

## Features

- Compact design minimizes space requirements; low weight improves connection strength and reduces gauge whip.
- Minimal instrument installation components reduce costs and decrease possible leak points.
- Easy instrument check calibration using ¼" FNPT vent/test port.
- Ball end stem eliminates seat galling, provides bubble-tight shutoff and long life. Hardened, non-rotating ball ensures perfect alignment closure.
- Packing below threads prevents lubricant washout, thread corrosion, process contamination and eliminates galling.
- Easily adjustable packing decreases replacement down time and increases valve life.
- Safety back seating prevents stem blowout or accidental removal and provides a metal-to-metal secondary stem seal while in the fully open position.
- Dust cap prevents lubricant washout and protects bonnet assembly from contaminants.
- ENC plated 316 SS prevents galling or freezing of stem threads.
- Rolled stem, bonnet and male NPT threads provide additional strength.
- Mirror stem finish in the packing area enables smooth operation and extends packing life.
- Metal-to-metal body-to-bonnet seal in constant compression prevents bonnet thread corrosion, eliminates possible tensile breakage and gives a reliable seal point.
- Color coded caps for easy valve function identification.



## Technical Data

### Materials:

CS, 316 SS, Monel®, Hastelloy, and other exotic materials per request

### Seats:

Metal

### Connection:

½" to 1" NPT; welded also available

### Pressure (max):

M25: 6,000 psig (414 barg)

M251: 10,000 psig (690 barg)

### Temperature (max):

M25: -313F° to 1000°F (-192° to 538°C)

M251: -70°F to 500°F (-57° to 260°C)

### NOTE

Monel® is a registered trademark of Special Metals Corporation

Two-valve single outlet gauge valves that combine isolating, calibrating and venting facilities in a single compact unit

## General Application

These valves enable gauges, pressure transmitters or switches to be installed and serviced reliably by reducing potential leak points. A threaded and plugged vent port enables safe installation of exhaust piping/tubing on hazardous service.

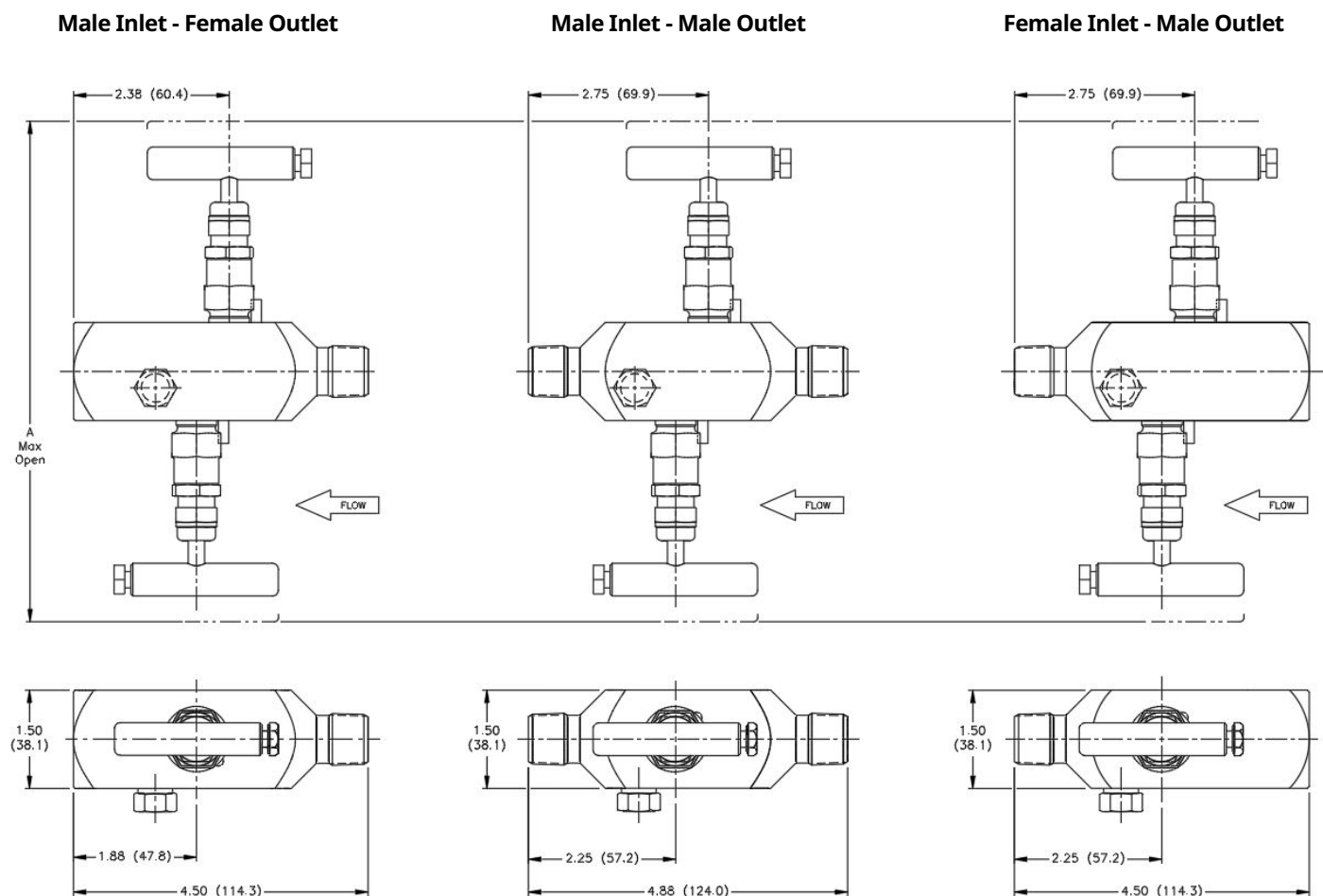
### Bonnet Assembly Options

The M25 and M251 feature a metal-seated bonnet assembly which has a rotating stem with free swivel ball-type seat for long service life. The stem threads are rolled and lubricated to prevent galling and reduce operating torque. The stem seal is a PTFE or Graphite packing gland which is adjustable in service. A protective dust cap is fitted to contain stem lubricant and prevent the influx of contaminants. The specially hardened ball seat is ideal for both gas and liquid service. All bonnets are assembled with a bonnet locking pin to prevent accidental removal while in service.

The high pressure M251 bonnet assembly uses a strengthened stem and bonnet and is fitted with a larger size T-bar handle.

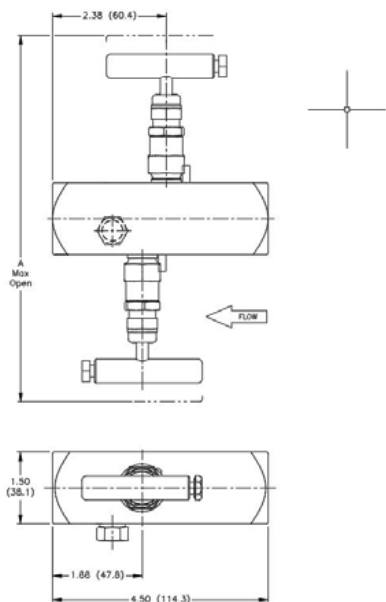
The M25 high-temperature bonnet assembly utilizes a similarly designed stem and bonnet, incorporating adjustable graphite rings and back-up pressure rings to ensure a leak-free stem seal.

### Dimensions, inches [mm]



### Bonnet Assembly Options

#### Female Inlet - Female Outlet

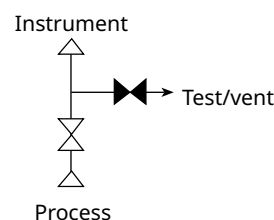


#### Dimensions, inches [mm]

Packing	A
Low emissions (E)	8.14 [206.75]
PTFE/Graphite	6.80 [172.72]
M251 only	6.84 [173.7]

#### NOTES

1. Approximate valve weight 3.6 lb [1.63 kg]. For 1/2" connection size
2. Valve Cv 0.52 maximum.

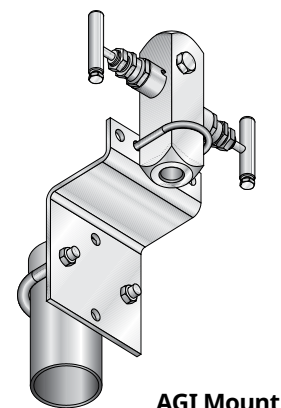


### Standard Materials

Valve	Body	Bonnet	Stem	Ball	Packing
CS[1]	CS	CS	316 SS	17-4 PH	PTFE
CS[1]	CS	316 SS	316 SS	17-4 PH	Graphite
					LE Graphite
316 SS	316 SS	316 SS	316 SS	316 SS	PTFE
316 SS	316 SS	316 SS	316 SS	316 SS	Graphite
					LE Graphite
SG[2]	316 SS	316 SS	Monel® 400	Monel® K500	PTFE
SG[2]	316 SS	316 SS	Monel® 400	Monel® K500	Graphite
					LE Graphite
SG3 [3]	Hastelloy® C-276	Hastelloy® C-276	Hastelloy® C-276	Elgiloy®	PTFE
SG3 [3]	Hastelloy® C-276	Hastelloy® C-276	Hastelloy® C-276	Elgiloy®	Graphite
					LE Graphite

#### NOTES

1. CS is zinc TCP plated to prevent corrosion.
2. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions  $\leq 50$  mg/l (ppm)) and NACE MR0103-2005.
3. SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions  $> 50$  mg/l (ppm)).
4. LE - Low Emission



**AGI Mount**

The M25 and M251 are available with the AGI Mount option, which provides secure mounting, instrument piping stability and easy instrument removal for repairs, service and calibration.

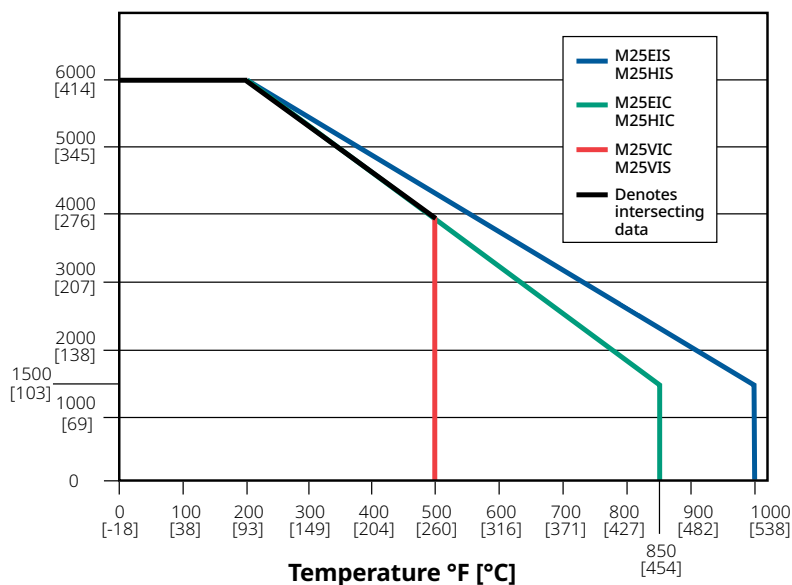
### Pressure vs. Temperature

Pressure and Temperature Ratings		
<b>PTFE packing</b>		
CS, 316 SS	6000 psig at 200°F [414 barg at 93°C]	4000 psig at 500°F [276 barg at 260°C]
316L SS	5000 psig at 200°F [344.7 barg at 93°C]	4000 psig at 500°F [276 barg at 260°C]
SG,SG3	6000 psig at 200°F [414 barg at 93°C]	4000 psig at 500°F [276 barg at 260°C]
<b>Graphite low emissions graphite packing</b>		
CS	6000 psig at 200°F [414 barg at 93°C]	1500 psig at 850°F [103 barg at 454°C]
316L SS	5000 psig at 200°F [344.7 barg at 93°C]	1500 psig at 850°F [103 barg at 454°C]
316 SS, SG, SG3	6000 psig at 200°F [414 barg at 93°C]	1500 psig at 1000°F [103 barg at 538°C]

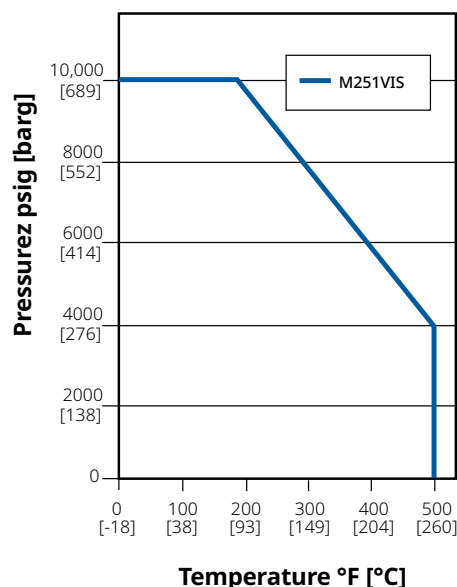
#### NOTE

Minimum temperature for 316 SS M25 is -313°F (-192°C) @2500PSI (172 barg), M251 minimum is -70°F(-57°C)

Pressure vs. Temperature - M25

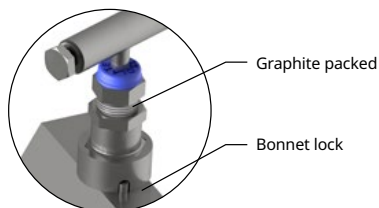


Pressure vs. Temperature - M251



#### NOTE

M251 316L material has a maximum pressure rating of 9,000 psi



### Bonnet Lock (BL)

The TESCOM™ Anderson Greenwood bonnet lock prevents accidental loosening of the bonnet-to-body seal. A high-strength, short bonnet pin aligns a hex collar over the bonnet.

Test indicate the minimum torque required to break the collar loose is greater than the torque required to twist off the handle.

# TESCOM™ Anderson Greenwood Instrumentation Block and Bleed Gauge Valves

M25/M251  
Series

## Selection Guide

M25	V	I	S	-44	C	-SG
Basic Series	Packing	Seat Material	Body Material <sup>(1)</sup>	Connections <sup>(2)</sup>	Connection Style	Options
M25, M251	V	I Integral	C CS	4F ½-inch FNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)	C Male plain end (CS is zinc coated)	HD Hydrostatic testing (100%) (MSS-SP-61)
	H		S 316 SS	4M ½-inch MNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)		LAT Lockable anti tamper (PTFE & Graphite Packing)
	E		M Monel®	44 ½-inch FNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)		MS Monel® stem
			J Hastelloy®	44F ½-inch MNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)		N1 (default) No India or Chinese content on the raw material of the <b>valve body only</b> . The MTR 3.1 Certificate will reflect material origin from outside of these two specified countries. All other parts will be covered by a Certificate of Conformance
			W 316L SS (maximum pressure 5,000 psig (345 barg) at 200°F (93°C))	46 ½-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)		N2 No India or Chinese content on the raw material of the "Pressure Boundary" parts of the valve. These are a total of 3 parts, which are the <b>Bonnet, Stem, and Body only</b> . The MTR 3.1 Certificate will be supplied for the body only & will reflect material origin outside of these two specified countries.
			46M ½-inch MNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)	OC00 Gaseous oxygen clean		
			48 ½-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)	OC01 Liquid oxygen clean		
			48M ½-inch MNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)	PMI00 PMI Body Only		
			6 ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch FNPT (inlet)	PMI01 PMI Body and Bonnet		
			66 ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)	PMI02 PMI Body, Bonnet and Stem		
			68 ¾-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)	SG SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l (ppm)) and NACE MR0103-2005		
			6M ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)	SG3 SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/l (ppm))		
				AM AGI Mount		
		AMS AGI Mount (stainless steel)				
		SST 316SS Tag Circular (10 Characters max)				
		BL Bonnet lock device				
		LT Low Temperature Bonnet 316 SS M25 only				

### NOTES

(1) For other body materials, consult factory.

(2) Consult factory for other optional connections.

(3) M251 not available in graphite.

# TESCOM™ Anderson Greenwood Instrumentation Block and Bleed Gauge Valves

M25/M251  
Series

M25 HP	S	-44	C	-XP
Basic Series	Body Material	Outlet x Inlet Connections (Inlet/ Outlet)	Connection Style	Options
M25HP	S 316 SS	<b>4F</b> ½-inch FNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)	C Male plain end (CS is zinc coated)	<b>PM100</b> PMI Body Only
		<b>4M</b> ½-inch MNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)		<b>XP</b> ASME B31.1(see note 1)
		<b>44</b> ½-inch FNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)		<b>AM</b> AGI Mount
		<b>44F</b> ½-inch MNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)		<b>AMS</b> AGI Mount (stainless steel)
		<b>46</b> ½-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)		
		<b>46M</b> ½-inch MNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)		
		<b>48</b> ½-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)		
		<b>48M</b> ½-inch MNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)		
		<b>6</b> ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch FNPT (inlet)		
		<b>66</b> ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)		
		<b>68</b> ¾-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)		
		<b>6M</b> ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)		

## NOTES

(1) All Power M25HP Gauge Valves come standard with Graphite packing, integral seats, bonnet locks, and are subjected to hydrostatic testing.

(2) SS ratings

6000 psig at 100°F [414 barg at 38°C]

3030 psig at 1000°F [201 barg at 538°C]

M25/M251\_09.23\_A Availability, design and specifications are subject to change without notice.  
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