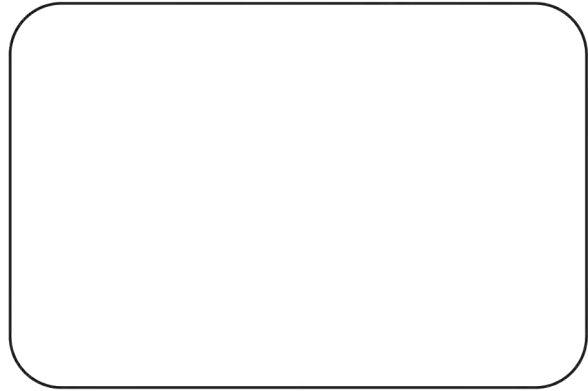




Gas Essentials^{INC}

Natural and Propane Gas Regulation, Measurement and Controls

Distributed By



Commercial & Industrial Propane Regulators and Meters

Master Distributor for



First Stage Regulators

P32* ▶



- ◀ Field adjustable
- ◀ 60 Mesh screen on inlet
- ◀ 1/4" FNPT 250 PSI
- ◀ Excellent stability

P37* ▶



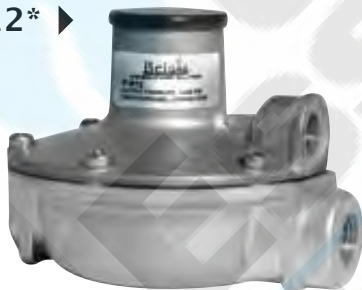
- ◀ Patented balance spindle design eliminates changes on outlet due to inlet fluctuations
- ◀ 1/2" FNPT 250 PSI

Capacity Chart @ 100 PSI

P32	2 MBTUPH
P37	8 MBTUPH

Outlet spring range: 0 to 30 PSI

P912* ▶



- ◀ Versatile
- ◀ Control Accuracy
- ◀ Compact Design
- ◀ Removable Vent Screen
- ◀ 1/4" x 3/8" FNPT 250 PSI

Capacity Chart

10 PSI	25 PSI	50-250 PSI
120,000 BTUPH	220,000 BTUPH	245,000 BTUPH

Based on 11" wc outlet pressure

* UL Approved



First Stage Regulators

Maximum inlet pressure 250 PSI ▶

Materials of construction: ▶
Cast ductile iron body,
aluminum bonnet
and diaphragm case,
nitrile diaphragm and seat

Temperature range -20° to 180° F ▶
-29° to 82° C

Sizes available: 3/4", 1" & 2" FNPT ▶

Outlet pressure ranges: ▶
5 to 20 PSI
15 to 40 PSI

Operator/Monitor versions available ▶
P627/P627M

Internal Relief version available ▶
P627R



▲ P627

The P627 is a First Stage Regulator used in conjunction with PGS Second Stage Regulators.

First Stage Regulators



▲ P630

The P630 is a First Stage Regulator used in conjunction with PGS Second Stage Regulators.

- ◀ Maximum inlet pressure 250 PSI
- ◀ Materials of construction:
Cast ductile iron body,
bonnet and diaphragm case,
neoprene diaphragm
and nylon seat
- ◀ Temperature range -20° to 150° F
-29° to 66° C
- ◀ Sizes available: 1" & 2" FNPT
- ◀ Outlet pressure ranges:
3 to 10 PSI
8 to 20 PSI

P627 – Capacity Chart

Maximum Flow Of Propane In Million BTUPH

Outlet Pressure

Inlet Pressure	Size	10 PSI			20 PSI		
		Orifice			Orifice		
		1/4"	3/8"	1/2"	1/4"	3/8"	1/2"
30 PSI	1"	4.4	7.5	10.8	4.0	6.9	9.9
	2"	4.4	5.8	10.2	3.7	6.8	9.7
60 PSI	1"	7.5	13	21.7	7.5	15.3	23
	2"	7.5	11.5	28.2	7.5	13.3	24.9
100 PSI	1"	11.6	19.8	25.4	11.6	22	37
	2"	11.6	25.7	45.5	11.6	25.7	45.5
150 PSI	1"	16.6	27	28.5	16.6	28	54.2
	2"	16.6	36.9	41.1	16.6	36.9	46
200 PSI	1"	21.7	28.5	29.3	21.7	42.2	62
	2"	21.7	36	38	21.7	38	52.3

How to order: P627 1" or 2"

Orifices: A = 1/4" B = 3/8" C = 1/2" Spring ranges: A = 5 to 20 psi B = 15 to 40 psi

P627R – Capacity Chart

Maximum Flow Of Propane In Million BTUPH

Outlet Pressure

Inlet Pressure	Size	10 PSI			20 PSI		
		Orifice			Orifice		
		1/4"	3/8"	1/2"	1/4"	3/8"	1/2"
30 PSI	1"	3.9	5.6	7.6	4	6.9	9.9
	2"	3.9	5.6	7.6	4	6.9	9.9
60 PSI	1"	5.8	8.9	10.9	7.5	12.3	16.8
	2"	5.8	8.9	10.9	7.5	12.3	16.8
100 PSI	1"	7.6	11.9	12.9	11.6	17.1	21.2
	2"	7.6	11.9	12.9	11.6	17.1	21.2
150 PSI	1"	9	15.8	17.1	16.3	21.4	22.2
	2"	9	15.8	17.1	16.3	21.4	22.2
200 PSI	1"	10	17.4	20.4	16.6	22.2	22.8
	2"	10	17.4	20.4	16.6	22.2	22.8

How to order: P627R 1" or 2"

Orifices: A = 1/4" B = 3/8" C = 1/2" Spring ranges: A = 5 to 20 psi B = 15 to 40 psi

P630LP – Capacity Chart

Maximum Flow Of Propane In Million BTUPH

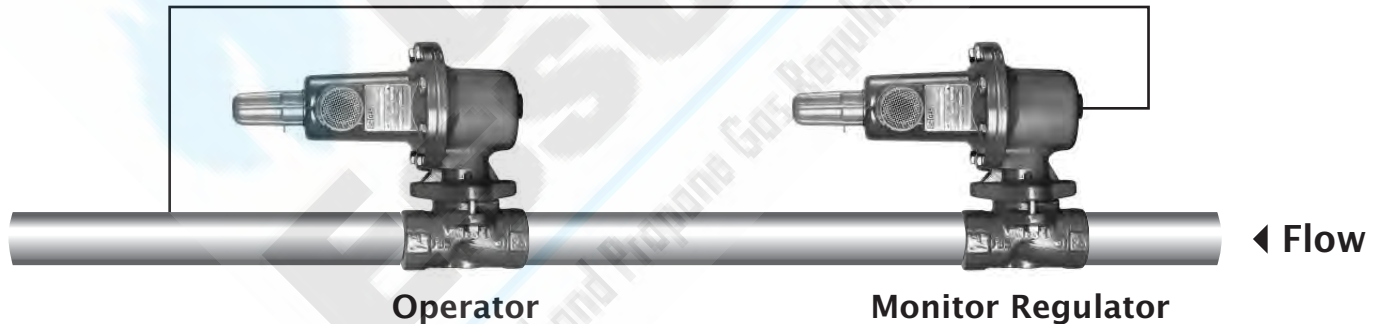
Outlet Pressure

Inlet Pressure	Size	10 PSI			20 PSI		
		Orifice			Orifice		
		1/4"	3/8"	1/2"	1/4"	3/8"	1/2"
30 PSI	1"	3.3	4.9	6.8	3.9	7.3	10.8
	2"	3.9	7.3	14	4.1	8.2	14.6
60 PSI	1"	5.5	7.4	9.2	7.7	11.9	15.5
	2"	7.1	15.7	29.3	8	17.4	28.5
100 PSI	1"	7.3	9	10.9	11.7	15	17.4
	2"	11.7	27	47.6	12.3	27	46
150 PSI	1"	9	10.7	12.3	14.6	17.4	19
	2"	17.4	39.6	69.8	17.4	36.5	66.6
200 PSI	1"	9.8	11.9	13	15.8	19	20.6
	2"	22.2	50.8	90.4	22.2	50	93.6

How to order: P630LP 1" or 2"

Orifices: A = 1/4" B = 3/8" C = 1/2" Spring ranges: A = 3 to 10 psi B = 8 to 20 psi

Monitor set using two P627 Belgas Regulators



Principle of Operation

The Operator/Monitor installation is designed to protect against over-pressurization of downstream piping and equipment in the event the normally throttling regulator (Operator) cannot function properly. In any Operator/Monitor installation the Operator will be the regulator with the lower set point and the Monitor will be the regulator with the higher set point. The upstream regulator must always be an "M" version with an o-ring sealed valve stem and a threaded connection on the lower diaphragm case for a downstream sensing line. In the event the Operator cannot function properly, the downstream pressure will rise to the set point of

the Monitor at which time the Monitor will begin throttling at its set point. For example, suppose the Operator has a set-point of 10 PSIG and the Monitor has a set point of 11 PSIG. Since both regulators are attempting to regulate the pressure at the same location (downstream of the second regulator) the Monitor will remain "wide-open" during normal operation because the Operator is limiting the downstream pressure to 10 PSIG. If the Operator fails to control the pressure at 10 PSIG, the downstream pressure will rise to 11 PSIG and the Monitor will begin regulating.

First Stage Gas Regulators



Norval/Dival Regulator Main Features

The Norval pressure regulator modular design allows for the application of an optional slam shut over pressurer device for use as an "in line" monitor" on the same body with changing the face to face dimension of the regulator. Monitor/Operator versions are also available.

The Norval "top entry design" allows for periodic maintenance as necessary without removing the valve body from the gas line.

Fast response time makes it ideal for industrial burner and commercial applications whenever sudden changes of flowrate are part of the process.

The Norval regulator maintains high accuracy output against any inlet pressure variation, making it the optimum product for gas district systems.

Easy maintenance and reduced number of parts are the basis of low cost operation.



Norval



Dival

- Norval/Dival Regulator Head and Valve Body Assembly Selected by Application with Specification Sheet Included at Time of Quotation
- Norval/Dival Inlet Pressures to 232 PSI
- Norval/Dival Outlet Pressures to 63 PSI
- Capacities to 227 million btu/hr propane
- Piping: 1" NPT thru 8" Flanged
- Temperature Range: -4°F to 140°F



BelGas P99 Pilot Operated Gas Regulator
Available Fall 2013

- Capacities to 74,000,000 BTU/Hr Propane
- Suitable for Large Industrial, Boiler and Commercial Applications
- Inlet Pressure Up to 300 PSI
- Outlet Pressure Down to 1 PSI

General Information

Information about LP-Gas*

	Propane	Butane
Formula	C ₃ H ₈	C ₄ H ₁₀
Boiling Point, °F.	-44	15
Specific Gravity of Gas (Air = 1.00)	1.50	2.01
Specific Gravity of Liquid (Water = 1.00)	0.504	0.582
Lbs. per Gallon of Liquid at 60° F.	4.20	4.81
BTU per Gallon of Gas at 60° F.	91502	102032
BTU per Lb. of Gas	21548	21221
BTU per Cu. Ft. of Gas at 60° F.	2488	3280
Cu. Ft. of Vapor (at 60° F) Gal.	36.38	31.26
Cu. Ft. of Vapor (at 60° F) Lb.	8.66	6.51
Latent Heat of Vaporization at Boiling Point BTU/Gal.	773	808
Combustion Data: Cu. Ft. Air Required to Burn 1 Cu. Ft. Gas	23.86	31.02
Flash Point, °F.	-156	N.A.
Ignition Temperature in Air, °F.	920-1120	900-1000
Maximum Flame Temperature in Air, °F.	3595	3615
Limits of Flammability Percentage of Gas in Air Mixture; at Lower Limit - % at Upper Limit - %	2.15 9.6	1.55 8.6
Octane Number (ISO - Octane = 100)	Over 100	92

* Commercial quality. Figures shown in this chart represent average values.

Vapor Pressures of LP-Gases*

Temperature		Approximate Pressure (PSIG)	
(°F.)	(°C.)	Propane	Butane
-40	-40	3.6	
-30	-34	8	
-20	-29	13.5	
-10	-23	23.3	
0	-18	28	
10	-12	37	
20	-7	47-1	
30	-1	58	
40	4	72	3.0
50	10	86	6.9
60	16	102	12
70	21	127	17
80	27	140	23
90	32	165	29
100	38	196	36
110	43	220	45

* Conversion Formula: Degrees C. = (°F. - 32) x 5/9 • Degrees F. = 9/5 x °C. + 32

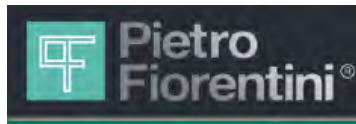
Comparison Chart

Itron	BelGas	Fisher
B42R/PGS6	P143	HSRL
B31R/PGS8	P143	S102
B34SR/PGS10	P202	S202
B34R/PGS12	P202	S202
B38R/PGS24	P202 or P133	
	P912	912
	P32	67C
	P37	64
	P627	627
	R627	627R
	P630	630
PGP12	P99	299/99
PGD1/2	P133/P99	133L/H
PGD11/22/33	P99/Dival	1098-EGR
	P289	289

*** Note – This is a guide only**



Natural and Propane Gas Regulation, Measurement and Controls



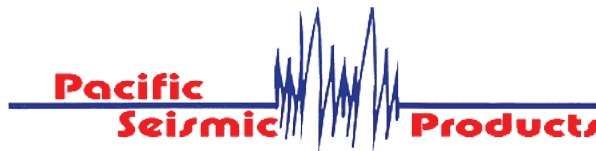
CSA 6.22a -2005 and ANSI Z21.80a Approved
Ventless Indoor Applications



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.