

Low-Pressure, Spring-Loaded, Back-Pressure Regulators—TBVS4 Series

Features

- Spring-loaded pressure control
- Diaphragm sensing mechanism
- 316L stainless steel materials of construction
- Large diaphragm to seat ratio
- Compliance with FDA/USP class VI

Options

- Special cleaning to ASTM G93 Level C

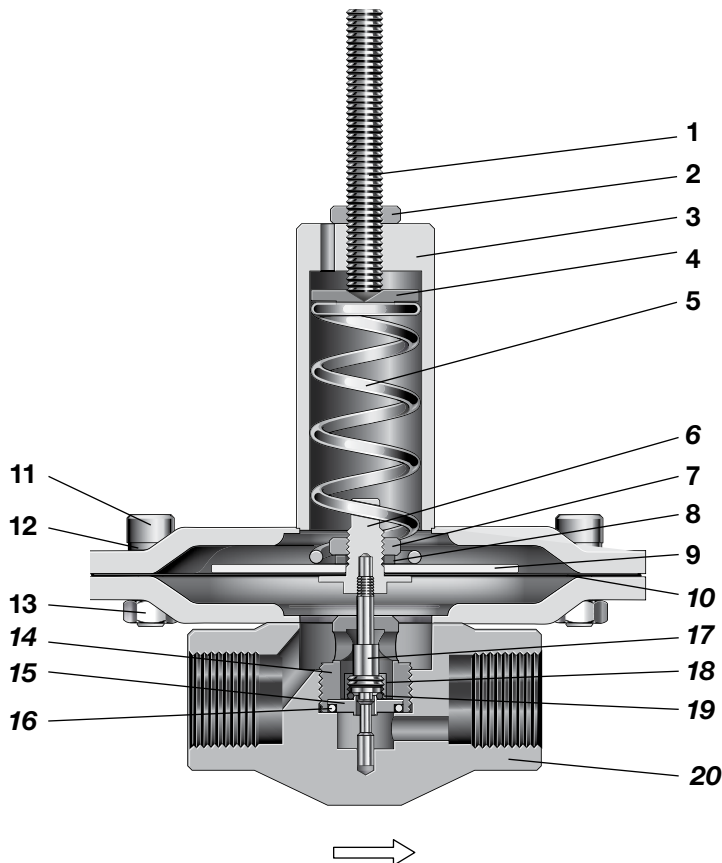


Technical Data

Series	Maximum Inlet Pressure psig (bar)	Maximum Inlet Control Pressure psig (in. H ₂ O, mbar)	Sensing Type	Temperature Range °F (°C)	Flow Coefficient (C _v)	Seat Diameter in. (mm)	Inlet and Outlet Connections	Weight lb (kg)
TBVS4	14.5 (1.0)	11.6 (321, 800)	Diaphragm	-4 to 212 (-20 to 100)	0.2	0.16 (4.0)	1/2 in. ISO/BSP parallel thread, sanitary clamp (BSOD), ASME or DIN flange	3.5 (1.6) without flanges

Materials of Construction

TBVS4 Series Regulator



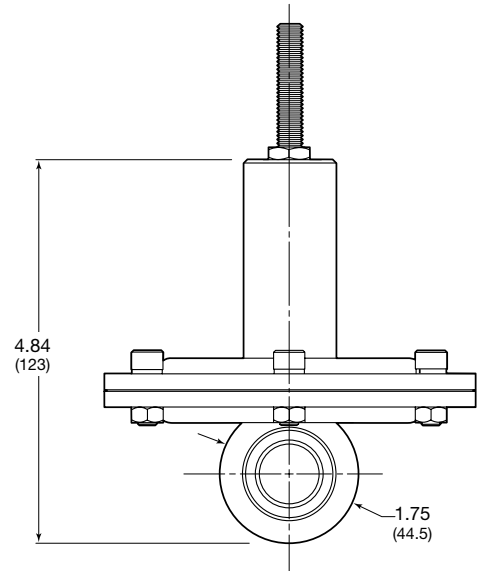
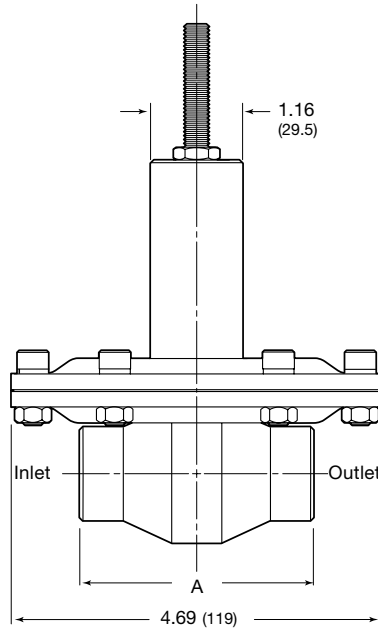
Component	Material / Specification
1 Set screw	A2-70
2 Nut	A2
3 Spring housing assembly	316L SS / A479 or EN10088
4 Spring guide	
5 Set spring	302 SS / A240
6 Clamp ring	316L SS / A479 or EN10088
7 Nut	A4
8 Washer	A2
9 Diaphragm plate	316L SS / A479 or EN10088
10 Diaphragm	PTFE
11 Socket-head cap screw	A4-80
12 Washer	A2
13 Nut	A4
14 Seat retainer	316L SS / A479 or EN10088
15 Seat	
16 Seat seal	PTFE
17 Poppet	316L SS / A479 or EN10088
18 Poppet screw	
19 Poppet O-ring	Kalrez 6230
20 Body assembly (body, bottom dish)	316L SS / A479 or EN10088
<i>Wetted lubricants: Silicone-based and synthetic hydrocarbon-based</i>	

Wetted components listed in *italics*.

Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.

End Connection Size and Type	A in. (mm)
1/2 in. female ISO/BSP parallel thread	2.95 (75.0)
DN15 PN16 flange	8.31 (211)
1/2 in. ASME class 150 flange	9.09 (231)
1/2 in. sanitary clamp (BSOD)	9.06 (230)



Shown with female ISO/BSP parallel thread end connections

Ordering Information

Build a TBVS4 series regulator ordering number by combining the designators in the sequence shown below.

1 **2** **3** **4** **5** **6** **7** **8** **9** **10** **11**
TBVS FA 4 A 1 - 02 - 3 - T T F - G93

1 Series

TBVS = 14.5 psig (1.0 bar) maximum inlet pressure

2 Inlet /Outlet

B = Female ISO/BSP parallel thread
FA = ASME B16.5 flange
FD = DIN flange
TC = Sanitary clamp (BSOD)

3 Size

4 = 1/2 in. / DN15

4 Pressure Class

Omit designator if flanges are not ordered.
A = ASME class 150
M = DN class PN16

5 Flange Facing

Omit designator if flanges are not ordered.
 1 = Raised face smooth

6 Body Material

02 = 316L SS

7 Pressure Control Range

3 = 0.72 to 1.4 psig (20 to 40 in. H₂O, 50 to 100 mbar)
4 = 0.72 to 2.9 psig (20 to 80 in. H₂O, 50 to 200 mbar)
5 = 0.72 to 7.2 psig (20 to 200 in. H₂O, 50 to 500 mbar)
6 = 0.72 to 11.6 psig (20 to 321 in. H₂O, 50 to 800 mbar)

8 Seal Material

T = PTFE

9 Diaphragm Material

T = PTFE

10 Seat Seal Material

F = Kalrez 6230

11 Options

G93 = ASTM G93 Level C-cleaned