# 64-5000 Series

Regulators - Pressure Reducing

D64501781X012

## Specifications

*For other materials or modifications, please consult TESCOM.*

### OPERATING PARAMETERS

*Pressure rating per criteria of ANSI/ASME B31.3*

**Maximum Inlet Pressure**
120, 600, or 3500 psig / 8.3, 41.4, or 241 bar

**Outlet Pressure Ranges**
50 mm Hg absolute - 15 psig / 1.0 bar
50 mm Hg absolute - 30 psig / 2.1 bar
50 mm Hg absolute - 60 psig / 4.1 bar
50 mm Hg absolute - 100 psig / 6.9 bar

**Design Proof Pressure**
150% of maximum rated

**Inboard Leak Rate**
<1 x $10^{-9}$ atm cc/sec He

**Operating Temperature**
**PCTFE Seat:** -40°F to 140°F / -40°C to 60°C
**Teflon® Seat:** -40°F to 160°F / -40°C to 71°C

**Flow Capacity**
$C_V$ **= 0.24** (120 psig / 8.3 bar model)
$C_V$ **= 0.15** (600 psig / 41.4 bar model)
$C_V$ **= 0.06** (3500 psig / 241 bar model)

### MEDIA CONTACT MATERIALS

**Body**
316L Stainless Steel Electropolish or
316L VAR Stainless Steel Electropolish

**Valve Seat**
Teflon® or PCTFE

**Diaphragm**
316L Stainless Steel

**Valve Stem, Spring, and Valve Guide**
316 Stainless Steel

### OTHER

**Internal Surface Finish**
10 $R_a$ microinch / 0.25 micrometer

**Connections**
Welded female or male VCR®
Tube stubs
High Purity Internal Connections (H.P.I.C.)
(Internal style of VCR®, compatible with male swivel VCR®)

**Cleaning**
DI water electronic grade cleaned and ES 500 Particle Certified for internal electropolish models

**Internal Volume**
2.9 cc

**Weight**
2.0 lbs / 0.9 kg

*Teflon® 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.*

TESCOM 64-5000 Series ultra high purity, absolute/subatmospheric pressure reducing regulator offers a 10 $R_a$ surface finish. Inlet pressures are 120, 600, or 3500 psig / 8.3, 41.4, or 241 bar with outlet pressures ranges from 50 mm Hg absolute - 15 to 100 psig / 50 mm Hg absolute - 1.0 to 6.9 bar.

## Applications

- Vacuum pressure control
- Toxic gas analysis
- Valve manifold boxes
- Gas cabinets
- Semiconductor manufacturing

## Features and Benefits

- Negative bias for controlling vacuum and low positive pressures
- 10 $R_a$ microinch / 0.25 micrometer internal surface finish
- Metal-to-metal diaphragm to body seal for high leak integrity
- Hastelloy® trim option is available

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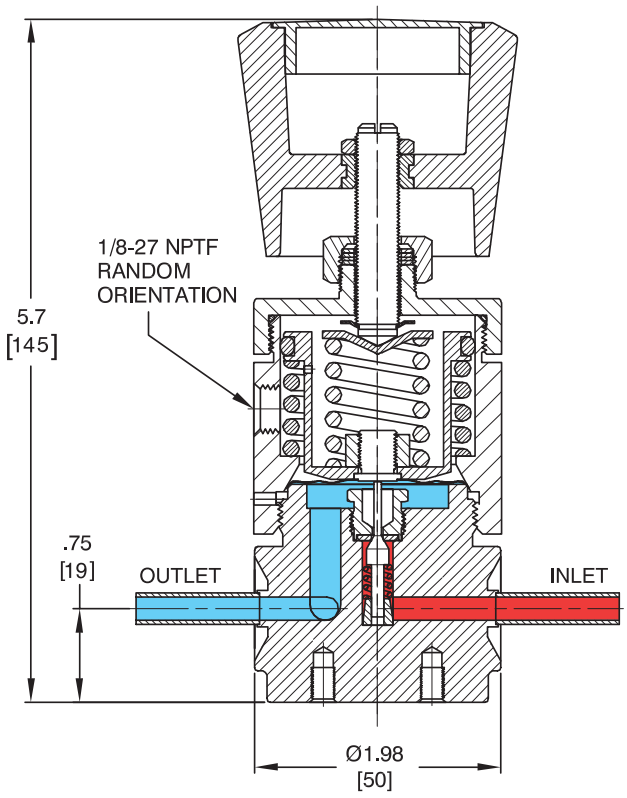
## 64-5000 Series Regulator Drawing



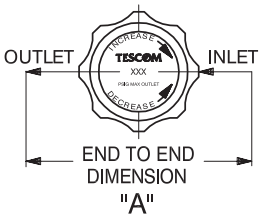




**Figure A (no gauges)**

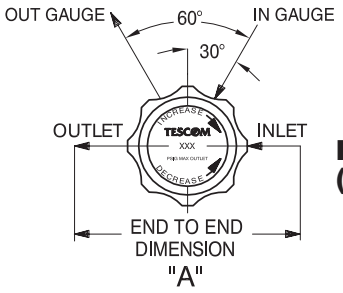



**Figure B (2 gauges)**

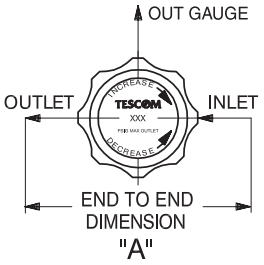



**Figure C (1 gauge)**

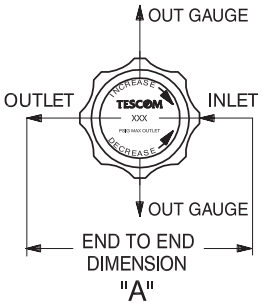
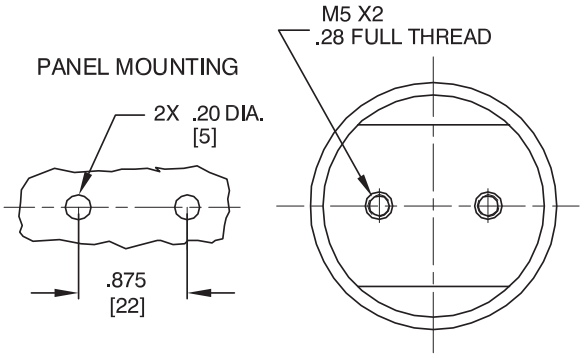



**Figure D (2 out gauges)**




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

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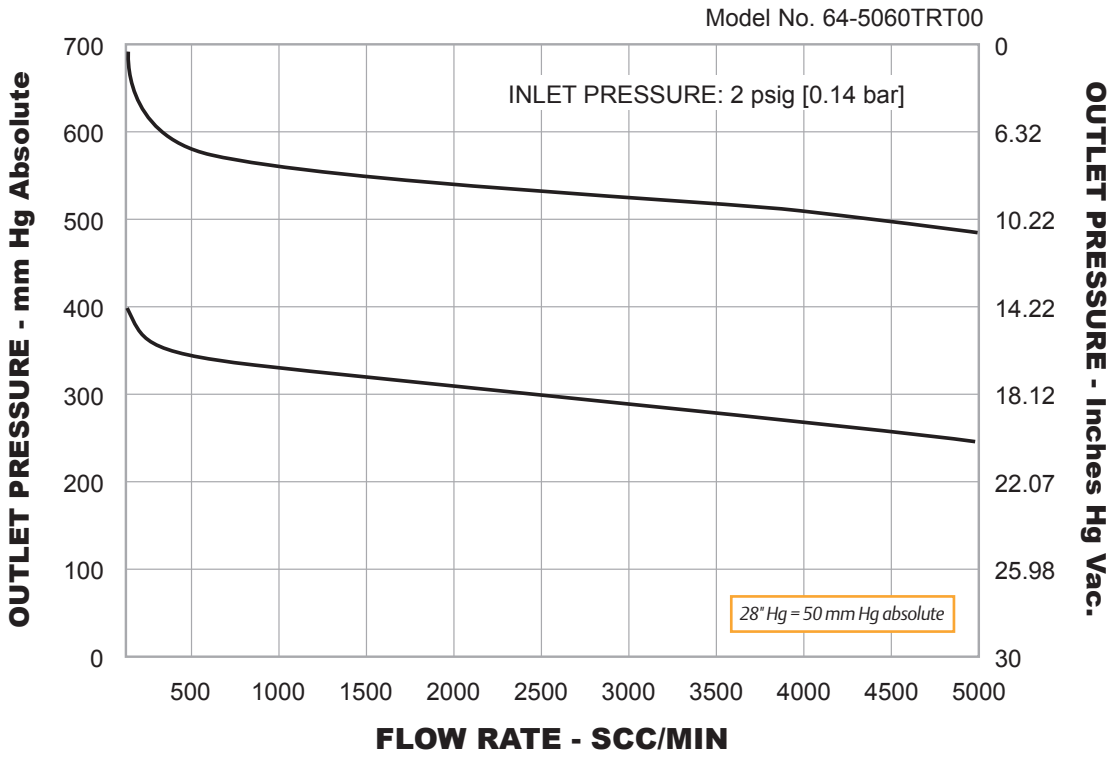
## 64-5000 Series Regulator Flow Chart

*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.*



# 64-5000 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:*

| 64-50 | 6 | 0 | T | A4 | | 1 | 0 | |
|---|---|---|---|---|---|---|---|---|
| **BASIC SERIES** | **BODY MATERIAL** | **OUTLET PRESSURE RANGES[3]** | **SEAT MATERIAL** | **INLET AND OUTLET PORT SIZE AND TYPE** | **'A' ± .06"** | **MAXIMUM INLET PRESSURE $C_V$** | **GAUGE PORT OPTION** | **NO. OF GAUGE PORTS (FIGURE)** |
| **64-50** | **4 –** 316L Stainless Steel Electropolish: 10 $R_a$[1]<br>**6 –** 316L VAR Stainless Steel Electropolish: 10 $R_a$[2] | **0 –** 50 mm Hg absolute - 15 psig / 1.0 bar<br>**1 –** 50 mm Hg absolute - 30 psig / 2.1 bar<br>**2 –** 50 mm Hg absolute - 60 psig / 4.1 bar<br>**3 –** 50 mm Hg absolute - 100 psig / 6.9 bar | **K –** PCTFE<br>**T –** Teflon® | **A4 –** 1/4" H.P.I.C.<br>**RK –** 1/2" Male Swivel<br>**RL –** 1/2" Female Swivel<br>**RM –** 1/4" Male Swivel<br>**RT –** 1/4" Female Swivel<br>**RU –** IN Port: 1/4" Male; OUT Port: 1/4" Female<br>**RV –** IN Port:1/4" Female; OUT Port: 1/4" Male<br>**T4 –** 1/4" Tube Stubs | –<br>4.75"<br>4.75"<br>3.70"<br>3.70"<br>3.70"<br>3.70"<br>3.00" | **0 –** 120 psig 8.3 bar $C_V$ = 0.24<br>**1 –** 3500 psig 241 bar $C_V$ = 0.06<br>**2 –** 600 psig 41.4 bar $C_V$ = 0.15 | **0 –** None<br>**1 –** 1/4" H.P.I.C.<br>**2 –** 1/4" H.P.I.C.<br>**3 –** 1/4" H.P.I.C.<br>**4 –** 1/4" Male Swivel<br>**5 –** 1/4" Male Swivel<br>**6 –** 1/4" Male Swivel<br>**7 –** 1/4" Female Swivel<br>**8 –** 1/4" Female Swivel<br>**9 –** 1/4" Female Swivel<br>**S –** 1/4" Fixed Male<br>**T –** 1/4" Fixed Male<br>**U –** 1/4" Fixed Male | 0 (Figure A)<br>1 (Figure C)<br>2 (Figure B)<br>2 (Figure D)<br>2 (Figure D)<br>1 (Figure C)<br>2 (Figure B)<br>2 (Figure D)<br>1 (Figure C)<br>2 (Figure B)<br>2 (Figure B)<br>1 (Figure C)<br>2 (Figure D) |

*1. Per ASTM B 912*
*2. Per SEMI F19, HP grade*
*3. 28" Hg = 50 mm Hg absolute*

**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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