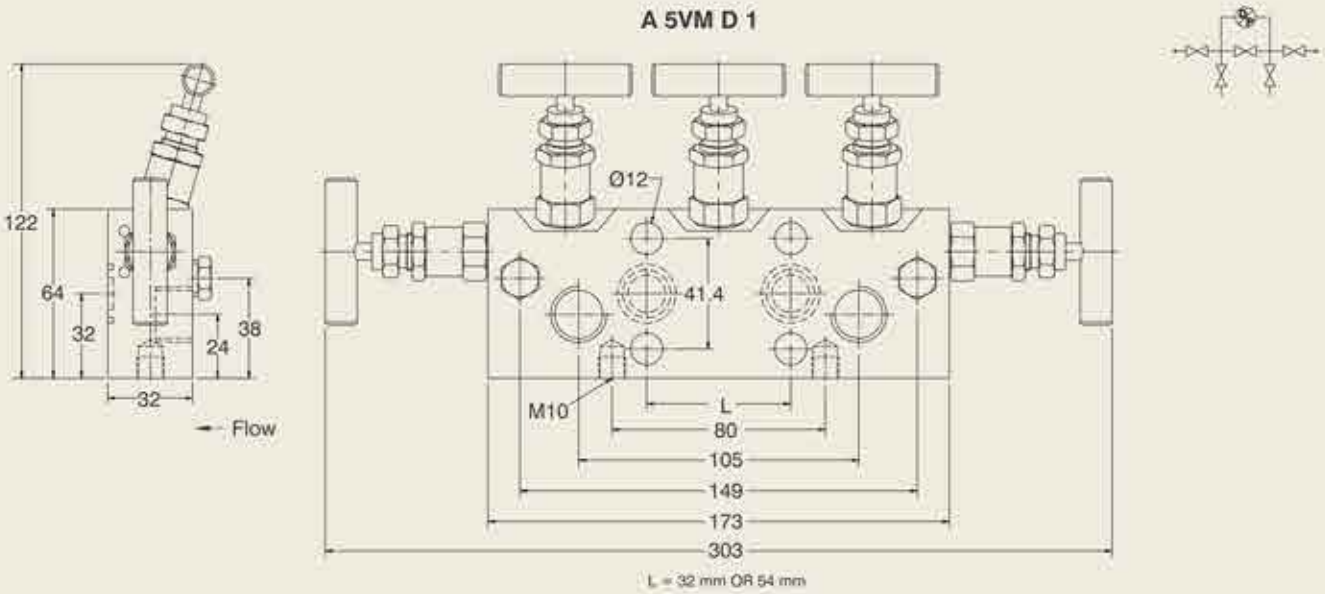
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : Flanged
Drain : ¼" NPT F
Valves for 10000 PSI working pressure are also available

Weight : 3.30 kg



A 5VM D 1

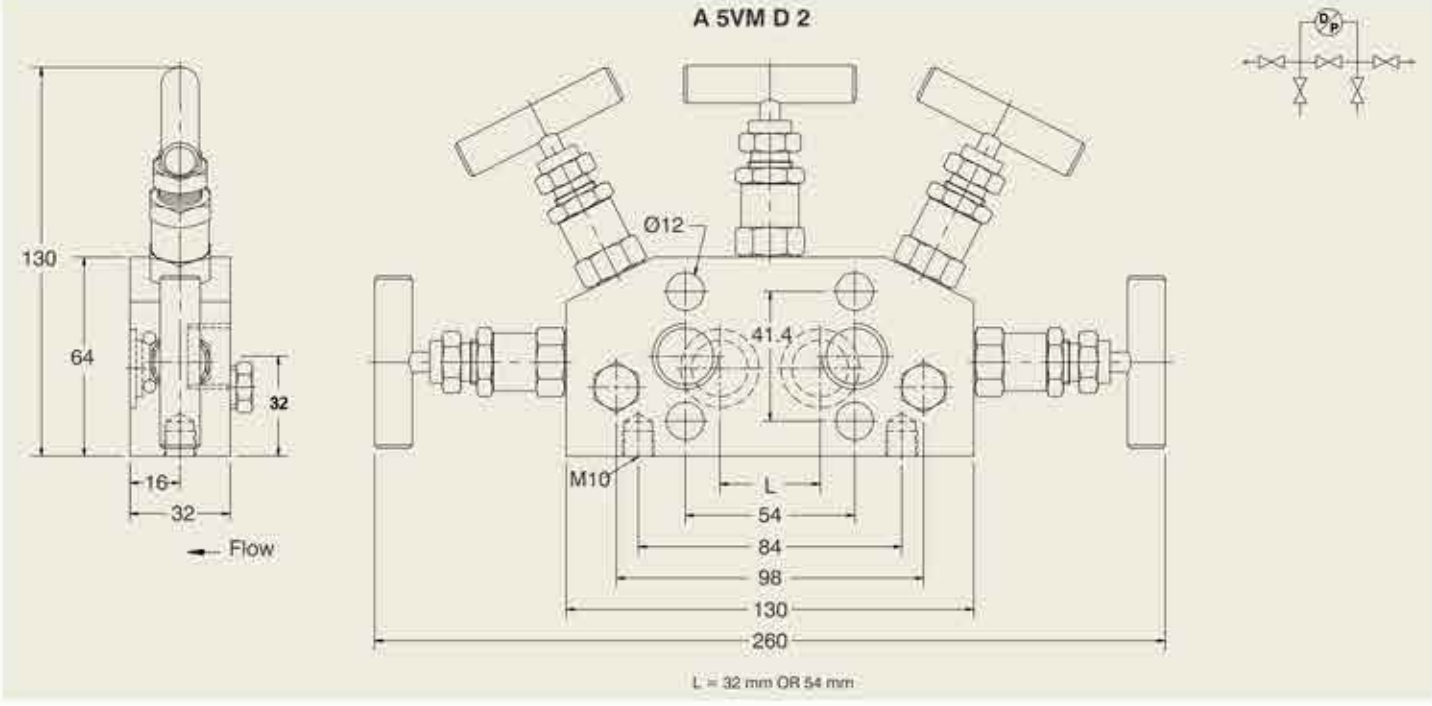


ISO 9001 : 2008 | PED 97/23/EC

Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : Flanged
Valves for 10000 PSI working pressure are also available

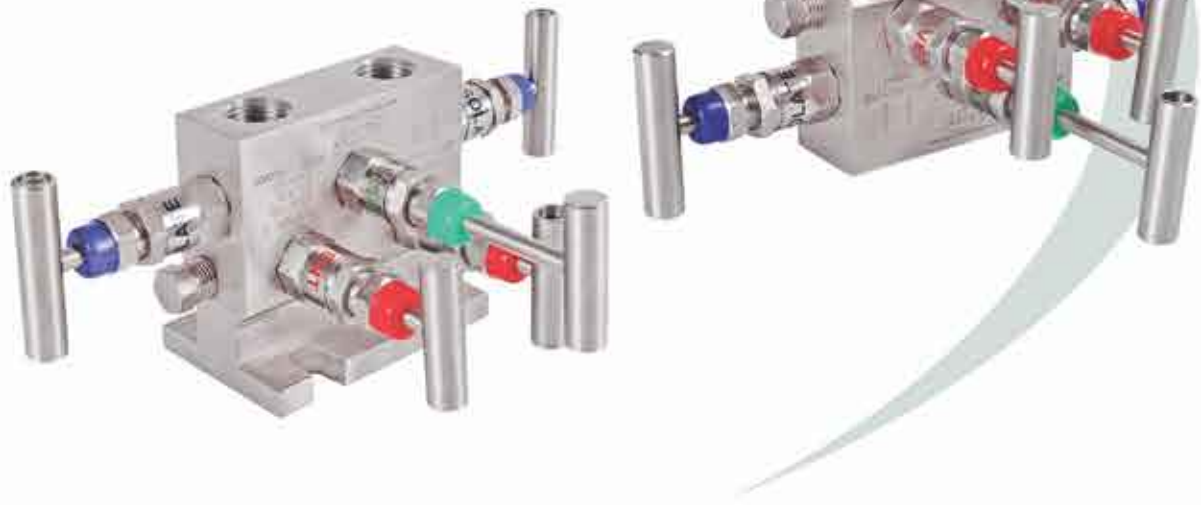
Weight : 2.70 kg



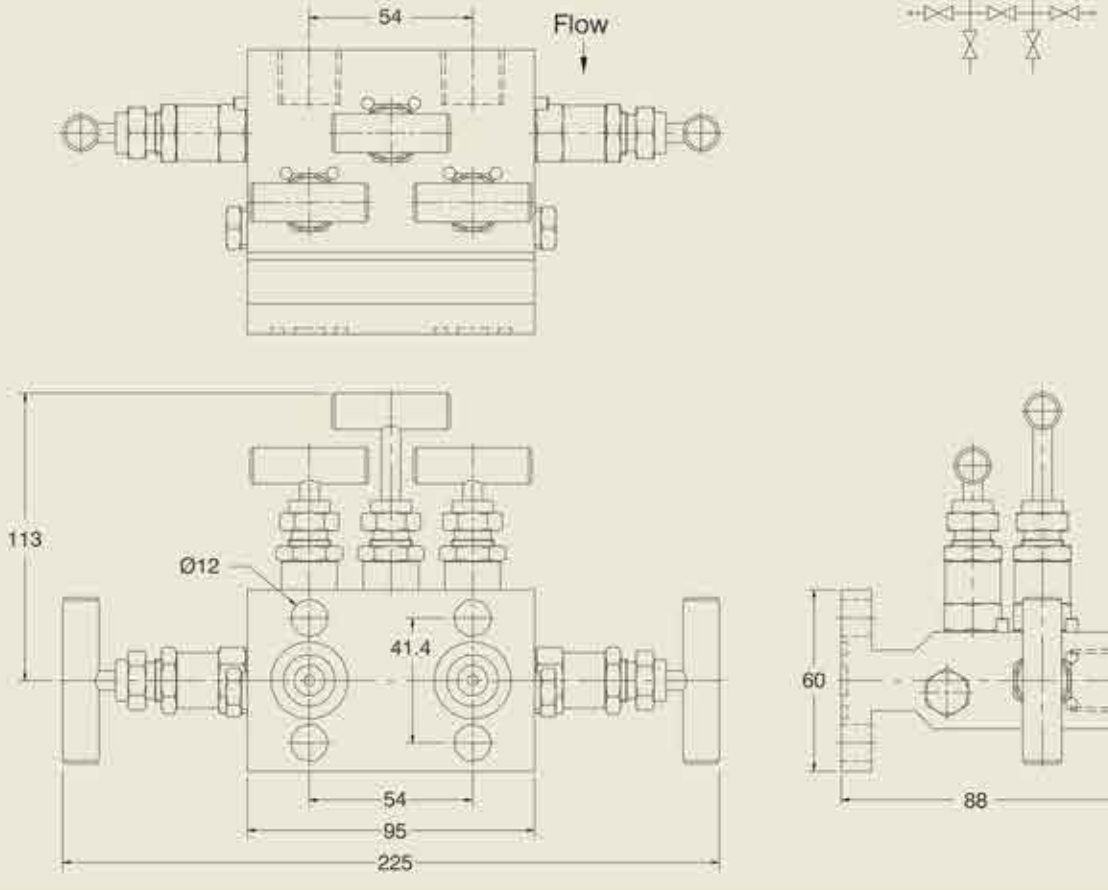
Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT F
Standard Instrument connection : Flanged
Drain : ¼" NPT F
Valves for 10000 PSI working pressure are also available

Weight : 2.90 kg



A 5VM DT



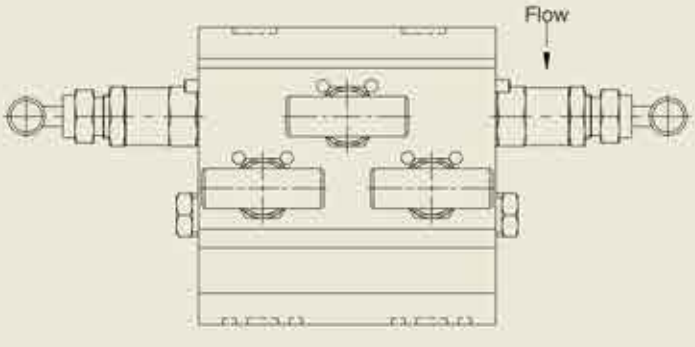
ISO 9001 : 2008 | PED 97/23/EC

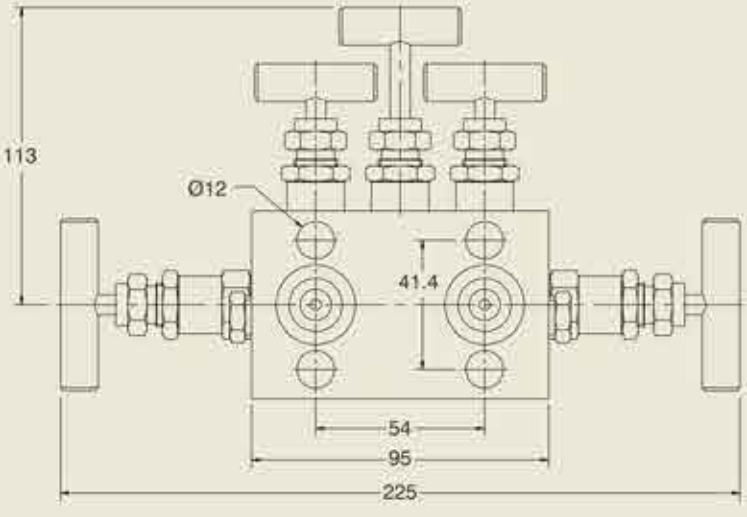
Standard Specifications :

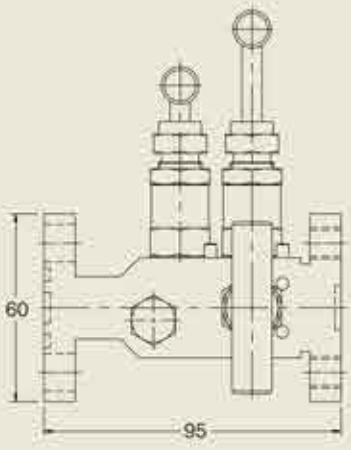
Maximum working pressure: 413 bar / 6000 PSI at 100°C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : Flanged
Standard Instrument connection : Flanged
Drain : ¼" NPT F
Valves for 10000 PSI working pressure are also available

Weight : 2.70 kg

A 5VM DH





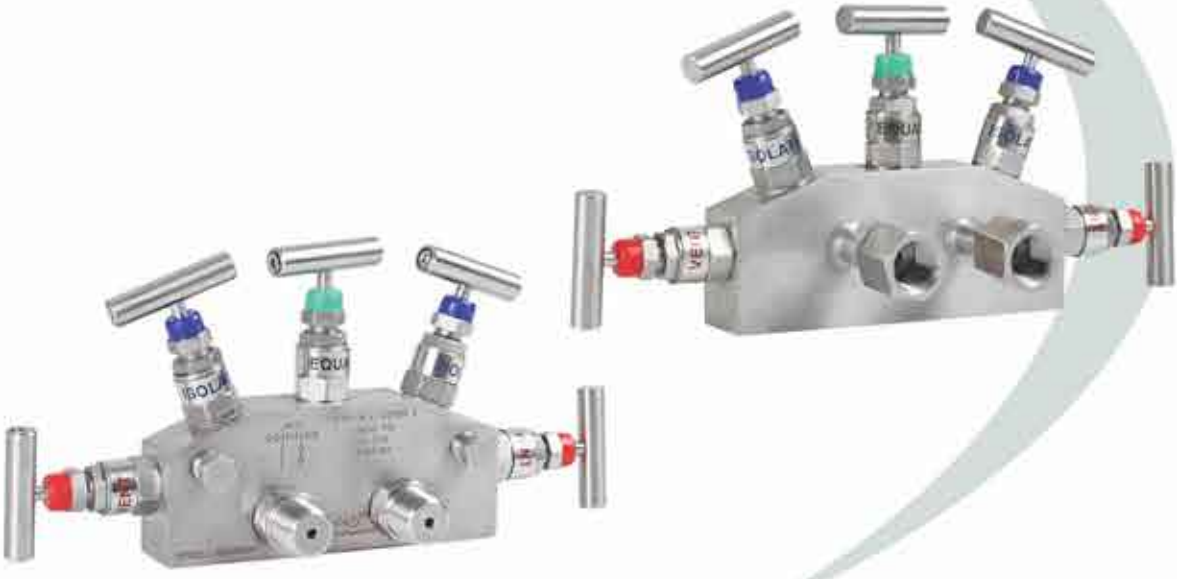


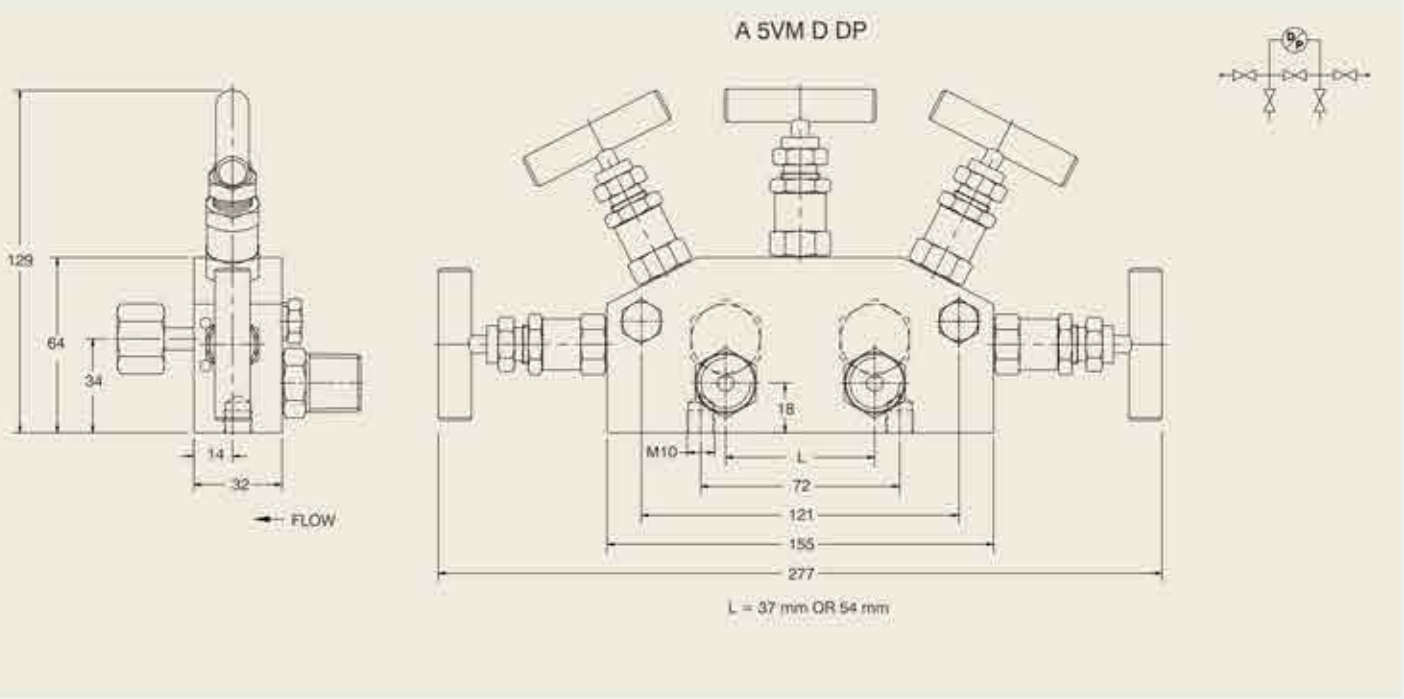
A 5VM D DP

Standard Specifications :

Maximum working pressure : 413 bar / 6000 PSI at 100° C
(see pressure temperature chart on Page No. 4 for higher temperature applications)
Material : 316 SS / 316L SS / 304 SS / Carbon steel
MOC in accordance with NACE MR0175 is available on request.
Monel, Inconel, Hastelloy, Duplex steel are also available on request.
Gland packing : PTFE / Graphite
Standard process connection : ½" NPT M or G ½" M
Standard Instrument connection : Swivel Nut G ½"
Drain : ¼" NPT F

Weight : 3.70 kg





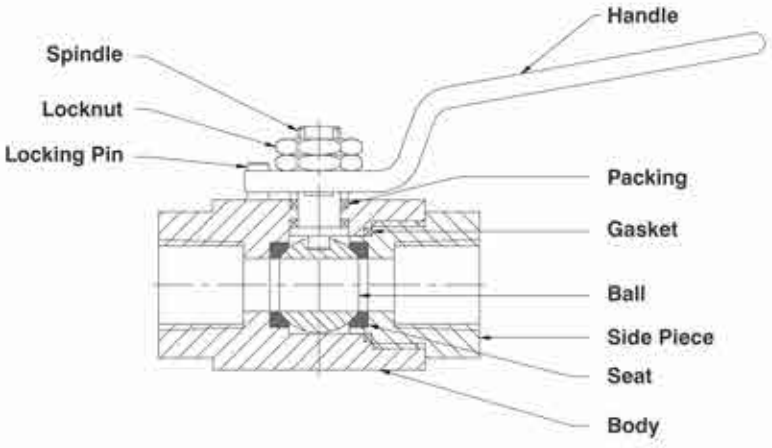
Instrumentation Ball Valves

ISO 9001 : 2008 | PED 97/23/EC

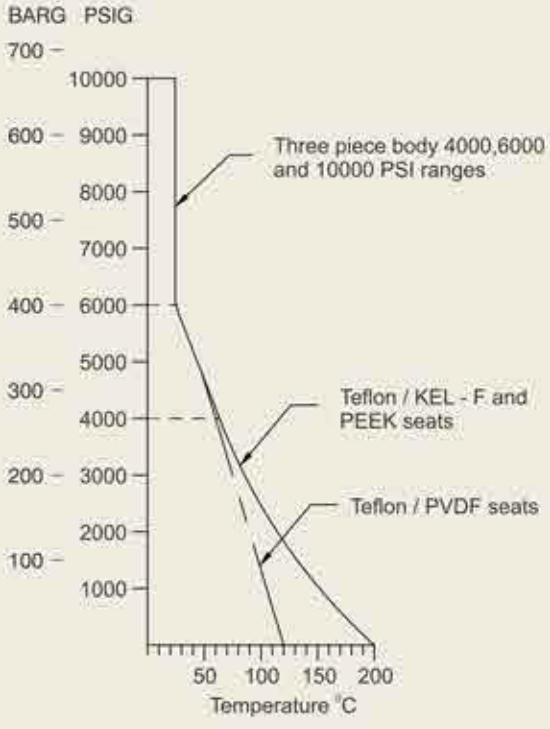
Aptek offers 2 types of ball valves for low pressure & high pressure applications

Low Pressure Ball Valve

(ABV 1)

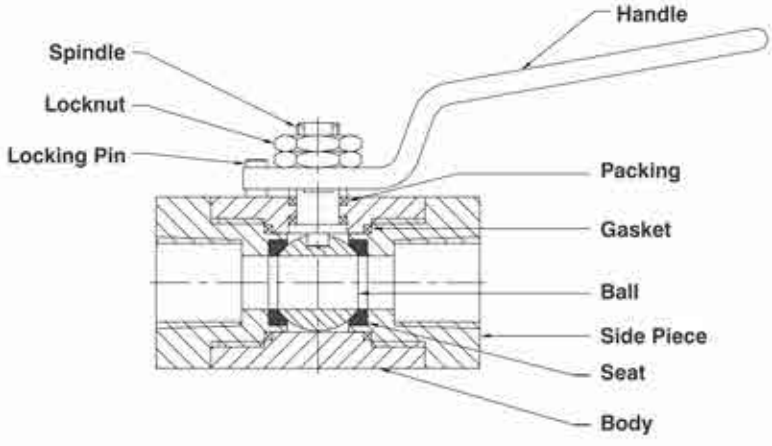


Pressure VS Temperature Graph for Ball Valves



High Pressure Ball Valve

(ABV 2)



Low Pressure Ball Valve

This valves are safe, reliable & economical option for low pressure application

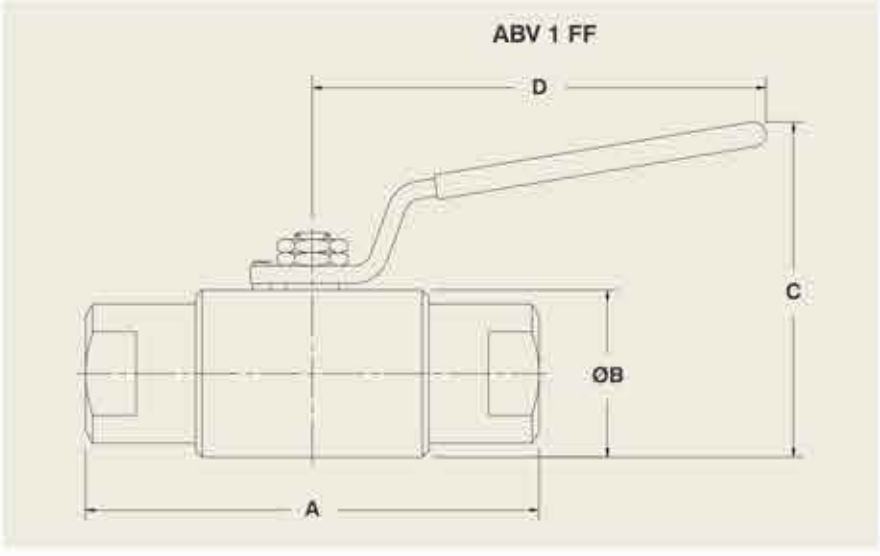
ABV 1

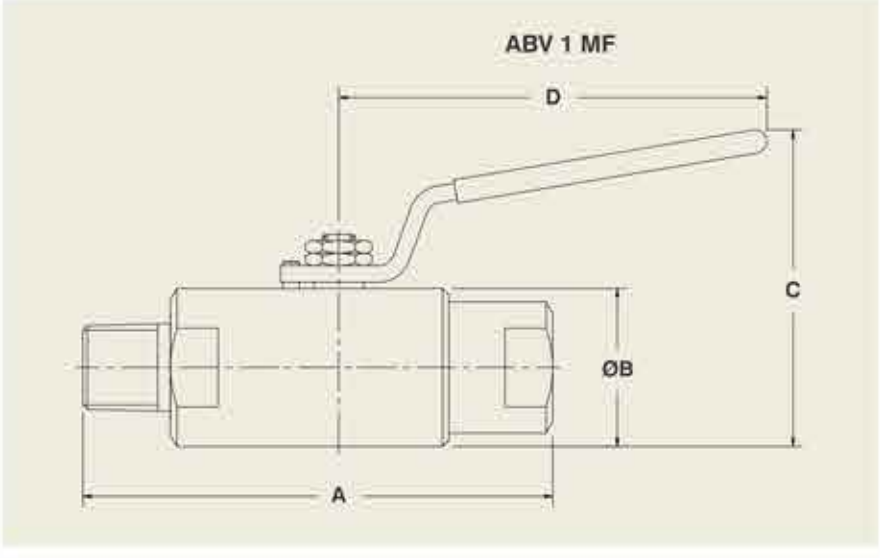
Standard Specifications :

Size : ¼" to 1"
End connections : Screwed (NPT / BSPP / BSPT), Socket weld,
Compression tube fitting ends
Material : CS, 316 SS, 304 SS, 316 L SS
Special materials are also available on request
Maximum working pressure : 2000 PSI at 100° C
See pressure temperature chart for high temperature applications

ABV 1 FF

SIZE	A	ØB	C	D(kg.)	WEIGHT
1/4"	60	28	45	85	0.30
3/8"	65	32	50	85	0.40
1/2"	75	38	65	120	0.50
3/4"	85	42	75	135	0.75
1"	95	50	85	135	0.90



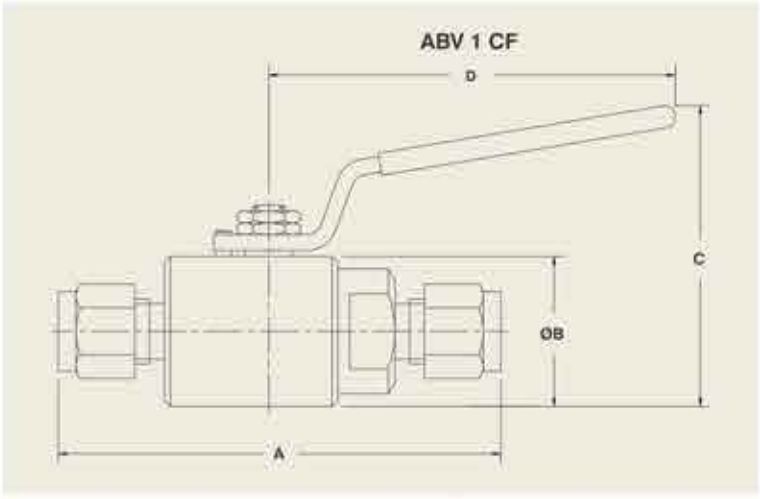


ABV 1 MF

SIZE	A	ØB	C	D(kg.)	WEIGHT
1/4"	70	28	45	85	0.30
3/8"	75	32	50	85	0.40
1/2"	85	38	65	120	0.50
3/4"	95	42	75	135	0.75
1"	105	50	85	135	0.90

ABV 1 CF

SIZE	A	ØB	C	D(kg.)	WEIGHT
1/4"	60	28	45	85	0.30
3/8"	65	32	50	85	0.40
1/2"	75	38	65	120	0.50
3/4"	85	42	75	135	0.75
1"	95	50	85	135	0.90



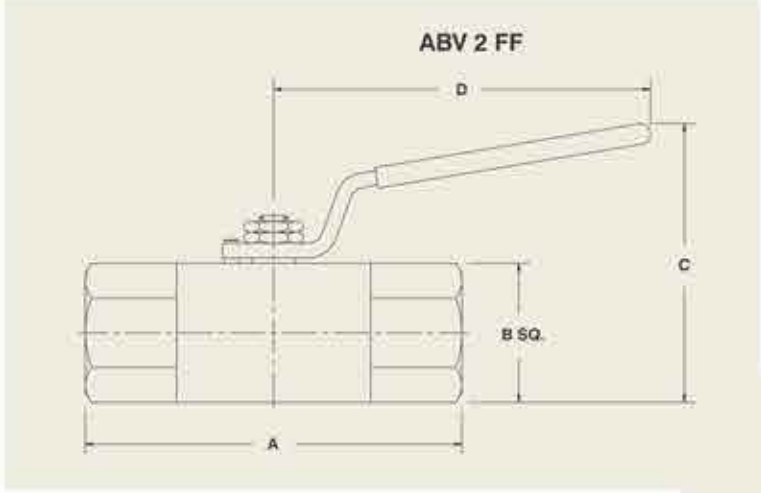
High Pressure Ball Valves

This range offers reliable option for the high pressure application. These valves are recommended for the use in Oil, Gas, Petrochemicals where the long life is required.

ABV 2

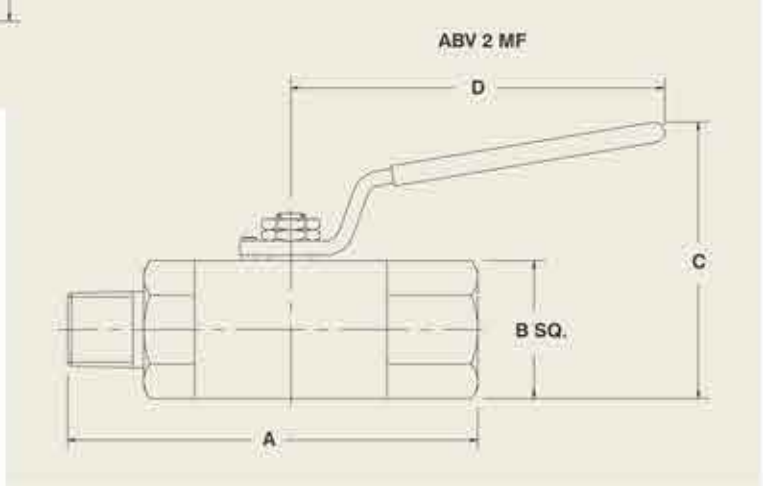
Standard Specifications :

Size : ¼" to 1"
End connections : Screwed (NPT / BSPP / BSPT)
Material : CS, 316 SS, 304 SS, 316 L SS
Special materials are also available on request
Maximum working pressure : 6000 PSI at 100° C
See pressure temperature chart for high temperature applications



ABV 2 FF

SIZE	A	B SQ.	C	D	WEIGHT
1/4"	60	28	63	84	0.4
3/8"	60	32	63	84	0.4
1/2"	103	38	76	103	1.2
3/4"	123	50	89	103	2.0
1"	123	50	89	103	1.9

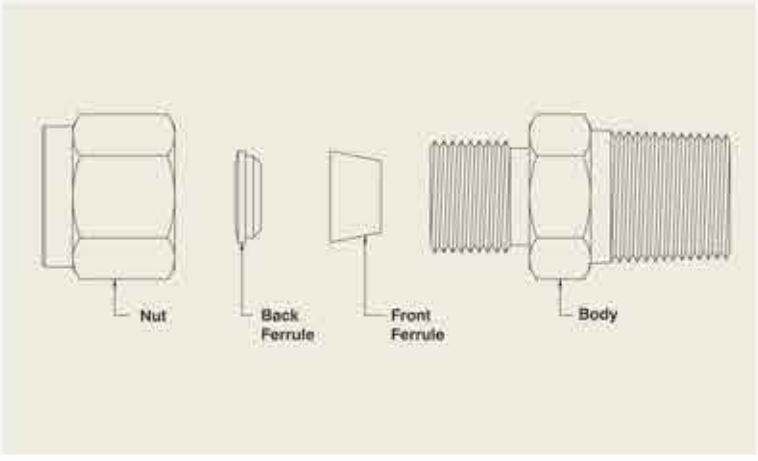


ABV 2 MF

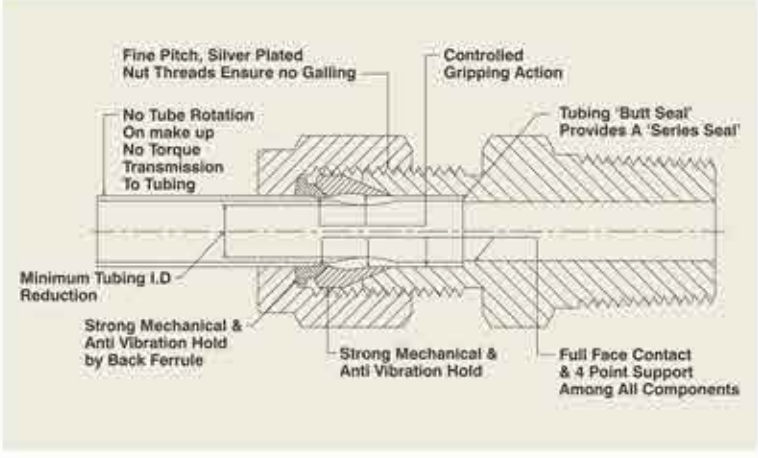
SIZE	A	B SQ.	C	D	WEIGHT
1/4"	75	32	63	84	0.4
3/8"	76	32	63	84	0.4
1/2"	114	38	76	103	1.2
3/4"	141	50	89	103	2.0
1"	144	50	89	103	1.9

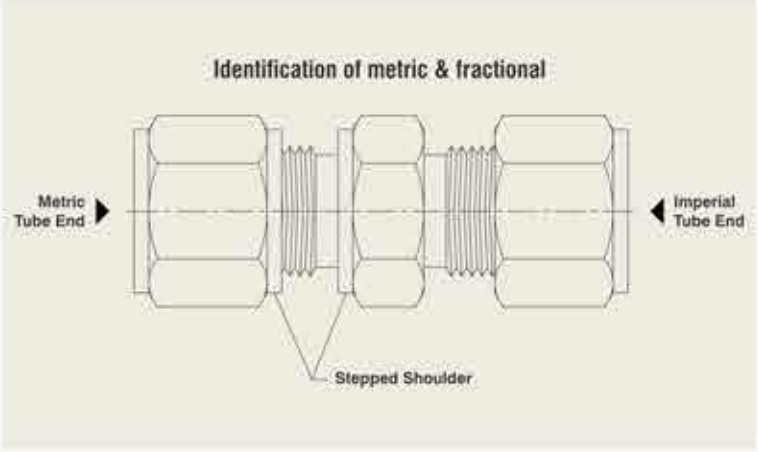
Instrumentation Tube Fittings

Aptek instrument tube fittings are used for leak proof, torque free seal in different instrumentation & process tubing connections. These products eliminate costly & hazardous leakages.



As shown in the figure the normal tube fitting is made of four parts. The parts are machined as per international standards to achieve the high quality. The frerrules are hardened & burnished for better swaging. The nuts are silver plated for preventing the seize up on the threads. The fitting consists of four parts but when it is fixed to the tube as shown; it becomes a five parts leak proof connection. No special tool is required to install the tube fittings.





Materials :
Aptek fittings are available in different materials as shown in the below mentioned table.

MATERIALS	BARSTOCK	FORGINGS
STAINLESS STEEL (316 & 304)	ASTM-A-276, ASTM-A-479, BS-970, DIN-4401	ASTM-A-182, BS-970, DIN-4401
BRASS	ASTM-B-16, ASTM-B-453, BS-2874	ASTM-B-124, BS-2872
STEEL MONEL	ASTM-A-108, ASTM-B-164, BS-3076	ASTM-A-576, ASTM-B-164, BS-3076

Pressure & Temperature rating for Instrumentation Fittings.

ISO 9001 : 2008 | PED 97/23/EC

Table - 1

NPT / ISO Pipe Size IN.	316 SS & Carbon Steel	
	Male Threads (PSI)	Female Threads (PSI)
1/8" NPT	9300	6000
1/4" NPT	7300	6000
3/8" NPT	7000	5000
1/2" NPT	6900	4500
3/4" NPT	6500	4200
1" NPT	4800	4000

Compression fittings are rated for working pressure higher than the tubing. Therefore pressure rating depends on choice of tubing which should be based on material. Wall thickness and temperature (see table below). De rating factors must be used to determinate tubing working pressure at high temperatures.

Maximum allowable working pressure for fractional size tubing (value in PSI)

Table - 2

Tubing O.D. (inch)	Tubing wall thickness (inch)											
	0.010"	0.012"	0.016"	0.020"	0.028"	0.035"	0.049"	0.065"	0.083"	0.095"	0.109"	0.120"
1/16"	6,852	8,395	11,510	14,395								
1/8"				6,843	9,948	12,622						
3/16"				4,345	6,342	8,145	11,760					
1/4"					4,575	5,910	8,700	11,773				
3/8"						3,770	5,465	7,520				
1/2"						2,770	3,980	5,415	7,155			
5/8"							3,130	4,240	5,550	6,480		
3/4"							2,570	3,490	4,535	5,270	6,150	
7/8"							2,190	2,948	3,845	4,443	5,180	
1"								2,568	3,318	3,843	4,462	4,970

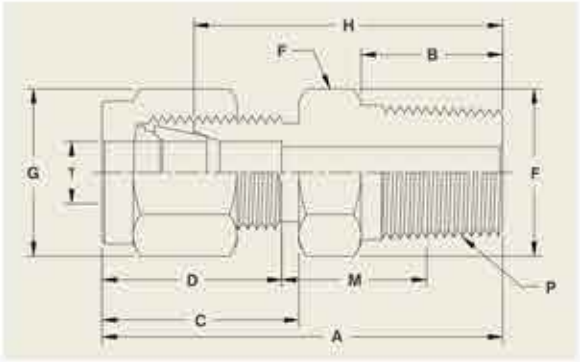
Maximum allowable working pressure for metric size tubing (value in bar)

Table - 3

Tubing O.D. (mm)	Tubing wall thickness (mm)											
	0.5	0.6	0.8	1.0	1.2	1.5	1.6	1.8	2.0	2.2	2.5	3.0
3	492	610	825	1030								
6			382	495	603	775	909					
8			281	357	441	560	603					
10			220	278	342	438	471					
12			180	235	280	360	384	438				
16				170	203	259	278	315	360	398	458	561
18				148	178	231	245	278	313	350	400	495
22				121	145	186	201	223	250	278	320	392
25				104	125	160	175	194	218	243	278	339

- AISI 304 and AISI 316 stainless steel annealed seamless tubing ASTM A-269 or A-213 or equivalent
- Above mentioned working pressure is applicable only for – 29 ° C to 38 ° C for AISI 304 & AISI 316/316 L stainless steel. For temperature range other then mentioned above the standard pressure temperature chart applicable for the selected material grade should be referred for the selection of the maximum working pressure.

Male Connector



Imperial Range

Dimensions in Inches

PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY	M
MCI-1616	1/16	1/16	0.94	0.38	0.44	0.34	5/16	5/16	0.78	0.34
MCI-1618	1/16	1/8	1.00	0.38	0.44	0.34	1/2	5/16	0.84	0.41
MCI-1816	1/8	1/16	1.19	0.38	0.63	0.53	1/2	7/16	0.91	0.41
MCI-1818	1/8	1/8	1.19	0.38	0.63	0.53	1/2	7/16	0.91	0.41
MCI-1814	1/8	1/4	1.41	0.56	0.63	0.53	9/16	7/16	1.13	0.50
MCI-3618	3/16	1/8	1.21	0.38	0.63	0.54	7/16	1/2	0.95	0.43
MCI-3614	3/16	1/4	1.42	0.56	0.63	0.54	9/16	1/2	1.16	0.54
MCI-1416	1/4	1/16	1.29	0.38	0.70	0.60	1/2	9/16	1.00	0.46
MCI-1418	1/4	1/8	1.29	0.38	0.70	0.60	1/2	9/16	1.00	0.45
MCI-1414	1/4	1/4	1.50	0.56	0.72	0.63	9/16	9/16	1.19	0.50
MCI-1438	1/4	3/8	1.51	0.56	0.70	0.60	11/16	9/16	1.19	0.56
MCI-1412	1/4	1/2	1.73	0.75	0.70	0.60	7/8	9/16	1.44	0.67
MCI-5618	5/16	1/8	1.34	0.38	0.73	0.64	9/16	5/8	1.05	0.46
MCI-5614	5/16	1/4	1.52	0.56	0.73	0.64	9/16	5/8	1.23	0.54
MCI-3818	3/8	1/8	1.38	0.38	0.76	0.66	5/8	11/16	1.09	0.48
MCI-3514	3/8	1/4	1.57	0.56	0.76	0.66	5/8	11/16	1.28	0.57
MCI-3838	3/8	3/8	1.57	0.56	0.76	0.66	11/16	11/16	1.28	0.56
MCI-3812	3/8	1/2	1.79	0.75	0.76	0.66	7/8	11/16	1.50	0.67
MCI-3834	3/8	3/4	1.82	0.75	0.76	0.66	1-1/16	11/16	1.53	0.68
MCI-1214	1/2	1/4	1.71	0.56	0.86	0.90	13/16	7/8	1.31	0.47
MCI-1238	1/2	3/8	1.71	0.56	0.86	0.90	13/16	7/8	1.31	0.46
MCI-1212	1/2	1/2	1.90	0.75	0.86	0.90	7/8	7/8	1.50	0.54
MCI-1234	1/2	3/4	1.93	0.75	0.86	0.90	1-1/16	7/8	1.53	0.55
MCI-5838	5/8	3/8	1.74	0.56	0.86	0.96	15/16	1	1.34	0.43
MCI-5812	5/8	1/2	1.93	0.75	0.86	0.96	15/16	1	1.53	0.51
MCI-5834	5/8	3/4	1.93	0.75	0.86	0.96	1-1/16	1	1.53	0.49
MCI-3412	3/4	1/2	1.99	0.75	0.86	0.96	1-1/16	1-1/8	1.59	0.57
MCI-3434	3/4	3/4	1.99	0.75	0.86	0.96	1-1/16	1-1/8	1.59	0.55
MCI-3401	3/4	1	2.21	0.94	0.86	0.96	1-3/16	1-1/8	1.81	0.68
MCI-0134	1	3/4	2.26	0.75	1.04	1.23	1-3/8	1-1/2	1.78	0.55
MCI-0101	1	1	2.45	0.94	1.04	1.23	1-3/8	1-1/2	1.97	0.65

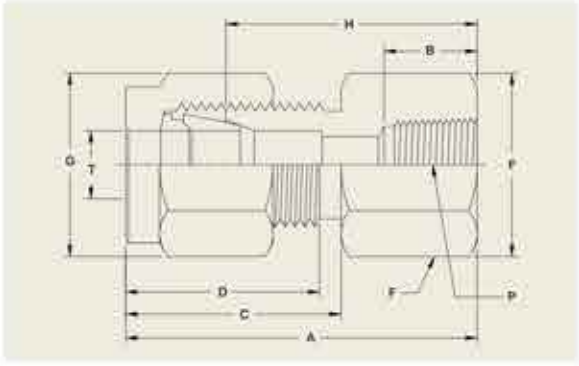
Matric Range

Dimensions in mm

PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY	M
MCM-0418	4	1/8"	31.35	9.53	16.67	14.29	12	12	24.21	10.72
MCM-0414	4	1/4"	35.72	14.29	16.67	14.29	14	12	29.37	15.88
MCM-0618	6	1/8"	33.34	9.53	18.26	15.88	14	14	25.40	11.11
MCM-0614	6	1/4"	33.34	14.29	18.26	15.88	14	14	30.16	12.70
MCM-0638	6	3/8"	38.89	14.29	18.26	15.88	19	14	30.96	13.49
MCM-0612	6	1/2"	44.45	19.05	18.26	15.88	22	14	36.51	15.88
MCM-0818	8	1/8"	34.53	9.53	19.05	16.67	14	17	26.59	11.51
MCM-0814	8	1/4"	39.29	14.29	19.05	16.67	14	17	31.35	13.10
MCM-1018	10	1/8"	35.72	9.53	19.84	17.46	17	19	27.78	11.91
MCM-1014	10	1/4"	40.48	14.29	19.84	17.46	17	19	32.54	13.49
MCM-1038	10	3/8"	40.48	14.29	19.84	17.46	19	19	32.54	13.49
MCM-1012	10	1/2"	46.04	19.05	19.84	17.46	22	19	38.10	15.88
MCM-1034	10	3/4"	46.83	19.05	19.84	17.46	27	19	38.89	15.08
MCM-1214	12	1/4"	43.66	14.29	22.23	23.02	22	22	33.34	11.11
MCM-1238	12	3/8"	43.66	14.29	22.23	23.02	22	22	33.34	11.11
MCM-1212	12	1/2"	48.42	19.05	22.23	23.02	22	22	38.10	12.70
MCM-1234	12	3/4"	49.21	19.05	22.23	23.02	27	22	38.89	11.91
MCM-1638	16	3/8"	44.45	14.29	22.23	24.61	24	27	34.13	10.32
MCM-1612	16	1/2"	49.21	19.05	22.23	24.61	24	27	38.89	11.91
MCM-1634	16	3/4"	49.21	19.05	22.23	24.61	27	27	38.89	10.32
MCM-1812	18	1/2"	50.80	19.05	22.23	24.61	27	30	40.48	13.49
MCM-1834	18	3/4"	50.80	19.05	22.23	24.61	27	30	40.48	10.32
MCM-1801	18	1"	56.36	23.81	22.23	24.61	36	30	46.40	14.29
MCM-2012	20	1/2"	50.80	19.05	22.23	24.61	27	30	40.48	13.49
MCM-2034	20	3/4"	50.80	19.05	22.23	24.61	27	30	40.48	10.32
MCM-2001	20	1"	56.36	23.81	22.23	24.61	36	30	46.04	14.39
MCM-2534	25	3/4"	57.15	19.05	26.19	30.96	36	41	45.24	11.91
MCM-2501	25	1"	61.91	23.81	26.19	30.96	36	41	50.01	13.49

Female Connector

ISO 9001 : 2008 | PED 97/23/EC



Imperial Range

Dimensions in Inches

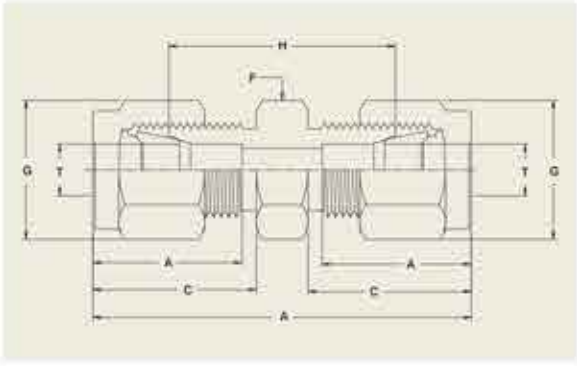
PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY
FCI-1616	1/16	1/16	0.94	0.36	0.44	0.34	1/2	5/16	0.78
FCI-1818	1/8	1/8	1.16	0.39	0.63	0.53	9/16	7/16	0.88
FCI-1814	1/8	1/4	1.34	0.59	0.63	0.53	3/4	7/16	1.06
FCI-3618	3/16	1/8	1.17	0.39	0.63	0.54	9/16	9/16	0.91
FCI-1418	1/4	1/8	1.23	0.39	0.70	0.60	9/16	9/16	0.94
FCI-1414	1/4	1/4	1.41	0.59	0.70	0.60	3/4	9/16	1.12
FCI-1438	1/4	3/8	1.48	0.59	0.70	0.60	7/8	9/16	1.19
FCI-1412	1/4	1/2	1.7	0.78	0.70	0.60	1-1/16	9/16	1.41
FCI-5618	5/16	1/8	1.26	0.39	0.73	0.64	3/4	5/8	0.97
FCI-5614	5/16	1/4	1.45	0.59	0.73	0.64	3/4	5/8	1.16
FCI-3818	3/8	1/8	1.29	0.39	0.76	0.66	5/8	11/16	1.00
FCI-3814	3/8	1/4	1.48	0.59	0.76	0.66	3/4	11/16	1.19
FCI-3838	3/8	3/8	1.54	0.59	0.76	0.66	7/8	11/16	1.25
FCI-3812	3/8	1/2	1.73	0.78	0.76	0.66	1-1/16	11/16	1.44
FCI-1214	1/2	1/4	1.65	0.59	0.86	0.90	13/16	7/8	1.25
FCI-1238	1/2	3/8	1.65	0.59	0.86	0.90	7/8	7/8	1.25
FCI-1212	1/2	1/2	1.84	0.78	0.86	0.90	1-1/16	7/8	1.44
FCI-5838	5/8	3/8	1.65	0.59	0.86	0.96	15/16	1	1.25
FCI-5812	5/8	1/2	1.84	0.78	0.86	0.96	1-1/16	1	1.44
FCI-3412	3/4	1/2	1.84	0.78	0.86	0.96	1-1/16	1-1/8	1.44
FCI-3434	3/4	3/4	1.9	0.81	0.86	0.96	1-5/16	1-1/8	1.50
FCI-0134	1	3/4	2.1	0.81	1.04	1.23	1-3/8	1-1/2	1.62
FCI-0101	1	1	2.45	1.00	1.04	1.23	1-5/8	1-1/2	1.97

Matric Range

Dimensions in mm

PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY
FCM-0418	4	1/8"	30.16	10	16.67	14.29	14	12	23.02
FCM-0618	6	1/8"	31.75	10	18.26	15.88	14	14	23.81
FCM-0614	6	1/4"	36.51	14	18.26	15.88	19	14	28.58
FCM-0638	6	3/8"	38.07	14	18.26	15.88	22	14	30.16
FCM-0612	6	1/2"	43.66	19	18.26	15.88	27	14	35.72
FCM-0818	8	1/8"	32.54	10	19.05	16.67	14	17	24.61
FCM-0814	8	1/4"	37.31	14	19.05	16.67	19	17	29.37
FCM-0118	10	1/8"	33.34	10	19.84	17.46	17	19	25.40
FCM-0114	10	1/4"	38.10	14	19.84	17.46	19	19	30.16
FCM-0138	10	3/8"	39.69	14	19.84	17.46	22	19	31.75
FCM-0112	10	1/2"	44.45	19	19.84	17.46	27	19	36.51
FCM-1214	12	1/4"	42.07	14	22.23	23.02	22	22	31.75
FCM-1238	12	3/8"	42.07	14	22.23	23.02	22	22	31.75
FCM-1212	12	1/2"	46.83	19	22.23	23.02	27	22	36.51
FCM-1612	16	1/2"	46.83	19	22.23	24.61	27	27	36.51
FCM-1812	18	1/2"	46.83	19	22.23	24.61	27	30	36.51
FCM-1834	18	3/4"	48.42	19	22.23	24.61	32	30	38.10
FCM-2012	20	1/2"	46.83	19	22.23	24.61	27	30	36.51
FCM-2034	20	3/4"	48.42	19	22.23	24.61	32	30	38.10
FCM-2534	25	3/4"	53.18	19	26.19	31.75	36	41	41.28
FCM-2501	25	1"	61.91	24	26.19	30.96	41	41	50.01

Equal Union



Imperial Range

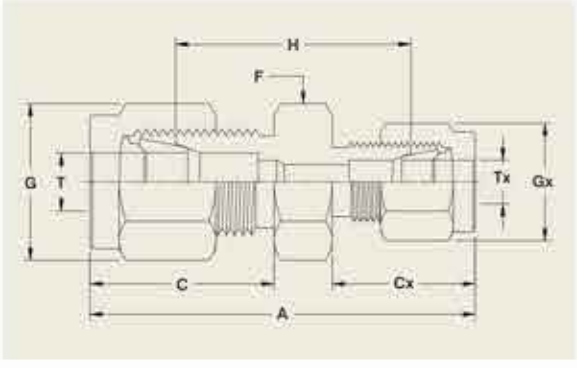
Dimensions in Inches

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
EUI-16	1/16	1.00	0.44	0.34	5/16	5/16	0.689
EUI-18	1/8	1.44	0.63	0.53	1/2	7/16	0.881
EUI-36	3/16	1.47	0.63	0.54	7/16	1/2	0.945
EUI-14	1/4	1.61	0.70	0.60	0.551	9/16	1.043
EUI-56	5/16	1.68	0.73	0.64	0.551	5/8	1.102
EUI-38	3/8	1.77	0.76	0.66	5/8	11/16	1.189
EUI-12	1/2	2.02	0.86	0.90	7/8	7/8	1.220
EUI-58	5/8	2.05	0.86	0.96	0.945	1	1.26
EUI-34	3/4	2.11	0.86	0.96	1.102	1-1/8	1.319
EUI-01	1	2.55	1.04	1.23	1.417	1-1/2	1.594

Metric Range

Dimensions in mm

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
EUM-04	4	38.50	16.67	14.29	12	12	24.21
EUM-06	6	42.07	18.26	15.88	14	14	26.19
EUM-08	8	44.04	19.05	16.67	14	17	28.18
EUM-10	10	46.04	19.84	17.46	17	19	31
EUM-12	12	51.59	22.23	23.01	22	22	31
EUM-16	16	52.39	22.23	24.61	24	25	32
EUM-18	18	53.98	22.23	24.61	27	30	33.34
EUM-20	20	55	22.23	24.61	27	32	34
EUM-25	25	64.29	26.19	30.96	36	38	40.48



Unequal Union

Imperial Range

Dimensions in Inches

PART NO.	T O/D	TX O/D	A LENGTH	C	CX	F BODY	G NUT	GX NUT	H BODY
UUI-1816	1/8	1/16	1.25	0.63	0.44	1/2	7/16	5/16	0.81
UUI-3618	3/16	1/8	1.48	0.66	0.63	1/2	1/2	7/16	0.92
UUI-1416	1/4	1/16	1.37	0.72	0.44	1/2	9/16	5/16	0.91
UUI-1418	1/4	1/8	1.56	0.72	0.63	1/2	9/16	7/16	0.97
UUI-1436	1/4	3/16	1.55	0.70	0.63	1/2	9/16	1/2	1.00
UUI-5614	5/16	1/4	1.66	0.73	0.70	9/16	5/8	9/16	1.08
UUI-3814	3/8	1/4	1.70	0.76	0.70	5/8	11/16	9/16	1.12
UUI-3856	3/8	5/16	1.74	0.76	0.73	5/81	11/16	5/8	1.16
UUI-1214	1/2	1/4	1.85	0.86	0.70	3/16	7/8	9/16	1.16
UUI-1238	1/2	3/8	1.91	0.86	0.76	13/16	7/8	11/16	1.22
UUI-5638	5/6	3/8	1.94	0.86	0.76	15/16	1	11/16	1.25
UUI-5812	5/8	1/2	2.05	0.86	0.86	15/16	1	7/8	1.25
UUI-3412	3/4	1/2	2.11	0.86	0.86	1-1/16	1-1/8	7/8	1.31
UUI-3458	3/4	5/8	2.11	0.86	0.86	1-1/16	1-1/8	1	1.31
UUI-0134	1	3/4	2.47	1.04	0.86	1-3/8	1-1/2	1-1/8	1.59

Matric Range

Dimensions in mm

PART NO.	T O/D	TX O/D	A LENGTH	C	CX	F BODY	G NUT	GX NUT	H BODY
UUM-0604	6	4	40.48	19.97	19.05	14	14	12	25.40
UUM-0804	8	6	43.26	19.05	19.97	14	17	14	27.38
UUM-1006	10	6	44.45	19.84	19.97	17	19	14	28.58
UUM-1008	10	8	45.24	19.84	19.05	17	19	17	29.37
UUM-1206	12	6	47.63	22.23	19.97	22	22	14	29.37
UUM-1210	12	10	49.21	22.23	19.84	22	22	19	30.96
UUM-1610	16	10	50.01	22.23	19.84	24	27	19	31.75
UUM-1612	16	12	52.39	22.23	22.23	24	27	22	31.75
UUM-2012	20	12	53.98	22.23	22.23	27	30	22	33.34
UUM-2016	20	16	53.98	22.23	22.23	27	30	27	33.34
UUM-2520	25	20	60.32	26.19	22.23	36	41	30	38.10

Bulkhead Male Connector

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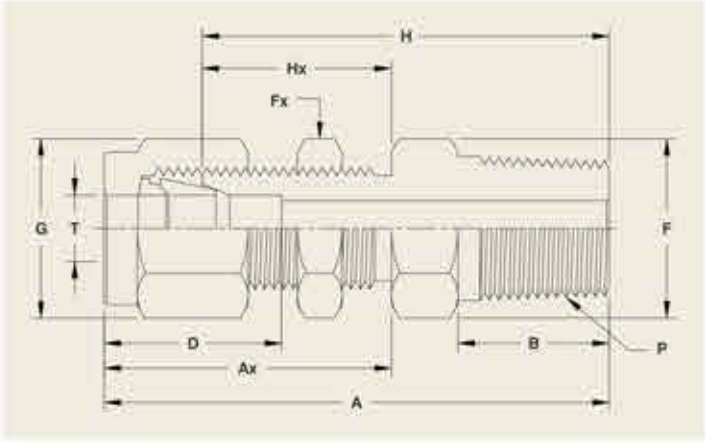
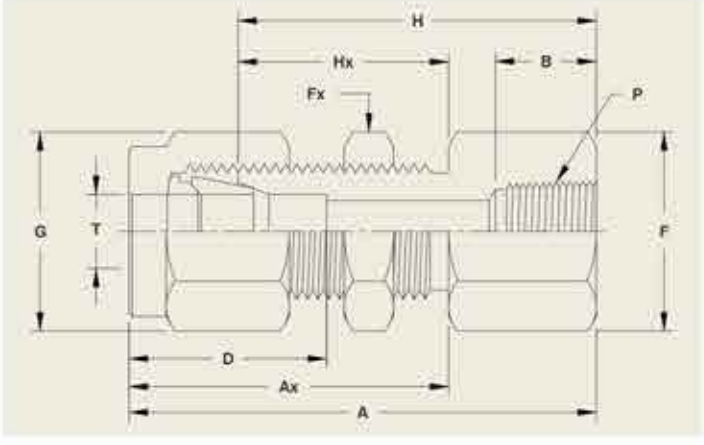


Imperial Range

Dimensions in Inches

PART NO.	T O/D	P	B	D	F BODY	G NUT	FX	H	AX	HX	A	PANEL HOLE	MAX PANEL
BMCI-1418	1/4	1/8	0.38	0.60	5/8	9/16	5/8	1.66	1.32	1.03	1.95	29/64	0.40
BMCI-1414	1/4	1/4	0.56	0.60	5/8	9/16	5/8	1.81	1.32	1.03	2.10	29/64	0.40
BMCI-3814	3/8	1/4	0.56	0.66	3/4	11/16	3/4	1.97	1.45	1.16	2.26	37/64	0.44
BMCI-1212	1/2	1/2	0.75	0.90	15/16	7/8	15/16	2.28	1.65	1.25	2.68	49/64	0.50

Bulkhead Female Connector

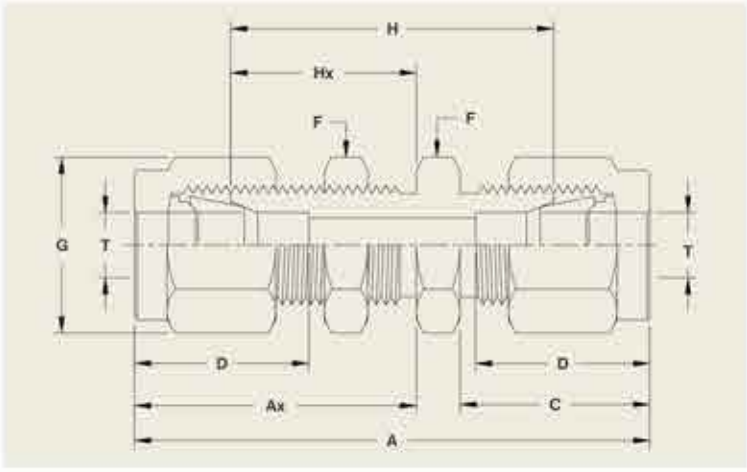


Imperial Range

Dimensions in Inches

PART NO.	T O/D	P	B	D	F BODY	G NUT	FX	H	AX	HX	A	PANEL HOLE	MAX PANEL
BFCI-1418	1/4	1/8	0.39	0.60	5/8	9/16	5/8	1.56	1.32	1.32	1.85	0.453	0.40
BFCI-1414	1/4	1/4	0.59	0.60	3/4	9/16	5/8	1.75	1.32	1.32	2.04	0.453	0.40
BFCI-3814	3/8	1/4	0.59	0.66	3/4	11/16	3/4	1.88	1.45	1.45	2.17	0.579	0.44
BFCI-1238	1/2	3/8	0.59	0.90	0.945	7/8	0.945	2.03	1.65	1.65	2.43	0.768	0.50
BFCI-1212	1/2	1/2	0.78	0.90	1.063	7/8	0.945	2.22	1.65	1.65	2.62	0.768	0.50

Bulkhead Union



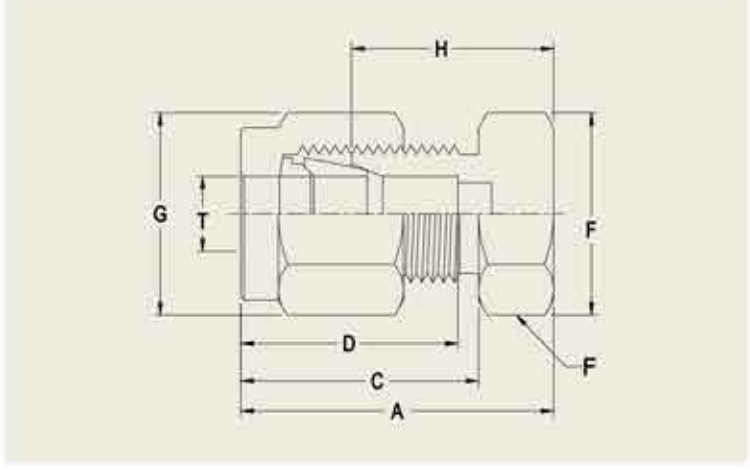
Imperial Range — **Dimensions in Inches**

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H
BUI-16	1/16	1.24	0.43	0.34	5/16	5/16	0.94
BUI-18	1/8	2.02	0.60	0.50	1/2	7/16	1.50
BUI-36	3/16	2.11	0.63	0.54	9/16	1/2	1.59
BUI-14	1/4	2.27	0.70	0.60	5/8	9/16	1.69
BUI-56	5/16	2.39	0.73	0.64	11/16	5/8	1.81
BUI-38	3/8	2.45	0.76	0.66	3/4	11/16	1.87
BUI-12	1/2	2.80	0.86	0.90	7/8	7/8	2.00
BUI-58	5/8	2.86	0.86	0.96	1-1/16	1	2.06
BUI-34	3/4	3.11	0.86	0.96	1-3/16	1-1/8	2.31
BUI-01	1	3.77	1.04	1.23	1-5/8	1-1/2	2.81

Metric Range — **Dimensions in mm**

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY	AX	HX
BUM-03	3	51.3	15.3	12.9	14	12	38.1	31.0	24.6
BUM-04	4	53.6	16.1	13.7	14	12	40.4	32.0	25.4
BUM-06	6	57.7	17.7	15.3	16	14	42.9	33.6	26.2
BUM-08	8	61.0	18.6	16.2	18	16	46.0	36.1	28.6
BUM-10	10	63.7	19.5	17.2	22	19	48.5	37.0	29.4
BUM-12	12	71.0	22.0	22.8	24	22	50.8	41.9	31.8
BUM-16	16	72.5	22.0	24.0	27	25	52.3	42.6	32.5
BUM-20	20	84.5	22.0	26.0	35	32	64.3	53.0	42.9

Cap



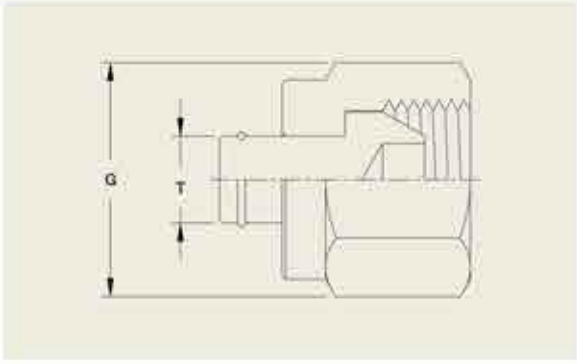
Imperial Range — **Dimensions in Inches**

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
CI-36	3/16	0.84	0.63	0.54	7/16	1/2	0.58
CI-14	1/4	0.92	0.70	0.60	1/2	9/16	0.63
CI-56	5/16	0.96	0.73	0.64	9/16	5/81	0.67
CI-38	3/8	1.01	0.76	0.66	5/8	1/16	0.72
CI-12	1/2	1.15	0.86	0.90	7/8	7/8	0.75
CI-58	5/8	1.18	0.86	0.96	15/16	1	0.78
CI-34	3/4	1.24	0.86	0.96	1-1/16	1-1/8	0.84
CI-01	1	1.51	1.04	1.23	1-3/8	1-1/2	1.03

Matric Range — **Dimensions in mm**

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
CM-04	4	21.3	16.1	13.70	12	12	14.70
CM-06	6	23.1	17.7	15.30	14	14	15.70
CM-08	8	24.5	18.6	16.20	15	16	17.00
CM-10	10	26.6	19.5	17.20	18	19	19.00
CM-12	12	29.1	22.0	22.00	22	22	19.00
CM-16	16	29.9	22.0	22.00	24	25	19.80
CM-18	18	31.4	22.0	22.00	27	30	21.30
CM-20	20	34.0	22.0	22.00	30	32	23.90
CM-25	25	38.5	26.5	26.50	35	38	26.20

Plug



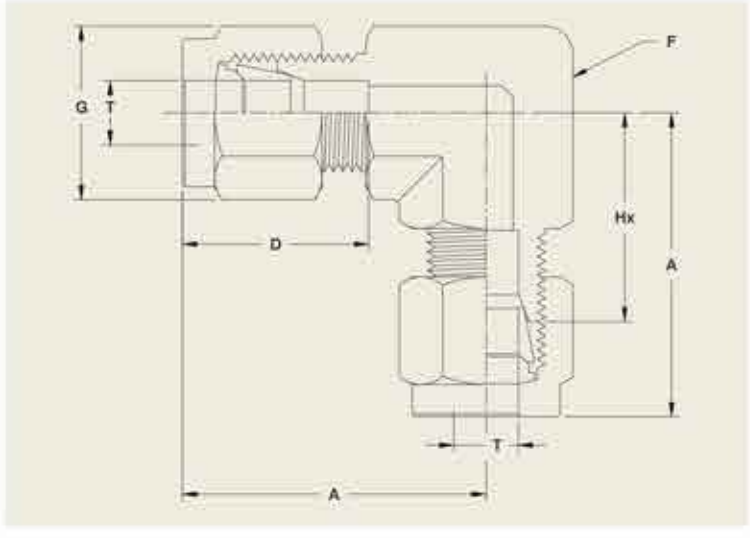
Imperial Range — **Dimensions in Inches**

PART NO.	T O/D	G NUT
PI-16	1/16	5/16
PI-18	1/8	7/16
PI-36	3/16	1/2
PI-14	1/4	9/16
PI-56	5/16	5/8
PI-38	3/8	11/16
PI-12	1/2	7/8
PI-58	5/8	1
PI-34	3/4	1-1/8
PI-01	1	1-1/2

Matric Range — **Dimensions in mm**

PART NO.	T O/D	G NUT
PM-04	4	12
PM-06	6	14
PM-08	8	17
PM-10	10	19
PM-12	12	22
PM-16	16	27
PM-18	18	30
PM-20	20	30
PM-25	25	41

Union Elbow



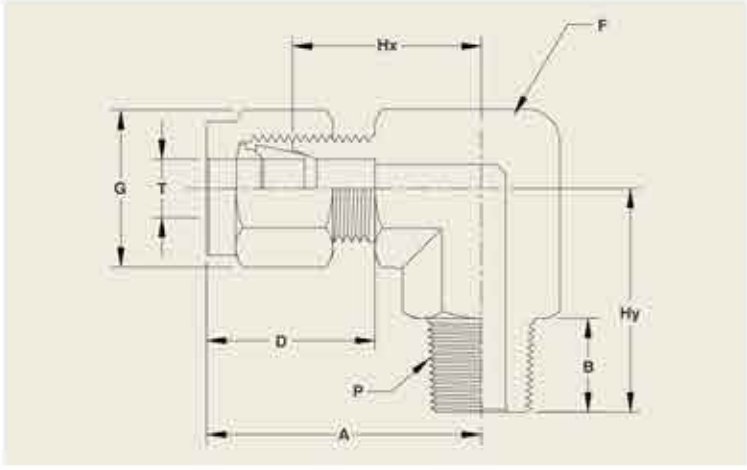
Imperial Range — **Dimensions in Inches**

PART NO	T O/D	A LENGTH	D	F BODY	G NUT	HX BODY
UEI-16	1/16	17.8	0.34	0.433	5/16	0.56
UEI-18	1/8	22.4	0.53	1/2	7/16	0.72
UEI-36	3/16	26	0.54	1/2	1/2	0.75
UEI-14	1/4	27	0.60	0.55	9/16	0.78
UEI-56	5/16	29	0.64	10.630	5/81	0.88
UEI-38	3/8	31	0.66	0.630	1/16	0.91
UEI-12	1/2	36	0.90	7/8	7/8	0.98
UEI-58	5/8	38	0.96	0.945	1	1.06
UEI-34	3/4	40	0.96	1.0630	1-1/8	1.11
UEI-01	1	49	1.23	1.380	1-1/2	1.31

Matric Range — **Dimensions in mm**

PART NO	T O/D	A LENGTH	D	F BODY	G NUT	HX BODY
UEM-04	4	24.61	14.29	12	12	19.05
UEM-06	6	27	15.88	12	14	19.81
UEM-08	8	29	16.67	16	17	22.23
UEM-10	10	31	17.46	16	19	23.11
UEM-12	12	36	23.02	22	22	24.89
UEM-16	16	38	24.61	24	27	26.19
UEM-18	18	40	24.61	27	30	29.37
UEM-20	20	44	24.61	27	30	29.37
UEM-25	25	50	30.96	32	41	33.34

Male Elbow



Imperial Range

Dimensions in Inches

PART. NO	T O/D	P	A LENGTH	B	HY	D	F BODY	G NUT	HX BODY
MEI-1616	1/16	1/16	3/4	0.38	0.690	0.34	0.47	5/16	5/8
MEI-1618	1/16	1/8	3/4	0.38	0.708	0.34	0.47	5/16	5/8
MEI-1816	1/8	1/16	1	0.38	0.748	0.51	0.47	7/16	0.708
MEI-1818	1/8	1/8	0.945	0.38	0.748	0.53	0.47	7/16	0.708
MEI-1814	1/8	1/4	0.945	0.56	0.945	0.53	0.47	7/16	0.945
MEI-3618	3/16	1/8	1	0.38	0.768	0.54	0.47	1/2	3/4
MEI-1418	1/4	1/8	1.063	0.38	0.768	0.60	0.47	9/16	0.787
MEI-1414	1/4	1/4	1.063	0.56	0.945	0.60	0.47	9/16	0.945
MEI-1438	1/4	3/8	1.181	0.56	1.024	0.60	0.55	9/16	0.866
MEI-1412	1/4	1/2	1.260	0.75	1.299	0.60	0.75	9/16	0.945
MEI-5618	5/16	1/8	1.181	0.38	0.787	0.64	0.55	5/8	0.866
MEI-5614	5/16	1/4	1.181	0.56	1	0.64	0.55	5/81	0.866
MEI-3818	3/8	1/8	1.220	0.38	0.787	0.66	0.55	1/16	0.945
MEI-3814	3/8	1/4	1.220	0.56	1	0.66	0.55	11/16	0.945
MEI-3838	3/8	3/8	1.240	0.56	1.024	0.66	0.55	11/16	0.945
MEI-3812	3/8	1/2	1.338	0.75	1.299	0.66	0.75	11/16	1
MEI-1214	1/2	1/4	1.417	0.56	1.102	0.91	0.75	7/8	1
MEI-1238	1/2	3/8	1.417	0.56	1.102	0.91	0.75	7/8	1
MEI-1212	1/2	1/2	1.456	0.75	1.299	0.91	0.75	7/8	1
MEI-5838	5/8	3/8	1.496	0.56	1.181	0.96	0.94	1	1.063
MEI-5812	5/8	1/2	1.496	0.75	1.338	0.96	0.94	1	1.063
MEI-3412	3/4	1/2	1.535	0.75	1.417	0.96	1.06	1-1/8	1.141
MEI-3434	3/4	3/4	1.535	0.75	1.417	0.96	1.06	1-1/8	1.141
MEI-0134	1	3/4	1.929	0.94	1.654	1.23	1.25	1-1/2	1.338
MEI-0101	1	1	1.929	0.94	1.850	1.23	1.25	1-1/2	1.338

Matric Range

Dimensions in mm

PART. NO	T O/D	P	A LENGTH	B	HY	D	F BODY	G NUT	HX BODY
MEM-0418	4	1/8"	24.61	19.53	19.30	14.29	12	12	19.05
MEM-0618	6	1/8"	26.19	9.53	19.84	15.88	12	14	19.80
MEM-0614	6	1/4"	26.19	14.29	23.81	15.88	14	14	19.80
MEM-0638	6	3/8"	27.60	14.29	23.58	15.88	19	14	21.33
MEM-0612	6	1/2"	29.40	19.05	33.24	15.88	22	14	23.11
MEM-0818	8	1/8"	28.58	9.53	20.64	16.67	17	17	22.22
MEM-0814	8	1/4"	28.58	14.29	25.40	16.67	14	17	22.22
MEM-0838	8	3/8"	28.58	14.24	25.40	16.67	19	17	22.22
MEM-0812	8	1/2"	31.75	19.05	32.00	16.67	22	17	24.00
MEM-1018	10	1/8"	28.90	9.53	22.23	17.46	19	19	23.11
MEM-1014	10	1/4"	28.90	14.29	25.40	17.46	19	19	23.11
MEM-1038	10	3/8"	28.90	14.29	28.58	17.46	19	19	23.11
MEM-1012	10	1/2"	30.60	19.05	31.75	17.46	22	19	24.89
MEM-1214	12	1/4"	35.80	14.29	28.58	23.02	22	22	24.89
MEM-1238	12	3/8"	35.80	14.29	28.58	23.02	22	22	24.89
MEM-1212	12	1/2"	35.80	19.05	33.34	23.02	22	22	24.89
MEM-1638	16	3/8"	36.51	14.29	31.75	24.61	19	27	26.19
MEM-1612	16	1/2"	36.51	19.05	34.93	24.61	19	27	26.19
MEM-1812	18	1/2"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-1834	18	3/4"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-2012	20	1/2"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-2034	20	3/4"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-2534	25	3/4"	45.24	19.05	38.10	26.19	32	41	33.34
MEM-2501	25	1"	45.24	23.81	46.83	30.96	32	41	33.34

Female Elbow

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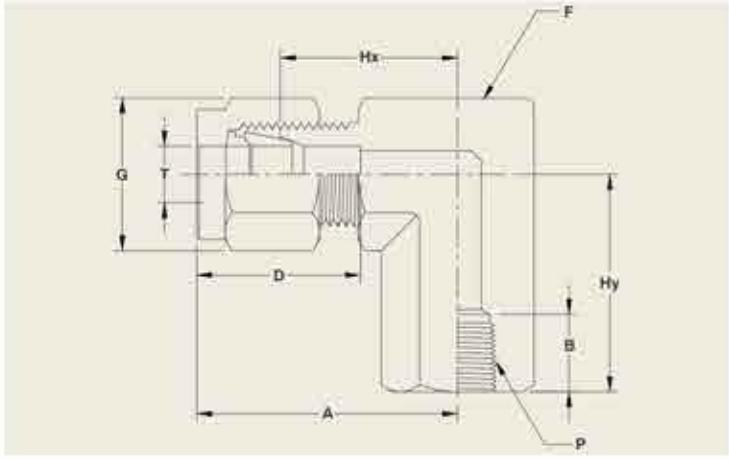
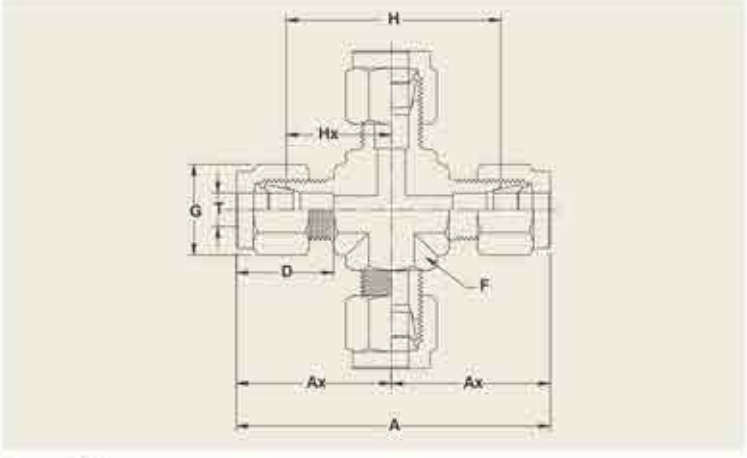


Imperial Range

Dimensions in Inches

PART. NO	T O/D	F	A LENGTH	B	HY	D	F BODY	G NUT	HX BODY
FEI-1818	1/8	1/8	0.95	0.39	0.15	0.50	0.551	7/16	0.708
FEI-1814	1/8	1/4	1.07	0.59	0.88	0.50	0.748	7/16	0.825
FEI-3618	3/16	1/8	0.98	0.39	0.75	0.54	0.551	½	0.703
FEI-1418	1/4	1/8	1.04	0.39	0.75	0.60	0.551	9/16	0.749
FEI-1414	1/4	1/4	1.17	0.59	0.88	0.60	0.630	9/16	0.886
FEI-5618	5/16	1/8	1.17	0.39	0.75	0.64	0.551	5/8	0.866
FEI-5614	5/16	1/4	1.20	0.59	0.88	0.64	0.748	5/8	0.905
FEI-3818	3/8	1/8	1.20	0.39	0.75	0.66	0.748	11/16	0.905
FEI-3814	3/8	1/4	1.23	0.59	0.88	0.66	0.748	11/16	0.945
FEI-3838	3/8	3/8	1.32	0.59	0.88	0.66	0.748	11/16	1.027
FEI-3812	3/8	1/2	1.41	0.78	1.12	0.66	1.102	11/16	1.102
FEI-1214	1/2	1/4	1.38	0.59	0.88	0.90	0.748	7/8	1.000
FEI-1238	1/2	3/8	1.43	0.59	0.88	0.90	0.748	7/8	1.023
FEI-1212	1/2	1/2	1.52	0.78	1.12	0.90	1.102	7/8	1.142
FEI-5838	5/8	3/8	1.46	0.59	0.88	0.96	0.748	1	1.102
FEI-5812	5/8	1/2	1.52	0.78	1.12	0.96	1.102	1	1.142
FEI-3412	3/4	1/2	1.51	0.78	1.12	0.96	1.102	1-1/8	1.102
FEI-3434	3/4	3/4	1.65	0.81	1.25	0.96	1.102	1-1/8	1.260

Equal Union Cross



Imperial Range

Dimensions in Inches

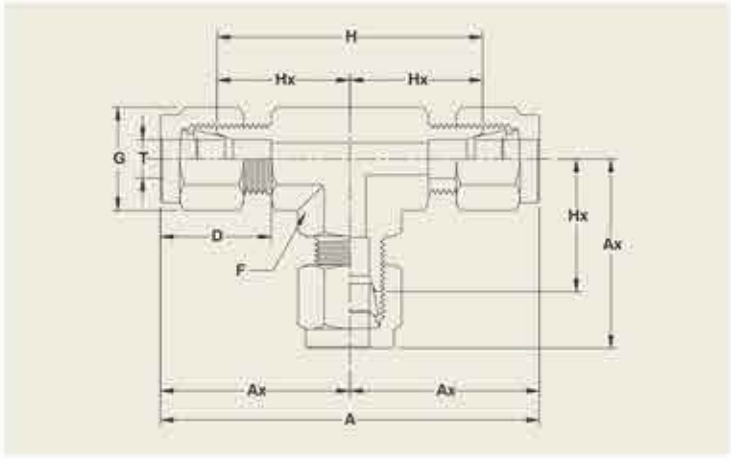
PART. NO	T O/D	AX LENGTH	D	F BODY	G NUT	HX BODY	H	A
UCI-18	1/8	0.99	0.53	1/2	7/16	0.72	1.44	1.98
UCI-36	3/16	1.01	0.54	1/2	1/2	0.75	1.50	2.02
UCI-14	1/4	1.07	0.60	9/16	9/16	0.78	1.56	2.14
UCI-56	5/16	1.17	0.64	5/8	5/81	0.88	1.76	2.34
UCI-38	3/8	1.2	0.66	5/8	1/16	0.91	1.82	2.40
UCI-12	1/2	1.38	0.90	7/8	7/8	0.98	1.96	2.76
UCI-58	5/8	1.46	0.96	0.81	1	1.06	2.12	2.92

Metric Range

Dimensions in mm

PART. NO	T O/D	Ax Length	D	F Body	G NUT	Hx Body	H	A
UCM-04	4	26.15	14.29	12	12	19.00	38.00	52.30
UCM-06	6	27.20	15.88	14	14	19.80	39.60	54.40
UCM-08	8	29.70	16.67	16	17	22.20	44.40	59.40
UCM-10	10	30.80	17.46	16	19	23.10	46.20	61.60
UCM-12	12	35.00	23.02	22	22	24.90	49.80	70.00
UCM-16	16	36.39	24.61	24	27	26.19	52.39	72.78

Union Tee



Imperial Range

Dimensions in Inches

PART. NO	T O/D	AX LENGTH	D	F BODY	G NUT	HX BODY	H	A
UTI-16	1/16	0.72	0.34	0.47	5/16	0.56	1.12	1.44
UTI-18	1/8	0.99	0.50	0.47	7/16	0.72	1.44	1.98
UTI-36	3/16	1.01	0.54	0.47	1/2	0.75	1.50	2.02
UTI-14	1/4	1.07	0.60	0.47	9/16	0.78	1.56	2.25
UTI-56	5/16	1.17	0.64	0.55	5/8	0.88	1.76	2.34
UTI-38	3/8	1.20	0.66	0.55	11/16	0.91	1.82	2.40
UTI-12	1/2	1.30	0.90	0.75	7/8	0.98	1.96	2.76
UTI-58	5/8	1.46	0.96	0.94	1	1.06	2.12	2.92
UTI-34	3/4	1.51	0.96	1.06	1-1/8	1.11	2.22	3.02
UTI-01	1	1.79	1.23	1.25	1-1/2	1.31	2.62	3.58

Metric Range

Dimensions in mm

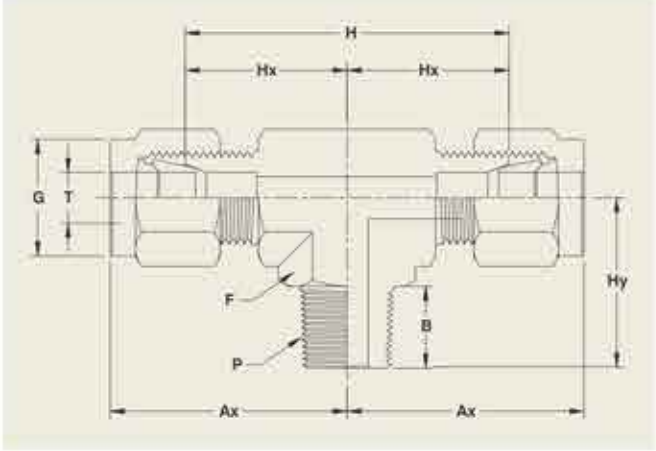
PART. NO	T O/D	AX LENGTH	D	F BODY	G NUT	HX BODY	H	A
UTM-04	4	26.15	14.29	12	12	19.00	38.00	52.30
UTM-06	6	27.20	15.88	12	14	19.80	39.60	54.40
UTM-08	8	29.70	16.67	14	17	22.20	44.40	59.40
UTM-10	10	30.80	17.46	14	19	23.10	46.20	61.60
UTM-12	12	35.00	23.02	19	22	24.90	49.80	70.00
UTM-16	16	36.39	24.61	24	27	26.19	52.39	72.78
UTM-18	18	39.37	24.61	27	30	29.37	58.74	78.74
UTM-20	20	39.37	24.61	27	30	29.37	58.74	78.74
UTM-25	25	45.24	30.96	32	41	33.54	67.08	90.48

Male Branch Tee

Imperial Range

Dimensions in Inches

PART. NO.	T O/D	P	Ax Length	B	HY	F	G NUT	HX BODY	H	A
BTI-1818	1/8	1/8	0.99	0.38	0.76	1/2	7/16	0.72	1.44	1.98
BTI-1814	1/8	1/4	0.99	0.56	0.94	0.551	7/16	0.72	1.44	1.98
BTI-3618	3/16	1/8	1.01	0.38	0.76	1/2	1/2	0.75	1.50	2.02
BTI-1418	1/4	1/8	1.07	0.38	0.76	1/2	9/16	0.78	1.56	2.14
BTI-1414	1/4	1/4	1.07	0.56	0.94	0.551	9/16	0.78	1.56	2.14
BTI-1438	1/4	3/8	1.13	0.56	1.00	3/4	9/16	0.84	1.68	2.26
BTI-5618	5/16	1/8	1.16	0.38	0.82	3/4	5/81	0.87	1.74	2.32
BTI-3818	3/8	1/8	1.21	0.38	0.82	3/4	1/16	0.91	1.82	2.42
BTI-3814	3/8	1/4	1.21	0.56	1.00	3/4	11/16	0.91	1.82	2.42
BTI-3838	3/8	3/8	1.21	0.56	1.00	3/4	11/16	0.91	1.82	2.42
BTI-3812	3/8	1/2	1.21	0.75	1.26	7/8	11/16	0.91	1.82	2.42
BTI-1214	1/2	1/4	1.38	0.56	1.08	7/8	7/8	0.98	1.96	2.76
BTI-1238	1/2	3/8	1.38	0.56	1.08	7/8	7/8	0.98	1.96	2.76
BTI-1212	1/2	1/2	1.38	0.75	1.26	7/8	7/8	0.98	1.96	2.76
BTI-5812	5/8	1/2	1.46	0.75	1.38	0.945	1	1.06	2.12	2.92



Metric Range

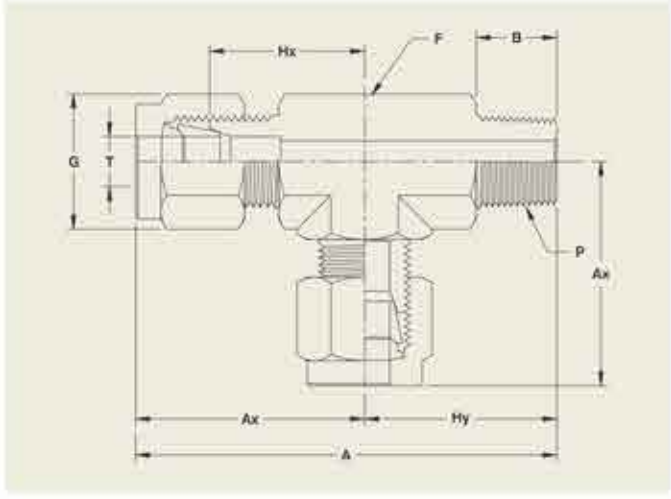
Dimensions in mm

PART. NO.	T O/D	P	AX LENGTH	B	HY	F	G NUT	HX BODY	H	A
BTM-0416	4	1/16	26.15	9.53	19.30	12	12	19.05	38.10	52.30
BTM-0418	4	1/8	26.15	9.53	19.53	12	12	19.05	38.10	52.30
BTM-0414	4	1/4	26.15	14.29	23.90	12	12	19.05	38.10	52.30
BTM-0618	6	1/8	27.21	9.53	19.30	14	14	19.80	39.60	54.42
BTM-0614	6	1/4	27.21	14.29	23.90	14	14	19.80	39.60	54.42
BTM-0638	6	3/8	29.00	14.29	25.40	19	14	21.33	42.66	57.46
BTM-0612	6	1/2	30.51	19.05	32.00	22	14	23.10	46.20	61.00
BTM-0818	8	1/8	29.70	9.53	20.80	19	17	22.22	44.44	59.40
BTM-0814	8	1/4	29.70	14.29	25.40	19	17	22.22	44.44	59.40
BTM-0838	8	3/8	29.70	14.29	25.40	19	17	22.22	44.44	59.40
BTM-0812	8	1/2	31.50	19.05	32.00	22	17	24.00	48.00	63.00
BTM-1018	10	1/8	30.80	9.53	20.80	19	19	23.10	46.20	61.60
BTM-1014	10	1/4	30.80	14.29	25.40	19	19	23.10	46.20	61.60
BTM-1038	10	3/8	30.80	14.29	25.40	19	19	23.10	46.20	61.60
BTM-1012	10	1/2	32.59	19.05	32.00	19	19	24.89	49.78	65.18
BTM-1214	12	1/4	34.99	14.29	27.40	22	22	24.89	49.78	69.98
BTM-1238	12	3/8	32.59	14.29	27.40	22	22	24.89	49.78	65.18
BTM-1212	12	1/2	32.59	19.05	32.00	22	22	24.89	49.78	65.18
BTM-1612	16	1/2	36.39	19.05	34.90	24	27	26.19	52.39	72.78

Male Run Tee

Aptek™

ISO 9001 : 2008 | PED 97/23/EC



Metric Range

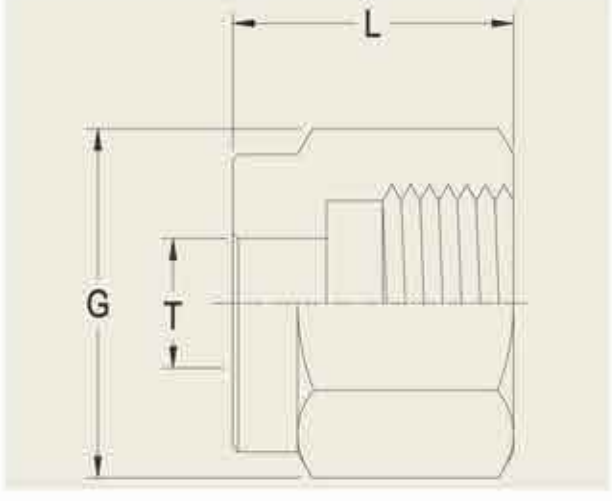
Dimensions in mm

PART. NO.	T O/D	P	AX LENGTH	B	HY	F	G NUT	HX BODY	H	A
RTM-0416	4	1/16	26.15	9.53	19.30	12	12	19.05	38.10	45.45
RTM-0418	4	1/8	26.15	9.53	19.30	12	12	19.05	38.10	45.45
RTM-0414	4	1/4	26.15	14.29	23.88	12	12	19.05	38.10	50.03
RTM-0618	6	1/8	27.21	9.53	19.30	12	14	19.81	39.62	46.51
RTM-0614	6	1/4	27.21	14.29	23.88	14	14	19.81	39.62	51.09
RTM-0638	6	3/8	28.74	14.29	25.40	19	14	21.34	42.68	54.14
RTM-0612	6	1/2	30.51	19.05	32.00	22	14	23.11	43.22	62.51
RTM-0818	8	1/8	29.73	9.53	20.83	19	17	22.23	44.46	50.56
RTM-0814	8	1/4	29.73	14.29	25.40	19	17	22.23	44.46	55.13
RTM-0838	8	3/8	29.73	14.29	25.40	19	17	22.23	44.46	55.13
RTM-0812	8	1/2	31.50	19.05	32.00	22	17	24.00	48.00	63.50
RTM-1018	10	1/8	30.81	9.53	20.83	19	19	23.11	46.22	51.64
RTM-1014	10	1/4	30.81	14.29	25.40	19	19	23.11	46.22	56.21
RTM-1038	10	3/8	30.81	14.29	25.40	19	19	23.11	46.22	56.21
RTM-1012	10	1/2	32.59	19.05	32.00	22	19	24.89	49.78	64.59
RTM-1214	12	1/4	34.99	14.29	27.43	22	22	24.89	49.78	62.42
RTM-1238	12	3/8	34.99	14.29	27.43	22	22	24.89	49.78	62.42
RTM-1212	12	1/2	34.99	19.05	32.00	22	22	24.89	49.78	66.99
RTM-1612	16	1/2	36.39	19.05	34.30	25	27	26.19	52.38	71.32

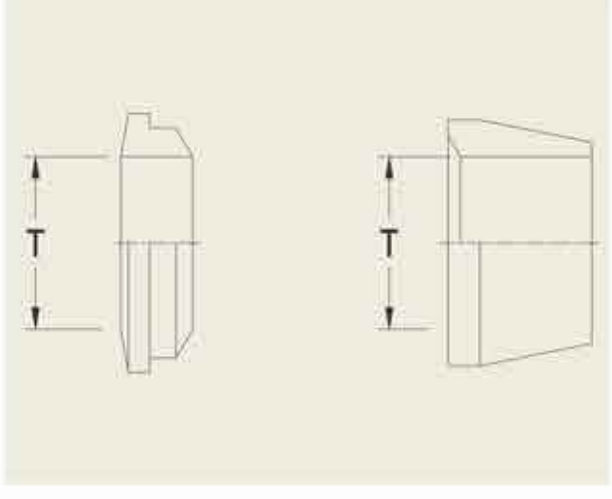
Imperial Range

Dimensions in Inches

PART. NO.	T O/D	P	AX LENGTH	B	HY	F	G NUT	HX BODY	H	A
RTI-1818	1/8	1/8	1.00	0.38	0.76	0.47	7/16	0.72	1.48	1.76
RTI-1814	1/8	1/4	1.00	0.56	0.94	0.47	7/16	0.72	1.66	1.94
RTI-3618	3/16	1/8	1.00	0.38	0.76	0.47	1/2	0.75	1.51	1.76
RTI-1418	1/4	1/8	1.07	0.38	0.76	0.47	9/16	0.78	1.54	1.83
RTI-1414	1/4	1/4	1.07	0.56	0.94	0.47	9/16	0.78	1.72	2.01
RTI-5618	5/16	1/8	1.16	0.38	0.82	0.55	5/81	0.87	1.70	1.98
RTI-3814	3/8	1/4	1.21	0.56	1.00	0.55	1/16	0.91	1.91	2.21
RTI-1238	1/2	3/8	1.38	0.56	1.08	0.74	7/8	0.98	2.06	2.46
RTI-1212	1/2	1/2	1.38	0.75	1.26	0.74	7/8	0.98	2.24	2.64
RTI-5812	5/8	1/2	1.47	0.75	1.38	0.74	1	1.06	2.40	2.85



Nut & Ferrules



Nut

Ferrules

Imperial Range

Dimensions In Inches

PART NO.	T O/D	G NUT A/F	L
NI-16	1/16	5/16	0.31
NI-18	1/8	7/16	0.47
NI-36	3/16	1/2	0.50
NI-14	1/4	9/16	0.50
NI-56	5/16	5/81	0.53
NI-38	3/8	1/16	0.56
NI-12	1/2	7/8	0.69
NI-58	5/8	1	0.69
NI-34	3/4	1-1/8	0.69
NI-01	1	1-1/2	0.81

Matric Range

Dimensions In mm

PART NO.	T O/D	G NUT A/F	L
NM-04	4	12	12.00
NM-06	6	14	12.70
NM-08	8	17	14.00
NM-10	10	17	14.00
NM-12	12	22	17.00
NM-16	16	27	17.46
NM-18	18	30	17.46
NM-20	20	30	17.46
NM-25	25	41	20.64

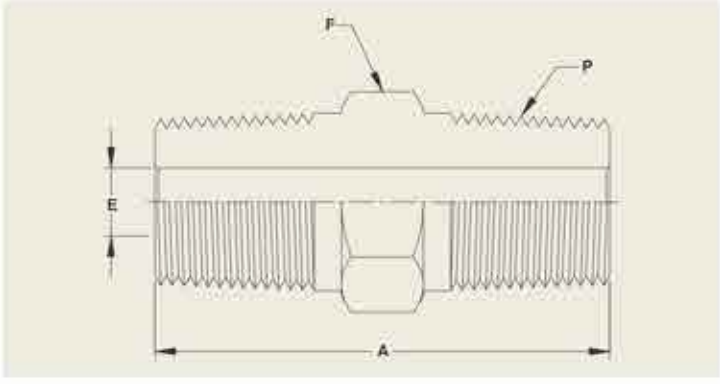
Imperial Range / Matric Range

PART NO.	T O/D	T O/D
FI-16	1/16	4
FI-18	1/8	6
FI-36	3/8	8
FI-14	1/4	10
FI-56	5/16	12
FI-38	3/8	16
FI-12	1/2	18
FI-58	5/8	20
FI-34	3/4	25
FI-01	1	

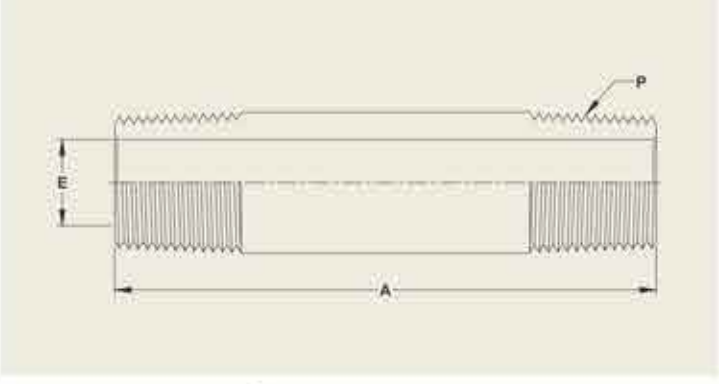
Instrumentation Pipe Fittings

Hex Nipple

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
HN-16	1/16	25.7	3	10
HN-18	1/8	25.7	4.8	11
HN-14	1/4	35.6	7.1	14
HN-38	3/8	36.3	9.6	17
HN-12	1/2	46.7	11.9	22
HN-34	3/4	46.7	15.8	28
HN-01	1	58.9	22.4	36



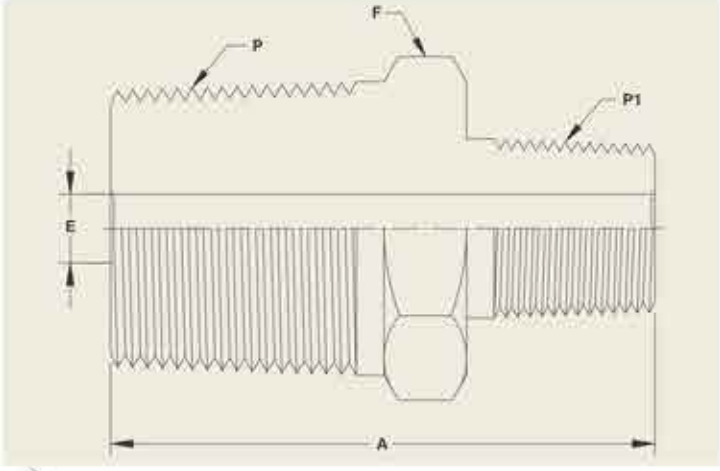
Long Pipe Nipple



PART NO.	PIPE SIZE	DIMENSIONS					
	P	1.5	2	2.5	3	4	E
LPN-18	1/8	1.5	2	2.5	3	4	6.80
LPN-14	1/4	1.5	2	2.5	3	4	9.24
LPN-38	3/8	1.5	2	2.5	3	4	12.52
LPN-12	1/2	1.5	2	2.5	3	4	15.80
LPN-34	3/4	1.5	2	2.5	3	4	20.43
LPN-01	1	-	2	2.5	3	4	26.65

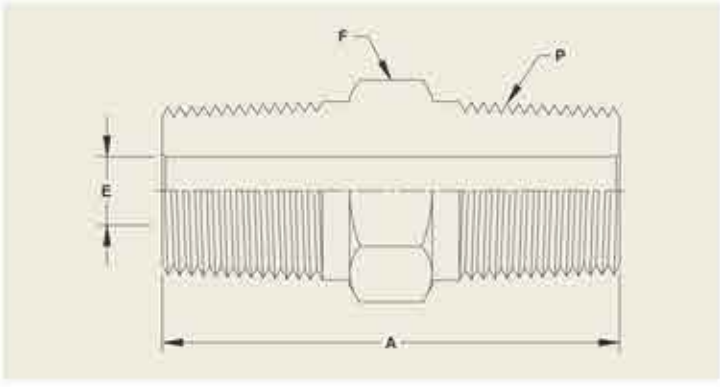
Hex Reducing Nipple

PART NO.	PIPE SIZE		DIMENSIONS		
	P	P1	A	E	F
HRN-1816	1/8	1/16	25.7	3.0	11
HRN-1418	1/4	1/8	31.0	4.8	12
HRN-3818	3/8	1/8	31.8	4.8	17
HRN-3814	3/8	1/4	36.3	7.1	17
HRN-1218	1/2	1/8	37.3	4.8	22
HRN-1214	1/2	1/4	41.9	7.1	22
HRN-1238	1/2	3/8	41.9	9.6	22
HRN-3814	3/4	1/4	41.9	7.1	28
HRN-3412	3/4	1/2	46.7	11.9	28
HRN-0112	1	1/2	54.1	11.9	36
HRN-0134	1	3/4	54.1	15.8	36

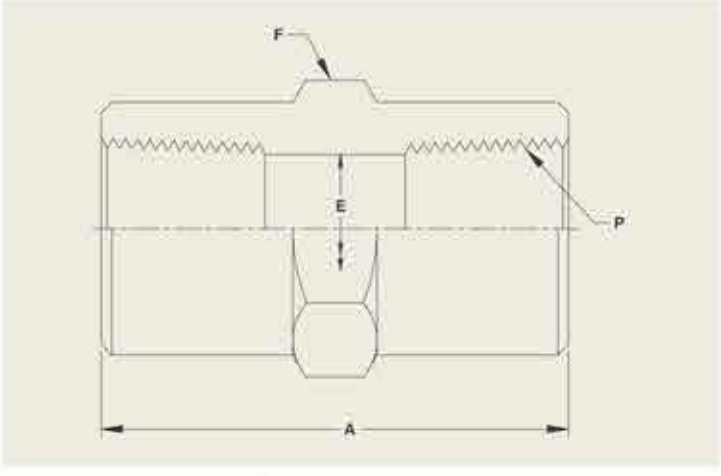


Close Nipple

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
CN-18	1/8	19.00	4.8	11
CN-14	1/4	28.40	7.1	14
CN-38	3/8	28.40	9.6	17
CN-12	1/2	38.10	11.9	22
CN-34	3/4	38.10	15.8	28
CN-01	1	47.70	22.4	36



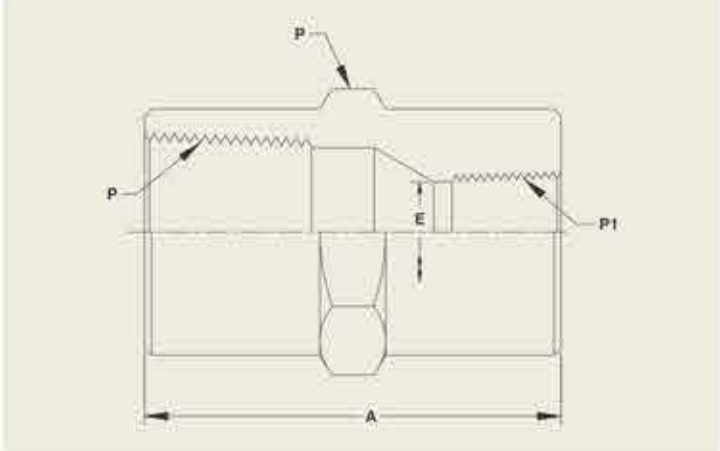
Coupling



PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
CO-18	1/8	20.6	8.6	14
CO-14	1/4	30.2	11.41	19
CO-38	3/8	33.3	15.0	22
CO-12	1/2	39.6	18.5	28
CO-34	3/4	41.1	23.9	36
CO-01	1	50.8	29.7	42

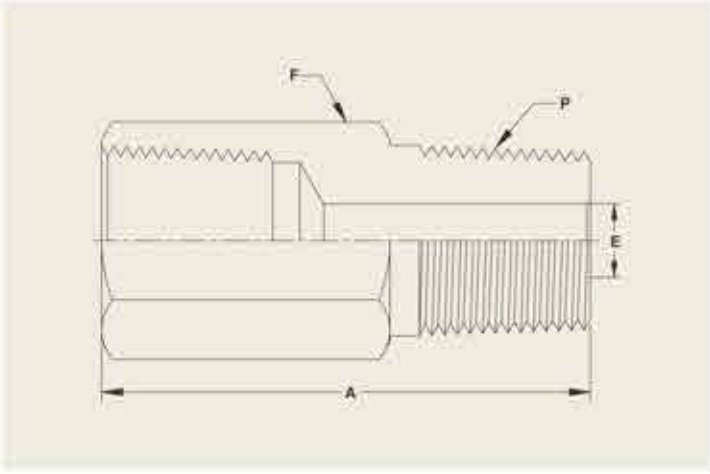
Reducing Coupling

PART NO.	PIPE SIZE		DIMENSIONS		
	P	P1	A	E	F
RCO-1418	1/4	1/8	31.0	8.6	19
RCO-3814	3/8	1/4	35.1	11.4	22
RCO-1218	1/2	1/8	39.6	8.6	28
RCO-1214	1/2	1/4	44.5	11.4	28
RCO-1238	1/2	3/8	45.2	15.0	28
RCO-3414	3/4	1/4	42.9	11.4	36
RCO-3412	3/4	1/2	52.3	18.5	36
RCO-0112	1	1/2	55.6	18.5	42
RCO-0134	1	3/4	57.2	23.9	42

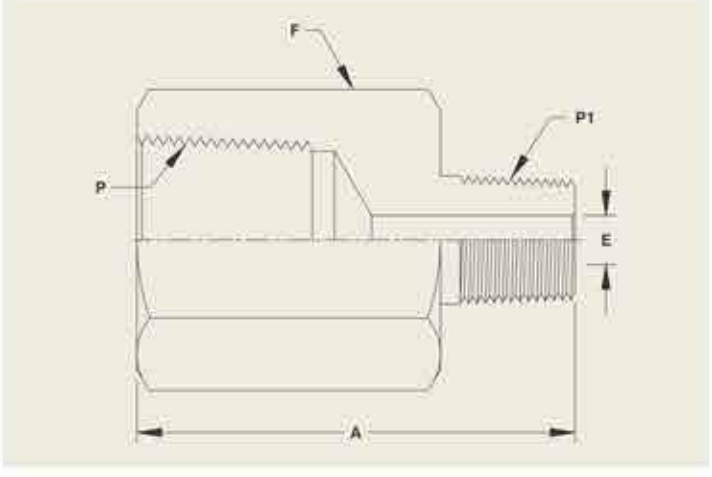


Adapter

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
AD-18	1/8	27.9	4.8	14
AD-14	1/4	35.6	7.1	19
AD-38	3/8	38.4	9.6	22
AD-12	1/2	49.3	11.9	28
AD-34	3/4	51.3	15.7	36
AD-01	1	57.9	22.1	42



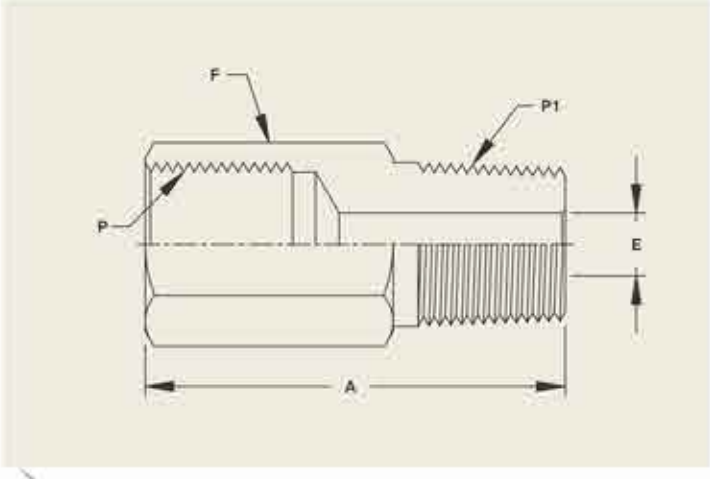
Reducing Adapter



PART NO.	PIPE SIZE		DIMENSIONS		
	P	P1	A	E	F
RAD-1816	1/8	1/16	26.1	3	14
RAD-1418	1/4	1/8	31.0	4.8	19
RAD-3818	3/8	1/8	33.6	4.8	22
RAD-3814	3/8	1/4	38.0	7.1	22
RAD-1218	1/2	1/8	40.1	4.8	28
RAD-1214	1/2	1/4	44.7	7.1	28
RAD-1238	1/2	3/8	44.5	9.5	28
RAD-3414	3/4	1/4	46.2	7.1	36
RAD-3438	3/4	3/8	46.2	9.5	36
RAD-3412	3/4	1/2	51.3	11.9	36
RAD-0114	1	1/4	49.8	7.1	42
RAD-0112	1	1/2	54.9	11.9	42
RAD-0134	1	3/4	55.1	15.7	42

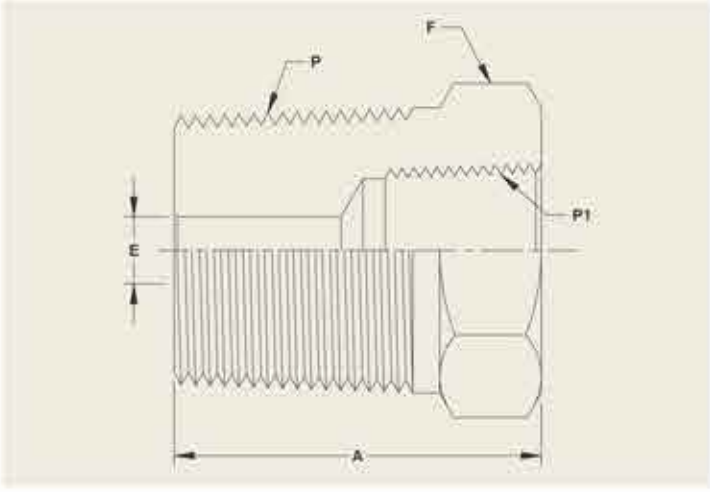
Gauge Adapter

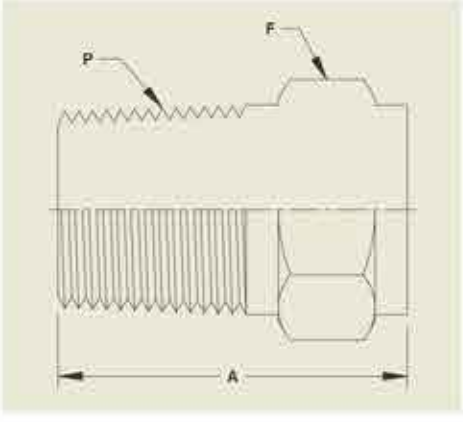
PART NO.	PIPE SIZE		DIMENSIONS		
	P	P1	A	E	F
GAD-14	1/4-19	1/4	27.7	3.0	19
GAD-38	3/8-19	3/8	32.0	4.8	22
GAD-12	1/2-14	1/2	41.9	7.1	28



Reducing Bushing

PART NO.	PIPE SIZE		DIMENSIONS		
	P	P1	A	E	F
RB-1816	1/8	1/16	26.2	4.8	12
RB-1418	1/4	1/8	26.9	7.1	14
RB-3818	3/8	1/8	21.8	8.6	19
RB-3814	3/8	1/4	30.2	9.5	19
RB-1218	1/2	1/8	27.4	8.6	22
RB-1214	1/2	1/4	27.4	11.4	22
RB-1238	1/2	3/8	35.8	11.9	22
RB-3414	3/4	1/4	27.4	11.4	28
RB-3438	3/4	3/8	27.4	15.0	28
RB-3412	3/4	1/2	41.4	15.7	28
RB-0114	1	1/4	34.8	11.4	36
RB-0138	1	3/8	34.8	15.0	36
RB-0112	1	1/2	34.8	17.45	36
RB-0134	1	3/4	47.0	22.4	36



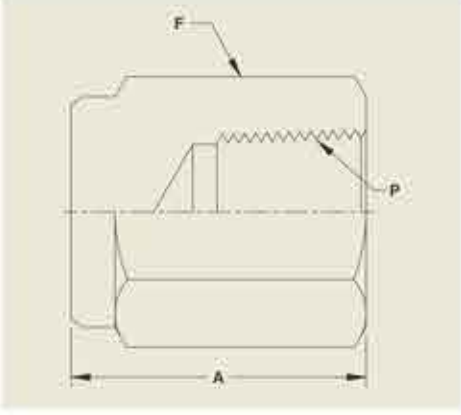


Pipe Plug

PART NO.	PIPE SIZE	DIMENSIONS	
	P	A	F
PP-16	1/16	19.0	8
PP-18	1/8	19.0	12
PP-14	1/4	24.5	14
PP-38	3/8	25.0	19
PP-12	1/2	31.0	22
PP-34	3/4	31.0	28
PP-01	1	38.0	36

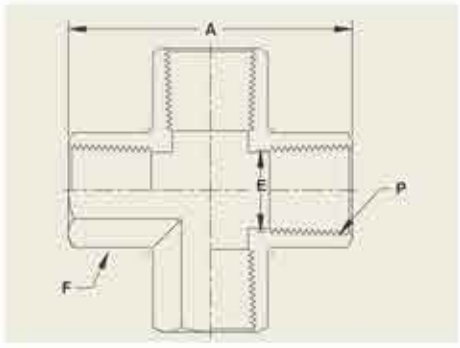
Pipe Cap

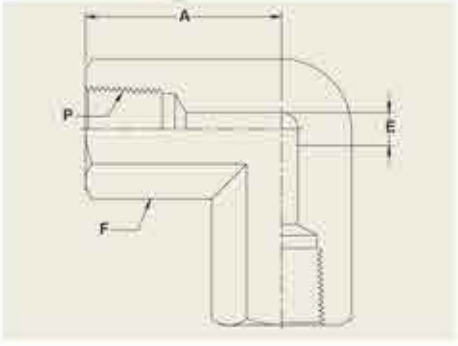
PART NO.	PIPE SIZE	DIMENSIONS	
	P	A	F
PC-18	1/8	19.1	14
PC-14	1/4	23.1	19
PC-38	3/8	26.2	22
PC-12	1/2	34.0	28
PC-34	3/4	36.6	33
PC-01	1	41.1	42



Cross

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
CR-18	1/8	52.8	8.6	14
CR-14	1/4	59.4	11.4	19
CR-38	3/8	72.2	15.0	22
CR-12	1/2	79.2	17.45	28
CR-34	3/4	97.6	22.8	36
CR-01	1	97.0	29.7	42



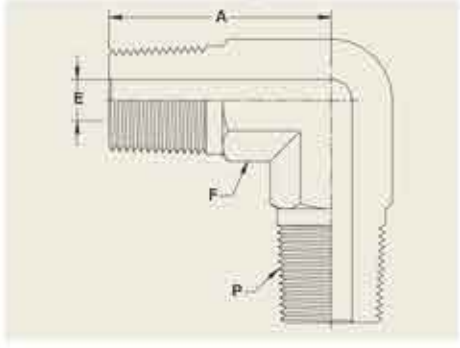


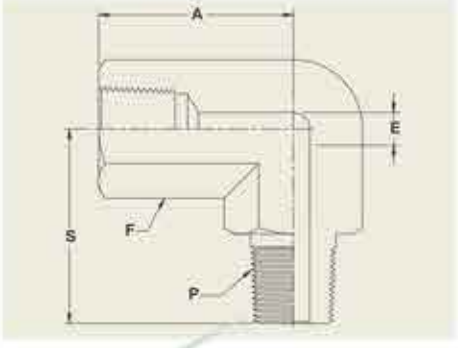
Female Elbow

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
FE-18	1/8	26.4	8.6	14
FE-14	1/4	30.0	11.4	19
FE-38	3/8	36.0	15.0	22
FE-12	1/2	39.6	17.45	28
FE-34	3/4	48.8	22.8	36
FE-01	1	48.5	29.7	42

Male Elbow

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
ME-18	1/8	22.4	4.8	12
ME-14	1/4	26.6	7.1	14
ME-38	3/8	29.7	9.6	19
ME-12	1/2	36.8	11.9	22



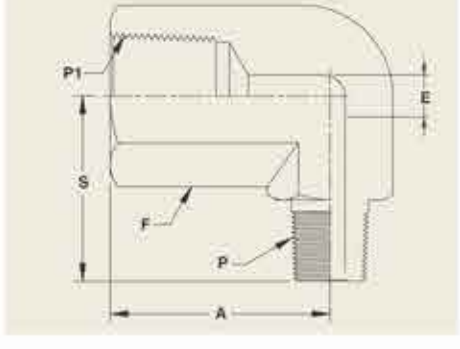


Street Elbow

PART NO.	PIPE SIZE	DIMENSIONS			
	P	A	E	F	S
SE-16	1/16	21.8	3.1	7/16	22.3
SE-18	1/8	26.4	4.8	14	22
SE-14	1/4	29.7	7.1	19	29.7
SE-38	3/8	36.0	9.6	22	32
SE-12	1/2	39.6	11.9	28	39.6
SE-34	3/4	48.8	15.8	35	42.4
SE-01	1	48.5	22.4	42	49.2

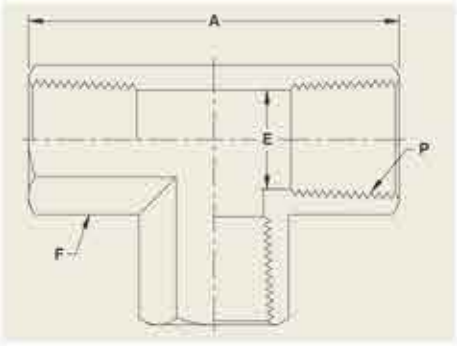
Reducing Street Elbow

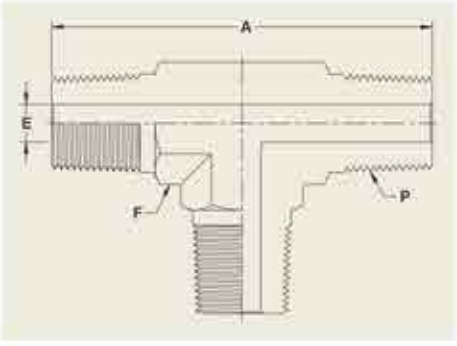
PART NO.	PIPE SIZE		DIMENSIONS			
	P	P1	A	E	F	S
RSE-1418	1/4	1/8	29.7	4.8	14	25.4
RSE-3814	3/8	1/4	36.0	7.1	19	32.0
RSE-1214	1/2	1/4	39.6	7.1	22	35.0
RSE-1238	1/2	3/8	39.6	9.6	22	35.0
RSE-3412	3/4	1/2	40.3	11.9	27	42.4
RSE-0112	1	1/2	48.5	11.9	36	49.2



Female Tee

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
FT-18	1/8	40.5	8.6	15
FT-14	1/4	48.5	11.4	20
FT-38	3/8	53.0	13.8	24
FT-12	1/2	59.5	17.45	28



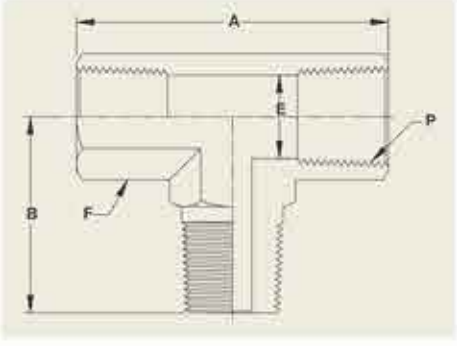


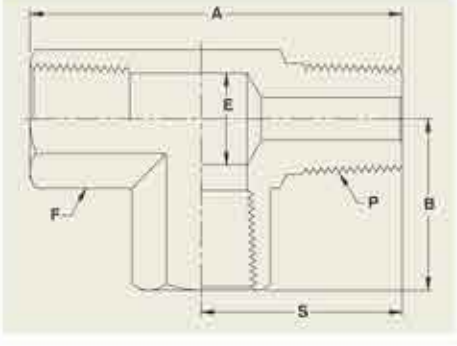
Male Tee

PART NO.	PIPE SIZE	DIMENSIONS		
	P	A	E	F
MT-18	1/8	40.5	4.8	12
MT-14	1/4	48.5	7.1	14
MT-38	3/8	59.5	9.6	19
MT-12	1/2	66.0	11.6	22

Branch Tee

PART NO.	PIPE SIZE	DIMENSIONS			
	P	A	B	E	F
ST-18	1/8	40.5	19.6	4.8	14
ST-14	1/4	44.5	27.5	7.1	19
ST-38	3/8	52.0	31.0	9.6	22
ST-12	1/2	62.5	37.4	11.6	28





Street Tee

PART NO.	PIPE SIZE	DIMENSIONS				
	P	A	B	E	F	S
ST-18	1/8	39.6	16.8	4.8	14	22.0
ST-14	1/4	55.4	22.4	7.1	19	29.7
ST-38	3/8	62.0	25.9	9.6	22	32.0
ST-12	1/2	74.7	31.2	11.6	28	39.6

Pressure Gauge Accessories

Aptek offers a wide range of pressure gauge accessories to suite the different instrumentation application.

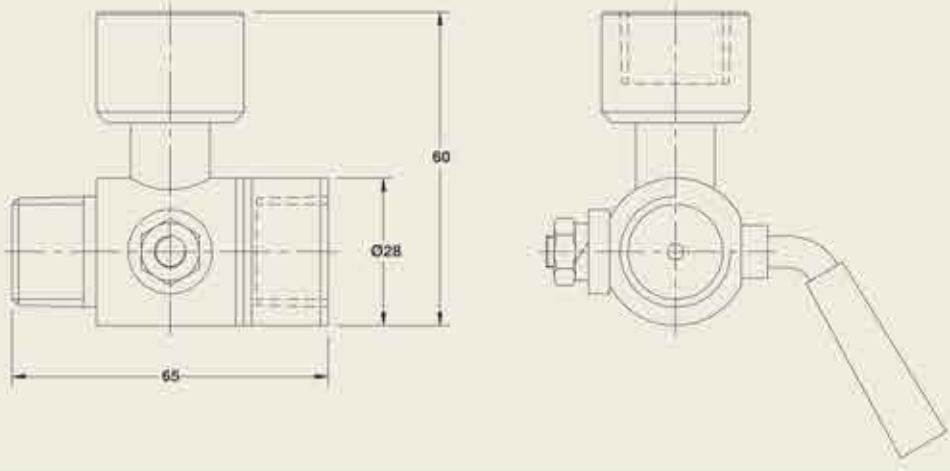
Gauge Cocks :

This cocks are use with the pressure gauge for isolation and drain purpose.

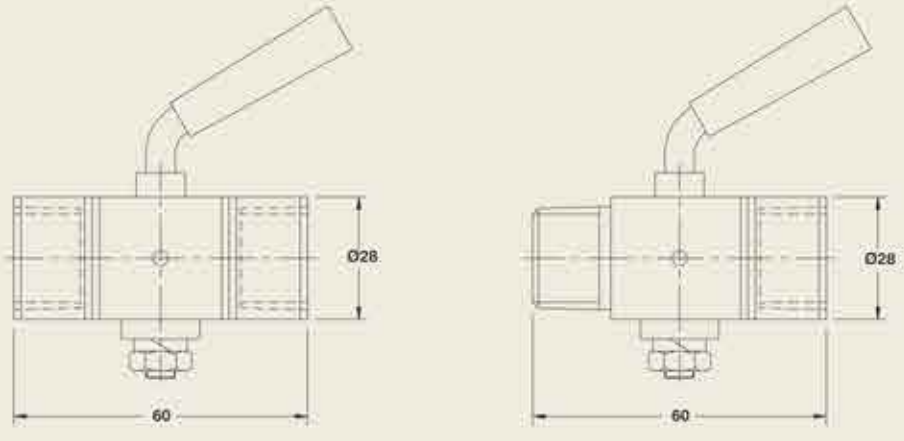
Standard Specification :

Size : ¼" to ½"
End Connections : NTP / BSPP / BSPT
Material : 316 SS / 316L SS / 304 SS / Brass
Seal : PTFE
Maximum working pressure : 1500 PSI

Gauge Cock 3 Way



Gauge Cock 2 Way



Over Pressure Protectors

As the name indicates, this device saves instruments from the over pressure.
Gauge savers close at a set point protects instruments from over load.

ISO 9001 : 2008 | PED 97/23/EC

Standard specification :

Model AOPP 1

Size: ½" NPT M x F
Material: 316 SS
Seal: Viton
Set pressure: 0.6 bar to 2 bars (in different ranges)
Maximum pressure: 400 BAR

Standard specification :

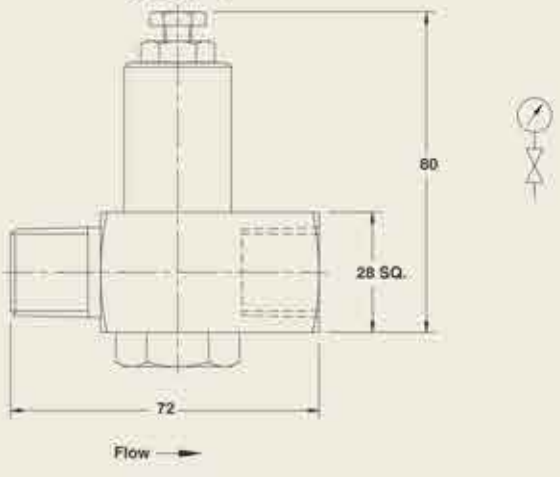
Model AOPP 2

Size: ½" NPT M x F
Material: 316 SS
Seal: Viton
Set pressure: 2.5 bar to 300 bars (in different ranges)
Maximum pressure: 400 BAR

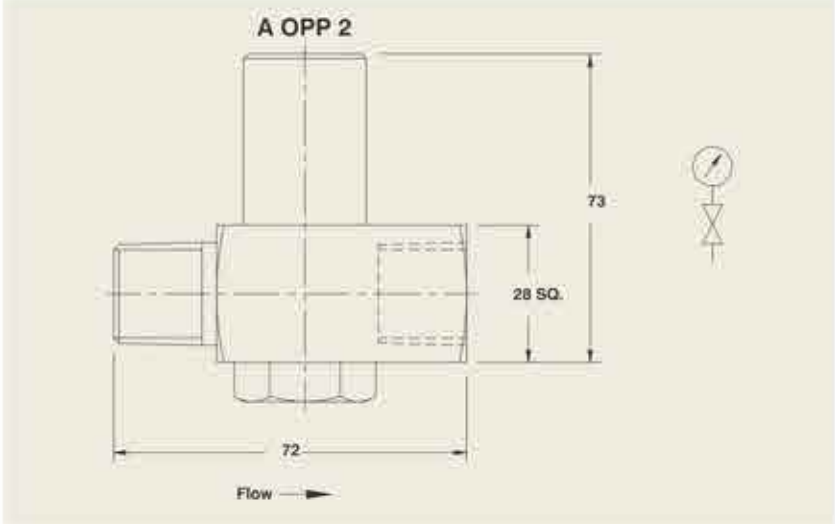
(A OPP 2)

(A OPP 1)

A OPP 1



A OPP 2

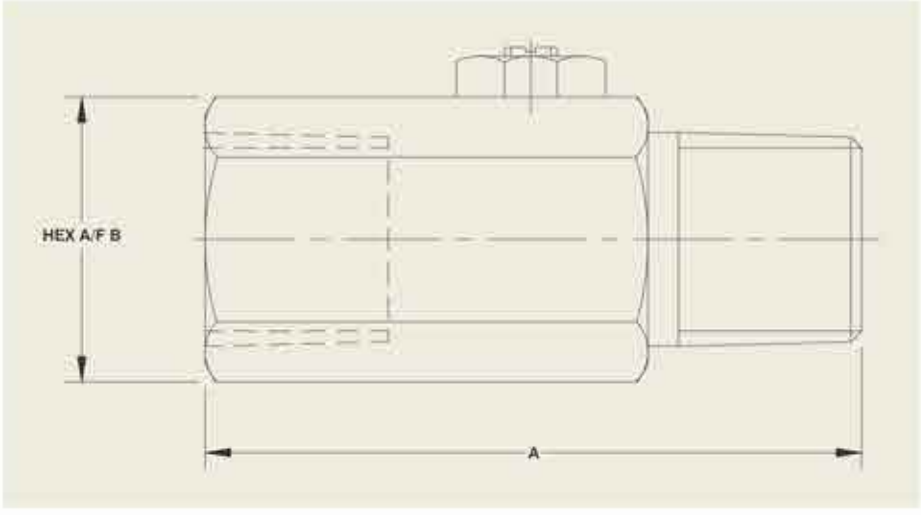


Pressure Gauge Snubbers

With the help of variable orifice, these gauge snubbers protect pressure gauges by reducing fluctuations.

Standard specification :

Size : ¼" to ½" NPT / BSP
End Connections : NTP / BSPP / BSPT
Material : 316 SS / 316L SS / 304 SS/ Brass
Seal : Viton
Max temperature : 120° C
Max pressure : 6000 PSI



Pressure gauge snubbers

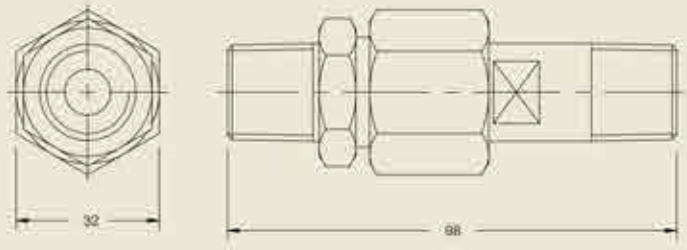
SIZE	A	B
1/4" NPT	55	25
3/8"NPT	55	25
1/2"NPT	63	28
G1/2"	63	28

Pressure Gauge Swivel Adapter

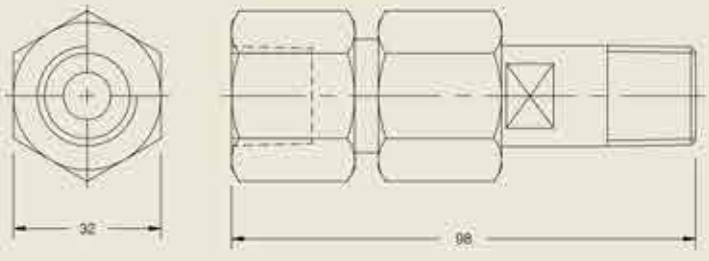
Standard specification :

Size : ½" NPT / BSPP / BSPT
Material : 316 SS / 316 L SS / 304 SS
Max Working pressure : 6000 PSI

Gauge Adapter M x M



Gauge Adapter M x F



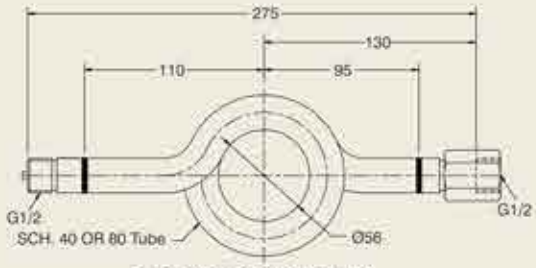
Pressure Gauge Siphon

The siphon is used to protect the pressure gauges from the steam or high temperature fluid.
Siphon reduces the temperature of the process fluid by dissipating the heat.
It also helps to reduce the line surges fluctuations.

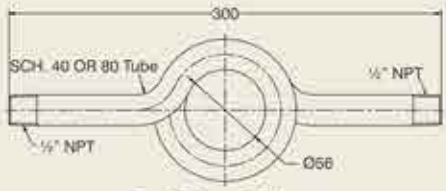
ISO 9001 : 2008 | PED 97/23/EC

Standard specification :
Size : ¼",⅜", ½"
End Connections : NPT / BSPP / BSPT
Material : 316 SS, 304 SS, 316 L SS, CS

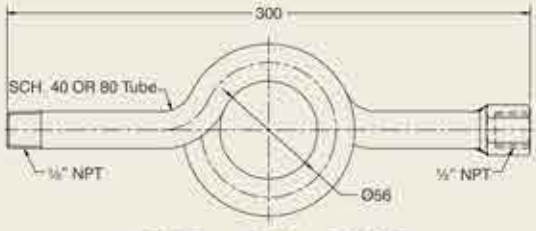
Coil Type Siphon



Coil Type Siphon DIN



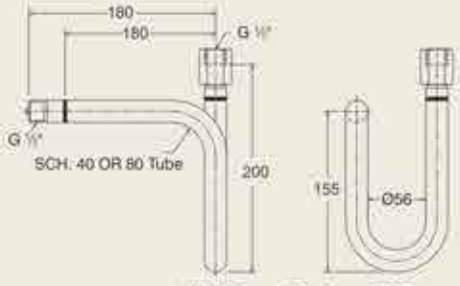
Coil Type Siphon



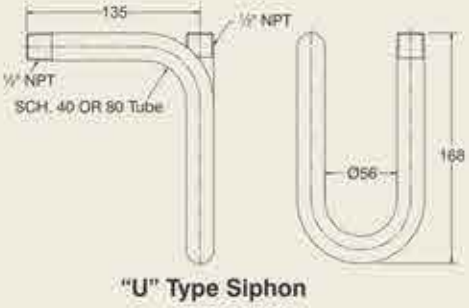
Coil Type Siphon M X F

Pigtail Type Siphon

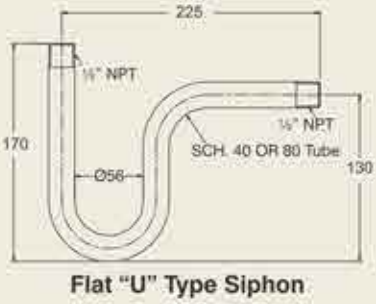
"U" Type Siphon



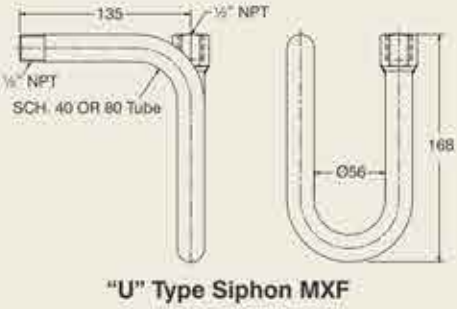
"U" Type Siphon DIN



"U" Type Siphon



Flat "U" Type Siphon



"U" Type Siphon MXF

Thermowells

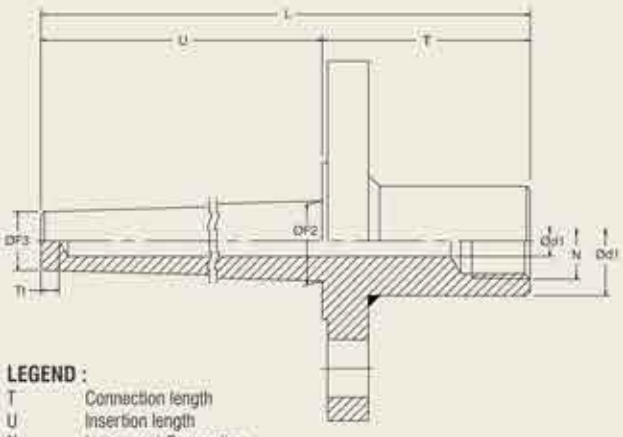
With the help of variable orifice, these gauge snubbers protect pressure gauges by reducing fluctuations.

Material : 316 SS / 304 SS / 316L SS or any special material

Thermowell Flanged Bar Stock

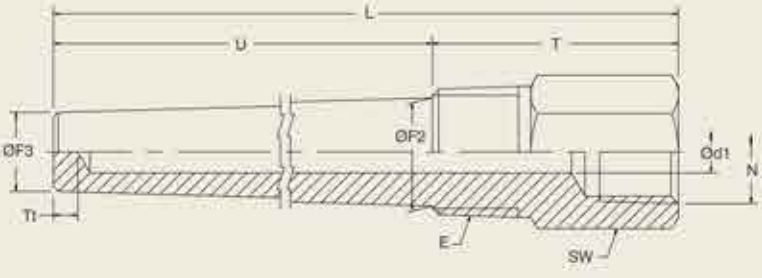
Dimensions for ASME flanged thermowell, style tapered

Size	Pressure Class	T	Ø F2	Ø F3	Ø D1	Ø D
1"	150	2 ¼" (57 mm)	22	16	6.6 or 8.5	30
	300					
	600					
	1500	3 ½" (83 mm)				
1 ½"	150	2 ¼" (57 mm)	25	19		
	300					
	600					
	1500	3 ½" (83 mm)				
2"	150	2 ¼" (57 mm)				
	300					
	600					
	1500	3 ½" (83 mm)				



LEGEND :

T	Connection length
U	Insertion length
N	Instrument Connection
Ø D1	Bore size
Ø F2	Root diameter
Ø F3	Tip diameter
Ø D	Bar diameter
T t	Tip thickness (6.5 mm)



Legend:

E	Process Connection
Hi	Bore Depth For Female Thread
L	Total Length
N	Instrument Connection
Sw	Across Flats
T	Connection Length
U	Insertion Length
Ø D1	Bore Size
Ø F2	Root Diameter Of Thermowell
Ø F3	Tip Diameter Of Thermowell

Thermowell - Screwed Bar Stock

E	N	Ø D1	Ø F2	Ø F3	HI	T	SW
1/2" NPT	1/2" NPT	6.6	16	13	19	1 ½" OR 50 MM	27
		8.5					
3/4" NPT		6.6	22	16			
		8.5					
1" NPT		6.6	27				36
		8.5		19			

Customized Valves and Manifolds

Components

Worldwide Export

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