FLUID CONTROLS®

INSTRUMENTATION MANIFOLDS



INTRODUCTION

Established in 1974, Fluid Controls® Limited is an ISO 9001:2015, ISO 14001 and OHSAS 45001 certified company. Fluid Controls® is involved in the manufacturing of Valves, Manifolds, Double Ferrule Compression Tube Fittings and specialized accessories for use in instrumentation, hydraulics, pneumatics, and lubrication. The company has a wide range of products for the Oil and Gas Applications, Petrochemicals, Rotating Machinery, Power Generation, Cryogenic / Vacuum Applications and Railways.

The Valves Unit of Fluid Controls® Limited was founded in 1979 by Late Dr. Y. E. Moochhala, a Ph.D. in Mechanical Engineering from Northwestern University, USA. The unit was earlier known as Hyd-Air Engineering Works Lonavala and subsequently merged with Fluid Controls® Limited in 2013.

At Fluid Controls®, we draw our strength from our experience of 50 years in the design, engineering, manufacturing and supply of a range of high performance valves and manifolds. These precision products are used for instrumentation in the chemical, petrochemical and oil & gas industries, as well as for high pressure hydraulics, pneumatics and lubrication.

Fluid Controls® offers a series of Manifolds for compact piping and control in lines involving pressure and differential pressure instruments. Manifolds eliminate several parts used in the conventional method of piping (with individual valves and adaptors) resulting in cost saving. Their compact design reduces space requirements for operation and installation. The internal porting arrangement within the Manifold eliminates leakage points.

Fluid Controls® Manifolds are available in 2, 3 or 5 Valve construction.

Two Valve Manifolds are used in pressure instrument such as pressure gauges, pressure transmitters, pressure switches, etc.

Three Valve and Five Valve Manifolds are used in differential pressure instruments such as differential pressure transmitters, differential pressure switches, differential pressure gauges etc.

Three Valve Manifolds are the most commonly used manifolds. They may be provided with test ports on the process side and drain ports on the instrument side for drawing of the process and instrument lines respectively.

Five Valve Manifolds are normally used with differential pressure instruments where drain valves are required on the instrument side. They are also useful for flushing of the system and prevention of loss of expensive Fluid Controls in the impulses.

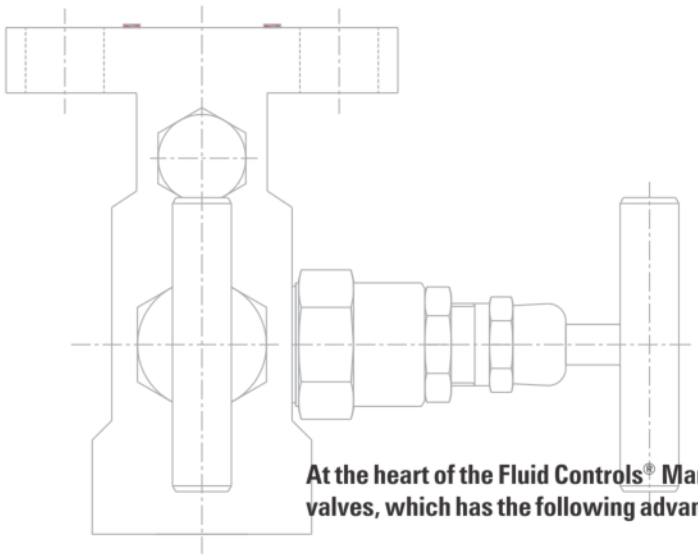
Fluid Controls® Manifolds are available in four designs:

SEPARATELY MOUNTED MANIFOLDS meant for installation from the instrument and are usually connected by means of pipes or tubes, pipes and pipe fittings/tubes and tube fittings.

DIRECT MOUNTING 'T' TYPE MANIFOLDS for the direct mounting on the instrument and screwed process connections.

DIRECT MOUNTING "H" TYPE Manifold for stacked assembly between the instrument and flanged process connection.

CO-PLANAR MANIFOLDS mount directly on to the instrument eliminating the adapter plate.



At the heart of the Fluid Controls® Manifold is the design of the pressure sealing system for each of the valves, which has the following advantages:

- The stem threads are rolled to reduce friction
- Stem threads are coated with a silver teflon mixture to allow for smooth operation.
- The stem plug has swiveling design and is uniquely hardened to provide for wear and long life.
- The pipe sealing system prevents blowout of the stem and reduces gland leakage.

Fluid Controls® Manifolds are available in variety of materials depending on the usage. The most common materials of construction are

- Carbon Steel ASTM A 105
- Stainless Steel ASTM A 479/A182 F 304, F316, F304L and F316L, F321
- Cupro-Nickel: Monel
- Inconel
- Hastelloy
- Titanium

The choice of the materials is based on the working and the installation location where atmospheric conditions may vary and require materials to prevent corrosion and withstand vibration.

Manifolds in Stainless Steel and Monel are also available with conformity to NACE MR 01 75 for corrosion resistance.

Fluid Controls® Manifolds are available in three specific designs.

- The standard design is with a case hardened swiveling stem plug suitable for most applications in low, medium and high pressure range.
- Where gas at high pressure is encountered, a swiveling plug with soft seat is preferred. The standard seat materials are reinforced PTFE, Delrin and PEEK.
- The thread design is for a case hardened ball plug in 316 Stainless Steel. Alternatively, Hastelloy, Monel, Inconel and Titanium manifolds have Tungsten Carbide ball plugs.
- All these designs are available in a standard thread above the seal design so that stem threads are not wetted by the fluid flowing in the system.

  The gland sealing arrangements used in Fluid Controls® Manifolds vary with the temperature requirement. The most common material is RPTFE for temperatures up to 180°C. For temperatures in the range 180°C to 270°C graphitized asbestos is a common gland seal material. Beyond 270°C and up to 540°C, graphoil is the standard use.

ORDERING CODE FOR 2 VALVE MANIFOLD

8 - 2 MNV-PTM- 4 D N SFT-GOIL.SS

DESCRIPTION	FEATURE	SYMBOL
Threaded Process - Instrument Connections	1/4"	4
	1/2"	8
	3/4"	12
Valves contained	No of cartridges	2
Series	With all threaded connection	2 MNV
	With flanged instrument & threaded process connection	2 FMNV
	Coplanar	2 CPL
Type	**Line mounting type**	
	Straight	I
	Angle	II
	Surface mounting type with	
	(1) Vent valve on top & isolation valve on side	PTM 1
	(2) Isolation & vent valve on opposed & drain on process side	PTM 2
	(3) Isolation &vent valve on opposed-drain on top	PTM 3
	(4) All valves on one side vent valve angled	PTM 4
	(5) Both valves on top drain on process side	PTM 5
	(6) Vent valve on side isolation valve on top angled-drain in front	PTM 6
	Flange mounting type	
	(7) Screwed inlet & flanged outlet, isolation valve on top angled & vent on side	PTM7
	(8) Single isolate/vent block,direct mounting type	DM 1
	(9) On ASA-RF flange	FL 1
Thread size of Drain Connection	For 1/4" NPT	4
	For 1/2" NPT	8
	For 3/4" NPT	12

No symbol is required if instrument process & drain thread size are same

Drain plug	Not required	No symbol
	Required	D
Thread Specification	NPT to ASA B 2.1 - 1960	N
	ISO parallel to ISO : 228/1	R
	ISO taper to ISO : 7/1	RX
Seat	Metallic seat	No symbol
	Soft seat for isolation valves only	
	Soft seat material _ PTFE	SFT
	DELRIN	SFD
	PEEK	SFP
Stem packing Material	Teflon (standard)	No symbol
	Graphitized asbestos	GASB
	Graphoil	GOIL
	Teflon asbestos	TASI
Body material	A 105	No symbol
	SS 304/SS 304L **	S/SL
	SS 316/SS 316L **	SS/SSL
	Monel	MNL
	Hastelloy C	HAC

** For material conformity to NACE MR-01-75 USE SUFFIX "NACE" AS S/NACE , SS/NACE,SSL/NACE

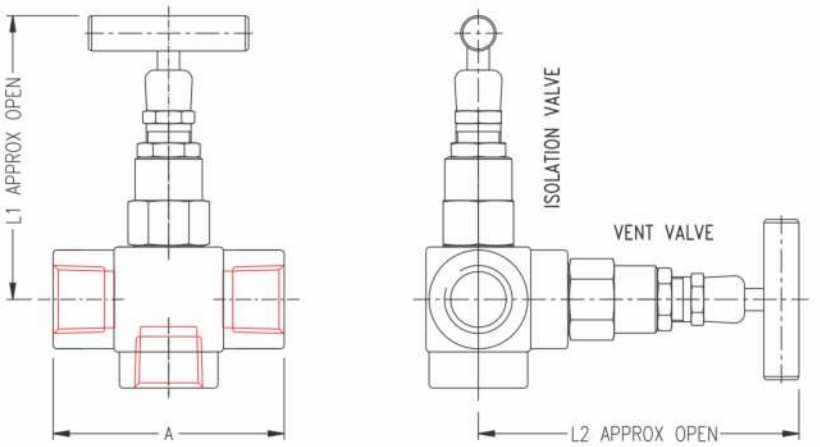
Note : Due to continous improvement & customer interaction designs & specifications may be modified or upgraded without notice.

FLUID CONTROLS

TWO VALVE (THREE-WAY) MANIFOLD FOR PRESSURE INSTRUMENTS



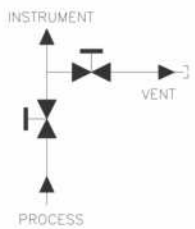
Model No. 2 MNV



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and calibration / vent valve. Generally used on static pressure transmitters, switches or gauges.

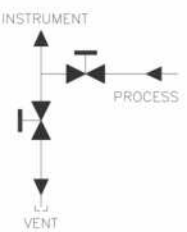
PROCESS PORT	GAUGE PORT	DRAIN PORT	A	L1	L2
1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F)	70	98	110
1/2" NPT(F)	1/2" NPT(F)	1/2" NPT(F)	70	98	110
3/4" NPT(F)	3/4" NPT(F)	3/4" NPT(F)	70	98	110
1/2" BSP(F)	1/2" BSP(F)	1/2" BSP(F)	70	98	110
1/2" NBSW	1/2" NPT(F)	1/2" NPT(F)	70	98	110
3/4"NBSW	1/2" NPT(F)	1/2" NPT(F)	70	98	110



ANGLE TYPE II

GAUGE INLINE WITH DRAIN / VENT AND PROCESS AT RIGHT ANGLE

1/2" BSP(F)	1/2" NPT(F)	1/2" NPT(F)	70	98	110
3/4" NPT(F)	3/4" NPT(F)	3/4" NPT(F)	70	98	110
1/2" NBSW	1/2"NPT(F)	1/2" NPT(F)	70	98	110
3/4" NBSW	1/2" NPT(F)	1/2" NPT(F)	70	98	110



Test Pressure : @ 25°C Room Temperature
- Hydrostatic : Body - 620 Kg/cm²
- Seat - 413 Kg/cm²
- Pneumatic : Seat - 40 Kg/cm²

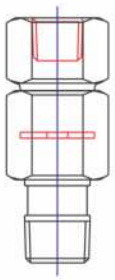
Gland packing : PTFE : Standard
: GRAPHOIL : Temperatures above 180°C

Material : A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy

Finish : CS : Zinc Plated and Dichromated; SS : Natural

Option : Drain plug. Three piece union for gauge positioning

OPTIONAL ITEM



THREE PIECE UNION FOR GUAGE POSITIONING

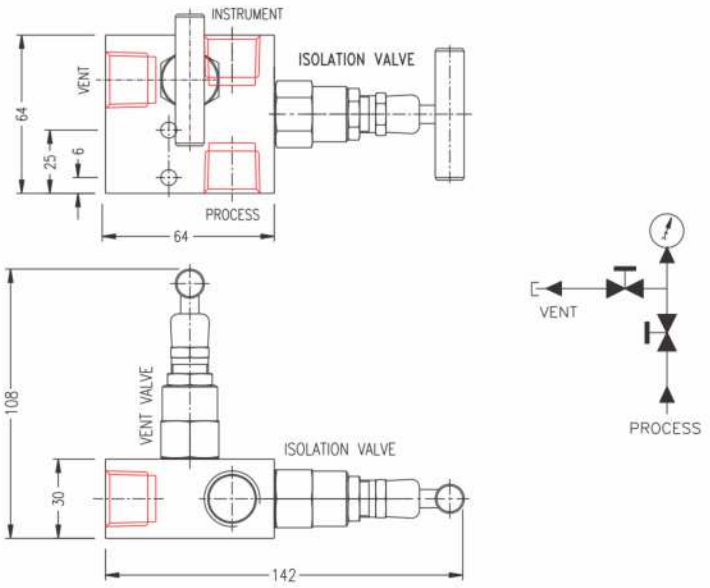
FLUID CONTROLS

TWO VALVE MANIFOLD-PTM 1

VENT VALVE ON TOP AND ISOLATION VALVE ON SIDE



Model No. 2 PTM 1



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and calibration / vent valve. Generally used on static pressure transmitters, switches or gauges.

Connections	:	Process	:	1/2" NPT (F)
		Instrument	:	1/2" NPT (F)
		Drain / Vent	:	1/4" NPT (F), 1/2"NPT (F)
Test Pressure	:	@ 25°C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm²
				Seat - 413 Kg/cm²
		Pneumatic	:	Seat - 40 Kg/cm²
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180°C
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Option	:	Drain Plug. Three piece union for gauge positioning		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos		

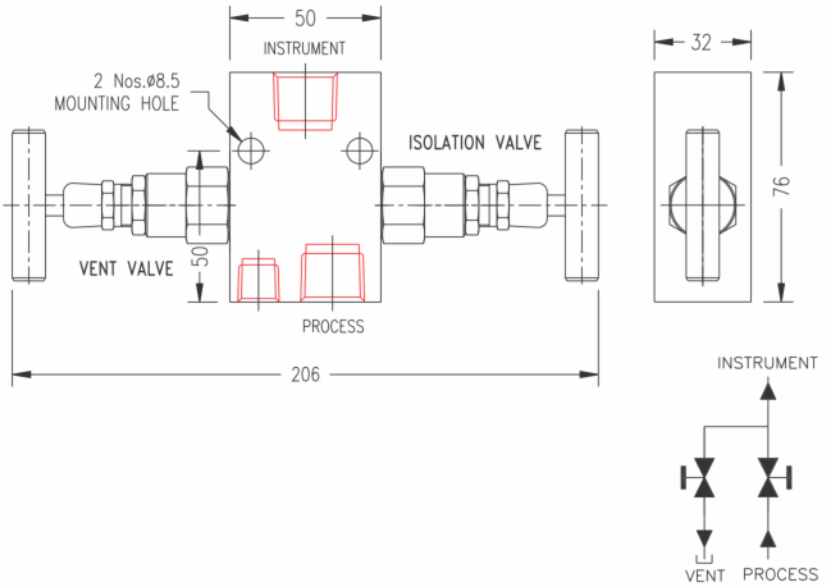
FLUID CONTROLS

TWO VALVE MANIFOLD-PTM 2

ISOLATION & VENT VALVE
OPPOSED AND DRAIN
ON PROCESS SIDE



Model No. 2 PTM 2



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and vent / calibration valve . Generally used on static pressure transmitters , switches or gauges.

Connections	:	Process	:	1/2"NPT (F)
		Instrument	:	1/2"NPT (F)
		Drain / Vent	:	1/4" NPT (F)
Test Pressure	:	@ 25^{0}C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm^2
				Seat - 413 Kg/cm^2
		Pneumatic	:	Seat - 40 Kg/cm^2
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180^{0}C
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Option	:	Drain Plug. Three piece union for gauge positioning		
Accessory	:	Mounting Bolts - IS : 1364 - 1960		

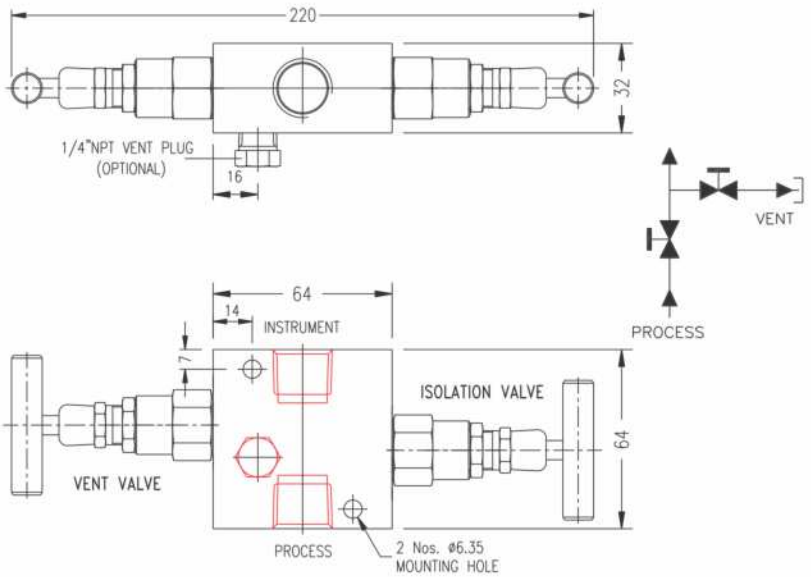
FLUID CONTROLS

TWO VALVE MANIFOLD-PTM 3

ISOLATION & VENT VALVE OPPOSED AND DRAIN ON TOP



Model No. 2 PTM 3



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and vent / calibration valve . Generally used on static pressure transmitters , switches or gauges.

Connections	:	Process	:	1/2"NPT (F)	
		Instrument	:	1/2"NPT (F)	
		Drain / Vent	:	1/4" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Drain Plug. Three piece union for gauge positioning			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos			

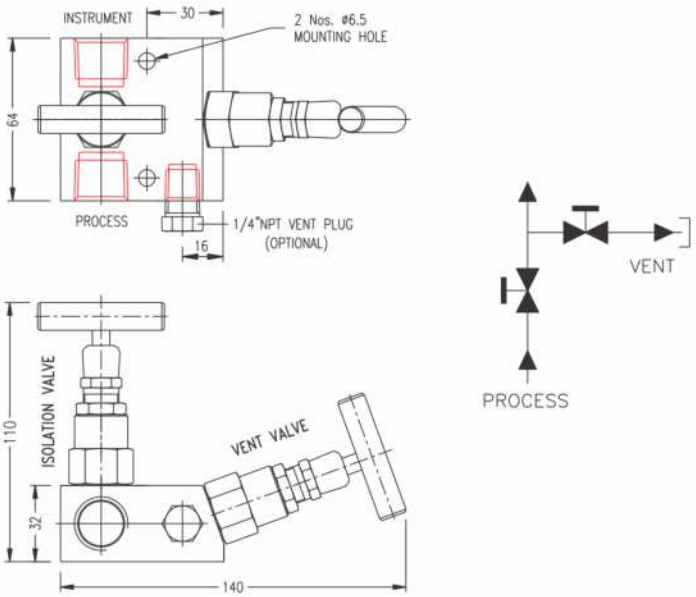
FLUID CONTROLS

TWO VALVE MANIFOLD - PTM 4

ALL VALVES ON ONE SIDE - VENT VALVE ANGLED



Model No. 2 PTM 4



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and vent / calibration valve . Generally used on static pressure transmitters , switches or gauges.

Connections	:	Process	:	1/2"NPT (F), 1/4" NPT (F)	
		Instrument	:	1/2"NPT (F), 1/4 MPT (F)	
		Drain / Vent	:	1/4" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Drain Plug. Three piece union for gauge positioning			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos			

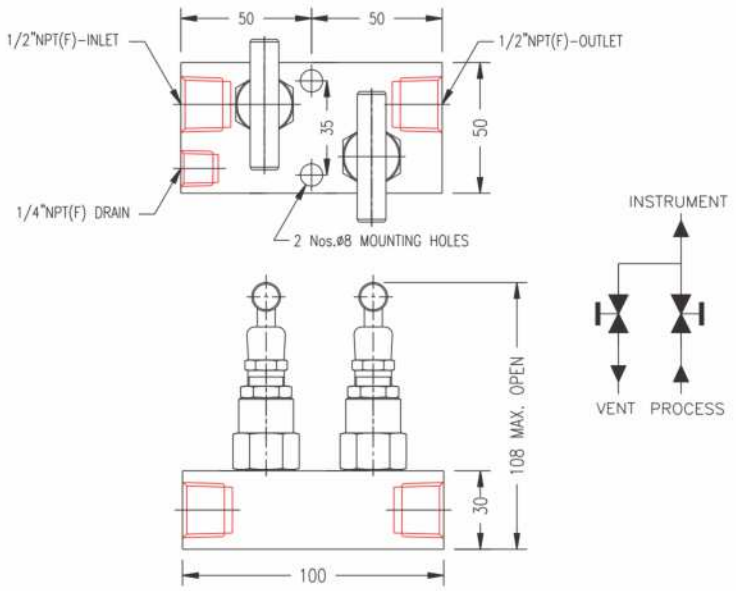
FLUID CONTROLS

TWO VALVE MANIFOLD-PTM 5

BOTH VALVES ON TOP -
DRAIN ON PROCESS SIDE



Model No. 2 PTM 5



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and vent / calibration valve . Generally used on static pressure transmitters , switches or gauges.

Connections	:	Process	:	1/2"NPT (F)	
		Instrument	:	1/2"NPT (F)	
		Drain / Vent	:	1/4" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Drain Plug. Three piece union for gauge positioning			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos			

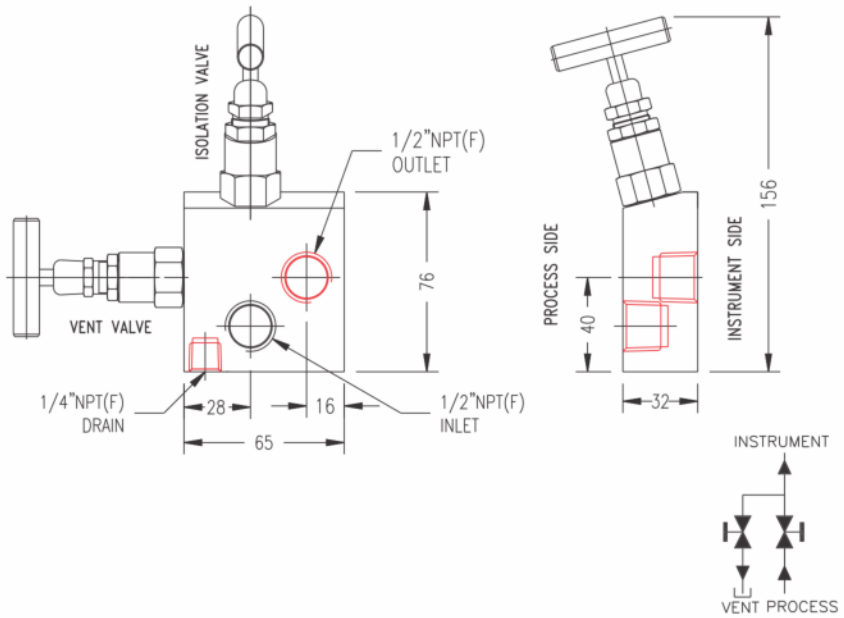
FLUID CONTROLS

TWO VALVE MANIFOLD-PTM 6

VENT VALVE ON SIDE,
ISOLATION VALVE TOP ANGLED -
DRAIN IN FRONT



Model No. 2 PTM 6



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and vent / calibration valve . Generally used on static pressure transmitters , switches or gauges.

Connections	:	Process	:	1/2"NPT (F)	
		Instrument	:	1/2"NPT (F)	
		Drain / Vent	:	1/4" NPT (F)	
Test Pressure	:	@ 25°C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm²
				Seat -	413 Kg/cm²
		Pneumatic	:	Seat -	40 Kg/cm²
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180°C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Drain Plug			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos			

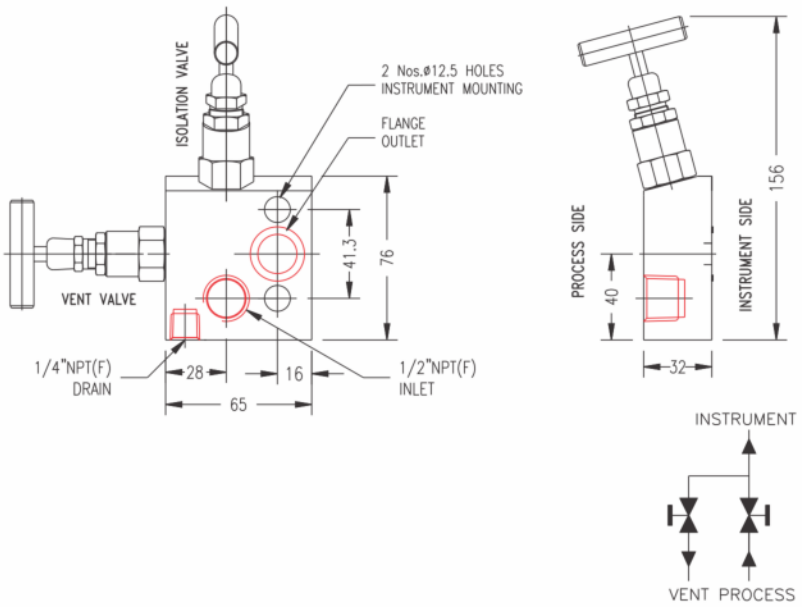
FLUID CONTROLS

TWO VALVE DIRECT MOUNTING MANIFOLD

VENT VALVE ON SIDE
ISOLATION VALVE TOP ANGLED
DRAIN IN FRONT



Model No. 2 PTM 7



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and vent / calibration valve . Generally used on static pressure transmitters , switches or gauges.

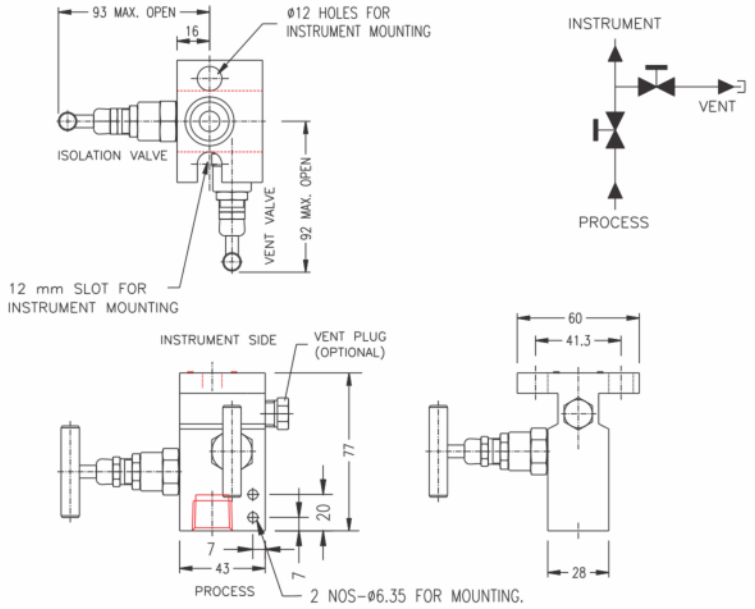
Connections	:	Process	:	1/2"NPT (F)
		Instrument	:	Flanged
		Drain / Vent	:	Standard - 1/4" NPT (F)
				Optional - 1/2" NPT (F)
Test Pressure	:	@ 25^{0}C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm^2
				Seat - 413 Kg/cm^2
		Pneumatic	:	Seat - 40 Kg/cm^2
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180^{0}C
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Option	:	Drain Plug		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos		
		Interface seal - PTFE / VITON - 1 Nos		

FLUID CONTROLS

TWO VALVE "T" TYPE MANIFOLD FOR PRESSURE INSTRUMENTS



Model No. 2 TM 1



DESCRIPTION

Two valve manifold is designed in a single block with female screwed inlet and outlet port combining isolation valve and vent / calibration valve . Generally used on static pressure transmitters , switches or gauges.

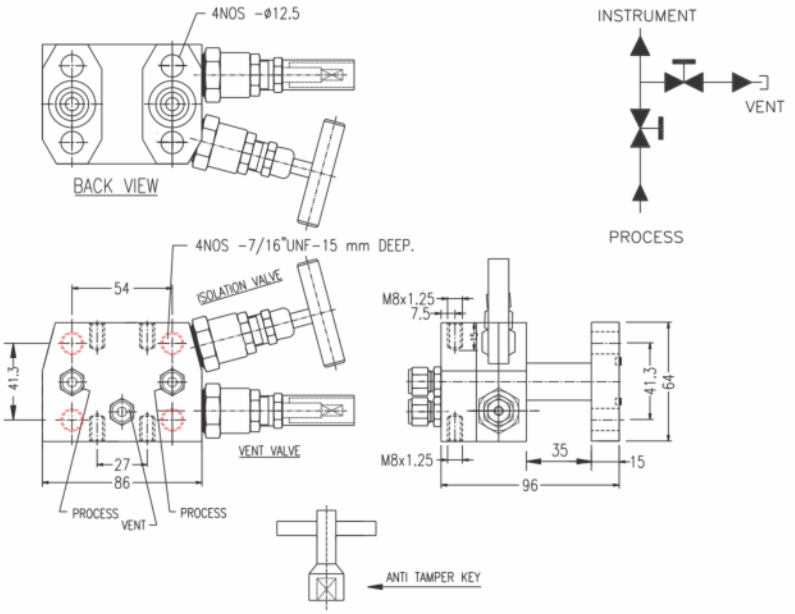
Connections	:	Process	:	1/2"NPT (F)	
		Instrument	:	Flanged	
		Drain / Vent	:	1/4" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Drain Plug			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos			
		Interface seal - PTFE / VITON - 1 Nos			

FLUID CONTROLS

TWO VALVE MANIFOLD SINGLE ISOLATE / VENT BLOCK DIRECT MOUNTING TYPE



Model No. 2 DM 1



DESCRIPTION

Designed for low pressure application and level measurement on atmospheric tanks with differential pressure transmiters.

Isolate valve with T-bar handle
Vent valve with anti tamper handle.

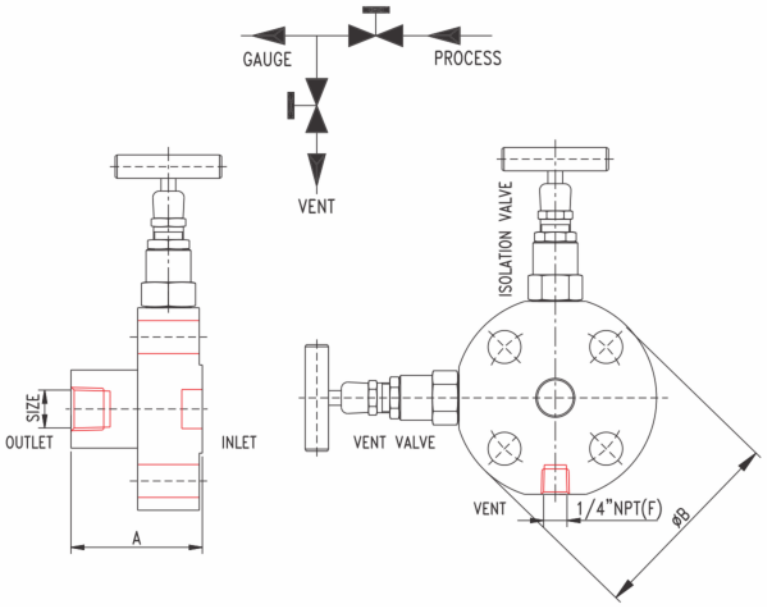
Connections	:	Process	:	1/4"NPT (F) / 1/4" BSPT (F) / 10 mm OD
		Instrument	:	Flanged
		Drain / Vent	:	1/4"NPT (F) / 1/4" BSPT (F) / 10 mm OD
Test Pressure	:	@ 25^{0}C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm^2
				Seat - 413 Kg/cm^2
		Pneumatic	:	Seat - 40 Kg/cm^2
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180^{0}C
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos		
		Interface seal - PTFE / VITON - 2 Nos		

FLUID CONTROLS

TWO VALVE MANIFOLD BLOCK AND BLEED ON ASA - RF FLANGE



Model No. 2 FL 1



DESCRIPTION

Designed for one-piece block and bleed assemblies for primary isolation of pressure take-offs, where the valve is directly mounted to the vessel or process pipe. Instruments may be directly mounted to the valve outlet or alternatively remotely mounted with gauge lines/impulse pipe work.

Test Pressure	:	@ 25°C	Room Temperature		
		Hydrostatic	:	Body -	620 Kg/cm²
				Seat -	413 Kg/cm²
		Pneumatic	:	Seat -	60 Kg/cm²
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180°C	
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos			

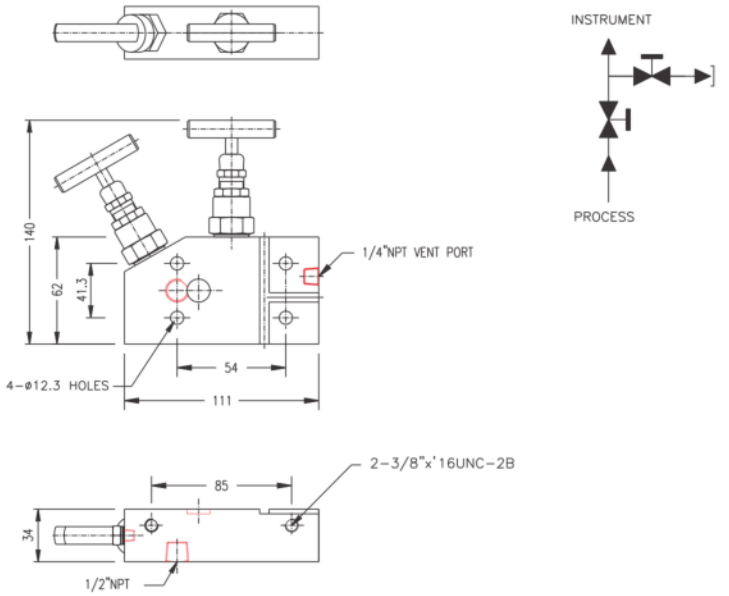
Size Inches	Rating lb	A-RF	B
½"	150	57	89
½"	300	57	96
½"	600	61	96
½"	900/1500	64	121
½"	2500	64	134
¾"	150	57	99
¾"	300	60	118
¾"	600	64	118
¾"	900/1500	64	130
¾"	2500	64	140
1"	150	57	108
1"	300	60	124
1"	600	64	124
1"	900/1500	67	150
1"	2500	67	159

FLUID CONTROLS

COPLANAR MOUNTING TWO VALVE MANIFOLD



Model No. 2 CPL



DESCRIPTION

Designed as a new series of process instrument manifold for particular transmitter models. This integral manifold when assembled to transmitter has the advantage of compact size with ease for operation in minimum space, therby eliminating several components in integrating the manifold to the transmitter. This manifold has one isolating valve and vent valve.

Connections	:	Process	:	½" NPT (F)	
		Instrument	:	Flanged	
		Drain / Vent	:	¼" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Optional	:	Drain plug			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos			

ORDERING CODE FOR 3 VALVE MANIFOLD

8 - 3 FMNV-DM1 - D N SFT-TASI. SSL

DESCRIPTION		FEATURE	SYMBOL
Threaded process-Instrument connections		1/4"	4
		1/2"	8
Valves contained		No of cartridges	
Series		(1) with all threaded connection	3 MNV
		(2) Direct mounting 'T' type with flanged instrument & threaded process connections	3 FMNV
		(3) With flanged process connection	3 FFMNV
		(4) Coplanar	3 CPL
Type	All threaded connections	Remote mounting type with isolation valve sides and equalizing valve on top	No symbol
	For flanged instrument and threaded process connections	Direct mounting 'T' type	No symbol
		Direct mounting block type with all valves on top	DM 1
		Direct mounting block type with only equalizing valve on top	DM 2
		Coplanar	No symbol
	For flange to flange connections	Flanged instrument connection for direct mounting & flanged process for oval flange connection	No symbol
Drain plug		Not required	No symbol
		Required	D
Thread specification		NPT to ASA B 2.1 - 1960	N
		ISO parallel to ISO : 228/1	R
		ISO taper to ISO : 7/1	RX
Note : not applicable for manifolds with flange to flange end connections.			
Seat		Metallic seat	No symbol
		Soft seat for isolation valves only	
		Soft seat material - PTFE	SFT
		DELRIN	SFD
		PEEK	SFP
Stem packing material		Teflon (standard)	No symbol
		Graphitised asbestos	GASB
		Graphoil	GOIL
		Teflon asbestos	TASI
Body material		A 105	No symbol
		SS 304/SS304L **	S/SL
		SS 316 /SS316L**	SS/SSL
		Monel	MNL
		Hastelloy C	HAC

** for material conformity to NACE MR-01-75 USE SUFFIX "NACE" AS S/NACE, SS/NACE,SSL/NACE

Note : Due to continous improvement & customer interaction designs & specifications may be modified or upgraded without notice.

FLUID CONTROLS®

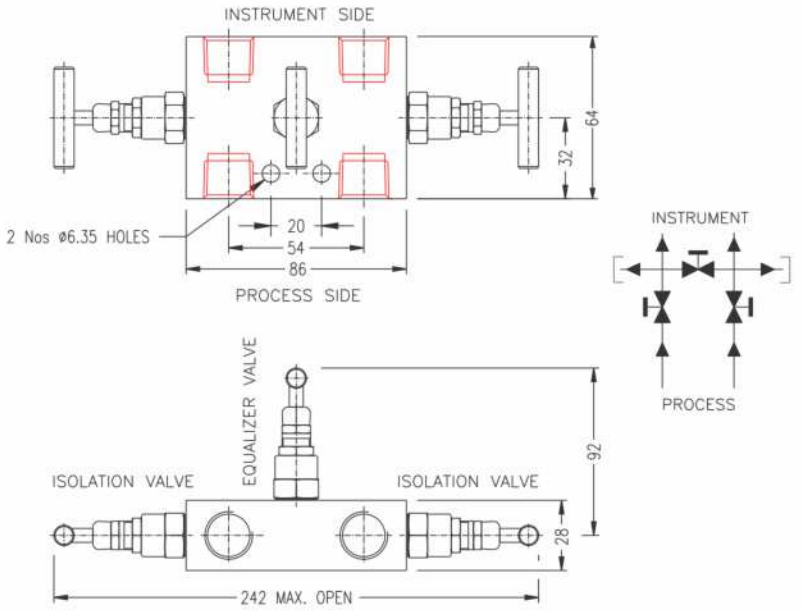
FLUID CONTROLS

THREE - VALVE MANIFOLD, REMOTE MOUNTING

VALVE ON THREE SIDES WITH SCREWED CONNECTIONS



Model No. 3 RM 1



DESCRIPTION

Designed for applications to facilitate remote mounting of differential pressure instruments. Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection. Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions. Useful for installations in remote fields eliminating conventional method of piping.

Connections	:	Process	:	½" NPT (F)
		Instrument	:	½" NPT (F)
		Drain / Vent	:	¼" NPT (F)
Test Pressure	:	@ 25°C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm²
				Seat - 413 Kg/cm²
		Pneumatic	:	Seat - 40 Kg/cm²
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180°C
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Option	:	Drain Port on instrument side with drain plug (Dimension 64 becomes 82) Test Port on process side with plug.		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos		

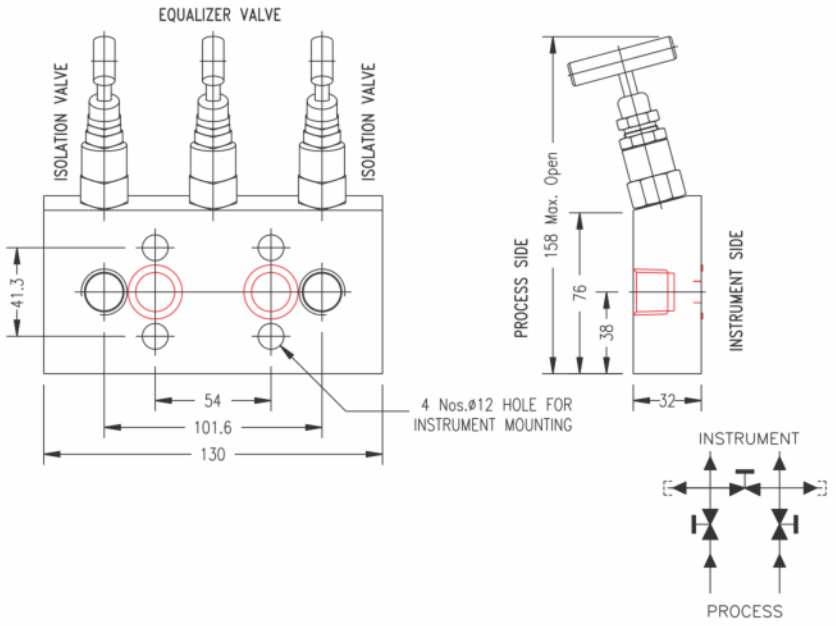
FLUID CONTROLS

THREE VALVE MANIFOLD, DIRECT MOUNTING - TYPE DM 1

ALL VALVE ON TOP, SCREWED PROCESS CONNECTIONS



Model No. 3 DM 1



DESCRIPTION

Designed for direct mounting on to standard differential pressure transmitters. This manifold block incorporates three valves, two main process isolation valves and one equalising valve.

This design is suitable where the straight valve may foul with the instrument and to provide ease of operation.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

Connections	:	Process	:	½" NPT (F)	
		Instrument	:	Flanged	
		Drain / Vent	:	¼" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Drain Port on instrument side with drain plug. Test Port on process side with plug.			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos Interface seal - PTFE / VITON - 2 Nos			

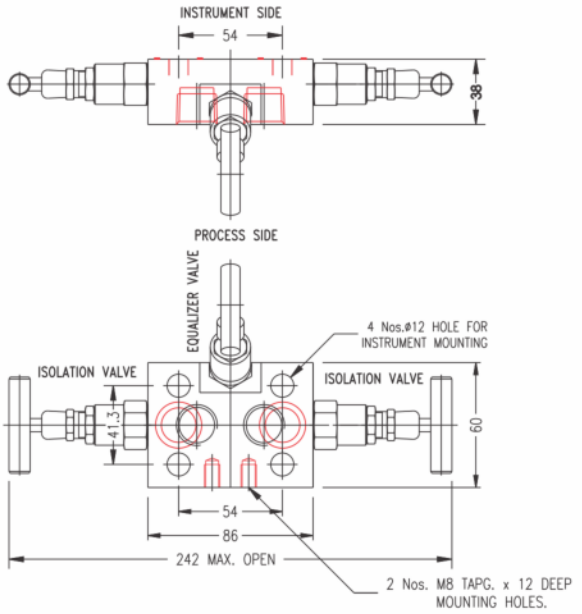
FLUID CONTROLS

THREE VALVE MANIFOLD, DIRECT MOUNTING TYPE DM 2

FLANGED BODY WITH VALVES ON THREE SIDES, SCREWED PROCESS CONNECTION



Model No. 3 DM 2



DESCRIPTION

Designed for direct mounting on to standard differential pressure transmitters. This manifold block incorporates three valves, two main process isolation valves and one equalising valve.

This design is suitable where the straight valve may foul with the instrument and to provide ease of operation.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

Connections	:	Process	:	½" NPT (F)	
		Instrument	:	Flanged	
Test Pressure	:	@ 25°C Room Temperature			
		Hydrostatic	:	Body	- 620 Kg/cm²
				Seat	- 413 Kg/cm²
		Pneumatic	:	Seat	- 40 Kg/cm²
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180°C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Optional	:	Drain Port on instrument side with drain plug. Test Port on process side with plug.			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos Interface seal - PTFE / VITON - 2 Nos			

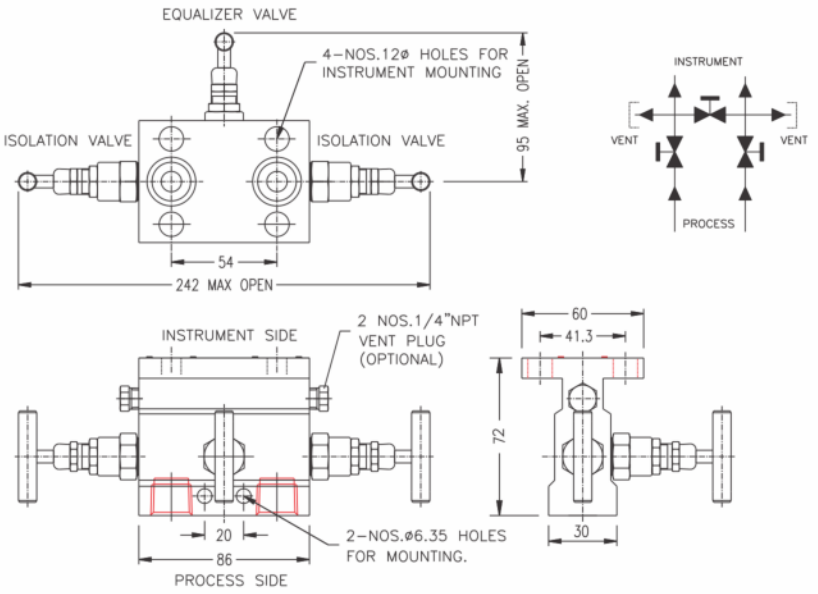
FLUID CONTROLS

THREE VALVE MANIFOLD, DIRECT MOUNTING - "T" TYPE

SCREWED PROCESS AND FLANGED INSTRUMENTS CONNECTION



Model No. 3 TM 1



DESCRIPTION

Designed for direct mounting on to standard differential pressure transmitters. This manifold block incorporates three valves, two main process isolation valves and one equalising valve.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

Connections	:	Process	:	½" NPT (F)		
		Instrument	:	Direct on instrument		
		Drain / Vent	:	¼" NPT (F)		
Test Pressure	:	@ 25^{0}C Room Temperature				
		Hydrostatic	:	Body	-	620 Kg/cm^2
				Seat	-	413 Kg/cm^2
		Pneumatic	:	Seat	-	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard		
	:	GRAPHOIL	:	Temperatures above 180^{0}C		
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy				
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural				
Accessories	:	Two PTFE seal ring and four 7/16" UNF HI. Steel mounting bolts available on request.				
Mounting kit	:	Mounting bracket with U bolts and necessary kits for fitting on 2"NB stanchion pipe stand or wall mount. (to be ordered seperately)				
Option	:	Drain Port on instrument side with drain plug. Test Port on process side with plug.				
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos Interface seal - PTFE / VITON - 2 Nos				

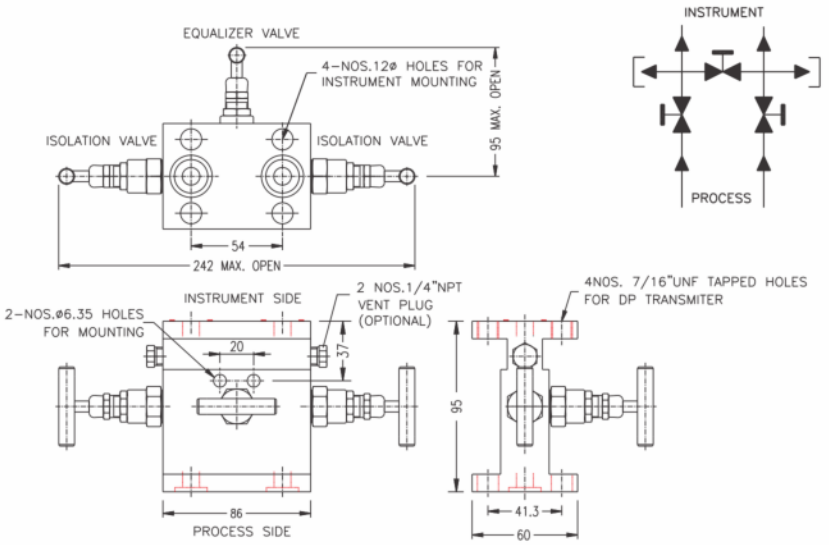
FLUID CONTROLS

THREE VALVE MANIFOLD, DIRECT MOUNTING - "H" TYPE

FLANGED INSTRUMENT AND PROCESS CONNECTION



Model No. 3 HM 1



DESCRIPTION

Designed for direct or remote mounting of differential pressure transmitters. For remote mounting two oval / kidney flanges are used for connecting process pipe to manifold block. These manifold block incorporate these valves, two main valve for process isolation and one valve for equalizing.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

Connections	:	Process	:	Flanged	
		Instrument	:	Flanged	
		Drain / Vent	:	¼" NPT (F)	
Test Pressure	:	@ 25°C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm²
				Seat -	413 Kg/cm²
		Pneumatic	:	Seat -	40 Kg/cm²
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180°C	

Material : A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy

Finish : CS : Zinc Plated and Dichromated; SS : Natural

Accessories : Two PTFE seal ring and four 7/16" UNF HI. Steel mounting bolts available on request.

Mounting kit : Mounting bracket with U bolts and necessary kits for fitting on 2"NB stanchion pipe stand or wall mount. (to be ordered seperately)

Option : Drain Port on instrument side with drain plug.
Test Port on process side with plug.

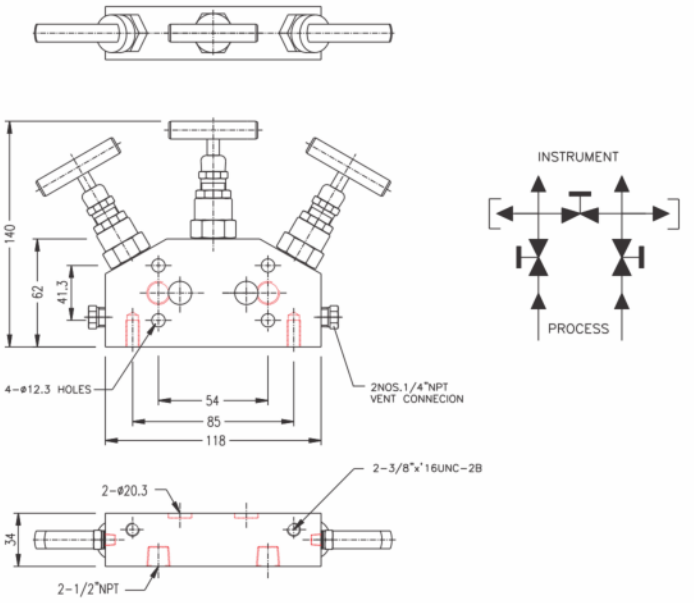
Accessory : Mounting Bolts - IS : 1364 - 1960 - 4 Nos
Interface seal - PTFE / VITO 'N' - 2 Nos

FLUID CONTROLS

COPLANAR MOUNTING THREE VALVE MANIFOLD



Model No. 3 CPL



DESCRIPTION

Designed as a new series of process instrument manifold for particular transmitter models. The coplanar manifold when assembled to transmitter has the advantage of compact size with ease for operation in minimum space, thereby eliminating several components in integrating the manifold to the transmitter. The coplanar manifold has two isolating valves, one equalizer valve and two vent ports duly plugged. The manifold dimensions illustrated are for standard 54 mm or 2 1/8 inch instrument centres but available for other centres. The direct mounting facility to the base of the differential pressure transmitter results in lesser leakage points and more accurate measurements.

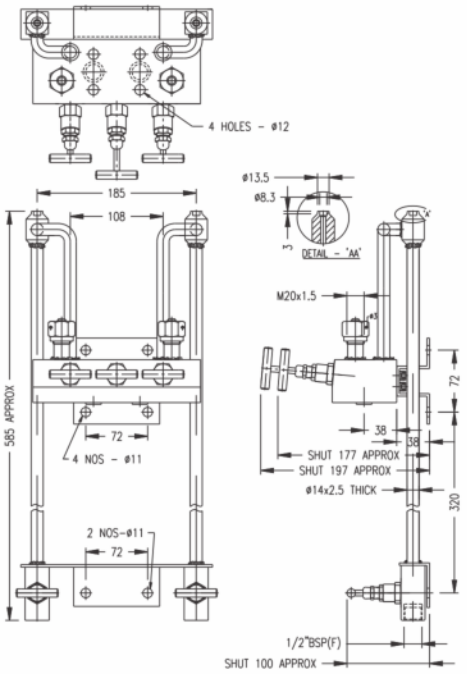
Connections	:	Process	:	½" NPT (F)	
		Instrument	:	Flanged	
		Drain / Vent	:	¼" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Optional	:	Test Port on process side with plug.			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos			

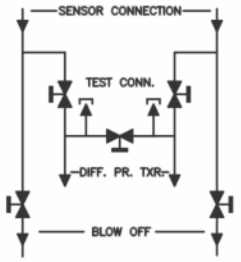
FLUID CONTROLS

VALVE COMBINATION



Model No. VCM



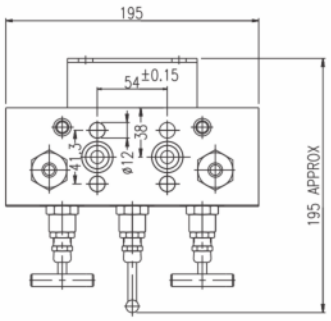


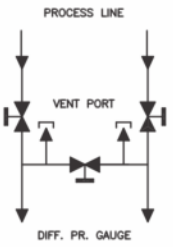
DESCRIPTION

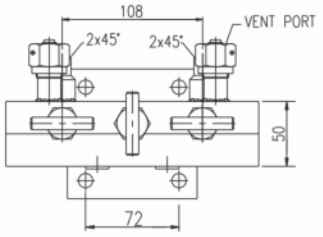
A fabricated manifold for use with steam and conforming to power generation regulations, usually mounted on panels in power station control room.

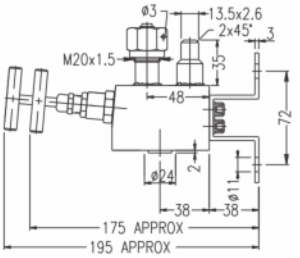
Connections	:	Process 13.5 X 2.6 BW Instrument : Flanged Drain ½" BSP (F)
Test Pressure	:	@ 25^{0}C Room Temperature Hydrostatic : Body - 620 Kg/cm^2 Seat - 413 Kg/cm^2 Pneumatic : Seat - 60 Kg/cm^2
Gland packing	:	PTFE : Standard GRAPHOIL : Temperatures above 180^{0}C
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS
Finish	:	CS - zinc plated and dichromated. SS - natural finish
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos Interface seal - PTFE / VITON - 2 Nos

FLUID CONTROLS









DESCRIPTION

A manifold very popular with power generating equipment, especially, with superheated steam conforming to boiler regulations.

Connections	:	Process 13.5 X 2.6 BW Instrument : Flanged Drain M20 x 1.5 (M)
Test Pressure	:	@ 25°C Room Temperature Hydrostatic : Body - 620 Kg/cm² Seat - 413 Kg/cm² Pneumatic : Seat - 60 Kg/cm²
Gland packing	:	PTFE : Standard GRAPHOIL : Temperatures above 180°C
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos Interface seal - PTFE / VITON - 2 Nos

3 VALVE MANIFOLD



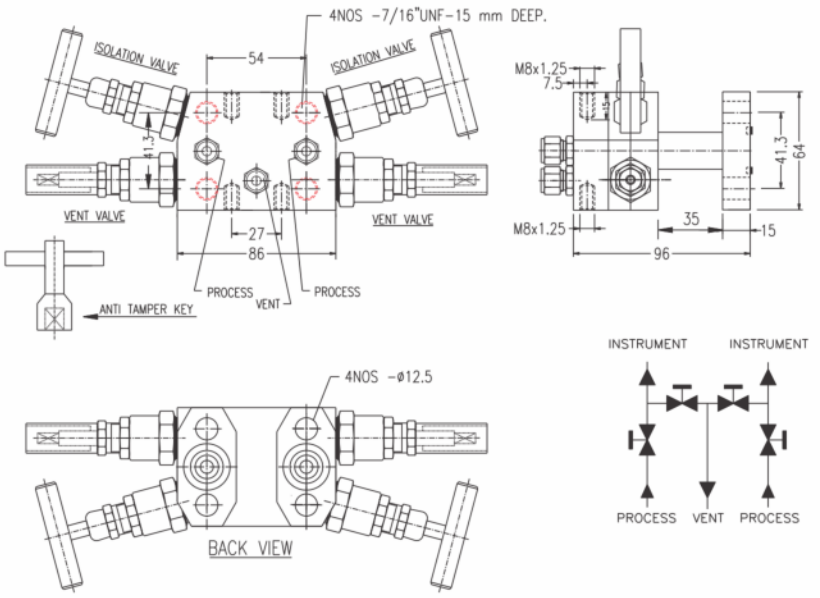
Model No.3 DM 5

FLUID CONTROLS

FOUR VALVE MANIFOLD - DOUBLE ISOLATE / VENT BLOCK - DIRECT MOUNTING TYPE



Model No. 4 DM 1



DESCRIPTION

Designed for where process HYD-AIR must not be contaminated, using differential pressure instruments.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

The essential feature of this design is a vent/drain valve which is provided with a tamper-proof handle to be removed after operation. This arrangement is especially suitable for applications with hazardous HYD-AIR.

Isolation valve with 'T' bar handle vent valve with anti tamper handle

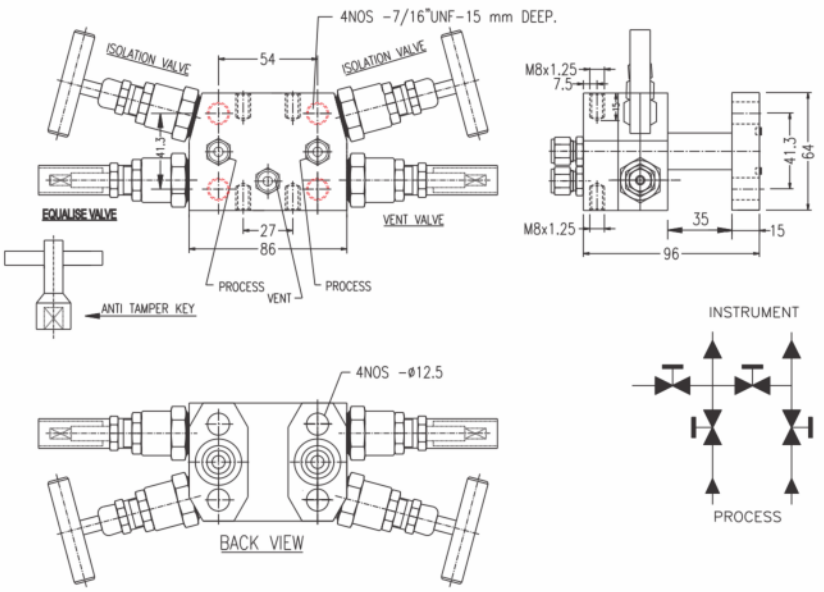
Connections	:	Process	:	1/4"NPT (F) / 1/4" BSPT (F) / 10 mm OD
		Instrument	:	Flanged
		Drain / Vent	:	1/4"NPT (F) / 1/4" BSPT (F) / 10 mm OD
Test Pressure	:	@ 25°C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm^2
				Seat - 413 Kg/cm^2
		Pneumatic	:	Seat - 40 Kg/cm^2
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180°C
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos		
		Interface seal - PTFE / VITON - 2 Nos		

FLUID CONTROLS

FOUR VALVE MANIFOLD - DOUBLE ISOLATE / EQUALIZE / VENT BLOCK - DIRECT MOUNTING TYPE



Model No. 4 DM 2



DESCRIPTION

Designed for general liquid and gas measurement applications for differential pressure instruments with a common drain

The essential feature of this design is a vent/drain valve which is provided with a tamper-proof handle to be removed after operation. This arrangement is especially suitable for applications with hazardous HYD-AIR.

Isolation valve with 'T' bar handle vent valve with anti tamper handle

Connections	:	Process	:	1/4"NPT (F) / 1/4" BSPT (F) / 10 mm OD
		Instrument	:	Flanged
		Drain / Vent	:	1/4"NPT (F) / 1/4" BSPT (F) / 10 mm OD
Test Pressure	:	@ 25^{0}C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm^2
				Seat - 413 Kg/cm^2
		Pneumatic	:	Seat - 40 Kg/cm^2
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180^{0}C
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos		
		Interface seal - PTFE / VITON - 2 Nos		

ORDERING CODE FOR 5 VALVE MANIFOLD

DESCRIPTION	FEATURE	SYMBOL
Threaded process-Instrument connections	1/2"	8
Valves contained	No of cartridges	5
Series	With all threaded connection	5 MNV
	With flanged instrument & threaded process connection	5 FMNV
	With flanged process connection	5 FFMNV
	Coplanar	5 CPL
Type — All threaded connections	**Remote mounting type**	
	Screwed process and instrument connection drain in side	5 RM 1
	Screwed process and instrument connection drain in front	5 RM 2
	Screwed process and instrument connection drain in bottom	5 RM 3
Type — For flanged instrument and threaded process connections	Vent valves on side and rest on top, screwed process connection	5 DM 1
	Screwed process and flanged instrument connection	5 TM 2
	Coplanar - drain connections adjacent to drain valve	5 CPL 1
	Coplanar - drain connections at process side	5 CPL 2
Type — For flange to flange	**Flange mounting type**	
	Flanged instrument and process connection, drain on one side optional test port at bottom	5DM3
Thread specification	NPT to ASA B 2.1 - 1960	N
	ISO parallel to ISO : 228/1	R
	ISO taper to ISO : 7/1	RX
Note : not applicable for manifolds with flange to flange end connections.		
Seat	Metallic seat	No symbol
	Soft seat for isolation valves only	
	Soft seat material - PTFE	SFT
	Soft seat material - DELRIN	SFD
	Soft seat material - PEEK	SFP
Stem packing material	Teflon (standard)	No symbol
	Graphitised asbestos	GASB
	Graphoil	GOIL
	Teflon asbestos	TASI
Body material	A 105	No symbol
	SS 304/SS304L **	S/SL
	SS 316 /SS316L**	SS/SSL
	Monel	MNL
	Hastelloy C	HAC

8 - 5 FMNV 5DM3 N SFT- GASB. S

** For material conformity to NACE MR-01-75 USE SUFFIX "NACE" AS S/NACE, SS/NACE,SSL/NACE

Note : Due to continous improvement & customer interaction designs & specifications may be modified or upgraded without notice.

FLUID CONTROLS®

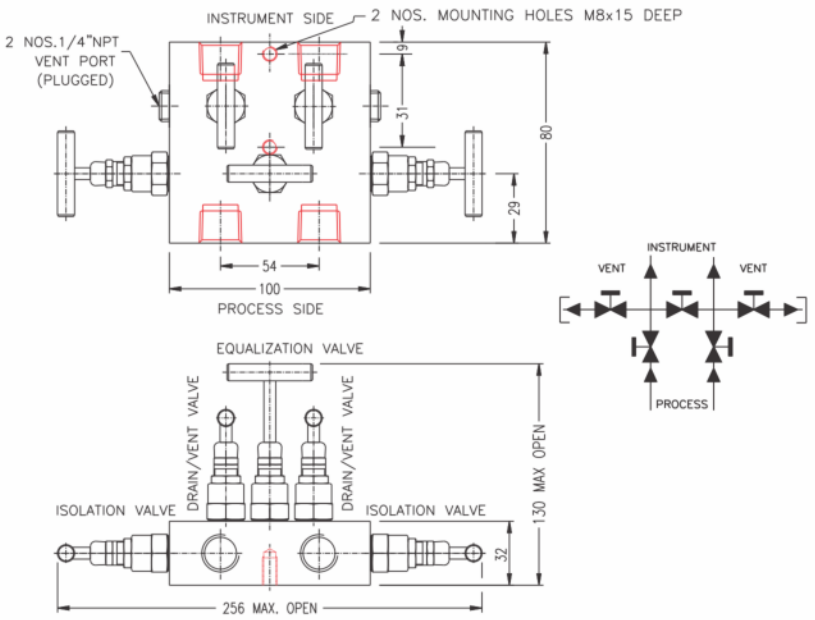
FLUID CONTROLS

FIVE VALVE MANIFOLD, REMOTE MOUNTED TYPE

SCREWED CONNECTIONS



Model No. 5 RM 1



DESCRIPTION

Five Valve Manifold 5 RM1 incorporate two process isolation valves, one equalizer valve and two drain/vent valves with separate connections in a compact manifold block. The Model 5 RM1 is designed for remote mounting away from the differential pressure instrument and joined by tube or pipe impulse lines. They have threaded connections of which the most popular are detailed below but also available to suit other sizes and standards.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection. Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

Connections	:	Process	:	½" NPT (F)		
		Instrument	:	½" NPT (F)		
		Drain / Vent	:	¼" NPT (F)		
Test Pressure	:	@ 25^{0}C Room Temperature				
		Hydrostatic	:	Body	-	620 Kg/cm^2
				Seat	-	413 Kg/cm^2
		Pneumatic	:	Seat	-	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard		
	:	GRAPHOIL	:	Temperatures above 180^{0}C		
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy				
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural				
Option	:	Test Port on precess side with plug.				
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos				

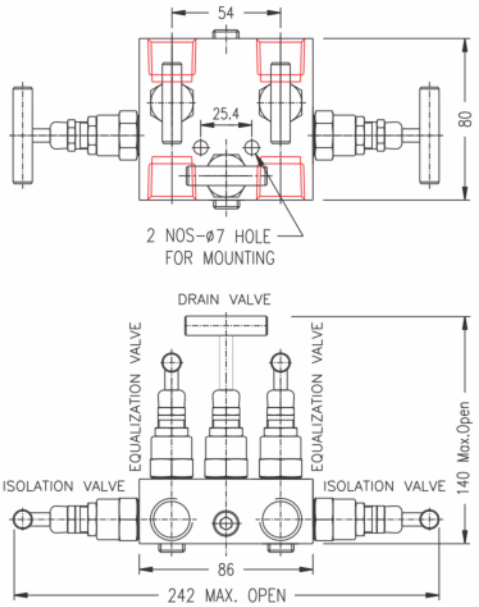
FLUID CONTROLS

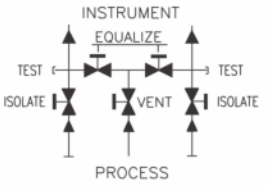
FIVE VALVE MANIFOLD, REMOTE MOUNTED TYPE

SCREWED PROCESS AND INSTRUMENT CONNECTION - DRAIN IN FRONT



Model No. 5 RM 2





DESCRIPTION

Five Valve Manifold 5 RM2 incorporate two process isolation valves, one equalizer valve and two drain/vent valves with a common drain connection in a compact manifold block. The Model 5 RM2 is designed for remote mounting away from the differential pressure instrument and joined by tube or pipe impulse lines. They have threaded connections of which the most popular are detailed below but also available to suit other sizes and standards.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

Connections	:	Process	:	½" NPT (F)	
		Instrument	:	½" NPT (F)	
		Drain / Vent	:	¼" NPT (F)	
Test Pressure	:	@ 25°C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm²
				Seat -	413 Kg/cm²
		Pneumatic	:	Seat -	40 Kg/cm²
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180°C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Test Port on precess side with plug.			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos			

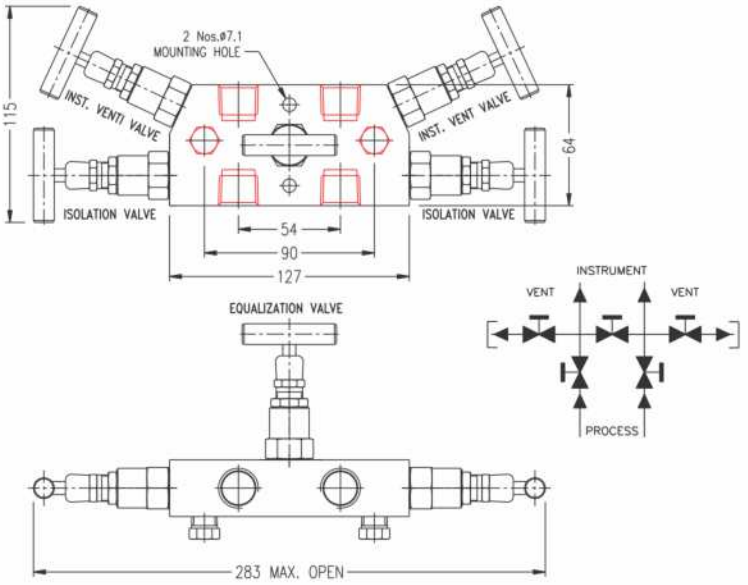
FLUID CONTROLS

FIVE VALVE MANIFOLD, REMOTE MOUNTED TYPE

SCREWED CONNECTIONS



Model No. 5 RM 3



DESCRIPTION

Five Valve Manifold 5 RM3 incorporate two process isolation valves, one equalizer valve and two drain/vent valves with separate connections in a compact manifold block. The Model 5 RM3 is designed for remote mounting away from the differential pressure instrument and joined by tube or pipe impulse lines. They have threaded connections of which the most popular are detailed below but also available to suit other sizes and standards.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

Connections	:	Process	:	½" NPT (F)		
		Instrument	:	½" NPT (F)		
		Drain / Vent	:	¼" NPT (F)		
Test Pressure	:	@ 25°C Room Temperature				
		Hydrostatic	:	Body	-	620 Kg/cm²
				Seat	-	413 Kg/cm²
		Pneumatic	:	Seat	-	40 Kg/cm²
Gland packing	:	PTFE	:	Standard		
	:	GRAPHOIL	:	Temperatures above 180°C		
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy				
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural				
Option	:	Test Port on precess side with plug.				
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 2 Nos				

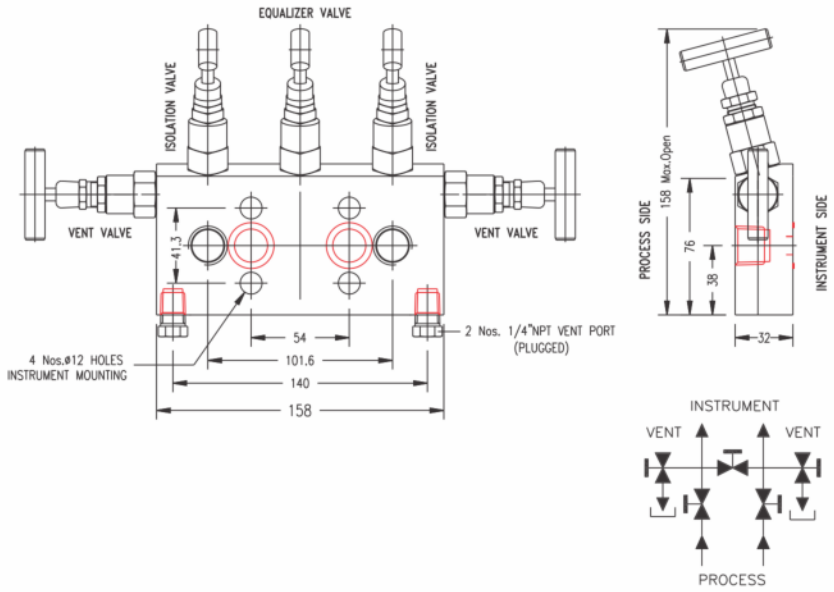
FLUID CONTROLS

FIVE VALVE MANIFOLD, DIRECT MOUNTING - TYPE DM 1

VENT VALVES ON SIDE
& REST ON TOP, SCREWED
PROCESS CONNECTION



Model No. 5 DM 1



DESCRIPTION

Five Valve Manifold Model 5DM1 is designed for direct mounting on differential pressure instruments. The manifold incorporates two process isolation valves, one equalizer valve and two drain/vent valves with separate connections. The process connection is through threaded connections for tube or pipe assembly. The valves are suitably angled to prevent fouling with the instrument. Dimensions shown are for the standard 54 mm or 2 1/8 inch instrument connection centres but also available for other centres on request.

Connections	:	Process	:	½" NPT (F)	
		Instrument	:	Flanged	
		Drain / Vent	:	¼" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Option	:	Test Port on precess side with plug.			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos			
		Interface seal - PTFE / VITON - 2 Nos			

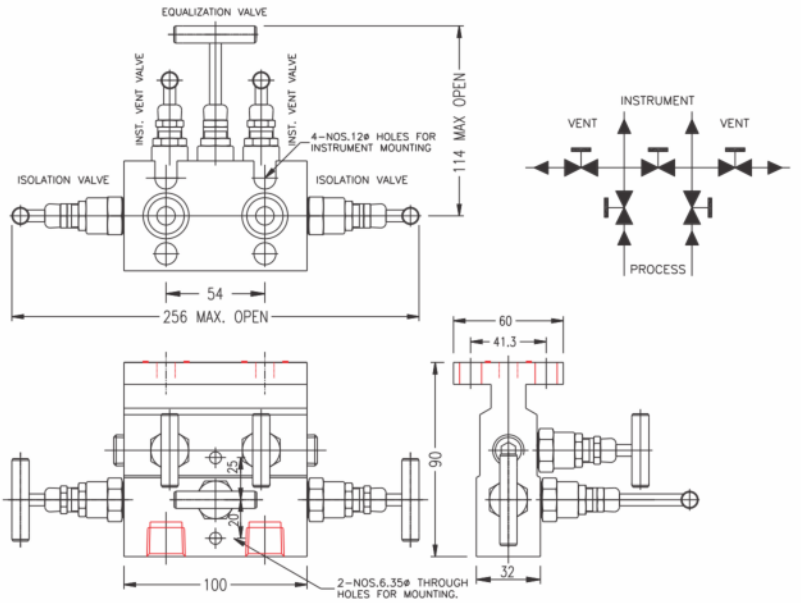
FLUID CONTROLS

FIVE - VALVE MANIFOLD, DIRECT MOUNTING - " T " TYPE

SCREWED PROCESS AND FLANGED INSTRUMENTS CONNECTION



Model No. 5 TM 1



DESCRIPTION

Five Valve Manifold Model "T" type Model 5TM1 is designed for direct mounting on differential pressure instruments. The manifold incorporates two process isolation valves, one equalizer valve and two drain/vent valves in a compact block. The process connection is threaded for connections by tube or pipe fittings. Dimensions shown are for the standard 54 mm or 2 1/8 inch centres for instrument and process connections but are available for other centres on request. Thread details shown are for standard popular sizes and available to suit other thread standards.

Connections	:	Process	:	½" NPT (F)		
		Instrument	:	Flanged		
		Drain / Vent	:	¼" NPT (F)		
Test Pressure	:	@ 25^{0}C Room Temperature				
		Hydrostatic	:	Body	-	620 Kg/cm^2
				Seat	-	413 Kg/cm^2
		Pneumatic	:	Seat	-	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard		
	:	GRAPHOIL	:	Temperatures above 180^{0}C		

Material : A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy

Finish : CS : Zinc Plated and Dichromated; SS : Natural

Mounting kit : Mounting bracket with U bolts and necessary kits for fitting on 2"NB stanchion pipe stand or wall mount. (to be ordered seperately)

Option : Test Port on precess side with plug.

Accessory : Mounting Bolts - IS : 1364 - 1960 - 4 Nos
Interface seal - PTFE / VITON - 2 Nos

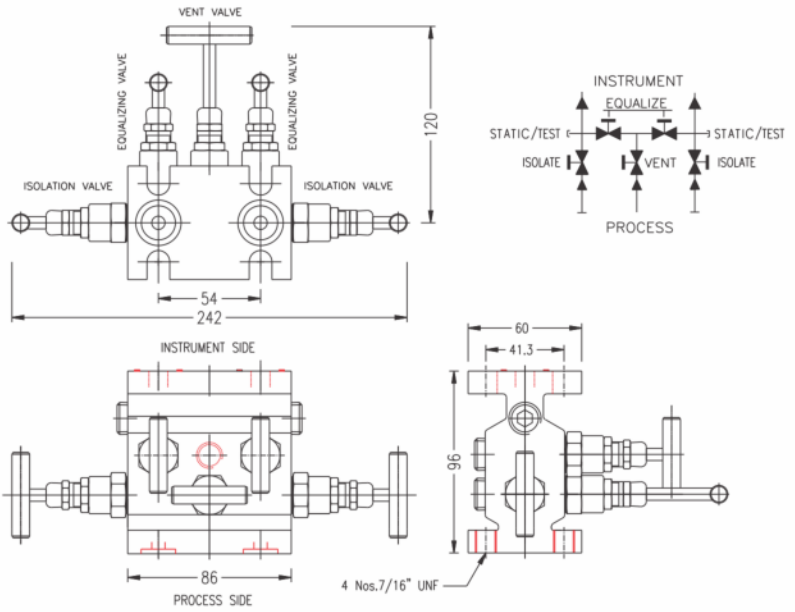
FLUID CONTROLS

FIVE - VALVE MANIFOLD, DIRECT MOUNTING - " H " TYPE

FLANGED INSTRUMENT AND PROCESS CONNECTION-DRAIN PORT ON ONE SIDE OPTIONAL TEST PORT AT BOTTOM



Model No. 5 HM 1



DESCRIPTION

Designed for direct or remote mounting of differential pressure transmitters. For remote mounting two oval/kidney flanges are used for connecting process pipe to manifold block. These manifold block incorporate five valves, two main valve for process isolation valve for vent two valves for equalizing.

Dimensions shown above are for the standard 54 mm or 2 1/8 inch instrument connection Centre distance found in majority of instruments. The manifold is also available for instruments with other centre distances for instrument connections (as 55 mm, 56 mm and 57 mm) but dimensions shown will vary. Please consult us for these dimensions.

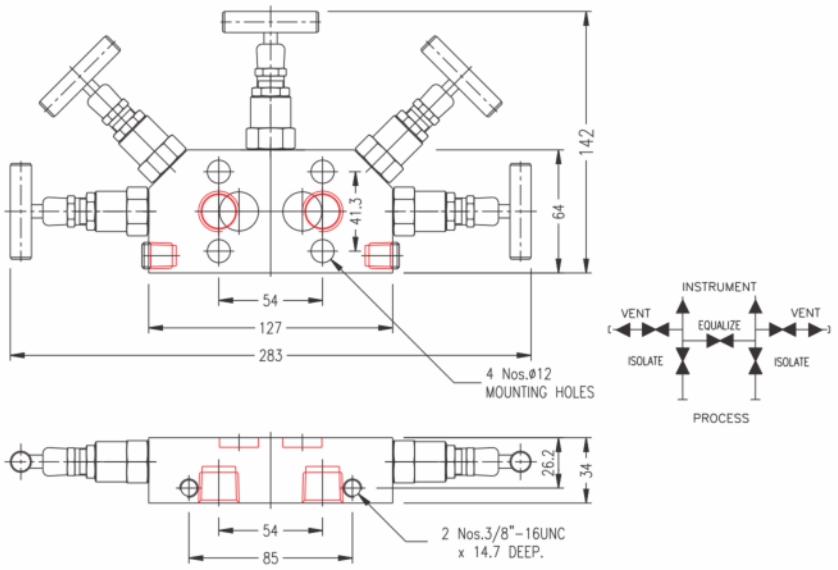
Connections	:	Process	:	Flanged
		Instrument	:	Flanged
		Drain / Vent	:	¼" NPT (F)
Test Pressure	:	@ 25°C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm²
				Seat - 413 Kg/cm²
		Pneumatic	:	Seat - 40 Kg/cm²
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Tempretures above 180°C
Material	:	A 105, A 182 Gr F 304SS, A 182 Gr F 316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Mounting kit	:	Mounting bracket with U bolts and necessary kits for fitting on 2"NB stanchion pipe stand or wall mount. (to be ordered seperately)		
Option	:	Test Port on precess side with plug.		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos		
		Interface seal - PTFE / VITON - 2 Nos		

FLUID CONTROLS

COPLANAR MOUNTING FIVE VALVE MANIFOLD



Model No. 5 CPL - 1



DESCRIPTION

Designed as a new series of process instrument manifold for particular transmitter models. The coplanar manifold when assembled to transmitter has the advantage of compact size with ease for operation in minimum space, thereby eliminating several components in integrating the manifold to the transmitter. The coplanar manifold has two isolating valves, one equalizer valve and two vent valves and two bottom test ports duly plugged. The manifold dimensions illustrated are for standard 54 mm or 2 1/8 inch instrument centres but available for other centres. The direct mounting facility to the base of the differential pressure transmitter results in lesser leakage points and more accurate measurements.

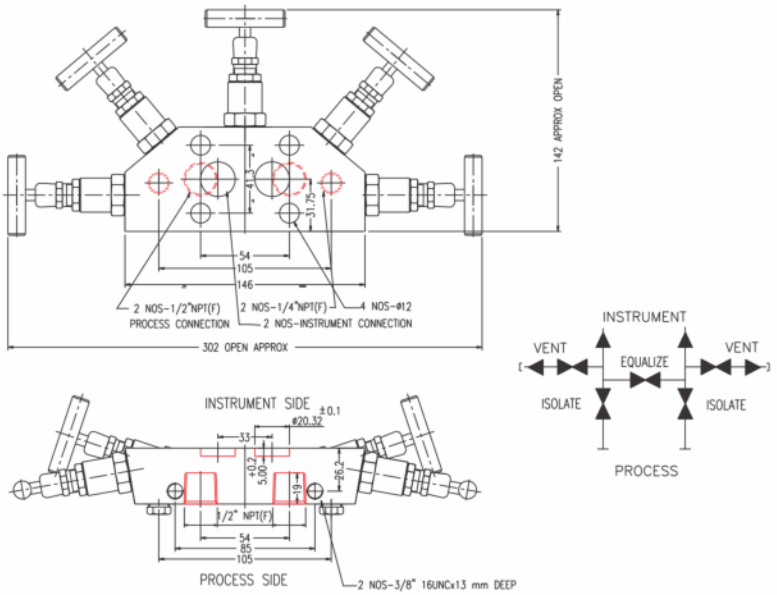
Connections	:	Process	:	1/2" NPT (F)	
		Instrument	:	Flanged	
		Drain / Vent	:	1/4" NPT (F)	
Test Pressure	:	@ 25^{0}C Room Temperature			
		Hydrostatic	:	Body -	620 Kg/cm^2
				Seat -	413 Kg/cm^2
		Pneumatic	:	Seat -	40 Kg/cm^2
Gland packing	:	PTFE	:	Standard	
	:	GRAPHOIL	:	Temperatures above 180^{0}C	
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy			
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural			
Optional	:	Test Port on precess side with plug.			
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos			

FLUID CONTROLS

COPLANAR MOUNTING FIVE VALVE MANIFOLD



Model No. 5 CPL 2



DESCRIPTION

Designed as a new series of process instrument manifold for particular transmitter models. The coplanar manifold when assembled to transmitter has the advantage of compact size with ease for operation in minimum space, thereby eliminating several components in integrating the manifold to the transmitter. The coplanar manifold has two isolating valves, one equalizer valve and two vent valves and two bottom test ports duly plugged. The manifold dimensions illustrated are for standard 54 mm or 2 1/8 inch instrument centres but available for other centres. The direct mounting facility to the base of the differential pressure transmitter results in lesser leakage points and more accurate measurements.

Connections	:	Process	:	½" NPT (F)
		Instrument	:	Flanged
		Drain / Vent	:	¼" NPT (F)
Test Pressure	:	@ 25°C Room Temperature		
		Hydrostatic	:	Body - 620 Kg/cm²
				Seat - 413 Kg/cm²
		Pneumatic	:	Seat - 40 Kg/cm²
Gland packing	:	PTFE	:	Standard
	:	GRAPHOIL	:	Temperatures above 180°C
Material	:	A 105, A 182 / A 479 Gr F 304SS, A 182 / A 479 Gr F316SS, Monel, Hastelloy		
Finish	:	CS : Zinc Plated and Dichromated; SS : Natural		
Optional	:	Test Port on precess side with plug.		
Accessory	:	Mounting Bolts - IS : 1364 - 1960 - 4 Nos		



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