

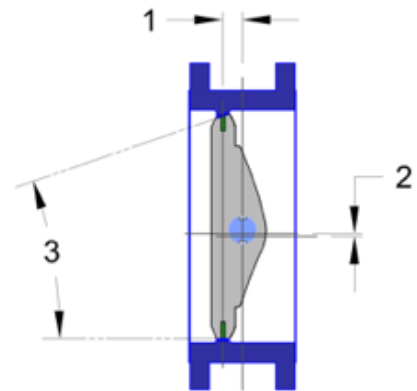
## Triple Offset Butterfly Valves Series 68 for Tight Shutoff, High Temperatures and Extreme Service Conditions

### General Description

The “Triple Offset” butterfly valve is available in a variety of both ANSI and PN classes, sizes and configurations.

How it Works:

The disc of a “Triple Offset” valve is not centered in the pipeline; instead it is slightly off center. The outside edge of the disc is machined to form a conic elliptical perimeter, allowing the placement of the disc to be shifted three times from the valve’s sealing surface (seat). The **first offset** occurs as the shaft is placed behind the valve seat, allowing for a continuous sealing surface. **Offset two**, shifts the disc to one side of the pipeline. This allows the disc to lift off of the seat when rotated 90°. The **third offset** angles the seat and disc from the centerline of the pipeline. This entirely removes the possibility of interference between the disc and valve body when rotating.



### Features:

- Metal to metal sealing
- Triple offset for quarter-turn design
- Torque seated
- More torque = More tightness
- Bi-directional tight shutoff
- Zero leakage compared to API 598
- Speed of Operation: Variable closing speed as required
- Non-rubbing rotation seating
- No jamming
- No cavities
- Space & Weight saving compared to gate valves and ball valves
- Inherently fire safe and fire tested
- Less maintenance
- Control capability

### Temperature:

- From -40°C up to +815°C (1435F)

## Triple Offset Butterfly Valves Series 68

### TYPICAL APPLICATIONS

- Process fluids
- Hydrocarbons
- Steam/Geothermal steam
- Hot gas/Sour gas (NACE)
- Blow down
- Sulfur recovery
- Acid, Caustic, Chloride
- Abrasive service

### PRODUCTION RANGE

- ND 3" - 112" ANSI Class 150
- ND 3" - 60" ANSI Class 300
- ND 3" - 48" ANSI Class 600
- ND 6" - 32" ANSI Class 900
- ANSI Class 1500 with ANSI Class 900 trims

### BODY STYLE

- Double flanged ISO 5752
- Double flanged ANSI B 16.10 (gate)
- Wafer & Lugged API 609
- Butt-Weld

### PRESSURE RANGE

- From Full Vacuum up to +250 Bar

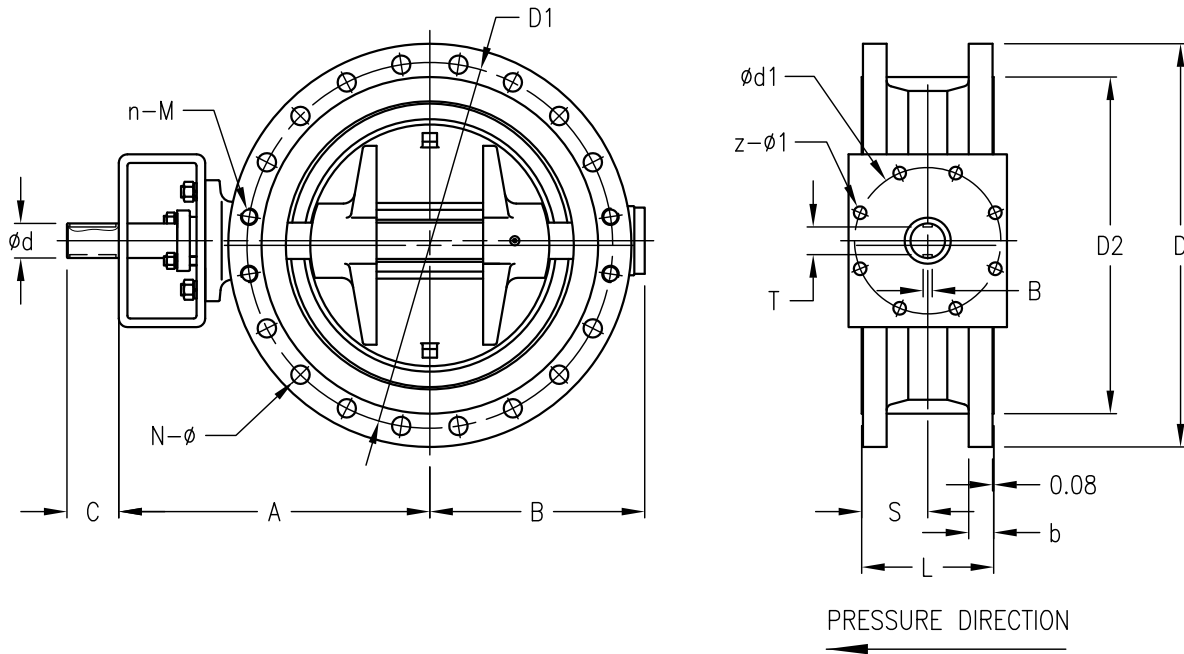
### APPLICABLE STANDARDS

- Design: API 609/ANSI B16.34/ASME VIII
- Face to face: API/ISO/ANSI/ASME
- Flange: ANSI/ISO/DIN/UNI/JIS
- Testing: API 598/ISO5208
- Fire Test: BS 6755 - API 607

### MATERIALS

- Carbon steel WCB
- Stainless steel CF8,CF8M
- Alloy steel WC6, WC9
- LCB, LC3
- Duplex
- Super duplex
- Monel
- Hastelloy
- Inconel
- Alloy 20
- Aluminum Bronze
- Titanium

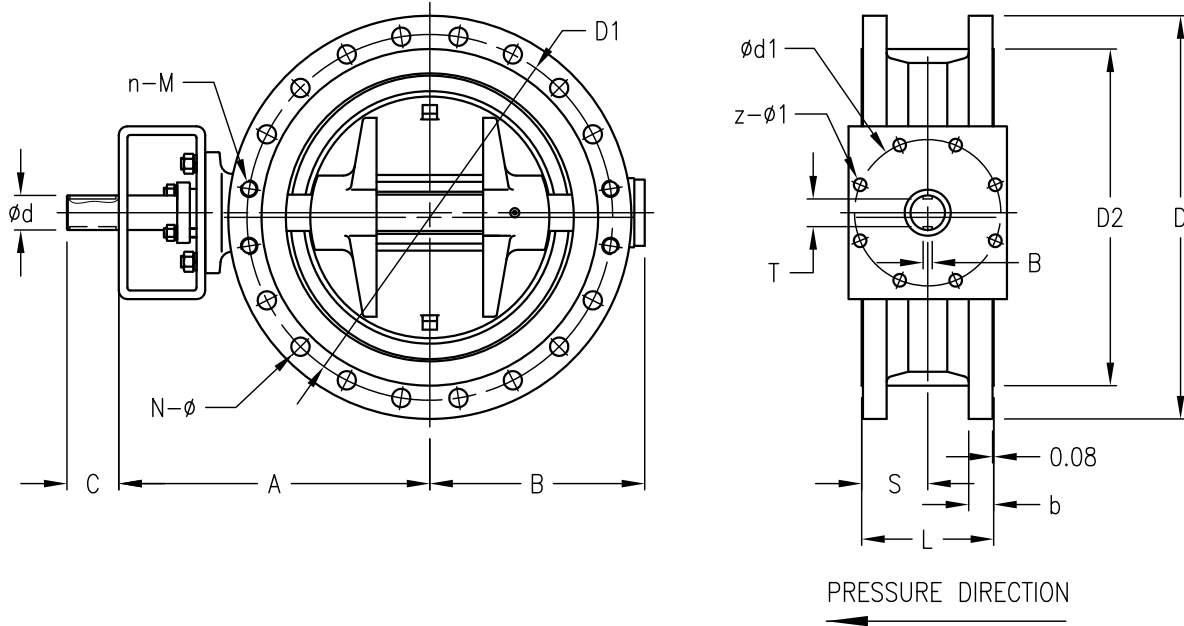




L = FACE TO FACE  
FLANGE CONNECTION ACC. TO ASME B16.5 FOR  $\leq$  DN600 AND  $>$  DN600 ACC. TO ASME B16.47 SER. B  
N- $\phi$  = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
n-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
FURTHER DESIGN ON REQUEST

METRIC DIMENSIONS AND WEIGHTS

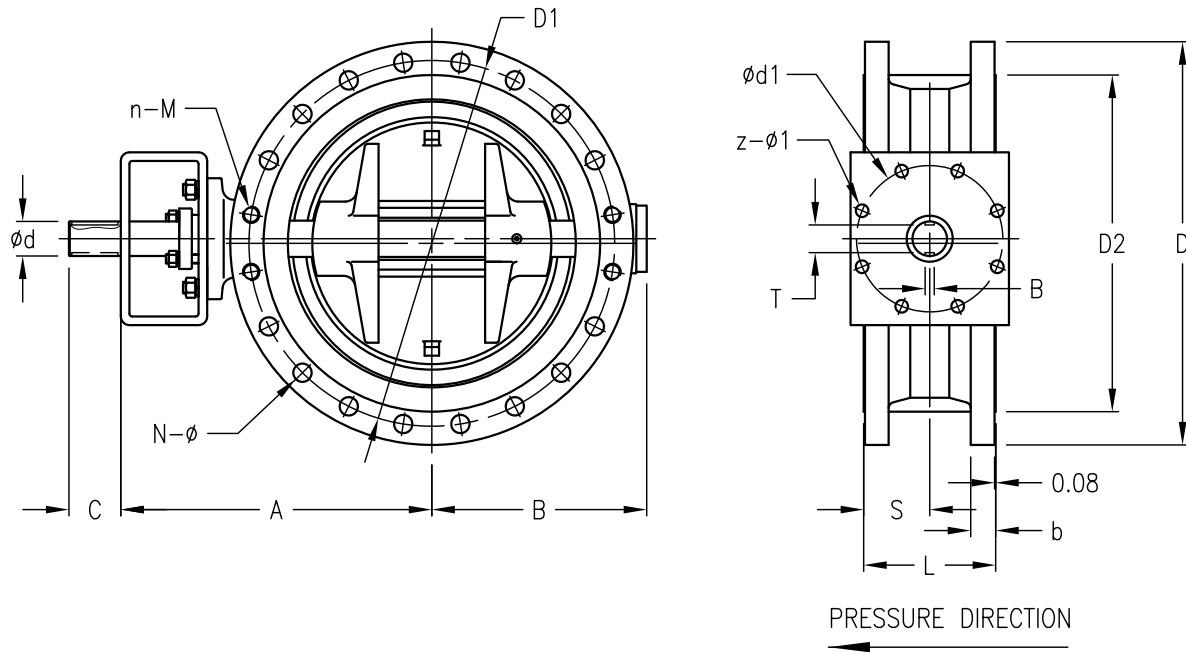
DIMENSIONS IN MILLIMETERS EXCEPT M																	WEIGHT (KG)
DN	L	S	D	D1	D2	b	N- $\phi$	n-M	A	B	C	$\phi d$	$\phi d1$	z- $\phi 1$	B	T	
80	114	57	190	152.4	127	24.3	4- $\phi 19.1$	--	195	95	40	17	70	4- $\phi 10$	5	14	20.6
100	127	63.5	230	190.5	157.2	24.3	8- $\phi 19.1$	--	202	115	40	19	70	4- $\phi 10$	6	15.5	31
125	140	70	255	215.9	185.7	24.3	8- $\phi 22.2$	--	258	138	40	25	102	4- $\phi 12$	8	21	38
150	140	70	280	241.3	215.9	25.9	8- $\phi 22.2$	--	270	147	60	25	102	4- $\phi 12$	8	21	48
200	152	76	345	298.5	269.9	29	8- $\phi 22.2$	--	305	185	60	28.8	125	4- $\phi 14$	8	24.8	73
250	165	82.5	405	362	323.8	30.6	8- $\phi 25.4$	4- $\frac{7}{8}$ "	355	215	60	36	140	4- $\phi 18$	10	31	98.4
300	178	89	485	431.8	381	32.2	8- $\phi 25.4$	4- $\frac{7}{8}$ "	395	252	60	36	140	4- $\phi 18$	10	31	142
350	190	95	535	476.3	412.8	35.4	8- $\phi 28.6$	4-1"	445	287	80	45	165	4- $\phi 22$	14	39.5	192
400	216	108	595	539.8	469.9	37	12- $\phi 28.6$	4-1"	490	317	90	50	254	8- $\phi 18$	14	44.5	236
450	222	111	635	577.9	533.4	40.1	12- $\phi 31.8$	4-1 $\frac{1}{8}$ "	507	342	90	50	254	8- $\phi 18$	14	44.5	290
500	229	114.5	700	635	584.2	43.3	16- $\phi 31.8$	4-1 $\frac{1}{8}$ "	535	372	90	55	254	8- $\phi 18$	16	49	358
600	267	133.5	815	749.3	692.2	48.1	16- $\phi 35$	4-1 $\frac{1}{4}$ "	605	439	90	60	254	8- $\phi 18$	18	53	480
700	292	146	835	795.3	762	45.0	40- $\phi 22.2$	--	680	536	120	70	298	8- $\phi 22$	20	62.5	647
750	318	159	885	846.1	813	45.0	44- $\phi 22.2$	--	705	560	120	80	298	8- $\phi 22$	2-22	62	868
800	318	159	940	900.1	864	46.6	48- $\phi 22.2$	--	720	555	120	80	298	8- $\phi 22$	2-22	62	990
900	330	165	1055	1009.6	972	52.9	44- $\phi 25.4$	--	790	645	120	90	298	8- $\phi 22$	2-22	72	1280
1000	409	205	1175	1120.8	1080	56.1	44- $\phi 28.6$	--	925	730	150	110	356	8- $\phi 33$	2-25	92	1410
1100	470	235	1275	1222.4	1181	60.9	52- $\phi 28.6$	--	965	775	150	110	356	8- $\phi 33$	2-25	92	1730
1200	470	235	1390	1335.1	1289	65.6	44- $\phi 31.8$	--	1018	825	180	120	406	8- $\phi 39$	2-28	100	2120



L = FACE TO FACE  
FLANGE CONNECTION ACC. TO ASME B16.5 FOR  $\leq 24"$  AND  $> 24"$  ACC. TO ASME B16.47 SER.B  
N- $\phi$  = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
n-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
FURTHER DESIGN ON REQUEST

IMPERIAL DIMENSIONS AND WEIGHTS

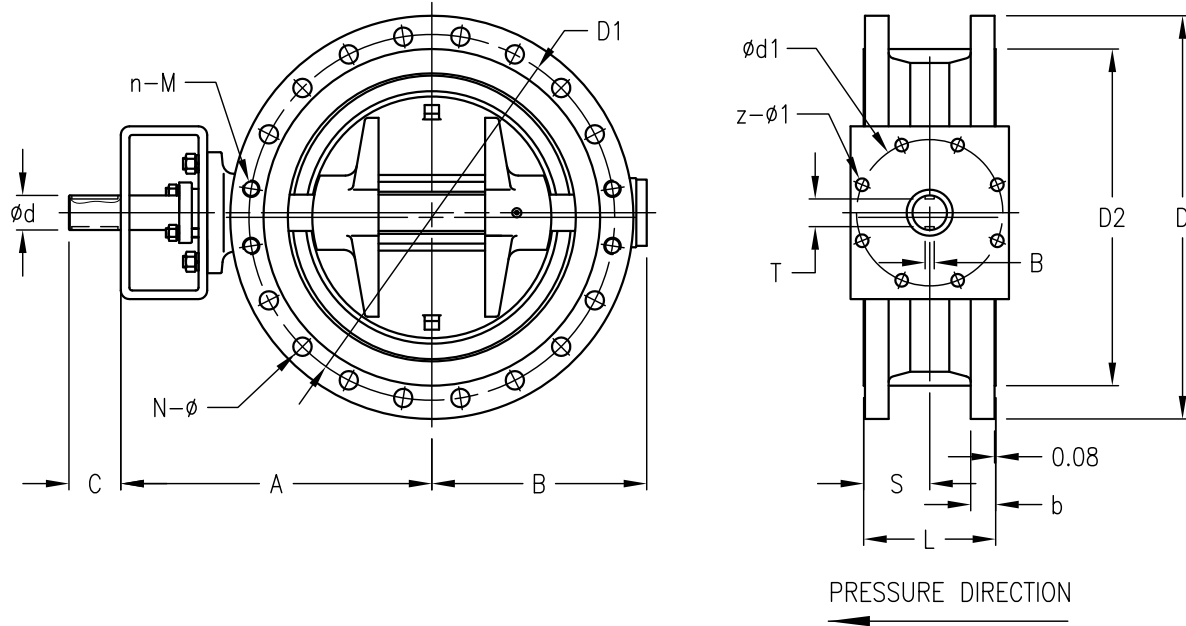
NPS	DIMENSIONS (INCH)															WEIGHT (LBS)	
	L	S	D	D1	D2	b	N- $\phi$	n-M	A	B	C	$\phi d$	$\phi d1$	z- $\phi 1$	B		T
3"	4.5	2.25	7.5	6	5	0.954	4- $\frac{3}{4}$ "	--	7.7	3.8	1.6	0.67	2.75	4- $\phi 0.4$	0.20	0.55	46
4"	5	2.5	9	7.5	6.19	0.954	8- $\frac{3}{4}$ "	--	8	4.5	1.6	0.75	2.75	4- $\phi 0.4$	0.24	0.61	69
5"	5.5	2.75	10	8.5	7.31	0.954	8- $\frac{7}{8}$ "	--	10.2	5.5	1.6	0.99	4	4- $\phi 0.5$	0.32	0.83	84
6"	5.5	2.75	11	9.5	8.5	1.02	8- $\frac{7}{8}$ "	--	10.6	5.8	2.4	0.99	4	4- $\phi 0.5$	0.32	0.83	106
8"	6	3	13.5	11.75	10.63	1.14	8- $\frac{7}{8}$ "	--	12	7.3	2.4	1.14	4.92	4- $\phi 0.55$	0.32	0.98	161
10"	6.5	3.25	16	14.25	12.75	1.2	8-1"	4- $\frac{7}{8}$ "	14	8.5	2.4	1.42	5.51	4- $\phi 0.71$	0.39	1.22	217
12"	7	3.5	19	17	15	1.27	8-1"	4- $\frac{7}{8}$ "	15.6	10	2.4	1.42	5.51	4- $\phi 0.71$	0.39	1.22	313
14"	7.5	3.75	21	18.75	16.25	1.39	8-1 $\frac{1}{8}$ "	4-1"	17.5	11.3	3.15	1.77	6.5	4- $\phi 0.87$	0.55	1.56	424
16"	8.5	4.25	23.5	21.25	18.5	1.46	12-1 $\frac{1}{8}$ "	4-1"	19.3	12.5	3.54	1.97	10	8- $\phi 0.71$	0.55	1.75	521
18"	8.75	4.375	25	22.75	21	1.58	12-1 $\frac{1}{4}$ "	4-1 $\frac{1}{8}$ "	20	13.5	3.54	1.97	10	8- $\phi 0.71$	0.55	1.75	640
20"	9	4.5	27.5	25	23	1.7	16-1 $\frac{1}{4}$ "	4-1 $\frac{1}{8}$ "	21	14.7	3.54	2.17	10	8- $\phi 0.71$	0.63	1.93	790
24"	10.5	5.25	32	29.5	27.25	1.89	16-1 $\frac{3}{8}$ "	4-1 $\frac{1}{4}$ "	23.8	17.3	3.54	2.36	10	8- $\phi 0.71$	0.71	2.09	1059
28"	11.5	5.75	32.94	31.31	30	1.75	40- $\frac{7}{8}$ "	--	26.8	21.1	4.7	2.76	11.73	8- $\phi 0.87$	0.79	2.46	1428
30"	12.5	6.25	34.94	33.31	32	1.75	44- $\frac{7}{8}$ "	--	27.8	22	4.7	3.15	11.73	8- $\phi 0.87$	2-0.87	2.44	1915
32"	12.5	6.25	37.06	35.44	34	1.81	48- $\frac{7}{8}$ "	--	28.3	21.9	4.7	3.15	11.73	8- $\phi 0.87$	2-0.87	2.44	2245
36"	13	6.5	41.62	39.75	38.25	2.06	44-1"	--	31.1	25.4	4.7	3.54	11.73	8- $\phi 0.87$	2-0.87	2.84	2825
40"	16.1	8.05	46.25	44.12	42.5	2.19	44-1 $\frac{1}{8}$ "	--	36.4	28.8	5.9	4.33	14	8- $\phi 1.3$	2-0.98	3.62	3112
44"	18.5	9.25	50.25	48.12	46.5	2.38	52-1 $\frac{1}{8}$ "	--	38	30.5	5.9	4.33	14	8- $\phi 1.3$	2-0.98	3.62	3817
48"	18.5	9.25	54.81	52.56	50.75	2.56	44-1 $\frac{1}{4}$ "	--	40	32.5	7.1	4.72	16	8- $\phi 1.54$	2-1.1	3.94	4678



L = FACE TO FACE  
FLANGE CONNECTION ACC. TO ASME B16.5 FOR  $\leq$  DN600 AND  $>$  DN600 ACC. TO ASME B16.47 SER. B  
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n-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
FURTHER DESIGN ON REQUEST

METRIC DIMENSIONS AND WEIGHTS

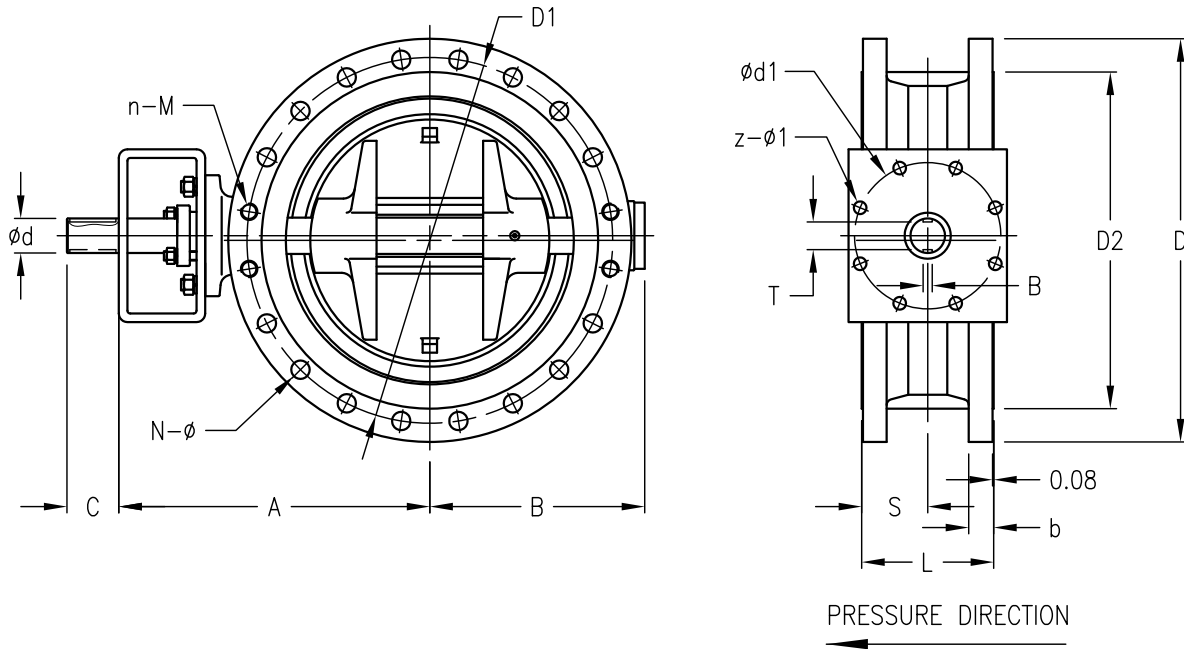
DIMENSIONS IN MILLIMETERS EXCEPT M																WEIGHT (KG)	
DN	L	S	D	D1	D2	b	N- $\phi$	n-M	A	B	C	$\phi d$	$\phi d1$	z- $\phi 1$	T		
80	114	57	210	168.3	127	29	4- $\phi 22.2$	4- $\frac{3}{4}$ "	205	115	40	17	70	4- $\phi 10$	5	14	28
100	127	63.5	255	200	157.2	32.2	4- $\phi 22.2$	4- $\frac{3}{4}$ "	220	140	40	19	70	4- $\phi 10$	6	15.5	38
125	140	70	280	235	185.7	35.4	4- $\phi 22.2$	4- $\frac{3}{4}$ "	268	170	60	25	102	4- $\phi 12$	8	21	52
150	140	70	320	269.9	215.9	37	8- $\phi 22.2$	4- $\frac{3}{4}$ "	290	190	60	25	125	4- $\phi 14$	8	21	58
200	152	76	380	330.2	269.9	41.7	8- $\phi 25.4$	4- $\frac{7}{8}$ "	345	230	60	36	140	4- $\phi 18$	10	31	84
250	165	82.5	445	387.4	323.8	48.1	12- $\phi 28.6$	4-1"	400	260	60	40	165	4- $\phi 22$	12	35	148
300	178	89	520	450.8	381	51.3	12- $\phi 31.8$	4-1 $\frac{1}{8}$ "	440	300	80	45	165	4- $\phi 22$	14	39.5	198
350	190	95	585	514.4	412.8	54.4	16- $\phi 31.8$	4-1 $\frac{1}{8}$ "	485	330	90	50	254	8- $\phi 18$	14	44.5	258
400	216	108	650	571.5	469.9	57.6	16- $\phi 35$	4-1 $\frac{1}{4}$ "	510	365	90	60	254	8- $\phi 18$	18	53	356
450	222	111	710	628.6	533.4	60.8	20- $\phi 35$	4-1 $\frac{1}{4}$ "	550	390	120	70	298	8- $\phi 22$	20	62.5	406
500	229	114.5	775	685.8	584.2	64	20- $\phi 35$	4-1 $\frac{1}{4}$ "	580	435	120	80	298	8- $\phi 22$	2-22	62	489
600	267	133.5	915	812.8	692.2	70.3	20- $\phi 41.3$	4-1 $\frac{1}{2}$ "	640	510	120	85	298	8- $\phi 22$	2-22	67	752
700	292	146	920	857.2	787	89.4	32- $\phi 34.9$	4-1 $\frac{1}{2}$ "	725	590	150	105	356	8- $\phi 33$	2-25	87	1195
750	318	159	990	920.8	845	94.1	32- $\phi 38.1$	4-1 $\frac{3}{8}$ "	765	620	165	110	356	8- $\phi 33$	2-25	92	1360
800	318	159	1055	977.9	902	103.6	28- $\phi 41.3$	4-1 $\frac{1}{2}$ "	850	650	180	120	406	8- $\phi 39$	2-28	100	1520
900	330	165	1170	1089.0	1010	103.6	28- $\phi 44.5$	4-1 $\frac{1}{8}$ "	900	705	200	130	406	8- $\phi 39$	2-28	110	1975
1000	409	205	1275	1190.6	1114	116.3	36- $\phi 44.5$	4-1 $\frac{3}{8}$ "	914	755	200	140	406	8- $\phi 39$	2-32	118	2350
1100	470	235	1385	1295.4	1219	127.5	36- $\phi 47.6$	4-1 $\frac{1}{4}$ "	1007	835	200	140	406	8- $\phi 39$	2-32	118	3100
1200	470	235	1510	1416.0	1327	129.0	36- $\phi 50.8$	4-1 $\frac{1}{8}$ "	1087	910	200	150	483	12- $\phi 39$	2-36	126	3995



L = FACE TO FACE  
FLANGE CONNECTION ACC. TO ASME B16.5 FOR  $\leq 24"$  AND  $> 24"$  ACC. TO ASME B16.47 SER. B  
N- $\phi$  = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
N-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
FURTHER DESIGN ON REQUEST

IMPERIAL DIMENSIONS AND WEIGHTS

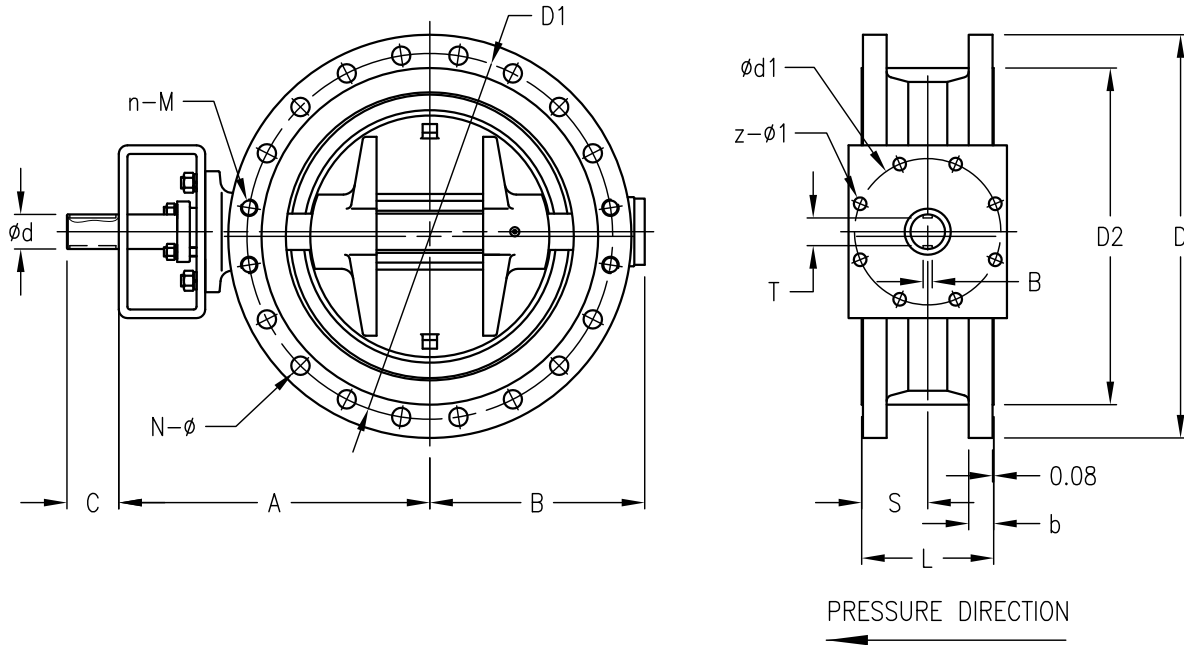
NPS	DIMENSIONS (INCH)															WEIGHT (LBS)	
	L	S	D	D1	D2	b	N- $\phi$	n-M	A	B	C	$\phi d$	$\phi d1$	z- $\phi1$	B		T
3"	4.5	2.25	8.25	6.62	5	1.14	4- $\frac{7}{8}$ "	4- $\frac{3}{4}$ "	8.1	4.53	1.58	0.67	2.76	4- $\phi 0.39$	0.20	0.16	62
4"	5	2.5	10	7.88	6.19	1.27	4- $\frac{7}{8}$ "	4- $\frac{3}{4}$ "	8.7	5.51	1.58	0.75	2.76	4- $\phi 0.39$	0.24	0.61	84
5"	5.5	2.75	11	9.25	7.31	1.39	4- $\frac{7}{8}$ "	4- $\frac{3}{4}$ "	10.6	6.70	2.36	0.98	4.00	4- $\phi 0.47$	0.32	0.83	115
6"	5.5	2.75	12.5	10.62	8.5	1.46	8- $\frac{7}{8}$ "	4- $\frac{3}{4}$ "	11.4	7.50	2.36	0.98	4.92	4- $\phi 0.55$	0.32	0.83	128
8"	6	3	15	13	10.63	1.64	8-1"	4- $\frac{7}{8}$ "	13.6	9.00	2.36	1.42	5.51	4- $\phi 0.71$	0.39	1.22	185
10"	6.5	3.25	17.5	15.25	12.75	1.89	12-1 $\frac{1}{8}$ "	4-1"	15.7	10.24	2.36	1.58	6.50	4- $\phi 0.87$	0.47	1.38	326
12"	7	3.5	20.5	17.75	15	2.02	12-1 $\frac{1}{4}$ "	4-1 $\frac{1}{8}$ "	17.3	11.8	3.15	1.77	6.50	4- $\phi 0.87$	0.55	1.56	437
14"	7.5	3.75	23	20.25	16.25	2.14	16-1 $\frac{1}{4}$ "	4-1 $\frac{1}{8}$ "	19.1	13.0	3.54	1.97	10.0	8- $\phi 0.71$	0.55	1.75	569
16"	8.5	4.25	25.5	22.5	18.5	2.27	16-1 $\frac{5}{8}$ "	4-1 $\frac{1}{4}$ "	20.1	14.4	3.54	2.36	10.0	8- $\phi 0.71$	0.71	2.09	786
18"	8.75	4.375	28	24.75	21	2.39	20-1 $\frac{3}{8}$ "	4-1 $\frac{1}{4}$ "	21.7	15.4	4.72	2.76	11.73	8- $\phi 0.87$	0.79	2.46	896
20"	9	4.5	30.5	27	23	2.52	20-1 $\frac{3}{8}$ "	4-1 $\frac{1}{4}$ "	22.8	17.1	4.72	3.15	11.73	8- $\phi 0.87$	2-0.87	2.44	1079
24"	10.5	5.25	36	32	27.25	2.77	20-1 $\frac{5}{8}$ "	4-1 $\frac{1}{2}$ "	25.2	20.1	4.72	3.35	11.73	8- $\phi 0.87$	2-0.87	2.64	1659
28"	11.5	5.75	36.25	33.75	30	3.5	32-1 $\frac{3}{8}$ "	4-1 $\frac{1}{2}$ "	28.5	23.2	5.91	4.13	14.0	8- $\phi 1.3$	2-0.98	3.43	2637
30"	12.5	6.25	39	36.25	32	3.69	28-1 $\frac{5}{8}$ "	4-1 $\frac{3}{8}$ "	30.1	24.4	6.50	4.33	14.0	8- $\phi 1.3$	2-0.98	3.62	3000
32"	12.5	6.25	41.5	38.5	34	4.06	32-1 $\frac{1}{2}$ "	4-1 $\frac{1}{2}$ "	34.5	25.6	7.10	4.72	16.0	8- $\phi 1.54$	2-1.1	3.94	3354
36"	13	6.5	46.12	42.88	38.25	4.06	32-1 $\frac{3}{4}$ "	4-1 $\frac{5}{8}$ "	35.4	27.8	7.88	5.12	16.0	8- $\phi 1.54$	2-1.1	4.33	4358
40"	16.1	8.05	50.12	46.88	42.5	4.56	36-1 $\frac{3}{4}$ "	4-1 $\frac{5}{8}$ "	36.0	29.7	7.88	5.51	16.0	8- $\phi 1.54$	2-1.26	4.65	5185
44"	18.5	9.25	54.5	51	46.5	5	36-1 $\frac{7}{8}$ "	4-1 $\frac{3}{4}$ "	39.7	32.9	7.88	5.51	16.0	8- $\phi 1.54$	2-1.26	4.65	6840
48"	18.5	9.25	59.5	55.75	50.75	5.06	36-2"	4-1 $\frac{7}{8}$ "	42.8	35.8	7.88	5.91	19.0	12- $\phi 1.54$	2-1.42	4.96	8815



L = FACE TO FACE  
 FLANGE CONNECTION ACC. TO ASME B16.5  
 N-φ = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
 n-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
 FURTHER DESIGN ON REQUEST

### METRIC DIMENSIONS AND WEIGHTS

DIMENSIONS IN MILLIMETERS EXCEPT M																	WEIGHT (KG)
DN	L	S	D	D1	D2	b	N-φ	n-M	A	B	C	ød	ød1	z-ø1	B	T	
80	180	90	210	168.3	127	38.8	4-ø22.2	4- $\frac{3}{4}$ "	240	115	40	22.2	102	4-ø12	6	18.7	40
100	190	95	275	215.9	157.2	45.1	4-ø25.4	4- $\frac{7}{8}$ "	240	150	60	25	125	4-ø14	8	21	68
125	200	100	330	266.7	185.7	51.5	4-ø28.6	4-1"	280	175	60	30	125	4-ø14	8	26	88
150	210	105	355	292.1	215.9	54.7	8-ø28.6	4-1"	325	210	60	35	165	4-ø22	10	30	102
200	230	115	420	349.2	269.9	62.6	8-ø31.8	4-1 $\frac{1}{8}$ "	380	245	80	45	165	4-ø22	14	39.5	156
250	250	125	510	431.8	323.8	70.5	12-ø35	4-1 $\frac{1}{4}$ "	440	290	90	50	254	8-ø18	14	44.5	248
300	270	135	560	489	381	73.7	16-ø35	4-1 $\frac{1}{4}$ "	465	315	90	55	254	8-ø18	16	49	328
350	290	145	605	527	412.8	76.9	16-ø38.1	4-1 $\frac{3}{8}$ "	527	345	90	60	254	8-ø18	18	53	416
400	310	155	685	603.2	469.9	83.2	16-ø41.3	4-1 $\frac{1}{2}$ "	610	455	120	85	298	8-ø22	2-22	67	546
450	330	165	745	654	533.4	89.6	16-ø44.5	4-1 $\frac{3}{8}$ "	630	480	120	95	356	8-ø33	2-25	77	728
500	350	175	815	723.9	584.2	95.9	16-ø44.5	8-1 $\frac{5}{8}$ "	645	510	150	100	356	8-ø33	2-25	82	890
600	390	195	940	838.2	692.2	108.6	16-ø50.8	8-1 $\frac{7}{8}$ "	755	590	150	120	406	8-ø39	2-28	100	1280

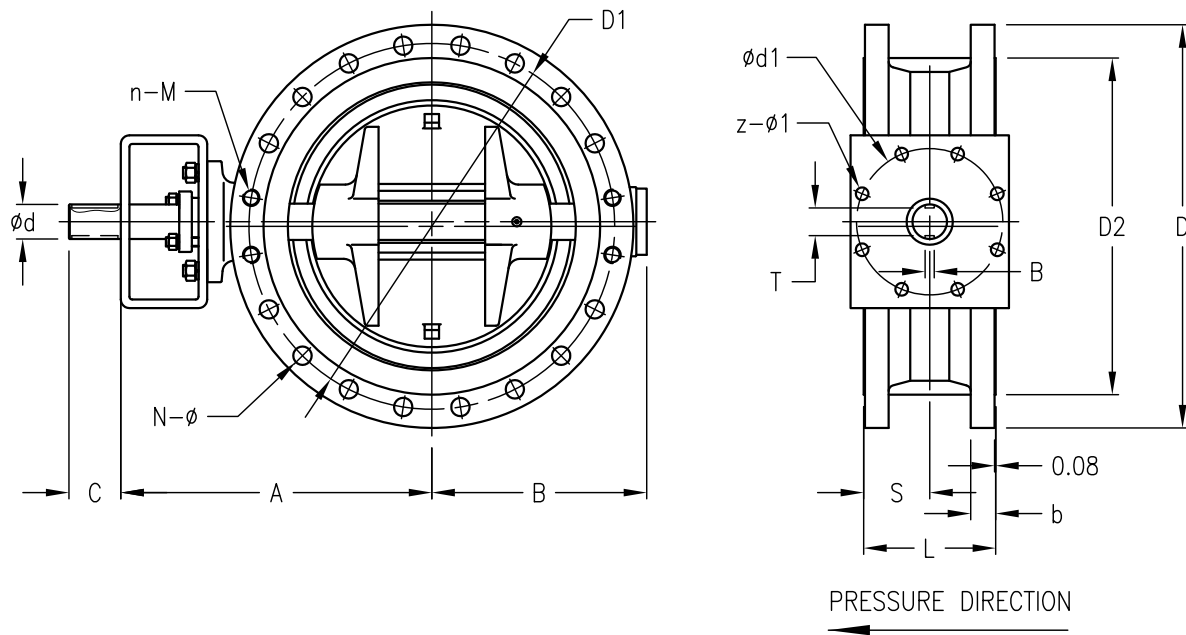


L = FACE TO FACE  
FLANGE CONNECTION ACC. TO ASME B16.5  
N-φ = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
n-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
FURTHER DESIGN ON REQUEST

IMPERIAL DIMENSIONS AND WEIGHTS

NPS	DIMENSIONS (INCH)															WEIGHT (LBS)	
	L	S	D	D1	D2	b	N-φ	n-M	A	B	C	φd	φd1	z-φ1	B		T
3"	7.08	3.54	8.25	6.62	5	1.53	4- $\frac{7}{8}$ "	4- $\frac{3}{4}$ "	9.5	4.53	1.58	0.87	4	4-φ0.47	0.24	0.74	88
4"	7.48	3.74	10.75	8.5	6.19	1.78	4-1"	4- $\frac{7}{8}$ "	9.5	5.91	2.36	0.98	4.92	4-φ0.55	0.32	0.83	150
5"	7.88	3.94	13	10.5	7.31	2.03	4-1 $\frac{1}{8}$ "	4-1"	11.0	4.89	2.36	1.18	4.92	4-φ0.55	0.32	1.02	194
6"	8.28	4.14	14	11.5	8.5	2.16	8-1 $\frac{1}{8}$ "	4-1"	12.8	8.27	2.36	1.38	6.5	4-φ0.87	0.39	1.18	225
8"	9.06	4.53	16.5	13.75	10.63	2.47	8-1 $\frac{1}{8}$ "	4-1 $\frac{1}{8}$ "	15.0	9.65	3.15	1.77	6.5	4-φ0.87	0.55	1.56	344
10"	9.84	4.92	20	17	12.75	2.78	12-1 $\frac{3}{8}$ "	4-1 $\frac{1}{4}$ "	17.3	11.42	3.54	1.97	10	8-φ0.71	0.55	1.75	547
12"	10.64	5.32	22	19.25	15	2.9	16-1 $\frac{3}{8}$ "	4-1 $\frac{1}{4}$ "	18.3	12.4	3.54	2.17	10	8-φ0.71	0.63	1.93	723
14"	11.42	5.71	13.75	20.75	16.25	3.03	16-1 $\frac{1}{2}$ "	4-1 $\frac{3}{8}$ "	20.8	13.6	3.54	2.36	10	8-φ0.71	0.71	2.09	918
16"	12.2	6.1	27	23.75	18.5	3.28	16-1 $\frac{5}{8}$ "	4-1 $\frac{1}{2}$ "	24.0	17.9	4.72	3.35	11.73	8-φ0.87	2-0.87	2.64	1205
18"	13	6.5	29.25	25.75	21	3.53	16-1 $\frac{3}{4}$ "	4-1 $\frac{5}{8}$ "	24.8	18.9	4.72	3.74	14	8-φ1.3	2-0.98	77	1606
20"	13.78	6.89	32	28.5	23	3.78	16-1 $\frac{3}{4}$ "	8-1 $\frac{5}{8}$ "	25.4	20.1	5.91	3.94	14	8-φ1.3	2-0.98	82	1964
24"	15.4	7.7	37	33	27.25	4.28	16-2"	8-1 $\frac{7}{8}$ "	29.7	23.2	5.91	4.72	15.98	8-φ1.54	2-1.1	100	2825

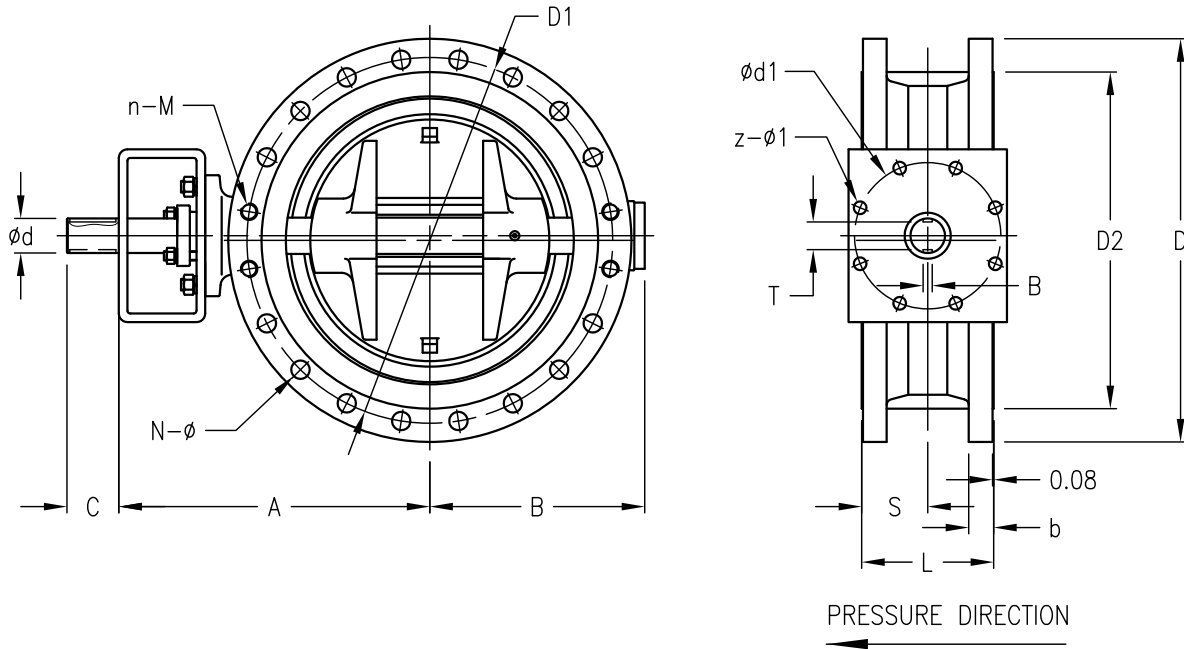




L = FACE TO FACE  
FLANGE CONNECTION ACC. TO ASME B16.5  
N-ø = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
n-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
FURTHER DESIGN ON REQUEST

METRIC DIMENSIONS AND WEIGHTS

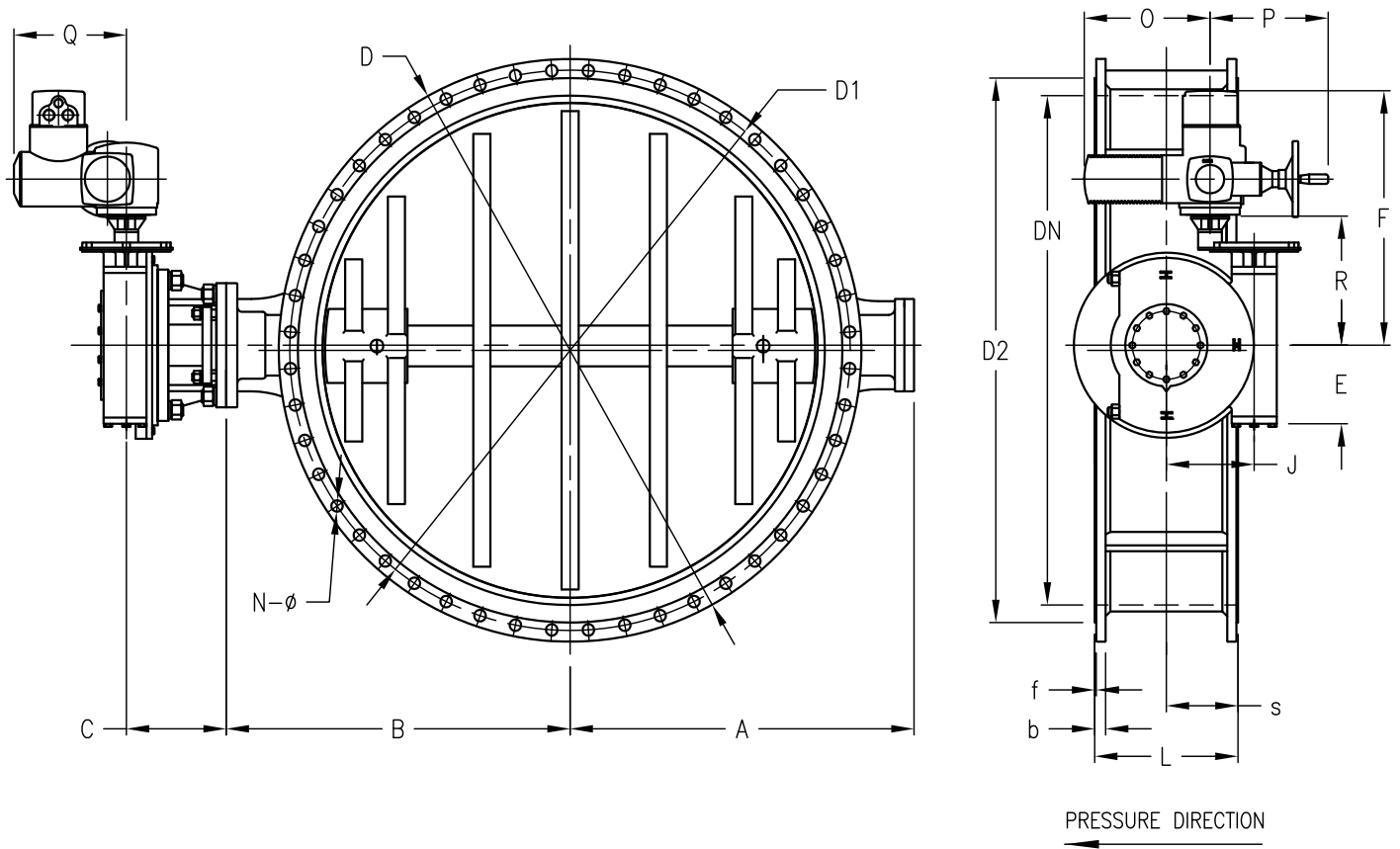
DIMENSIONS IN MILLIMETERS EXCEPT M																WEIGHT (KG)	
DN	L	S	D	D1	D2	b	N-ø	n-M	A	B	C	ød	ød1	z-ø1	B		T
150	225	112.5	381	317.5	215.9	62.6	8-ø31.7	4-1 <sup>1</sup> / <sub>8</sub> "	405	226	80	45	165	4-ø22	14	39.5	186
200	275	137.5	469.9	393.7	269.7	70.5	8-ø38.1	4-1 <sup>3</sup> / <sub>8</sub> "	485	280	90	60	254	8-ø18	18	53	315
250	325	162.5	546.1	469.9	323.8	76.85	12-ø38.1	4-1 <sup>3</sup> / <sub>8</sub> "	575	338	90	60	254	8-ø18	18	53	495
300	375	187.5	609.6	533.4	381	86.25	16-ø38.1	4-1 <sup>3</sup> / <sub>8</sub> "	655	402	120	60	254	8-ø18	18	53	782
350	425	212.5	641.3	558.8	412.8	92.8	16-ø41.1	4-1 <sup>1</sup> / <sub>2</sub> "	675	456	120	85	298	8-ø22	2-22	67	975
400	475	237.5	704.8	615.9	469.9	95.9	16-ø44.4	4-1 <sup>5</sup> / <sub>8</sub> "	730	492	120	85	298	8-ø22	2-22	67	1170
450	500	250	787.4	685.8	533.4	108.6	16-ø50.8	4-1 <sup>7</sup> / <sub>8</sub> "	770	510	150	100	356	8-ø33	2-25	77	1550
500	575	287.5	857.2	749.3	584.2	114.9	16-ø53.8	4-2"	870	590	170	100	356	8-ø33	2-25	77	2210
600	675	337.5	1041.4	901.7	692.2	146.7	16-ø66.55	4-2 <sup>1</sup> / <sub>2</sub> "	1030	675	170	120	406	8-ø39	2-28	100	3410



L = FACE TO FACE  
FLANGE CONNECTION ACC. TO ASME B16.5  
N-ø = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
n-M = NUMBER OF FLANGE THREAD HOLES & DIAMETER OF FLANGE THREAD HOLES  
FURTHER DESIGN ON REQUEST

IMPERIAL DIMENSIONS AND WEIGHTS

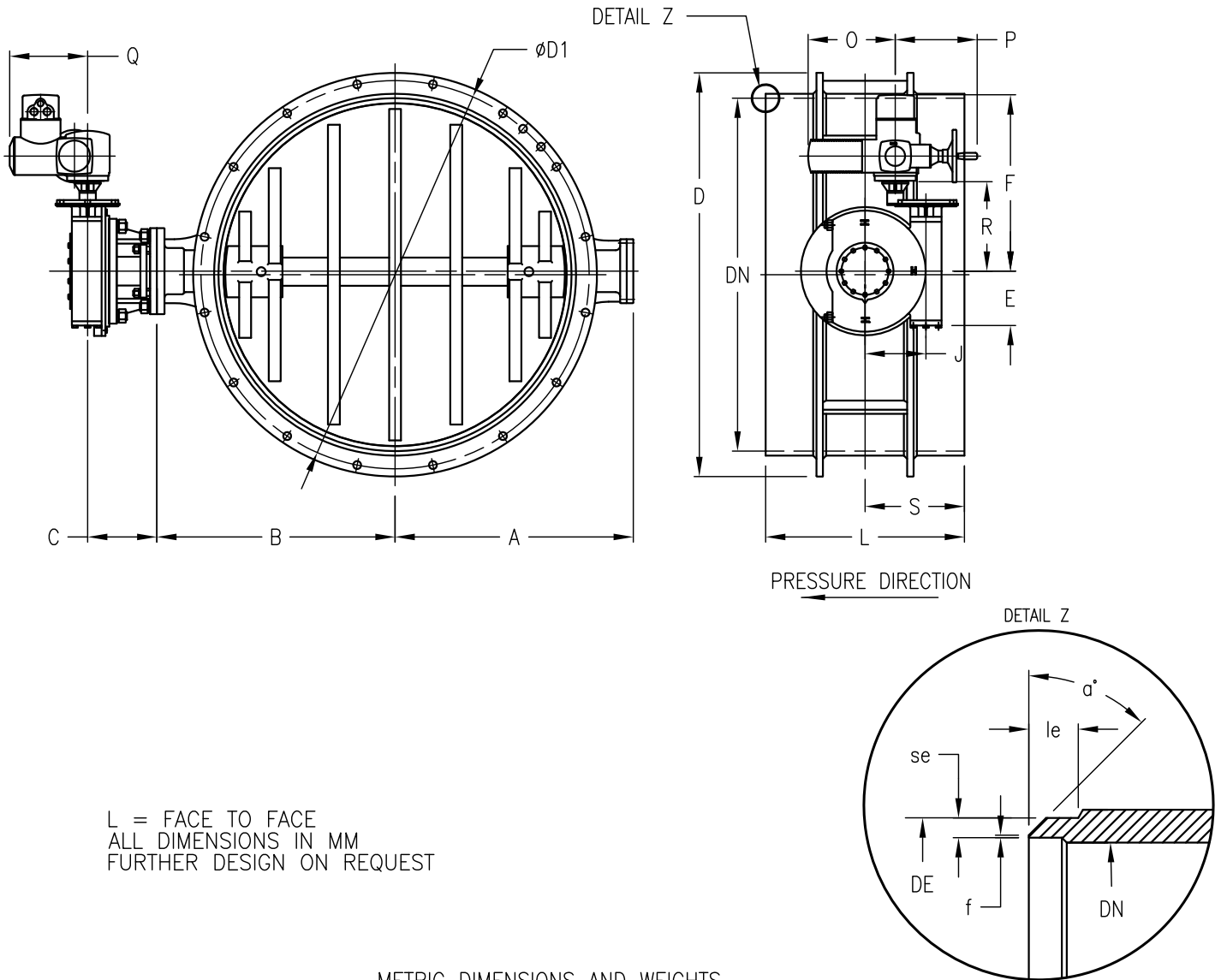
NPS	DIMENSIONS (INCH)																WEIGHT (LBS)
	L	S	D	D1	D2	b	N-ø	n-M	A	B	C	ød	ød1	z-ø	B	T	
6"	8.86	4.43	15	12.5	8.5	3.53	8-1 $\frac{1}{4}$ "	4-1 $\frac{1}{8}$ "	15.9	8.9	3.15	1.77	6.5	4-ø0.87	0.55	1.56	410
8"	10.82	5.41	18.5	15.5	10.63	3.9	8-1 $\frac{1}{2}$ "	4-1 $\frac{3}{8}$ "	19.1	11	3.54	2.36	10	8-ø0.71	0.71	2.09	695
10"	12.8	6.4	21.5	18.5	12.75	4.53	12-1 $\frac{1}{2}$ "	4-1 $\frac{3}{8}$ "	22.6	13.3	3.54	2.36	10	8-ø0.71	0.71	2.09	1092
12"	14.76	7.38	24	21	15	5.16	16-1 $\frac{1}{2}$ "	4-1 $\frac{3}{8}$ "	25.8	15.8	4.72	2.36	10	8-ø0.71	0.71	2.09	1726
14"	16.73	8.37	25.25	22	16.25	5.53	16-1 $\frac{5}{8}$ "	4-1 $\frac{1}{2}$ "	26.8	18	4.72	3.35	11.73	8-ø0.87	2-0.87	2.64	2151
16"	18.7	9.35	27.75	24.25	18.5	6.03	16-1 $\frac{3}{4}$ "	4-1 $\frac{5}{8}$ "	28.7	19.4	4.72	3.35	11.73	8-ø0.87	2-0.87	2.64	2582
18"	19.68	9.84	31	27	21	6.66	16-2"	4-1 $\frac{7}{8}$ "	30.3	20.1	5.91	3.94	14	8-ø1.3	2-0.98	3.03	3420
20"	22.64	11.32	33.75	29.5	23	7.28	16-2 $\frac{1}{8}$ "	4-2"	34.3	23.2	6.69	3.94	14	8-ø1.3	2-0.98	3.03	4876
24"	26.58	13.29	41	35.5	27.25	8.28	16-2 $\frac{3}{8}$ "	4-2 $\frac{1}{2}$ "	40.6	26.6	6.69	4.72	15.98	8-ø1.54	2-1.1	3.94	3410



L = FACE TO FACE  
FLANGE CONNECTION ACC. TO EN1092 PN2.5  
N-ø = NUMBER OF FLANGE HOLES & DIAMETER OF FLANGE HOLES  
ALL DIMENSIONS IN MM  
FURTHER DESIGN ON REQUEST

METRIC DIMENSIONS AND WEIGHTS

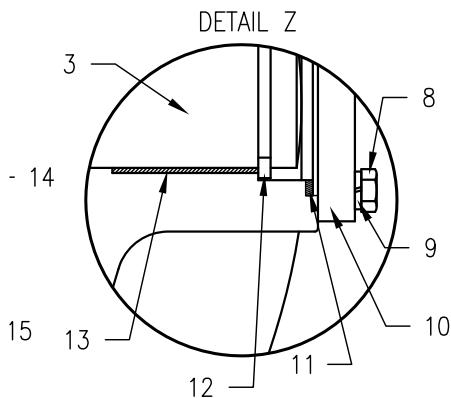
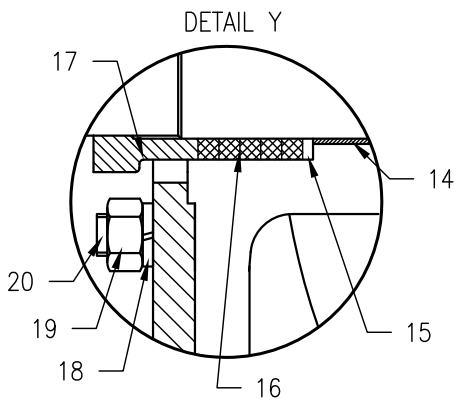
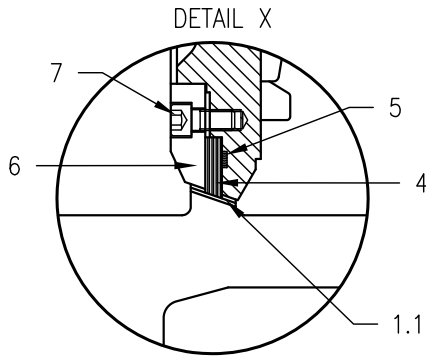
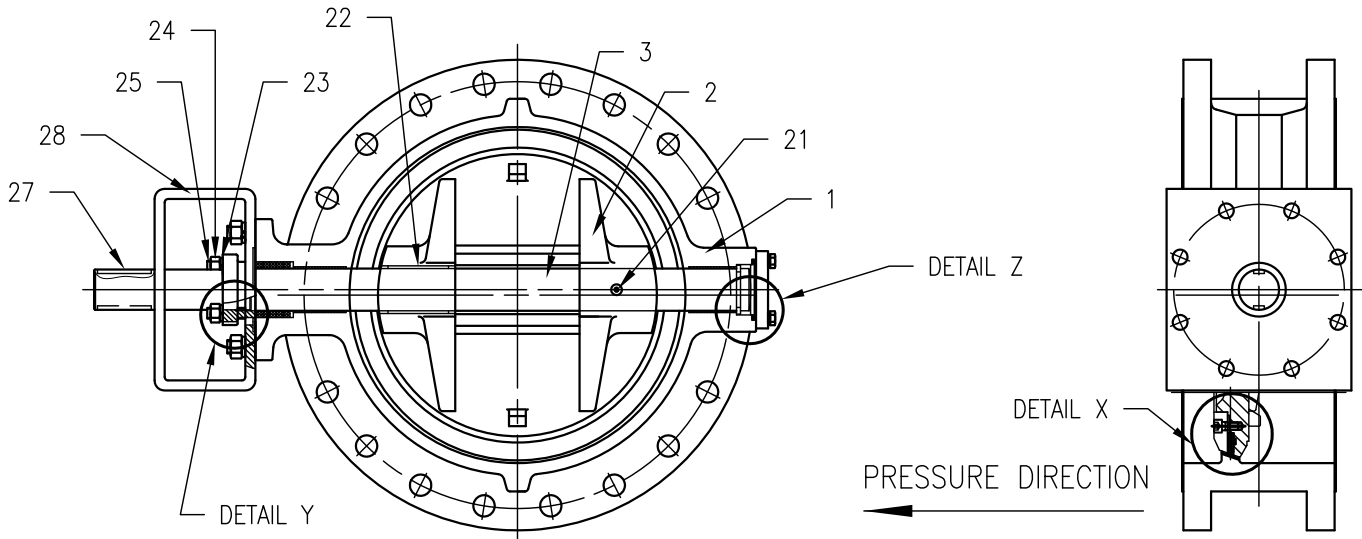
DIMENSIONS IN MILLIMETERS																		WEIGHT (KG)
DN	L	S	D	D1	D2	b	f	N-ø	A	B	C	E	R	F	O	P	Q	
1000	410	205	1175	1120	1080	26	2	28-ø30	650	720	237	245	325	575	285	260	250	1050
1200	470	235	1375	1320	1280	26	2	32-ø30	760	830	237	245	325	575	285	260	250	1330
1400	530	265	1575	1520	1480	26	2	36-ø30	880	950	277	245	325	575	285	260	250	1885
1600	600	300	1790	1730	1690	26	2	40-ø30	1020	1065	297	310	385	635	285	260	250	2575
1800	670	335	1990	1930	1890	26	2	44-ø30	1130	1175	337	310	385	635	285	260	250	3345
2000	540	270	2190	2130	2090	26	2	48-ø30	1230	1275	354	410	480	730	285	260	250	4700
2200	590	295	2405	2340	2295	28	2	52-ø33	1365	1400	354	410	480	730	285	260	250	5515
2400	650	325	2605	2540	2495	28	2	56-ø33	1425	1545	354	410	480	730	285	260	250	6405
2600	700	335	2805	2740	2695	28	2	60-ø33	1655	1695	381	520	567	817	285	260	250	8450
2800	760	380	3030	2960	2910	30	2	64-ø33	1755	1805	381	520	567	817	285	260	250	9825
3000	810	405	3230	3160	3110	30	2	68-ø33	1865	1910	381	520	567	817	285	260	250	11515



L = FACE TO FACE  
 ALL DIMENSIONS IN MM  
 FURTHER DESIGN ON REQUEST

METRIC DIMENSIONS AND WEIGHTS

DIMENSIONS IN MILLIMETERS																	WEIGHT (KG)
DN	L	S	DE	Se	$a'$	le	f	A	B	C	E	R	F	O	P	Q	
1000	550	275	1016	10	37.5°	30	2	650	720	237	245	325	575	285	260	250	1180
1200	630	315	1219	11	37.5°	30	2	760	830	237	245	325	575	285	260	250	1550
1400	710	355	1422	11	37.5°	30	2	880	950	277	245	325	575	285	260	250	1965
1600	790	395	1626	11	37.5°	30	2	1020	1065	297	310	385	635	285	260	250	2750
1800	870	435	1829	14	37.5°	30	2	1130	1175	337	310	385	635	285	260	250	3530
2000	950	475	2032	14	37.5°	30	2	1230	1275	354	410	480	730	285	260	250	5100
2200	1000	500	2235	14	37.5°	30	2	1365	1400	354	410	480	730	285	260	250	5680
2400	1100	550	2458	14	37.5°	30	2	1425	1545	354	410	480	730	285	260	250	7180
2600	1200	600	2620	14	37.5°	30	2	1655	1695	381	520	567	817	285	260	250	9700
2800	1300	650	2860	15	37.5°	30	2	1755	1805	381	520	567	817	285	260	250	10900
3000	1400	700	3020	16	37.5°	30	2	1865	1910	381	520	567	817	285	260	250	12680



NO.	PART NAME	MATERIAL	DIN-MAT-NO.
1	VALVE BODY	A216 WCB	1.0619
1.1	BODY SEAT	STL.21	
2	DISC	A216 WCB	1.0619
3	SHAFT	A276 TP 420	1.4021
4	DISC SEAL	A276 TP 304+GRAPH.	1.4301+GRAPH.
5	SEAL GASKET	A276 TP 304+GRAPH.	1.4301+GRAPH.
6	CLAMP	A105	1.0050
7	HEX SOCKET SCREW	A193 B7	
8	HEX HEAD SCREW	A193 B7	
9	LOCK WASHER	AISI 1566	
10	BOTTOM COVER	A105	1.0050
11	SEAL GASKET	A276 TP 304+GRAPH.	1.4301+GRAPH.
12	BISECT RING	A276 TP 420	
13	BEARING BUSHING	SF-1	
14	BEARING BUSHING	SF-1	
15	PACKING SEAT	A276 TP 304	1.4301
16	PACKING	FLEXIBLE GRAPHITE	
17	PACKING GLAND	A216 WCB	1.0619
18	LOCK WASHER	AISI 1566	
19	NUT	A194 2H	
20	ALL THREAD STUD	A193 B7	
21	PIN	A276 TP 420	1.4021
22	KEY	SA29 1045	1.0503.07
23	LOCK WASHER	AISI 1566	
24	NUT	A194 2H	
25	ALL THREAD STUD	A193 B7	
26	YOKE	A216 WCB	1.0619
27	KEY	SA29 1045	1.0503.07



Process Development & Control, LLC  
www.pdcvalve.com

# Cv FLOW COEFFICIENT

## FLOW DATA

### Cv AT 90°-FULLY OPEN VALVE

CLASS	Size (NPS/DN)																	
	3	4	5	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48
	80	100	125	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200
150	152	248	390	912	1972	3127	4551	6185	8402	10969	14470	21472	29175	36177	52500	66870	71520	78189
300	152	248	390	683	1238	1972	2953	3851	5332	6885	8630	13200	19260	22600	40730	48430	57530	72005
600		227	365	591	1229	1476	2159	2926	4115	5683	7339	9782						

## Cv CURVE

