

**CONCENTRIC GAS LUG BUTTERFLY VALVE EXCELLENCE RANGE TTV  
DUCTILE IRON BODY-STAINLESS STEEL/DUCITILE IRON DISC AND NBR SEAT**

Lug butterfly valves TTV excellence range for closing or setting networks of gas.  
 Valves with NF ROB-GAZ certification by Certigaz, 5 years warranty.  
 Ductile iron body EN GJS-500-7, stainless steel disc up to DN100 and NBR Gas seat.  
 Between flanges PN10, PN16 according to the DN.  
 Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22 on request.



Reinforced lug for DN200

- Size :** DN40 to DN200
- Connection :** Between flanges PN10/16 (PN10 for DN200)
- Min Temperature :** -20°C
- Max Temperature :** +60°C
- Max Pressure :** 5 Bars
- Specifications :** Long neck for isolation  
 Lug type  
 Full crossing stem  
 ISO 5211 direct mounting pad

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

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

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**SPECIFICATIONS :**

- Long neck for isolation
- ISO 5211 mounting pad
- Lug type ( Reinforced lug for DN200 )
- Between PN10/16 flanges ( PN10 for DN200 )
- **Certificate NF ROGAZ**
- Full crossing stem
- Removable NBR gas seat, dovetail type above DN40
- Stainless steel disc up to DN100 included and chromed ductile iron disc from DN125 to 200
- 9 positions lever with locking device
- Rilsan coated body color RAL 5024 , 250-300 microns thickness

**USE :**

- Fluids : Gas
- Min and max Temperature Ts : - 20°C to + 60°C
- Max Pressure Ps : 5 bars ( MOP 5 class )

**RANGE :**

- With lever from DN 40 to DN 200

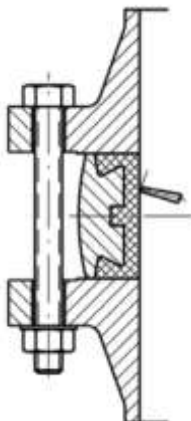
**CONNECTION :**

- Between PN10/16 flanges up to DN150 and PN10 for DN200

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

DN	40	50	65	80	100	125	150	200
Torque ( Nm )	8	10	14	18	31	59	93	206

**MAXIMUM TIGHTENING TORQUES FOR BOLTING FLANGES :**



		Maximum torques (Nm)			
		Bolting types	5,6 / A307 Gr.B	8,8 / A193 B7	10,9
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

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**FLOW COEFFICIENT Kv ( m3 / h ) :**

DN	Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
32-40	3	5	10	16	22	31	36	36	36
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

**HEAD LOSS CALCULATIONS :**

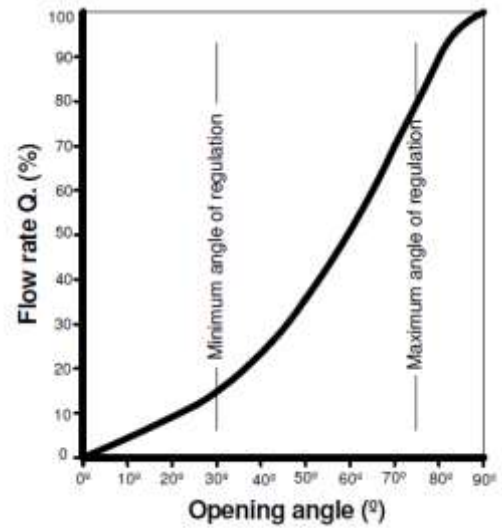
$\Delta p = ( Q / Kv )^2 \times SG$

Q : flow in m³/h

$\Delta p$  : Head loss in bar

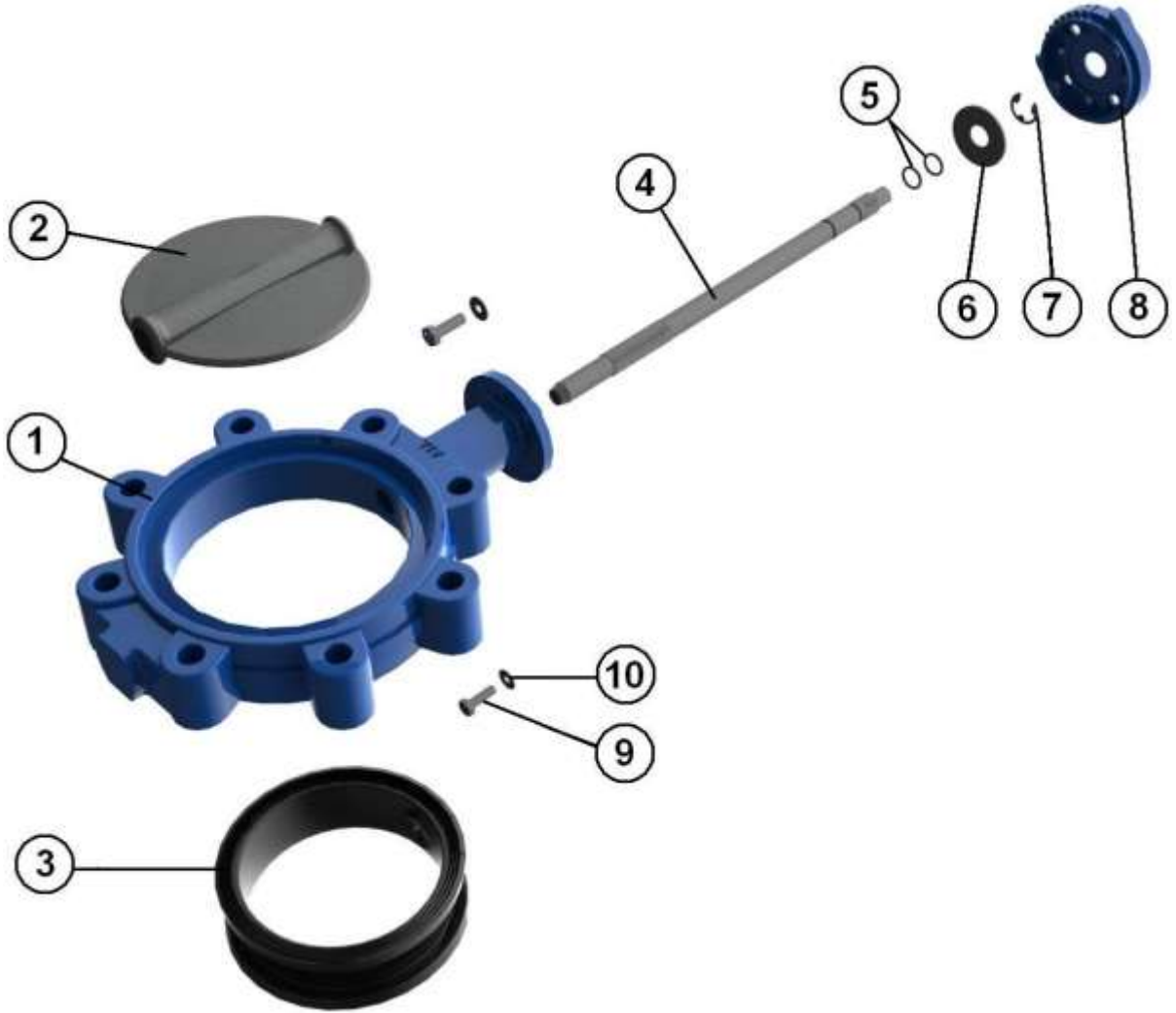
SG : Specific gravity (= 1 for water)

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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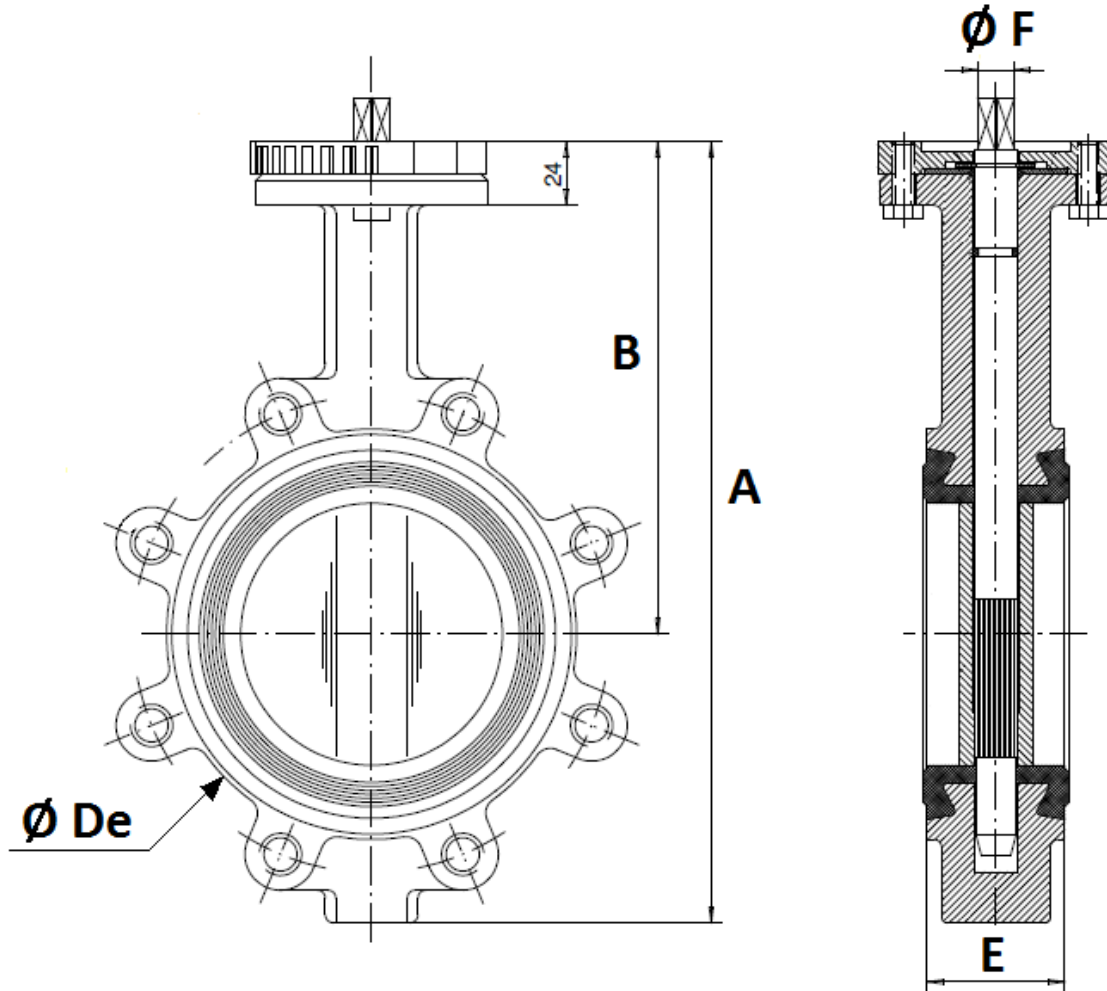
MATERIALS DN 40 - 200 :



Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 rilsan coated color RAL 5024 , 250-300 μ thickness
2	Disc DN40-100	ASTM A351 CF8M
2	Disc DN125-200	Chromed Ductile iron EN GJS 500-7
3	Seat	NBR for Gas
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
	Lever	Aluminium ADC10 with epoxy painting 50μ thickness

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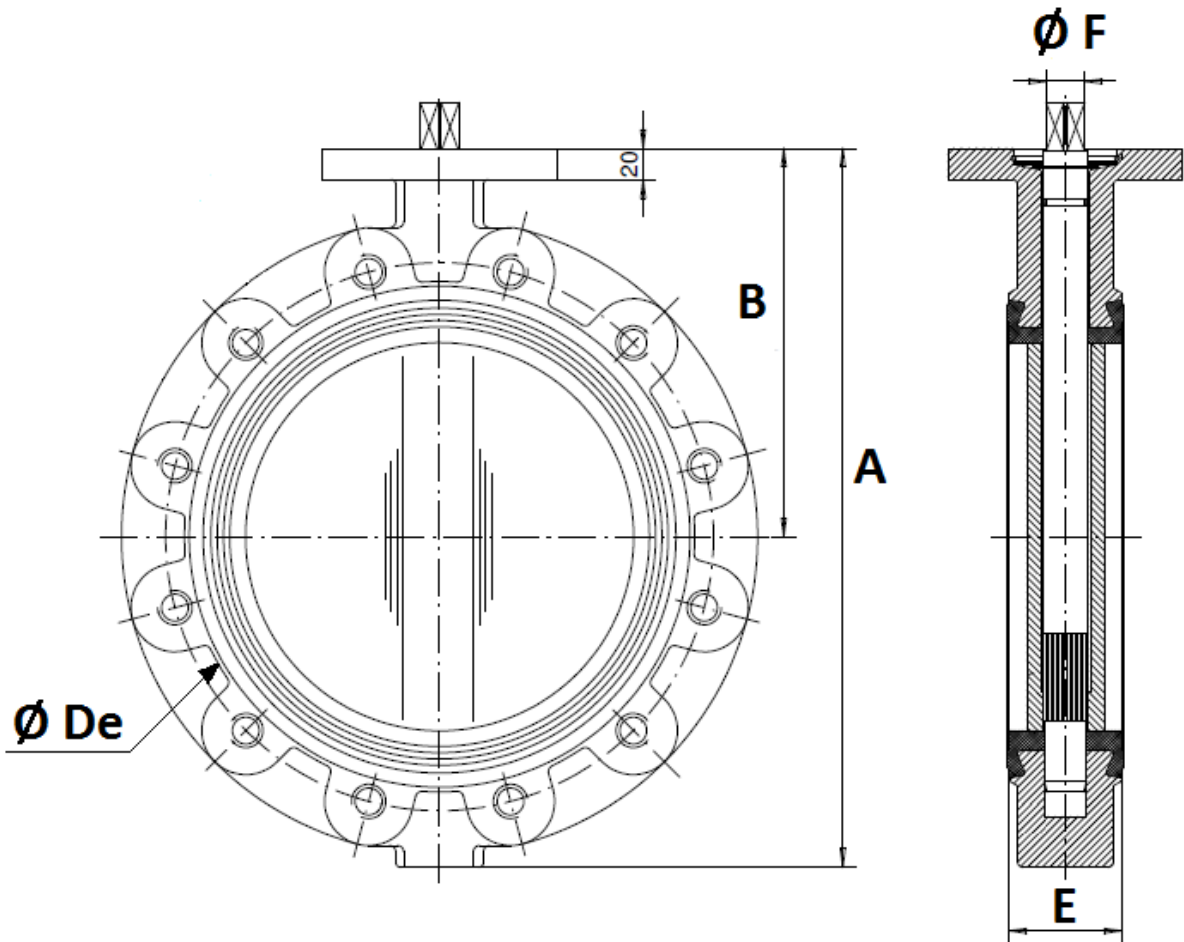
**SIZE DN32-150 ( in mm ) :**



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
Poids (Kg)	2.7	4.1	4.7	6.1	7.9	10.9	11.85

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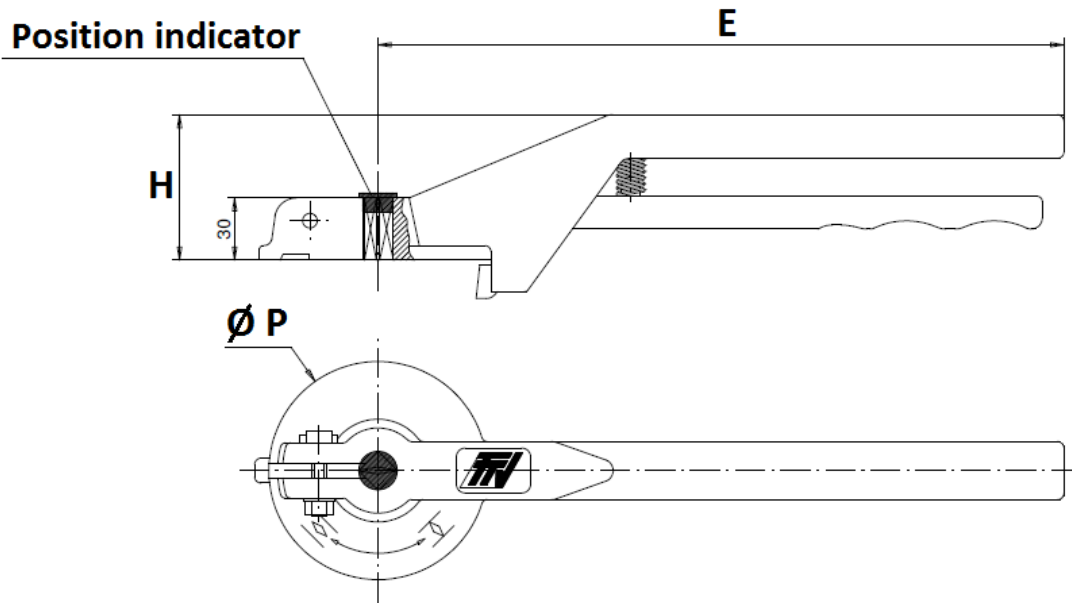
**SIZE DN200 ( in mm ) :**



DN	200
A	422
B	255
Ø De	275
E	60
Ø F	21
Weight (Kg)	18.5

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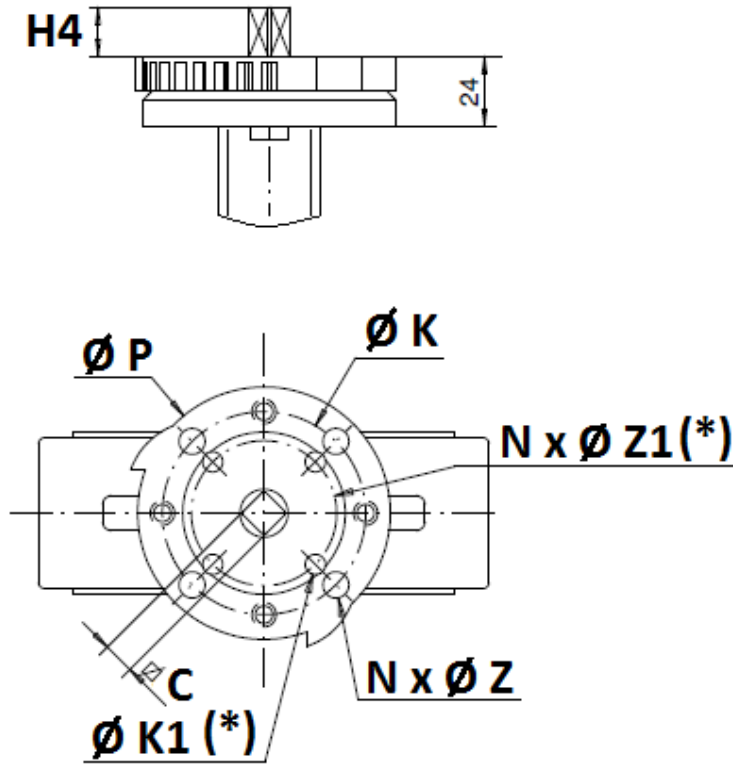
LEVERS SIZE ( in mm ) :



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

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**ISO MOUNTING PAD AND STEM SIZE ( in mm ) :**



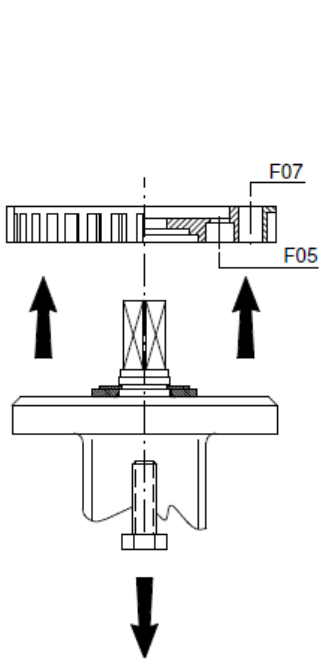
(\*) : Only from DN32 to DN100 (see installation with ISO F05 plate page 9)

DN	32/40	50	65	80	100	125	150	200
H4	14		16		20			24
C	8		9	11		14		17
Ø K	70							
ISO	F07							
N x Ø Z	4 x 9							
Ø K1	50					-	-	-
ISO 1	F05					-	-	-
N x Ø Z1	4 x 7					-	-	-
Ø P	88					105		

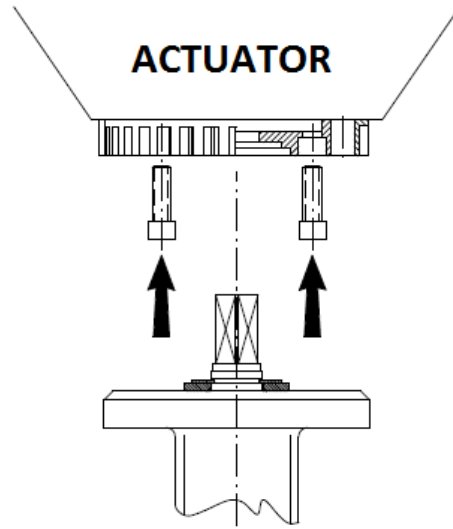


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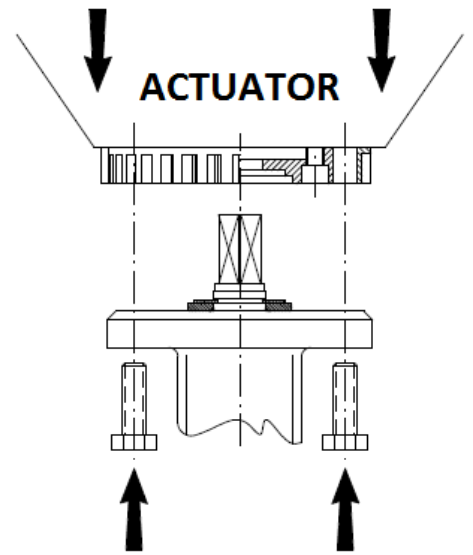
**ISO PLATE INSTALLATION FOR DN32-100 ISO F05 :**



**Unscrew and remove the flange**



**Screw the flange to the actuator with hexagon socket screws**

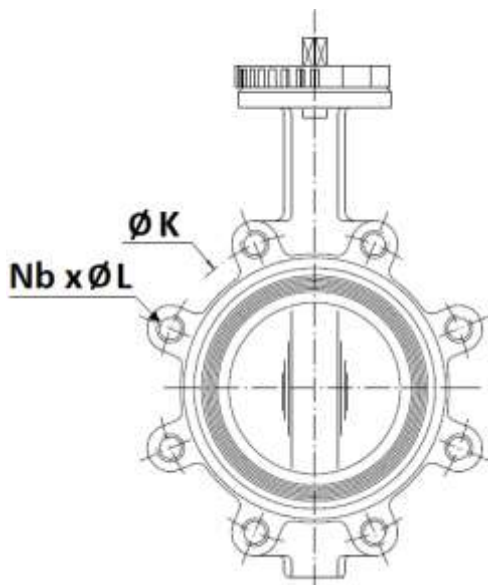


**Screw the valve to the flange**

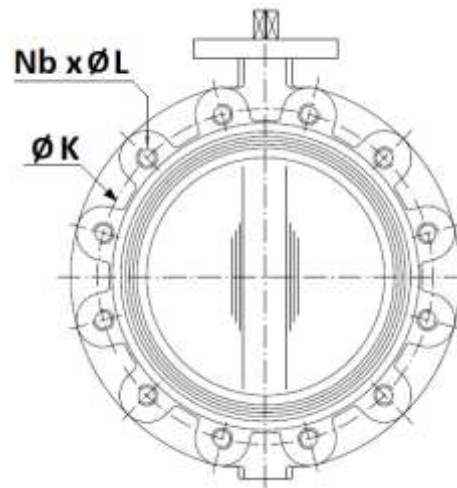
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**BETWEEN FLANGES SIZE :**

**DN 32-150**



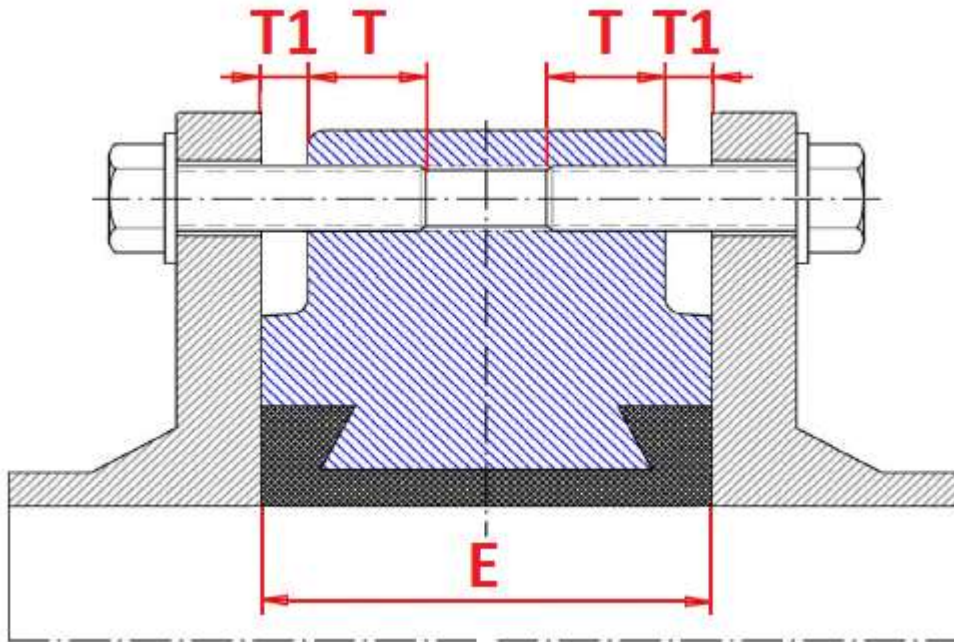
**DN200**



	DN (mm)	32	40	50	65	80	100	125	150	200
	NPS (")	1"1/4	1"1/2	2"	2"1/2	3"	4"	5"	6"	8"
PN10	Ø K	100	110	125	145	160	180	210	240	295
	Nb x Ø L	4 x M16				8 x M16			8 x M20	
PN16	Ø K	100	110	125	145	160	180	210	240	295
	Nb x Ø L	4 x M16				8 x M16			8xM20	12xM20

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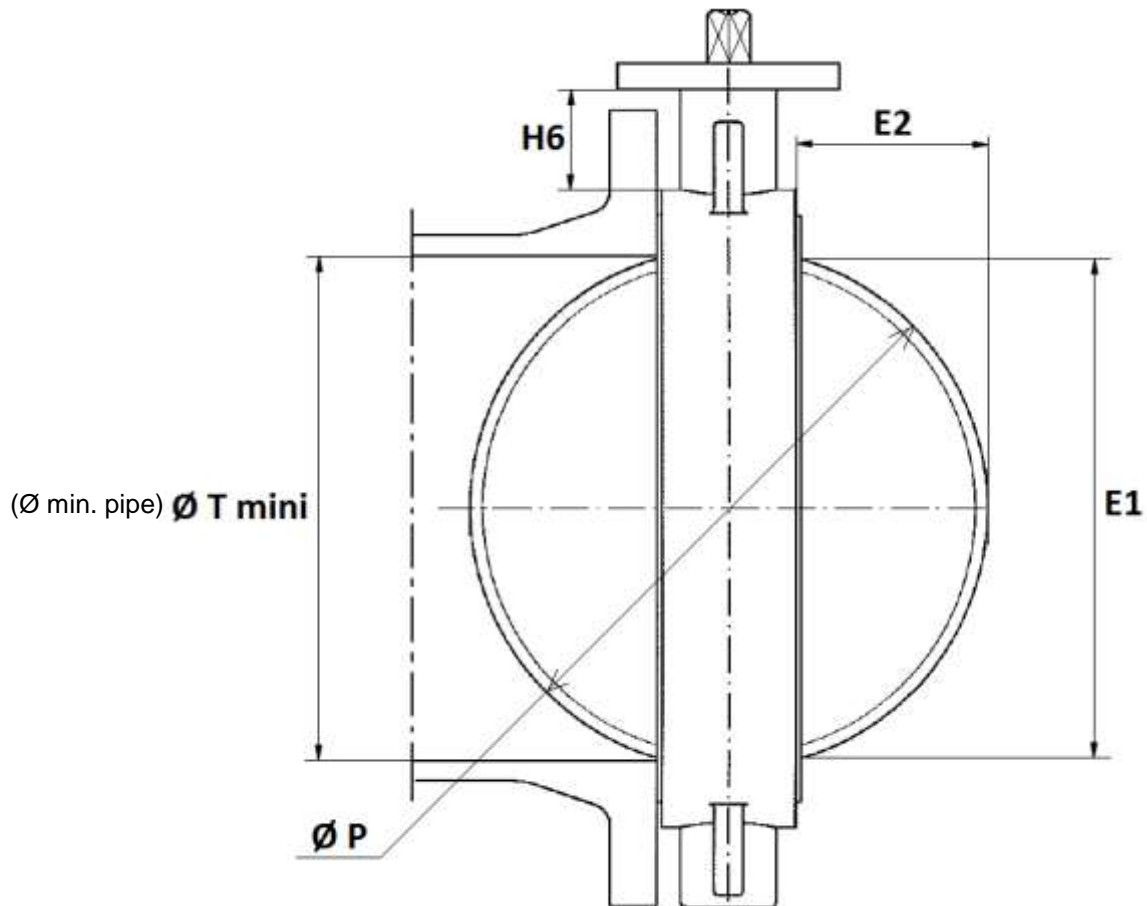
**DEPTH THREADED HOLES:**



DN	PN10	PN16	PN10 - PN16	
	T	T	T1	E
32	13.5	13.5	2.5	33
40	13.5	13.5	2.5	33
50	14.5	14.5	2.5	43
65	13.5	13.5	3.5	46
80	16	16	4	46
100	17.5	17.5	2.5	52
125	20	20	3	56
150	20	20	3	56
200	23	23	3	60

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NECK AND DISC SIZE ( in mm ) :



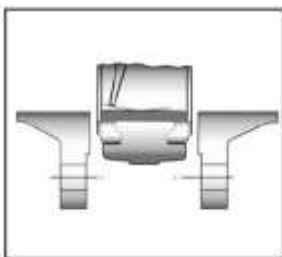
DN	32/40	50	65	80	100	125	150	200
E1	23	24.5	46	65	85	109	136	188
E2	3.5	3.5	9.5	17	24	33.5	45.5	69
H6	76	82	80	80	88	93	89	99
Ø T mini	26	27.5	49	68	88	112	139	191
Ø P	40	50	65	80	100	123	147	198

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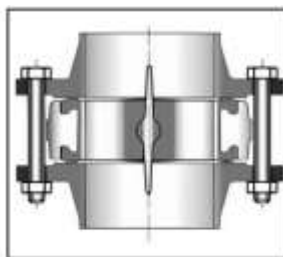
**STANDARDS :**

- Manufacturer certified ISO 9001:2015
- DIRECTIVE 2014/68/EU : For liquids or Gas of Group 1
  - DN32-100 : Risk category I, CE marking
  - DN125-200 : Risk category II, CE0094 marking
- Certificate 3.1 on request
- Pressure tests according to EN 12266-1, rate A
- Between PN10/16 flanges according to EN 1092-1
- 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
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 & 22 ( on request )
- **Certificate NF ROGAZ N° ROB 064 according to NF EN 13774 & NF EN 549**

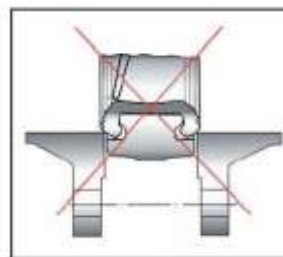
**INSTALLATION INSTRUCTIONS :**



**Half open valve introduction**



**Complete opened disc valves  
when screw tightening**



**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.