

23 Series

Regulators - Pressure Reducing

D23XX1787X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

150 or 250 psig / 10.3 or 17.2 bar

Outlet Pressure Ranges

0-30, 0-60, 0-100 psig / 0-2.1, 0-4.1, 0-6.9 bar

Design Proof Pressure

150% maximum rated

Certified Maximum Inboard Leak Rate

<1 x 10⁻⁹ atm cc/sec He

Operating Temperature

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

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

Flow Capacity

C_v = 1.8



MEDIA CONTACT MATERIALS

Body

316L VAR Stainless Steel with Electropolish

Valve Seat

Teflon® or PCTFE

Diaphragm

316L Stainless Steel

Stem

316L Stainless Steel

Seal

316 Stainless Steel

Remaining Parts

316 Stainless Steel

TESCOM 23 Series ultra high purity in-line regulator offers 10 R_a microinch finish with high flow capabilities up to 950 SLPM. The tied diaphragm 23 Series provides an internally springless and threadless design with inlet pressure of 250 psig / 17.2 bar and outlet pressure up to 100 psig / 6.9 bar.

Application

- High flow in-line regulator excellent for purging

Features and Benefits

- Smooth unobstructed flow path for complete purging
- Minimized particle generation because of springless and threadless construction
- Positive shut-off seal with positionable bonnet
- Excellent leak integrity is created by metal-to-metal diaphragm to body seal
- Meets SEMI F19, UHP Grade

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

18.5 cc with 1/2" VCR

Weight

3.2 lbs / 1.5 kg

Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.
VCR® is a registered trademark of Cajon Co.

23 Series Regulator Drawing

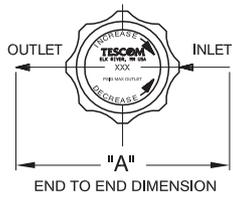


Figure A (No Gauges)

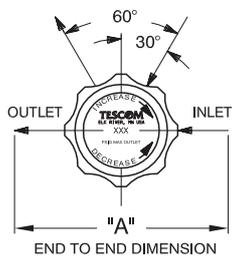


Figure B (2 Gauges)

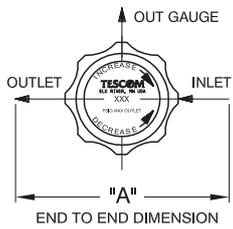


Figure C (1 Gauge)

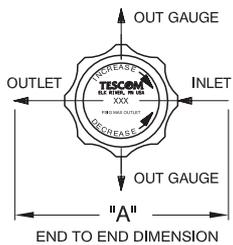
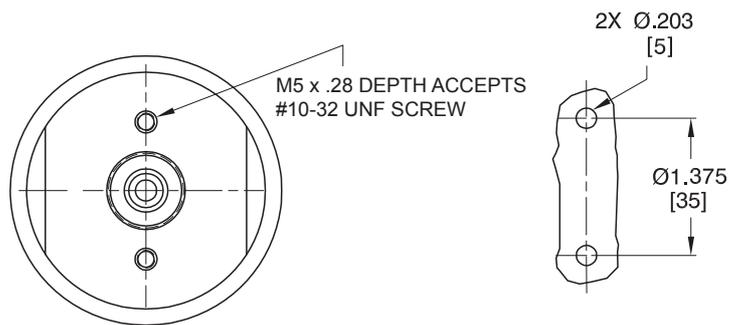
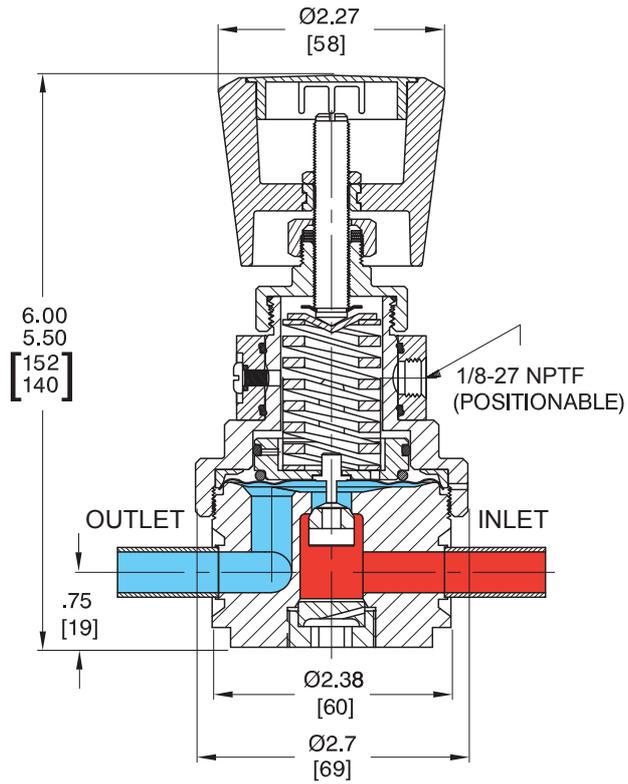


Figure D (1 Out Gauges)

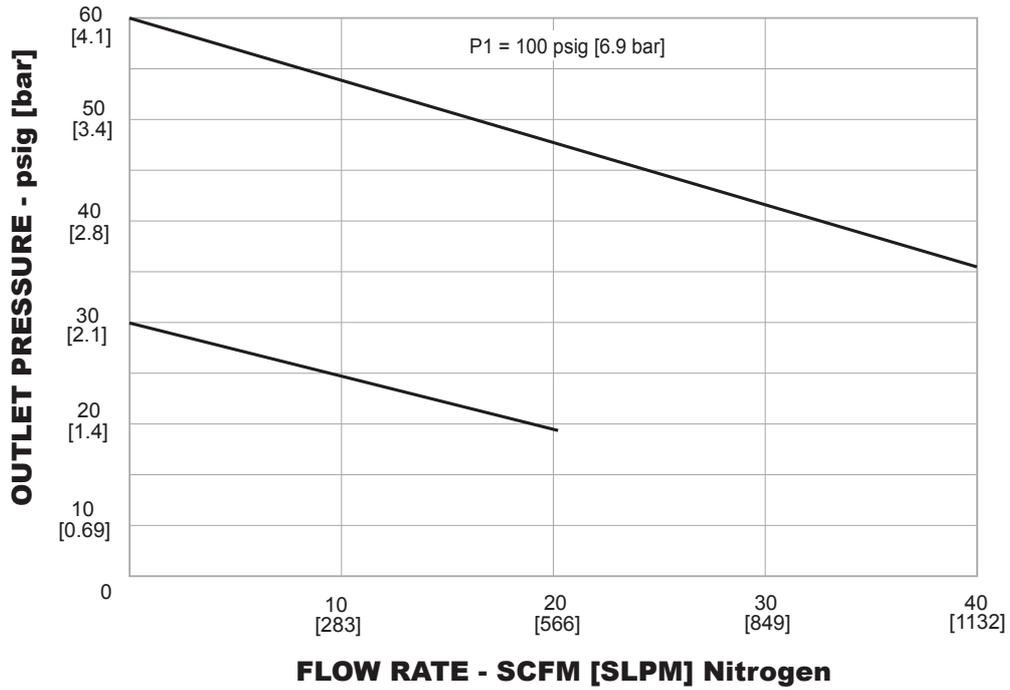
23-3
TIED DIAPHRAGM DESIGN



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

23 Series Regulator Flow Chart

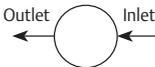
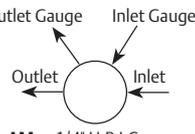
For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



23 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	INLET PRESSURE INTERNAL SURFACE FINISHES AND BODY/TRIM/ SEAT MATERIAL	OUTLET PRESSURE	ADJUSTMENT METHOD AND COLOR	PORTING CONFIGURATION - TYPE AND SIZE*		OPTIONS CHOOSE ONE ONLY
				GAUGE PORT OPTIONS	INLET AND OUTLET PORT END-TO-END DIMENSION 'A'	
23-3 Tied diaphragm/ positive shutoff	B – 250 psig 17.2 bar – 10 Ra finishes – 316L VAR Stainless Steel body with Eletropolish – 316 Stainless Steel trim – PCTFE seat C – 150 psig 10.3 bar – 10 Ra finishes – 316L VAR Stainless Steel body with Eletropolish – 316 Stainless Steel trim – Teflon® seat	0 – 30 psig 2.1 bar 1 – 60 psig 4.1 bar 2 – 100 psig 6.9 bar	5 – Handknob – White	AA – No gauge ports  AB – 1/4" H.P.I.C. AC – 1/4" FVCR AD – 1/4" MVCR, swivel AE – 1/4" MVCR, fixed	EN7EN7 1/4" MVCR, fixed - 3.97" HF4HF4 1/2" FVCR - 5.59" GF4GF4 1/2" MVCR - 5.59" FB7FB7 1/2" Tube - 3.70" UR2UR2 3/4" Tube - 5.75"	Z – None T – Test Report (typical) (Includes Helium Leak Certification and Particle Count Certification) C – Certification of Conformance E – Centerline to bottom (0.680")
				 AM – 1/4" H.P.I.C. AN – 1/4" FVCR AP – 1/4" MVCR, swivel AR – 1/4" MVCR, fixed		

* Consult factory for other porting configurations, type and size.