

TESCOM™ Pressure Reducing Regulators

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

3500 psig / 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

Inboard Leak Rate

Seat: $< 4 \times 10^{-9}$ atm cc/sec He

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

Operating Temperature

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

Teflon PFA® Seat: -40°F to 160°F / -40°C to 71°C

Flow Capacity

See Part Number Selector

MEDIA CONTACT MATERIALS

Body

316L Stainless Steel Electropolish or 316L VAR Stainless Steel Electropolish Per Criteria of SEMI F19, HP Grade

Diaphragm

316L Stainless Steel

Valve Seat

PCTFE or PTFE PFA®

Valve Spring

316 Stainless Steel

Valve Stem and Remaining Parts

316 Stainless Steel (Nickel Alloy (Hastelloy®) optional)

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

10 cc

Weight

3.0 lbs / 1.4 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 64-3400 Series dual-stage, ultra high purity pressure reducing regulator offers a tied diaphragm design and 10 R_a microinch / 0.25 micrometer surface finish with optional Hastelloy® trim. Inlet pressure is 3500 psig / 241 bar with outlet pressures up to 150 psig / 10.3 bar.

Applications

- Gas cabinets
- Semiconductor manufacturing
- Research labs

Features and Benefits

- 10 R_a microinch / 0.25 micrometer internal surfaces
- Full internal Electropolish is available
- Metal-to-metal body to diaphragm seal for high leak integrity
- Choice of free poppet or tied diaphragm

NOTE:

When choosing a regulator and control pressure, decaying inlet characteristic must be considered when the supply pressure is expected to change. The decaying inlet characteristic of a pressure reducing regulator is commonly known as the increase in control pressure due to the decrease in supply pressure. It is important to make sure this effect does not cause the control pressure to exceed the pressure rating of the unit's outlet or that of the downstream system.

For more information on decaying inlet, please refer to the Technical Information section of the product catalog and/or contact the TESCOM customer support further assistance.

64-3400 SERIES

64-3400 Series Regulator Drawing

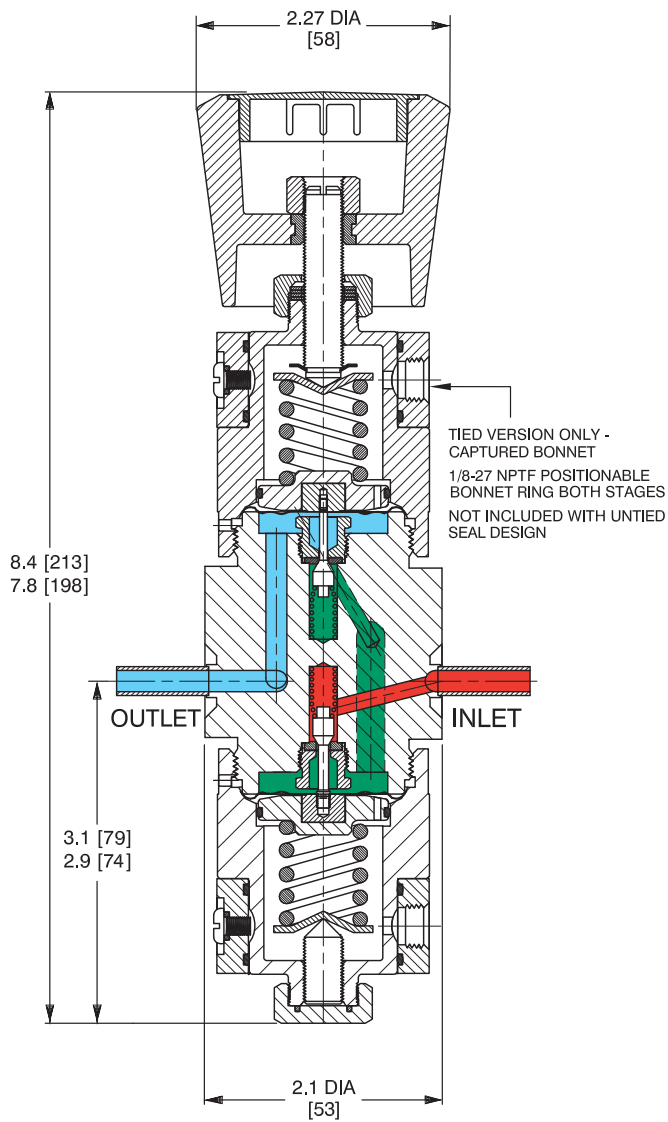


Figure A

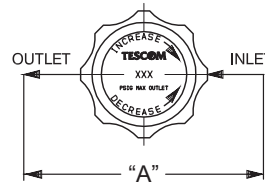


Figure B

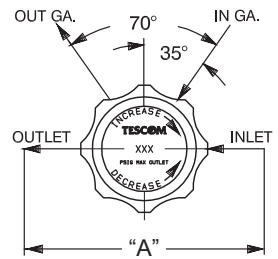


Figure C

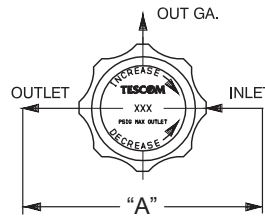
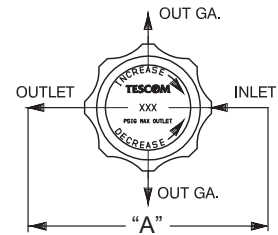


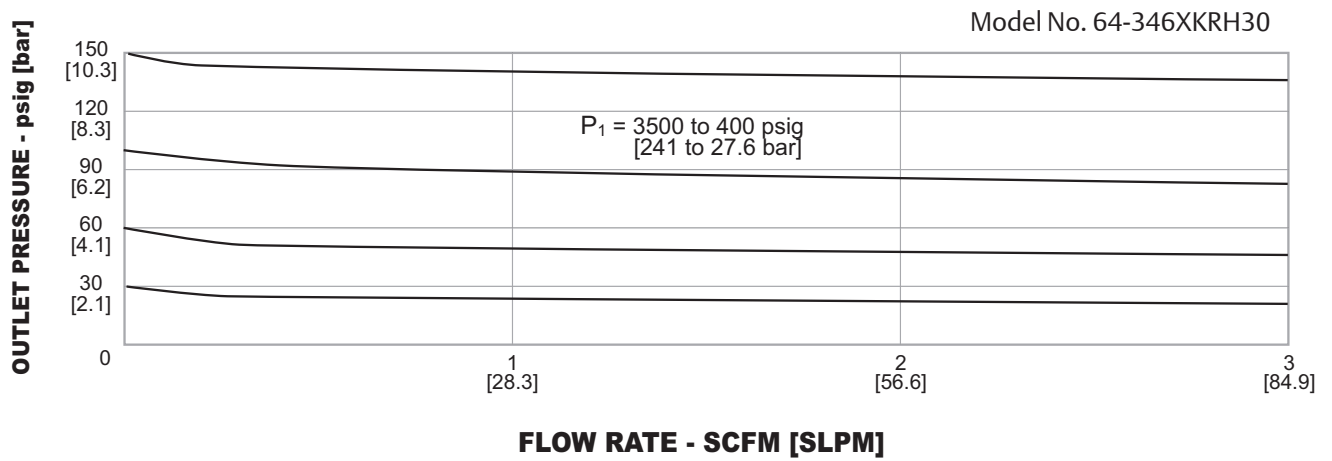
Figure D



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

64-3400 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.



64-3400 SERIES

64-3400 Series Regulator Part Number Selector



Learn more about common options.

For modifications, repair kits and accessories, contact factory.

Example for selecting a part number:

64-34	6	2	K	A4	2	0			
BASIC SERIES	BODY MATERIAL/ FINISH	OUTLET PRESSURE RANGES	SEAT MATERIAL	INLET AND OUTLET PORT SIZE AND TYPE	'A' ± .06"	SEAL DESIGN	C _v	GAUGE PORT OPTIONS	NO. OF GAUGE PORTS (FIGURE)
64-34	4 – 316L Stainless Steel Electropolish: 10 R _a ¹ 6 – 316L VAR Stainless Steel Electropolish: 10 R _a ²	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 T – PTFE PFA® (untied models only)	A4 – 1/4" H.P.I.C. (see Connections)	-	1 – Untied	C _v = 0.06	0 – None	0 (Figure A)
				RK – 1/2" Male Swivel	4.92"	2 – Tied	C _v = 0.06	1 – 1/4" H.P.I.C.	1 (Figure C)
				RL – 1/2" Female Swivel	4.92"	3 – Tied	C _v = 0.15	2 – 1/4" H.P.I.C.	2 (Figure B)
				RM – 1/4" Fixed Male	3.70"	4 – Tied	C _v = 0.15	3 – 1/4" H.P.I.C.	2 (Figure D)
				RT – 1/4" Female Swivel	3.70"	Nickel Alloy (Hastelloy®) Trim	4 – 1/4" Male Swivel	2 (Figure D)	
				RU – 1/2" Male Swivel:	5.59"		5 – 1/4" Male Swivel	1 (Figure C)	
				RV – IN Port:	3.70"		6 – 1/4" Male Swivel	2 (Figure B)	
				1/4" Female Swivel;			7 – 1/4" Female Swivel	2 (Figure D)	
				OUT Port:			8 – 1/4" Female Swivel	1 (Figure C)	
				1/4" Male Swivel			9 – 1/4" Female Swivel	2 (Figure B)	
				T4 – 1/4" Tube Stubs	3.00"		5 – 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