

# S200 Series Pressure Reducing Regulators

## Introduction

The quick-reacting S200 Series pressure reducing regulators are typically used in industrial or commercial installations to minimize the shock effect of sudden downstream load changes that might otherwise activate safety shutoff equipment. In such an installation, where gas consumption varies from almost nothing to several thousand standard cubic feet or normal cubic meters per hour (SCFH or m<sup>3</sup>/h(n)), snap-acting solenoid valves can cause sudden load changes. In addition, the S200 Series has an integral monitor regulator that works independently of the main regulator to provide overpressure protection in case of main regulator failure.

## Body Sizes and End Connection Styles

See Table 2

## Features

- Excellent Shock Characteristics and High Speed of Response
- Installation Adaptability
- Control Accuracy
- Easy Maintenance

## Maximum Inlet Pressure

125 psig (8,6 bar)  
See Table 4

## Maximum Outlet (Casing) Pressure

15 psig (1,0 bar)

## Outlet Pressure Range

2-inches w.c. to 10 psig (5 mbar to 0,69 bar)

## Flow Coefficients

See Table 4

## Pressure Registration

Internal or External

## Temperature Capabilities

-20° to 180°F (-29° to 82°C)

## Additional Technical Data

For more technical information contact your Fisher Sales Representative, refer to Bulletin 71.1:S200, or order your Fisher Regulator CD using the card in the back of this handbook.

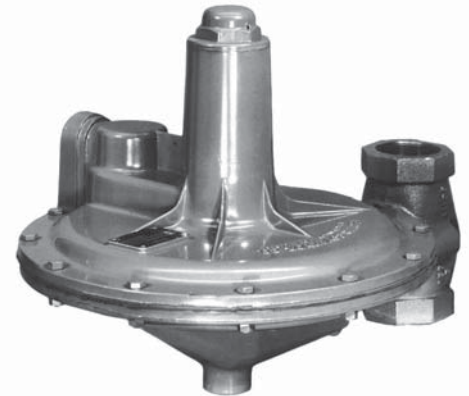


Figure 1. Typical Spring-Loaded S200 Series Regulator

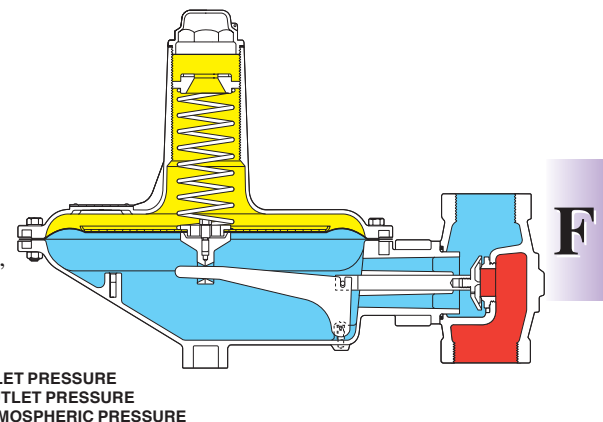


Figure 2. Type S201 Operational Schematic

Table 1. Available Configurations	
TYPE	CONFIGURATION
S201	Basic construction without internal relief
S201H	S201 construction for outlet pressures 1 to 5 psig (0,069 to 0,34 bar)
S201K	S201 construction for outlet pressures 2 to 10 psig (0,14 to 0,69 bar)
S201P	Basic construction with external pressure registration
S201PK	High-pressure version with external pressure registration
S202	Basic construction with internal relief
S202H	S202 construction for outlet pressures 1 to 5 psig (0,069 to 0,34 bar)
S202P	S202 construction with external pressure registration

Table 2. Body Sizes and End Connection Styles			
BODY SIZE, INCHES (DN)	END CONNECTION STYLE		
	Cast Iron	Ductile Iron	Steel
1-1/4 (32)	NPT screwed	---	---
1-1/2 (40)	NPT screwed	NPT screwed	NPT screwed
2 (50)	NPT screwed, ANSI Class 125 <sup>(1)</sup> FF and 250 RF flanged	NPT screwed, ANSI Class 125 FF and 250 RF Flanged, and PN 10 and 16 flanged	NPT screwed, ANSI Class 150 RF and 300 RF flanged, and PN 16 flanged

1. This flange is available with a face-to-face dimension of 7.5-inches (191 mm) or 10-inches (254 mm).

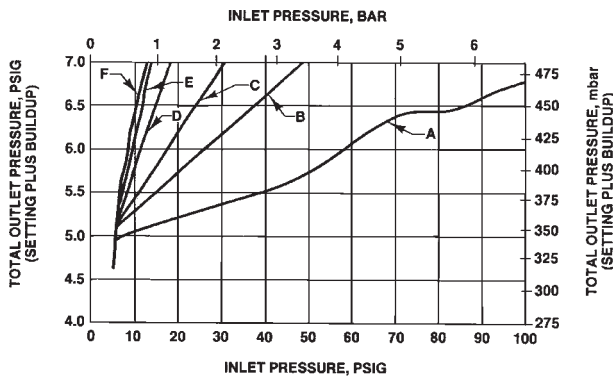
Table 3. Construction Materials					
BODY	SPRING CASE, LOWER DIAPHRAGM CASING, UNION RING, SEAT RING, AND DISK HOLDER(S)	DISK, DIAPHRAGM, AND O-RING	CLOSING CAP GASKET	STABILIZER VENT FLAPPERS, IF USED	OTHER METAL PARTS
Cast iron or steel	Aluminum	Nitrile	Neoprene	Nylon	Aluminum, brass, cast iron, Monel, steel, stainless steel, and zinc

## S200 Series Pressure Reducing Regulators

Table 4. Additional Specifications						
TYPE NUMBER	OUTLET PRESSURE SETTING	ORIFICE SIZE, INCHES (mm)	MAXIMUM OPERATING INLET PRESSURE TO OBTAIN OPTIMUM PERFORMANCE, PSIG (BAR)	WIDE-OPEN C <sub>g</sub>	WIDE-OPEN C <sub>v</sub>	C <sub>i</sub>
S201 or S202; S201P or S202P	2 to 30-inches w.c. (5 to 75 mbar)	1/4 (6,4)	125 (8,6)	53	1.51	35
		3/8 (9,5)	125 (8,6)	110	3.14	
		1/2 (12,7)	100 (6,9)	190	5.43	
		3/4 (19,1)	60 (4,1)	415	11.9	
		1 (25,4)	25 (1,7)	700	20	
1-3/16 (30,2)	13 (0,90)	910	26			
S201H or S202H; S201P, or S202P	1 to 3.25 psig (0,069 to 0,22 bar)	1/4 (6,4)	125 (8,6)	53	1.51	
		3/8 (9,5)	125 (8,6)	110	3.14	
		1/2 (12,7)	100 (6,9)	190	5.43	
		3/4 (19,1)	60 (4,1)	415	11.9	
		1 (25,4)	30 (2,1)	700	20	
1-3/16 (30,2)	14 (1,0)	910	26			
S201K, S201PK	All outlet pressure settings	1/4 (6,4)	125 (8,6)	53	1.51	
		3/8 (9,5)	125 (8,6)	110	3.14	
		1/2 (12,7)	100 (6,9)	190	5.43	
		3/4 (19,1)	60 (4,1)	415	11.9	
		1 (25,4)	30 (2,1)	700	20	
	2 to 5.5 psig (0,14 to 0,38 bar)	1-3/16 (30,2)	20 (1,4)	910	26	
	4 to 10 psig (0,28 to 0,69 bar)	1-3/16 (30,2)	25 (1,7)			

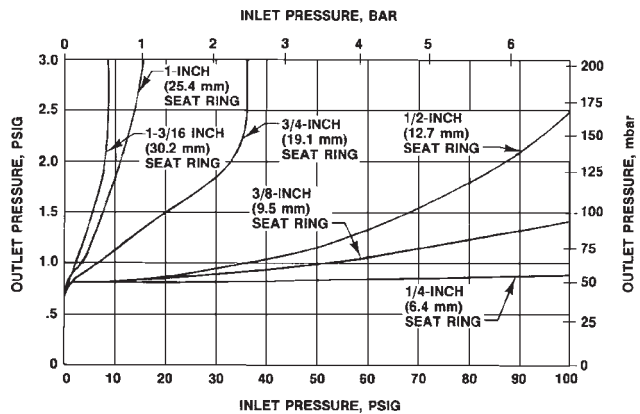
Table 5. Types S202 and S202H Internal Relief Performance	
CURVE	ORIFICE SIZE, INCHES (mm)
A	1/4 (6,4)
B	3/8 (9,5)
C	1/2 (12,7)
D	3/4 (19,1)
E	1 (25,4)
F	1-3/16 (30,2)

F



1-1/2 INCH TYPE S202H REGULATOR WITH SEAT BLOCKED OPEN BY ONE 1/8-INCH (3.2 mm) DIAMETER WIRE

Figure 3. Internal Relief Performance for Types S202 and S202H Regulators Venting Directly to Atmosphere



NOTE:  
TYPE S201 REGULATOR BLOCKED WIDE OPEN AND TYPE 289H RELIEF VALVE VENTING DIRECTLY TO ATMOSPHERE.

Figure 4. Relief Characteristics of Type S201 Regulators with 2-Inch Type 289H Relief Valve Installed on Downstream Line of Regulator

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**Table 6. Outlet Pressure Ranges**

TYPE NUMBER	OUTLET PRESSURE RANGE	CONTROL SPRING	
		Part Number	Color Code
S201 and S202 S201P and S202P	2 to 4-1/2-inches w.c. (5 to 11 mbar) <sup>(1)</sup> 3-1/2 to 6-1/2-inches w.c. (9 to 16 mbar) 5 to 9-inches w.c. (12 to 22 mbar) 8-1/2 to 18-inches w.c. (21 to 45 mbar) 14 to 30-inches w.c. (35 to 75 mbar)	1D892527022 1D892627022 1D892727012 1D893227032 1D893327032	Brown Red Black Gray Dark green
S201H and 202H S201P and S202P	1 to 2 psig (0,069 to 0,14 bar) 1.5 to 3.25 psig (0,10 to 0,22 bar) 2 to 5 psig (0,14 to 0,34 bar)	1H975827032 1H975927032 1P615427142	Dark blue Orange Yellow
S201K and S201PK	2 to 5.5 psig (0,14 to 0,38 bar) 4 to 10 psig (0,28 to 0,69 bar)	OY066427022 1H8024000A2	Green stripe Unpainted

1. With regulator installed so control spring is on top of diaphragm. If installed so control spring is on bottom, lower end of outlet pressure range can be reduced by 1-inch w.c. (2,5 mbar) for regulator with light diaphragm plate or 2-inches w.c. (5,0 mbar) for regulator with heavy diaphragm plate.

**Table 7. Types S201, S202, and S203 Capacities for 1-1/2-Inch Body Size**

OUTLET PRESSURE SETTING	OUTLET PRESSURE RANGE, SPRING PART NUMBER, AND COLOR	DROOP	INLET PRESSURE, PSIG (BAR)	CAPACITIES IN SCFH (m³/h(n)) OF 0.6 SPECIFIC GRAVITY NATURAL GAS						
				Orifice Size, Inches (mm)						
				1/4 (6,4)	3/8 (9,5)	1/2 (12,7)	3/4 (19,1)	1 (25,4)	1-3/16 (30,2)	
4-inches w.c. (10 mbar) or 6-inches w.c. (15 mbar)	2 to 4-1/2-inches w.c. (5 to 11 mbar) 1D892527022 Brown	1-inch w.c. (2,5 mbar)	0.4 (0,027)				1000 (26,8)	1400 (37,5)	1600 (42,9)	
			0.5 (0,034)				1400 (37,5)	1600 (42,9)	1800 (48,2)	
			1.0 (0,069)	400 (10,7)	800 (21,4)	1200 (32,2)	2100 (56,3)	2500 (67)	2700 (72,4)	
	3-1/2 to 6-1/2-inches w.c. (9 to 16 mbar) 1D892627022 Red	1-inch w.c. (2,5 mbar)	1.5 (0,10)	500 (13,4)	1050 (28,1)	1600 (42,9)	2500 (67)	3000 (80,4)	3200 (85,8)	
			2.0 (0,14)	600 (16,1)	1300 (34,8)	2100 (56,3)	2800 (75,0)	3500 (93,8)	3800 (102)	
			5.0 (0,34)	950 (25,5)	2200 (59,0)	3300 (88,4)	4500 (121)	5300 (142)	6000 (161)	
7-inches w.c. (17 mbar)	5 to 9-inches w.c. (12 to 22 mbar) 1D892727012 Black	1-inch w.c. (2,5 mbar)	13 (0,90)	1600 (42,9)	3500 (93,8)	6200 (166)	7000 (188)	7750 (208)	7750 (208)	
			25 (1,7)	2300 (61,6)	5000 (134)	7750 (208)	7750 (208)	7750 (208)		
			60 (4,1)	4400 (118)	7750 (208)	7750 (208)	7750 (208)			
	8-1/2 to 18-inches w.c. (21 to 45 mbar) 1D893227032 Gray	2-inches w.c. (5 mbar)	100 (6,9)	6800 (182)	7750 (208)	7750 (208)	7750 (208)			
			125 (8,6)	6800 (182)	7750 (208)	7750 (208)				
			0.4 (0,027)				900 (24,1)	1300 (34,8)	1450 (38,9)	
11-inches w.c. (27 mbar)	8-1/2 to 18-inches w.c. (21 to 45 mbar) 1D893227032 Gray	2-inches w.c. (5 mbar)	0.5 (0,034)				1800 (48,2)	2200 (59,0)	2450 (65,7)	
			1.0 (0,069)	400 (10,7)	700 (18,8)	1100 (29,5)	1800 (48,2)	2200 (59,0)	2450 (65,7)	
			1.5 (0,10)	500 (13,4)	950 (25,5)	1450 (38,9)	2300 (61,6)	2800 (75,0)	2900 (77,7)	
	14 to 30-inches w.c. (35 to 75 mbar) 1D893327032 Dark green	3-inches w.c. (7,5 mbar)	2.0 (0,14)	600 (16,1)	1200 (32,2)	1700 (45,6)	2700 (72,4)	3200 (85,8)	3300 (88,4)	
			5.0 (0,34)	950 (25,5)	2000 (53,6)	2900 (77,7)	3900 (105)	5100 (137)	5600 (150)	
			13 (0,90)	1600 (42,9)	3400 (91,1)	5200 (139)	6500 (174)	7750 (208)	7750 (208)	
20-inches w.c. (50 mbar)	14 to 30-inches w.c. (35 to 75 mbar) 1D893327032 Dark green	3-inches w.c. (7,5 mbar)	25 (1,7)	2100 (56,3)	4700 (126)	7750 (208)	7750 (208)	7750 (208)		
			60 (4,1)	4400 (118)	7750 (208)	7750 (208)	7750 (208)			
			100 (6,9)	7000 (188)	7750 (208)	7750 (208)	7750 (208)			
	8-1/2 to 18-inches w.c. (21 to 45 mbar) 1D892727012 Black	1-inch w.c. (2,5 mbar)	125 (8,6)	7000 (188)	7750 (208)	7750 (208)	7750 (208)			
			0.5 (0,034)				800 (21,4)	1500 (40,2)	1700 (46,6)	
			1.0 (0,069)	400 (10,7)	700 (18,8)	1100 (29,5)	1800 (48,2)	2200 (59,0)	2450 (65,7)	
7-inches w.c. (17 mbar)	5 to 9-inches w.c. (12 to 22 mbar) 1D892727012 Black	1-inch w.c. (2,5 mbar)	1.5 (0,10)	500 (13,4)	1050 (28,1)	1500 (40,2)	2300 (61,6)	2800 (75,0)	3100 (83,1)	
			2.0 (0,14)	600 (16,1)	1300 (34,8)	1900 (50,9)	2600 (69,7)	3300 (88,4)	3600 (96,5)	
			5.0 (0,34)	950 (25,5)	2100 (56,3)	3200 (85,8)	4000 (107)	5100 (137)	5600 (150)	
	11-inches w.c. (27 mbar)	8-1/2 to 18-inches w.c. (21 to 45 mbar) 1D893227032 Gray	2-inches w.c. (5 mbar)	13 (0,90)	1600 (42,9)	3500 (93,8)	6100 (163)	6600 (177)	7750 (208)	7750 (208)
				25 (1,7)	2200 (59,0)	5000 (134)	7750 (208)	7750 (208)	7750 (208)	
				60 (4,1)	4300 (115)	7750 (208)	7750 (208)	7750 (208)		
4-inches w.c. (10 mbar) or 6-inches w.c. (15 mbar)	2 to 4-1/2-inches w.c. (5 to 11 mbar) 1D892527022 Brown	1-inch w.c. (2,5 mbar)	100 (6,9)	6800 (182)	7750 (208)	7750 (208)	7750 (208)			
			125 (8,6)	6800 (182)	7750 (208)	7750 (208)				
			0.4 (0,027)				900 (24,1)	1300 (34,8)	1450 (38,9)	
	3-1/2 to 6-1/2-inches w.c. (9 to 16 mbar) 1D892627022 Red	1-inch w.c. (2,5 mbar)	0.5 (0,034)				1200 (32,2)	1550 (41,5)	1750 (46,9)	
			1.0 (0,069)	400 (10,7)	800 (21,4)	1100 (29,5)	1900 (50,9)	2300 (61,6)	2500 (67)	
			1.5 (0,10)	500 (13,4)	1050 (28,1)	1500 (40,2)	2300 (61,6)	2800 (75,0)	3100 (83,1)	
20-inches w.c. (50 mbar)	14 to 30-inches w.c. (35 to 75 mbar) 1D893327032 Dark green	3-inches w.c. (7,5 mbar)	2.0 (0,14)	600 (16,1)	1300 (34,8)	1900 (50,9)	2600 (69,7)	3300 (88,4)	3600 (96,5)	
			5.0 (0,34)	900 (24,1)	1700 (45,6)	2500 (67)	4200 (113)	5000 (134)	5500 (147)	
			13 (0,90)	1500 (40,2)	3200 (85,8)	5400 (145)	6500 (174)	7750 (208)	7750 (208)	
	8-1/2 to 18-inches w.c. (21 to 45 mbar) 1D893227032 Gray	2-inches w.c. (5 mbar)	25 (1,7)	2100 (56,3)	4700 (126)	7750 (208)	7750 (208)	7750 (208)		
			60 (4,1)	4400 (118)	7750 (208)	7750 (208)	7750 (208)			
			100 (6,9)	7000 (188)	7750 (208)	7750 (208)	7750 (208)			
7-inches w.c. (17 mbar)	5 to 9-inches w.c. (12 to 22 mbar) 1D892727012 Black	1-inch w.c. (2,5 mbar)	125 (8,6)	7000 (188)	7750 (208)	7750 (208)	7750 (208)			
			0.5 (0,034)				800 (21,4)	1500 (40,2)	1700 (46,6)	
			1.0 (0,069)	400 (10,7)	700 (18,8)	1100 (29,5)	1800 (48,2)	2200 (59,0)	2450 (65,7)	
	11-inches w.c. (27 mbar)	8-1/2 to 18-inches w.c. (21 to 45 mbar) 1D893227032 Gray	2-inches w.c. (5 mbar)	1.5 (0,10)	500 (13,4)	950 (25,5)	1450 (38,9)	2300 (61,6)	2800 (75,0)	2900 (77,7)
				2.0 (0,14)	600 (16,1)	1200 (32,2)	1700 (45,6)	2700 (72,4)	3200 (85,8)	3300 (88,4)
				5.0 (0,34)	950 (25,5)	2000 (53,6)	2900 (77,7)	3900 (105)	5100 (137)	5600 (150)
4-inches w.c. (10 mbar) or 6-inches w.c. (15 mbar)	2 to 4-1/2-inches w.c. (5 to 11 mbar) 1D892527022 Brown	1-inch w.c. (2,5 mbar)	13 (0,90)	1600 (42,9)	3400 (91,1)	5200 (139)	6500 (174)	7750 (208)	7750 (208)	
			25 (1,7)	2100 (56,3)	4700 (126)	7750 (208)	7750 (208)	7750 (208)		
			60 (4,1)	4400 (118)	7750 (208)	7750 (208)	7750 (208)			
	3-1/2 to 6-1/2-inches w.c. (9 to 16 mbar) 1D892627022 Red	1-inch w.c. (2,5 mbar)	100 (6,9)	6800 (182)	7750 (208)	7750 (208)	7750 (208)			
			125 (8,6)	6800 (182)	7750 (208)	7750 (208)				
			0.4 (0,027)				900 (24,1)	1300 (34,8)	1450 (38,9)	

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.  
Shaded areas indicate where droop would be exceeded regardless of capacity.

# Products

## S200 Series Pressure Reducing Regulators

Table 8. Types S201, S202, and S203 Capacities for 2-Inch Body Size

OUTLET PRESSURE SETTING	OUTLET PRESSURE RANGE, SPRING PART NUMBER, AND COLOR	DROOP	INLET PRESSURE, PSIG (BAR)	CAPACITIES IN SCFH (m³/h(n)) OF 0.6 SPECIFIC GRAVITY NATURAL GAS					
				Orifice Size, Inches (mm)					
				1/4 (6,4)	3/8 (9,5)	1/2 (12,7)	3/4 (19,1)	1 (25,4)	1-3/16 (30,2)
4-inches w.c. (10 mbar) or 6-inches w.c. (15 mbar)	1D892527022 Brown or 1D892627022 Red	1-inch w.c. (2,5 mbar)	0.4 (0,027)				1200 (32,2)	1600 (42,9)	1800 (48,2)
			0.5 (0,034)				1700 (45,6)	2200 (59,0)	2400 (64,3)
			1.0 (0,069)	400 (10,7)	900 (24,1)	1300 (34,8)	2800 (75,0)	3200 (85,8)	3800 (102)
			1.5 (0,10)	500 (13,4)	1100 (29,5)	1700 (45,6)	3600 (96,5)	4300 (115)	5000 (134)
			2.0 (0,14)	600 (16,1)	1400 (37,5)	2200 (59,0)	4500 (121)	5500 (147)	6400 (172)
			5.0 (0,34)	1000 (26,8)	2300 (61,6)	3700 (99,2)	7800 (209)	9500 (255)	10,000 (268)
	1D892527022 Brown or 1D892627022 Red	1-inch w.c. (2,5 mbar)	13 (0,90)	1650 (44,2)	3700 (99,2)	6500 (174)	10,000 (268)	10,000 (268)	10,000 (268)
			25 (1,7)	2400 (64,3)	5200 (139)	9200 (247)	10,000 (268)	10,000 (268)	
			60 (4,1)	4450 (119)	9000 (241)	10,000 (268)	10,000 (268)		
			100 (6,9)	7000 (188)	10,000 (268)	10,000 (268)			
			125 (8,6)	7000 (188)	10,000 (268)				
7-inches w.c. (17 mbar)	1D892727012 Black	1-inch w.c. (2,5 mbar)	0.4 (0,027)				950 (25,5)	1400 (37,5)	1600 (42,9)
			0.5 (0,034)				1500 (40,2)	1800 (48,2)	2000 (53,6)
			1.0 (0,069)	400 (10,7)	800 (21,4)	1200 (32,2)	2300 (61,6)	2800 (75,0)	3300 (88,4)
			1.5 (0,10)	500 (13,4)	1050 (28,1)	1600 (42,9)	3100 (83,1)	3600 (96,5)	4500 (121)
			2.0 (0,14)	600 (16,1)	1300 (34,8)	2000 (53,6)	4000 (107)	4500 (121)	6000 (161)
			5.0 (0,34)	1000 (26,8)	2100 (56,3)	3500 (93,8)	7700 (206)	9200 (247)	10,000 (268)
	1D892727012 Black	1-inch w.c. (2,5 mbar)	13 (0,90)	1650 (44,2)	3500 (93,8)	6400 (172)	10,000 (268)	10,000 (268)	10,000 (268)
			25 (1,7)	2400 (64,3)	5200 (139)	9100 (244)	10,000 (268)	10,000 (268)	
			60 (4,1)	4450 (119)	9000 (241)	10,000 (268)	10,000 (268)		
			100 (6,9)	7000 (188)	10,000 (268)	10,000 (268)			
			125 (8,6)	7000 (188)	10,000 (268)				
11-inches w.c. (27 mbar)	1D893227032 Gray	2-inches w.c. (5 mbar)	0.5 (0,034)				800 (21,4)	1500 (40,2)	1700 (45,6)
			1.0 (0,069)	400 (10,7)	750 (20,1)	1100 (29,5)	1800 (48,2)	2500 (67)	2900 (77,7)
			1.5 (0,10)	500 (13,4)	1000 (26,8)	1450 (38,9)	2500 (67)	3400 (91,1)	4000 (107)
			2.0 (0,14)	600 (16,1)	1200 (32,2)	1700 (45,6)	3100 (83,1)	4200 (113)	5000 (134)
			5.0 (0,34)	1000 (26,8)	2000 (53,6)	3000 (80,4)	7300 (196)	8000 (214)	9500 (255)
			13 (0,90)	1600 (42,9)	3400 (91,1)	6200 (166)	10,000 (268)	10,000 (268)	10,000 (268)
	1D893227032 Gray	2-inches w.c. (5 mbar)	25 (1,7)	2400 (64,3)	4800 (129)	8900 (239)	10,000 (268)	10,000 (268)	
			60 (4,1)	4450 (119)	8900 (239)	10,000 (268)	10,000 (268)		
			100 (6,9)	7000 (188)	10,000 (268)	10,000 (268)			
			125 (8,6)	7000 (188)	10,000 (268)				
20-inches w.c. (50 mbar)	1D893327032 Dark green	3-inches w.c. (7,5 mbar)	1.0 (0,069)	300 (8,04)	500 (13,4)	750 (20,1)	1000 (26,8)	1300 (34,8)	1700 (45,6)
			2.0 (0,14)	500 (13,4)	950 (25,5)	1400 (37,5)	2000 (53,6)	3000 (80,4)	3500 (93,8)
			5.0 (0,34)	900 (24,1)	1700 (45,6)	2500 (67)	5300 (142)	5600 (150)	6500 (174)
			13 (0,90)	1500 (40,2)	3200 (85,8)	5500 (147)	9500 (255)	10,000 (268)	10,000 (268)
			25 (1,7)	2300 (61,6)	4800 (129)	9000 (241)	10,000 (268)	10,000 (268)	
			60 (4,1)	4400 (118)	9500 (255)	10,000 (268)	10,000 (268)		
	1D893327032 Dark green	3-inches w.c. (7,5 mbar)	100 (6,9)	7000 (188)	10,000 (268)	10,000 (268)			
			125 (8,6)	7000 (188)	10,000 (268)				

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.  
 Shaded areas indicate where droop would be exceeded regardless of capacity.

### Fisher Tips

34. Do not use needle valves in control lines; use full-open ball valves. Needle valves can cause instability.



# S200 Series Pressure Reducing Regulators

**Table 9. Type S201H, S202H, and S203H Capacities for 1-1/2-Inch Body Size**

OUTLET PRESSURE SETTING	OUTLET PRESSURE RANGE, SPRING PART NUMBER, AND COLOR	DROOP	INLET PRESSURE, PSIG (BAR)	CAPACITIES IN SCFH (m³/h(n)) OF 0.6 SPECIFIC GRAVITY NATURAL GAS					
				Orifice Size, Inches (mm)					
				1/4 (6,4)	3/8 (9,5)	1/2 (12,7)	3/4 (19,1)	1 (25,4)	1-3/16 (30,2)
1 psig (0,069 bar)	1H975827032 Dark blue	0.2 psig (0,014 bar)	2.0 (0,14)	500 (13,4)	750 (20,1)	1100 (29,5)	1400 (37,5)	2400 (64,3)	2800 (75,0)
			6.0 (0,41)	1100 (29,5)	1800 (48,2)	2600 (69,7)	4100 (110)	5500 (147)	5800 (155)
			14 (1,0)	1600 (42,9)	3200 (85,8)	5000 (134)	6600 (177)	8000 (214)	9500 (255)
			30 (2,1)	2400 (64,3)	5300 (142)	7750 (208)	8000 (214)	10,000 (268)	
			60 (4,1)	4300 (115)	9200 (247)	10,000 (268)	10,000 (268)		
			100 (6,9)	6800 (182)	10,000 (268)	10,000 (268)			
			125 (8,6)	6800 (182)	10,000 (268)				
3 psig (0,21 bar) except 2 psig (0,14 bar) for Type S203H	1H975927032 Orange	0.6 psig (0,041 bar)	3.0 (0,21)	500 (13,4)	1000 (26,8)	1500 (40,2)	2000 (53,6)	3200 (85,8)	3600 (96,5)
			7.0 (0,48)	1000 (26,8)	2200 (59,0)	3500 (93,8)	5500 (147)	7500 (201)	7600 (204)
			14 (1,0)	1500 (40,2)	3000 (80,4)	5800 (155)	8000 (214)	10,000 (268)	12,000 (322)
			30 (2,1)	2400 (64,3)	5100 (137)	9000 (241)	10,000 (268)	12,000 (322)	
			60 (4,1)	4300 (115)	9200 (247)	12,000 (322)	12,000 (322)		
			100 (6,9)	6800 (182)	10,000 (268)	12,000 (322)			
			125 (8,6)	6800 (182)	10,000 (268)				
5 psig (0,34 bar) for Types S201H and S202H only	1P615427142 Yellow	1.0 psig (0,069 bar)	7.0 (0,48)	800 (21,4)	1400 (37,5)	2000 (53,6)	2000 (53,6)	5000 (134)	5800 (155)
			14 (1,0)	1500 (40,2)	3000 (80,4)	3700 (99,2)	3800 (102)	9450 (253)	10,000 (268)
			30 (2,1)	2500 (67)	5400 (145)	7200 (193)	7200 (193)	14,400 (386)	
			60 (4,1)	4200 (113)	9200 (247)	11,000 (295)	11,000 (295)		
			100 (6,9)	5800 (155)	10,000 (268)	12,600 (338)			
			125 (8,6)	6000 (161)	12,000 (322)				

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

**Table 10. Type S201H, S202H, and S203H Capacities for 2-Inch Body Size**

OUTLET PRESSURE SETTING	OUTLET PRESSURE RANGE, SPRING PART NUMBER, AND COLOR	DROOP	INLET PRESSURE, PSIG (BAR)	CAPACITIES IN SCFH (m³/h(n)) OF 0.6 SPECIFIC GRAVITY NATURAL GAS					
				Orifice Size, Inches (mm)					
				1/4 (6,4)	3/8 (9,5)	1/2 (12,7)	3/4 (19,1)	1 (25,4)	1-3/16 (30,2)
1 psig (0,069 bar)	1H975827032 Dark blue	0.2 psig (0,014 bar)	2.0 (0,14)	500 (13,4)	750 (20,1)	1100 (29,5)	1400 (37,5)	2400 (64,3)	3000 (80,4)
			6.0 (0,41)	1100 (29,5)	1800 (48,2)	2600 (69,7)	4200 (113)	6200 (166)	7500 (201)
			14 (1,0)	1600 (42,9)	3200 (85,8)	5000 (134)	8000 (214)	10,000 (268)	12,000 (322)
			30 (2,1)	2400 (64,3)	5400 (145)	9200 (247)	15,000 (402)	15,000 (402)	
			60 (4,1)	4400 (118)	9000 (241)	15,000 (402)	15,000 (402)		
			100 (6,9)	7000 (188)	13,000 (348)	15,000 (402)			
			125 (8,6)	7000 (188)	13,000 (348)				
3 psig (0,21 bar) except 2 psig (0,14 bar) for Type S203H	1H975927032 Orange	0.6 psig (0,041 bar)	3.0 (0,21)	500 (13,4)	1000 (26,8)	1500 (40,2)	2000 (53,6)	3200 (85,8)	3600 (96,5)
			7.0 (0,48)	1000 (26,8)	2200 (59,0)	3500 (93,8)	6000 (161)	8000 (214)	8800 (236)
			14 (1,0)	1500 (40,2)	3000 (80,4)	6000 (161)	11,500 (308)	13,500 (362)	14,000 (375)
			30 (2,1)	2400 (64,3)	5100 (137)	9500 (255)	20,000 (536)	20,000 (536)	
			60 (4,1)	4300 (115)	9000 (241)	16,000 (429)	20,000 (536)		
			100 (6,9)	6800 (182)	14,000 (375)	20,000 (536)			
			125 (8,6)	6800 (182)	14,000 (375)				
5 psig (0,34 bar) for Types S201H and S202H only	1P615427142 Yellow	1.0 psig (0,069 bar)	7.0 (0,48)	800 (21,4)	1400 (37,5)	2500 (67)	4000 (107)	5000 (134)	6300 (169)
			14 (1,0)	1500 (40,2)	3000 (80,4)	5000 (134)	8000 (214)	11,000 (295)	13,500 (362)
			30 (2,1)	2500 (67)	5400 (145)	10,000 (268)	18,000 (482)	22,500 (603)	
			60 (4,1)	4200 (113)	9200 (247)	17,000 (456)	29,000 (777)		
			100 (6,9)	6200 (166)	14,000 (375)	25,000 (670)			
			125 (8,6)	7000 (188)	16,000 (429)				

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

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# Products

## S200 Series Pressure Reducing Regulators

**Table 11. Type S201K, S201PK, and S202K Capacities for 1-1/2 and 2-Inch Body Size**

OUTLET PRESSURE SETTING, PSIG (BAR)	OUTLET PRESSURE RANGE, SPRING PART NUMBER, AND COLOR	OFFSET, PSIG (BAR)	INLET PRESSURE, PSIG (BAR)	CAPACITIES IN SCFH (m³/h(n)) OF 0.6 SPECIFIC GRAVITY NATURAL GAS					
				Orifice Size, Inches (mm)					
				1/4 (6,4)	3/8 (9,5)	1/2 (12,7)	3/4 (19,1)	1 (25,4)	1-3/16 (30,2)
5 (0,34)	0Y066427022 Green stripe	0.5 (0,034)	10 (0,69)	750 (20,1)	1200 (32,2)	1500 (40,2)	2300 (61,6)	2800 (75,0)	3500 (93,8)
			15 (1,0)	1000 (26,8)	1400 (37,5)	2000 (53,6)	3000 (80,4)	3600 (96,5)	4200 (113)
			20 (1,4)	1200 (32,2)	1750 (46,9)	2800 (75,0)	3700 (99,2)	4200 (113)	6200 (166)
			30 (2,1)	1600 (42,9)	2250 (60,3)	3400 (91,1)	4700 (126)		
			35 (2,4)	1800 (48,2)	2500 (67)	3700 (99,2)	5100 (137)		
			60 (4,1)	2800 (75,0)	3700 (99,2)	6000 (161)	9000 (241)		
		75 (5,2)	3500 (93,8)	4400 (118)	7200 (193)				
		100 (6,9)	4500 (121)	6500 (174)	9000 (241)				
		125 (8,6)	5100 (137)	7800 (209)					
		1 (0,069)	10 (0,69)	1200 (32,2)	1900 (50,9)	2600 (69,7)	4100 (110)	5200 (139)	6800 (182)
			15 (1,0)	1500 (40,2)	2400 (64,3)	3500 (93,8)	5200 (139)	7000 (188)	8000 (214)
			20 (1,4)	1750 (46,9)	2800 (75,0)	4800 (129)	6500 (174)	8000 (214)	10,000 (268)
30 (2,1)	2300 (61,6)		3600 (96,5)	5900 (158)	9000 (241)	11,000 (295)			
35 (2,4)	2600 (69,7)		4200 (113)	6500 (174)	9800 (263)				
60 (4,1)	4000 (107)		6700 (180)	10,000 (268)	14,000 (375)				
75 (5,2)	5200 (139)	8100 (217)	13,000 (348)						
100 (6,9)	6500 (174)	11,000 (295)	15,000 (402)						
125 (8,6)	7800 (209)	13,000 (348)							
10 (0,69)	1H8024000A2 Unpainted	1 (0,069)	10 (0,69)	900 (24,1)	1300 (34,8)	1700 (45,6)	2300 (61,6)	3200 (85,8)	3800 (102)
			15 (1,0)	1200 (32,2)	1750 (46,9)	2500 (67)	3300 (88,4)	4000 (107)	5800 (155)
			20 (1,4)	1400 (37,5)	2100 (56,3)	2800 (75,0)	4000 (107)	5400 (145)	7000 (188)
			30 (2,1)	1700 (45,6)	2300 (61,6)	3300 (88,4)	5100 (137)	6200 (166)	
			35 (2,4)	2300 (61,6)	2800 (75,0)	3700 (99,2)	6000 (161)		
			60 (4,1)	3000 (80,4)	4000 (107)	5900 (158)	8000 (214)		
		75 (5,2)	3500 (93,8)	4500 (121)	7200 (193)				
		100 (6,9)	4500 (121)	6600 (177)	8500 (228)				
		125 (8,6)	5500 (147)	7800 (209)					
		2 (0,14)	10 (0,69)	1300 (34,8)	2200 (59,0)	3200 (85,8)	4600 (123)	6000 (161)	8000 (214)
			15 (1,0)	1600 (42,9)	2700 (72,4)	4300 (115)	6500 (174)	8000 (214)	10,000 (268)
			20 (1,4)	2000 (53,6)	3400 (91,1)	4800 (129)	8200 (220)	9000 (241)	13,000 (348)
30 (2,1)	2300 (61,6)		4100 (110)	5500 (147)	9500 (255)	12,000 (322)			
35 (2,4)	2900 (77,7)		5300 (142)	6700 (180)	11,000 (295)				
60 (4,1)	3800 (102)		6800 (182)	11,000 (295)	14,000 (375)				
75 (5,2)	5100 (137)	8300 (222)	13,000 (348)						
100 (6,9)	6500 (174)	11,000 (295)	15,000 (402)						
125 (8,6)	7800 (209)	13,000 (348)							

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

### Looking for a specific product?

When you know the application and type or series of the product you need, you can use the Quick Product Index in the Table of Contents, the Section Outline in the Application Map of each section, or the Product Index at the back of this handbook to direct you to the page on which the product is described.

# S200 Series Pressure Reducing Regulators

**Table 12. Types S201P, S202P, and S203P Capacities for 1-1/2 and 2-Inch Body Sizes**

OUTLET PRESSURE SETTING	OUTLET PRESSURE RANGE, SPRING PART NUMBER, AND COLOR	DROOP	INLET PRESSURE, PSIG (BAR)	CAPACITIES IN SCFH (m³/h(n)) OF 0.6 SPECIFIC GRAVITY NATURAL GAS								
				Orifice Size, Inches (mm)								
				1/4 (6,4)	3/8 (9,5)	1/2 (12,7)	3/4 (19,1)	1 (25,4)	1-3/16 (60,2)			
6-inches w.c. (15 mbar)	1D892627022 Red	1-inch w.c. (2,5 mbar)	0.4 (0,027)				1200 (32,2)	1500 (40,2)	1750 (46,9)			
			0.5 (0,034)				1600 (42,9)	1900 (50,9)	2200 (59,0)			
			1.0 (0,069)	400 (10,7)	900 (24,1)	1300 (34,8)	2300 (61,6)	2900 (77,7)	3300 (88,4)			
			1.5 (0,10)	500 (13,4)	1150 (30,8)	1650 (44,2)	3000 (80,4)	3600 (96,5)	4300 (115)			
			2.0 (0,14)	600 (16,1)	1400 (37,5)	2000 (53,6)	3500 (93,8)	4200 (113)	5500 (147)			
			5.0 (0,34)	1000 (26,8)	2300 (61,6)	3500 (93,8)	5700 (153)	7300 (196)	7700 (206)			
			13 (0,90)	1650 (44,2)	3700 (99,2)	6200 (166)	10,000 (268)	13,500 (362)	13,500 (362)			
			25 (1,7)	2400 (64,3)	5200 (139)	9000 (241)	13,500 (362)	13,500 (362)				
			60 (4,1)	4400 (118)	9600 (257)	13,500 (362)	13,500 (362)					
			100 (6,9)	7000 (188)	13,500 (362)	13,500 (362)						
			125 (8,6)	7000 (188)	13,500 (362)							
			7-inches w.c. (17 mbar)	1D892727012 Black	1-inch w.c. (2,5 mbar)	0.4 (0,027)				950 (25,5)	1350 (36,2)	1550 (41,5)
0.5 (0,034)							1500 (40,2)	1700 (45,6)	1950 (52,3)			
1.0 (0,069)	400 (10,7)	800 (21,4)				1200 (32,2)	2000 (53,6)	2600 (69,7)	3000 (80,4)			
1.5 (0,10)	500 (13,4)	1050 (28,1)				1500 (40,2)	2550 (68,3)	3200 (85,8)	4100 (110)			
2.0 (0,14)	600 (16,1)	1300 (34,8)				1800 (48,2)	3000 (80,4)	3700 (99,2)	5000 (134)			
5.0 (0,34)	1000 (26,8)	2100 (56,3)				3100 (83,1)	5000 (134)	6500 (174)	7000 (188)			
13 (0,90)	1650 (44,2)	3300 (88,4)				5500 (147)	8600 (230)	12,000 (322)	13,500 (362)			
25 (1,7)	2400 (64,3)	5000 (134)				8000 (214)	13,500 (362)	13,500 (362)				
60 (4,1)	4400 (118)	9400 (252)				13,500 (362)	13,500 (362)					
100 (6,9)	7000 (188)	13,500 (362)				13,500 (362)						
125 (8,6)	7000 (188)	13,500 (362)										
11-inches w.c. (27 mbar)	1D893227032 Gray	2-inches w.c. (5mbar)				0.5 (0,034)	375 (10,1)	750 (20,1)	1100 (29,5)	1450 (38,9)	1650 (44,2)	1850 (49,6)
			1.0 (0,069)	475 (12,7)	1000 (26,8)	1450 (38,9)	2400 (64,3)	3100 (83,1)	2900 (77,7)			
			1.5 (0,10)	475 (12,7)	1000 (26,8)	1450 (38,9)	2400 (64,3)	3100 (83,1)	3900 (105)			
			2.0 (0,14)	550 (14,7)	1250 (33,5)	1700 (45,6)	3000 (80,4)	3600 (96,5)	4800 (129)			
			5.0 (0,34)	950 (25,5)	2000 (53,6)	2900 (77,7)	4800 (129)	6500 (174)	6700 (180)			
			13 (0,90)	1550 (41,5)	3100 (83,1)	5100 (137)	9000 (241)	11,000 (295)	13,500 (362)			
			25 (1,7)	2260 (60,6)	4700 (126)	8000 (214)	13,500 (362)	13,500 (362)				
			60 (4,1)	4200 (113)	8900 (239)	13,500 (362)	13,500 (362)					
			100 (6,9)	6600 (177)	13,500 (362)	13,500 (362)						
			125 (8,6)	6600 (177)	13,500 (362)							
			20-inches w.c. (50 mbar)	1D893327032 Dark green	3-inches w.c. (7,5 mbar)	1.0 (0,069)	300 (8,04)	500 (13,4)	950 (25,5)	1000 (26,8)	1300 (34,8)	2000 (53,6)
						2.0 (0,14)	500 (13,4)	950 (25,5)	1500 (40,2)	2000 (53,6)	2900 (77,7)	4000 (107)
5.0 (0,34)	850 (22,8)	1700 (45,6)				2400 (64,3)	4000 (107)	5000 (134)	5300 (142)			
13 (0,90)	1350 (36,2)	2800 (75,0)				4400 (118)	6500 (174)	8700 (233)	13,500 (362)			
25 (1,7)	2000 (53,6)	4800 (129)				6600 (177)	10,000 (268)	13,500 (362)				
60 (4,1)	3700 (99,2)	9000 (241)				12,700 (340)	13,500 (362)					
100 (6,9)	6000 (161)	13,500 (362)				13,500 (362)						
125 (8,6)	6000 (161)	13,500 (362)										
1 psig (0,069 bar)	1H975827032 Dark blue	0.2 psig (0,014 bar)				2.0 (0,14)	500 (13,4)	750 (20,1)	1100 (29,5)	1400 (37,5)	2400 (64,3)	3000 (80,4)
						6.0 (0,41)	1100 (29,5)	1800 (48,2)	2500 (67)	4000 (107)	5200 (139)	7000 (188)
						14 (1,0)	1500 (40,2)	3000 (80,4)	4500 (121)	7000 (188)	9000 (241)	13,500 (362)
						30 (2,1)	2300 (61,6)	4800 (129)	7000 (188)	11,000 (295)	13,500 (362)	
			60 (4,1)	4400 (118)	9200 (247)	10,500 (281)	13,500 (362)					
			100 (6,9)	7000 (188)	13,500 (362)	13,500 (362)						
3 psig (0,21 bar) except 2 psig (0,14 bar) for Types S203P2 and S203P3	1H975927032 Orange	0.6 psig (0,041 bar)	3.0 (0,21)	500 (13,4)	1000 (26,8)	1500 (40,2)	2000 (53,6)	3200 (85,8)	3600 (96,5)			
			7.0 (0,48)	1000 (26,8)	2200 (59,0)	3400 (91,1)	5700 (153)	7000 (188)	8800 (236)			
			14 (1,0)	1500 (40,2)	3000 (80,4)	5700 (153)	10,000 (268)	11,000 (295)	13,500 (362)			
			30 (2,1)	2400 (64,3)	5000 (134)	7500 (201)	13,500 (362)	13,500 (362)				
			60 (4,1)	4300 (115)	9400 (252)	11,500 (308)	13,500 (362)					
			100 (6,9)	6800 (182)	11,400 (306)	13,500 (362)						
125 (8,6)	6800 (182)	11,400 (306)										

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.  
Shaded areas indicate where droop would be exceeded regardless of capacity.

# Products

## S200 Series Pressure Reducing Regulators

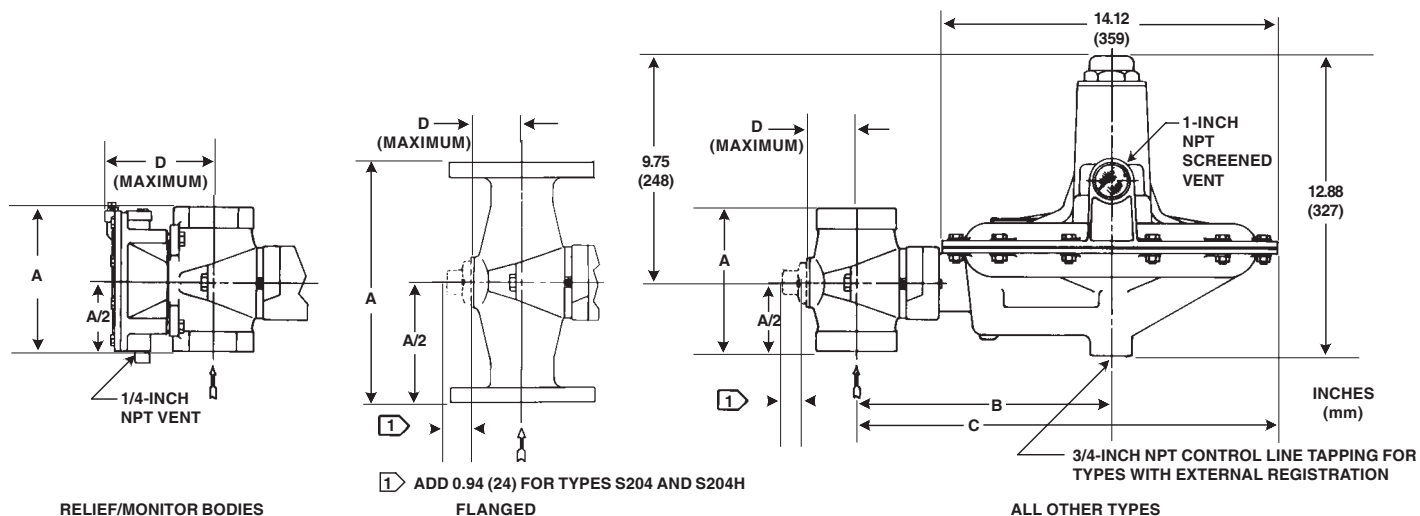


Figure 5. S203 Series Dimensions

Table 13. Dimensions and Shipping Weight									
BODY SIZE, INCHES (DN)	A				B	C	D		APPROXIMATE SHIPPING WEIGHT, POUNDS (KG)
	NPT Screwed	Class 125A FF or 150 RF Flanged	Class 250A FF or 300 RF Flanged	PN 10/16 Flanged			All Other Types		
							NPT Screwed	Flanged	
1-1/2	6.12 (156)	---	---	---	11.06 (281)	18.12 (460)	1.44 (37)	---	28 (12,7)
2 (50)	6.12 (156)	10.00 (254)	10.50 (267)	10.19 (259)	10.62 (270)	17.69 (449)	1.88 (48)	2.19 (56)	

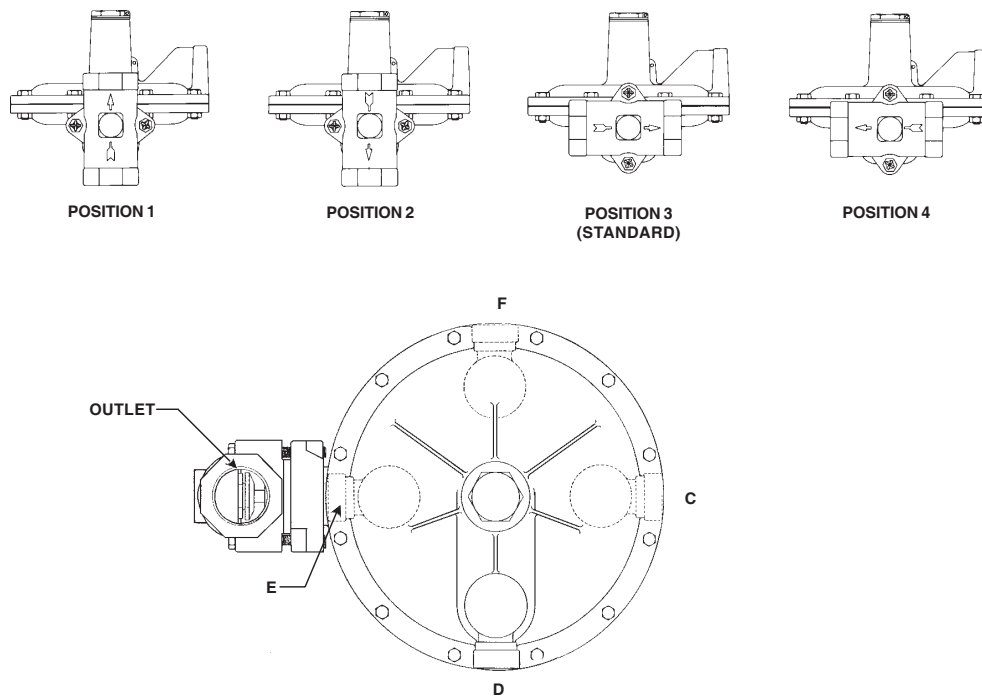


Figure 6. Body/Spring Case Assembly Positions and Vent Locations

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# S200 Series Pressure Reducing Regulators

## Ordering Guide

### Type, See Table 1 (Select One)

- Type S201 (without internal relief)\*\*\*
- Type S201H  
(outlet pressures 1 to 5 psig (0,069 to 0,34 bar))\*\*\*
- Type S201K  
(outlet pressures 2 to 10 psig (0,14 to 0,69 bar))\*\*\*
- Type S201KP (S201K with external pressure registration)\*\*\*
- Type S201P (external pressure registration)\*\*\*
- Type S202 (with internal relief)\*\*\*
- Type S202H  
(outlet pressures 1 to 5 psig (0,069 to 0,34 bar))\*\*\*
- Type S202P (external pressure registration)\*\*\*

### Body Size, Material and End Connection Style (Select One)

#### 1-1/4-inch Ductile Iron Body

- 125B FF-7.5-inches\*\*\*
- 150 RF\*\*\*
- 300 RF\*\*\*
- DN PN 10/16\*\*\*

#### 1-1/2-inch Cast Iron Body

- NPT Screwed\*\*\*

#### 1-1/2-inch WCB Steel Body

- NPT Screwed\*\*\*

#### 2-inch Cast Iron Body

- NPT Screwed\*\*\*
- 125B FF-7.5-inches\*\*\*
- 125B FF-10-inches\*\*\*
- 250B RF\*\*\*

#### 2-inch or DN 50 WCB Steel Body

- NPT Screwed\*\*\*

### Orifice Size (Select One)

- 1/4-inch (6,4 mm)\*\*\*
- 3/8-inch (9,5 mm)\*\*\*
- 1/2-inch (12,7 mm)\*\*\*
- 3/4-inch (19,1 mm)\*\*\*
- 1-inch (25,4 mm)\*\*\*
- 1-3/16-inch (30,2 mm)\*\*\*

To order this product, complete this page or complete a specification sheet, then provide the information to your Fisher Sales Representative.

If the construction you need is not offered on this page, contact your Fisher Sales Representative.

Fisher Regulators Quick Order Guide	
* * *	Standard - Readily Available for Shipment
* *	Non-Standard - Allow Additional Time for Shipment
*	Special Order, Constructed from Non-Stocked Parts. Consult Your Fisher Sales Representative for Availability.
Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction.	

### Body Position (Select One)

- Position 1\*\*
- Position 2\*\*
- Position 3 (standard)\*\*\*
- Position 4\*\*

### Vent Position (Select One)

- Position C\*\*
- Position D\*\*
- Position E\*\*
- Position F (standard)\*\*\*

### Outlet Pressure Ranges (Select One)

#### Types S201, S201P, S202, and S202P

- 2 to 4.5-inches w.c. (5 to 11 mbar)\*\*\*
- 3.5 to 6.5-inches w.c. (9 to 16 mbar)\*\*\*
- 5 to 9-inches w.c. (12 to 22 mbar)\*\*\*
- 8.5 to 18-inches w.c. (21 to 45 mbar)\*\*\*
- 14 to 30-inches w.c. (35 to 75 mbar)\*\*\*

#### Types S201H, S201P, S202H, and S202P

- 1 to 2 psig (0,069 to 0,14 bar)\*\*\*
- 1.5 to 3.25 psig (0,10 to 0,22 bar)\*\*\*
- 2 to 5 psig (0,14 to 0,34 bar)\*\*\*

#### Types S201K and S201PK

- 2 to 5.5 psig (0,14 to 0,38 bar)\*\*\*
- 4 to 10 psig (0,28 to 0,69 bar)\*\*\*

F

### Specification Worksheet

#### Application:

Specific Use \_\_\_\_\_

Line Size \_\_\_\_\_

Gas Type and Specific Gravity \_\_\_\_\_

Gas Temperature \_\_\_\_\_

Does the Application Require Overpressure Protection?

- Yes  No If yes, which is preferred:  
 Relief Valve  Monitor Regulator  Shutoff Device

Is overpressure protection equipment selection assistance desired? \_\_\_\_\_

#### Pressure:

Maximum Inlet Pressure ( $P_{1max}$ ) \_\_\_\_\_

Minimum Inlet Pressure ( $P_{1min}$ ) \_\_\_\_\_

Downstream Pressure Setting(s) ( $P_2$ ) \_\_\_\_\_

Maximum Flow ( $Q_{max}$ ) \_\_\_\_\_

#### Performance Required:

Accuracy Requirements? \_\_\_\_\_

Need for Extremely Fast Response? \_\_\_\_\_

Other Requirements: \_\_\_\_\_