

Gauge Valves

Features

- Stainless steel construction
- Nonrotating ball-tip and plug-tip stem designs
- Roddable (plug-tip design)
- Lagging extension body available for insulation clearance
- 1/2 and 3/4 in. male to 1/2 in. NPT female end connections
- 1/2 in. female gauge ports standard
- Schedule 160 pipe wall or heavier on valve inlet fitting for strength
- Bonnet lock plate standard



Materials of Construction

Component	Material Grade/ ASTM Specification
Handle pin, set screw	S17400 SS/A564
Packing bolt	416 SS/A582
Packing supports (2)	Reinforced PTFE
Packing	PTFE/D1710, D1708, D792
Seat (plug-tip design)	Acetal/D6778, PEEK, or PFA/D3307
Handle, gland, lock nut, washer, lock plate, cap screw (3/16 in. hex key)	316 SS
Stem (ball- and plug- tip design), ball (ball-tip design)	316 SS/A276
Body, bonnet	316 SS/A479
Lubricants	Fluorinated-, PTFE, and tungsten disulfide-based, nickel antiseize in a hydrocarbon carrier, and hydrocarbon- based (all packing materials); molybdenum disulfide-based (PEEK packing material)

Wetted components listed in *italics*.

- ⚠ **A packing adjustment may be required periodically to increase service life and to prevent leakage.**
- ⚠ **To increase service life, ensure proper valve performance, and prevent leakage, apply only as much torque as is required to achieve positive shutoff.**

Pressure-Temperature Ratings

Stem Design	Ball Tip		Plug Tip		
Seat Material	316 SS		PFA	Acetal ^①	PEEK
Packing Material	PTFE	Grafoil®	PTFE		PEEK
Temperature, °F (°C)	Working Pressure, psig (bar)				
-65 (-53) to 100 (37)	6000 (413)	6000 (413)	750 (51.6)	6000 (413)	6000 (413)
200 (93)	5160 (355)	5160 (355)	625 (43.0)	2650 (182)	3000 (206)
250 (121)	4910 (338)	4910 (338)	450 (31.0)	1000 (68.9)	1600 (110)
300 (148)	4660 (321)	4660 (321)	300 (20.6)	—	1300 (89.5)
350 (176)	4470 (307)	4470 (307)	200 (13.7)	—	1200 (82.6)
400 (204)	4280 (294)	4280 (294)	100 (6.8)	—	1000 (68.9)
450 (232)	4130 (284)	4130 (284)	—	—	800 (55.1)
500 (260)	—	3980 (274)	—	—	600 (41.3)
550 (287)	—	3870 (266)	—	—	400 (27.5)
600 (315)	—	3760 (259)	—	—	200 (13.7)
650 (343)	—	3700 (254)	—	—	—
700 (371)	—	3600 (248)	—	—	—
750 (398)	—	3520 (242)	—	—	—
800 (426)	—	3460 (235)	—	—	—
850 (454)	—	3380 (232)	—	—	—
900 (482)	—	3280 (225)	—	—	—
950 (510)	—	3220 (221)	—	—	—
1000 (537)	—	3030 (208)	—	—	—
1050 (565)	—	3000 (206)	—	—	—
1100 (593)	—	2685 (184)	—	—	—
1150 (621)	—	2285 (157)	—	—	—
1200 (648)	—	1715 (118)	—	—	—

① Acetal is rated to 250°F (121°C) for general service and to 200°F (93°C) for water and steam service.

Testing

Every gauge valve is factory tested with nitrogen at 1000 psig (69 bar). Seats have a maximum allowable leak rate of 0.1 std cm³/min. Shell testing is performed to a requirement of no detectable leakage with a liquid leak detector.

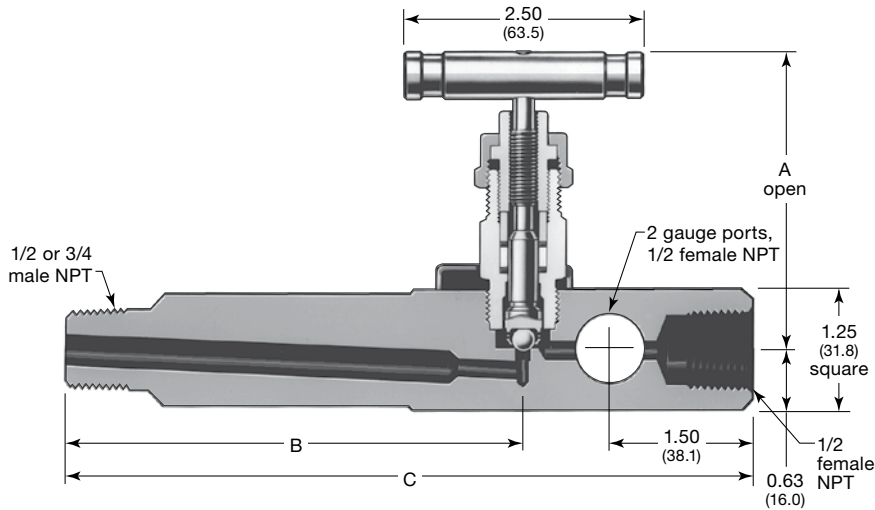
Cleaning and Packaging

Every gauge valve is cleaned and packaged in accordance with Swagelok *Standard Cleaning and Packaging (SC-10)*, MS-06-62.

Ordering Information and Dimensions

Select an ordering number.

Dimensions, in inches (millimeters), are for reference only and are subject to change.



Ball-Tip Design Valve with Lagging Extension Body

Stem Design	Inlet/Outlet (Male to Female NPT) in.	Seat	Ordering Number	Dimensions in. (mm)			
				Orifice	A	B	C
Ball tip	1/2	316 SS	SS-6PNBGM8-F8	0.156 (4.0)	3.88 (98.6)	2.97 (75.4)	5.38 (137)
	Lagging 1/2 to 1/2		SS-6PNBGM8L-F8			4.84 (123)	7.25 (184)
	3/4 to 1/2		SS-6PNBGM12-F8			2.97 (75.4)	5.38 (137)
	Lagging 3/4 to 1/2		SS-6PNBGM12L-F8			4.84 (123)	7.25 (184)
Plug	1/2 to 1/2	Acetal	SS-6PNDGM8-F8	0.250 (6.4)	3.54 (89.9)	2.97 (75.4)	5.38 (137)
	3/4 to 1/2		SS-6PNDGM12-F8				
	1/2 to 1/2	PFA	SS-6PNTGM8-F8				
	3/4 to 1/2		SS-6PNTGM12-F8				
	1/2 to 1/2	PEEK	SS-6PNPGM8-F8				
	3/4 to 1/2		SS-6PNPGM12-F8				

Options

Packing Material

PTFE packing is standard with 316 SS, acetal, and PFA seat materials.

PEEK packing is standard with PEEK seat material and is also available with other seat materials. To order, if it is not standard, add **-PK** to the valve ordering number.

Example: SS-6PNBGM8-F8-**PK**

Grafoil packing is available for the ball-tip design, extending the high-temperature pressure rating to 1715 psig at 1200°F (118 bar at 648°C). To order, add **-G** to the valve ordering number.

Example: SS-6PNBGM8-F8-**G**

UHMWPE packing is available. The temperature rating for UHMWPE packing is -65 to 250°F (-56 to 121°C). To order, add **-P** to the valve ordering number.

Example: SS-6PNBGM8-F8-**P**

Ball-Tip Material

An optional cobalt-based alloy ball tip is available. To order, add **-STE** to the valve ordering number.

Example: SS-6PNBGM8-F8-**STE**

Sour Gas Service

Valves for sour gas service are available. Materials are selected in accordance with NACE MR0175/ISO 15156. Stems are alloy 400, and wetted stainless steel parts are annealed. To order, add **-SG** to the valve ordering number.

Example: SS-6PNBGM8-F8-**SG**

Accessories

Seat Maintenance Kit (Plug-Tip Design)

Kits contain one seat, lubricant, and instructions.

Seat Material	Ordering Number
Acetal	DL-9K-5P
PFA	TF-9K-5P
PEEK	PK-9K-5P

Stem Packing Maintenance Kit

Kits contain packing, lubricant, instructions, and packing supports as required.

Packing Material	Ordering Number
PTFE	T-9K-6N
Grafoil	G-9K-6N
PEEK	PK-9K-6N
UHMWPE	PE-9K-6N

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.

Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

⚠ WARNING

Do not mix/interchange Swagelok products or components not governed by industrial design standards, including Swagelok tube fitting end connections, with those of other manufacturers.