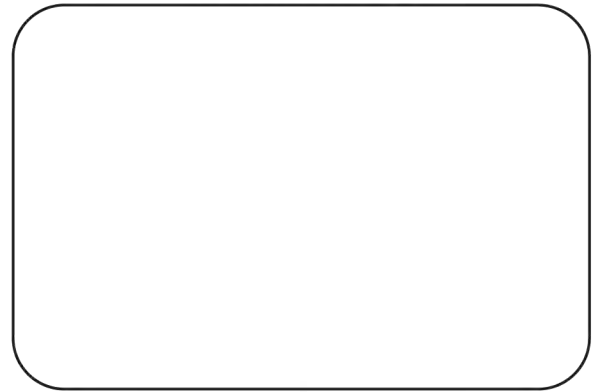


Distributed By



## Spring Loaded Direct Acting & Relief Valves



Master Distributor  
for





# P143 Pressure Regulator

- Versatile
- Control Accuracy
- Compact Design
- Low Pressure Cut-Off Option

The Type P143 pressure regulator is ideal for natural gas, air, propane and general purpose gas pressure regulation. Uses include commercial, residential and light industrial for burners and unit heaters. The P143 has an internal relief device and is available in the low pressure cut off – LPCO – version.

## Applications

Applicable to a wide range of gaseous fluids, including air, natural gas and propane. Can be used as a LP regulator.

## Materials of Construction

	P143
Body, Bonnet	Iron, Aluminum
Diaphragm	Nitrile
Diaphragm Assembly	Zinc/Nitrile
Gaskets	Non-asbestos, CGR 2750
Pin	Stainless Steel
Vent Screen	Stainless Steel
Spring	Zinc-Plated Steel
Diaphragm Piston	Zinc-Plated Steel



- Valve Body Sizes: 3/4", 1", 1-1/4" NPT
- Vent Size: 1" NPT
- Temperature Range: -20°F to 150°F
- Approximate Weight: 6 lbs.

Max Inlet Pressure (PSIG)	
Orifice	Standard
1/8	125
3/16	125
1/4	60
5/16	40
3/8	40
1/2	20
5/8	10

# P143 Pressure Regulator

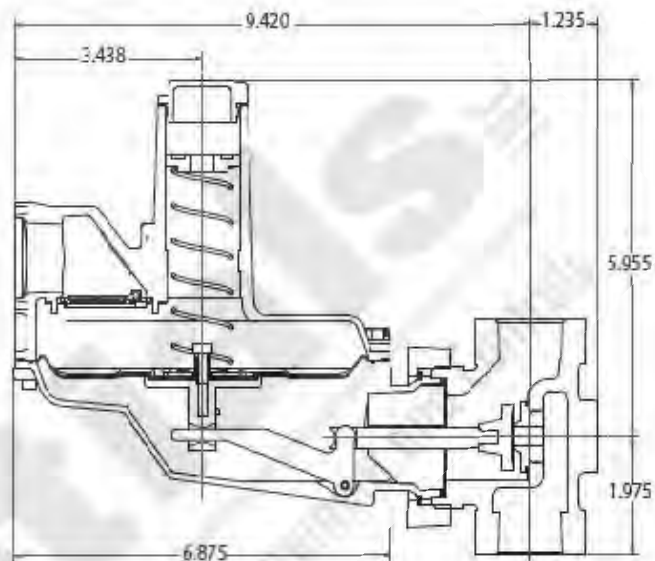
## P143 Standard Model Flow Capacities

Capacity\* in SCFH Natural Gas

Inlet psig	Body Size 3/4" x 3/4"						
	Orifice						
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
1/2					340	450	510
1				480	500	510	530
2			530	560	570	580	600
3		420	600	560	630	650	670
5	250	560	700	720	730	770	790
8	310	700	840	860	880	900	900
10	370	830	950	970	1,000	1,020	1,020
20	530	1,200	1,220	1,240	1,250	1,270	
40	860	1,570	1,330	1,340	1,450		
60	1,200	1,660	1,520				
80	1,500	1,710					
125	1,800	1,900					

Inlet psig	Body Size 3/4" x 1" • 1" X 1"						
	Orifice						
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
1/2					350	460	520
1				480	550	600	650
2			530	700	840	880	780
3		420	650	870	1,000	920	910
5	250	580	890	1,120	1,160	950	970
7.5	310	700	1,140	1,340	1,270	1,140	1,060
10	370	840	1,360	1,500	1,330	1,200	1,180
20	530	1,230	2,000	1,600	1,480	1,400	
40	860	1,700	2,000	1,640	1,900		
60	1,200	1,900	2,000				
80	1,540	2,000					
125	2,100	2,100					

Inlet psig	Body Size 1" x 1-1/4" • 1-1/4" x 1-1/4"						
	Orifice						
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
1/2					350	460	520
1				480	550	680	760
2			530	700	840	1,020	1,030
3		420	650	870	1,030	1,200	1,050
5	250	580	890	1,180	1,350	1,490	1,060
7.5	310	700	1,140	1,500	1,610	1,580	1,060
10	370	840	1,360	1,700	1,710	1,800	1,180
20	630	1,230	1,600	1,800	1,900	1,900	
40	860	1,800	2,200	1,900	2,000		
60	1,200	2,100	2,400				
80	1,550	2,200					
125	2,250	2,400					



Spring Ranges	
3.5" - 6.5" WC	Red
5.0" - 8.5" WC	Blue
6.0" - 14" WC	Green
12" - 33" WC	Orange
0.5 - 2.0 PSI	Purple
0.5 - 3.0 PSI	Yellow
2.0 - 6.0 PSI	Black

# P200 Pressure Regulator

## Features

- Minimize Sudden Downstream Load Change
- Wide Pressure Ranges
- P202 has internal relief valve for overpressure protection

The P200 Series Pressure Regulator is a manual self-operating, spring loaded, adjustable regulator.

The P200 Series is used in applications where pressure reduction is required.

The P200 will reduce the risk of “shock” from abrupt changes in downstream conditions. This can help prevent safety equipment from shutting an operation down.



### Materials of Construction

Adjusting Screw	Aluminum/Brass
Body	Ductile Cast Iron or WCB Steel
Bonnet	Aluminum
Closing Cap	Aluminum/Brass
Diaphragm	Nitrile
Housing	Aluminum
Molded Seat Assembly	Nitrile
Orifice	Aluminum
Upper/Lower Spring Seat	Aluminum/Brass
Flange	Iron

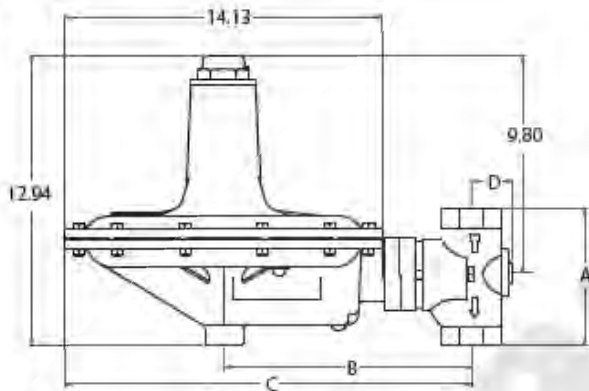
- ▶ Valve Body Size: 2" NPT
- ▶ End Connections Available 125 FF Flange  
250 RF Flange
- ▶ Vent Connection 1" NPT
- ▶ Temp. Range -40°F to 200°F  
-40°C to 93°C
- ▶ Approx. Weight 26 lbs. (11.8 kg)

# P200 Pressure Regulator

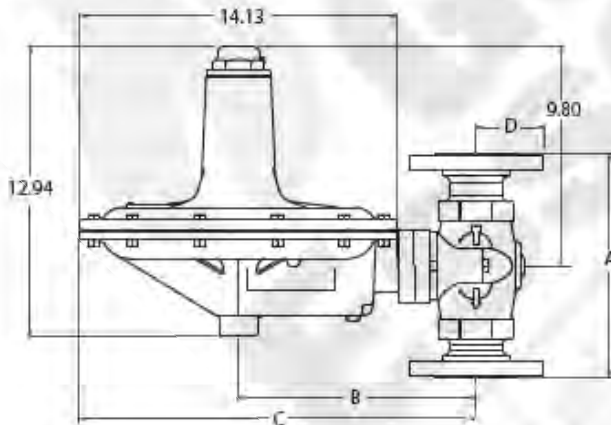
Body Size	A			B	C	D		
Inches	NPT	125 FF Flange*	250 RF Flange*			NPT	125 FF Flange*	250 RF Flange*
2	6.13	10	10.5	10.59	17.66	2.15	3	3

\*Flanges Only Available in Iron

## P200 Standard



## P200 Flanged



P200 Series Maximum Inlet Pressure

Orifice Inches	Versions	Pressure Range W.C. or PSI	Maximum Inlet Pressure PSI
1/4"			125
3/8"			125
1/2"			100
3/4"			60
1"	O		25
	H		20
1-3/16"	O		13
	H	1 - 2 PSI	14
		1.5 - 3.25 PSI	14
		2 - 5 PSI	20

Spring Ranges

Model	Spring Ranges	Spring Color	Part Number
	W.C. or PSI		
P201 and P202	2" - 4.5" W.C.	Brown	655-697-002
	3.5" - 6.5" W.C.	Red	655-697-003
	5" - 9" W.C.	Black	655-697-004
	8.5" - 18" W.C.	White	655-697-005
	14" - 30" W.C.	Dark Green	655-697-006
P201H and P202H	1 - 2 PSI	Dark Blue	655-697-007
	1.5 - 3.25 PSI	Orange	655-697-008
	2 - 5 PSI	Yellow	655-697-009

# Capacity Table

## CAPACITIES IN SCFH

7" w.c. SET POINT (1" Droop)						
Inlet PSIG	Orifice Size, Inches					
	1/4"	3/8"	1/2"	3/4"	1"	1 3/16"
0.5				1,500	1,800	2,000
1	400	800	1,200	2,300	2,800	3,300
1.5	500	1,050	1,600	3,100	3,600	4,500
2	600	1,300	2,000	4,000	4,500	6,000
5	1,000	2,100	3,500	7,700	9,400	9,400
13	1,650	3,500	6,400	10,000	20,200	21,200
25	2,400	5,200	10,300	20,000	11,800	
60	4,450	9,000	12,000	20,700		
<b>SPRING FOR APPLICATION 655-697-004</b>						

14" w.c. SET POINT (2" Droop)						
Inlet PSIG	Orifice Size, Inches					
	1/4"	3/8"	1/2"	3/4"	1"	1 3/16"
1	450	700	1,100	1,500	1,700	2,700
1.5	550	850	1,200	1,900	2,700	3,600
2	600	1,000	1,900	2,800	3,800	3,800
5	1,050	1,750	2,800	4,000	5,300	10,600
13	1,750	3,700	5,700	14,400	18,000	18,500
25	2,600	5,700	10,200	18,000	25,400	
60	4,800	10,900	11,000	19,600		
<b>SPRING FOR APPLICATION 655-697-005</b>						

2 PSI SET POINT (2% Droop)						
Inlet PSIG	Orifice Size, Inches					
	1/4"	3/8"	1/2"	3/4"	1"	1 3/16"
5	1,000	2,150	2,750	5,000	6,200	7,900
10	1,550	3,050	5,000	8,600	12,750	13,800
15	1,900	4,200	7,200	11,000	11,750	21,700
20	2,300	5,100	9,200	14,200	16,000	
25	2,600	5,900	10,700	16,400	25,400	
30	3,000	6,600	12,100	19,700	27,900	
40	3,700	8,200	12,200	27,200		
45	4,100	9,000	15,200	27,200		
50	4,400	9,700	16,900	27,400		
60	5,100	11,300	20,800	27,400		
<b>SPRING FOR APPLICATION 655-697-007</b>						

# Capacity Table

5 PSI SET POINT (2% Droop)						
Inlet PSIG	Orifice Size, Inches					
	1/4"	3/8"	1/2"	3/4"	1"	1 3/16"
10	1,000	1,400	1,650	2,900	3,500	4,500
15	1,300	2,100	2,800	3,900	5,500	5,850
20	1,650	2,750	3,600	5,300	7,400	
25	2,050	3,400	4,400	6,800	7,400	
30	2,400	4,000	5,500	7,900	8,350	
40	3,100	5,400	7,200	9,300		
45	3,250	6,100	8,300	9,850		
50	3,850	6,700	9,400	10,650		
60	4,450	8,200	11,500	14,550		
<b>SPRING FOR APPLICATION 655-697-009</b>						

10 PSI SET POINT (2% Droop)						
Inlet PSIG	Orifice Size, Inches					
	1/4"	3/8"	1/2"	3/4"	1"	1 3/16"
15	450	550	850	1,300	1,550	1,850
20	450	1,000	1,100	1,750	2,200	2,400
25	550	1,250	1,600	2,300	2,700	3,550
30	800	1,350	1,800	2,800	2,800	
40	1,050	1,650	2,150	3,500		
45	1,350	1,900	2,600	3,700		
50	1,450	2,100	2,850	4,300		
60	1,600	2,300	3,100	4,400		
<b>SPRING FOR APPLICATION 655-697-010</b>						





# P133 Pressure Regulator

## Applications

The P133 is a direct operated pressure reducing regulator used in commercial and industrial applications such as furnaces and burners where accuracy and sensitivity is critical.

The P133 regulator utilizes a balanced diaphragm design that provides for sensitivity and accuracy.

The P133 is available in a low pressure or high pressure model and a broad range of outlet spring ranges. The P133 is also suitable in pressure monitoring applications.

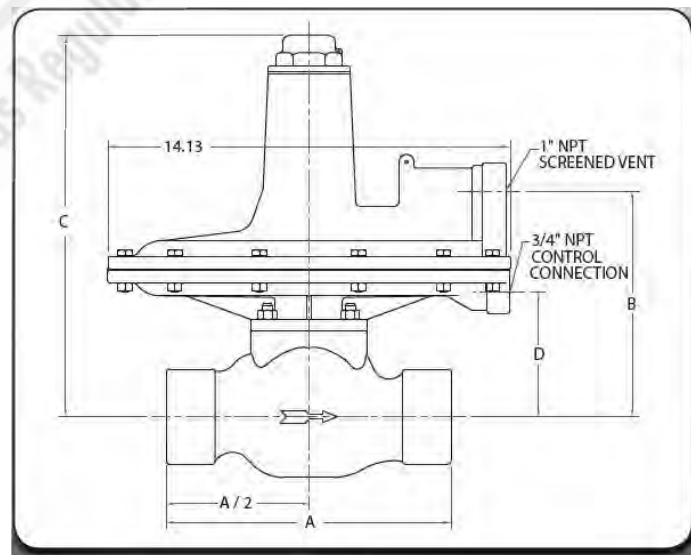
Maximum Inlet	133L 60 PSI	133H 125 PSI
Maximum Emergency Outlet	2 PSI L Version 10 PSI H Version	
Port Sizes	2" NPT	
Restrictor Collars	25%	
	40%	
	60%	
End Connections	2" NPT (Standard)	
	125 FF Flange (Iron Only) 150 RF Flange (Steel Only)	
Temperature Range	-40°F - 200°F	
	-40°C - 93°C	
Approximate Weight	35 lbs. (15.9kg)	

Model	Spring Ranges wc or PSI	Spring Color	Part Number
P133 L & H	2" - 4" wc	Brown	655-697-002
	3.5" - 6" wc	Red	655-697-003
	5" - 9" wc	Black	655-697-004
	8.5" - 18" wc	White	655-697-005
	14" - 28" wc	Green	655-697-006
	0.75 - 2 PSI	Dark Blue	655-697-007
P133 H Version Only	1.5 - 3.25 PSI	Orange	655-697-008
	2 - 5 PSI	Yellow	655-730-000
	5 - 10 PSI	Blue Stripe	655-659-004



**P133 Dimensions**

A			B	C	D		
2" NPT	125 FF	250 RF			2" NPT	125 FF	150 RF
10	10	10	7.91	13.36	4.36	4.36	4.36



# Capacity Table

## P133L Unrestricted Flow Capacities in Thousands of SCFH

Outlet Pressure Setting											
Inlet Pressure	4" wc 2" - 4" wc	6" wc 3.5" - 6" wc	7" wc 5" - 9" wc	14" wc 8.5" - 18" wc		14" wc 14" - 28" wc		1 psig 14" - 28" wc		2 psig 0.75 - 2 psig	
	1" wc Droop SCFH	1" wc Droop SCFH	1" wc Droop SCFH	1" wc Droop SCFH	2" wc Droop SCFH	1" wc Droop SCFH	2" wc Droop SCFH	10% Droop SCFH	20% Droop SCFH	10% Droop SCFH	20% Droop SCFH
1	14	13	12	5	8						
2	21	20	17	8	15			12	16		
3	26	25	21	12	20			16	22	13	19
5	35	33	32	16	28	14	23	24	32	21	28
10	52	52	48	34	45	26	38	38	44	38	46
20	78	77	79	69	76	60	69	70	77	62	76
30	101	100	100	91	97	87	93	90	101	87	101
40	124	122	124	109	116	107	115	110	122	105	121
50	146	144	145	130	136	132	137	127	145	124	145
60	170	168	166	155	161	152	158	149	167	145	170

## P133H Unrestricted Flow Capacities in Thousands of SCFH

Outlet Pressure Setting and Outlet Pressure Range										
Inlet Pressure	3 psig 1.5 - 3 psig		2 psig 2 - 5 psig		5 psig 2 - 5 psig		5 psig 5 - 10 psig		10 psig 5 - 10 psig	
	10% Droop SCFH	20% Droop SCFH	10% Droop SCFH	20% Droop SCFH	10% Droop SCFH	20% Droop SCFH	10% Droop SCFH	20% Droop SCFH	10% Droop SCFH	20% Droop SCFH
3			7	12						
5	14	22	11	18						
7	22	31	13	22	16	24	9	15		
10	28	42	15	27	24	35	14	22		
15	40	57	26	39	35	51	19	32	21	35
20	52	72	35	52	46	67	24	41	31	51
30	76	96	49	73	68	95	35	58	44	74
40	98	119	66	97	88	117	44	73	56	97
50	118	141	84	112	103	138	57	89	74	117
60	136	165	104	132	122	156	65	106	91	136



# P289 Relief Valve



## Principle of Operation

The P289 Series relief valve is a throttling relief valve used downstream of pressure regulators to protect the downstream system from overpressure. A smooth throttling action minimizes pressure surges in the system during emergency operation.

The P289 Series feature a pitot tube booster for achieving the highest possible relief capacity with a minimum buildup of system pressure. When the valve is opening, high gas velocity through the orifice creates an area of relatively low pressure near the end of the pitot tube. This pitot tube effect forms a partial vacuum above the diaphragm which helps to open the valve.

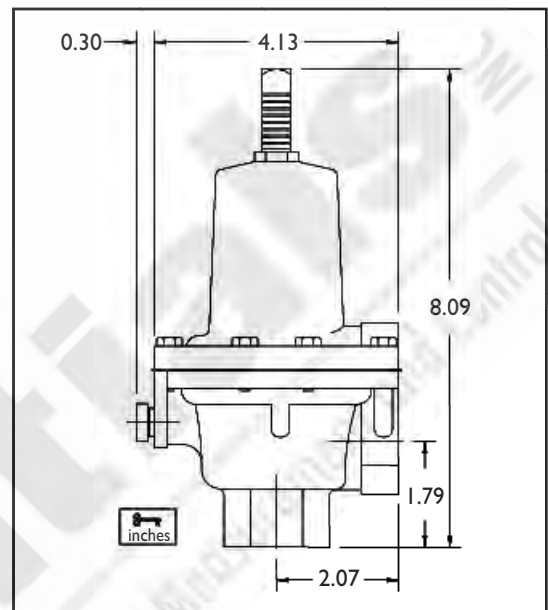
The P289 Series are ideal for low pressure settings due to the increased sensitivity provided by the large diaphragm area.

## Specifications

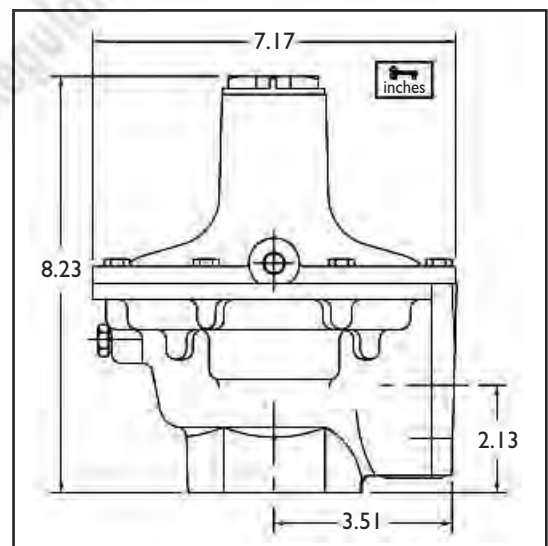
	P289 - 1"	P289 - 2"
Port Size	1" NPT	2" NPT
Max. Relief Inlet Pressure	100 PSIG	25 PSIG
Relief Set Pressure Ranges	1-4.5 PSIG	7-18" W.C.
	4-15 PSIG	0.5-2.25 PSIG
	10-20 PSIG	1.75-7 PSIG
	15-50 PSIG	4-10 PSIG
Approximate Weight	4 lbs.	15 lbs.

- ◀ Throttling Type Relief
- ◀ Compact
- ◀ Tight Shutoff
- ◀ High Flow Rates
- ◀ Reliability Due to Simplicity

## P289 1" Dimensions



## P289 2" Dimensions



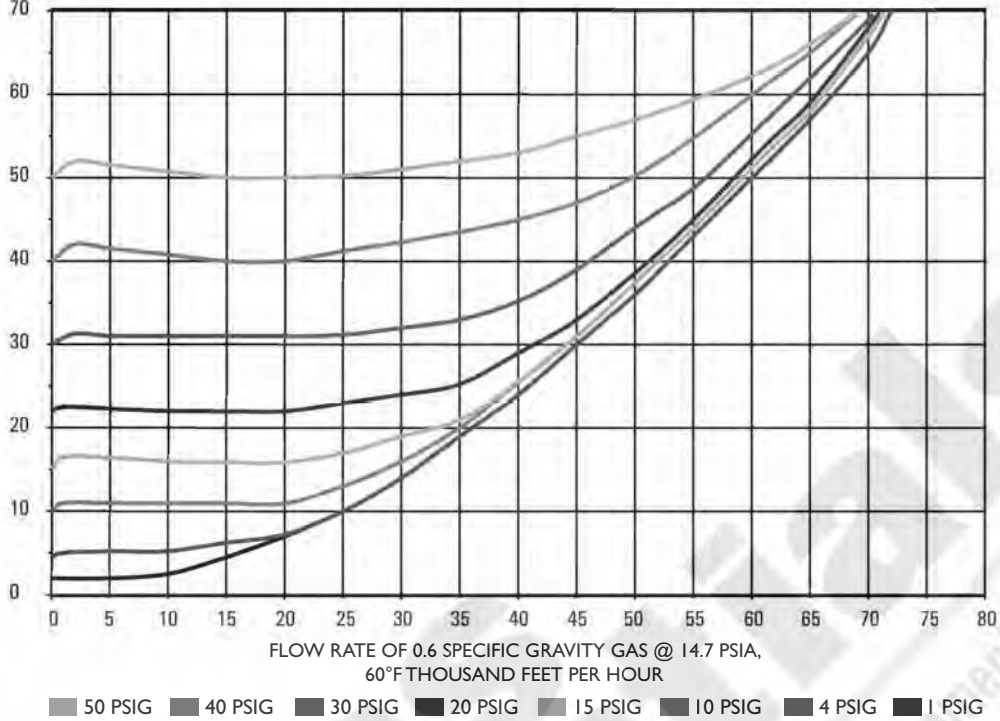
## Operating Temperature Range:

-20°F to 150°F  
-29°C to 65°C

# Capacity Table

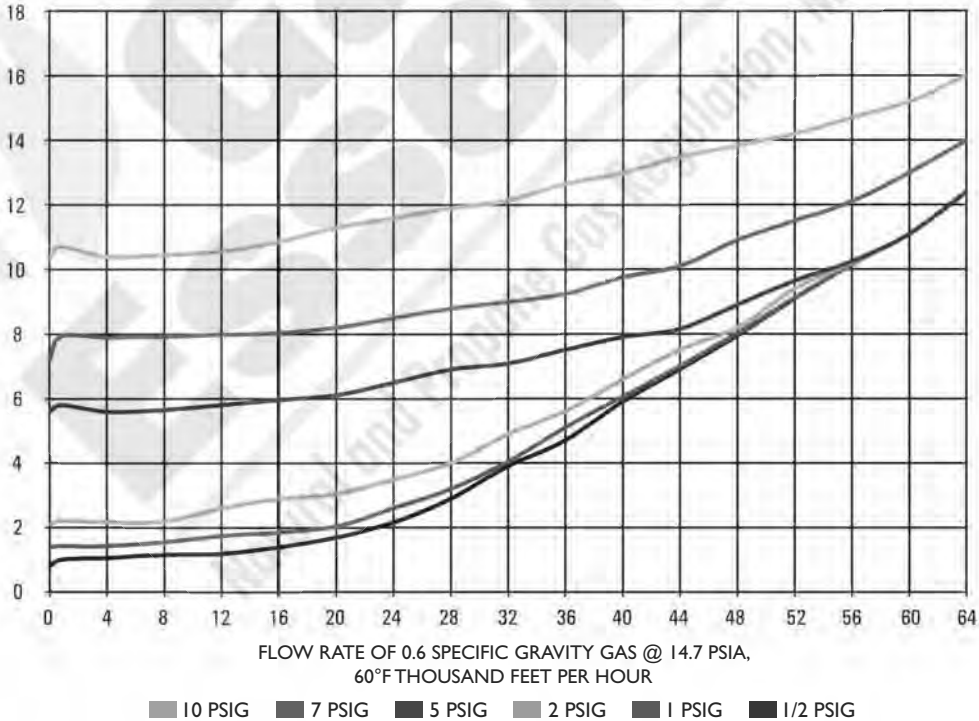
INLET PRESSURE  
PSIG

**P289-1" NPT**  
Vent screen installed



INLET PRESSURE  
PSIG

**P289-2" NPT**  
Vent screen uninstalled



## Relief Capacity Table – P289

Inlet Outlet (NPT)	Relief Pressure Range	Relief Pressure Setting	Natural Gas Capacity in SCFH						
			-----Pressure Buildup (PSI) Over Relief Set Point-----						
			1	2	5	10	20	30	40
1"	1 – 4.5 PSI	1 PSI	-----	-----	17,000	25,000	37,000	-----	-----
		2 PSI	-----	14,000	20,000	25,000	38,000	-----	-----
		3 PSI	-----	14,000	21,000	27,000	38,000	-----	-----
		4 PSI	-----	14,000	24,000	31,000	38,000	-----	-----
	4 – 15 PSI	4 PSI	-----	15,000	24,000	31,000	38,000	-----	-----
		7 PSI	-----	20,000	26,000	33,000	41,000	-----	-----
		10 PSI	-----	20,000	28,000	35,000	44,000	-----	-----
		13 PSI	-----	22,000	30,000	37,000	47,000	-----	-----
	10 – 20 PSI	15 PSI	-----	25,000	33,000	38,000	48,000	-----	-----
		10 PSI	-----	-----	25,000	35,000	44,000	51,000	58,000
		12 PSI	-----	-----	30,000	35,000	45,000	53,000	60,000
		14 PSI	-----	-----	32,000	38,000	47,000	55,000	62,000
		15 PSI	-----	-----	32,000	39,000	48,000	56,000	62,000
		18 PSI	-----	-----	32,000	40,000	48,000	56,000	63,000
	15 – 50 PSI	20 PSI	-----	-----	34,000	42,000	50,000	57,000	63,000
		15 PSI	-----	-----	-----	-----	47,000	55,000	62,000
20 PSI		-----	-----	-----	42,000	50,000	57,000	63,000	
25 PSI		-----	-----	-----	43,000	52,000	59,000	65,000	
30 PSI		-----	-----	39,000	45,000	55,000	62,000	67,000	
35 PSI		-----	-----	39,000	50,000	58,000	66,000	-----	
40 PSI		-----	-----	40,000	50,000	59,000	67,000	-----	
2"	7" – 18" wc	.263	20,000	28,000	37,000	67,000	-----	-----	-----
		.505	16,000	26,000	38,000	50,000	-----	-----	-----
		.650	8000	24,000	39,000	69,000	-----	-----	-----
	0.5 – 2.25 PSI	0.5 PSI	18,000	26,000	38,000	58,000	-----	-----	-----
		1 PSI	18,000	26,000	40,000	59,000	-----	-----	-----
		1.5 PSI	18,000	26,000	42,000	62,000	-----	-----	-----
		2.25 PSI	14,000	26,000	44,000	63,000	-----	-----	-----
	1.75 – 7 PSI	1.75 PSI	28,000	28,000	42,000	61,000	-----	-----	-----
		3 PSI	18,000	28,000	48,000	-----	-----	-----	-----
		5 PSI	16,000	32,000	55,000	-----	-----	-----	-----
		7 PSI	14,000	32,000	55,000	-----	-----	-----	-----
	4 – 10 PSI	4 PSI	20,000	30,000	50,000	50,000	-----	-----	-----
		6 PSI	24,000	32,000	60,000	64,000	-----	-----	-----
		8 PSI	20,000	34,000	60,000	-----	-----	-----	-----
		10 PSI	18,000	30,000	60,000	-----	-----	-----	-----



**Also available from Gas Essentials:**

**P627**



**P630**

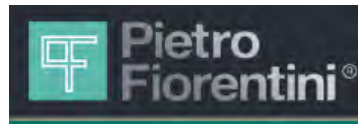


**Belgas**<sup>TM</sup>  
A DIVISION OF MARSH BELLOFRAM





Natural and Propane Gas Regulation, Measurement and Controls



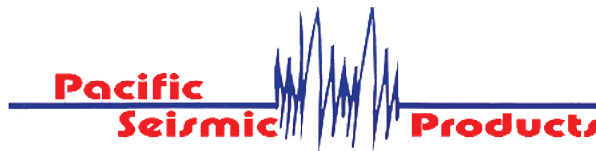
CSA 6.22a -2005 and ANSI Z21.80a Approved  
Ventless Indoor Applications



Regulators for Natural & Propane Gas  
High Pressure Regulators up to 5000 PSI  
Filter Regulators & Gauges

## MILLIKEN

Lubricated two way & three way Plug Valves  
CSA/CGA Approved



Seismic "Earthquake" Valves  
available from 3/4" to 8"

## METERS

Diaphragm, Rotary, Turbine,  
Flange Kits and Accessories

Manufacturer standard warranty applies. For a copy please contact us.