

L32

L32.5.1144 PN16 DN50-300 Butterfly valve wafer



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 with 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 :

- F.M. : Factory mutual
- Long neck for isolation
- For fire network (F.M. approved)
- IP65 gearbox
- Gear box with position indicator
- Cast iron gear box
- 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 :

- For fire network and sprinkler
- 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. 1144** 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

L32

L32.5.1144 PN16 DN50-300 Butterfly valve wafer

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 :

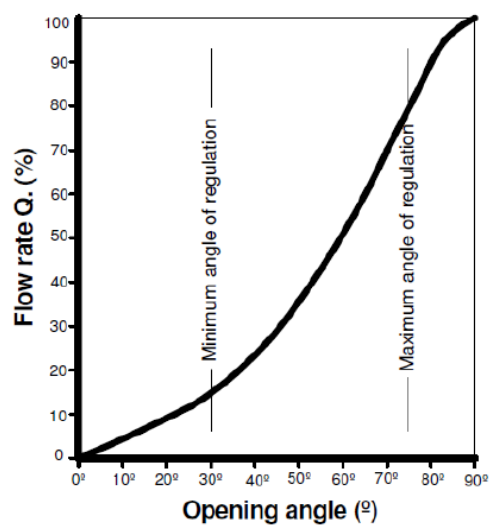
$$\Delta p = (Q / K_v)^2 \times SG$$

Q : flow in m³/h

Δp : Head loss in bar

SG : Specific gravity (= 1 for water)

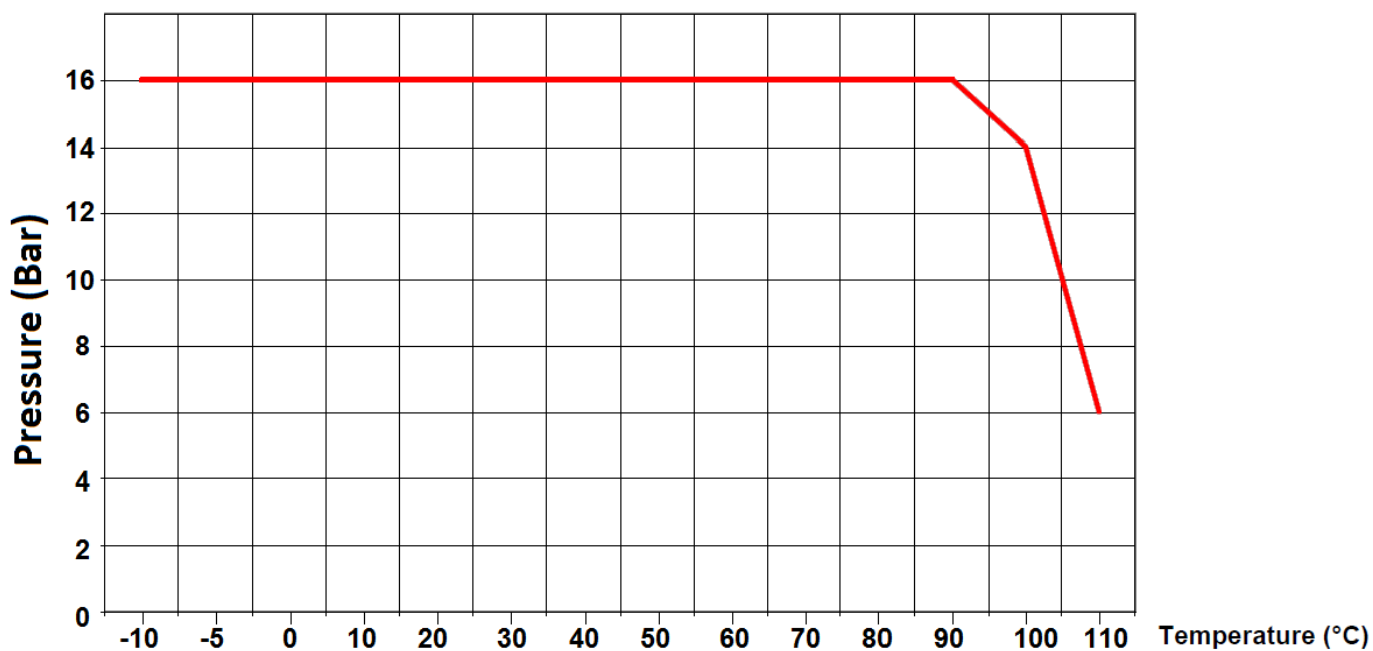
Kv : Volume of water in m³/h, that will flow through a given restriction or valve opening with a pressure drop of 1 bar at 20°C)



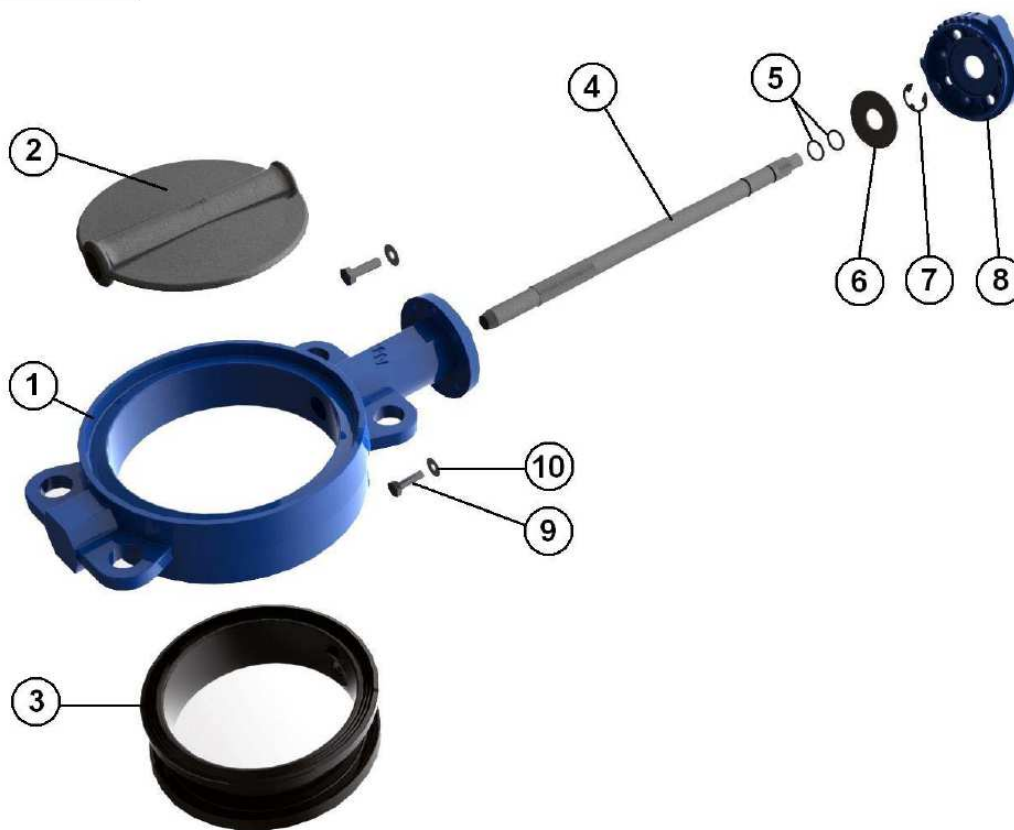
L32

L32.5.1144 PN16 DN50-300
Butterfly valve wafer

PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) :



MATERIALS DN 50 - 200 :

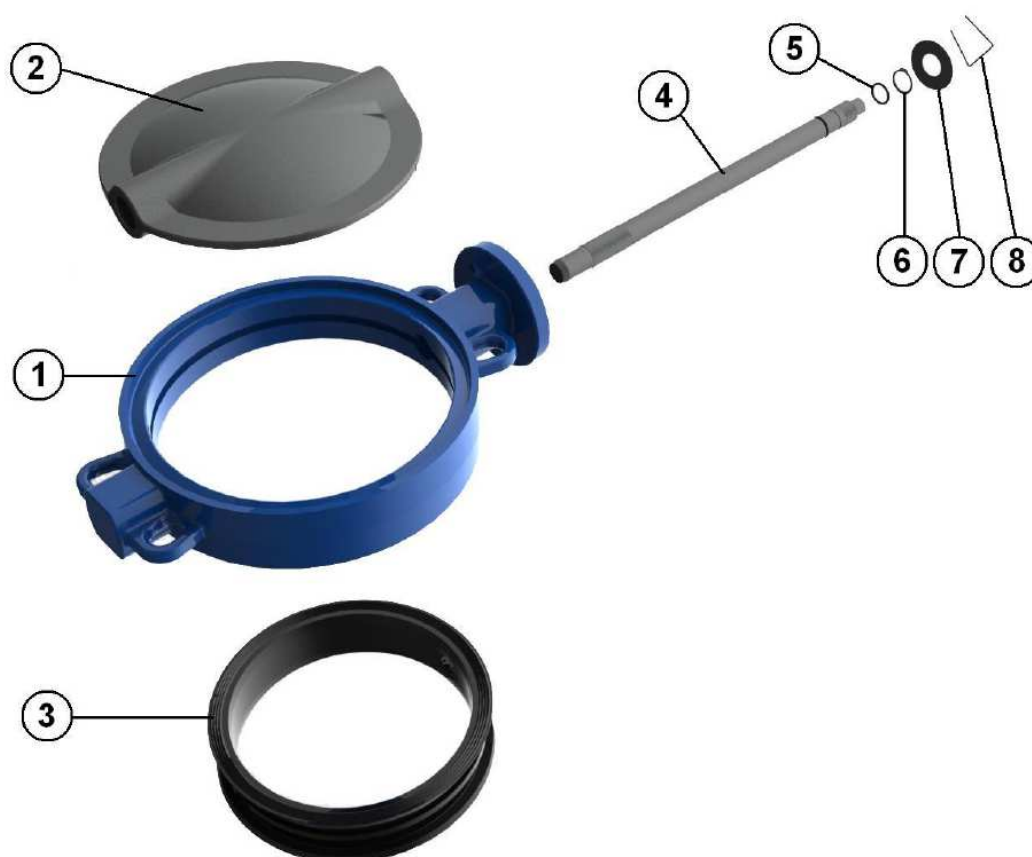


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 250-300 μ thickness
2	Disc DN 50 - 100	ASTM A351 CF8M
2	Disc DN125 - 200	Ductile iron EN GJS-500-7 epoxy coated +/- 40μ
3	Seat	EPDM
4	Stem	AISI 420
5	O ring	EPDM
6	Ring	Steel
7	Circlips	Steel
8	Plate	Aluminium
9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

L32

L32.5.1144 PN16 DN50-300 Butterfly valve wafer

MATERIALS DN 250 - 300 :

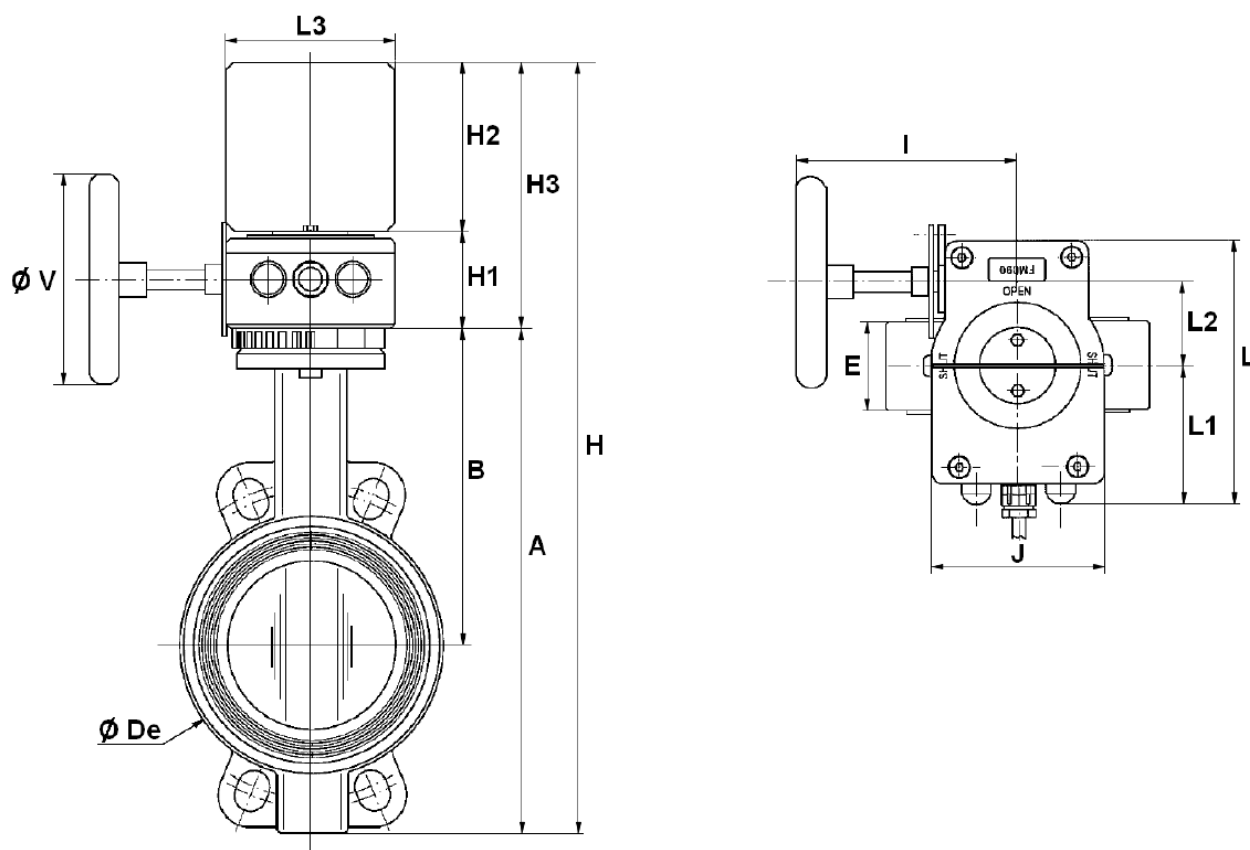


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 250-300 μ thickness
2	Disc	Ductile iron EN GJS-500-7 epoxy coated +/- 40 μ
3	Seat	EPDM
4	Stem	AISI 420
5	O ring	EPDM
6	Circlips	Steel
7	Ring	Steel
8	Spring	Steel

L32

L32.5.1144 PN16 DN50-300 Butterfly valve wafer

SIZE (in mm) :



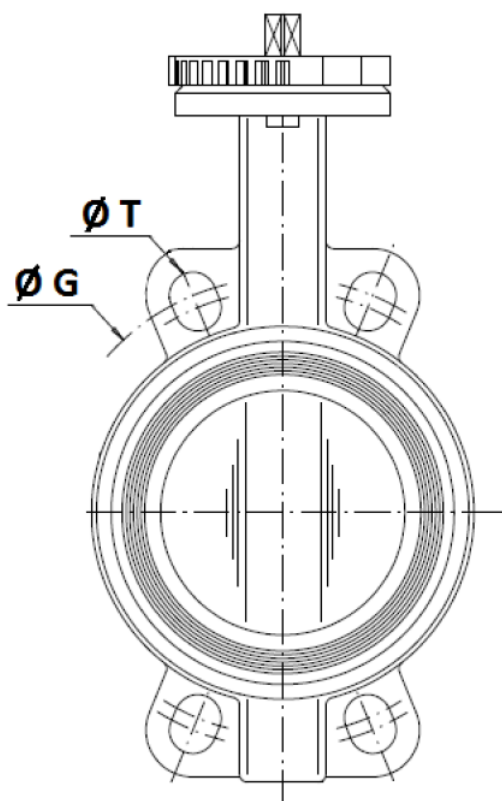
Ref.	DN	50	65	80	100	125	150	200	250	300
1144	E	43	46	46	52	56	56	60	68	78
	A	227	243	266	294	324	349	438	461	523
	B	156	162	170	185	207	216	256	248	280
	H	329	345	363	397	417	439	551	585	663
	H1	48	48	48	48	54	54	78	78	84
	H2	54	54	54	54	37	37	46	46	56
	H3	102	102	102	102	91	91	124	124	140
	L3	55	55	55	55	46	46	75	75	86
	Ø V	100	100	100	100	250	250	250	250	315
	I	130	130	130	130	192	192	231	231	225
	J	80	80	80	80	102	102	130	130	154
	L	141	141	141	141	178	178	209	209	232
	L1	58	58	58	58	78	78	80	80	88
	L2	42	42	42	42	50	50	71	71	86
	Ø De	103	120	134	153	185	209	270	320	372
	Weight (Kg)	5.9	6.7	7	8.45	12.5	13.85	24.8	34.8	48.45

L32

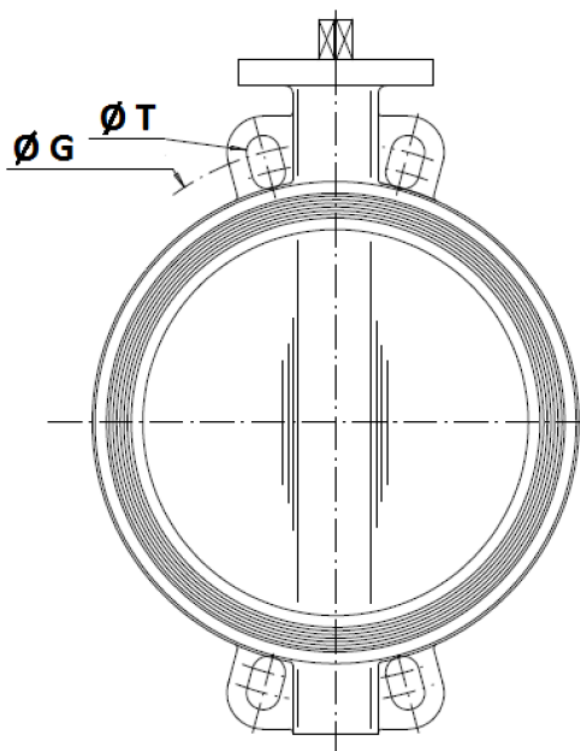
L32.5.1144 PN16 DN50-300 Butterfly valve wafer

BETWEEN FLANGES SIZE (in mm) :

DN 50 - 200



DN250 – 300

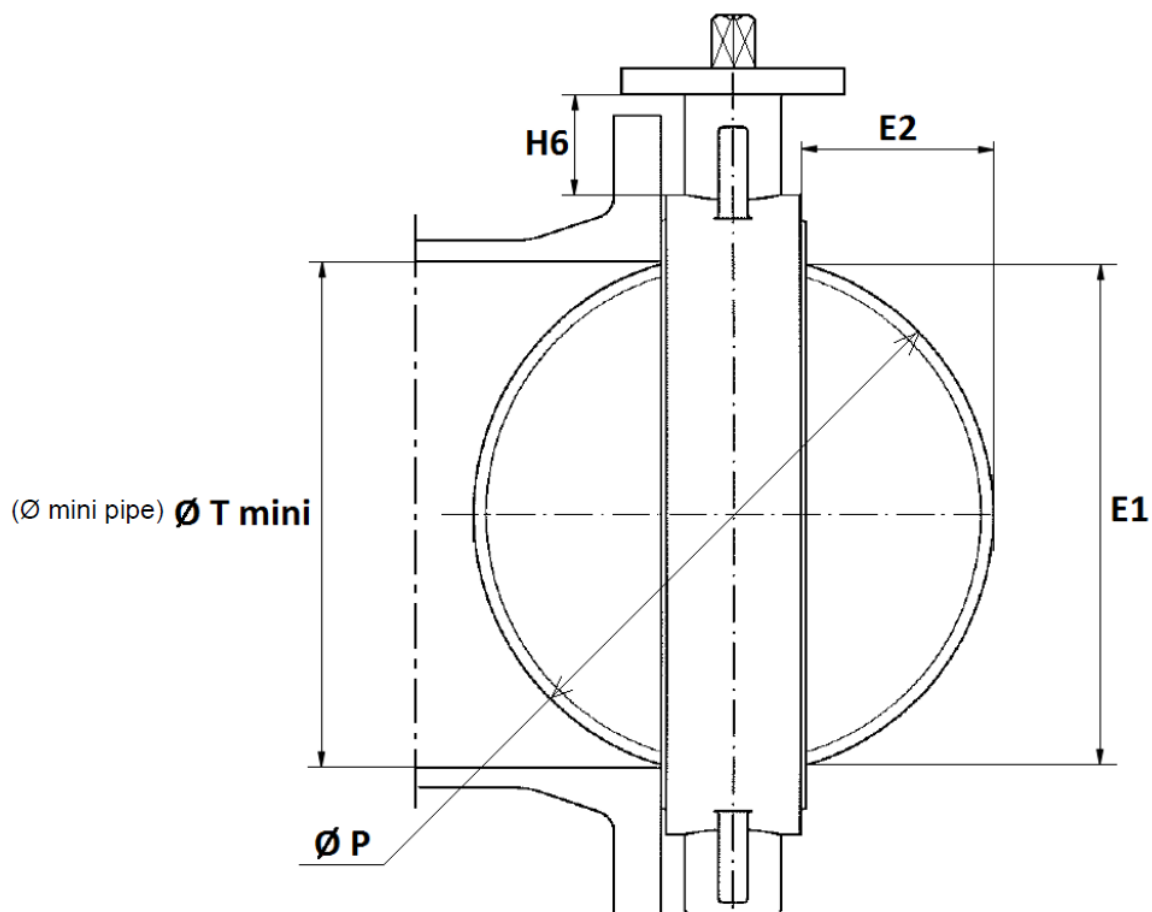


	DN (mm)	50	65	80	100	125	150	200	250	300
	NPS (")	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
PN10	Ø G	125	145	160	180	210	240	295	350	400
	Ø T	18	18	18	18	18	23	23	23	23
PN16	Ø G	125	145	160	180	210	240	295	355	410
	Ø T	18	18	18	18	18	23	23	27	27
Class 150	Ø G	120.6	139.7	152.4	190.5	215.9	241.3	298.5	362	431.8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

L32

L32.5.1144 PN16 DN50-300 Butterfly valve wafer

DISC AND NECK SIZE (in mm) :



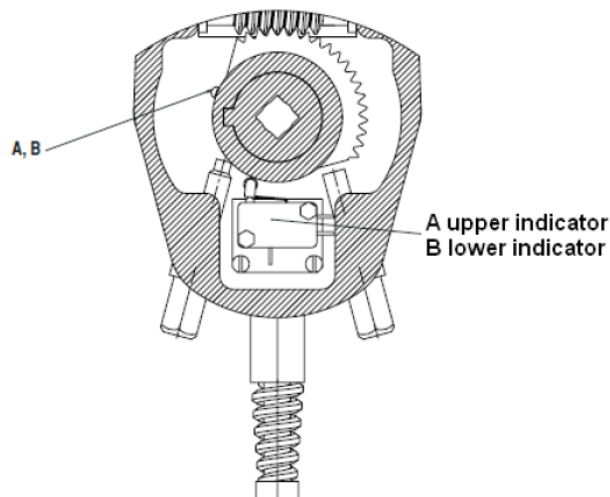
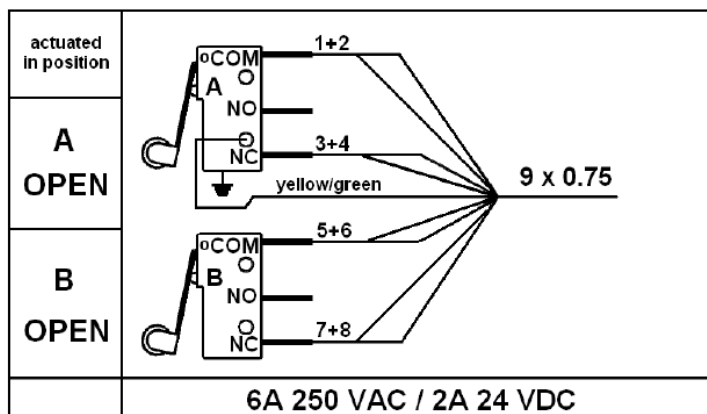
DN	50	65	80	100	125	150	200	250	300
E1	24.5	46	65	85	109	136	188	238	289
E2	3.5	9.5	17	24	33.5	45.5	69	90	110.5
H6	82	80	80	88	93	89	99	71	76
Ø T mini	27.5	49	68	88	112	139	191	241	292
Ø P	50	65	80	100	123	147	198	248	299

L32

L32.5.1144 PN16 DN50-300 Butterfly valve wafer

POSITION INDICATOR :

- A double contact (incompleted opening position) , signal at the beginning of closure.
- 9 wires cable 0.75 mm² 1 meter long



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 EN 12266-1, 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
- FM approved N°3025174 17/06/2008

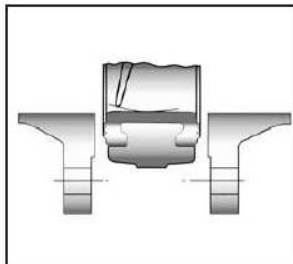
INSTALLATION INSTRUCTIONS

GENERAL GUIDELINES :

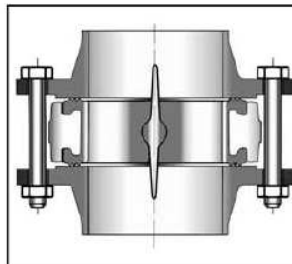
- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves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

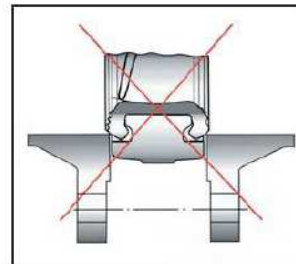
- **Before installing the valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the valve (upstream and downstream) are aligned** (if they're not, the valves may not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

L32

L32.5.1144 PN16 DN50-300
Butterfly valve wafer

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.