

High Flow Piston Regulators

RPGN Series

Introduction

RPGN Series High Flow Piston Regulators feature a single-stage pressure reduction design with a piston sensing mechanism that is more resistant to damage caused by pressure spikes and offers a broad outlet pressure range, making them ideal for high flow applications.

Features

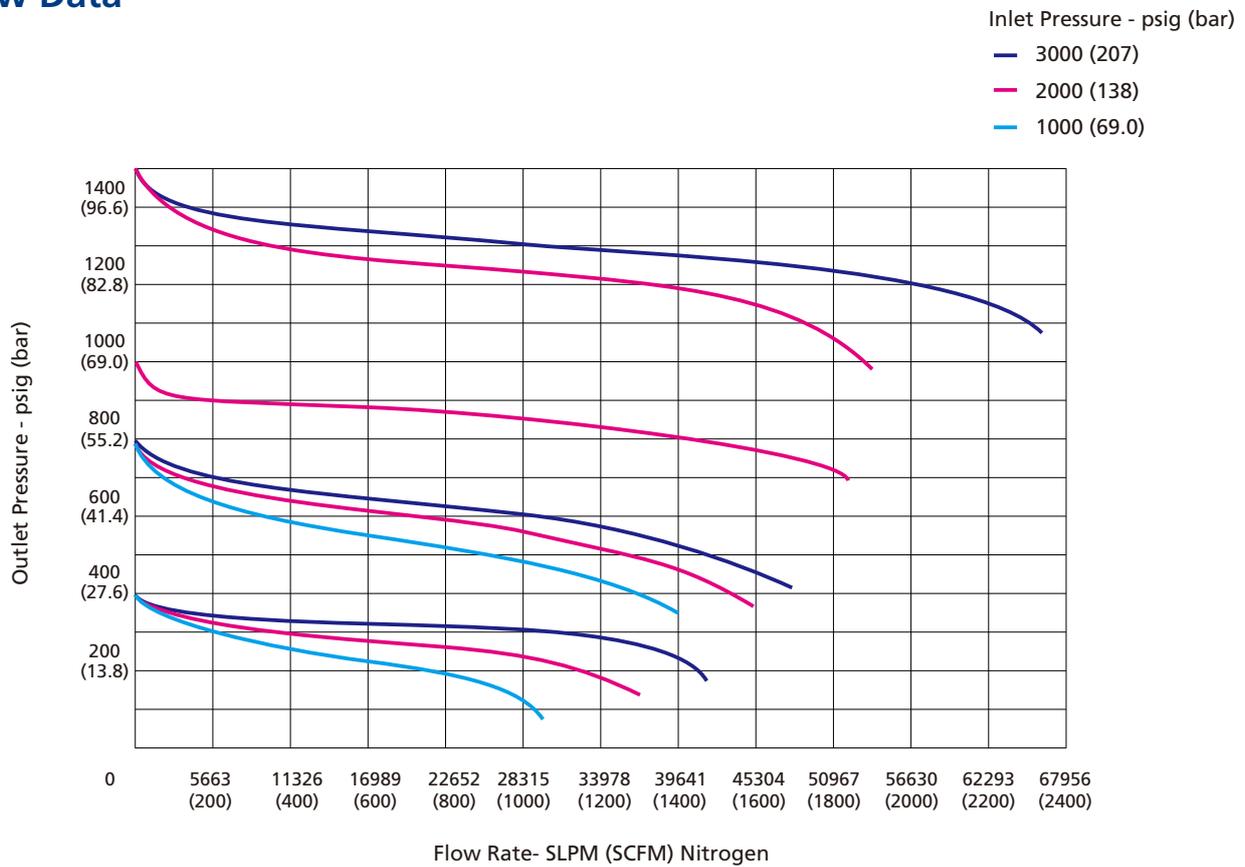
- ◎ Large diameter piston improves pressure sensitivity.
- ◎ Optional self-venting feature.



Technical Data

Port Size		1/2", 3/4", 16 mm or 18 mm
Max. Working Pressure	F316 SS, F316L SS	4500 psig (310 bar)
	Brass	3800 psig (262 bar)
Outlet Pressure Range		0 ~ 300 psig (0 ~ 20.7 bar)
		0 ~ 600 psig (0 ~ 41.4 bar)
		0 ~ 1000 psig (0 ~ 69.0 bar)
		0 ~ 1500 psig (0 ~ 103 bar)
Flow Coefficient (Cv)		2.0
Working Temperature		FKM -4 ~ 220 °F (-20 ~ 104 °C)
		FFKM 1.4 ~ 220 °F (-17 ~ 104 °C)
SPE (Supply Pressure Effect)	Max. Outlet Pressure: 300, 600 psig	1.5 psig per 100 psig source pressure change
	Max. Outlet Pressure: 1000, 1500 psig	4 psig per 100 psig source pressure change
Leak Rate		External Bubble tight
		Internal Bubble tight

Flow Data



Gas Control Equipment

Related Products

Technical References

Process Specification

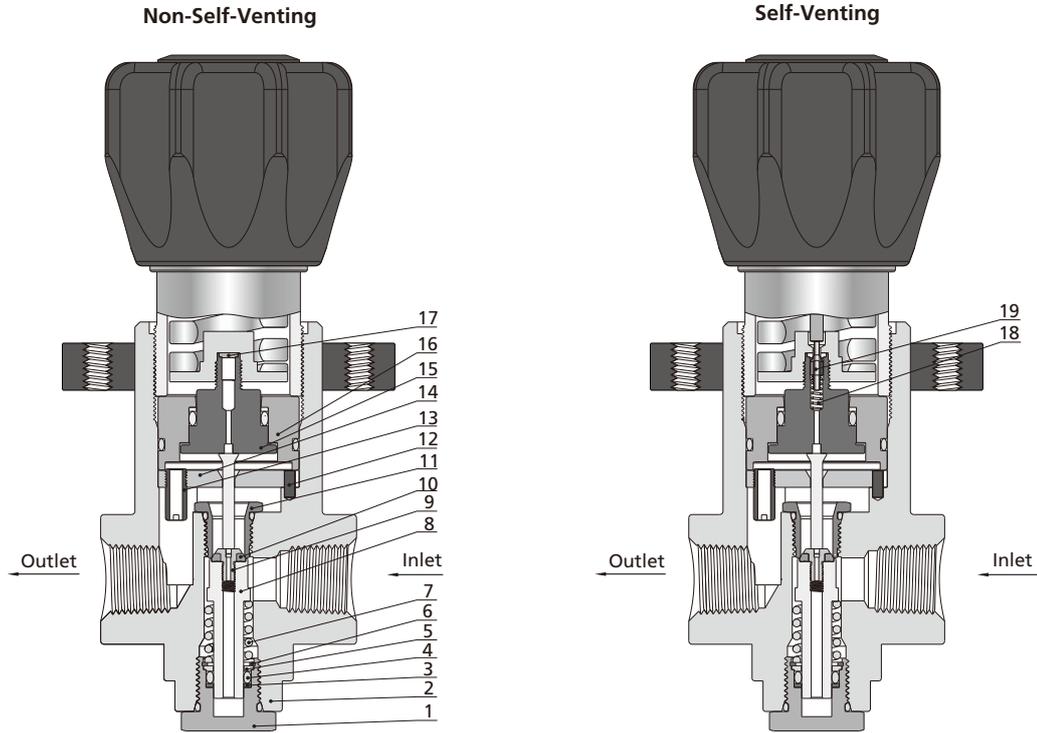
Item	Process Specification	Special Cleaning and Packaging Process (FC-02)
Material		F316 SS, F316L SS, Brass
Wetted Surface Roughness		Ra 32 μin. (0.8 μm)
Polishing Process		Machine Finished
Assembly Environment		In specially cleaned areas
Packaging		Double bagged

Major Materials of Construction

Gas Control Equipment

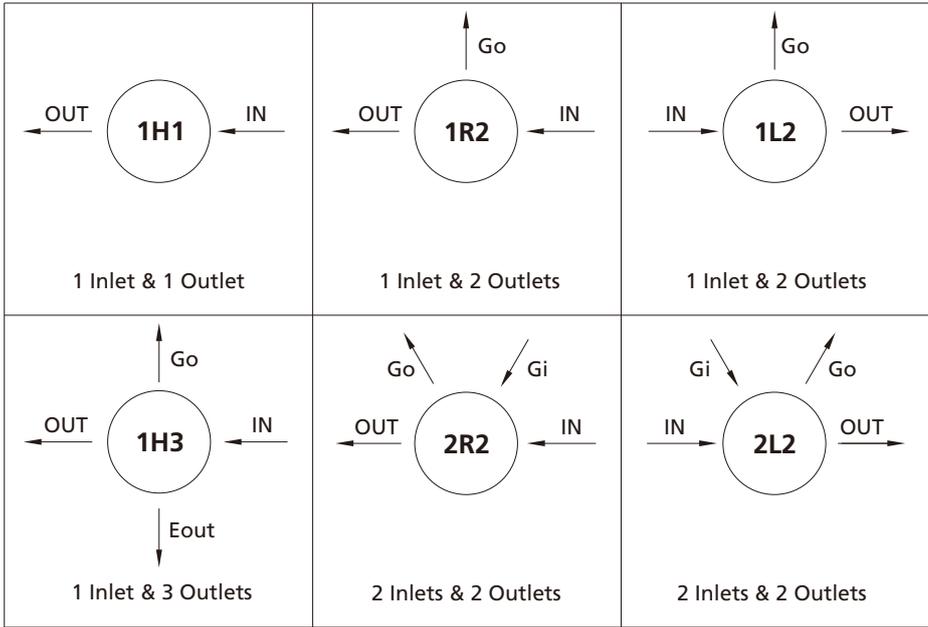
Related Products

Technical References



Item	Component	Material/Specification
1	Plug	316 SS/ASTM A479 or Brass
2	Body	F316 SS/ASTM A182 or F316L SS/ASTM A182 or Brass
3	Circlip	PEEK
4	O-Ring	FKM or FFKM
5	Gland	316 SS/ASTM A479
6	Circlip for Bores	304 SS
7	Poppet Spring	316 SS/ASTM A313
8	Lift Poppet	316 SS/ASTM A479
9	Screw	S17400/ASTM A564
10	Seat	PCTFE/ASTM D1430
11	Seat Retainer	316 SS/ASTM A479
12	Pin	316 SS/ASTM A479
13	Cylinder	316 SS/ASTM A479
14	Guide Block	316 SS/ASTM A479
15	Piston	316 SS/ASTM A479
16	Piston Ring	316 SS/ASTM A479
17	Auxiliary Seat	PCTFE/ASTM D1430
18	Poppet Spring	316L SS/ASTM A313
19	Auxiliary Poppet	S17400/ASTM A564

Porting Configurations



Porting Configuration Symbol

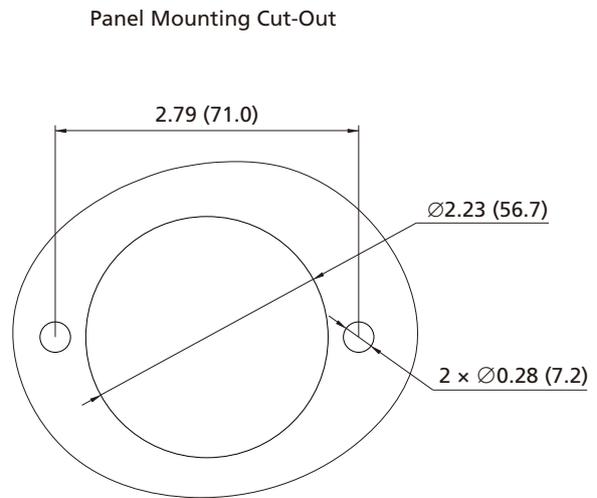
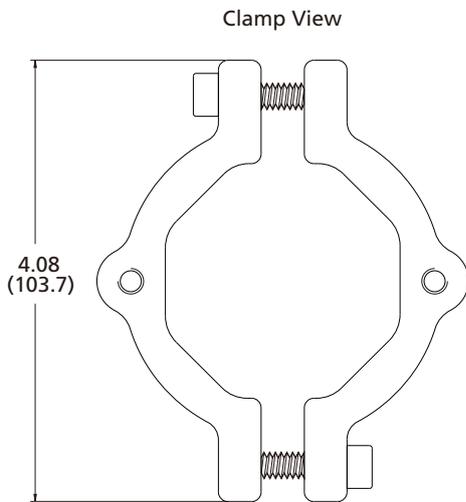
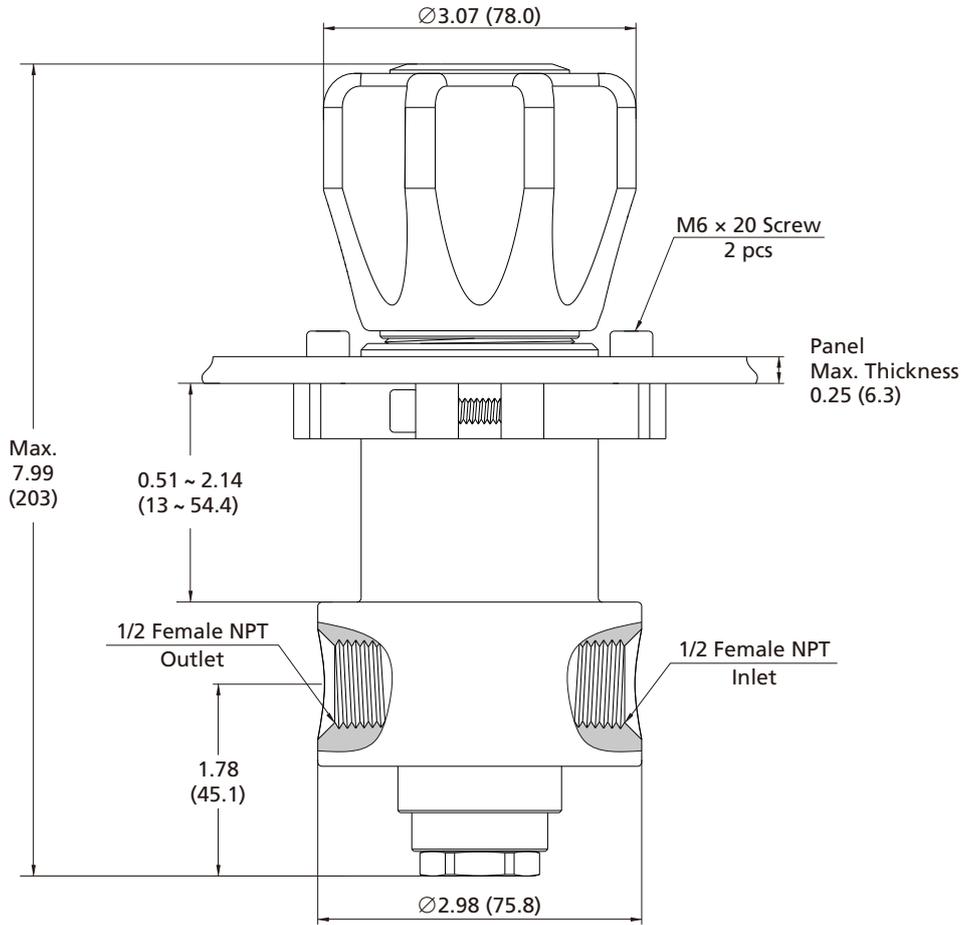
IN	OUT	Gi	Go	Eout
Inlet	Outlet	Inlet Pressure Gauge Port	Outlet Pressure Gauge Port	Auxiliary Outlet

Notes:

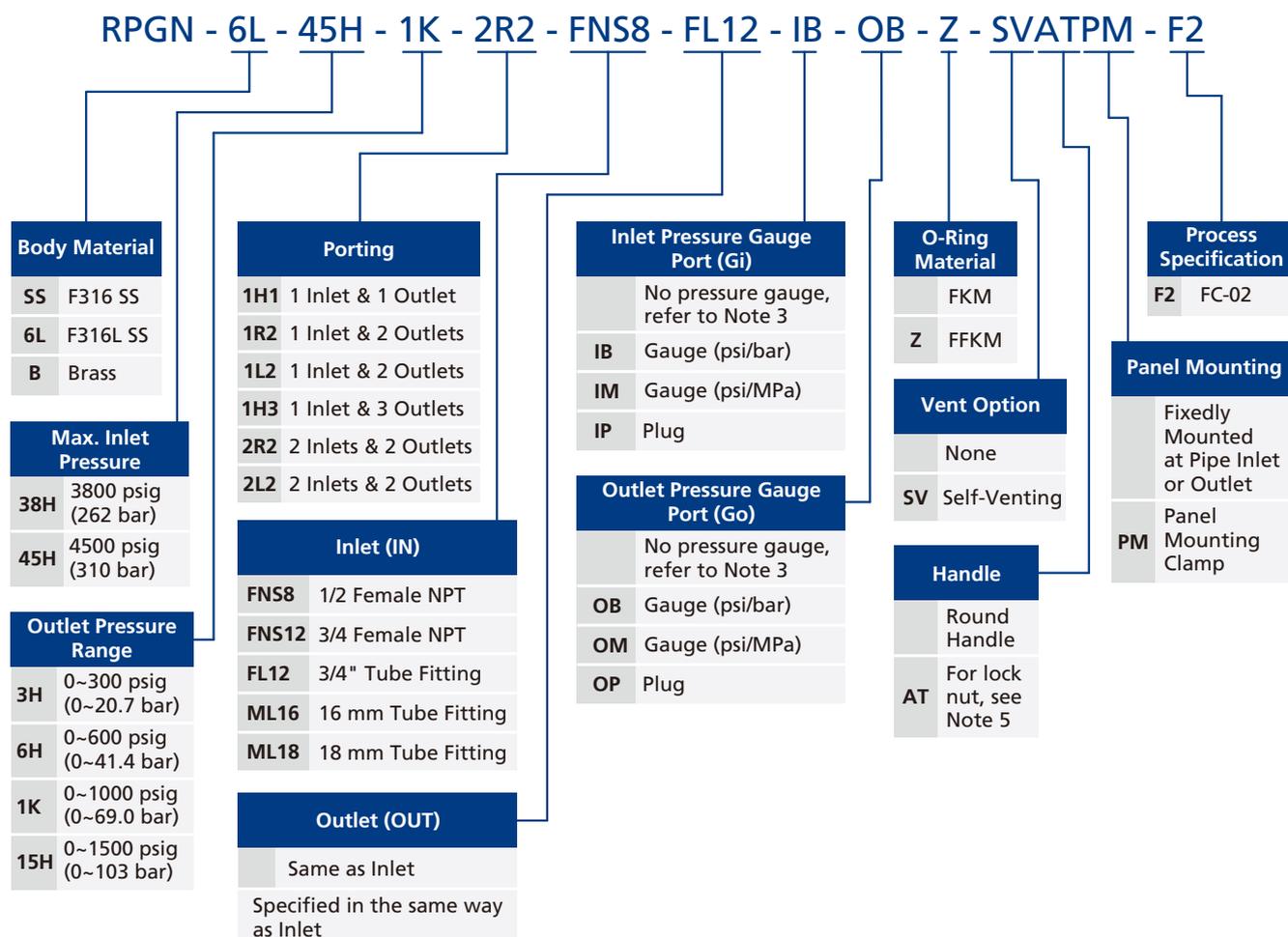
1. IN and OUT are the inlet and outlet ports for connecting the valve to the system. Ports other than IN and OUT should not be used for system connections.
2. Porting configuration is viewed from the top.

Dimensions

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



Ordering Number Description



Notes:

- "Ordering Number Description" is a reference to understanding the combination rules of FITOK product part numbers. Not all combinations are available. Should you have any questions, please contact FITOK Group or our authorized distributors.
- When choosing NPT or Metric/Fractional Tube Fitting ports, the regulator body comes with 1/2 Female NPT inlet and outlet by default. Other options are adapted from 1/2 Male NPT.
- When choosing NPT or Metric/Fractional Tube Fitting for inlet and outlet, gauge ports (Gi, Go) and auxiliary outlet (Eout) are 1/4 Female NPT.
- When using the vent function, media will be discharged into the atmosphere from beneath the handle.
- Lock nut (AT): The metal lock nut construction is designed to prevent accidental pressure adjustments. FITOK can set the specified outlet pressure based on customer requirements; simply include this information in the remarks when placing an order. If the outlet pressure is not specified, customers will need to adjust and fix it themselves.