

## LB-1 Series

Ultra-miniature Back Pressure Regulators

### Introduction

The LB-1 is an ultra-miniature back pressure regulator that employs many of the same features found in the time-tested design of the CBP-3 & BP-3 Series back pressure regulators. Designed for surface, panel or manifold mounting, the LB-1 offers the utmost in versatility to the systems designer. It's low internal volume of less than 3cc makes the LB-1 the perfect choice for systems that require rapid purge cycles. Standard features permit using this regulator in a wide variety of services, including corrosive fluids. The LB-1 can be tailored to virtually any application by choosing the optional features. This regulator is designed to allow the construction of compact and sophisticated analytical instrumentation where the optimum in back pressure control is required and space is at a premium.



pressure regulators

### Typical Applications

- Instrumentation systems requiring rapid purge cycles
- Systems with limited space availability
- Analytical instrumentation
- Gas and liquid sampling
- Research labs

### Features & Benefits

- Gas or liquid service
- Electro-polished body with better than 25 Ra finish in diaphragm cavity
- Bubble tight shutoff

### Technical Data

CONSTRUCTION	316L stainless steel, aluminum, brass, or Monel®
ADJUSTABLE STANDARD PRESSURE RANGES	0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
OPERATING TEMPERATURE	–40° F to +500° F (–40° C to +260° C)
C <sub>v</sub> COEFFICIENT	0.2

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## Maximum Temperature and Control Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM CONTROL RANGE
Viton®	250° F (121° C)	@	250 psig (1.72 MPa)
Kalrez®	300° F (148° C)	@	250 psig (1.72 MPa)
Tefzel®	175° F (80° C)	@	500 psig (3.44 MPa)
Polyimide	500° F (260° C)	@	500 psig (3.44 MPa)
PEEK™	500° F (260° C)	@	500 psig (3.44 MPa)

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizard at  
[www.goreg.com/products/matix/index.htm](http://www.goreg.com/products/matix/index.htm)

## How to Order

For additional configurations, consult the factory. **Standard items in bold.**

### LB1-1A01D5E111A

#### Body Material

- 1 316L stainless steel**
- 2 Brass
- 3 Aluminum
- 4 Monel®

#### Port Configuration

**A Standard (body "A")**

See pg. 29 for port locations.

#### Process Port Types

**0** 1/8" FNPT (all ports)

1 Surface mount

**A** 1/16" FNPT (all ports)

**B** 1/8" FNPT inlets; 1/16" FNPT outlets

#### Cavity Finish

**1 <25 Ra**

#### Actuator Material

**A Tefzel®**

**C Polyimide**

**D Viton® (0-250 psig max.)** **K**

Kalrez® (0-250 psig max.) **Q**

PEEK™

#### Options

A. EB33 (oxygen cleaning)

B. EB5 cleaning

D. Helium leak test

E. Pressure test certificate

**F** Certificate of Conformity

**G** CMTR

#### Cap Assembly

**1 Hand knob (0-100 psig max.)**

2 T-handle

3 T-handle, panel mount

4 Handle knob, panel mount (1-100 psig max.)

8 Tamper-proof

#### Diaphragm Facing/Backing/O-ring Material

**1 Tefzel® seal ring / stainless steel / PTFE**

2 Tefzel® seal ring / Inconel® / PTFE

3 PTFE facing / Viton® / Viton®

7 Tefzel® seal ring / stainless steel / Viton®

H Tefzel® seal ring / Inconel® / Viton®

#### Diaphragm Type

**1 Standard, Nylon diaphragm slip ring (170° F max. temp)**

2 Standard, Polyimide diaphragm slip ring (high temp. service)

#### Control Range

C. 0-10 psig

D. 0-25 psig

E. 0-50 psig

G 0-100 psig

I. 0-250 psig

J. 0-500 psig

#### Flow Coefficient (C<sub>v</sub>)

**1** 0.03

**2** 0.05

3 0.06

4 0.12

**5** **0.2**

6 0.24

7 0.3

A 0.095

C 0.025

E 0.04

I 0.005

J 53

NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.goreg.com](http://www.goreg.com) or contact the factory.

For flow curve charts, visit <http://www.goreg.com>.

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## Outline and Mounting Dimensions

Weight - 0.75 lbs (0.34 kg)

