

Block and Bleed Gauge Valve – M9

Product Overview

The M9 (block and bleed) gauge valve is specifically designed to facilitate safe, compact, and economical gauge installation.

Block valve seating is interchangeable between 'hard' or 'soft' without changing the bonnet assembly. This feature enhances the value of the M9 by extending the useful life of the valve.

The M9's Bleed Plug is integral and employs metal-to-metal seating. It enables pressure to be safely vented without breaking threaded connections.



Applications

Static pressure gauge and instrument installation for isolation and venting.

Features and Benefits

- **Packing below threads (O-ring bonnet)** prevents lubricant washout, thread corrosion, and keeps solids from entering thread area, which can cause galling. It also prevents process contamination.
- **Adjustable packing** – Teflon® and GRAFOIL® packed bonnets adjust easily, decreasing packing replacement downtime and increasing 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.
- **Chrome plating of 316 SS stem** 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.

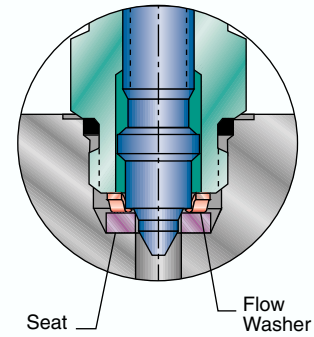
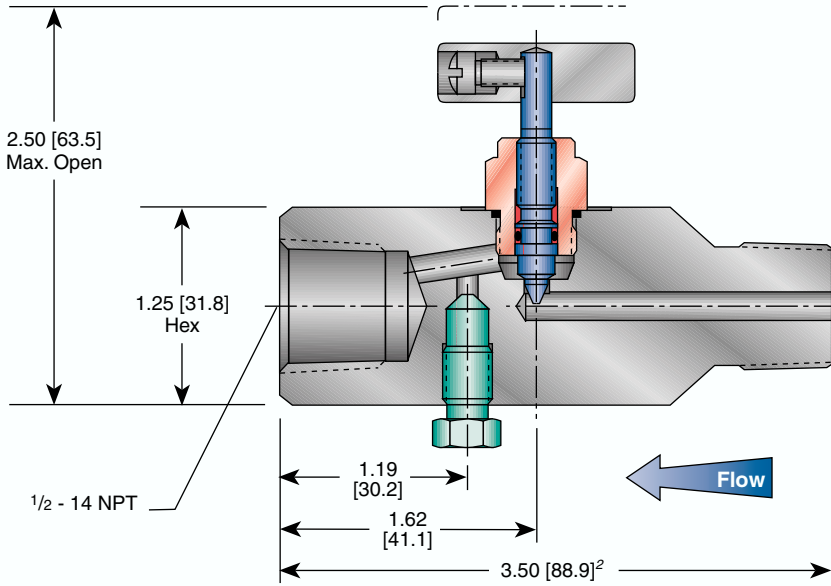
- **Mirror stem finish** burnished to a 16 RMS finish in the packing area enabling smooth stem operation and extending packing life.
- **One-piece handle design** prevents loss of the valve handle due to vibration or during maintenance.
- **Soft or metal seat for bubble-tight shutoff** is field replaceable for easy maintenance. The V-tipped stem provides accurate flow control.
- **Extended valve life**, if soft seat becomes damaged it can be removed, leaving a metal seated valve.

Note

1. Teflon® is a registered trademark of the E.I. duPont de Nemours Company.

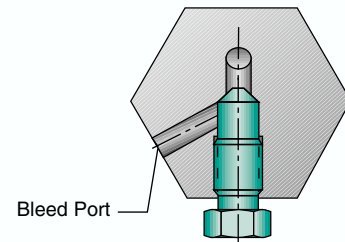
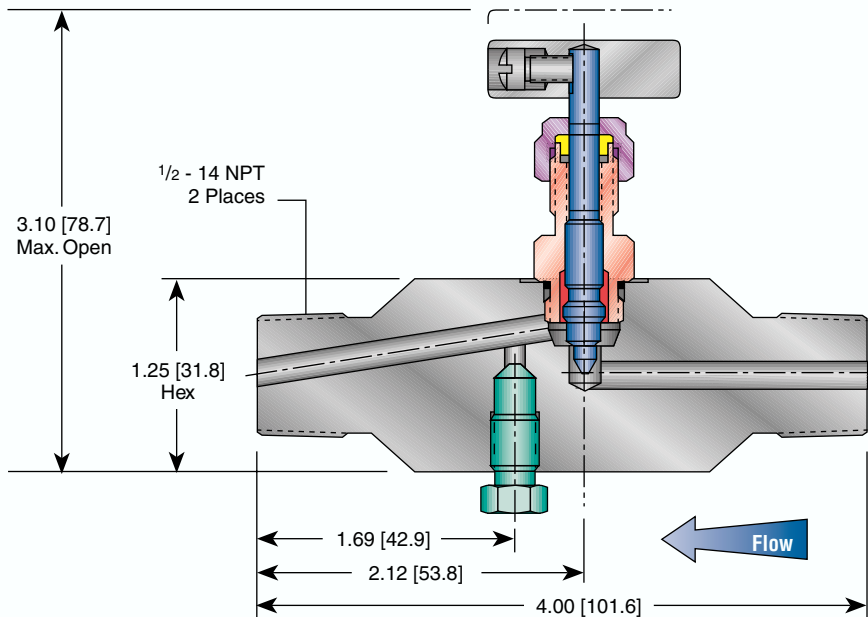
Block and Bleed Gauge Valve – M9 Specifications

M9RIS – 44 Dimensions with O-ring Bonnet¹, inches [mm]



Optional Soft Seat

M9VIS – 4M Dimensions with Teflon[®] Bonnet¹, inches [mm]



Section Through Bleed Plug

Notes

1. Bonnets interchangeable between all body configurations.
2. 4.00-inch [101.6 mm] for -44C, -46C.



Block and Bleed Gauge Valve – M9 Specifications

Standard Materials

Metal Seat

Valve ¹	Body	Bonnet	Stem	Packing	Bleed Plug	Seat
CS ²	A108 CS	A108 CS	A581-303 SS	Teflon [®] or BUNA-N O-ring	A108 CS	Integral
SS	A479-316 SS	A479-316 SS	A276-316 SS	Teflon [®] or BUNA-N O-ring	A276-316 SS	Integral
SG ³	A479-316 SS	A479-316 SS	Monel [®] 400	Teflon [®]	A279-316 SS	Integral
Monel [®]	Monel [®] R405	Monel [®] R405	Monel [®] R405	Teflon [®]	Monel [®] R405	Integral

Soft Seat

Valve ¹	Body	Bonnet	Stem	Packing	Flow Washer	Bleed Plug	Seat ⁴
CS ²	A108 CS	A108 CS	A581-303 SS	Teflon [®] or BUNA-N O-ring	316 SS	A108 CS	Delrin [®]
SS	A479-316 SS	A479-316 SS	A276-316 SS	Teflon [®] or Viton [®] O-ring	316 SS	A276-316 SS	PCTFE ⁵
SG ³	A479-316 SS	A479-316 SS	Monel [®] 400	Teflon [®]	316 SS	A276-316 SS	PCTFE ⁵

Notes

- Approximate valve weight 1.2 lb [.54 kg]. Orifice size .136-inch [3.5 mm] diameter. Valve C_v Hard Seat .25 maximum. Valve C_v Soft Seat .24 maximum.
- CS is zinc-cobalt plated to prevent corrosion (except male plain end is black oxide coated).
- SG (Sour Gas) meets the requirements of NACE MR0175-latest revision.
- PEEK available.
- PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F[®].
- Viton[®] and Delrin[®] are registered trademarks of the E.I. duPont de Nemours Company.
- Monel[®] is a registered trademark of the International Nickel Company.

Pressure and Temperature Ratings

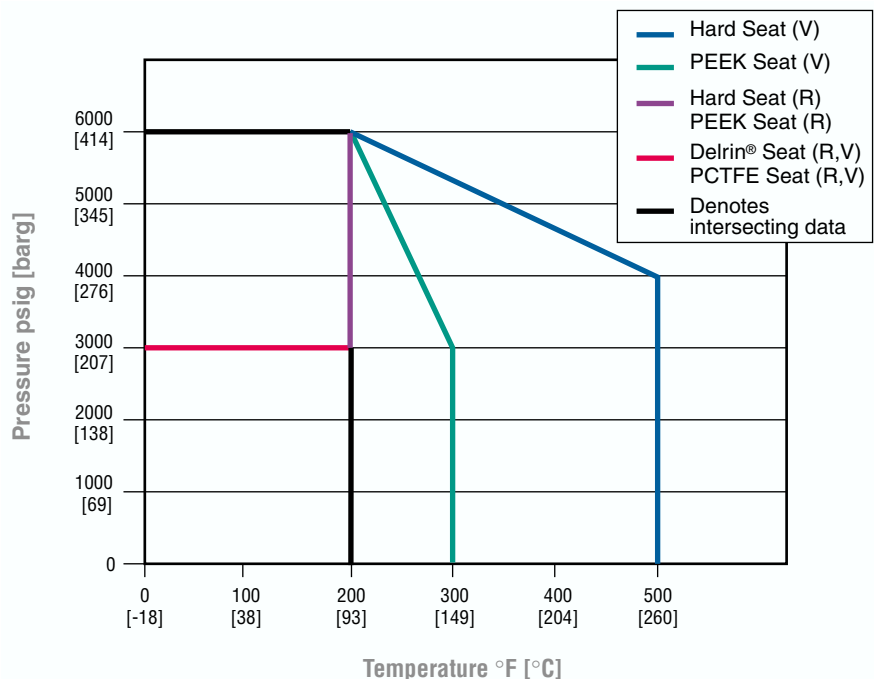
Ratings with Teflon[®] Bonnet

Hard Seat	6000 psig @ 200°F
	[414 barg @ 93°C]
Delrin [®] and PCTFE ⁵	4000 psig @ 500°F
	[276 barg @ 260°C]
PEEK Seat	3000 psig @ 200°F
	[207 barg @ 93°C]
	6000 psig @ 200°F
	[414 barg @ 93°C]
PEEK Seat	3000 psig @ 300°F
	[207 barg @ 149°C]
	3000 psig @ 300°F
	[207 barg @ 149°C]

Ratings with O-ring Bonnet

Hard Seat	6000 psig @ 200°F
	[414 barg @ 93°C]
Delrin [®] and PCTFE ⁵	3000 psig @ 200°F
	[207 barg @ 93°C]
PEEK Seat	6000 psig @ 200°F
	[414 barg @ 93°C]

Pressure vs. Temperature



(V) = with Teflon[®] Bonnet Assembly
(R) = with O-ring Bonnet Assembly

Block and Bleed Gauge Valve – M9 Specifications

Ordering Information

M9

V

I

S

- 44C

- SG

Packing

- V – Teflon® Bonnet (standard for 316 SS)
- R – O-ring Bonnet

Seat

- I – Integral
- D – Delrin® (standard)
- E – PEEK
- K – PCTFE¹

Body Materials

- C – CS
- S – SS
- M – Monel®

Connections (Inlet/Outlet)

- 44 – 1/2-inch MNPT x 1/2-inch FNPT
- 46 – 3/4-inch MNPT x 1/2-inch FNPT
- 4M – 1/2-inch MNPT x 1/2-inch MNPT

- C – Male plain end (CS is black oxide coated)

Options

- AL – Arctic Lubricant (Low Temperature Service) Not available for CS valves.
- CLC – Chlorine Cleaning
- HD – Hydrostatic Testing (100%) (MSS-SP-61)
- MS – Monel® Stem
- OC – Oxygen Cleaning
- PHB – Phenolic Black Handle
- PHG – Phenolic Green Handle
- PHR – Phenolic Red Handle
- PM – Panel Mount (Teflon® packed only)
- SG – Sour Gas meets the requirements of NACE MR0175-latest revision (SS only)
- SP – Special Requirements - please specify

Note

1. PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F®.