

# 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

<b>Maximum Inlet Pressure</b>	1000 or 3500 psig / 69.0 or 241 bar
<b>Outlet Pressure Ranges</b>	30, 60, 100, 150 psig / 2.1, 4.1, 6.9, 10.3 bar
<b>Design Proof Pressure</b>	150% of maximum rated
<b>Design Burst Pressure</b>	400% of maximum rated
<b>Inboard Leak Rate</b>	
<b>Internal:</b>	Bubble-tight
<b>External:</b>	$1 \times 10^{-9}$ atm cc/sec He (ASTM test E499)
<b>Operating Temperature</b>	
<b>PCTFE:</b>	-40°F to 140°F / -40°C to 60°C
<b>VespeI®:</b>	-40°F to 350°F / -40°C to 176°C
<b>Flow Capacity</b>	
<b>3500 psig / 241 bar Model:</b>	$C_v = 0.06$
<b>1000 psig / 69.0 bar Model:</b>	$C_v = 0.15$
<b>Decaying Inlet Characteristic</b>	
<b><math>C_v = 0.06</math>:</b>	0.8 per 100 psig / 0.06 per 6.9 bar
<b><math>C_v = 0.15</math>:</b>	1.6 per 100 psig / 0.1 per 6.9 bar

#### MEDIA CONTACT MATERIALS

<b>Body</b>	316L Stainless Steel Electropolish or 316L VAR Stainless Steel Electropolish
<b>Valve Seat</b>	PCTFE
<b>Diaphragm, Stem, Spring</b>	316 Stainless Steel, Hastelloy®

#### OTHER

<b>Internal Surface Finish</b>	10 $R_a$ microinch / 0.25 micrometer
<b>Connections</b>	Welded female or male VCR® Tube stubs Highly Purity Internal Connections (H.P.I.C.) (Internal style for VCR®, compatible with male swivel VCR®)
<b>Cleaning</b>	DI water electronic grade cleaned and ES 500 Particle Certified for internal Electropolish models
<b>Internal Volume</b>	5.75 cc
<b>Weight (without gauges)</b>	2 lbs / 0.9 kg

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



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.

### 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

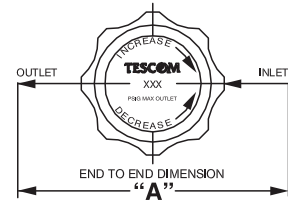
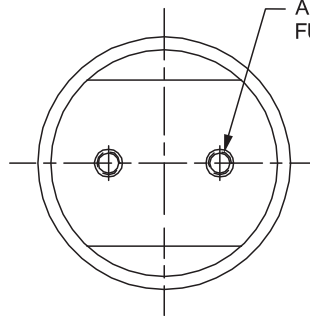
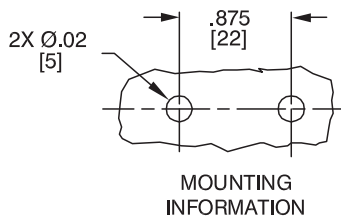
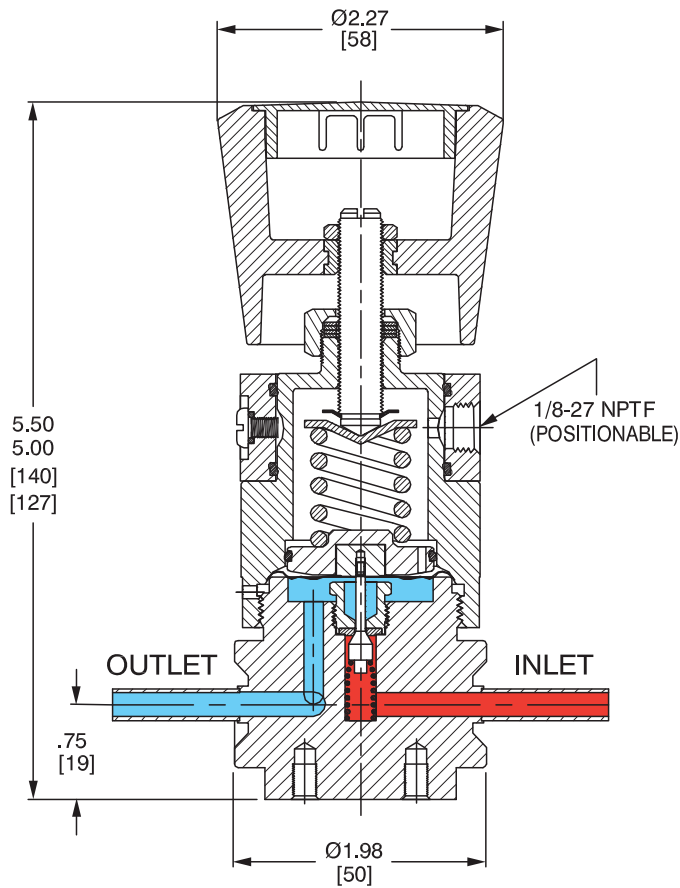


FIGURE A (NO GAUGES)

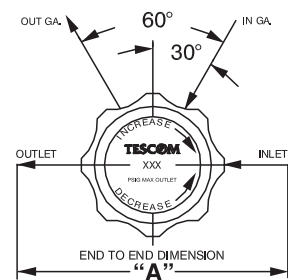


FIGURE B (2 GAUGES)

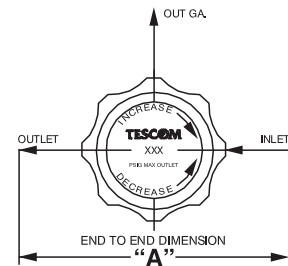


FIGURE C (1 GAUGE)

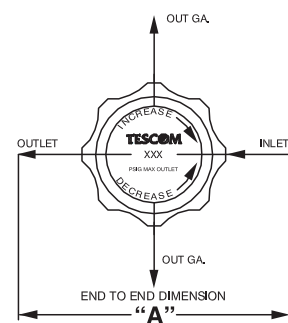
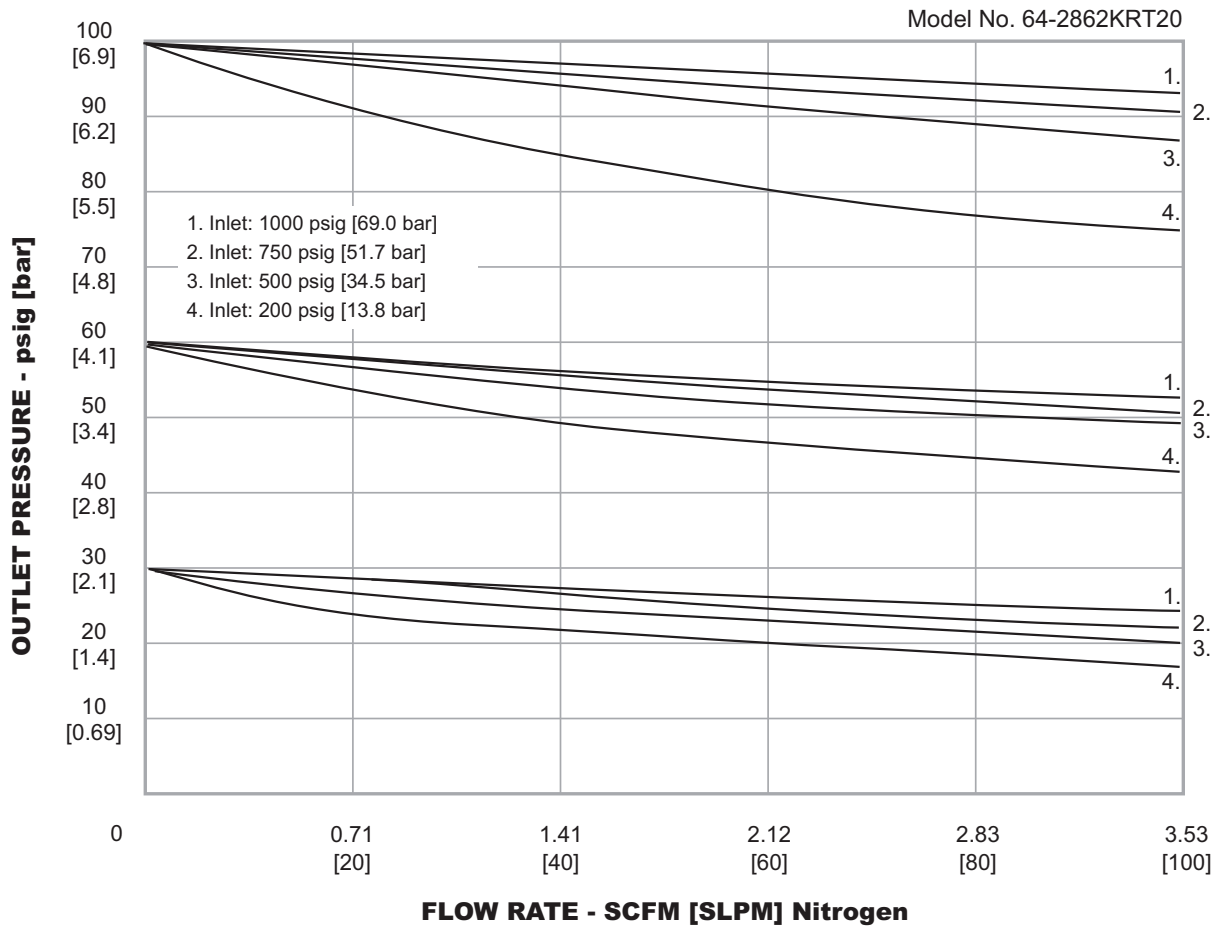


FIGURE D (2 OUT GAUGES)

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)
<b>64-28</b>	<b>4</b> – 316L Stainless Steel Electropolish: 10 R <sub>a</sub> <sup>1</sup> <b>6</b> – 316L VAR Stainless Steel Electropolish: 10 R <sub>a</sub> <sup>2</sup>	<b>0</b> – 30 psig 2.1 bar <b>1</b> – 60 psig 4.1 bar <b>2</b> – 100 psig 6.9 bar <b>3</b> – 150 psig 10.3 bar	<b>K</b> – PCTFE	<b>A4</b> – 1/4" H.P.I.C. <b>RK</b> – 1/2" Male Swivel <b>RL</b> – 1/2" Female Swivel <b>RM</b> – 1/4" Male Swivel <b>RT</b> – 1/4" Female Swivel <b>RU</b> – IN Port: 1/4" Male; OUT Port: 1/4" Female <b>RV</b> – IN Port: 1/4" Female; OUT Port: 1/4" Male <b>T4</b> – 1/4" Tube Stubs	1.09" 4.75" 4.75" 3.70" 3.70" 3.70" 3.70" 3.70" 3.70"	<b>1</b> – 3500 psig 241 bar <b>2</b> – 1000 psig 69.0 bar <b>3</b> – 1000 psig 69.0 bar Hastelloy® trim	<b>0</b> – None <b>1</b> – 1/4" H.P.I.C. <b>2</b> – 1/4" H.P.I.C. <b>3</b> – 1/4" H.P.I.C. <b>4</b> – 1/4" Male Swivel <b>5</b> – 1/4" Male Swivel <b>6</b> – 1/4" Male Swivel <b>7</b> – 1/4" Female Swivel <b>8</b> – 1/4" Female Swivel <b>9</b> – 1/4" Female Swivel <b>S</b> – 1/4" Fixed Male <b>T</b> – 1/4" Fixed Male <b>U</b> – 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							