

# 74-2400 Series

## Regulators - Pressure Reducing

D74241729X012

### Specifications

For other materials or modifications, please consult TESCOM.

#### OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

##### Maximum Inlet Pressure

600 or 3500 psig / 41.4 or 241 bar

##### Outlet Pressure Ranges

30, 60, or 100 psig / 2.1, 4.1, or 6.9 bar

##### Design Proof Pressure

150% of maximum rated

##### Inboard Leak Rate

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

##### Operating Temperature

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

**Vespel® Seat:** -40°F to 350°F / -40°C to 177°C

##### Flow Capacity

$C_v = 0.06$  (3500 psig / 241 bar model)

$C_v = 0.15$  (600 psig / 41.4 bar model)

##### Decaying Inlet Characteristic

**$C_v = 0.06$ :** 0.7 per 100 psig / 0.05 per 6.9 bar

#### MEDIA CONTACT MATERIALS

##### Body

316L VAR Stainless Steel Electropolish

##### Diaphragm

316L Stainless Steel

##### Seat

PCTFE (Vespel® Optional for 3500 psig / 241 bar model)

##### Valve Stem

316 Stainless Steel

##### Rear Seal

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

##### Internal Volume

2.9 cc

##### Weight (without gauges)

2.0 lbs / 0.9 kg

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

VCR® is a registered trademark of Cajon Co.



TESCOM 74-2400 Series ultra high purity, tied diaphragm pressure reducing regulator provides low internal volume and an internally springless and threadless design. The 74-2400 Series offers a 10  $R_a$  surface finish and 316 Stainless Steel VAR. Inlet pressures are 600 or 3500 psig / 41.3 or 241 bar with outlet pressures up to 100 psig / 6.9 bar.

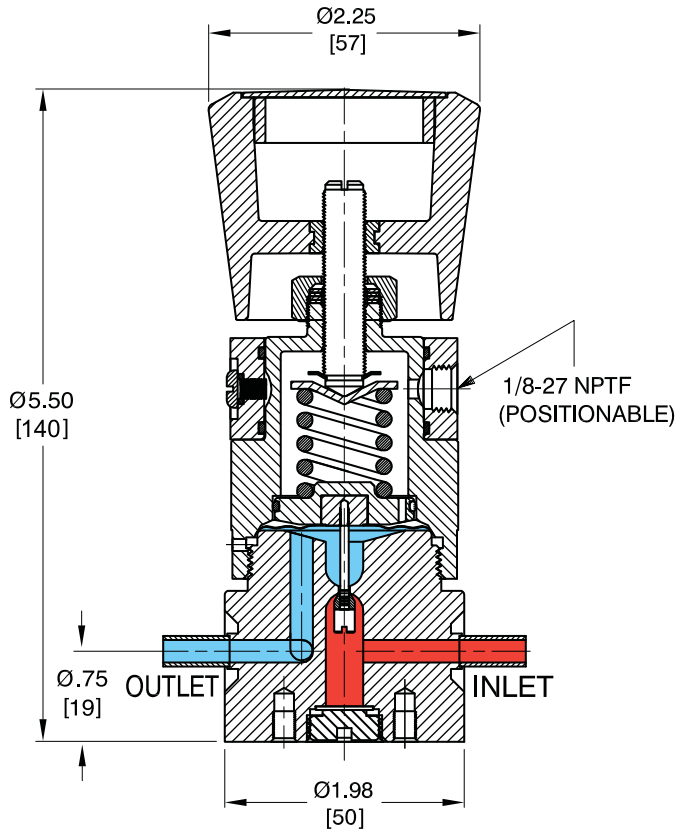
### Applications

- 1/4" point-of-use
- Gas cabinets
- Semiconductor manufacturing
- Valve manifold boxes
- Research labs

### Features and Benefits

- Manufactured and tested using Total Quality tools including Statistical Process Control
- No internal springs and a low internal volume minimizes particle entrapment
- Metal-to-metal seal at diaphragm or body interface
- 10  $R_a$  microinch / 0.25 micrometer finish is available

74-2400 Series Regulator Drawing



GAUGE PORT OPTIONS

Figure A (no gauges)

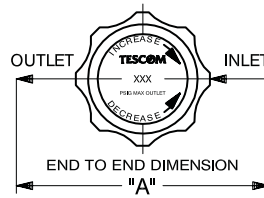


Figure B (2 gauges)

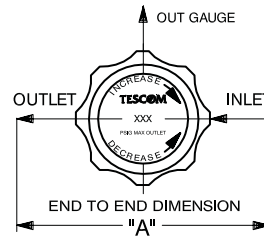
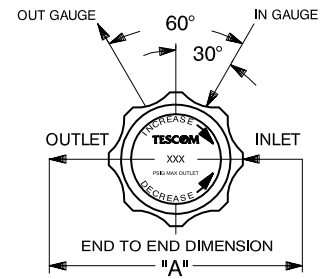


Figure C (1 gauge)

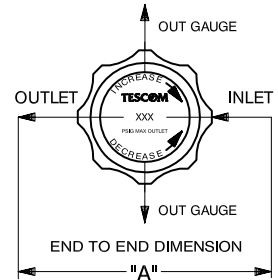
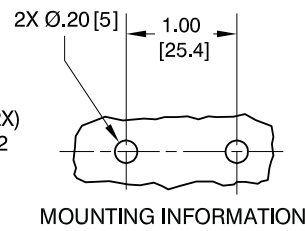
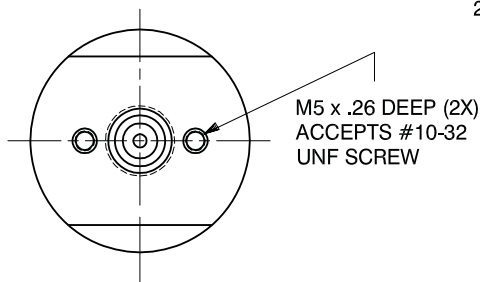


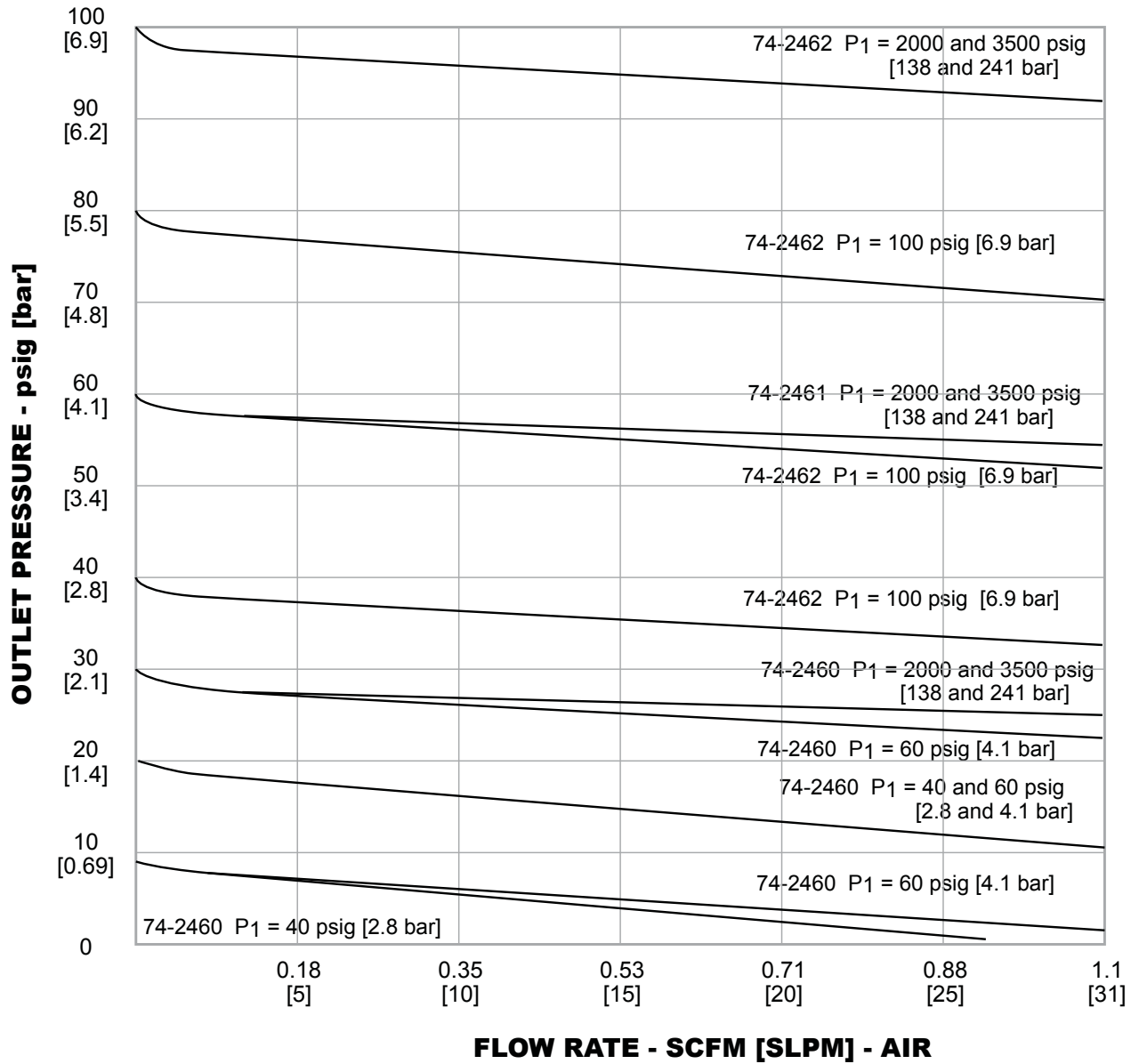
Figure D (2 gauges)



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

### 74-2400 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).



## 74-2400 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:

74-24	6	2	K	A4	1	0		
BASIC SERIES	BODY MATERIAL / FINISH	OUTLET PRESSURE RANGES	SEAT MATERIAL	INLET AND OUTLET PORT SIZE AND TYPE	'A' ± 0.06"	MAXIMUM INLET PRESSURE	GAUGE PORT OPTIONS	NUMBER OF GAUGE PORTS (FIGURE)
74-24	6 – 316L VAR Stainless Steel Electropolish: 10 R <sub>a</sub> <sup>1</sup>	0 – 30 psig 2.1 bar  1 – 60 psig 4.1 bar  2 – 100 psig 6.9 bar	K – PCTFE (standard)  V – Vespel® (3500 psig / 241 bar model only)	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 Stubs	1.09" 4.75" 4.75" 3.70" 3.70"	1 – 3500 psig 241 bar  2 – 600 psig 41.4 bar	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) 1 (Figure C) 2 (Figure B) 2 (Figure D) 2 (Figure D) 1 (Figure C) 2 (Figure B) 2 (Figure B) 1 (Figure C) 2 (Figure B)
	1. Per SEMI F19, UHP grade							