



# 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.



## Typical Applications

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

## Technical Data

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

packless valves

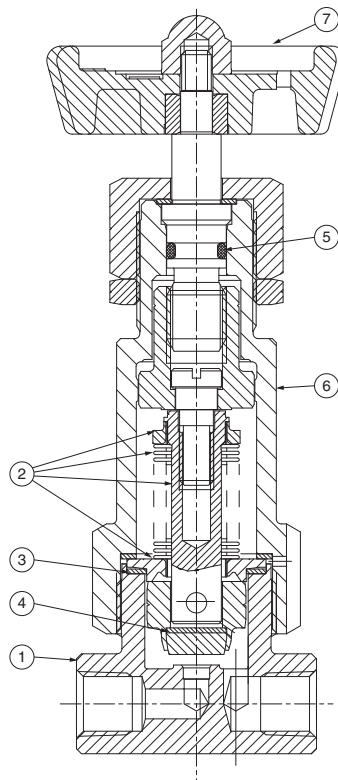
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# 4200 Series

## Materials of Construction

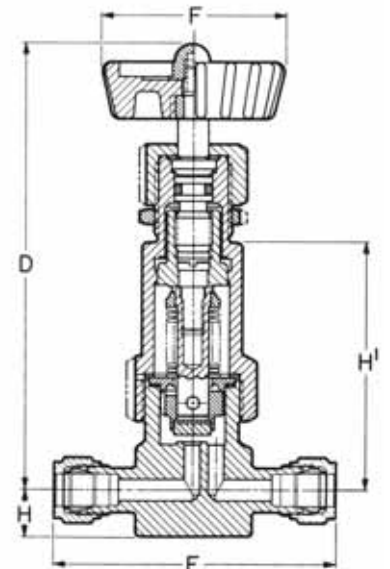
DESCRIPTION	4251F2Y 4251F4Y 4251N6Y 4251G4Y	4212F4Y	4235Q6Y	4213Q6Y
	1 Body, bar stock	316 stainless steel	316 stainless steel	316 stainless steel
2 Bellows assembly	316 stainless steel	316 stainless steel	316 stainless steel	316 stainless steel
3 Seal, bellows-to-body	Teflon®	316 stainless steel	316 stainless steel seal welded	316 stainless steel seal welded
4 Disc or plug	Teflon®	316 stainless steel	316 stainless steel stellite	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 3/32	2 3/8	2 3/32	3/16
	mm	113	38	60	10	60	20	5
4251F4Y	inch	4 7/16	1 1/2	1 13/16	1 3/32	2 9/32	2 5/32	3/16
	mm	113	38	46	10	58	20	5
4251G4Y	inch	4 5/8	2 5/32	1 13/16	1 5/32	2 1/32	2 5/32	3/16
	mm	117	55	46	12	64	20	5
4213Q6Y	inch	4 3/8	7 1/2	2 3/8	5/16	2 5/32	2 5/32	3/16
	mm	111	191	60	8	58	20	5
4235Q6Y	inch	6 1/2	7 1/2	2 3/8	5/16	2 5/32	2 5/32	3/16
	mm	165	191	67	8	58	20	5
4212G4Y	inch	4 5/8	2 5/32	1 13/16	1 5/32	2 7/32	2 5/32	3/16
	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.

# 4200 Series

## 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	⅜" 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