

GEMÜ R470 Tugela

Double-eccentric butterfly valve with bare shaft



Features

- High-performance butterfly valve with double-eccentric construction in order to separate the disc directly from the seat (gasket), thereby reducing friction and extending the service life
- Continuous shaft with temperature resistant graphite bearing and PTFE gland packing for readjustment in operation for minimized leakage, even at low pressures
- Antistatic fixture for ATEX area
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A

Description

The GEMÜ R470 Tugela double-eccentric metal butterfly valve has a bare shaft with a top flange in accordance with EN ISO 5211. The butterfly valve is available in nominal sizes DN 50 to 600 and in standardized installation lengths API 609 category A (DIN 3202 K1).

Technical specifications

- **Media temperature :** -40 to 230 °C
- **Ambient temperature:** -40 to 70 °C
- **Operating pressure :** 0 to 40 bar
- **Nominal sizes:** DN 50 to 600
- **Body configurations:** Wafer
- **Connection standards:** ASME | ISO
- **Body materials:** 1.0619 (WCB), cast steel material with CDP coating | 1.4408 (CF8M), investment casting material
- **Liner materials:** PTFE
- **Disc materials:** 1.4408
- **Conformities:** ATEX | EAC | FDA | FMEDA | TA Luft (German Clean Air Act)

Technical data depends on the respective configuration



further information
webcode: GW-R470



Product line
GEMÜ R470
Tugela

GEMÜ R471
Tugela

GEMÜ R477
Tugela

GEMÜ R478
Tugela
Operation

With bare shaft	●	-	-	-
Manual	-	-	●	-
Pneumatic	-	●	-	-
Motorized	-	-	-	●
Nominal sizes	DN 50 to 600	DN 50 to 600	DN 50 to 600	DN 50 to 600
Media temperature	-40 to 230 °C	-40 to 230 °C	-40 to 230 °C	-40 to 230 °C
Operating pressure	0 to 40 bar	0 to 40 bar	0 to 40 bar	0 to 40 bar

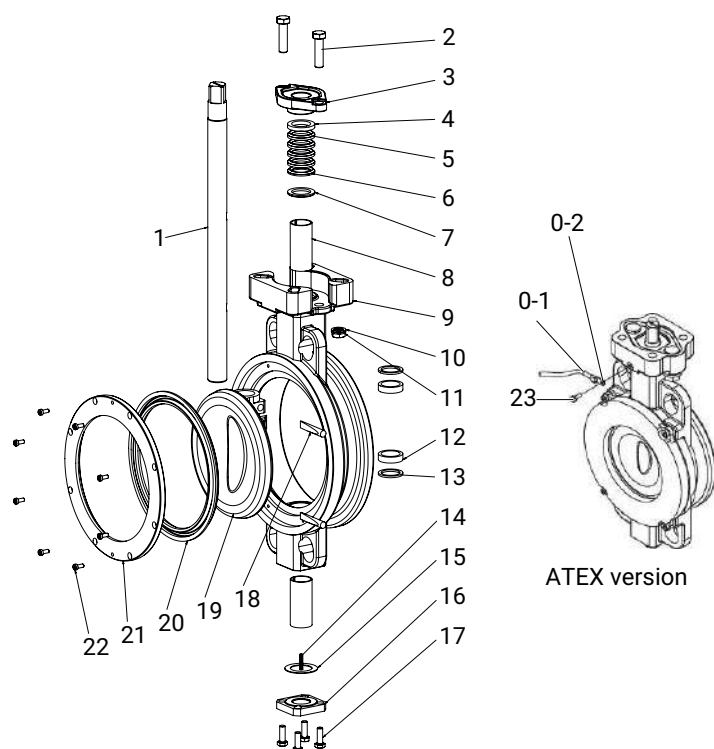
Connection types

Flange (lug)	●	●	●	●
Flange (U section)	●	●	●	●
Flange (wafer)	●	●	●	●

Conformities

ATEX	●	●	●	●
EAC	●	●	●	●
FDA	●	●	●	●
FMEDA	●	-	-	-
TA Luft (German Clean Air Act)	●	●	●	●

Product description



Item	Designation	Material
1	Shaft	See order code (order data)
2	Hexagon screw	Stainless steel
3	Packing washer	1.4408
4	Upper gland packing	PTFE
5	Middle gland packing	PTFE
6	Lower gland packing	PTFE
7	Packing washer	PTFE
8	Bush	316/PTFE
9	Housing	See order code (order data)
10	Spring washer	Stainless steel
11	Hexagon nut	Stainless steel
12	Shaft bearing	PTFE coated steel
13	Shaft bearing	PTFE coated steel
14	Static spring	Stainless steel
15	Sealing washer	Stainless steel
16	Lower cap	As body
17	Hexagon screw	Stainless steel
18	Disc pin	Steel
19	Disc	See order code (order data)
20*	Seat	See order code (order data)
21	Seat retainer	
22	Hexagon screw	Stainless steel
0	Earthing kit for ATEX version	
0-1	Stranded wire (ATEX version)	

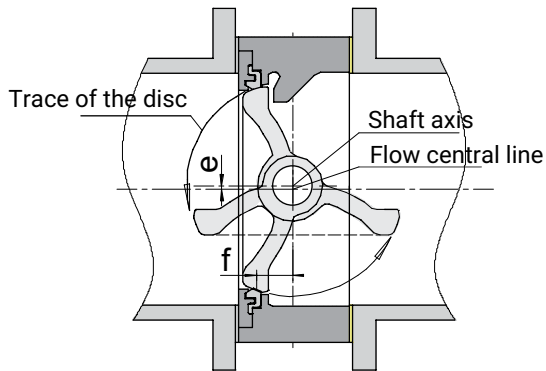
Product description

Item	Designation	Material
0-2	Cable lug (ATEX version)	
23	Hexagon screw	Stainless steel

* available as spare part

Additional design features

Double-eccentric design



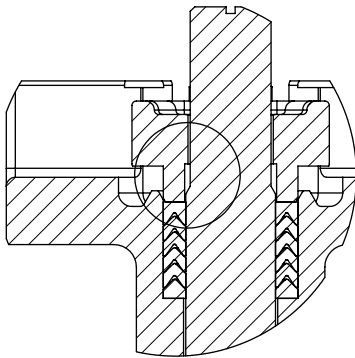
During operation, the disc directly disconnects from the seat, thereby reducing friction between the seat and disc, as well as the torque.

This design is particularly low-wear and this, together with the temperature-resistant carbon bushing, increases the service life.

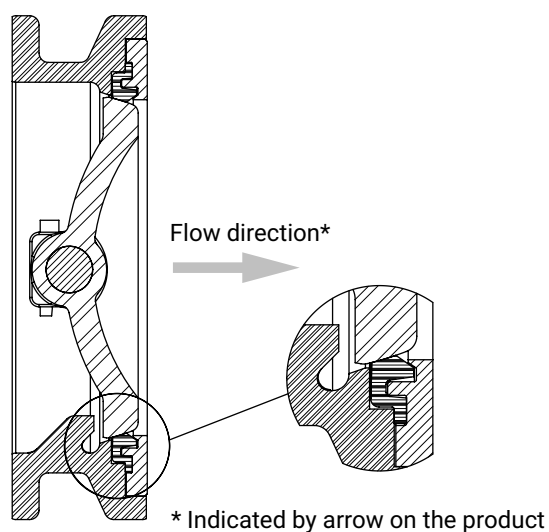
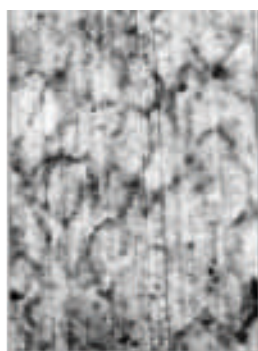
Spherical surface

The disc is designed with a spherical surface for improved mechanical behaviour under pressure and temperature fluctuations.

Shaft blow-out protection



There is a chamfer at the upper end of the shaft which acts as an additional safety measure in case the shaft breaks.

Flow direction**Seat material****PTFE****TFM**

TFM™ is made from conventional PTFE and a 1% proportion of perfluoropropyl vinyl ether (PPVE). While the properties of conventional PTFE (excellent chemical resistance, application in a wide temperature range and resistance to embrittlement or ageing, etc.) are maintained, the PPVE additive leads to a better distribution of the PTFE particles and thus to a higher density of the polymer structure.

This leads to the following additional advantages:

- Significantly better cold flow properties (measured as deformation under load):
Same cold flow properties as PTFE with 25% glass fibres.
- Reduced gas permeability and increased blocking properties
- The smooth surface results in less abrasion of the shut-off seal and fewer abraded particles in the medium.

Order data

Other configurations available on request. Please check the availability with GEMÜ before ordering.

Order codes

1 Type	Code
Butterfly valve, double-eccentric, bare shaft, long service life, low friction thanks to direct separation of seat/disc, continuous and blow-out proof shaft, with anti-static unit and low-maintenance spindle seal, readjustable	R470

2 DN	Code
DN 50	50
DN 65	65
DN 80	80
DN 100	100
DN 125	125
DN 150	150
DN 200	200
DN 250	250
DN 300	300
DN 350	350
DN 400	400
DN 450	450
DN 500	500
DN 600	600

3 Body configuration	Code
Flange-mounted design (lug), face-to-face dimension FTF EN 558 series 20	L
Double flange design (U section), face-to-face dimension FTF EN 558, series 20	U
Intermediate flange design (wafer), face-to-face dimension FTF API609 table B, EN 558 series 108, EN 558 series 109	W

4 Operating pressure	Code
10 bar	2
16 bar	3
20 bar	4
25 bar	5
40 bar	6

5 Connection type	Code
PN 10 / flange EN 1092, face-to-face dimension FTF EN 558 series 108	2
PN 16 / flange EN 1092, face-to-face dimension FTF EN 558 series 108	3
PN 25 / flange EN 1092, face-to-face dimension FTF EN 558 series 20	5
PN 40 / flange EN 1092, face-to-face dimension FTF EN 558 series 109	6
ANSI B16.5, Class 150, face-to-face dimension FTF EN 558 series 108	D
ANSI B16.5, Class 300, face-to-face dimension FTF EN 558 series 109	M

6 Body material	Code
1.4408 / ASTM A351 / CF8M	4
1.0619 / ASTM A216 WCB, CDP coated 20 µm, for non-European countries, 1.0619 is not a material for pressure equipment according to 2014/68/EU	5

7 Disc material	Code
1.4408 / ASTM A351 CF8M	A

8 Shaft material	Code
1.4542 / ASTM 564 630 UNS S17400	6

9 Shut-off seal material	Code
TFM 1600 (FDA certification)	T

10 Liner fixing	Code
Loose liner	L

11 Actuator flange	Code
F05, flange type DIN EN ISO 5211	F05
F07, flange type DIN EN ISO 5211	F07
F10, flange type DIN EN ISO 5211	F10
F12, flange type DIN EN ISO 5211	F12
F14, flange type DIN EN ISO 5211	F14

12 Actuator flange	Code
F07, flange type DIN EN ISO 5211	07
F10, flange type DIN EN ISO 5211	10
F12, flange type DIN EN ISO 5211	12
F14, flange type DIN EN ISO 5211	14
F16, flange type DIN EN ISO 5211	16

13 Shaft connection and size	Code
Square, diagonal, WAF 11 mm	D11
Square, diagonal, WAF 14 mm	D14
Square, diagonal, WAF 17 mm	D17
Square, diagonal, WAF 22 mm	D22
Square, diagonal, WAF 27 mm	D27
Square, diagonal, WAF 36 mm	D36

14 Special version	Code
Without	
ATEX certification	X

15 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Ordering option	Code	Description
1 Type	R470	Butterfly valve, double-eccentric, bare shaft, long service life, low friction thanks to direct separation of seat/disc, continuous and blow-out proof shaft, with anti-static unit and low-maintenance spindle seal, readjustable
2 DN	300	DN 300
3 Body configuration	W	Intermediate flange design (wafer), face-to-face dimension FTF API609 table B, EN 558 series 108, EN 558 series 109
4 Operating pressure	4	20 bar
5 Connection type	6	PN 40 / flange EN 1092, face-to-face dimension FTF EN 558 series 109
6 Body material	4	1.4408 / ASTM A351 / CF8M
7 Disc material	A	1.4408 / ASTM A351 CF8M
8 Shaft material	6	1.4542 / ASTM 564 630 UNS S17400
9 Shut-off seal material	T	TFM 1600 (FDA certification)
10 Liner fixing	L	Loose liner
11 Actuator flange	F14	F14, flange type DIN EN ISO 5211
12 Actuator flange	16	F16, flange type DIN EN ISO 5211
13 Shaft connection and size	D27	Square, diagonal, WAF 27 mm
14 Special version		Without
15 CONEXO		Without

Technical data

Medium

Working medium: Gaseous and liquid media which have no negative impact on the physical and chemical properties of the disc and seat material.

Temperature

Media temperature: -40 – 230 °C

Ambient temperature: -40 – 70 °C

Storage temperature: -60 – 60 °C

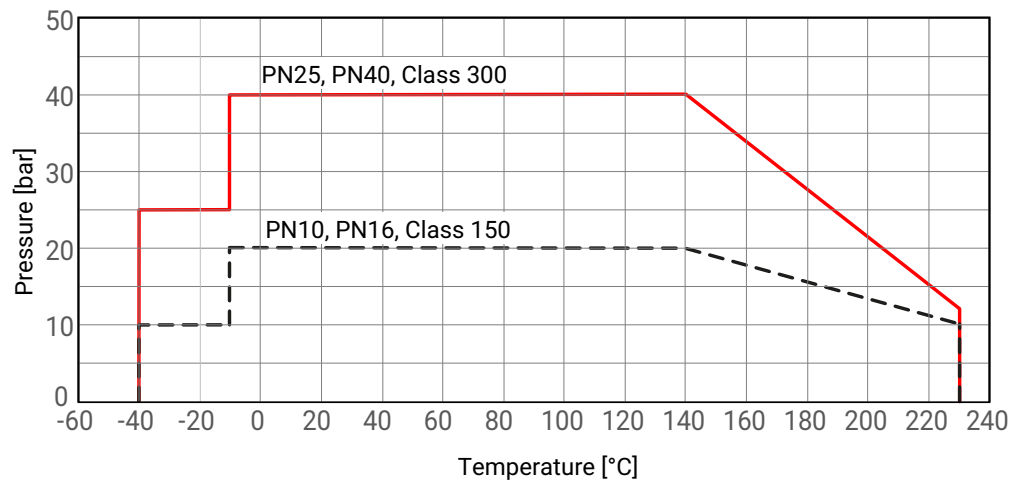
Pressure

Operating pressure: 0 – 40 bar

Note: Cannot be used as an end-of-line valve

Vacuum: Can be used up to a vacuum of 10 mbar (abs) due to a leak rate at 10^{-3} [mbar l / sec]
These values apply to room temperature and air. The values may deviate for other media and other temperatures.

Pressure/temperature diagram:



Cv values:

DN	NPS	Body CLASS	Kv in m ³ /h at opening angle in °						
			90	80	65	50	35	20	0
50	2"	CL300	24.7	25.3	27.2	21.3	9.6	0.1	0.0
65	2½"	CL300	59.6	69.3	74.2	50.6	24.2	2.99	0.0
80	3"	CL300	123.0	129.0	118.0	95.5	60.2	17.2	0.0
100	4"	CL300	281.0	295.0	250.0	170.0	100.0	35.9	0.0
125	5"	CL300	423.0	449.0	393.0	276.0	168.0	52.3	0.0
150	6"	CL150	770.0	776.0	586.0	384.0	211.0	85.2	0.0
		CL300	696.0	705.0	543.0	363.0	200.0	78.0	0.0
200	8"	CL150	1480.0	1530.0	1160.0	734.0	414.0	192.0	0.0
		CL300	1470.0	1520.0	1150.0	734.0	419.0	195.0	0.0
250	10"	CL150	2400.0	2410.0	1780.0	1120.0	597.0	271.0	0.0
		CL300	2410.0	2340.0	1690.0	1030.0	522.0	218.0	0.0
300	12"	CL150	3650.0	3600.0	2610.0	1650.0	910.0	410.0	0.0
		CL300	3350.0	3250.0	2350.0	1490.0	781.0	345.0	0.0
350	14"	CL150	3890.0	3810.0	2960.0	2000.0	1200.0	647.0	0.0
		CL300	3860.0	3720.0	2780.0	1790.0	1030.0	510.0	0.0
400	16"	CL150	6350.0	5960.0	4270.0	2570.0	1420.0	720.0	0.0
		CL300	5300.0	5140.0	3670.0	2350.0	1330.0	643.0	0.0
450	18"	CL150	8080.0	7710.0	5360.0	3290.0	1800.0	888.0	0.0
		CL300	6740.0	6390.0	4650.0	2900.0	1590.0	767.0	0.0
500	20"	CL150	9590.0	9050.0	6320.0	3850.0	2070.0	948.0	0.0
		CL300	7800.0	7290.0	5460.0	3600.0	2040.0	1000.0	0.0
600	24"	CL150	14300.0	13400.0	9620.0	6100.0	3560.0	1950.0	0.0
		CL300	12400.0	11800.0	8550.0	5650.0	3240.0	1770.0	0.0

 Cv values in m³/h

Product conformity



Machinery Directive: 2006/42/EC

Pressure Equipment Directive: 2014/68/EU

Food: FDA

EAC: The product is certified according to EAC.

Explosion protection: 2014/34/EU (ATEX)

ATEX marking: Special function code X
 Gas:  II -/2 G Ex h -/IIC T6...T3 -/Gb X
 Dust:  II -/2D Ex h -/IIIC T150°C -/Db X

TA Luft (German Clean Air Act): The product meets the following requirements under the max. permissible operating conditions:

- Tightness or compliance with the specific leak rate within the sense of TA-Luft as well as VDI 2440
- Compliance with the requirements in accordance with DIN EN ISO 15848-1, Table C.2, Class BH

Mechanical data

Torques:

DN	NPS	Connection type code ¹⁾									
		D, 2, 3					M, 5, 6				
		Maximum pressure differential [bar]									
		0.0	6.0	10.0	16.0	20.0	0.0	20.0	25.0	40.0	50.0
50	2"	33.0	33.0	34.0	35.0	37.0	33.0	37.0	38.0	40.0	42.0
65	2½"	43.0	44.0	45.0	46.0	50.0	43.0	50.0	52.0	57.0	60.0
80	3"	54.0	56.0	57.0	58.0	64.0	54.0	64.0	67.0	74.0	79.0
100	4"	68.0	71.0	72.0	74.0	84.0	68.0	84.0	88.0	99.0	107.0
125	5"	90.0	94.0	96.0	100.0	115.0	90.0	115.0	121.0	139.0	151.0
150	6"	114.0	120.0	123.0	128.0	149.0	123.0	158.0	167.0	193.0	211.0
200	8"	181.0	192.0	200.0	211.0	258.0	202.0	280.0	299.0	358.0	397.0
250	10"	250.0	268.0	280.0	297.0	372.0	287.0	409.0	439.0	530.0	591.0
300	12"	357.0	387.0	408.0	438.0	567.0	393.0	603.0	655.0	813.0	918.0
350	14"	559.0	607.0	640.0	688.0	721.0	699.0	861.0	901.0	1023.0	1104.0
400	16"	950.0	1027.0	1079.0	1156.0	1207.0	1188.0	1445.0	1509.0	1701.0	1830.0
450	18"	1420.0	1534.0	1611.0	1725.0	1802.0	1629.0	2011.0	2107.0	2394.0	2585.0
500	20"	1967.0	2144.0	2262.0	2439.0	2557.0	2499.0	3089.0	3237.0	3679.0	3974.0
600	24"	3324.0	3579.0	3748.0	4003.0	4173.0	3579.0	4429.0	4641.0	5278.0	5703.0

Torques in Nm

1) **Connection type**

- Code 2: PN 10 / flange EN 1092, face-to-face dimension FTF EN 558 series 108
- Code 3: PN 16 / flange EN 1092, face-to-face dimension FTF EN 558 series 108
- Code 5: PN 25 / flange EN 1092, face-to-face dimension FTF EN 558 series 20
- Code 6: PN 40 / flange EN 1092, face-to-face dimension FTF EN 558 series 109
- Code D: ANSI B16.5, Class 150, face-to-face dimension FTF EN 558 series 108
- Code M: ANSI B16.5, Class 300, face-to-face dimension FTF EN 558 series 109

Weight:

DN	NPS	Connection type code ¹⁾	
		D, 2, 3	M, 5, 6
50	2"	3.2	3.2
65	2½"	3.6	3.6
80	3"	4.9	4.9
100	4"	7.5	7.5
125	5"	8.0	8.0
150	6"	12.0	14.0
200	8"	18.0	23.0
250	10"	31.0	40.0
300	12"	47.0	66.0
350	14"	77.0	114.0
400	16"	96.0	146.0
450	18"	133.0	212.0
500	20"	156.0	261.0
600	24"	268.0	385.0

Weights in kg

1) **Connection type**

Code 2: PN 10 / flange EN 1092, face-to-face dimension FTF EN 558 series 108

Code 3: PN 16 / flange EN 1092, face-to-face dimension FTF EN 558 series 108

Code 5: PN 25 / flange EN 1092, face-to-face dimension FTF EN 558 series 20

Code 6: PN 40 / flange EN 1092, face-to-face dimension FTF EN 558 series 109

Code D: ANSI B16.5, Class 150, face-to-face dimension FTF EN 558 series 108

Code M: ANSI B16.5, Class 300, face-to-face dimension FTF EN 558 series 109

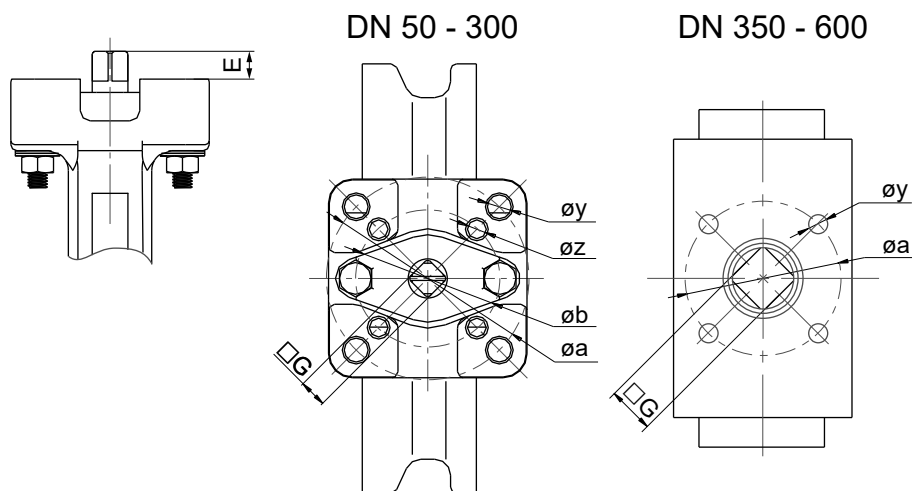
Flow direction:

Indicated by an arrow on the product

Dimensions

Actuator flange

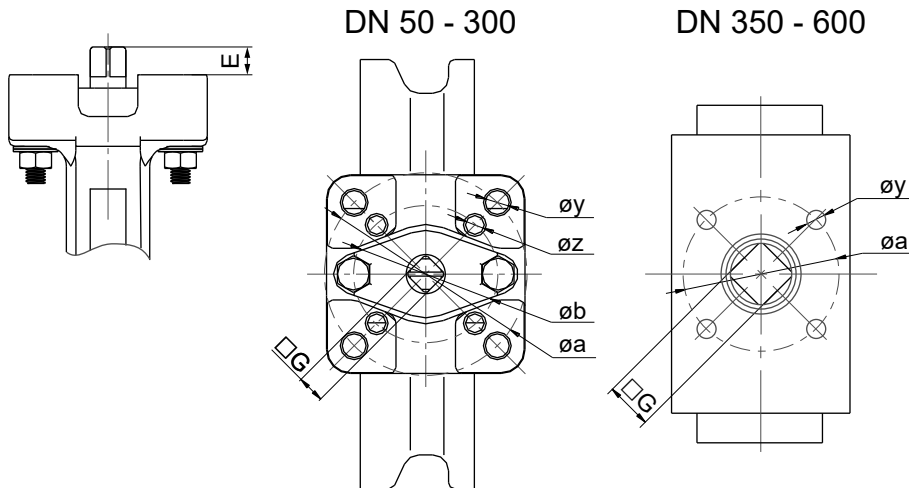
Flange PN10 (code 2), PN16 (code 3), CLASS 150 (code D)



DN	NPS	ISO 5211	øa	øb	E	□G	øy	øz
50	2"	F05	50.0	-	15.0	11.0	4 x 7.0	-
65	2½"	F05/F07	70.0	50.0	15.0	11.0	4 x 9.5	4 x 7.0
80	3"	F05/F07	70.0	50.0	15.0	11.0	4 x 9.5	4 x 7.0
100	4"	F07	70.0	-	19.0	14.0	4 x 9.5	-
125	5"	F07	70.0	-	19.0	14.0	4 x 9.5	-
150	6"	F07/F10	102.0	70.0	19.0	14.0	4 x 12.0	4 x 9.5
200	8"	F10	102.0	-	22.0	17.0	4 x 12.0	-
250	10"	F10/F12	125.0	102.0	27.0	22.0	4 x 14.0	4 x 12.0
300	12"	F12/F14	140.0	125.0	32.0	27.0	4 x 18.0	4 x 14.0
350	14"	F14/F16	165.0	140.0	29.0	27.0	4 x 22.0	4 x 18.0
400	16"	F14/F16	165.0	140.0	38.0	36.0	4 x 22.0	4 x 18.0
450	18"	F14/F16	165.0	140.0	38.0	36.0	4 x 22.0	4 x 18.0
500	20"	F14/F16	165.0	140.0	48.0	46.0	4 x 22.0	4 x 18.0
600	24"	F16/F25	254.0	165.0	48.0	46.0	8 x 19.0	4 x 22.0

Dimensions in mm

Flange PN25 (code 5), PN40 (code 6), CLASS 300 (code M)



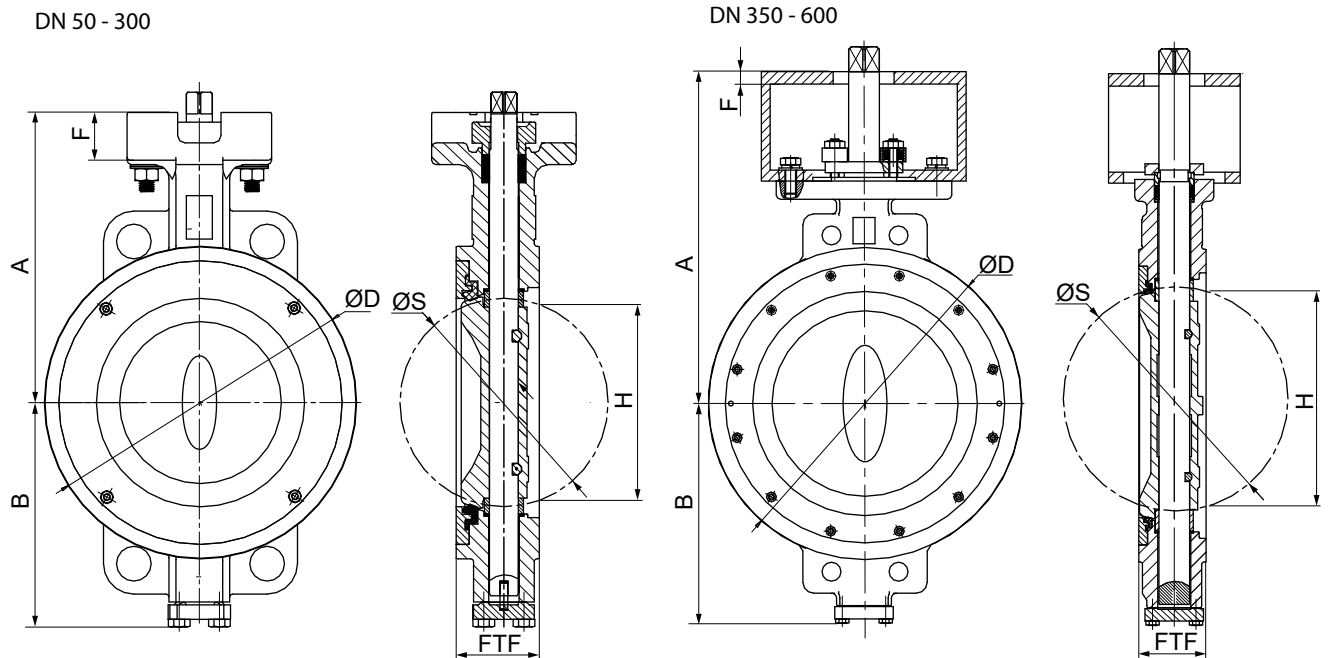
DN	NPS	ISO 5211	$\varnothing a$	$\varnothing b$	E	$\square G$	$\varnothing y$	$\varnothing z$
50	2"	F05	50.0	-	15.0	11.0	4 x 7.0	-
65	2½"	F05/F07	70.0	50.0	15.0	11.0	4 x 9.5	4 x 7.0
80	3"	F05/F07	70.0	50.0	15.0	11.0	4 x 9.5	4 x 7.0
100	4"	F07	70.0	-	19.0	14.0	4 x 9.5	-
125	5"	F07	70.0	-	19.0	14.0	4 x 9.5	-
150	6"	F10	102.0	-	22.0	17.0	4 x 12.0	-
200	8"	F10/F12	125.0	102.0	27.0	22.0	4 x 14.0	4 x 12.0
250	10"	F12/F14	140.0	125.0	32.0	27.0	4 x 18.0	4 x 13.5
300	12"	F14	140.0	-	32.0	27.0	4 x 18.0	-
350	14"	F14/F16	165.0	140.0	38.0	36.0	4 x 22.0	4 x 18.0
400	16"	F14/F16	165.0	140.0	48.0	46.0	4 x 22.0	4 x 18.0
450	18"	F16/F25	254.0	165.0	48.0	46.0	8 x 19.0	4 x 22.0
500	20"	F16/F25	254.0	165.0	57.0	55.0	8 x 19.0	4 x 22.0
600	24"	F16/F25	254.0	165.0	57.0	55.0	8 x 19.0	4 x 22.0

Dimensions in mm

Body

Wafer body configuration

Flange PN10 (code 2), PN16 (code 3), CLASS 150 (code D)



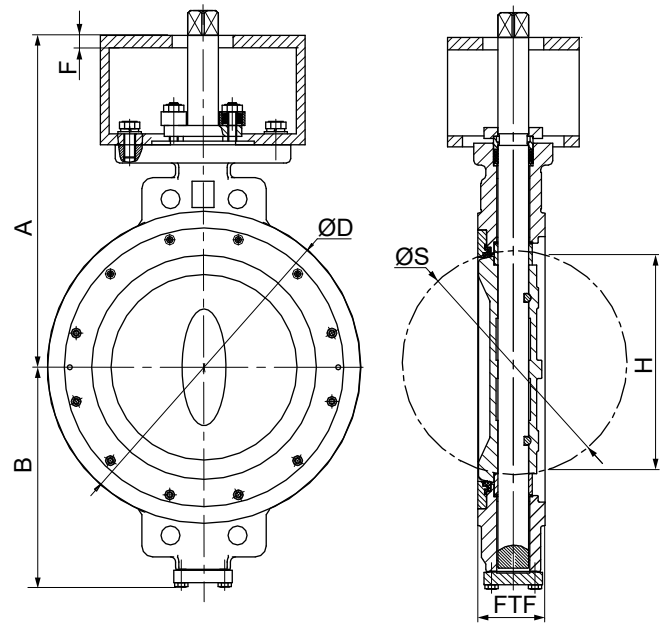
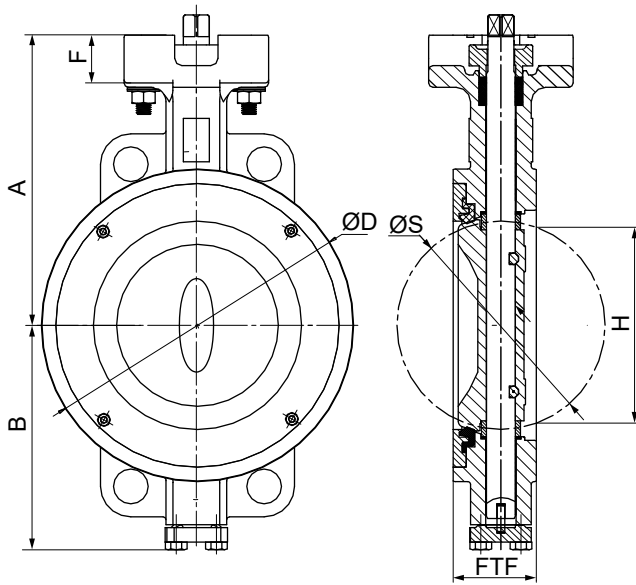
DN	NPS	A	B	ØD	F	FTF	H	ØS
50	2"	124.0	96.4	100.0	-	50.0	15.0	38.6
65	2½"	122.0	101.0	105.0	-	51.5	49.0	57.0
80	3"	143.5	115.0	132.0	-	49.5	69.0	74.0
100	4"	160.0	128.0	158.0	-	56.5	91.0	96.0
125	5"	176.5	148.0	186.0	-	57.0	103.0	111.0
150	6"	198.0	157.0	216.0	33.0	57.5	140.0	144.0
200	8"	230.0	195.0	266.0	35.0	63.0	179.0	188.0
250	10"	273.0	236.0	324.0	34.0	71.0	231.0	237.0
300	12"	319.0	262.0	381.0	30.0	81.5	276.0	283.0
350	14"	455.0	303.0	429.0	17.0	92.0	300.0	307.0
400	16"	490.0	337.5	480.0	17.0	101.5	347.0	363.5
450	18"	502.0	353.5	533.0	17.0	114.0	394.0	414.0
500	20"	524.0	376.5	584.0	17.0	127.0	434.0	458.0
600	24"	625.0	453.5	692.0	22.0	154.0	524.0	550.0

Dimensions in mm

Flange PN25 (code 5), PN40 (code 6), CLASS 300 (code M)

DN 50 - 300

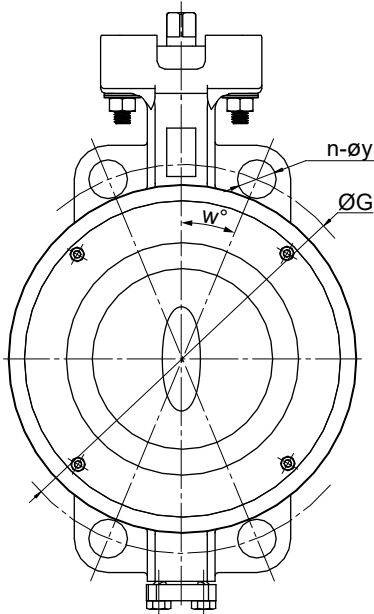
DN 350 - 600



DN	NPS	A	B	ØD	F	FTF	H	ØS
50	2"	124.0	96.4	100.0	22.0	50.0	15.0	38.6
65	2½"	122.0	101.0	105.0	15.0	51.5	49.0	57.0
80	3"	143.5	115.0	132.0	18.0	49.5	69.0	74.0
100	4"	160.0	128.0	158.0	23.0	56.5	91.0	96.0
125	5"	176.5	148.0	186.0	23.0	57.0	103.0	111.0
150	6"	217.5	170.5	216.0	26.0	59.0	140.0	144.0
200	8"	250.0	206.5	270.0	35.0	73.0	179.0	188.0
250	10"	303.0	248.0	324.0	31.0	83.0	231.0	237.0
300	12"	335.5	291.0	409.0	39.0	92.0	276.0	283.0
350	14"	470.0	320.5	445.0	17.0	117.0	300.0	315.0
400	16"	500.5	365.5	470.0	17.0	133.5	347.0	363.5
450	18"	531.0	382.5	560.0	17.0	149.0	394.0	414.0
500	20"	593.0	426.5	585.0	22.0	162.0	434.0	456.5
600	24"	645.0	498.0	692.0	22.0	181.0	524.0	550.0

Dimensions in mm

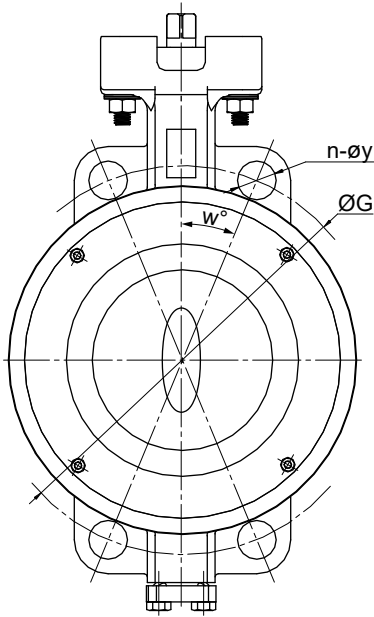
Connections



DN	NPS	PN10				PN16				PN25				PN40			
		n	ØG	w°	øy	n	ØG	w°	øy	n	ØG	w°	øy	n	ØG	w°	øy
50	2"	4	125.0	45.0	18.0	4	125.0	45.0	18.0	4	125.0	45.0	18.0	4	125.0	45.0	18.0
65	2½"	8	145.0	22.5	18.0	8	145.0	22.5	18.0	8	145.0	22.5	18.0	8	145.0	45.0	18.0
80	3"	8	160.0	22.5	19.0	8	160.0	22.5	19.0	8	160.0	22.5	19.0	8	160.0	22.5	19.0
100	4"	8	180.0	22.5	18.0	8	180.0	22.5	18.0	8	190.0	22.5	22.0	8	190.0	22.5	22.0
125	5"	8	210.0	22.5	18.0	8	210.0	22.5	18.0	8	220.0	22.5	26.0	8	220.0	22.5	26.0
150	6"	8	240.0	22.5	22.0	8	240.0	22.5	22.0	8	250.0	22.5	28.0	8	250.0	22.5	28.0
200	8"	8	295.0	22.5	24.0	12	295.0	15.0	24.0	12	310.0	15.0	28.0	12	320.0	15.0	30.0
250	10"	12	350.0	15.0	22.0	12	355.0	15.0	26.0	12	370.0	15.0	30.0	12	385.0	15.0	33.0
300	12"	12	400.0	15.0	22.0	12	410.0	15.0	26.0	16	430.0	11.25	M27	16	450.0	11.25	M30
350	14"	16	460.0	11.25	22.0	16	470.0	11.25	26.0	16	490.0	11.25	M30	16	510.0	11.25	M33
400	16"	16	515.0	11.25	28.0	16	525.0	11.25	30.0	16	550.0	11.25	M33	16	585.0	11.25	M36
450	18"	20	565.0	9.0	M24	20	585.0	9.0	M27	20	600.0	9.0	M33	20	610.0	9.0	M36
500	20"	20	620.0	9.0	M24	20	650.0	9.0	M30	20	660.0	9.0	M33	20	670.0	9.0	M39
600	24"	20	725.0	9.0	M27	20	770.0	9.0	M33	20	770.0	9.0	M36	20	795.0	9.0	M45

Dimensions in mm

n = number of bolt holes / bolts



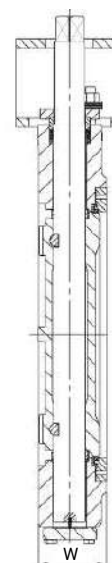
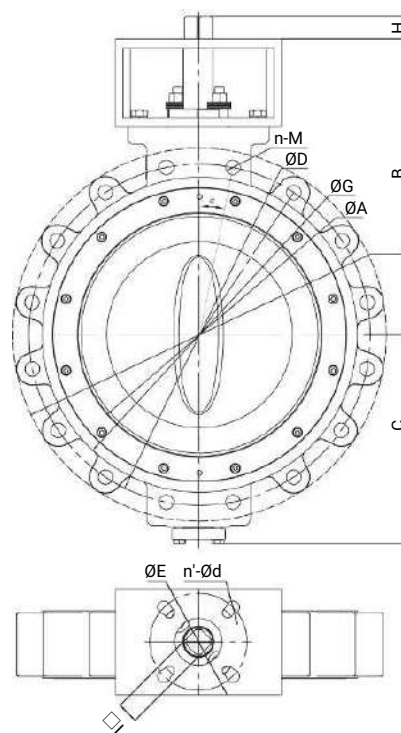
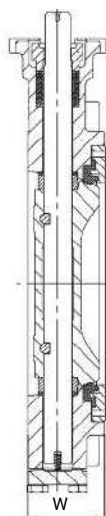
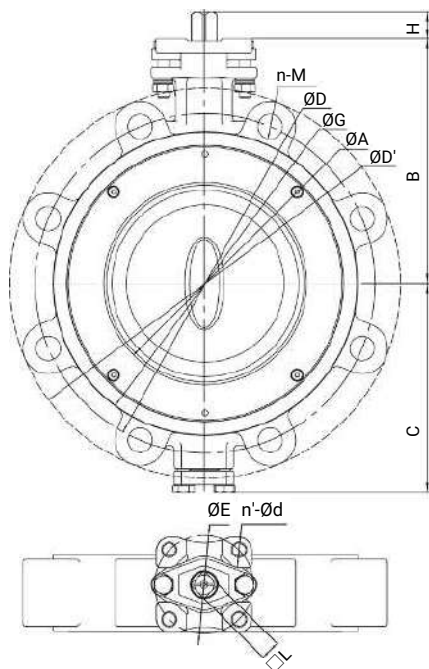
DN	NPS	CLASS 150				CLASS 300			
		n	ØG	w°	øy	n	ØG	w°	øy
50	2"	4	120.5	45.0	19.0	8	127.0	22.5	18.0
65	2½"	4	139.5	45.0	18.0	8	149.0	22.5	22.0
80	3"	4	152.5	45.0	19.0	8	168.5	22.5	22.0
100	4"	8	190.5	22.5	19.0	8	200.0	22.5	22.0
125	5"	8	216.0	22.5	24.0	8	235.0	22.5	22.0
150	6"	8	241.0	22.5	24.0	12	270.0	15.0	24.0
200	8"	8	298.5	22.5	24.0	12	330.0	15.0	28.0
250	10"	12	362.0	15.0	26.0	16	387.5	11.25	1" x 8UN
300	12"	12	432.0	15.0	26.0	16	451.0	11.25	1½" x 8UN
350	14"	12	476.0	15.0	30.0	20	514.5	9.0	1½" x 8UN
400	16"	16	540.0	11.25	28.6	20	571.5	9.0	1¼" x 8UN
450	18"	16	578.0	11.25	1½" x 8UN	24	628.5	7.5	1¼" x 8UN
500	20"	20	635.0	9.0	1½" x 8UN	24	685.5	7.5	1¼" x 8UN
600	24"	20	749.5	9.0	1¼" x 8UN	24	812.8	7.5	1½" x 8UN

Dimensions in mm
 n = number of bolt holes / bolts

Lug body configuration

DN 50 - DN 300

DN 350 - DN 600



DN	NPS	ISO 5211	ØA	B	C	ØD'	ØG	H	□L	W	ØE	n'-ØF
50	2"	F05	38.5	116.0	86.0	155.0	100.0	15.0	11.0	42.0	50.0	4.0-7.0
65	2,5"	F05	57.0	126.2	93.0	174.0	105.0	15.0	11.0	45.5	50.0	4.0-7.0
80	3"	F05	74.0	133.8	102.0	182.5	132.0	15.0	11.0	47.0	50.0	4.0-7.0
100	4"	F07	96.0	148.5	118.0	220.5	158.0	19.0	14.0	52.0	70.0	4.0-9.5
125	5"	F07	111.0	161.5	133.0	250.0	186.0	19.0	14.0	54.0	70.0	4.0-9.5
150	6"	F07	144.0	173.8	148.5	277.0	216.0	19.0	14.0	57.5	70.0	4.0-9.5
200	8"	F10	188.0	230.0	195.0	335.0 / 331.0	266.0	22.0	17.0	60.0	102.0	4.0-12.0
250	10"	F10/F12	237.0	273.0	235.0	402.0	320.0	27.0	22.0	60.5	102.0/125.0	4.0-12.0/4.0-14.0
300	12"	F12/F14	283.0	319.0	261.0	472.0	378.0	32.0	27.0	78.5	150.0/140.0	4.0-14.0/4.0-18.0
350	14"	F14/F16	302.5	455.0	303.0	520.0	429.0	29.0	27.0	92.0	140.0/165.0	4.0-18.0/4.0-22.0
400	16"	F14/F16	363.5	490.0	342.0	588.0	480.0	38.0	36.0	101.6	140.0/165.0	4.0-18.0/4.0-22.0
450	18"	F14/F16	413.4	502.0	353.0	632.0	533.0	38.0	36.0	114.0	140.0/165.0	4.0-18.0/4.0-22.0
500	20"	F14/F16	458.0	524.0	376.0	704.0	584.0	48.0	46.0	127.0	140.0/165.0	4.0-18.0/4.0-22.0
600	24"	F16/F25	550.0	625.0	453.0	830.0	692.0	48.0	46.0	154.0	165.0/254.0	4.0-23.0/8.0-19.0

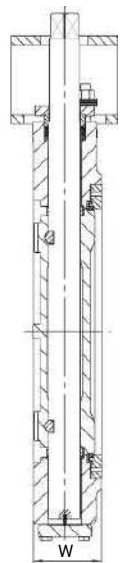
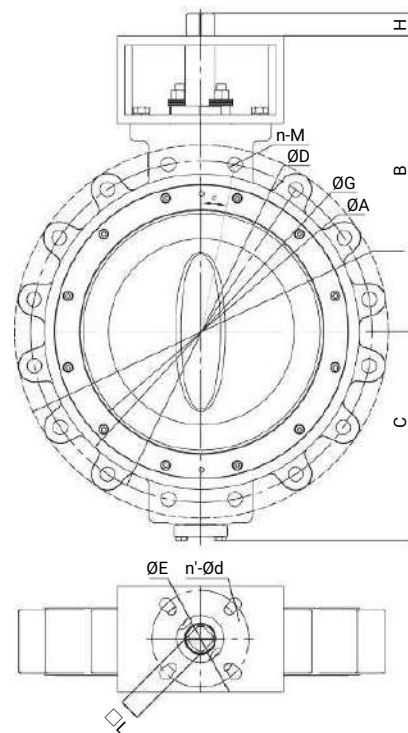
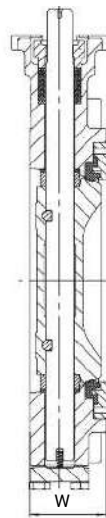
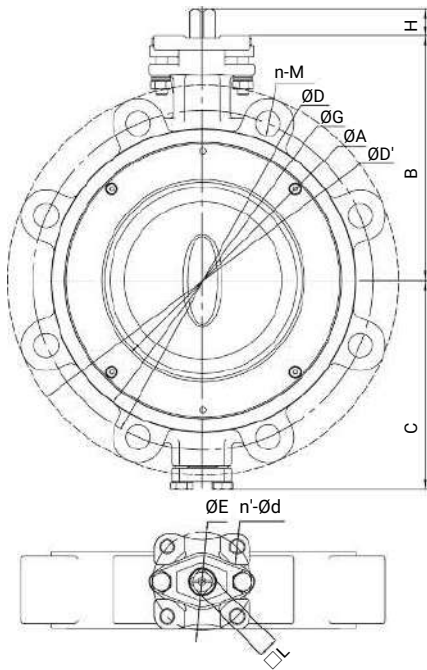
Dimensions in mm

n = number of bolt holes / bolts

Connections

DN 50 - DN 300

DN 350 - DN 600



PN10/PN16

DN	NPS	PN10				PN16			
		ØD	n-Ød	n-M	α	ØD	n-Ød	n-M	α
50	2"	125.0	4-M16	-	45.00°	125.0	4-M16	-	45.00°
65	2,5"	145.0	4-M16	-	45.00°	145.0	4-M16	-	45.00°
80	3"	-	-	-	-	-	-	-	-
100	4"	180.0	8-M16	-	22.50°	180.0	8-M16	-	22.50°
125	5"	210.0	8-M16	-	22.50°	210.0	8-M16	-	22.50°
150	6"	240.0	8-M20	-	22.50°	240.0	8-M20	-	22.50°
200	8"	295.0	8-M20	-	22.50°	295.0	12-M20	-	22.50°
250	10"	350.0	12-M20	-	15.00°	355.0	12-M24	-	15.00°
300	12"	400.0	12-M20	-	15.00°	410.0	12-M24	-	15.00°
350	14"	460.0	-	16-M20	11.25°	470.0	-	16-M24	11.25°
400	16"	515.0	-	16-M24	11.25°	525.0	-	16-M27	11.25°
450	18"	565.0	-	20-M24	9.00°	585.0	-	20-M27	9.00°
500	20"	620.0	-	20-M24	9.00°	650.0	-	20-M30	9.00°
600	24"	725.0	-	20-M27	9.00°	770.0	-	20-M33	9.00°

Dimensions in mm
n = number of bolt holes / bolts

Dimensions

CLASS150

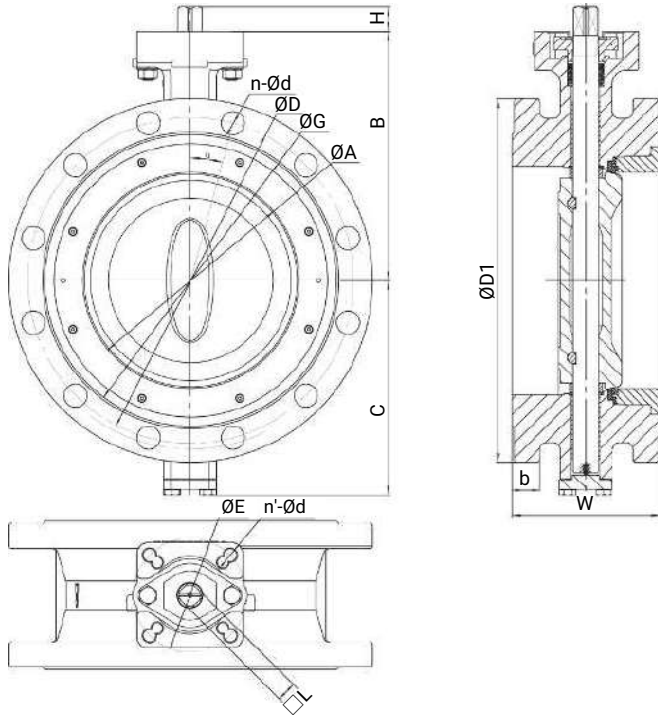
DN	NPS	ØD	n-Ød	n-M	α
50	2"	120.5	4-5/8"-11UN	-	45.00°
65	2,5"	139.5	4-5/8"-11UN	-	45.00°
80	3"	152.5	4-5/8"-11UN	-	45.00°
100	4"	190.5	8-5/8"-11UN	-	22.50°
125	5"	216.0	8-3/4"-10UN	-	22.50°
150	6"	241.0	8-3/4"-10UN	-	22.50°
200	8"	298.5	8-3/4"-10UN	-	22.50°
250	10"	362.0	12-7/8"-9UN	-	15.00°
300	12"	432.0	12-7/8"-9UN	-	15.00°
350	14"	-	-	-	-
400	16"	539.8	-	16-1-UNC	11.25°
450	18"	-	-	-	-
500	20"	635.0	-	20-1½-8UN	9.00°
600	24"	749.3	-	20-1¼-8UN	9.00°

Dimensions in mm

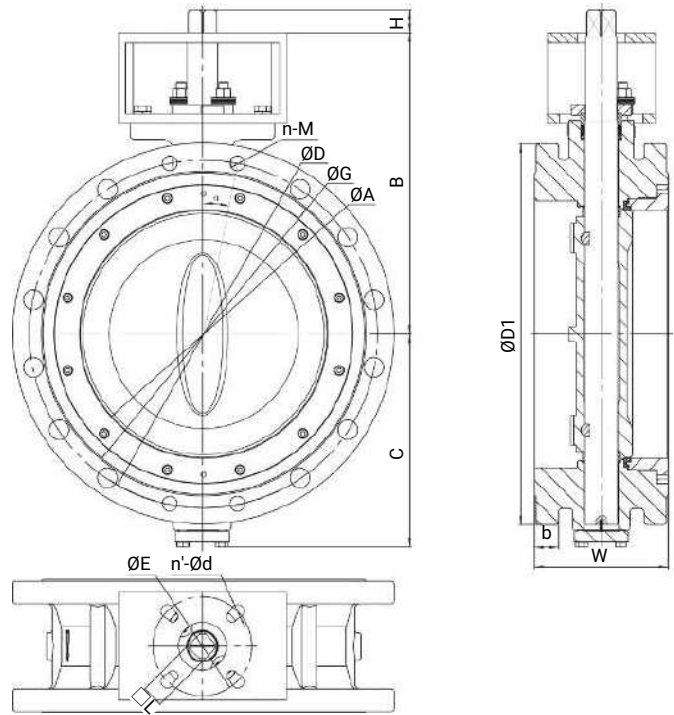
n = number of bolt holes / bolts

U section body configuration

DN 150 - DN 300



DN 350 - DN 600



DN	NPS	ØA	B	C	ØG	H	□L	W	ØE	n'-ØF	ISO 5211
150	6"	144.0	198.0	157.0	216.0	19.0	14.0	140.0	70.0/102.0	4.0-9.5/4.0-12.0	F07/F10
200	8"	188.0	230.0	195.0	266.0	22.0	17.0	152.0	102.0	4.0-12.0	F10
250	10"	237.0	273.0	236.0	324.0	27.0	22.0	165.0	102.0/125.0	4.0-12.0/4.0-14.0	F10/F12
300	12"	283.0	318.5	262.0	381.0	32.0	27.0	178.0	125.0/140.0	4.0-14.0/4.0-18.0	F12/F14
350	14"	302.5	455.0	303.0	429.0	29.0	27.0	190.0	140.0/165.0	4.0-18.0/4.0-22.0	F14/F16
400	16"	363.5	490.0	342.0	480.0	38.0	36.0	216.0	140.0/165.0	4.0-18.0/4.0-22.0	F14/F16
450	18"	413.4	502.0	353.0	533.0	38.0	36.0	222.0	140.0/165.0	4.0-18.0/4.0-22.0	F14/F16
500	20"	458.0	524.0	376.0	584.0	48.0	46.0	229.0	140.0/165.0	4.0-18.0/4.0-22.0	F14/F16
600	24"	550.0	625.0	453.0	692.0	48.0	46.0	267.0	165.0/254.0	4.0-23.0/8.0-19.0	F16/F25

Dimensions in mm

n = number of bolt holes / bolts

Dimensions

Connections

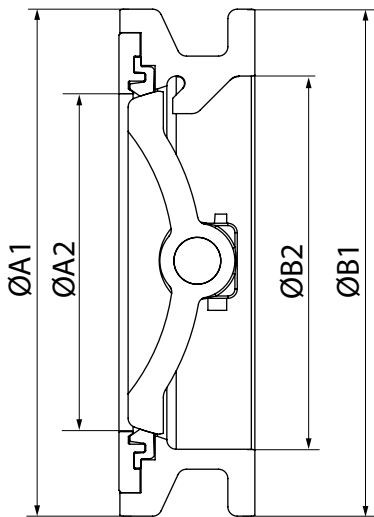
CLASS150

DN	NPS	ØD	n-Ød	n-M	α
150	6"	241.0	8.0-24.0	-	22.5°
200	8"	298.5	8.0-24.0	-	22.5°
250	10"	362.0	12.0-24.0	-	15.0°
300	12"	432.0	12.0-26.0	-	15.0°
350	14"	476.3	-	12-Ø30	15.0°
400	16"	539.8	-	4-1-8UNC, 12-Ø30	11.25°
450	18"	578.0	-	4-1½-8UNC, 12-Ø33	11.25°
500	20"	635.0	-	4-1½-8UNC, 16-Ø33	9.0°
600	24"	749.3	-	4-1¼-8UNC, 16-Ø36	9.0°

Dimensions in mm

n = number of bolt holes / bolts

Gasket



DN	NPS	Connection											
		PN10, PN16, CL150, PN25, PN40, CL300				CL150				CL300			
		ØA1	ØA2	ØB1	ØB2	ØA1	ØA2	ØB1	ØB2	ØA1	ØA2	ØB1	ØB2
50	2"	99.6	38.6	99.0	56.0	-	-	-	-	-	-	-	-
65	2½"	105.0	57.0	104.8	74.0	-	-	-	-	-	-	-	-
80	3"	132.0	74.0	132.0	95.0	-	-	-	-	-	-	-	-
100	4"	157.5	96.0	156.7	115.8	-	-	-	-	-	-	-	-
125	5"	185.2	111.0	185.7	140.3	-	-	-	-	-	-	-	-
150	6"	-	-	-	-	215.2	144.0	215.2	159.9	215.5	144.0	215.5	159.5
200	8"	-	-	-	-	265.9	188.0	265.6	209.4	269.4	188.0	269.4	209.6
250	10"	-	-	-	-	324.0	118.5	324.0	254.0	324.0	237.0	324.0	254.0
300	12"	-	-	-	-	381.0	283.0	380.75	305.1	409.0	283.0	409.0	304.8
350	14"	-	-	-	-	427.6	307.2	428.0	365.0	445.0	314.7	445.0	364.0
400	16"	-	-	-	-	480.0	363.5	480.0	400.0	470.0	363.5	470.0	394.0
450	18"	-	-	-	-	533.0	414.0	533.0	444.5	560.0	414.2	560.0	444.5
500	20"	-	-	-	-	584.0	458.3	584.0	493.6	583.3	456.4	583.3	493.6

DN	NPS	Connection											
		PN10, PN16, CL150, PN25, PN40, CL300				CL150				CL300			
		ØA1	ØA2	ØB1	ØB2	ØA1	ØA2	ØB1	ØB2	ØA1	ØA2	ØB1	ØB2
600	24"	-	-	-	-	692.0	549.8	692.0	610.0	690.3	549.8	690.3	599.7

Dimensions in mm

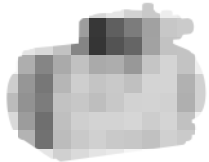
Add-on components



GEMÜ ADA/ASR

Pneumatic universal quarter turn actuators

GEMÜ ADA is a pneumatic, double acting and GEMÜ ASR a pneumatic, single acting quarter turn actuator. Both work according to the double piston rack and pinion principle and are suitable for mounting to butterfly valves or ball valves.



GEMÜ DR/SC

Pneumatic premium quarter turn actuators

GEMÜ DR is a pneumatic, double acting and GEMÜ SC a pneumatic, single acting quarter turn actuator. Both work according to the double piston rack and pinion principle and are suitable for mounting to butterfly valves or ball valves.



GEMÜ 9428

Motorized quarter turn actuator

The product is a motorized quarter turn actuator. The actuator is designed for DC or AC operating voltages. A manual override and an optical position indicator are integrated as standard. The torque in the end positions is increased. This enables a closing curve matched to the valves.



GEMÜ 9468

Motorized quarter turn actuator

GEMÜ 9468 is a motorized quarter turn actuator. A manual override and an optical position indicator are integrated as standard. The torque in the end positions is increased. This enables a closing curve matched to the valves.



GEMÜ J4C

Motorized quarter turn actuator

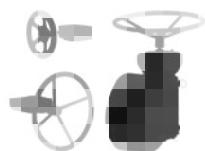
The J4C actuator is a motorized quarter turn actuator. The motor is designed for DC and AC operating voltages. A manual override and an optical position indicator are integrated as standard. The end positions are potential-free and adjustable.



GEMÜ DAHL / SAHL / GHL / VHL

Hand lever

Lockable aluminium or stainless steel hand lever with standard flange acc. to EN ISO 5211 for manual operation (latch positions or continuous) of butterfly valves.

**GEMÜ GB****Handwheel with gearbox**

Handwheel with gearbox made of aluminium diecasting, GG25 or stainless steel with standard flange acc. to EN ISO 5211 for the manual operation of quarter turn valves. Option with chain wheel or prepared for limit switches.

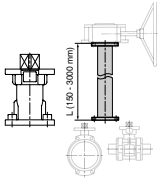
**GEMÜ LSC****Limit switch box for quarter turn actuators**

The GEMÜ LSC limit switch box is suitable for mounting to manually and pneumatically operated quarter turn valves. It is also fitted with an optical position indicator for visual confirmation of position.

**GEMÜ LSF****Inductive dual sensor for quarter turn valves**

The GEMÜ LSF inductive dual sensor is suitable for mounting to manually and pneumatically operated quarter turn valves. It is also fitted with an optical position indicator for visual confirmation of position.

Accessories



GEMÜ RC0

Shaft extension

The RC0 shaft extension for quarter turn valves is a distance piece between manually, pneumatically or electrically operated valves. This means that valves can be protected from flooding or better access for operation of the valve can be ensured (also for manual override).



GEMÜ MSC

Mounting kit

The MSC mounting kit is an interface, for the same and different ends, to join flange designs according to ISO 5211. This mounting kit ensures thermal separation of actuator and valve body. It can also be used as height compensation for insulated pipelines. The mounting kit is available in steel, electrogalvanized and stainless steel in an open or closed design.

GEMÜ ADH

Mounting sleeve

The mounting sleeve accessories are available in the square and star geometry designs. These are used for the shaft and hub support for quarter turn actuators. Both sleeves have an internal square drive (please observe stated measurement dimensions here). The sleeve material is sintered metal and they are chemically nickel plated with a surface of 25 µm.



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