



ISO Registered Company

BA1/BL1-TB

02-20

MODELS BA1/BL1 BIO-SANITARY

BACK PRESSURE REGULATORS



MODEL BA1



MODEL BL1

OVERVIEW

The Models BA1 and BL1 are stainless steel back pressure relief regulators designed to handle small to mid-capacity flow rates in sanitary biotechnical process piping systems. These units are capable of controlling inlet pressure to a level between 2 and 135 psig (.13 and 9.3 Barg).

BA1 & BL1 FEATURES

- Adjustment Ease:** Adjusting knob for frequent set point changes.
- Wetted Materials Construction:** All metallic parts are 316L SST. Unit is cleaned to Cashco Spec. #S-1576.
- Surface Finish:** Interior of body mechanically polished per ASME BPE (SFV-4). Interior and exterior surfaces are electro-polished.
- Top Guided:** A "non-wetted" guide in the topworks above the diaphragm provides stability at all set points.

BA1 FEATURES

- Self-Draining:** Self-draining angle style body with side inlet and bottom outlet.



LINE SIZES AVAILABLE

1/2" (DN15), 3/4" (DN20)



END CONNECTIONS

SANITARY TRI-CLAMP



COMMON APPLICATIONS

PHARMACEUTICAL INDUSTRY,
PROCESSED FOOD PRODUCTION,
COSMETICS PRODUCTION, SPECIALTY
CHEMICALS



DESIGN PRESSURE

MAXIMUM INLET PRESSURE:
UP TO 135 psig (9.3 Barg)

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Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
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Брянск (4832)59-03-52
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Владимир (4922)49-43-18
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Вологда (8172)26-41-59
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Новосибирск (383)227-86-73
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Орел (4862)44-53-42
Оренбург (3532)37-68-04
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STANDARD/GENERAL SPECIFICATIONS

Body Size: 1/2", 3/4" (DN15, 20.)

Body & Spring Chamber Materials: Wrought Barstock; ASTM A479, Type 316L SST.

Body Connection: Standard - Sanitary "Tri-Clamp®". Designed to seal against weld-type clamp liners per ISO 2852.
Alternate - Tube end connections 1/2" size for BL1 design only.

Cleaning: All units cleaned per Cashco Spec. #S-1576.

Trim:

PART	LE
Diaphragm *	EPDM
Piston	316L SST
Seat ¹ *	316L SST
Plug	316L SST
Pusher Plate	316L SST
Body Cap **	316L SST
Temperature Range °F (°C)	-20 to +275 (-29 to +135)

* Parts conforms with FDA Code of Federal Regulations Title 21, Part 177
** Not required on BA1
¹ The fixed portion of the seat is integral to the body. Indicated seat is the moving portion and is attached or integral with the plug.

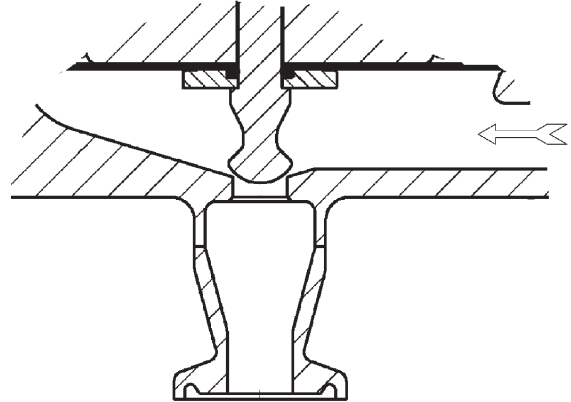


Figure 1
Metal Seat
Shown with
Angle Design

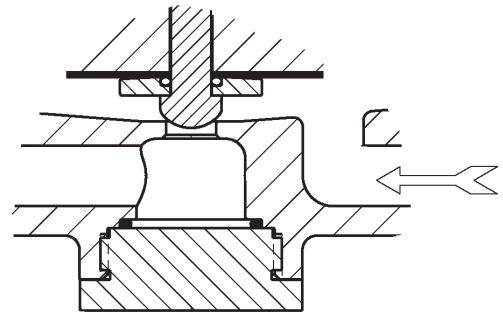


Figure 2
Metal Seat
Shown with
In-Line Design

Seals: TFE o-ring at pusher plate and body cap locations. All seals meet USP Class VI requirements.

Operating Temperature: -20 to +275°F (-29° to +135°C)

Inlet Pressure: 135 psig (9.3 Barg) maximum

Operating Pressure / Range Springs: Standard: SST

Range Spring	
psig	(Barg)
2-25	(.34-1.7)
20-50	(1.4-3.4)
40-100	(2.7-6.9)
80-135	(5.5-9.3)

Cv's/Capacities: BL1 - Inline Wide Open Cv: 1.22
BA1 - Angle Wide Open Cv: 1.86
See Tables 1a-1d, 2a, 2b for flow curves

Opt-1: **CLOSING CAP.** A removable cap discourages tampering with spring setting. Covers the adjusting screw threads to enhance cleanability.

Opt-33: **THIRD BODY CONNECTION.** BA1 design only. Two side inlets, bottom outlet.

Opt-41: **EXTENDED TUBE END CONN.** Body sizes 1/2" (DN15), BL1 design only. SST extension tube diameter with 0.065 inch (1.65 mm) wall thickness.

TABLE 1a

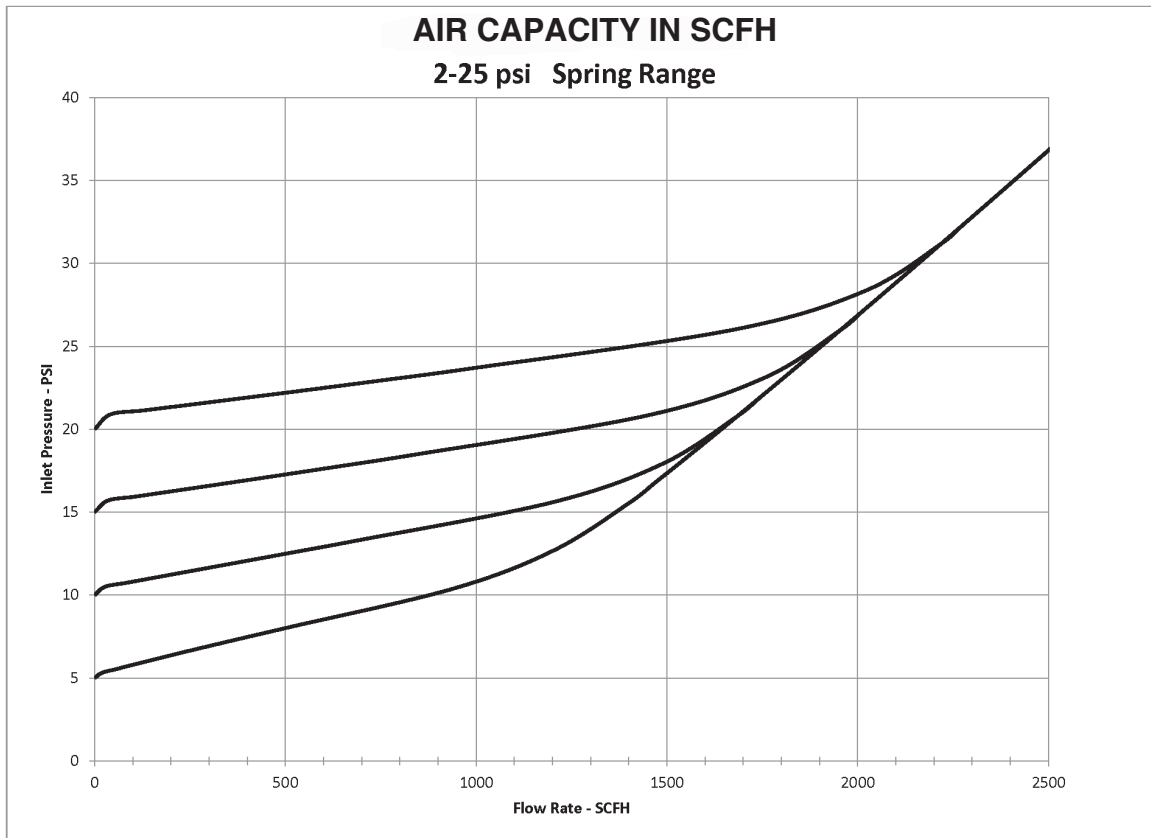


TABLE 1b

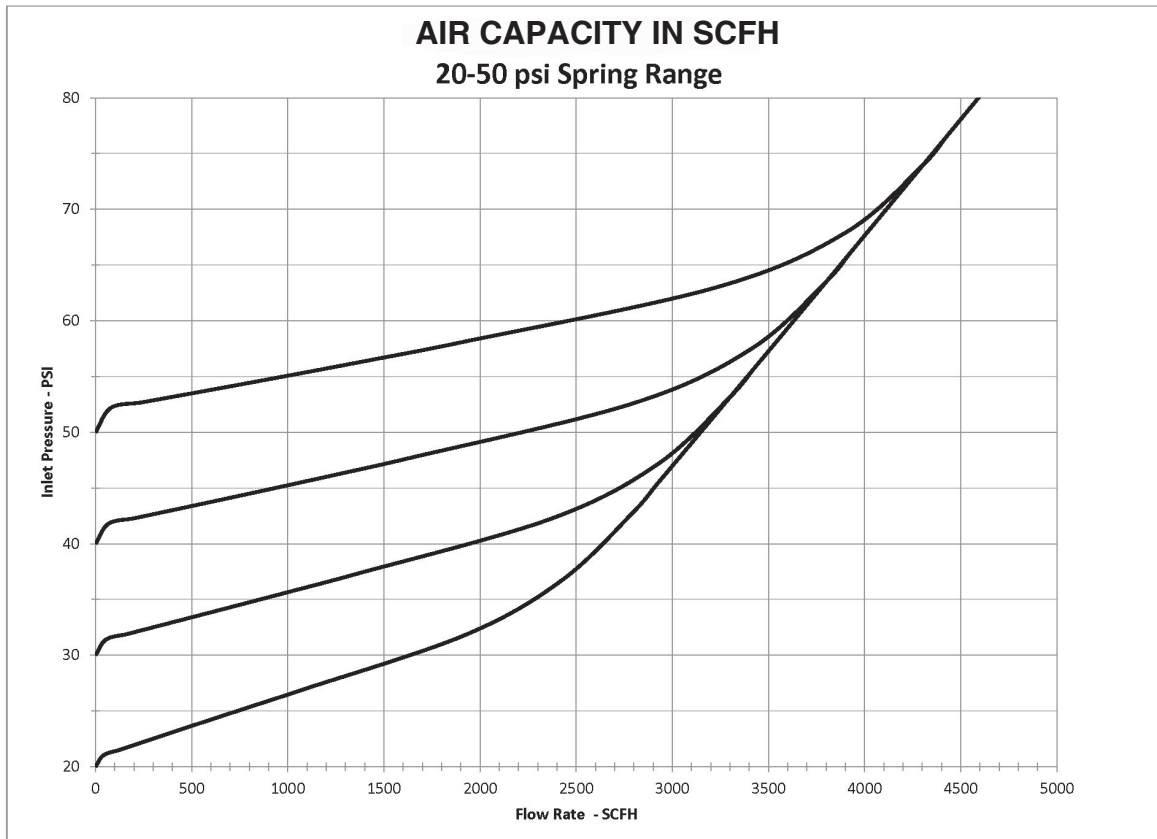


TABLE 1c

AIR CAPACITY IN SCFH
40-100 psi Spring Range

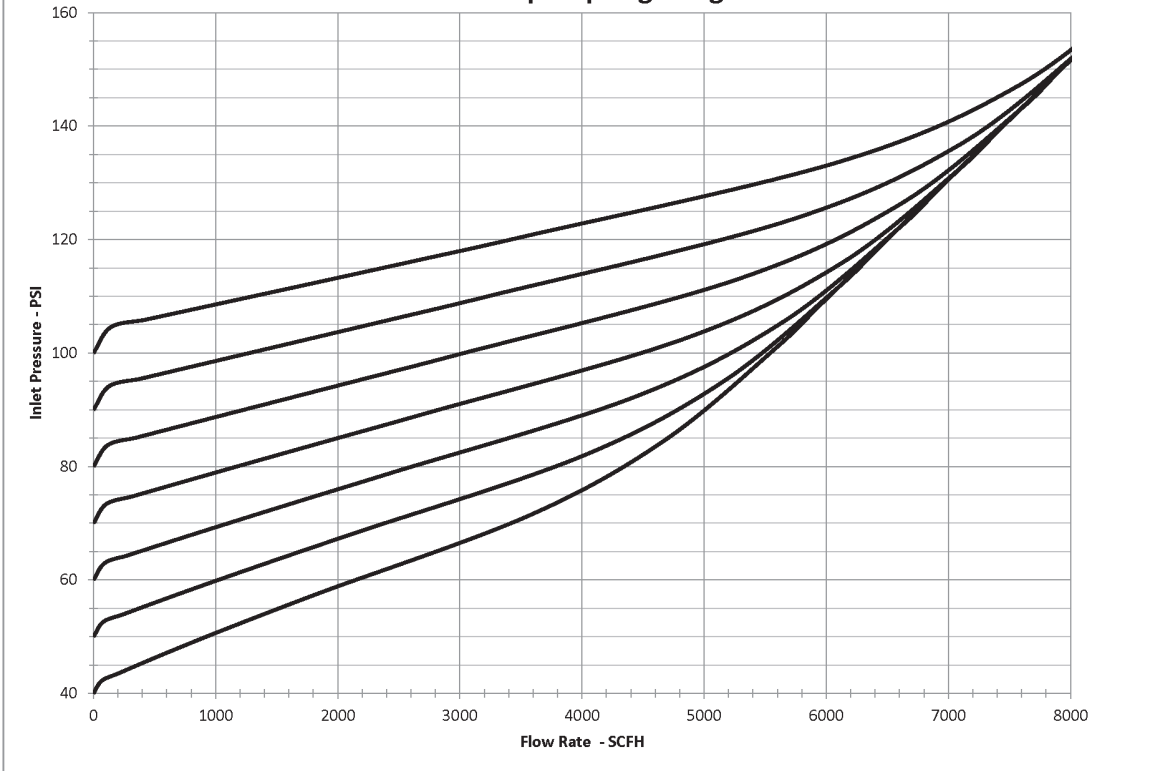


TABLE 1d

AIR CAPACITY IN SCFH
85-140 psi Spring Range

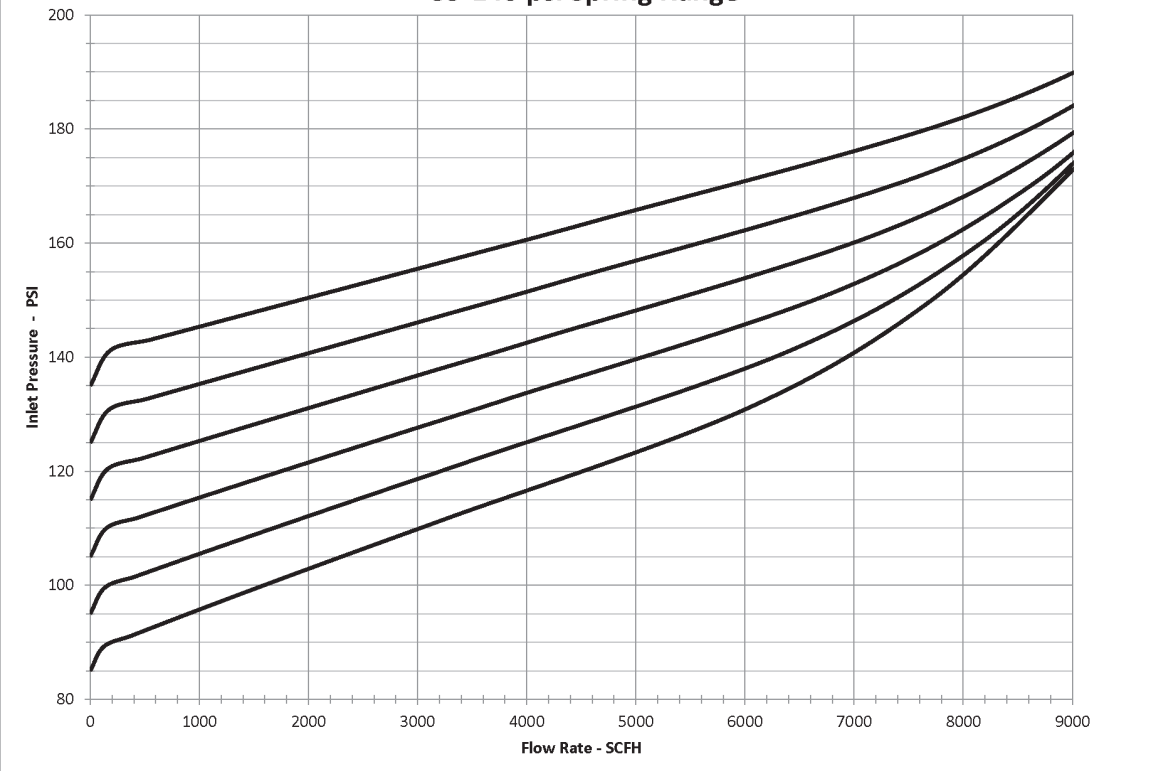


TABLE 2a

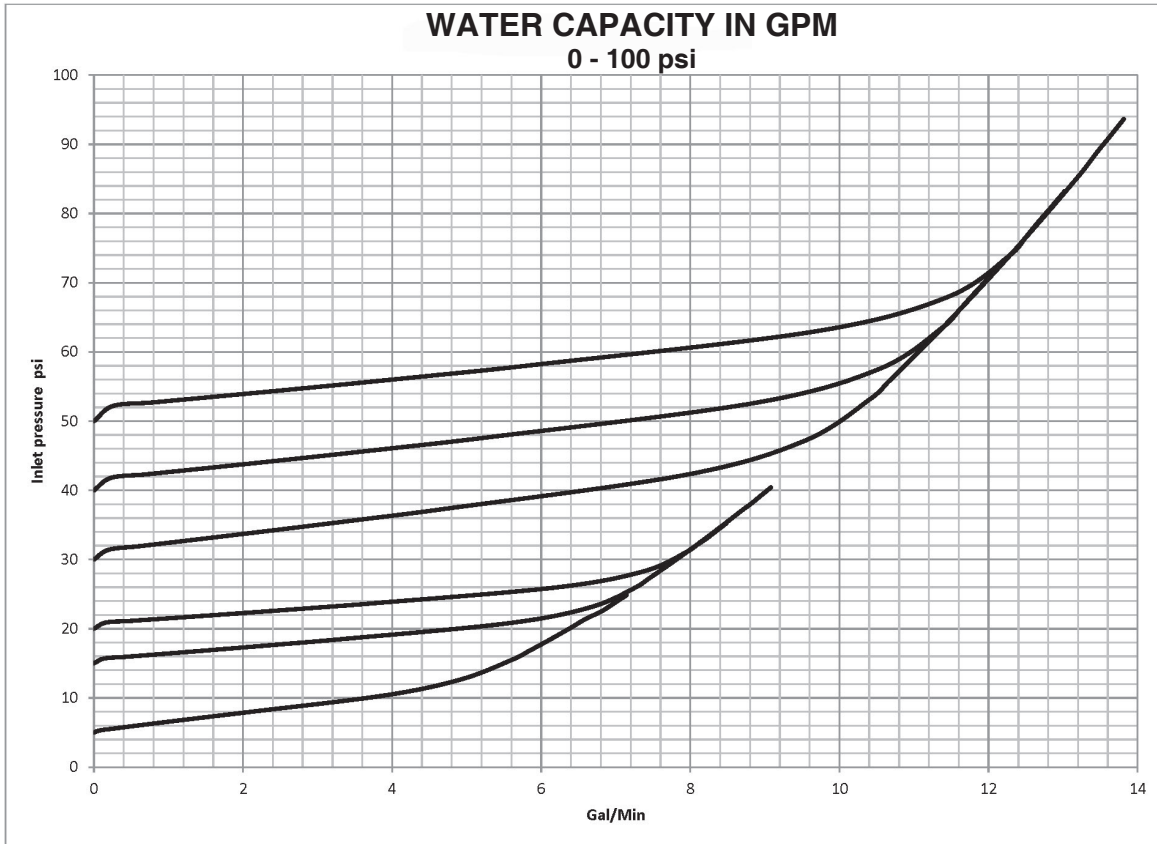
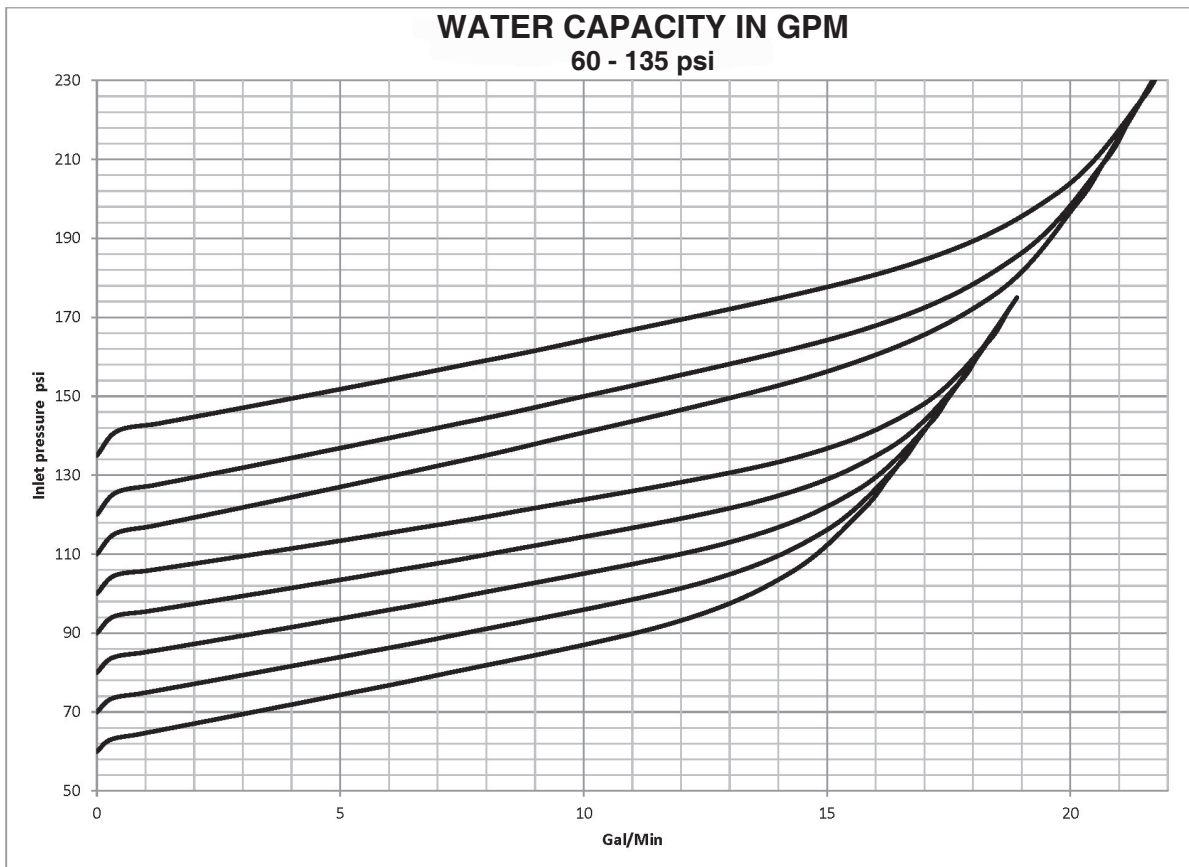
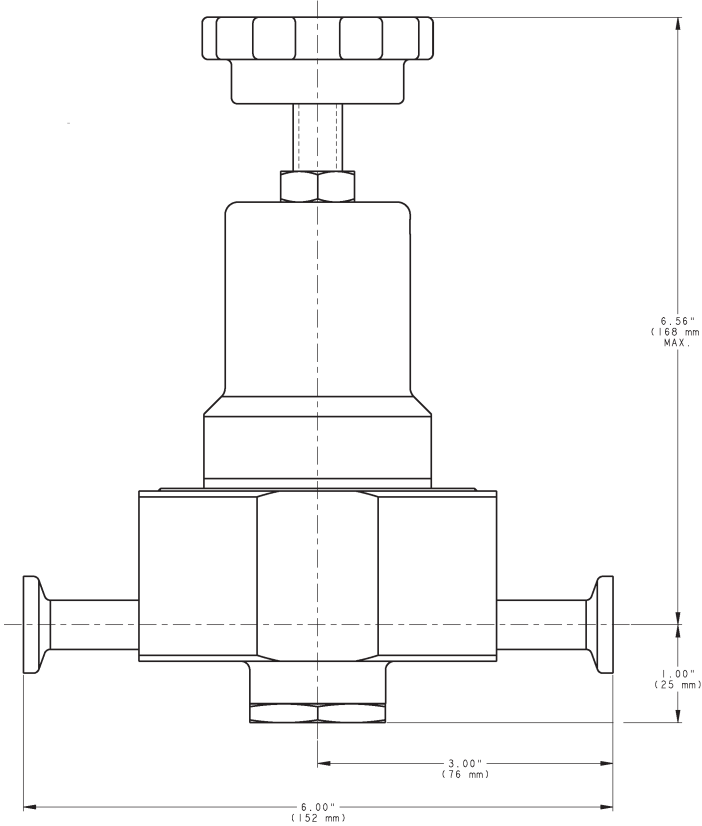


TABLE 2b



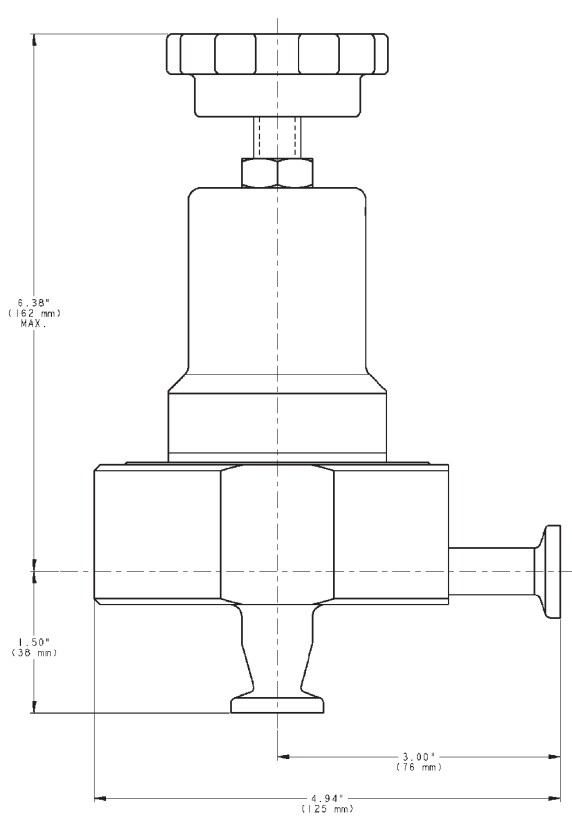
DIMENSIONS AND WEIGHTS

MODEL BL1

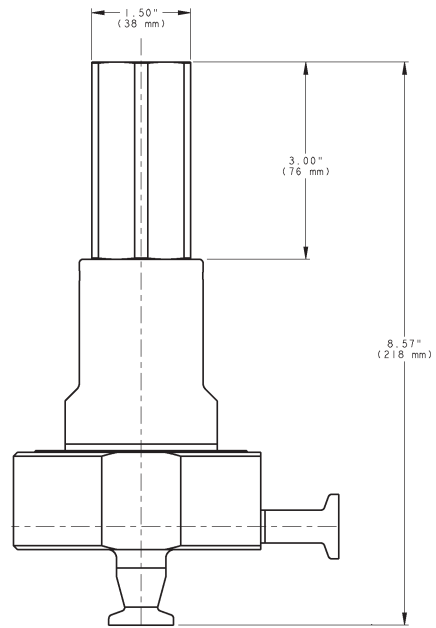
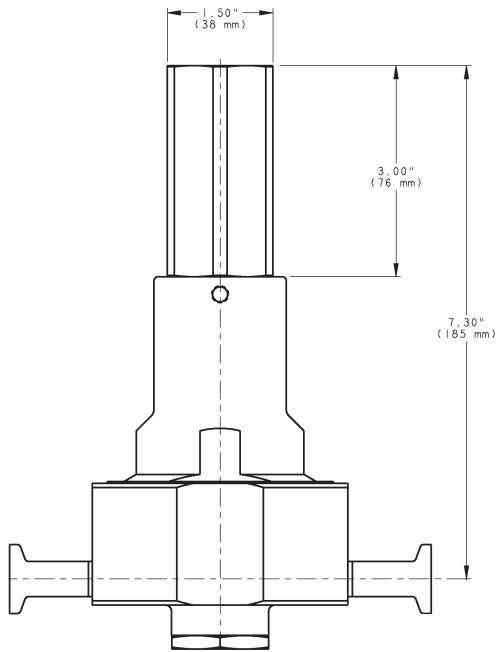


Weight = 7 Lbs. (3.18 kgs)

MODEL BA1



Weight = 6 Lbs. (2.72 kgs)



Opt-1 CLOSING CAP

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MODELS BA1/BL1 PRODUCT CODER 02/07/20

FOR THE BIO / SANITARY INDUSTRY



POSITION 3 - SIZE				
Model	Connection Orientation	Size	ASME	ISO 2852
		in (DN)	CODE	CODE
BL1	In-Line — side inlet / side outlet	1/2" (15)	4	G
BA1	Angle — side inlet / bottom outlet *		5	J
BL1	In-Line — side inlet / side outlet	3/4" (20)	6	K
BA1	Angle — side inlet / bottom outlet		7	L

* Bottom Outlet is bored to 3/4" size.

POSITION 6 & 7 – TRIM DESIGNATION NUMBERS	
Desig.	CODE
LE	LE

Comply w/ FDA 21 CFR 177. & USP Class VI material classification.

POSITION 10 - END CONNECTIONS		
Description	Option	CODE
Sanitary Tri-Clamp End Connections	-	1
Third Body Conn. Sanitary Tri-Clamp (2 side inlets (flow thru), 1 bottom outlet)	-33	4
Tube End Connections - 1/2" size BL1 only	-41	T

POSITION 11 – RANGE SPRINGS		
SST Range Spring		CODE
psig	(Barg)	
2-25	(.13-1.7)	1
20-50	(1.4-3.4)	2
40-100	(2.7-6.9)	3
80-135	(5.5-9.3)	4

*** For information on ATEX see pages 8 & 9 on the IOM.**

POSITION 13 - OPTIONS		
Description	Option	CODE
None	-	0
Closing Cap	-1	1

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