CONCENTRIC LUG BUTTERFLY VALVE
DUCTILE IRON BODY-STAINLESS STEEL DISC AND EPDM ACS SEAT

References
10CD021
10CD02P1
10CD121



References	Working pressure	∅ DN									
		40	50	65	80	100	125	150	200	250	300
10CD121	16 Bar	●	●	●	●	●	●	●			
10CD02P1	16 Bar								●		
10CD021	10 bar									●	●

1. Standards

- ✓ Manufacturer certified ISO 9001:2015
- ✓ Designing according to ISO 10631 and EN 593
- ✓ DIRECTIVE 2014/68/EU : For liquids or Gas of Group 1
  - DN32-50 : Risk category I, CE marking
  - DN65-200 : Risk category II, CE0094 marking
  - DN250-300 : Risk category III, CE0094 marking
- ✓ Certificate 3.1 on request
- ✓ Pressure 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 up to DN350, column 4 from DN400 to 600
- ✓ ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 &22 (on request)
- ✓ The valves are suitable for use in a safety instrumented system up to SIL 2 in low demand mode. Under consideration of the minimum required hardware fault tolerance HFT= 1 the valves may be used in a redundant architecture up to SIL 3.
- ✓ French water agreement A.C.S. N° 24 ACC LY 017

Approval certificate Marine BUREAU VERITAS on request

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2. Features

Use :	Fluids : Cold and hot water, drinkable water, sea water, alcohol, sodium hydroxide (concentration 70% max), demineralized water, mercury, alcalins
Size :	DN32/40 to DN300
Connection :	Between flanges PN10/16
Min Temperature :	-20°C
Max Temperature :	+110°C
Max Pressure :	16 bar
Specifications :	Long neck for isolation Lug type Full crossing stem ISO 5211 direct mounting pad
Materials :	Ductile iron GJS 500-7 body, ACS EPDM seat

3. Flow coefficient Kvs (m3/h)

DN	Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
32-40	3	4	8	17	25	35	45	56	70
50	3	6	14	22	37	60	95	147	164
65	4	7	10	22	48	78	140	160	201
80	5	12	29	52	88	156	216	281	359
100	9	21	48	87	147	234	346	519	627
125	19	35	78	148	232	372	562	761	995
150	28	48	108	203	324	536	865	1211	1471
200	35	91	206	320	554	952	1427	2163	2509
250	43	143	329	562	865	1471	2336	3460	3936
300	69	216	476	770	1341	2206	3460	4758	5865

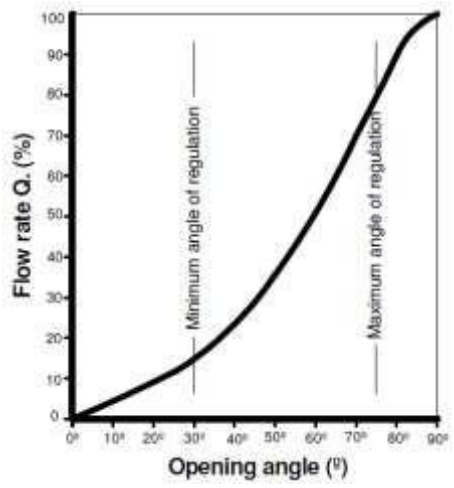
Head loss calculations :

$\Delta p = (Q / Kv)^2 \times SG$ Q : flow in m³/h

Δp : Head loss in bar

SG : Specific gravity (= 1 for water)

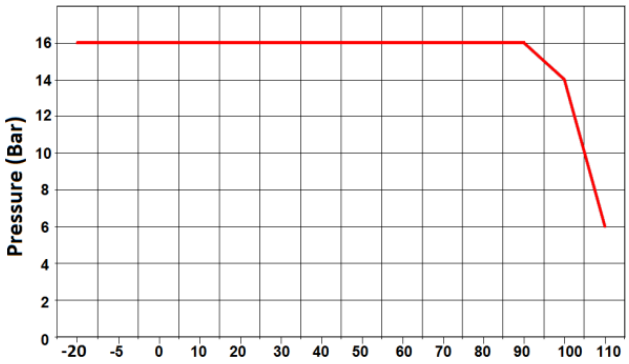
Kv : Volume of water in m³/h, that will flow through a given restriction or valve opening with a pressure drop of 1 bar at 20°C)



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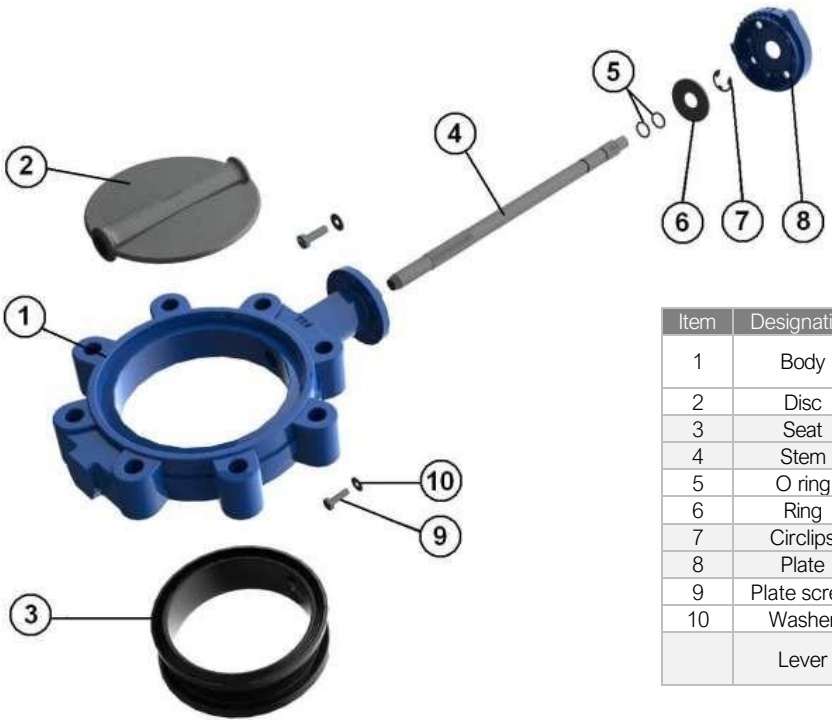
4. Pressure / temperature graph

PS 16 BAR, DN40-300



5. Materials

DN32-200 :



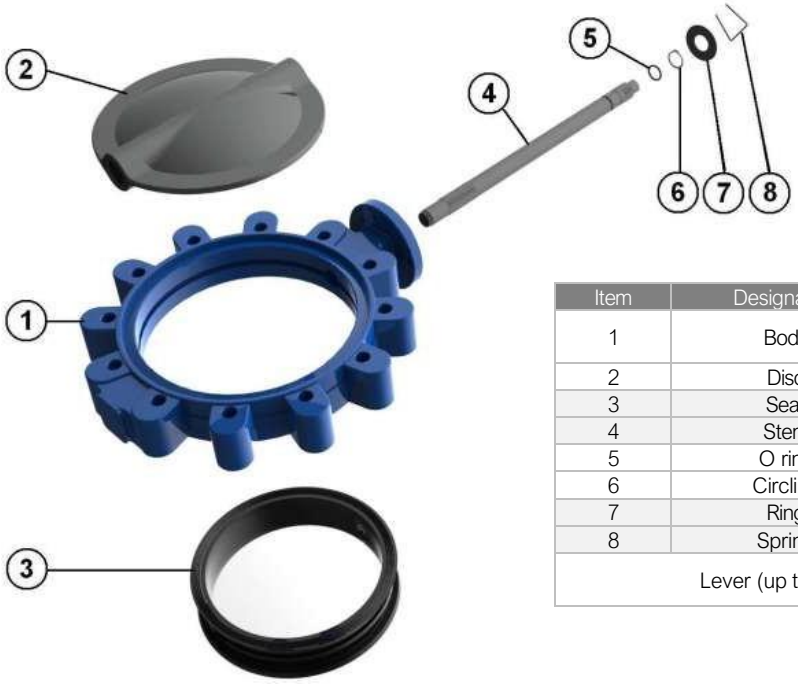
Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 250-300 µ thickness
2	Disc	ASTM A351 CF8M
3	Seat	EPDM
4	Stem	AISI 304
5	O ring	NBR
6	Ring	Steel
7	Circlips	Steel
8	Plate	Aluminium
9	Plate screw	5.6
10	Washer	Steel
	Lever	Aluminium ADC10 with epoxy painting 50µ thickness

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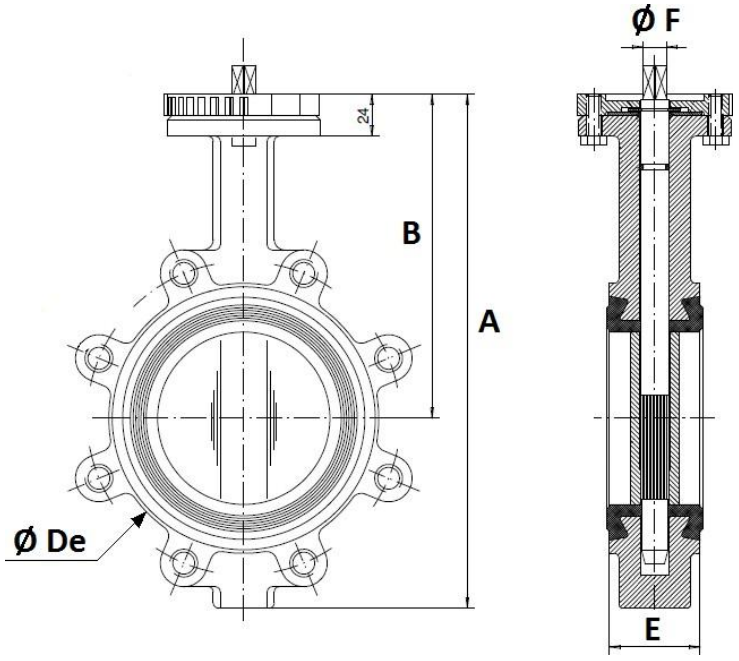
DN250-300



Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 250-300 µ thickness
2	Disc	ASTM A351 CF8M
3	Seat	EPDM
4	Stem	AISI 304
5	O ring	NBR
6	Circlips	Steel
7	Ring	Steel
8	Spring	Steel
	Lever (up to DN300)	Ductile iron EN GJS-500-7 with epoxy painting 50µ thickness

6. Size (in mm)

VALVES DN32-150



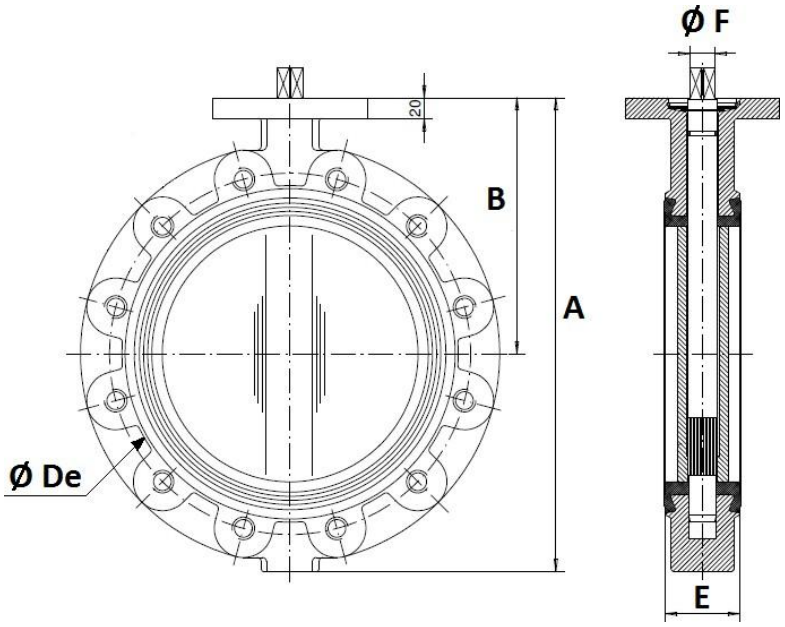
DN	32/40	50	65	80	100	125	150
A	205	226	246	259	295	325	352
B	140	156	161	169	187	206	215
Ø De	83	102	115	136	157	192	220
E	33	43	46	46	52	56	56
Ø F	9.5	9.5	12	14	14	17	17
Weight (Kg)	2.7	4.1	4.7	6.1	7.9	10.9	11.85

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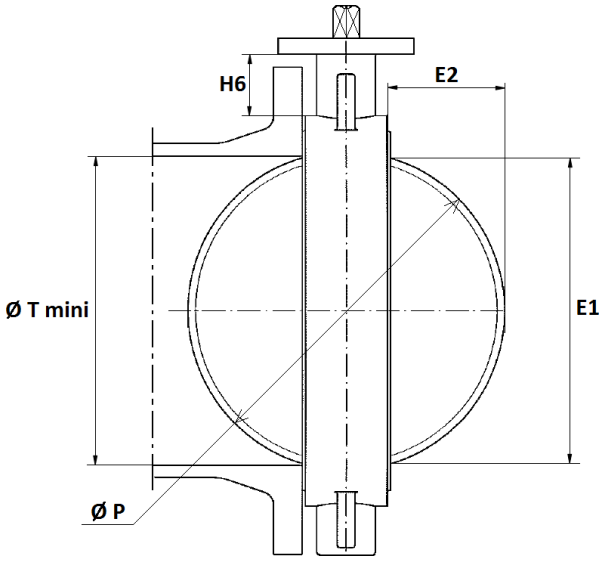
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10CD121

VALVES DN200-300



DN	200	250	300	350
A	422	460	523	570
B	255	248	280	300
Ø De	275	329	378	436
E	60	68	78	78
Ø F	21	23	26.5	26.5
Weight (Kg)	18.5	31.8	47.80	53

NECK AND DISC SIZE



DN	32/40	50	65	80	100	125	150	200	250	300
E1	23	24.5	46	65	85	109	136	188	238	289
E2	3.5	3.5	9.5	17	24	33.5	45.5	69	90	110.5
H6	76	82	80	80	88	93	89	99	71	76
Ø T mini	26	27.5	49	68	88	112	139	191	241	292
Ø P	40	50	65	80	100	123	147	198	248	299

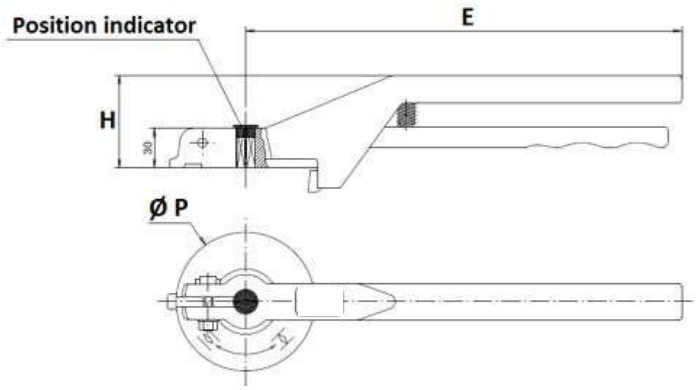
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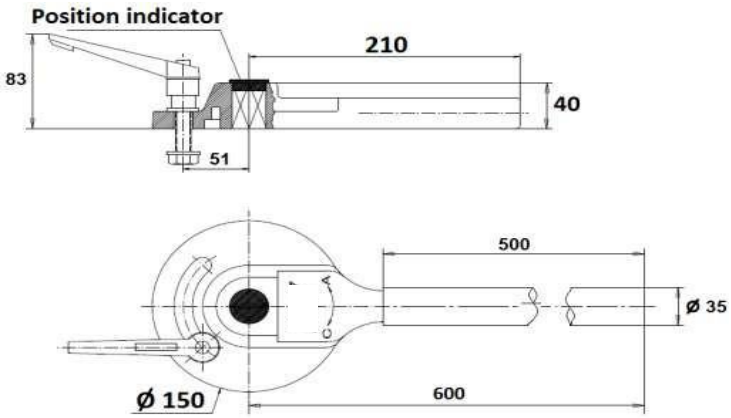
STANDARD LEVERES SIZE

DN32–200



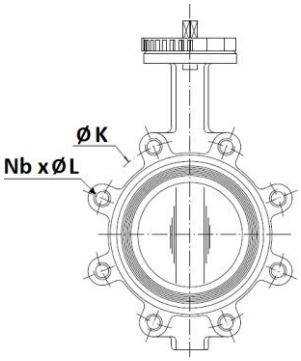
DN	32-100	125-200
E	205	330
H	57	70
Ø P	88	105

DN250–300 :

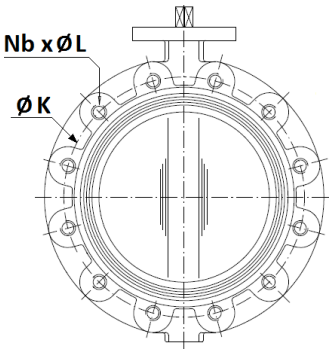


BETWEEN FLANGES SIZE

DN 32-150



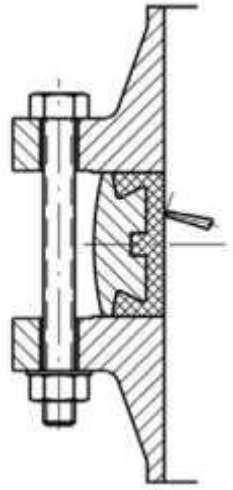
DN 200-300



	DN (mm)	32	40	50	65	80	100	125	150	200	250	300
	NPS (")	1"1/4	1"1/2	2"	2"1/2	3"	4"	5"	6"	8"	10"	12"
PN10	Ø K	100	110	125	145	160	180	210	240	295	350	400
	Nb x Ø L	4 x M16				8 x M16			8 x M20		12 x M20	
PN16	Ø K	100	110	125	145	160	180	210	240	295	355	410
	Nb x Ø L	4 x M16				8 x M16			8xM20	12xM20	12 x M24	
Class 150	Ø K	88.9	98.5	120.6	139.7	152.4	190.5	215.9	241.3	298.5	362	431.8
	Nb x Ø L	4 x 1/2"		4 x 5/8"			8x5/8"		8 x 3/4"		12 x 7/8"	

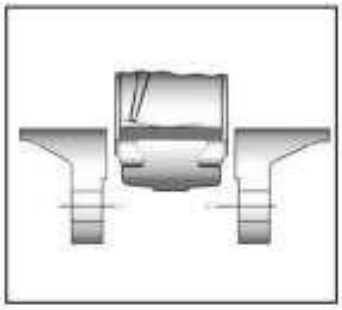
Information provided as an indication and subject to possible modification

7. Maximum tightening torques for bolting flanges

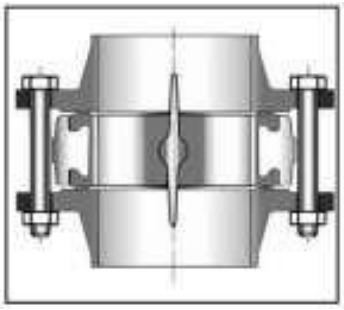


		Maximum torques (Nm)			
	Bolting types	5,6 / A307 Gr.B	8,8 / A193 B7	10,9	12,9
Bolting DN	**M12 (1/2")**	41,16	84,28	117,6	142,1
	M14 (9/16")	66,64	132,3	186,2	225,4
	M16 (5/8")	102,9	205,8	289,1	347,9
	M18 (3/4")	142,1	284,2	396,9	475,3
	M20 (3/4")	196	401,8	568,4	676,2
	M22 (7/8")	259,7	539	764,4	911,4
	M24 (1")	338,1	695,8	980	1176
	M27 (1"1/8)	499,8	1029	1470	1764
	M30 (1"1/4)	666,4	1421	1960	2352

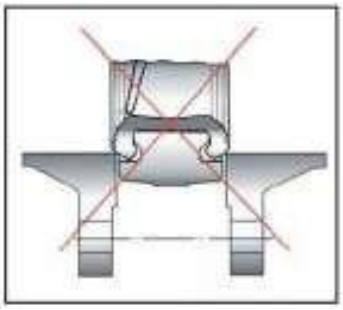
8. Installation instructions



Half open valve introduction



Complete opened disc valves when screw tightening



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