

# P50 & P50 NACE Filter Regulators

- Superior Regulation Characteristics
- Rugged, Corrosion-Resistant Construction
- Excellent Stability and Repeatability
- Integral, 40 micron, Self Cleaning Filter
- Self-Relieving
- Standard Tapped Vent
- Soft Relief Seat on P50
- Several Mounting Options

The BelGAS General Purpose P50 & P50 NACE Filter Regulators are reliable precision units designed for instrumentation and general purpose use in both standard environments (P50), and corrosive environments (P50 NACE). The P50 NACE complies with NACE material requirement MR0175 for sulfide stress cracking resistant metallic material for oil field equipment.

These BelGAS regulators are generally superior in regulated pressure vs. flow, forward-to-reverse flow offset, supply pressure sensitivity, repeatability and stability.

Ruggedly designed and constructed, the regulators have housings of diecast aluminum. The P50 Regulator is finished with vinyl paint (which resists scratching, weathering & other physical abuse), while the P50 NACE is finished with epoxy paint and includes a vent cap for added protection. Both models are pressure and leak tested prior to shipment from the factory.

The full flow gauge port is convenient for gauge installation and can also be used as an additional full flow outlet. The P50 regulators include a unique self-cleaning 40 micron nylon mesh filter (316 stainless steel in the P50 NACE) that can be easily removed.

## Applications

The design of these regulators is especially well suited to pilot-operated level, pressure and flow controllers and instruments, as well as applications such as air chucks, air spray guns, air cylinders and actuators, and a wide range of industrial pneumatic systems and equipment.

## P50 Part Matrix

P050	02			0 0 0	
↑		↑	↑		Versions
0					Standard
N					NACE
					Output Range
		010			0-10 PSIG*
		035			0-35 PSIG
		060			0-60 PSIG
		120			0-120 PSIG
					Options
		00			Standard
		0B			Non-relieving
		0F			5 Micron Filter
		0K			Knob*
		BF			Non-relieving & 5 M Filter
		BK			Non-relieving & Knob*
		CD			Non-relieving, 5 M Filter & Knob*

\*Not available in NACE

\*P50 standard version only

**The P50 NACE is available for use in corrosive environments. This complies with NACE material requirement MR0175 for sulfide stress cracking resistant metallic material for oil field equipment.**



## Materials of Construction

	P50 Filter Regulator	P50 NACE Filter Regulator
Body	Diecast aluminum with vinyl paint	Diecast aluminum with epoxy paint
Adjusting Screw	Plated steel	Stainless steel
Trim	Plated steel, brass, acetal resin	Stainless steel, Neoprene, Fluoroelastomer
Diaphragm	Buna-N elastomer with polyester fabric	Fluoroelastomer with Polyester Fabric
Knob	Phenolic plastic (option)	
Spring	Music wire	Inconel

## Non-relieving

Used in applications where it is desirable to relieve pressure downstream of the regulator, for some constant flow applications, and where the gas flowing through the regulator must not escape at the regulator. Non-relieving regulators should not be used for low or no flow applications.

## 5 Micron Filter

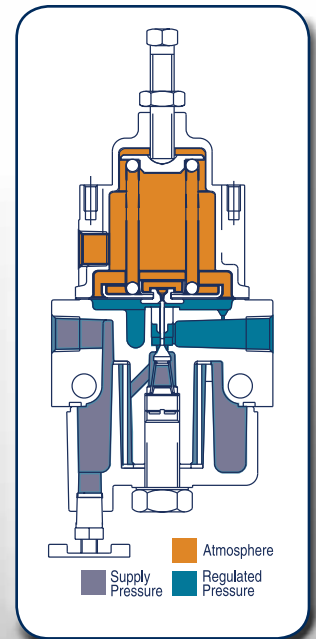
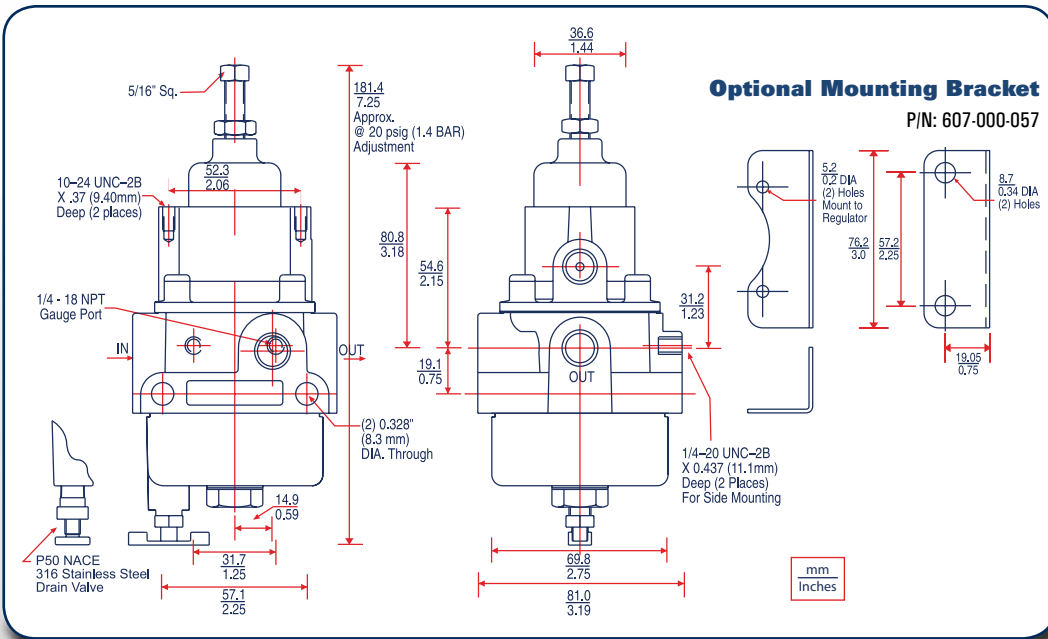
Replaces the 40 micron filter supplied with the standard P50 for more complete air filtration.

The standard P50 will have a tapped vent, vinyl paint, 40 micron filter and low bleed. The standard P50N will have a tapped vent, epoxy paint, 40 micron filter and standard bleed.

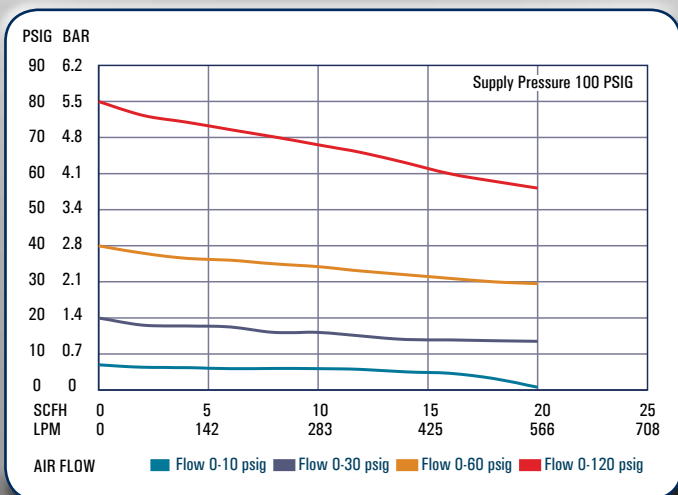
## P50 & P50 Nace Specifications

	P50 Filter Regulator	P50 NACE Filter Regulator
Sensitivity	1" (25.4 mm) Water Column	1" (25.4 mm) Water Column
Flow Capacity	20 SCFM (565 LPM)	18 SCFM (510 LPM)
Effect of Supply Pressure variation (25 PSIG) on Outlet Pressure	< 0.2 PSIG (0.01 BAR)	< 0.2 PSIG (0.01 BAR)
Exhaust Capacity (5 PSIG above 20 PSIG set point)	0.1–0.45 SCFM Typical (2.8–12.7 LPM)	0.1–0.45 SCFM Typical (2.8–12.7 LPM)
Maximum Input/Supply Pressure	250 PSIG (17.2 BAR)	250 PSIG (17.2 BAR)
Effect of Changes in Flow on Regulated Pressure (100 PSIG/6.9 BAR Supply)	4 PSIG (0.3 BAR) over flow 10 SCFM (283 LPM) (1/4 NPT, 20 PSIG / 1.4 BAR set point)	5 PSIG (0.3 BAR) over flow 10 SCFM (283 LPM) (1/4 NPT, 20 PSIG / 1.4 BAR set point)
Output Pressure Ranges	0-10 PSIG (0-0.7 BAR) 0-35 PSIG (0-2.4 BAR) 0-60 PSIG (0-4.1 BAR), 0-120 PSIG (0-8.3 BAR)	0-35 PSIG (0-2.4 BAR) 0-60 PSIG (0-4.1 BAR), 0-120 PSIG (0-8.3 BAR)
Temperature Range	0 to 160°F (-18 to 71 °C)	-20 to 180° F (-29 to 82 °C)
Total Air Consumption @ Maximum Output	0.1 SCFH (0.05 LPM)	6 SCFH (2.8 LPM)
Port Size	1/4 NPT	1/4 NPT
Size	3.19" X 3.19" X 7.25" (81 X 81 X 184 mm)	3.19" X 3.19" X 7.25" (81 X 81 X 184 mm)
Weight	1.81 lb (0.8 kg)	1.81 lb (0.8 kg)
Mounting	Pipe, Panel, Bracket or Thru Body Holes	Pipe, Panel, Bracket or Thru Body Holes

## P50 & P50 Nace Dimensions



## P50 Regulated Pressure vs. Flow



## P50 NACE Regulated Pressure vs. Flow

