

High Pressure Medium Flow Piston Regulators

RPGG Series

Introduction

RPGG Series High Pressure Medium 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. They are ideal for high pressure and medium flow applications.

Features

- ⦿ Large-diameter piston provides high sensitivity to outlet pressure changes
- ⦿ Balanced poppet design ensures stable outlet pressure
- ⦿ Optional self-venting feature
- ⦿ A variety of O-ring material options for broad media compatibility and temperature ranges

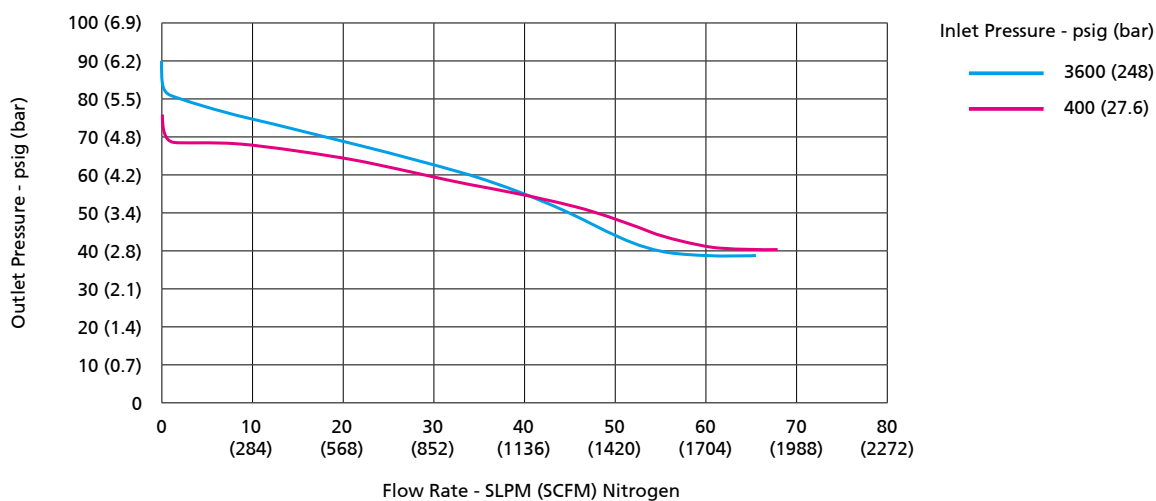
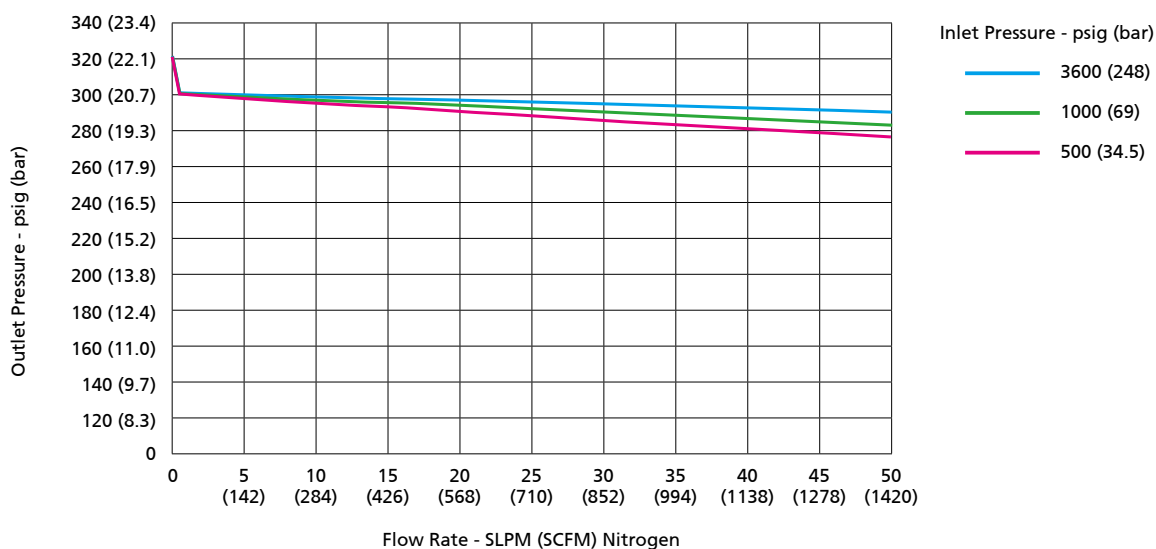


Technical Data

Port Size		1/4" to 1/2", 6 mm or 8 mm
Max. Working Pressure		10000 psig (690 bar)
Outlet Pressure Range		0 ~ 50 psig (0 ~ 3.4 bar)
		0 ~ 100 psig (0 ~ 6.9 bar)
		0 ~ 150 psig (0 ~ 10.3 bar)
		0 ~ 250 psig (0 ~ 17.2 bar)
		0 ~ 450 psig (0 ~ 31 bar)
Flow Coefficient (Cv)		0.5
Working Temperature ^①	FKM	-4 ~ 165 °F (-20 ~ 74 °C)
	FFKM	1.4 ~ 400 °F (-17 ~ 204 °C)
	EPDM	-40 ~ 185 °F (-40 ~ 85 °C)
SPE (Supply Pressure Effect)		0.2 psig per 100 psig source pressure change
Leak Rate	External	Bubble tight
	Internal	Bubble tight

① For the working temperature of products equipped with a pressure gauge, please refer to the [catalog for Pressure Gauges](#).

Flow Data



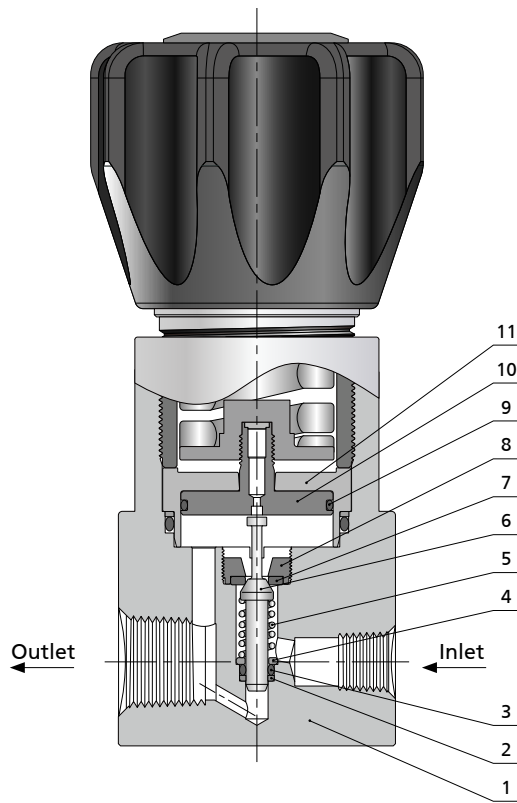
Process Specification

Item	Process Specification	Special Cleaning and Packaging Process (FC-02)
Material		316 SS
Wetted Surface Roughness		Ra 32 $\mu\text{in.}$ (0.8 μm)
Polishing Process		Machine finished
Assembly Environment		In specially cleaned areas
Packaging		Double bagged

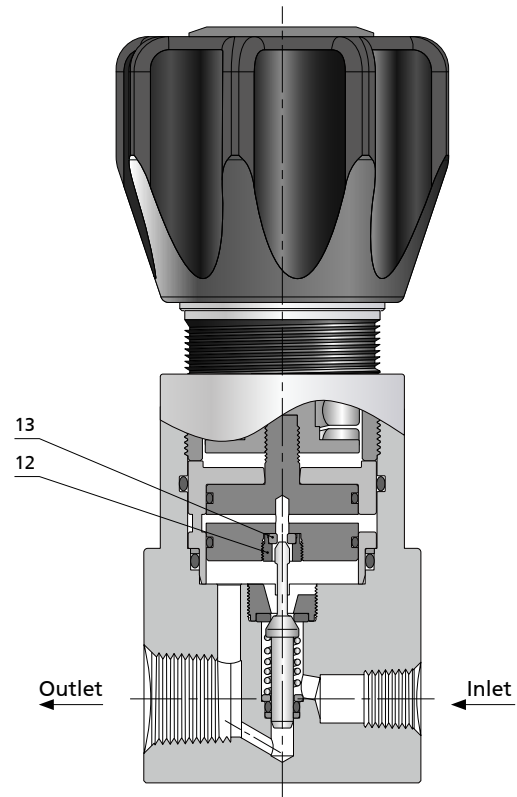
Note: For products with higher surface finish, please contact FITOK.

Major Materials of Construction

Non-Self Venting



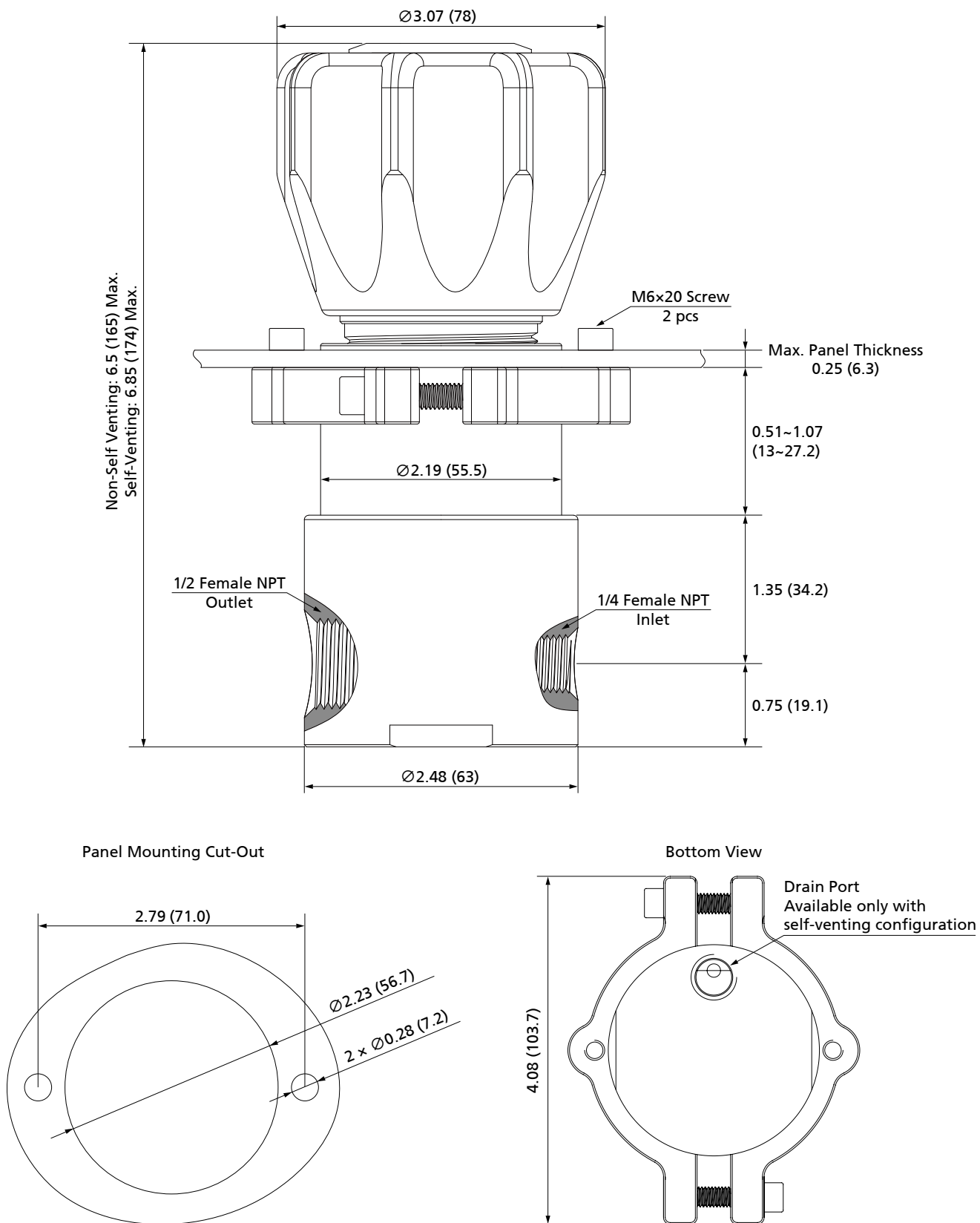
Self-Venting



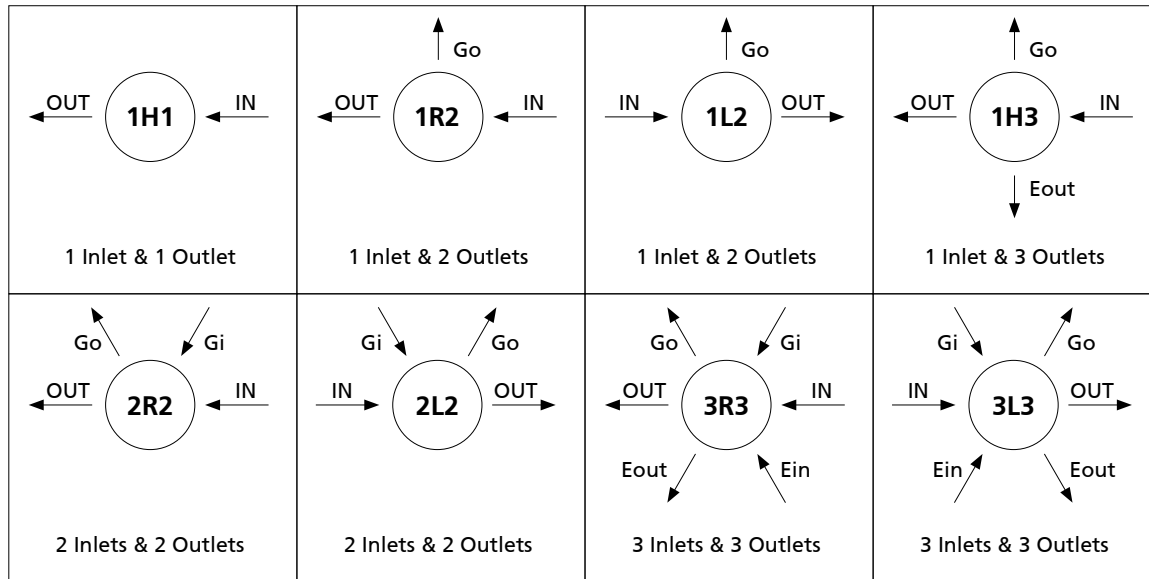
Item	Component	Material/Specification
1	Body	316 SS/ASTM A479
2	Circlip	Polyimide
3	O-ring	FKM, FFKM or EPDM
4	Spring Seat	316 SS/ASTM A479
5	Actuator Spring	304 SS/ASTM A313
6	Lift Poppet	N10276/B574
7	Seat	Polyimide
8	Seat Retainer	316 SS/ASTM A479
9	O-ring	FKM, FFKM or EPDM
10	Piston	316 SS/ASTM A479
11	Piston Ring	316 SS/ASTM A479
12	Vent Seat Retainer	316 SS/ASTM A479
13	Vent Seat	PEEK

Dimensions

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



Porting Configurations



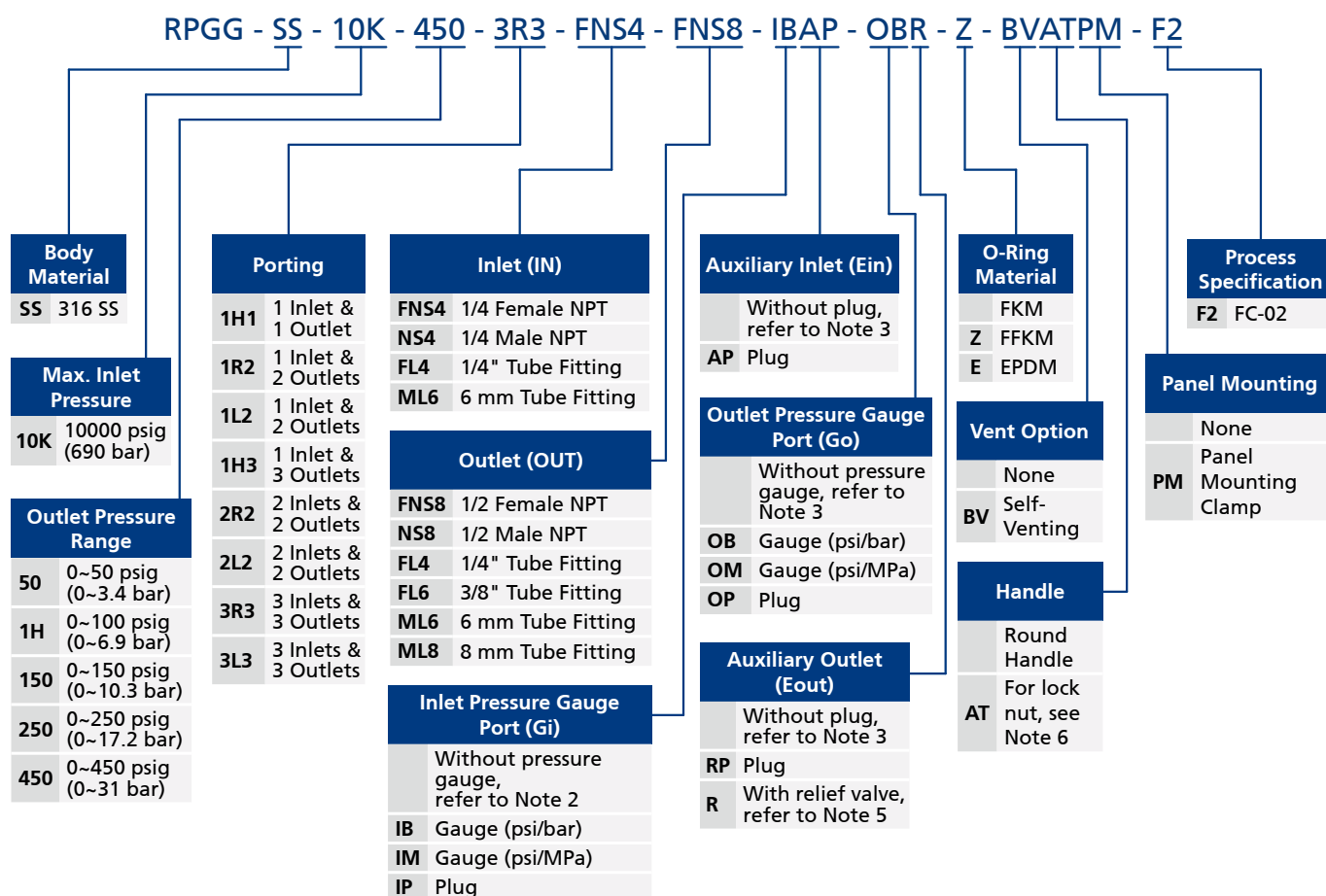
Porting Configuration Symbol

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



Notes:

- "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.
- When choosing NPT or Metric/Fractional Tube Fitting ports, the regulator body comes with 1/4 Female NPT inlet and 1/2 Female NPT outlet by default. Other options are provided using the appropriate adapters.
- When choosing NPT or Metric/Fractional Tube Fitting for inlet and outlet, gauge ports (Gi, Go) and auxiliary ports (Ein, Eout) are 1/4 Female NPT.
- When the self-venting is used, the process medium is discharged directly through the vent hole at the bottom of the body.
- For the outlet relief valve, the set pressure is factory-set to 1.05-1.1 times the maximum outlet pressure by default, FITOK can preset the specified set pressure according to customer requirements. Please specify the desired set pressure when placing your order.
- 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.