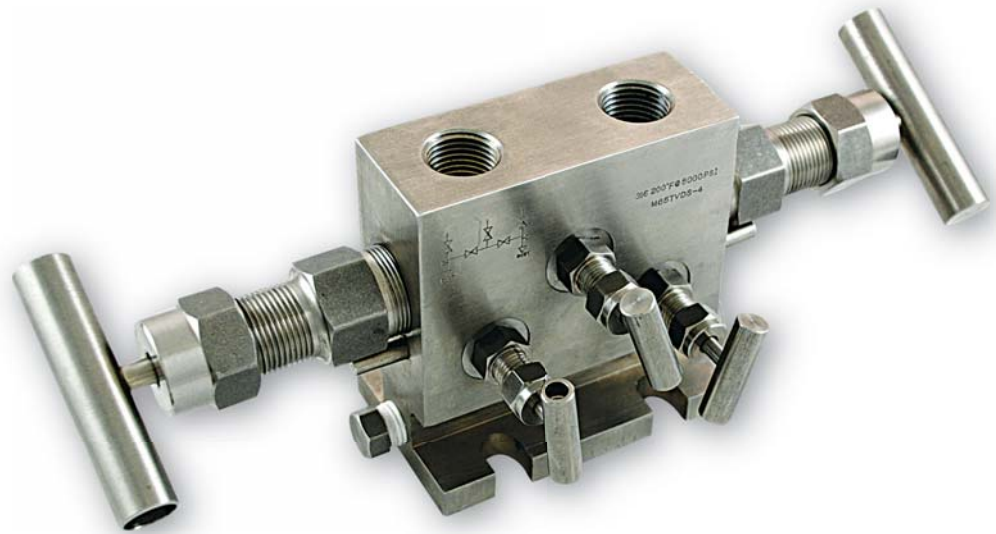


# Valves

## VALVE MANIFOLDS



NEEDLE VALVE

67

VALVE MANIFOLDS

81

BALL VALVE

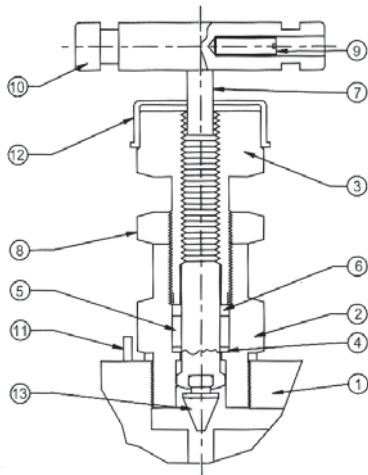
90

CHECK VALVE

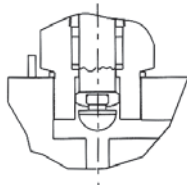
104

## Valve Manifolds

### Material of Construction



Vee Tip Stem & Metal Seat



Ball Tip Stem & Metal Seat

Item	Parts Name	Material	Description
1	Body	Stainelss Steel	ASTM 479-316/304
2	Bonnet	Stainelss Steel	ASTM 479-316/304
3	Gland Retainer	Stainelss Steel	ASTM 479-316/304
4	Washer	Stainelss Steel	ASTM 479-316/304
5	Packing	PIFE	PTFE/GRAFOIL
6	Packing Washer	Stainless Steel	ASTM 479-316/304
7	Stem	Stainless Steel	ASTM 479-316/304
8	Lock Nut	Stainless Steel	ASTM 479-316/304
9	Grub Screw	Stainless Steel	ASTM 276-304
10	Handle	Stainless Steel	ASTM 276-304
11	Lock Pin	Stainless Steel	ASTM 276-304
12	Dust Cap	Plastic	
13	Non-Rotating End TiP	Stainless Steel	ASTM 479-316/304

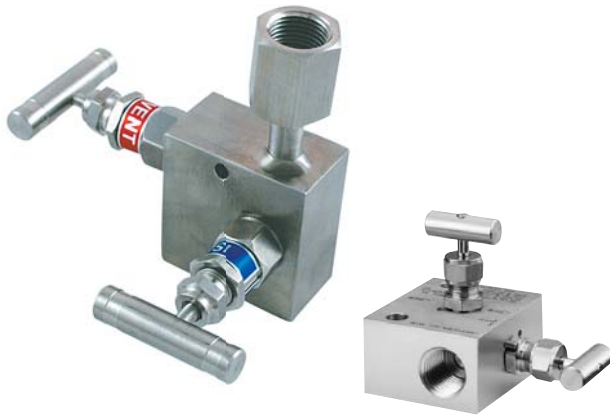
Option Available:

1. Ball tip & Vee tip are available.
2. The other material and bonnet type is available upon request.

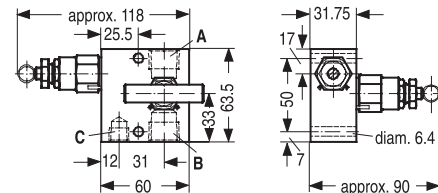
1. Bonnet lock pins prevent accidental loosening.
2. Free-swiveling ball end stem(metal seat, std.) assure bubble tight valve closure without seat galling. The special hardened ball seat is ideal for both gas and liquid service.
3. All stem packing is located below the stem threads prevent galling, corrosion and contamination by the process medias.
4. The packing is adjustable with less possibility of bonnet/body leaks.
5. Full back-seated bonnets prevent accidental stem removal and blowout. Unique design minimizes emissions while offering easy access to the packing.
6. Max Pressure rating(metal seated).6000PSIG@200°F(414barg@93°C)
7. Pressure rating at max. temp.: PTFE-4130psig at 450°F284bar at 232°C)and Grafoil-1500psig at 1000°F103bar at 537°C).
8. The orifice size: 0.156 inch (4.0mm).

## Two Valve Manifolds

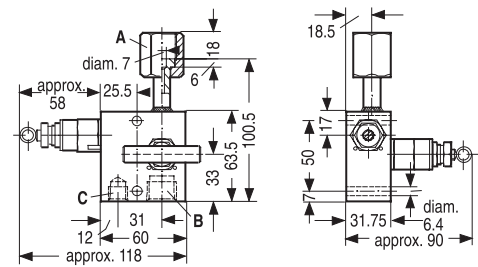
### Block Type(R Type)



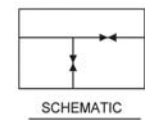
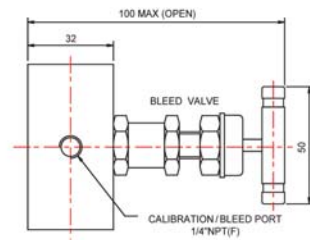
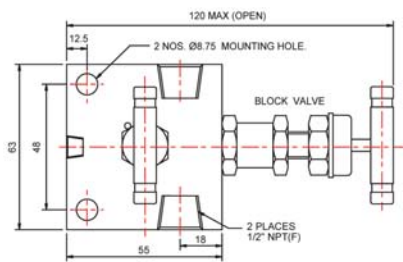
LOCK-FIT two valve calibration manifold provides an economical and convenient method of blocking, bleeding and calibrating pressure instruments. The block type(R type) may be mounted rigidly to a mounting bracket, providing a safe isolation valve and the single flanged type(T Type) is directly mounted while reducing the number of fittings and space required for installation.



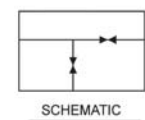
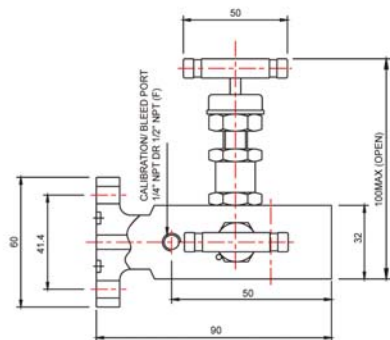
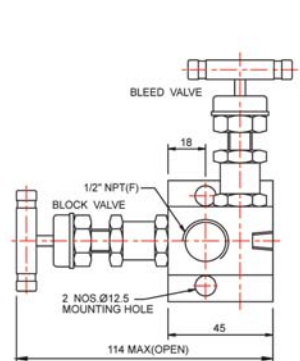
- A Connection on device side: 1/2-14 NPT
- B Connection on measurement side: 1/2-14 NPT
- C Vent and test connection: 1/4-18 NPT



- A Connection on device side: nipple to DIN 16 284, G1/2, SW 27
- B Connection on measurement side: 1/2-14 NPT
- C Vent and test connection: 1/4-18 NPT



### Single Flange Type(T Type)



## Three Valve Manifolds

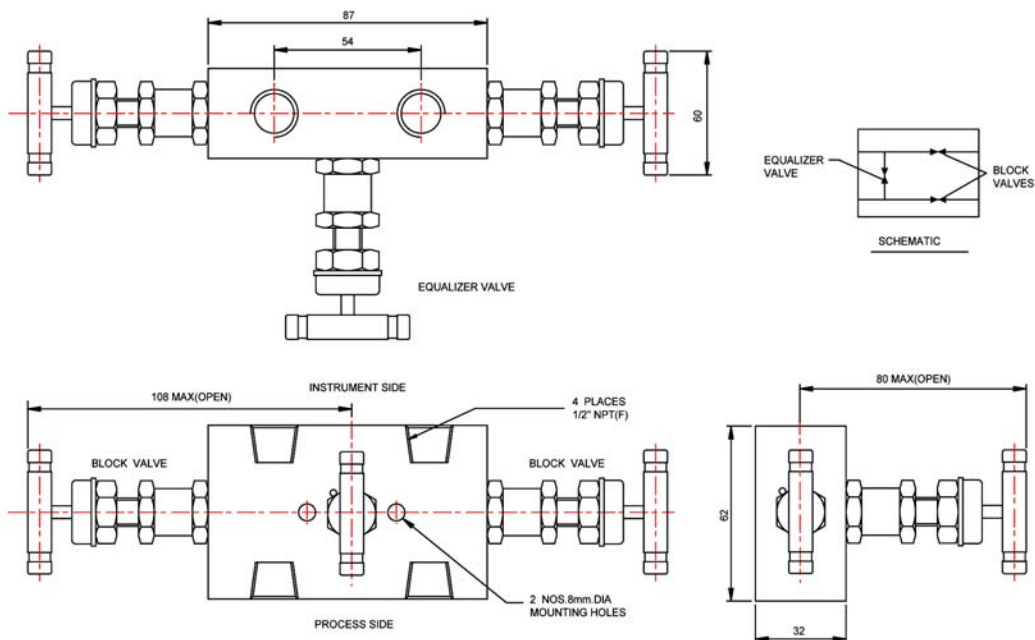
Three Valve Manifolds is designed for Flow Static, Static Pressure, Liquid Level instruments application

LOCK-FIT three valve manifolds contain two block valves and one equalizing valve. Perform the block. equalizing and vent requirement of differential pressure by providing one compact valve assembly.



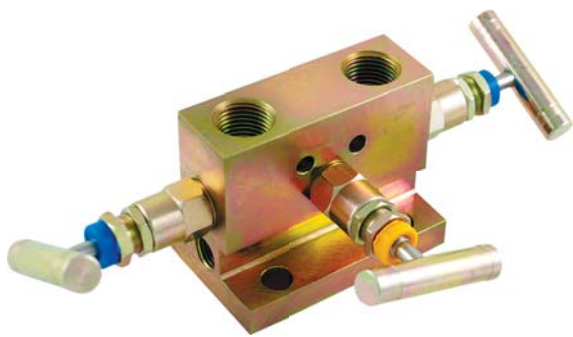
The block type(R type. pipe to pipe)in-line three valve manifold is designed for differential pressure or flow recorder to impulse tubing. Connections are 1/2"NPT on industry standard and 2-1/8"(54mm)center-to-center dimension(Model for 2-3/16" & 2-1/4"center—to—center dimensions are available)

### Block Type(R Type)



### Three Valve Manifolds

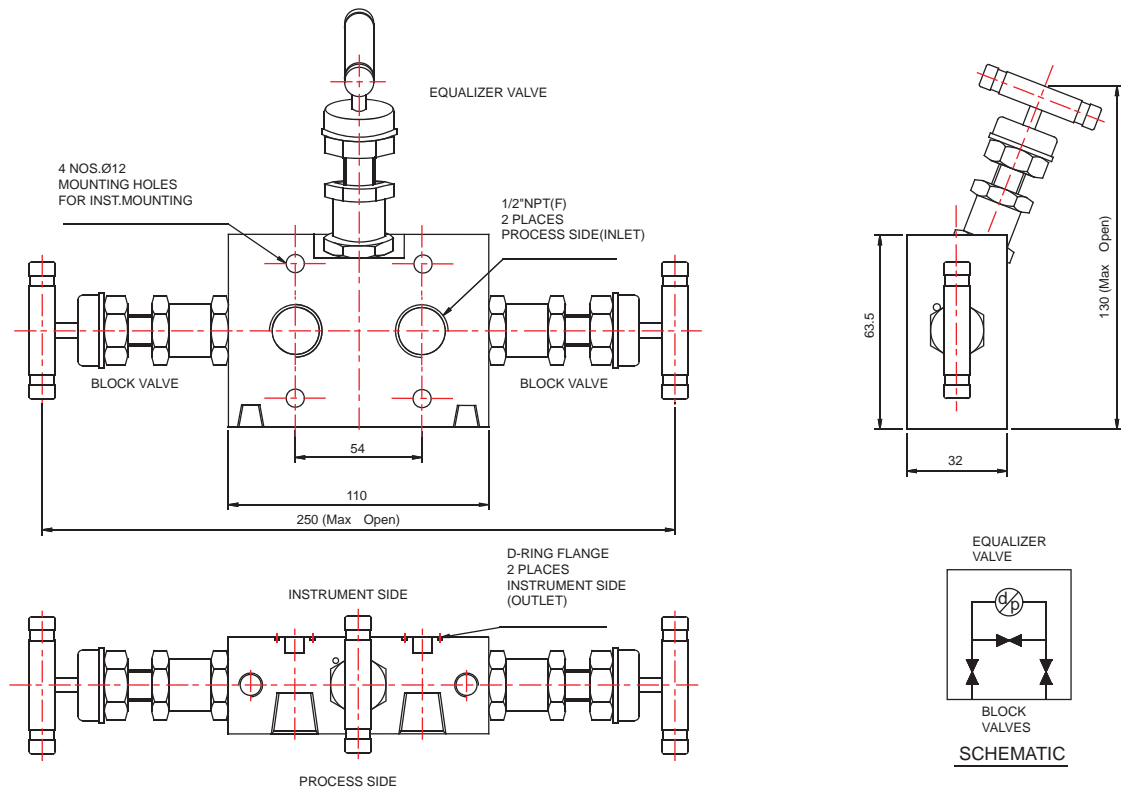
Is designed for Flow Static, Static Pressure, Liquid Level instruments application



D type (direct mount, pipe to flange), T type (single flange, pipe to flange) and H type (dual flange, flange to flange) manifolds bolt directly to the differential pressure instruments which eliminate the need for unnecessary piping, valves and fittings.

D type manifold is a light weight and compact design and direct mounting to standard differential pressure transmitters. T type manifold comes complete with mounting kit for quick and easy installation to a pipe stand. H type manifold is designed for close.

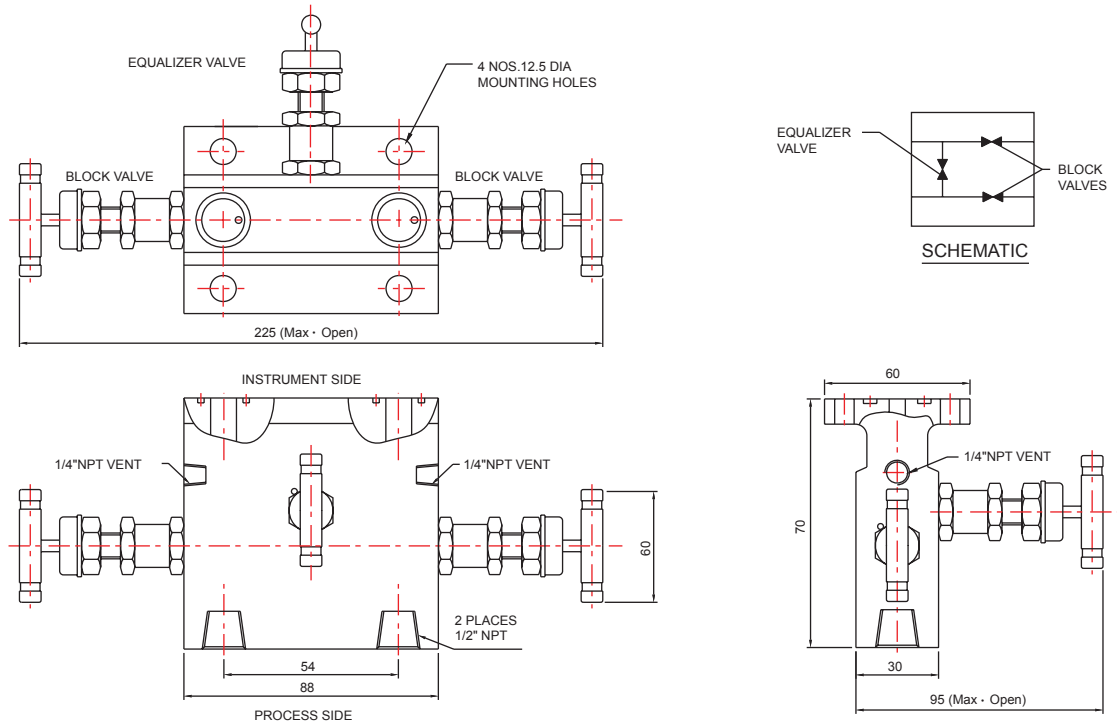
### Direct Mount Type(D Type, Pipe to Flange)



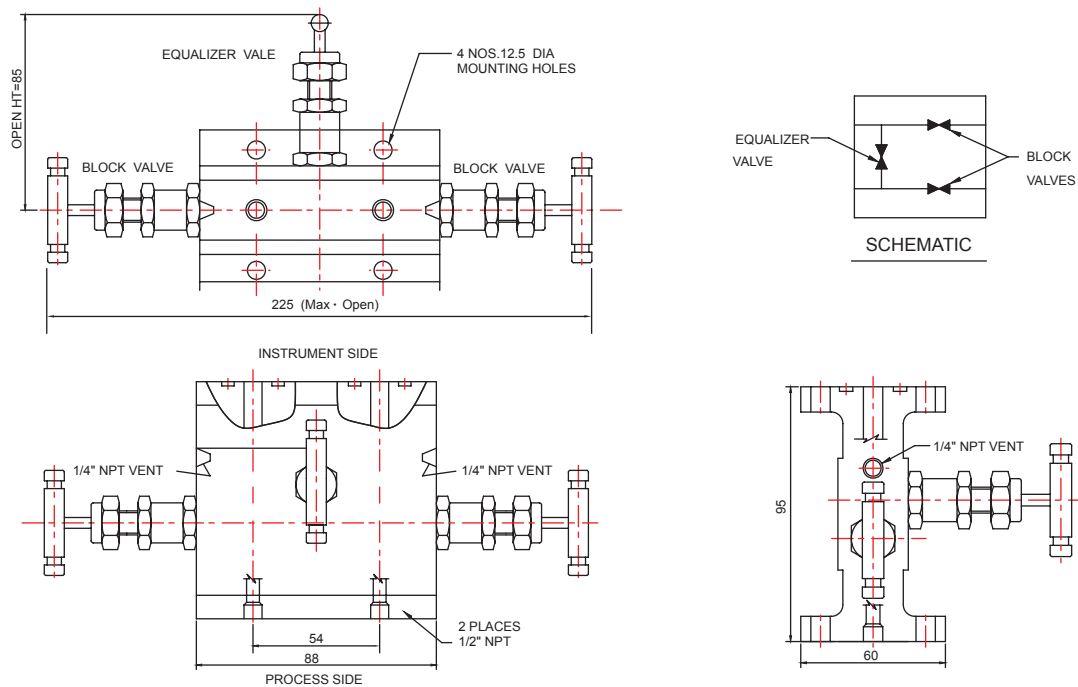
### Three Valve Manifolds

Is designed for Flow Static, Static Pressure, Liquid Level instruments application

#### Single Flange Type(T Type, Pipe to Flange)



#### Dual Flange Type(H Type, Flange to Flange)



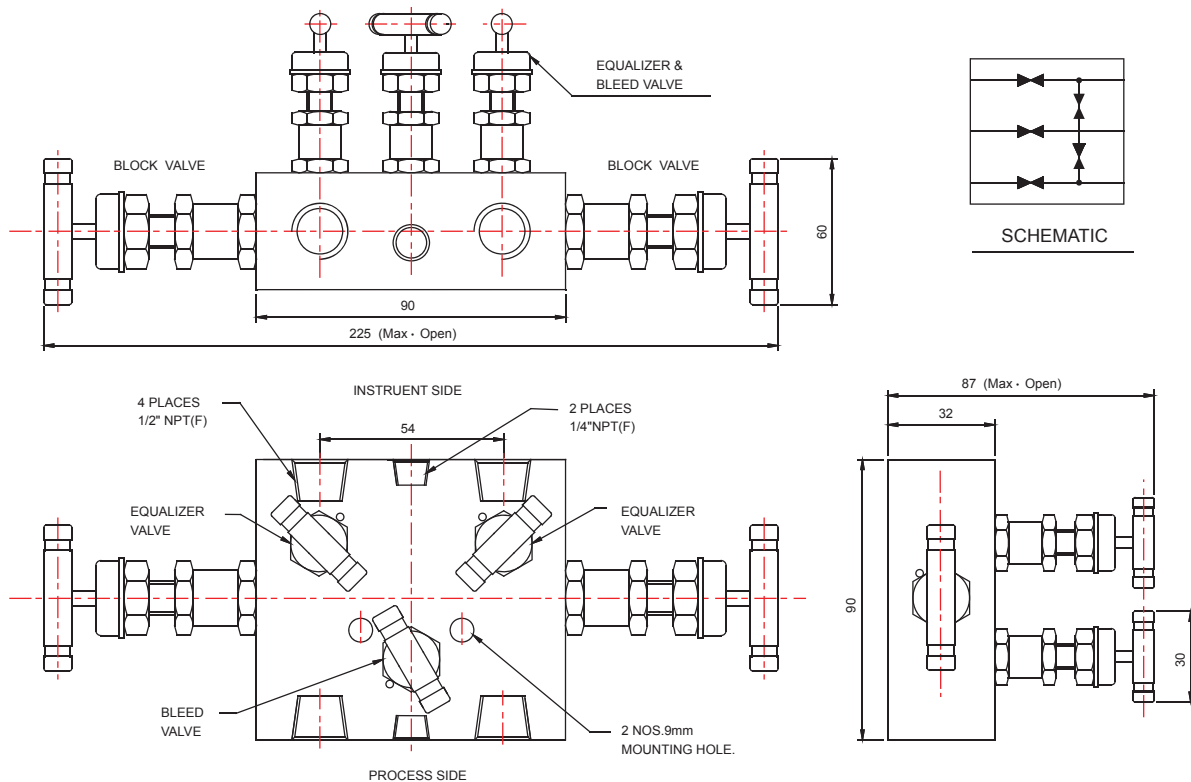
### Five Valve Manifolds

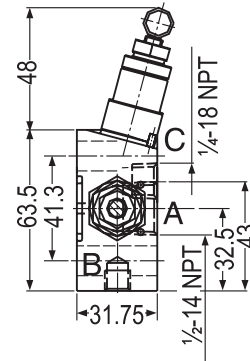
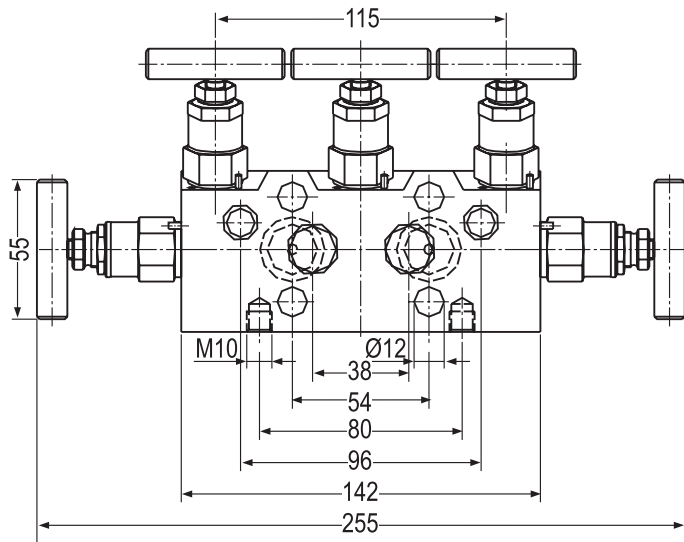
Is designed for natural gas metering application

LOCK-FIT five manifolds are designed for natural gas application. The five manifolds consists of two shut off valves, two equalizing valves and a single vent valve which takes the place of the conventional piped up 5-valve manifold generally found on field meters or gas service differential pressure pressure instrument. There are three type five valve manifold. Block type (R type) - pipe to pipe, Single Flange type(R type) - pipe to flange and Dual Flange type(H type) - flange to flange, To meet the requirements for differential pressure instruments application.



### Block Type(R Type, Pipe to Pipe) Dimension



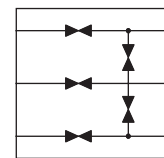
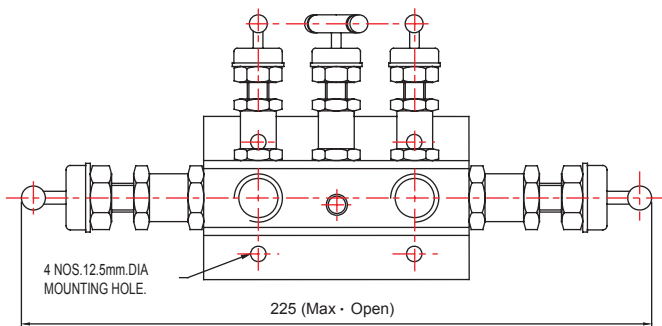


- A Process connection: 1/2-14 NPT
  - B Transmitter connection: Flange connection to EN 61 518, form B
  - C Vent / test connection: 1/4-18 NPT
- Valve design: external spindle thread

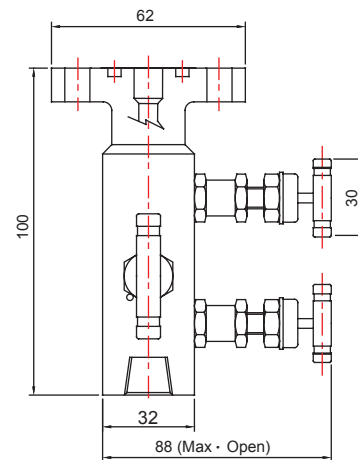
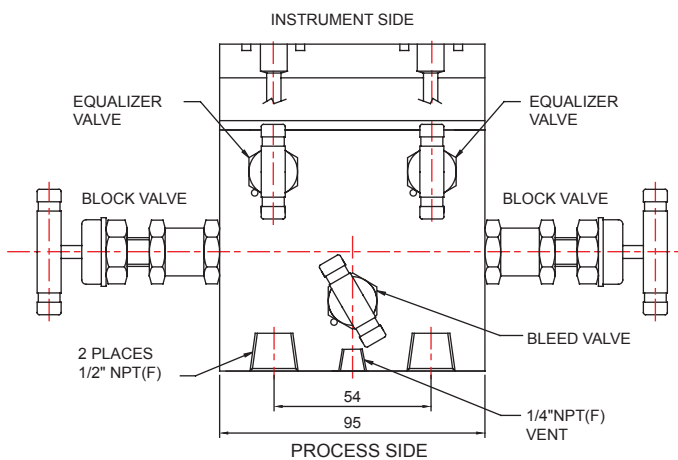
## Five Valve Manifolds

Is designed for natural gas metering application

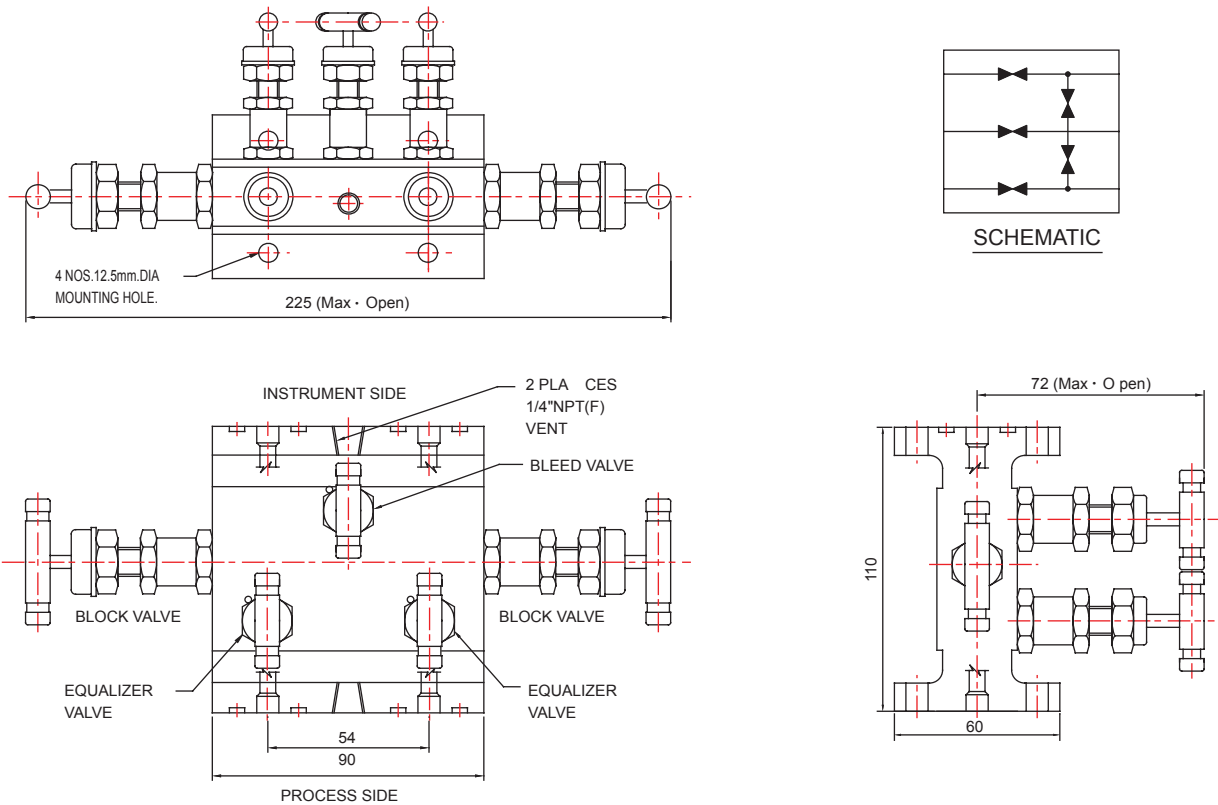
### Single Flange Type(T Type, Pipe to Flange)



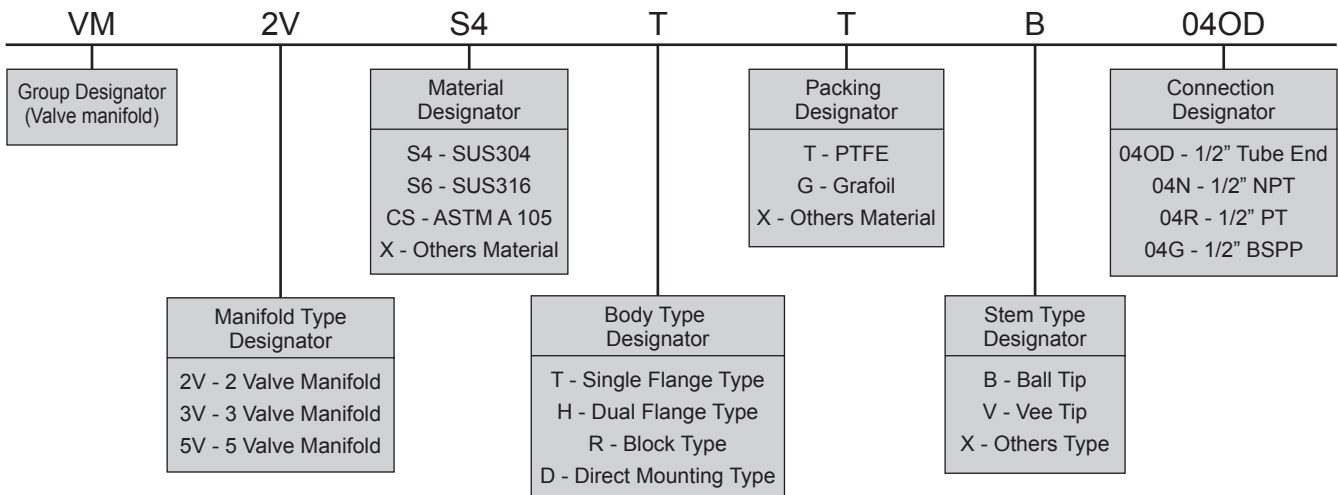
SCHMATIC



### Dual Flange Type(H Type, Flange to Flange) Dimension



### ORDERING INFORMATION



- P.S.: 1. The other types of 2-, 3-, 5-valve manifolds are available upon request.  
 2. Testing: Each valve is tested with nitrogen @100psi for seat & packing leakage to max. leak rate of 0.1SCCM or optional hydrostatic test which performed with pure water at 1.5 times of working pressure.  
 3. All dimensions are mm. Dimensions for reference only-subject to change.