

# Regulators

## Steam Heated Regulators

### RDVC Series

#### Introduction

RDVC Series Steam Heated Regulators are designed to heat fluids for analyzer systems, primarily to preheat fluids and prevent gas condensation or liquid evaporation. The unique design allows for easy disassembly, cleaning, and replacement of heat transfer components, reducing maintenance time and costs.

#### Features

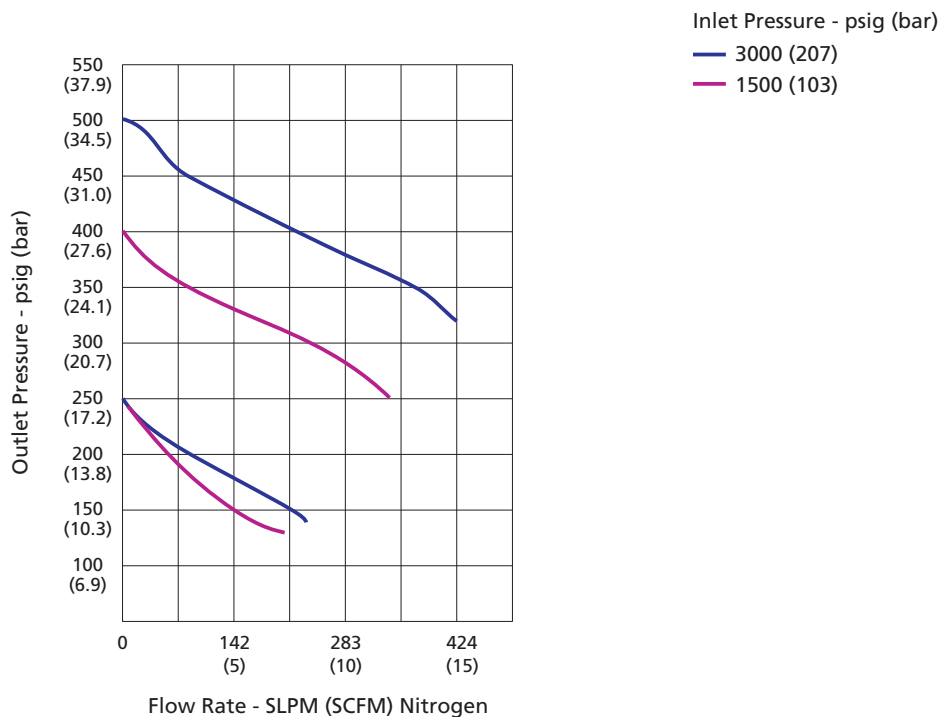
- ⦿ Low internal volume and high flow rate
- ⦿ Convoluted diaphragm for improved regulation precision and extended service life
- ⦿ Reinforced diaphragm improves sealing performance and extends service life
- ⦿ Wetted metal components comply with NACE MR0175



#### Technical Data

Port Size	Media Inlet and Outlet	1/8" to 3/8", 6 mm or 8 mm
	Steam Supply Port	3/8"
Max. Working Pressure	Media	3600 psig (248 bar)
	Steam	600 psig (41.4 bar)
Outlet Pressure Range		0 ~ 25 psig (0 ~ 1.7 bar)
		0 ~ 50 psig (0 ~ 3.4 bar)
		0 ~ 100 psig (0 ~ 6.9 bar)
		0 ~ 250 psig (0 ~ 17.2 bar)
		0 ~ 500 psig (0 ~ 34.4 bar)
Flow Coefficient (Cv)		0.06
Working Temperature	Media	-40 ~ 500 °F (-40 ~ 260 °C)
	Steam	Max. 500 °F (260 °C)
Leak Rate (Helium)	Internal	$\leq 1 \times 10^{-7}$ std cm <sup>3</sup> /s
	External	$\leq 1 \times 10^{-7}$ std cm <sup>3</sup> /s

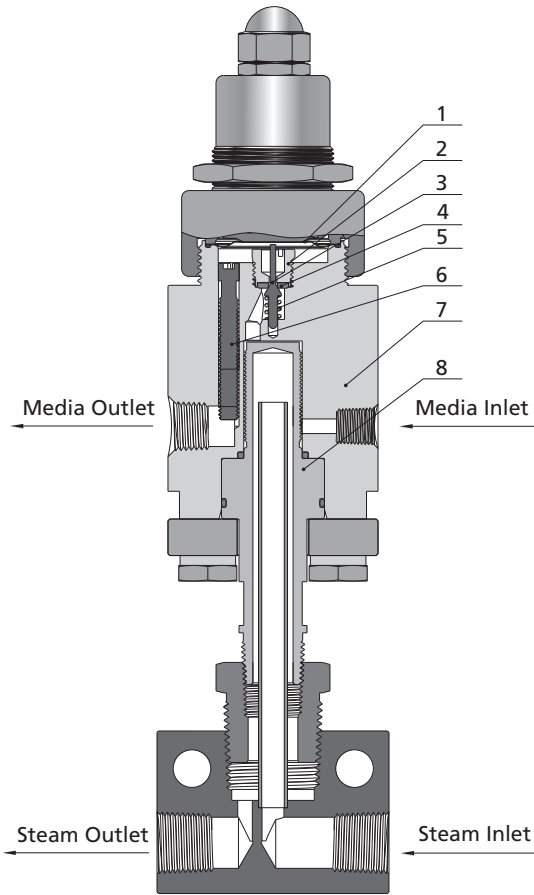
## Flow Data



## Process Specification

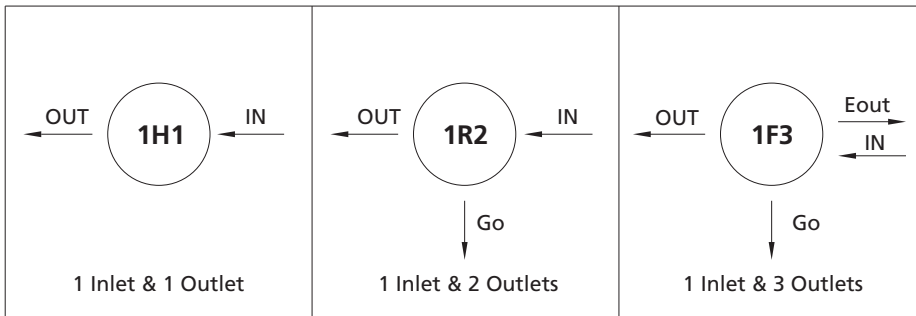
Item	Process Specification	Special Cleaning and Packaging Process (FC-02)
Material		316L SS, Alloy 400
Wetted Surface Roughness		Ra 32 μin. (0.8 μm)
Polishing Process		Machine Finished
Assembly Environment		In specially cleaned areas
Packaging		Double bagged

## Major Materials of Construction



Item	Component	Material/Specification
1	Diaphragm	Alloy C-22
2	Seat Retainer	316L SS or 316L SS VAR
3	Lift Poppet	Alloy C-276/ASTM B574
4	Seat	PCTFE/ASTM D1430
5	Poppet Spring	Alloy X-750
6	Shutoff Bolt	316L SS/ASTM A479
7	Body	316L SS/ASTM A479 or Alloy 400
8	Stream Heater	316L SS/ASTM A479

## Porting Configurations



### Porting Configuration Symbol

IN	OUT	Go	Eout
Inlet	Outlet	Outlet Pressure Gauge Port	Auxiliary Outlet

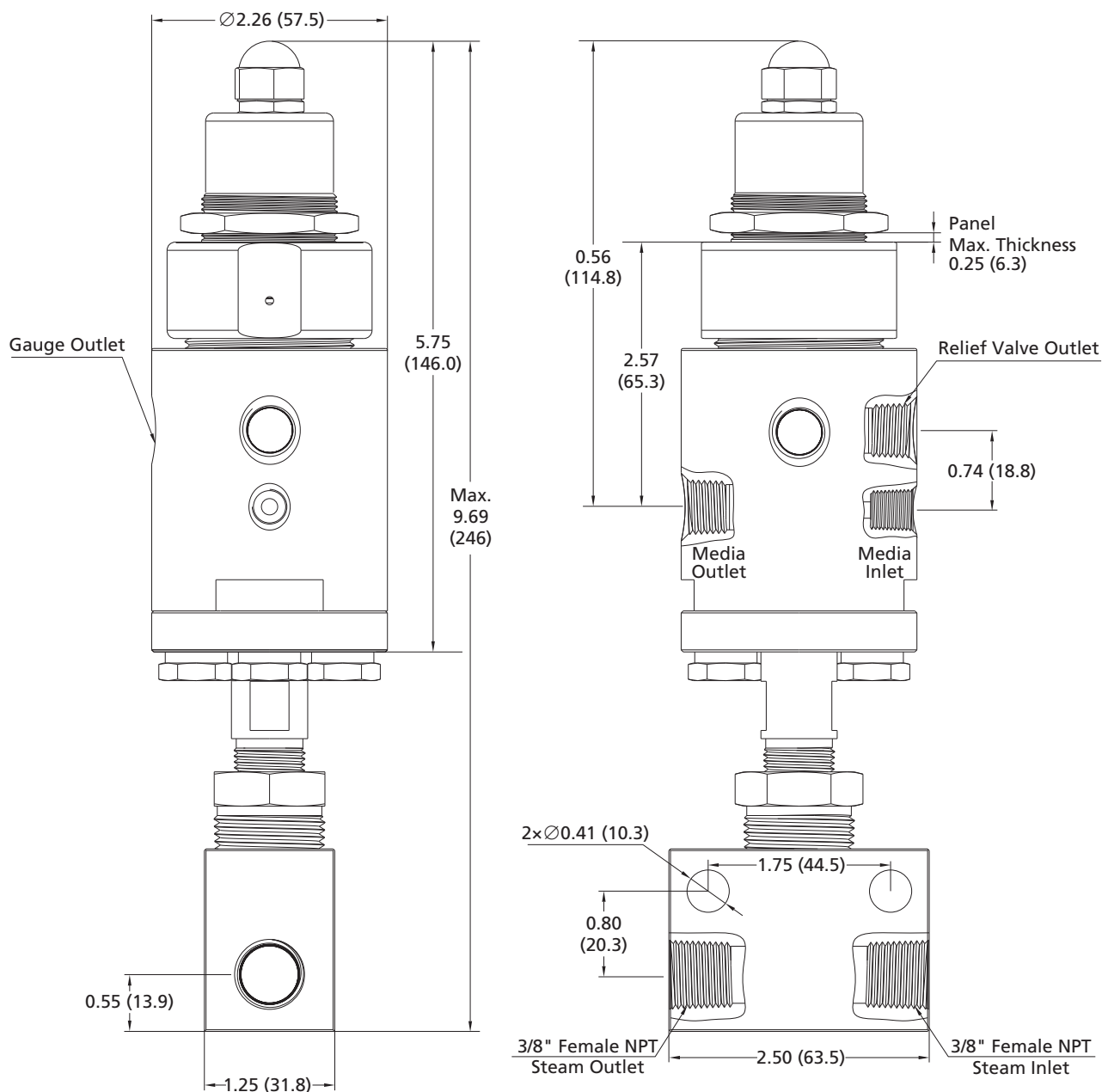
Notes:

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.

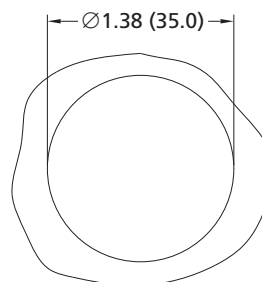
## Dimensions

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

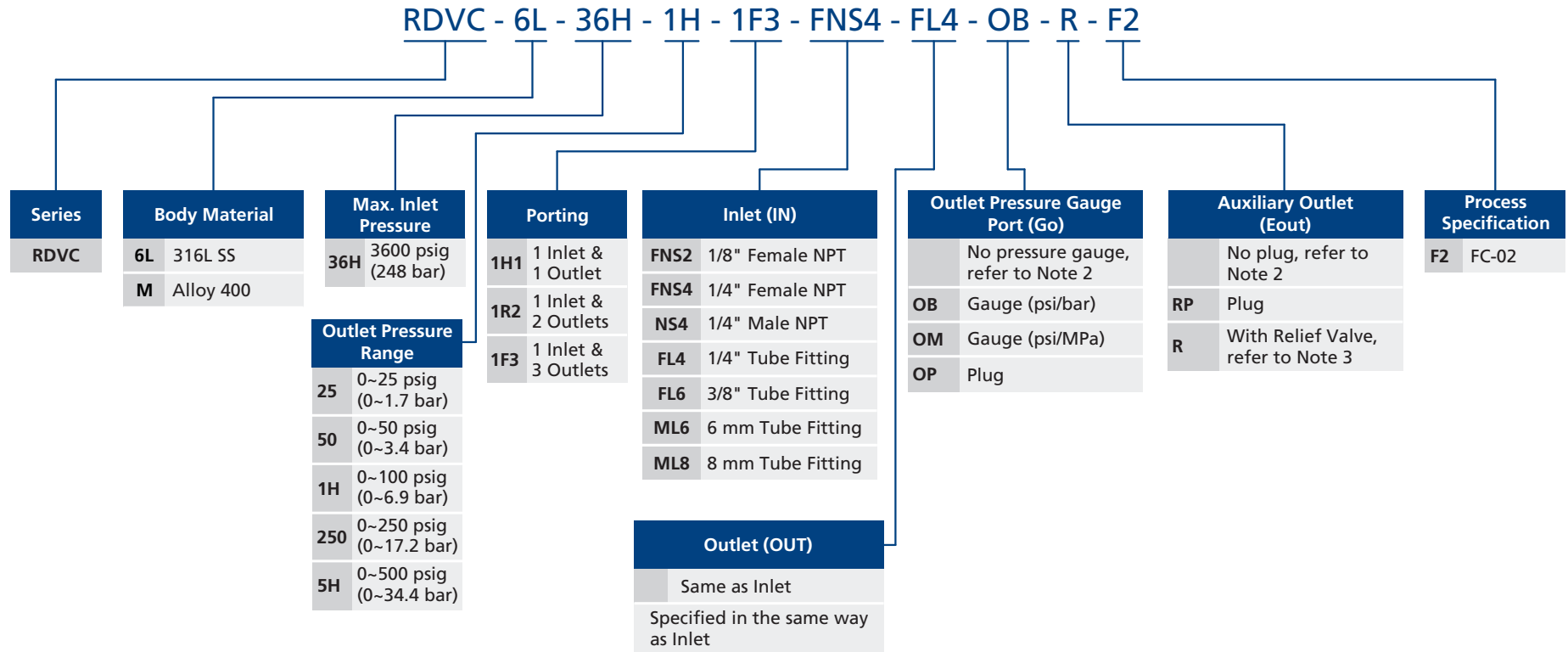
Pressure Regulator with 1 Inlet & 3 Outlets (1F3)



Panel Cut-out



## 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. When choosing NPT or Metric/Fractional Tube Fitting connection for the inlet and outlet, the body inlet port is 1/8" Female NPT by default, the body outlet port is 1/4" Female NPT by default, and the gauge port (Go) and auxiliary outlet (Eout) are also 1/4" Female NPT. Other options are adapted from Male NPT.
3. For the outlet relief valve, the set pressure is factory-set to 1.05-1.1 times the maximum outlet pressure by default.