

# Back Pressure Regulators

BPR-1, BPR-2 and BPR-3 Series



**FITOK**  
Valves and Fittings

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# Back Pressure Regulators

## BPR-1 Series Back Pressure Diaphragm Regulators

### Features

- ⦿ Metal-to-metal seal with convoluted diaphragm
- ⦿ Close pressure differential between crack and reseal
- ⦿ Panel mounting available

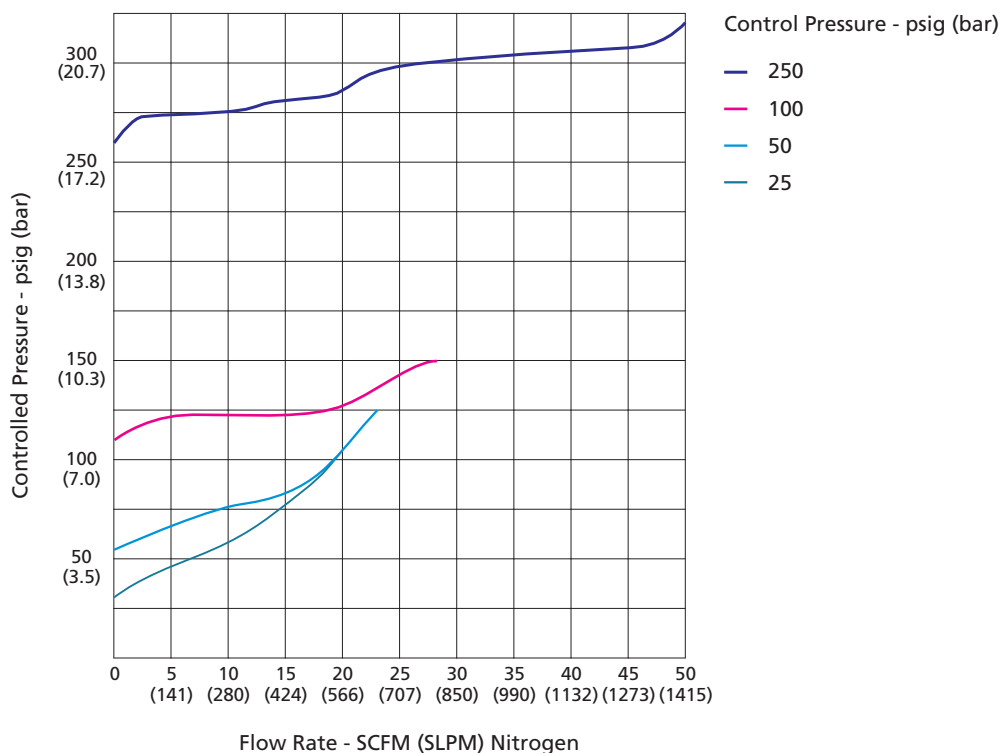
### Technical Data

- ⦿ Maximum control pressure: 250 psig
- ⦿ Pressure control range: 0~25, 0~50, 0~100 or 0~250 psig
- ⦿ Material of the main components:  
Seat: PCTFE  
Diaphragm: Hastelloy
- ⦿ Temperature: -15°F~+165°F (-26°C~+74°C)
- ⦿ Leak rates:  
Internal: Bubble-tight  
External:  $\leq 1 \times 10^{-9}$  mbar · l/s helium
- ⦿ Flow coefficient (Cv): 0.3
- ⦿ Weight:  $\approx 1.98$  lbs (0.9 kg)
- ⦿ Body ports: 1/4" female NPT for inlet, outlet and gauge



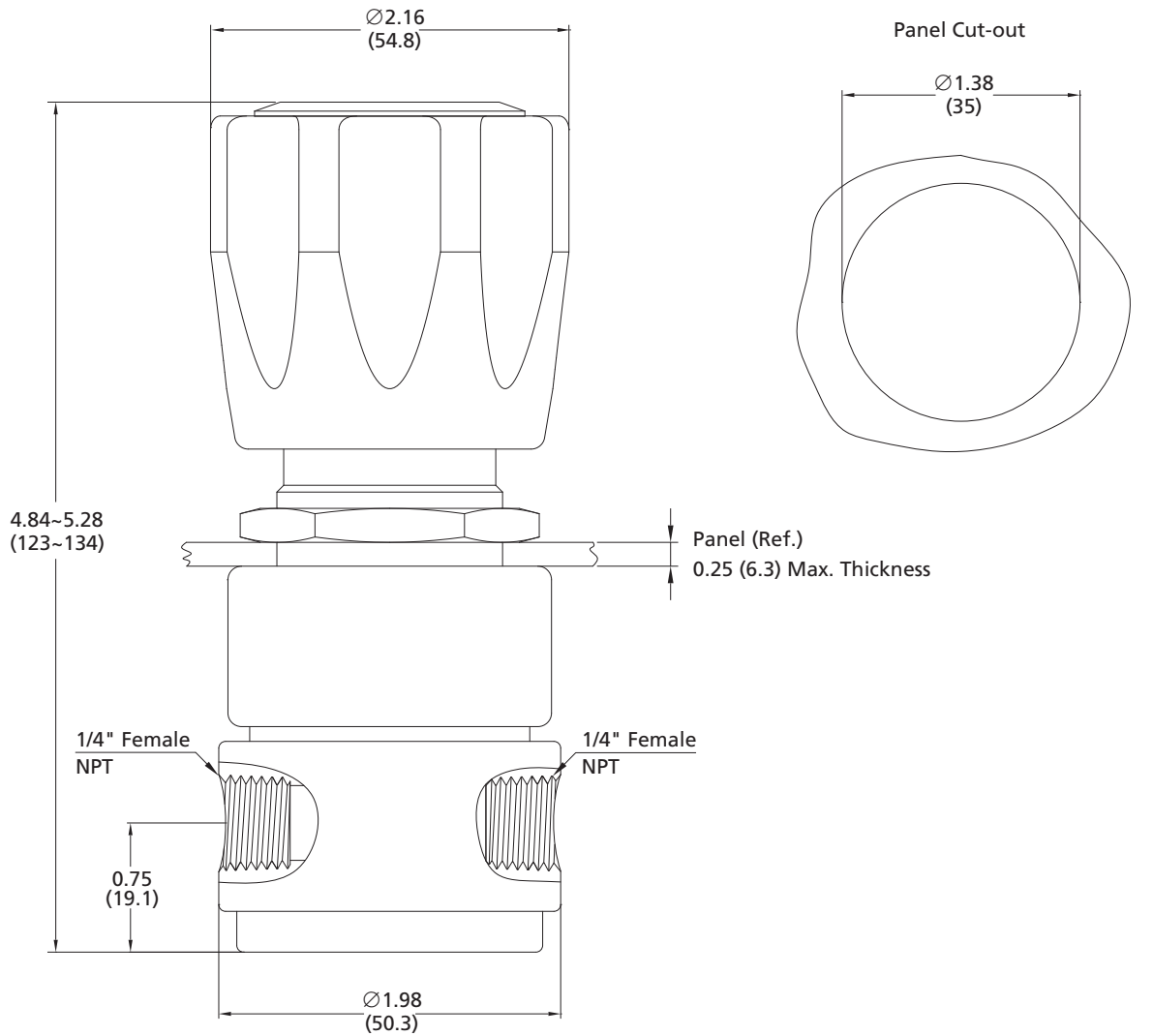
Model: BPR-16L-250-00-00

### Typical Flow Chart



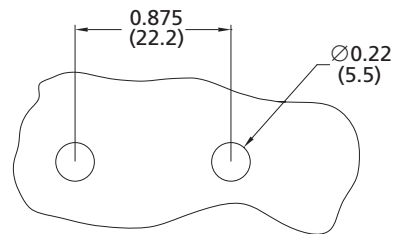
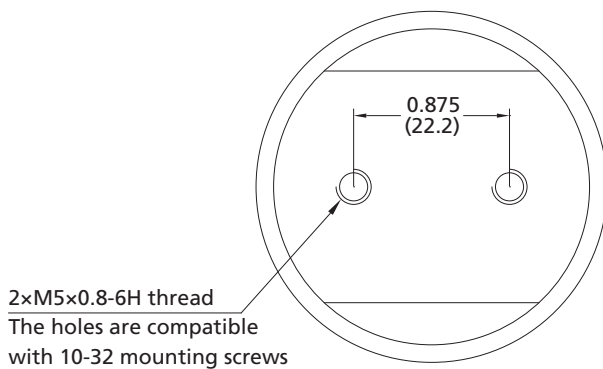
## Dimensions

Dimensions, in inches (millimeters), are for reference only.

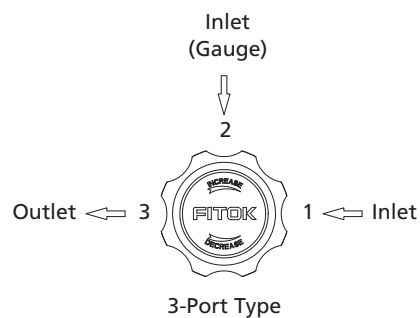
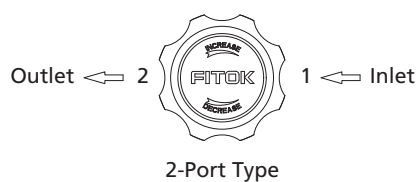


Bottom View

Bottom Panel Cut-out

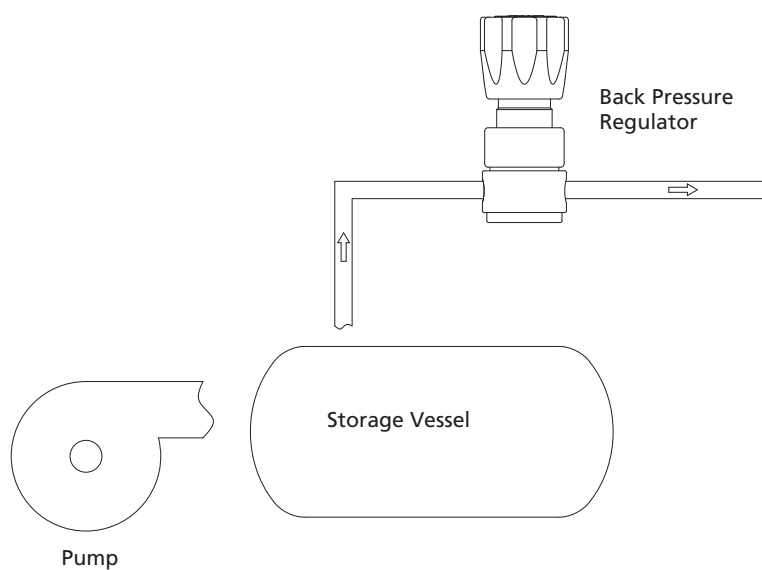


## Port Configurations



## Typical Application

When the system pressure is lower than the set pressure, the diaphragm obstructs the flow by the force of spring. When the system pressure is higher than the set pressure, the diaphragm compresses the inner spring to connect the flow so as to allow the fluid to pass through the back pressure regulator to keep the pressure of the Storage Vessel stable.



## Part Number Description

BPR – 16L		–	100	–	10	–	M	–	11
Body Material		Pressure Control Range P		Connection 1		Connection 2		Connection 3	
6L	316L SS	25	0~25 psig	00	1/4" Female NPT	B	With Gauge (psi/bar)	Same as Connection 1	
SS	316 SS	50	0~50 psig	01	1/4" Male NPT	M	With Gauge (MPa)		
B	Brass (Nickel-plated)	100	0~100 psig	10	1/4" Tube Fitting	P	Plug		
		250	0~250 psig	11	3/8" Tube Fitting	00	1/4" Female NPT		
				20	6 mm Tube Fitting	01	1/4" Male NPT		
				21	8 mm Tube Fitting	10	1/4" Tube Fitting		
				Other connections are available upon request		Other connections are available upon request			

Examples of part number:

a. 2-port type (1 in, 1 out): BPR-16L-25-00-00

# Back Pressure Regulators

## BPR-2 Series Back Pressure Piston Regulators

### Features

- ⦿ Durable piston-sensed design
- ⦿ Bubble-tight shutoff at all reseating pressure
- ⦿ Low operating torque
- ⦿ Panel mounting available
- ⦿ With special cleaning and packaging, applicable to oxygen-enriched environments

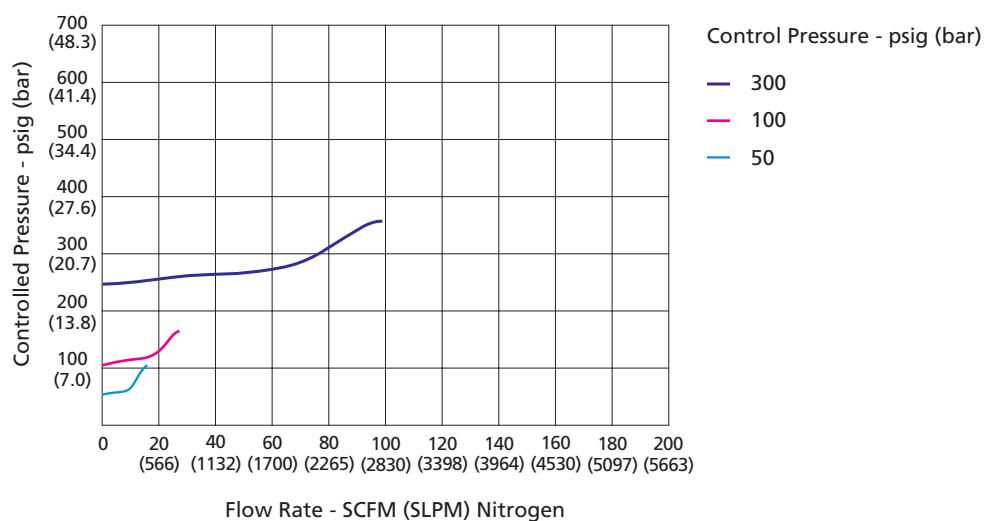
### Technical Data

- ⦿ Maximum control pressure: 1000 psig
- ⦿ Pressure control range: 50~300, 100~500 or 200~1000 psig
- ⦿ Material of the main components:
  - Piston: 316L
  - O-rings: Viton or Kalrez
- ⦿ Temperature: -15°F~+165°F (-26°C~+74°C)
- ⦿ Leak rates:
  - Internal: Bubble-tight
  - External: Bubble-tight
- ⦿ Flow coefficient (Cv): 0.3
- ⦿ Weight: ≈1.98 lbs (0.9 kg)
- ⦿ Body ports: 1/4" female NPT for inlet, outlet and gauge



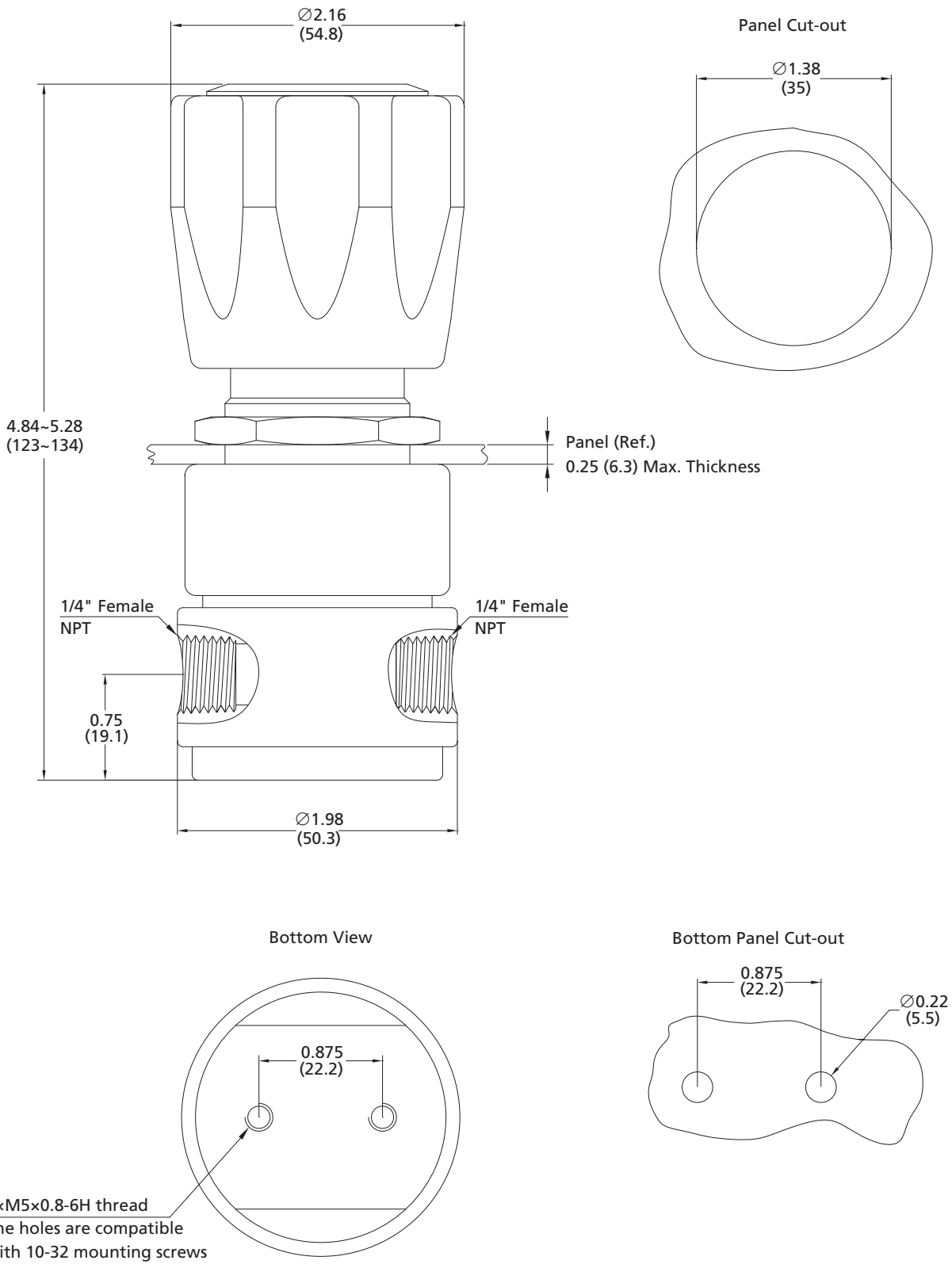
Model: BPR-26LZ-300-00-00

### Typical Flow Chart

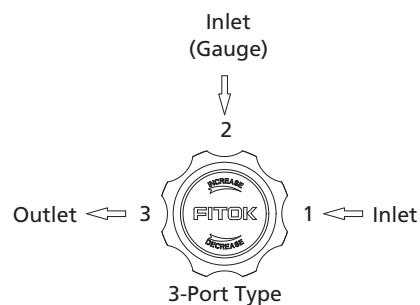
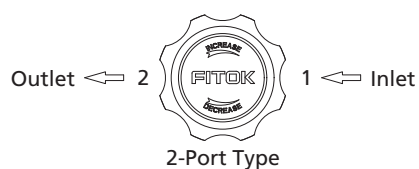


## Dimensions

Dimensions, in inches (millimeters), are for reference only.

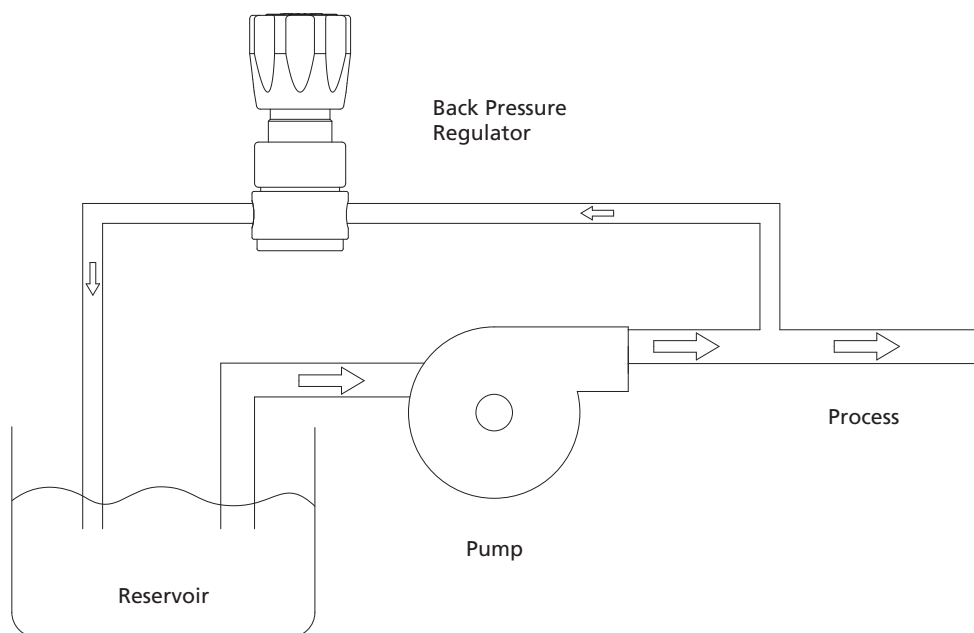


## Port Configurations



## Typical Application

BPR-2 Series Back Pressure Regulators maintain the required pipeline pressure to ensure the Pump to output fluid stably when system pressure fluctuates.



Part Number Description

BPR – 26L		Z –	300	–	10	–	M	–	11
Body Material		Pressure Control Range P		Connection 1		Connection 2		Connection 3	
6L	316L SS	300	50~300 psig	00	1/4" Female NPT	B	With Gauge (psi/bar)	Same as Connection 1	
SS	316 SS	500	100~500 psig	01	1/4" Male NPT	M	With Gauge (MPa)		
B	Brass (Nickel-plated)	1000	200~1000 psig	10	1/4" Tube Fitting	P	Plug		
O-ring Material				11	3/8" Tube Fitting	00	1/4" Female NPT		
	Viton			20	6 mm Tube Fitting	01	1/4" Male NPT		
Z	Kalrez			21	8 mm Tube Fitting	10	1/4" Tube Fitting		
				Other connections are available upon request		Other connections are available upon request			

Examples of part number:  
a. 2-port type (1 in, 1 out): BPR-2SS-500-00-00

# Back Pressure Regulators

## BPR-3 Series Back Pressure Piston Regulators

### Features

- ⦿ Control of back-pressure up to 10000 psig for gas or liquid application
- ⦿ Safe and reliable piston sensing
- ⦿ 7 pressure control ranges
- ⦿ Panel mounting available
- ⦿ Special cleaning and packaging available for application in oxygen-enriched environments

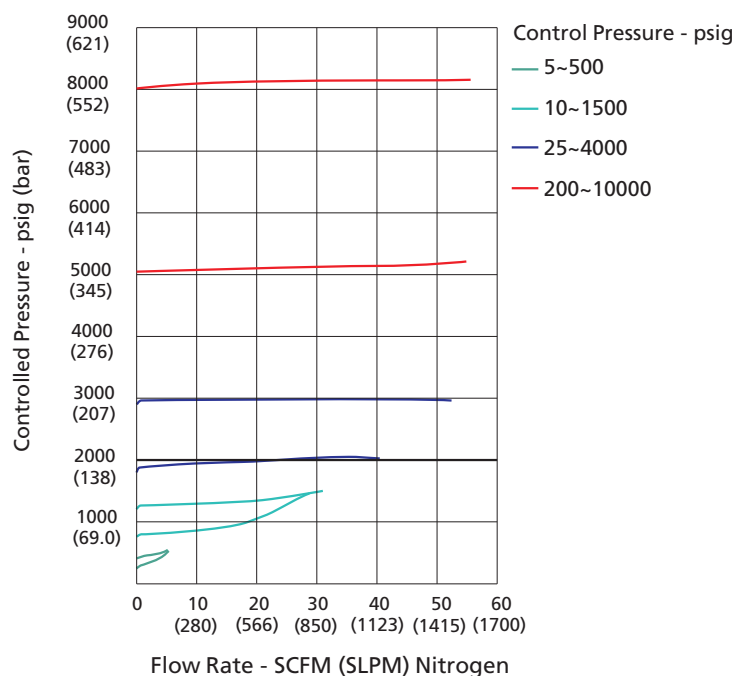
### Technical Data

- ⦿ Maximum control pressure:  
Stainless steel: 10000 psig  
Brass: 6000 psig
- ⦿ Pressure control ranges: 5~500, 5~800, 10~1500, 15~2500, 25~4000, 50~6000, 200~10000 psig
- ⦿ Material of the main components:  
Body: 316 SS or brass  
Seat: PEEK  
Piston: 316L  
O-rings: Viton or Kalrez
- ⦿ Temperature: -15°F~+165°F (-26°C~+74°C)
- ⦿ Leak rates:  
Internal: Bubble-tight  
External: Bubble-tight
- ⦿ Flow coefficient (Cv): 0.25
- ⦿ Weight: ≈5.7 lbs (2.6 Kg)
- ⦿ Body ports: 1/4" female NPT for inlet, outlet, and gauge



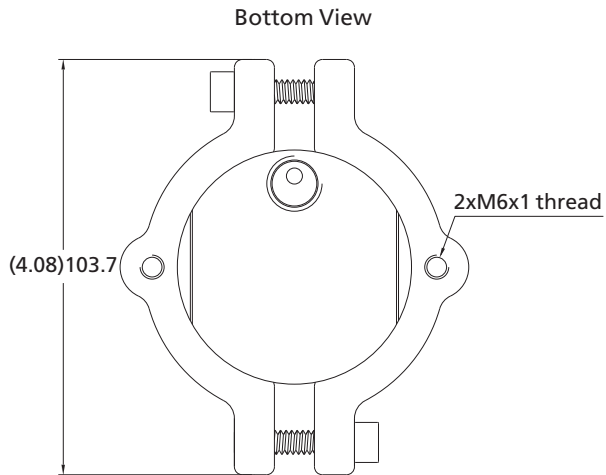
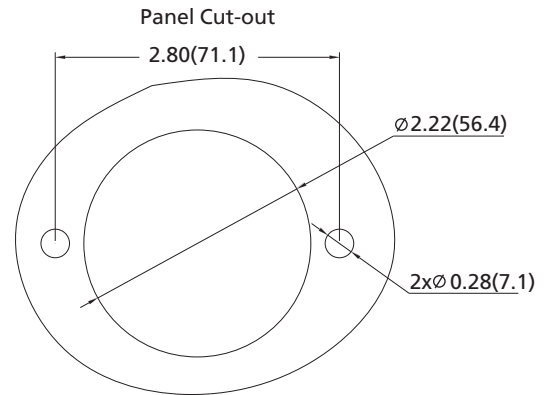
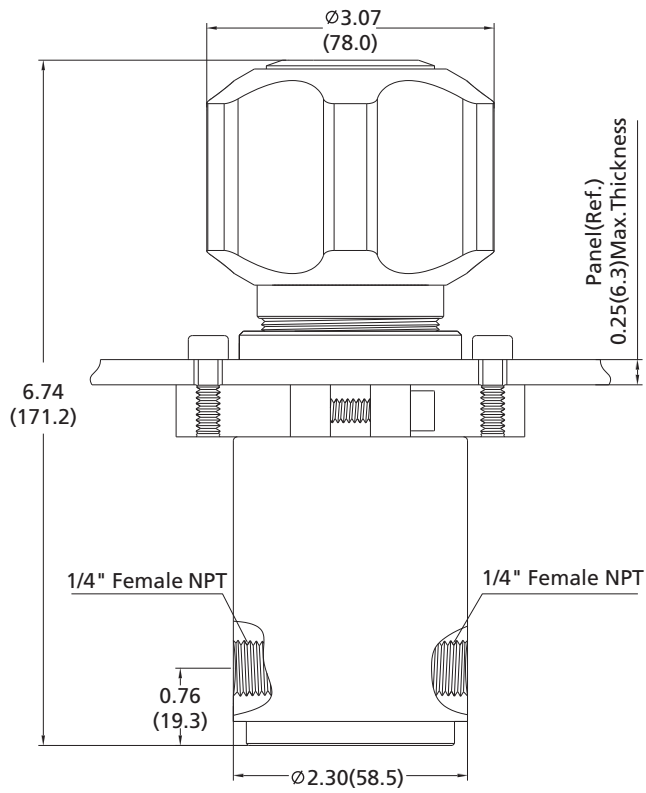
Model: BPR-3SS-40-00-00

### Typical Flow Chart

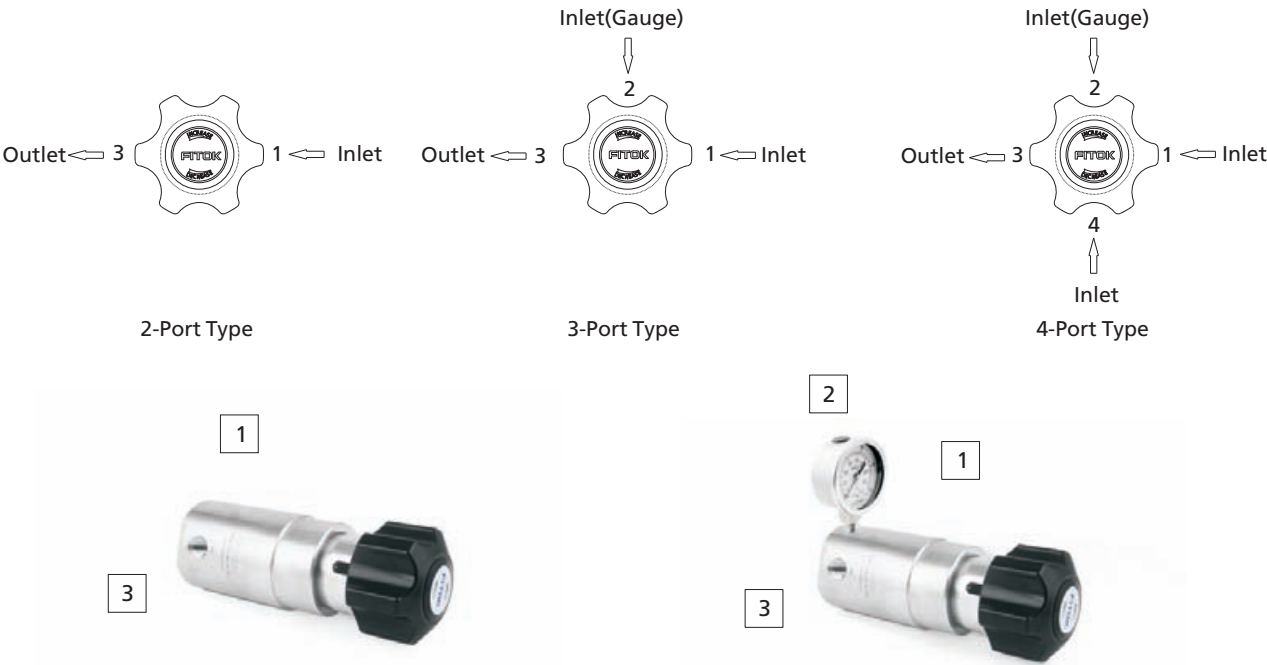


## Dimensions

Dimensions, in inches (millimeters), are for reference only.



Port Configurations



Part Number Description

BPR-3B		Z	-	15	-	00	-	B	-	00	-	00	-	Z	-	F2						
Body Material		Pressure Control Range P		Connection 1		Connection 2		Connection 3	Connection 4	Panel Mount		Product Technology Grade										
SS	316 SS	5	5~500 psig	00	1/4" Female NPT	B	With Gauge (psi/bar)	Same as Connection 1	Same as Connection 1		Without		General Purpose									
6L	316L SS	8	5~800 psig	01	1/4" Male NPT	M	With Gauge (MPa)															
B	Brass(Max. Control Pressure 6000 psig)	15	10~1500 psig	10	1/4" Tube Fitting	P	Plug				z	With		Special Cleaning and Packaging								
		25	15~2500 psig	11	3/8" Tube Fitting	00	1/4" Female NPT															
		40	25~4000 psig	20	6 mm Tube Fitting	01	1/4" Male NPT															
		60	50~6000 psig	10	1/4" Tube Fitting	10	1/4" Tube Fitting															
Z	Kalrez	100	200~10000 psig	11	3/8" Tube Fitting	20	6 mm Tube Fitting									Other connections are available upon request						
O-ring Material				21	8 mm Tube Fitting	21	8 mm Tube Fitting															
				Other connections are available upon request		Other connections are available upon request																

- Examples of part number:
- a. 2-Port type (1 in, 1 out): BPR-3B-25-00-00
  - b. 3-Port type (2 in, 1 out): BPR-3B-40-00-M-00
  - c. 4-Port type (3 in, 1 out): BPR-3B-60-00-M-00-00

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