

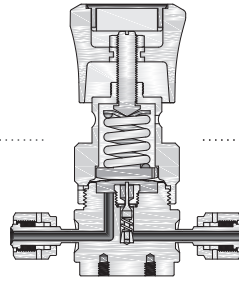
Ultra-high Purity Regulators PPR Series



Contents

Ultra-high Purity Regulators (PPR1 series)

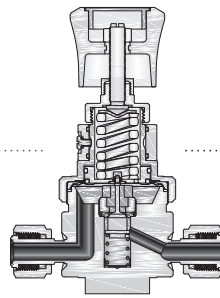
- ❖ Maximum Inlet Pressure 3500 psig (241 bar)
- ❖ Flow Capacity: Cv = 0.06
- ❖ 1/4" point-of-use



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Ultra-high Purity Regulators (PPR2 series)

- ❖ Maximum Inlet Pressure 1500 psig (103 bar)
- ❖ Flow Capacity: Cv = 1.2
- ❖ 1/2" point-of-use



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Ultra-high Purity Regulators

PPR1 series

Applications

- ❖ 1/4" point-of-use
- ❖ Gas cabinets
- ❖ Semiconductor manufacturing
- ❖ Valve manifolds boxes
- ❖ Research labs

Features

- ❖ Optimum performance and cleanliness at a great value
- ❖ Internal surface finished to 10 Ra microinch /0.25 micrometer ensures minimal particle generation or entrapment
- ❖ True metal-to-metal body diaphragm seal provides enhanced leak integrity
- ❖ No bias spring or friction device in the flow stream
- ❖ Adjustable stop to limit outlet pressure
- ❖ Positionable ported bonnet ring is available



Operating Parameters

- ❖ Maximum Inlet Pressure
3500 psig (241 bar)
- ❖ Outlet Pressure Ranges
0-30 psig (0-2.1 bar), 0-60 psig (0-4.1 bar), 0-100 psig (0-6.9bar),
0-150 psig (0-10.3 bar), 0-250 psig (0-17.2 bar)
- ❖ Design Proof Pressure
150% maximum rated
- ❖ Leakage
Internal: Bubble-tight
External: Design to meet $\leq 2 \times 10^{-9}$ atm cc/sec He
- ❖ Operating Temperature
PCTFE Seat: -40°F to 140°F (-40°C to 60°C)
- ❖ Flow Capacity
Cv = 0.06

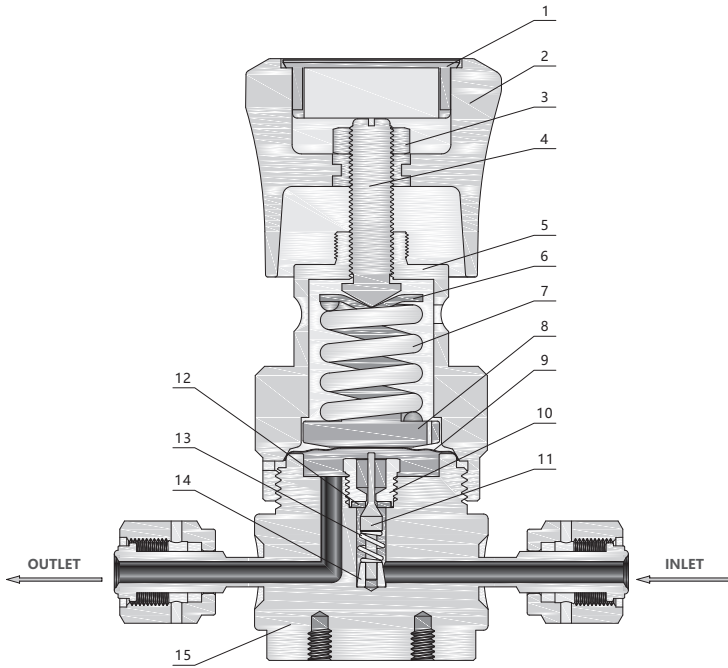
Internal Surface Finish

- ❖ 10 Ra microinch / 0.25 micrometer

Cleaning

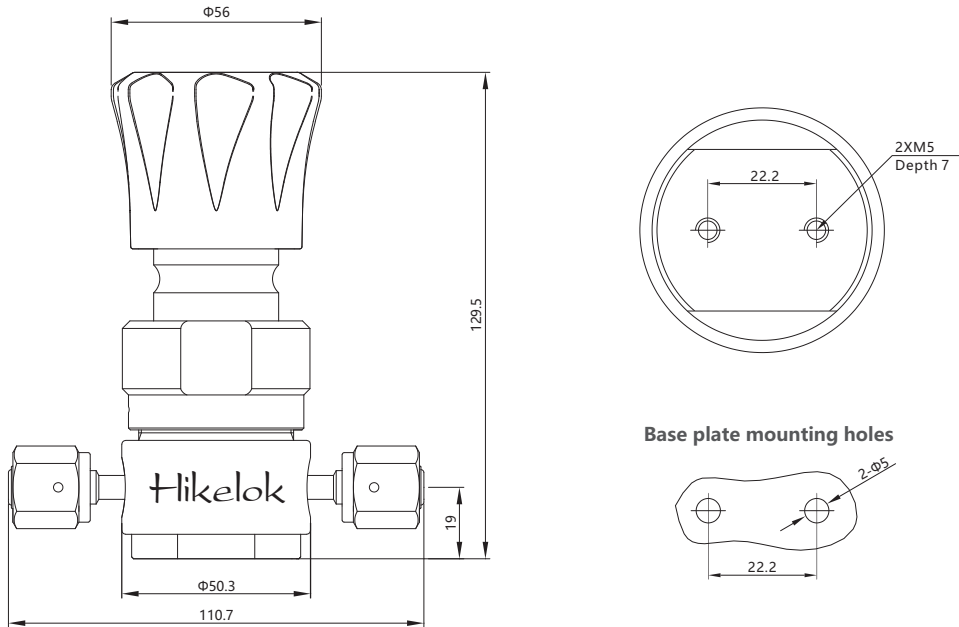
- ❖ DI water electronic grade cleaned and ES 500 Particle Certified for internal electropolish models

Standard Materials of Construction

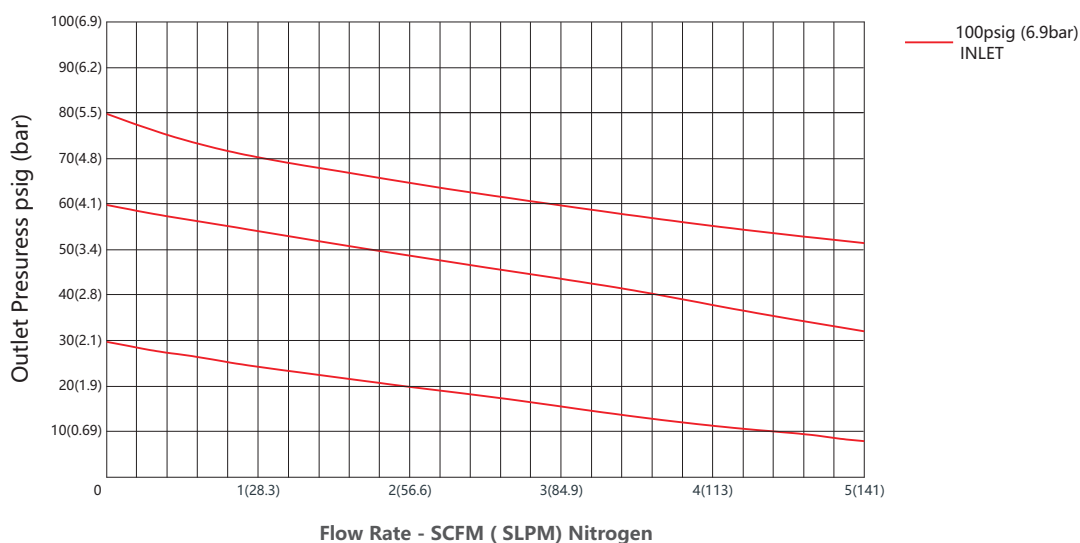


Item	Component	Material Grade / ASTM Specification
		316 S.S.
1	Cover	Nylon PA66
2	Knob handle	Nylon PA66
3	Stem nut	316 S.S.
4	Stem	316 S.S.
5	Bonnet	316 S.S. / A479
6	Spring button	316 S.S. / A276
7	Range spring	316 S.S.
8	stop plate	316 S.S. / A276
9	Diaphragm	Alloy X-750 or alloy C-276
10	Seat retainer	316 S.S. / A276
11	Poppet	316 S.S. / A276
12	Seat	PCTFE or PI or PTFE
13	Poppet spring	Alloy X-750
14	Friction sleeve	316 S.S. / A276
15	Body	316 S.S. / A479

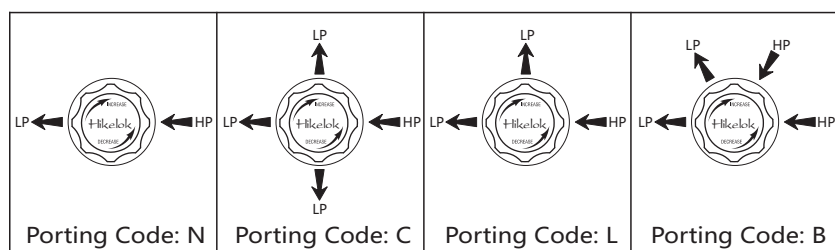
Dimensions



Flow Charts



Path Options (LP=Low Pressure; HP=High Pressure)



How to Order

Series	Inlet Type Outlet Type	Inlet Size Outlet Size	Seat Material	Porting	Inlet Pressure	Out Pressure	Gauges	Body Material	
PPR1	GFS Male GFS Fitting	2 1/8 in.	PCTFE	N No Gauge Ports	3 3500 psig	250 0-250 psig	No Gauges	316 316 S.S.	
	FGFS Female GFS Fitting	4 1/4 in.		L One Gauge Ports		150 0-150 psig	G With Gauges	316L 316L S.S.	
	FBW Fractional Tube Butt Weld	6 6 mm		C Two Gauge Ports		100 0-100 psig		304 304 S.S.	
	MBW Metric Tube Butt Weld	8 8 mm or 1/2 in.		B Two Gauge Ports		60 0-60 psig		304L 304L S.S.	
	RGFS Rotatable Male GFS Fitting						30 0-30 psig		
	IGFS Internal Female GFS Fitting								

Ultra-high Purity Regulators

PPR2 series

Features

- ❖ 1/2" point-of-use
- ❖ Corrugated non-perforated diaphragm design improves adjustment accuracy and prolongs service life
- ❖ Metal-to-metal seal to ensure minimum external leakage
- ❖ Applicable to corrosive or toxic gases
- ❖ Bottom installation
- ❖ High flow coefficient = Cv 1.2
- ❖ Can be used for gas and liquid.

Technical Data

- ❖ Maximum inlet pressure:
1500psig (103bar)
- ❖ Outlet Pressure Ranges
0-30 psig (0-2.1 bar), 0-60 psig (0-4.1 bar), 0-100 psig (0-6.9 bar),
0-150 psig (0-10.3 bar), 0-200 psig (0-13.8 bar)
- ❖ Leak rates:
Internal: Bubble-tight
External: Design to meet $< 2 \times 10^{-8}$ std cm³/s He
- ❖ Design Proof Pressure:
150% maximum rated
- ❖ Optional material: 316 S.S., 316L S.S., Alloy400, Alloy C276, Brass
- ❖ Optional seat: PCTFE(standard), PEEK, PI(optional)
- ❖ Operating Temperature:
PCTFE: -40°F to 176°F (-40°C to 80°C)
PEEK: -40°F to 392°F (-40°C to 200°C)
PI: -40°F to 500°F (-40°C to 260°C)
- ❖ Flow Capacity
Cv = 1.2



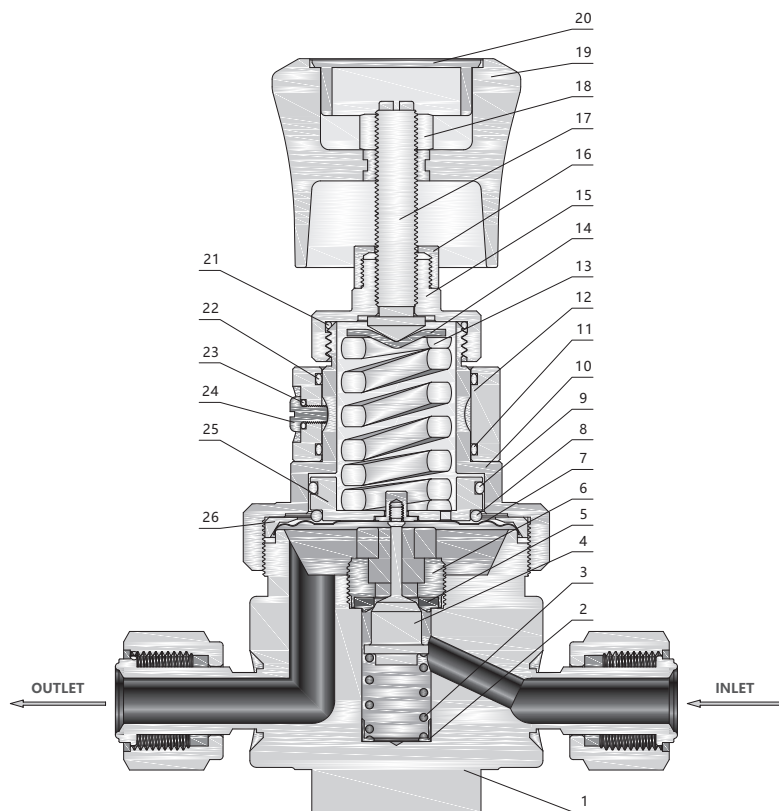
Internal Surface Finish

- ❖ 10 Ra microinch / 0.25 micrometer

Cleaning

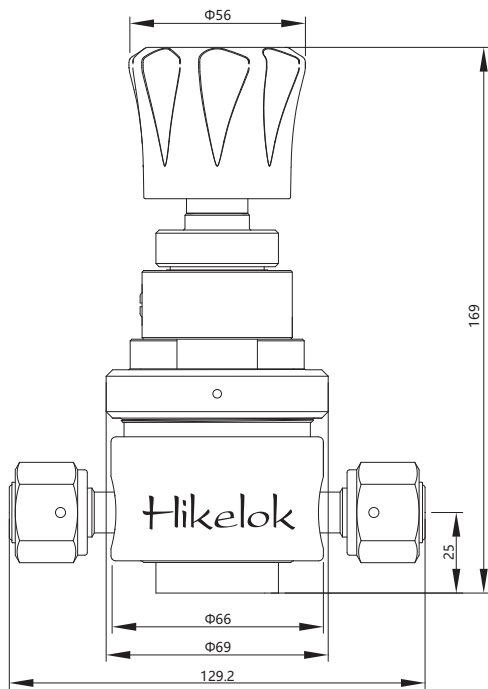
- ❖ DI water electronic grade cleaned and ES 500 Particle Certified for internal electropolish models

Standard Materials of Construction

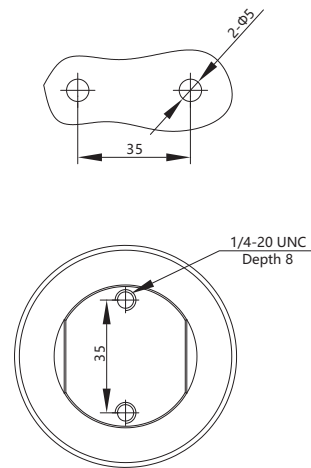


Item	Component	Material Grade
1	Body	316 S.S. / ASTM A479
2	Spring Base	316 S.S.
3	Spool Spring	Alloy X-750
4	Spool	316 S.S. / ASTM A479
5	Seat	PCTFE / PEEK / PI
6	Seat Retainer	316 S.S.
7	Diaphragm	316 S.S.
8	Support Ring	PTFE
9	O-Ring	FKM
10	Bonnet	316 S.S. / ASTM A479
11	O-Ring	FKM
12	Bonnet Rleeve	316 S.S. / ASTM A276
13	Range Spring	Spring Steel
14	Spring Button	304 S.S.
15	Bonnet	316 S.S. / ASTM A479
16	Bonnet Nut	316 S.S.
17	Stem	C36000
18	Stem Nut	316 S.S.
19	Handle	Nylon PA66
20	Cover	Nylon PA66
21	O-Ring	FKM
22	O-Ring	FKM
23	O-Ring	FKM
24	Screws	316 S.S.
25	Spring Support	C36000
26	Bonnet Inner Ring	316 S.S.

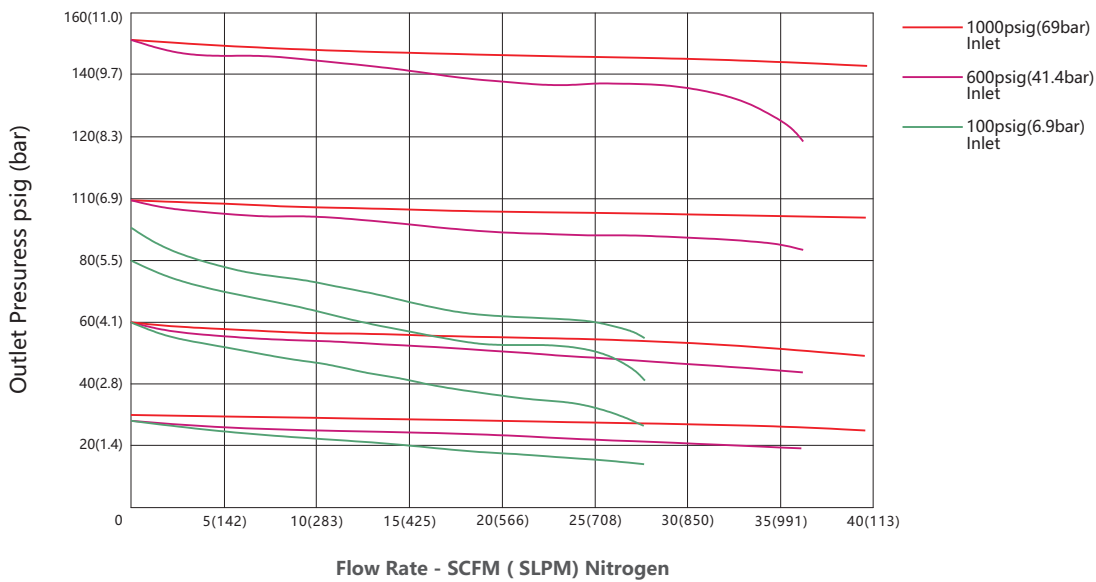
Dimensions



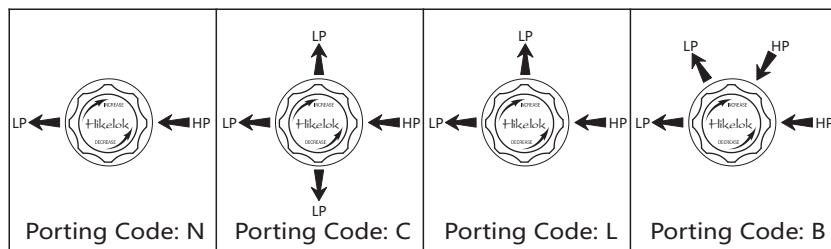
MOUNTING INFORMATION



Flow Charts



Path Options (LP=Low Pressure; HP=High Pressure)



How to Order

PPR2 — FGFS8 — IB — 1200G — 316L

Series	Inlet Type Outlet Type	Inlet Size Outlet Size	Seat Material	Porting	Inlet Pressure	Out Pressure	Gauges	Body Material
PPR2	GFS Male VCR Fitting	6 3/8 in.	PCTFE	N No Gauge Ports	1 1500 psig	200 0-200 psig	No	316 316 S.S.
	IGFS Internal Female VCR Fitting	8 1/2 in.	P PEEK	L One Gauge Ports		150 0-150 psig	G YES	316L 316L S.S.
	RGFS Rotatable Male VCR Fitting	10 10 mm	I PI	C Two Gauge Ports		100 0-100 psig		304 304 S.S.
	FGFS Female VCR Fitting	12 12 mm		B Two Gauge Ports		60 0-60 psig		304L 304L S.S.
	FBW Fractional Tube Butt Weld					30 0-30 psig		
	MBW Metric Tube Butt Weld							

FOR YOUR SAFETY

It is solely the responsibility of the system designer and the user to consider the compatibility of the materials, of the components and system, the function of the component, appropriate ratings and to ensure proper installation, operation and maintenance. Improper selection or use of products described herein can cause personal injury or property damage.