



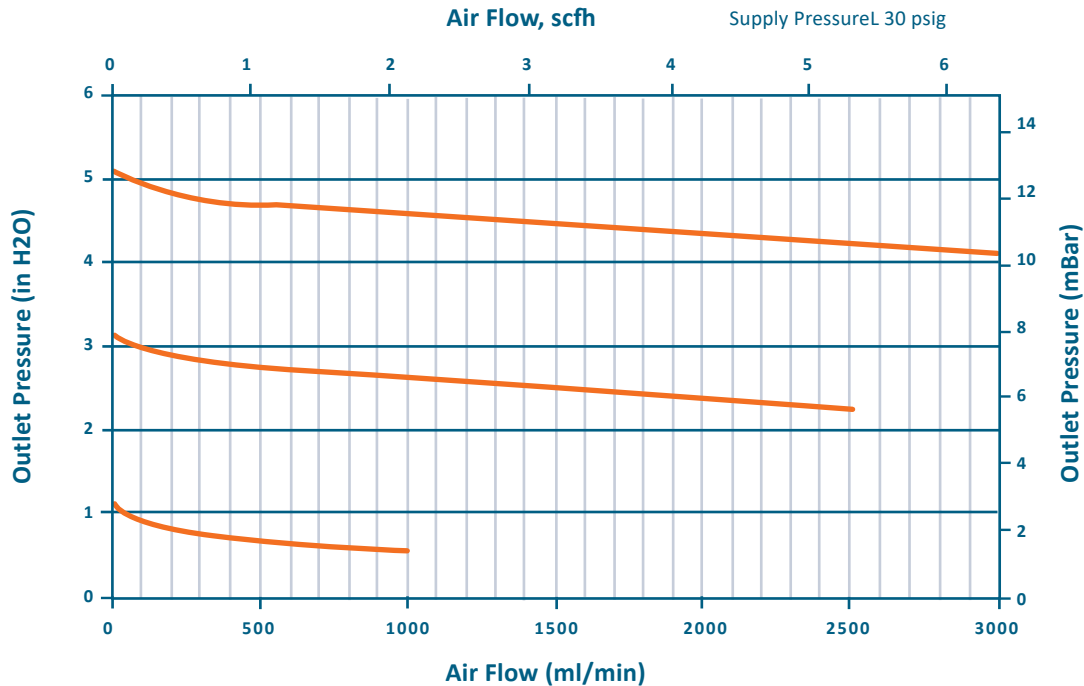
# LPR2

Pressure Reducing Regulators  
FOR VERY LOW PRESSURE APPLICATIONS

# Performance Specifications

The 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

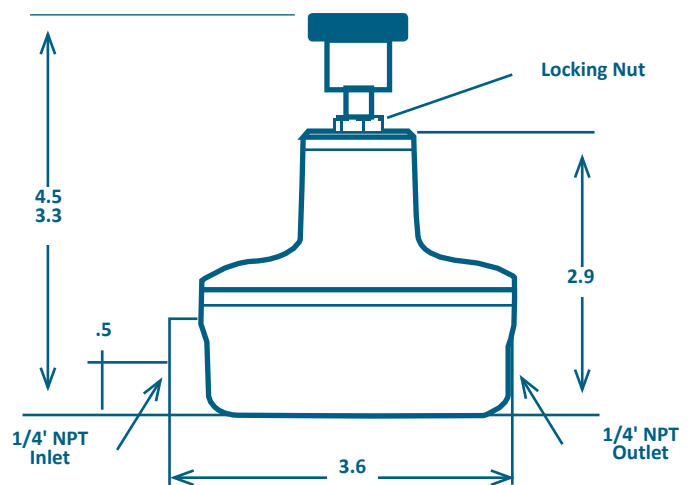


## LOW FLOW TEST RESULTS

<b>SENSITIVITY</b>	± 0.01 inH2O (0.0004 psi)
<b>7 DAY STABILITY</b>	± 0.06 inH2O (0.002 psi)
<b>MAX AIR FLOW</b>	Approx. 3 lpm (6 SCFH, 5 inH2O setting @ 0.5 inH2O Droop, See Chart)

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

## DIMENSIONAL DRAWING



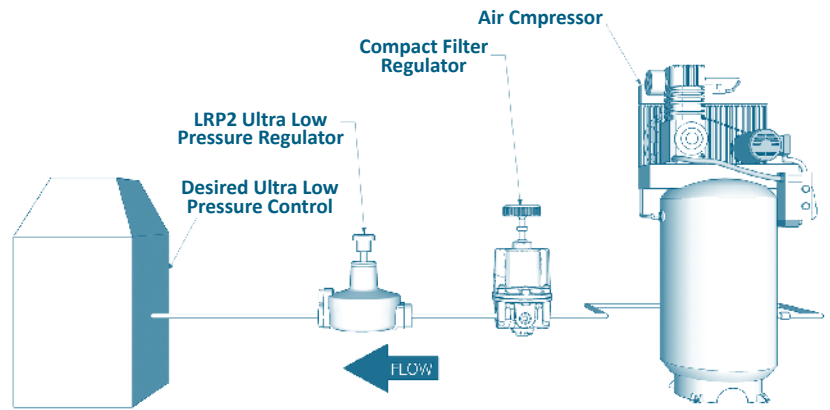
Dimensions Shown In Inches

# Applications for the LPR2

## ULTRA LOW PRESSURE REDUCING

The LPR2 can function as a standard pressure reducing regulator. It is able to output pressures below 1 psig (0.04 psi) [2.49 mbar] with high accuracy. 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.

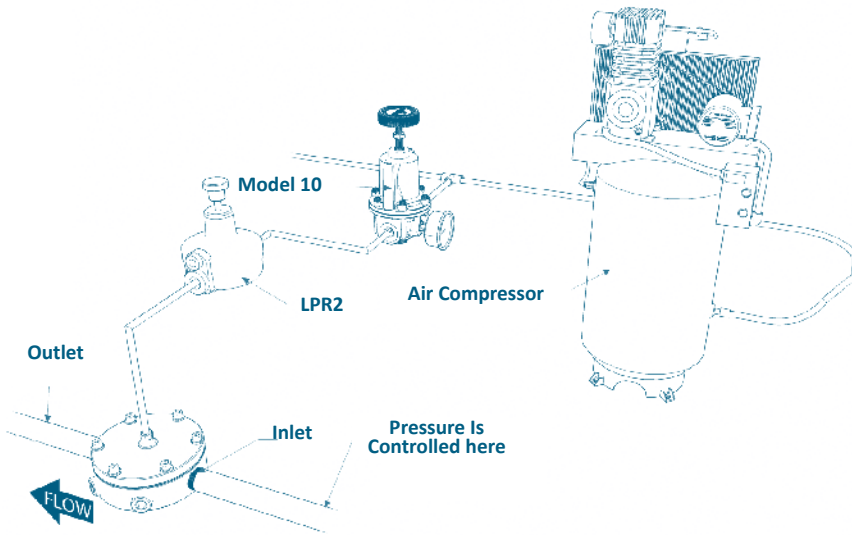
Equilibr recommends setting the conditioning regulator to supply a 5-30 psig [0.34 - 2.07 mbar] output to the LPR2.



## HIGH FLOW APPLICATIONS OR ULTRA LOW LIQUID PRESSURE CONTROL

**PROBLEM:** There are very few if any commercial regulators capable of precisely controlling gas pressure below 0.5 psig with significantly varying flow rates.

**SOLUTION:** The LPR2 can be used in conjunction with an Equilibr Precision Back Pressure Regulator and a flow control valve to provide incredible precision and responsiveness. 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.



## 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

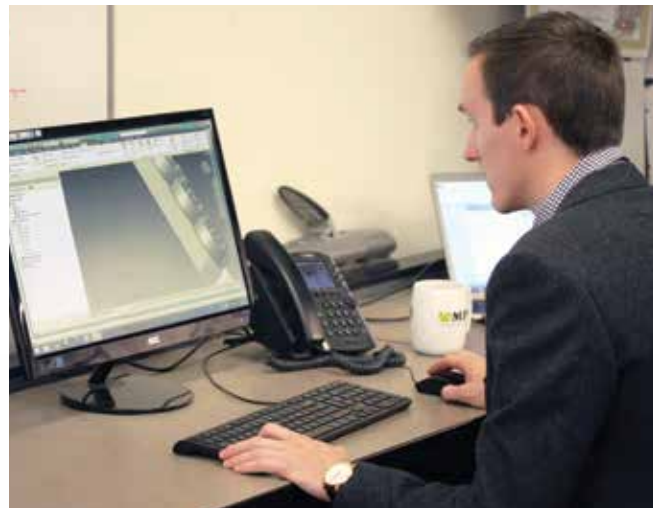
Unlike mass-market regulator distributors, we focus on working with you, the scientist or engineer with a complex pressure control scenario.

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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### **Work territory**

The Netherlands, Germany, Austria, Sweden, Finland, Norway, Denmark, the Flemish part of Belgium and the German-speaking part of Switzerland



Made in the  
**USA**

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

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