

## U31 SERIES TIED-DIAPHRAGM ULTRA HIGH PURITY REGULATOR

U31 Series dual-stage Tied-Diaphragm ultra high purity regulators are hand adjustable, pressure reducing regulators for applications ranging from non-corrosive, corrosive, and toxic gases. Our metal-to-metal diaphragm to body seal is designed to minimize leakage and to provide excellent accuracy and longevity.



» U31SLBK-DHP-VSF4-E

### Features

- 316L or 316L VAR stainless steel body
- Metal to metal diaphragm to body seal
- Easy front panel and rear bracket mounting
- Gauge ports are standard with 1/4" face seal male
- Fully internal electropolished
- Cleaned, assembled, and packaged for high-purity semi-conductor applications
- High-cycle life
- 100% Helium-leak tested

### Materials

- Body: 316L, 316L VAR
- Seat: PCTFE\*, Vespel®
- Diaphragm: HC22



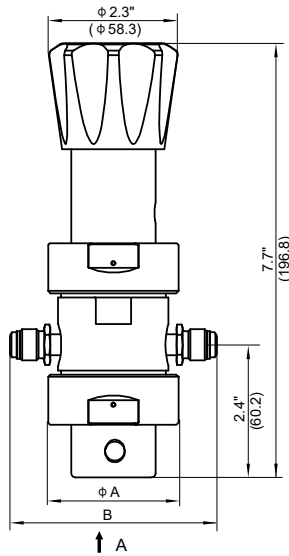
» U31SLAK-DHW-VSM4-E

### Specifications

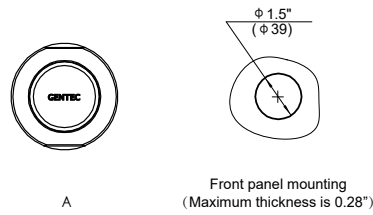
- Max. Inlet Pressure: 3000psi (206 bar), 4500psi (310bar)
- Max. Outlet Pressure: 0~25psi (1.7 bar), 0~50psi (3 bar), 0~75psi (5.2 bar), 0~100psi (7bar), 0~150psi (10bar), 0~250psi (17 bar)
- Temperature: -40°F ~ 165°F (-40°C ~ 74°C)
- U31 Series Cv: 0.05  
U31A Series Cv: 0.07
- Inboard leakage:  $1 \times 10^{-9}$  atm/sec He
- Across seat leakage:  $4 \times 10^{-8}$  atm/sec He
- Proof pressure: 150% of maximum rated pressure
- Burst pressure: 400% of maximum rated pressure
- Surface Finish: 10 uin
- Internal Volume: 15.1cc

\*: Standard material

Dimensions

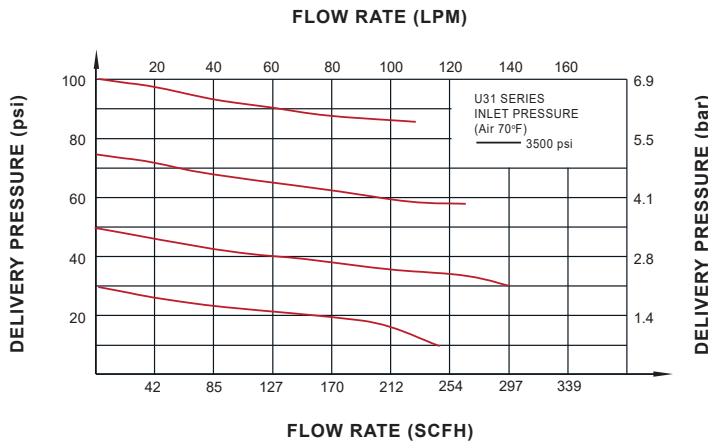


Connection Type		Dimension in.(mm)	
		A	B
VSF4	1/4" swivel female FSR	2.25" (57.2)	3.7" (94)
VSM4	1/4" swivel male FSR		3.7" (94)
VSF8	1/2" swivel female FSR		4.7" (119.4)
VSM8	1/2" swivel male FSR		4.7" (119.4)
TW4	1/4" weld stub		2.96" (75.2)
TW6	3/8" weld stub		2.96" (75.2)

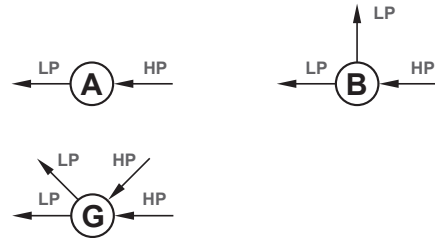


Dimension: in.(mm)

Flow Data



Regulator Port Configurations



	Material Configuration			
	U31SL	U31SLV	U31SLV***-SH	U31SLV***-H
Body	316L	316L VAR	316L VAR	316L VAR
Diaphragm	HC-22	HC-22	HC-22	HC-22
Stem	316L	316L	HC-22	HC-22
Nozzle	316L	316L	316L	HC-22
Seat	PCTFE	PCTFE	PCTFE	PCTFE
Surface Finish	10µin	10µin	10µin	10µin

Ordering Information

EX:	U31	SL	B	K	- D	I	P	- VSF4	- E	- H	- P
	Series	Body	Ports	Seat	Inlet Pressure	Outlet Pressure	Pressure Gauge	Inlet / Outlet Connection	Surface Finish	Corrosion Resistance	Options
	U31	SL: 316L	A	K: PCTFE	C: 4500 psi	G: 0 ~ 250 psi	W: Without Gauge	VSF4, VSM4	E: Ra 10 µin	None: 316L nozzle and stem	P: Panel Mounting
	U31A	SLV:316L VAR	B G	V: Vespel®	D: 3000 psi	H: 0 ~ 150 psi I: 0 ~ 100 psi J: 0 ~ 75 psi K: 0 ~ 50 psi L: 0 ~ 25 psi	P: psi / bar Gauge K: psi / kPa Gauge	VSF8, VSM8 TW4, TW6 .....		SH: HC22 stem and 316L nozzle H: HC22 stem and nozzle	

