Back Pressure Regulators

BPR-1 Series Back Pressure Diaphragm Regulators

Features

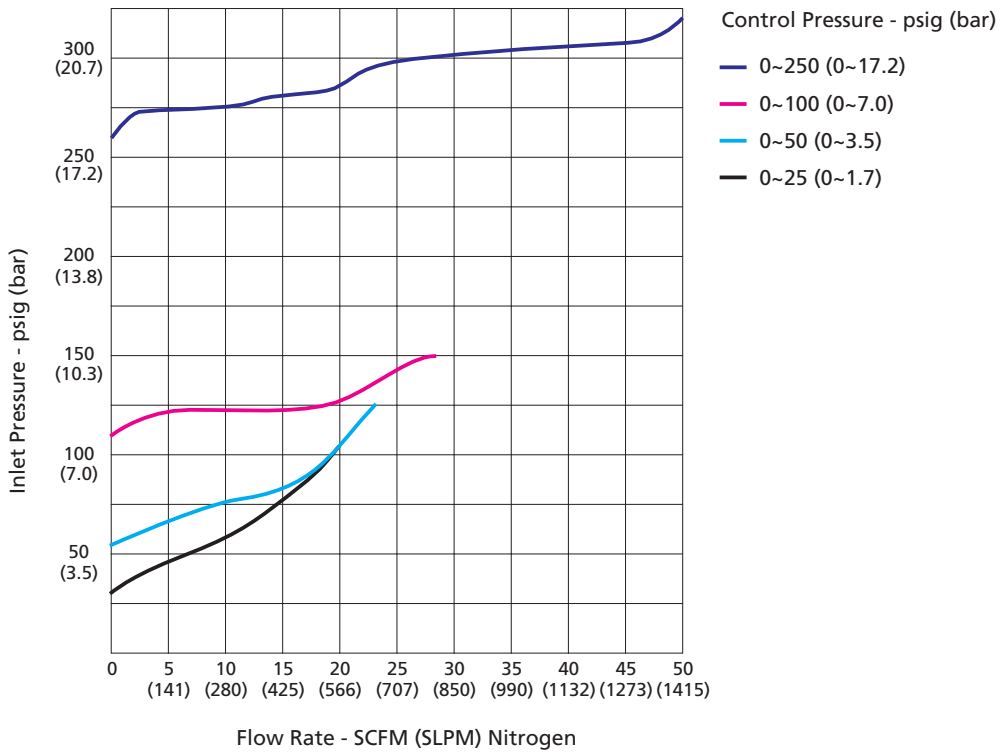
◎ Excellent sensitivity and set point pressure stability
◎ Reduced inner capacity
◎ With special cleaning and packaging, applicable to oxygen-enriched atmospheres

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

Technical Data

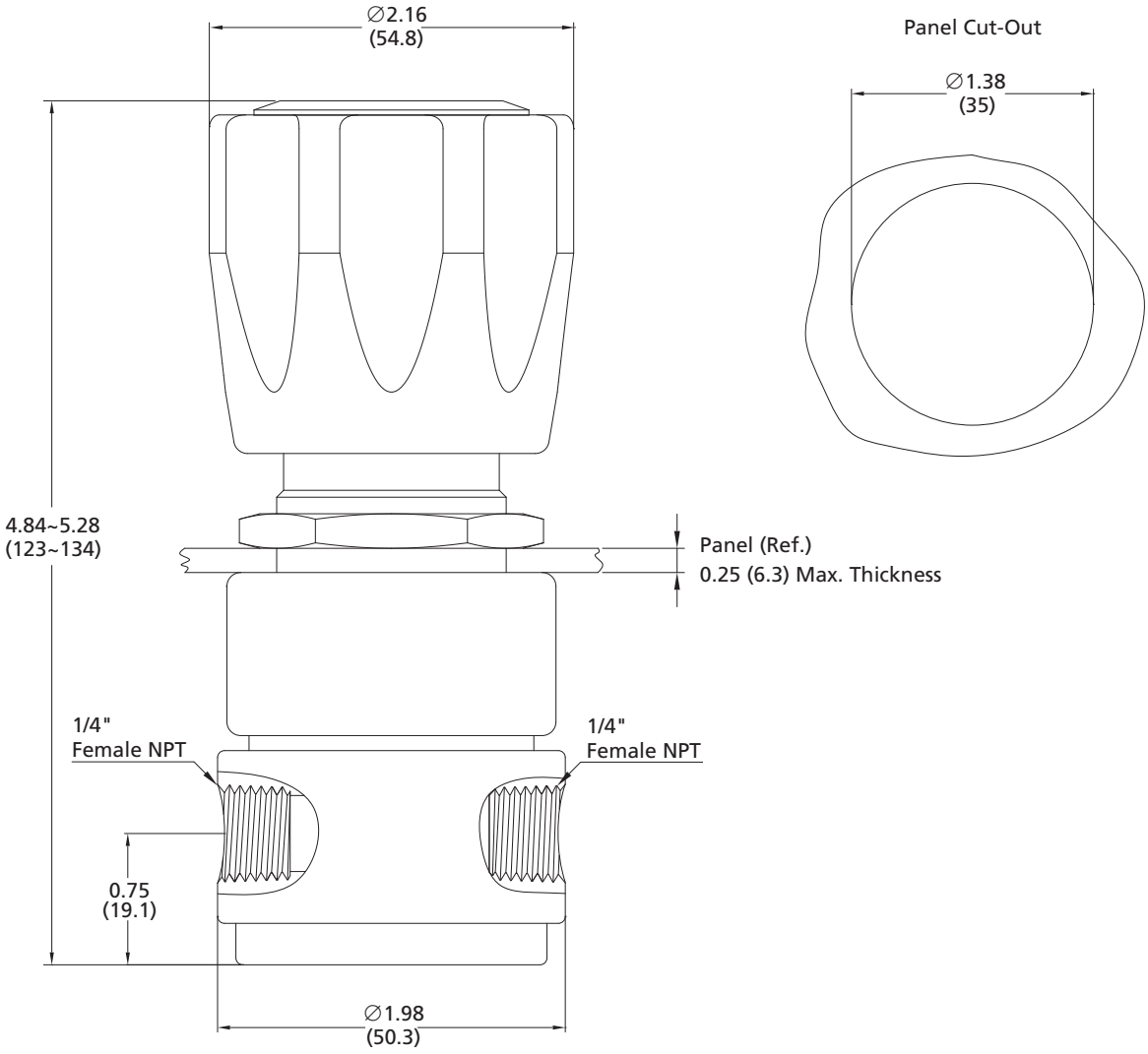
◎ Maximum control pressure: 250 psig
◎ Pressure control range: 0 ~ 25, 0 ~ 50, 0 ~ 100 or 0 ~ 250 psig
◎ Material of the main components:
Seat: PCTFE
Diaphragm: 316L
◎ Temperature: -40 °F ~ 140 °F (-40 °C ~ 60 °C)
◎ Leak rates (helium):
Internal: Bubble-tight
External: $\leqslant 1x10^{-9}$ std cm^3/s
◎ Flow coefficient (Cv): 0.3
◎ Weight: ≈1.98 lbs (0.9 kg)

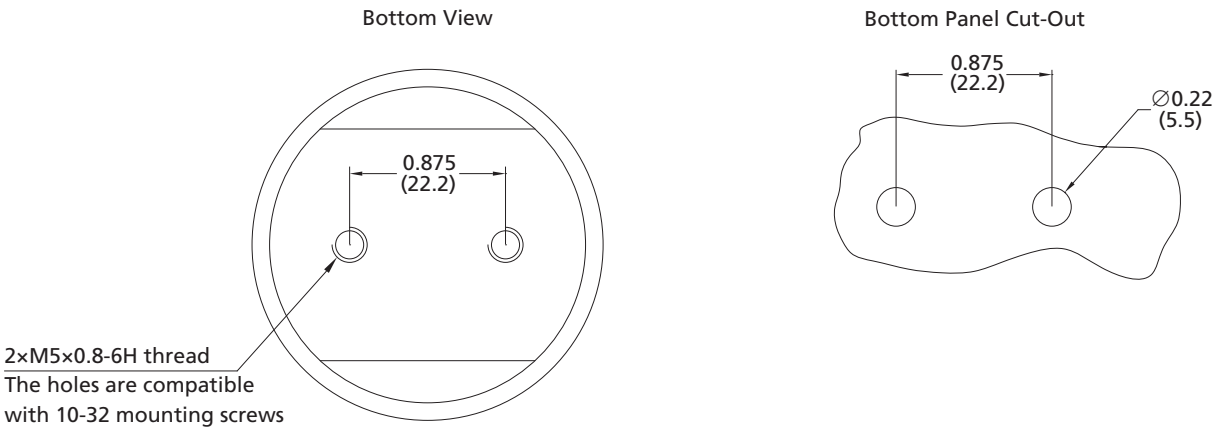
Typical Flow Chart



Dimensions

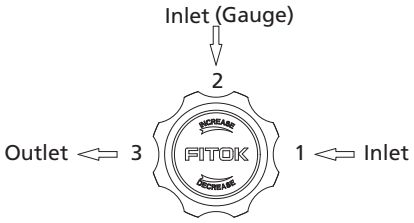
Dimensions, in inches (millimeters), are for reference only.





Port Configurations

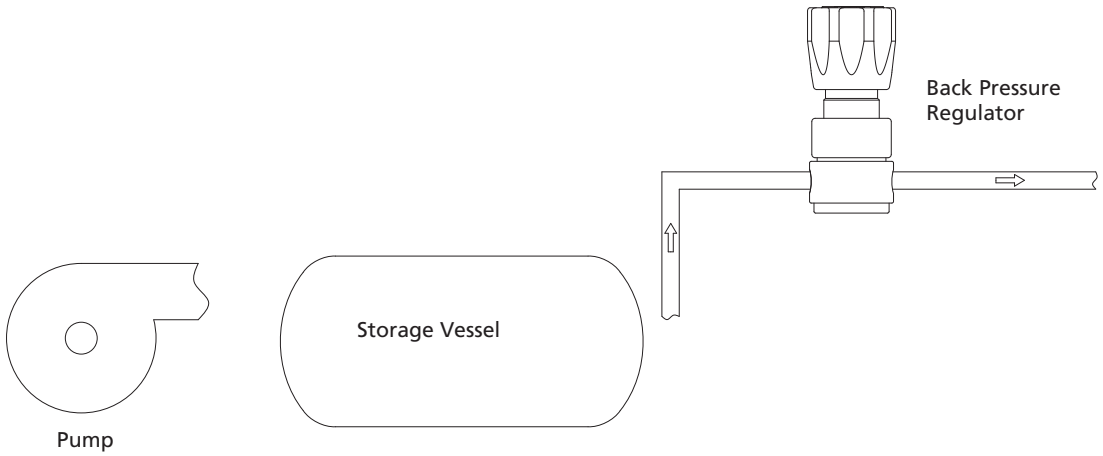
2-Port Type



3-Port Type

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.



Ordering Number Description

BPR – 16L – 100 – 10 – M – 11 – Z

Body Material	
6L	316L SS
SS	316 SS
B	Brass (Nickel-plated)

Control Pressure Range P	
25	0~25 psig
50	0~50 psig
100	0~100 psig
250	0~250 psig

Connection 1	
00	1/4" Female NPT
FFR4	1/4" Rotatable Female FR Metal Gasket Face Seal Fitting
RFR4	1/4" Rotatable Male FR Metal Gasket Face Seal Fitting
01	1/4" Male NPT
10	1/4" Tube Fitting
11	3/8" Tube Fitting
20	6 mm Tube Fitting
21	8 mm Tube Fitting
	Other connections are available upon request

Connection 2	
B	With Gauge (psi/bar)
M	With Gauge (psi/MPa)
P	Plug
00	1/4" Female NPT
FFR4	1/4" Rotatable Female FR Metal Gasket Face Seal Fitting
RFR4	1/4" Rotatable Male FR Metal Gasket Face Seal Fitting
IFR4	1/4" Integral Female FR Metal Gasket Face Seal Fitting
01	1/4" Male NPT
10	1/4" Tube Fitting
	Other connections are available upon request

Connection 3	
	None
	Same as Connection 1

Installation Type	
	Bottom Thread Hole
Z	Installed with One Panel Nut
N	Installed with Screws at the Bottom

Notes:

1. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.
2. Before ordering, please read **User's Guide** on A-11.
3. For face seal connection, the connection and body are orbital-welded integral structure. The pressure is installed on "RFR4" connection by default.
4. For connections other than face seal connection, the body connections are 1/4" Female NPT by default. Other options are adapted from 1/4" Male NPT.
   Examples of part number:
   a. 2-port type (1 in, 1 out): BPR-16L-25-00-00, BPR-16L-25-RFR4-RFR4
   b. 3-port type (2 in, 1 out): BPR-16L-50-00-00-00, BPR-16L-50-FFR4-RFR4-FFR4

Back Pressure Regulators

BPR-2 Series Back Pressure Piston Regulators

Features

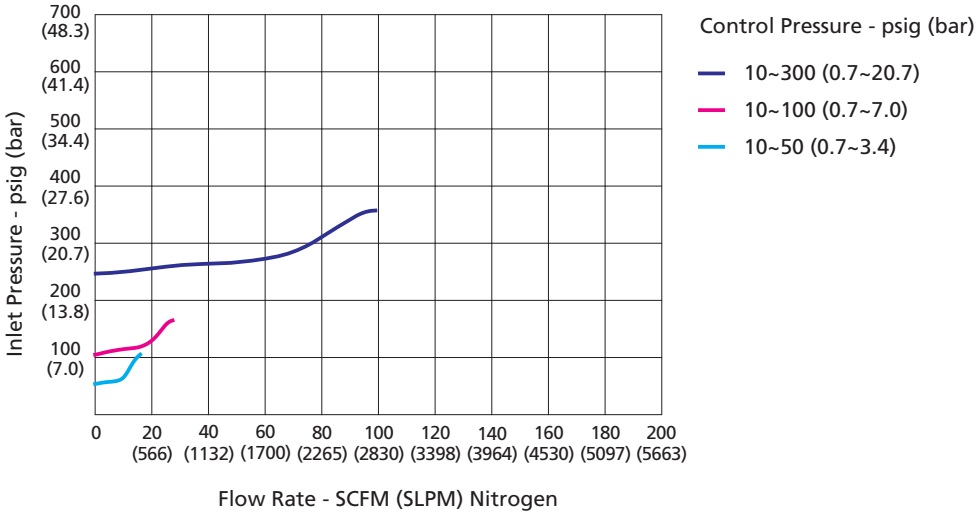
◎ Piston sensing design with greater pressure control range
◎ Reduced inner capacity
◎ With special cleaning and packaging, applicable to oxygen-enriched atmospheres

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

Technical Data

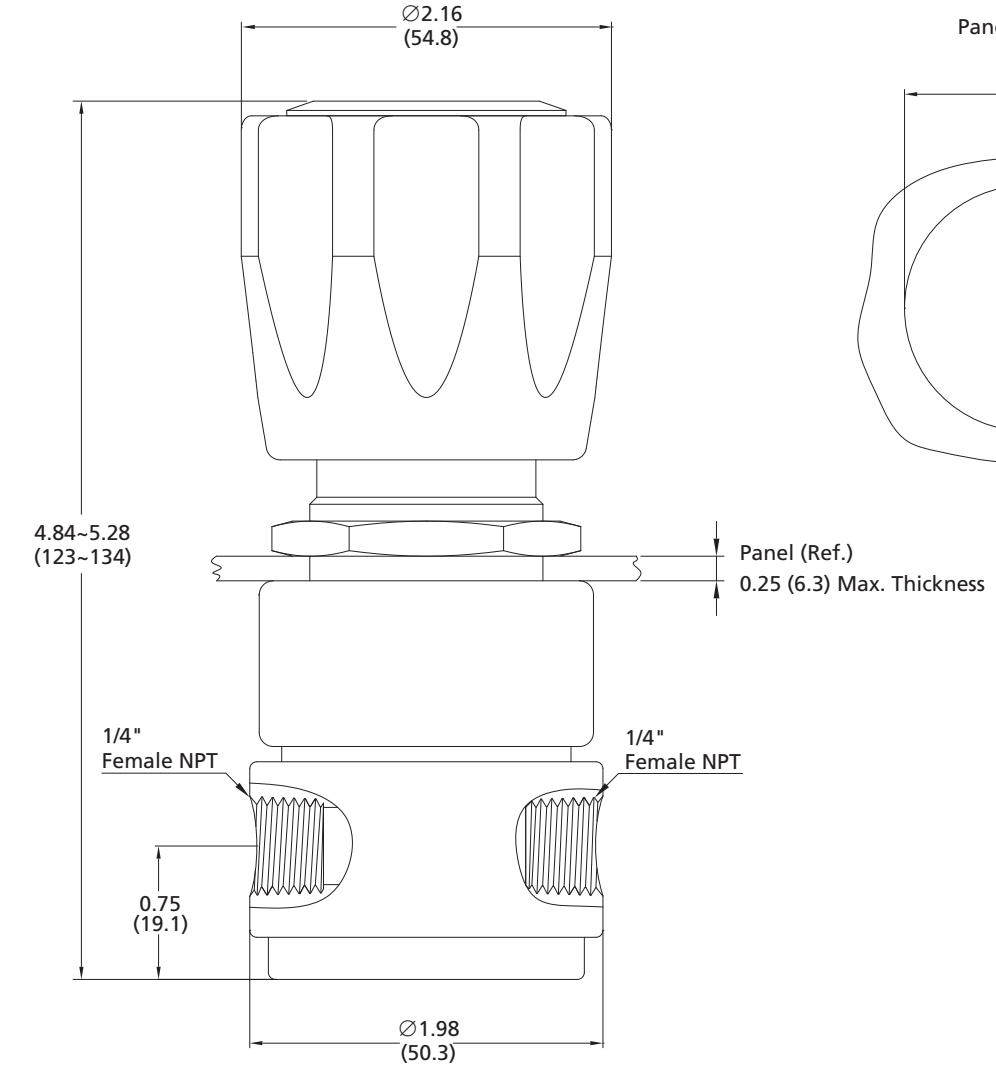
◎ Maximum control pressure: 1000 psig
◎ Pressure control range: 10 ~ 300, 10 ~ 500 or 10 ~ 1000 psig
◎ Material of the main components:
Seat: PCTFE
Piston: 316L
O-rings: FKM or FFKM
◎ Temperature: -15 °F ~ 165 °F (-26 °C ~ 74 °C)
◎ Leak rates:
Internal: Bubble-tight
External: Bubble-tight
◎ Flow coefficient (Cv): 0.3
◎ Weight: ≈1.98 lbs (0.9 kg)

Typical Flow Chart

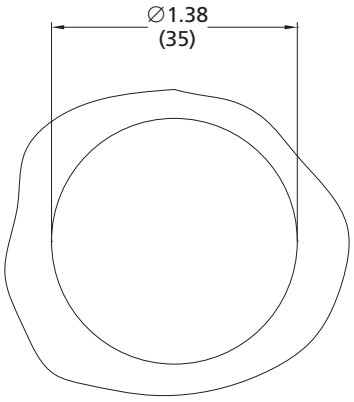


Dimensions

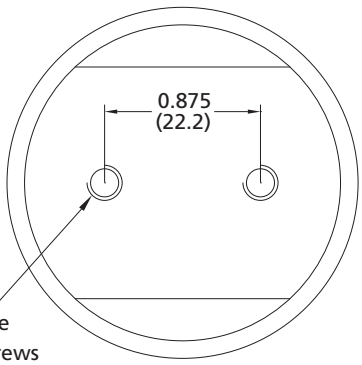
Dimensions, in inches (millimeters), are for reference only.



Panel Cut-Out

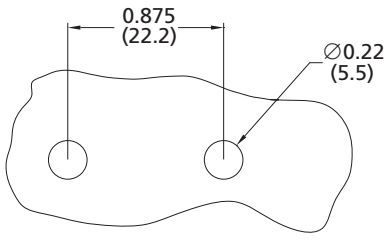


Bottom View



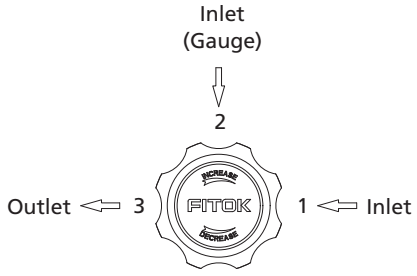
2×M5×0.8-6H thread
The holes are compatible
with 10-32 mounting screws

Bottom Panel Cut-Out



Port Configurations

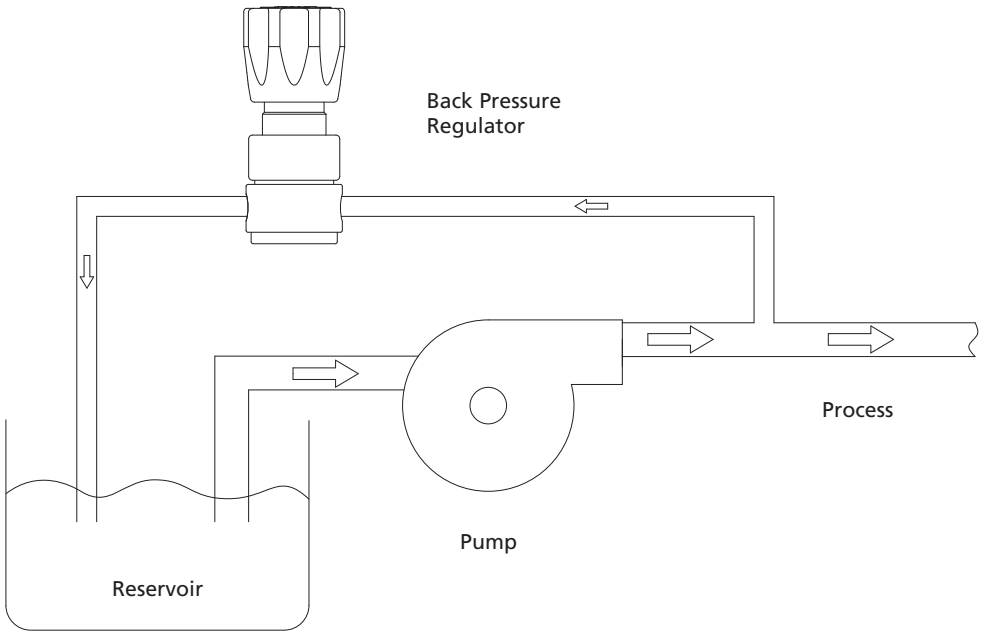
2-Port Type



3-Port Type

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.



Ordering Number Description

BPR – 26L Z – 300 – 10 – M – 11 – Z

Body Material	
6L	316L SS
SS	316 SS
B	Brass (Nickel-plated)

O-ring Material	
	FKM
Z	FFKM

Control Pressure Range P	
300	10~300 psig
500	10~500 psig
1000	10~1000 psig

Connection 1	
00	1/4" Female NPT
01	1/4" Male NPT
10	1/4" Tube Fitting
11	3/8" Tube Fitting
20	6 mm Tube Fitting
21	8 mm Tube Fitting
Other connections are available upon request	

Connection 2	
B	With Gauge (psi/bar)
M	With Gauge (psi/MPa)
P	Plug
00	1/4" Female NPT
01	1/4" Male NPT
10	1/4" Tube Fitting
Other connections are available upon request	

Connection 3	
	None
Same as Connection 1	

Installation Type	
	Bottom Thread Hole
Z	Installed with One Panel Nut
N	Installed with Screws at the Bottom

Notes:

1. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.
2. Before ordering, please read **User's Guide** on A-11.
3. The body connections are 1/4" Female NPT by default. Other options are adapted from 1/4" Male NPT.
   Examples of part number:
   a. 2-port type (1 in, 1 out): BPR-2SS-300-00-00
   b. 3-port type (2 in, 1 out): BPR-26LZ-500-00-B-00

Back Pressure Regulators

BPR-3 Series Back Pressure Piston Regulators

Features

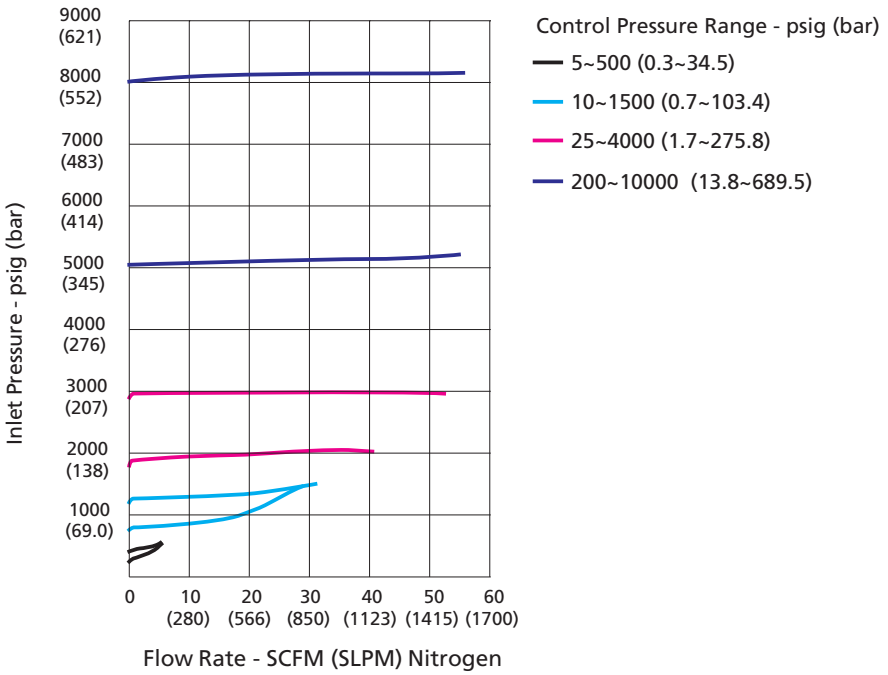
◎ Piston sensing design with greater pressure control range
◎ Thrust roller bearings make operation easier

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

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: 316 SS
O-rings: FKM or FFKM
◎ Temperature: -15 °F ~ 165 °F (-26 °C ~ 74 °C)
◎ Leak rates:
Internal: Bubble-tight
External: Bubble-tight
◎ Flow coefficient (Cv): 0.25
◎ Weight(regulator): ≈5.7 lbs (2.6 kg)

Typical Flow Chart



Dimensions

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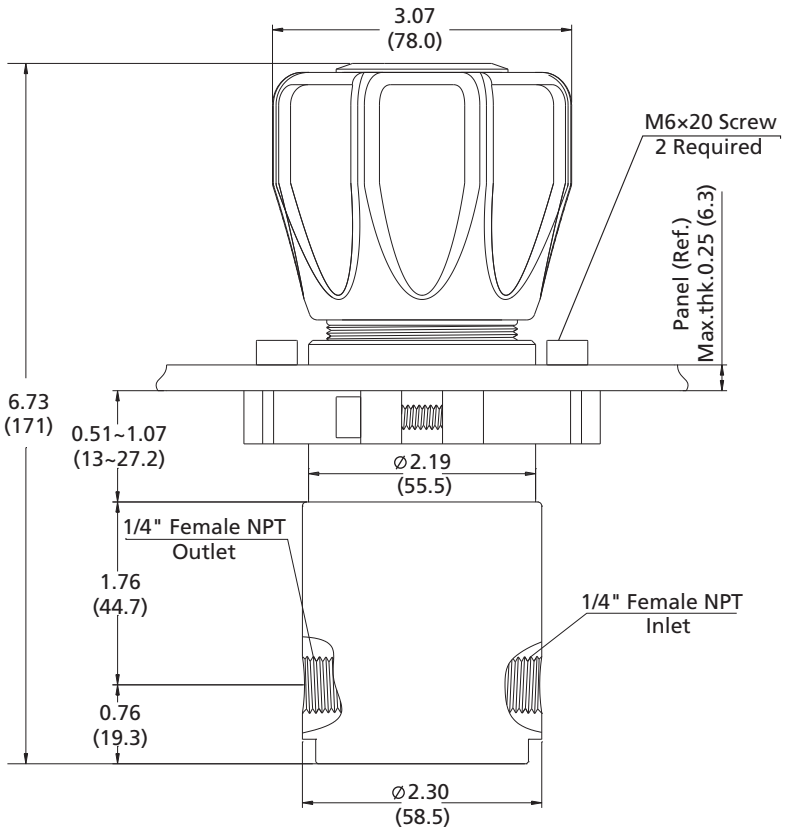
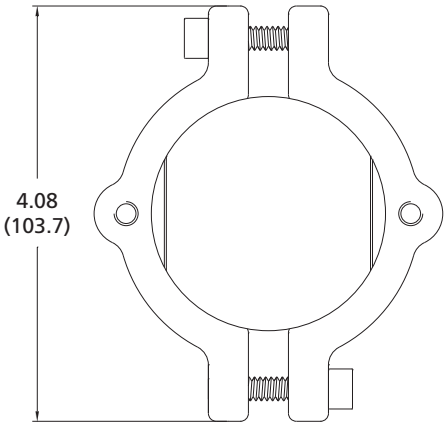
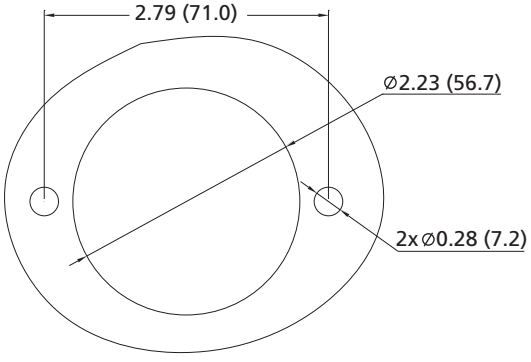


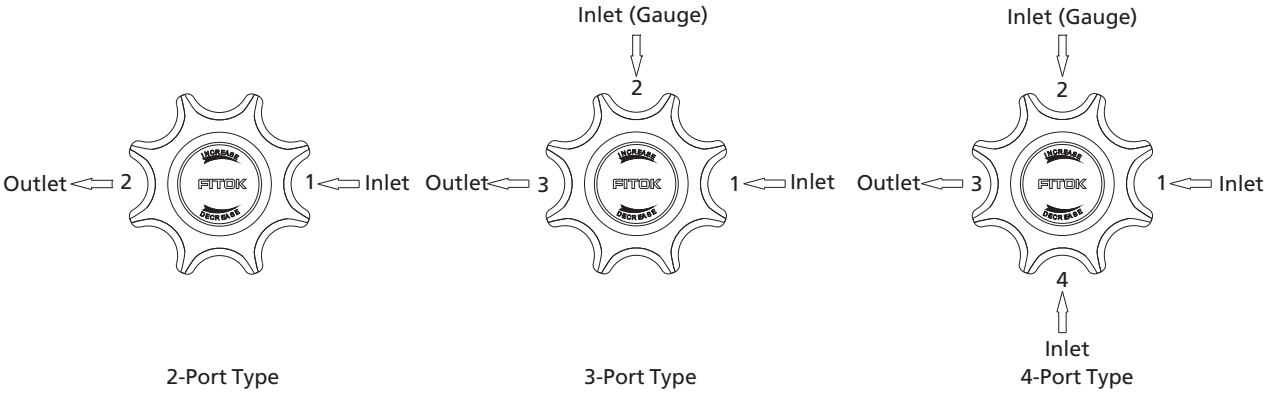
Bottom View



Panel Cut-Out



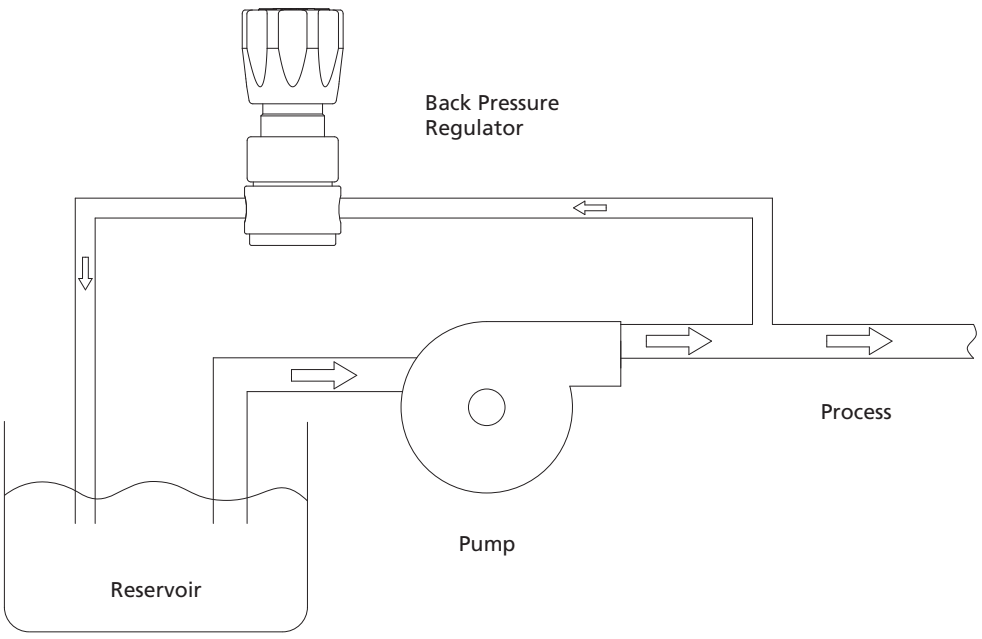
Port Configurations



2-Port Type　　3-Port Type　　4-Port Type

Typical Application

BPR-3 Series Back Pressure Regulators maintain the required pipeline pressure to ensure the Pump to output fluid stably when system pressure fluctuates.



Ordering Number Description

BPR – 3B Z – 15 – 00 – B – 00 – 00 – Z – F2

Body Material	
SS	316 SS
6L	316L SS
B	Brass (Max. Control Pressure 6000 psig)

O-ring Material	
	FKM
Z	FFKM

Pressure Control Range P	
5	5~500 psig
8	5~800 psig
15	10~1500 psig
25	15~2500 psig
40	25~4000 psig
60	50~6000 psig
100	200~10000 psig

Connection 1	
00	1/4" Female NPT
01	1/4" Male NPT
10	1/4" Tube Fitting
11	3/8"Tube Fitting
20	6 mm Tube Fitting
21	8 mm Tube Fitting
Other connections are available upon request	

Connection 2	
B	With Gauge (psi/bar)
M	With Gauge (psi/MPa)
P	Plug
00	1/4" Female NPT
01	1/4" Male NPT
10	1/4" Tube Fitting
11	3/8" Tube Fitting
20	6 mm Tube Fitting
21	8 mm Tube Fitting
Other connections are available upon request	

Connection 3	
	None
Same as Connection 1	

Connection 4	
	None
Same as Connection 1	

Panel Mount	
	Without
Z	With

Product Grade	
	Standard Cleaning and Packaging
F2	Special Cleaning and Packaging

Notes:

1. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.
2. Before ordering, please read **User's Guide** on A-11.
3. The body connections are 1/4" Female NPT by default. Other options are adapted from 1/4" Male NPT.
   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