Baumann™ 89000 Sanitary Control Valve

Baumann 89000 sanitary control valves provide control solutions for various sanitary process systems. These valves meet FDA and USP CLVI standards. All metal parts in contact with the media are made of S31603 stainless steel and each valve comes standard with a stainless steel actuator to resist corrosion from caustic wash down.

The 89000 control valve is designed for use in a wide range of applications in many industries, including biotechnology, pharmaceutical, food & beverage, cosmetics, and others where cleanliness and sterility are required. The valves have a modular design allowing for quick assembly and easy maintenance and calibration.

W9850

Baumann 89000 NPS 1/2 Sanitary Control Valve Shown with FIELDVUE DVC2000 Digital Valve Controller

W9851-2

Baumann 89000 NPS 3 Sanitary Control Valve Shown with FIELDVUE DVC6200 Digital Valve Controller

Features

- Sizes ranging from NPS 1/2 to 6
- Elastomers meet FDA and USP CLVI standards
- Internal surface finish of 20 Ra (0.5 μm) available
- Stainless steel diaphragm actuators with an electropolish finish come standard
- Actuators are optimally matched to each valve size to suit many processes
- A robust stainless steel yoke construction connects the valve with its actuator and allows the Fisher® FIELDVUE™ digital valve controller to be attached
- The entire valve assembly can be easily disassembled for inspection and maintenance

Specifications

See table 2 for technical specifications and table 3 for actuator specifications.

Figure 1. Baumann 89000A Angle Valve Assembly

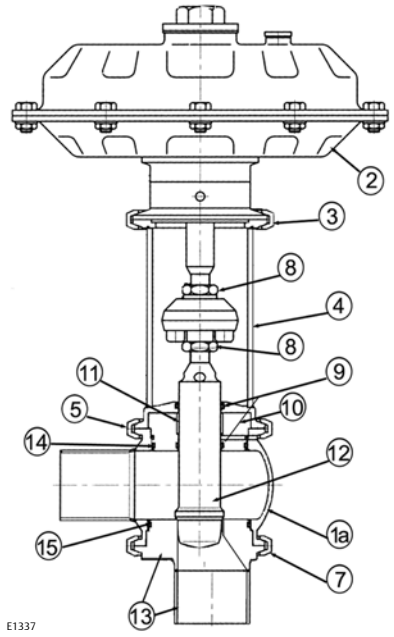


Figure 2. Baumann 89000I Inline Valve Assembly

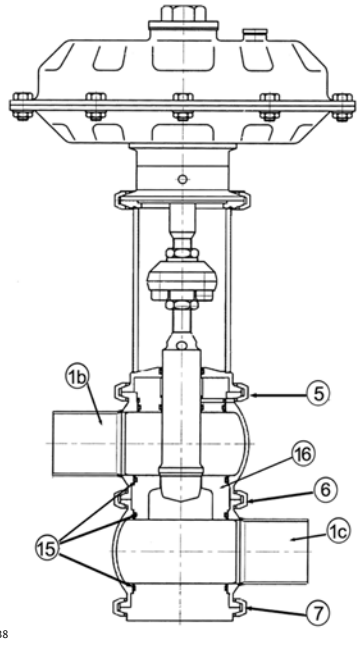
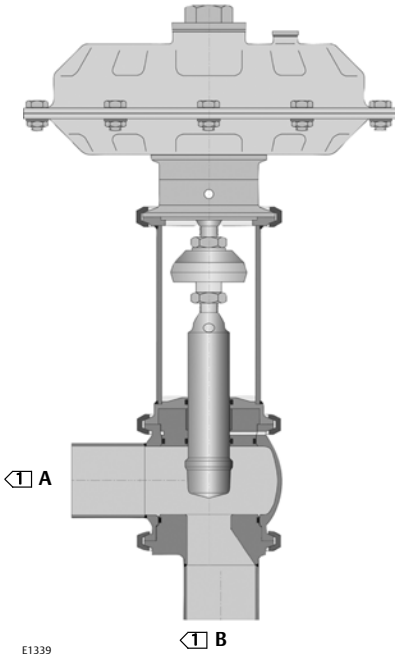


Table 1. Materials of Construction

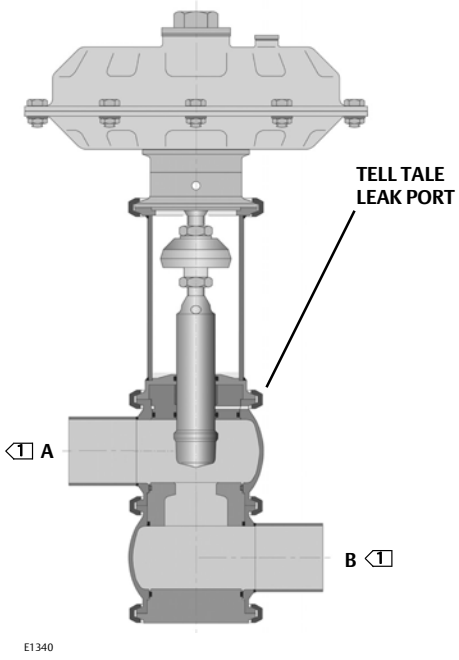
Key Number	Description	Material
1a	Angle Valve Body	S31603 Stainless Steel
1b	Upper Inline Valve Body	
1c	Lower Inline Valve Body	
2	Diaphragm Actuator	S30400 Stainless Steel
3	Actuator Clamp	
4	Yoke	
5	Upper Body Clamp	
6	Middle Body Clamp	
7	Lower Body Clamp	
8	Stem Locknut	
9	O-Ring	EPDM
10	Bonnet	S31603 Stainless Steel
11	Bearing	PTFE/Bronze
12	Valve Plug with Seat	S31603 Stainless Steel
13	Angle Valve Seat/Lower Pipe Connection (1pc)	
14	O-Ring	EPDM
15	O-Ring	
16	Inline Valve Seat	S31603 Stainless Steel

Figure 3. Baumann 89000A Angle Valve Body



1 Installed with flow from Port B to Port A. Flow from Port A to Port B is not recommended

Figure 4. Baumann 89000I Inline Valve Body



1 Installed with flow from Port B to Port A. Flow from Port A to Port B is not recommended

Table 2. Technical Specifications

Nominal Size	NPS 1/2 through 6
Valve Body Material	S31603 Stainless Steel
Internal Valve Body Finish	</=20Ra Microinch / 0.50Ra Micron
Connections	Tri-Clamp Standard (Weld Ends, ISO Clamps and others available)
Rangeability	50:1
Bonnet	Clamped
Characteristics	Modified Equal Percentage
Seat Leakage	ANSI / FCI 70-2, CLIV (Metal Seat)
Maximum Operating Pressure	17 bar (250 Psi)
Maximum Operating Temperature, Fluids, and Gases (Non-Steam)	135°C (275°F)
Maximum Operating Temperature, Steam	160°C (320°F)

Table 3. Actuator Specifications

Type	20	50	50H	112
Travel, mm (Inches)	20 (0.8)		30 (1.2)	60 (2.4)
Air Failure	Open or Closed			
Ambient Temperature Range	-20 to 80°C (0 to 175°F)			
Maximum Air Pressure	80 Psi			
Spring Cases	S30400 Stainless Steel			
Yoke	S30400 Stainless Steel			

Table 4. Allowable Pressure Drops

AIR-TO-OPEN				ACTUATOR SIZE	20	50	50H	112
				Bench Range (bar)	0.8 - 4.0	1.5 - 3.0	1.5 - 3.0	1.4 - 3.0
				Bench Range (psi)	12 - 58	22 - 44	22 - 44	45 - 75
				Valve Stroke, mm (Inches)	20 (0.8)		30 (1.2)	60 (2.4)
VALVE SIZE		**Cv**	**Kv**	**Port Diameter mm (Inches)**	**ALLOWABLE SHUTOFF PRESSURES**			
DN	**NPS**				**bar (psi)**			
15	1/2	0.29	0.25	7 (0.28)	16 (230)			
		1.2	1.0	7 (0.28)	16 (230)			
20	3/4	1.9	1.6	8.5 (0.33)	16 (230)			
		4.7	4.0	16 (0.63)	16 (230)			
25	1.0	10	9.0	24 (0.94)		16 (230)		
40	1-1/2	21	18	32 (1.26)		16 (230)		
50	2	21	18	32 (1.26)		16 (230)		
		33	28	48 (1.89)		16 (230)		
--	3	79	68	62 (2.44)			11 (155)	16 (230)
80	--	99	85	73 (2.87)			7.7 (110)	16 (230)
100	4	209	180	90 (3.54)			5 (70)	16 (230)
150	6 (A)	442	380	135 (5.31)				8 (115)

AIR-TO-CLOSE					
	ACTUATOR SIZE	**20**	**50**	**50H**	**112**
	Bench Range, bar	0.8 - 4.0	1.5 - 3.0	1.5 - 3.0	1.4 - 3.0
	Bench Range, psi	12 - 58	22 - 44	22 - 44	45 - 75
	Valve Stroke, mm (Inches)	20 (0.8)		30 (1.2)	60 (2.4)
	VALVE SIZE	**Allowable Shutoff Pressure**			
	DN / **NPS**	**bar (psi)**			
	25 - 100 / 1 - 4	160 (230)			
	150 / 6(1)	10 (145)			

1. Consult your Emerson Process Management sales office for NPS6 availability.

Figure 5. Dimensions for Baumann 89000A Angle Valve with FIELDVUE DVC6200 Digital Valve Controller

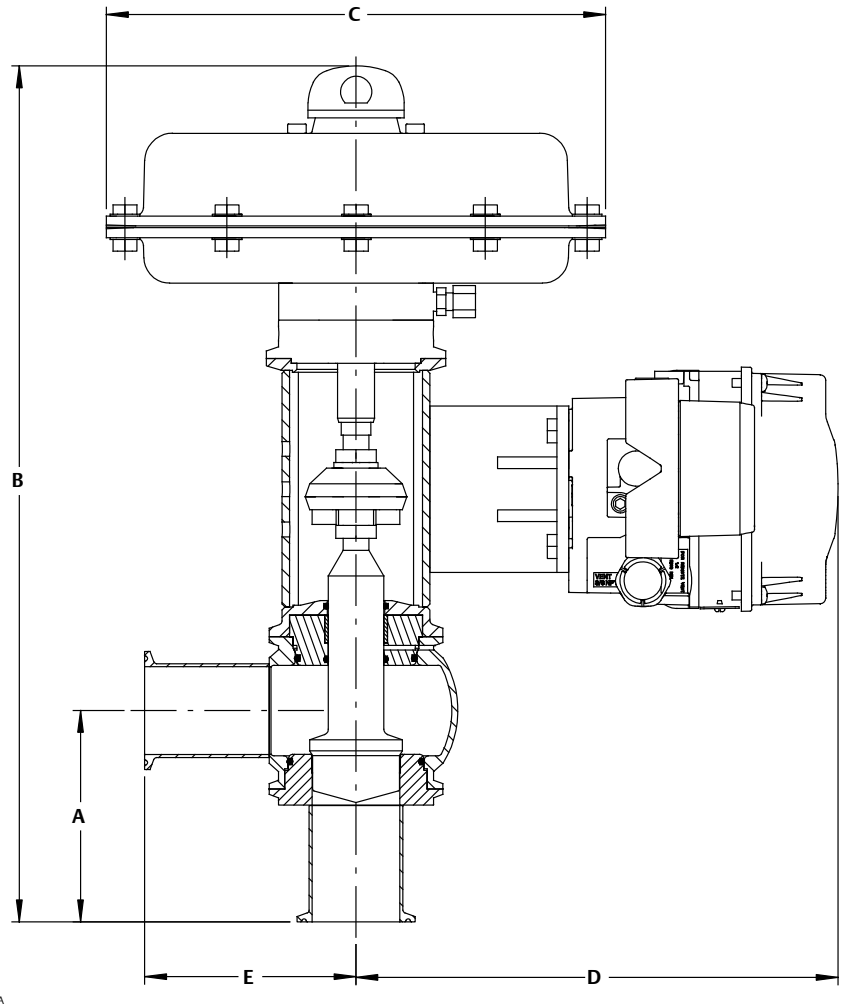


Table 5. Baumann 89000A Angle Valve Dimensions

VALVE SIZE			DIMENSIONS															
			Tri-Clamp A		Weld End A		Tri-Clamp B		Weld End B		C		D		Tr-Clamp E		Weld End E	
DN	NPS	Capacity	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
15	1/2	0.29	62.7	2.5	50	1.97	344	13.5	331	13	165	6.5	261	10.3	65.40	2.57	52.70	2.07
15	1/2	1.2	62.7	2.5	50	1.97	344	13.5	331	13	165	6.5	261	10.3	63.90	2.52	51.20	2.01
20	3/4	1.9	62.7	2.5	50	1.97	344	13.5	331	13	165	6.5	261	10.3	66.35	2.61	53.65	2.11
20	3/4	4.7	62.7	2.5	50	1.97	344	13.5	331	13	165	6.5	261	10.3	62.70	2.47	50.00	1.97
25	1	10	62.7	2.5	50	1.97	344	13.5	331	13	270	10.6	261	10.3	61.75	2.43	49.05	1.93
40	1-1/2	21	102.7	4	90	3.54	445	17.5	432	17	270	10.6	261	10.3	104.10	4.1	91.40	3.60
50	2	33	112.7	4.4	100	3.94	459	18.1	446	17.6	270	10.6	261	10.3	112.70	4.44	100.00	3.94
---	3	79	142.7	5.6	130	5.12	531	20.9	519	20.4	270	10.6	261	10.3	148.15	5.83	135.45	5.33
80	---	99	142.7	5.6	130	5.12	531	20.9	519	20.4	270	10.6	261	10.3	142.70	5.62	130.00	5.12
100	4	209	155.9	6.1	140	5.50	552	21.7	536	21.1	270	10.6	261	10.3	155.90	6.14	150.00	5.91
150	6	442	Contact your Emerson Process Management sales office for NPS 6 availability.															

Figure 6. Dimensions for Baumann 89000I Inline Valve with FIELDVUE DVC2000 Digital Valve Controller

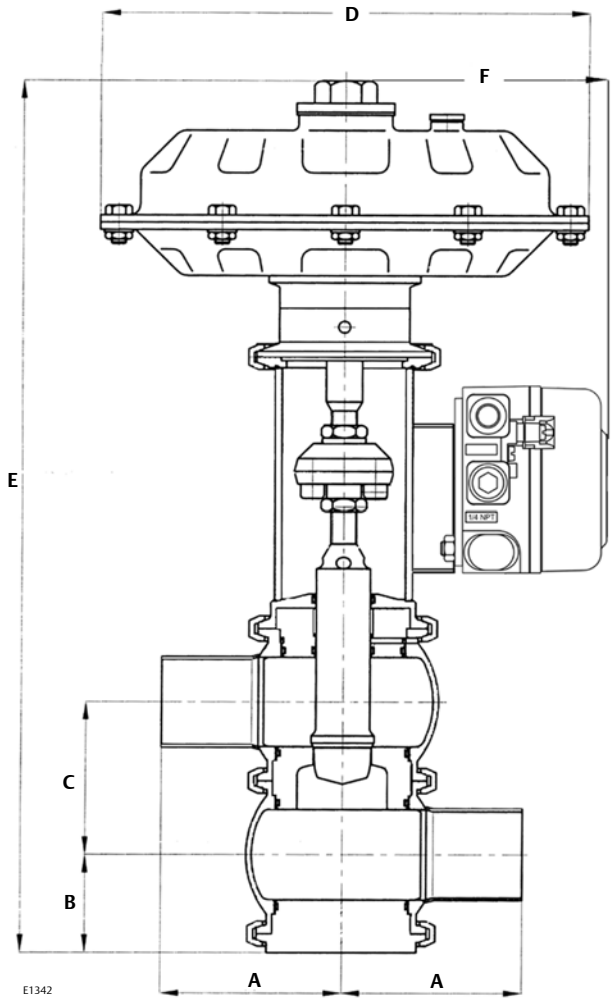


Table 6. Baumann 89000I Inline Valve Dimensions

VALVE SIZE		DIMENSIONS													
		Tri-Clamp A		Weld End A		B		C		D		E		F	
DN	NPS	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
15	1/2	62.7	2.5	50	1.97	34.5	1.36	50	1.97	165	6.5	366	14.4	127	5
20	3/4	62.7	2.5	50	1.97	34.5	1.36	50	1.97	165	6.5	366	14.4	127	5
25	1	102.7	4	90	3.54	48	1.89	74	2.91	165	6.5	464	18.3	153	6
40	1-1/2	102.7	4	90	3.54	48	1.89	74	2.91	270	10.6	464	18.3	153	6
50	2	112.7	4.4	100	3.94	56	2.20	85	3.35	270	10.6	488	19.2	153	6
80	3	147.7	5.6	130	5.12	78	3.07	116	4.57	270	10.6	581	22.9	153	6
100	4	1553.9	6.1	140	5.50	86	3.39	136	5.35	270	10.6	617	24.3	153	6
150	6	Contact your Emerson Process Management sales office for NPS 6 availability.													

Table 7. Model Numbering System

	89	588				
ACTUATOR TYPE	**VALVE BODY**	**PLUG SERIES**	**CHARACTERISTIC**	**SEAT LEAKAGE**	**VALVE BODY STYLE**	
20		588	Equal % / Metal Seat (S31603)	IV	A	Angle
50					I	Inline
50H						
112						

Emerson Process Management
Marshalltown, Iowa 50158 USA
Sorocaba, 18087 Brazil
Chatham, Kent ME4 4QZ UK
Dubai, United Arab Emirates
Singapore 128461 Singapore

www.Fisher.com