

## High Purity Stainless Steel 316 Line Regulators

### DESCRIPTION

Matheson's High Purity StSt 316 Line Regulators, Models 3455 and 3457 are designed for use with high purity gases in all stainless steel systems. The construction of these regulators makes them ideal line pressure control regulators in cases where freedom from contamination is required or for service with corrosive gases.

These Models 3455 and 3457 regulators have stainless steel 316 delivery pressure gauges for accurately setting the desired delivery pressure. Also, each regulator has a stainless steel 316 diaphragm sealed packless valve installed at the outlet for easy flow control. A stainless steel plug is provided at the bottom of these regulators to permit the installation of a purge assembly if required.

### APPLICATIONS

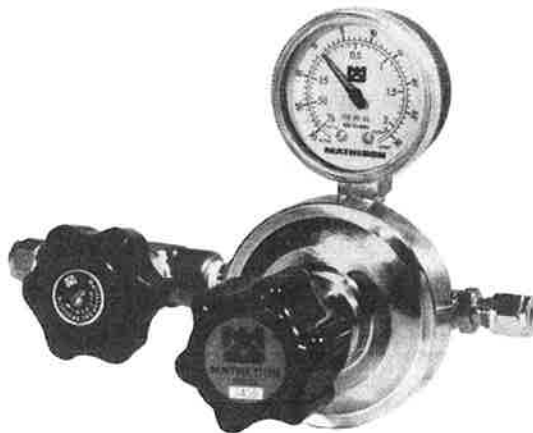
The Models 3455 and 3457 high purity regulators are designed for installations involving semiconductor crystal growing and highly critical analytical work in the laboratory. Mass spectrometry, gas chromatography, and trace analysis are methods which require such high purity gas systems.

### DESIGN FEATURES

- All metal parts in gas stream are StSt 316 . . . Assurance that system purity will be maintained
- High flow capacity . . . Excellent pressure control for multi-instrument applications
- Easily panel mounted . . . Assures well supported gas handling system and avoids possibilities of leaks
- Helium Leak rate certification available . . . Assurance that inboard leak rate is less than  $2 \times 10^{-10}$  ccs and that possible back diffusion of atmospheric contamination is eliminated
- StSt 316 diaphragm sealed packless outlet valve . . . Maintains system purity even at regulator outlet
- StSt 316 flareless tubing fittings on inlet and outlet . . . Simplifies time-consuming installation procedure

### MATERIALS OF CONSTRUCTION

Body:	316 stainless steel
Diaphragm:	301 StSt Teflon <sup>®</sup> lined
Seat:	Kalrez
Inlet fitting:	316 stainless steel
Gauge:	316 stainless steel
Outlet packless valve:	316 stainless steel
Gaskets:	Teflon <sup>®</sup>



### SPECIFICATIONS

Maximum inlet pressure:	300 psi (2,070 kPa)
Temperature range:	-40 to 250° F (-40 to 120° C)
Flow coefficient:	$C_v = 0.45$
Maximum flow of air:	650 lpm (1400 cfh)
Valve removed	
Inlet connection:	1/4" Gyrolok (3/8" optional)
Inlet port in body:	1/4" NPT Female
Outlet connection:	1/4" Gyrolok
Overall dimensions:	7 1/2" w x 5" h x 5" d (19 x 13 x 13 cm)
Shipping weight:	4 lb. 12 oz. (2.2 kg)

### MODELS & PRICES

Model	Delivery Pressure Range (psig)	Delivery Pressure Gauge (psig)	Price
3455	0-25	30" vac.-0-30	\$272.00
3455-678*	0-25	30" vac.-0-30*	298.00
3457	5-90	0-100	272.00

\*Special gauge 63-3704 Heliarc welded for Dichlorosilane.

### OPTIONS

**Helium Leak Rate Certification** **\$25.75**

Consists of a five minute check of helium diffusion into the regulator. Maximum acceptable leak rate is  $2 \times 10^{-10}$  ccs.

**Purge Assembly—Model 4744**—For eliminating atmospheric contamination or hazardous materials before and after use (for details see page 207). **\$82.30**

**Cross Purge Assembly—Model 4774**—Eliminates the escape of toxic, corrosive, and/or flammable gases when regulator is disconnected from cylinder or line (for details see page 206). **\$265.00**

**1180053 Panel Mount Kit** . . . . . **\$7.00**

**3/8" Gyrolok inlet connection** . . . . . **N/C**