

# 86000 Series Flexsleeve™ Corrosion Resistant Control Valve

The ideal product for the precise control of acids or caustic process media. A flexible PTFE sleeve surrounds the Halar<sup>®</sup> (ECTFE) core. Process fluid is contained by Kalrez O-rings held in static compression. The 86000 Series Flexsleeve valve incorporates the benefits of packless valves with the corrosion resistance of all-plastic wetted parts. Available in rated Cv's from 1 through 5.2, this valve features a ductile iron body with flange connections for 1" class 150RF flanges. The 86000 series uses a size 32 multi-spring epoxy coated actuator.

## **FEATURES:**

- Compact and light weight design reduces installed piping costs.
- Multiple trim capacity reductions available to meet changing process requirements.
- Suitable for maximum service pressure of 150 psig (10 bar).
- No positioner required for normal applications.
- Epoxy powder coated actuator with stainless steel fasteners for maximum corrosion resistance.
- Packless construction effectively contains process media.
- FIELDVUE<sup>®</sup> digital valve controller available for remote calibration and diagnostics. Dual travel stops assist with FIELDVUE<sup>®</sup> autocalibration procedure.



Shown with 3660/3661 Positioner



Shown with FIELDVUE Controller





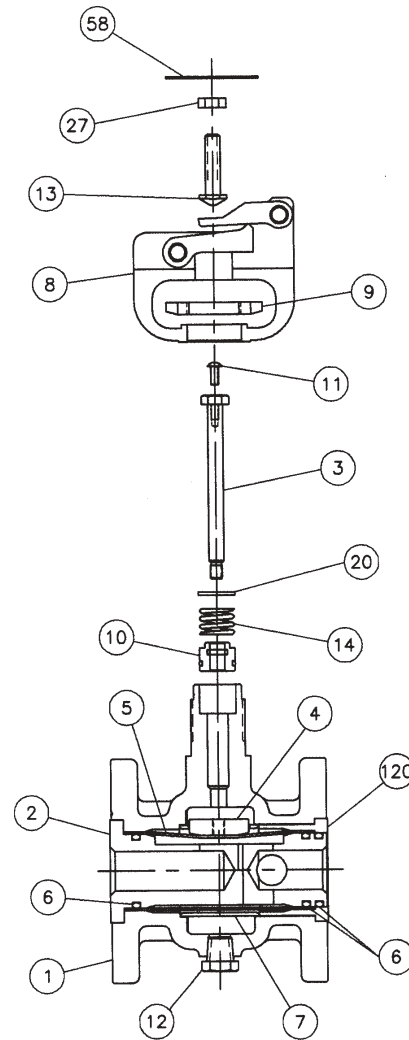
# 86000 Flexsleev™ Valve

## MODEL NUMBERING SYSTEM

<b>32</b>	
<b>ACTUATOR</b>	
32	

RATED Cv	MODEL NO.
1.0	86011
2.0	86021
3.8	86041
5.2	86051



## MATERIALS OF CONSTRUCTION

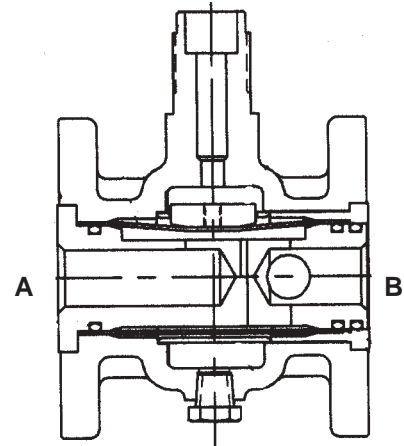
KEY NO.	DESCRIPTION	MATERIAL
1	Body	Ductile Iron (Epoxy Coat)
2	Seating Core	Halar (ECTFE)
3	Stem	Hastelloy C
4	Plug	303 Stainless Steel
5	Sealing Tube	PTFE
6	O-Ring	Kalrez
7	Sleeve	303/304 Stainless Steel
8	Mechanical Linkage S/A	
9	Drive Nut (Yoke)	304 SS ASTM A194 GR.8
10	Packing Follower S/A	Nitronic 60/ Viton A
11	Button Head Cap Screw	18-8 Stainless Steel
12	Hex Head Pipe Plug	Stainless Steel
13	Pusher Pin	304SS ASTM A193, GR.B8
14	Compression Spring	Stainless Steel
20	Washer	304 Stainless Steel
21	Line Flange Adapter Gaskets	Teflon/ Steel Core
27	Locknut	18-8 SS
58	Travel Indicator	304 SS
120	Spacer	PTFE

**TECHNICAL SPECIFICATIONS**

<b>NOMINAL SIZE</b>		1" / DN 25
<b>MAXIMUM WORKING PRESSURE</b>		150 Psi CWP
<b>CONNECTIONS</b>		Flanged, Mates with ANSI CL 125 Flat-Face or 150 Raised-Face
<b>SEAT PLUG SEALING</b>	PTFE Soft Seat	-100°F to 400°F (-73°C to 204°C)
<b>BONNET</b>		-100°F to 400°F (-73°C to 204°C)
<b>CHARACTERISTIC</b>		Modified Linear
<b>RANGEABILITY</b>		Exceeds 50:1

**PERFORMANCE SPECIFICATIONS**

Cv RANGE	PROCESS TEMP. RANGE	SEAT LEAKAGE (PER ANSI/FCI 70-2)	FLOW DIRECTION	MAXIMUM SHUTOFF PRESSURE
1.0	-20° to 300°F	Class VI	B to A	150 Psi
2.0, 3.8, 5.2	-20° to 300°F	Class VI	A to B	150 Psi



**FLOW COEFFICIENTS (ANSI/ISA/IEC) Note:  $K_v = 0.86 (C_v)$**

ORIFICE DIA.	Cv AT VALVE OPENING - PERCENT OF VALVE STEM TRAVEL											F <sub>L</sub>	F <sub>d</sub>	X <sub>t</sub>	K <sub>c</sub>
	5	10	20	30	40	50	60	70	80	90	100				
.312	.005	.02	.12	.23	.34	.45	.56	.67	.78	.89	1.0	0.85	0.35	0.61	0.55
.500	.01	.03	.20	.45	.70	.90	1.1	1.4	1.6	1.8	2.0	0.75	0.35	0.47	0.44
.500	.02	.04	.30	.60	1.1	1.7	2.2	2.7	3.1	3.5	3.8	0.85	0.35	0.61	0.55
.810	.03	.06	.40	1.2	2.0	2.7	3.3	3.8	4.3	4.8	5.2	0.82	0.35	0.56	0.52

F<sub>L</sub> = Pressure recovery factor.  
F<sub>d</sub> = Valve style modifier.

**ACTUATOR SPECIFICATIONS**

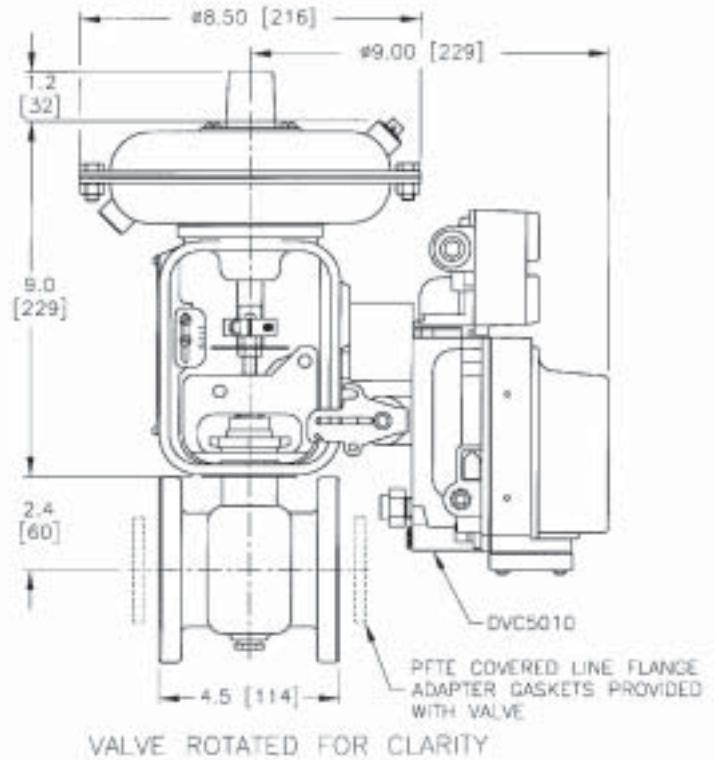
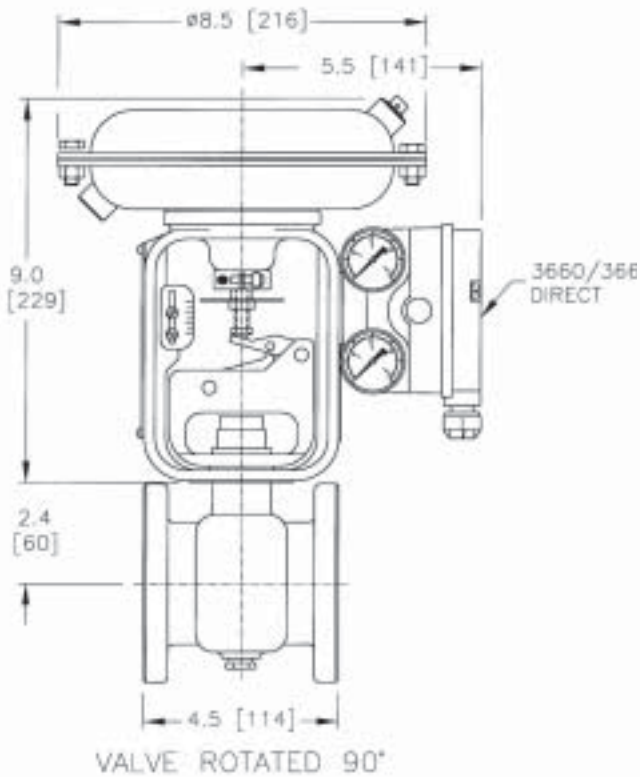
<b>TYPE</b>	32 Multi-Spring Diaphragm (Single Acting)
<b>NOMINAL SIZE</b>	32 in <sup>2</sup> / 210 cm <sup>2</sup>
<b>ACTION</b>	Push Down to Close
<b>AIR FAILURE</b>	Open or Closed
<b>BENCH SPRING RANGE</b>	3-13 psi (0.21 - 1.0 bar), fail open / 5-15 psi, (0.34 - 1.0 bar), fail closed
<b>DUAL TRAVEL STOPS (Adjustable)</b>	Open-Closed Plug Position (standard)
<b>TRAVEL</b>	1/2 in / 12.7 mm
<b>AMBIENT TEMPERATURE RANGE (Standard)</b>	-20 to 180°F / -30 to 82.2°C
<b>AMBIENT TEMPERATURE RANGE (High Temp)</b>	-60 to 300°F / -51.1 to 149°C
<b>MAXIMUM AIR PRESSURE</b>	35 psig / 2.5 barg
<b>DIAPHRAGM MATERIAL (Standard)</b>	Nitrile, Fabric Reinforced
<b>DIAPHRAGM MATERIAL (High Temp)</b>	Silicone, Fabric Reinforced
<b>SPRING CASES</b>	Steel, Powder Coated with SST Fasteners
<b>YOKE</b>	Ductile Iron, Powder Coated

NOTE: Actuator requires 4-1/2" (115mm) vertical clearance.

Must use an actuator support when purchasing a size 32 actuator with Fieldvue and mounting sideways.

Dual travel stops required with use of size 32 actuator.

# 86000 Flexsleev™ Valve



## WEIGHTS

VALVE ASSEMBLY WEIGHTS		ACTUATOR WEIGHTS		
LBS	KGS	ACTUATOR	LBS	KGS
22	10	32	10	4.5

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