

# Miniature Tied Diaphragm Regulators

## RTCC Series

### Introduction

RTCC Series Miniature Tied Diaphragm Regulators feature a single-stage pressure reduction design and a compact form, making them ideal for low flow ultra high purity applications.

### Features

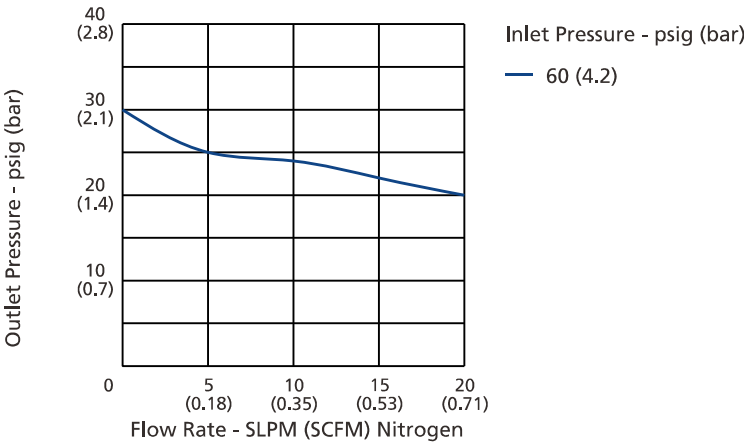
- ⦿ Alloy C-22 lift poppet and Alloy C-276 diaphragm provide excellent corrosion resistance
- ⦿ Metal-to-metal seal between valve body and diaphragm provides ensured sealing performance
- ⦿ FR metal gasket face seal, W-seal, and C-seal connections optional
- ⦿ Reinforced diaphragm design extends diaphragm service life
- ⦿ No threads or springs exposed to the wetted area for easy purging
- ⦿ Tied diaphragm construction offers positive shutoff for safety



### Technical Data

Port Size				1/4", 1.125" W-seal, 1.125" C-seal
Max. Working Pressure				150 psig (10.3 bar)
Outlet Pressure Range				0 ~ 30 psig (0 ~ 2.1 bar)
				0 ~ 60 psig (0 ~ 4.2 bar)
				0 ~ 100 psig (0 ~ 6.9 bar)
Working Temperature				-40 ~ 160 °F (-40 ~ 71 °C)
Flow Coefficient (Cv)				0.08
SPE (Supply Pressure Effect)				0.3 psig per 20 psig source pressure change
Leak Rate (Helium)	External	Inboard	$\leq 2 \times 10^{-10}$ std cm <sup>3</sup> /s	
		Outboard	$\leq 2 \times 10^{-9}$ std cm <sup>3</sup> /s	
	Internal		$\leq 2 \times 10^{-9}$ std cm <sup>3</sup> /s	

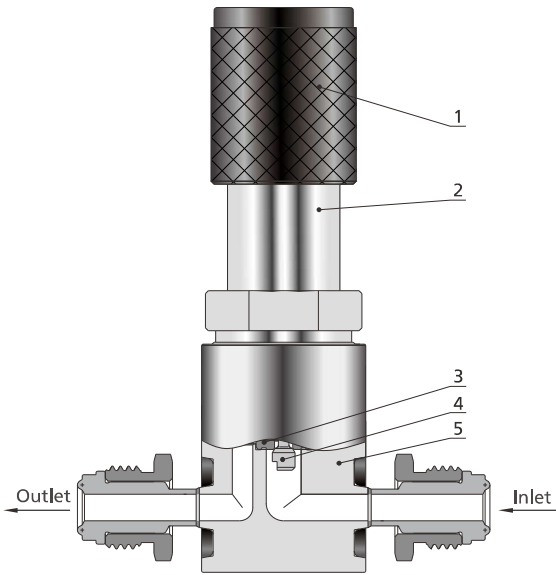
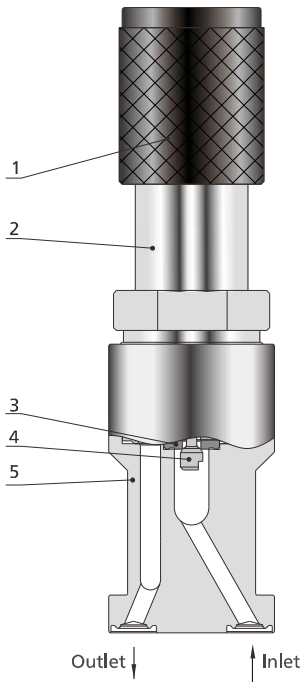
### Flow Data



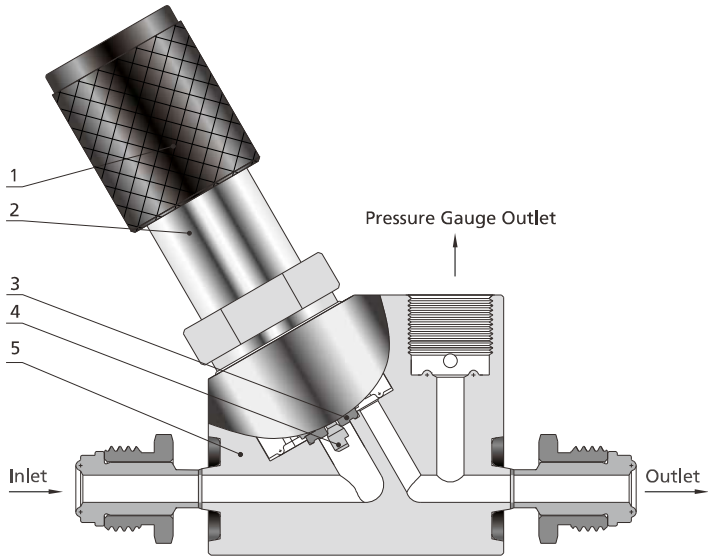
Process Specification

Item	Process Specification	Ultra High Purity Process (FC-03)
Material		316L SS, 316L SS VAR
Wetted Surface Roughness		Ra 5 µin. (0.13 µm)
Polishing Process		Electropolished
Assembly Environment		ISO Class 4 (FS 209E Class 10 equivalent) cleanroom
Packaging		Double bagged in cleanroom

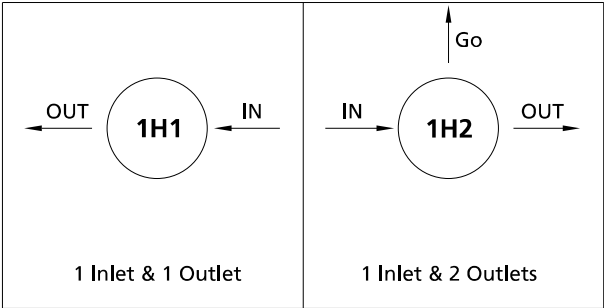
Major Materials of Construction



Item	Component	Material/Specification
1	Handle	Aluminum
2	Bonnet	316 SS/ASTM A479
3	Seat	PCTFE/ASTM D1430 or PTFE/ASTM D1710
4	Lift Poppet	Alloy C-22/ASTM B574
5	Body	316L SS, 316L SS VAR



Porting Configurations



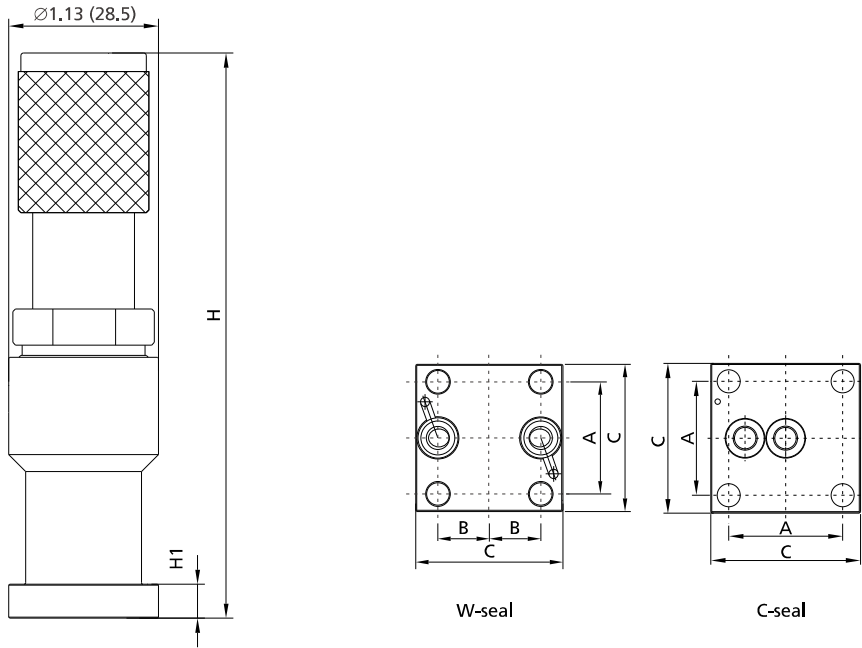
Porting Configuration Symbol

IN	OUT	Go
Inlet	Outlet	Outlet Pressure Gauge Port

Note: 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.

Dimensions and Ordering Information

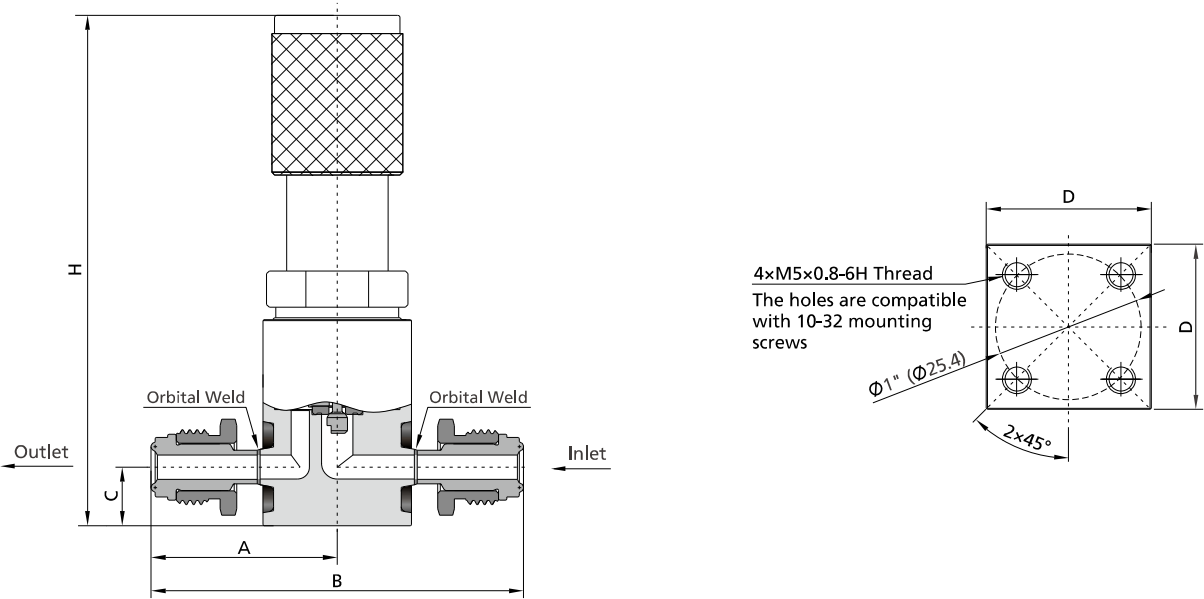
Dimensions, in inches (millimeters), are for reference only.



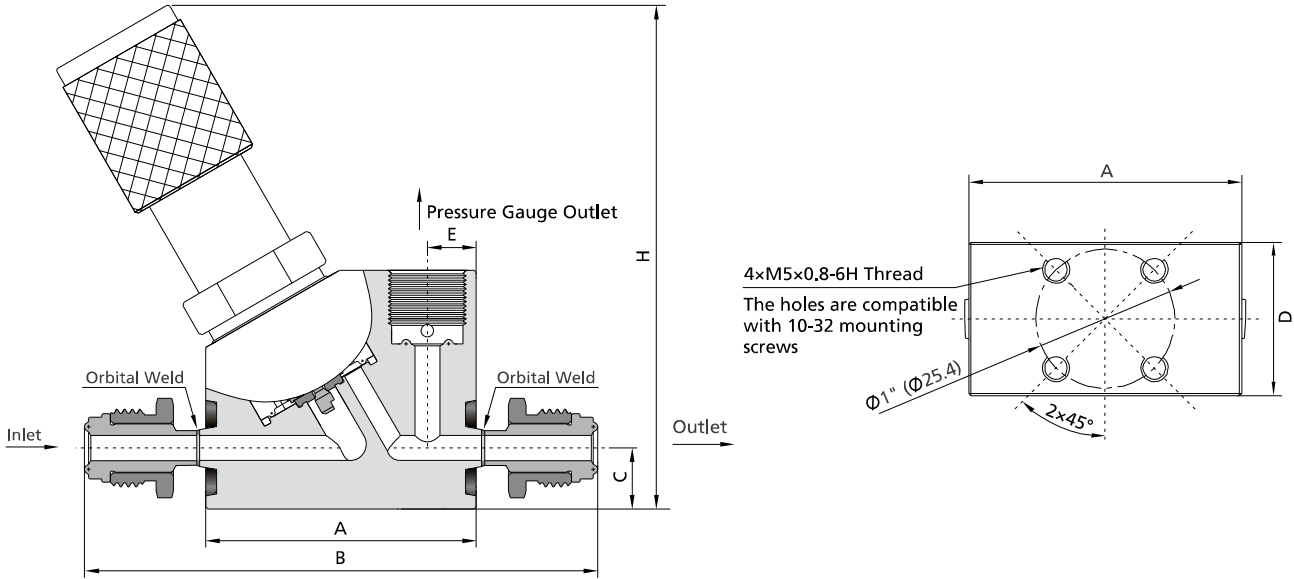
Basic Ordering Number	Port Type and Size	Dimensions, in. (mm)				
		A	B	C	H	H1
RTCC-□□-150-□□-1H1-WS11-F3	1.125" W-seal	0.86 (21.8)	0.39 (10.0)	1.13 (28.6)	4.25 (108.0)	0.26 (6.5)
RTCC-□□-150-□□-1H1-CS11-F3	1.125" C-seal					

Fittings
Valves
Regulators
Filters
Tubing
Integrated Systems
Other Products
Technical Information

- Fittings
- Valves
- Regulators
- Filters
- Tubing
- Integrated Systems
- Other Products
- Technical Information

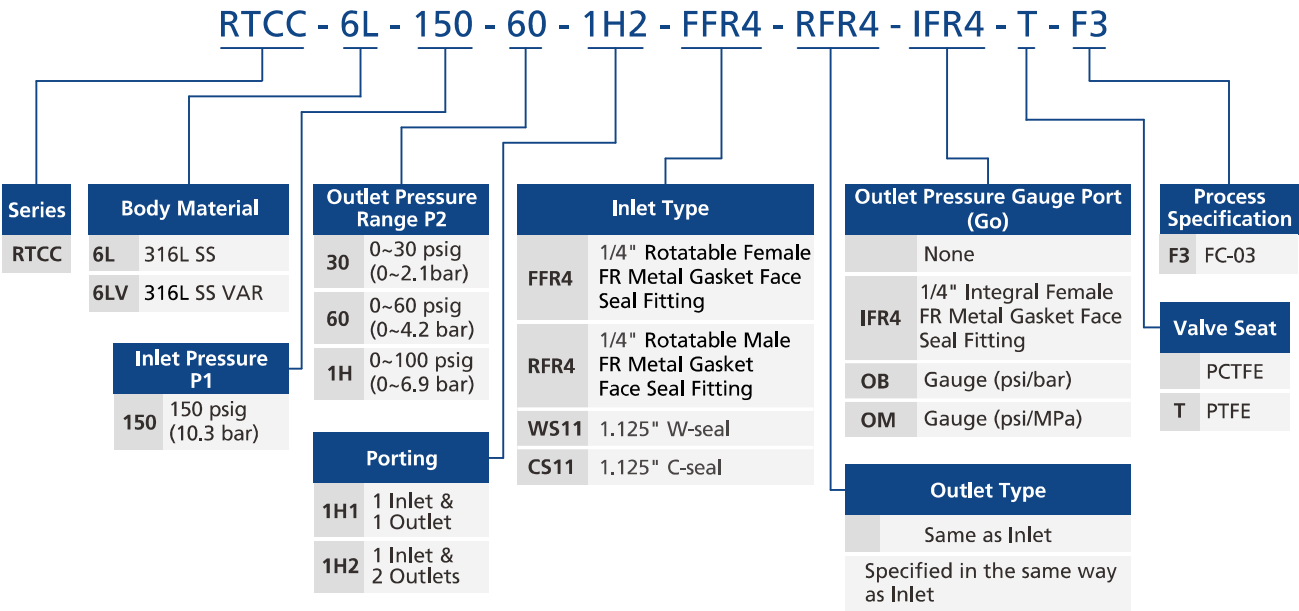


Basic Ordering Number	Port Type and Size	Dimensions, in. (mm)				
		A	B	C	D	H
RTCC-□□-150-□□-1H1-RFR4-F3	1/4" Rotatable Male FR Metal Gasket Face Seal Fitting at Both Ends	1.39 (35.3)	2.78 (70.6)	0.44 (11.2)	1.12 (28.4)	3.84 (97.5)



Basic Ordering Number	Port Type and Size	Dimensions, in. (mm)					
		A	B	C	D	E	H
RTCC-□□-150-□□-1H2-RFR4-IFR4-F3	1/4" Rotatable Male FR Metal Gasket Face Seal Fitting at Both Ends, 1/4" Integral Female FR Metal Gasket Face Seal Fitting as Pressure Gauge Connection	1.96 (49.8)	3.70 (94.0)	0.44 (11.2)	1.10 (28.0)	0.35 (9.0)	3.65 (92.7)

Ordering Number Description



Notes:

- 1. "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.
- 2. Mounting screws and gasket are not included, please contact FITOK Group or our authorized distributors if you have any requests.

Fittings
Valves
Regulators
Filters
Tubing
Integrated Systems
Other Products
Technical Information