REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE



Size :	DN 32 to 1400 mm
Ends :	Between flanges PN10/16 and Class 150 (PN20)
Min Temperature :	- 10°C
Max Temperature :	+ 130°C
Max Pressure :	16 Bars up to DN300
Specifications :	Long neck for isolation Wafer type Full crossing stem EPDM High Temperature seat ISO 5211 mounting pad
Materials :	Ductile iron body EN GJS 500-7

*the installation defects and wear defects are not covered by the guarantee

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SPECIFICATIONS :

- Long neck for isolation
- ISO 5211 mounting pad
- Wafer type
- Between flanges PN10/16 from DN32/40 to 400 and Class 150 (PN20) from DN40 to 400 (over on request)
- Betwwen flanges PN10 from DN450 to DN 1400
- Full crossing stem
- Removable EPDM H.T. seat
- 9 positions lever with locking device up to DN200 , stop in all positions but non lockable from DN250 to 300
- Stainless steel disc
- Rilsan coated body color RAL 5024 , 250-300 microns thickness
- Stem extension 75 mm length (option)
- Square lever 30x30 mm for special key (option)

USE:

- Cold and hot water, sea water, alcohol, hydroxyd of soda, demineralized water, mercury, alcalins
- Min and max Temperature Ts : - 10°C to + 130°C
- Max Pressure Ps : 16 bars up to DN300, 10 bars over (see graph page 4)

RANGE :

- With lever from DN 32 to DN 300
- With gearbox IP65 (**Ref. 1197**) from DN 32 to DN 1400
- With chain gearbox IP65 (**Ref. 1194**) from DN 32 to DN 500
- On request, stem extension with special length (**Ref. 98665**)
- On request, stainless steel lever and bolting (**Ref. 9831250-9831264**)

FLANGES :

- Between flanges PN10/16 from DN32/40 to 400 and Class 150 (PN20) from DN40 to 400
- Between flanges PN10 from DN450 to DN 1400

TORQUE VALUES (in Nm with safety coefficient of 30 % included) at 16 Bars :

DN	32/40	50	65	80	100	125	150	200	250	300
Torque (Nm)	9	11	20	29	47	82	130	210	360	475

TORQUE VALUES (in Nm with safety coefficient of 30 % included) at 10 Bars :

DN	350	400	450	500	600	700	750	800	900	1000	1100	1200	1300	1400
Torque (Nm)	640	1176	1450	2150	2850	4600	5800	7400	11000	13600	14200	16400	17800	19200

FLOW COEFFICIENT Kvs (m3 / h) :

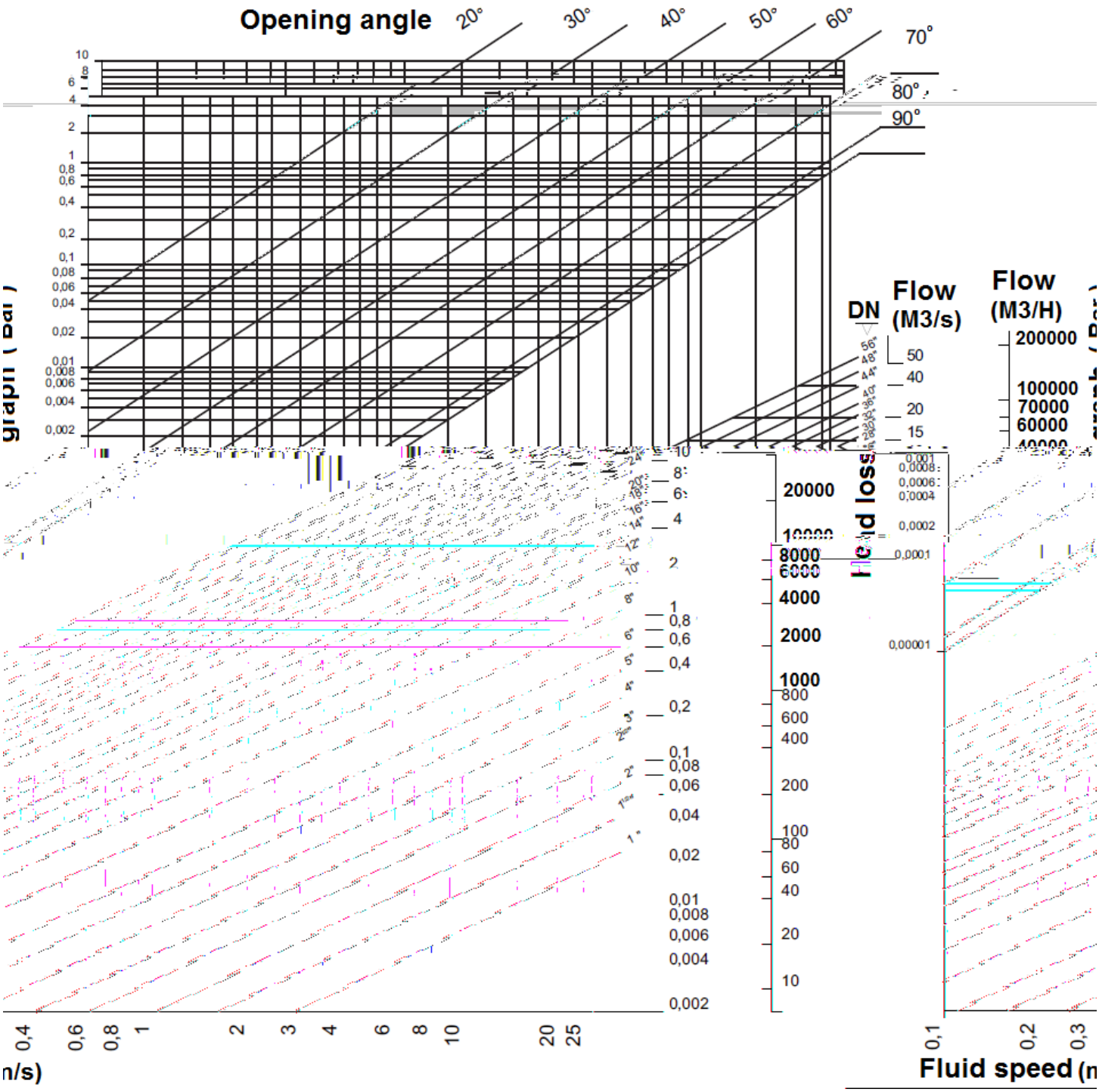
DN	32/40	50	65	80	100	125	150	200	250	300	350	400
Kvs (m3/h)	70	109	200	334	551	901	1427	2383	3825	5659	8177	10659

DN	450	500	600	700	800	900	1000	1200	1300	1400
Kvs (m3/h)	12562	16021	22737	32443	43263	53873	64407	97341	119770	129808

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

HEAD LOSS GRAPH :



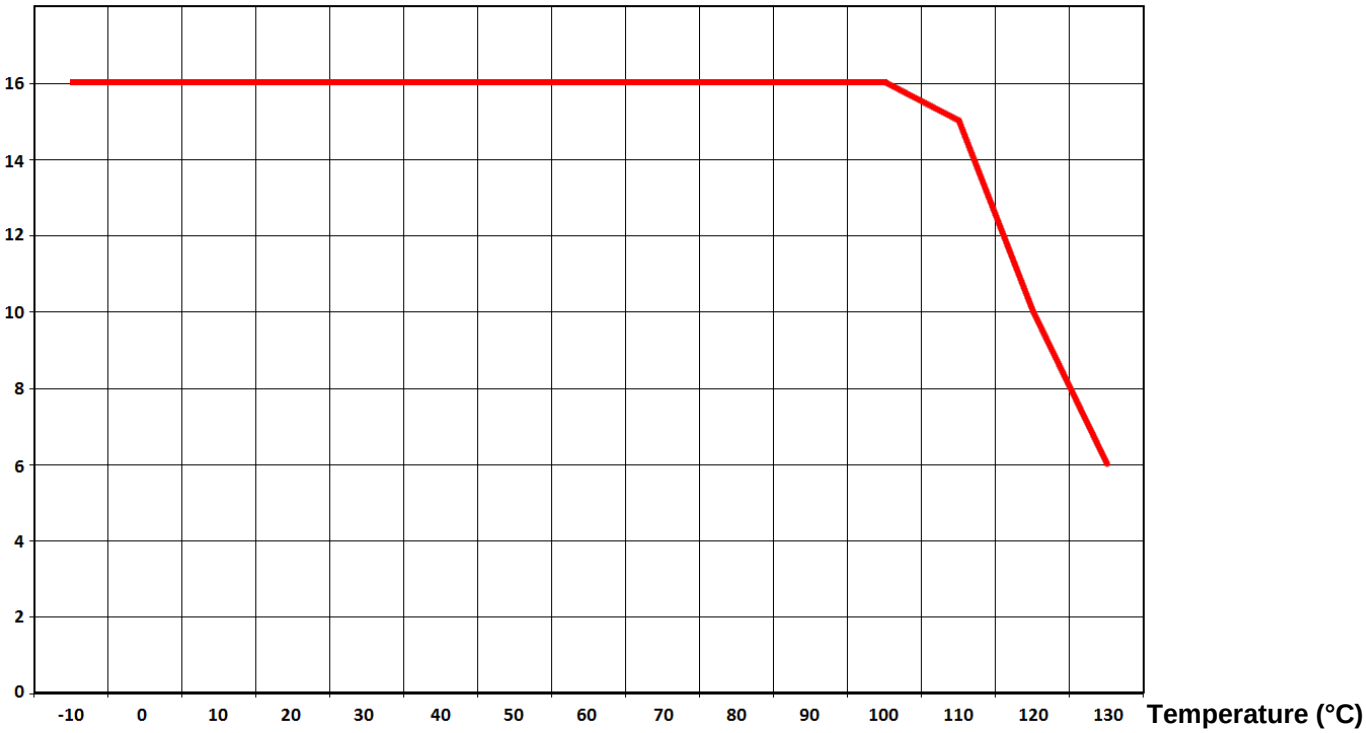
REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) :

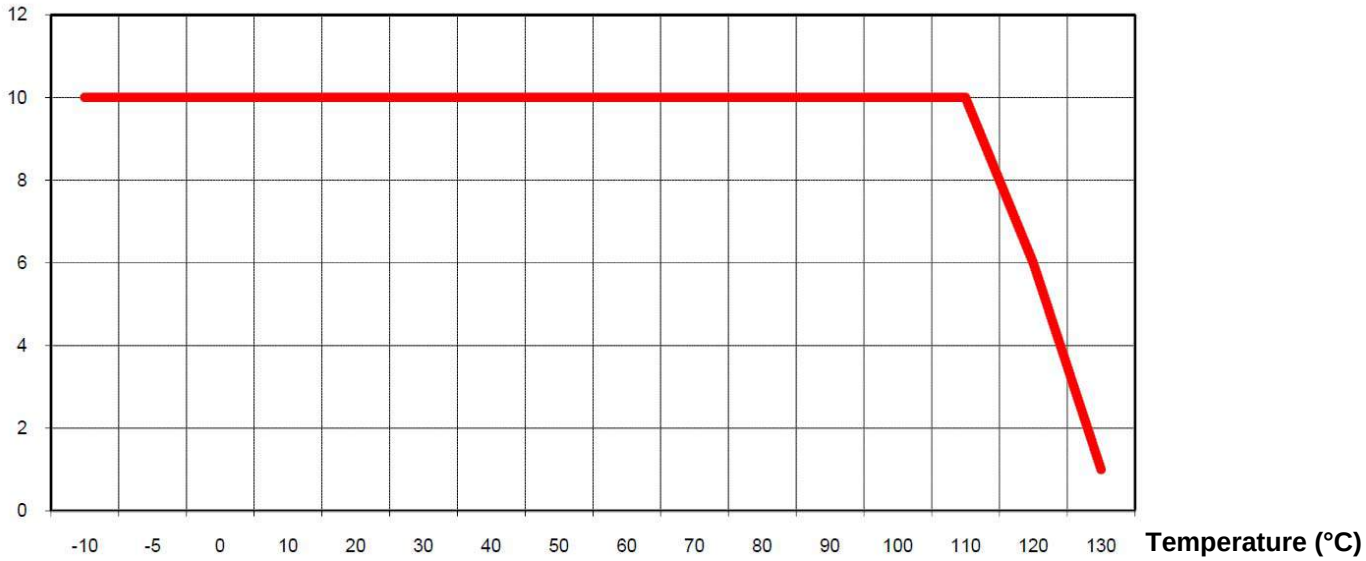
- ***DN40 – 300 :***

Pressure (Bar)



- ***DN350-1400 :***

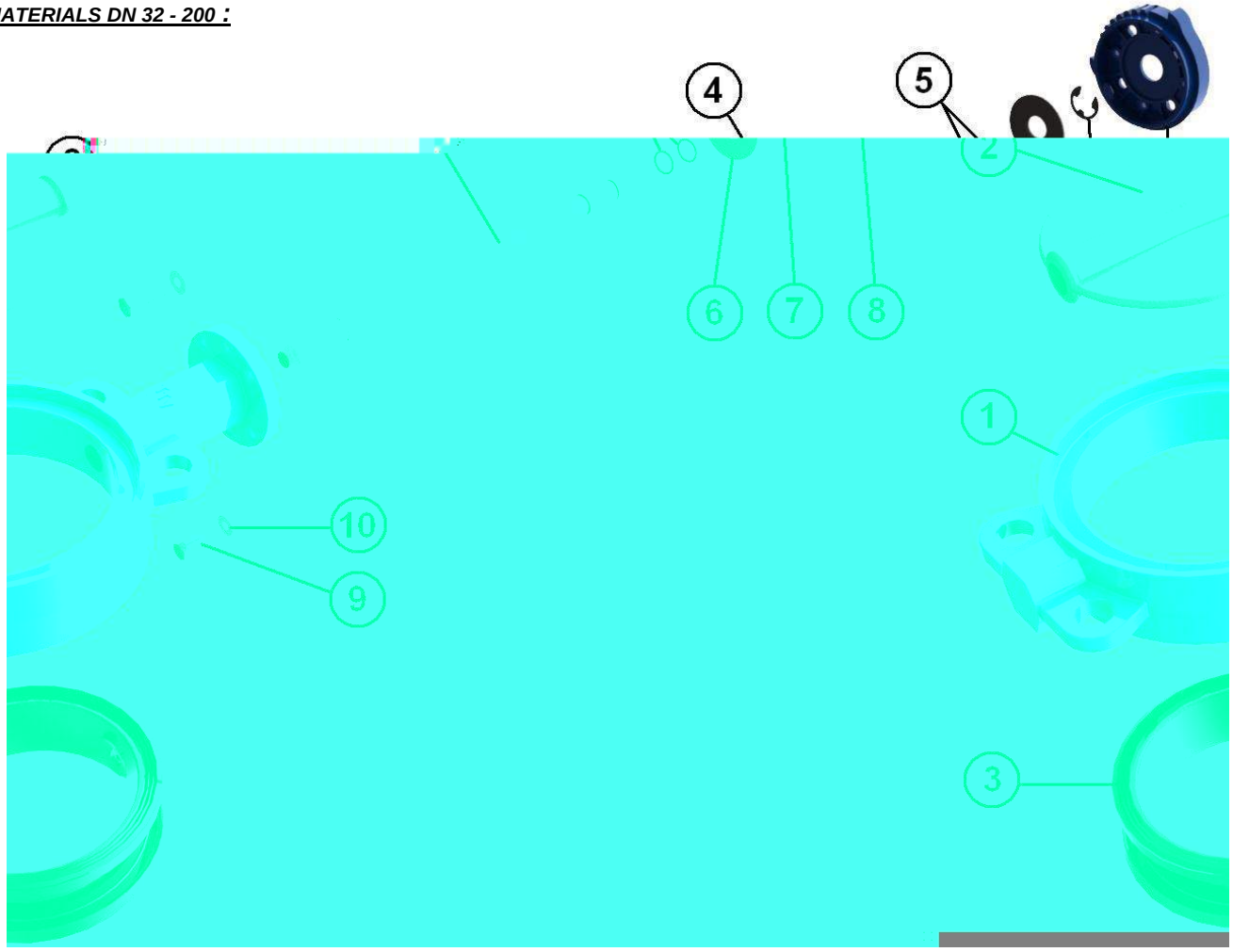
Pressure (Bar)



REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

MATERIALS DN 32 - 200 :

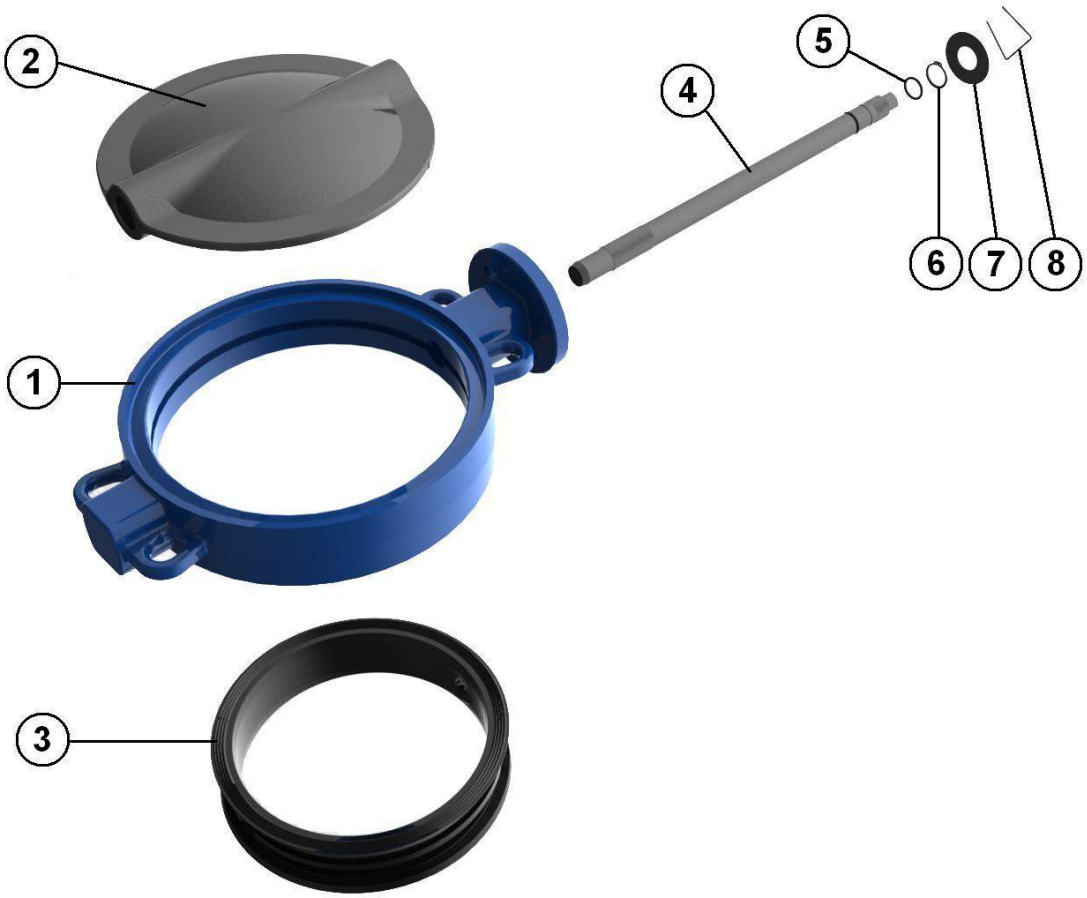


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7
2	Disc	ASTM A351 CF8M
3	Seat	EPDM H.T.
4	Stem	SS 304
5	O ring	EPDM H.T.
6	Ring	Steel
7	Circlips	Steel
8	Plate	Aluminium
9	Plate screw	5.6
10	Washer	Steel
	Lever	Aluminium ADC10 with epoxy painting 50µ thickness

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

MATERIALS DN 250 - 400 :

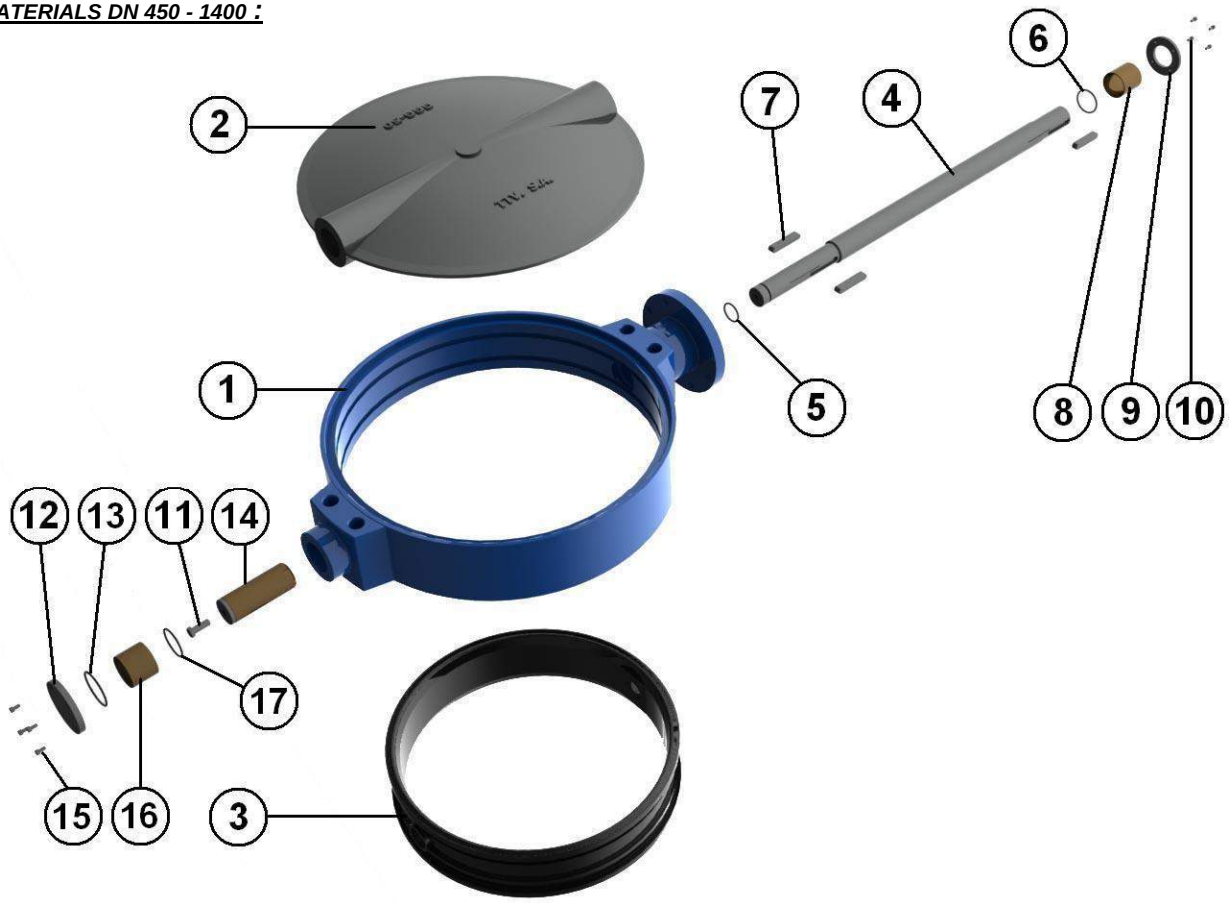


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7
2	Disc	ASTM A351 CF8M
3	Seat	EPDM H.T.
4	Stem	SS 304
5	O ring	EPDM H.T.
6	Circlips	Steel
7	Ring	Steel
8	Spring	Steel
Lever (up to DN300)		Ductile iron EN GJS-500-7 with epoxy painting 50µ thickness

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

MATERIALS DN 450 - 1400 :

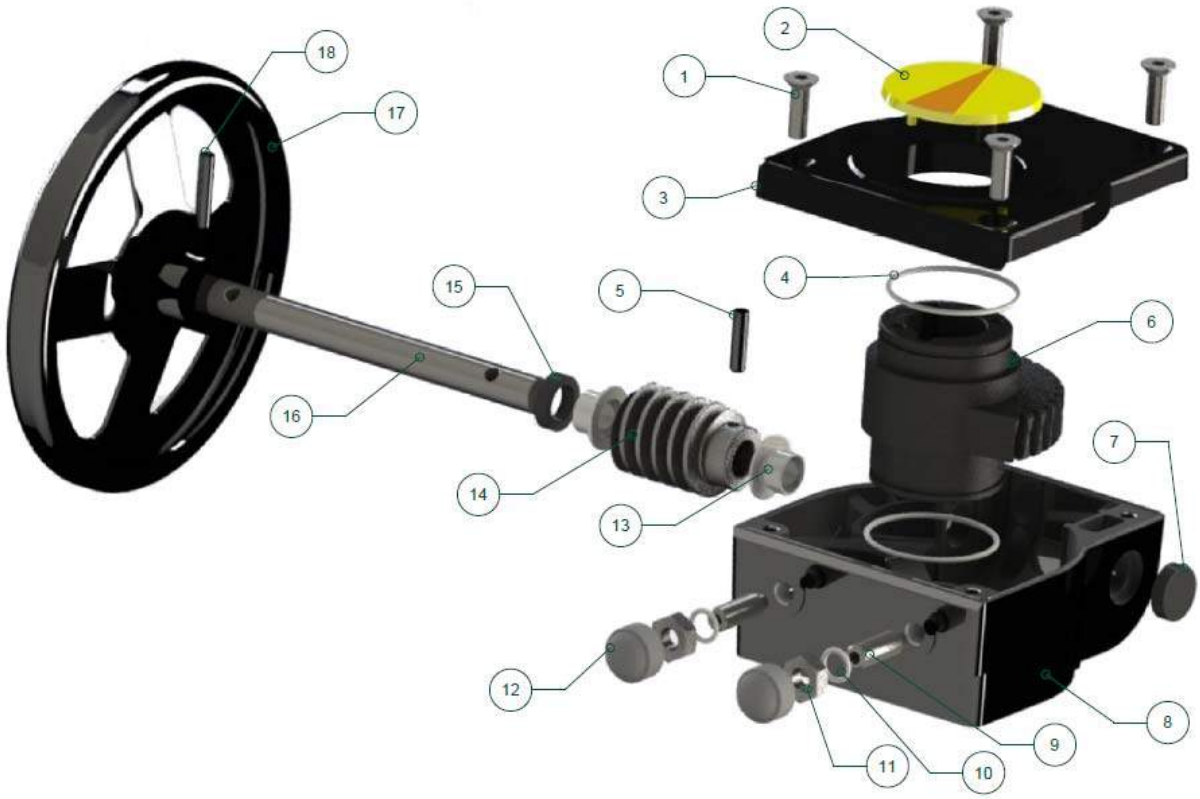


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7
2	Disc	ASTM A351 CF8M
3	Seat	EPDM H.T.
4	Stem	SS 304
5	O ring	EPDM H.T.
6	O ring	EPDM H.T.
7	Pin	ST – 60
8	Socket	BRONZE
9	Ring	F1110
10	Screw	5.6
11	Screw	5.6
12	Cap	F1110
13	O ring	EPDM H.T.
14	Socket	F1110
15	Screw	5.6
16	Socket	BRONZE
17	O ring	EPDM H.T.

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

GEARBOX MATERIALS REF. 1197 :



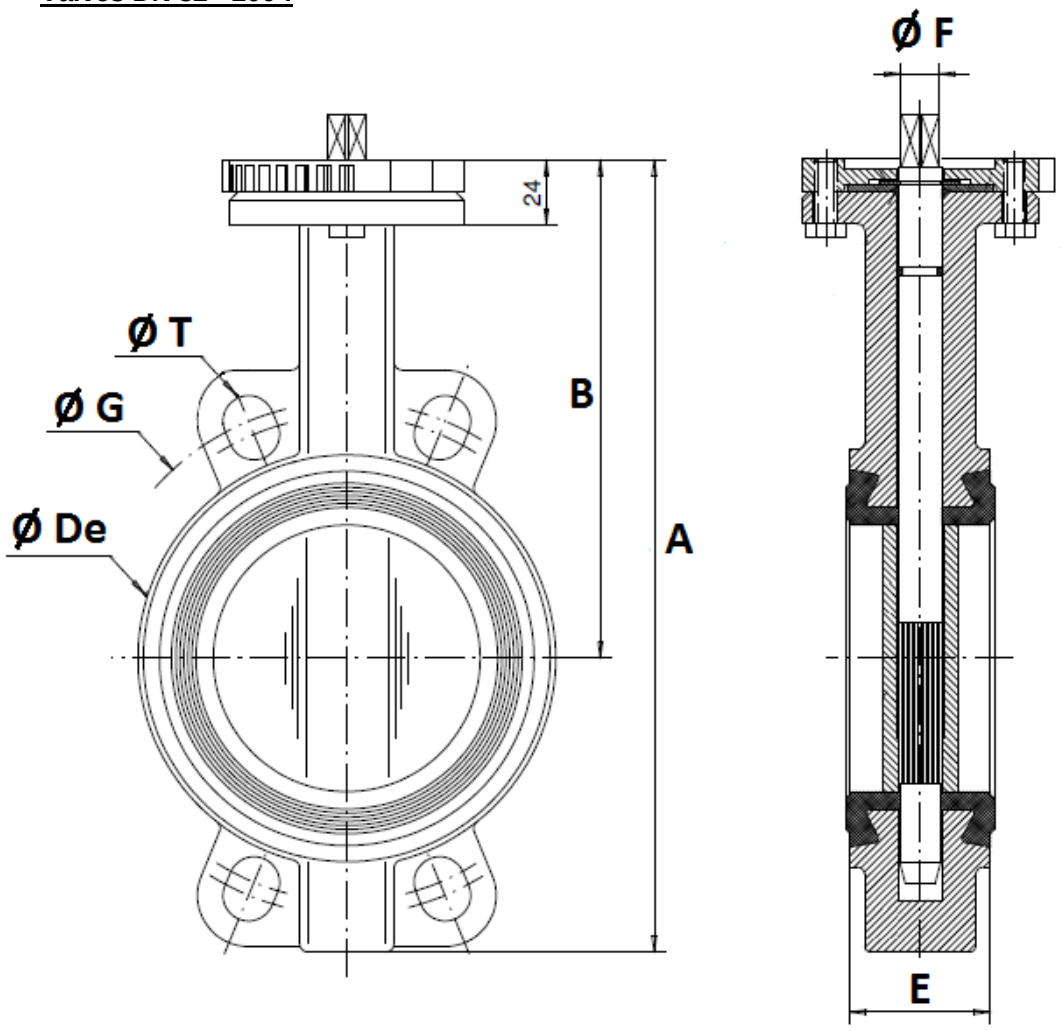
Item	Designation	Materials Ref. 1197
1	Screw	SS 304
2	Indicator	Polypropylene
3	Cover	Aluminium
4	O ring	NBR
5	Pin	Carbon steel
6	Quadrant	Ductile iron EN GJS-400-15
7	Gasket	NBR
8	Body	Aluminium
9	Adjusting bolt	Carbon steel
10	Washer	Galvanized steel
11	Nut	Galvanized steel
12	Cap	NBR 70
13	Bushing	Bronze
14	Worm	Carbon steel 45
15	Gasket	NBR
16	Shaft	Carbon steel 45
17	Handwheem	Carbon steel
18	Pin	Carbon steel

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SIZE PN16 (in mm) :

- **Valves DN 32 - 200 :**



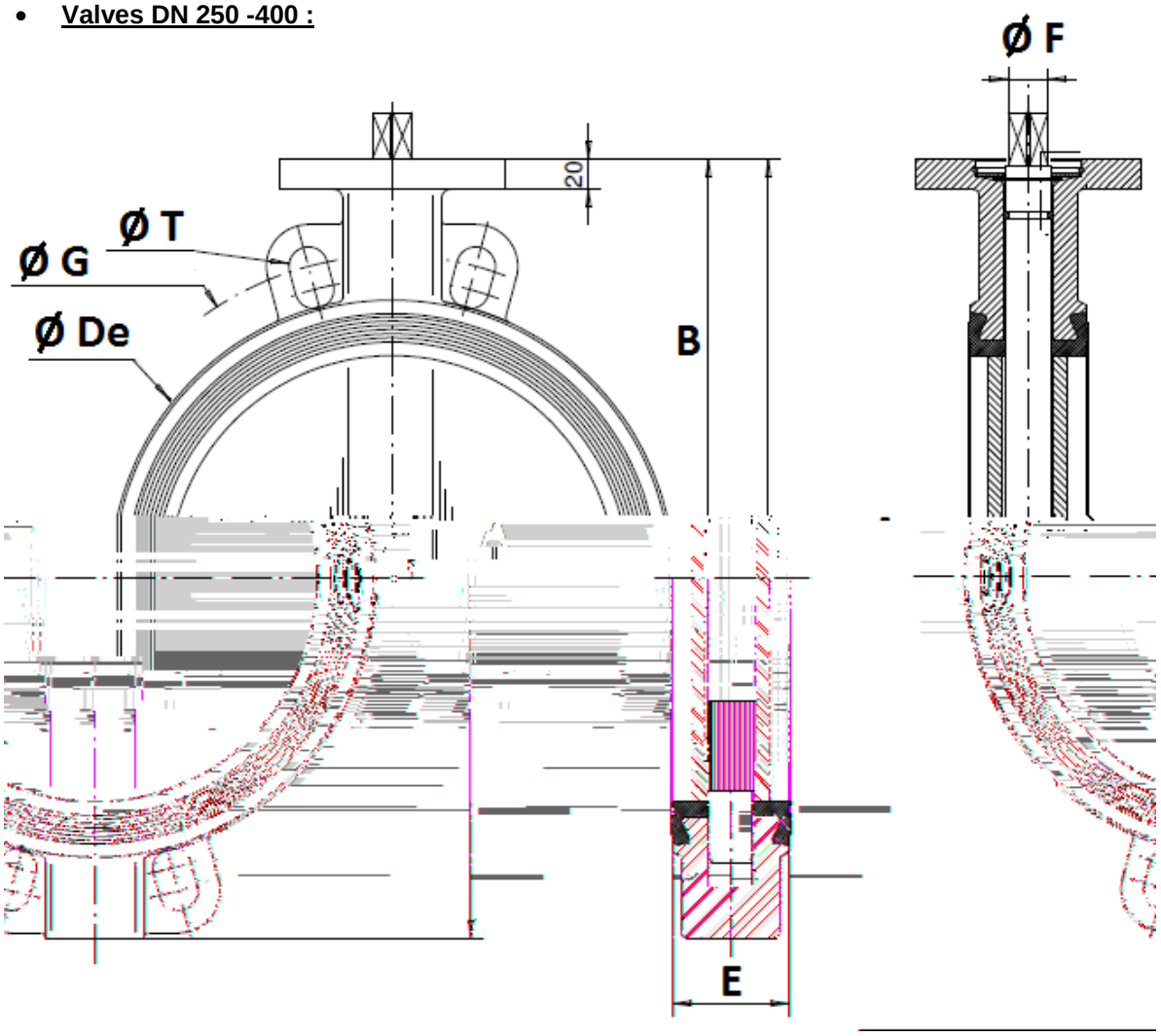
DN	32/40	50	65	80	100	125	150	200
A	206	228	248	265	298	331	349	430
B	140	156	161	169	187	206	215	255
Ø De	82	102	119	135	155	185	208	270
E	33	43	46	46	52	56	56	60
Ø F	9.5	9.5	12	14	14	17	17	21
Ø G	110	125	145	160	180	210	240	295
Ø T	18	18	18	18	18	18	23	23
Weight (Kg)	2.46	3.66	4.4	4.6	6	7.6	9.2	14.7

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SIZE PN10 (in mm) :

- **Valves DN 250 -400 :**



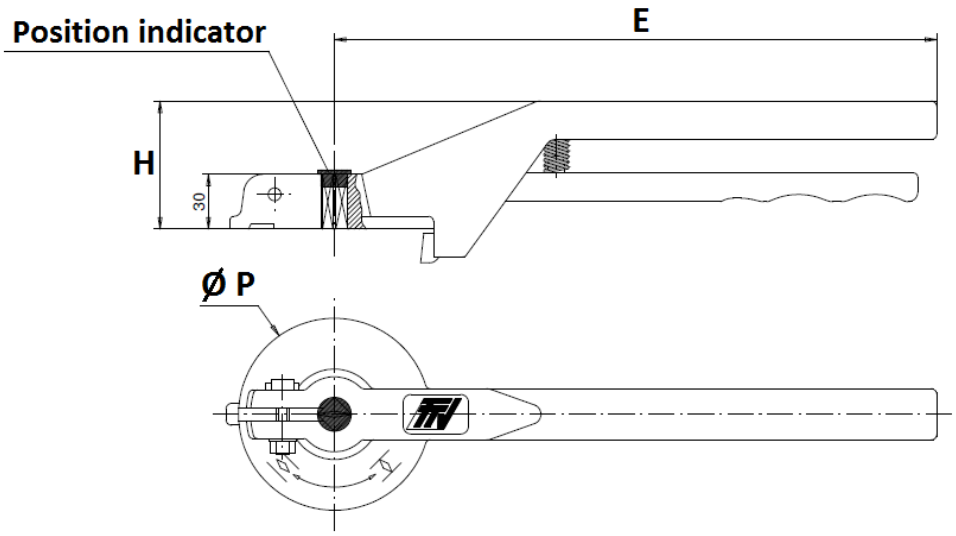
DN	250	300	350	400
A	461	524	570	644
B	248	280	300	340
Ø De	328	381	437	486
E	68	78	78	102
Ø F	23	26.5	26.5	33
Ø G	350	400	460	515
Ø T	23	23	23	27
Weight (Kg)	24.7	33	39	52

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

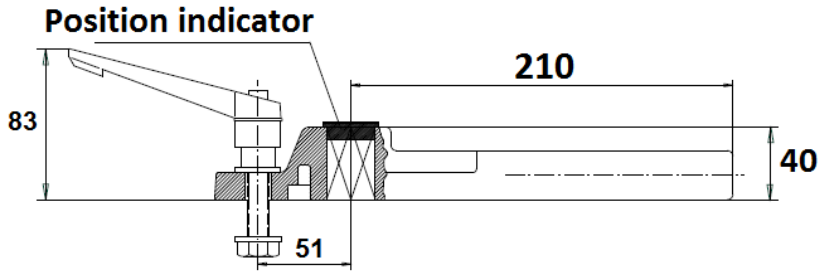
STANDARD LEVERS SIZE (in mm) :

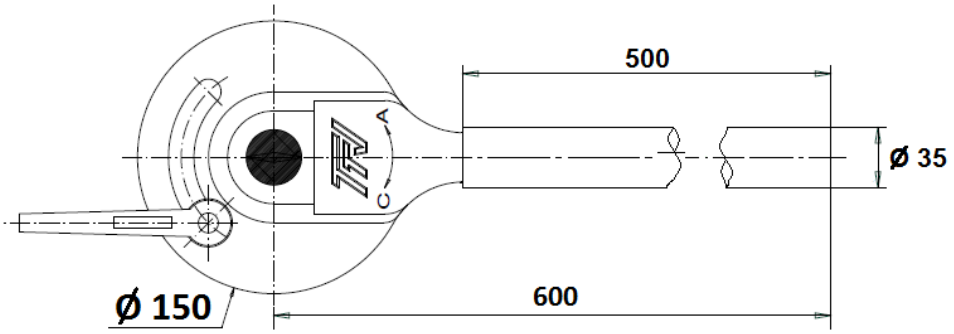
DN 32 – 200 :



DN	32-100	125-200
E	205	330
H	57	70
Ø P	88	105

DN 250 – 300 :



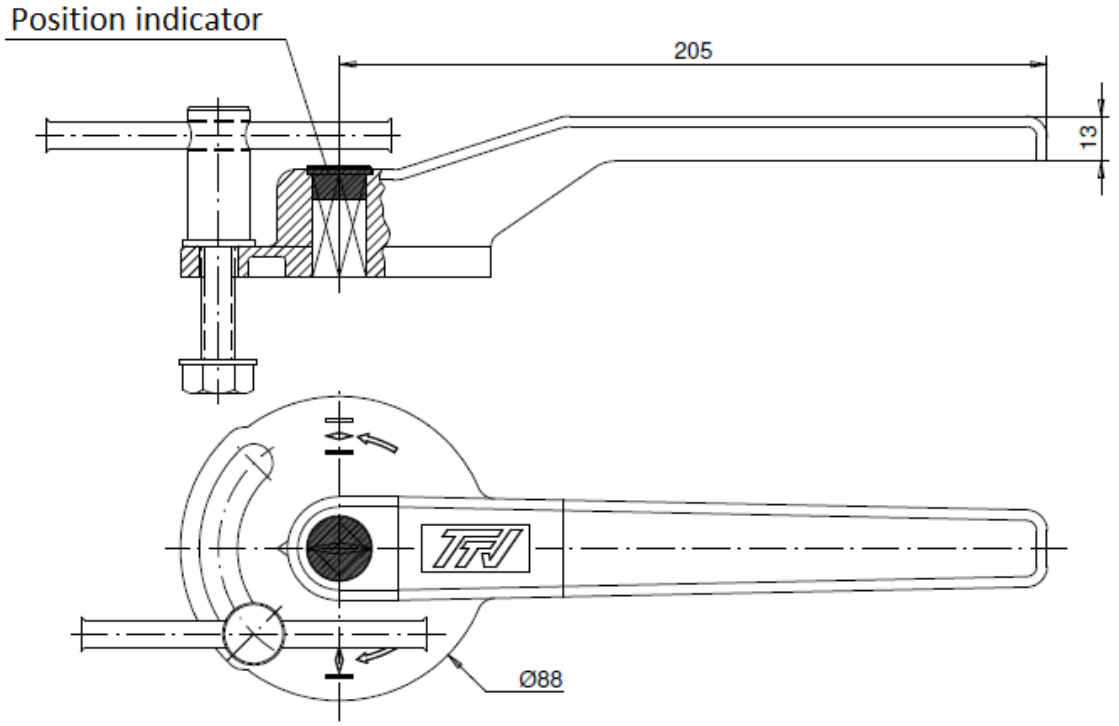


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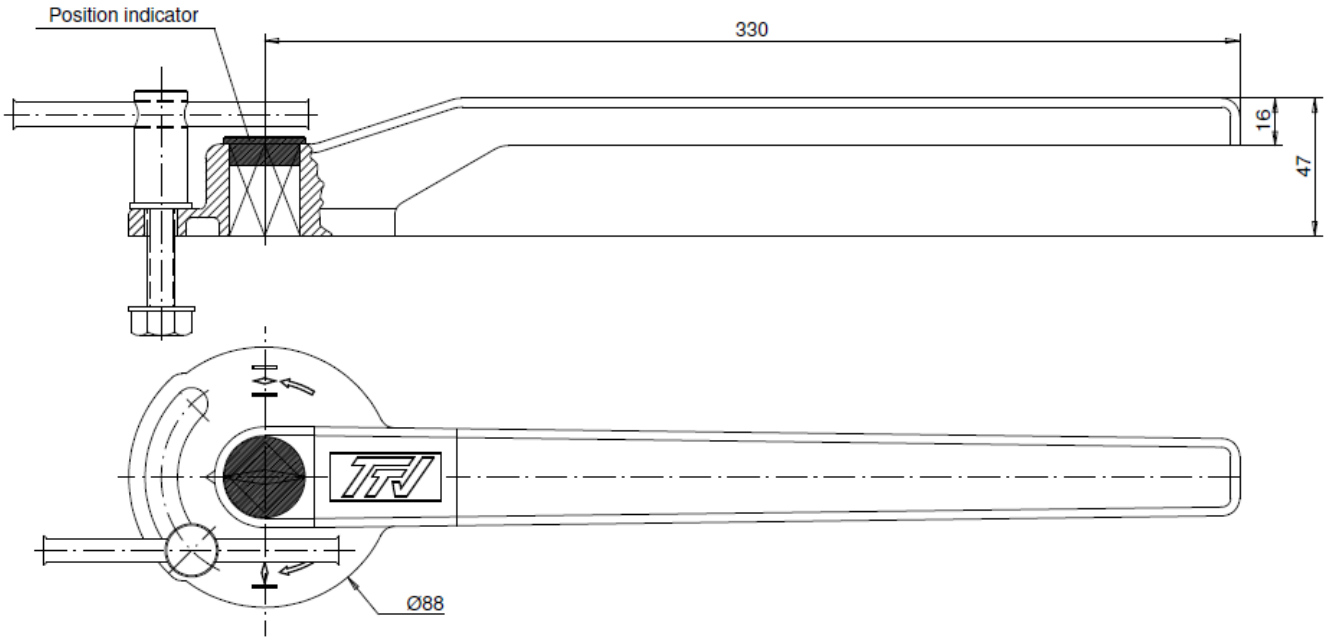
WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

ASTM A351 CF8M STAINLESS STEEL LEVERS SIZE (in mm) (ON REQUEST) :

DN 40 - 100



DN 125 - 200

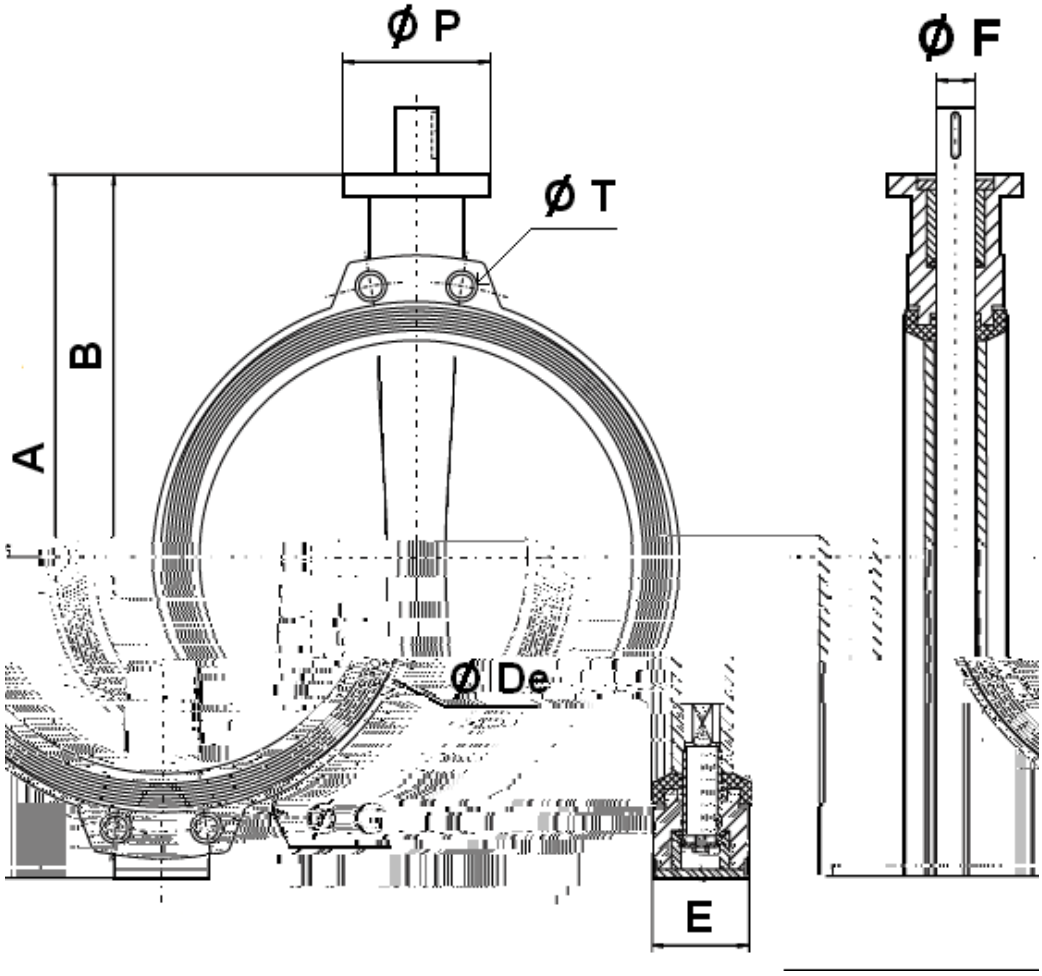


REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SIZE PN10 (in mm) :

- **Valves DN 450 - 1400 :**



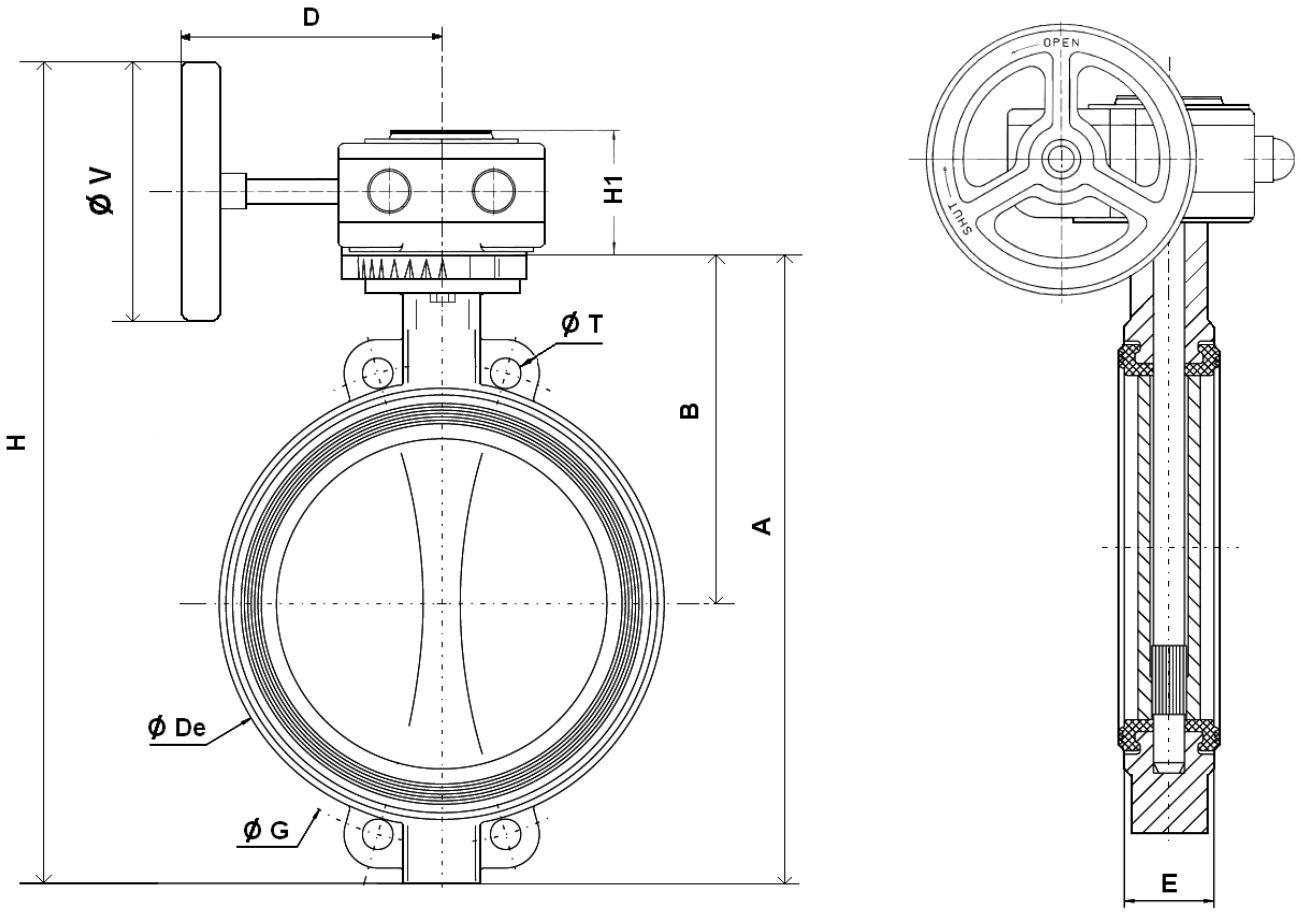
DN	450	500	600	700	750	800	900	1000	1100	1200	1300	1400
A	738	822	965	1100	1150	1248	1325	1457	1580	1720	1910	1990
B	394	440	507	575	600	655	685	754	815	873	1005	1025
Ø De	538	595	695	804	860	911	1010	1124	1225	1330	1460	1530
E	114	127	154	165	190	190	203	216	216	254	360	360
Ø F	50	50	60	60	65	65	80	80	80	100	120	120
Ø G	565	620	725	840	900	950	1050	1160	1270	1380	-	1590
Ø P	175	175	250	300	300	300	300	300	300	300	350	350
Ø T	M24	M24	M27	M27	M30	M30	M30	M33	M33	M36	-	M39
Weight (Kg)	87	117	177	258	296	330	505	661	840	1020	1650	1900

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SIZE PN10 (in mm) :

- **Valves with gear box DN 32 - 400 :**



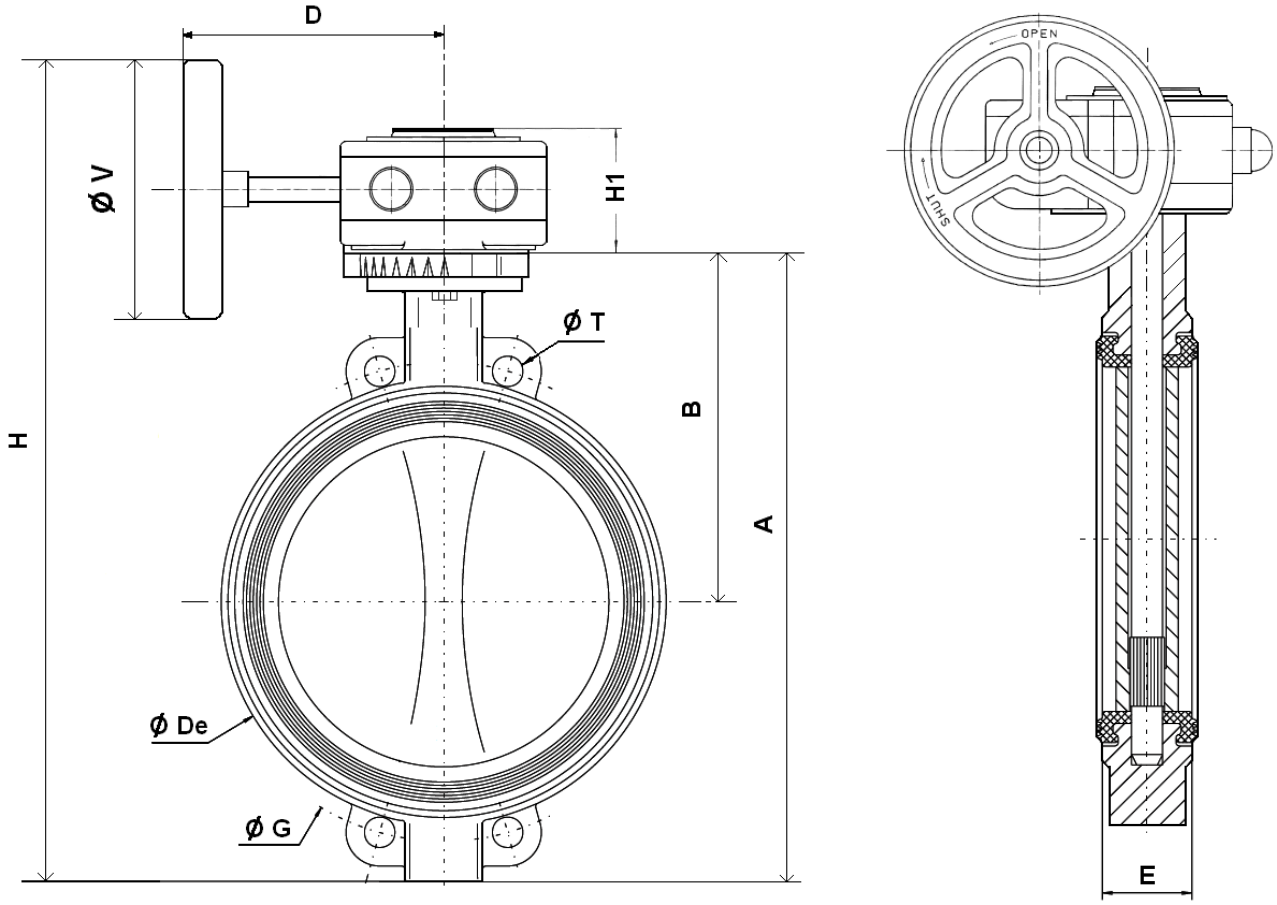
DN	32/40	50	65	80	100	125	150	200	250	300	350	400
A	206	228	248	265	298	331	349	430	461	524	570	644
B	140	156	161	169	187	206	215	255	248	280	300	340
Ø De	82	102	119	135	155	185	208	270	328	381	437	486
D	120	120	120	120	120	136	136	136	223	223	345	345
E	33	43	46	46	52	56	56	60	68	78	78	102
H	304	326	341	364	392	452	477	566	647	709	831	894
H1	58	58	58	58	58	58	58	58	74	74	98	98
Ø G	110	125	145	160	180	210	240	295	350	400	460	515
Ø T	18	18	18	18	18	18	23	23	23	23	23	27
Ø V	140	140	140	140	140	200	200	200	300	300	400	400
Weight (Kg)	3.81	5.01	5.75	5.95	7.35	9.35	10.95	16.45	28.7	37	48.5	61.5

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SIZE PN10 (in mm) :

- **Valves with gear box DN 450 - 1400 :**



DN	450	500	600	700	750	800	900	1000	1100	1200	1300	1400
A	738	822	965	1100	1150	1248	1325	1457	1580	1720	1910	1990
B	394	440	507	575	600	655	685	754	815	873	1005	1025
Ø De	538	595	695	804	860	911	1010	1124	1225	1330	1460	1530
D	364	386	421	440	440	438	492	492	492	550	605	605
E	114	127	154	165	190	190	203	216	216	254	360	360
H	1083	1171	1376	1409	1459	1657	1688	1820	1943	2178	2260	2429
H1	90	98	122	117	117	117	125	125	125	115	178	178
Ø G	565	620	725	840	900	950	1050	1160	1270	1380	-	1590
Ø T	M24	M24	M27	M27	M30	M30	M30	M33	M33	M36	-	M39
Ø V	600	600	700	500	500	700	600	600	600	800	700	700
Weight (Kg)	105.8	143.8	215.3	307	345	381.3	579.8	735.8	914.8	1106.5	1882	2132

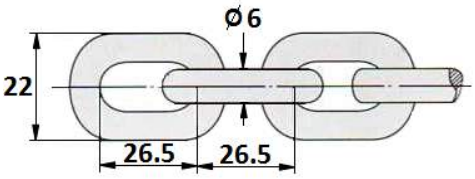
REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SIZE PN10 (in mm) :

- **Valves with chain gear box :**

Chain size :



DN	32/40	50	65	80	100	125	150	200	250	300	350	400	450	500
D	120	120	120	120	120	126	126	126	214	214	331	331	350	365
H1	58	58	58	58	58	58	58	58	74	74	98	98	90	98
L	128	128	128	128	128	128	128	128	175	175	224	224	232	267
L1	100	100	100	100	100	100	100	100	142	142	185	185	204	227
L2	50	50	50	50	50	50	50	50	61	61	80	80	86	104.5
L3	56	56	56	56	56	56	56	56	80	80	98	98	100	110
Ø V	160	160	160	160	160	210	210	210	300	300	400	400	500	500
Weight (Kg)	4.81	6.01	6.75	6.95	8.35	10.35	11.95	17.45	31.5	39.8	53.3	66.3	113.2	150.7

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

GEARBOX SPECIFICATIONS :

DN	32/50	65	80/100	125/150	200	250	300	350
Ref.	1197050	1197065	1197100	1197150	1197200	1197250	1197300	1197350
Ratio factor	37 : 1	37 : 1	37 : 1	37 : 1	37 : 1	36 : 1	36 : 1	50 : 1
Number of cycles for opening or closing	9.25	9.25	9.25	9.25	9.25	9	9	12.5
Input torque (Nm)	12.5	12.5	12.5	12.5	12.5	23	23	50
Output torque (Nm)	300	300	300	300	300	675	675	1310

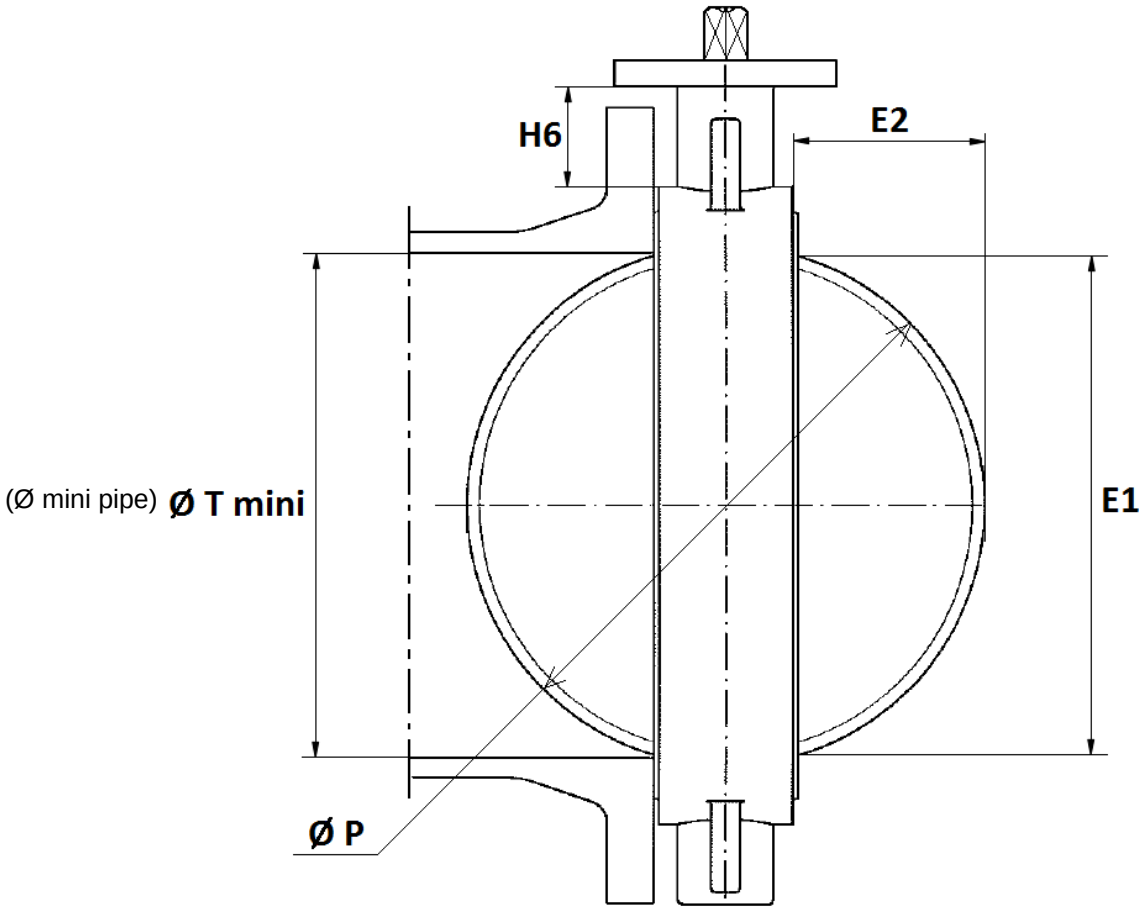
DN	400	450	500	600	700	800	900	1000
Ref.	1197400	1197451	1197501	1197601	1197700	1197800	-	-
Ratio factor	50 : 1	38 : 1	55 : 1	52 : 1	208 : 1	208 : 1	312 : 1	312 : 1
Number of cycles for opening or closing	12.5	9.5	13.75	13	52	52	78	78
Input torque (Nm)	50	86	96	160	65	65	80	80
Output torque (Nm)	1310	1620	2640	4160	6800	6800	12500	12500

DN	1200	1300	1400
Ratio factor	702 : 1	720 : 1	720 : 1
Number of cycles for opening or closing	175.5	180	180
Input torque (Nm)	50	91	91
Output torque (Nm)	17000	32000	32000

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

DISC AND NECK SIZE (in mm) :



DN	32/40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
E1	23	24.5	46	65	85	109	136	188	238	289	331	385	424	479	575
E2	3.5	3.5	9.5	17	24	33.5	45.5	69	90	110.5	131	148	162.5	184	221
H6	76	82	80	80	88	93	89	99	71	76	69	80	96	119	127
Ø T mini	26	27.5	49	68	88	112	139	191	241	292	334	388	427	482	578
Ø P	40	50	65	80	100	123	147	198	248	299	340	398	439	495	596

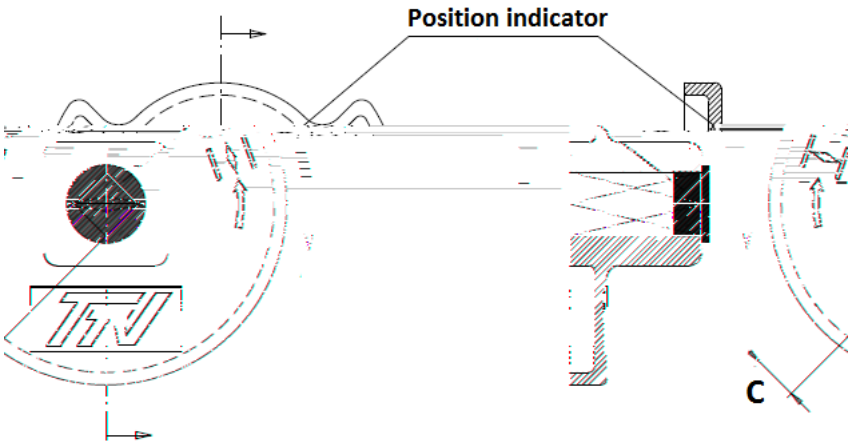
DN	700	750	800	900	1000	1100	1200	1300	1400
E1	680	721	777	850	957	1052	1146	1261	1368
E2	267.5	278	305	335.5	382.5	429	460	475.5	527.5
H6	148	140	170	150	162	175	176	240	228
Ø T mini	683	724	780	853	960	1055	1149	1264	1371
Ø P	700	746	800	874	981	1074	1174	1311	1415

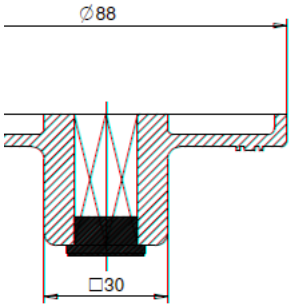
REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

SIZE (in mm) :

- **Square lever for special key (30x30 mm) :**





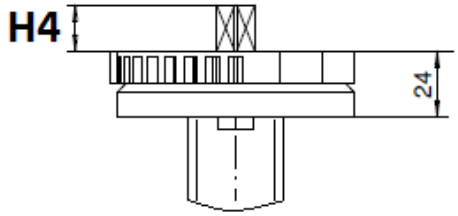
DN	32-50	65	80-100	125-150	200
C	8x8	9x9	11x11	14x14	17x17

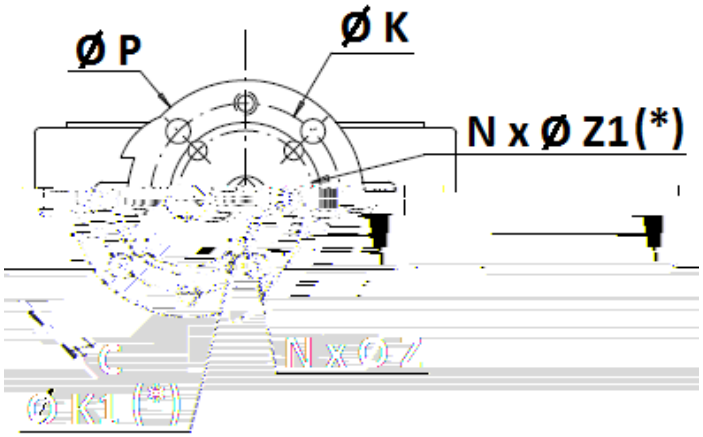
REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

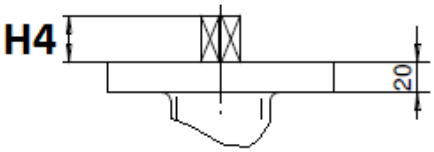
ISO MOUNTING PAD SIZE DN32-400 (in mm) :

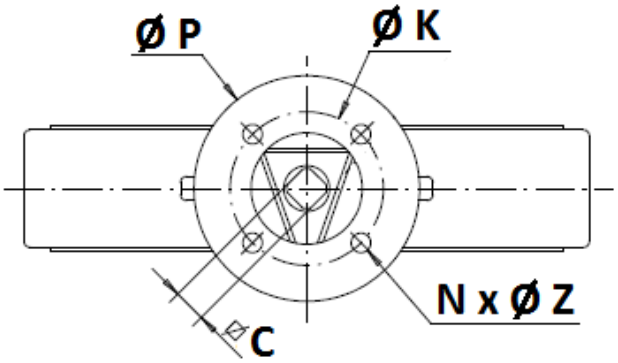
DN 32 – 200





DN250-400





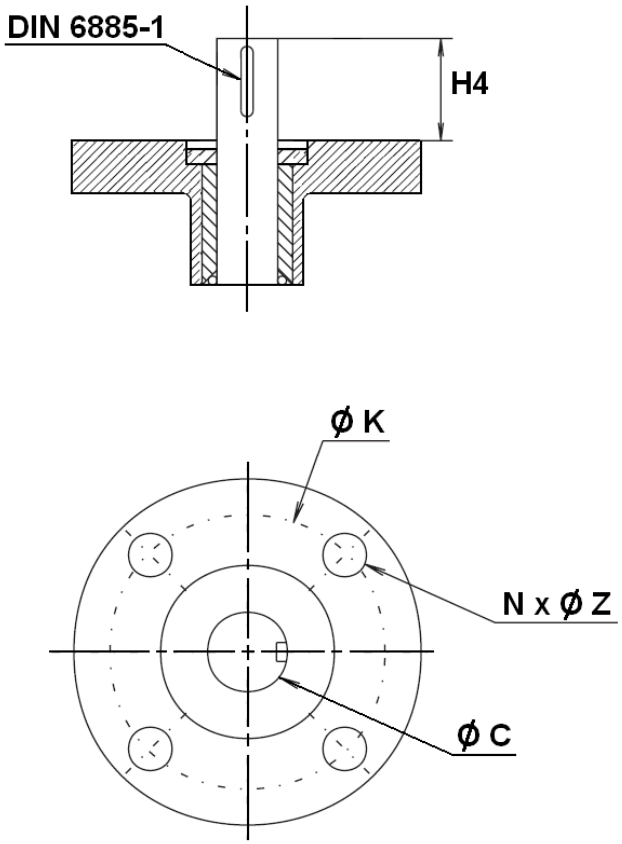
79.9431.1504 TL 7.98 0 0 7.98 42.314w 7.98 0(*) Tj ( ) Tj 12: Tj ( ) Tj 12O Tj 10.02 0 0 10.02 2620.323.314w 7.98 0n -0.0024 Tw 10.02 0 0 5.8735.314w 7

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

ISO MOUNTING PAD SIZE DN450-1400 (in mm) :

DN 450 - 1400



DN	450	500	600	700	750	800	900	1000	1100	1200	1300	1400
H4	80	80	90	90	110	110	110	110	110	110	120	120
Ø C	50	50	60	60	65	65	80	80	80	100	120	120
Ø K	140	140	165	254	254	254	254	254	254	254	298	298
ISO	F14	F14	F16	F25	F25	F25	F25	F25	F25	F25	F30	F30
N x Ø Z	4 x 18	4 x 18	4 x 22	8 x 18	8 x 18	8 x 18	8 x 18	8 x 18	8 x 18	8 x 18	8 x 22	8 x 22

REF. 1149

WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

STANDARDS :

- Fabrication according to ISO 9001:2008
- Designing according to ISO 10631
- DIRECTIVE 97/23/CE : CE N° 0038
  Risk category III module H
- Pressure tests according to ISO 5208, A class
- Between flanges according to EN 1092-1 PN10/16
- ISO 5211 mounting pad
- Length according to ISO 5752 short series 20, EN 558 series 20 (NF 29305),BS 5155 Wafer short/medium, DIN 3202 part 3, series K1
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 &22 (optional marking)
- Approval certificate **Marine BUREAU VERITAS,** N° 14087/B0 BV from DN32 to 1000
- OTAN agreement (N° 286B)

ADVICE : Our opinion and our advice are not guaranteed and Lauridsen Industri shall not be liable for the consequences of damages. The customer must check the right choice of the products with the real service conditions.

INSTALLATION INSTRUCTIONS

GENERAL GUIDELINES :

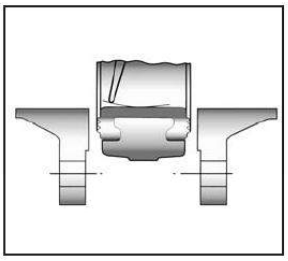
- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid,pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strenght to be able to support the capacity of their usage.
- **Installation of all circuits should ensure that their function can be automatically tested on a regular basis (at least two times a year).**

REF. 1149

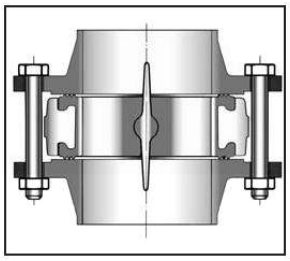
WAFER BUTTERFLY VALVE WITH EPDM H.T. SEAT EXCELLENCE RANGE

INSTALLATION INSTRUCTIONS :

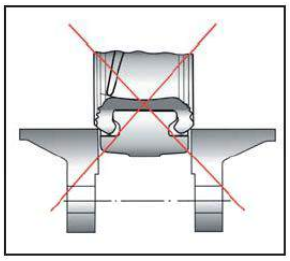
- **Before installing the valves,clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the valve (upstream and downstream) are aligned (if they're not,the valves may not work correctly).**
- **Make sure that the two sections of the pipe (upstream and downstream) match,the valve unit will not absorb any gaps.Any distortions in the pipes may affect the thightness of the connection,the working of the valve and can even cause a rupture.**To be sure,place the kit in position to ensure the assembling will work.
- **If sections of piping do not have their final support in place,they should be temporarily fixed.This is to avoid unnecessary strain on the valve.**
- The valve must be inserted between flanges with disc half opened but the disc must not overpass the valve thickness. Position the bolts to keep centered the valve. Then open fully the valve and tighten the bolts. **See graph under**.



Half open valve introduction



Complete opened disc valves when screw tightening



- Tighten the bolts in cross.
- The disc must move easily inside the pipe.
- Valves must be opened during cleaning operation.
- Tests must be done with a cleaned pipe.
- Tests must be done with opened valve. Test pressure must not be higher than the valve specification according to ISO 5208.
- Then open slowly the valve.
- **Do not mount butterfly valves with stainless steel pressed collars and turning flanges without strias.**
- **And not on flat face flanges without strias (example : painted cast iron fittings)**

MAINTENANCE :

- We recommend to operate fully the valve 1 to 2 times per year.

- During maintenance operation, ensure that the pipe isn't under pressure, that there's no fluid in the pipe and that the valve is isolated. If there's a fluid in the pipe , evacuate it. Ensure that there are no risks due to the temperature or the fluid (like acids). If the fluid is corrosive , inert the installation before maintenance operation.