

# U53 SERIES

Ultra High Purity Regulator

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U53 Series single-stage regulators are a threadless, high purity, non-tied diaphragm design. Our metal-to-metal diaphragm to body seal is designed to minimize leakage and to provide excellent accuracy and longevity.



» U53SLGK-GLP-91-91

## Surface Finish

- Standard Ra (EP): 10  $\mu$ m

## Internal Volume

- 9.3 cc

## Features

- 316L 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. Internal 1/4" face seal female is also available
- Fully internal electropolished
- Cleaned, assembled and packaged for high purity semiconductor applications
- High-cycle life
- 100% Helium-leak tested

## Materials

- Body: 316L stainless steel
- Seat: PCTFE
- Diaphragm: Elgiloy<sup>®</sup>, Hastelloy<sup>®</sup>
- Poppet: 316 stainless steel, Hastelloy<sup>®</sup>
- Compression member: 316 stainless steel, Hastelloy<sup>®</sup>
- Remaining part: 316 stainless steel, Hastelloy<sup>®</sup>

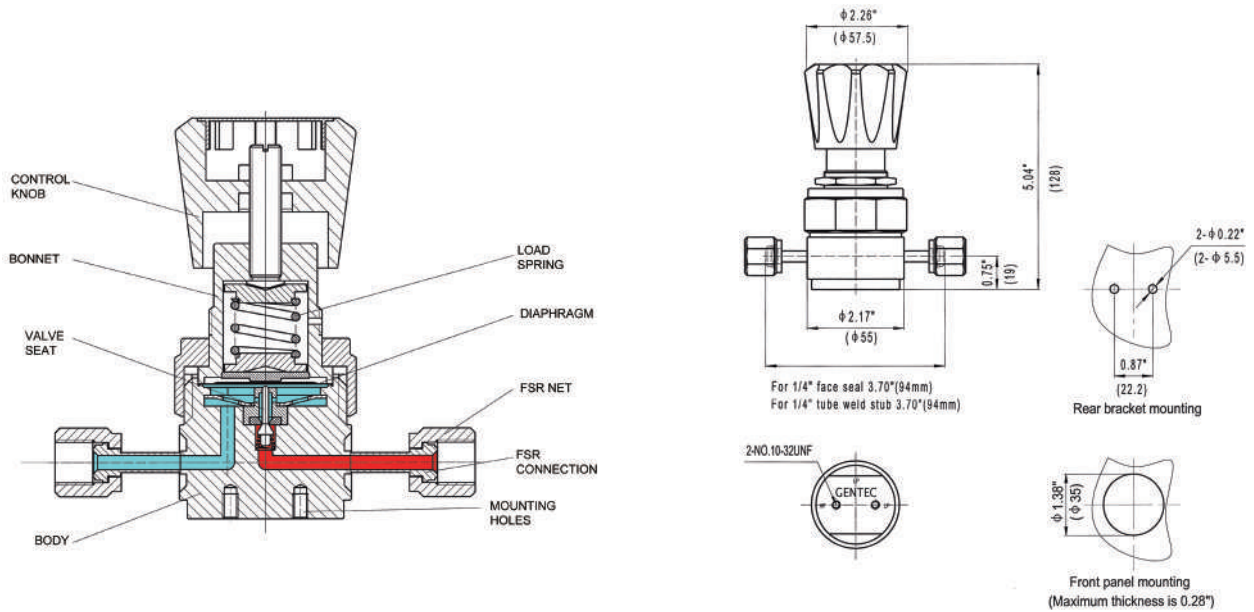
## Functional Performance

- Flow capacity: Cv=0.054
- Maximum leak Rate:
  - Inboard leakage:  $0.5 \times 10^{-8}$  atm cc/sec He
  - Across seat leakage:  $1 \times 10^{-8}$  atm cc/sec He
- Proof pressure: 150% of maximum rated pressure
- Burst pressure: 400% of maximum rated pressure

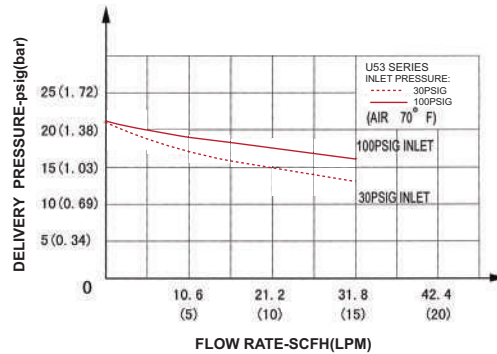
## Operating Conditions

- Maximum inlet pressure: 300 psi (20 bar)
- Outlet pressure: 0 ~ 30 psi (2 bar)
- Temperature: 0°F ~ 140°F (-18°C ~ 60°C)

## Dimensions



## Flow Data



## Ordering Information

EX: U53	SL	B	K	- G	L	P -	91 - 92	- P
Series	Body	Ports	Seat	Inlet Pressure	Outlet Pressure	Gauge*	Inlet / Outlet Connection	Options
U53	SL: 316L	A B G J	K: PCTFE	G: 300 psi	L: 0~30 psi	W: Without Gauge P: psi / bar Gauge	90: 1/4" internal female FSR 91: 1/4" swivel female FSR 92: 1/4" swivel male FSR 41: 1/4" weld stub	P: Panel Mounting H: Hastelloy® Diaphragm

\*: Gauges' connection: 1/4"FSR , other connection type please connect GENTEC.