



# DIAPHRAGM VALVE / Flanged type



## DF Series

**DF 300**  
Size: DN15~DN250

### DE300 DIAPHRAGM VALVE-3 LAYERS TYPE

Suitable to the protect diaphragm from the gas permeation in the corrosion resistance and electrolytic chlorine gas.

#### MATERIALS OF CONSTRUCTION

No.	Parts	Pcs.	Materials	No.	Parts	Pcs.	Materials
1	Body	1	UPVC, PP, CPVC, PPG, PVDF	10	Name Plate	1	PVC
2	Bonnet	1	UPVC, CPVC, PPG, PVDF	11	Grease Nipple	1	SUS304
3	Compressor	1	15A-25A PVDF 40A-250A FC20	12	Stud Bolt & Nut	4 ..... 15A-25A 6 ..... 40A-50A 8 ..... 65A-125A 12 ..... 150A 16 ..... 200A 20 ..... 250A	SUS304 BSBM SUS304
4	Hand Wheel	1	ABS	13	Inserted Nut		
5	Sleeve	1	15A-50A BSBM 65A-250A FCD45	14	Bolt Nut & Washer		
6	Stem	1	15A-50A BSBM 65A-250A SUS304	15	thrust Bearing	1	Standardized 80A-250A USED ONLY
7	Diaphragm	1	EPDM, HYPALON TEFLON PVDF 3 lays	16	Stopper	1	SS-41 BSBM SUS304
7-1	Upper Board	1	SUS304	17	Set Nut	1	SS41 BSBM SUS304
7-2	Down Board	2	SUS304	18	Gauge Cover	1	PC
8	Cap	1	15A-25A BSBM 40A-250A PVC	19	Sheet Ring	1	EPDM
9	Compressor Pin	1	SUS-304	20	Washer	1	SUS304

Note : 1. SUS 304 .....Stainless Steel AISI 304      2. SS 41 .....Rolled steel for General Structure      3. BSBM .....Free Cutting Brass Bar  
4. FC 20.....Grav Cast Iron      5. SUP.....Steel for Spring ASTM A-230-68

Part no. 3,5,6,12,14 material :SUS 304 or SUS316, price on request  
The standard bonnet material on PVDF valve is PPG. Price will be requested if use PVDF bonnet.  
The standard material to bonnet : PPG.

Optional PVDF bonnet material for PVDF diaphragm valve.

Optional materials on request for part no. 4,5,6,12,14.: SUS 304 or SUS 316.

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#### DIMENSIONS TABLE

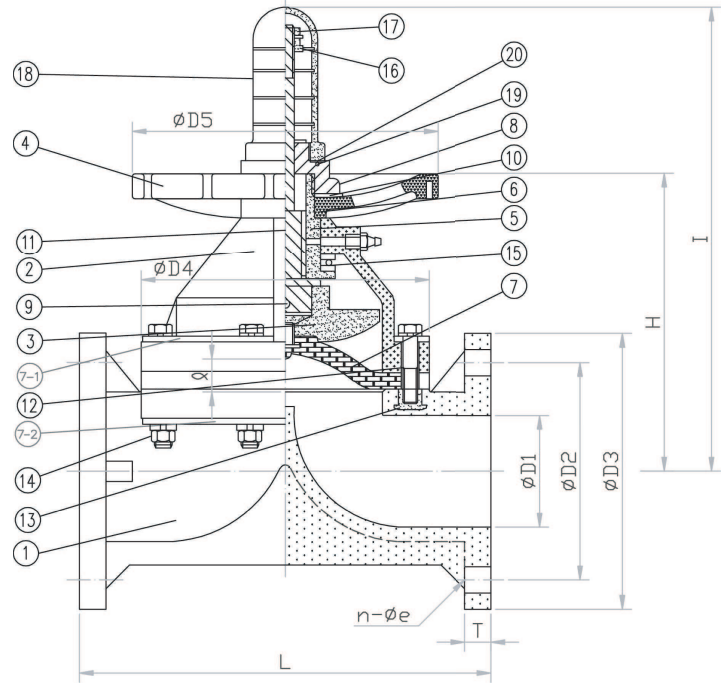
Nom. Size m/m(inch)	JIS												PRESS Test for Assembly (at 20°C)																
	Unit: mm												Test Pressure Unit: kgf/cm <sup>2</sup>																
	D1	D2	D3	e	n No. of holes	D4	D5	Lift ℓ	L	T	H	I	Rubber Diaphragm					Teflon Diaphragm											
													UPVC	PP	PPG	CPVC	PVDF	UPVC	PP	PPG	CPVC	PVDF							
15(1/2")	16	70	91.5	15	4	58x51	94	13	110	15	101	140	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
20(3/4")	20	75	97	15	4	70x60	94	13	120	17	106	152	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
25(1")	25	90	125	19	4	79x65	94	14	130	17	113	158	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
40(1-1/2")	41	105	135	19	4	123	147	24	180	19	133	193	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
50(2")	52	120	151	19	4	148	147	28	210	19	145	210	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
65(2-1/2")	68	140	185	19	4	183	202	32	250	24	197	276	10	10	10	10	10	10	10	7	7	7	10	10	10	10	10	10	10
80(3")	78	150	183.5	19	8	201	202	34	280	23	218	293	10	10	10	10	10	10	10	7	7	7	10	10	10	10	10	10	10
100(4")	100	175	210	19	8	250	241	54	340	24	261	370	10	10	10	10	10	10	10	7	7	7	10	10	10	10	10	10	10
125(5")	125	210	250	23	8	321	274	72	410	26	308	412	10	7	7	10	10	7	7	7	7	7	7	7	7	7	7	7	7
150(6")	148	240	282	23	8	382	395	72	480	33	334	471	10	7	7	10	10	7	7	7	7	7	7	7	7	7	7	7	7
200(8")	198	290	337	23	12	431	395	96	570	33	419	625	7	5	5	7	7	5	5	5	5	5	5	5	5	5	5	5	5
250(10")	248	355	397	25	12	529	555	132	680	38	510	750	7	5	5	7	7	5	5	5	5	5	5	5	5	5	5	5	5



CV VALUE	
CV	[ GMP/(11bf/in <sup>2</sup> ) <sup>1/2</sup> ]
Full Open: 100%	
SIZE	CV
1/2"	3.27
3/4"	5.29
1"	8.87
1-1/2"	31.09
2"	43.15
2-1/2"	90.68
3"	116.79
4"	186.78
6"	345.26

BOLTS TORQUE VALUE		
SIZE	Kg.m	N.m
1/2"	90	8.83
3/4"	110	10.79
1"	110	10.79
1-1/2"	150	14.72
2"	220	21.58
2-1/2"	220	21.58
3"	280	27.47
4"	280	27.47
6"	280	27.47

1Kg.cm=0.0981N.m



### DIMENSIONS TABLE

ANSI													PRESS Test for Assembly ( at 20°C )											
Nom. Size n/m(inch)	D1	D2	D3	e	n No. of holes	D4	D5	Lift ℓ	L	T	H	I	Test Pressure Unit: psi											
													Rubber Diaphragm					Teflon Diaphragm						
													UPVC	PP	PPG	CPVC	PVDF	UPVC	PP	PPG	CPVC	PVDF		
													15(1/2")	0.63	2.38	3.50	0.63	4	2.28x2	3.70	0.51	4.25	0.59	3.98
20(3/4")	0.79	2.76	3.86	0.63	4	2.76x2.36	3.70	0.51	5.90	0.63	4.17	5.98	150	150	150	150	150	150	150	150	150	150	150	150
25(1")	0.98	3.13	4.25	0.63	4	3.11x2.56	3.70	0.55	5.90	0.63	4.45	6.22	150	150	150	150	150	150	150	150	150	150	150	150
40(1-1/2")	1.61	3.88	5.00	0.63	4	4.84	5.79	0.94	6.95	0.67	5.24	7.60	150	150	150	150	150	150	150	150	150	150	150	150
50(2")	2.05	4.74	5.98	0.75	4	5.83	5.79	1.10	7.95	0.67	5.71	8.27	150	150	150	150	150	150	150	150	150	150	150	150
65(2-1/2")	2.68	5.49	7.01	0.75	4	7.20	7.95	1.26	9.85	0.87	7.76	10.87	150	150	150	150	150	150	105	105	150	150	150	150
80(3")	3.07	6.00	7.52	0.75	4	7.91	7.95	1.34	10.40	0.75	8.50	11.54	150	150	150	150	150	150	105	105	150	150	150	150
100(4")	3.94	7.50	9.17	0.75	8	9.84	9.49	2.13	12.95	0.91	10.28	14.57	150	150	150	150	150	150	105	105	150	150	150	150
125(5")	4.92	8.50	10.00	0.87	8	12.64	10.79	2.83	16.14	0.94	12.13	16.22	150	105	105	150	150	105	105	105	105	150	150	150
150(6")	5.83	9.51	10.98	0.87	8	15.04	15.55	2.83	18.90	1.18	13.15	18.54	150	105	105	150	150	105	105	105	105	150	150	150
200(8")	7.80	11.75	13.50	0.87	8	16.97	15.55	3.78	22.44	1.26	16.40	24.61	105	75	75	105	105	75	75	75	75	105	150	150
250(10")	9.76	14.25	15.98	0.98	12	20.83	21.85	5.20	26.77	1.26	20.08	29.53	105	75	75	105	105	75	75	75	75	105	150	150

DIN													PRESS Test for Assembly ( at 20°C )											
Nom. Size n/m(inch)	D1	D2	D3	e	n No. of holes	D4	D5	Lift ℓ	L	T	H	I	Test Pressure Unit: (bar)											
													Rubber Diaphragm					Teflon Diaphragm						
													UPVC	PP	PPG	CPVC	PVDF	UPVC	PP	PPG	CPVC	PVDF		
													15(1/2")	16	65	95	14	4	58x51	94	13	130	23	101
20(3/4")	20	75	105	14	4	70x60	94	13	150	23	106	152	10	10	10	10	10	10	10	10	10	10	10	10
25(1")	25	85	125	14	4	79x65	94	14	160	23	113	158	10	10	10	10	10	10	10	10	10	10	10	10
40(1-1/2")	41	110	150	18	4	123	147	24	200	23	133	193	10	10	10	10	10	10	10	10	10	10	10	10
50(2")	52	125	165	18	4	148	147	28	230	21	145	210	10	10	10	10	10	10	10	10	10	10	10	10
65(2-1/2")	68	145	185	18	4	183	202	32	290	22	197	276	10	10	10	10	10	10	7	7	10	10	10	10
80(3")	78	160	200	18	8	201	202	34	310	22	218	293	10	10	10	10	10	10	7	7	10	10	10	10
100(4")	100	180	210	18	8	250	241	54	350	25	261	370	10	10	10	10	10	10	7	7	7	7	10	10
125(5")	125	210	250	18	8	321	274	72	400	24	308	412	10	7	7	10	10	7	7	7	7	7	7	7
150(6")	148	240	285	23	8	382	395	72	480	30	334	471	10	7	7	10	10	7	7	7	7	7	7	7
200(8")	198	295	340	23	8	431	395	96	600	32	419	625	7	5	5	7	7	5	5	5	5	5	5	5
250(10")	248	350	395	23	12	529	555	132	680	32	510	750	7	5	5	7	7	5	5	5	5	5	5	5

※ The dimension table is calculated based on PVC material.  
 ※ The flanged length tolerance is according to EN558-1:1995.