

Sanitary Diaphragm Valve

manually operated

Description

The type 671 is a compact valve with many features which make it ideal for pharmaceutical and bio-processing applications.

Standard Features

- Compact design
- Glass filled polypropylene bonnet
- Visual position indicator
- FDA compliant diaphragms
- 316L stainless steel body
- Triclamp®, O.D. Tubing, ISO, and DIN end connections
- Sizes 1/2" - 4"

Available Options

Special connections

Hose barb, tube extensions, Swagelok®, Cajon VCR®, Ingold®, and others available upon request.

Fabrications

Cluster valve assemblies for both horizontal and vertical orientations, and custom fabrications upon request.

Materials

AL-6XN®, Hastelloy®, Titanium®, and others available upon request.

Bonnet Options

- "V" notch vent plug
- Extended handwheel
- Locking device
- Electrical position indicator

Typical Applications

- Pharmaceutical manufacturing
- Bioprocessing
- Cosmetic
- Brewery Service
- Food and Beverage
- Semiconductor
- High Purity Chemicals



Type 671

Type 671 Technical Data

Size (Inches)	Nominal diameter (mm)	Working pressure (psi)	Body configuration (D = straight through)	C _v value (gpm)		Weight (lbs)
				ISO	O.D. Tubing	
1/2	15	0 - 150	D	-	-	1.5
3/4	20	0 - 150	D	5.4	5.4	1.5
1	25	0 - 150	D	14.3	14.3	2.0
1 1/4	32	0 - 150	D	-	-	3.3
1 1/2	40	0 - 150	D	34.5	34.5	3.5
2	50	0 - 150	D	59.2	59.2	6.6
2 1/2	65	0 - 150	D	80.1	80.1	20.9
3	80	0 - 150	D	101.8	101.8	22.0
4	100	0 - 150	D	220	220	33.1

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

Working Medium

All inert and corrosive liquids and gases, subject to correct choice of body and diaphragm materials.

Working Pressure: 0 - 150 psi

Max. Permissible temperature of working medium:

176°F (80°C) (Depending on diaphragm material)

In biotechnological installations, depending on diaphragm and frequency of cycles, the max.

Temperature is 266° F (130°C).

The valve will seal against flow in either direction up to a working pressure of 150 psi (gauge pressure).

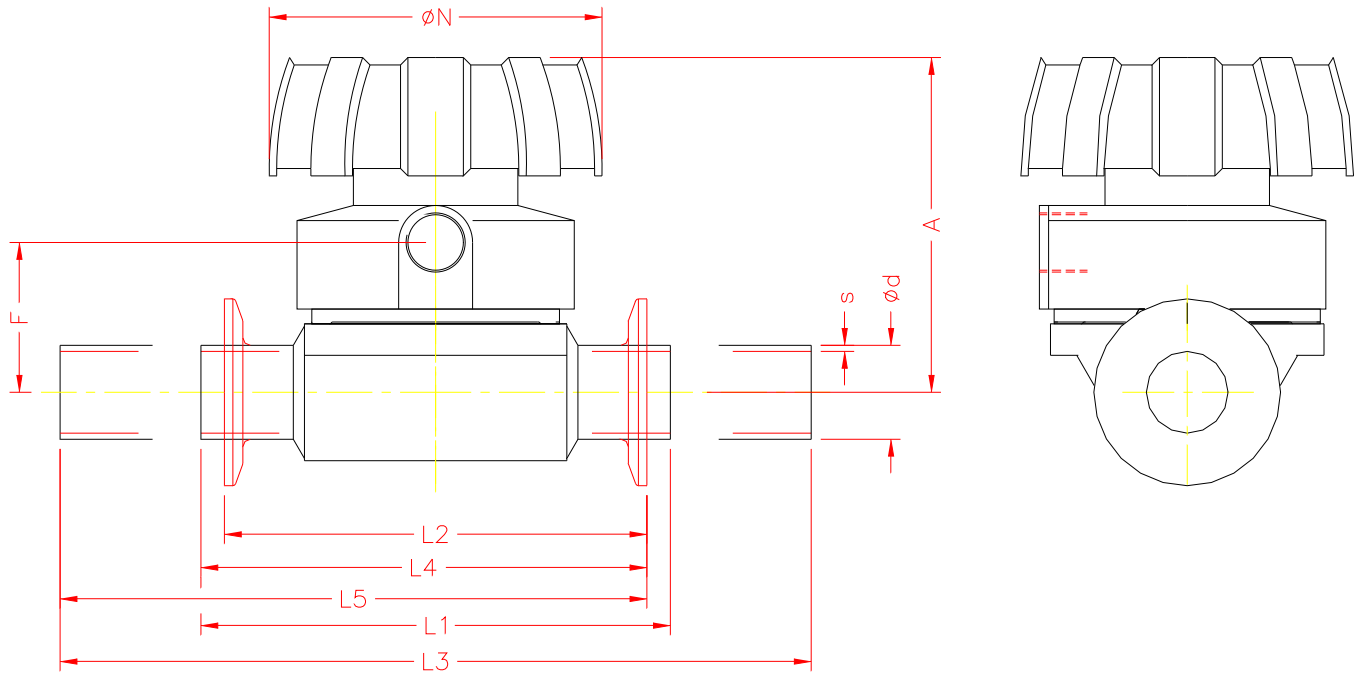
Body Configuration	Ref.no.	Diaphragm material	Ref.no.
Tank bottom valve body	B		
2-way valve body	D	2nd generation, modified Teflon® with Ethylene-propylene backing 2-piece molded closed	TFM/EPDM 5E
		2nd generation, modified Teflon® with Silicone backing 2-piece molded closed	TFM/VMQ 5S
Connection	Ref.no.		
DIN	0	Ethylene-propylene Rubber for saturated steam max 302° F	EPDM 13
DIN 11850/Series 1	16		
DIN 11850/Series 2	17	Ethylene-propylene Rubber for saturated steam max 302° F	EPDM 16
DIN 11850/Series 3	18		
Butt weld OD tubing	59	2nd generation, modified Teflon® with Ethylene-propylene backing (2-piece)	TFM/EPDM 50
Sizes 1/4-3/8" 20 gauge .035" wall			
Sizes 1/2-3" 16 gauge .065" wall			
Sizes 4" 14 gauge .083" wall		2nd generation, modified Teflon® with Ethylene-propylene backing	TFM/EPDM 52
ISO	60		
Schedule 10 pipe	63		
Tri-clamp®	80		
O.D. Tubing by Triclamp®	93		
Extended O.D. Tubing	94		
Extended O.D. Tubing by Triclamp®	95		
		<i>All diaphragms listed conform to the FDA code of Federal Regulations paragraph 177.2600 of section 21.</i>	
		Control function	Ref.no.
		Manually operated	0
Body material	Ref.no.	Surface finish	Ref.no.
Investment cast body			
Stainless steel 316 L ± 1.4435 (BN2) Fe < 0.5%	32		
Stainless steel 1.4539 (UNS N 08904)	33		
Forged Body			
Stainless steel 316 L ± 1.4435 (ASTM A 182)	40		
Stainless steel 316 L ± 1.4435 (BN2) Fe < 0.5%	42		
Machined block			
Stainless steel 316 L ± 1.4435 (ASTMA 479)	41		
Special versions			
(Consult factory for special material reference numbers)	91	Special Versions	Ref.no.
		Special versions	UXXXX
		Locking device	1155

μ-in.	BPE Surface Designation	Ra Average [Note (1)]		Ra Max		Ref.no.	
		μ-in.	μm	μ-in.	μm		
32	Mechanical					3	
25	Mechanical	SFV3	25	0.625	30	0.750	1502
20	E-pol	SFV6	20	0.500	25	0.625	1508
20	Mechanical	SFV2	20	0.500	25	0.625	1507
15	E-pol	SFV5	15	0.375	20	0.500	1537
11	Mechanical	SFV1	15	0.375	20	0.500	1536
10	E-pol	SFV4	10	0.250	15	0.375	1516

GENERAL NOTE: All Ra readings are taken across the grain.
NOTE: (1) The average Ra is derived from two readings taken at different locations.

Order Example	-671	015	D	80	40	13	0					1507
Type of valve	-671											
Size DN		015										
Body configuration			D									
Connection (valve body)				80								
Body material					40							
Diaphragm material						13						
Control function							0					
Actuator size												
Locking device												
Pipe main size												
Pipe main connection												
Surface finish												1507
Special versions (XXXX)												

Type 671 Dimensional Data



Take Out Dimensions for Standard Connections

Size	DN	Units	Con. Ref. No.		(59)	(80)	(94)	(93)	(95)
			Ød	s	L1	L2	L3	L4	L5
1/2	15	mm	12.70	1.65	120.00	101.60	184.15	110.80	142.88
		in	0.500	0.065	4.724	4.000	7.250	4.362	5.625
3/4	20	mm	19.05	1.65	120.00	101.60	190.50	110.80	146.05
		in	0.750	0.065	4.724	4.000	7.500	4.362	5.750
1	25	mm	25.40	1.65	120.00	114.30	203.20	117.15	158.75
		in	1.000	0.065	4.724	4.500	8.000	4.612	6.250
1 1/2	40	mm	38.10	1.65	153.00	139.70	234.95	146.35	187.33
		in	1.500	0.065	6.024	5.500	9.250	5.762	7.375
2	50	mm	50.80	1.65	173.00	158.75	266.70	165.88	212.73
		in	2.000	0.065	6.811	6.250	10.500	6.531	8.375
2 1/2	65	mm	63.50	1.65	216.00	193.68	292.10	204.84	242.89
		in	2.500	0.065	8.504	7.625	11.500	8.065	9.563
3	80	mm	76.20	1.65	254.00	222.25	333.38	238.13	277.82
		in	3.000	0.065	10.000	8.750	13.125	9.375	10.938
4	100	mm	101.60	2.10	305.00	292.10	406.40	298.55	349.25
		in	4.000	0.083	12.008	11.500	16.000	11.754	13.750

- L1 = Connection Code 59 = Standard butt-weld
- L2 = Connection Code 80 = Standard clamp
- L3 = Connection Code 94 = Standard butt-weld extension (AWF)
- L4 = Connection Code 93 = Standard clamp X butt-weld
- L5 = Connection Code 95 = Standard clamp X butt-weld extension (AWF)

Drain Angles

Size	DN	Degrees
1/2	15	46°
3/4	20	55°
1	25	60°
1 1/4	32	65°
1 1/2	40	65°
2	50	70°
2 1/2	65	70°
3	80	70°
4	100	70°

Drain angles are for BS O.D. Tubing only.

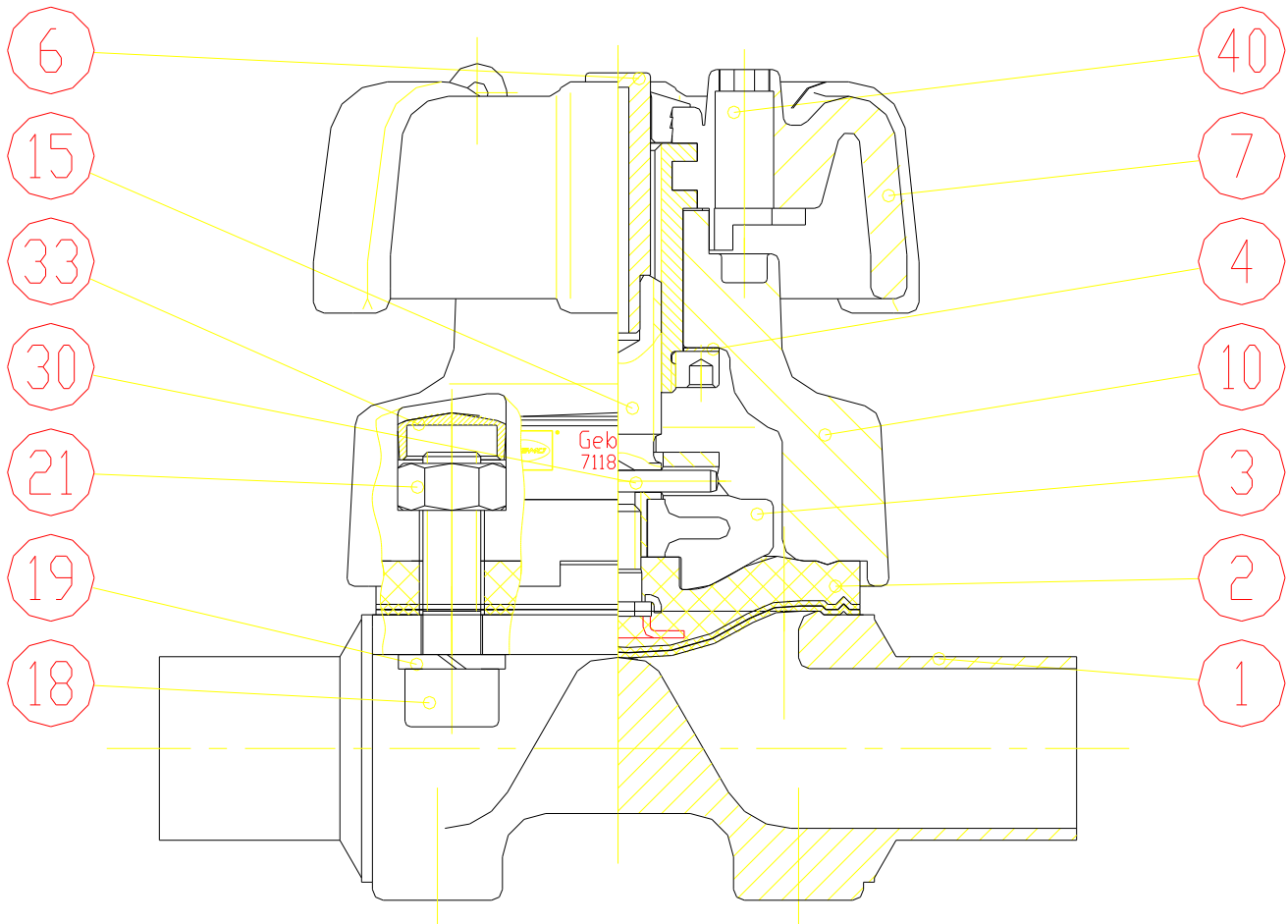
Optional Spigot Dimensions

Connection Ref. No.		60	0	16	17	18	37						
Size	DN	L ₁	d	s	d	s	d	s	d	s	d	s	
1/2"	15	120	21,3	1,6	18	1,5	18	1	19	1,5	20	2	-
3/4"	20	120	26,9	1,6	22	1,5	22	1	23	1,5	24	2	-
1"	25	120	33,7	2,0	28	1,5	28	1	29	1,5	30	2	25,0
1 1/4"	32	153	42,4	2,0	34	1,5	34	1	35	1,5	36	2	33,7
1 1/2"	40	153	48,3	2,0	40	1,5	40	1	41	1,5	42	2	38,0
2"	50	173	60,3	2,3	52	1,5	52	1	53	1,5	54	2	51,0
2 1/2"	65	216	76,1	2,6	-	-	70,2	2	-	-	-	-	63,5
3"	80	254	88,9	2,6	-	-	85	2	-	-	-	-	76,1
4"	100	305	114,3	2,6	-	-	104	2	-	-	-	-	101,6

Dimensions

Size	DN	Units	A	ØN	F	G
1/2	15	mm	99.0	90.0	37.0	M16 x 1
		in	3.90	3.54	1.46	
3/4	20	mm	99.0	90.0	37.0	M16 x 1
		in	3.90	3.54	1.46	
1	25	mm	99.0	90.0	37.0	M16 x 1
		in	3.90	3.54	1.46	
1 1/4	32	mm	120.0	114.0	49.0	M16 x 1
		in	4.72	4.49	1.93	
1 1/2	40	mm	120.0	114.0	49.0	M16 x 1
		in	4.72	4.49	1.93	
2	50	mm	146.0	140.0	58.0	M16 x 1
		in	5.75	5.51	2.28	
3	80	mm	235.0	215.0	105.0	M16 x 1
		in	9.25	8.46	4.13	
4	100	mm	281.0	215.0	129.0	M16 x 1
		in	11.06	8.46	5.08	

Type 671 Spare Parts



ITEM	PART
1	Valve Body
2	Process Diaphragm
3	Compressor
4	Bearing Plate (only sizes 1/2-1")
4	Axial Needle Bearing (only sizes 1¼-2")
5	Bearing Plate (only sizes 1¼-2")
6	Optical Position Indicator
7	Indicator
10	Hand Wheel
15	Bonnet
18	Spindle Socket-Head
19	Bolt
20	Washer
21	Guide Piece
30	Hex. nut
32	Pin
33	Nut
40	Cap Lock (accessory)