APPLICATIONS

Ideal for high-cycle applications, filling systems, galvanizing and pickling systems, water treatment systems, dosing and chemical feed lines as well as general applications that involve aggressive atmospheres that can affect actuators constructed of iron and steel.

The consistent tight-shutoff, high-cycle performance and compact size of the 687 series make it an ideal alternative to ball valves.

ADVANTAGES

- Handwheel manual override
- Electrical limit and proximity switches
- Visual position indicator
- Pneumatic and electro-pneumatic positioners
- Stroke limiters
- Safety packing
- "V" notch vent plug

DESIGN FEATURES

- Compact design
- Sizes 1/2"- 4"
- Corrosion resistant glass filled polypropylene housing with stainless steel distance piece
- 3 action modes: fail open, fail closed and double acting
- Accepts standard elastomer and Teflon faced diaphragms without changing internal components.

Technical Data

Nominal Size		Conversion Factors		Maximum Working Pressure					
				Control Function 1		Control Function 2		Control Function 3	
mm	in		bar/psi	Elastomer	Teflon	Elastomer	Teflon	Elastomer	Teflon
15	1/2"	Metric	bar	0 - 10	0 - 6	0 - 10	0 - 6	0 - 10	0 - 6
		US	psi	0 - 150	0 - 90	0 - 150	0 - 90	0 - 150	0 - 90
20	3/4"	Metric	bar	0 - 10	0 - 6	0 - 10	0 - 6	0 - 10	0 - 6
		US	psi	0 - 150	0 - 90	0 - 150	0 - 90	0 - 150	0 - 90
25	1"	Metric	bar	0 - 10	0 - 6	0 - 10	0 - 6	0 - 10	0 - 6
		US	psi	0 - 150	0 - 90	0 - 150	0 - 90	0 - 150	0 - 90
32	1 1/4"	Metric	bar	0 - 10	0 - 6	0 - 10	0 - 6	0 - 10	0 - 6
		US	psi	0 - 150	0 - 90	0 - 150	0 - 90	0 - 150	0 - 90
40	1 1/2"	Metric	bar	0 - 10	0 - 6	0 - 10	0 - 6	0 - 10	0 - 6
		US	psi	0 - 150	0 - 90	0 - 150	0 - 90	0 - 150	0 - 90
50	2"	Metric	bar	0 - 10	0 - 6	0 - 10	0 - 6	0 - 10	0 - 6
		US	psi	0 - 150	0 - 90	0 - 150	0 - 90	0 - 150	0 - 90
80	3"	Metric	bar	0 - 8	0 - 5	0 - 10	0 - 6	0 - 10	0 - 6
		US	psi	0 - 120	0 - 75	0 - 150	0 - 90	0 - 150	0 - 90
100	4"	Metric	bar	0 - 6	0 - 4	0 - 10	0 - 6	0 - 6	0 - 3
		US	psi	0 - 90	0 - 60	0 - 150	0 - 90	0 - 90	0 - 45

Note: All pressures are gauge pressures when applied upstream.
The C_v values for different body configurations vary due to differences in valve construction (i.e., Port size, body material, diaphragm material, etc.).

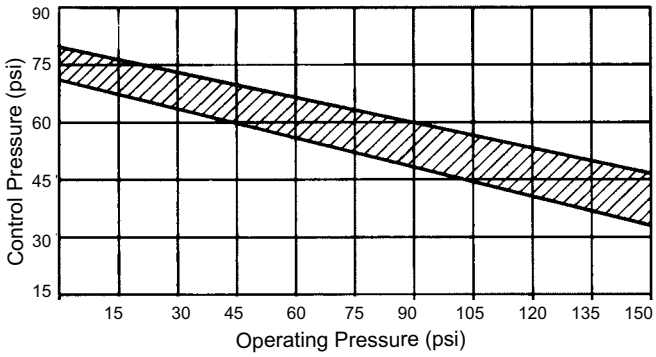
Max permissible working temperature:
300°F (depending on diaphragm and body materials).

The valve will seal against flow in either direction up to full working pressure.

	5.” To 2”	3” & 4”
Control Medium		
Min. Required control pressure:	45 psi	80 psi
Max. Permissible control pressure:	90 psi	105 psi
Max. Permissible temp. of control medium:	100°F	

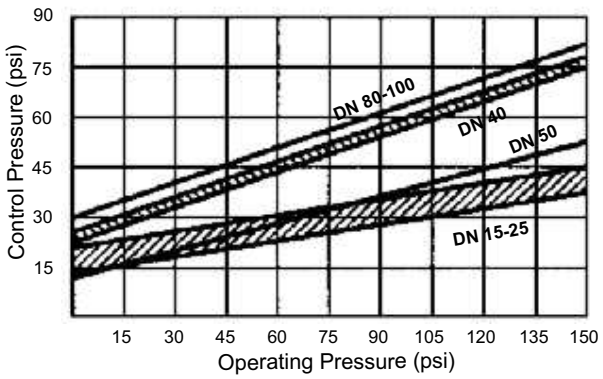
Actuator volume:	1/2” to 1”	9.2 cubic inches
	1 1/2”	21.4 cubic inches
	2”	67.1 cubic inches
	3”	152.6 cubic inches
	4”	152.6 cubic inches

Control function 1 (1/2” - 2”)



Above control pressures apply to maximum stroke of valve.
Values are lower for lower strokes.

Control function 2+3 (1/2” - 4”)



The values shown relate to control function 2 (with lifting spring). For control function 3 (without lifting spring) control pressure is approx. 1 bar lower.

Dimensional Data

Dimensions

Nominal Size		Units	CF 1 (STC)	CF 2 (STO) ,3 (D/A)				Weight	
mm	in		A	A1	F	G	ØB	kg/lb	
15	1/2"	mm	161	131	79	1/4"	125	kg	3
		in	6	5	3		5	lb	6
20	3/4"	mm	164	134	82	1/4"	125	kg	3
		in	6	5	3		5	lb	6
25	1"	mm	169	137	85	1/4"	125	kg	3
		in	7	5	3		5	lb	6
32	1 1/4"	mm	209	164	110	1/4"	155	kg	6
		in	8	6	4		6	lb	14
40	1 1/2"	mm	211	166	112	1/4"	155	kg	6
		in	8	7	4		6	lb	14
50	2"	mm	253	197	130	1/4"	210	kg	10
		in	10	8	5		8	lb	22
80	3"	mm	382	341	234	1/4"	258	kg	24
		in	15	13	9		10	lb	53
100	4"	mm	391	350	243	1/4"	328	kg	30
		in	15	14	10		13	lb	66