



GREEN CONTROL

Creative Solutions



TRIPLE OFFSET BUTTERFLY

TF SERIES

Sizes - 3" - 48"

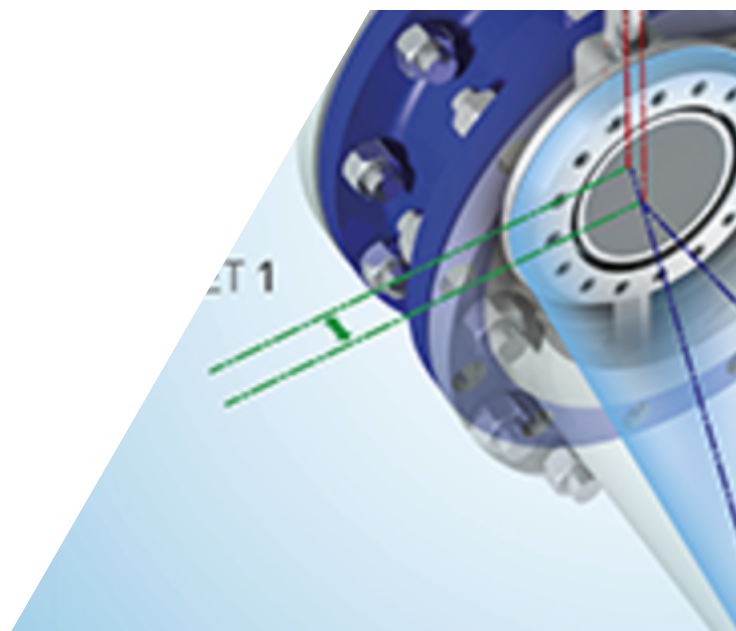
ASME 150#-300#

TRIPLE ECCENTRIC BUTTERFLY CONTROL VALVES

NOMINAL SIZES: 3" TO 48"

PRESSURE RATING: ASME 150# TO 300#

TEMPERATURE: 196°C TO 600°C



Series TF Triple Offset Butterfly Control Valve is designed & developed to use in Process engineering and industrial application where Class IV or Class V or Class VI leakage rate is required at closed Position.

- **Valve with Metallic Seat**
- **Valve with PTFE Seal**
- **Valve with Metallic Seal + Graphite Laminated Seal**

FEATURES

- Triple Eccentric design
- Uninterrupted 360° contact
- Excellent flow control rangeability
- Disc design for minimum dynamic torque
- ANSI/FCI 70-2 leakage rate up to Class VI
- Metallic / Laminated Graphite / PTFE seal
- Modified Equal percentage Inherent flow characteristic
- NACE MR0175 compliance
- Low maintenance

SPECIFICATIONS

TRIPLE ECCENTRIC BUTTERFLY CONTROL VALVES



BODY STYLES

Wafer, lugged and double flanged.



DISC ROTATION

Clockwise to close (when viewing from the drive/actuation side) through 90 degree of disc rotation



SHAFT PACKING

PTFE up to 232oc
Graphite for high temperature



END CONNECTIONS

Suitable for all standard flanges



BEARINGS

PTFE Bearing for moderate pressure drop applications. Graphite/Metallic bearing for high temperature/high pressure drop applications.



HIGH/LOW TEMPERATURE CAPABILITY

Valves operate up to +550o C / -196oC with the appropriate body/trim material combination. Hard facing can be provided for cavitating/ erosive/ corrosive applications.



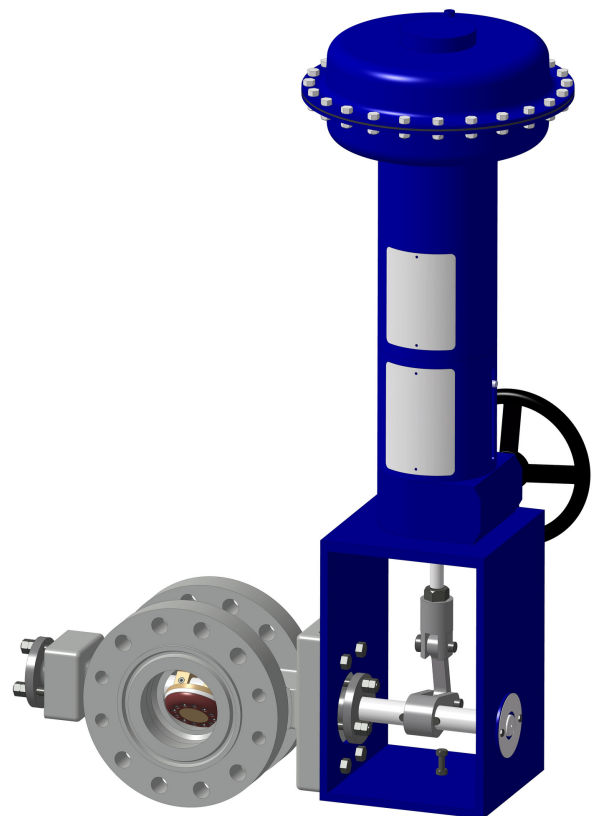
ACTUATION OPTION

Pneumatic spring return diaphragm actuator as standard. Other actuators Viz: Pneumatic piston quarter turn, Electric, Electro-hydraulic, Manual gear box etc.



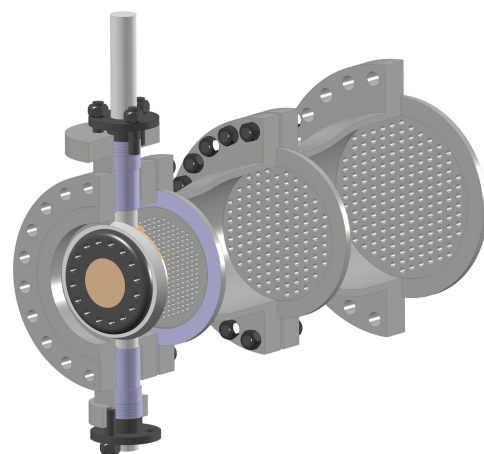
ACTUATION/ VALVE ACTION

With a spring diaphragm or piston rotary actuator the valve action is field reversible. Double acting piston actuators are required for operation of valves of large size and/or high pressure drops. Double acting piston actuators are available with an air volume tank and necessary trip/check valves to provide the required air fail position



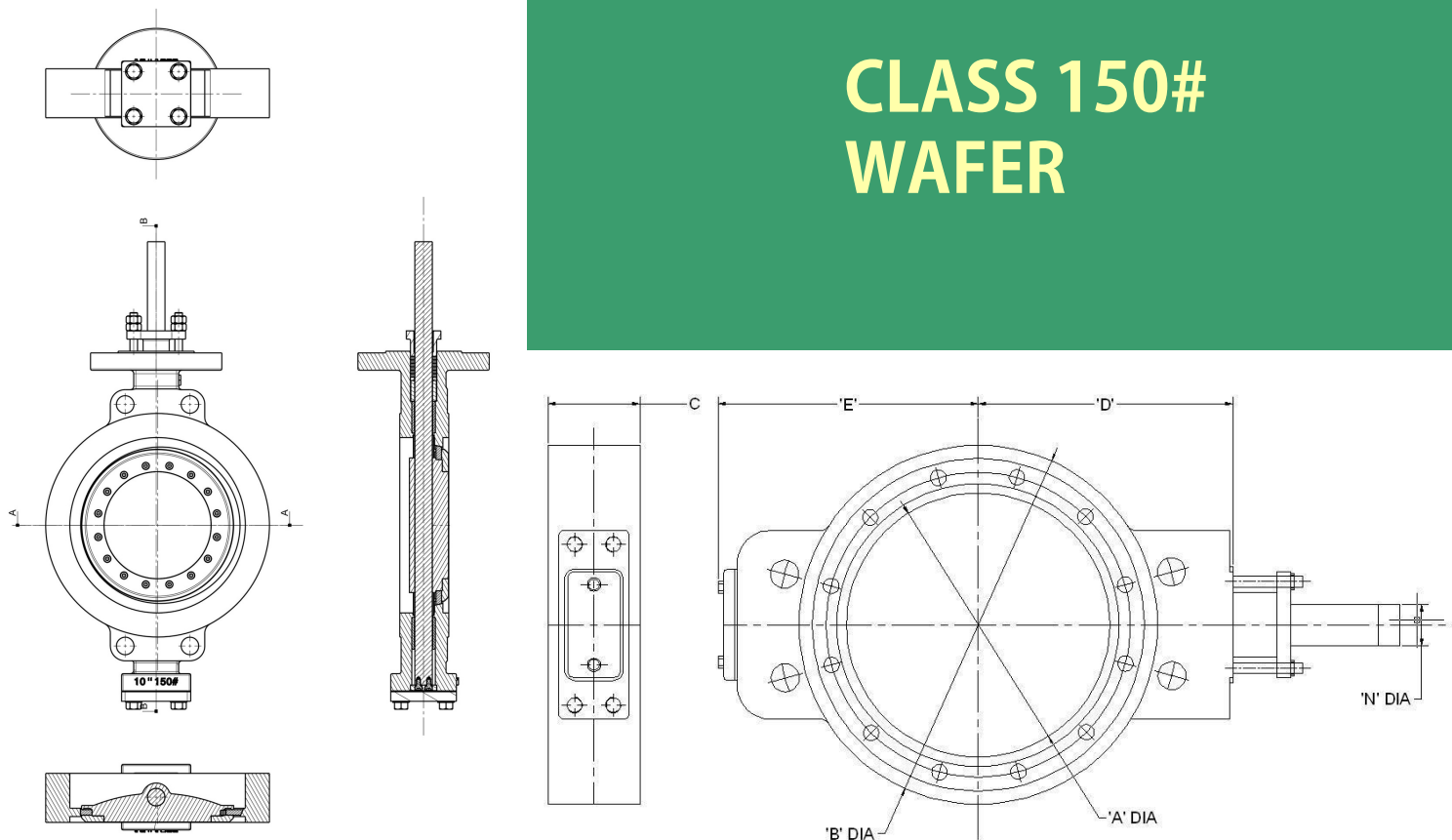
CV VALUES FOR CLASS 150 AND CLASS 300

NOMINAL SIZE		CLASS 150								
		OPENING ANGLE								
NPS	DN	10°	20°	30°	40°	50°	60°	70°	80°	90°
3	80	2	9	16	24	38	55	74	91	100
4	100	4	20	35	53	84	121	163	200	220
6	150	13	57	101	151	239	347	466	573	630
8	200	30	136	242	362	574	831	1117	1374	1510
10	250	49	222	395	593	939	1358	1828	2248	2470
12	300	80	362	643	965	1528	2211	2975	3658	4020
14	350	104	468	832	1248	1976	2860	3848	4732	5200
16	400	137	618	1099	1649	2611	3779	5084	6252	6870
18	450	185	833	1482	2222	3519	5093	6852	8427	9260
20	500	234	1055	1875	2812	4454	6446	8673	10665	11720
24	600	372	1676	2979	4469	7076	10241	13779	16944	18620
28	700	514	2312	4110	6166	9762	14130	19011	23378	25690
30	750	610	2746	4882	7322	11594	16781	22577	27764	30510
36	900	893	4016	7141	10711	16959	24547	33026	40613	44630
40	1000	1171	5269	9366	14050	22245	32197	43320	53271	58540



NOMINAL SIZE		CLASS 300								
		OPENING ANGLE								
NPS	DN	10°	20°	30°	40°	50°	60°	70°	80°	90°
3	80	2	8	14	21	34	50	67	82	90
4	100	4	18	32	48	76	110	148	182	200
6	150	12	54	96	144	228	330	444	546	600
8	200	25	115	204	306	484	700	942	1158	1273
10	250	46	207	367	551	872	1262	1698	2088	2295
12	300	72	322	573	859	1360	1969	2649	3258	3580
14	350	96	432	768	1152	1824	2640	3553	4369	4801
16	400	129	580	1031	1546	2448	3543	4767	5862	6442
18	450	172	776	1380	2069	3276	4742	6380	7846	8622
20	500	229	1032	1834	2751	4356	6305	8483	10431	11463
24	600	331	1489	2647	3971	6287	9099	12243	15056	16545
28	700	481	2165	3850	5775	9143	13234	17805	21895	24061
30	750	595	2678	4760	7140	11305	16363	22015	27073	29750
36	900	880	3959	7039	10558	16717	24196	32555	40034	43993

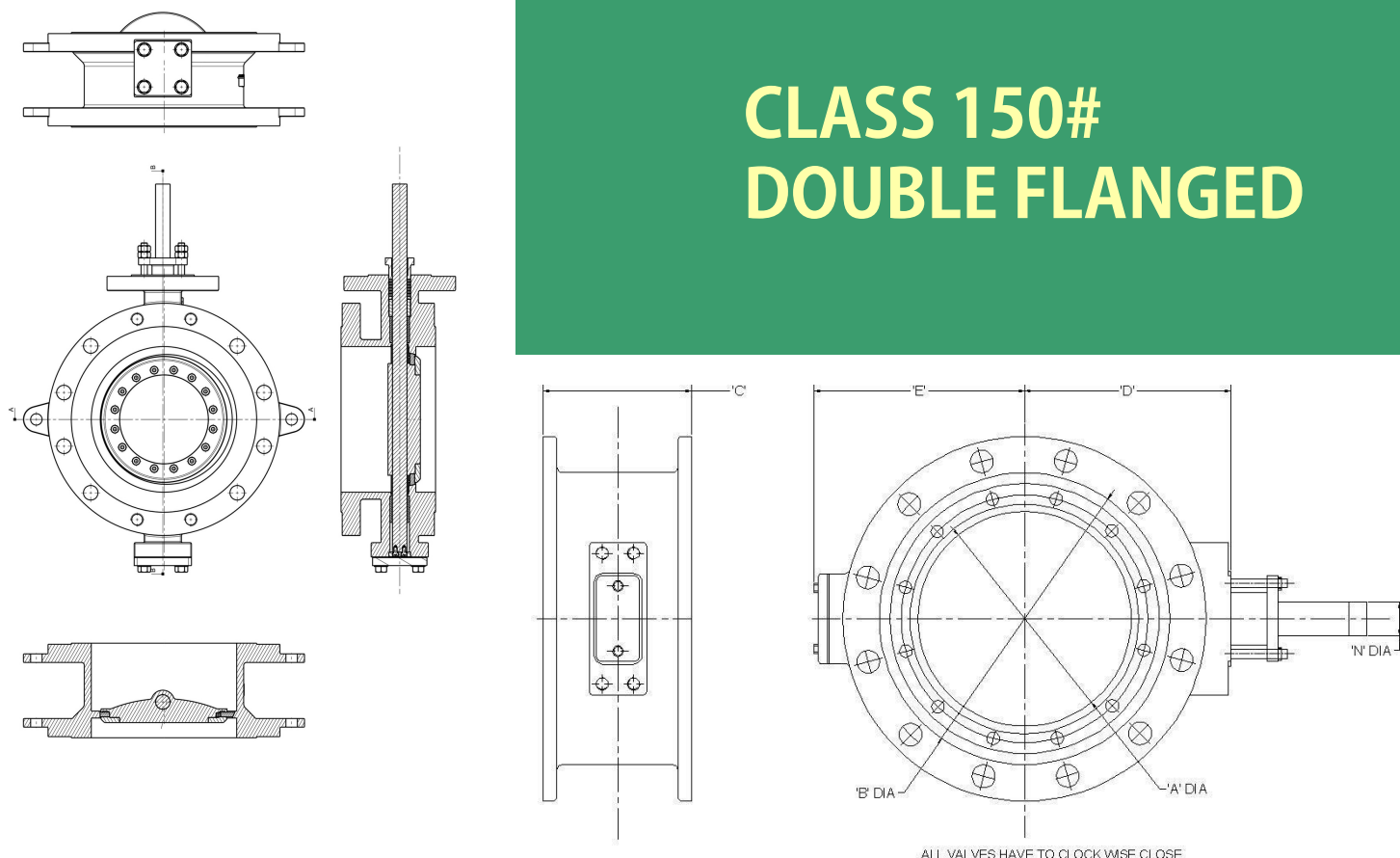
CLASS 150# WAFER



ALL VALVES HAVE TO CLOCK WISE CLOSE

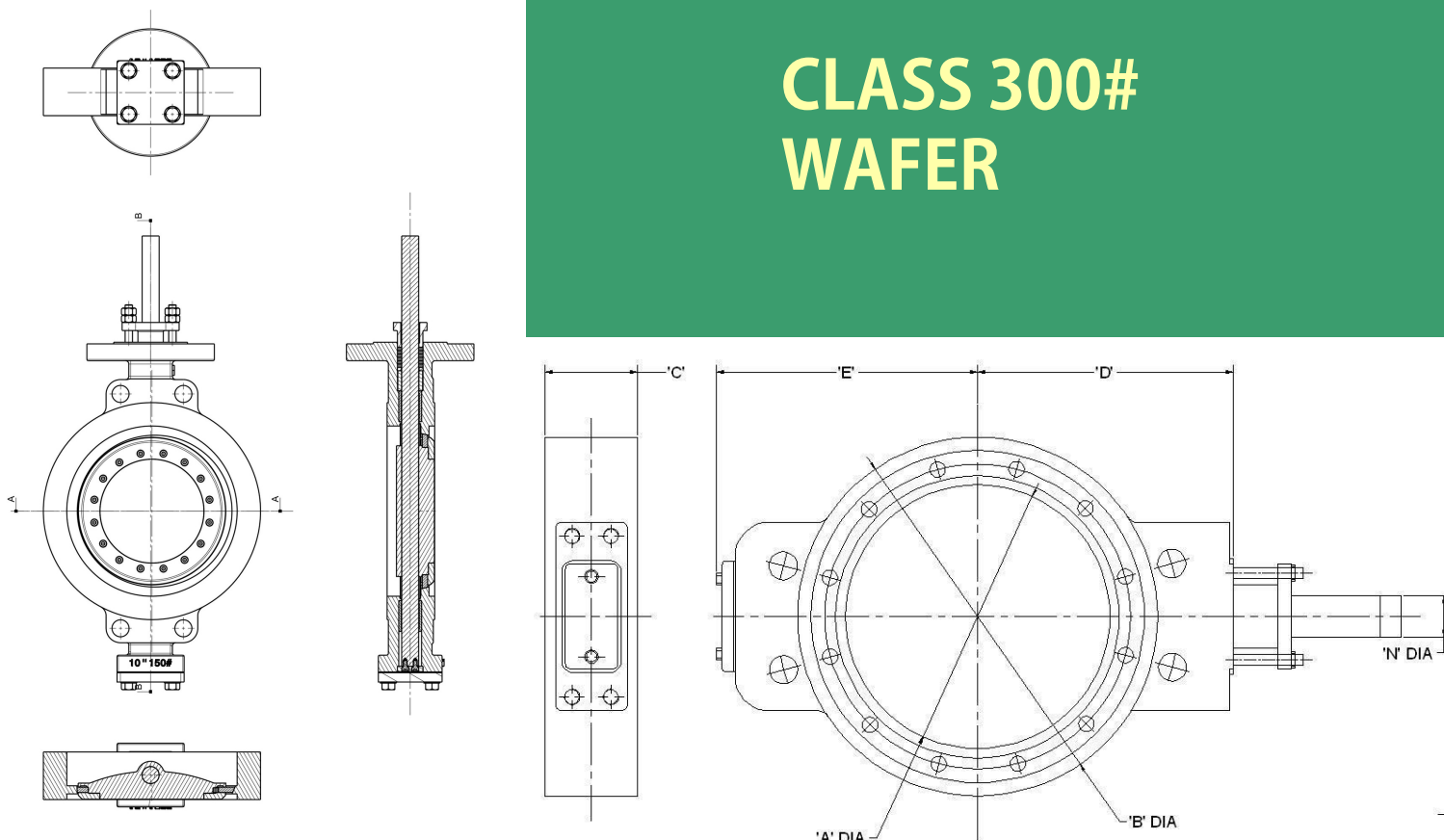
Valve Size		Dimensions(mm)					
in	mm	A	B	C	D	E	N
3	75	68	130	48	125	120	15.9
4	100	87	160	54	160	150	19.1
6	150	138	215	57	200	190	19.1
8	200	188	270	64	235	220	25.4
10	250	238	324	71	265	250	25.4
12	300	287	382	81	305	290	31.8
14	350	328	426	92	330	320	38.1
16	400	365	474	102	360	350	38.1
18	450	415	535	114	400	375	44.5
20	500	465	590	127	450	415	50.8
24	600	563	695	154	480	450	57.2
28	700	692	805	165	535	515	63.5
30	750	740	860	165	610	580	76.2
32	800	790	915	190	620	590	76.2
36	900	890	1022	200	670	640	76.2
40	1000	995	1085	216	730	700	82.6
48	1200	1195	1301	276	840	800	82.6

CLASS 150# DOUBLE FLANGED



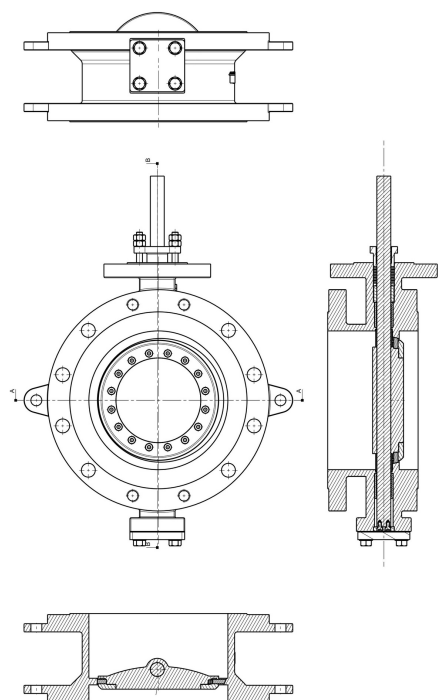
Valve Size		Dimensions(mm)					
in	mm	A	B	C	D	E	N
3	75	68	130	114	121	121	15.9
4	100	87	160	127	145	145	19.1
6	150	138	215	140	185	180	19.1
8	200	188	270	152	200	205	25.4
10	250	238	324	165	230	240	25.4
12	300	287	382	178	270	270	31.8
14	350	328	426	190	308	295	38.1
16	400	365	474	216	340	335	38.1
18	450	415	535	222	360	365	44.5
20	500	465	590	229	395	390	50.8
24	600	563	695	267	480	460	57.2
28	700	692	805	292	555	530	63.5
30	750	740	860	318	570	540	76.2
32	800	790	915	318	585	560	76.2
36	900	890	1022	330	655	630	76.2
40	1000	995	1085	410	730	700	82.6
48	1200	1195	1301	470	860	830	82.6

CLASS 300# WAFER

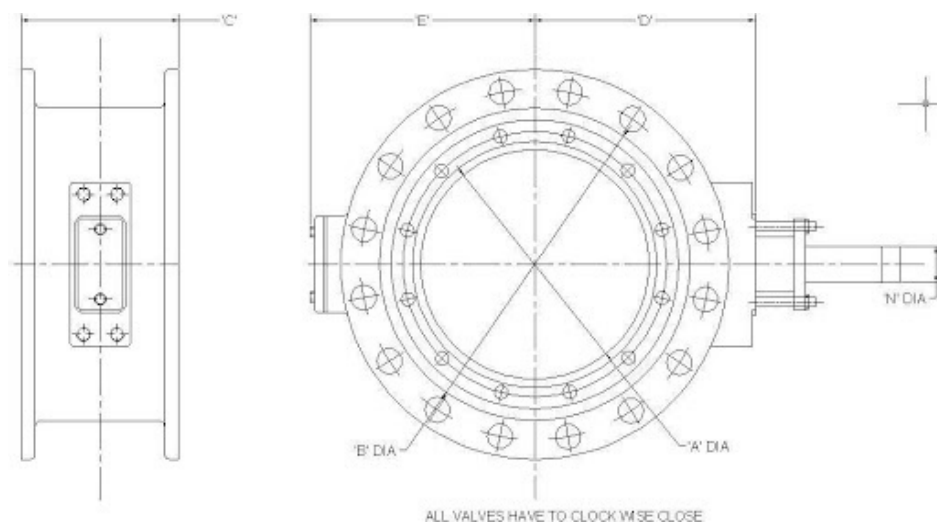


ALL VALVES HAVE TO CLOCK WISE CLOSE

Valve Size		Dimensions(mm)					
in	mm	A	B	C	D	E	N
3	75	68	130	48	135	125	15.9
4	100	87	160	54	165	160	19.1
6	150	138	215	59	210	200	25.4
8	200	188	270	73	240	235	31.8
10	250	238	324	83	270	260	31.8
12	300	287	382	92	310	300	38.1
14	350	328	426	117	335	325	50.8
16	400	365	474	133	370	365	50.8
18	450	415	535	149	410	400	57.2
20	500	465	590	159	460	450	69.9
24	600	563	695	181	540	520	76.2
28	700	692	805	209	610	580	82.6
30	750	740	860	241	630	600	82.6
32	800	790	915	241	660	630	82.6
36	900	890	1022	260	730	700	88.9
40	1000	995	1085	300	740	720	88.9
48	1200	1195	1301	320	860	820	88.9



CLASS 300 DOUBLE FLANGED



Valve Size		Dimensions(mm)					
in	mm	A	B	C	D	E	N
3	75	68	130	180	121	121	15.9
4	100	87	160	190	145	145	19.1
6	150	138	215	210	185	180	25.4
8	200	188	270	230	225	220	31.8
10	250	238	324	250	250	265	31.8
12	300	287	382	270	285	285	38.1
14	350	328	426	290	325	340	50.8
16	400	365	474	310	350	360	50.8
18	450	415	535	330	400	400	57.2
20	500	465	590	350	430	430	69.9
24	600	563	695	390	530	505	76.2
28	700	692	805	430	555	560	82.6
30	750	740	860	450	570	540	82.6
32	800	790	915	470	585	630	82.6
36	900	890	1022	510	655	680	88.9
40	1000	995	1085	550	730	780	88.9
48	1200	1195	1301	630	860	830	88.9



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