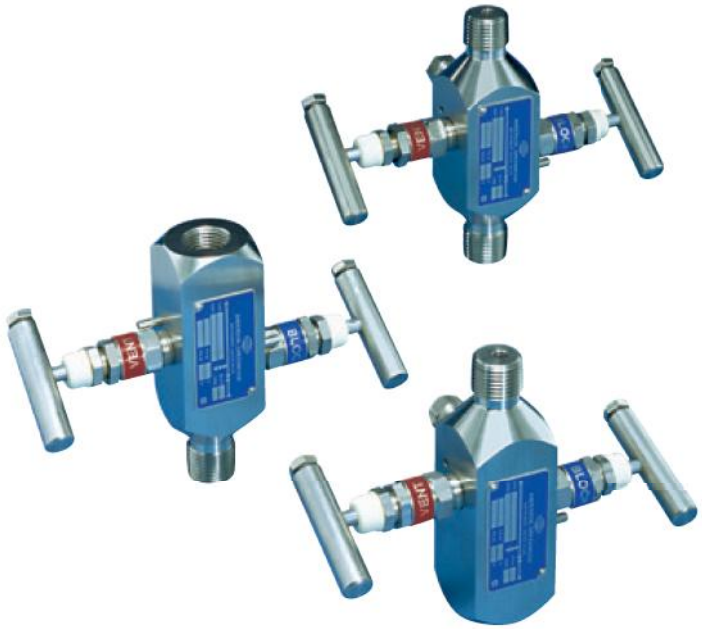
ANDERSON GREENWOOD M25/M251

BLOCK AND BLEED GAUGE VALVES

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.

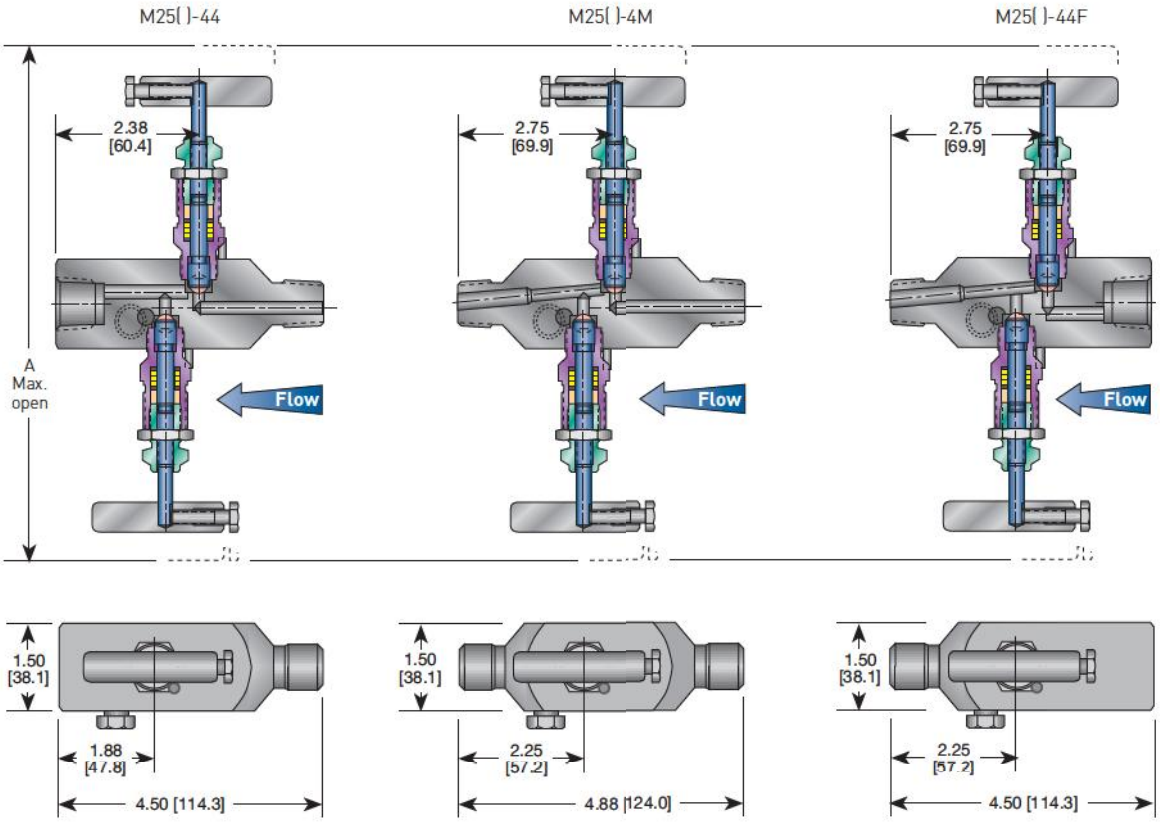
TECHNICAL DATA

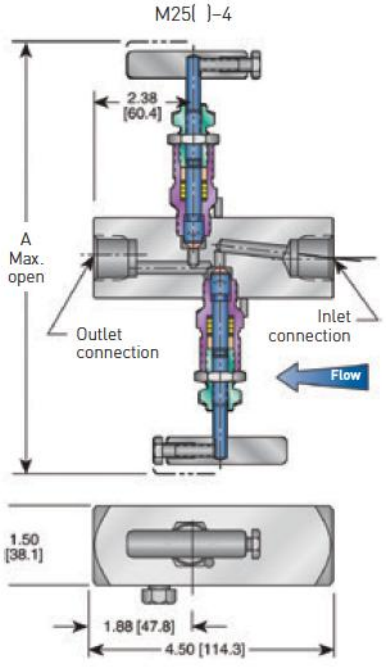
Materials:	CS, SS, Monel, duplex and other exotic materials
Seats:	Metal
Connections:	½" to 1" NPT; welded also available
Pressure (max.)	
M25:	6,000 psig (414 barg)
M251:	10,000 psig (690 barg)
Temperature	
M25:	-70° to 1000°F (-57° to 538°C)
M251:	-70° to 500°F (-57° to 260°C)

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 downtime 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 cover 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.

DIMENSIONS, INCHES (mm)



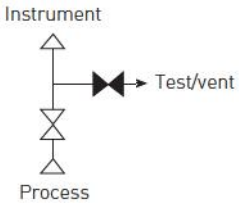


DIMENSIONS, INCHES (mm)

Packing	A
Low emissions (E)	8.14
GRAFOIL® (H)	(206.8)
PTFE (V)	6.84
M251 only	(173.7)

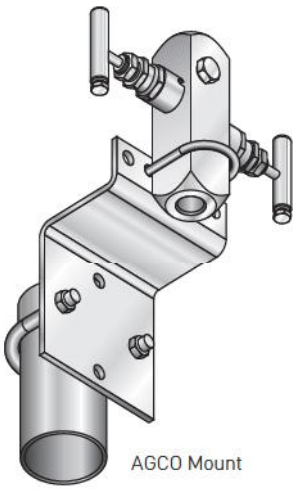
NOTES

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.
2. For Hastelloy® and SG3 call factory for dimensions and weights.
3. Contact factory for all other available configurations not shown above.



STANDARD MATERIALS

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



AGCO Mount

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

NOTES

1. CS is zinc chromate plated to prevent corrosion.
2. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 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)).

BONNET ASSEMBLY

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 patented PTFE 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.

PRESSURE AND TEMPERATURE RATINGS

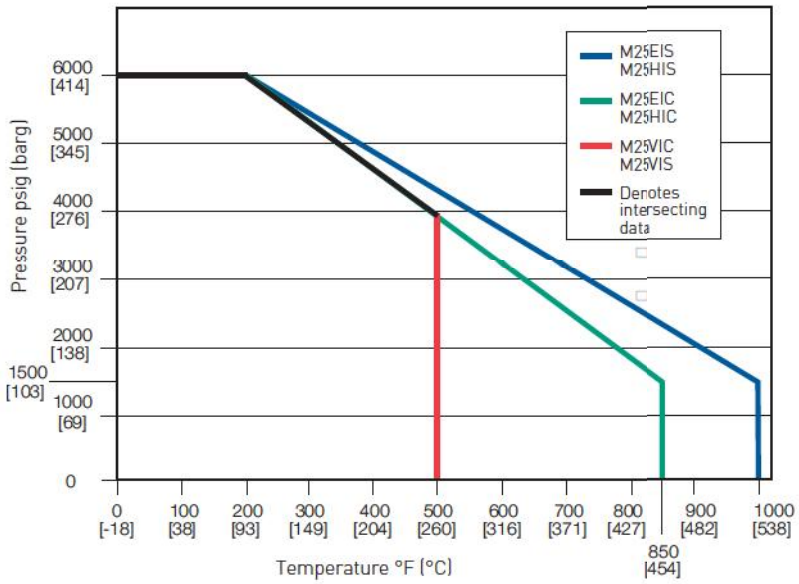
PTFE packing		
CS, SS	6000 psig at 200°F (414 barg at 93°C)	4000 psig at 500°F (276 barg at 260°C)
316L SS	5000 psig at 200°F (345 barg at 93°C)	
SG,SG3	6000 psig at 200°F (414 barg at 93°C)	4000 psig at 500°F (276 barg at 260°C)

GRAFOIL® low emissions graphite packing		
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 (345 barg at 93°C)	
SS, SG, SG3	6000 psig at 200°F (414 barg at 93°C)	1500 psig at 850°F (103 barg at 454°C)

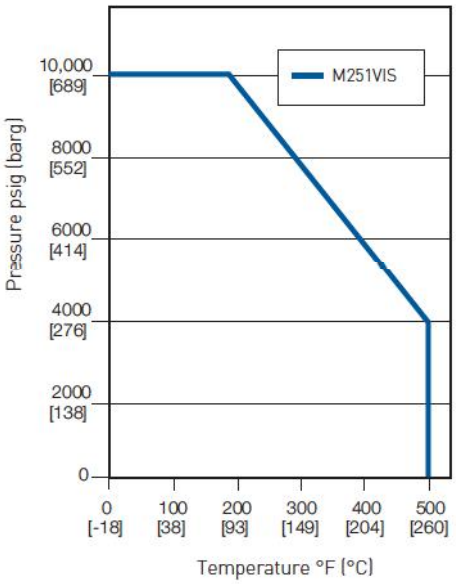
NOTE

Minimum temperature for 316 SS material 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.

SELECTION GUIDE

Example:	M25	V	I	S	-44	C	- SG

Model number

M25, M251

Packing

V	PTFE
H	GRAFOIL®
E	Low emissions graphite

Seat material

I	Integral

Body material[1]

C	CS
S	316 SS
M	Monel®
J	Hastelloy®
W	316L SS (maximum pressure 5,000 psig (345 barg) at 200°F (93°C)

Connections[2]

4	½-inch FNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)
4M	½-inch MNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)
44	½-inch FNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)
44F	½-inch MNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)
46	½-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)
46M	½-inch MNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)
48	½-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)
48M	½-inch MNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)
6	¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch FNPT (inlet)
66	¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)
68	¾-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)

Connection style

C	Male plain end (CS is black oxide coated)

Options

CL00	Chlorine cleaning (CL)
HD	Hydrostatic testing (100%) (MSS-SP-61)
LAT	Lockable anti tamper
MS	Monel stem
NIC	No India/China
OC00	Oxygen clean (OC)
OC01	Gaseous oxygen clean (GOC)
PMI00	PMI body only
SG	(Sour Gas) NACE Edition 2003 / MR0103
SG3	(Sour Gas) NACE MR0175/ISO 15156-3 (latest edition)
AM	AGCO Mount
AMS	AGCO Mount kit (stainless steel)
BL	Bonnet lock device

NOTES

1. For other body materials, consult factory.
2. Consult factory for other optional connections.
3. M251 not available in GRAFOIL® or graphite.

SELECTION GUIDE - POWER INDUSTRY APPLICATIONS[1]

Example:	M25 HP	S	- 44	C	- XP
Model number					
M25 HP					
Body material					
S SS, A479-316					
Connections (inlet/outlet)					
4 ½-inch FNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)					
4M ½-inch MNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)					
44 ½-inch FNPT (outlet) x ¼-inch vent x ½-inch MNPT (inlet)					
44F ½-inch MNPT (outlet) x ¼-inch vent x ½-inch FNPT (inlet)					
46 ½-inch FNPT(outlet) x ¼-inch vent x ¾-inch MNPT (inlet)					
46M ½-inch MNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)					
48 ½-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)					
48M ½-inch MNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)					
6 ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch FNPT (inlet)					
66 ¾-inch FNPT (outlet) x ¼-inch vent x ¾-inch MNPT (inlet)					
68 ¾-inch FNPT (outlet) x ¼-inch vent x 1-inch MNPT (inlet)					
Connection style					
C Male plain end (CS is black oxide coated)					
Options					
LAT Lockable anti tamper					
PMI00 PMI body only					
XP ASME B31.1					
AM AGCO Mount					
AMS AGCO Mount kit (stainless steel)					

NOTE

1. All Power M25 Gauge Valves come standard with GRAFOIL® 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)