GO REGULATOR

SBPR Series
Subatmospheric Back Pressure Regulators

Introduction

The SBPR Series subatmospheric back pressure regulator is designed to provide precise upstream vacuum control. One example of this could be to introduce a sample gas at a positive pressure into a vacuum chamber. Downstream from this chamber would be the SBPR and a vacuum pump. The positive pressure will build up in the chamber causing the SBPR to open and allow the chamber to return to the vacuum desired. The SBPR will then close and the process will repeat. The large diameter diaphragm aided by a vacuum assist spring, provides the user with optimum sensitivity for subatmospheric pressure control.

pressure regulators

Typical Applications
- Analytical instrumentation
- Gas and liquid sampling
- Research labs

Technical Data

CONSTRUCTION	316L stainless steel or brass (standard) Monel® and Hastelloy® C-276 (optional)
ADJUSTABLE PRESSURE CONTROL RANGES	1–30 psia (−27.7 in. H_2O to 15.3 psig)
OPERATING TEMPERATURE	−40° F to +300° F (−40° C to +148° C)
C_V COEFFICIENT	0.2
INLET/OUTLET CONNECTIONS	¼″ FNPT

Features & Benefits
- Subatmospheric or positive back pressure control
- Large diaphragm for sensitive pressure control

Options
- Extra ports
- Panel mount (requires a 1⅜″ mounting hole)
- Pressure gauges
- Optional welded connections
- Smaller orifice sizes available: 0.005, 0.03

GO Regulator
405 Centura Court • PO Box 4866 (29305) • Spartanburg, SC 29303
Phone (864) 574-7966 Fax (864) 574-5608
www.goreg.com • sales@goreg.com
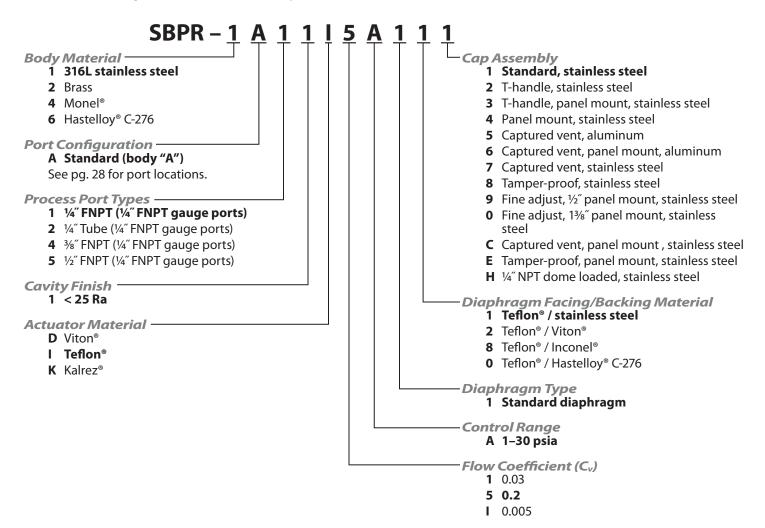
Subatmospheric Back Pressure Regulators

Maximum Temperature and Control Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM CONTROL RANGE
Viton®	250° F (121° C)	@	1–30 psia
Kalrez®	300° F (148° C)	@	1–30 psia
Teflon®	200° F (93° C)	@	1–30 psia

Temperatures in excess of 175° F (80° C) require the use of a T-handle or the tamper proof option.

How to Order

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

SBPR – 1 A 1 1 I 5 A 1 1 1

Body Material
- **1 316L stainless steel**
- 2 Brass
- 4 Monel®
- 6 Hastelloy® C-276

Port Configuration
- **A Standard (body "A")**
- See pg. 28 for port locations.

Process Port Types
- **1 ¼˝ FNPT (¼˝ FNPT gauge ports)**
- 2 ¼˝ Tube (¼˝ FNPT gauge ports)
- 4 ⅜˝ FNPT (¼˝ FNPT gauge ports)
- 5 ½˝ FNPT (¼˝ FNPT gauge ports)

Cavity Finish
- **1 < 25 Ra**

Actuator Material
- D Viton®
- **I Teflon®**
- K Kalrez®

Cap Assembly
- **1 Standard, stainless steel**
- 2 T-handle, stainless steel
- 3 T-handle, panel mount, stainless steel
- 4 Panel mount, stainless steel
- 5 Captured vent, aluminum
- 6 Captured vent, panel mount, aluminum
- 7 Captured vent, stainless steel
- 8 Tamper-proof, stainless steel
- 9 Fine adjust, ½˝ panel mount, stainless steel
- 0 Fine adjust, 1⅜˝ panel mount, stainless steel
- C Captured vent, panel mount , stainless steel
- E Tamper-proof, panel mount, stainless steel
- H ¼˝ NPT dome loaded, stainless steel

Diaphragm Facing/Backing Material
- **1 Teflon® / stainless steel**
- 2 Teflon® / Viton®
- 8 Teflon® / Inconel®
- 0 Teflon® / Hastelloy® C-276

Diaphragm Type
- **1 Standard diaphragm**

Control Range
- **A 1–30 psia**

Flow Coefficient (C_v)
- 1 0.03
- **5 0.2**
- I 0.005

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

Subatmospheric Back Pressure Regulators

Outline and Mounting Dimensions

Weight - 3.2 lbs (1.45 kg)

2.1 (53mm)

4.81 (122mm)

Ø 3.00 (76mm)

1/4" NPT
TYP

.750 (19mm)

OUT

IN

.750 (19mm)

10-32 UNF x .25 MIN FULL THDS (2X)