

# Baumann™ 85000 Sanitary Pinch Valve

Baumann 85000 sanitary pinch valves (figure 1) are intended for use with 3/4 inch O.D. pharmaceutical grade tubing. They are designed to couple FIELDVUE™ intelligence with a linear actuator and tube shell.

The 85000 is designed for use in both biotechnology and pharmaceutical industries, where cleanliness and sterility are required. The primary use is for disposable skid-based processes, replacing traditional manually operated valves. Automated valves offer consistent quality, better record keeping, and improved batch control.

Lab testing resulted in a max capacity of 6.5 C<sub>v</sub> achieved with standard pharmaceutical grade tubing.

## Features

- Characterization of the Fisher® FIELDVUE digital valve controller provides an installed equal percent flow characteristic for precision control (see figure 3)
- The 85000 has no physical contact with the process fluid, due to the use of disposable tubing
- Tube shell design of the 85000 allows for easy changeout of disposable tubing while providing stability during service
- Fail-close configuration
- Compact and light weight design
- Epoxy powder-coated actuator with SST fasteners for maximum corrosion resistance

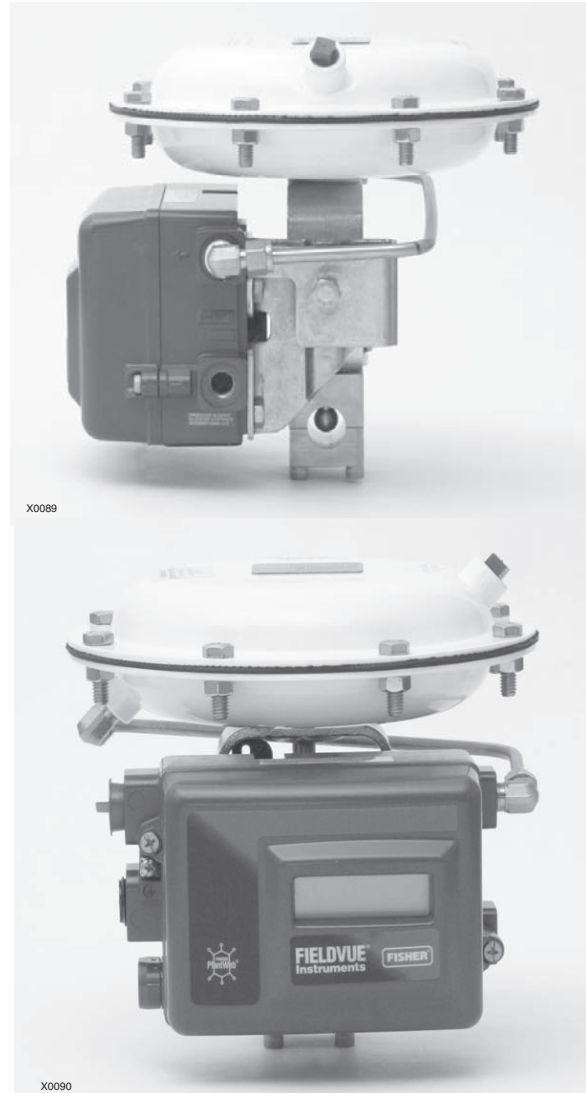
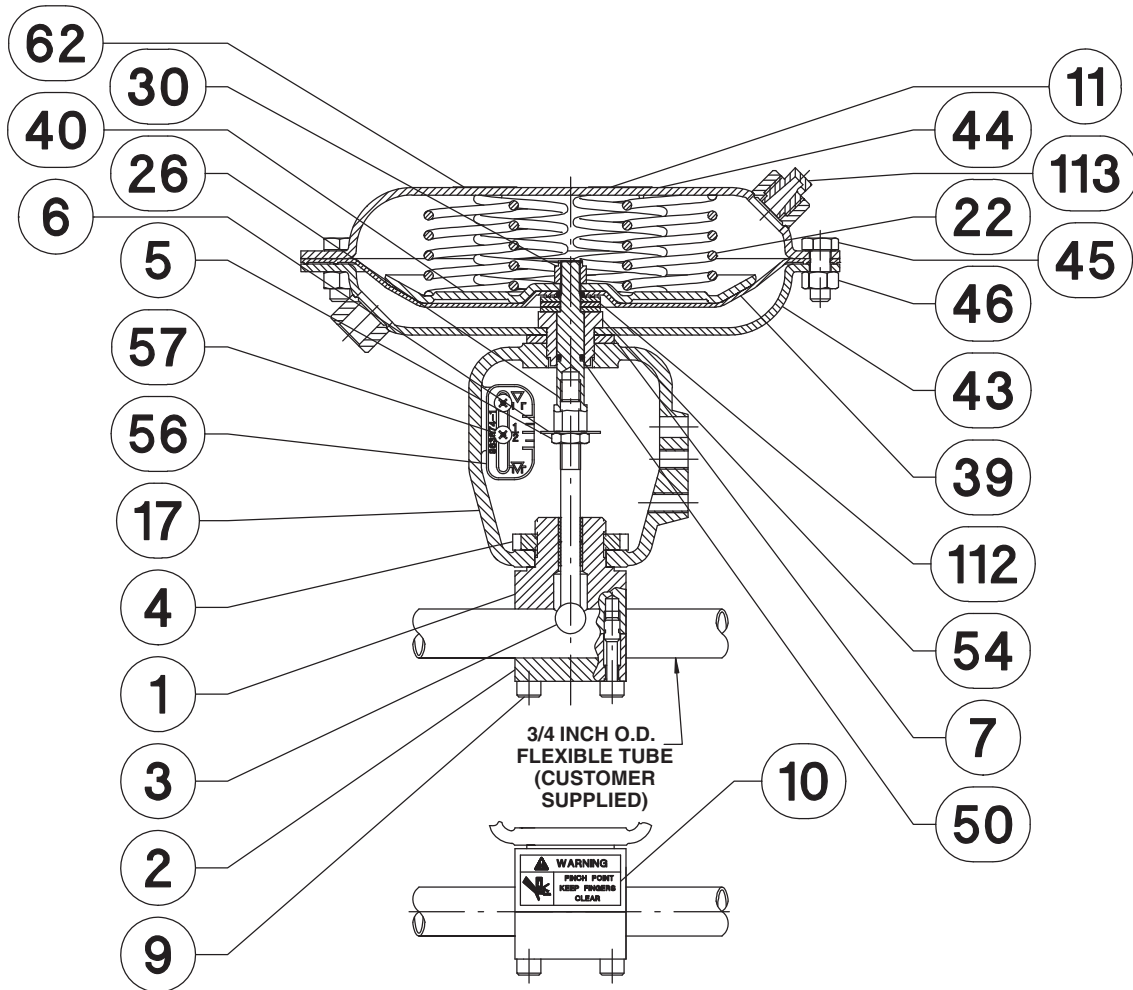


Figure 1. Baumann 85000 Sanitary Pinch Valve with Fisher FIELDVUE DVC2000 Digital Valve Controller

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Figure 2. Baumann 85000 Sanitary Pinch Valve Body Sub-Assembly (also see table 1)

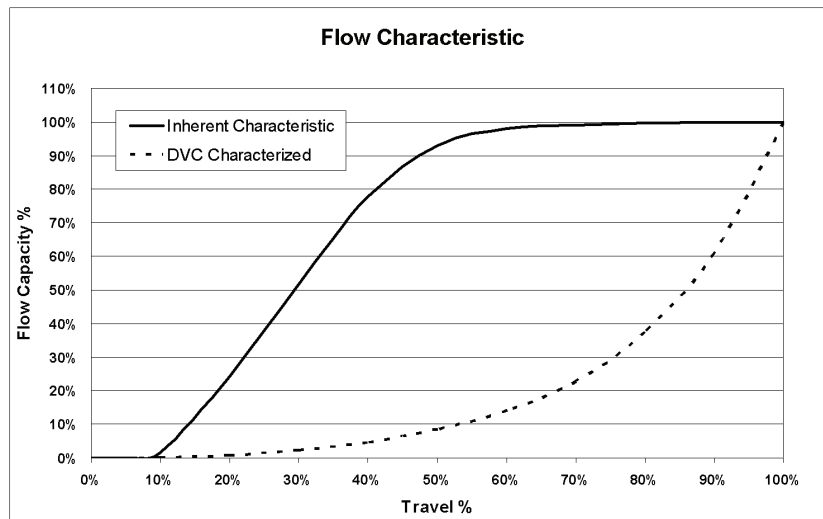


Figure 3. Baumann 85000 Sanitary Pinch Valve Flow Characteristic

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# 85000 Valve

Table 1. Materials of Construction for Baumann 85000 Sanitary Pinch Valve (see figure 2)

Key Number	Description	Material
1	Bonnet Assembly	S31600
2	Valve Body Cradle	S31600
3	Plunger	S31600
4	Yoke Drive Nut	S30400
5	Jam Nut, M8 x 1.25	18-8 SST
6	Travel Indicator Disk	18-8 SST
7	Washer Stop	S30400
9	Cap Screw, Reduced Shank, 1/4-20x1.00	18-8 SST
10	Warning Label – Pinch	Polyester Film
11	Label – Maximum Pressure	Polyester Film
17	Yoke Size 16	CF8M
22	Actuator Spring	High Carbon Spring Wire
26	Actuator Stem	S30300
30	Self Locking Jam Nut, 5/16x24	Cadmium Plated Steel
39	Diaphragm, Size 32 Mini	Nitrile/Polyester
40	Diaphragm Plate, Size 32 Mini	AISI 1010 Stamped Carbon Steel
43	Lower Actuator Case, Size 32 Mini	AISI 1010 Stamped Carbon Steel
44	Upper Actuator Case, Size 32 Mini	AISI 1010 Stamped Carbon Steel
45	Hex Head Cap Screw, 5/16-18x1.00	18-8 SST
46	Hex Nut, 5/16-18	18-8 SST
50	O-Ring	FKM Fluorocarbon
54	Actuator Coupling, Size 16	660 Bronze
56	Travel Scale, 1/2 inch Stroke	1100 Aluminum
57	Pan Head Screw, M3.5x6	18-8 SST
62	Nameplate	18-8 SST
112	Washer	18-8 SST
113	Vent Plug	High Density Polyethelene

Table 2. Technical Specifications

VALVE SIZE		3/4 Inch O.D. Tubing
RATED	Cv	6.5 <sup>(1)</sup>
	Kv	5.6 <sup>(1)</sup>
TRAVEL	inches	0.50
	mm	12.7
BONNET		Lock Nut
ACTUATOR TYPE		32 Mini
CHARACTERISTIC		Quick Opening, Modified Equal Percentage <sup>(2)</sup>
SEAT LEAKAGE		ASME/FCI 70-2, Class VI <sup>(1)</sup>
MAXIMUM OPERATING PRESSURE		6.9 bar (100 Psi) <sup>(3)</sup>
MAXIMUM OPERATING TEMPERATURE		40°C (104°F) <sup>(3)</sup>
<p>1. May be impacted by grade of tubing. Values presented here are based on pharmaceutical grade tubing, 3/4 inch O.D., 1/2 inch I.D., 72 durometer material with reinforcing braid.                  2. Inherent characteristic is quick opening. FIELDVUE digital valve controller may be programmed to provide linear or modified equal percentage characteristic.                  3. Selected tubing may require lower pressure/temperature requirements.</p>		

Table 3. Actuator Specifications

TYPE	32 Mini Multi-Spring Diaphragm (Single-Acting)
NOMINAL SIZE	32 in <sup>2</sup>
AIR FAILURE	Closed
TRAVEL	12.7 mm (0.50 inches)
AMBIENT TEMPERATURE RANGE	-29 to 82°C (-20 to 180°F)
MAXIMUM AIR PRESSURE	2.4 bar (35 psig)

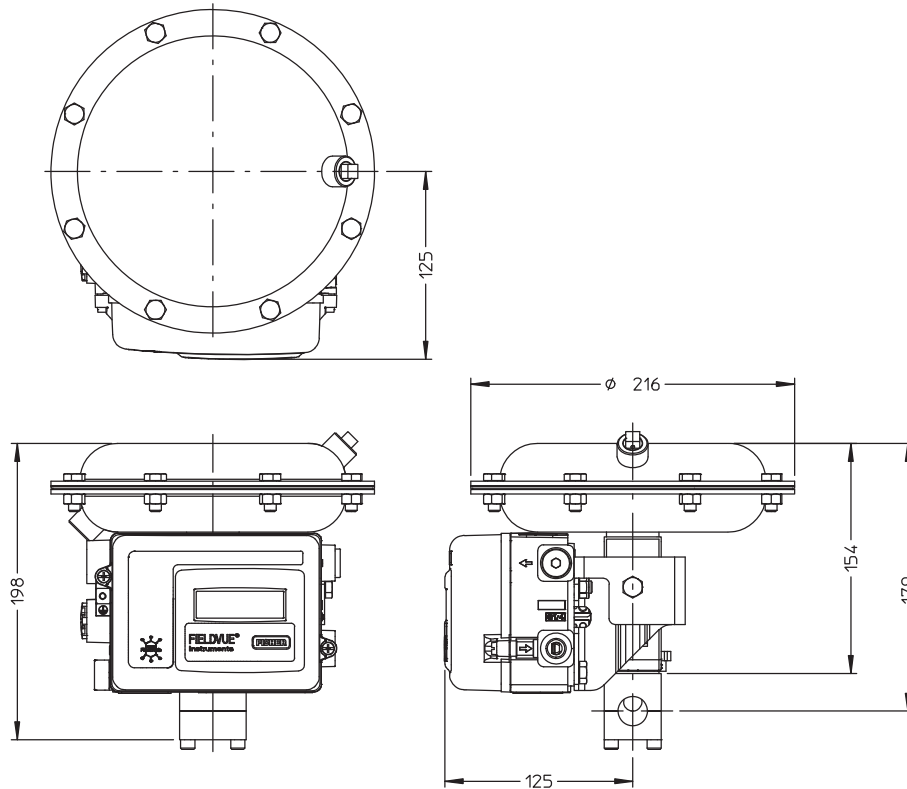


Figure 4. Dimensional Drawing for Baumann 85000 NPS 3/4 Pinch Valve

Table 4. Baumann 85000 Valve Assembly and Actuator Weights

VALVE SIZE		85000 VALVE AND ACTUATOR WEIGHT		
DN	NPS	TYPE	kgs	lbs
20	3/4	32 Mini	4.3	9.5

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