

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.
- Convuluted 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.

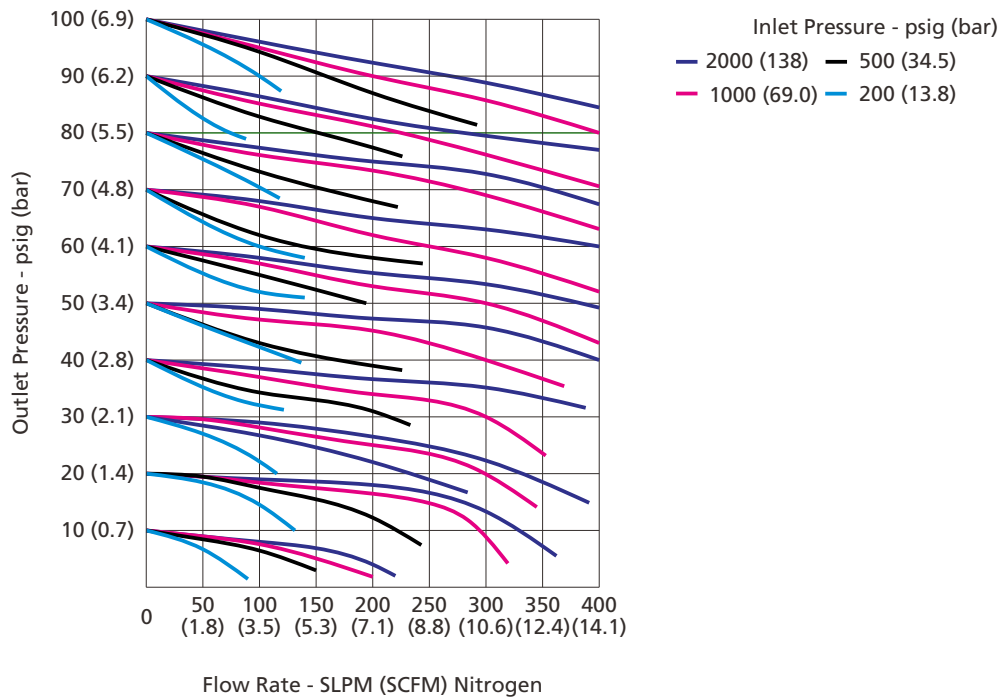
Technical Data

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 ^①	Media	PCTFE: -40 ~ 165 °F (-40 ~ 74 °C)
		Polyimide: -40 ~ 500 °F (-40 ~ 260 °C)
		PEEK: -40 ~ 400 °F (-40 ~ 204 °C)
	Steam	Max. 500 °F (260 °C)
Leak Rate (Helium)	Internal	≤1×10 ⁻⁷ std·cm ³ /s
	External	≤1×10 ⁻⁷ std·cm ³ /s

① For the working temperature of products equipped with a pressure gauge, a relief valve, or both, please refer to the **catalog for Pressure Gauges or Relief Valves**.



Flow Data

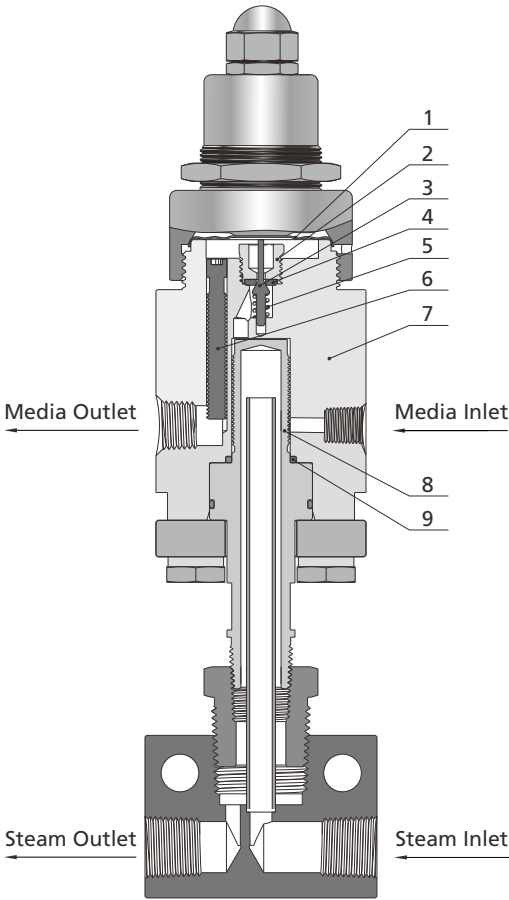


Process Specification

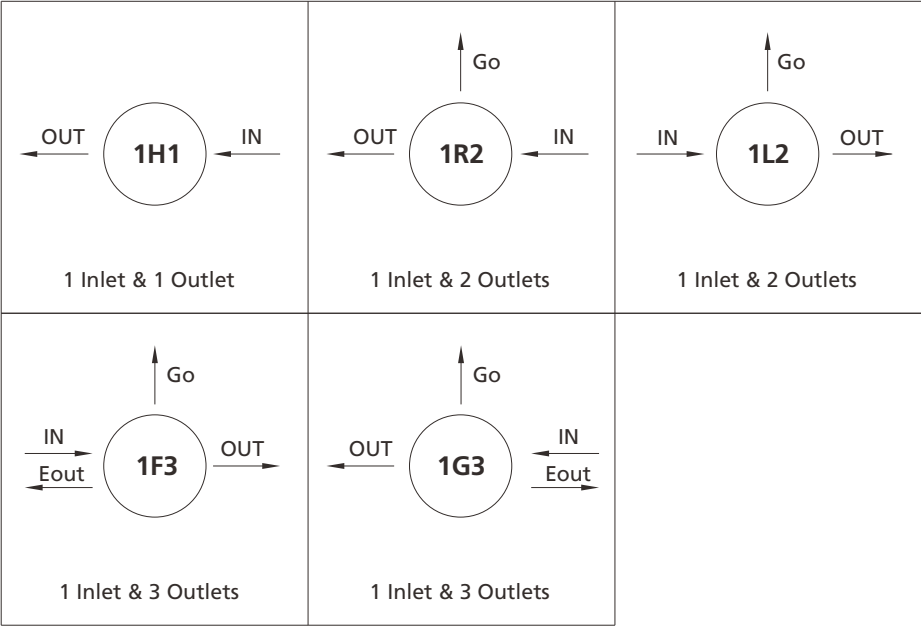
Item	Process Specification	Special Cleaning and Packaging Process (FC-02)
Material		316L SS, Alloy 400
Wetted Surface Roughness		Ra 32 μin. (0.8 μm)
Polishing Process		Machine Finished
Assembly Environment		In specially cleaned areas
Packaging		Double bagged

Major Materials of Construction

Item	Component	Material/Specification	
		6L	M
1	Diaphragm	Alloy C-22/ASTM B575	
2	Seat Retainer	316L SS/ASTM A479	Alloy 400/ASTM B164
3	Lift Poppet	Alloy C-276/ASTM B574	
4	Seat	PCTFE/ASTM D1430 or Polyimide or PEEK	
5	Poppet Spring	Alloy X-750	
6	Shutoff Bolt	316L SS/ASTM A479	Alloy 400/ASTM B164
7	Body	316L SS/ASTM A479	Alloy 400/ASTM B164
8	Stream Heater	316L SS/ASTM A479	Alloy 400/ASTM B164
9	Seal Ring	Polyimide	



Porting Configurations



Porting Configuration Symbol

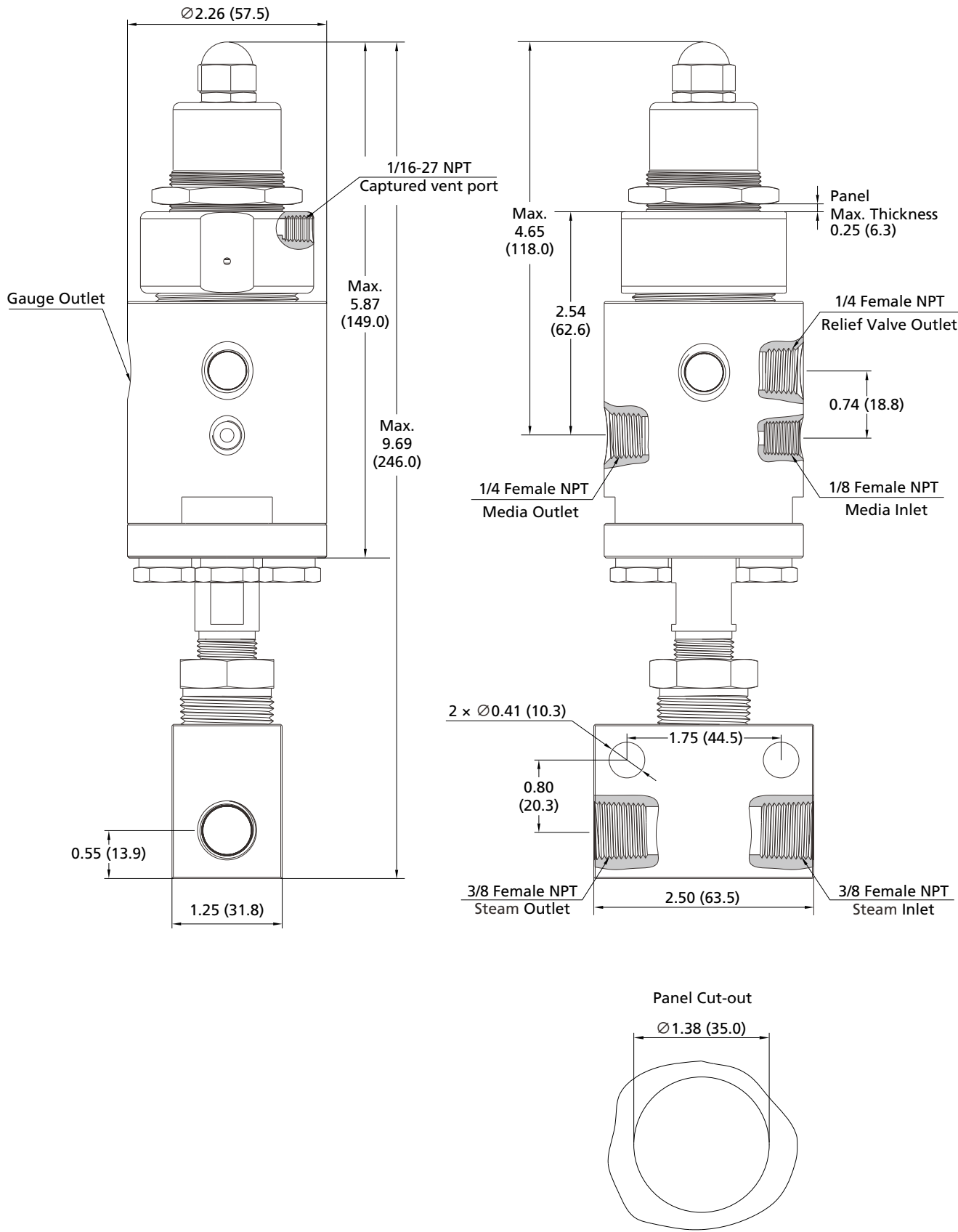
IN	OUT	Go	Eout
Inlet	Outlet	Outlet Pressure Gauge Port	Auxiliary Outlet

- 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.

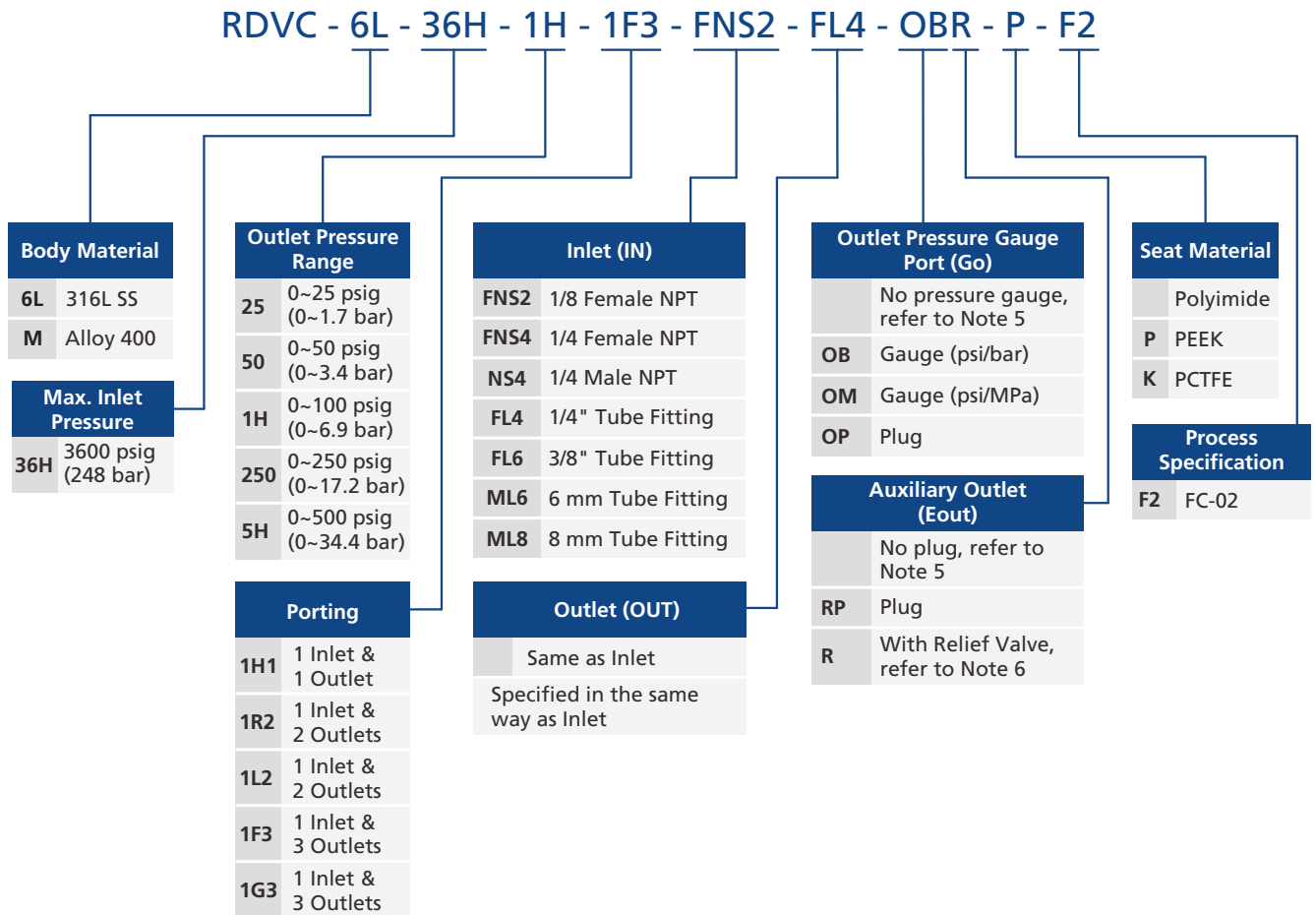
Dimensions

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

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



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.
- When selecting pressure gauge and relief valve accessories, the medium working temperature must not exceed the temperature range of the accessories.
- For "1F3" or "1G3" port configurations, the inlet must be 1/8 female NPT only. The installation space for both the inlet and the auxiliary outlet should be evaluated.
- 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.
- 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.
- 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.
- For the default pressure gauge configurations, please refer to the pressure gauge ordering information on page A-12.