

L32

L32.5.1148 PN16 DN50-300 Butterfly valve wafer



Lloyd's
Register
PED/2014/68/EU



Certificate 3.1

Size : DN 50 to 300 mm
Ends : Between flanges PN10/16 and Class 150 (PN20)
Min Temperature : - 10°C
Max Temperature : + 110°C
Max Pressure : 16 Bars
Specifications : For fire network and sprinkler
Wafer type
Full crossing stem
Gear box without position indicator

Materials : Ductile iron EN GJS-500-7 body, EPDM seat

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

SPECIFICATIONS :

- CNPP
- Long neck for isolation
- For fire network
- IP65 gearbox
- Gear box with position indicator
- Aluminium gear box with locking device (by steel chain for DN250 and 300)
- Valve indicator (indicate valve position : opened or closed)
- Wafer type
- Between flanges PN10/16 and Class 150 (PN20)
- Full crossing stem
- Stainless steel disc up to DN100 included
- Ductile iron epoxy coated disc (+/- 40 μ thickness) from DN125 to DN300
- Rilsan coated body color RAL 5024 250-300 microns thickness

USE :

- Sprinkler (rule APSAD R1) :
 - Test piping
 - Valves on anti-frost device
- Min and max Temperature Ts : - 10°C to + 110°C
- Max pressure Ps : 16 bars (see graph page 4)

RANGE :

- Wafer butterfly valve with gear box **Ref. 1148** DN 50 to DN 300

ENDS :

- Between flanges PN10-PN16 and Class 150 (PN20)

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

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

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

DN	50	65	80	100	125	150	200	250	300
Torque (Nm)	10	14	18	31	59	93	206	330	425

FLOW COEFFICIENT Kv (m³ / h) :

DN	Opening angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	3	7	15	33	44	48	54	54	54
65	6	10	21	40	57	86	102	102	102
80	7	16	37	56	84	182	246	246	246
100	9	22	51	88	134	187	255	336	336
125	21	33	91	153	232	331	468	560	560
150	45	69	149	281	302	597	822	1015	1072
200	55	131	254	420	631	904	1388	1758	1758
250	64	246	442	710	1056	1522	2128	3096	3096
300	100	275	472	953	1450	2093	2972	4193	4480

HEAD LOSS CALCULATIONS :

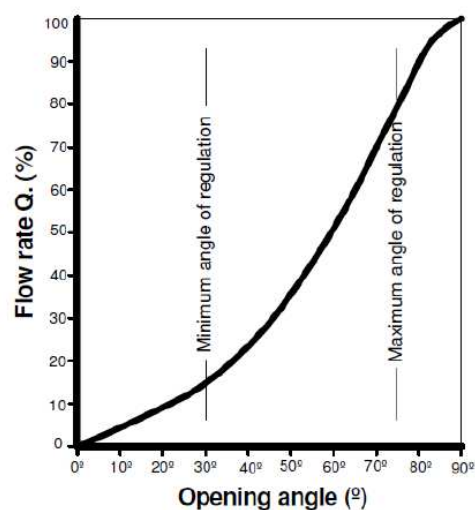
$$\Delta p = (Q / K_v)^2 \times SG$$

Q : flow in m³/h

Δp : Head loss in bar

SG : Specific gravity (= 1 for water)

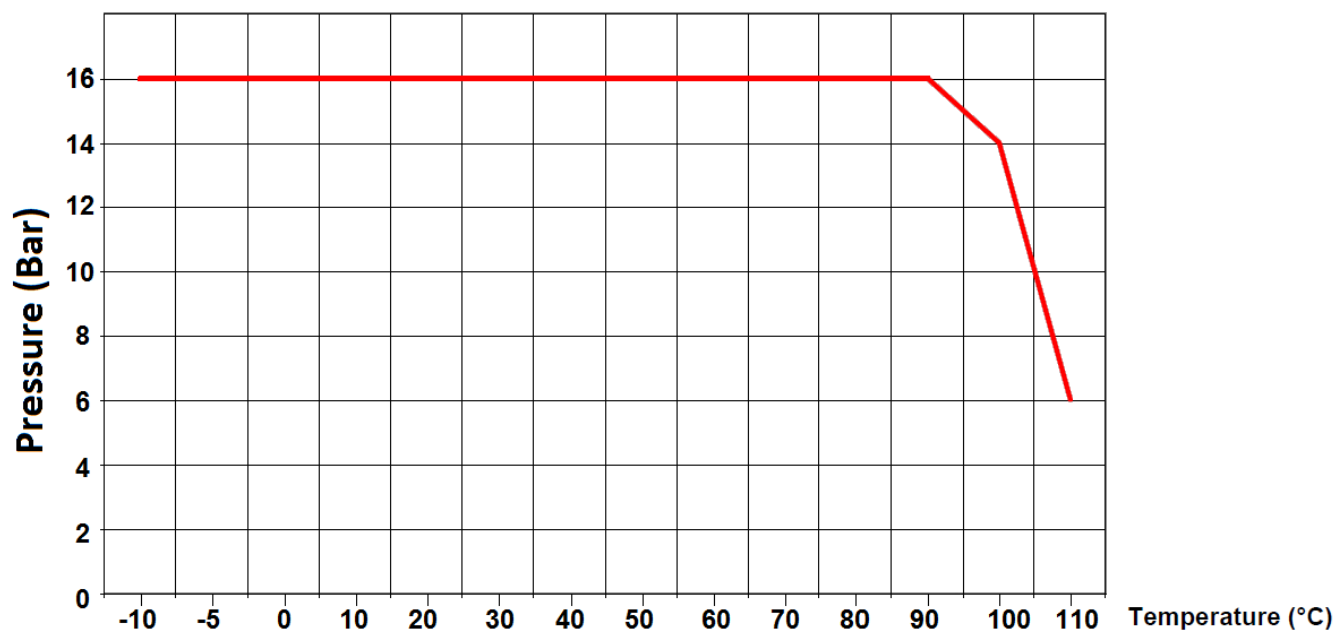
Kv : Volume of water in m³/h, that will flow through a given restriction or valve opening with a pressure drop of 1 bar at 20°C)



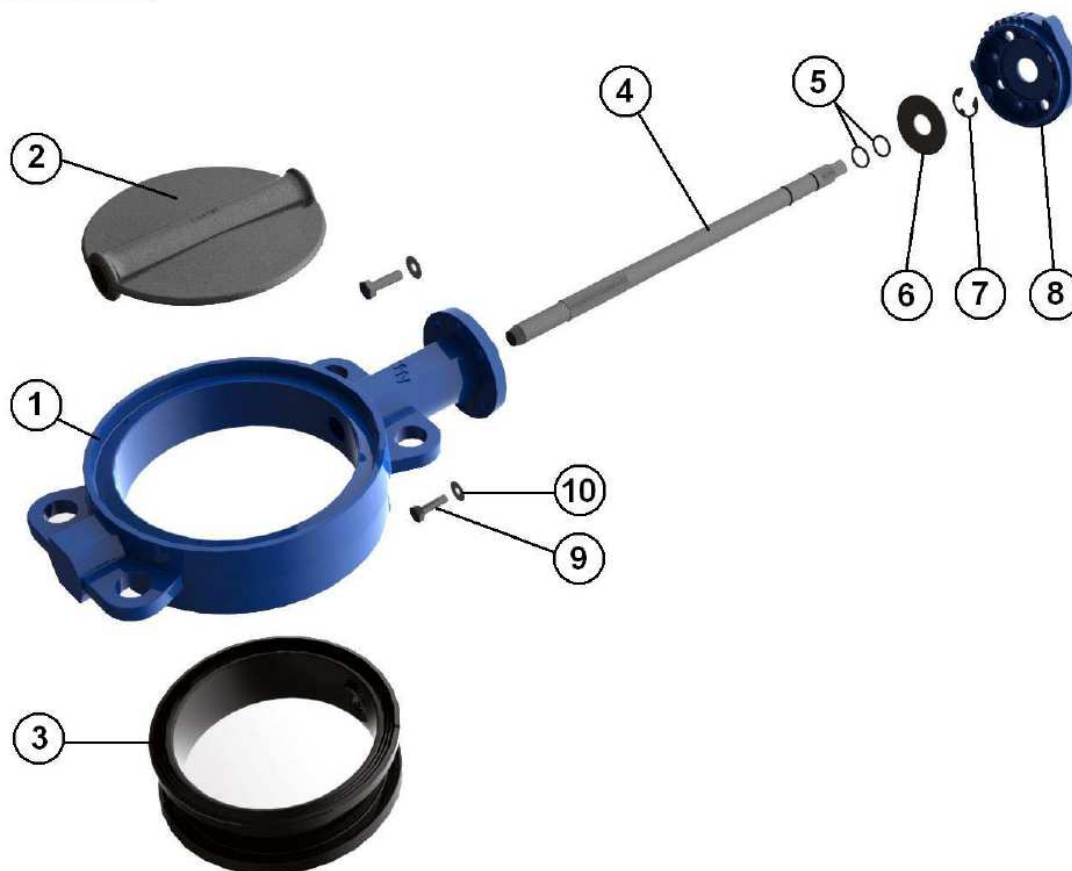
L32

L32.5.1148 PN16 DN50-300
Butterfly valve wafer

PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) :



MATERIALS DN 50 - 200 :

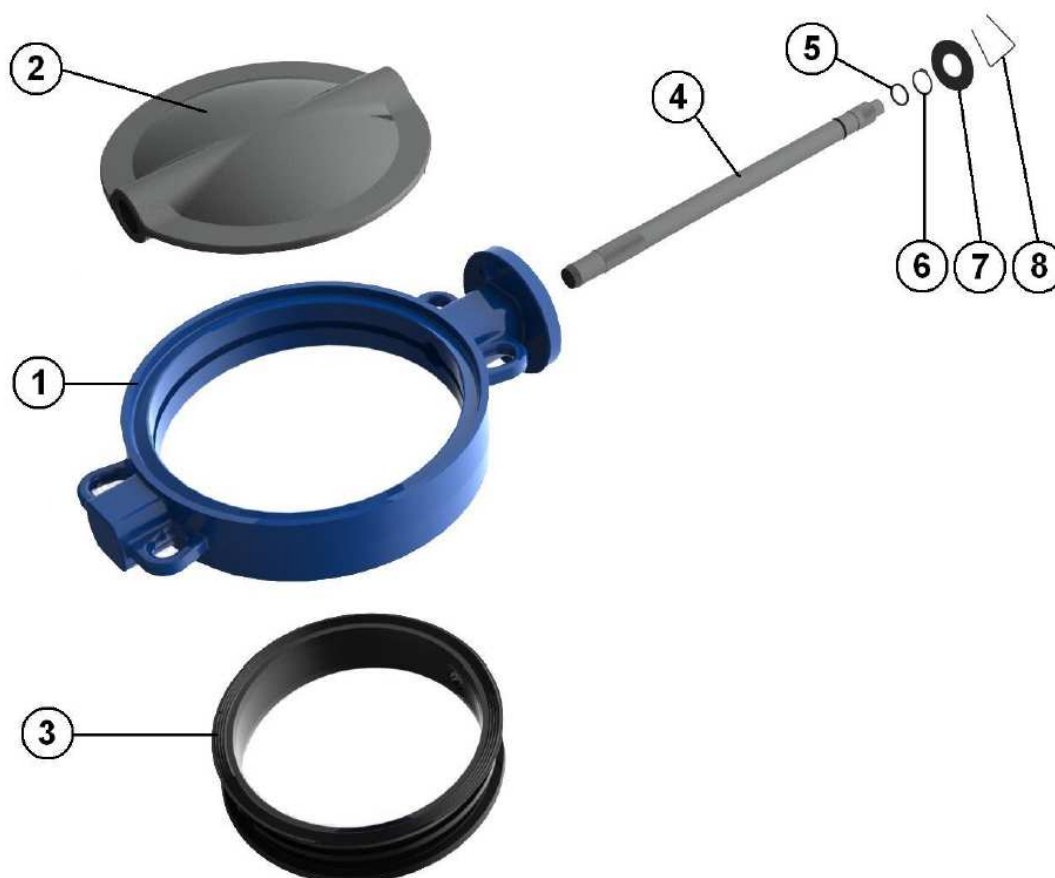


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 250-300 μ thickness
2	Disc DN 50 -100	ASTM A351 CF8M
2	Disc DN125 - 200	Ductile iron EN GJS-500-7 epoxy coated +/- 40 μ
3	Seat	EPDM
4	Stem	AISI 420
5	O ring	EPDM
6	Ring	Steel
7	Circlips	Steel
8	Plate	Aluminium
9	Plate screw	5.6
10	Washer	Steel

L32

L32.5.1148 PN16 DN50-300 Butterfly valve wafer

MATERIALS DN 250 - 300 :

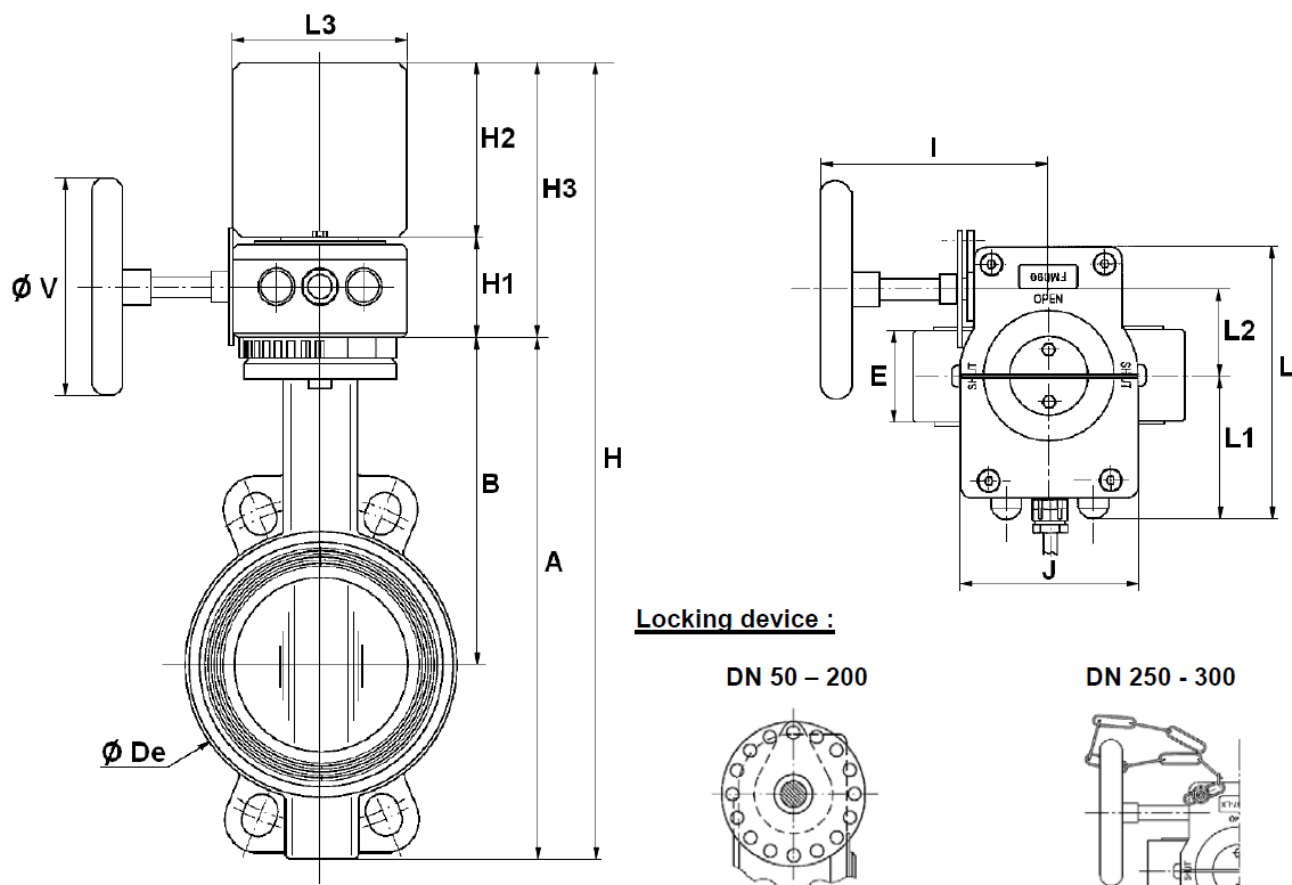


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 250-300 μ thickness
2	Disc	Ductile iron EN GJS-500-7 epoxy coated +/- 40 μ
3	Seat	EPDM
4	Stem	AISI 420
5	O ring	EPDM
6	Circlips	Steel
7	Ring	Steel
8	Spring	Steel

L32

L32.5.1148 PN16 DN50-300 Butterfly valve wafer

SIZE (in mm) :



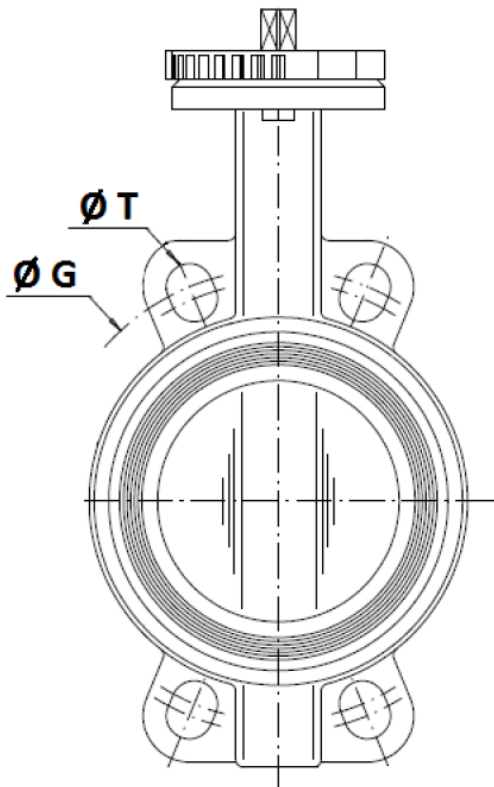
DN	50	65	80	100	125	150	200	250	300
E	43	46	46	52	56	56	60	68	78
A	228	248	265	298	326	349	430	461	523
B	156	161	169	187	206	215	255	248	280
H	385.5	405.5	422.5	455.5	483.5	506.5	587.5	633.5	696.5
H1	57.5	57.5	57.5	57.5	57.5	57.5	57.5	72.5	72.5
H2	100	100	100	100	100	100	100	100	100
H3	157.5	157.5	157.5	157.5	157.5	157.5	157.5	172.5	172.5
L3	100	100	100	100	100	100	100	100	100
Ø V	100	100	125	125	125	125	200	250	250
I	132	132	131	131	131	131	143	210	210
J	102	102	102	102	102	102	102	146	146
L	156	156	156	156	156	156	156	177.5	177.5
L1	82	82	82	82	82	82	82	82.5	82.5
L2	50	50	50	50	50	50	50	60	60
Ø De	102	119	135	155	185	208	270	328	381
Weig. (in Kg)	5.6	6.25	6.75	8	9.5	10.5	15.65	25.8	34.3

L32

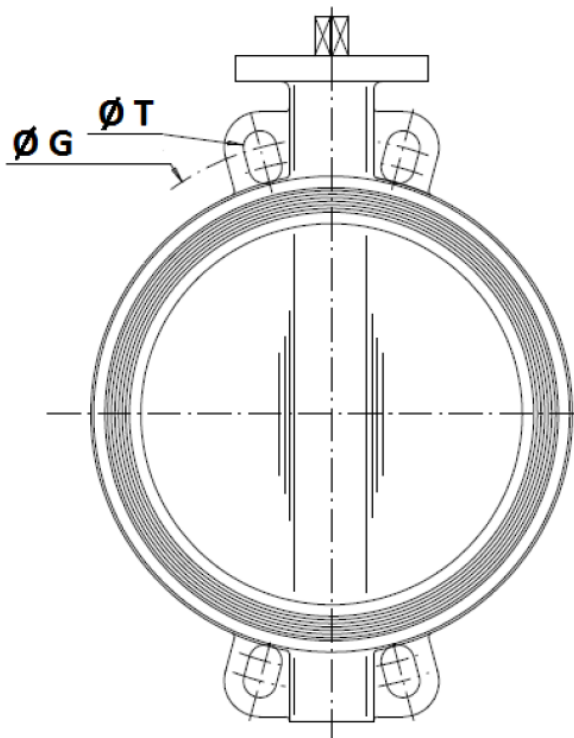
L32.5.1148 PN16 DN50-300 Butterfly valve wafer

BETWEEN FLANGES SIZE (in mm) :

DN 50 - 200

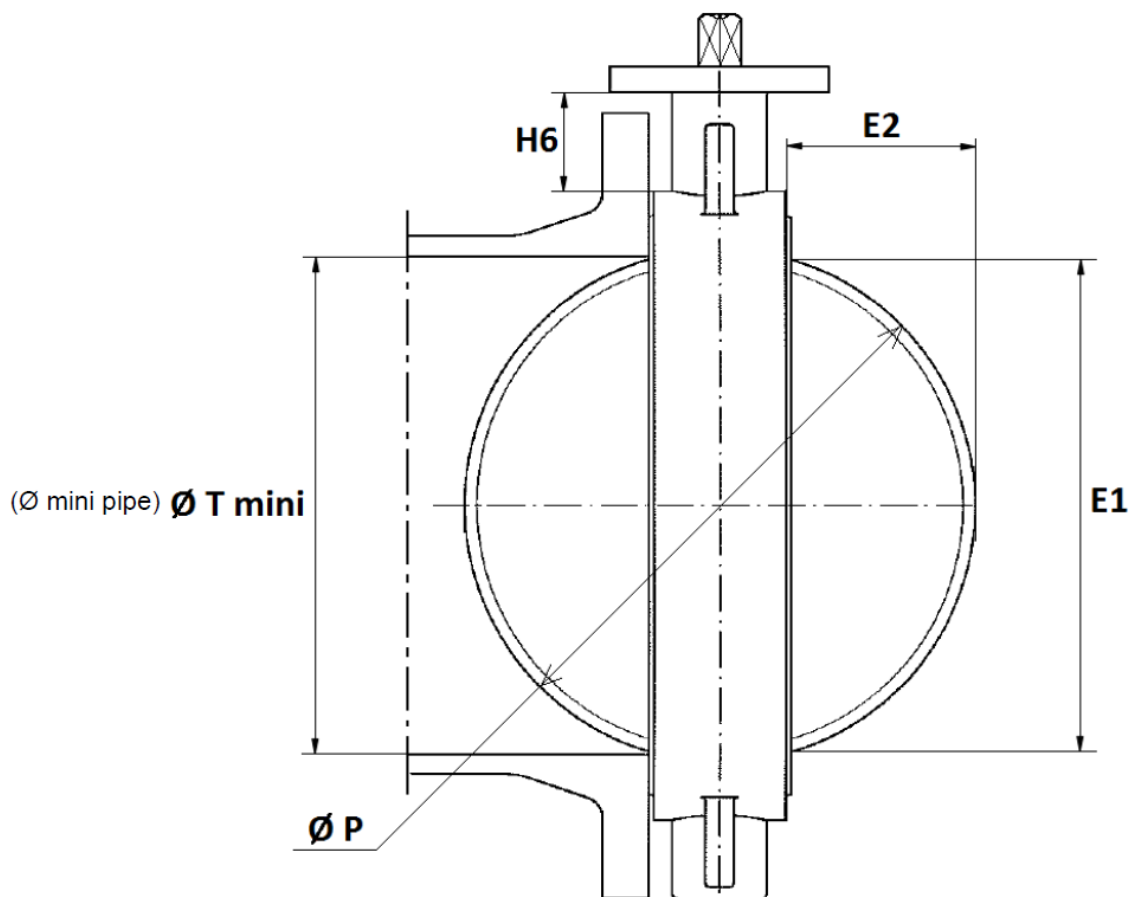


DN250 – 300



	DN (mm)	50	65	80	100	125	150	200	250	300
	NPS (")	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
PN10	Ø G	125	145	160	180	210	240	295	350	400
	Ø T	18	18	18	18	18	23	23	23	23
PN16	Ø G	125	145	160	180	210	240	295	355	410
	Ø T	18	18	18	18	18	23	23	27	27
Class 150	Ø G	120.6	139.7	152.4	190.5	215.9	241.3	298.5	362	431.8
	Ø T	19	19	19	19	23	23	23	26	26

NECK AND DISC SIZE (in mm) :



DN	50	65	80	100	125	150	200	250	300
E1	24.5	46	65	85	109	136	188	238	289
E2	3.5	9.5	17	24	33.5	45.5	69	90	110.5
H6	82	80	80	88	93	89	99	71	76
Ø T mini	27.5	49	68	88	112	139	191	241	292
Ø P	50	65	80	100	123	147	198	248	299

STANDARDS :

- Fabrication according to ISO 9001:2008
- DIRECTIVE 2014/68/EU : CE N° 0038
Risk category III module H
- Certificate 3.1 on request
- Designing according to NF EN 593 v 2004
- Marking according to NFE 29-130
- Tests according to ISO 5208, Rate A
- 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
- Belongs to the list of materials that can be used as part of an installation according to the rule **APSAD R1**

INSTALLATION INSTRUCTIONS

GENERAL GUIDELINES :

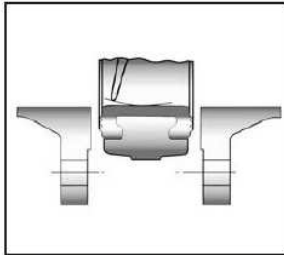
- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strength 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).**

INSTALLATION INSTRUCTIONS :

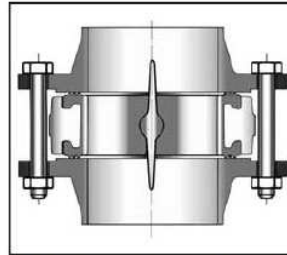
- **Before installing the valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the valve (upstream and downstream) are aligned (if they're not, the valves may not 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 tightness 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.**

INSTALLATION INSTRUCTIONS (SUITE) :

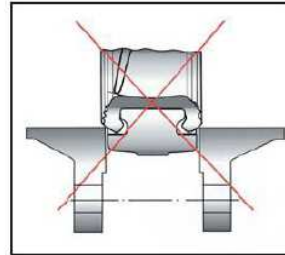
- If sections of piping do not have their final support in place, they should be temporarily fixed. This is to avoid unnecessary strain on the valve.
- The valve must be inserted between flanges with disc half opened but the disc must not overpass the valve thickness. Position the bolts to keep centered 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.