



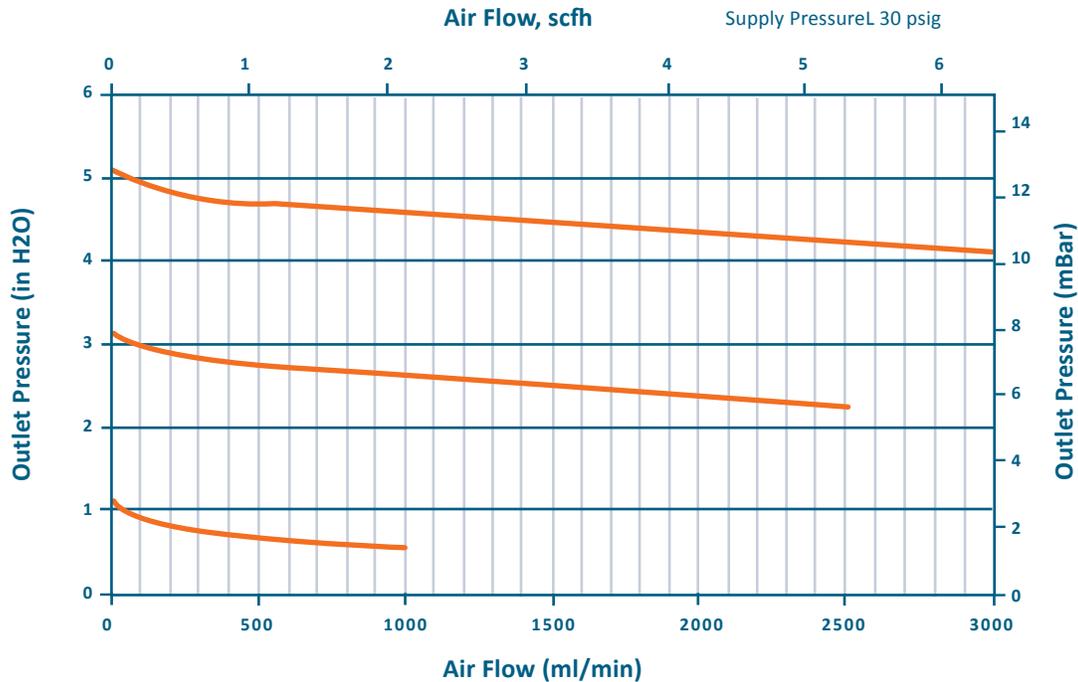
LPR2

Pressure Reducing Regulators
FOR VERY LOW PRESSURE APPLICATIONS

Performance Specifications

The Equilbar LPR2 is a manually adjustable pressure reducing regulator for ultra-low pressures in applications that are static or require only low flow rates. The LPR2 accepts a 5-30 psig regulated gas supply and regulates the pressure to a reduced value that matches the setting on the adjustable hand knob. The LPR2 is a non-relieving regulator. A small bleed to atmosphere orifice may be integrated for applications that do not consume downstream gas.

LPR2 PERFORMANCE GRAPH

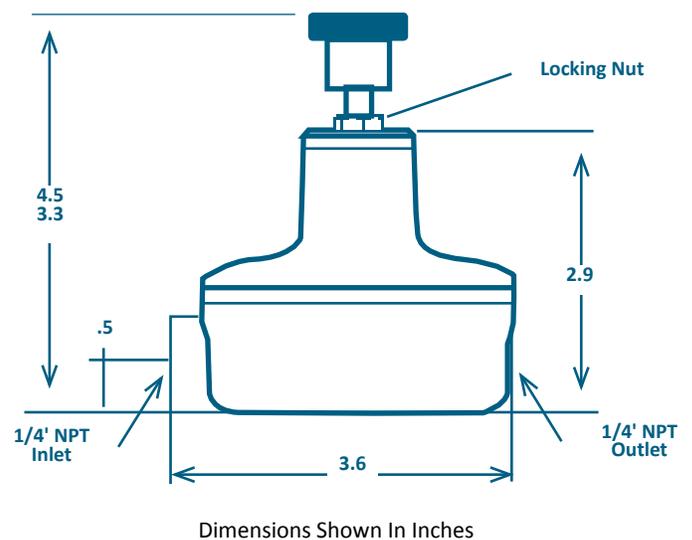


LOW FLOW TEST RESULTS

SENSITIVITY	± 0.01 inH ₂ O (0.0004 psi)
7 DAY STABILITY	± 0.06 inH ₂ O (0.002 psi)
MAX AIR FLOW	Approx. 3 lpm (6 SCFH, 5 inH ₂ O setting @ 0.5 inH ₂ O Droop, See Chart)

FLOW CAPACITY	3 SLPM (6 SCFH) with 30 psig supply and 5 in WC (0.18 psi) [12.45 mbar] set point
SUPPLY PRESSURE	5 – 30 psig [0.34 – 2.07 bar]
OUTPUT RANGES	0.25 - 7 in WC (0.01-0.25psi) [0.62-17.44mbar] 1 - 10 in WC (0.04-0.36psi) [2.49-24.91mbar] 1 - 28 in WC (0.04-1.01psi) [2.49-69.74mbar]
CONSUMPTION	< 30 ml/min (No Bleed unit) Approximately 250 ml/min (Bleed unit)
SENSITIVITY	±0.01 in WC (0.0004 psi) [0.0249 mbar]
7 DAY STABILITY	±0.06 in WC (0.002 psi) [0.149 mbar]
TEMPERATURE RANGE	-20 to 170°F (-29 to 77°C)
PORTS	¼" NPT inlet & outlet
WEIGHT	Approximately 1.3 lbs (0.59 kg)

DIMENSIONAL DRAWING



Applications

There are numerous potential applications for the unique capabilities of the Equilibar® LPR2. The LPR2 has been designed as a pilot regulator for controlling the setpoint of our dome loaded back pressure regulators. Now it is easy to achieve high precision in the low pressure range to high temperature, high flow, liquid or multi-phase flow and corrosive chemicals.

ULTRA LOW PRESSURE REDUCING REGULATOR

The LPR2 can function as a standard pressure reducing regulator to accurately control applications to pressures below 1 psig. The unit can pass up to 1 SCFH for ultra low flow applications. For inert gas applications, the unit can be built without a bleed orifice to help reduce consumption and increase savings.

Equilibar recommends setting the filter regulator to supply a 5-30 psig [0.34 - 2.07 bar] pressure to the LPR2. See Figure 1.

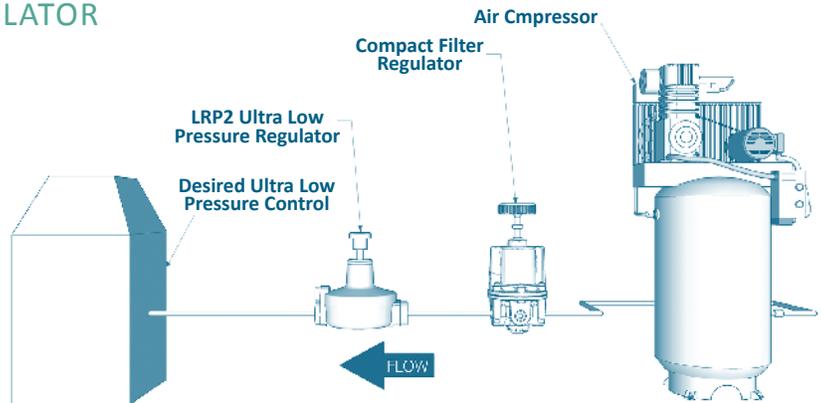


Figure 1 LPR2 Ultra Low Pressure Reducing Regulator used to control pressure in a low pressure application downstream of an air compressor

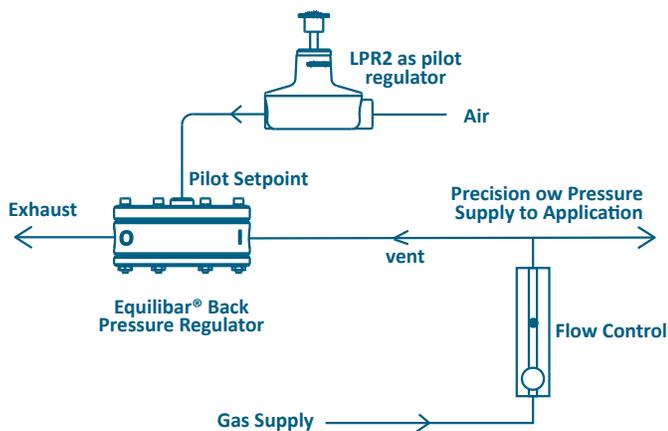


Figure 2 LPR2 used as a pilot regulator of an Equilibar® back pressure regulator in a low pressure gas supply application

PRECISION ULTRA LOW PRESSURE GAS SUPPLY APPLICATION

PROBLEM: There are very few commercial regulators capable of precisely controlling gas pressure below 0.5 psig in applications with significant flow rate variations.

SOLUTION: The LPR2 can be used in conjunction with an Equilibar® back pressure regulator (BPR) and a flow control valve to provide precision and responsiveness in a gas supply system. The BPR exhausts excess gas not required by the process to maintain precision pressure supply. By venting any gas flow not required by the application, this system can accommodate forward or reverse gas flow at the application without loss of accuracy. See Figure 2.

MATERIALS OF CONSTRUCTION

BODY	Zinc
DIAPHRAGM	Polyethylene
DIAPHRAGM ASSEMBLY	Zinc/Nitrile
PIN	Stainless Steel
VENT SCREEN	Monel
SPRING	Zinc-Plated Steel / Carbon Steel
DIAPHRAGM PISTON	Zinc-Plated Steel
SPACER	PVC

ORDERING INFORMATION

EXAMPLE				
LPR2	-	B	-	7
LPR2	-		-	
1	2	3		

1	MODEL
	Ultra Low Pressure Precision Regulator
2	GAS CONSUMPTION
	B Bleed
	NB No Bleed
3	PRESSURE RANGE
	7 0.25 - 7 in WC (0.01-0.25psi) [0.62-17.44mbar]
	10 1 - 10 in WC (0.04-0.36psi) [2.49-24.91mbar]
	28 1 - 28 in WC (0.04-1.01psi) [2.49-69.74mbar]

About Equibar

Equibar provides innovative and robust pressure control technology for researchers and engineers worldwide. We are proud to design, manufacture and test our patented back pressure regulators in our factory overlooking the Blue Ridge Mountains near Asheville, NC.

APPLICATION ENGINEERING— WHAT SETS US APART

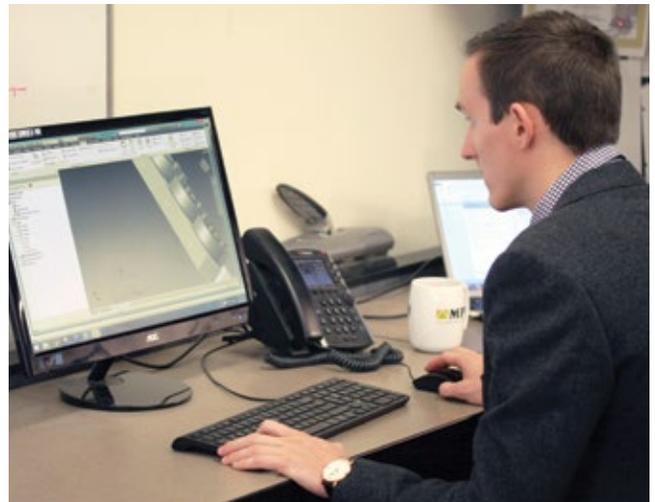
Unlike mass-market regulator distributors, we focus on working with you, the scientist or engineer with a complex pressure control scenario.

Our application engineers work collaboratively with clients to identify the optimal model, trim, and diaphragm for each application's unique challenges. No matter where you are on the globe, you can stay in close contact with your engineer by email, telephone, videoconferencing or fax.

After installation, your application engineer will support you with start-up information and fine-tuning as needed.



Each application is reviewed by our engineering team to ensure quality performance of our products.



Our engineers offer custom designed solutions for the most difficult pressure control challenges. Feel free to contact us to discuss your situation.



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Made in the
USA

Equibar's quality system is
ISO 9001:2015 certified.