

# ABP1 Series

## Back Pressure Regulator

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding

### Customer Value Proposition:

The ABP1 is a versatile design for the control of inlet, upstream or back pressure in an instrument or analyzer system.

The materials of construction of this regulator make it suitable for applications where corrosive media and/or environments are present.



### Contact Information:

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### Product Features:

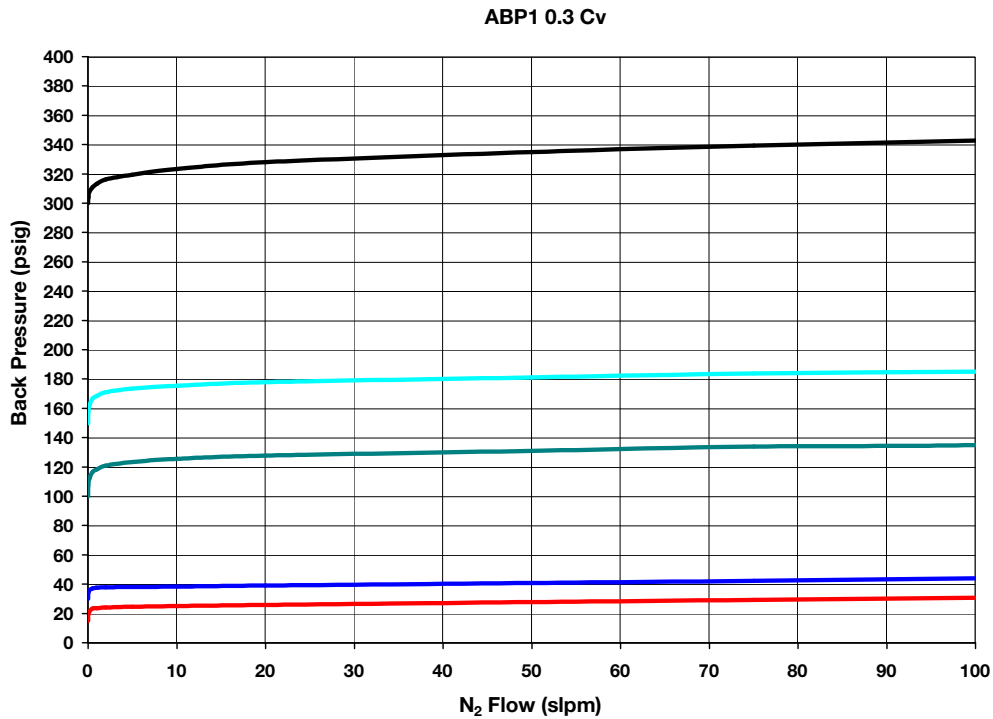
- Standard Hastelloy C-22® diaphragm for superior strength and corrosion resistance.
- Integral diaphragm stop provides an additional safety measure.
- Cleaned for O<sub>2</sub> service is standard.
- Convolute diaphragm provides outlet pressure stability with changes in flow.
- Express Service Program is available and noted in *blue italic print*.



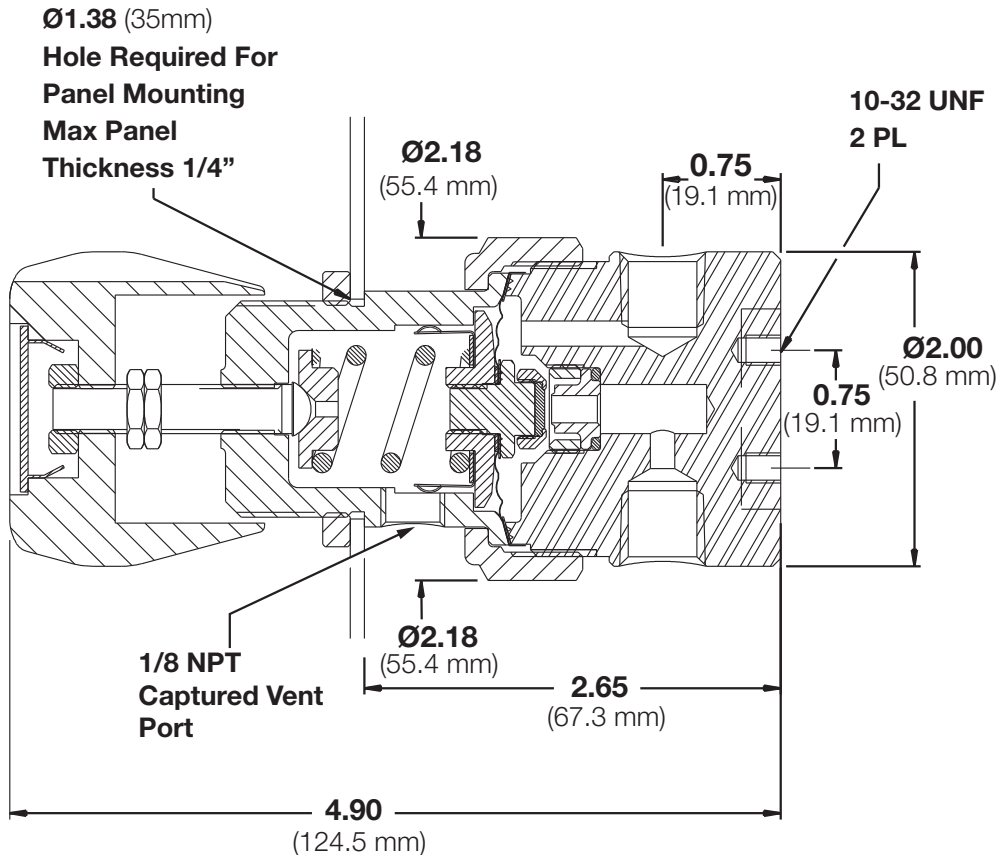
ENGINEERING YOUR SUCCESS.

# ABP1

## Flow Curves



## Dimensional Drawing



# ABP1

## Ordering Information

Build an ABP1 Regulator by replacing the numbered symbols with an option from the corresponding tables below.

Note: Options in *blue/italic* type are available for the *Express Service Program*.

Sample: **ABP1**      **S**      **T**      **3**      **3BP**      **2**      **4**

Finished Order: **ABP1ST33BP24**

**1** **Body Material**  
*S = 316L Stainless Steel*  
 H = Hastelloy C-22®  
 M = Monel®

**2** **Seat Material**  
*T = PTFE*  
 V = Fluorocarbon Elastomer (FKM)  
 K = Perfluoroelastomer (FFKM)

**3** **Pressure Range**

Range	Gauge
<i>1 = 1 - 25 psig</i>	<i>03 0 - 30 psig</i>
<i>2 = 2 - 50 psig</i>	<i>OL 0 - 60 psig</i>
<i>3 = 3 - 100 psig</i>	<i>2 0 - 200 psig</i>
<i>4 = 10 - 250 psig</i>	<i>4 0 - 400 psig</i>
<i>5 = 20 - 500 psig</i>	<i>6 0 - 600 psig</i>

**4** **Porting**  
*2BP = 2 Ports - No X required for gauges, Inlet & outlet ports only,*  
*3BP = 3 Ports - One X for gauge port*  
*3PB = 3 Ports - One X for gauge port (outlet though bottom)*  
*3PP = 3 Ports - One X for gauge ports*

**5** **Inlet Gauge**  
*03 = 0 - 30 psig*  
*OL = 0 - 60 psig*  
*2 = 0 - 200 psig*  
*4 = 0 - 400 psig*  
*6 = 0 - 600 psig*  
*X = No Gauge*  
*(Additional ranges available upon request)*

**6** **Port Style**  
*2 = 1/8" NPT Female*  
*4 = 1/4" NPT Female*  
*(All Gauge ports are 1/4" NPT Female)*

**7** **Optional Features**  
 This section can have multiple options  
**DO= Dome Loaded** *(Not available with M option)*  
**M = Metal Knob** *(Black) (Not available with DO options)*  
**06 = 0.06 Cv**  
**1 = 0.1 Cv**

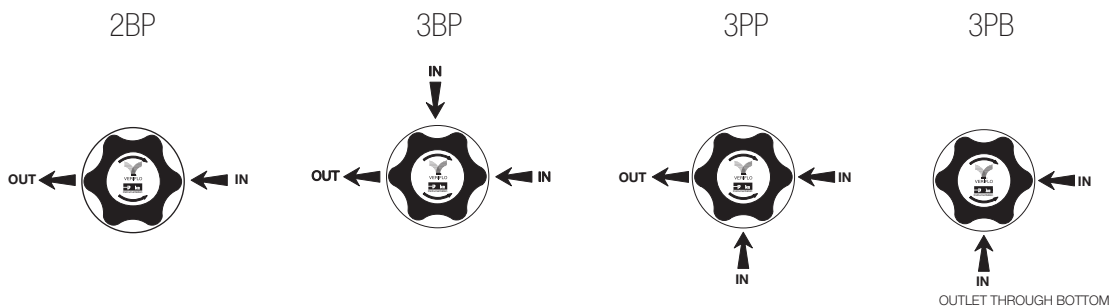
**Note: Panel Mount Option:**  
*Order Panel Nut Ring p/n: 41900363 as a separate line item.*  
**Vent Muffler Option:**  
*Order Vent Muffler p/n: 46600581 as a separate line item.*

Additional configurations available upon request

Hastelloy C-22® is a registered trademark of Haynes International, Inc.  
 Monel® is a registered trademark of Special Metals Corporation

**Note:** Veriflo reserves the right to plug NPT ports. If a true ported body is required, please contact Customer Service.

## Porting Configurations



# ABP1

## Specifications

<b>Materials of Construction</b>	
<b>Wetted</b>	
Body Options	316L Stainless Steel (std) Monel® or Hastelloy C-22®
Diaphragm	Hastelloy C-22®
Diaphragm Assembly Options	316L Stainless Steel, PTFE (std) Hastelloy C-22, PTFE
Seal Options	PTFE, FKM or FFKM
Seat O-ring	PTFE
Seat & Holder Options	316L Stainless Steel (std) Hastelloy C-22®
Outboard Gasket	PTFE
Screen Options	316L Stainless Steel (std) Hastelloy C-22®
<b>Non-wetted</b>	
Cap	303 Stainless Steel
Cap Nut	316L Stainless Steel
Knob Options	ABS (std) Aluminum

For additional information on materials of construction, functional performance and operating conditions, see Regulator Technical Bulletin.

<b>Functional Performance</b>	
<b>Design</b>	
Proof Pressure	750 psig (52 barg)
Burst Pressure	1,500 psig (103 barg)
<b>Flow Capacity</b>	
$C_v$	0.3 $C_v$ (std), 0.1 $C_v$ or 0.06 $C_v$
<b>Leak Rate</b>	
Internal:	Bubble Tight
External:	Bubble Tight
<b>Internal Volume</b>	5.9 cc
<b>Approx. Weight</b>	2.3 lbs (1.0 kgm)
<b>Operating Conditions</b>	
Control Pressure	1 - 25 psig (2 barg)
	2 - 50 psig (3.5 barg)
	3 - 100 psig (7 barg)
	10 - 250 psig (17 barg)
	20 - 500 psig (35 barg)
Max. Temperature of Flow Media	-15°F to 400°F (26°C to 204°C) <i>Note: Metal Knob required for high temperature applications</i>

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