

Baumann™ 87000 Flexsleev Sanitary Control Valve



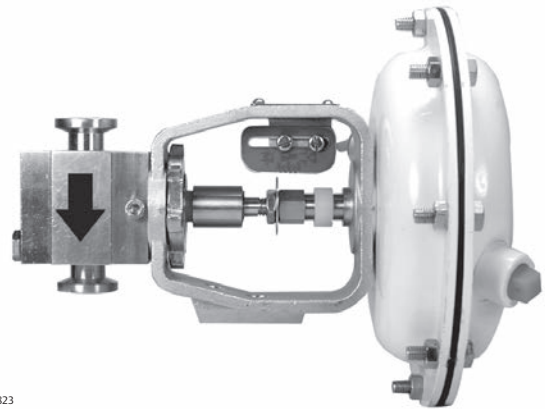
The Baumann 87000 control valve is excellent for throttling high purity liquid or gaseous media commonly found in the food and beverage, pharmaceutical, film, and biotechnology industries.

The valve is suitable for repeated steam sterilization cycles with 2.4 bar (35 psi) maximum steam pressures.

Assembly of valve body sections using only two bolts allows for ease of cleaning and inspection. A lower telltale port is provided. The valve will drain either horizontally or vertically with the actuator in the horizontal position. In contrast to diaphragm valves, the operation is not affected by vacuum.

Features

- Unique flow pattern allows for self-draining in both vertical and horizontal pipelines
- Streamlined low shear flow contours make it ideal for sensitive biomedica
- Electropolished, wetted interior finishes to $\leq 30 R_a$ microinch ($\leq 20 R_a$ microinch optional)
- Flow area between tubing O.D. and valve body seating is suitable for fine particulate media
- Full and reduced port orifices available to optimize sizing
- Foolproof bolting method assists with ease of valve body disassembly and reassembly
- Fisher™ FIELDVUE™ digital valve controller available for remote calibration and diagnostics in facilities utilizing the PlantWeb™ architecture



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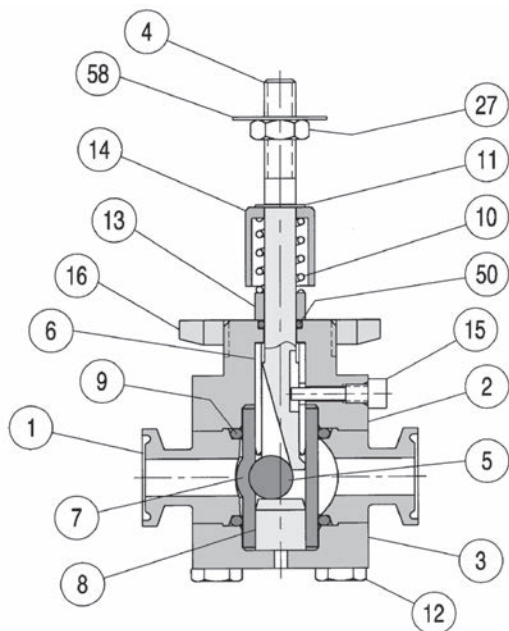
Baumann 87000 Valve Shown in Recommended Mounting Position for Self-Draining



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Baumann 87000 Valve with FIELDVUE DVC2000 Digital Valve Controller

Figure 1. Baumann 87000 Flexsleeve Valve Assembly



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Table 1. Materials of Construction

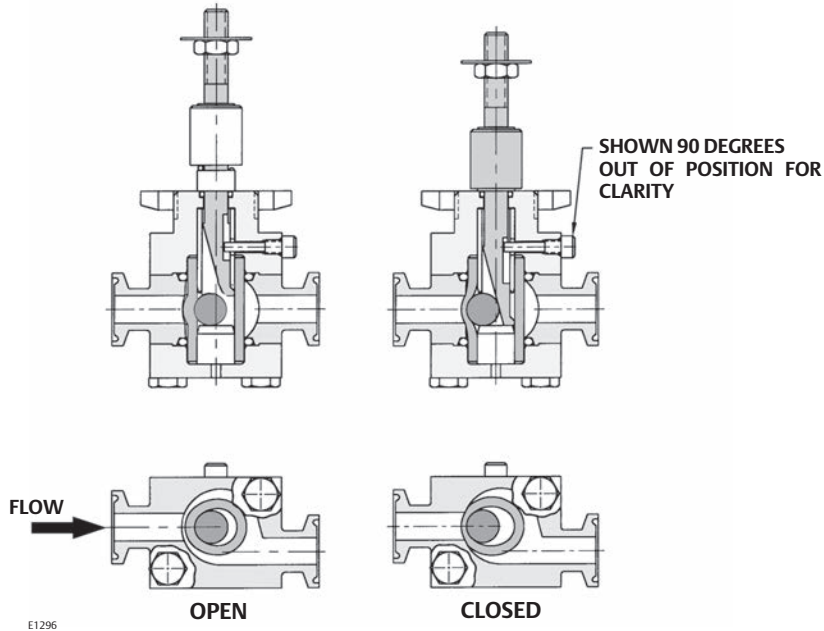
Key Number	Description	Material
1	Valve Body	ASTM SA479 (S31600/S31603)
2	Bonnet, Upper	ASTM SA479 (S31600/S31603)
3	Bonnet, Lower	ASTM SA479 (S31600/S31603)
4	Shaft	S21800 SST
5	Ceramic Ball	Grade 25 Ceramic
6	Sleeve Bushing	S30300 Stainless Steel
7	Sleeve	Silicone, fluorocarbon (FKM), EPDM, Perfluoroelastomer (FFKM)
8	Anvil	S21800
9	O-Ring	Silicone, fluorocarbon (FKM), EPDM, Perfluoroelastomer (FFKM)
10	Spring Stem	Passivated Stainless Steel
11	Retaining Ring	S15700
12	Hex Head Cap Screw	18-8 Stainless Steel
13	Spring Seat	PA Nylon 6/6
14	Protecting Cap	S30300 Stainless Steel
15	Alignment Pin	18-8 Stainless Steel
16	Drive Nut, (Yoke)	S31600 SST (ASTM A194 Grade 8M)
27	Jam Nut (locknut)	B8 Stainless Steel
50	O-Ring	Fluorocarbon (FKM)
58	Travel Indicator	ASTM A240 S30400

Mode of Operation

As shown in figure 2, a flexible sleeve is inserted through the length of the valve and sealed between

the valve body and bonnet by O-rings. The actuator-motivated valve stem has a tapered groove that pushes a ceramic ball against the inside of the sleeve and, thereby, the sleeve against a valve seat.

Figure 2. Mode of Operation



E1296

Table 2. Technical Specifications

Valve Body Rating	18.9 bar CWP (275 psi CWP)
Nominal Size	17.7 mm (NPS 1/2)
Connections	17.7 mm (0.5 inch), Tri-Clover / Tri-Clamp (Welded Ends Optional)
Seat Leakage	Class VI
Bonnet	Bolted
Characteristic	Modified Linear
Internal Valve Body Finish (Wetted Interior)	< 30 Ra Microinch / 0.76 Ra Micron (standard) < 20 Ra Microinch / 0.51 Ra Micron (optional - or as required)
Maximum Operating Temperature	Refer to table 3
Available Certificates⁽¹⁾	USP CL VI, 21CFR 177 ⁽¹⁾

1. Consult your [Emerson Process Management sales office](#) for applicable materials.



Table 3. Sleeve Material Temperature Chart

SLEEVE MATERIAL ⁽¹⁾	TEMPERATURE RANGE ⁽³⁾	SEAT LEAKAGE	FLOW DIRECTION	MAXIMUM SHUTOFF PRESSURE	
				psi	bar
Silicone	-62 to 232°C (-80 to 450°F)	VI	To Open	150	10.35
Silicone (steam)	-17 to 135°C (0 to 275°F)				
Fluorocarbon (general service)	-17 to 204°C (-0 to 400°F)				
Fluorocarbon (water or steam service)	-17 to 37°C (-0 to 100°F)				
EPDM	-40 to 148°C (-40 to 300°F)				
Perfluoroelastomer ⁽²⁾	-17 to 248°C (-0 to 480°F)				

1. Medical grade in compliance with FDA 21CFR 177.
2. Please consult your [Emerson Process Management sales office](#) before ordering perfluoroelastomer.
3. Sleeve material temperature limitations may reduce allowable shutoff pressures.

Table 4. Flow Coefficients (ASME/ISA/IEC) and ISA Sizing Factors⁽¹⁾

PLUG TRAVEL mm (INCH)	ORIFICE DIAMETER mm (INCH)	C _v AT VALVE OPENING - PERCENT OF PLUG TRAVEL
		100
7.9 (0.3125)	3.18 (0.125)	0.25
	9.40 (0.370)	1.25

1. See [Fisher Catalog 12](#) for a full range of flow and sizing information.

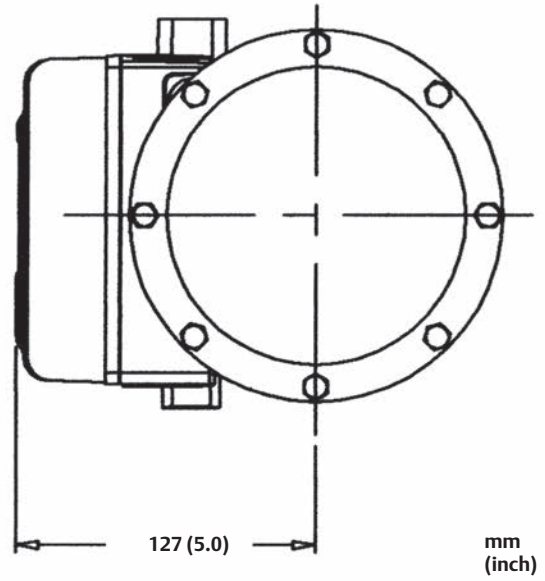
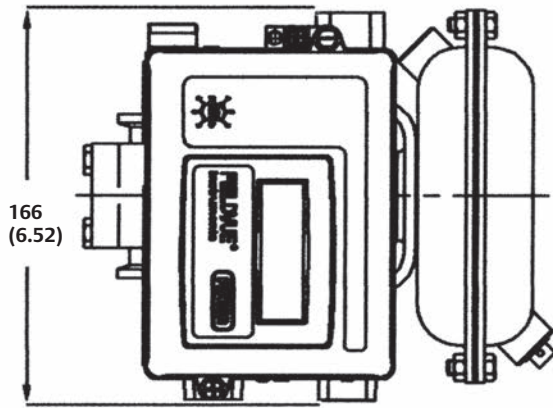
Table 5. Model Numbering System

87	MAX C _v			END CONNECTIONS		SLEEVE MATERIAL	
87000		C _v	K _v				
	00	0.25	0.22	1	Tri-Clamp	S	Silicone
	01	1.25	1.08	3	Special	E	EPDM
						V	Fluorocarbon
						K	Perfluoroelastomer ⁽¹⁾

1. Consult your Emerson Process Management sales office.

Figure 3. 87000 Dimensions

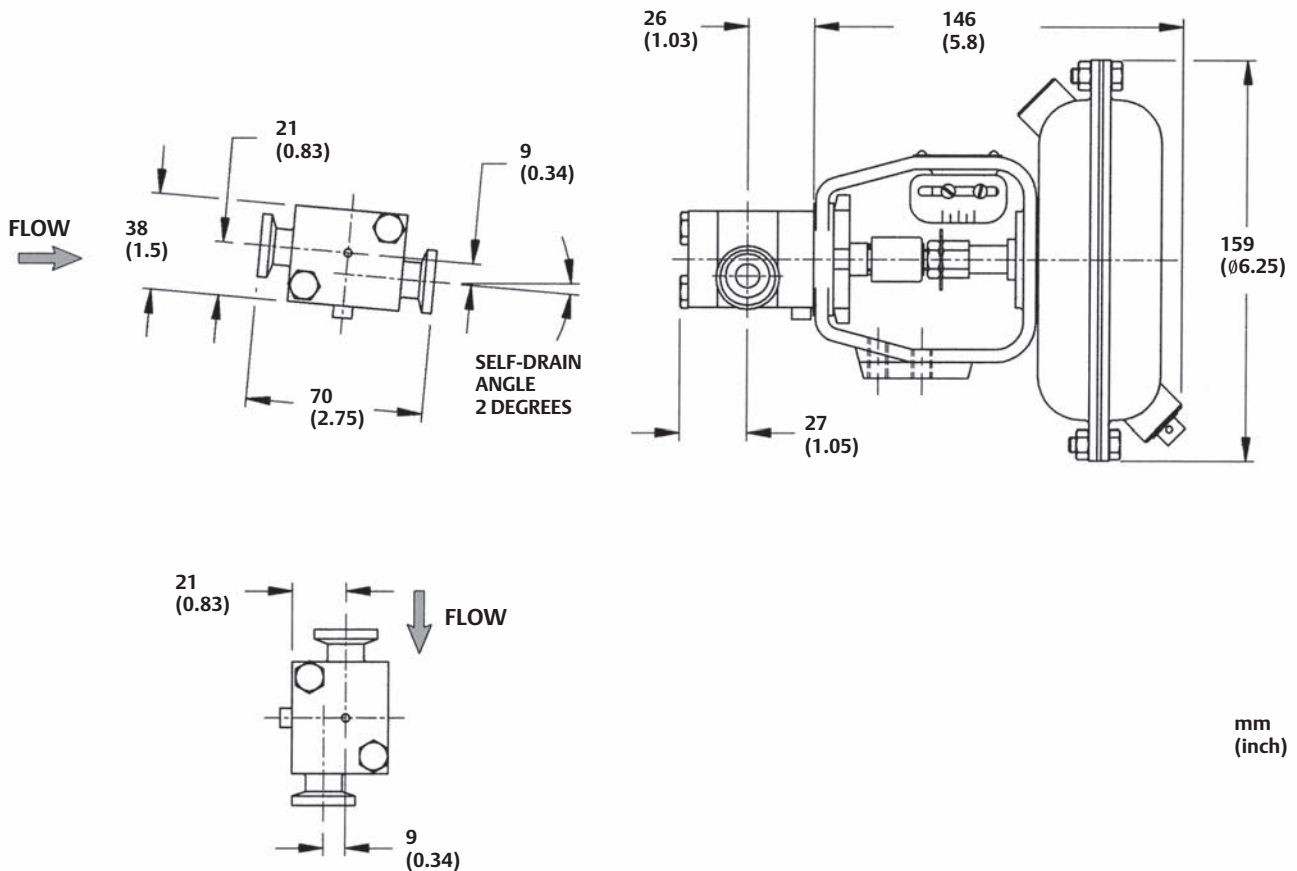
87000 WITH BAUMANN 16 ACTUATOR AND FIELDVUE DVC2000 SHOWN IN
RECOMMENDED MOUNTING POSITION FOR SELF-DRAINING (TOP VIEW SHOWN AT RIGHT)



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Figure 4. 87000 Dimensions

87000 WITH BAUMANN 16 ACTUATOR SHOWN IN RECOMMENDED MOUNTING POSITION FOR SELF-DRAINING



RECOMMENDED MOUNTING FOR SELF-DRAINING (ACTUATOR SHOULD BE MOUNTED HORIZONTALLY)

E1297

NOTE: ACTUATOR REQUIRES 115mm (4.5 INCHES) VERTICAL CLEARANCE.

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Emerson Process Management
Marshalltown, Iowa 50158 USA
Sorocaba, 18087 Brazil
Cernay, 68700 France
Dubai, United Arab Emirates
Singapore 128461 Singapore

www.Fisher.com