

GO Regulator

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.



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Typical Applications

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

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 _v coefficient	0.2

Features & Benefits

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

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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) 500° F (260° C) Polyimide @ 500 psig (3.44 MPa) PEEK™ 500° F (260° C) @ 500 psig (3.44 MPa) To Order, contact your local Distributor Link below: Verify that your chosen part number is valid using the GO Wizards at www.goreg.com/distributor/index.htm www.goreg.com/products/matrix/index.htm How to Order For additional configurations, consult the factory. Standard items in bold. 5 LB1 1 0 E Bodv Material -**Options** 1 316L stainless steel EB33 (oxygen cleaning) A В EB5 cleaning 2 Brass D Helium leak test 3 Aluminum Pressure test certificate Ε 4 MONEL® Certificate of Conformity F G CMTR Port Configuration -Cap Assembly A Standard (body "A") 1 Hand knob (0–100 psig max.) See pg. 29 for port locations. **2** T-handle 3 T-handle, panel mount Process Port Types -0 ¹/₈" FNPT (all ports) **4** Handle knob, panel mount 1 Surface mount (0-100 psig max.) 8 Tamper-proof **A** $\frac{1}{16}$ FNPT (all ports) **B** ¹/₈" FNPT inlets; ¹/₁₆" FNPT outlets Diaphragm Facing/Backing/O-ring Material 1 Tefzel[®] seal ring / stainless steel / PTFE Cavity Finish 2 Tefzel[®] seal ring / INCONEL[®] / PTFE 1 < 25 Ra 3 PTFE facing / Viton[®] / Viton[®] **Actuator Material** 7 Tefzel® seal ring / stainless steel / A Tefzel® Viton® **C** Polyimide H Tefzel[®] seal ring / INCONEL[®] / Viton[®] **D** Viton[®] (0–250 psig max.) Diaphragm Type K Kalrez[®] (0–250 psig max.) 1 Standard, Nylon diaphragm slip ring Q PEEK™ (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 0-250 psig (requires T-handle or L Tamper proof) 0-500 psig (requires T-handle or NOTE: Contact the factory for any additional requirements. Tamper proof) Flow Coefficient (C_v) 1 0.03 **3** 0.06 5 0.2 **7** 0.3 C 0.025 **E** 0.04

For flow curve charts, visit www.goreg.com.

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