

GEMÜ R471 Tugela

Pneumatically operated butterfly valve



Merkmale

- 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
- Various actuator types can be selected
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A

Description

The GEMÜ R471 Tugela double eccentric metal butterfly valve is operated by a pneumatic actuator. The butterfly valve is available in nominal sizes DN 50 to 400 and in standardized installation lengths API 609 category A (DIN 3202 K1).

Technical specifications

- **Media temperature:** -76 to 446 °F
- **Ambient temperature:** -4 to 158 °F
- **Operating pressure :** 0 to 580 psi
- **Nominal sizes:** 2" (DN 50) to 16" (DN 400)
- **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 TFM™
- **Disc materials:** 1.4408
- **Conformities:** ATEX | EAC | FDA | TA Luft (German Clean Air Act)

Technical data depends on the respective configuration



further information
webcode: GW-R471



Product line



GEMÜ R470
Tugela

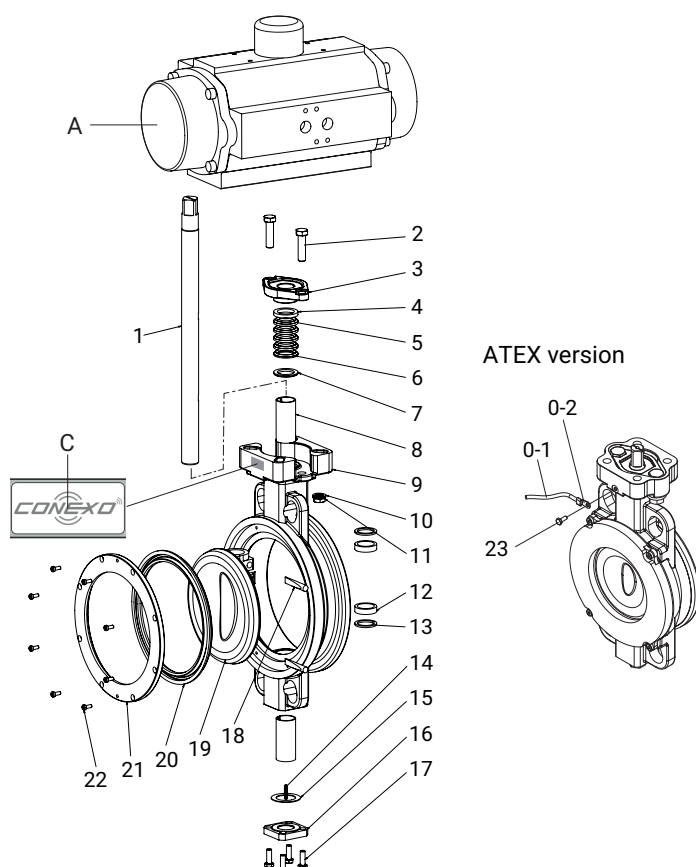
GEMÜ R471
Tugela

GEMÜ R477
Tugela

GEMÜ R478
Tugela

Operation				
With bare shaft	●	-	-	-
Manual	-	-	●	-
pneumatic	-	●	-	-
Motorized	-	-	-	●
Nominal sizes	2" (DN 50) to 24" (DN 600)	2" (DN 50) to 16" (DN 400)	2" (DN 50) to 16" (DN 400)	2" (DN 50) to 12" (DN 300)
Media temperature	-76 to 446 °F	-76 to 446 °F	-76 to 446 °F	-76 to 446 °F
Operating pressure	0 to 580 psi	0 to 580 psi	0 to 580 psi	0 to 580 psi
Connection types				
Flange (wafer)	●	●	●	●
Conformities				
ATEX	●	●	●	●
EAC	●	●	●	●
FDA	●	●	●	●
TA Luft (German Clean Air Act)	●	●	●	●

Product description



Item	Designation	Material
1	Shaft	see order code (order data)
2	Hexagon bolt	Stainless steel
3	Packing washer	1.4408
4	Upper packing	PTFE
5	Medium packing	PTFE
6	Lower packing	PTFE
7	Packing washer	PTFE
8	Bush	316/PTFE
9	Body	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	same as body
17	Hexagon bolt	Stainless steel
18	Disc pin	Steel
19	Washer	see order code (order data)
20*	Seat	see order code (order data)
21	Seat retainer	
22	Hexagon bolt	Stainless steel

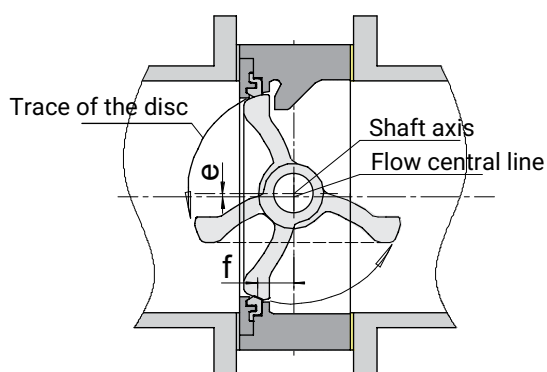
Product description

Item	Designation	Material
A	Pneumatic actuator	Aluminium
C	CONEXO label with RFID chip	
0	Earthing kit for ATEX version	
0-1	Stranded wire (ATEX version)	
0-2	Cable lug (ATEX version)	
23	Hexagon bolt	Stainless steel

* available as spare part

Additional design features

Double-eccentric design



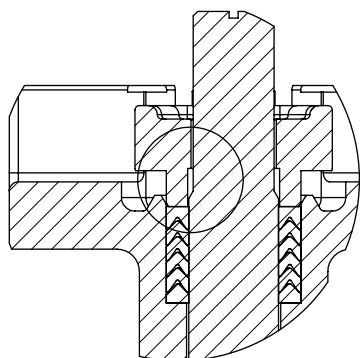
During operation, the disc directly disconnects from the seat, thereby reducing friction between the seat and disc, as well as the torque.

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

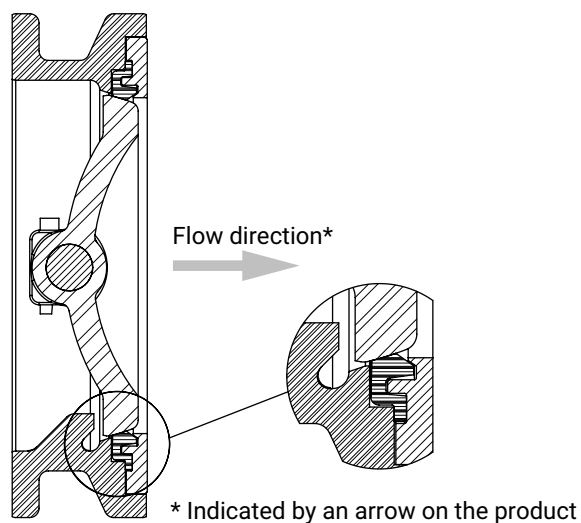
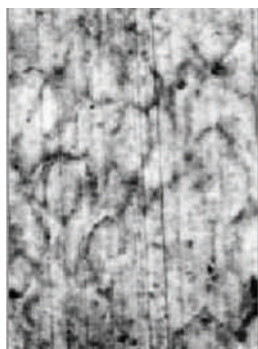
Spherical surface

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**Shut-off seal 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 improved cold flow properties (measured as deformation under load):
The 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.

Actuator assignment

GEMÜ type ASR – Single acting

DN	Anticlockwise rotation, spring opening (code 2, U)	Code	Clockwise rotation, spring closing (code 1, Q)	Code
50	ASL0130US14F05/07S17S14	LU13KC	ASR0130US14F05/07S17S14	AU13KC
65	ASL0200US14F07/10S17S14	LU20KE	ASR0200US14F07/10S17S14	AU20KE
80	ASL0200US14F07/10S17S14	LU20KE	ASR0200US14F07/10S17S14	AU20KE
100	ASL0300US14F07/10 S22	LU30KD	ASR0300US14F07/10 S22	AU30KD
125	ASL0500US14F07/10 S22	LU50KD	ASR0500US14F07/10 S22	AU50KD
150	ASL0850US14F10/12 S27	LU85KG	ASR0850US14F10/12 S27	AU85KG
200	ASL1200US14F10/12 S27	L12UKG	ASR1200US14F10/12 S27	A12UKG
250	ASL1750US14F14 S36	L17UKK	ASR1750US14F14 S36	A17UKK
300	ASL2100US14F14 S36	L21UKK	ASR2100US14F16 S46	A21UKL
350	ASL2500US14F14 S36	L25UKK	ASR2500US14F16 S46	A25UKL
400	ASL4000US14F16/25 S55	L40UKM	ASR4000US14F16/25 S55	A40UKM

GEMÜ type ADA – Double acting

DN	Double acting (code 3, T)	Code
50	ADA0040U F05 S14S11	BU04AB
65	ADA0080U F05/07S17S14	BU08AC
80	ADA0080U F05/07S17S14	BU08AC
100	ADA0130U F05/07S17S14	BU13AC
125	ADA0200U F07/10S17S14	BU20AE
150	ADA0300U F07/10 S22	BU30AD
200	ADA0500U F10 S22	BU50AF
250	ADA0850U F10/12 S27	BU85AG
300	ADA1200U F10/12 S27	B12UAG
350	ADA1750U F14 S36	B17UAK

Order data

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

Order codes

1 Type	Code
Butterfly valve, double-eccentric, pneumatically operated, 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	R471

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
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, dimension FTF EN 558 series 109	M

6 Body material	Code
1.4408 / ASTM A351 / CF8M	4

6 Body material	Code
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	6

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

10 Liner fixing	Code
Loose liner	L

11 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3
Normally closed (NC), actuator mounted across the piping	Q
Double acting (DA), actuator mounted across the piping	T
Normally open (NO), actuator mounted across the piping	U

12 Actuator version	Code
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0130US14F05/07S17S14	AU13KC
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0200US14F07/10S17S14	AU20KE
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0300US14F07/10 S22	AU30KD
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0500US14F07/10 S22	AU50KD
Actuator, pneumatic, double acting, clockwise rotation, ADA0080U F05/07S17S14	BU08AC
Actuator, pneumatic, double acting, clockwise rotation, ADA0130U F05/07S17S14	BU13AC
Actuator, pneumatic, double acting, clockwise rotation, ADA0200U F07/10S17S14	BU20AE
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL0130US14F05/07S17S14	LU13KC
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL0200US14F07/10S17S14	LU20KE

Order data

12 Actuator version	Code
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL0300US14F07/10 S22	LU30KD
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL0500US14F07/10 S22	LU50KD
Actuator, pneumatic, single acting, spring closing, clockwise rotation, ASR1200U S14 F10F12YS27A	A12UKG
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR1750US14F14 S36	A17UKK
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR2100US14F16 S46	A21UKL
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR2500US14F16 S46	A25UKL
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR4000US14F16/25 S55	A40UKM
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0850US14F10/12 S27	AU85KG
Actuator, pneumatic, double acting, clockwise rotation, ADA1200U F10/12 S27	B12UAG
Actuator, pneumatic, double acting, clockwise rotation, ADA1750U F14 S36	B17UAK
Actuator, pneumatic, double acting, clockwise rotation, ADA2100U F16 S46	B21UAL
Actuator, pneumatic, double acting, clockwise rotation, ADA0300U F07/10 S22	BU30AD
Actuator, pneumatic, double acting, clockwise rotation, ADA0500U F10 S22	BU50AF
Actuator, pneumatic, double acting, clockwise rotation, ADA0850U F10/12 S27	BU85AG
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL1200US14F10/12 S27	L12UKG
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL1750US14F14 S36	L17UKK
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL2100US14F14 S36	L21UKK
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL2500US14F14 S36	L25UKK
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL4000US14F16/25 S55	L40UKM
Actuator, pneumatic, single acting, anticlockwise rotation, spring opening, ASL0850US14F10/12 S27	LU85KG
13 Type of design	Code
Without	
Valve free of oil and grease, media wetted area cleaned and packed in PE bag	0107

13 Type of design	Code
Thermal separation between actuator and valve body via mounting kit, mounting parts made from stainless steel	5227
14 Special version	Code
Without	
ATEX certification	X
15 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Order option	Code	Description
1 Type	R471	Butterfly valve, double-eccentric, pneumatically operated, 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
9 Shut-off seal material	T	TFM 1600 (FDA certification)
10 Liner fixing	L	Loose liner
11 Control function	2	Normally open (NO)
12 Actuator version		
13 Type of design		Without
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.

Temperatur

Ambient temperature: -4 – 158 °F

Media temperature: -76 – 446 °F

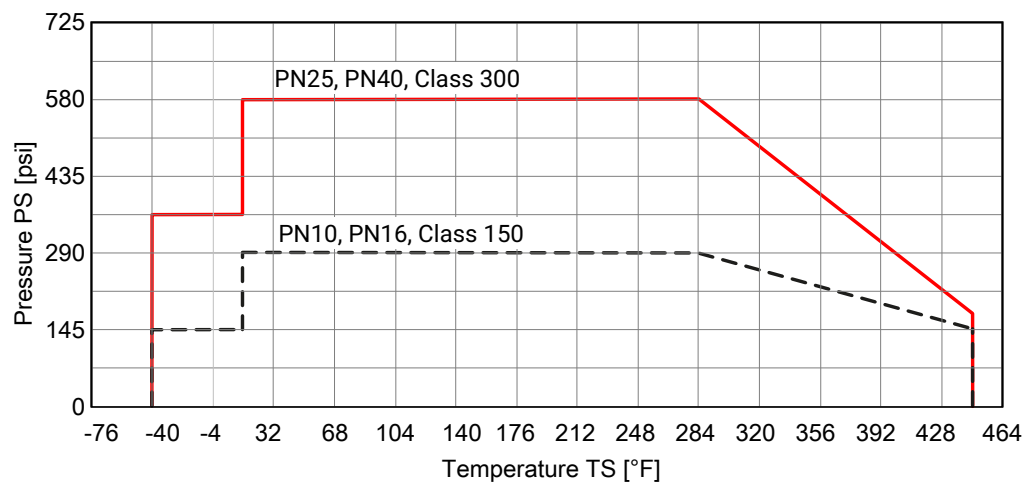
Pressure

Operating pressure: 0 – 580 psi

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

Vacuum: can be used up to a vacuum of 0.3 inHg (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:



Control pressure: 87 – 116 psi

Control pressure:

DN	NPS	Connection type code ¹⁾	
		D, 2, 3	M, 5, 6
50	2"	52.65	52.65
65	2½"	91.26	91.26
80	3"	193.05	193.05
100	4"	468.00	468.00
125	5"	760.50	760.50
150	6"	1228.50	1228.50
200	8"	2574.00	2106.00
250	10"	3861.00	3685.50
300	12"	5967.00	5557.50
350	14"	6786.00	6084.00
400	16"	9360.00	8073.00
450	18"	12285.00	10881.00
500	20"	16380.00	13221.00
600	24"	25272.00	21645.00

Cv values in gpm

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, dimension FTF EN 558 series 109

Control pressure:

DN	NPS	Body	Kv in m³/h at opening angle in °						
		CLASS	90	80	65	50	35	20	0
50	2"	CL300	28.90	29.60	31.82	24.92	11.23	0.12	0.00
65	2½"	CL300	69.73	81.08	86.81	59.20	28.31	3.50	0.00
80	3"	CL300	143.91	150.93	138.06	111.74	70.43	20.12	0.00
100	4"	CL300	328.77	345.15	292.50	198.90	117.00	42.00	0.00
125	5"	CL300	494.91	525.33	459.81	322.92	196.56	61.19	0.00
150	6"	CL150	900.90	907.92	685.62	449.28	246.87	99.68	0.00
		CL300	814.32	824.85	635.31	424.71	234.00	91.26	0.00
200	8"	CL150	1731.60	1790.10	1357.20	858.78	484.38	224.64	0.00
		CL300	1719.90	1778.40	1345.50	858.78	490.23	228.15	0.00
250	10"	CL150	2808.00	2819.70	2082.60	1310.40	698.49	317.07	0.00
		CL300	2819.70	2737.80	1977.30	1205.10	610.74	255.06	0.00
300	12"	CL150	4270.50	4212.00	3053.70	1930.50	1064.70	479.70	0.00
		CL300	3919.50	3802.50	2749.50	1743.30	913.77	403.65	0.00
350	14"	CL150	4551.30	4457.70	3463.20	2340.00	1404.00	756.99	0.00
		CL300	4516.20	4352.40	3252.60	2094.30	1205.10	596.70	0.00
400	16"	CL150	7429.50	6973.20	4995.90	3006.90	1661.40	842.40	0.00
		CL300	6201.00	6013.80	4293.90	2749.50	1556.10	752.31	0.00
450	18"	CL150	9453.60	9020.70	6271.20	3849.30	2106.00	1038.96	0.00
		CL300	7885.80	7476.30	5440.50	3393.00	1860.30	897.39	0.00
500	20"	CL150	11220.30	10588.50	7394.40	4504.50	2421.90	1109.16	0.00
		CL300	9126.00	8529.30	6388.20	4212.00	2386.80	1170.00	0.00
600	24"	CL150	16731.00	15678.00	11255.40	7137.00	4165.20	2281.50	0.00
		CL300	14508.00	13806.00	10003.50	6610.50	3790.80	2070.90	0.00

Cv values in gpm

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:

Assessment of the body

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

Actuator type ADA/ASR

Gas:  II 2 G Ex h IIC T6 Gb

Dust:  II 2 D Ex h IIIC T60°C Db

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, dimension FTF EN 558 series 109

Weight:
Butterfly valve

DN	NPS	Connection type code ¹⁾	
		D, 2, 3	M, 5, 6
50	2"	7.05	7.05
65	2½"	7.94	7.94
80	3"	10.80	10.80
100	4"	16.53	16.53
125	5"	17.64	17.64
150	6"	26.46	30.86
200	8"	39.68	50.71
250	10"	68.34	88.18
300	12"	103.62	145.51
350	14"	169.76	251.33
400	16"	211.64	321.88
450	18"	293.22	467.38
500	20"	343.92	575.41
600	24"	590.84	848.78

Weight in lb

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, dimension FTF EN 558 series 109

Actuator type ADA/ASR

Type	ADA	ASR
0040U	4.63	5.07
0080U	6.61	8.16
0130U	8.38	10.58
0200U	12.35	16.09
0300U	18.74	23.81
0500U	24.69	33.95
0850U	37.26	48.94
1200U	56.88	75.62
1750U	71.65	101.41
2100U	108.03	149.91
2500U	153.44	220.24
4000U	285.28	403.23

Weight in lb

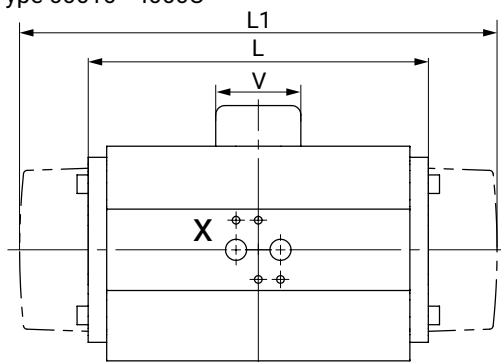
Flow direction:

Indicated by an arrow on the product

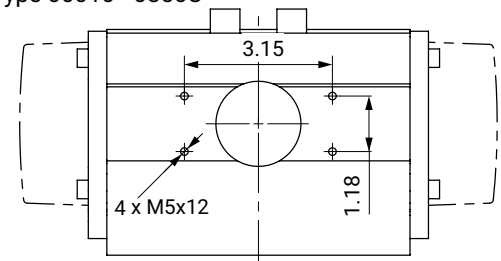
Dimensions

Actuator dimensions

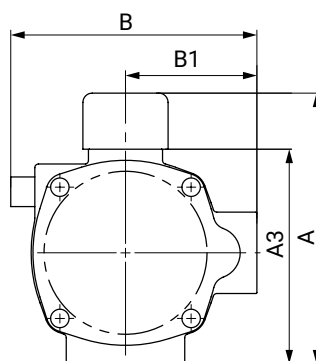
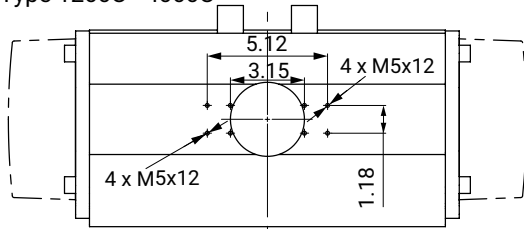
Type 00010 - 4000U



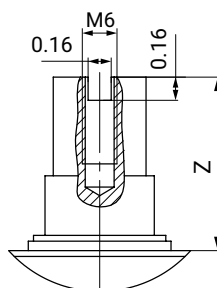
Type 00010 - 0850U



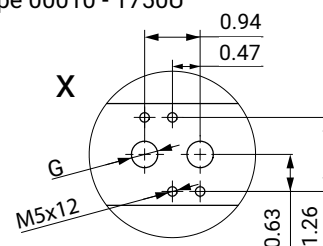
Type 1200U - 4000U



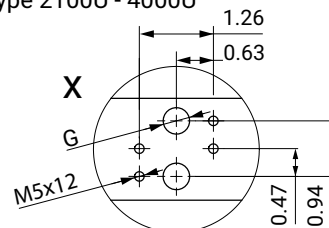
Type 00010 - 4000U



Type 00010 - 1750U



Type 2100U - 4000U



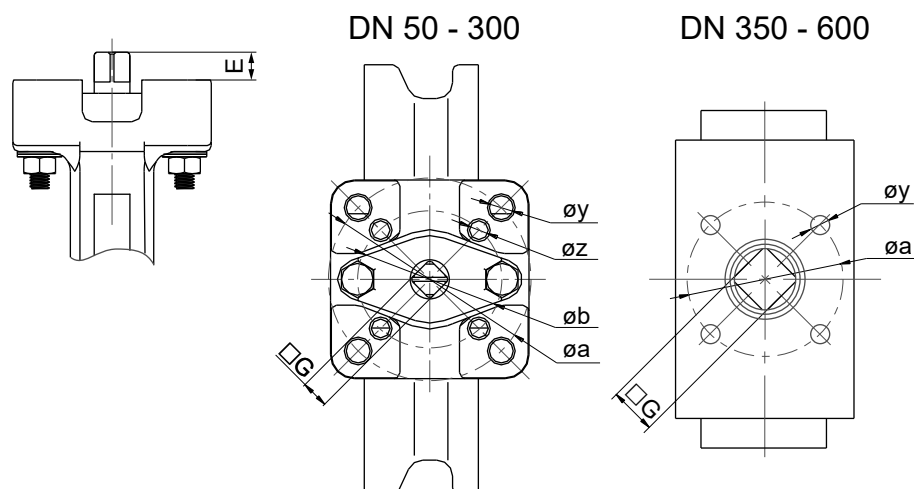
Typ	A	A3	B	B1	G	L	L1	V	Z
0040U	4.53	3.35	3.58	2.20	G1/4"	6.22	7.68	1.57	1.18
0080U	5.39	4.21	4.37	2.60	G1/4"	6.97	8.54	1.57	1.18
0130U	5.79	4.61	4.80	2.80	G1/4"	7.72	10.16	1.57	1.18
0200U	6.50	5.31	5.33	3.07	G1/4"	8.86	11.77	1.57	1.18
0300U	7.17	5.98	6.00	3.39	G1/4"	10.75	13.72	1.57	1.18
0500U	7.83	6.65	6.81	3.78	G1/4"	11.97	15.63	1.57	1.18
0850U	8.70	7.52	7.54	4.17	G1/4"	14.65	18.62	1.57	1.18
1200U	9.80	8.62	8.37	4.57	G1/4"	17.28	22.05	2.56	1.18
1750U	11.02	9.84	9.55	5.16	G1/4"	18.15	23.66	2.56	1.18
2100U	12.32	11.14	10.89	5.83	G1/4"	20.08	27.64	2.56	1.18
2500U	15.08	13.90	14.02	6.99	G1/4"	20.39	29.06	2.56	1.18
4000U	17.09	15.91	16.34	8.39	G1/4"	24.80	37.01	2.56	1.18

Dimensions in inch

Body dimensions

Actuator flange

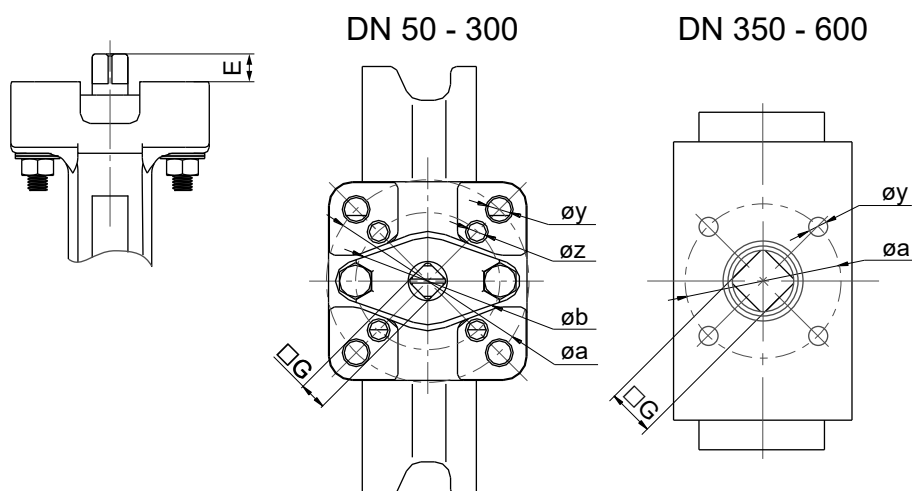
Flange PN10 (code 2), PN16 (code 3), CLASS 150 (code D)



DN	NPS	ISO 5211	Øa	Øb	E	G	Øy	Øz
50	2"	F05	1.97	-	0.59	0.43	4 x 0.28	-
65	2½"	F05/F07	2.76	1.97	0.59	0.43	4 x 0.37	4 x 0.28
80	3"	F05/F07	2.76	1.97	0.59	0.43	4 x 0.37	4 x 0.28
100	4"	F07	2.76	-	0.75	0.55	4 x 0.37	-
125	5"	F07	2.76	-	0.75	0.55	4 x 0.37	-
150	6"	F07/F10	4.02	2.76	0.75	0.55	4 x 0.47	4 x 0.37
200	8"	F10	4.02	-	0.87	0.67	4 x 0.47	-
250	10"	F10/F12	4.92	4.02	1.06	0.87	4 x 0.55	4 x 0.47
300	12"	F12/F14	5.51	4.92	1.26	1.06	4 x 0.71	4 x 0.55
350	14"	F14/F16	6.50	5.51	1.14	1.06	4 x 0.87	4 x 0.71
400	16"	F14/F16	6.50	5.51	1.50	1.42	4 x 0.87	4 x 0.71
450	18"	F14/F16	6.50	5.51	1.50	1.42	4 x 0.87	4 x 0.71
500	20"	F14/F16	6.50	5.51	1.89	1.81	4 x 0.87	4 x 0.71
600	24"	F16/F25	10.00	6.50	1.89	1.81	8 x 0.75	4 x 0.87

Dimensions in inch

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



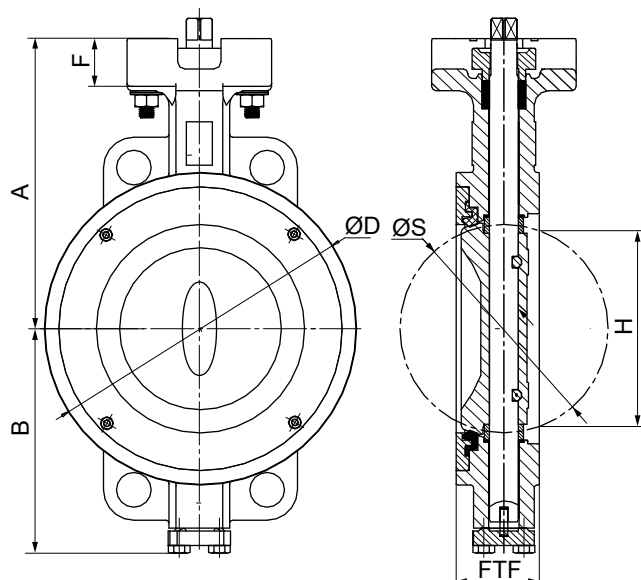
DN	NPS	ISO 5211	øa	øb	E	G	øy	øz
50	2"	F05	1.97	-	0.59	0.43	4 x 0.28	-
65	2½"	F05/F07	2.76	1.97	0.59	0.43	4 x 0.37	4 x 0.28
80	3"	F05/F07	2.76	1.97	0.59	0.43	4 x 0.37	4 x 0.28
100	4"	F07	2.76	-	0.75	0.55	4 x 0.37	-
125	5"	F07	2.76	-	0.75	0.55	4 x 0.37	-
150	6"	F10	4.02	-	0.87	0.67	4 x 0.47	-
200	8"	F10/F12	4.92	4.02	1.06	0.87	4 x 0.55	4 x 0.47
250	10"	F12/F14	5.51	4.92	1.26	1.06	4 x 0.71	4 x 0.53
300	12"	F14	5.51	-	1.26	1.06	4 x 0.71	-
350	14"	F14/F16	6.50	5.51	1.50	1.42	4 x 0.87	4 x 0.71
400	16"	F14/F16	6.50	5.51	1.89	1.81	4 x 0.87	4 x 0.71
450	18"	F16/F25	10.00	6.50	1.89	1.81	8 x 0.75	4 x 0.87
500	20"	F16/F25	10.00	6.50	2.24	2.17	8 x 0.75	4 x 0.87
600	24"	F16/F25	10.00	6.50	2.24	2.17	8 x 0.75	4 x 0.87

Dimensions in inch

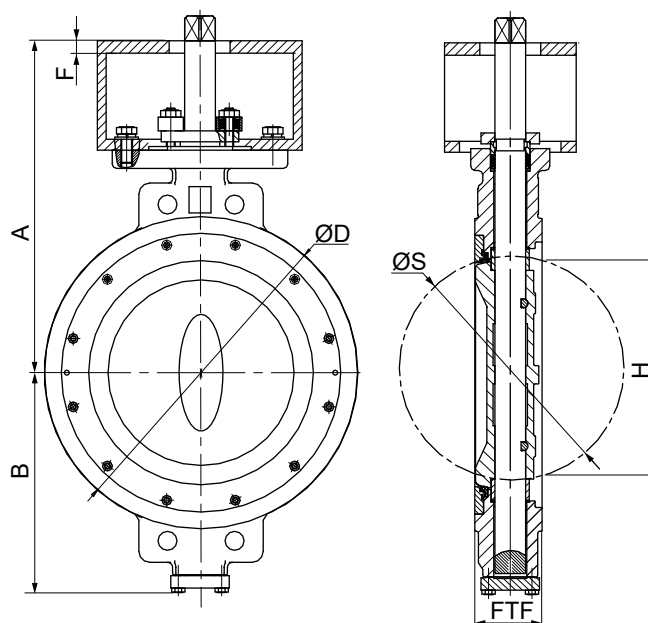
Body

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

DN 50 - 300



DN 350 - 600

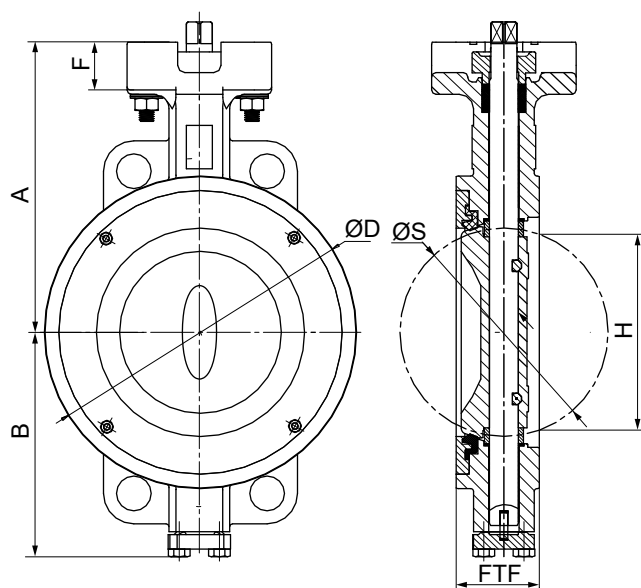


DN	NPS	A	B	ØD	F	FTF	H	ØS
50	2"	4.88	3.80	3.94	-	1.97	0.59	1.52
65	2½"	4.80	3.98	4.13	-	2.03	1.93	2.24
80	3"	5.65	4.53	5.20	-	1.95	2.72	2.91
100	4"	6.30	5.04	6.22	-	2.22	3.58	3.78
125	5"	6.95	5.83	7.32	-	2.24	4.06	4.37
150	6"	7.80	6.18	8.50	1.30	2.26	5.51	5.67
200	8"	9.06	7.68	10.47	1.38	2.48	7.05	7.40
250	10"	10.75	9.29	12.76	1.34	2.80	9.09	9.33
300	12"	12.56	10.31	15.00	1.18	3.21	10.87	11.14
350	14"	17.91	11.93	16.89	0.67	3.62	11.81	12.09
400	16"	19.29	13.29	18.90	0.67	4.00	13.66	14.31
450	18"	19.76	13.92	20.98	0.67	4.49	15.51	16.30
500	20"	20.63	14.82	22.99	0.67	5.00	17.09	18.03
600	24"	24.61	17.85	27.24	0.87	6.06	20.63	21.65

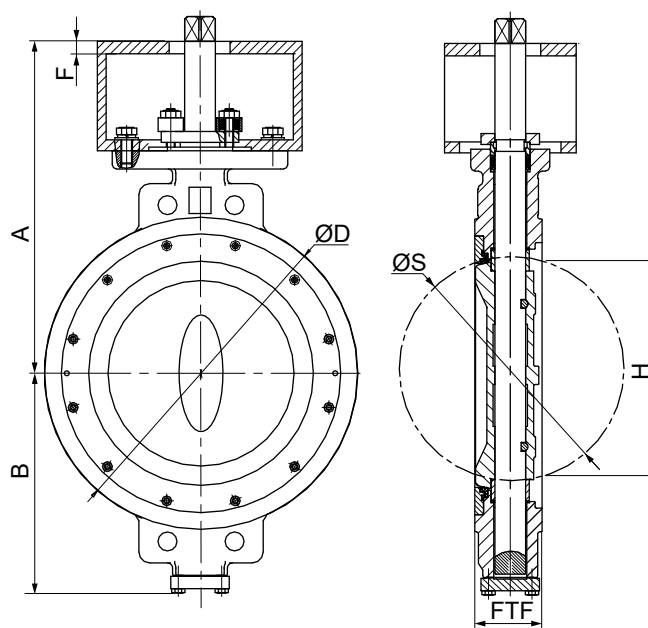
Dimensions in inch

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

DN 50 - 300



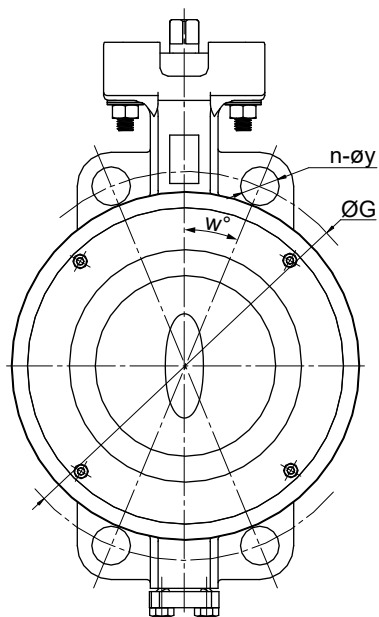
DN 350 - 600



DN	NPS	A	B	ØD	F	FTF	H	ØS
50	2"	4.88	3.80	3.94	0.87	1.97	0.59	1.52
65	2½"	4.80	3.98	4.13	0.59	2.03	1.93	2.24
80	3"	5.65	4.53	5.20	0.71	1.95	2.72	2.91
100	4"	6.30	5.04	6.22	0.91	2.22	3.58	3.78
125	5"	6.95	5.83	7.32	0.91	2.24	4.06	4.37
150	6"	8.56	6.71	8.50	1.02	2.32	5.51	5.67
200	8"	9.84	8.13	10.63	1.38	2.87	7.05	7.40
250	10"	11.93	9.76	12.76	1.22	3.27	9.09	9.33
300	12"	13.21	11.46	16.10	1.54	3.62	10.87	11.14
350	14"	18.50	12.62	17.52	0.67	4.61	11.81	12.40
400	16"	19.70	14.39	18.50	0.67	5.26	13.66	14.31
450	18"	20.91	15.06	22.05	0.67	5.87	15.51	16.30
500	20"	23.35	16.79	23.03	0.87	6.38	17.09	17.97
600	24"	25.39	19.61	27.24	0.87	7.13	20.63	21.65

Dimensions in inch

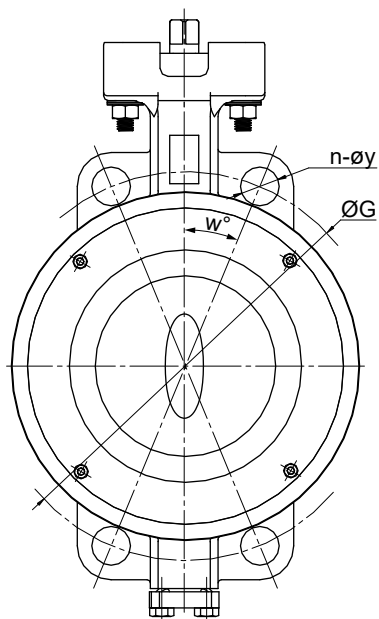
Connections



DN	NPS	PN10				PN16				PN25				PN40			
		n	Ø G	w°	ø y	n	Ø G	w°	ø y	n	Ø G	w°	ø y	n	Ø G	w°	ø y
50	2"	4	4.92	45.0	0.71	4	4.92	45.0	0.71	4	4.92	45.0	0.71	4	4.92	45.0	0.71
65	2½"	8	5.71	22.5	0.71	8	5.71	22.5	0.71	8	5.71	22.5	0.71	8	5.71	45.0	0.71
80	3"	8	6.30	22.5	0.75	8	6.30	22.5	0.75	8	6.30	22.5	0.75	8	6.30	22.5	0.75
100	4"	8	7.09	22.5	0.71	8	7.09	22.5	0.71	8	7.48	22.5	0.87	8	7.48	22.5	0.87
125	5"	8	8.27	22.5	0.71	8	8.27	22.5	0.71	8	8.66	22.5	1.02	8	8.66	22.5	1.02
150	6"	8	9.45	22.5	0.87	8	9.45	22.5	0.87	8	9.84	22.5	1.10	8	9.84	22.5	1.10
200	8"	8	11.61	22.5	0.94	12	11.61	15.0	0.94	12	12.20	15.0	1.10	12	12.60	15.0	1.18
250	10"	12	13.78	15.0	0.87	12	13.98	15.0	1.02	12	14.57	15.0	1.18	12	15.16	15.0	1.30
300	12"	12	15.75	15.0	0.87	12	16.14	15.0	1.02	16	16.93	11.25	M27	16	17.72	11.25	M30
350	14"	16	18.11	11.25	0.87	16	18.50	11.25	1.02	16	19.29	11.25	M30	16	20.08	11.25	M33
400	16"	16	20.28	11.25	1.10	16	20.67	11.25	1.18	16	21.65	11.25	M33	16	23.03	11.25	M36
450	18"	20	22.24	9.0	M24	20	23.03	9.0	M27	20	23.62	9.0	M33	20	24.02	9.0	M36
500	20"	20	24.41	9.0	M24	20	25.59	9.0	M30	20	25.98	9.0	M33	20	26.38	9.0	M39
600	24"	20	28.54	9.0	M27	20	30.31	9.0	M33	20	30.31	9.0	M36	20	31.30	9.0	M45

Dimensions in inch

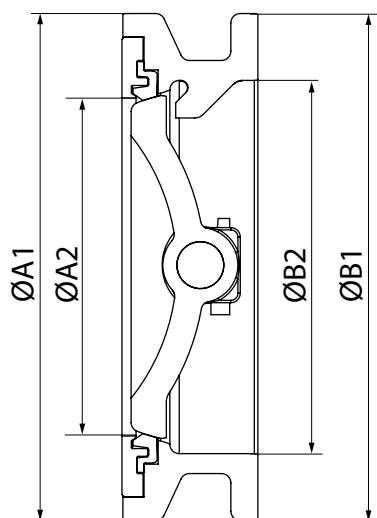
n = number of bolt holes / bolts



DN	NPS	CLASS 150				CLASS 300			
		n	Ø G	w°	ø y	n	Ø G	w°	ø y
50	2"	4	4.74	45.0	0.75	8	5.00	22.5	0.71
65	2½"	4	5.49	45.0	0.71	8	5.87	22.5	0.87
80	3"	4	6.00	45.0	0.75	8	6.63	22.5	0.87
100	4"	8	7.50	22.5	0.75	8	7.87	22.5	0.87
125	5"	8	8.50	22.5	0.94	8	9.25	22.5	0.87
150	6"	8	9.49	22.5	0.94	12	10.63	15.0	0.94
200	8"	8	11.75	22.5	0.94	12	12.99	15.0	1.10
250	10"	12	14.25	15.0	1.02	16	15.26	11.25	1" x 8UN
300	12"	12	17.01	15.0	1.02	16	17.76	11.25	1⅝" x 8UN
350	14"	12	18.74	15.0	1.18	20	20.26	9.0	1⅝" x 8UN
400	16"	16	21.26	11.25	1.13	20	22.50	9.0	1¼" x 8UN
450	18"	16	22.76	11.25	1⅝" x 8UN	24	24.74	7.5	1¼" x 8UN
500	20"	20	25.00	9.0	1⅝" x 8UN	24	26.99	7.5	1¼" x 8UN
600	24"	20	29.51	9.0	1¼" x 8UN	24	32.00	7.5	1½" x 8UN

Dimensions in inch

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"	3.92	1.52	3.90	2.20	-	-	-	-	-	-	-	-
65	2½"	4.13	2.24	4.13	2.91	-	-	-	-	-	-	-	-
80	3"	5.20	2.91	5.20	3.74	-	-	-	-	-	-	-	-
100	4"	6.20	3.78	6.17	4.56	-	-	-	-	-	-	-	-
125	5"	7.29	4.37	7.31	5.52	-	-	-	-	-	-	-	-
150	6"	-	-	-	-	8.47	5.67	8.47	6.30	8.48	5.67	8.48	6.28
200	8"	-	-	-	-	10.47	7.40	10.46	8.24	10.61	7.40	10.61	8.25
250	10"	-	-	-	-	12.76	4.67	12.76	10.00	12.76	9.33	12.76	10.00
300	12"	-	-	-	-	15.00	11.14	14.99	12.01	16.10	11.14	16.10	12.00
350	14"	-	-	-	-	16.83	12.09	16.85	14.37	17.52	12.39	17.52	14.33
400	16"	-	-	-	-	18.90	14.31	18.90	15.75	18.50	14.31	18.50	15.51
450	18"	-	-	-	-	20.98	16.30	20.98	17.50	22.05	16.31	22.05	17.50
500	20"	-	-	-	-	22.99	18.04	22.99	19.43	22.96	17.97	22.96	19.43
600	24"	-	-	-	-	27.24	21.65	27.24	24.02	27.18	21.65	27.18	23.61

Dimensions in inch

Add-on components



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.



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 ILG-D

Manual override gearbox

The ILG-D manual override gearbox is designed for pneumatic valve actuators in order to enable reliable manual operation of the actuators. All units are mounted between valve and actuator and can be supplied with an ISO actuator shaft.

These gearboxes have a disengageable handwheel.

To ensure a long service life, the housing is sealed to IP65 and the actuator shaft is made of protected steel.

Accessories



GEMÜ 2022

Dual throttle

The GEMÜ 2022 throttle valves are available as throttle valve, throttle check valve and dual throttle check valve. In pneumatic actuators they are used to regulate the compressed air depending on the function for the supply or exhaust air and can be set independently of each other in the case of dual throttle check valves.



GEMÜ 8500

Electrically operated pilot solenoid valve

The GEMÜ 8500 servo assisted 3/2 or 5/2-way pilot solenoid valve is indirectly controlled. The body is made of aluminium. The plastic encapsulated coil is detachable. The piston valve has a soft elastomer seal.



GEMÜ 8500DRN

Throttle plate

Throttle plates can be used to continuously adjust the travel times of pneumatic quarter turn actuators in both the "OPEN" and "CLOSED" directions independently of one another. They are installed between the NAMUR valve and the quarter turn actuator.



GEMÜ 1751

Silencer

Damping of vent hole or suction noises and coarse filtering of the suction air for pneumatic applications

GEMÜ CONEXO

The interaction between valve components equipped with RFID chips and the corresponding IT infrastructure actively increases process reliability.



Thanks to serialization, every valve and every relevant valve component, such as the body, actuator, diaphragm or even automation components, can be clearly traced and read at any time using the RFID reader – the CONEXO pen. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the servicing process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides him with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

For further information on GEMÜ CONEXO please visit:

www.gemu-group.com/conexo



GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Fritz-Müller-Straße 6-8, 74653 Ingelfingen-Criesbach, Germany
Tel. +49 (0)7940 123-0 · info@gemue.de
www.gemu-group.com