

# 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<sub>a</sub> 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<sub>a</sub> 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<sub>a</sub> microinch / 0.25 micrometer internal surface finish
- Hastelloy® trim is optional

64-2800 Series Regulator Drawing

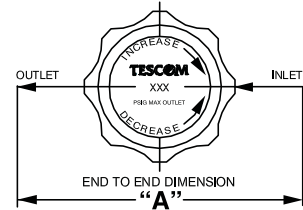
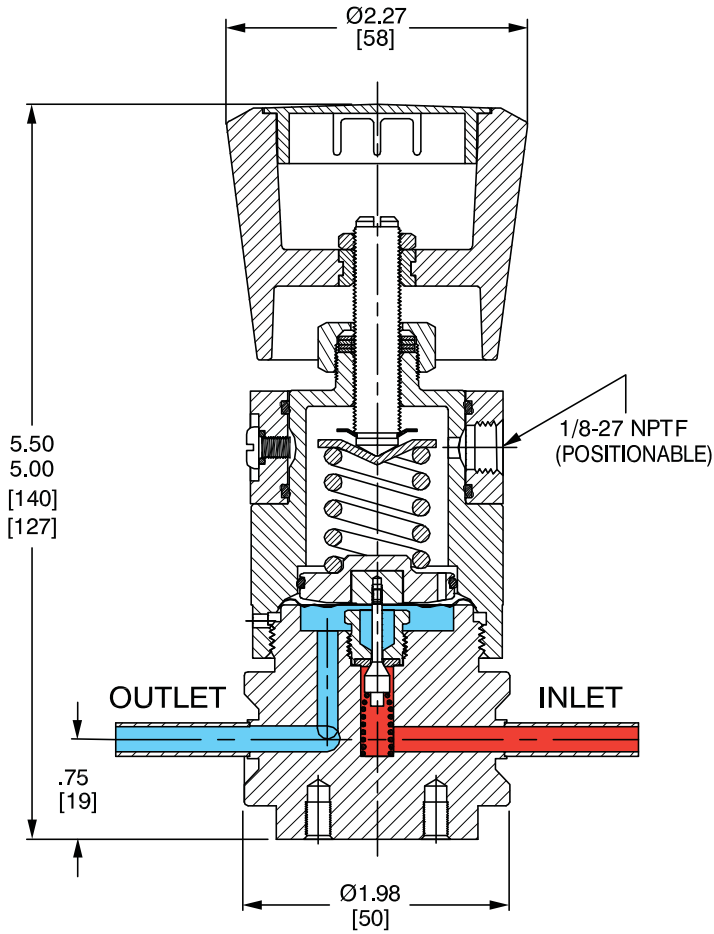


FIGURE A (NO GAUGES)

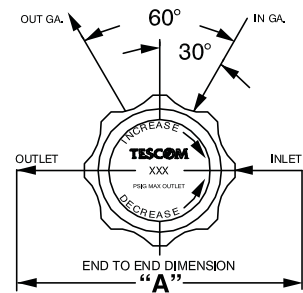


FIGURE B (2 GAUGES)

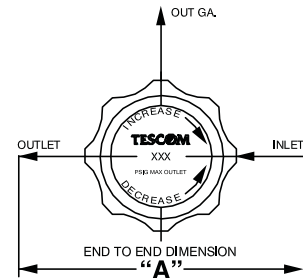


FIGURE C (1 GAUGE)

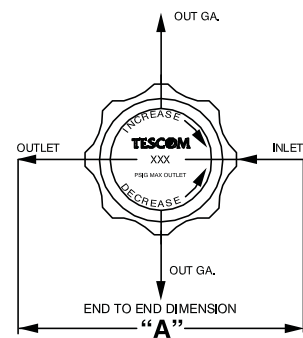
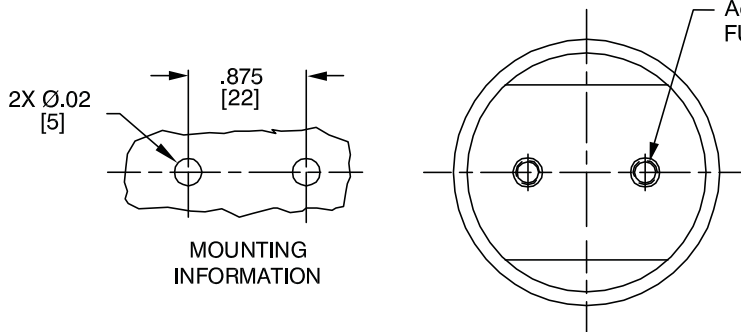


FIGURE D (2 OUT GAUGES)

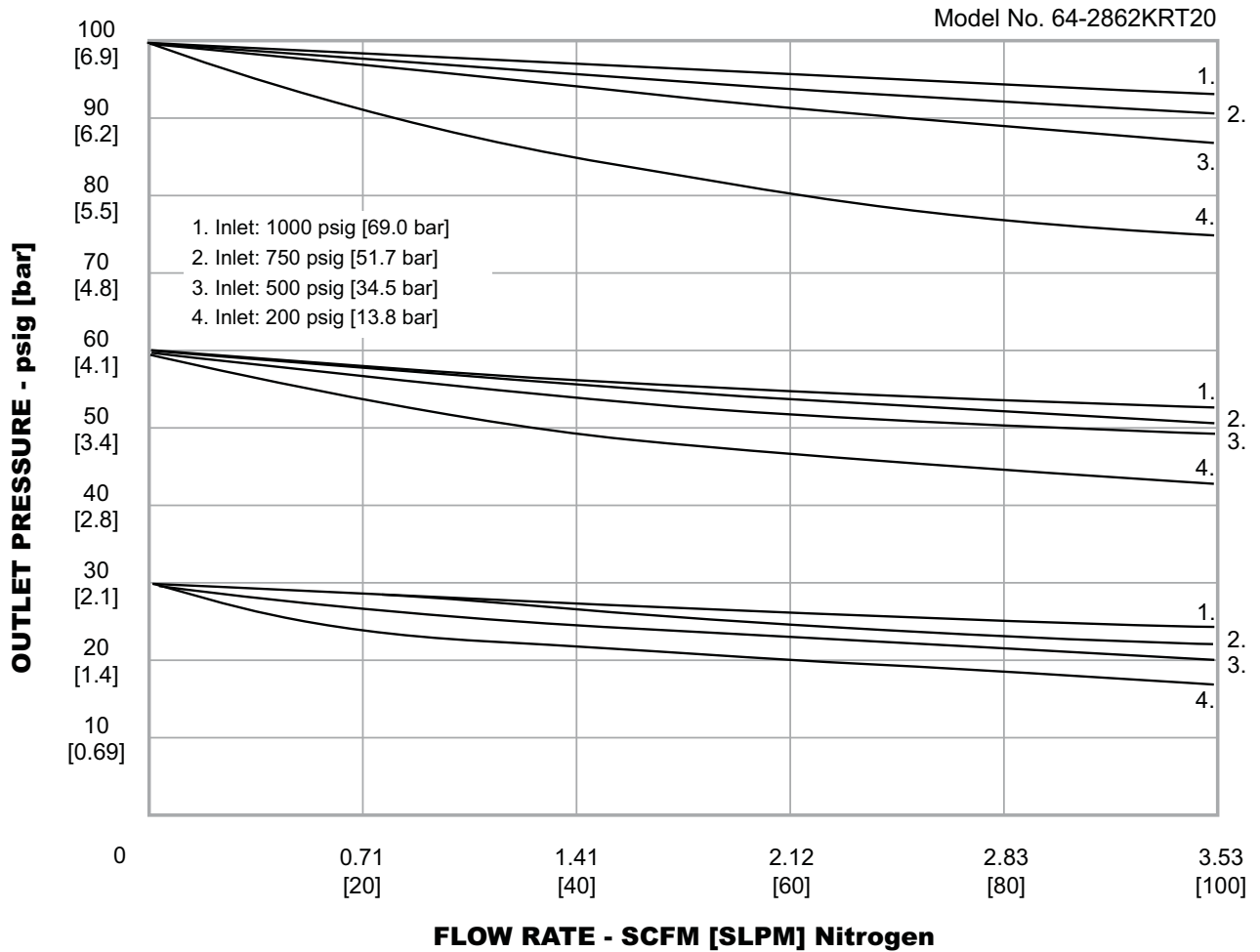


MOUNTING INFORMATION

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:

64-28	6	2	K	A4		1		0	
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>	0 – 30 psig 2.1 bar	K – PCTFE	A4 – 1/4" H.P.I.C.	1.09"	1 – 3500 psig 241 bar	0 – None	0 (Figure A)	
				RK – 1/2" Male Swivel	4.75"		1 – 1/4" H.P.I.C.	1 (Figure C)	
	6 – 316L VAR Stainless Steel Electropolish: 10 R <sub>A</sub> <sup>2</sup>	1 – 60 psig 4.1 bar		RL – 1/2" Female Swivel	4.75"	2 – 1000 psig 69.0 bar	2 – 1/4" H.P.I.C.	2 (Figure B)	
				RM – 1/4" Male Swivel	3.70"		3 – 1/4" H.P.I.C.	2 (Figure D)	
		2 – 100 psig 6.9 bar		RT – 1/4" Female Swivel	3.70"	3 – 1000 psig 69.0 bar Hastelloy® trim	4 – 1/4" Male Swivel	2 (Figure D)	
				RU – IN Port: 1/4" Male; OUT Port: 1/4" Female	3.70"		5 – 1/4" Male Swivel	1 (Figure C)	
		3 – 150 psig 10.3 bar		RV – IN Port: 1/4" Female; OUT Port: 1/4" Male	3.70"		6 – 1/4" Male Swivel	2 (Figure D)	
				T4 – 1/4" Tube Stubs	3.00"		7 – 1/4" Female Swivel	2 (Figure D)	
								8 – 1/4" Female Swivel	1 (Figure C)
								9 – 1/4" Female Swivel	2 (Figure B)
						S – 1/4" Fixed Male	2 (Figure B)		
						T – 1/4" Fixed Male	1 (Figure C)		
						U – 1/4" Fixed Male	2 (Figure D)		

1. Per ASTM B 912  
2. Per SEMI F19, HP Grade