

# 64-2800 Series

## Regulators - Pressure Reducing

D64281743X012

### Specifications

For other materials or modifications, please consult TESCOM.

#### OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

**Maximum Inlet Pressure**

1000 or 3500 psig / 69.0 or 241 bar

**Outlet Pressure Ranges**

30, 60, 100, 150 psig / 2.1, 4.1, 6.9, 10.3 bar

**Design Proof Pressure**

150% of maximum rated

**Design Burst Pressure**

400% of maximum rated

**Inboard Leak Rate**

**Internal:** Bubble-tight

**External:**  $1 \times 10^{-9}$  atm cc/sec He (ASTM test E499)

**Operating Temperature**

**PCTFE:** -40°F to 140°F / -40°C to 60°C

**VespeI®:** -40°F to 350°F / -40°C to 176°C

**Flow Capacity**

**3500 psig / 241 bar Model:**  $C_v = 0.06$

**1000 psig / 69.0 bar Model:**  $C_v = 0.15$

**Decaying Inlet Characteristic**

**$C_v = 0.06$ :** 0.8 per 100 psig / 0.06 per 6.9 bar

**$C_v = 0.15$ :** 1.6 per 100 psig / 0.1 per 6.9 bar



TESCOM 64-2800 Series high purity, tied diaphragm pressure reducing regulator offers Stainless Steel construction with 10  $R_a$  microinch / 0.25 micrometer surface finish and is electronic grade cleaned. Inlet pressures of 1000 or 3500 psig / 69.0 or 241 bar with outlet pressures up to 150 psig / 10.3 bar.

#### MEDIA CONTACT MATERIALS

**Body**

316L Stainless Steel Electropolish or 316L VAR Stainless Steel Electropolish

**Valve Seat**

PCTFE

**Diaphragm, Stem, Spring**

316 Stainless Steel, Hastelloy®

#### OTHER

**Internal Surface Finish**

10  $R_a$  microinch / 0.25 micrometer

**Connections**

Welded female or male VCR®

Tube stubs

Highly Purity Internal Connections (H.P.I.C.)

(Internal style for VCR®, compatible with male swivel VCR®)

**Cleaning**

DI water electronic grade cleaned and ES 500 Particle Certified for internal Electropolish models

**Internal Volume**

5.75 cc

**Weight (without gauges)**

2 lbs / 0.9 kg

VespeI® is a registered trademark of E.I. du Pont de Nemours and Company.

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

VCR® is a registered trademark of Cajon Co.

### Applications

- 1/4" point-of-use
- Gas cabinet
- Regulation of specialty gases
- Crystal growing
- Diffusion Furnaces

### Features and Benefits

- Positive shutoff minimizes creep
- Metal-to-metal diaphragm to body seal for high leak integrity
- 10  $R_a$  microinch / 0.25 micrometer internal surface finish
- Hastelloy® trim is optional
- Captured bonnet

64-2800 Series Regulator Drawing

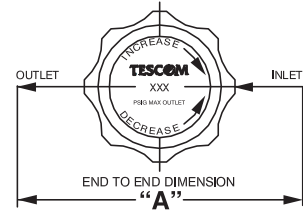
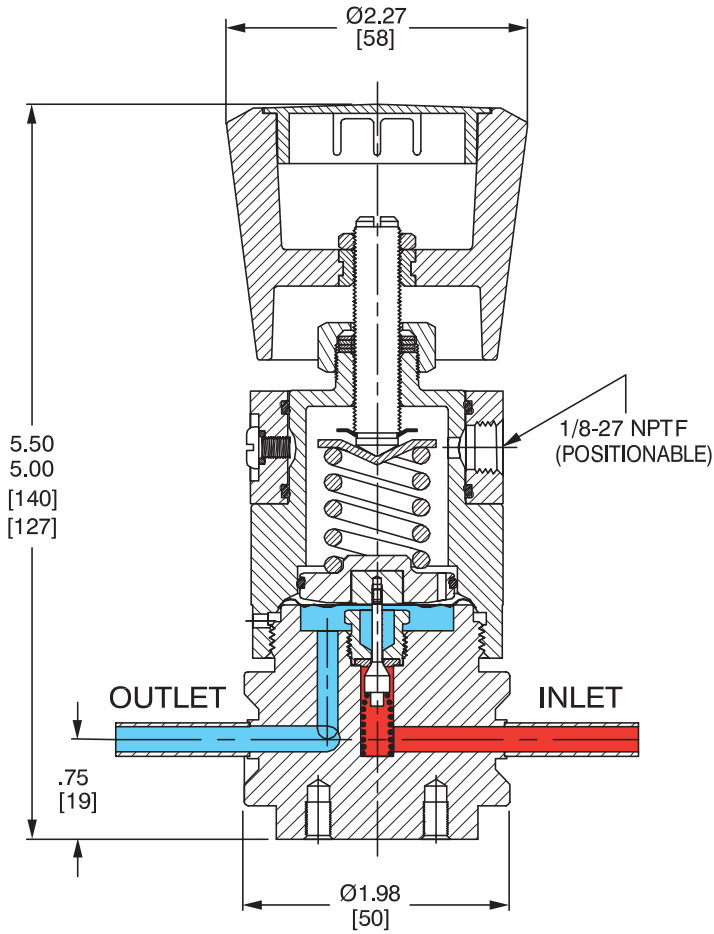


FIGURE A (NO GAUGES)

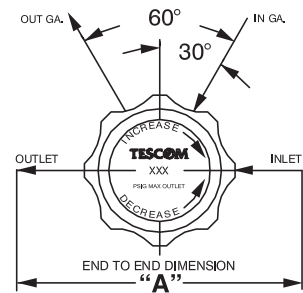


FIGURE B (2 GAUGES)

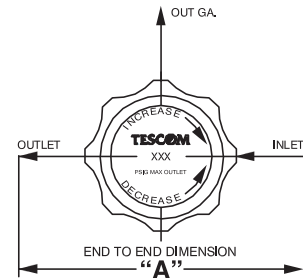


FIGURE C (1 GAUGE)

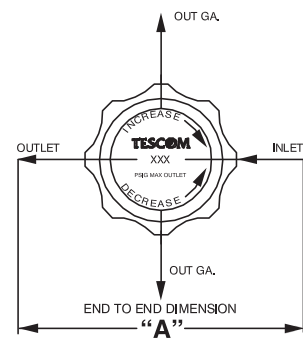
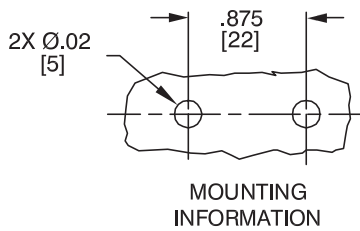
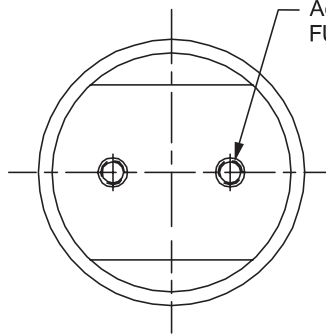


FIGURE D (2 OUT GAUGES)



MOUNTING INFORMATION

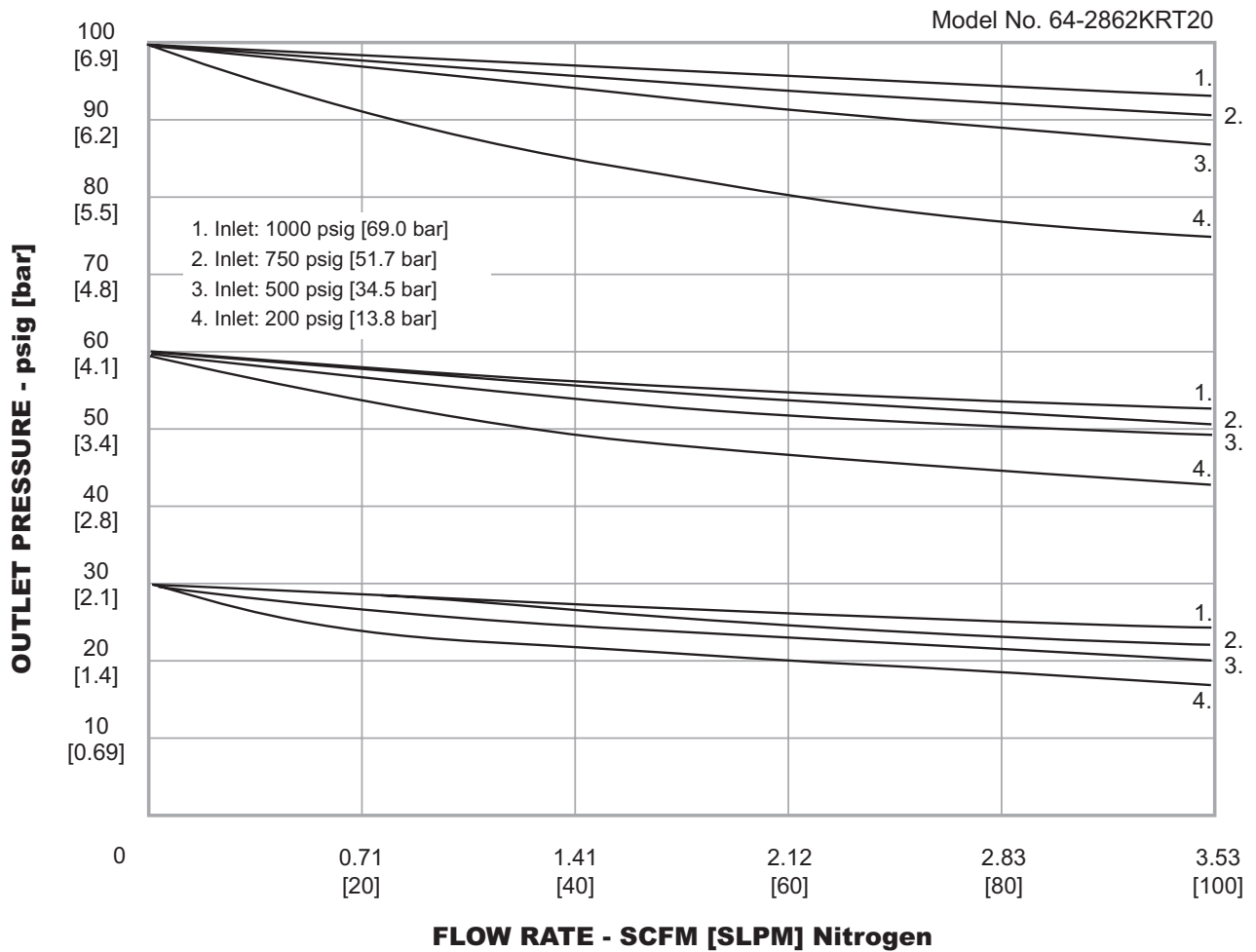


M5 X.258 (2X)  
Accepts #10-32 screw  
FULL THD

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

### 64-2800 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).



## 64-2800 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:

BASIC SERIES	BODY MATERIAL / FINISH	OUTLET PRESSURE RANGES	SEAT MATERIAL	INLET AND OUTLET PORT SIZE AND TYPE	'A' ± .06"	MAXIMUM INLET PRESSURE	GAUGE PORT OPTION	NO. OF GAUGE PORTS (FIGURE)
64-28	4 – 316L Stainless Steel Electropolish: 10 R <sub>A</sub> <sup>1</sup> 6 – 316L VAR Stainless Steel Electropolish: 10 R <sub>A</sub> <sup>2</sup>	0 – 30 psig 2.1 bar 1 – 60 psig 4.1 bar 2 – 100 psig 6.9 bar 3 – 150 psig 10.3 bar	K – PCTFE	A4 – 1/4" H.P.I.C. RK – 1/2" Male Swivel RL – 1/2" Female Swivel RM – 1/4" Male Swivel RT – 1/4" Female Swivel RU – IN Port: 1/4" Male; OUT Port: 1/4" Female RV – IN Port: 1/4" Female; OUT Port: 1/4" Male T4 – 1/4" Tube Stub	1.09" 4.75" 4.75" 3.70" 3.70" 3.70" 3.70" 3.70"	1 – 3500 psig 241 bar 2 – 1000 psig 69.0 bar 3 – 1000 psig 69.0 bar Hastelloy® trim	0 – None 1 – 1/4" H.P.I.C. 2 – 1/4" H.P.I.C. 3 – 1/4" H.P.I.C. 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) 1 (Figure C) 2 (Figure B) 2 (Figure D) 2 (Figure D) 1 (Figure C) 2 (Figure D) 2 (Figure D) 1 (Figure C) 2 (Figure B) 2 (Figure B) 1 (Figure C) 2 (Figure D)
	1. Per ASTM B 912 2. Per SEMI F19, HP Grade							



**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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