

TTV WAFER BUTTERFLY VALVE FOR FIRE NETWORK –SPRINKLER EXCELLENCE RANGE

Wafer butterfly valves TTV excellence range for closing or setting fire networks and sprinkler with lockable gearbox without sensors.

5 years warranty.

Ductile iron body EN GJS-500-7, stainless steel disc up to DN100 and EPDM seat.

Between flanges PN10, PN16 or Class 150 according to the DN.



- Size :** DN50 to DN300
- Connection :** Between flanges PN10/16 and Class 150 (PN20)
- Min Temperature :** -10°C
- Max Temperature :** +110°C
- Max Pressure :** 16 Bars
- Specifications :** Long neck for isolation  
Wafer type  
Full crossing stem  
Gear box without position indicator

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

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

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**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
- Chromed ductile iron disc 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 5)

**RANGE :**

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

**CONNECTION :**

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

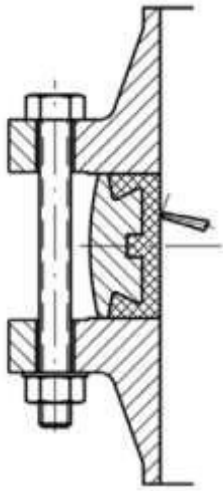
**TORQUE VALUES ( in Nm with safety coefficient of 30 % included ) :**

		DN									
	Pressure (Bar)	32/40	50	65	80	100	125	150	200	250	300
Torque (Nm) with machined disc (on request)	1-5*	2	4	6	8	10	14	15	25	64	118
	6*	3	5	7	10	12	18	31	55	123	216
	10*	6	8	10	14	18	31	59	93	206	330
Torque ( Nm )	16	9	11	20	29	47	82	130	210	360	475

\* : Torques with machined disc (on request)

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**MAXIMUM TIGHTENING TORQUES FOR BOLTING FLANGES :**



		Maximum torques (Nm)			
		Bolting types	5,6 / A307 Gr.B	8,8 / A193 B7	10,9
<b>Bolting DN</b>	<b>M12 (1/2")</b>	41,16	84,28	117,6	142,1
	<b>M14 (9/16")</b>	66,64	132,3	186,2	225,4
	<b>M16 (5/8")</b>	102,9	205,8	289,1	347,9
	<b>M18 (3/4")</b>	142,1	284,2	396,9	475,3
	<b>M20 (3/4")</b>	196	401,8	568,4	676,2
	<b>M22 (7/8")</b>	259,7	539	764,4	911,4
	<b>M24 (1")</b>	338,1	695,8	980	1176
	<b>M27 (1"1/8)</b>	499,8	1029	1470	1764
	<b>M30 (1"1/4)</b>	666,4	1421	1960	2352

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**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 :**

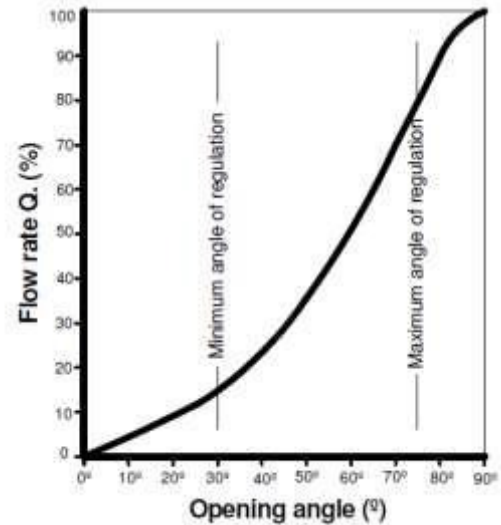
$\Delta p = ( Q / Kv )^2 \times SG$

Q : flow in m³/h

$\Delta p$  : Head loss in bar

SG : Specific gravity (= 1 for water)

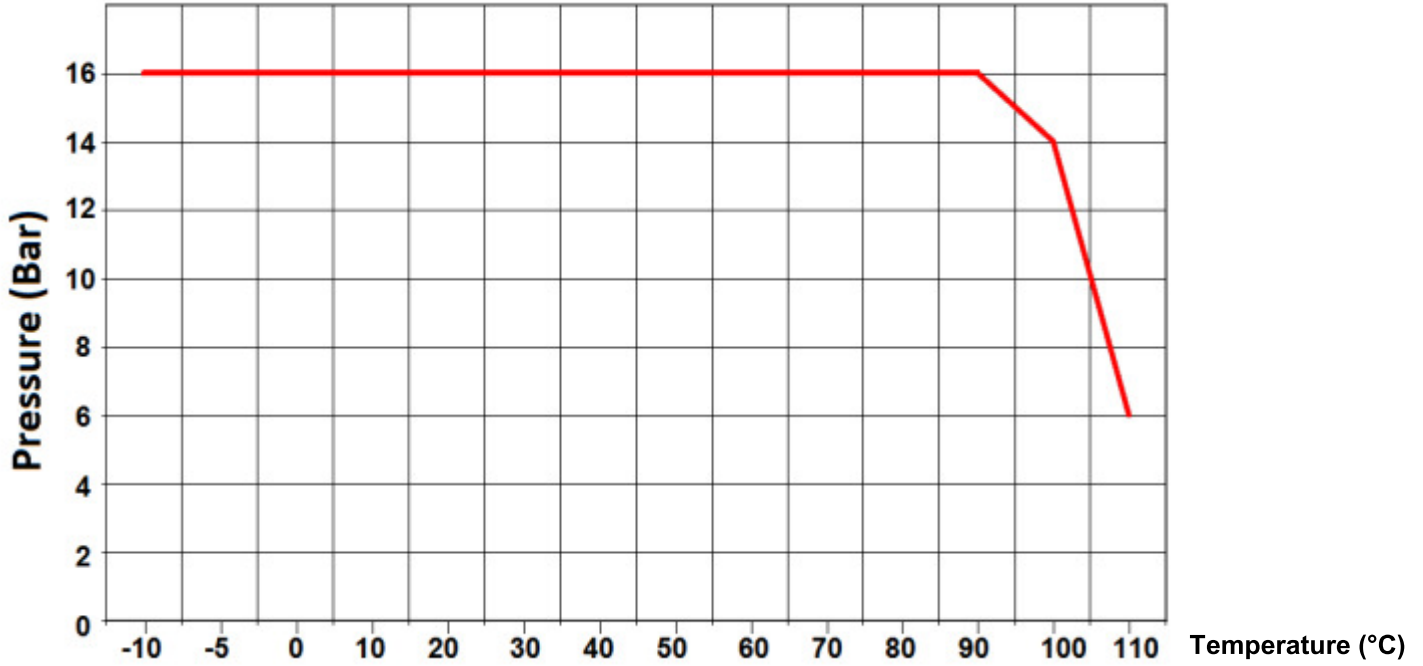
Kv : Volume of water in m³/h, that will flow through a given restriction or valve opening with a pressure drop of 1 bar at 20°C)





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PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) :



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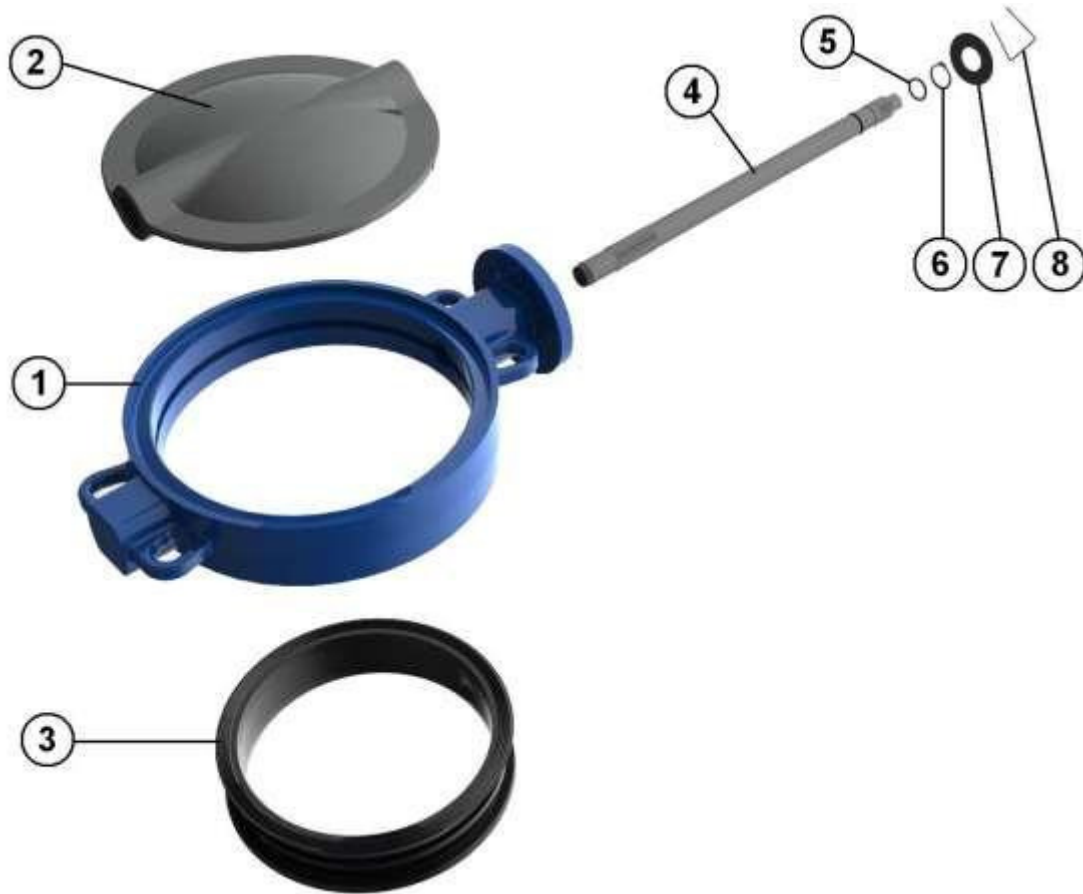
MATERIALS DN 50 - 200 :



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	Chromed Ductile iron EN GJS-500-7
3	Seat	EPDM
4	Stem	AISI 420
5	O ring	NBR
6	Ring	Steel
7	Circlips	Steel
8	Plate	Aluminium
9	Plate screw	5.6
10	Washer	Steel

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MATERIALS DN 250 - 300 :

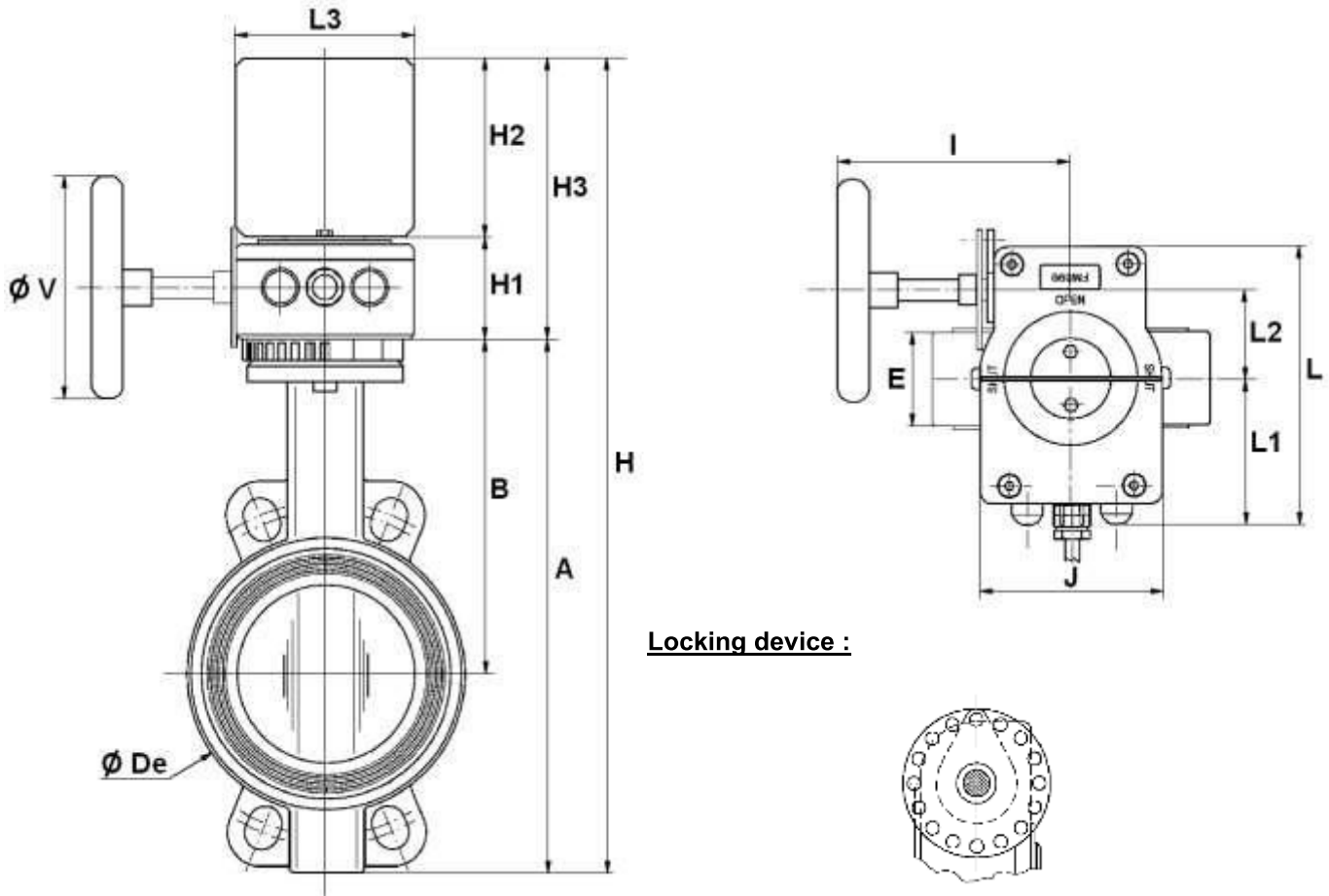


Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 250-300 μ thickness
2	Disc	Chromed Ductile iron EN GJS-500-7
3	Seat	EPDM
4	Stem	AISI 420
5	O ring	NBR
6	Circlips	Steel
7	Ring	Steel
8	Spring	Steel



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SIZE DN50-200 ( in mm ) :



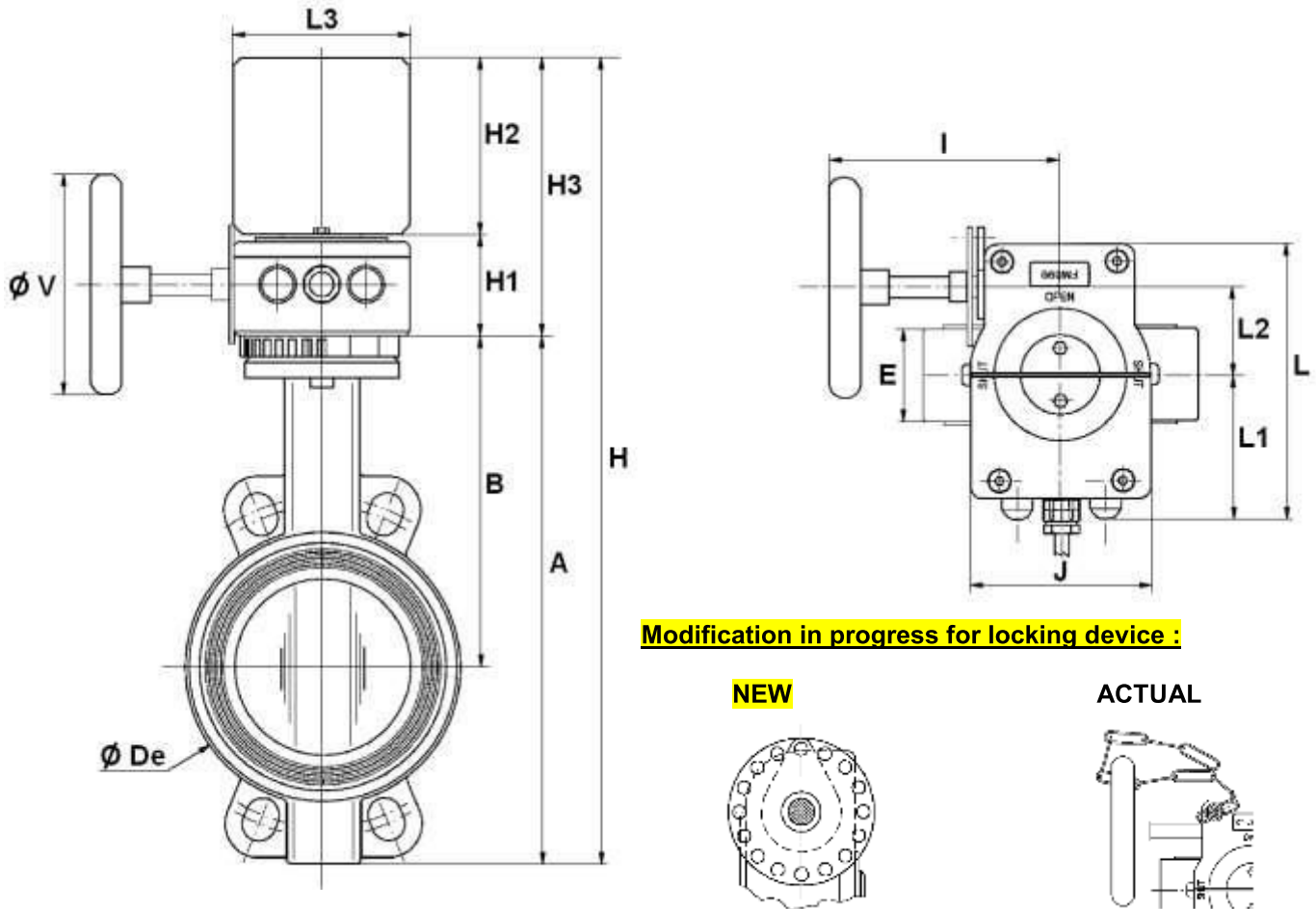
Locking device :

DN	50	65	80	100	125	150	200
E	43	46	46	52	56	56	60
A	228	248	265	298	326	349	430
B	156	161	169	187	206	215	255
H	385.5	405.5	422.5	455.5	483.5	506.5	587.5
H1	57.5	57.5	57.5	57.5	57.5	57.5	57.5
H2	100	100	100	100	100	100	100
H3	157.5	157.5	157.5	157.5	157.5	157.5	157.5
L3	100	100	100	100	100	100	100
Ø V	100	100	125	125	125	125	200
I	132	132	131	131	131	131	143
J	102	102	102	102	102	102	102
L	156	156	156	156	156	156	156
L1	82	82	82	82	82	82	82
L2	50	50	50	50	50	50	50
Ø De	102	119	135	155	185	208	270
Weight (Kg)	5.6	6.25	6.75	8	9.5	10.5	15.65
Ref.	1148050	1148065	1148080	1148100	1148125	1148150	1148200



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**SIZE DN250-300 ( in mm ) :**



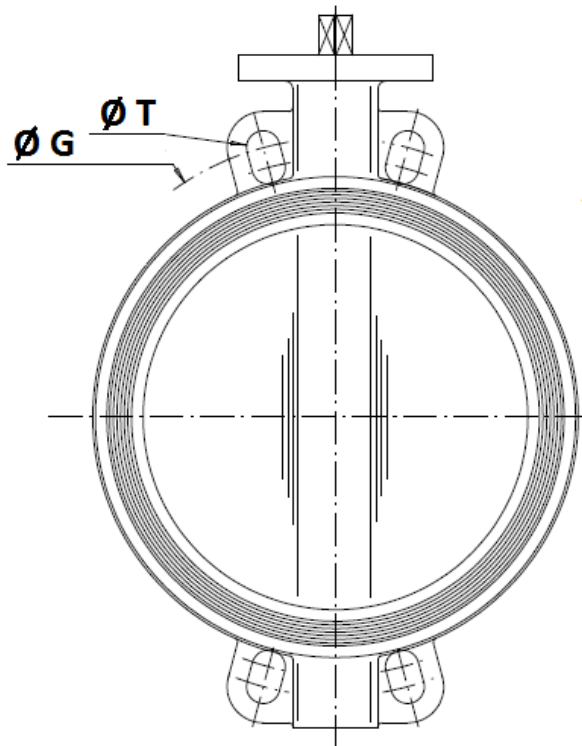
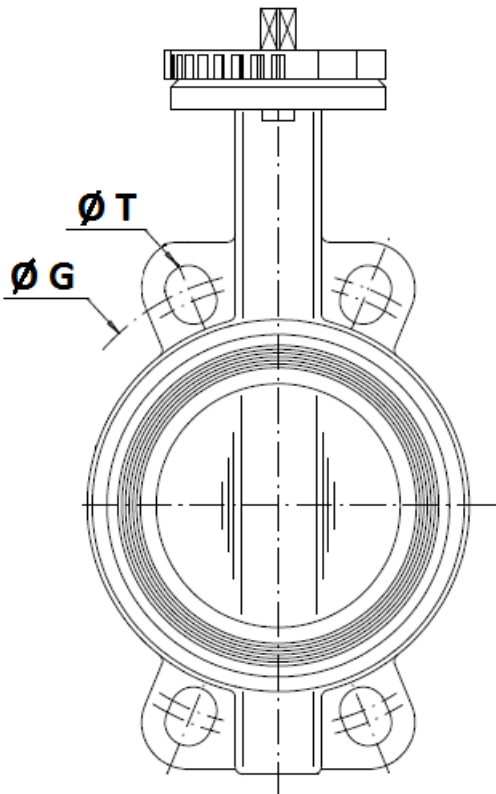
DN	250	250 New	300	300 New
E	68		78	
A	461		523	
B	248		280	
H	633.5		696.5	
H1	72.5			
H2	100			
H3	172.5			
L3	100			
Ø V	250	300	250	300
I	210	223.5	210	223.5
J	146	140	146	140
L	177.5	182	177.5	182
L1	82.5	82	82.5	82
L2	60	61.25	60	61.25
Ø De	328		381	381
Weight (in Kg)	25.8	27	34.3	35.5
Ref.	1148250		1148300	

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**BETWEEN FLANGES SIZE ( in mm ) :**

**DN 50 - 200**

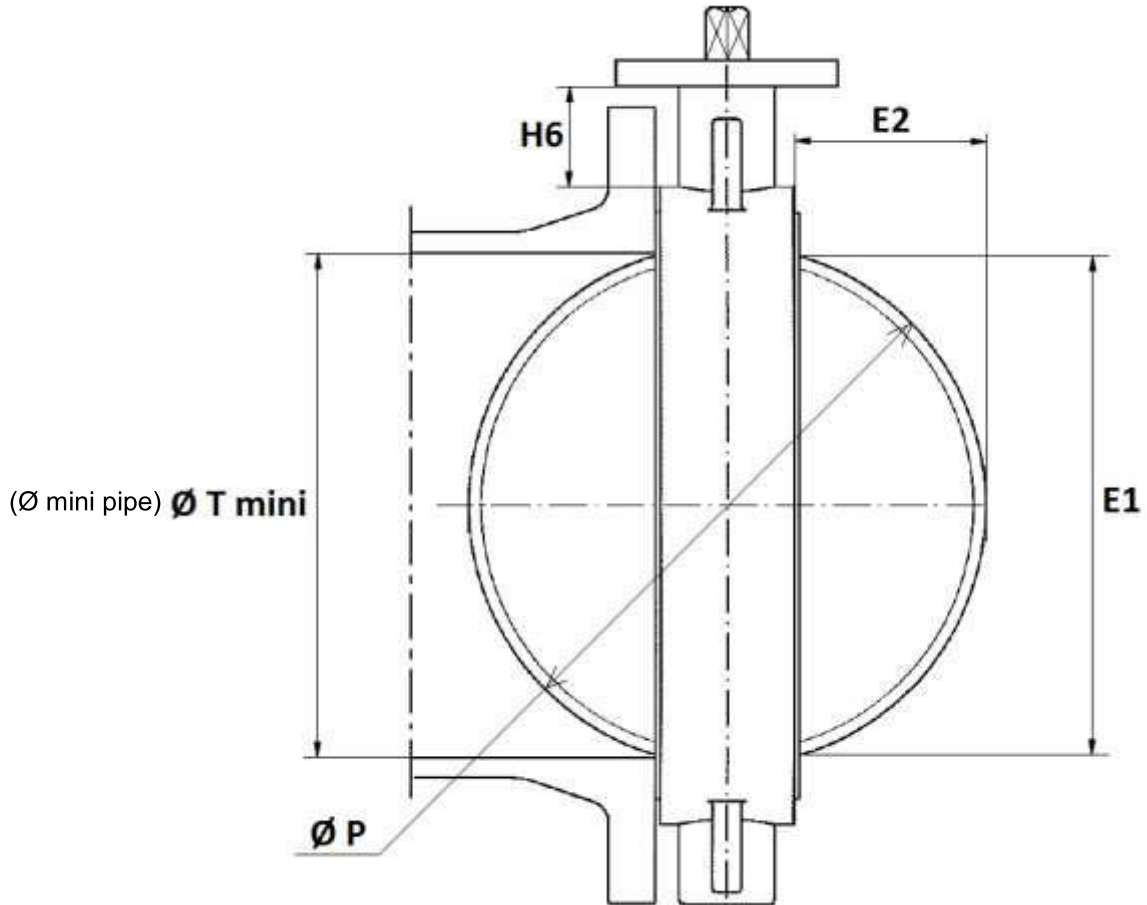
**DN250 – 300**



	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

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NECK AND DISC SIZE ( in mm ) :



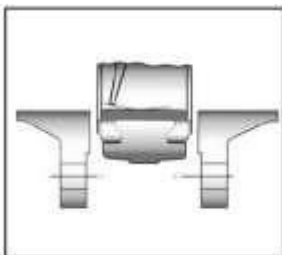
DN	50	65	80	100	125	150	200	250	300
E1	24.5	46	65	85	109	136	188	238	289
E2	3.5	9.5	17	24	33.5	45.5	69	90	110.5
H6	82	80	80	88	93	89	99	71	76
Ø T mini	27.5	49	68	88	112	139	191	241	292
Ø P	50	65	80	100	123	147	198	248	299

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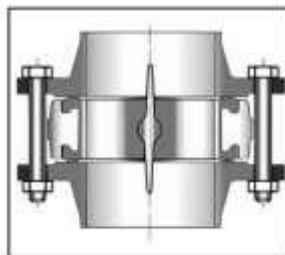
**STANDARDS :**

- Manufacturer certified ISO 9001:2015
- DIRECTIVE 2014/68/EU : For liquids of Group 1
  - DN32-125 : Article 4, §3 (SEP), no CE marking
  - DN150-300 : Risk category II, CE0094 marking
- 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 series 4
  - DIN 3202 part 3, series K1
  - API 609 Table 1 up to DN600
  - ASME B16.10 Table 8 column 3
- Belongs to the list of materials that can be used as part of an installation according to the rule **APSAD R1**

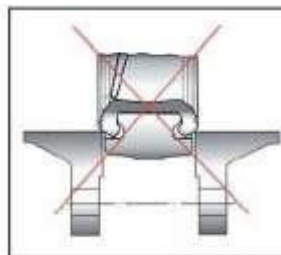
**INSTALLATION :**



**Half open valve introduction**



**Complete opened disc valves when screw tightening**



**Do not install with head down**

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