

L32.5

L32.5 172 625.1187 PN25 DN50 – DN200
butterfly valve wafer, concentric, PN25



REF. 1187

CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE IRON BODY AND EPDM SEAT

PN25 Wafer butterfly valve TTV excellence range for cold and hot water.

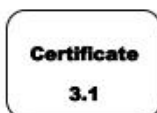
Approval Bureau Veritas marine certificate, 5 years warranty.

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

Between flanges PN25 or class 150 according to DN.

Handling possible with stainless steel handle, gearbox or, chain gearbox and stem extension.

Thanks to the ISO 5211 plate and the square stem, an actuator can be installed direct on the valve.



Size : DN40 to DN200
Connection : Between flanges PN25 and Class 150 (PN20)
Min Temperature : -20°C
Max Temperature : +110°C
Max Pressure : 25 Bars
Specifications : Long neck for isolation
Wafer type
Full crossing stem
ISO 5211 direct mounting pad

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

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

L32.5

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SPECIFICATIONS :

- Long neck for isolation
- ISO 5211 mounting pad
- Wafer type
- Between flanges PN25 and Class 150 (PN20)
- Full crossing stem reinforced
- Vulcanized EPDM seat
- Stainless steel disc up to DN100
- Ductile iron disc with cathaphoresic coating from DN125 to 200
- 9 positions lever with locking device
- Rilsan coated body color RAL 5024 , 250-300 microns thickness
- Stem extension 75 mm length (option)
- Square lever 30x30 mm for special key (option)

USE :

- Fluids : Cold and hot water, drinkable water
- Min and max Temperature Ts : From -20°C to + 110°C
- Max Pressure Ps : 25 bars (see graph page 5)

RANGE :

- With lever from DN 40 to DN 300
- IP65 gear box possible (**Ref. 1197**) from DN 40 to DN 200
- IP65 chain gear box (**Ref. 1194**) from DN 40 to DN 200
- On request, stem extension with special length (**Ref. 98665**)
- On request, CF8M stainless steel handle and bolting **Ref. 9831250-9831264**

ENDS :

- Between flanges PN25 and Class 150 (PN20)

TORQUE VALUES (in Nm with safety coefficient of 30 % included) at 16 Bars and 25 Bars :

DN	40	50	65	80	100	125	150	200
Torque (Nm)	9	11	20	29	47	82	130	210

TORQUE VALUES (in Nm with safety coefficient of 30 % included) at 10 Bars on request, with machined disc :

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

L32.5

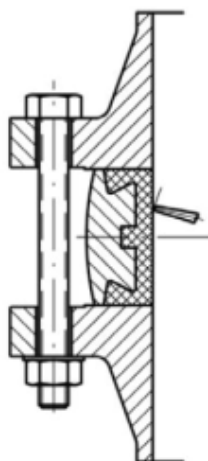
L32.5 172 625.1187 PN25 DN50 – DN200
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REF. 1187

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IRON BODY AND EPDM SEAT**

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

L32.5

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FLOW COEFFICIENT Kv (m³/h) :

DN	Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
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 :

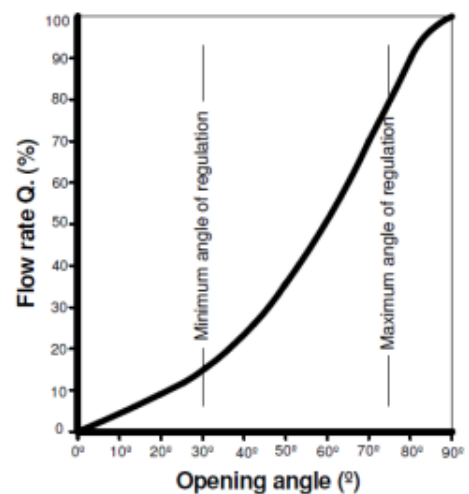
$$\Delta p = (Q / K_v)^2 \times SG$$

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)



L32.5

L32.5 172 625.1187 PN25 DN50 – DN200
butterfly valve wafer, concentric, PN25

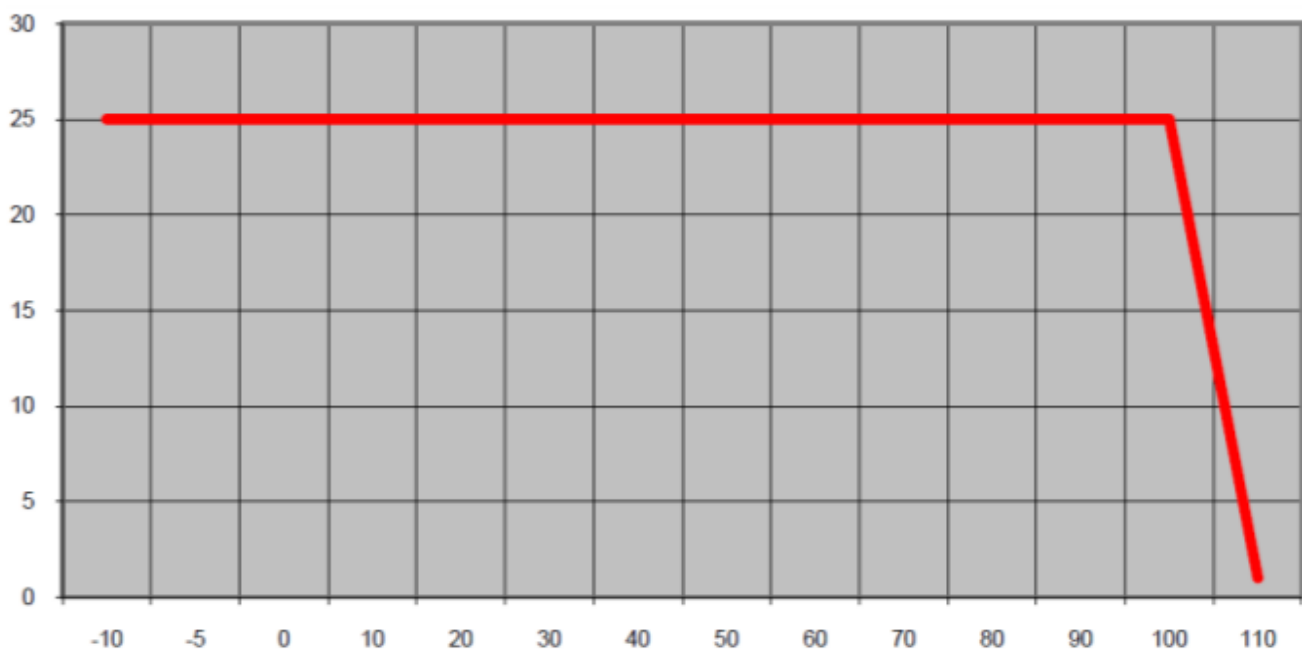


REF. 1187

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IRON BODY AND EPDM SEAT**

PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) :

Pressure (Bar)



Temperature (°C)

L32.5

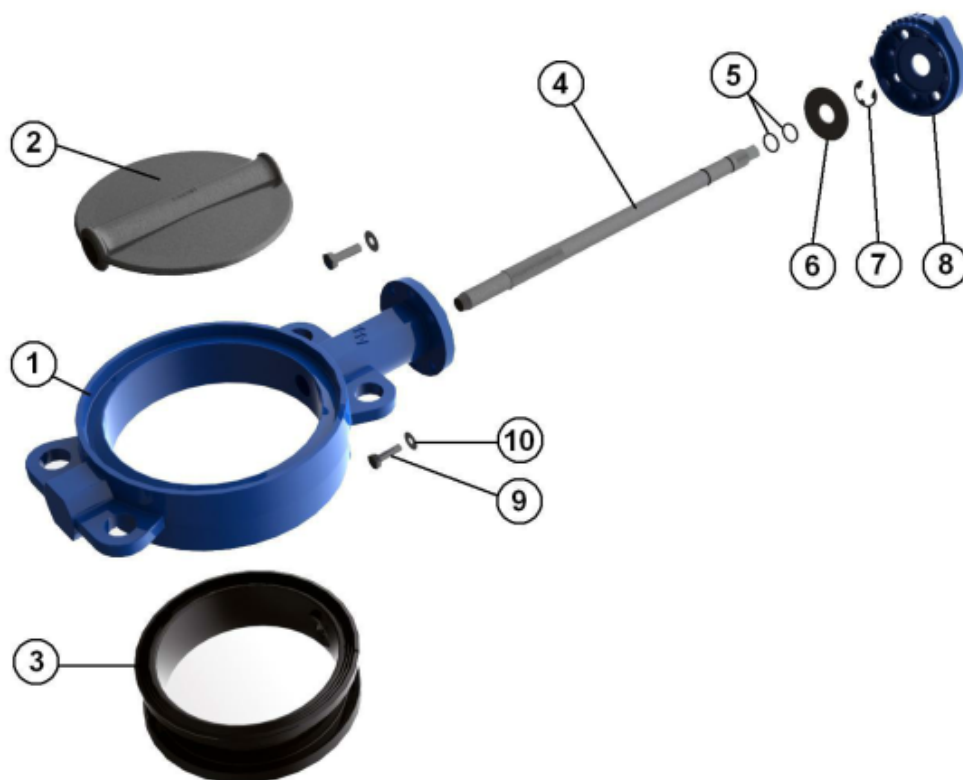
L32.5 172 625.1187 PN25 DN50 – DN200
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REF. 1187

**CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE
IRON BODY AND EPDM SEAT**

MATERIALS :



Item	Designation	Materials
1	Body	Ductile iron EN GJS-500-7 nilsan coated color RAL 5024 250-300 µ thickness
2	Disc DN32-100	ASTM A351 CF8M
2	Disc DN125-200	EN GJS-500-7 black cataphoresic coated
3	Seat	Vulcanized EPDM
4	Stem	AISI 17-4 PH 1.4542
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

L32.5

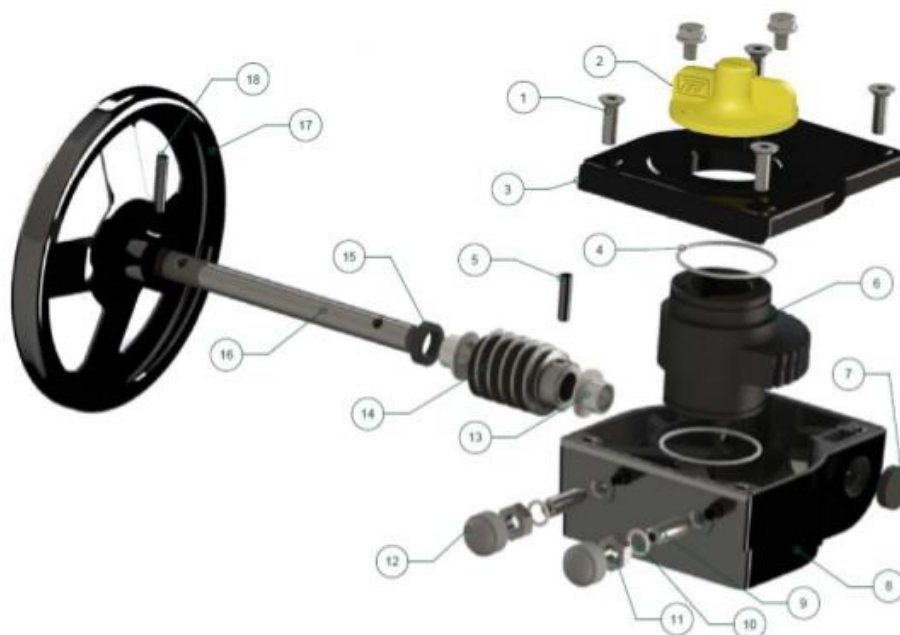
L32.5 172 625.1187 PN25 DN50 – DN200
butterfly valve wafer, concentric, PN25



REF. 1187

**CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE
IRON BODY AND EPDM SEAT**

GEARBOX MATERIALS REF. 1197 :



Item	Designation	Materials Ref. 1197
1	Screw	AISI 304
2	Pointer	PVC
3	Bonnet	Aluminium
4	O ring	NBR
5	Pin	Carbon steel
6	Quadrant	Ductile iron EN GJS-400-15
7	Gasket	NBR
8	Body	Aluminium
9	Adjusting bolt	Carbon steel
10	Washer	Galvanized steel
11	Nut	Galvanized steel
12	Cap	NBR 70
13	Bushing	Bronze
14	Worm	Carbon steel 45
15	Gasket	NBR
16	Stem	Carbon steel 45
17	Handwheel	Carbon steel
18	Pin	Carbon steel

L32.5

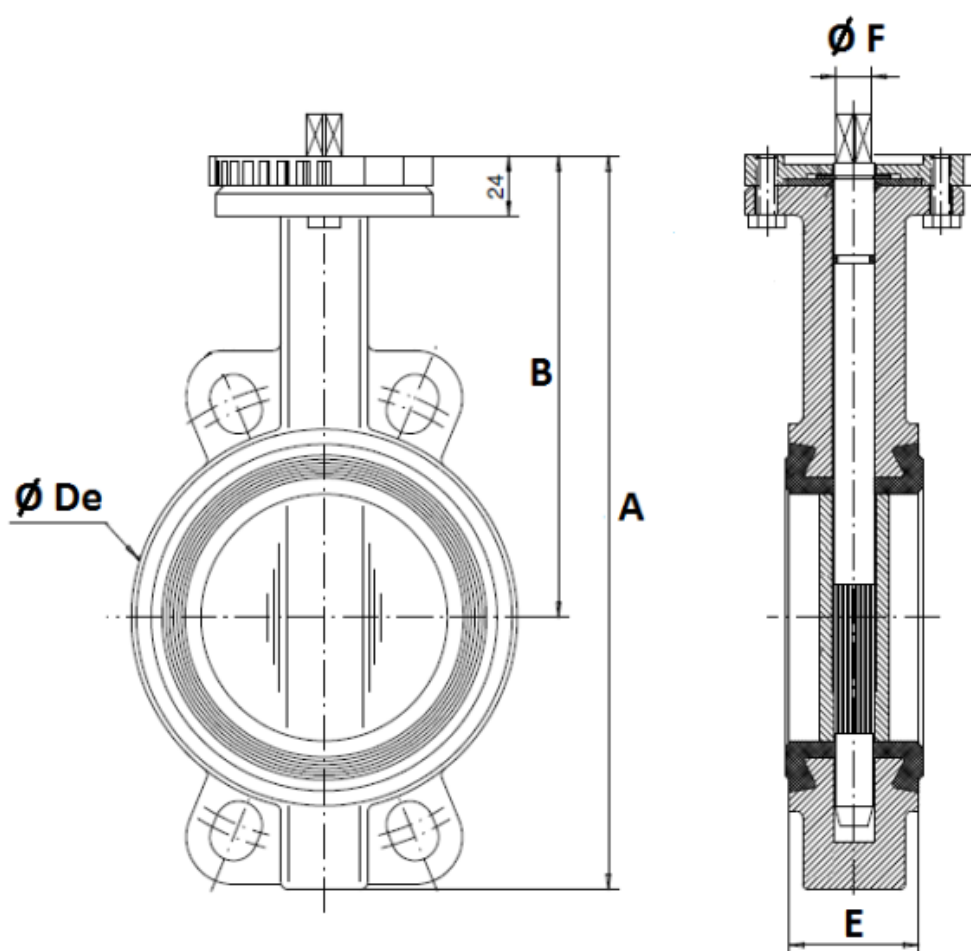
L32.5 172 625.1187 PN25 DN50 – DN200
butterfly valve wafer, concentric, PN25



REF. 1187

CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE
IRON BODY AND EPDM SEAT

SIZE (in mm) :



DN	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

L32.5

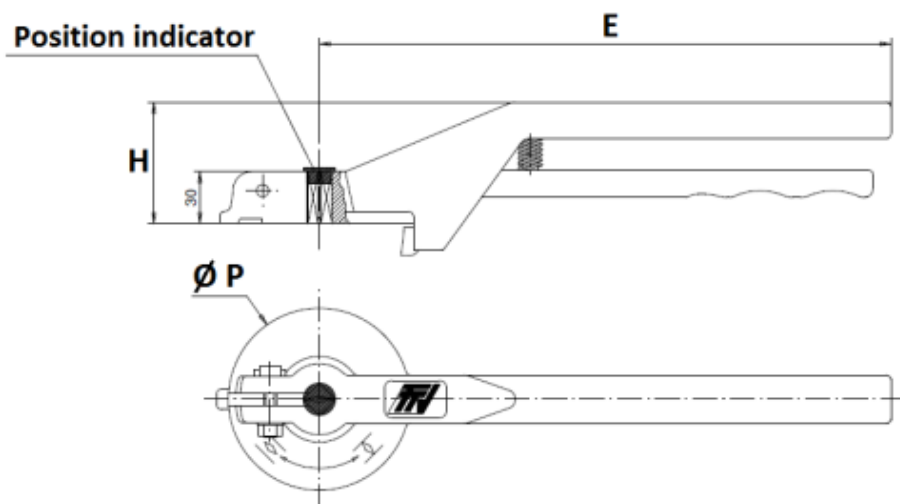
L32.5 172 625.1187 PN25 DN50 – DN200
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REF. 1187

**CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE
IRON BODY AND EPDM SEAT**

STANDARD LEVERS SIZE (in mm) :



DN	40-100	125-200
E	205	330
H	57	70
Ø P	88	105

L32.5

L32.5 172 625.1187 PN25 DN50 – DN200
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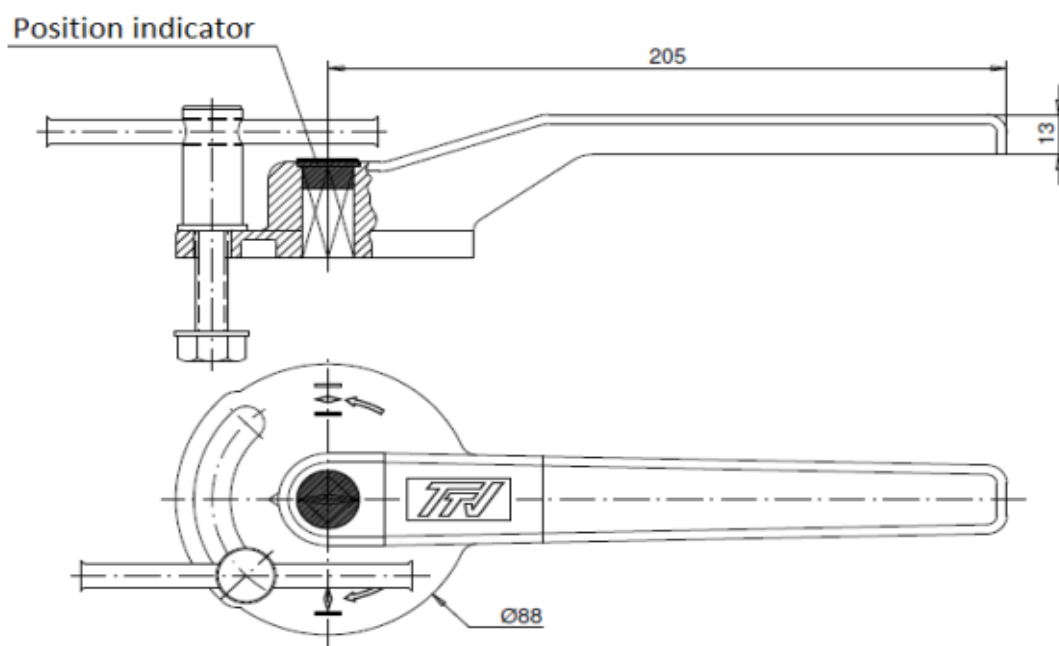


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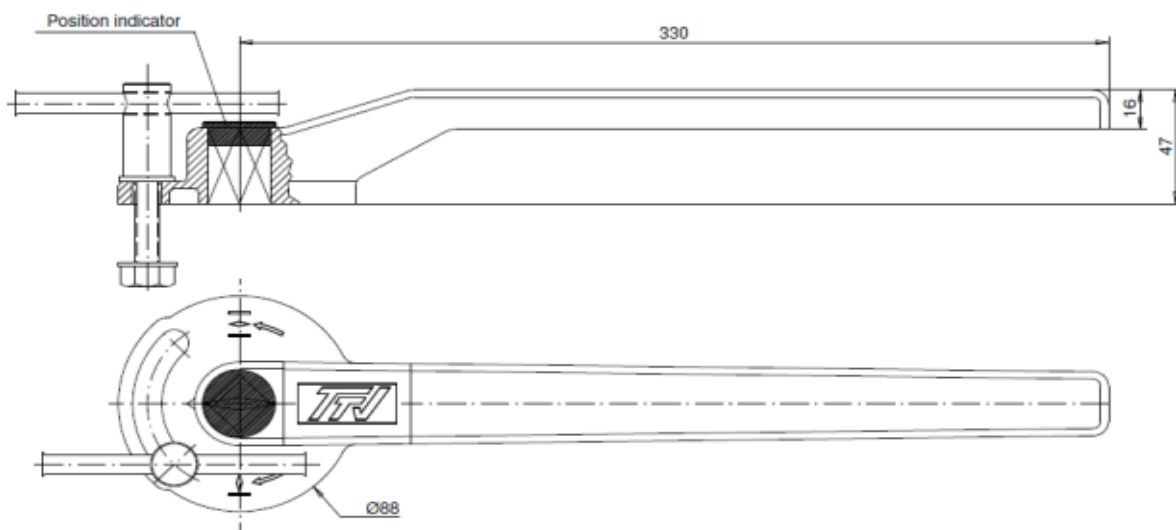
**CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE
IRON BODY AND EPDM SEAT**

ASTM A351 CF8M STAINLESS STEEL LEVERS SIZE (in mm) (ON REQUEST) :

DN 40 - 100



DN 125 - 200



L32.5

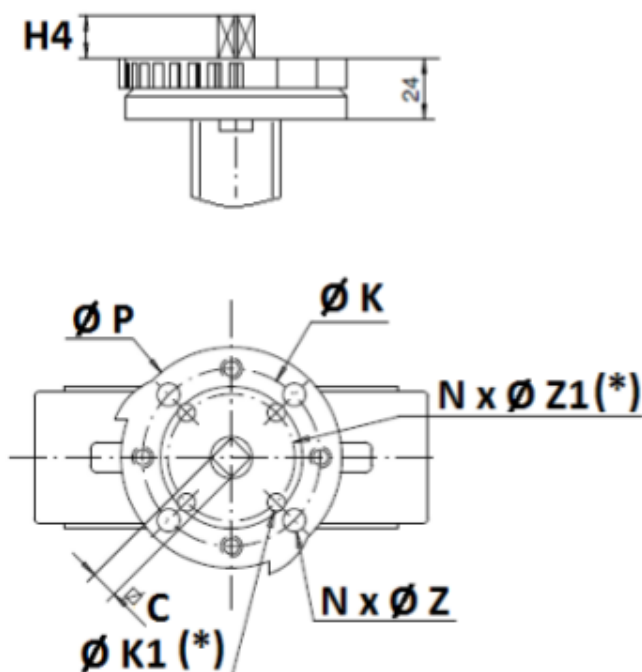
L32.5 172 625.1187 PN25 DN50 – DN200
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REF. 1187

**CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE
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ISO MOUNTING PAD SIZE (in mm) :



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

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

L32.5

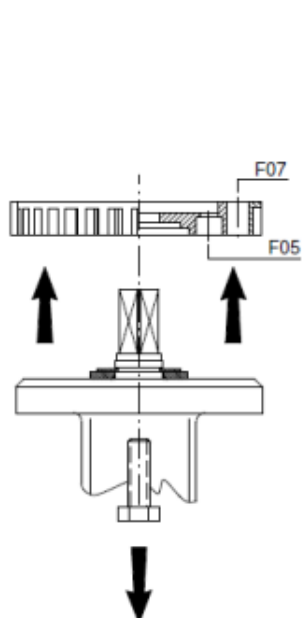
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butterfly valve wafer, concentric, PN25



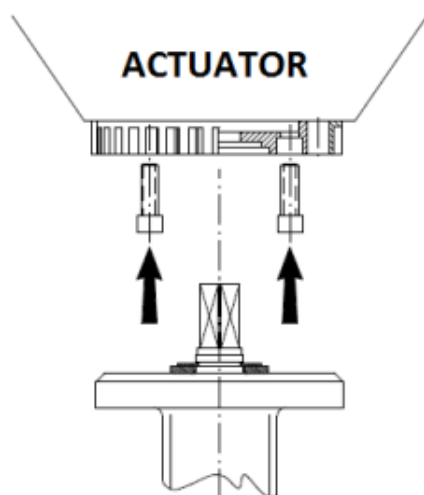
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IRON BODY AND EPDM SEAT**

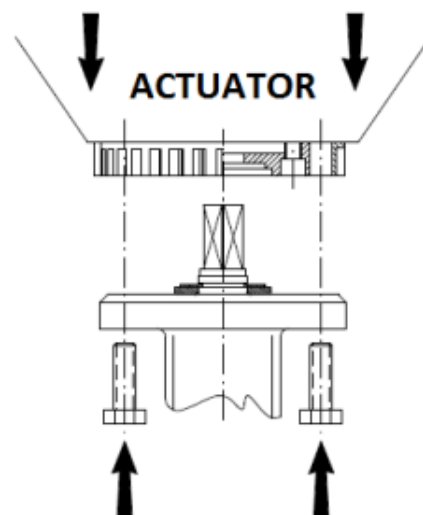
ISO PLATE INSTALLATION FOR DN32-100 ISO F05 :



Unscrew and remove the flange



Screw the flange to the actuator with hexagon socket screws



Screw the valve to the flange

L32.5

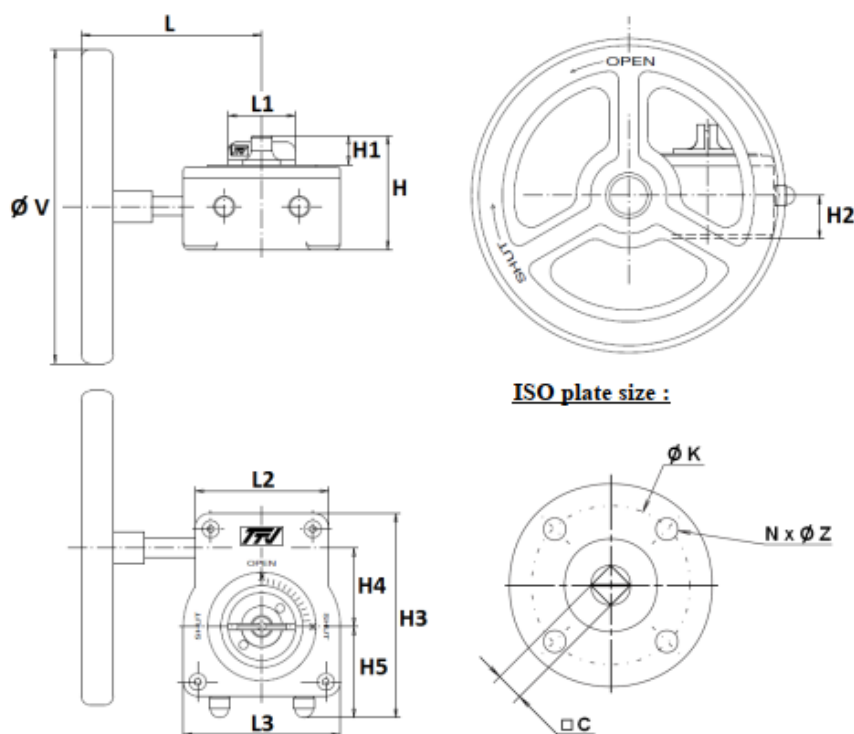
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butterfly valve wafer, concentric, PN25



REF. 1187

**CONCENTRIC PN25 WAFER BUTTERFLY VALVE EXCELLENCE RANGE TTV DUCTILE
IRON BODY AND EPDM SEAT**

GEARBOX SIZE REF.1197 DN32-400 (in mm) :



DN	32/50	65	80/100	125/150	200
L	115	115	115	115	115
L1	43	43	43	43	43
L2	85	85	85	85	85
L3	100	100	100	100	100
H	73	73	73	73	73
H1	19	19	19	19	19
H2	27.5	27.5	27.5	27.5	27.5
H3	130	130	130	130	130
H4	50	50	50	50	50
H5	58	58	58	58	58
Ø V	140	140	140	200	200
C	8	9	11	14	17
Ø K	70	70	70	70	70
ISO	F07	F07	F07	F07	F07
N x Ø Z	4 x M8	4 x M8	4 x M8	4 x M8	4 x M8
Weight (Kg)	1.35	1.35	1.35	1.75	1.75
Ref.	1197050	1197065	1197100	1197150	1197200

L32.5

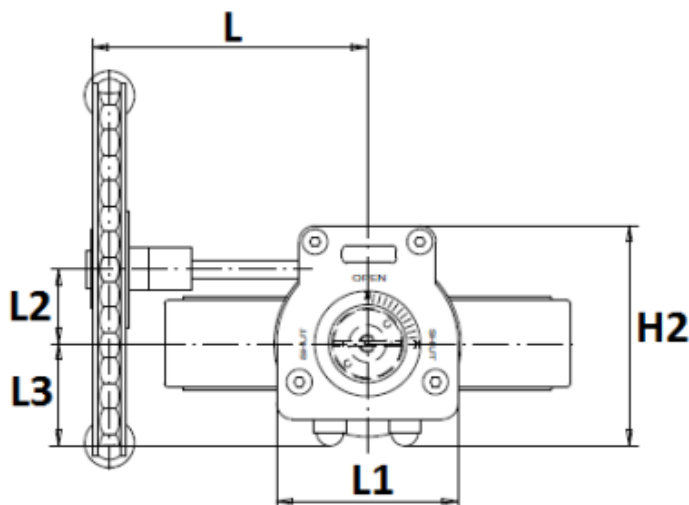
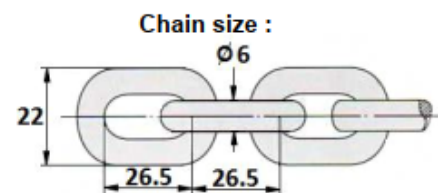
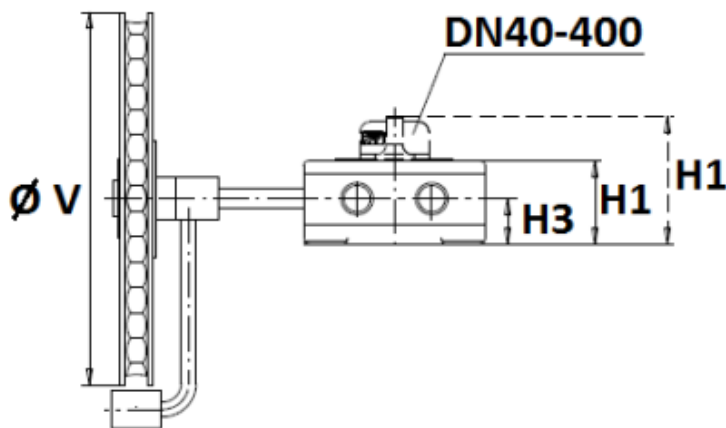
L32.5 172 625.1187 PN25 DN50 – DN200
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REF. 1187

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CHAIN GEARBOX REF.1194 (in mm) :



DN	32/50	65	80/100	125/150	200
L	120	120	120	215	215
L1	100	100	100	100	100
L2	50	50	50	50	50
L3	56	56	56	56	56
H1	73	73	73	73	73
H2	128	128	128	128	128
H3	27.5	27.5	27.5	27.5	27.5
Ø V	160	160	160	210	210
Weight (Kg)	2.35	2.35	2.35	2.75	2.75
Ref.	1194050	1194065	1194100	1194150	1194200

L32.5

L32.5 172 625.1187 PN25 DN50 – DN200
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IRON BODY AND EPDM SEAT**

GEARBOX SPECIFICATIONS :

DN	40/50	65	80/100	125/150	200
Ref.	1197050	1197065	1197100	1197150	1197200
Ratio factor	37 : 1	37 : 1	37 : 1	37 : 1	37 : 1
Turns number for closing / opening	9.25	9.25	9.25	9.25	9.25
Input torque (Nm)	9	9	9	9	9
Output torque (Nm)	250	250	250	250	250

L32.5

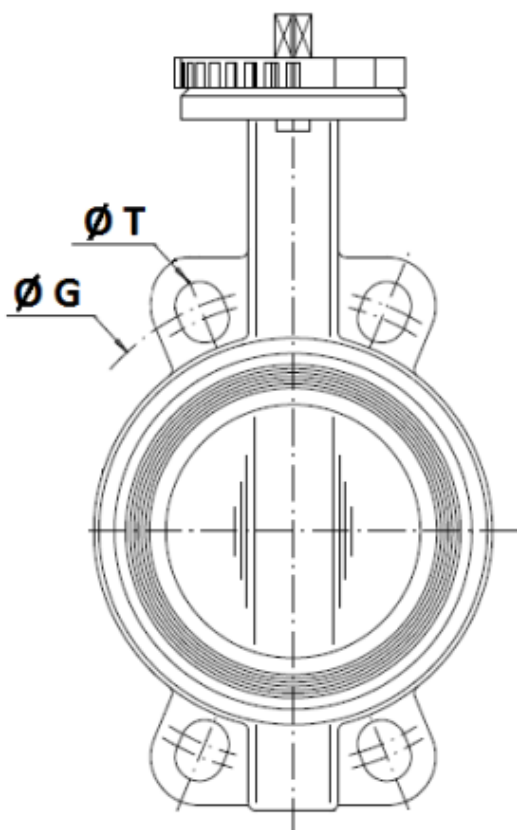
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BETWEEN FLANGES SIZE (in mm) :



	DN (mm)	40	50	65	80	100	125	150	200
PN25	Ø G	110	125	145	160	190	220	250	310
	Ø T	18	18	18	18	22	26	26	26

L32.5

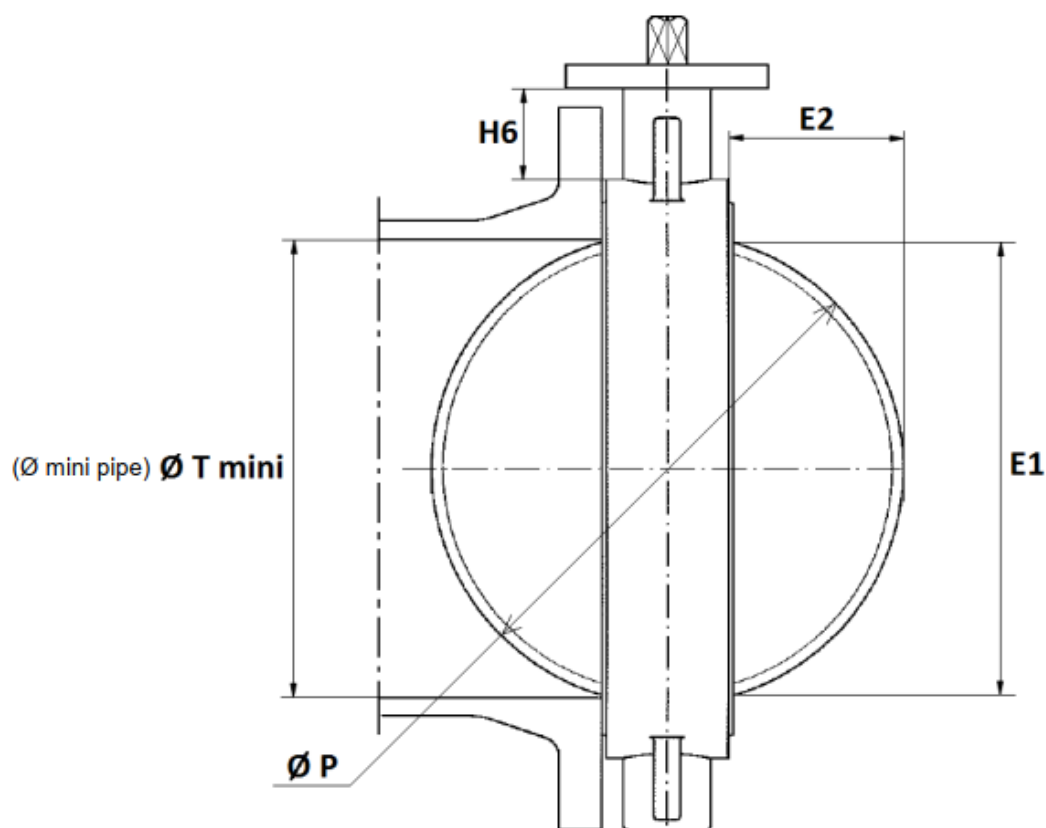
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IRON BODY AND EPDM SEAT

NECK AND DISC SIZE (in mm) :



DN	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

L32.5

L32.5 172 625.1187 PN25 DN50 – DN200
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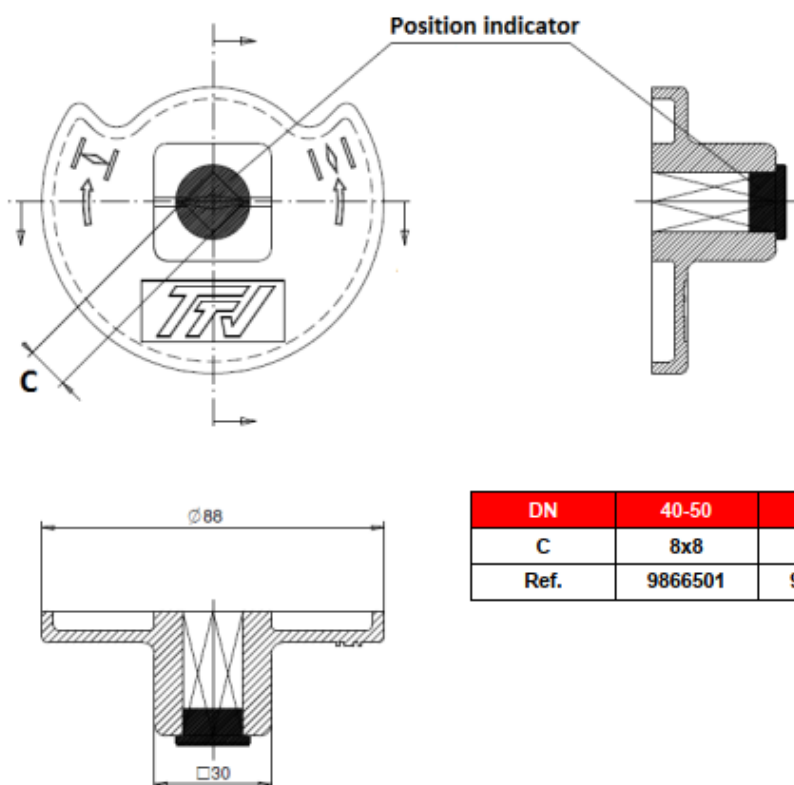


REF. 1187

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IRON BODY AND EPDM SEAT**

SIZE (in mm) :

- Square lever for special key (30x30 mm) :



DN	40-50	65	80-100	125-150	200
C	8x8	9x9	11x11	14x14	17x17
Ref.	9866501	9866502	9866503	9866504	9866505

L32.5

L32.5 172 625.1187 PN25 DN50 – DN200
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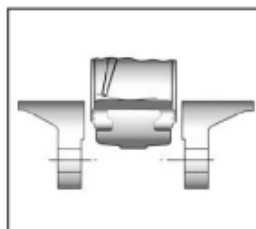
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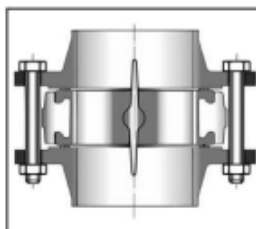
STANDARDS :

- Manufacturer certified ISO 9001:2015
- Designing according to ISO 10631 and EN 593
- DIRECTIVE 2014/68/EU : CE N° 0038
Risk Category III module H
- Certificate 3.1 on request
- Pressure tests according to EN 12266-1, Rate A
- Between flanges according to EN 1092-1 PN25
- 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
- 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.
- Approval certificate **Marine BUREAU VERITAS** on request

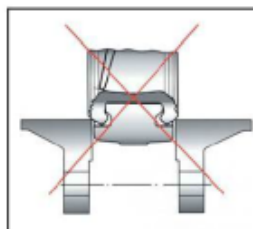
INSTALLATION INSTRUCTIONS :



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.

L32.5

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