

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, 10 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

Sferaco 90 rue du Ruisseau 38297 St Quentin Fallavier Tel: + 33 (0) 474.94.15.90 Fax: + 33 (0) 474.95.62.08 Internet: www.sferaco.com E-mail: info@sferaco.fr

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

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 ROGAZ 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

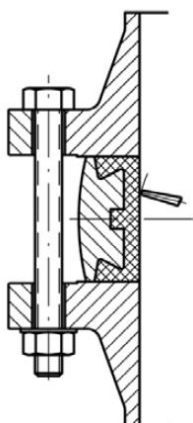
CONNECTION :

- 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	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

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

FLOW COEFFICIENT Kv (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

HEAD LOSS CALCULATIONS :

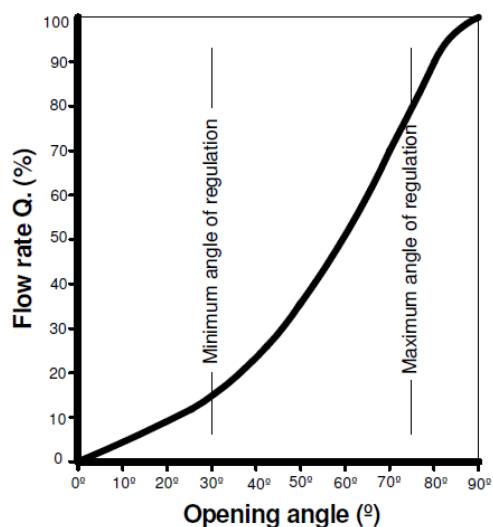
$$\Delta p = (Q / K_v)^2 \times SG$$

Q : flow in m³/h

Δp : Head loss in bar

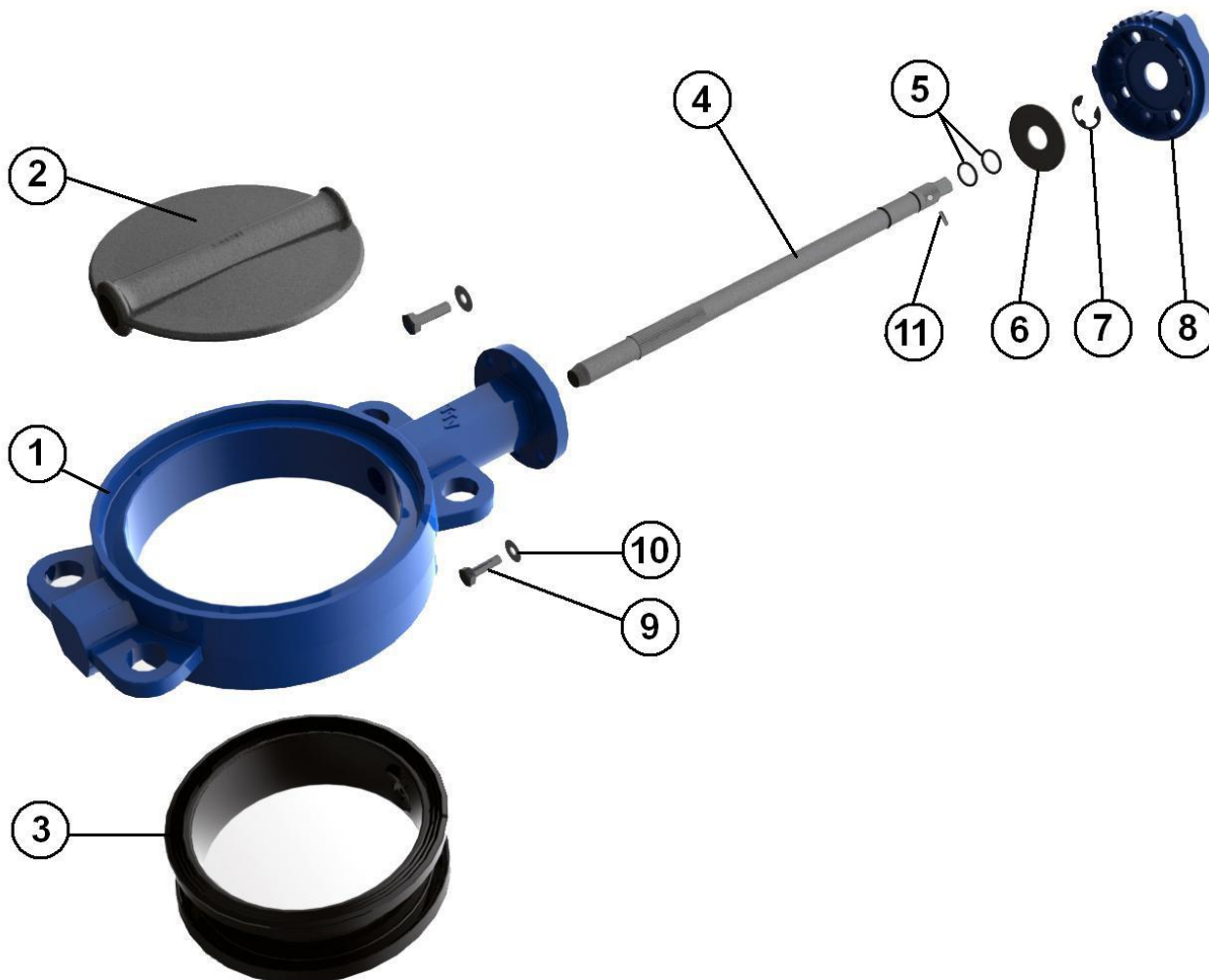
SG : Specific gravity (= 1 for water)

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)



CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

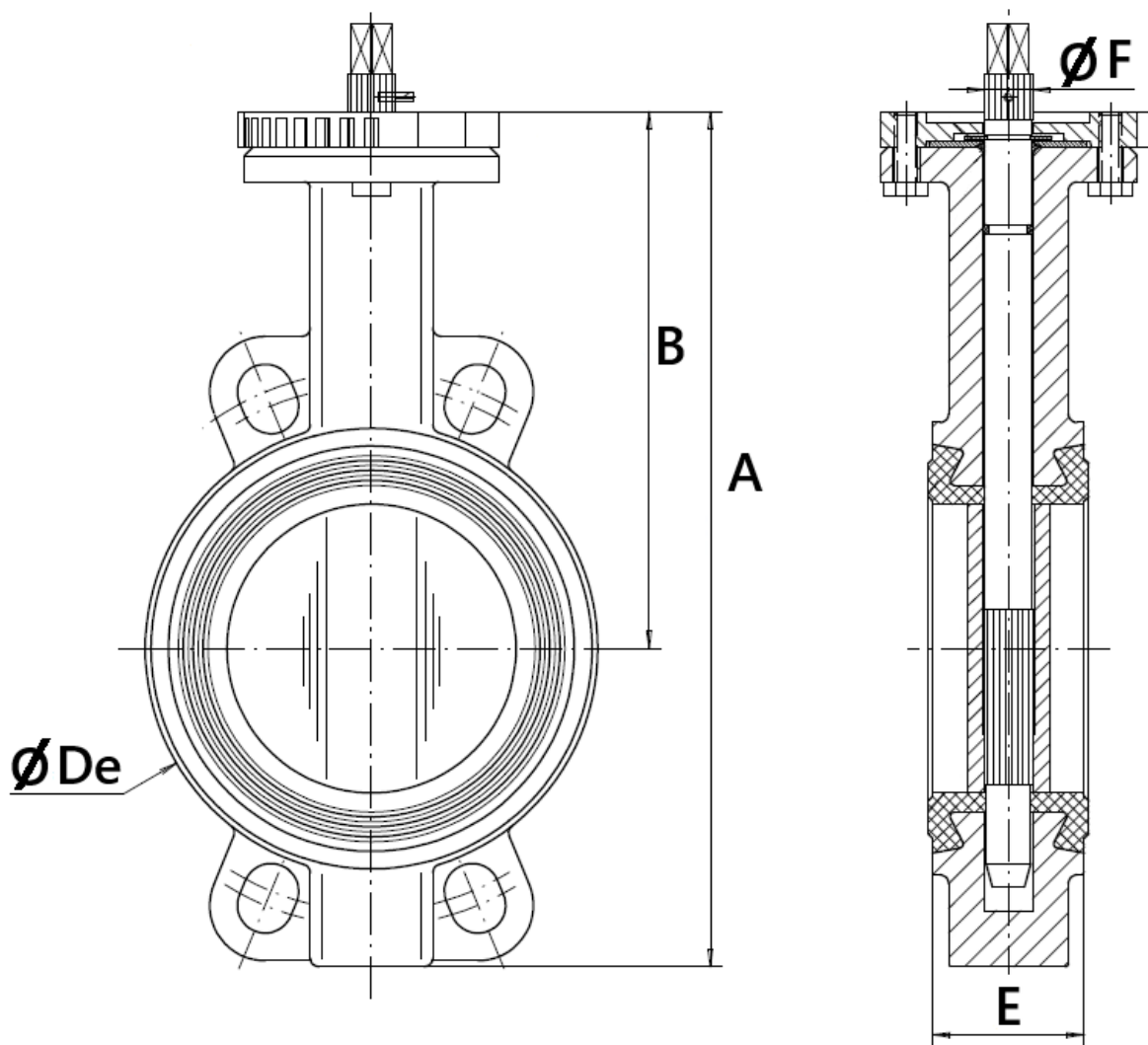
MATERIALS :



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	
8	Plate	Aluminium
9	Plate screw	5.6
10	Washer	Steel
11	Pin	
	Lever	Aluminium ADC10 with epoxy painting 50μ thickness

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

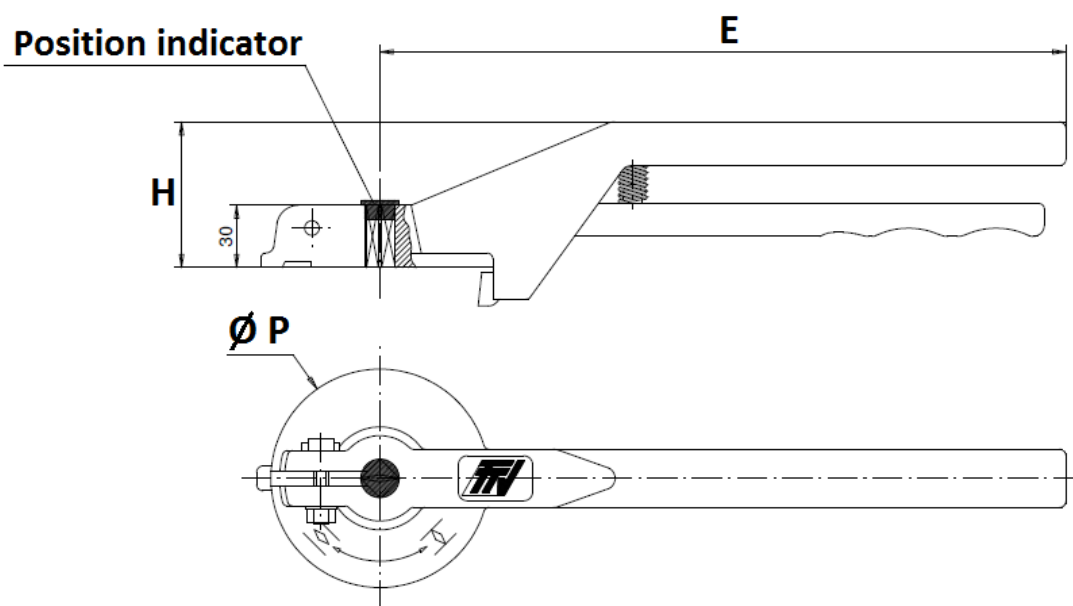
SIZE (in mm) :



DN	32/40	50	65	80	100	125	150	200
A	205	226	242	262	293	326	348	426
B	140	156	161	169	186	207	215	255
Ø De	83	103	116	134	153	185	208	270
E	33	43	46	46	52	56	56	60
Ø F	10.5	10.5	14.5	16.5	16.5	18.5	18.5	22.5
Weight (Kg)	2.46	3.66	4.4	4.6	6	7.6	9.2	14.7
Ref.	1141040	1141050	1141065	1141080	1141100	1141125	1141150	1141200

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

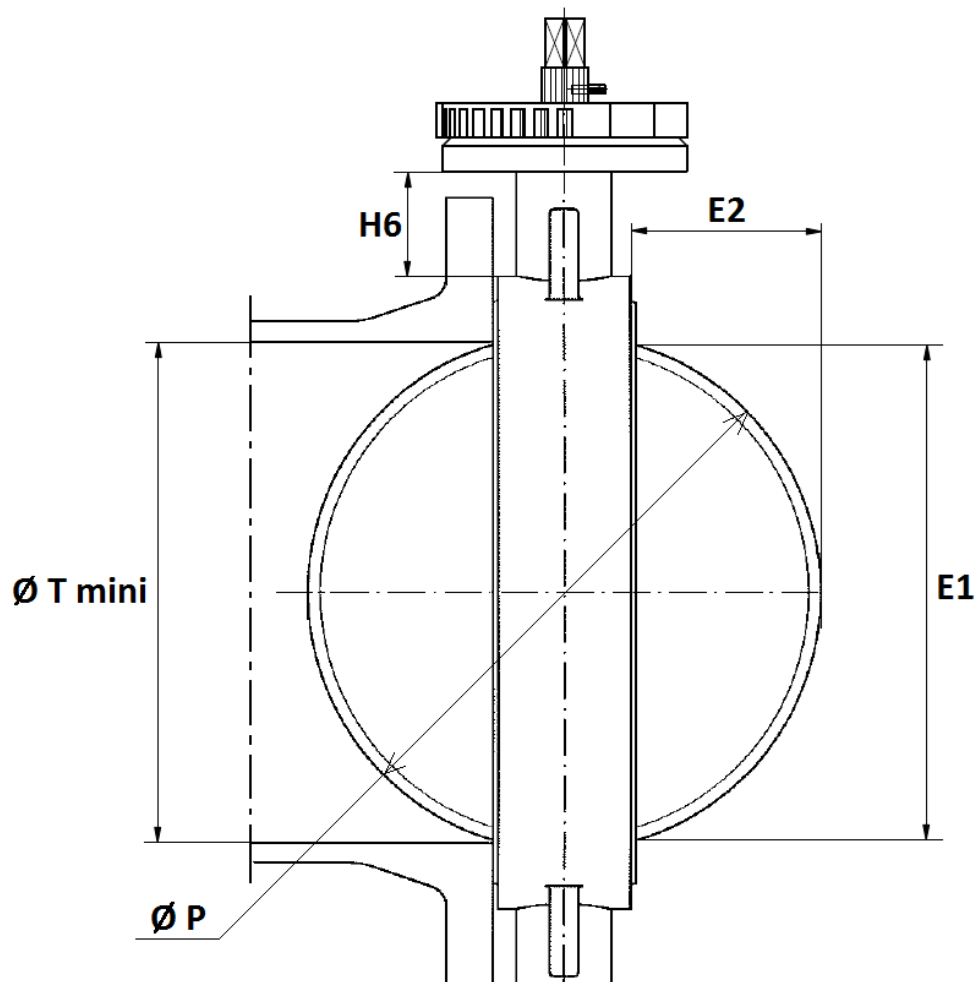
LEVERS SIZE (in mm) :



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

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

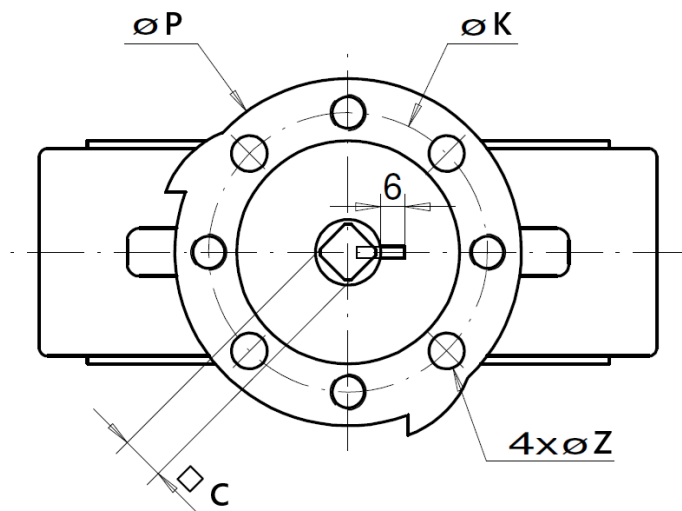
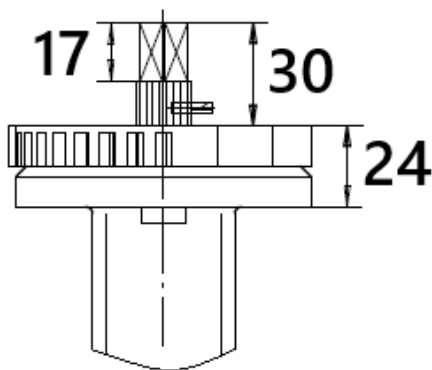
DISC AND NECK SIZE (in mm) :



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
Ø T mini	26	27.5	49	68	88	112	139	191
Ø P	40	50	65	80	100	123	147	198

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

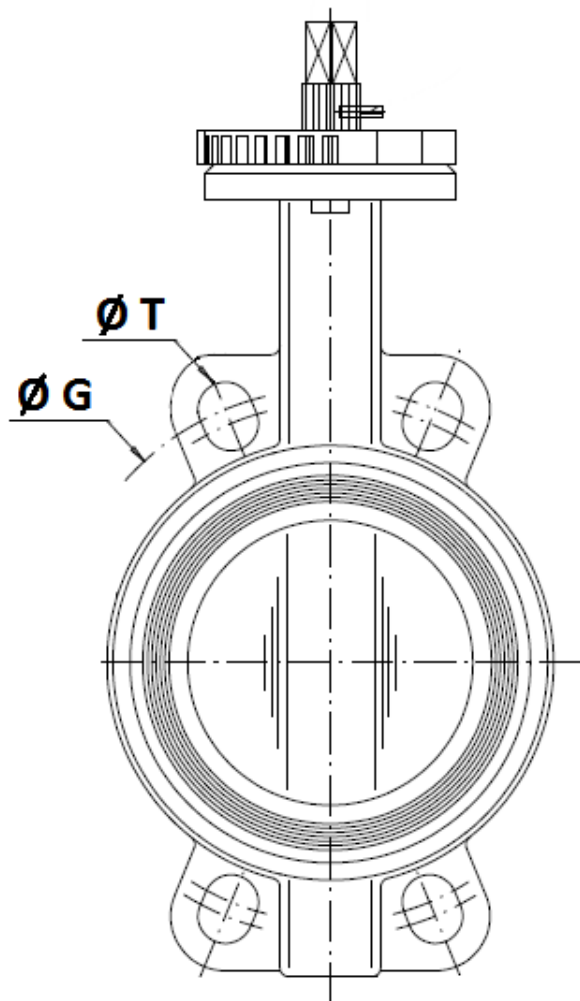
ISO MOUNTING PAD AND STEM SIZE (in mm) :



DN	32/40	50	65	80	100	125	150	200
C	8		9	11		14		17
Ø K	70							
ISO	F07							
4 x Ø Z	4 x 9							
Ø P	87.3					105		

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

BETWEEN FLANGES SIZE (in mm) :



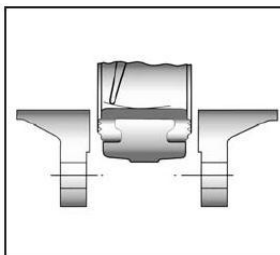
	DN (mm)	32	40	50	65	80	100	125	150	200
	NPS (")	1"1/4	1"1/2	2"	2"1/2	3"	4"	5"	6"	8"
PN10	Ø G	100	110	125	145	160	180	210	240	295
	Ø T	18	18	18	18	18	18	18	23	23
PN16	Ø G	100	110	125	145	160	180	210	240	295
	Ø T	18	18	18	18	18	18	18	23	23
Class 150	Ø G	88.9	98.5	120.6	139.7	152.4	190.5	215.9	241.3	298.5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

CONCENTRIC GAS WAFER BUTTERFLY VALVE TTV EXCELLENCE RANGE

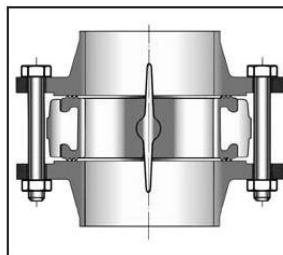
STANDARDS :

- 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**

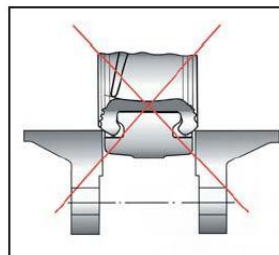
INSTALLATION INSTRUCTIONS :



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.