

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

Wafer 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 or Class 150 according to the DN.
Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22 on request.



Size : DN40 to DN200
Connection : Between flanges PN10/16 and Class 150 (PN20)
Min Temperature : -20°C
Max Temperature : +60°C
Max Pressure : 5 Bars
Specifications : Long neck for isolation
 Wafer 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
- Wafer type
- Between flanges PN10/16 from DN32/40 to 200 and Class 150 (PN20) from DN40 to 200
- **NF ROBGAZ certificate**
- 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 32/40 to DN 200

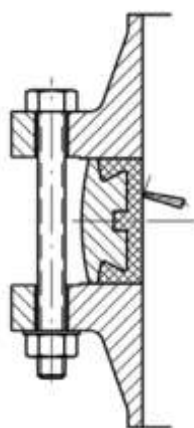
CONNECTION :

- Between flanges PN10/16 from DN32/40 to 200 and Class 150 (PN20) from DN40 to 200

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

DN	32/40	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 :

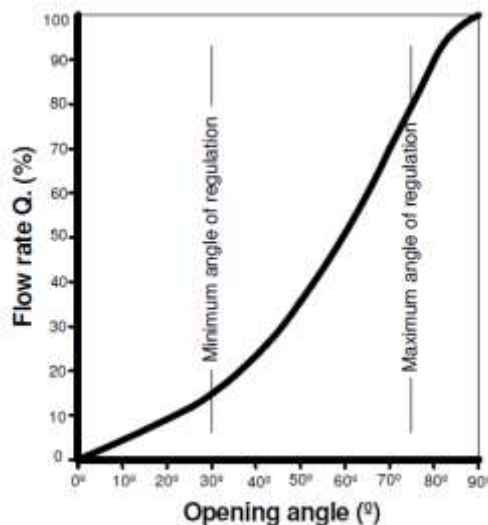
$\Delta p = (Q / Kv)^2 \times SG$

Q : flow in m³/h

Δp : Head loss in bar

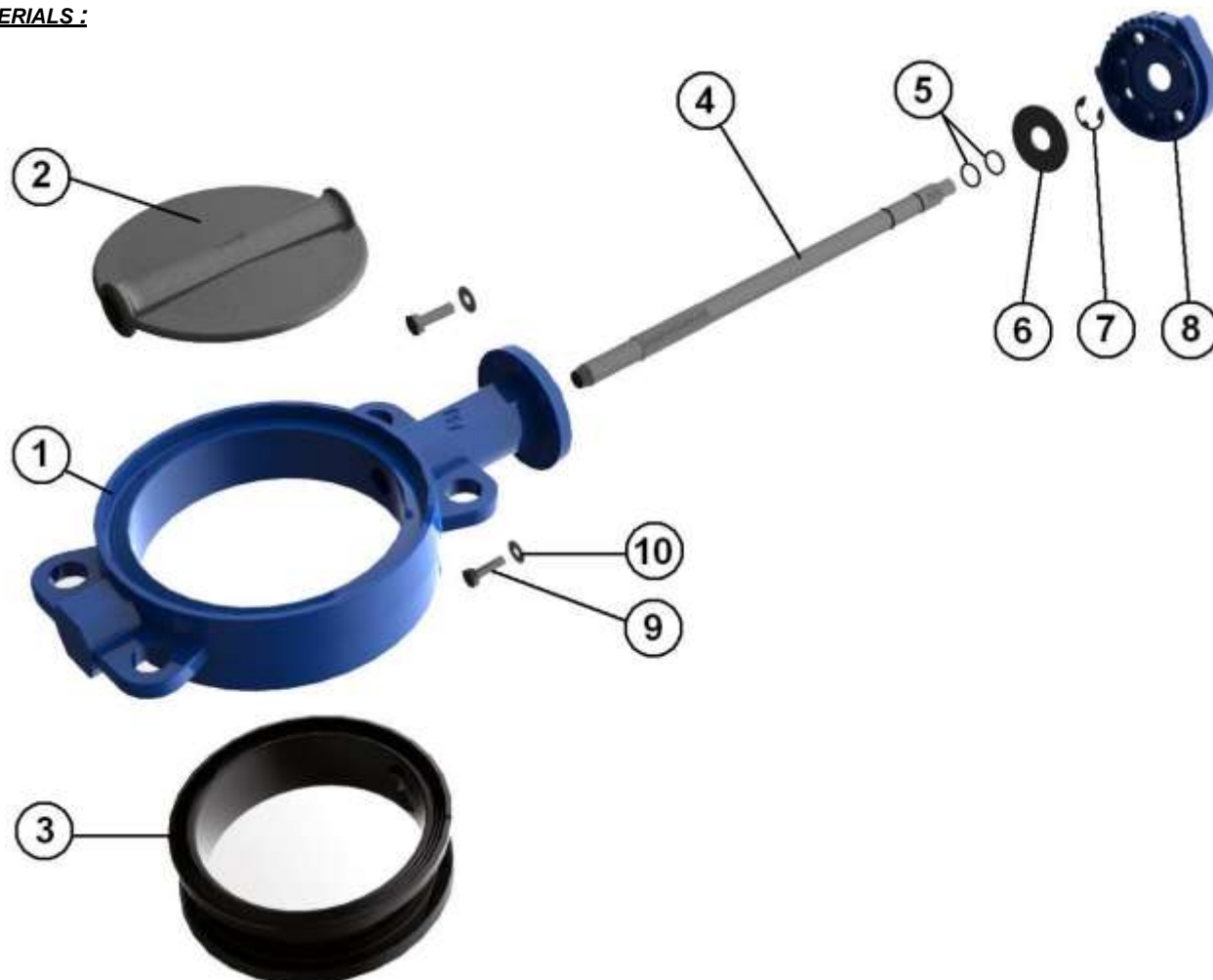
SG : Specific gravity (= 1 for water)

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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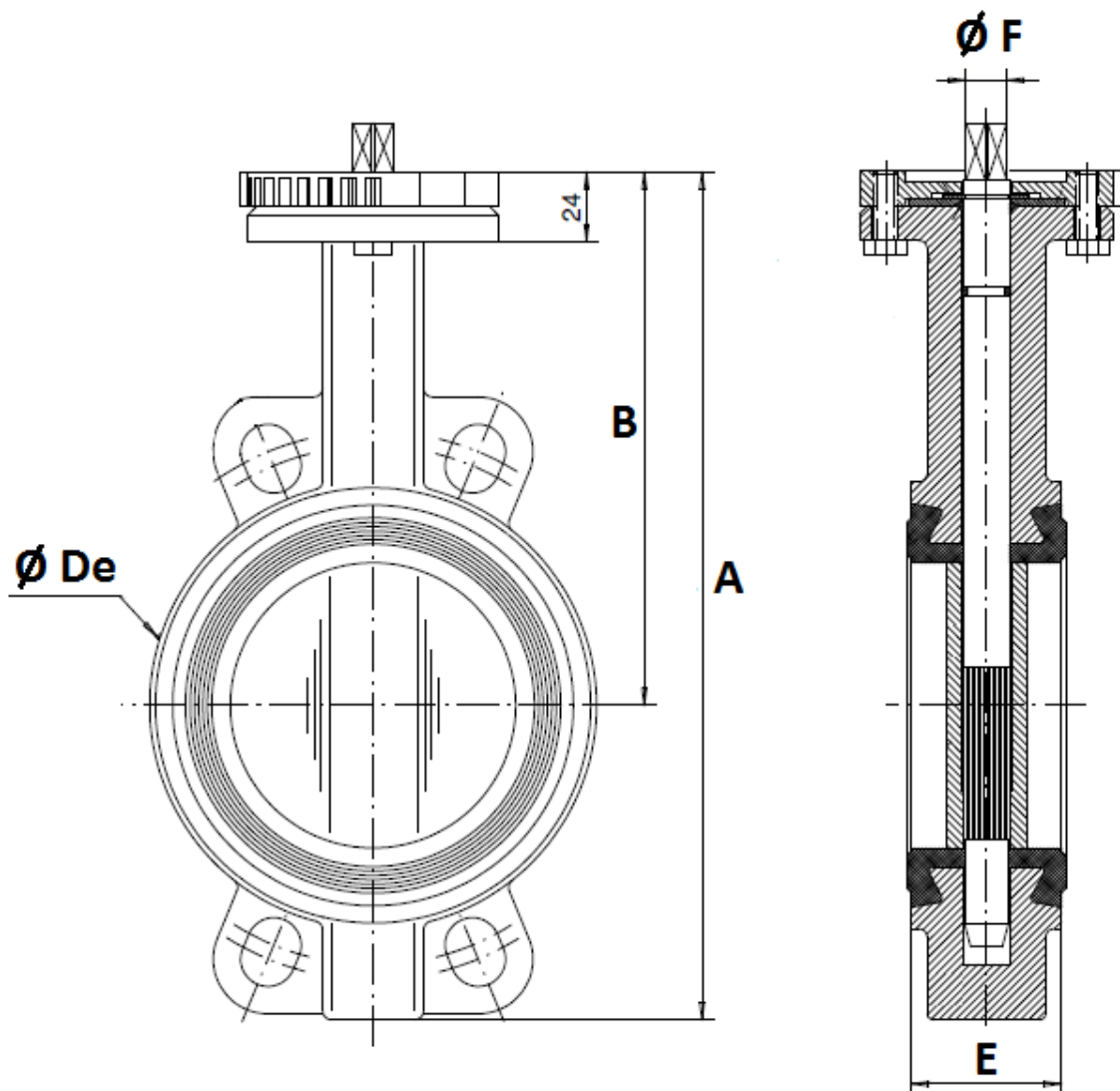
MATERIALS :



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 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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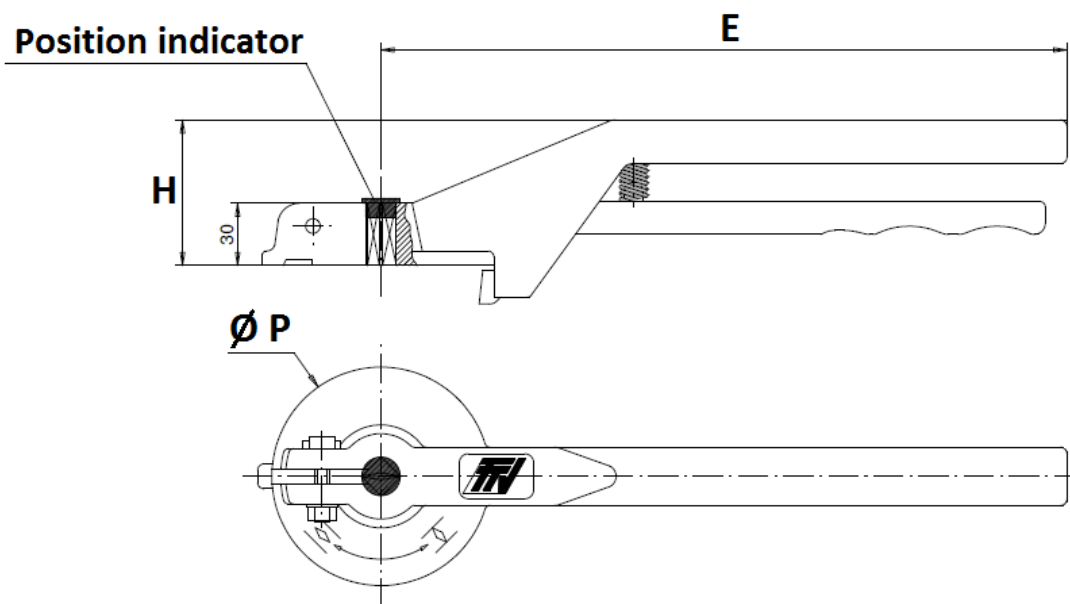
SIZE (in mm) :



DN	32/40	50	65	80	100	125	150	200
A	206	228	248	265	298	331	349	430
B	140	156	161	169	187	206	215	255
Ø De	82	102	119	135	155	185	208	270
E	33	43	46	46	52	56	56	60
Ø F	9.5	9.5	12	14	14	17	17	21
Weight (Kg)	2.46	3.66	4.4	4.6	6	7.6	9.2	14.7

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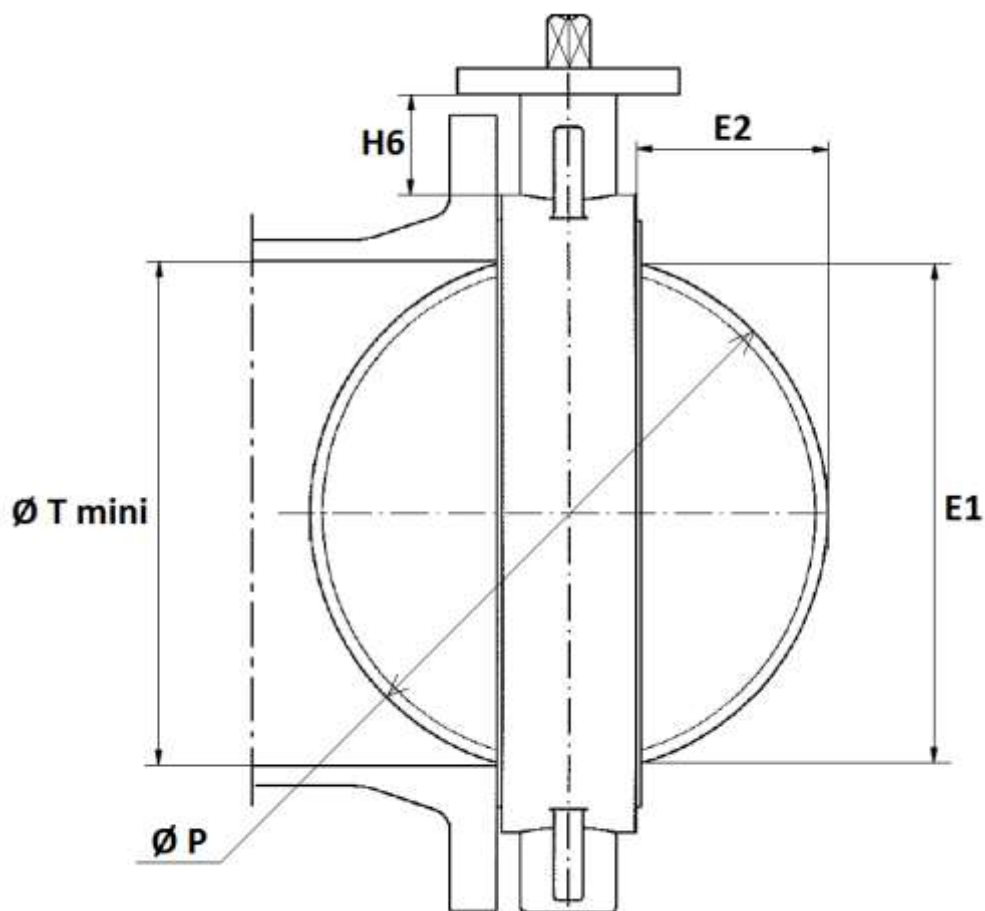
LEVERS SIZE (in mm) :



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

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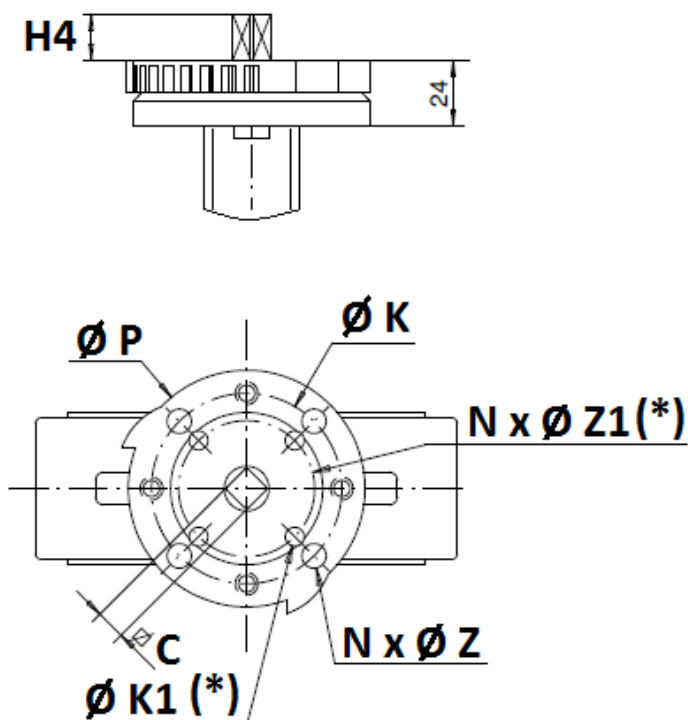
DISC AND NECK SIZE (in mm) :



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
$\varnothing T \text{ mini}$	26	27.5	49	68	88	112	139	191
$\varnothing P$	40	50	65	80	100	123	147	198

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ISO MOUNTING PAD AND STEM SIZE (in mm) :

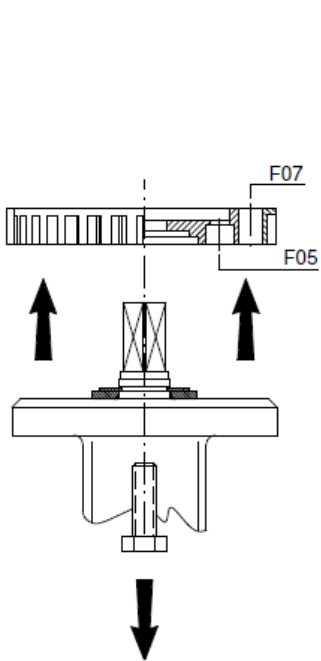


(*) : Only from DN32 to DN100 (see installation with ISO F05 plate page 9)

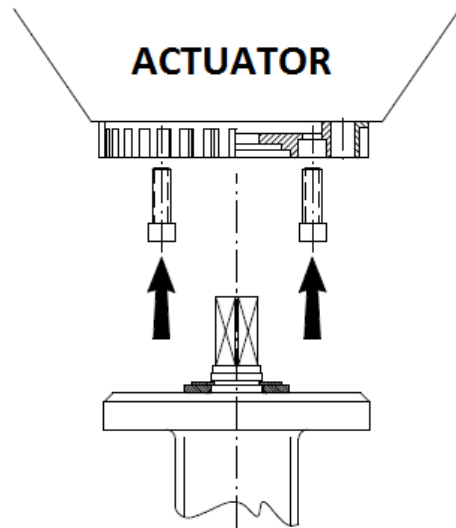
DN	32/40	50	65	80	100	125	150	200
H4	14		16		20		24	
C	8		9		11		14	
Ø K	70							
ISO	F07							
N x Ø Z	4 x 9							
Ø K1	50				-	-	-	-
ISO 1	F05				-	-	-	-
N x Ø Z1	4 x 7				-	-	-	-
Ø P	88				105			

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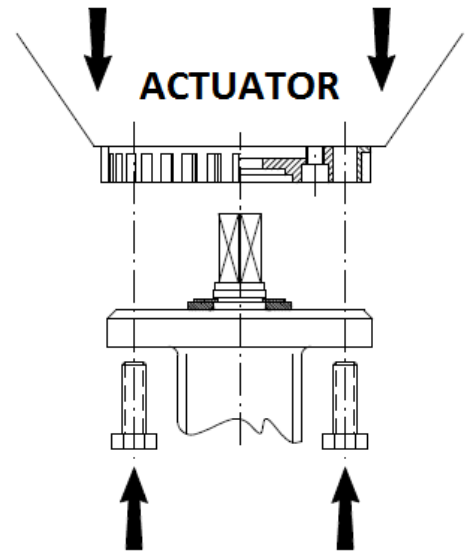
ISO PLATE INSTALLATION FOR DN32-100 ISO F05 :



Unscrew and remove the flange



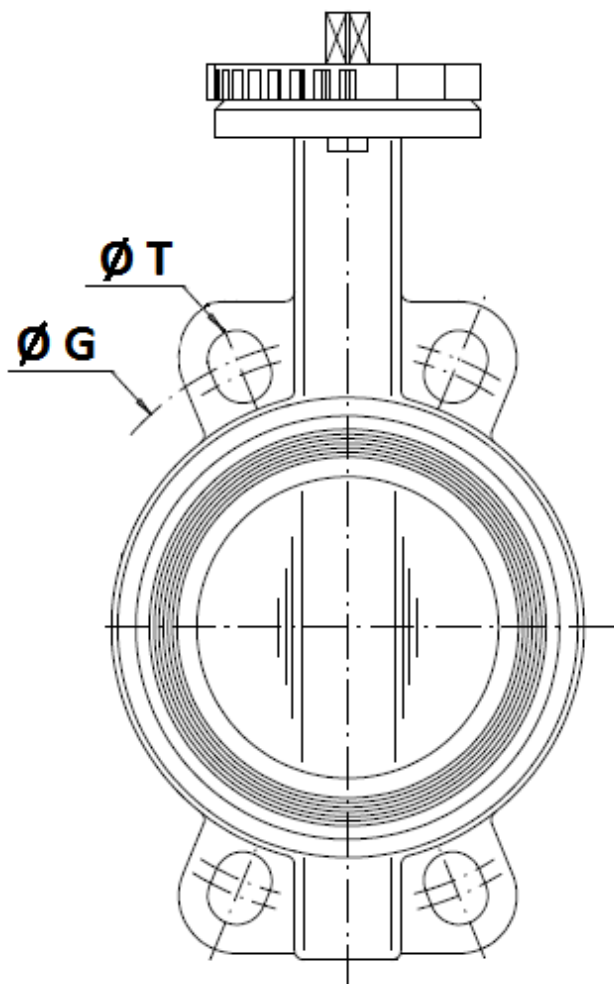
Screw the flange to the actuator with hexagon socket screws



Screw the valve to the flange

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BETWEEN FLANGES SIZE (in mm) :



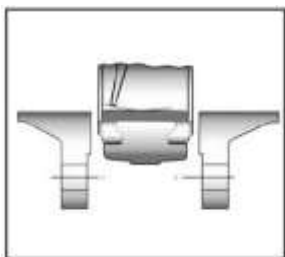
	DN (mm)	32	40	50	65	80	100	125	150	200
	NPS (")	1"1/4	1"1/2	2"	2"1/2	3"	4"	5"	6"	8"
PN10	Ø G	100	110	125	145	160	180	210	240	295
	Ø T	18	18	18	18	18	18	18	23	23
PN16	Ø G	100	110	125	145	160	180	210	240	295
	Ø T	18	18	18	18	18	18	18	23	23
Class 150	Ø G	88.9	98.5	120.6	139.7	152.4	190.5	215.9	241.3	298.5
	Ø T	16	16	19	19	19	19	23	23	23

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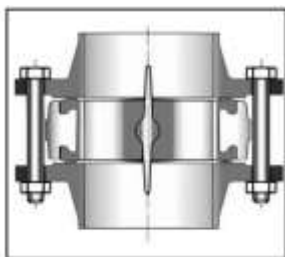
STANDARDS :

- 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 ROBGAZ N° ROB 064 according to NF EN 13774 & NF EN 549**

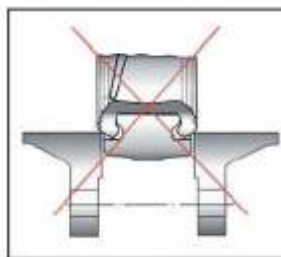
INSTALLATION INSTRUCTIONS :



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.