

Compact Piston Regulators

RPCC Series

Introduction

RPCC Series Compact 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. These regulators are ideal for high-pressure, low-flow applications.

Features

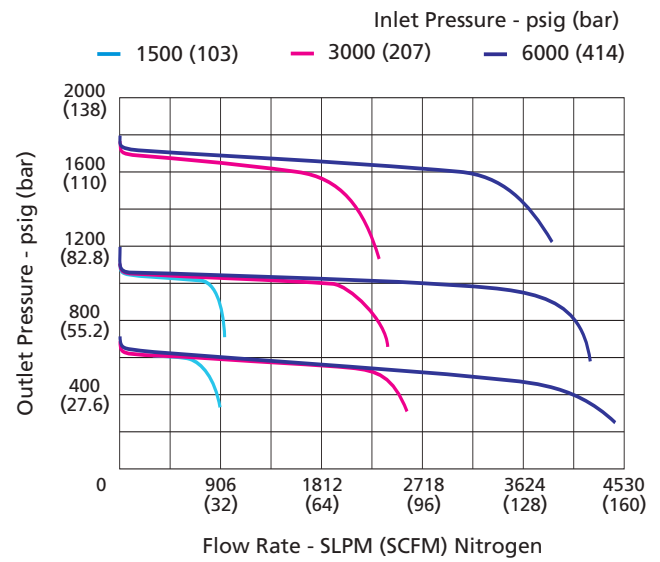
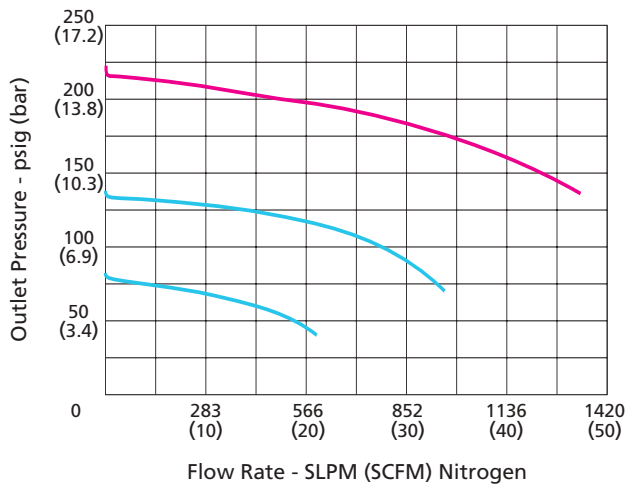
- Compact and small size design
- Integrated 40 µm inlet filter for cleanliness and extended service life
- A variety of O-ring material options for broad media compatibility and temperature ranges



Technical Data

Port Size		1/4", 3/8", 6 mm or 8 mm
Max. Working Pressure		6000 psig (414 bar)
Outlet Pressure Range		0 ~ 80 psig (0 ~ 5.5 bar)
		0 ~ 140 psig (0 ~ 9.7 bar)
		0 ~ 220 psig (0 ~ 15.2 bar)
		0 ~ 700 psig (0 ~ 48.3 bar)
		0 ~ 1200 psig (0 ~ 82.8 bar)
		0 ~ 1800 psig (0 ~ 124 bar)
Flow Coefficient (Cv)		0.06
Working Temperature		O-Ring
		NBR: -30 ~ 165°F (-34 ~ 74°C)
		FKM: -4 ~ 165°F (-20 ~ 74°C)
		FFKM: 1.4 ~ 400°F (-17 ~ 204°C)
		EPDM: -30 ~ 300°F (-34 ~ 149°C)
		Seat
PCTFE: -30 ~ 165°F (-34 ~ 74°C)		
PEEK: -30 ~ 400°F (-34 ~ 204°C)		
SPE (Supply Pressure Effect)	Outlet Pressure ≤ 220 psig	0.6 psig per 100 psig source pressure change
	Outlet Pressure > 220 psig	4 psig per 100 psig source pressure change
Leak Rate	External	Bubble tight
	Internal	Bubble tight

Flow Data



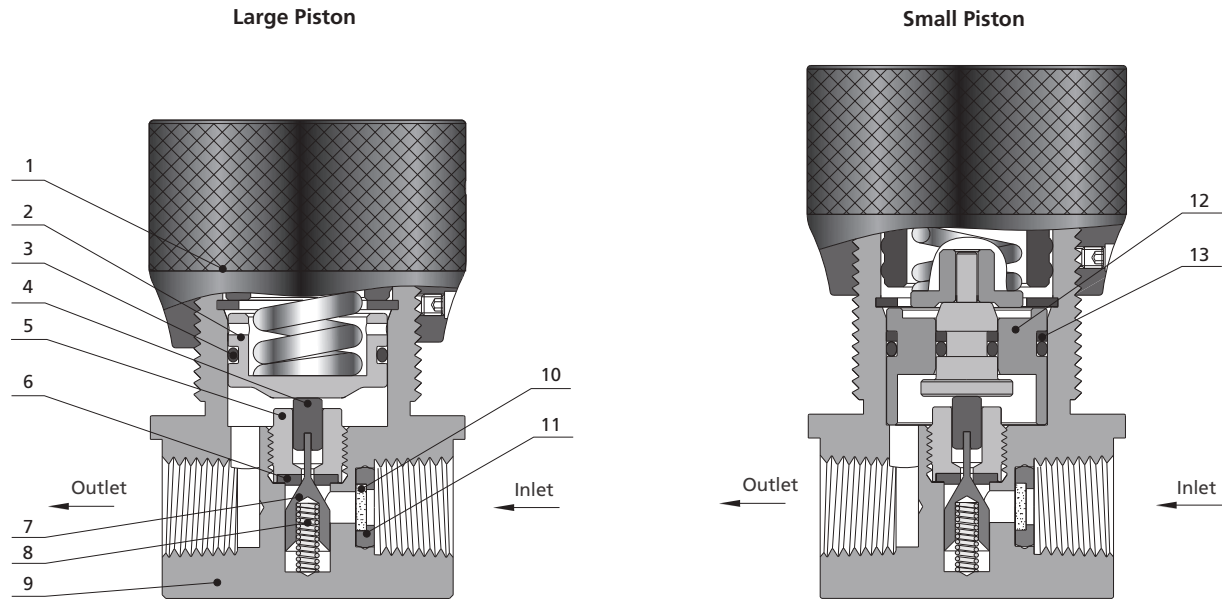
Process Specification

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

Major Materials of Construction

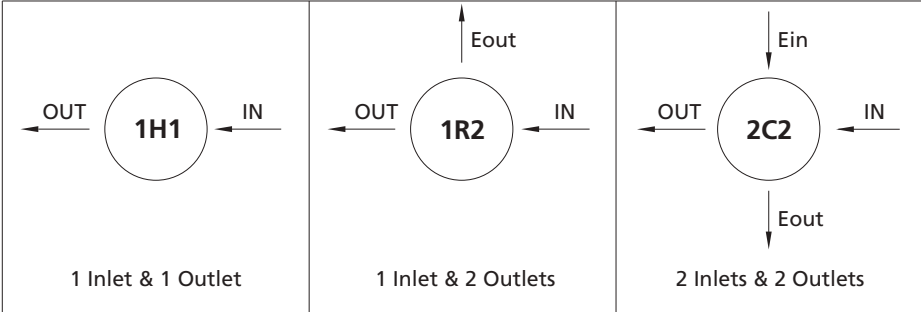
Large piston configuration: Max. outlet pressure \leq 220 psig

Small piston configuration: Max. outlet pressure $>$ 220 psig



Item	Component	Material/Specification
1	Knob Handle	Aluminium Alloy
2	Piston	316L SS
3	O-Ring	NBR or FKM or FFKM or EPDM
4	Poppet Button	316L SS
5	Seat Retainer	316L SS
6	Seat	PCTFE/ASTM D1430 or PEEK
7	Lift Poppet	316L SS
8	Poppet Spring	316 SS
9	Body	316L SS or Brass (Nickle-Plated)
10	Filter	316L SS
11	Retaining Ring	PTFE/ASTM D1710
12	Piston Ring	316L SS
13	Retaining Ring	PTFE/ASTM D1710 or PEEK

Porting Configurations



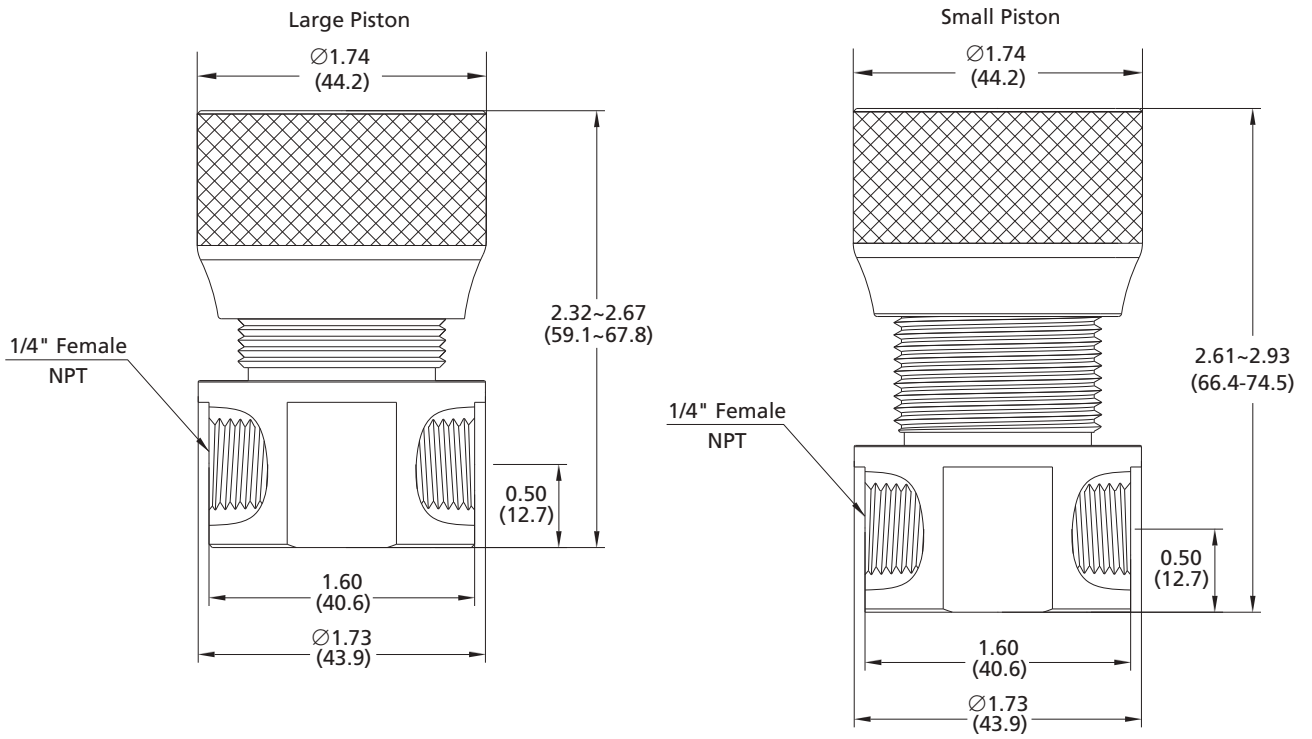
Porting Configuration Symbols

IN	OUT	Ein	Eout
Inlet	Outlet	Auxiliary Inlet	Auxiliary Outlet

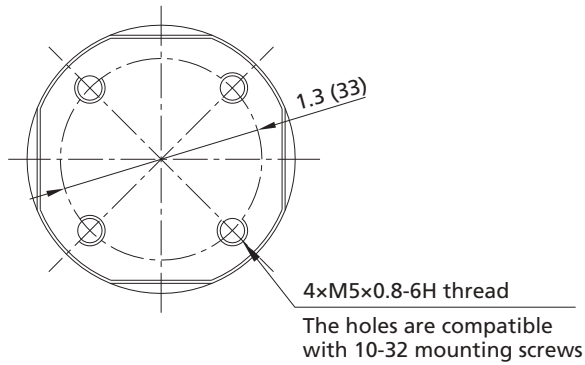
Notes: 1. IN and OUT are the inlet and outlet ports for connecting the valve to the system.
 Ports other than IN and OUT should not be used for system connections.
 2. Porting configuration is viewed from the top.

Dimensions

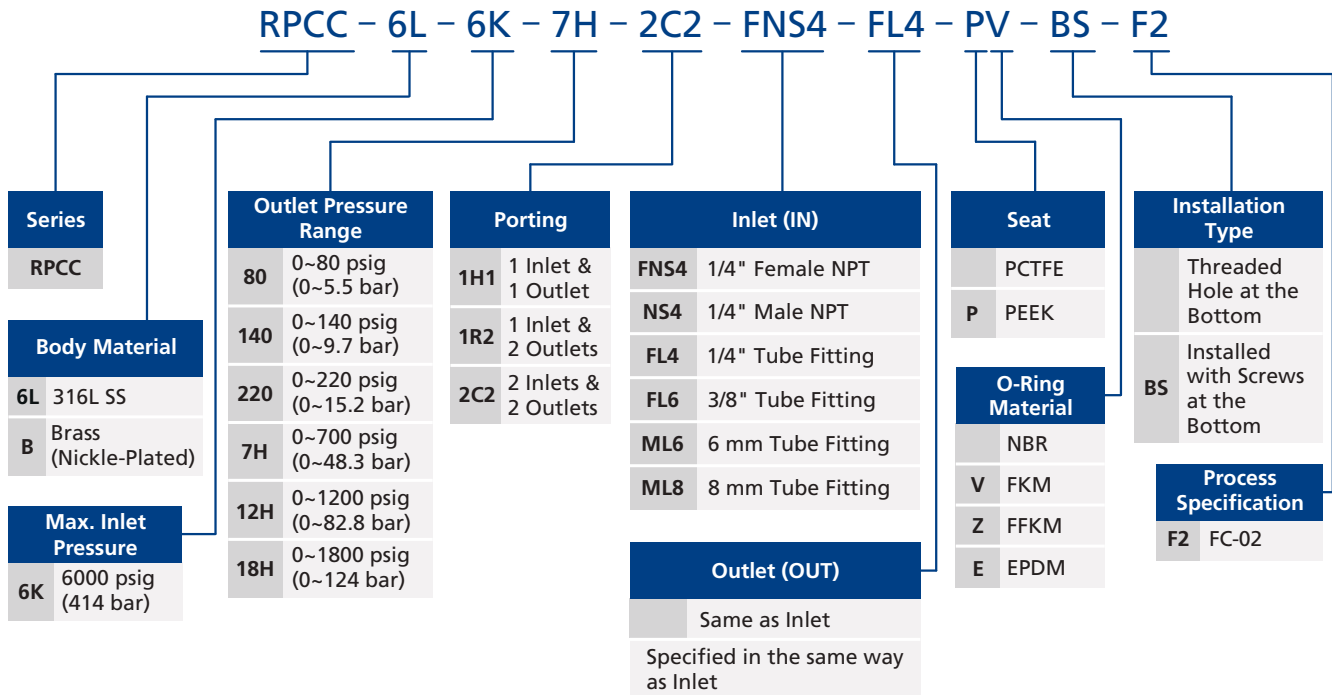
Dimensions, in inches (millimeters), are for reference only.



Bottom Mounting Cut-Outs



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.
- For NPT connection and Metric/Fractional Tube Fitting connection, the body connection is 1/4" Female NPT by default. Other options are adapted from Male NPT.
- Auxiliary inlet (Ein) and auxiliary outlet (Eout) are 1/4" Female NPT by default.