

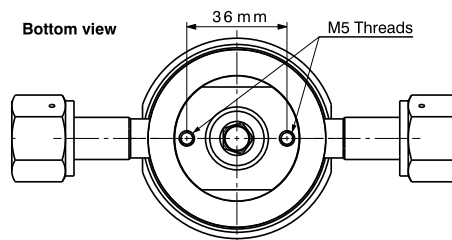
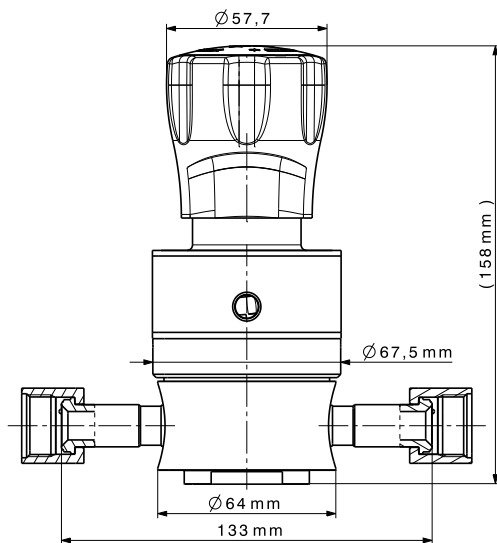


# RX4000

## SINGLE-STAGE DIAPHRAGM PRESSURE REGULATOR FOR HP & UHP APPLICATIONS

- Unique threadless design in all versions for a higher purity level
- Spring less design for tied diaphragm version
- Sub-atmospheric option available
- Optimized supply pressure effect and excellent flow stability
- Life duration according to CGA E4
- Vacuum to 240 bar (3500 psi) inlet
- Assembling, testing & packaging in cleanroom: Class ISO 4
- Individual serial number for full traceability
- Electropolished surface per SEMI F19 UHP Grade
- 316L VAR® stainless steel double melt per SEMI F20 option available

# RX4000 | THE FIRST OF ITS KIND THREADLESS AND SPRINGLESS PRESSURE REGULATOR FOR THE HIGHEST LEVEL OF PURITY



## SPECIFICATIONS

### Max. inlet pressure

RX4400-RX4300: 240 bar (3500 psig) leak rate  
 RX4100: 160 bar (2320 psig)  
 RX4000-RX42000: 117 bar (2000 psig) / HF: 50 bar (730 psig)

### Poppet type

RX4000-RX4400 : Free poppet  
 RX4100-RX4200-RX4300: Tied diaphragm

### Certified max. Helium outboard leak rate

$\leq 1 \times 10^{-9}$  mbar.l/s

### Outlet pressure

100 mbar/ 2/4/7/10 bar  
 (29/58/102/150 psig)

### Burst pressure\*

300% of operating pressure

### Certified max. Helium across the seat leak rate (at max. pressure)

$\leq 1 \times 10^{-8}$  mbar.l/s

### Temperature range

-20°C to +65°C  
 (-4°F to +149°F)

### Proof pressure\*

150% of operating pressure

### Certified max. Helium inboard leak rate (at max. pressure)

$\leq 1 \times 10^{-9}$  mbar.l/s

### Flow capacity (Cv)

RX4400-RX4300: Standard: 0.15 / HF: 0.2  
 RX4100: Standard: 0.45  
 RX4000-RX4200: Standard: 0.9 / HF: 1.1

### Supply pressure effect I\*

RX4400-RX4300: Standard: 0.25 / HF: 0.5  
 RX4100: Standard: 1.4  
 RX4000-RX4200: Standard: 3 / HF: 4

## CONSTRUCTION MATERIAL

	Parts	Material
<b>Wetted parts</b>	Body	SS 316L, VAR
	Seat	PCTFE (PVDF, VESPEL® optional)
	Diaphragm	SS 316L (Hastelloy optional)
	Poppet	SS 316L (Hastelloy optional)
	Spring	SS 316L (Hastelloy optional)
	Spring Holder	SS 316L
<b>Non-wetted parts</b>	Bonnet	SS 303
	Handwheel	PA 6.6
	Others	Stainless Steel and Brass

## SURFACE FINISH

<b>S</b>	Ra 0.4 $\mu$ m (15 $\mu$ in)
<b>V</b>	Ra 0.25 $\mu$ m EP (10 $\mu$ in)
<b>U</b>	Ra 0.13 $\mu$ m EP (5 $\mu$ in)

	Regulator type	Max. Delivery Pressure	Body Material	Surface Finish	Porting Configuration	Inlet / Outlet Connections	Options	Version
RX	40	02	-	V	2W1	4M4M	-	HF
	Free poppet	40 2 bar (29 psig)	02 SS 316L	- Ra 0.4 µm (15 µin)	S 2 ports	2W1 Metal face seal 1/4" - Female	4F Vespel Seat	V Standard (Cv 0.9)
	Tied diaphragm	42 4 bar (58 psig)	04 VAR*	V Ra 0.25 µm EP (10 µin)	V 3 ports	3W4 Metal face seal 1/4" - Male	4M PVDF Seat	P High Flow (Cv 1.1)
		7 bar (102 psig)	07	U Ra 0.13 µm EP (5 µin)*	4 ports	4W6 Metal face seal 1/2" - Female	8F Hastelloy Trim**	H
		10 bar (145 psig)	10				8M Gauge(s)*	PG
							12F PTCFE	-
						12M Metal face seal 3/4" Male		

	Regulator type	Max. Delivery Pressure	Body Material	Surface Finish	Porting Configuration	Inlet / Outlet Connections	Options	Version
RX	41	01	-	V	2W1	4M4M	-	-
	Tied and sub atmospheric delivery pressure (min 100 mbara)	41 100 mbara (10 psig)	01 SS 316L	- Ra 0.4 µm (15 µin)	S 2 ports	2W1 Metal face seal 1/4" - Female	4F Vespel Seat	V Standard (Cv 0.45)
		2 bar (29 psig)	02 VAR*	V Ra 0.25 µm EP (10 µin)	V 3 ports	3W4 Metal face seal 1/4" - Male	4M PVDF Seat	P VAC (Cv 0.45)
		4 bar (58 psig)	04	U Ra 0.13 µm EP (5 µin)*	4 ports	4W6 Metal face seal 1/2" - Female	8F Hastelloy Trim**	H
		7 bar (102 psig)	07				8M Gauge(s)*	PG
		10 bar (145 psig)	10				PTCFE	-

	Regulator type	Max. Delivery Pressure	Body Material	Surface Finish	Porting Configuration	Inlet / Outlet Connections	Options	Version
RX	44	02	-	V	2W1	4M4M	-	-
	Free poppet	44 2 bar (29 psig)	02 SS 316L	- Ra 0.4 µm (15 µin)	S 2 ports	2W1 Metal face seal 1/4" - Female	4F Vespel Seat	V Standard (Cv 0.15)
	Tied diaphragm	43 4 bar (58 psig)	04 VAR*	V Ra 0.25 µm EP (10 µin)	V 3 ports	3W4 Metal face seal 1/4" - Male	4M PVDF Seat	P High Flow (Cv 0,2)
		7 bar (102 psig)	07	U Ra 0.13 µm EP (5 µin)*	4 ports	4W6 Metal face seal 1/2" - Female	8F Hastelloy Trim**	H
		10 bar (145 psig)	10				8M Gauge(s)*	PG
							PTCFE	-