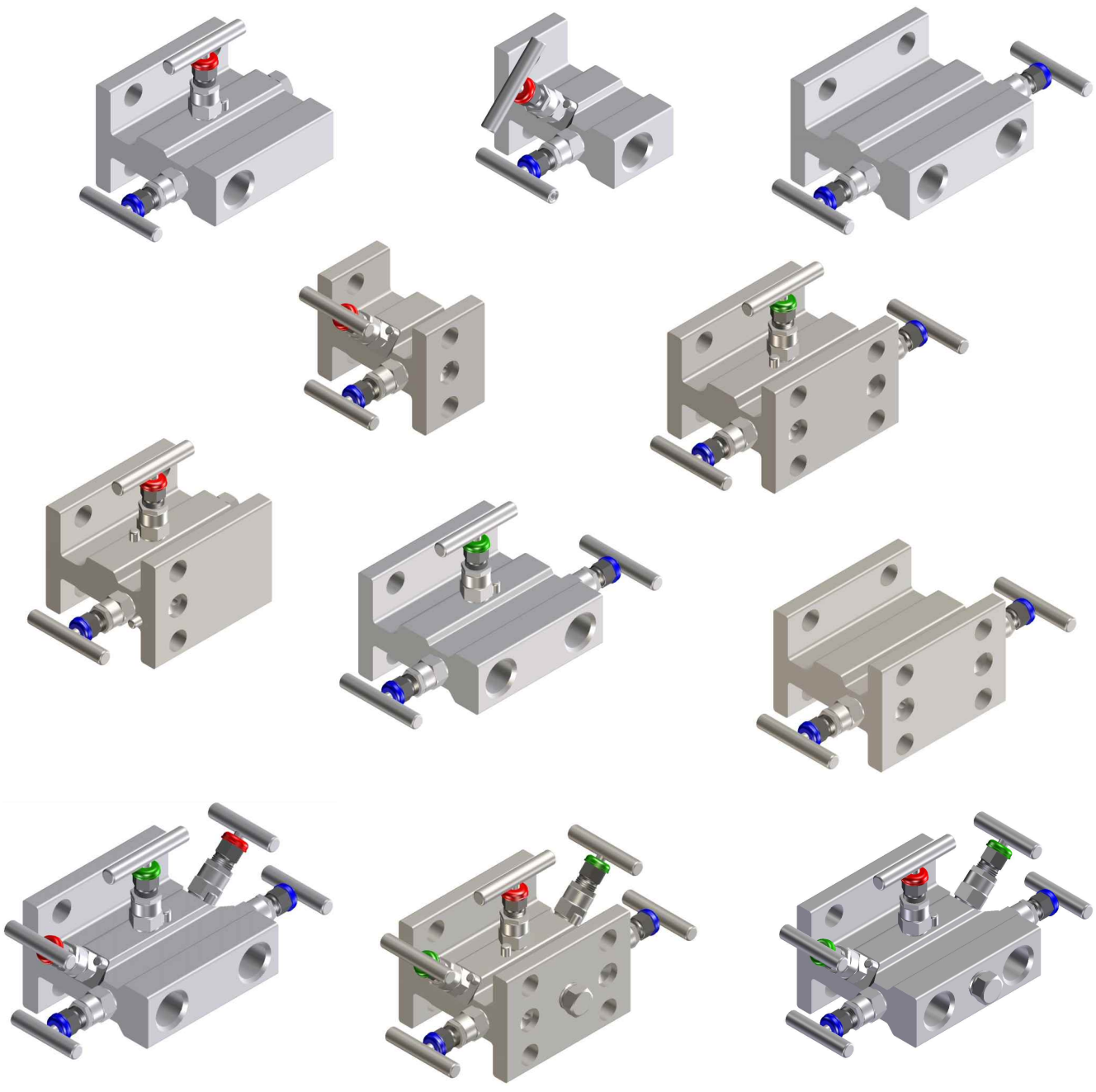
SUSTECH

PRECISION ISO 9001:2008



T and H Section Manifolds

L Series

- Rated up to 10 000 psi
- Compact design
- Ease of use

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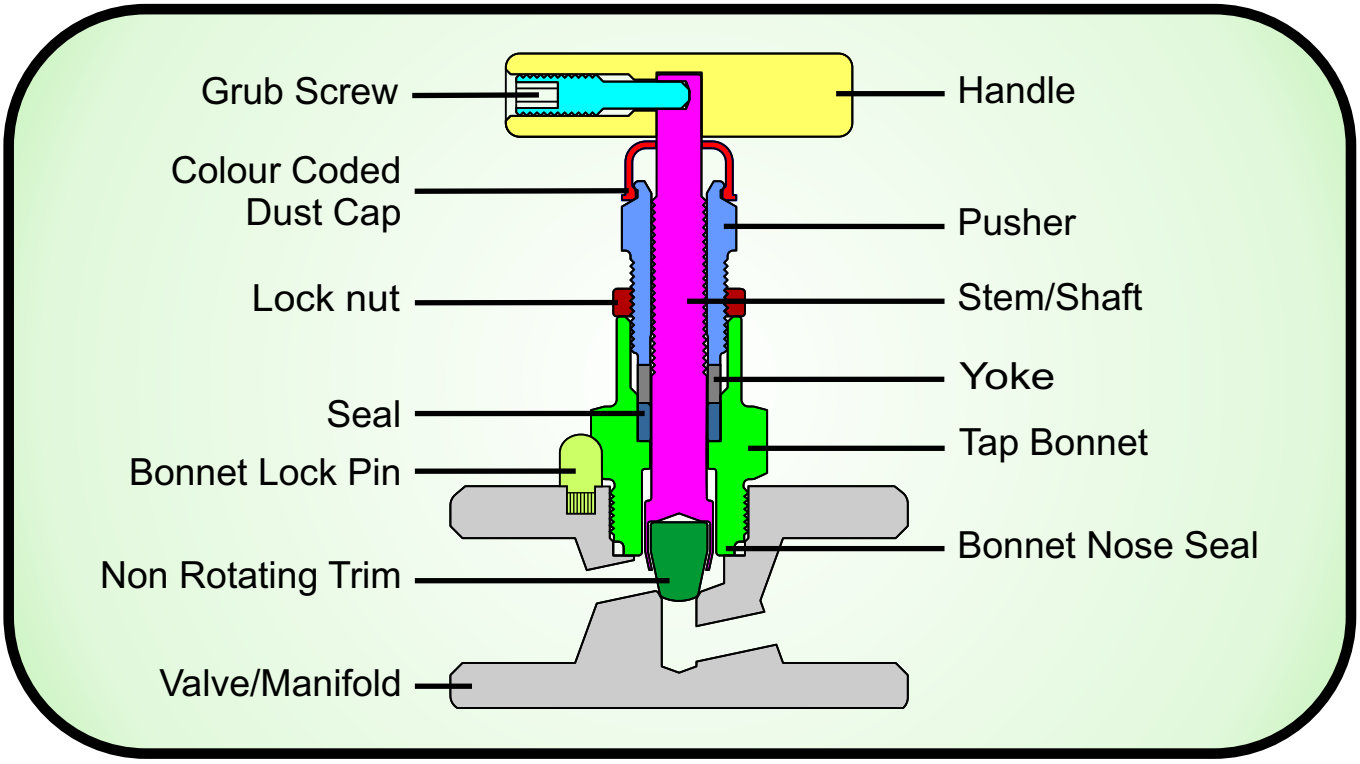
L-Series Valve Head



Features and Benefits

- **Low Operating Torque**
- **Safety Back Seating of Stem**
- **Anti Blow-Out Shaft**
- **Stem Seal below the Threads**
- **Bonnet Seal located below Threads**
- **Bonnet Lock Pin**
- **Non-Rotating Ball-Nose Trim**
- **External adjustment of packing seal**
- **Stem dust cap**
- **Colour Coded Valve Function**
- **Tracker Code**
- **Hidden Tap Handle Locating Screw**
- **Full Traceability**
- **Locknut**
- **Seal Yoke**
- **Low Friction Coating on Pusher**
- **Mirror Finish Burnished Stem Seal Surface**
- **Single Point Machined Threads**
- **2 Times Overpressure Safety Margin**
- **100% Pressure Tested**
- **Anti Tamper Option Available** (with removable key)
- **Lockable Option Available** (with contained key)
- **Panel Mount Option Available**

L-Series Valve Head

Features and Benefits Explained

Safety Back Seating of Stem
This function prevents accidental removal of the stem while in operation. When the tap is in the fully opened position the stem produces a metal to metal secondary back seal, removing continuous pressure from the packing.

Anti Blow-Out Shaft
Reduces risk of injury as the shaft will be contained in the unlikely event of a shaft thread failure due to unforseen circumstances.

Stem Seal below the Threads
This isolates the stem threads from the process media, preventing thread corrosion and keeps solids from entering the thread area which can cause galling. It also isolates the thread lubricant from the process, preventing process contamination as well as lubricant washout.

Bonnet Seal located below Threads
A metal to metal seal is utilized to provide a positive seal that also provides a great seal even at high temperatures. This seal is located below the bonnet threads isolating the bonnet threads from the process media.

Bonnet Lock Pin
All taps are secured by a Bonnet lock pin. These pins are machined from billet rather than using a roll pin. The end result is a shouldered bonnet dwell pin that is knurled on the insertion point.

Non-Rotating Ball-Nose Trim
This stops galling or damage to the seat face by allowing the trim to not rotate while lift off of, and seating down on, the seating surface. For added security the trim is produced from billet rather than using a sphere (pure ball) as a ball does not have polarity. This ensures the trim can only rotate around the same axis as the stem.

External adjustment of packing seal
The stem seal can be easily adjusted in position, without any disassembly of the valve or manifold.

Stem dust cap
Protects stem threads against contaminants in the atmosphere.

Colour Coded Valve Function
Tap function easily identifiable through colour coded dust caps.

Tracker Code
All taps are assembled with a tracker code to ensure 100% traceability.

Full Traceability
All components are fully traceable back to source.

Locknut
Ensures safe operation under high vibration conditions.

Seal Yoke
The high precision yoke provides good encapsulation and integrity of the stem seal.

Low Friction Coating on Pusher
The low friction coating is applied to the pusher so that both the stem threads and seal adjusting threads are protected. This greatly reduces friction, galling and wear of the stem threads increasing valve life. It also supplies protection to the seal adjusting threads.

Hidden Tap Handle Locating Screw
This improves the feel to the user when operating the tap as there are no sharp edges or protruding bolts.

Mirror Finish Burnished Stem Seal Surface
The face where the seal contacts the stem is burnished to a mirror like finish. This reduces operating torque and extends the life of the seal

Single Point Machined Threads
Produces high accuracy threads as opposed to tapping. This ensures NACE compliance as no cold working operations such as thread rolling are performed on the material.

2 Times Overpressure Safety Margin

100% Pressure Tested
Each valve is tested with nitrogen gas to a minimum of 1000 psi. Optional 1.5X hydrostatic testing is available on special request.

Anti Tamper Option Available (with removable key).

Lockable Option Available (with contained key).
This option has a handle and key which can be disengaged from the stem and locked using a traditional padlock. The main advantage of this option is that the handle and key remain attached to the valve or manifold reducing the possibility of losing the key.

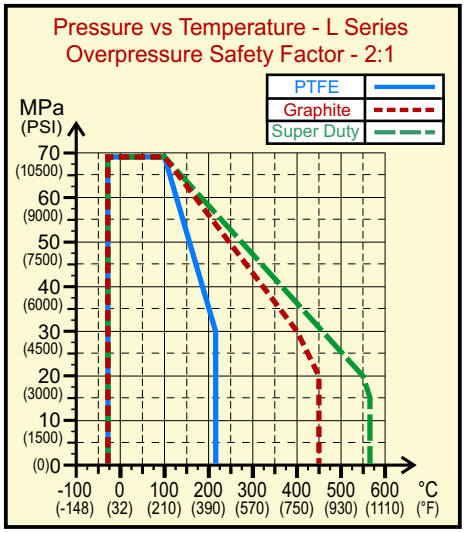
Panel Mount Option Available

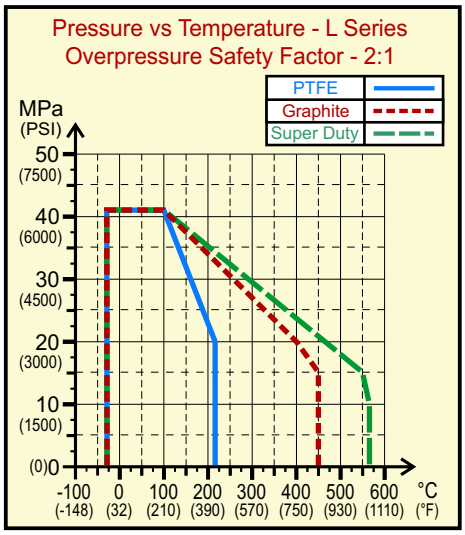
Valve Head Materials,Pressure/Temperature Ratings

Standard Materials Makeup

Sustech's L Series valveheads are assembled with the best possible components. All wetted components of the valvehead are produced from the same material grade as the manifold body. When special alloys are used, the non wetted components will be produced from 316L SS. Below is a list of a few common materials to illustrate the list of materials used. Care should be taken to specify the correct material for the process media and conditions.

Component	316 SS Manifold	Monel 400 Manifold	Hastelloy C-276 Manifold	ASTM A105 Manifold
Tap Bonnet	316/316L SS	Monel 400	Hastelloy C-276	ASTM A105
Stem				304L SS
Trim				304L SS
Pusher	316/316L SS			ASTM A105
Yoke	316/316L SS			ASTM A105
Handle	316/316L SS			ASTM A105
Grub Screw	316/316L SS			304L SS
Bonnet Lock Pin	316/316L SS			316L SS
Lock Nut	316/316L SS			316L SS
Dust Cap	UV Stabalized Nylon			UV Stabalized Nylon
Packing Seal	PTFE or Graphite			PTFE or Graphite





Pressure/Temperature Ratings

10 000 psi Standard Pressure Version

PTFE PACKING

Maximum pressure 689 bar (10 000 psi) at -30 to 100° C (212° F)
Maximum pressure 310 bar (4 500 psi) at 215° C (420° F)

GRAFOIL® PACKING

Maximum pressure 689 bar (10 000 psi) at -30 to 100° C (212° F)
Maximum pressure 206 bar (3 000 psi) at 450° C (842° F)*

* For Super Duty High Temperature Power Valves contact Sustech for information

6 000 psi Standard Pressure Version

PTFE PACKING

Maximum pressure 413 bar (6 000 psi) at -30 to 100° C (212° F)
Maximum pressure 206 bar (3 000 psi) at 215° C (420° F)

GRAFOIL® PACKING

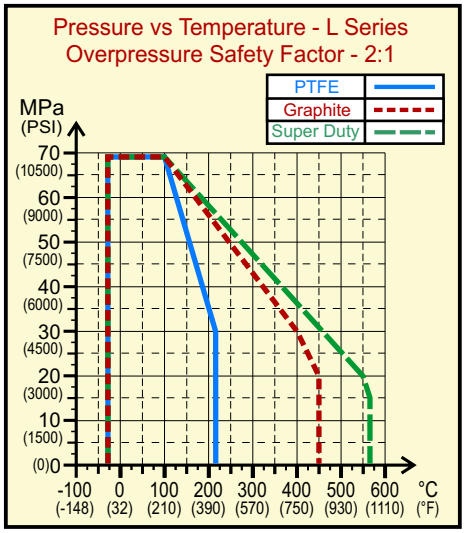
Maximum pressure 413 bar (6 000 psi) at -30 to 100° C (212° F)
Maximum pressure 155 bar (2 250 psi) at 450° C (842° F)*

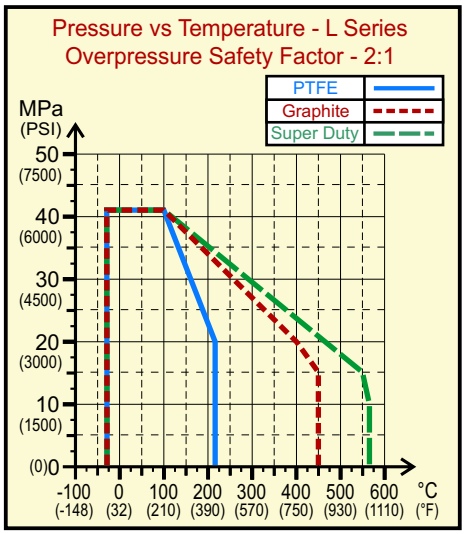
* For Super Duty High Temperature Power Valves contact Sustech for information

Materials Makeup of -STC or -STJ Option

Sustech's L Series valveheads are assembled with the best possible components. The Stem and Trim of the valvehead are produced from the specified material grade in the order (-STC for Hastelloy C-276, and -STJ for Monel 400). When special alloys are used, the non wetted components will be produced from 316L SS. Below is a list of a few common materials to illustrate the list of materials used. Care should be taken to specify the correct material for the process media and conditions.

Component	316 SS Standard Manifold	- STJ Monel 400	-STC Hastelloy C-276
Tap Bonnet	316/316L SS		
Stem	316/316L SS	Monel 400	Hastelloy C-276
Trim			
Pusher	316/316L SS		
Yoke	316/316L SS		
Handle	316/316L SS		
Grub Screw	316/316L SS		
Bonnet Lock Pin	316/316L SS		
Lock Nut	316/316L SS		
Dust Cap	UV Stabalized Nylon		
Packing Seal	PTFE or Graphite		





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6 000 psi Standard Pressure Version

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Maximum pressure 413 bar (6 000 psi) at -30 to 100° C (212° F)
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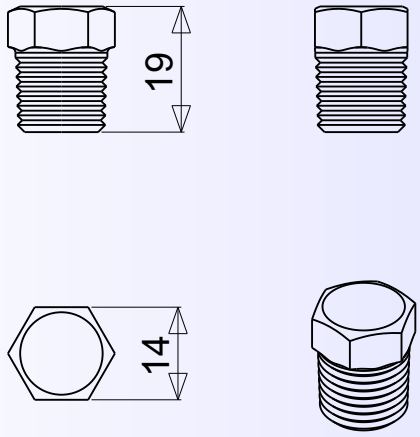
GRAFOIL® PACKING

Maximum pressure 413 bar (6 000 psi) at -30 to 100° C (212° F)
Maximum pressure 155 bar (2 250 psi) at 450° C (842° F)*

* For Super Duty High Temperature Power Valves contact Sustech for information

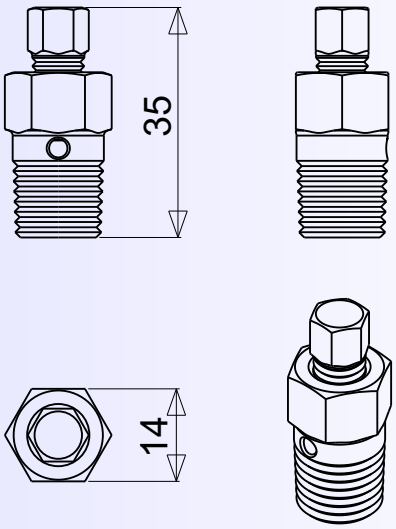
Accessories

Plug



Specifications subject to change without prior notification

Bleed Plug



Specifications subject to change without prior notification

The following vent/test port plugging options are available:

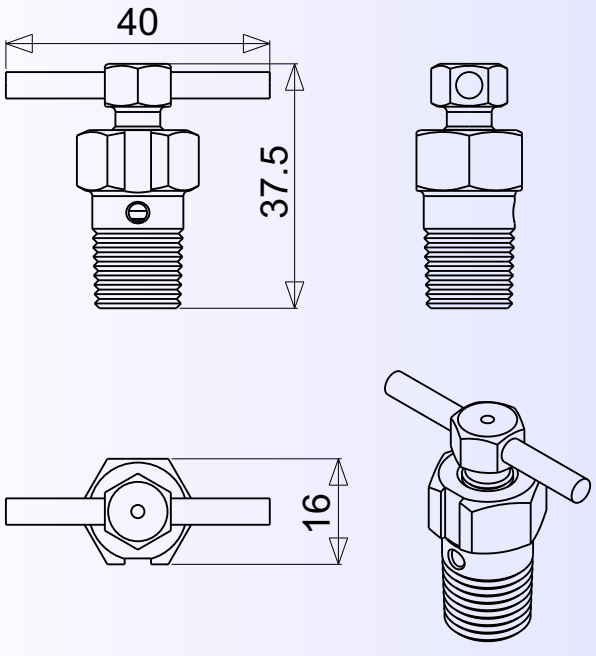
Plug - Standard plugging option.

Bleed Plug - Versatile option, allowing the user to bleed pressure off without removing the plug from the manifold.

T Bar Handle Bleed Plug - Further enhances ease of use by removing the need for tools to operate.

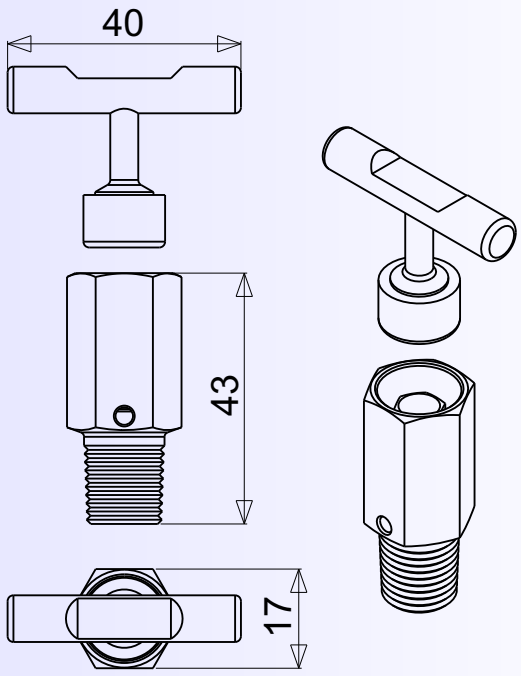
Anti-Tamper Bleed Plug - Provides added safety by offering a tamper resistant design. The removable key can be assigned to a designated user.

T Bar Handle Bleed Plug



Specifications subject to change without prior notification

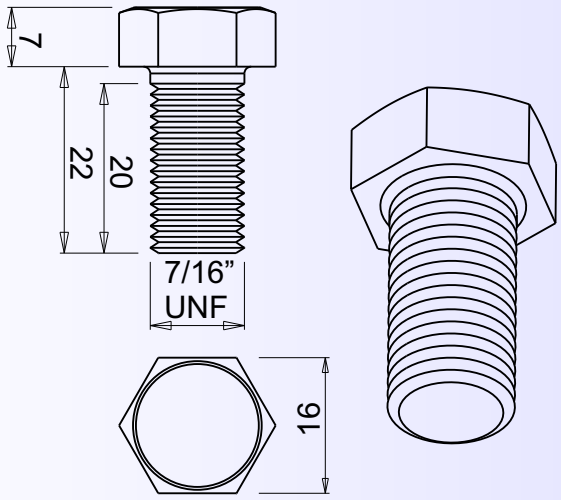
Anti-Tamper Bleed Plug



Specifications subject to change without prior notification

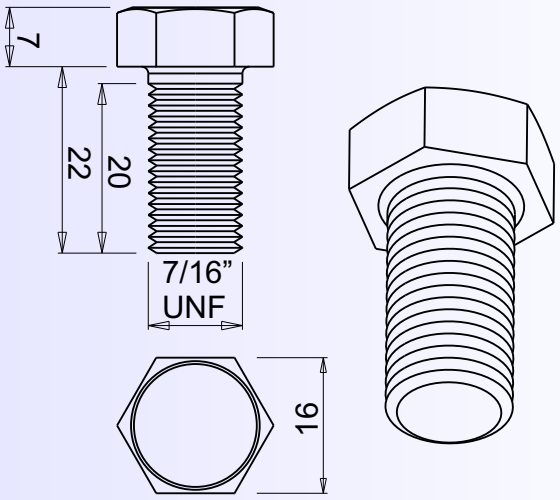
Accessories

Passivated Carbon Steel Bolt



Specifications subject to change without prior notification

Stainless Steel Bolt



Specifications subject to change without prior notification

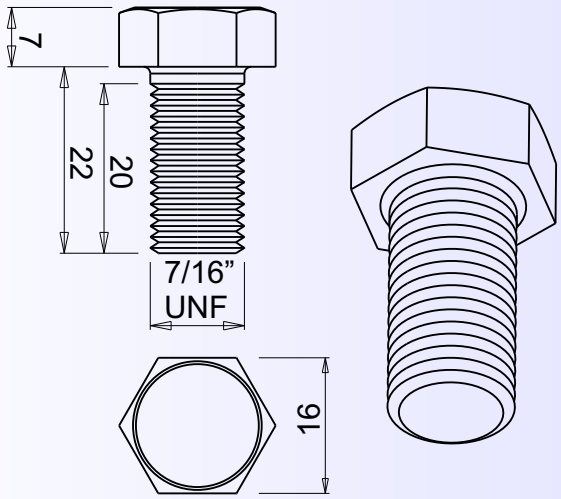
The following transmitter bolting options are available:

Passivated Carbon Steel Bolt - Standard bolting option. This is also the most cost effective option. The plating gives the bolts a gold appearance.

Stainless Steel Bolt - This option provides greater corrosion resistance in more aggressive environments.

Exotic Material Bolt - For the most demanding environments. These bolts are normally requested to be the same material as the manifold body.

Exotic Material Bolt



Specifications subject to change without prior notification

Material Certificates, Testing and Traceability

Material Certificates and Traceability

Each manifold that we assemble is assigned a traceability code which we call our assembly A-Number.

This entails the main body of the manifold being marked with an alpha numeric code. Furthermore, the individual valveheads are pre-assembled and get their own traceability code marked onto them before being installed into the manifold bodies. These codes link each component to manufacturing, assembly and mill test reports (MTR's).

The A-Number is stored in our ISO 9001 quality management system for traceability and future reference. This A-Number corresponds to our Material Certificate Register (MCR).

An MCR is supplied with every order to the customer. This document gives a list of the corresponding material batch numbers and grades for all wetted components used to assemble that specific batch of manifolds. Along with this MCR, mill test reports (MTR's) are also supplied in a mini databook. This can be supplied in either a PDF file or a hard copy format.

All valves/manifolds are marked to a minimum of MSS-SP-25. This will include manufacturers name, material of construction, traceability code (A number), part number, temperature and pressure rating. These markings are permanently marked onto the body by either a pin stamping or laser etching process. The material of construction marking pertains to all the wetted components in the valve/manifold

Testing and Quality Control

All components undergo 100% size testing during the manufacturing process. From there the components will be assembled into the final product which gets pressure tested to confirm correct operation. To keep to the highest possible standard, 100% of the finished products are tested.

Sustech's standard testing procedure conforms to MSS-SP-99*. Each manifold is tested in such a way that every valve seat in the manifold, as well as every valvehead's stem packing and bonnet to body seal is checked. This test utilizes pressurized nitrogen gas at a minimum of 1000 psi (MSS-SP-99 only requires 80 psi). Sustech does not permit any leakage at all through the seat or the stem packing during testing.

The results are then recorded and a report compiled.

* For code applications where a hydrostatic 1.5X over-pressure shell test needs to be performed, Sustech uses the MSS-SP-105 testing procedure. This testing is done on special request.

Specifications

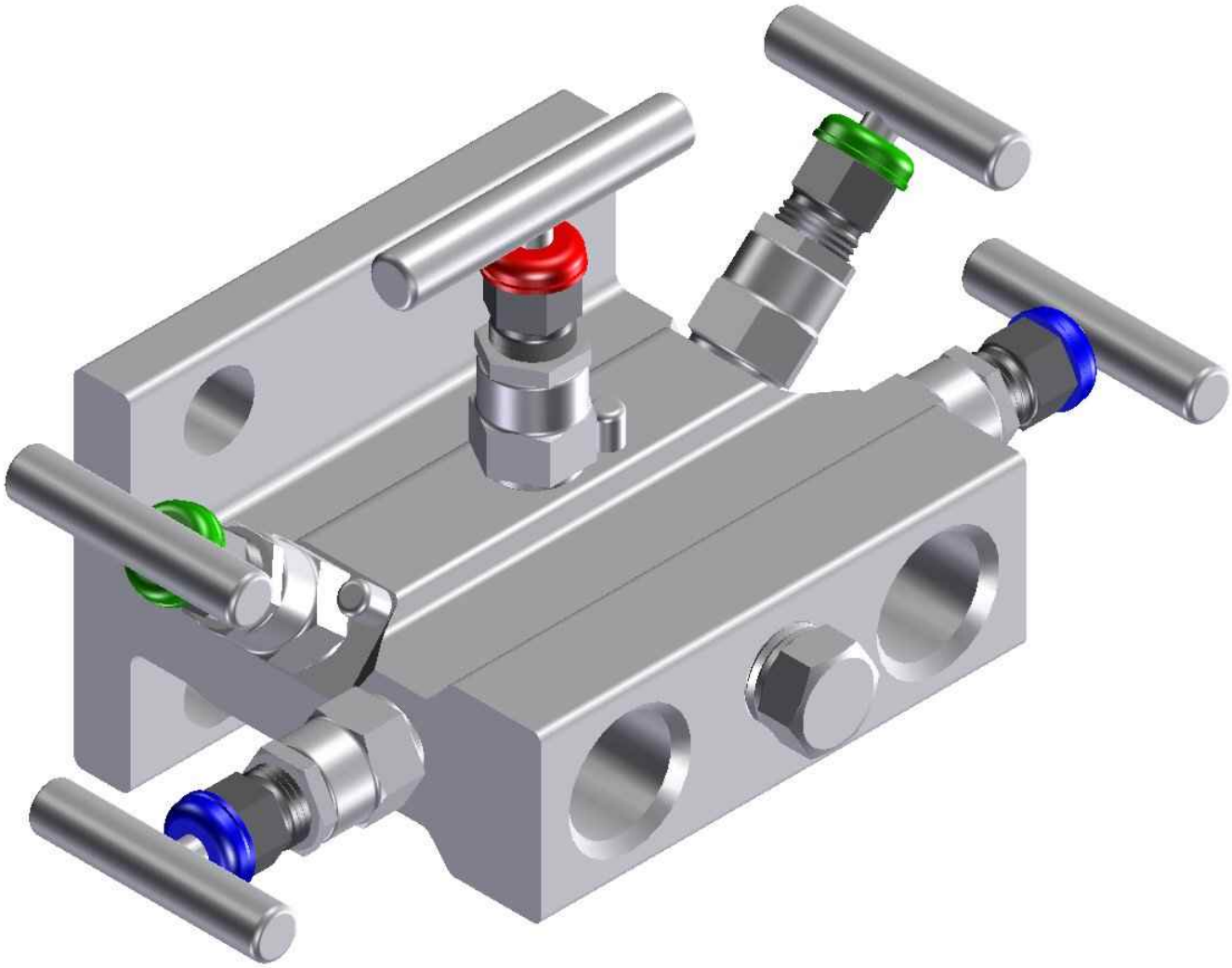
Manufacturing Standards and Compliances

Sustech products are designed, manufactured and tested to the highest possible standards and can have the following standards and regulations applied as required:

ASME BPVC VIII Div 1	- ASME Boiler Pressure Vessel Code Section 8 Division 1
ASME B31.1	- Power Piping
ASME B31.3	- Process Piping
ASME B16.34	- Valves Flanged, Threaded
ISO 9001:2008	- Certified Quality System
MSS-SP-99	- Instrument Valves
MSS-SP-105	- Instrument valves for code applications
MSS-SP-25	- Standard marking system for valves, fittings, flanges and unions
MSS-SP-61	- Hydrostatic testing of steel valves
NACE	- National Association of Corrosion Engineers
NACE MR0175 / ISO 15156	- Materials for use in H2S-containing environments in oil and gas production
NACE MR0103	- Materials Resistant to Sulfide Stress Cracking in Corrosive Petroleum Refining Environments
NORSOK M650	- Qualification of manufacturers of special materials
EN 10204 3.1 or 3.2	- Mill Test Reports
ASME B1.20.1	- General Pipe Threads or high tolerance thread
ASTM A182	- Forged or Rolled Alloy - Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High Temperature Service
ASTM A276	- Standard Specification for Stainless Steel Bars and Shapes
ASTM A479	- Stainless Steel Bars and Shapes for Use in Boilers and other Pressure Vessels
SANS 347	- Categorization and conformity assessment criteria for all pressure equipment
P.E.R	- Pressure Equipment Regulations (South Africa)
P.E.D	- Pressure Equipment Directive (Europe)
CSA	- Canadian Standards Association
CSA B51.03	- Boiler, Pressure Vessel, and Pressure Piping Code
CRN	- Canadian Registration Number
GOST	- State Standard of the Soviet Union

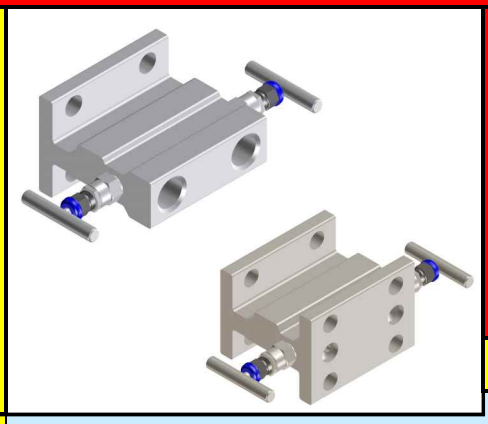
Pressure Equipment Directive (P.E.D 97/23/EC) (Europe)

Due to internal bore size and internal volumes up to and including 1”/25mm, products offered in this catalogue comply with S.E.P (Sound Engineering Practice) article 3, paragraph 3 of the Pressure Equipment Directive P.E.D 97/23/EC and therefore CE marking is not applicable.



T and H Section Manifolds

1 Way T and H Section Manifolds



Code	Range	Manifold Body Style	Seals Material Type	Pressure Rating	Material	Tap Options	Transmitter Connection	Options
	L1/	TL	T	E	H	X	X	-OX

L1/	L Series 1 Way Manifold

TL	T Section Liquid Level Manifold
HL	H Section Liquid Level Manifold

T	PTFE Seals
C	PCTFE Seals (KEL-F)
F	Glass Filled PTFE
G	Graphite Seals

Blank	6 000 psi
E	10 000 psi

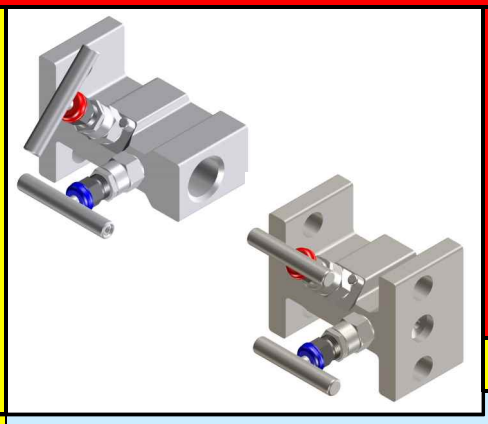
H	See Materials List (Refer to page 18)

X	All Taps Standard "T" Bar
A	All Taps Anti-Tamper
H	All Taps Lockable (Captured)

X	Flanged “O” Ring Transmitter Hook-Up

-OX	See Options List (Refer to page 19)

2 Way T and H Section Manifolds



Code	Range	Manifold Body Style	Seals Material Type	Pressure Rating	Material	Tap Options	Transmitter Connection	Options
	L2/	T	T	E	H	X	X	-OX

L2/	L Series 2 Way Manifold

T	T Section Manifold
TW	T Section Wide Body Manifold
TL	T Section, Liquid Level Manifold with Vent
H	H Section Manifold
HW	H Section Wide Body Manifold
HL	H Section Liquid Level Manifold with Vent

T	PTFE Seals
C	PCTFE Seals (KEL-F)
F	Glass Filled PTFE
G	Graphite Seals

Blank	6 000 psi
E	10 000 psi

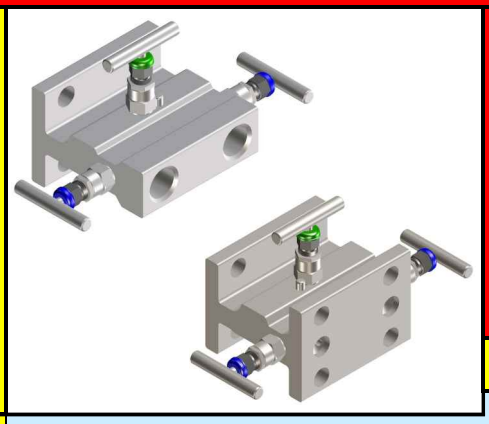
H	See Materials List (Refer to page 18)

X	All Taps Standard "T" Bar
A	All Taps Anti-Tamper
H	All Taps Lockable (Captured)
K	Vent Taps Lockable (Captured)
L	Isolate Taps Lockable (Captured)
V	Vent Taps Anti-Tamper
Y	Isolate Taps Anti-Tamper

X	Flanged “O” Ring Transmitter Hook-Up

-OX	See Options List (Refer to page 19)

3 Way T and H Section Manifolds



Code	Range	Manifold Body Style	Seals Material Type	Pressure Rating	Material	Tap Options	Transmitter Connection	Options
	L3/	T	T	E	H	X	X	-OX

Range	
L3/	L Series 3 Way Manifold

Manifold Body Style	
T	T Section Manifold
H	H Section Manifold

Seals Material Type	
T	PTFE Seals
C	PCTFE Seals (KEL-F)
F	Glass Filled PTFE
G	Graphite Seals

Pressure Rating	
Blank	6 000 psi
E	10 000 psi

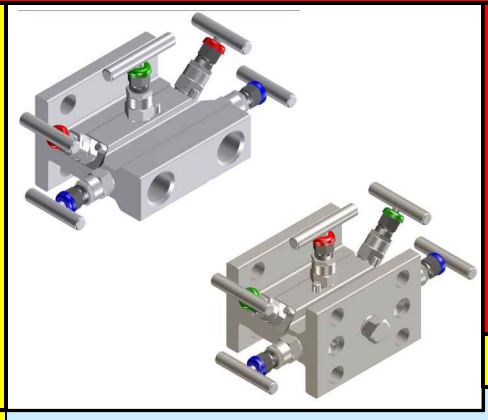
Material	
H	See Materials List (Refer to page 18)

Tap Options	
X	All Taps Standard "T" Bar
A	All Taps Anti-Tamper
H	All Taps Lockable (Captured)
I	Equalize and Vent Taps Lockable (Captured)
J	Equalize Tap Lockable (Captured)
K	Vent Taps Lockable (Captured)
L	Isolate Taps Lockable (Captured)
T	Equalise Tap Anti-Tamper
U	Equalise and Vent Taps Anti-Tamper
V	Vent Taps Anti-Tamper
Y	Isolate Taps Anti-Tamper

Transmitter Connection	
X	Flanged “O” Ring Transmitter Hook-Up

Options	
-OX	See Options List (Refer to page 19)

5 Way T and H Section Manifolds



Code	Range	Manifold Body Style	Seals Material Type	Pressure Rating	Material	Tap Options	Transmitter Connection	Options
	L5/	T	T	E	H	X	X	-OX

L5/	L Series 5 Way Manifold

T	T Section Manifold
TD	T Section Manifold with Double Equalize
H	H Section Manifold
HD	H Section Manifold with Double Equalize

T	PTFE Seals
C	PCTFE Seals (KEL-F)
F	Glass Filled PTFE
G	Graphite Seals

Blank	6 000 psi
E	10 000 psi

H	See Materials List (Refer to page 18)

X	All Taps Standard "T" Bar
A	All Taps Anti-Tamper
H	All Taps Lockable (Captured)
I	Equalize and Vent Taps Lockable (Captured)
J	Equalize Tap Lockable (Captured)
K	Vent Taps Lockable (Captured)
L	Isolate Taps Lockable (Captured)
T	Equalise Tap Anti-Tamper
U	Equalise and Vent Taps Anti-Tamper
V	Vent Taps Anti-Tamper
Y	Isolate Taps Anti-Tamper

X	Flanged “O” Ring Transmitter Hook-Up

-OX	See Options List (Refer to page 19)

Materials

Code	Most Common Materials
H	316
L	316L
LD	316/316L Dual Certified
T	316 Ti
F	Alloy 20
K	ASTM A105
K2	ASTM A350 LF2
S	Duplex Stainless Steel
S2	Super Duplex Stainless Steel
J	Monel 400
C	Hastelloy C-276
C1	Hastelloy C-22
X	Inconel Alloy 625
Y	Inconel Alloy 825
4	304
U	Titanium Grade 5
	*Other materials available on request

Options

Code	Common Optional Extras
-ARC	Arctic Lube for service down to -57 degrees C
-M	Metering Trim
-OX	Oxygen Cleaning
-P	Plug installed in bleed / vent port
-Q	Bleed plug installed in bleed / vent port
-R	Bottom Mounting
-U	Upstream venting
-T7	Trim in 17/4 PH Condition H1075
-BSTC	Hastelloy C-276 Bonnet & Shaft & Trim
-STC	Hastelloy C-276 Shaft & Trim
-STJ	Monel 400 Shaft & Trim
-TW	Tungsten carbide ball trim
-ZH	316 SS Transmitter bolting kit included.
-ZK	Carbon steel transmitter bolting kit included
	*Other options available on request

L1/TL

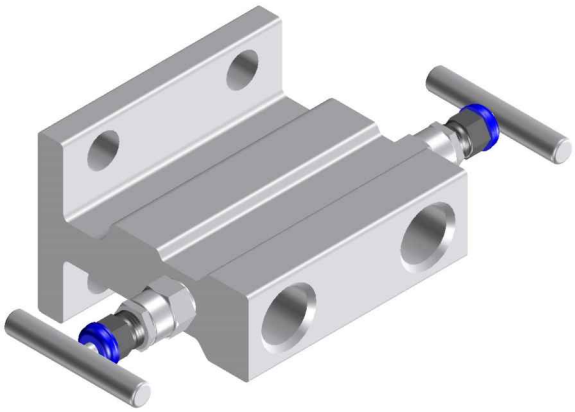
1 Way T-Section Manifold, Liquid Level

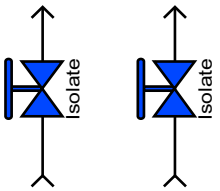
The L1/TL manifold mounts directly to standard pressure transmitters. Designed for liquid level applications with two isolation valves operating in parallel to shut of either one of two process lines through the manifold. No equalizer passage run through the manifold. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

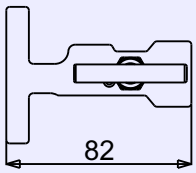
- **Well suited for liquid level applications**
- **Compact and light weight**
- **Separate isolation of parallel process lines**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **100% Pressure tested**

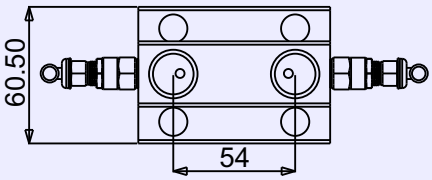
Specifications

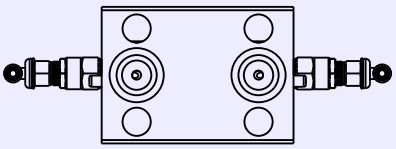
Type	1 Way Liquid Level T-Section Manifold Pipe to Flange
Inlets	Female 1/2" NPT
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.45kg

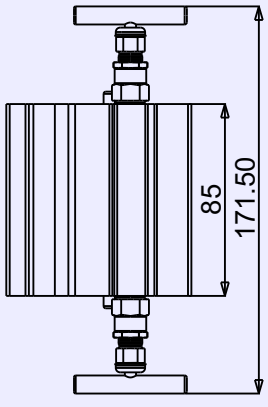


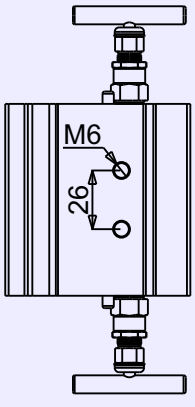


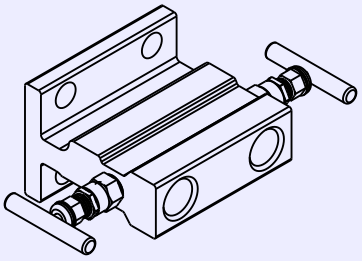












Specifications Subject to Change without Prior Notification

L2/T

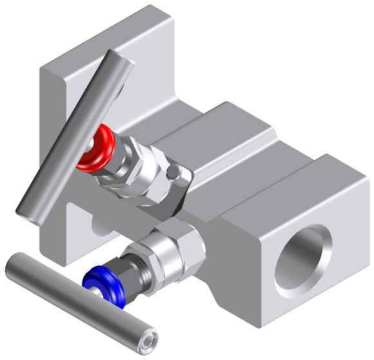
2 Way T-Section Manifold,

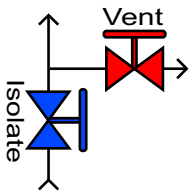
The L2/T manifold mounts directly to standard pressure transmitters, allowing isolation and venting of process media for testing and calibration of transmitter with ease. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The efficient design of this manifold reduces time required installation. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

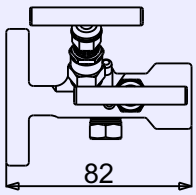
- **Compact and light weight**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **All taps accessable from one standing position**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No “cheat holes” are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located side of the manifold for easy access and operation**
- **100% Pressure tested**

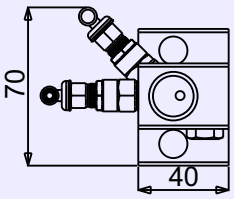
Specifications

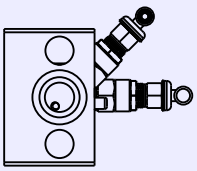
Type	2 Way T-Section Manifold Pipe to Flange
Inlets	Female 1/2” NPT
Outlets	Flanged “O” Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	0.8kg

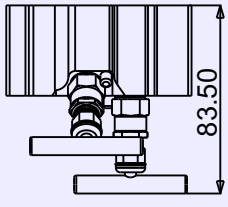


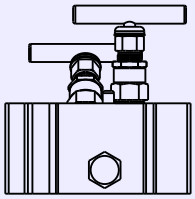


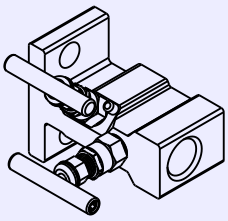












Specifications Subject to Change without Prior Notification

Plug Shown for Illustrative Purposes Only

L2/TW

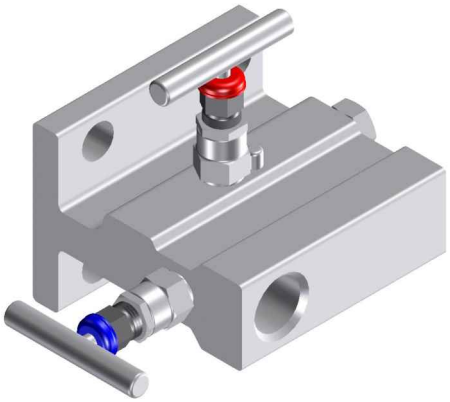
2 Way T-Section Manifold, Wide Body

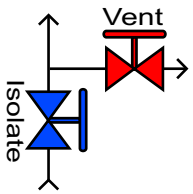
The L2/TW manifold mounts directly to standard pressure transmitters, allowing isolation and venting of process media for testing and calibration of transmitter with ease. The wide body design enhances installation by allowing 4 transmitter bolts as well as improving vent port access. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

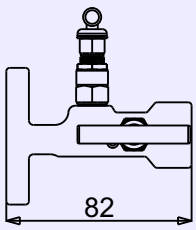
Specifications

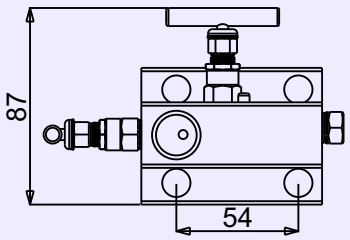
Type	2 Way T-Section Manifold Pipe to Flange
Inlets	Female 1/2" NPT
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.40kg

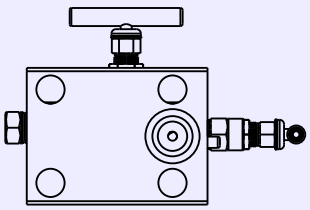
- **Wide body design provides greater ease of use and installation**
- **Allows the user to bolt the transmitter to the manifold using 4 bolts**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located side of the manifold for easy access and operation**
- **100% Pressure tested**

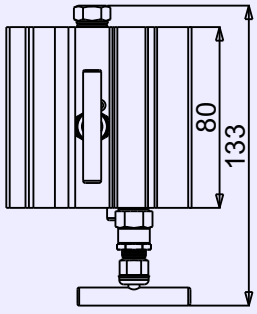


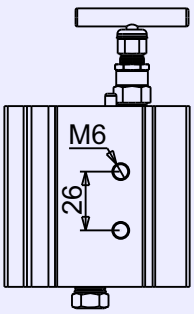


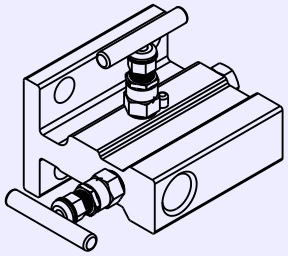












Specifications Subject to Change without Prior Notification

Plug Shown for Illustrative Purposes Only

L2/TL

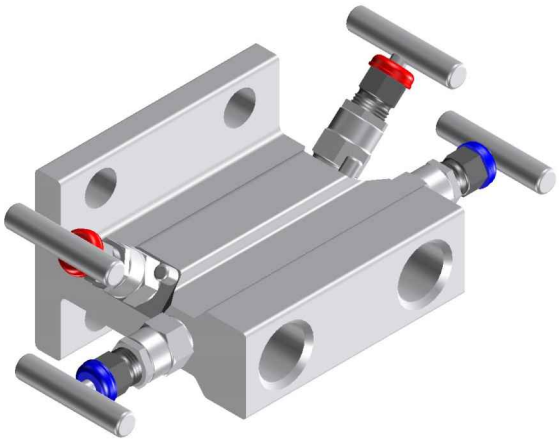
2 Way T-Section Manifold, Liquid Level

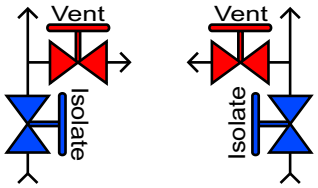
The L2/TL manifold mounts directly to standard pressure transmitters. Designed for liquid level applications with two isolation valves operating in parallel to shut of either one of two process lines through the manifold. No equalizer passage run through the manifold. Venting of process media can be safely done, after isolation of process media, via the vent port. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

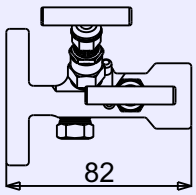
- **Suited for liquid level applications with venting**
- **Compact and light weight**
- **Separate isolation and venting of parallel process lines**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **90 Degree venting**
- **100% Pressure tested**

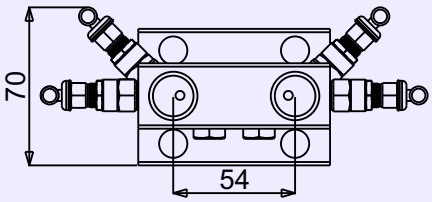
Specifications

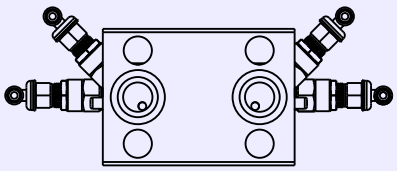
Type	2 Way Liquid Level T-Section Manifold Pipe to Flange
Inlets	Female 1/2" NPT
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.51kg

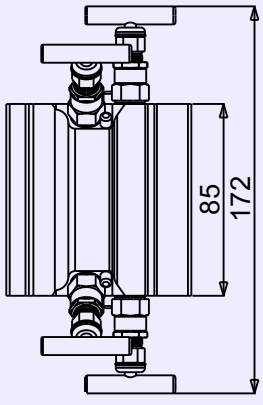


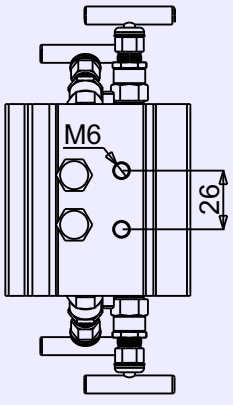


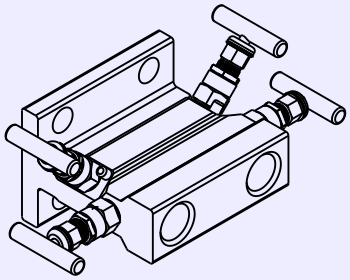












Specifications Subject to Change without Prior Notification

Plugs Shown for Illustrative Purposes Only

L3/T

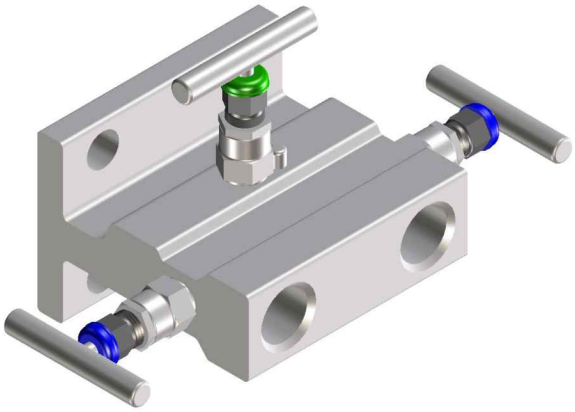
3 Way T-Section Manifold,

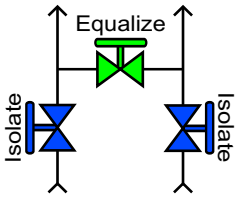
The L3/T manifold mounts directly to standard differential pressure transmitters, allowing isolation and equalizing of process media for testing and calibration of transmitter with ease. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

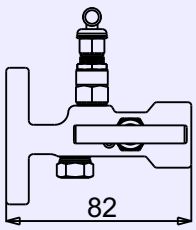
Specifications

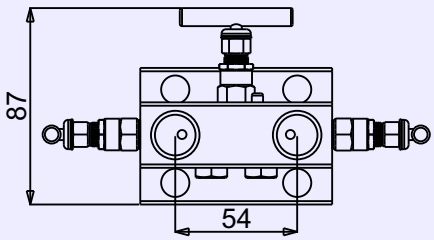
Type	3 Way T-Section Manifold Pipe to Flange
Inlets	Female 1/2" NPT
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.50kg

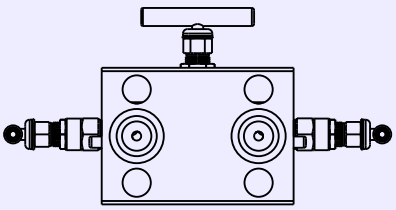
- **Compact and light weight**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **100% Pressure tested**

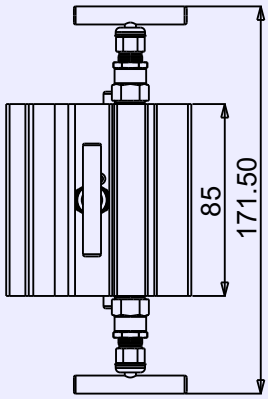


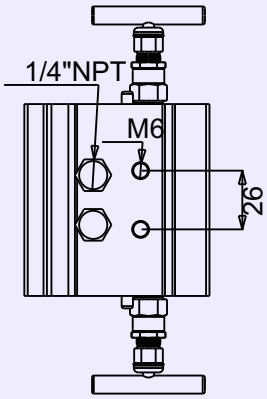


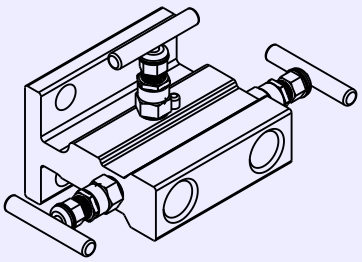












-Q Option Shown

Specifications Subject to Change without Prior Notification

Plugs Shown for Illustrative Purposes Only

L5/T

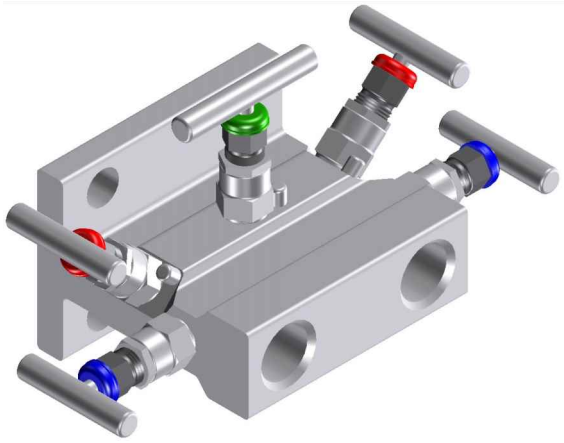
5 Way T-Section Manifold,

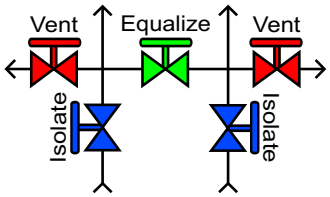
The L5/T manifold mounts directly to standard differential pressure transmitters, allowing isolation, venting and equalizing of process media for testing and calibration of transmitter with ease. Designed for applications requiring double venting capabilities. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

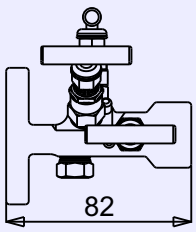
- **Compact and light weight**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located on the bottom face**
- **100% Pressure tested**

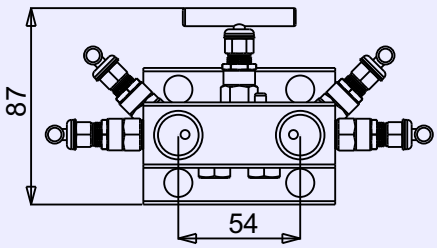
Specifications

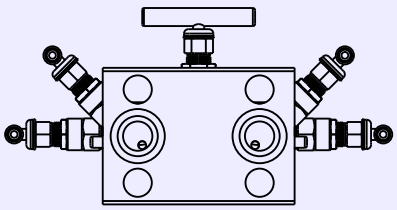
Type	5 Way T-Section Manifold Pipe to Flange
Inlets	Female 1/2" NPT
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.58kg

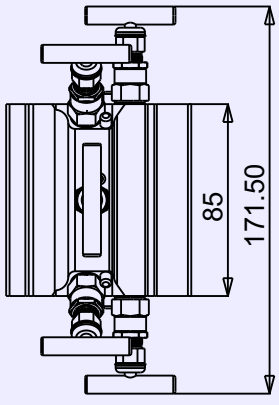


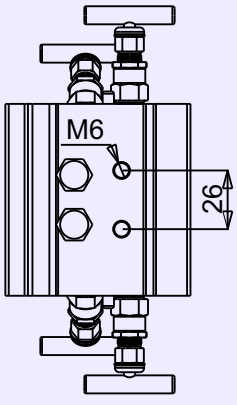


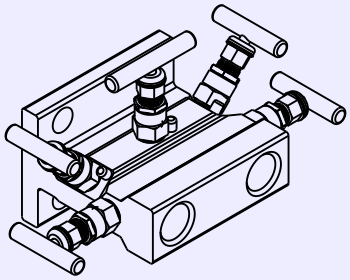












Specifications Subject to Change without Prior Notification

Plugs Shown for Illustrative Purposes Only

L5/TD

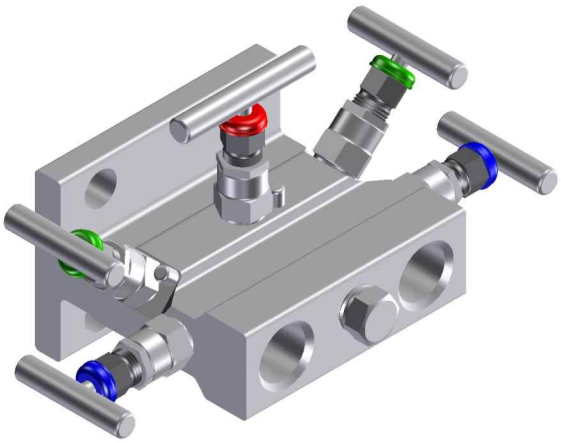
5 Way T-Section Manifold, Double Equalize

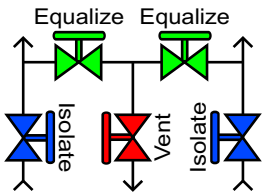
The L5/TD manifold mounts directly to standard differential pressure transmitters. Utilizing a double equalize pattern, greater accuracy can be ensured when calibrating. Equalize valves integrities can be established while the transmitter is in use by venting between the two equalize valves. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

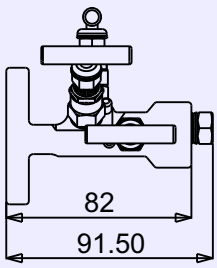
- **Well suited for natural gas applications**
- **Compact and light weight**
- **Double equalize design provides a safer and more accurate operating environment**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located on process connection face for easy access and operation**
- **100% Pressure tested**

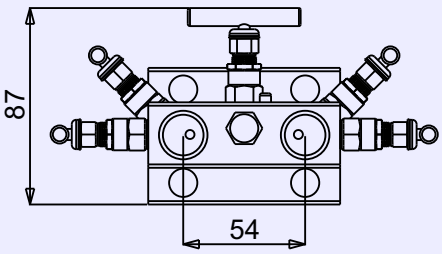
Specifications

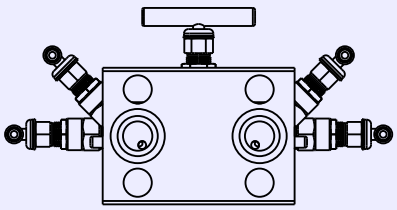
Type	5 Way Double Equalize T-Section Manifold Pipe to Flange
Inlets	Female 1/2" NPT
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.55kg

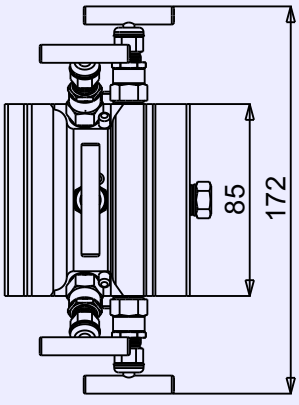


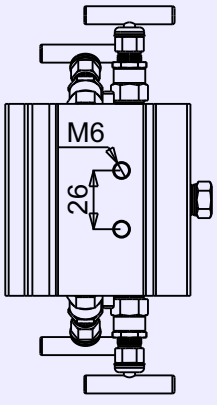


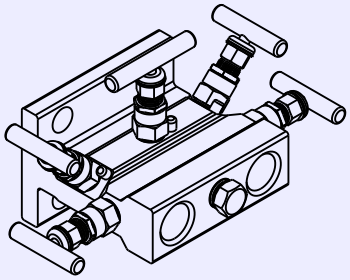












Specifications Subject to Change without Prior Notification

Plug Shown for Illustrative Purposes Only

L1/HKL

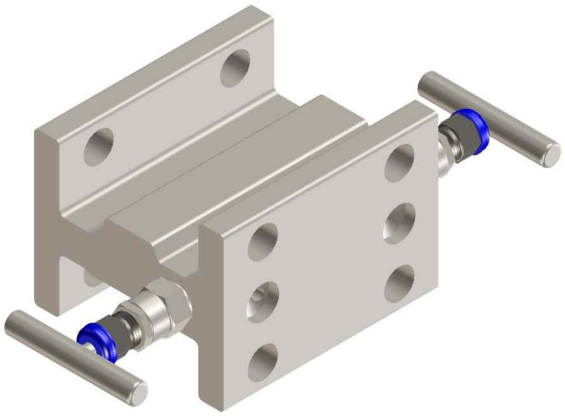
1 Way H-Section Manifold, Liquid Level

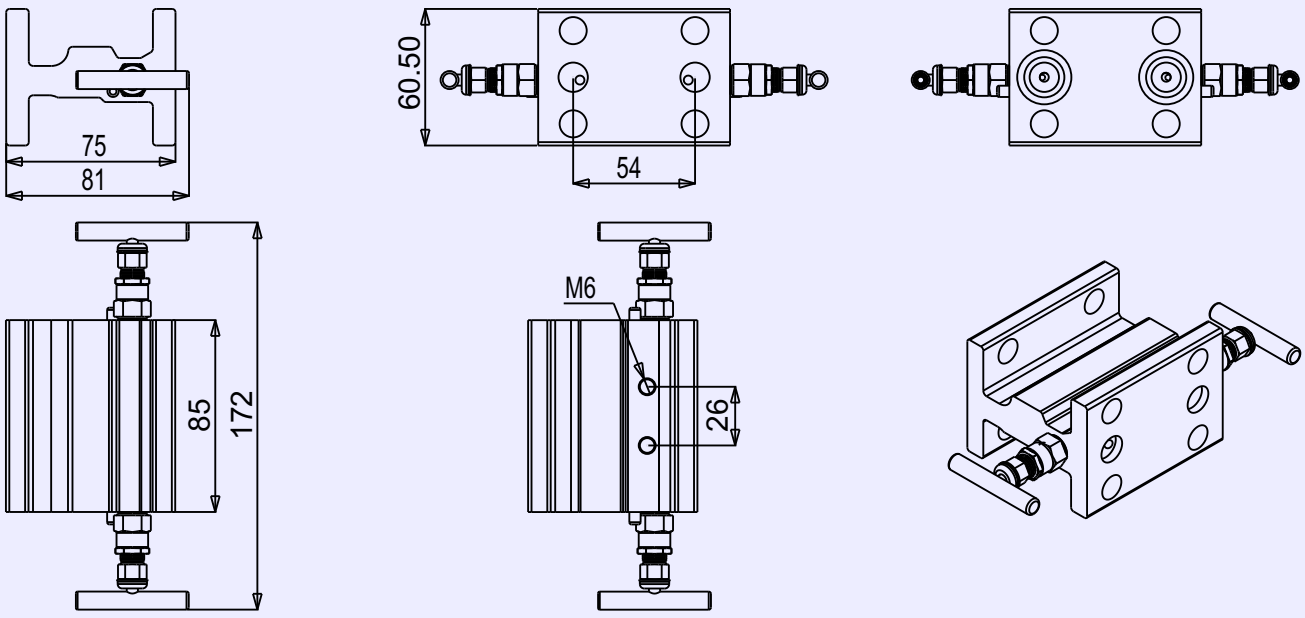
The L1/HKL manifold mounts directly to standard pressure transmitters. Designed for liquid level applications with two isolation valves operating in parallel to shut of either one of the two process lines through the manifold. No equalizer passage run through the manifold. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

- **Well suited for liquid level applications**
- **Compact and light weight**
- **Separate isolation of parallel process lines**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **100% Pressure tested**

Specifications

Type	1 Way H-Section Manifold Flange to Flange
Inlets	Kidney Flange
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.55kg





Specifications Subject to Change without Prior Notification

L2/HK

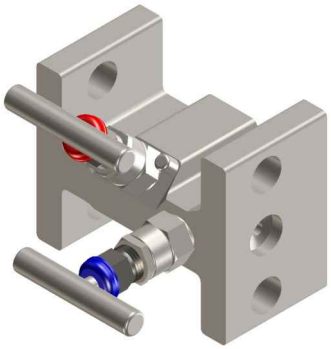
2 Way H-Section Manifold,

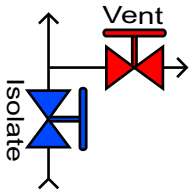
The L2/HK manifold mounts directly to standard pressure transmitters, allowing isolation and venting of process media for testing and calibration of transmitter with ease. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The efficient design of this manifold reduces time required installation. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

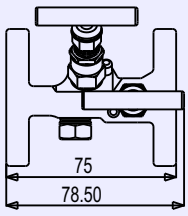
Specifications

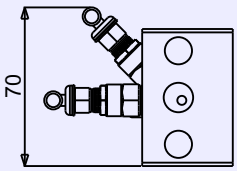
Type	2 Way H-Section Manifold Flange to Flange
Inlets	Kidney Flange
Outlets	Flanged “O” Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	0.84kg

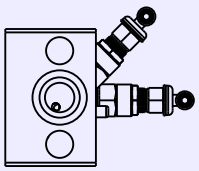
- **Compact and light weight**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **All taps accessable from one standing position**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No “cheat holes” are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located side of the manifold for easy access and operation**
- **100% Pressure tested**

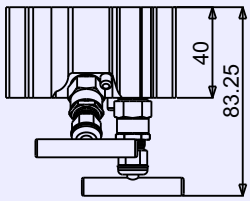


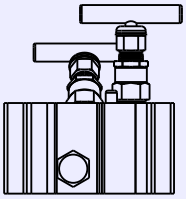


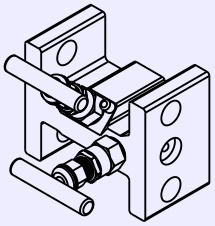












Specifications Subject to Change without Prior Notification

Plug Shown for Illustrative Purposes Only

L2/HKW

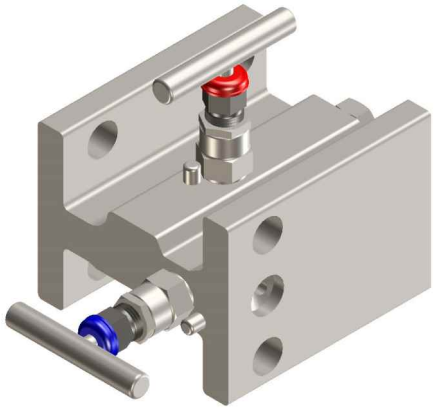
2 Way H-Section Manifold, Wide Body

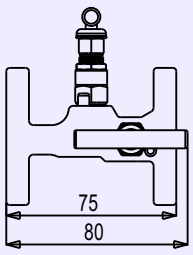
The L2/HKW manifold mounts directly to standard pressure transmitters, allowing isolation and venting of process media for testing and calibration of transmitter with ease. The wide body design enhances installationby alowing 4 transmitter bolts to be used as well as improving vent port access. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

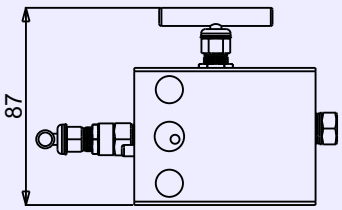
- **Wide body design provides greater ease of use and installation**
- **Allows the user to bolt the transmitter to the manifold using 4 bolts**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located side of the manifold for easy access and operation**
- **100% Pressure tested**

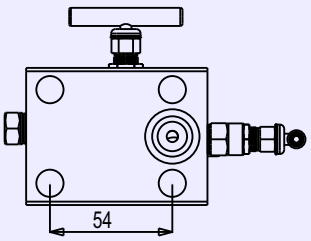
Specifications

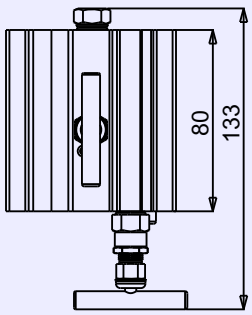
Type	2 Way H-Section Manifold Flange to Flange
Inlets	Kidney Flange
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.50kg

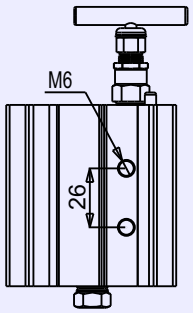


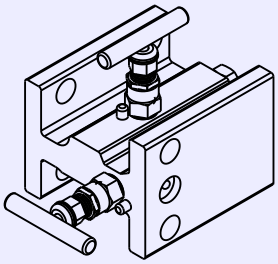












Specifications Subject to Change without Prior Notification

Plug Shown for Illustrative Purposes Only

L2/HKL

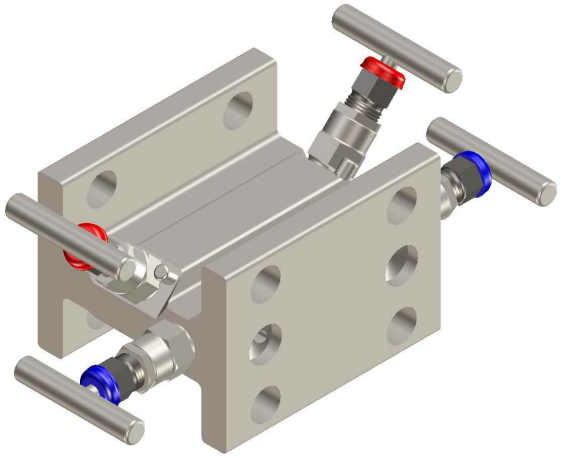
2 Way H-Section Manifold, Liquid Level

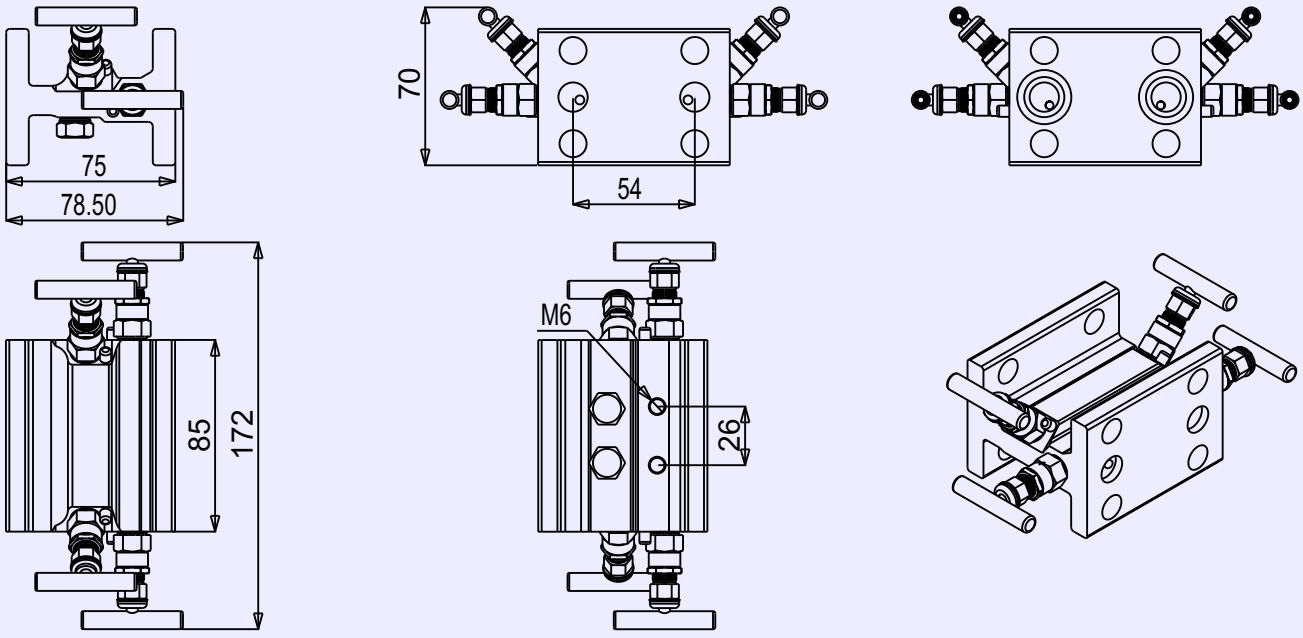
The L2/HKL manifold mounts directly to standard pressure transmitters. Designed for liquid level applications with two isolation valves operating in parallel to shut of either one of the two process lines through the manifold. No equalizer passage run through the manifold, effectively separating the two process lines. Venting of process media can be safely done, after isolation of process media, via the vent port. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

- **Suited for liquid level applications with venting**
- **Compact and light weight**
- **Separate isolation of parallel process lines**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **90 Degree venting**
- **100% Pressure tested**

Specifications

Type	2 Way Liquid Level H-Section Manifold Flange to Flange
Inlets	Kidney Flange
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.63kg





Specifications Subject to Change without Prior Notification

Plugs Shown for Illustrative Purposes Only

L3/HKK

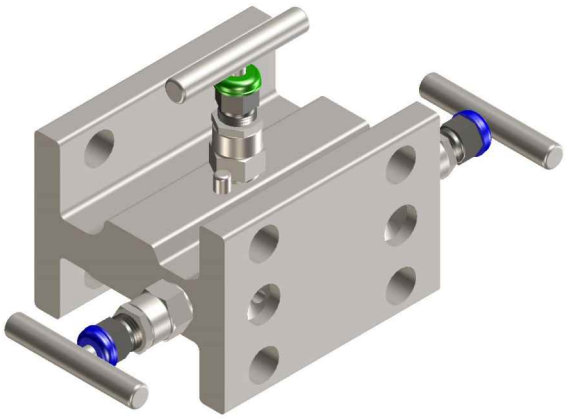
3 Way H-Section Manifold,

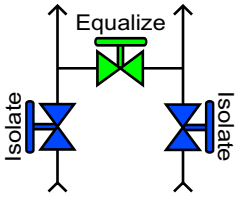
The L3/HK manifold mounts directly to standard differential pressure transmitters, allowing isolation and equalizing of process media for testing and calibration of transmitter with ease. This manifold can be purchased with an option for bleed/vent ports if needed. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

- **Compact and light weight**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **100% Pressure tested**

Specifications

Type	3 Way H-Section Manifold Flange to Flange
Inlets	Kidney Flange
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.60kg





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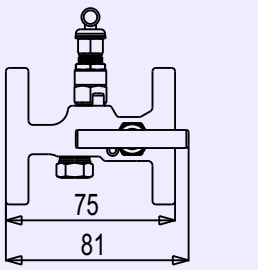
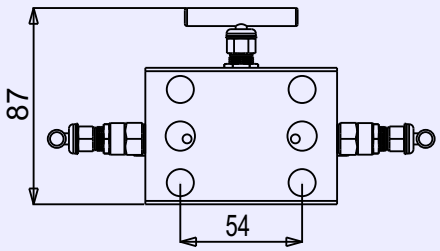
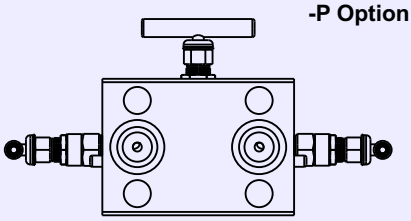
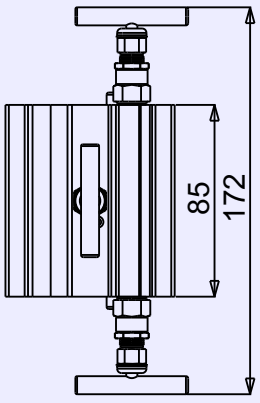
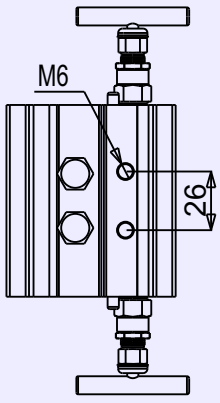
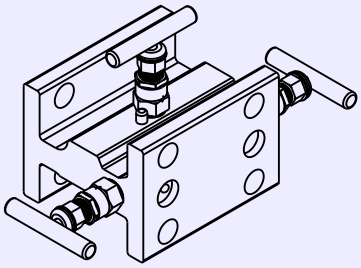












Specifications Subject to Change without Prior Notification

Plugs Shown for Illustrative Purposes Only

L5/HK

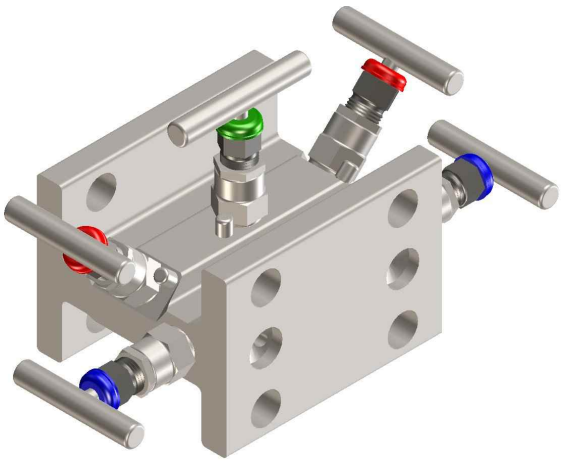
5 Way H-Section Manifold,

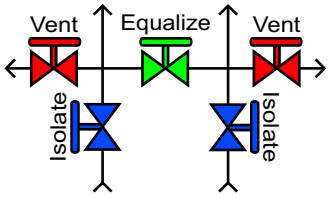
The L5/HK manifold mounts directly to standard differential pressure transmitters, allowing isolation, venting and equalizing of process media for testing and calibration of transmitter with ease. Designed for applications requiring double venting capabilities. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

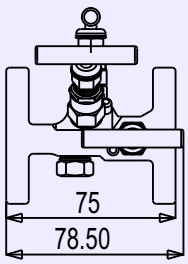
- **Compact and light weight**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No “cheat holes” are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located on the bottom face**
- **100% Pressure tested**

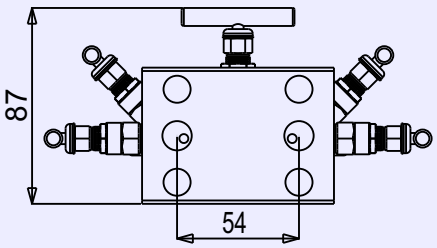
Specifications

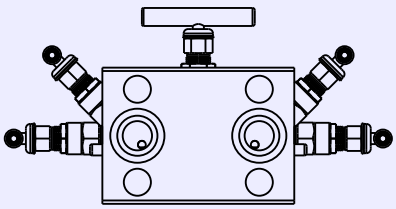
Type	5 Way H-Section Manifold Flange to Flange
Inlets	Kidney Flange
Outlets	Flanged “O” Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.70kg

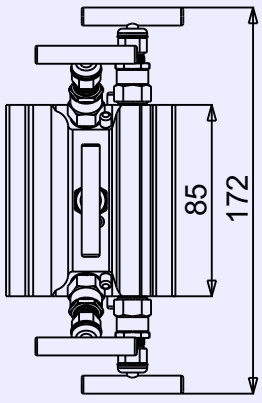


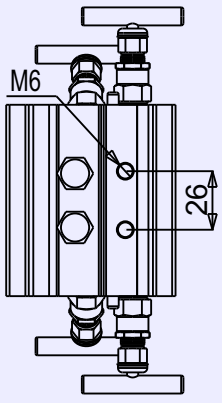


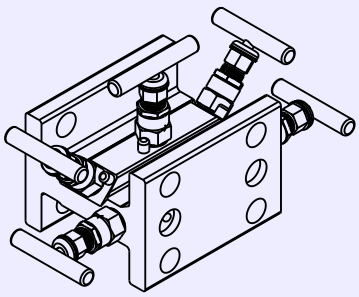












Specifications Subject to Change without Prior Notification

Plugs Shown for Illustrative Purposes Only

L5/HKD

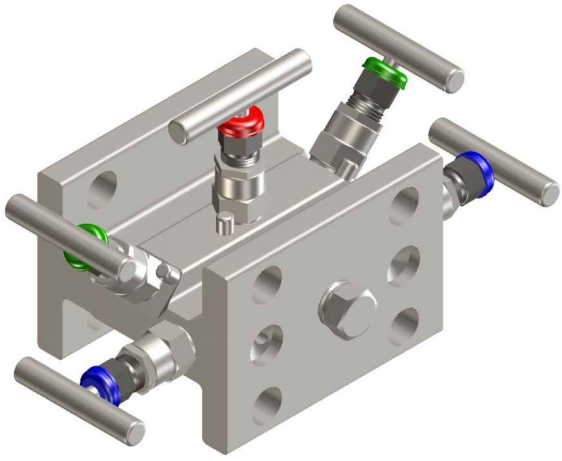
5 Way H-Section Manifold, Double Equalize

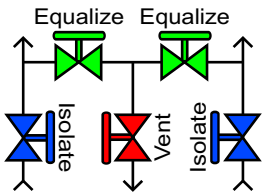
The L5/HKD manifold mounts directly to standard differential pressure transmitters. Utilizing a double equalize pattern, greater accuracy can be ensured when calibrating. Equalize valves integrities can be established while the transmitter is in use by venting between the two equalize valves. Great cost benefits can be achieved due to the lightweight design, such as reduced shipping costs. The manifold is supplied with the transmitter seals as standard, with the bolting kit being included as an option added to the part number.

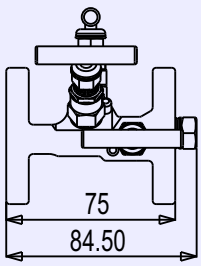
- **Well suited for natural gas applications**
- **Compact and light weight**
- **Double equalize design provides a safer and more accurate operating environment**
- **All taps are full sized tap designs with adjustable gland packings. (No mini taps used). This provides all the many safety features related to the tap design**
- **No miniature tap handles utilized, minimizing force required to operate the tap**
- **No "cheat holes" are used for porting, therefor minimizing leak paths**
- **Mounting point location allows easy removal of the transmitter without disconnecting the manifold**
- **Un-obstructed installation and removal of transmitter bolts**
- **Versatile mounting options for horizontal and vertical mounts**
- **Vent port located on process connection face for easy access and operation**
- **100% Pressure tested**

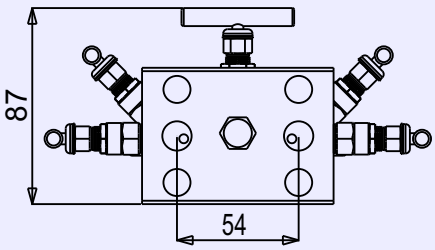
Specifications

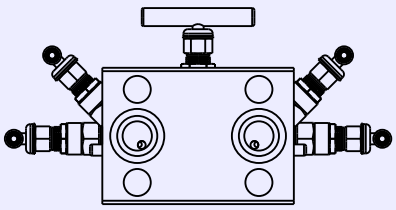
Type	5 Way Double Equalize H-Section Manifold Flange to Flange
Inlets	Kidney Flange
Outlets	Flanged "O" Ring Transmitter Hook-Up
Packing	PTFE Graphite
M.C.W.P Pressure	6 000 psi / 10 000 psi
Temperature Range	-30°C (-22°F) to 215°C (420°F) PTFE -30°C (-22°F) to 440°C (824°F) Graphite
Approximate Weight	1.68kg

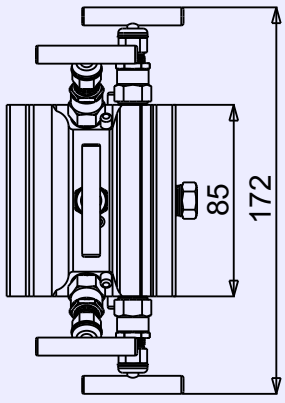


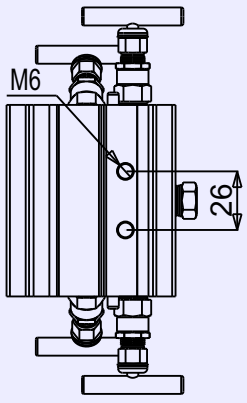


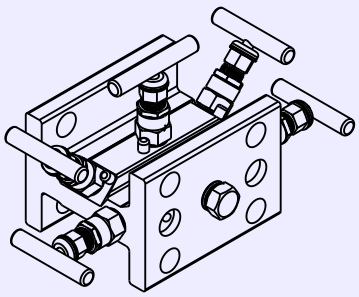












Specifications Subject to Change without Prior Notification

Plug Shown for Illustrative Purposes Only

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Business reg. no:	1990/004585/07
B-BBEE status:	Level 2 contributor (South Africa)

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