

Manifolds - Five Valve

A differential pressure manifold with two block valves, an equalizer valve and two instrument side vent/calibrate valves

General Application

The A22N is designed for remote mounting differential pressure transmitters, for instrument isolation and zeroing, venting and calibration. It's suitable for both liquid and vapor service and for applications with differential pressure.

TECHNICAL DATA

Materials

316 SS, Monel®, Hastelloy®

Seats:

Metal

Connections:

Instrument: 1/4" or 1/2" NPT

Process: 1/4" or 1/2" NPT

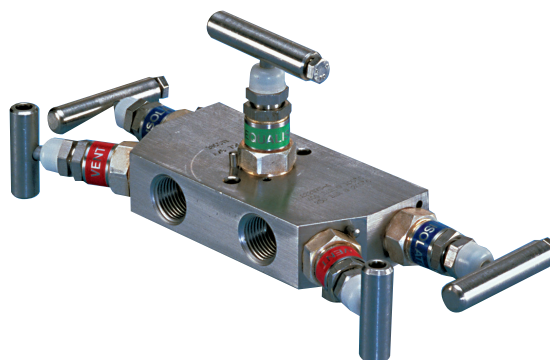
Pressure (max):

6000 psig (414 barg) standard, 1000 psig (690 barg) optional

Temperature range (min/max):

-70°C to 1000°F

(-57°C to 538°C)



Features

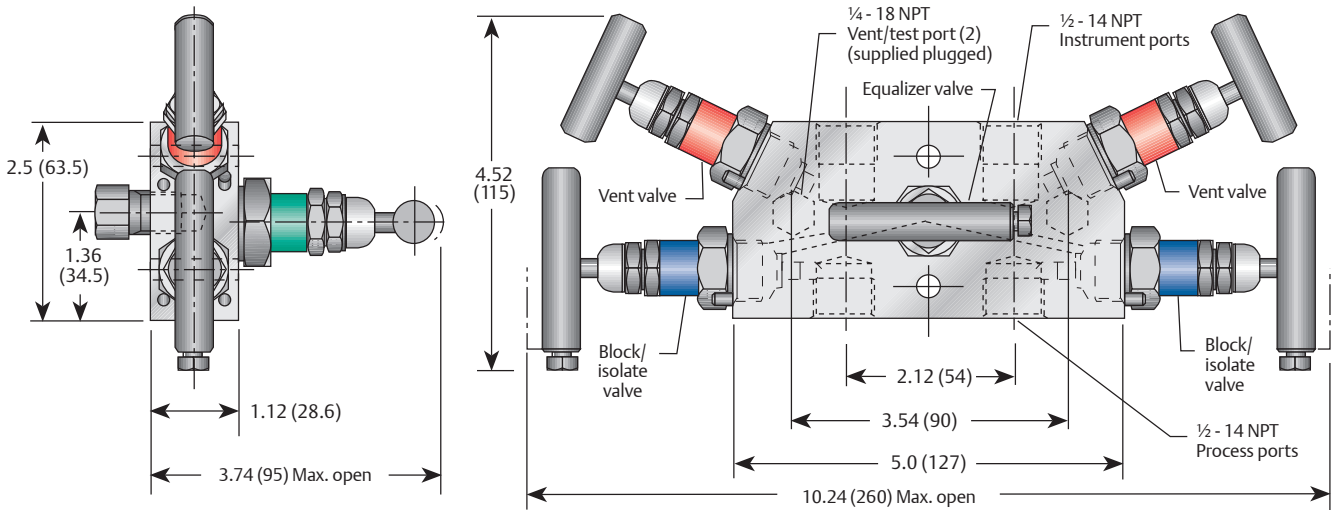
- Remote mounting compact design requires minimum space for operation and installation with fewer potential leak points.
- Reduced installation costs by manifolding the valves, eliminating several components essential for 'piping-up.'
- Free-swivelling ball end stem ensures perfect alignment, providing repetitive bubble-tight shutoff and long life.
- PTFE or graphite packing below stem threads prevents lubricant washout and thread corrosion.
- Back seat stem prevents blowout or accidental removal while in operation.
- Threaded vent ports allow vent to be piped away safely. Supplied plugged as standard.
- Standard 2^{1/8}" (54 mm) centered instrument connections.
- All manifolds supplied with mounting holes as standard to enable pipe bracket mounting.
- AGCO Mount option available.

A22N SERIES

Manifolds - Five Valve

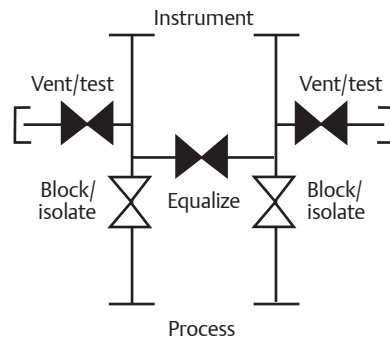
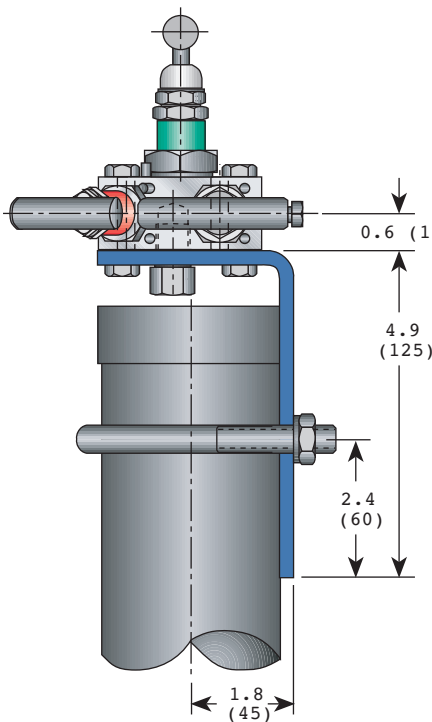
A22 Dimensions

Dimensions, inches (mm) Threaded x Threaded



AGCO Mount

A22N is available with a mounting bracket AM suitable for 2-inch (50 mm) pipestand. Supplied in zinc plated CS as standard.



Special Severe Service Materials

- Duplex UNS S31803
- 6MO UNS S31254
- Hastelloy® C276
- Inconel 625

For any other material requirements, please consult the factory.

Manifolds - Five Valve

Standard Materials

| Valve ^[1] | Body | Bonnet | Stem | Ball seat |
|----------------------|-----------------|-----------------|-----------------|-------------|
| 316 SS | SS, A479 316 | 316 SS | 316 SS | 316 SS |
| Monel® | Monel® 400 | Monel® 400 | Monel® 400 | Monel® K500 |
| SG ^[2] | A479 316 | 316 SS | Monel® 400 | Monel® K500 |
| SG3 ^[3] | Hastelloy® C276 | Hastelloy® C276 | Hastelloy® C276 | Elgiloy® |

NOTES

1. Approximate valve weight: 6.0 lb (2.7 kg).
0.187-inch (4.8 mm) diameter orifice.
Valve Cv 0.52 maximum.
2. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for Chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103.
3. SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for Chloride conditions > 50 mg/l [ppm]).

Bonnet Assemblies

The metal-seated bonnet assemblies have a rotating stem with free swivel ball-end seat for long service life. The specially hardened ball seat is ideal for both gas and liquid service. All stem threads are rolled and lubricated to prevent galling and reduce operating torque. The stem seal is a patented PTFE packing gland which is adjustable in service. All bonnets are assembled with a bonnet locking pin to prevent accidental removal while in service and a protective dust cap is fitted to contain stem lubricant and prevent the influx of contaminants.

Valve Bonnet Identification

Dust cap coding: The valve bonnet dust caps are color coded to identify the gland packing/stem.

White: Standard bonnet assembly
PTFE packing.
Green: Sour gas service PTFE
packing.

Ring labels: the valve bonnets have color coded ring labels for service identification.

Red: vent valves
Blue: isolate valves
Green: equalize valves

Connections

Standard connections

Process Threaded ½-inch NPT to ANSI/ASME B1-20-1.
Instrument Threaded ½-inch NPT to ANSI/ASME B1-20-1.
Vent Threaded ¼-inch NPT to ANSI/ASME B1-20-1.

Other connections

Threaded BSPT tapered thread to BS21
BSPF straight thread

Please consult the factory for availability.

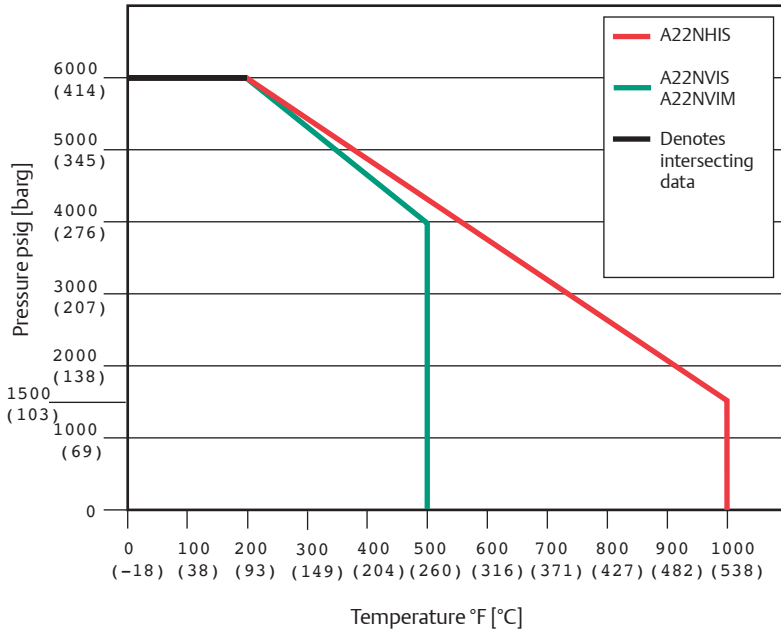
NOTE

1. Threaded connection: vent supplied with blanking plug as standard.

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Pressure vs. Temperature



Pressure and Temperature Ratings

| Valve | PTFE bonnet |
|-------------------|---|
| 316 SS and Monel® | 6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C) |

| Valve | High temperature |
|--------|--|
| 316 SS | 6000 psig at 200°F (414 barg at 93°C) 1500 psig at 1000°F (103 barg at 538°C) |

| Valve | High pressure |
|--------|--|
| 316 SS | 10000 psig at 200°F (690 barg at 93°C) 4500 psig at 200°F (414 barg at 260°C) |

Minimum Temperature

| | |
|---|---------------|
| 316 SS, Monel®, Hastelloy® PTFE packed | -70°F (-57°C) |
| 316 SS, Monel®, Hastelloy® GRAFOIL® packed | -70°F (-57°C) |

Selection Guide

| A22N | V | I | S | -4 | -SG |
|--------------|----------------|------------|---------------|--------------------------------|--|
| BASIC SERIES | BONNET PACKING | SEAT | BODY MATERIAL | PROCESS/INSTRUMENT CONNECTIONS | OPTIONS |
| A22N | V PTFE | I Integral | S 316 SS | 2 1/4-inch FNPT | AT Tamper-proof bonnet |
| | H Graphite | | M Monel® | 4 1/2-inch FNPT | K Key for -AT |
| | | | | | LAT Lockable tamper-proof bonnet |
| | | | | | AM AGCO Mount kit for 2-inch pipe stand mounting (CS) |
| | | | | | AMS AGCO Mount kit for 2-inch pipe stand mounting (316 SS) |
| | | | | | OC00 Cleaned for oxygen service |
| | | | | | PD Padlock for -LAT |
| | | | | | SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for Chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103 (316 SS valves only) |
| | | | | | SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for Chloride conditions > 50 mg/l [ppm]) |
| | | | | | SS All 316 SS material on non wetted components |