



**Amflow®**

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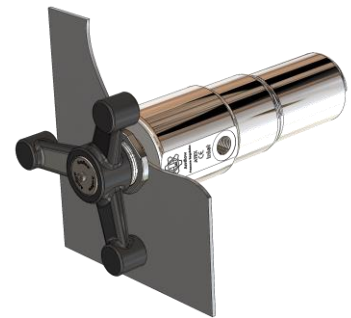
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## TECHNICAL DATA SHEET

# **AMFLOW® PR7B BACK PRESSURE REGULATOR**



**Part Number: 0000575-0501**

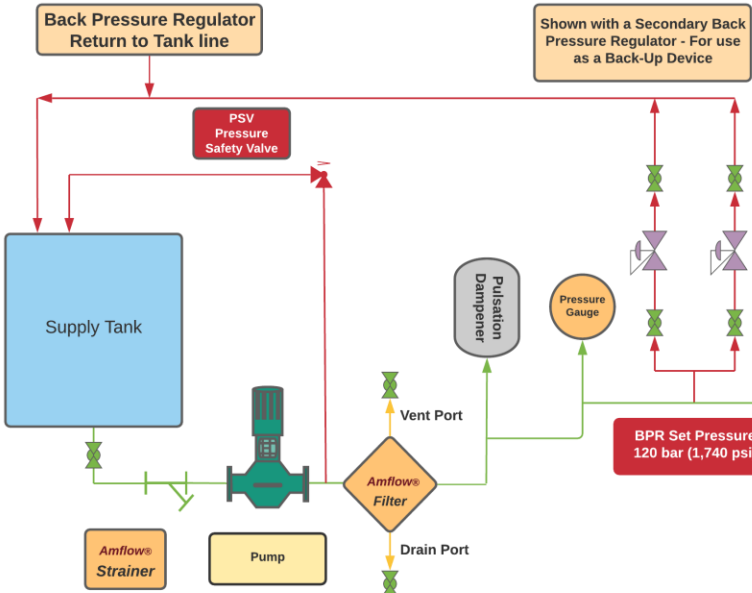
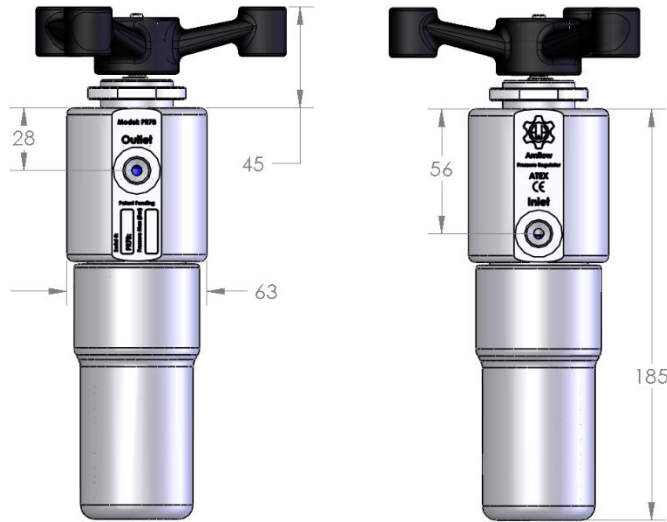
(Reference Ordering Guide on page 6 for part number options)

### **Standards and Patents:**

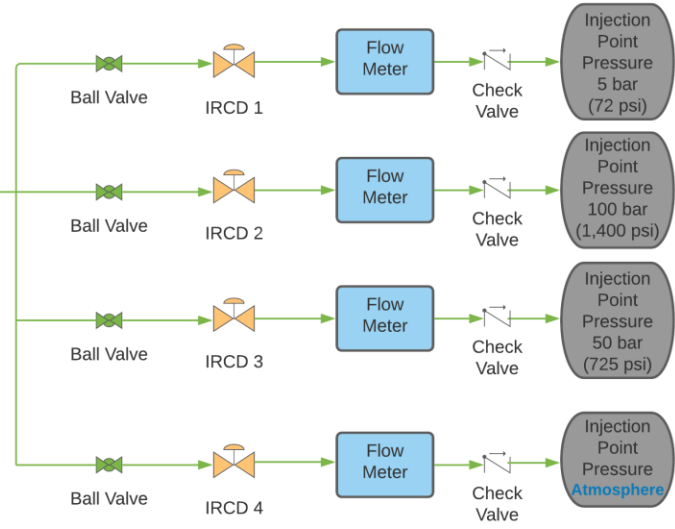
Material traceability certificates, post processes, and As-Built documents shall be maintained on file with **Amflow®** for a period of not less than TEN years.

<b>ATEX DIRECTIVE 2014/34/EU</b>
<b>CE 0891 Ex II 2G Ex h T6</b>
<b>PED 2014/68 EU SEP CATEGORY II MODULES A, D1 &amp; E1</b>
<b>US PATENTS 7343929 B2</b>

**Amflow®** reserves the right to amend or change specifications without prior notice.



The injection point pressures are to show the capabilities of the Amflow® Flow Control Valves. They are for reference only. In operation your injection point pressures will be different. As shown on IRCD 4 Amflow® Flow Control Valves can take the entire system pressure drop and inject to atmosphere.



This P&ID is just a sample. It is a typical setup and what we recommend for a system. It is not meant to apply to any particular project.

**Pump Requirement:** Pressure & Flow to meet highest demand. Pump Stroke should be set to a minimum of 20% more than project requirements. The excess amount will be returned to the tank.  
**Pulsation Damper (Accumulator):** Charged to 75-80% of system operating pressure.  
**Back Pressure Regulator:** Set to a minimum of 20 bar above the highest injection point.



Sample Chemical Injection Skid P&ID - 4 injection points Reference only.



## Design Features

### PRODUCT DESCRIPTION:

The **Amflow**® PR7B Back Pressure Regulator is adjustable for back pressure regulation. from 3 to 414 bar (44 PSI - 6,000 PSI) and flow rates up to 1,000 LPH.

The PR7B Back Pressure Regulator is designed to be mounted in a stainless-steel panel with a minimum thickness of 2 mm. The mounting hole should be from 34 mm to 38 mm in diameter.

The Inlet and Outlet Ports are 180-degrees from each other.

### DESIGN FEATURES:

- The **Amflow**® PR7B Back Pressure Regulator maintains up stream pressure
- Pressure Vessel Materials Standard: 316/316L Stainless Steel & Titanium
- Pressure Vessel Materials Optional: Duplex 2205, Super Duplex 2507 & Titanium
- Operating Pressure: 3 bar (44 PSI) to 414 bar (6,000 PSI)
- Ambient Operating Temperature Range Standard: -15°C (5°F) to 232°C (450°F)
- Ambient Operating Temperature Range Optional: -45°C (-49°F) to 250°C (482°F)
- Standard Inlet & Outlet Ports: 1/4" FBSPP & FNPT
- Weight: 3.4 kg (7.50 lbs.)
- Ceramic pins & seats for high pressure control & reliability
- FFKM (perfluoroelastomer) & PTFE seals for high chemical resistance
- Low maintenance
- Variable spring rate with the configurable Belleville spring stack, allows flexibility in the set pressure range
- Easily adaptable to remote operation with **Amflow**® ATEX/IECEX Certified 24 VDC Electronic Actuators

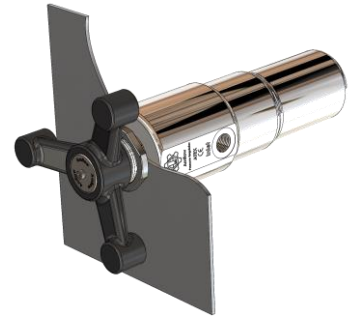
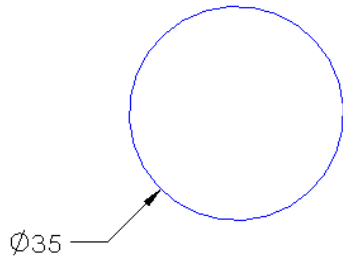
### OPERATING TORQUE:

Due to the design of the **Amflow**® PR7B Back Pressure Regulator, the operating torque requirements are very low throughout the operating range, thus making it suitable for automated applications.

The PR7B Back Pressure Regulator can be configured with an **Amflow**® A6 ATEX/IECEX certified 24 VDC electronic valve actuator for local or remote operation.



### Panel Mount Dimensions



### ATEX/IECEX Certified Actuator Options



**PR7B**  
Shown with  
**Amflow® A6 ATEX/IECEX certified 24 VDC Actuator**  
Offering remote & local back pressure regulation.



1. FLOW RATES		
1.01 Flow rate range	<b>MINIMUM:</b> 1.0 LPH	<b>MAXIMUM:</b> 1,000 LPH
1.02 Operating pressure range *	<b>MINIMUM:</b> 3 bar (44 PSI)	<b>MAXIMUM:</b> 414 bar (6,000 PSI)
1.03 Hydrostatic pressure test	620 bar (9,000 PSI)	
1.04 Ambient operating temperature standard	<b>MINIMUM:</b> -15°C (5°F)	<b>MAXIMUM:</b> 232°C (450°F)
1.05 Ambient operating temperature optional	<b>MINIMUM:</b> -45°C (-49°F)	<b>MAXIMUM:</b> 250°C (482°F)
2. PORT CONFIGURATION	Standard	Optional
2.01 Positioned as shown on GA drawing	1/4" FBSPP or FNPT	ANSI B16.5/ASTM A82 Flanges
3. CONSTRUCTION MATERIALS	Standard Material	Special Order
3.01 Pressure vessel & external parts	316/316L & Titanium (6AL-6V-2Sn)	Duplex 2205, Super Duplex 2507 & Titanium
3.02 Internal wetted parts	316/316L & Titanium (6AL-6V-2Sn)	Contact <b>Amflow®</b>
3.03 Wetted seals	FFKM & PTFE	Contact <b>Amflow®</b>
3.04 Non-wetted seals	Viton	Contact <b>Amflow®</b>
4. PIN & SEAT	Standard Material	
4.01 Pin & Seat	Ceramic – Zirconia – ZrO <sub>2</sub>	
4.02 Seat leakage class	IV	
5. NOISE	Decibels	
5.01	Less than 70 dB	
6. DIMENSIONS	Metric	Imperial
6.01 Height (overall)	230 mm	9 in.
6.02 Diameter	63 mm	2.5 in.
7. WEIGHT	Metric	Imperial
7.01	3.4 kg	7.5 lbs.
8. PANEL MOUNT REQUIREMENTS	Metric	Imperial
8.01 Maximum panel thickness	7 mm	0.28 in.
8.02 Mounting hole diameter	35 mm	1.38 in.
<b>NOTES:</b>		
<b>SET PRESSURE:</b>		
* Depending on the set pressure requirements of the PR7B back pressure regulator, springs can be assembled in different configurations.		



ORDERING GUIDE

PRODUCT NO.	PRODUCT TYPE	CODE NO.	PRESSURE VESSEL MATERIAL	MATERIAL CODE NO.	WETTED SEALS	SEALS CODE NO.	FLOW RATE H2O	FLOW CODE NO.	SET PRESSURE RANGE	SET PRESSURE CODE NO.	PORT TYPE	PORT CODE NO.
00000575	BACK PRESSURE REGULATOR	-0501	316/316L DUAL CERTIFIED	-001	STANDARD WETTED SEALS ARE FFKM & PTFE	-02	1-100 LPH	-000	3-30 BAR** (44-435 PSI)	-00	1/4" FBSPP	-00
			TITANIUM 6AL-4V	-002			1-500 LPH	-001	20-414 BAR (290-6,000 PSI)	-01	1/4" FNPT	-01
			DUPLEX 2205	-003							ANSI B16.5 ASTM A182 FLANGES	-FL
			SUPER DUPLEX 2507	-004			1-1,000* LPH	-002	*69 -414 bar (1,000 – 6,000 psi)	-02		

00000575      -0501      -001      -02      -000      -01      -00

\* Only available with operating pressures above 69 bar (1,000 PSI)

\*\* 3 bar (44 PSI) to 6 bar (87 psi) maximum flow rate is 100 LPH.

**EXAMPLE**

**TO ORDER:**

**Amflow®** PR7B Back Pressure Regulator in 316L with FFKM Seals, 100 LPH, 20 - 414-bar (290-6,000 PSI), and 1/4" FBSPP Ports

**YOU WOULD ORDER #:**

**00000575 – 0501 – 001 – 02 – 000 – 01 – 00**

**ORDERING INFORMATION**

As the **Amflow®** PR7B Back Pressure Regulator is custom built specifically to meet the end user's criteria, it is critical that **Amflow®** receive certain information when ordering Back Pressure Regulators. That information should include, the minimum & maximum flow rates, set pressures, temperatures & chemical MSDS.



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