

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

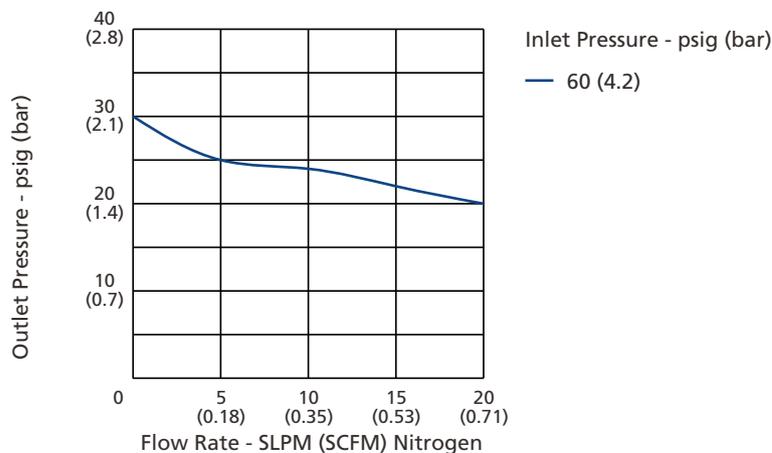
- ⦿ Alloy C-22 lift poppet and Alloy C-276 diaphragm provide excellent corrosion resistance
- ⦿ Metal-to-metal seal between valve body and diaphragm provides ensured sealing performance
- ⦿ FR metal gasket face seal, W-seal, and C-seal connections optional
- ⦿ Reinforced diaphragm design extends diaphragm 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 ³ /s
		Outboard	$\leq 2 \times 10^{-9}$ std cm ³ /s
	Internal	$\leq 2 \times 10^{-9}$ std cm ³ /s	

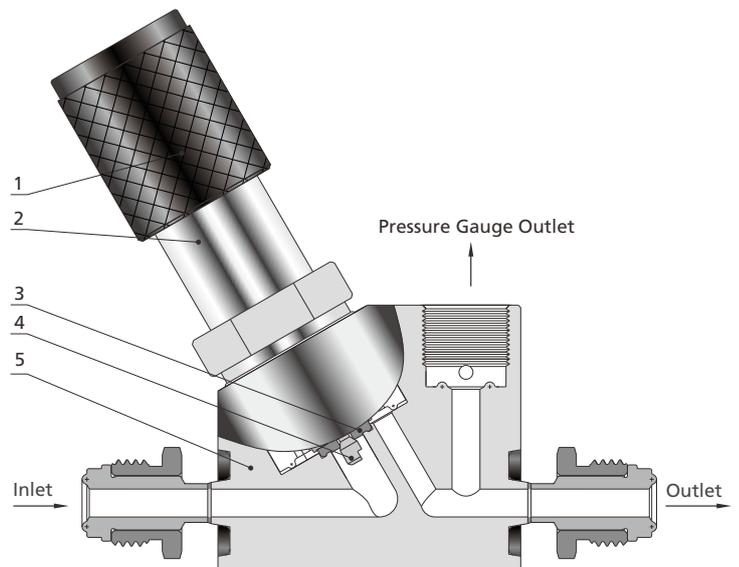
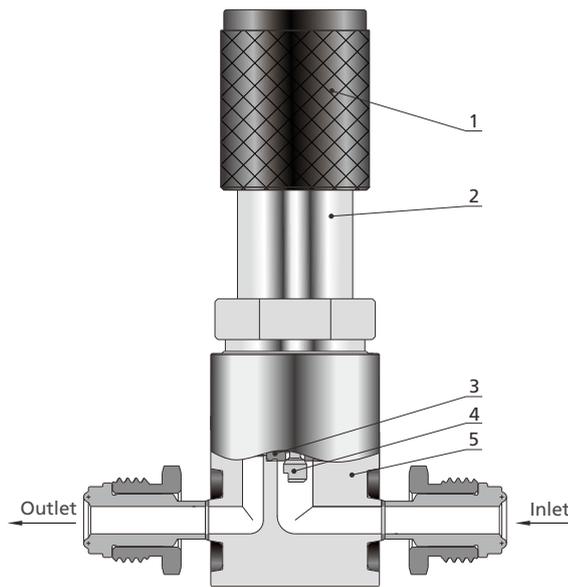
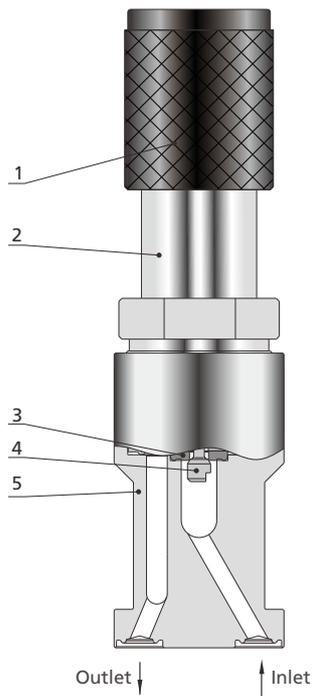
Flow Data



Process Specification

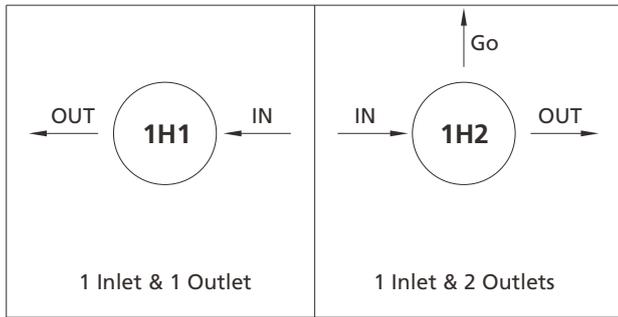
Process Specification		Ultra High Purity Process (FC-03)
Material		316L SS, 316L SS VAR
Wetted Surface Roughness		Ra 5 µin. (0.13 µm)
Polishing Process		Electropolished
Assembly Environment		ISO Class 4 (FS 209E Class 10 equivalent) cleanroom
Packaging		Double bagged in cleanroom

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



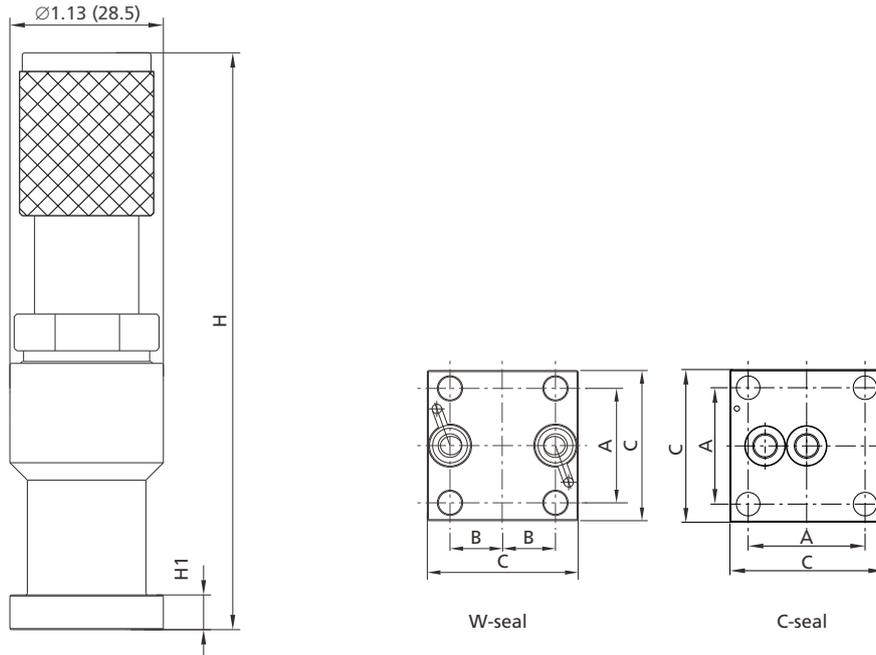
Porting Configuration Symbol

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					

R-07 Pressure Reducing Regulators

Fittings

Valves

Regulators

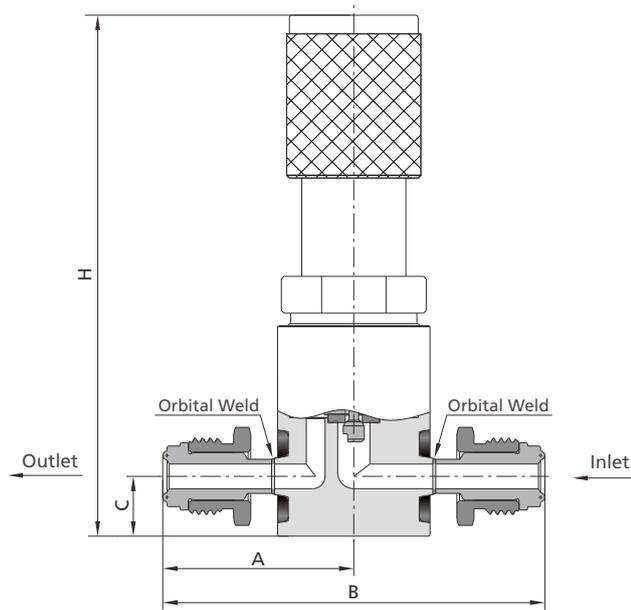
Filters

Tubing

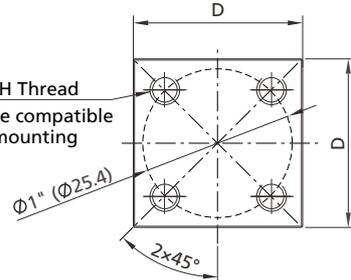
Integrated Systems

Other Products

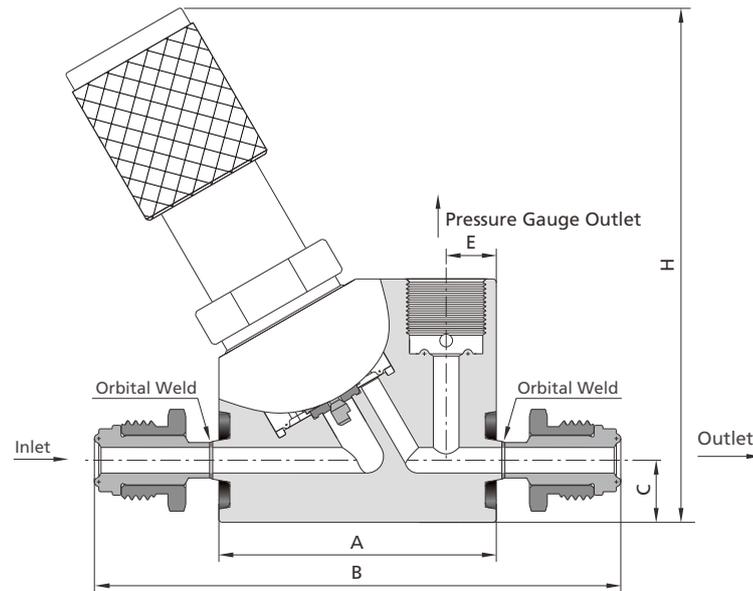
Technical Information



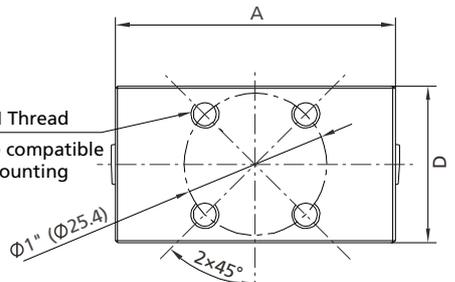
4xM5x0.8-6H Thread
The holes are compatible with 10-32 mounting screws



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)

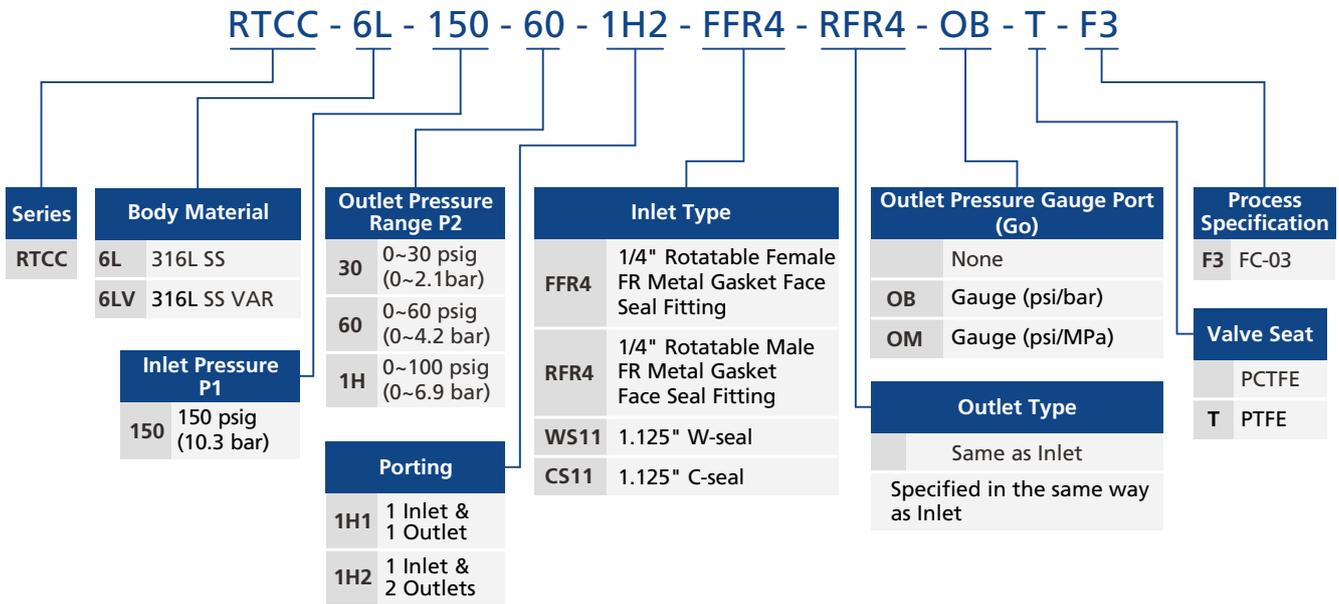


4xM5x0.8-6H Thread
The holes are compatible with 10-32 mounting screws



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:

- "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.
- Mounting screws and gasket are not included, please contact FITOK Group or our authorized distributors if you have any requests.
- For the 1H2 port configuration, the pressure gauge port defaults to IFR4 (1/4" integral female FR metal gasket face seal fitting).

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