

# 449-254 Series

## Regulators - Pressure Reducing

D449X1888X012

### Specifications

For other materials or modifications, please consult TESCOM.

#### OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

**Maximum Inlet Pressure**

1500 psig / 103 bar

**Outlet Pressure Range**

25-400 psig / 1.7-27.6 bar

**Design Proof Pressure**

150% maximum rated

**Inboard Leak Rate**

$<1 \times 10^{-9}$  atm cc/sec

**Operating Temperature**

-40°F to 140°F / -40°C to 60°C

**Flow Capacity**

$C_v = 1.0$

#### MEDIA CONTACT MATERIALS

**Body**

316L VAR Stainless Steel

**Diaphragm**

Elgiloy®

**Seat**

PCTFE

**Trim**

Hastelloy®\*

**Valve**

Hastelloy®\*

#### OTHER

**Internal Surface Finish**

10 R<sub>a</sub> microinch / 0.25 micrometer

**Connections**

Welded Female or Male VCR®

Tube Stubs

**Internal Volume**

12 cc

**Weight**

3.5 lbs / 1.6 kg

VCR® is a registered trademark of Cajon Co.

Elgiloy® is a registered trademark of Elgiloy Corp.

Hastelloy® is a registered trademark of Haynes International, Inc.

\*Material to be Hastelloy® or equivalent per ASTM B 574



TESCOM 449-254 Series high purity, high flow pressure reducing regulators are ideal for high pressure bulk specialty gas delivery systems (BSGS). The 449-254 Series offers a  $C_v = 1.0$ , surface finish of 10 R<sub>a</sub> and is available with Hastelloy® trim. Inlet pressure is 1500 psig / 103 bar with outlet pressures up to 400 psig / 27.6 bar.

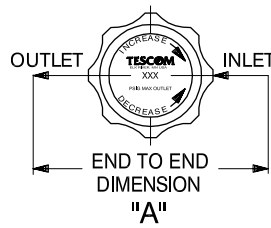
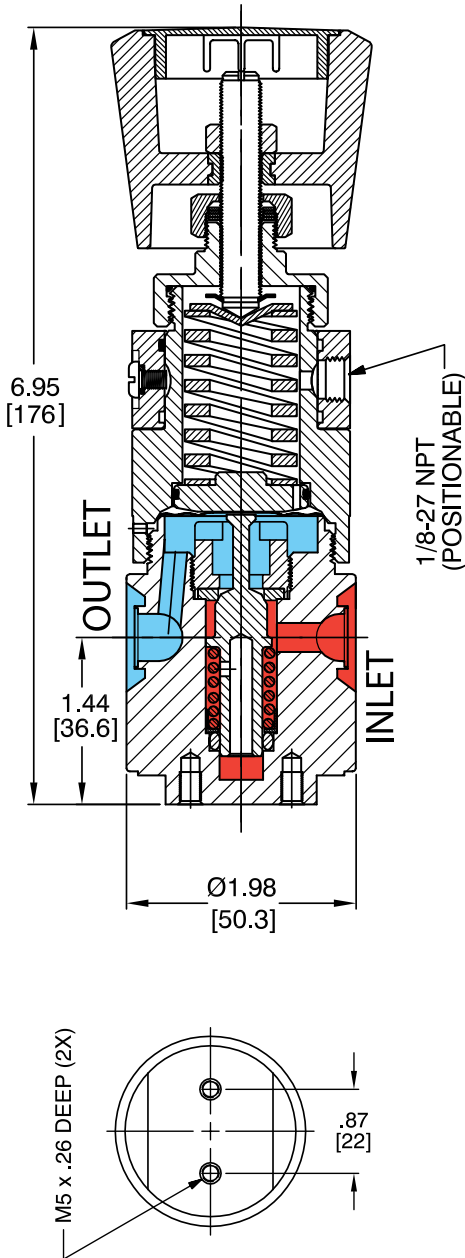
### Application

- High purity bulk specialty gas delivery systems

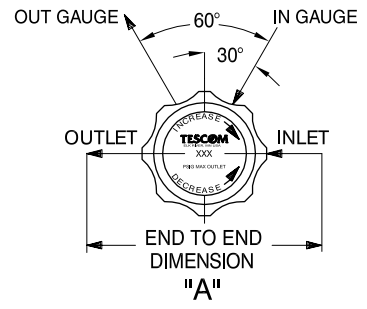
### Features and Benefits

- Exclusively designed to handle the demands of high purity bulk specialty gas delivery systems
- Its proven design, high outlet capabilities, bubble-tight shutoff valve and standard Hastelloy® trim provides dependability required for demanding regulator applications
- Metal-to-metal sealed diaphragm
- $C_v = 1.0$  with 10 R<sub>a</sub> microinch finish on wetted surfaces
- Meets SEMI F19 and SEMI Modular Interface specifications

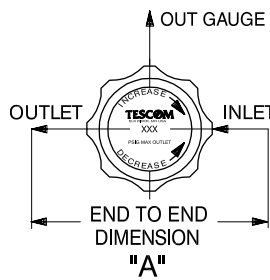
449-254 Series Regulator Drawing



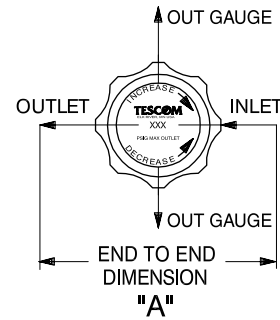
**Figure A**  
(no gauges)



**Figure B**  
(2 gauges)



**Figure C**  
(1 gauge)

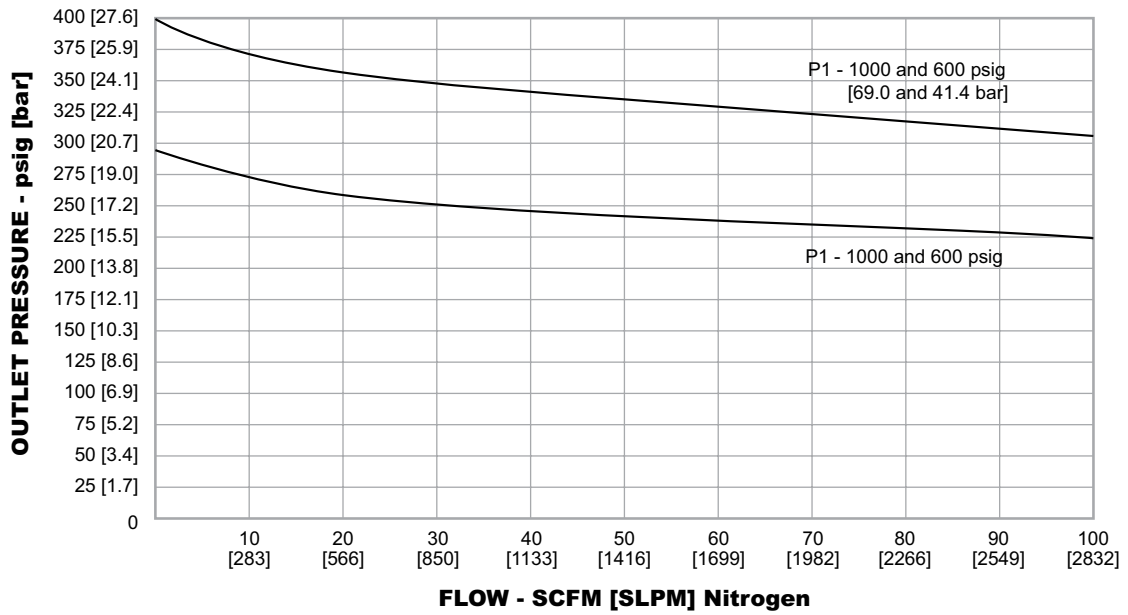


**Figure D**  
(2 out gauges)

All dimensions are reference & nominal  
Metric [millimeter] equivalents are in brackets

### 449-254 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on [www.tescom.com](http://www.tescom.com).



## 449-254 Series Regulator Part Number Selector

*Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.*

*Example for selecting a part number:*

449-254	4	R	K		0	
BASIC SERIES	OUTLET PRESSURE	PORT TYPE	INLET AND OUTLET PORT SIZE	"A" ± 0.06	GAUGE PORT OPTION	NUMBER OF PORTS (FIGURE)
449-254	4 – 25-400 psig 1.7-27.6 bar	R – Welded T – Tube Stubs	G – 1/4" Male Swivel (High Flow) H – 1/4" Female Swivel (High Flow) K – 1/2" Male Swivel L – 1/2" Female Swivel 8 – 1/2" Tube Stubs	4.00" 4.00" 5.21" 5.21" 5.21"	0 – None 4 – 1/4" Male Swivel 5 – 1/4" Male Swivel 6 – 1/4" Male Swivel 7 – 1/4" Female Swivel 8 – 1/4" Female Swivel 9 – 1/4" Female Swivel S – 1/4" Fixed Male T – 1/4" Fixed Male U – 1/4" Fixed Male	0 (Figure A) 2 (Figure D) 1 (Figure C) 2 (Figure B) 2 (Figure D) 1 (Figure C) 2 (Figure B) 2 (Figure B) 1 (Figure C) 2 (Figure D)



**WARNING!** Do not attempt to select, install, use or maintain this product until you have read and fully understood the *TESCOM Safety, Installation and Operation Precautions*.

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