

INSTRUMENTS • CONTROLS • VALVES

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Product Overview

The M25 and M251 are two-valve single outlet gauge valves that combine isolating, calibrating, and venting facilities in a single compact unit. These valves enable gauges, pressure transmitters, or switches to be reliably installed and serviced, by reducing potential leak points.

The vent port is threaded 1/4-inch NPT on all valves and is fitted with a plug. This facilitates installation of exhaust piping/tubing on hazardous services, which in turn contributes to operator safety.

Block and Bleed Gauge Valves – M25 and M251

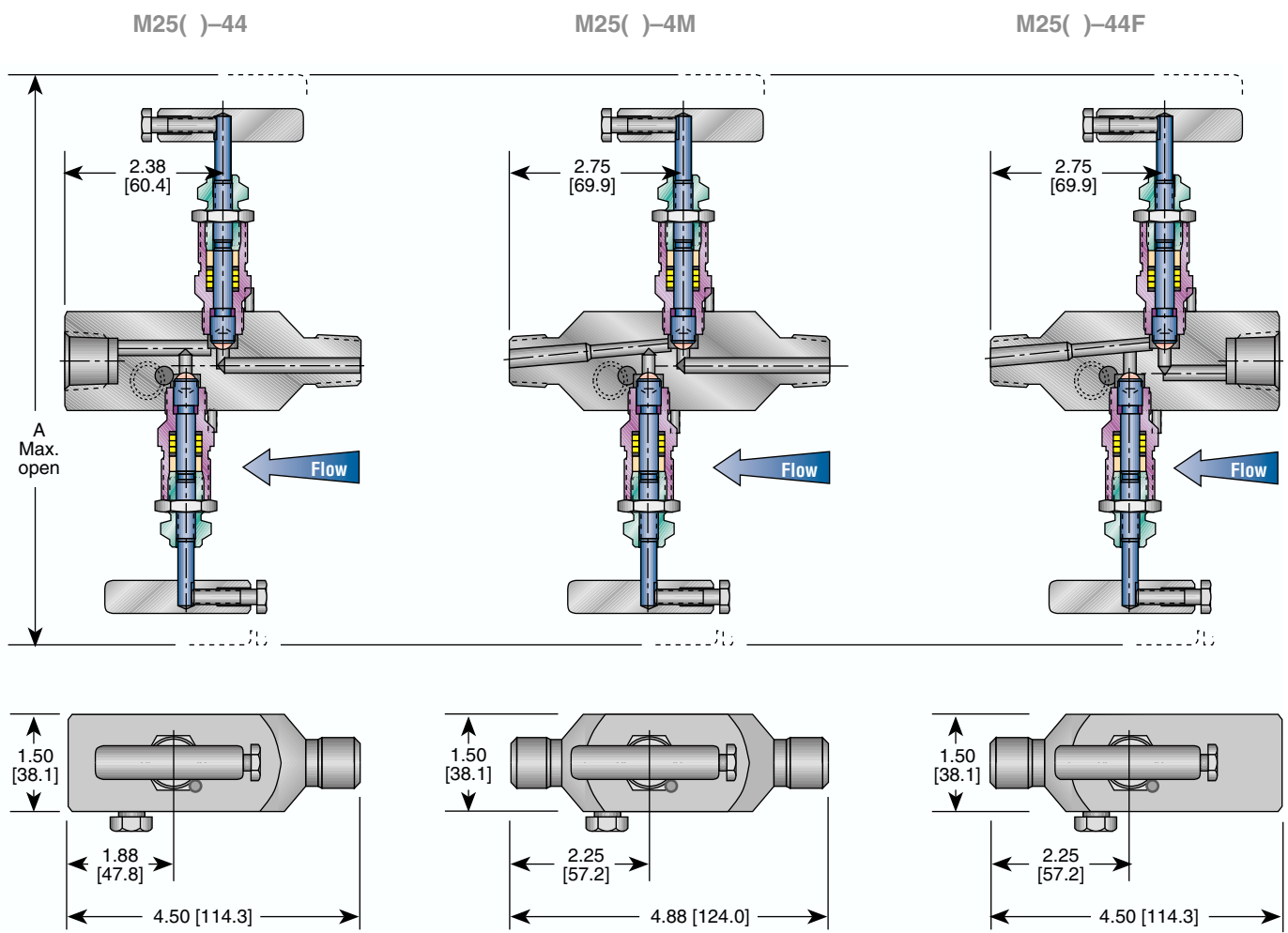


Features and Benefits

- **Compact design** requires minimum space for operation and installation. Lower valve weight increases strength at the process connection and reduces gauge whip.
- **Cost savings** from reduced number of components required for instrument installation, also decreases possible leak points.
- **Easy instrument check calibration** using 1/4-inch FNPT vent/test port.
- **Ball end stem** eliminates seat galling, provides bubble-tight shutoff and long life. The hardened, non-rotating ball ensures perfect alignment closure.
- **Packing below threads** prevents lubricant washout, thread corrosion, and keeps solids from entering the thread area, which can cause galling. It also prevents process contamination.
- **Adjustable packing** adjusts easily – loosen jam nut, tighten bushing slightly, then retighten jam nut. Decreases packing replacement downtime and increases valve life.
- **Safety back seating** prevents stem blowout or accidental removal while in operation and provides a metal-to-metal secondary stem seal while in the full open position.
- **Dust cover** prevents lubricant washout and keeps contaminants (dirt, rain, etc.) out of bonnet assembly.
- **Panel mount** (optional) affords opportunity to use high quality products in racks or panels.
- **Chrome plating of 316 SS** prevents galling or freezing of stem threads when similar metals mate. CS valves use a 303 SS stem.
- **Rolled threads** provide additional thread strength. The stem, bonnet, and male NPT threads are rolled, not cut.
- **Mirror stem finish** burnished to a 16 RMS finish in the packing area enables smooth stem operation and extends packing life.
- **Body-to-bonnet seal** is metal-to-metal in constant compression, isolating the bonnet threads from process fluid corrosion. Eliminates possible tensile breakage of bonnet, and gives a reliable seal point.
- **Bonnet lock pin** is another safety feature which prevents the accidental separation of the bonnet from the body. However, normal valve maintenance and repair are still easily accomplished.

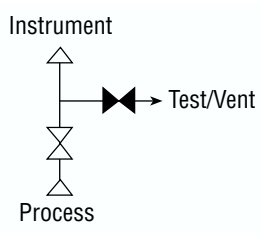
Block and Bleed Gauge Valves – M25 Specifications

Dimensions, inches [mm]



Dimensions, inches [mm]

Packing	A
Low Emissions (E)	8.14
GRAFOIL® (H)	[206.8]
Teflon® (V)	6.84
	[173.7]



Note

1. Approximate valve weight M25()-44 and M25()-44F 3.6 lb [1.63 kg].
 M25()-4M 3.8 lb [1.72 kg].
 Valve C_v 0.52 maximum.

Block and Bleed Gauge Valves – M25 and M251 Specifications

Pressure and Temperature Ratings

Teflon® Packing

CS,	6000 psig @ 200°F	4000 psig @ 500°F
SS,	[414 barg @ 93°C]	[276 barg @ 260°C]
SG		

GRAFOIL® and Low Emissions Graphite Packing

CS,	6000 psig @ 200°F	1500 psig @ 850°F
SS,	[414 barg @ 93°C]	[103 barg @ 454°C]
SG		

SS,	6000 psig @ 200°F	1500 psig @ 1000°F
SG	[414 barg @ 93°C]	[103 barg @ 538°C]

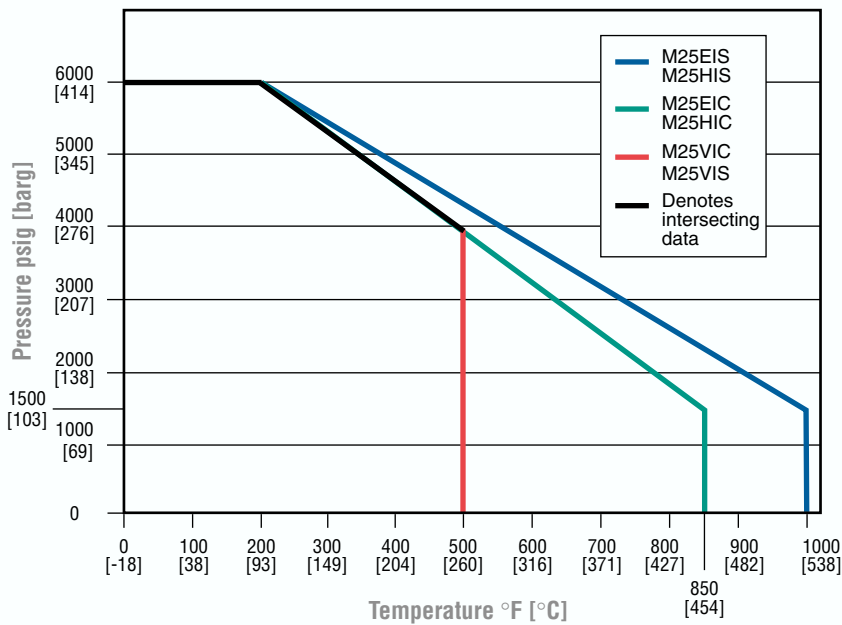
Standard Materials

Valve	Body	Bonnet	Stem	Ball	Packing
CS ¹	A105 CS	A108 CS	A581-303 SS	17-4 PH	Teflon®
CS ¹	A105 CS	A105 CS	A581-303 SS	17-4 PH	GRAFOIL® Low Emissions Graphite
SS	A479-316 SS	A479-316 SS	A276-316 SS	316 SS	Teflon®
SS	A479-316 SS	A479-316 SS	A276-316 SS	316 SS	GRAFOIL® Low Emissions Graphite
SG ²	A479-316 SS	A479-316 SS	Monel® 400	Monel® K500	Teflon®
SG ²	A479-316 SS	A479-316 SS	Monel® 400	Monel® K500	GRAFOIL® Low Emissions Graphite

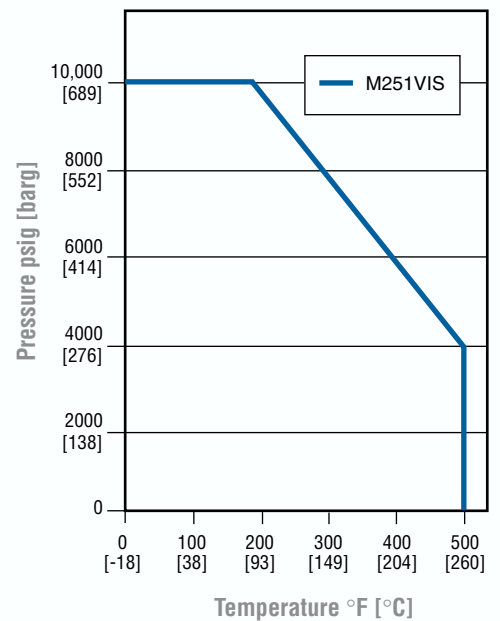
Notes

1. CS is zinc-cobalt plated to prevent corrosion.
2. SG (Sour Gas) meets the requirements of NACE MR0175-latest revision.

Pressure vs. Temperature – M25



Pressure vs. Temperature – M251



Block and Bleed Gauge Valves – M25 and M251 Specifications

Ordering Information

	M25	V	I	S	- 44C	- SG
Model Number						
M25, M251						
Packing						
V – Teflon® (patent protected)						
H – GRAFOIL®						
E – Low Emissions Graphite						
Seat Material						
I – Integral						
Body Material¹						
C – CS						
S – 316 SS						
M – Monel®						
Connections (Inlet/Outlet)²						
4M – 1/2-inch MNPT x 1/2-inch MNPT						
44 – 1/2-inch MNPT x 1/2-inch FNPT						
44F – 1/2-inch FNPT x 1/2-inch MNPT						
46 – 3/4-inch MNPT x 1/2-inch FNPT						
C – Male plain end (CS is black oxide coated)						
Options						
BL – Bonnet Lock Device (patent protected)						
CLC – Chlorine Cleaning						
HD – Hydrostatic Testing (100%)(MSS-SP-61)						
OC – Oxygen Cleaning						
SG – Sour Gas meets the requirements of NACE MR0175-latest revision (SS only)						
SP – Special Requirements - please specify						

Notes

1. For other body materials, consult factory.
2. Consult factory for other optional connections.

Block and Bleed Gauge Valves – M25 ASME B31.1

Ordering Information – Power Industry Applications¹

	M25 HP	S	– 44C	– XP
Model Number				
M25 HP				
Body Material				
C – CS, A105				
S – SS, A479-316				
Connections (Inlet/Outlet)				
4M – 1/2-inch MNPT x 1/2-inch MNPT				
44 – 1/2-inch MNPT x 1/2-inch FNPT				
44F – 1/2-inch FNPT x 1/2-inch MNPT				
46 – 3/4-inch MNPT x 1/2-inch FNPT				
C – Male plain end (CS is black oxide coated)				
Options				
SP – Special Requirements - please specify				

Note

- All Power M25 Gauge Valves come standard with GRAFOIL® packing, integral seats, bonnet locks, and are subjected to hydrostatic testing.
- Ratings
 - SS**
 - 6000 psig @ 100°F [414 barg @ 38°C]
 - 2915 psig @ 1000°F [201 barg @ 538°C]
 - CS**
 - 6170 psig @ 100°F [425 barg @ 38°C]
 - 3430 psig @ 800°F [236 barg @ 427°C]