

# General Piston Regulators

## RPGC Series

### Introduction

RPGC Series General 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. With eight port configuration options, these regulators accommodate a variety of gas and liquid applications.

### Features

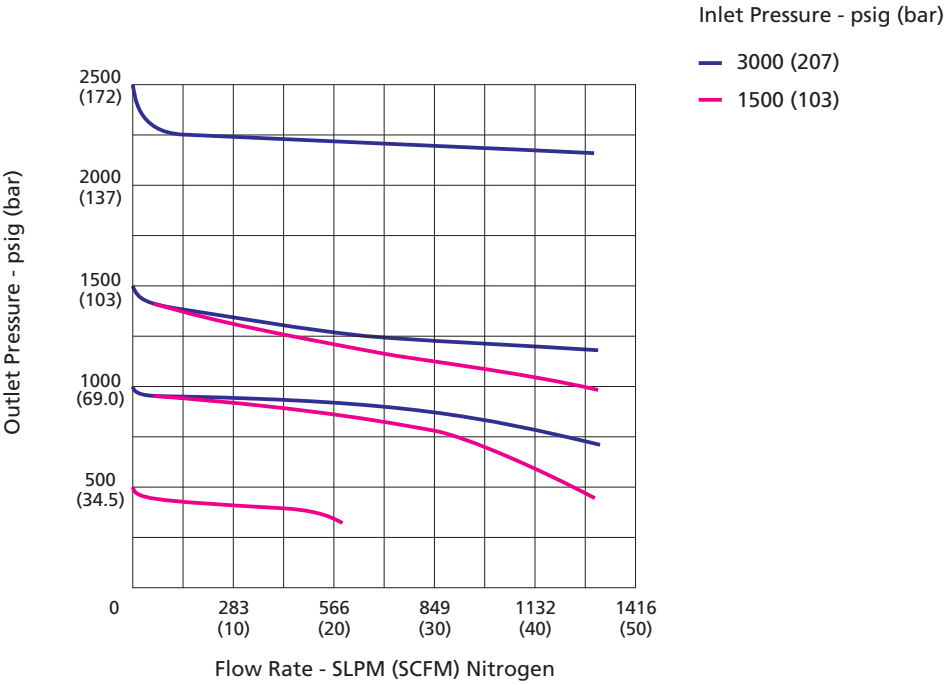
- Built-in 40 µm inlet filter for cleanliness and extended service life
- Optional self-venting feature
- The bonnet includes a captured vent port, allowing media to be vented to a designated location in the event of accidental O-ring failure

### Technical Data

Port Size		1/4", 3/8", 6 mm or 8 mm
Max. Working Pressure		6000 psig (414 bar)
Outlet Pressure Range		0 ~ 250 psig (0 ~ 17.2 bar)
		0 ~ 500 psig (0 ~ 34.5 bar)
		0 ~ 750 psig (0 ~ 51.7 bar)
		0 ~ 1000 psig (0 ~ 69.0 bar)
		0 ~ 1500 psig (0 ~ 103 bar)
		0 ~ 2500 psig (0 ~ 172 bar)
Flow Coefficient (Cv)	Non-self-venting	0.06
	Self-venting	0.1
Working Temperature		FKM -4 ~ 165 °F (-20 ~ 74 °C)
		FFKM -1.4 ~ 165 °F (-17 ~ 74 °C)
SPE (Supply Pressure Effect)	Outlet Pressure: 250, 500 psig	1.3 psig per 100 psig source pressure change
	Outlet Pressure: 750, 1000 psig	1.9 psig per 100 psig source pressure change
	Outlet Pressure: 1500, 2000 psig	4.5 psig per 100 psig source pressure change
Leak Rate		External Bubble tight
		Internal Bubble tight



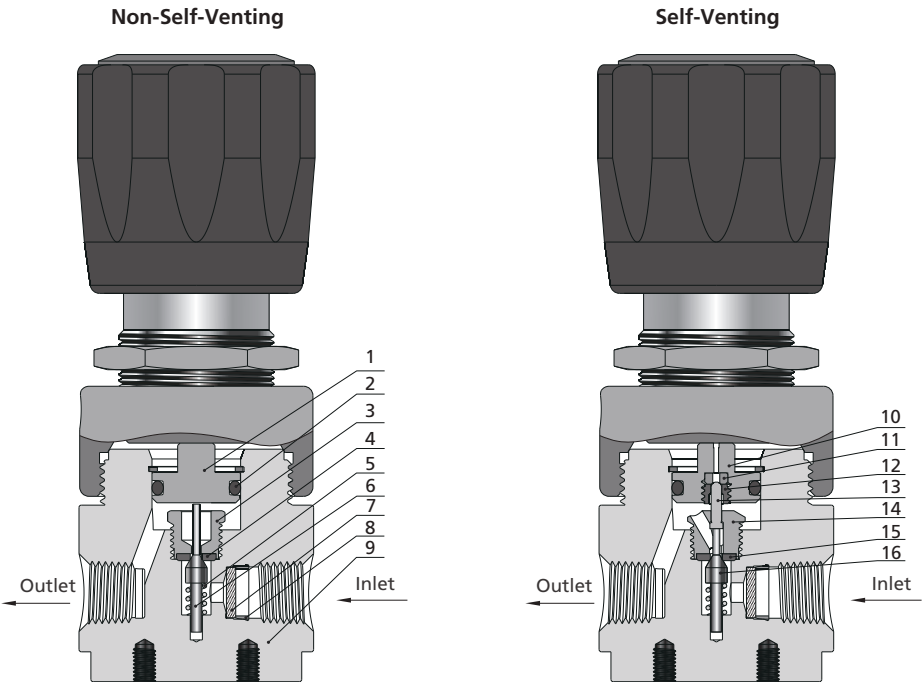
Flow Data



Process Specification

Process Specification	
Item	Special Cleaning and Packaging Process (FC-02)
Material	316L SS, Brass (Nickle-Plated)
Wetted Surface Roughness	Ra 32 μin. (0.8 μm)
Polishing Process	Machine Finished
Assembly Environment	In specially cleaned areas
Packaging	Double bagged

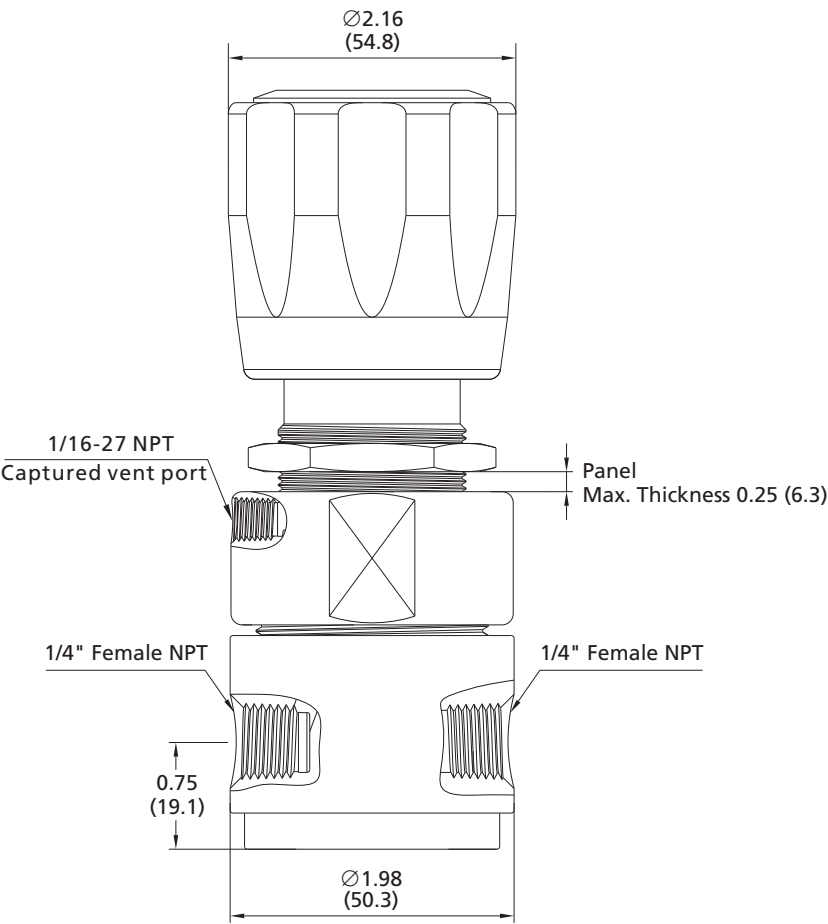
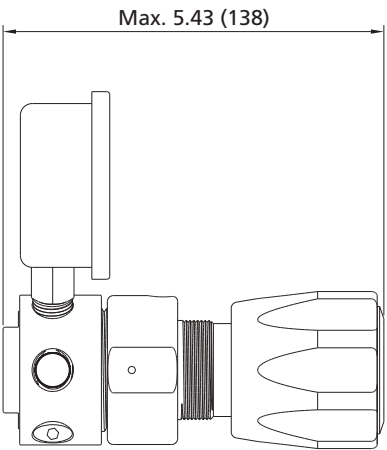
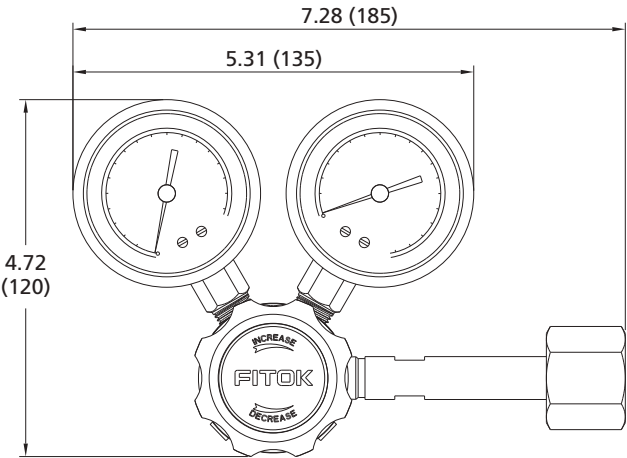
Major Materials of Construction



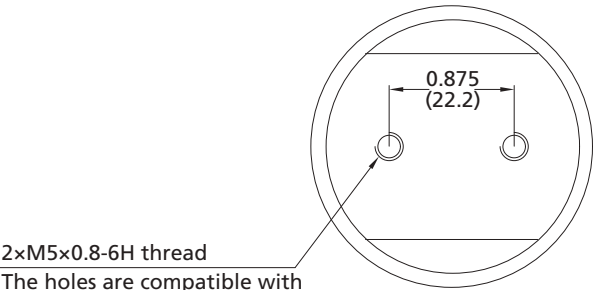
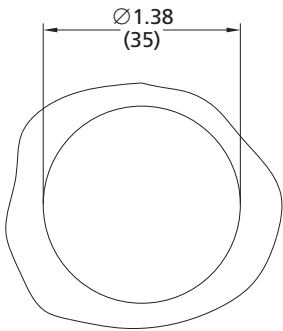
Item	Component	Material/Specification
1	Piston	316L SS/ASTM A276
2	O-Ring	FKM or FFKM
3	Seat Retainer	316L SS/ASTM A479
4	Seat	PCTFE/ASTM D1430
5	Poppet Spring	Alloy
6	Lift Poppet	Alloy C-276/ASTM B574
7	Filter	316L SS
8	Retaining Ring	PTFE/ASTM D1710
9	Body	316L SS/ASTM A479 or Brass (Nickle-Plated)
10	Vent Piston	316L SS/ASTM A479
11	Vent Seat	PEEK
12	Vent Bushing	316L SS/ASTM A479
13	Vent Rod	Alloy C-276/ASTM B574
14	Vent Seat Retainer	316L SS/ASTM A479
15	Seat	PEEK
16	Vent Poppet	Alloy C-276/ASTM B574

Dimensions

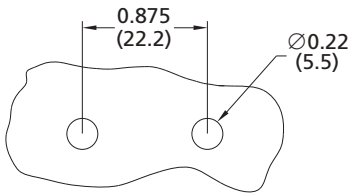
Dimensions, in inches (millimeters), are for reference only.



Panel Mounting Cut-Out

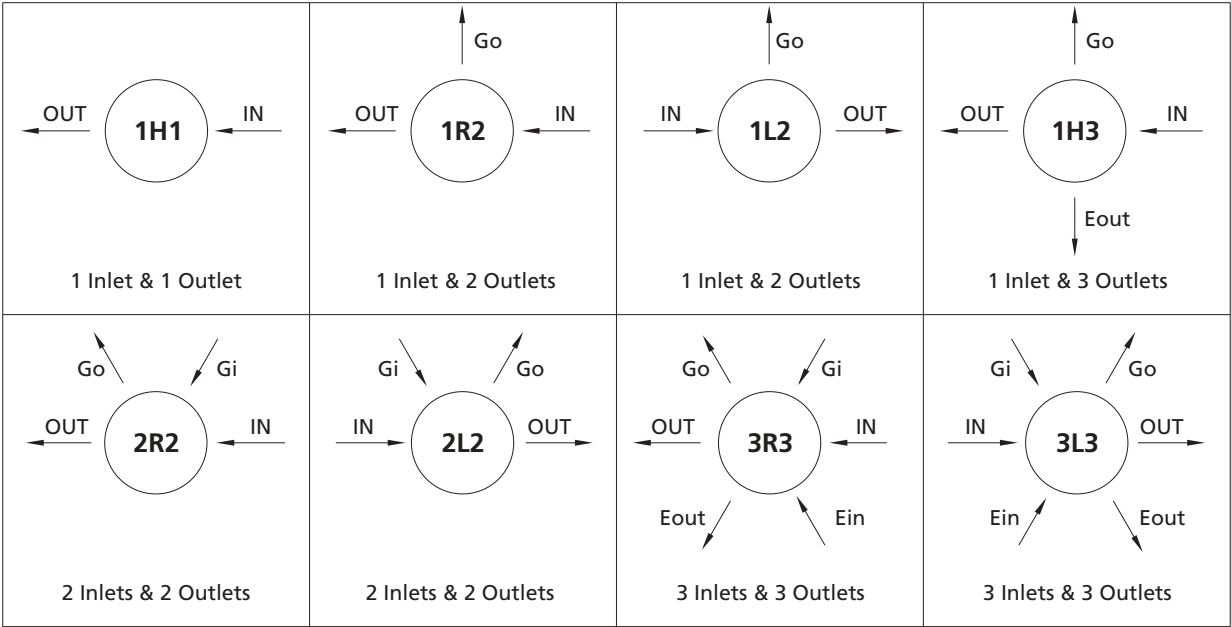


Bottom Mounting Cut-Outs



2xM5x0.8-6H thread  
The holes are compatible with  
10-32 mounting screws

Porting Configurations



Porting Configuration Symbol

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

## Ordering Number Description

RPGC - 6L - 45H - 5H - 3R3 - FNS4 - C580 - IBAP - OBR - Z - SVPM - F2

Series	Body Material	Porting	Inlet (IN)	Inlet Pressure Gauge Port (Gi)	Auxiliary Inlet (Ein)	Outlet Pressure Gauge Port (Go)	Vent Option	O-Ring Material	Process Specification	Installation Type
RPGC	6L 316L SS B Brass (Nickel-Plated)	1H1 1 Inlet & 1 Outlet 1R2 1 Inlet & 2 Outlets 1L2 1 Inlet & 2 Outlets 1H3 1 Inlet & 3 Outlets 2R2 2 Inlets & 2 Outlets 2L2 2 Inlets & 2 Outlets 3R3 3 Inlets & 3 Outlets 3L3 3 Inlets & 3 Outlets	C_ CGA Cylinder Connection (For Inlet Only) DIN_ DIN Cylinder Connection (For Inlet Only) FNS4 1/4" Female NPT NS4 1/4" Male NPT FL4 1/4" Tube Fitting FL6 3/8" Tube Fitting ML6 6 mm Tube Fitting ML8 8 mm Tube Fitting	No pressure gauge, refer to Note 2 IB Gauge (psi/bar) IM Gauge (psi/MPa) IP Plug	No plug, refer to Note 2 AP Plug	No pressure gauge, refer to Note 2 OB Gauge (psi/bar) OM Gauge (psi/MPa) OP Plug	None SV Self-Venting	FKM Z FFKM	F2 FC-02	Threaded Hole at the Bottom PM Installed with Panel Nut BS Installed with Screws at the Bottom
	Max. Inlet Pressure 3K 3000 psig (207 bar) 45H 4500 psig (310 bar) 6K 6000 psig (414 bar)									
	Outlet Pressure Range 250 0~250 psig (0~17.2 bar) 5H 0~500 psig (0~34.5 bar) 750 0~750 psig (0~51.7 bar) 1K 0~1000 psig (0~69.0 bar) 15H 0~1500 psig (0~103 bar) 25H 0~2500 psig (0~172 bar)		Outlet (OUT) Same as Inlet Specified in the same way as Inlet							

## 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 selecting Cylinder Connection, NPT, or Fractional/Metric Tube Fitting for the inlet and outlet, the valve body comes with 1/4" Female NPT inlet and outlet ports by default. The gauge ports (Go, Gi), auxiliary inlet (Ein), and auxiliary outlet (Eout) are also 1/4" Female NPT.
- For the outlet relief valve, the set pressure is factory-set to 1.05-1.1 times the maximum outlet pressure by default.