



4200 Series

316 Stainless Steel Bellows Sealed Valves
(0.156/3.962 mm orifice)

Introduction

With its wide operating temperature range of -320° to 1200° F (-196° to +649° C), the 4200 Series meets the demands of many critical fluid control conditions. Operating pressure range is 0-2000 psig. Applications include high temperature liquid metals, cryogenic service, and gas analysis.



packless valves

Typical Applications

- Critical gas analysis
- High temperature liquid metals
- Cryogenics
- Reactive and toxic fluids
- Sealing cesium or isotope containers
- High vacuum systems

Technical Data

MAXIMUM OPERATING PRESSURE	Hard seats: 2000 psi @ 600° F (141 kg/cm ² @ 316° C) Soft seats: 500 psi @ 350° F (35 kg/cm ² @ 175° C)
HIGH VACUUM	to 10 ⁻⁵ Torr
TEMPERATURE RANGE	-320° F to +1200° F (-195° C to +632° C)
ORIFICE SIZE	0.156 (3.962 mm)
Cv FACTOR	0.36 (maximum)
INTERNAL VOLUME	0.18 cubic inches

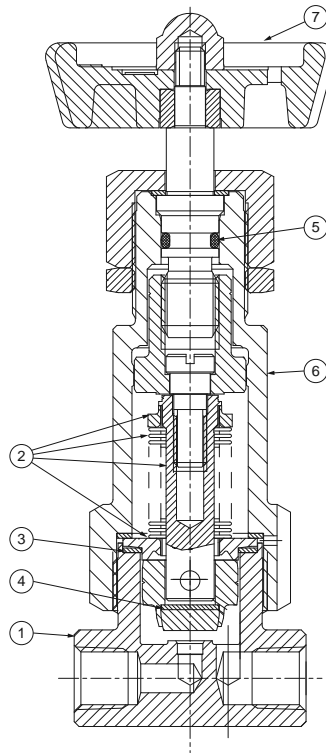
Features & Benefits

- Positive plug return on all valves prevents plug sticking in severe service
- No torque transmitted to bellows – Hex guide mates with hex broach in bonnet
- Secondary o-ring seal in upper bonnet prevents leakage if bellows is damaged
- Non-rising stem prevents galling or seizing of stem threads
- Heavy-duty welded bellows provides long cycle life and assures leak tight service. Long size bellows insures full lift and utilization of full orifice area.
- All-welded design for high-temperature and high-pressure service
- Plugs and bellows are replaceable on all gasketed types
- Valves can be base or panel mounted – add prefix “D” to part number for panel mounted
- Variety of materials and modifications
- Special High Tolerance NPT Thread

4200 Series

Materials of Construction

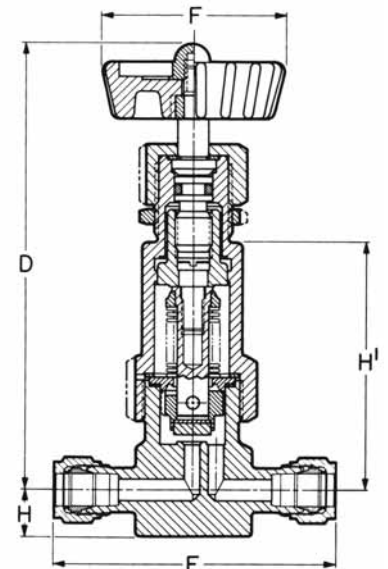
DESCRIPTION	4251F2Y 4251F4Y 4251N6Y 4251G4Y	4212F4Y	4235Q6Y	4213Q6Y
	1 Body, bar stock	316 stainless steel	316 stainless steel	316 stainless steel
2 Bellows assembly	316 stainless steel	316 stainless steel	316 stainless steel	316 stainless steel
3 Seal, bellows-to-body	PTFE	316 stainless steel	316 stainless steel seal welded	316 stainless steel seal welded
4 Disc or plug	PTFE	316 stainless steel	316 stainless steel stellited	316 stainless steel
5 Packing, secondary	O-ring seal	O-ring seal	Garlock® 908	O-ring seal
6 Bonnet	aluminum	303 stainless steel	303 stainless steel	303 stainless steel
7 Handle	Nylon wheel	aluminum cross, die cast	303 stainless steel	aluminum cross, die cast



Dimensions

CONNECTIONS	D (OPEN)	E	F	H	H'	PANEL MOUNTING		BASE MOUNTING
						HOLE SIZE	MAX. THICKNESS	
4212F4Y	inch	4 ⁷ / ₁₆	1 ¹ / ₂	2 ³ / ₈	1 ¹³ / ₃₂	2 ³ / ₈	2 ³ / ₃₂	3 ¹ / ₁₆
	mm	113	38	60	10	60	20	5
4251F4Y	inch	4 ⁷ / ₁₆	1 ¹ / ₂	1 ¹³ / ₁₆	1 ¹³ / ₃₂	2 ¹ / ₂	2 ⁵ / ₃₂	3 ¹ / ₁₆
	mm	113	38	46	10	58	20	5
4251G4Y	inch	4 ³ / ₈	2 ¹ / ₂	1 ¹³ / ₁₆	1 ¹⁵ / ₃₂	2 ¹ / ₂	2 ⁵ / ₃₂	3 ¹ / ₁₆
	mm	117	55	46	12	64	20	5
4213Q6Y	inch	4 ³ / ₈	7 ¹ / ₂	2 ³ / ₈	5 ¹ / ₁₆	2 ¹ / ₂	2 ⁵ / ₃₂	3 ¹ / ₁₆
	mm	111	191	60	8	58	20	5
4235Q6Y	inch	6 ¹ / ₂	7 ¹ / ₂	2 ³ / ₈	5 ¹ / ₁₆	2 ¹ / ₂	2 ⁵ / ₃₂	3 ¹ / ₁₆
	mm	165	191	67	8	58	20	5
4212G4Y	inch	4 ³ / ₈	2 ¹ / ₂	1 ¹³ / ₁₆	1 ¹⁵ / ₃₂	2 ¹ / ₂	2 ⁵ / ₃₂	3 ¹ / ₁₆
	mm	117	55	46	12	64	20	5

2 mounting
holes 10-32
NF Thd.,
0.187 min. full
thd.



Dimensions for reference only, subject to change.

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How to Order

Order valve by part number shown in chart.

	CONNECTIONS INLET & OUTLET	ORDER BY PART NUMBER	CV FACTOR	OPERATING PRESSURE	TEMPERATURE RANGE
PIPE ENDED MODELS	¼" NPT Female	4212F4Y	0.33	2000 @ 600° F	-320° F to 600° F (-196° C to 316° C)
		4251F4Y	0.36	500 @ 350° F	-65° F to 350° F (18° C to 177° C)
GYROLOK®	¼" GYROLOK® tube fitting	4212G4Y	0.33	2000 @ 600° F	-320° F to 600° F (-196° C to 316° C)
		4251G4Y	0.36	500 @ 350° F	-65° F to 350° F (18° C to 177° C)
SOCKET WELD MODELS	¾" O.D. socket weld	4212N6Y	0.33	2000 @ 600° F	-320° F to 600° F (-196° C to 316° C)
		4251N6Y	0.36	500 @ 350° F	-65° F to 350° F (18° C to 177° C)
3" TUBE EXTENSIONS SOCKET WELD TO BODY	Socket weld to body	4213Q6Y	0.33	2000 @ 600° F 400 @ 900° F	-320° F to 900° F (196° C to 482° C)
		4235Q6Y	0.33	2000 @ 600° F 250 @ 1200° F	-320° F to 1200° F (196° C to 649° C)



Pipe ended
4212F4Y



3" Tube extensions
4235Q6Y



Socket weld
4251N6Y