

U2VR Series Needle Manifold

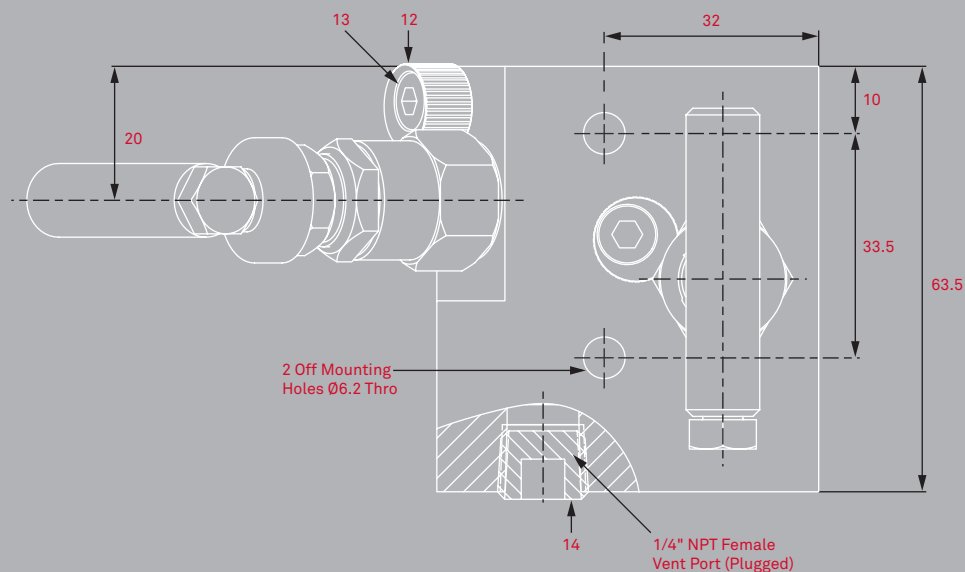
Overview

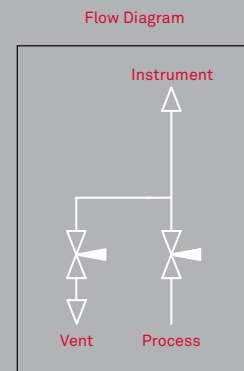
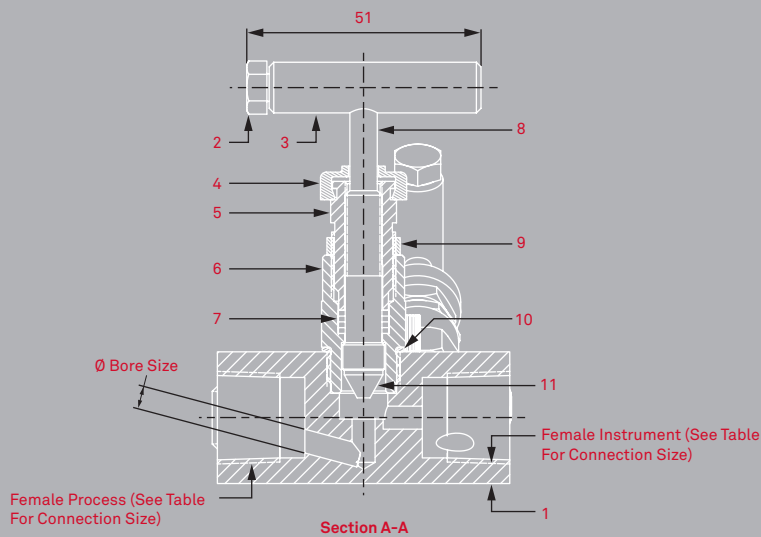
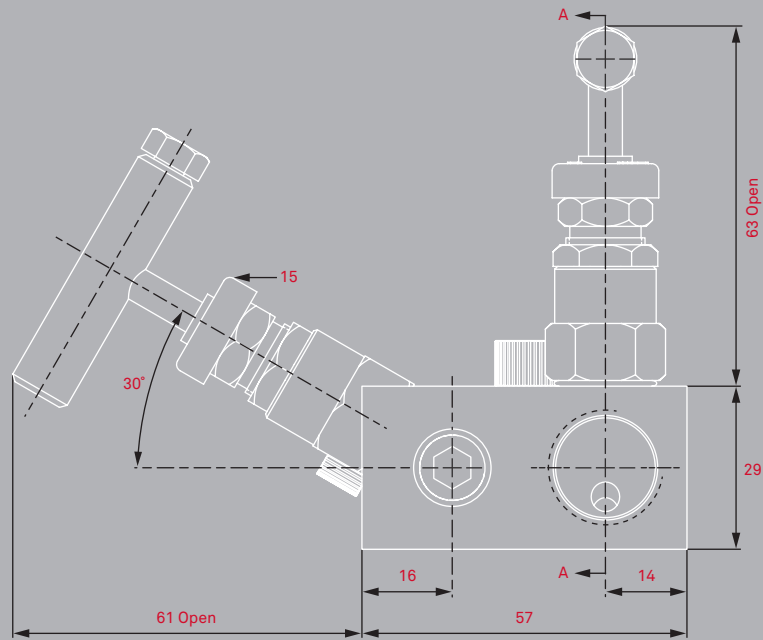
2 Valve Needle Manifold 10,000 PSI

The two-valve isolating and venting manifold used mainly in gauge and static instrument applications such as pressure switches, pressure transmitters and manometers. The manifold will isolate instrumentation from the process and allow venting of the instrument for calibration / removal from the circuit with affecting the process / application and recovery of a sample, etc. Incorporated are all the standard long service life features of the standard 'UN' series needle valve, multi-ring piston style packing, back sealing facility. Mounting holes supplied as standard for pipe or wall mounting to suit quick installation.

Design Features

- Offset vent valve for ease of operation
- Valve flow can be reversed so calibration can be conducted in situ
- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard, for bubble tight shut off and long service life
- Metal to metal body bonnet seal for high pressure and high temperature sealing
- Unique bonnet anti-rotational cam device
- Positive no slack stem action
- Mounting holes as standard to allow for fixing to pipe stands or enclosures
- Blanking plugs supplied as standard
- Temperature range -40°C to 230°C
- Fine control of venting
- Available in 316/316L
- Repair/service kits available to extend service life further
- Ingress seals fitted as standard
- Full material traceability
- Materials of construction supplied to meet the requirements of NACE MR 0175





Item No.	Description	Material	Quantity
1	MANIFOLD BODY	A479 UNS S31600	1
2	HANDLE BOLT	A4 ST/ST	2
3	"T" HANDLE	UNS S31600	2
4	ISOLATE DUST CAP	PVC	1
5	GLAND ADJUSTER	UNS S31600	2
6	BONNET HOUSING	A479 UNS S31600	2
7	PACKING	RTFE	8
8	NEEDLE STEM	A479 UNS S31600	2
9	GLAND LOCKNUT	UNS S31600	2
10	INGRESS SEAL	VITON	2
11	VALVE TIP	A564 UNS S17400	2
12	CAM SCREW	A4 ST/ST	2
13	LOCKING CAM	UNS S31600	2
14	BLANK PLUG	A479 UNS S31600	1
15	VENT DUST CAP	PVC	1

Components Key

Dimensions shown are in metric mm

Part no.	Connection size	Bore	CV	Weight
U2VR2NS	1/4" NPT	5	0.7	0.96 Kg
U2VR4NS	1/2" NPT	5	0.7	0.92 Kg

U2VG Series Needle Manifold

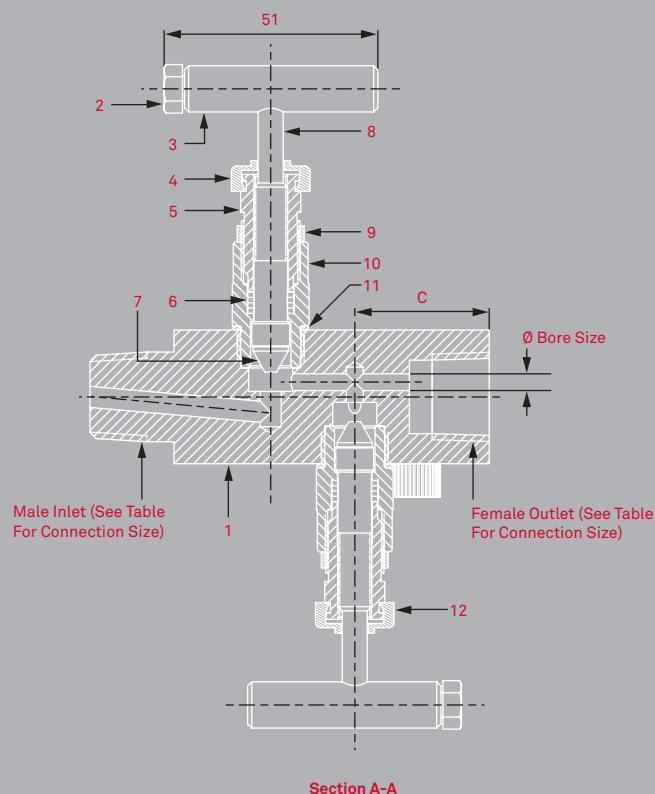
Overview

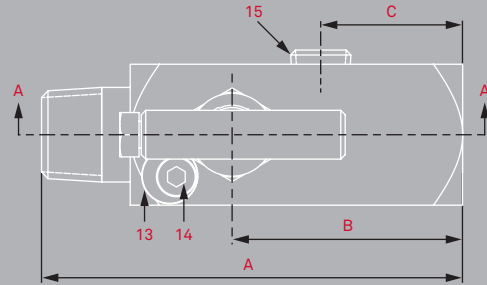
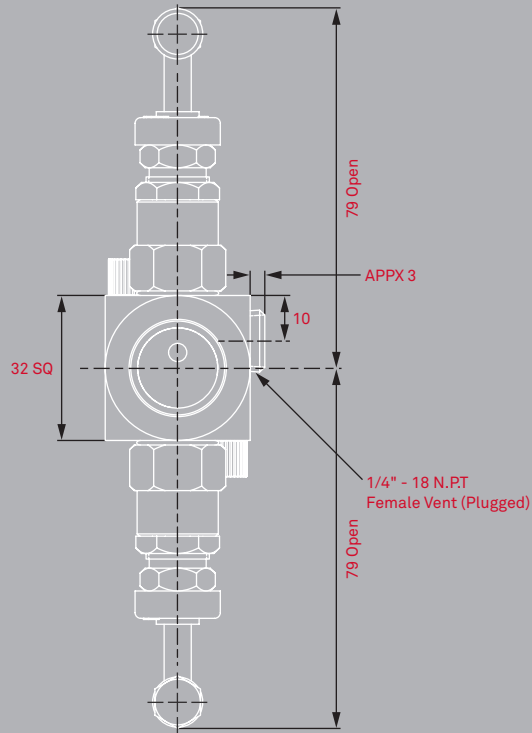
2 Valve Needle Manifold 10,000 PSI

The U2VG series 2 valve gauge manifold offering single process isolation and controlled venting. Unlike the 'U2VR' series, this can be offered with male inlet and female outlet connections. A slim-line and compact 2 valve manifold. Incorporated are all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing and back sealing facility.

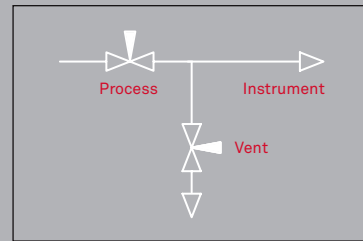
Design Features

- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard, for bubble tight shut off and long service life
- Positive no slack stem action
- Unique bonnet anti-rotational cam device
- Metal to metal body bonnet seal for high pressure and high temperature sealing
- Ingress seals fitted as standard
- Temperature range -40°C to 230°C
- Repair/service kits available to extend service life further
- Available in 316/316L
- Full material traceability
- Materials of construction supplied to meet the requirements of NACE MR 0175





Flow Diagram



Components Key

Item No.	Description	Material	Quantity
1	NEEDLE BODY	A479 UNS S31600	1
2	HANDLE BOLT	A4 ST/ST	2
3	"T" HANDLE	UNS S31600	2
4	ISOLATE DUST CAP	PVC	1
5	GLAND ADJUSTER	UNS S31600	2
6	PACKING	RTFE	8
7	VALVE TIP	A564 UNS S17400	2
8	NEEDLE STEM	A479 UNS S31600	2
9	GLAND LOCKNUT	UNS S31600	2
10	BONNET HOUSING	A479 UNS S31600	2
11	INGRESS SEAL	VITON	2
12	VENT DUST CAP	PVC	1
13	LOCKING CAM	UNS S31600	2
14	CAM SCREW	A4 ST/ST	2
15	BLANK PLUG	A479 UNS S31600	1

Dimensions shown are in metric mm

Part no.	Inlet size	Outlet size	A	B	Bore	C	CV	Weight
U2VG4NS	1/2" NPT	1/2" NPT	95	52	4	32	0.6	0.83 Kg
U2VG4NS-16MN	3/4" NPT	1/2" NPT	95	52	3	32	0.38	0.89 Kg

U2VG FxF Series Needle Manifold

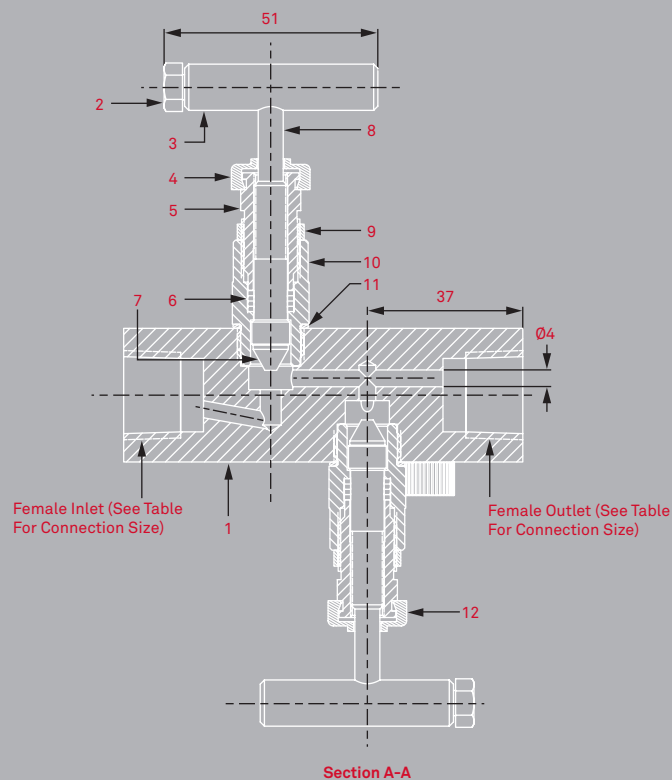
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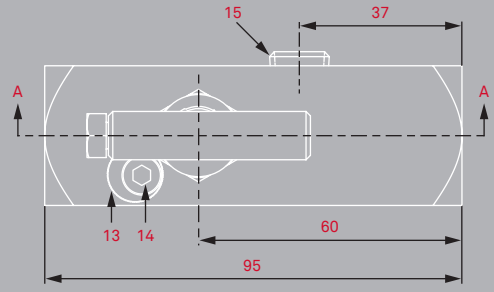
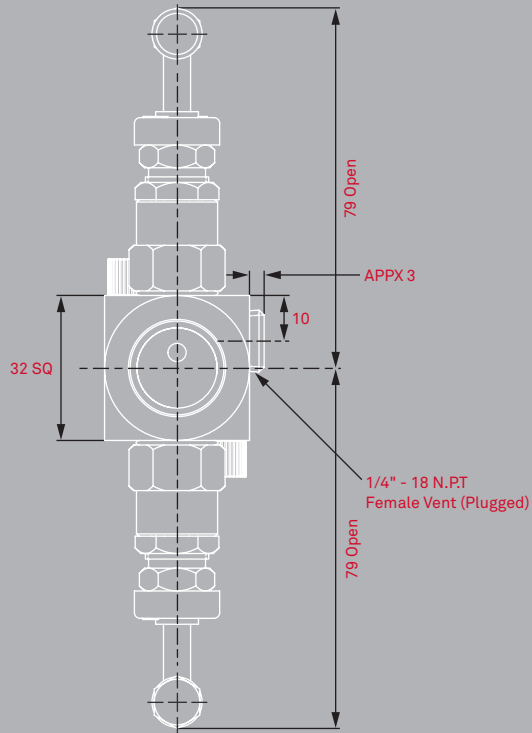
2 Valve Needle Manifold 10,000 PSI

The U2VG series 2 valve gauge manifold offering single process isolation and controlled venting. Unlike the 'U2VR' series, this can be offered with male inlet and female outlet connections. A slim-line and compact 2 valve manifold. Incorporated are all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing and back sealing facility.

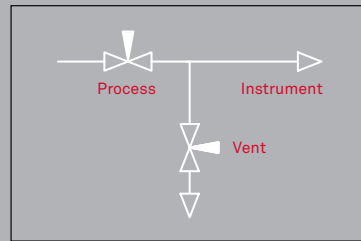
Design Features

- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard, for bubble tight shut off and long service life
- Positive no slack stem action
- Unique bonnet anti-rotational cam device
- Metal to metal body bonnet seal for high pressure and high temperature sealing
- Ingress seals fitted as standard
- Temperature range -40°C to 230°C
- Repair/service kits available to extend service life further
- Available in 316/316L
- Full material traceability
- Materials of construction supplied to meet the requirements of NACE MR 0175





Flow Diagram



Components Key

Item No.	Description	Material	Quantity
1	NEEDLE BODY	A479 UNS S31600	1
2	HANDLE BOLT	A4 ST/ST	2
3	"T" HANDLE	UNS S31600	2
4	ISOLATE DUST CAP	PVC	1
5	GLAND ADJUSTER	UNS S31600	2
6	PACKING	RTFE	8
7	VALVE TIP	A564 UNS S17400	2
8	NEEDLE STEM	A479 UNS S31600	2
9	GLAND LOCKNUT	UNS S31600	2
10	BONNET HOUSING	A479 UNS S31600	2
11	INGRESS SEAL	VITON	2
12	VENT DUST CAP	PVC	1
13	LOCKING CAM	UNS S31600	2
14	CAM SCREW	A4 ST/ST	2
15	BLANK PLUG	A479 UNS S31600	1

Dimensions shown are in metric mm

Part no.	Connection size	Bore	CV	Weight
U2VG4NS-F	1/2" NPT	0.6	0.6	0.83 Kg

U2VG FxM Series Needle Manifold

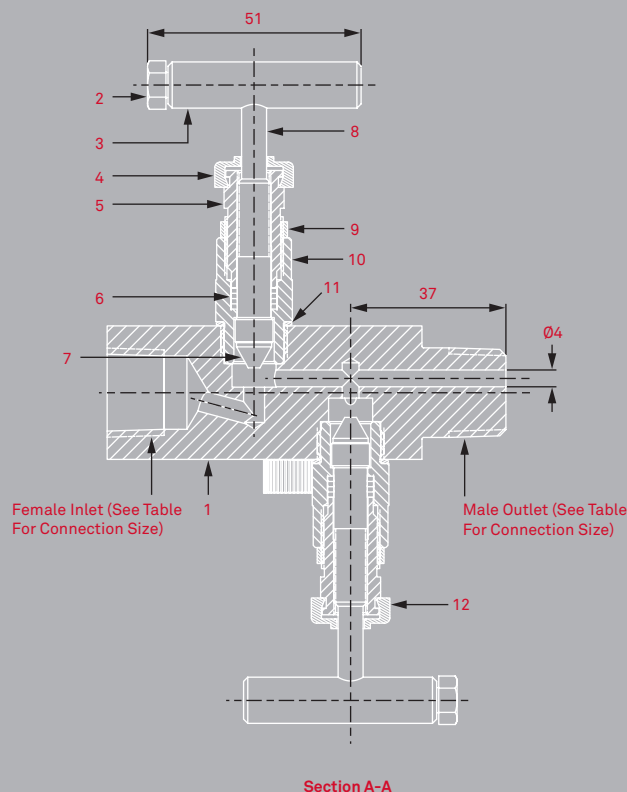
Overview

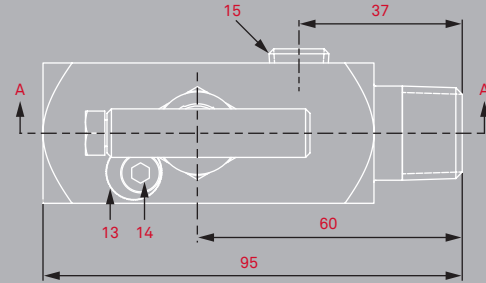
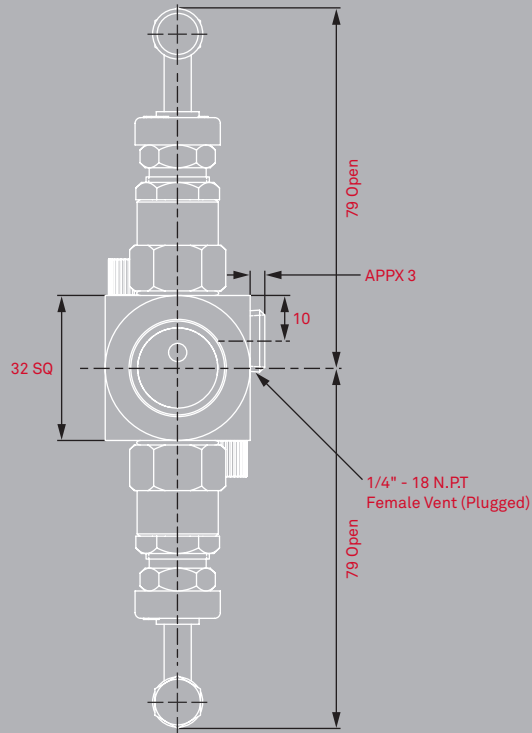
2 Valve Needle Manifold 10,000 PSI

The U2VG series 2 valve gauge manifold offering single process isolation and controlled venting. Unlike the 'U2VR' series, this can be offered with male inlet and female outlet connections. A slim-line and compact 2 valve manifold. Incorporated are all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing and back sealing facility.

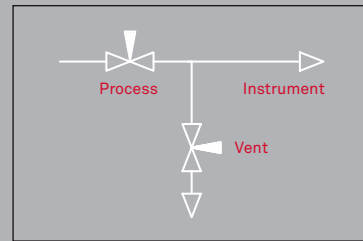
Design Features

- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard, for bubble tight shut off and long service life
- Positive no slack stem action
- Unique bonnet anti-rotational cam device
- Metal to metal body bonnet seal for high pressure and high temperature sealing
- Ingress seals fitted as standard
- Temperature range -40°C to 230°C
- Repair/service kits available to extend service life further
- Available in 316/316L
- Full material traceability
- Materials of construction supplied to meet the requirements of NACE MR 0175





Flow Diagram



Components Key

Item No.	Description	Material	Quantity
1	NEEDLE BODY	A479 UNS S31600	1
2	HANDLE BOLT	A4 ST/ST	2
3	"T" HANDLE	UNS S31600	2
4	ISOLATE DUST CAP	PVC	1
5	GLAND ADJUSTER	UNS S31600	2
6	PACKING	RTFE	8
7	VALVE TIP	A564 UNS S17400	2
8	NEEDLE STEM	A479 UNS S31600	2
9	GLAND LOCKNUT	UNS S31600	2
10	BONNET HOUSING	A479 UNS S31600	2
11	INGRESS SEAL	VITON	2
12	VENT DUST CAP	PVC	1
13	LOCKING CAM	UNS S31600	2
14	CAM SCREW	A4 ST/ST	2
15	BLANK PLUG	A479 UNS S31600	1

Dimensions shown are in metric mm

Part no.	Connection size	Bore	CV	Weight
U2VG4FNS-1M	1/2" NPT	0.6	0.6	0.83 Kg

3VR Series Needle Manifold

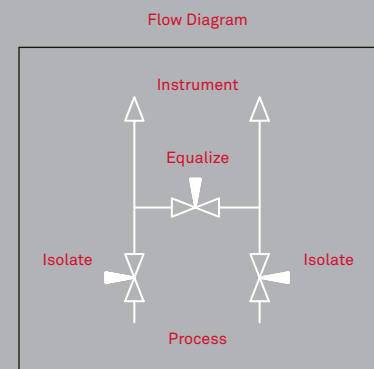
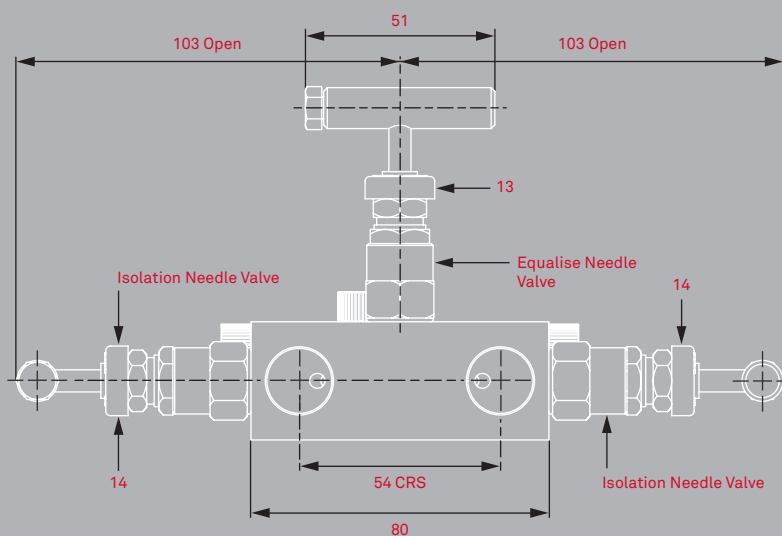
Overview

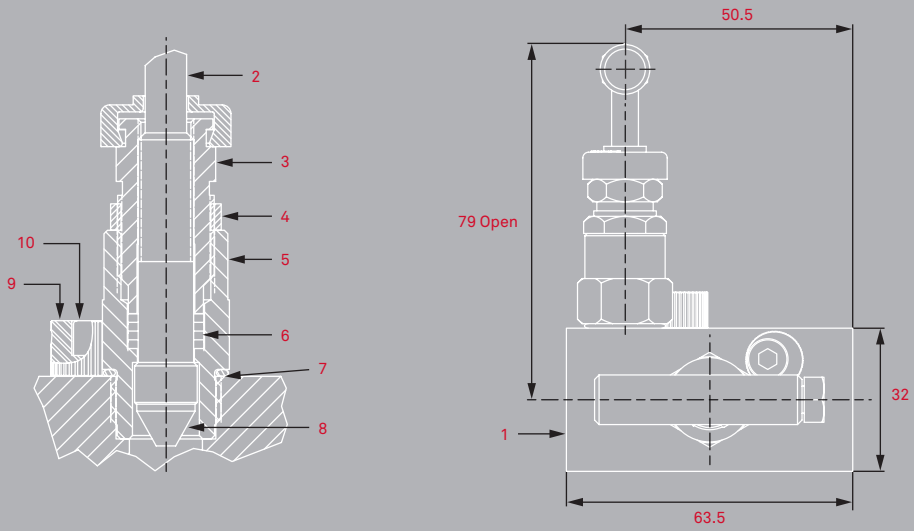
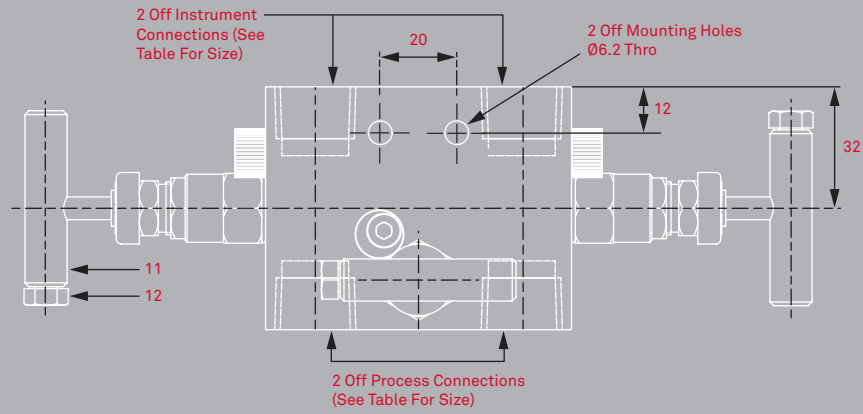
3 Valve Needle Manifold 6,000 PSI

The three-valve isolation manifold remote mounted (pipe to pipe). Used mainly in differential pressure transmitters and static instrument applications. The '3VR' has two process isolation valves and one equalisation valve to equalise the two sides. Incorporated all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing, back sealing facility. Mounting holes supplied as standard for wall or bracket. Process and instrument sides are both on 54mm centres to correspond with transmitter connections.

Design Features

- 2 x isolation and 1 x equalising valve for instrument balancing applications
- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard, for bubble tight shut off and long service life
- Metal to metal body bonnet seal for high pressure and high temperature sealing
- 2 x 6mm diameter mounting holes as standard
- Positive no slack stem action
- Unique anti-rotational cam device for extra safety
- Temperature range -40°C to 230°C
- Ingress seals fitted as standard
- Repair/service kits available to extend service life further
- Available in 316/316L
- Mounting holes as standard to allow for fixing to pipe stands or enclosures
- Full material traceability
- Materials of construction supplied to meet the requirements of NACE MR 0175





Components Key

Item No.	Description	Material	Quantity
1	VALVE BODY	A479 UNS S31600	1
2	NEEDLE STEM	A479 UNS S31600	3
3	GLAND ADJUSTER	UNS S31600	3
4	GLAND LOCKNUT	UNS S31600	3
5	BONNET HOUSING	A479 UNS S31600	3
6	PACKING	RTFE	12
7	INGRESS SEAL	VITON	3
8	VALVE TIP	A564 UNS S17400	3
9	LOCKING CAM	UNS S31600	3
10	CAM SCREW	A4 ST/ST	3
11	"T" HANDLE	UNS S31600	3
12	HANDLE BOLT	A4 ST/ST	3
13	EQUALISE DUST CAP	PVC	1
14	ISOLATE DUST CAP	PVC	2

Dimensions shown are in metric mm

Part no.	Connection size	Bore	CV	Weight
3VR4NS	1/2" NPT	4	0.6	1.45 Kg

3VBD Series Needle Manifold

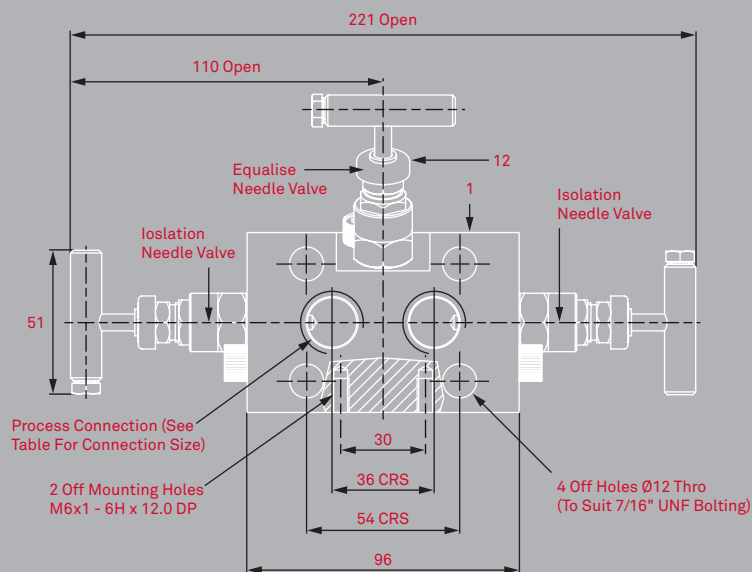
Overview

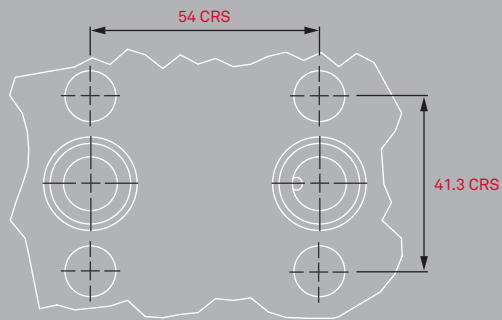
Direct Mounted 3 Valve Needle Manifold 6,000 PSI

Direct mounted 3 valve manifold, instrument mount to pipe connection. Offering two isolation valves, and one equalising valve for differential pressure transmitter or static instrument applications. This slim, compact 3 valve manifold offers all the features of Alco's high integrity needle valve head design incorporated in one common instrument manifold block that mounts directly to an instrument.

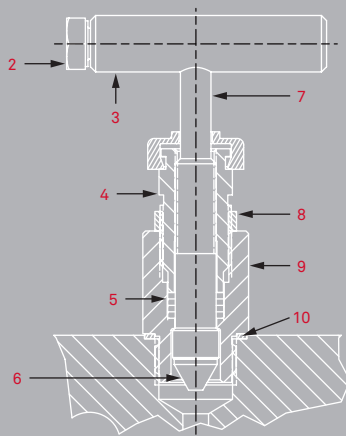
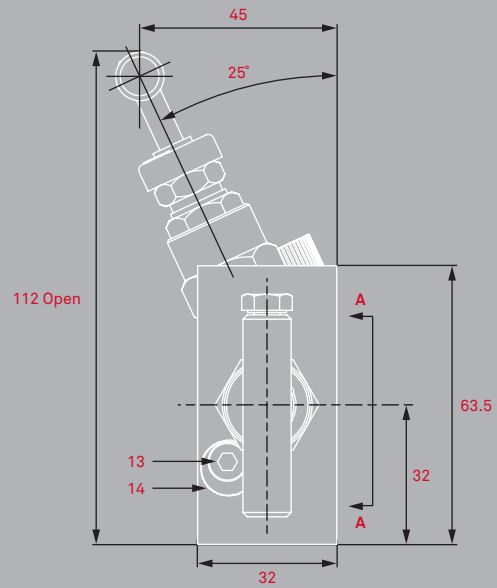
Design Features

- Compact bodied instrument manifold block
- All valves have two piece non-rotating hardened (17-4PH) tips as standard for first time seal and long life service
- Bubble tight shut off
- Positive no slack stem action
- Supplied with bolt pack and PTFE seals as standard
- Metal to metal body bonnet seal for high pressure and high temperature use
- Full material traceability
- Temperature range -40°C to 230°C
- Available in 316/316L
- 54mm (2 1/8") instrument centres
- Repair/service kit available to extend field life further
- Base mounting holes to allow fixing to enclosure or mounting boss
- Materials of construction supplied to meet the requirements of NACE MR 0175



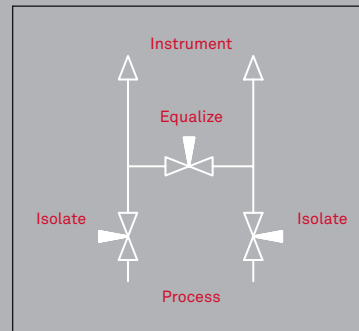


Direct Mount Instrument Connection Detail A-A



Needle Valve Details

Flow Diagram



Components Key

Item No.	Description	Material	Quantity
1	VALVE BODY	A479 UNS S31600	1
2	HANDLE BOLT	A4 ST/ST	3
3	"T" HANDLE	UNS S31600	3
4	GLAND ADJUSTER	UNS S31600	3
5	PACKING	RTFE	12
6	VALVE TIP	A564 UNS S17400	3
7	NEEDLE STEM	A479 UNS S31600	3
8	GLAND LOCKNUT	UNS S31600	3
9	BONNET HOUSING	A479 UNS S31600	3
10	BONNET SEAL	UNS S31600	3
11	ISOLATE DUST CAP	PVC	2
12	EQUALISE DUST CAP	PVC	1
13	CAM SCREW	A4 ST/ST	3
14	LOCKING CAM	UNS S31600	3

Dimensions shown are in metric mm

Part no. 3VBD4NS-TM Connection size 1/2" NPT Bore 4 CV 0.6 Weight 1.6KG

5VR Series Needle Manifold - Oil

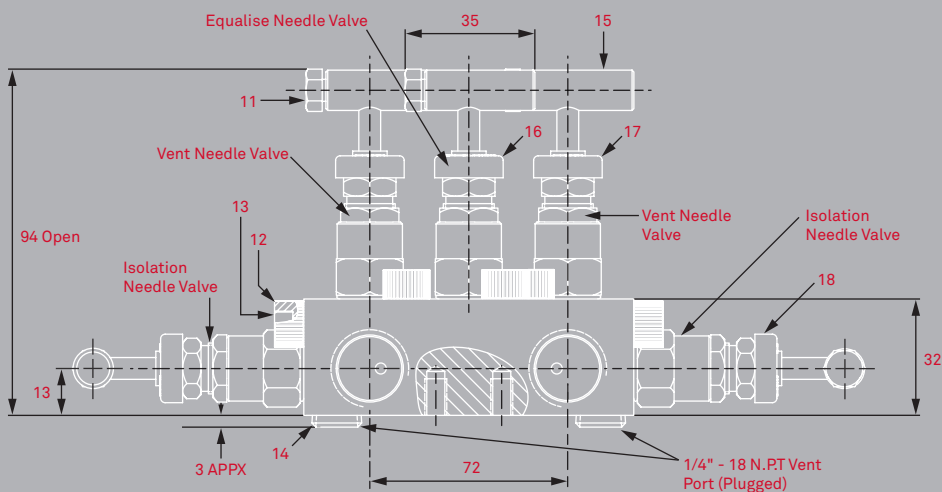
Overview

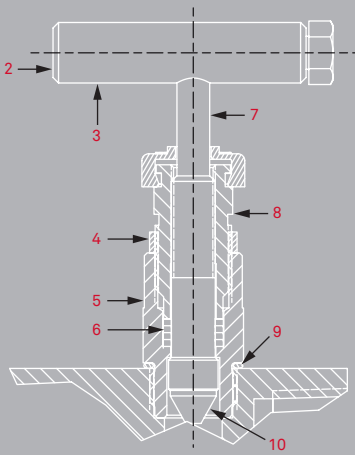
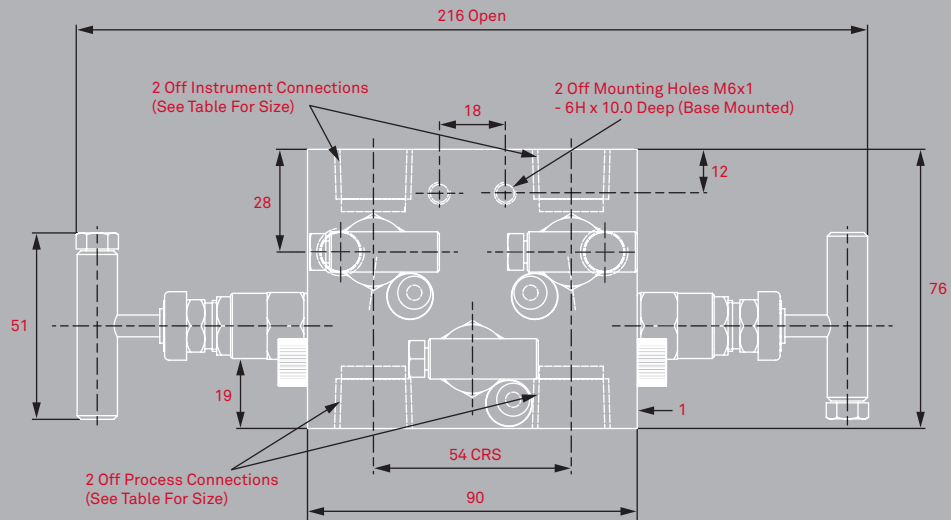
5 Valve Needle Manifold 6,000 PSI

Remote mounted, pipe to pipe configuration five valve manifold. Offering two isolation valves, two vent valves and one equalising valve (see attached drawing). Used in differential pressure transmitters and static instrument applications. Standard 2 x 1/2" inlet x 2 x 1/2" outlet all on 54mm instrument centres with 2 x 1/4" vent port. Incorporating all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing, back sealing facility. Mounting holes supplied as standard for wall or bracket mounting.

Design Features

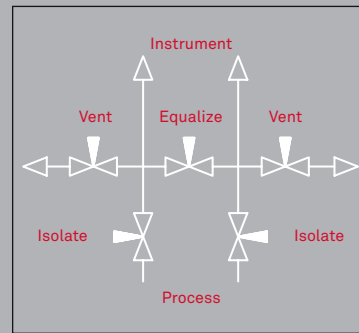
- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard
- Positive no slack stem action
- Bubble tight shut off
- Vent porting in base for piping away (oil type only)
- Metal to metal body bonnet seal for high pressure and high temperature use
- Unique bonnet locking cam
- Ingress seals fitted as standard
- Temperature range -40°C to 230°C
- Available in 316/316L
- 54mm (2 1/8") instrument centres
- Full material traceability
- Oil configuration
- Repair/service kit available to extend field life further
- Materials of construction supplied to meet the requirements of NACE MR 0175





Needle Valve Details

Flow Diagram



Components Key

Item No.	Description	Material	Quantity
1	VALVE BODY	A479 UNS S31600	1
2	M6 X 20 HEX BOLT	A4 ST/ST	2
3	"T" HANDLE	UNS S31600	2
4	GLAND LOCKNUT	UNS S31600	5
5	BONNET HOUSING	A479 UNS S31600	5
6	PACKING	RTFE	20
7	NEEDLE STEM	A479 UNS S31600	5
8	GLAND ADJUSTER	UNS S31600	5
9	INGRESS SEAL	VITON	5
10	VALVE TIP	A564 UNS S17400	5
11	M6 X 12 HEX BOLT	A4 ST/ST	3
12	LOCKING CAM	UNS S31600	5
13	CAM SCREW	A4 ST/ST	5
14	BLANK PLUG	A479 UNS S31600	2
15	"T" HANDLE (SHORT)	UNS S31600	3
16	EQUALISE DUST CAP	PVC	1
17	VENT DUST CAP	PVC	2
18	ISOLATE DUST CAP	PVC	2

Dimensions shown are in metric mm

Part no. 5VR4NS-O Connection size 1/2" NPT Bore 3 CV 0.4 Weight 2.1 Kg

5VR Series Needle Manifold - Gas

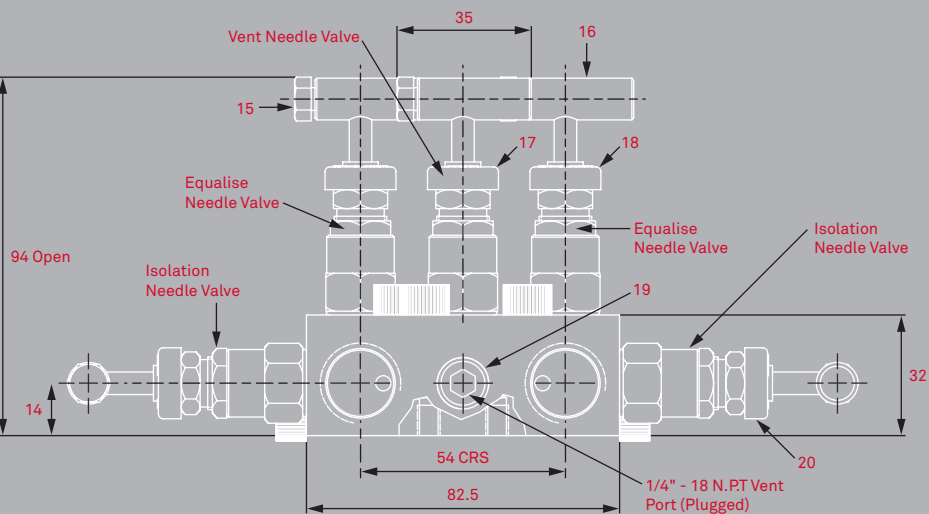
Overview

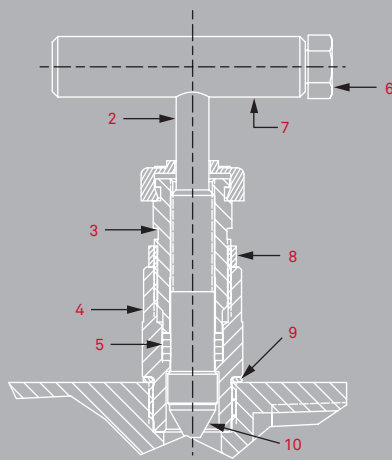
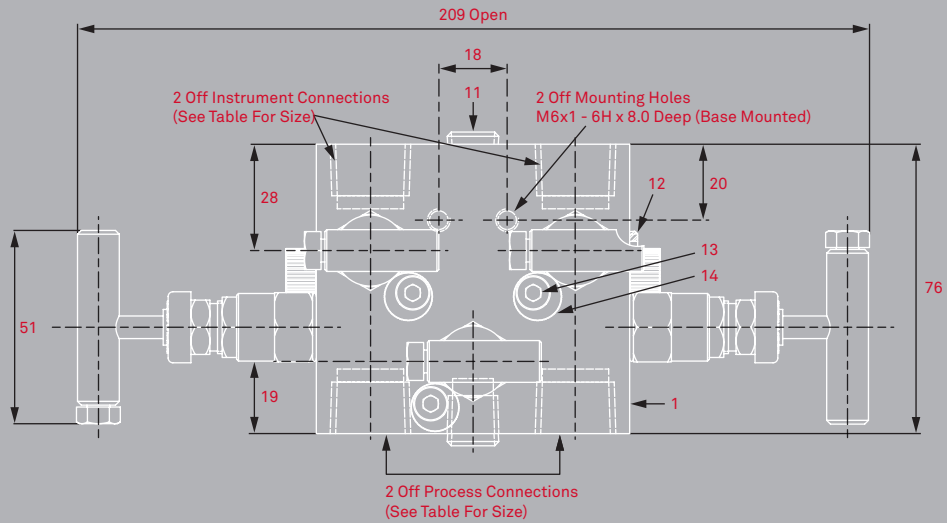
5 Valve Needle Manifold 6,000 PSI

Remote mounted, pipe to pipe configuration five valve manifold. Offering two isolation valves, one vent valve and two equalising valves (see attached drawing). Used in differential pressure transmitters and static instrument applications. Standard 2 x 1/2" inlet x 2 x 1/2" outlet all on 54mm instrument centres with 2 x 1/4" vent port. Incorporating all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing, back sealing facility. Mounting holes supplied as standard for wall or bracket mounting.

Design Features

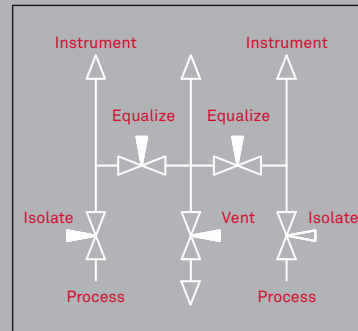
- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard
- Positive no slack stem action
- Bubble tight shut off
- Metal to metal body bonnet seal for high pressure and high temperature use
- Unique bonnet locking cam
- Ingress seals fitted as standard
- Temperature range -40°C to 230°C
- Available in 316/316L
- 54mm (2 1/8") instrument centres
- Full material traceability
- Gas configuration
- Repair/service kit available to extend field life further
- Materials of construction supplied to meet the requirements of NACE MR 0175





Needle Valve Details

Flow Diagram



Item No.	Description	Material	Quantity
1	VALVE BODY	A479 UNS S31600	1
2	NEEDLE STEM	A479 UNS S31600	5
3	GLAND ADJUSTER	UNS S31600	5
4	BONNET HOUSING	A479 UNS S31600	5
5	PACKING	RTFE	20
6	M6 X 20 HEX BOLT	A4 ST/ST	2
7	"T" HANDLE	UNS S31600	2
8	GLAND LOCKNUT	UNS S31600	5
9	INGRESS SEAL	VITON	5
10	VALVE TIP	A564 UNS S17400	5
11	1/4" NPT BLANK PLUG *	A479 UNS S31600	2
12	1/8" NPT BLANK PLUG *	A479 UNS S31600	1
13	CAM SCREW	A4 ST/ST	5
14	LOCKING CAM	UNS S31600	5
15	M6 X 12 HEX BOLT	A4 ST/ST	3
16	'T' HANDLE	UNS S31600	3
17	VENT DUST CAP	PVC	1
18	EQUALISE DUST CAP	PVC	2
19	1/4" NPT VENT PLUG	A479 UNS S31600	1
20	ISOLATE DUST CAP	PVC	2

Components Key

Dimensions shown are in metric mm

Part no. 5VR4NS-G Connection size 1/2" NPT Bore 4 CV 0.6 Weight 1.9 Kg

* THESE PLUGS ARE USED SOLELY FOR THE PURPOSE OF RETAINING PRESSURE (DO NOT REMOVE)

5VBD Series Needle Manifold - Oil

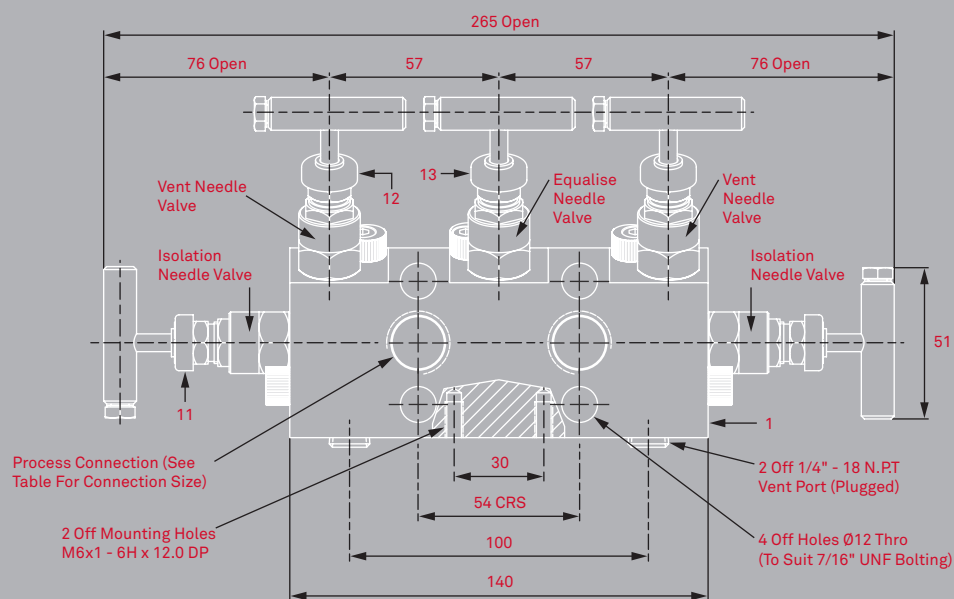
Overview

Direct Mounted 5 Valve Needle Manifold 6,000 PSI

Direct style block mounted 5 valve manifold, instrument mount to pipe connection. Offering two isolation valves, two vent valves and one equalising valve (see attached drawing). Used in differential pressure transmitters and static instrument applications. Standard 2 x 1/2" inlet x 2 x 1/2" outlet all on 54mm instrument centres with 2 x 1/4" vent port. Incorporating all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing, back sealing facility. Mounting holes supplied as standard for wall or bracket mounting.

Design Features

- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard
- Positive no slack stem action
- Bubble tight shut off
- Supplied with bolt pack and PTFE seals as standard
- Metal to metal body bonnet seal for high pressure and high temperature use
- Unique bonnet locking cam
- Available in 316/316L
- Base mounting holes to allow fixing to enclosure or mounting boss
- Temperature range -40°C to 230°C
- 54mm (2 1/8") instrument centres
- Full material traceability
- Oil configuration
- Repair/service kit available to extend field life further
- Materials of construction supplied to meet the requirements of NACE MR 0175



5VBD Series Needle Manifold - Gas

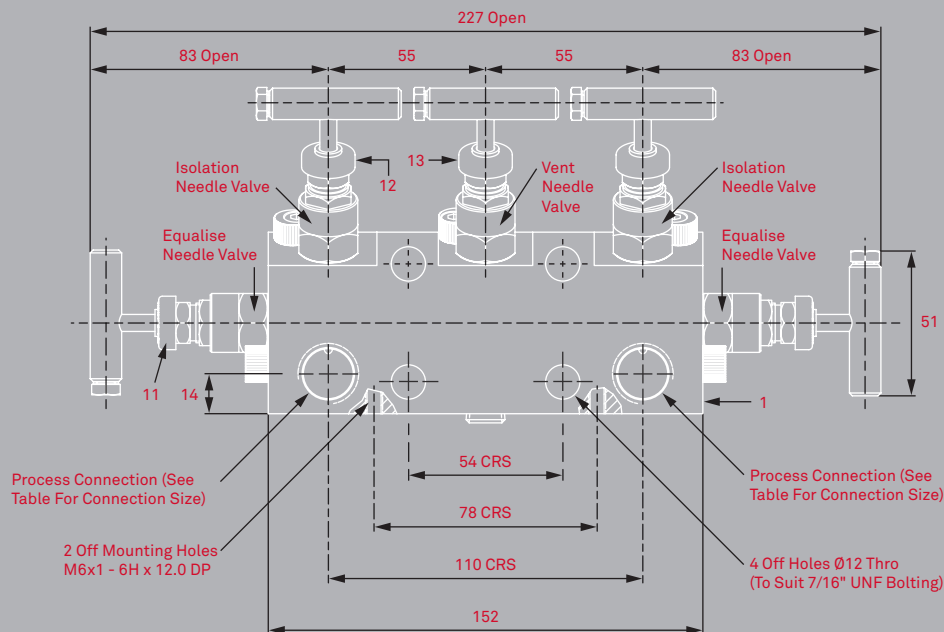
Overview

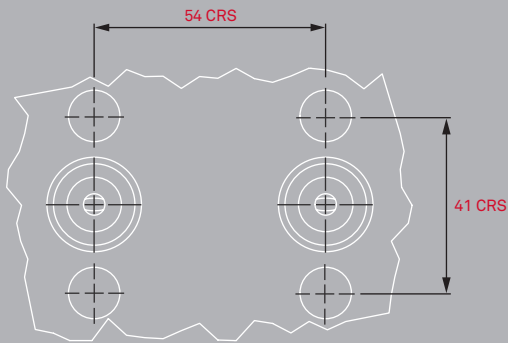
Direct Mounted 5 Valve Needle Manifold 6,000 PSI

Direct style block mounted 5 valve manifold, instrument mount to pipe connection. Offering two isolation valves, one vent valve and two equalising valves (see attached drawing). Used in differential pressure transmitters and static instrument applications. Standard 2 x 1/2" inlet x 2 x 1/2" outlet all on 54mm instrument centres with 2 x 1/4" vent port. Incorporating all the standard long service life features of the standard 'N' series needle valve, multi-ring piston style packing, back sealing facility. Mounting holes supplied as standard for wall or bracket mounting.

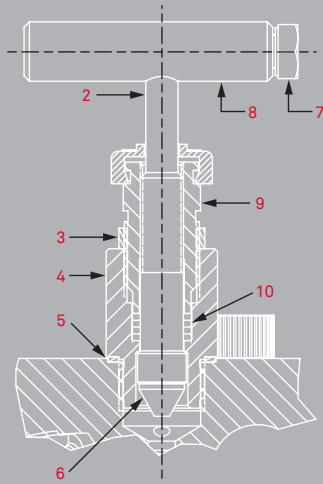
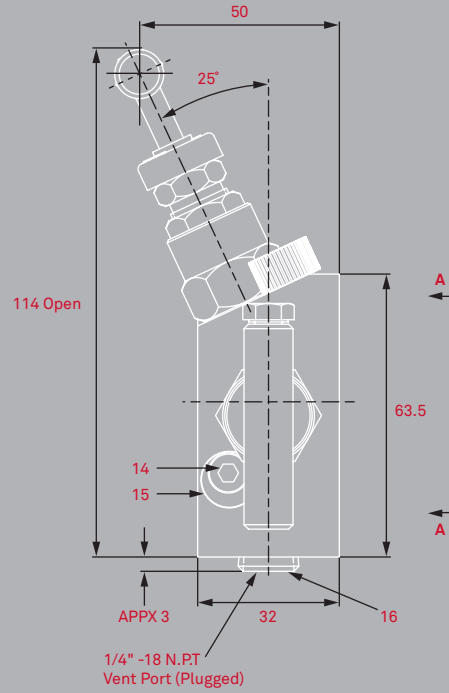
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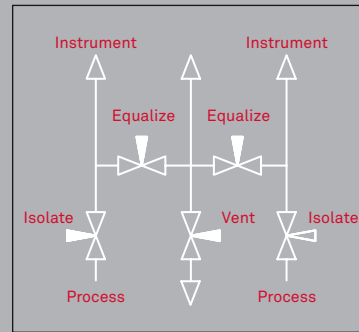


Direct Mount Instrument Connection Detail A-A



Needle Valve Details

Flow diagram



Components Key

Item No.	Description	Material	Quantity
1	NEEDLE MANIFOLD	A479 UNS S31600	1
2	NEEDLE STEM	A479 UNS S31600	5
3	GLAND LOCKNUT	UNS S31600	5
4	BONNET HOUSING	A479 UNS S31600	5
5	BONNET SEAL	UNS S31600	5
6	VALVE TIP	A564 UNS S17400	5
7	HANDLE BOLT	A4 ST/ST	5
8	"T" HANDLE	UNS S31600	5
9	GLAND ADJUSTER	UNS S31600	5
10	PACKING	RTFE	20
11	EQUALISE DUST CAP	PVC	2
12	ISOLATE DUST CAP	PVC	2
13	VENT DUST CAP	PVC	1
14	CAM SCREW	A4 ST/ST	5
15	LOCKING CAM	UNS S31600	5
16	BLANK PLUG	A479 UNS S31600	1

Dimensions shown are in metric mm

Part no. 5VBD4NS-TM-G Connection size 1/2" NPT Bore 3 CV 0.4 Weight 2.4 Kg