

# **GEMÜ R477 Tugela**

## *Manually 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

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### **Description**

The GEMÜ R477 Tugela double eccentric metal butterfly valve is operated by a manual 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



**Product line**
**GEMÜ R470**  
Tugela

**GEMÜ R471**  
Tugela

**GEMÜ R477**  
Tugela

**GEMÜ R478**  
Tugela
**Operation**

With bare shaft	●	-	-	-
Manual	-	-	●	-
pneumatic	-	●	-	-
Motorized	-	-	-	●
<b>Nominal sizes</b>	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)
<b>Media temperature</b>	-76 to 446 °F	-76 to 446 °F	-76 to 446 °F	-76 to 446 °F
<b>Operating pressure</b>	0 to 580 psi	0 to 580 psi	0 to 580 psi	0 to 580 psi

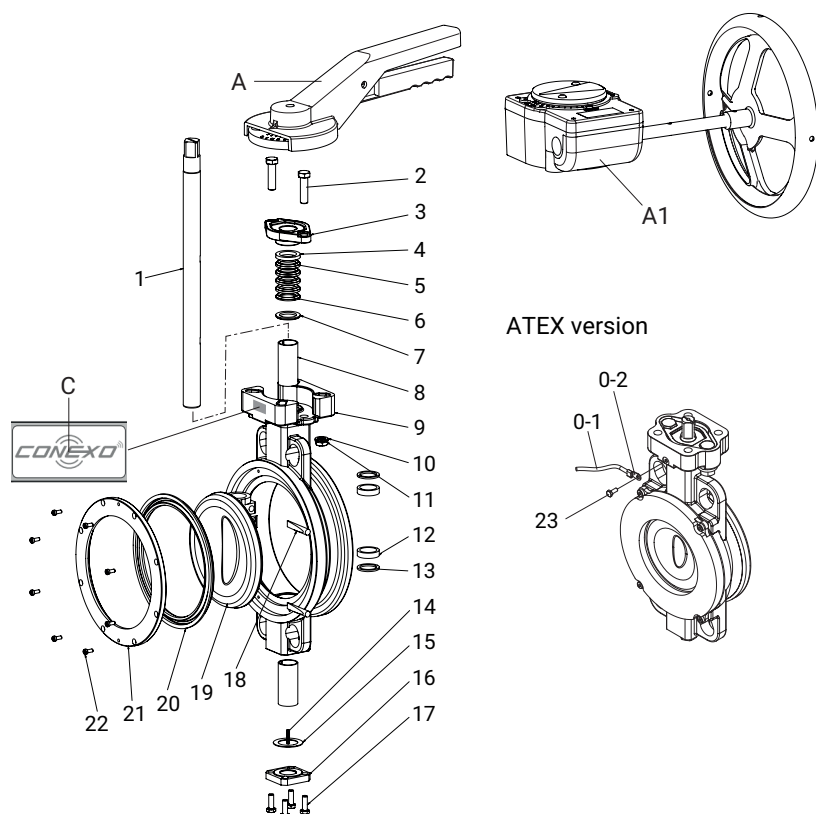
**Connection types**

Flange (wafer)	●	●	●	●
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**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
A	Hand lever	Aluminium, polyurethane coated
A1	Gearbox with handwheel	Die-cast aluminium casing

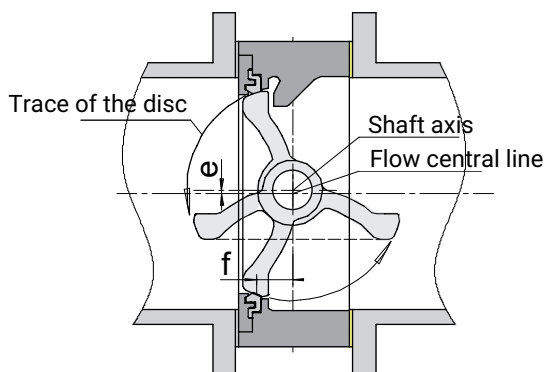
## Product description

Item	Designation	Material
C	CONEXO label with RFID chip (see "GEMÜ CONEXO", page 23)	
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



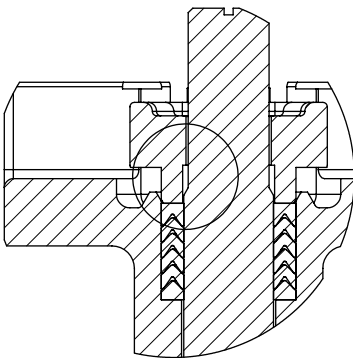
During operation, the disc directly disconnects from the seat, thereby reducing friction between the seat and disc, as well as the torque.

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

### Spherical surface

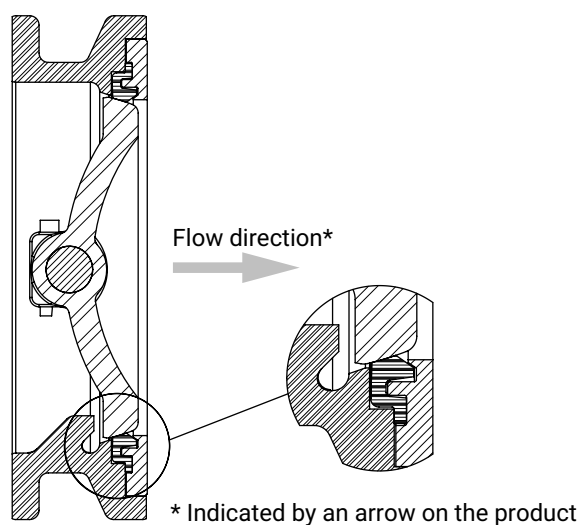
The disc is designed with a spherical surface for improved mechanical behaviour under pressure and temperature fluctuations.

### Shaft blow-out protection

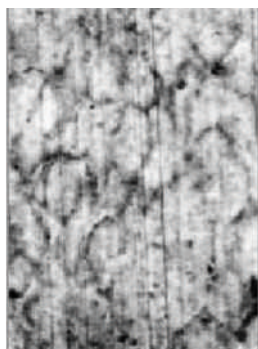


There is a chamfer at the upper end of the shaft which acts as an additional safety measure in case the shaft breaks.

## 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**

DN	Actuator version (code) <sup>1)</sup>						
	AHL11	DAHL11	DAHL14	VHL14	VHL17	GB232	GB880N
50	X	-	-	X	-	X	-
65	-	X	-	X	-	X	-
80	-	X	-	-	X	X	-
100	-	-	X	-	X	X	-
125	-	-	X	-	X	X	-
150	-	-	-	-	-	X	-
200	-	-	-	-	-	X	-
250	-	-	-	-	-	X	-
300	-	-	-	-	-	X	-
350	-	-	-	-	-	X	-
400	-	-	-	-	-	-	X
500	-	-	-	-	-	-	X
600	-	-	-	-	-	-	X

1) **Actuator version**

Code AHL11: Hand lever, aluminium

Code DAHL11: Hand lever, aluminium

Code DAHL14: Hand lever, aluminium

Code VHL14: Hand lever, 10 notched positions, diagonal square, WAF = 14 mm

Code VHL17: Hand lever, 10 notched positions, diagonal square, WAF = 17 mm

Code GB232: Gearbox, die-cast aluminium casing

Code GB880N: Gearbox, cast iron

## Order data

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

## Order codes

1 Type	Code
Butterfly valve, double-eccentric, manually 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	R477

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

5 Connection type	Code
ANSI B16.5, Class 300, 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	6

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

10 Liner fixing	Code
Loose liner	L

11 Actuator version	Code
Hand lever, aluminium	AHL11
Hand lever, aluminium	DAHL11
Hand lever, aluminium	DAHL14
Hand lever, 10 notched positions, diagonal square, WAF = 14 mm	VHL14
Hand lever, 10 notched positions, diagonal square, WAF = 17 mm	VHL17
Gearbox, die-cast aluminium casing	GB232
Gearbox, cast iron	GB880N

12 Type of design	Code
Without	
Gearbox prepared for limit switch mounting	7042
Thermal separation between actuator and valve body via mounting kit, mounting parts made from stainless steel	5227

13 Special version	Code
Without	
ATEX certification	X

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

**Order example**

Order option	Code	Description
1 Type	R477	Butterfly valve, double-eccentric, manually 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	0	Manually operated
12 Actuator version	GB232	Gearbox, die-cast aluminium casing
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

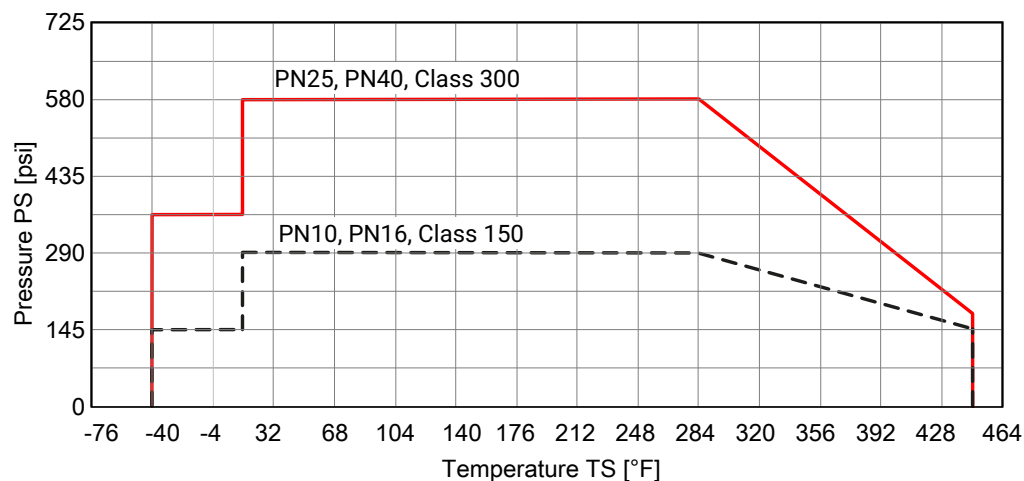
### Pressure

**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:**



Pressure/temperature diagram:

DN	NPS	Connection type code <sup>1)</sup>	
		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

Pressure/temperature diagram:

DN	NPS	Body	Kv in m <sup>3</sup> /h at opening angle in °						
			CLASS	90	80	65	50	35	20
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

**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 <sup>1)</sup>									
		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 <sup>1)</sup>	
		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

**Manual actuator**

Designation	Weight
AHL11, DAHL11, DAHL14	0.314
VHL14	1.54
VHL17	2.65
GB 232	0.21
GB880N	0.91

Weight in lb

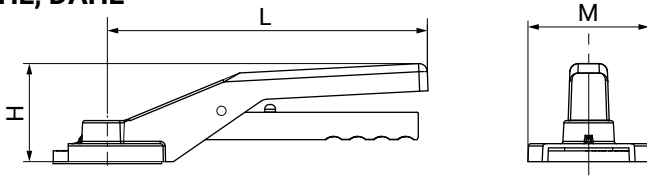
**Flow direction:**

Indicated by an arrow on the product

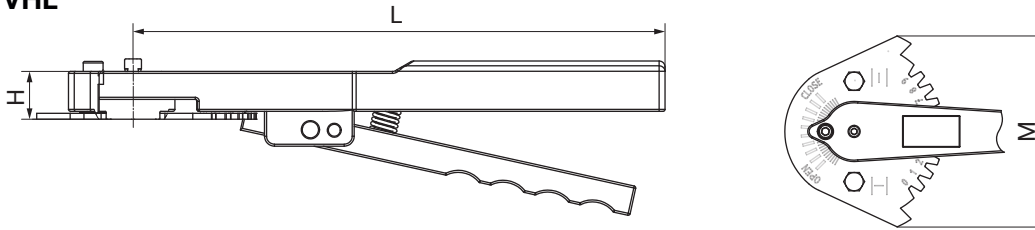
## Dimensions

### Actuator dimensions

#### AHL, DAHL



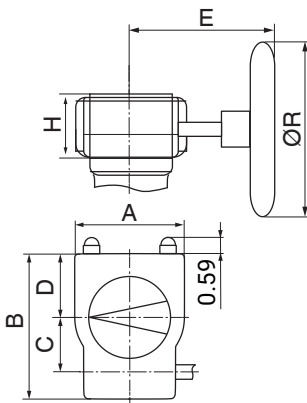
#### VHL



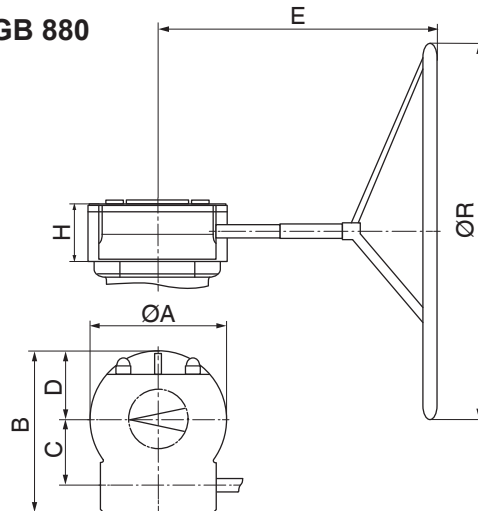
DN	Code	H	L	M
50 - 125	AHL11, DAHL11, DAHL14	2.76	7.87	2.91
50 - 65	VHL14	0.75	7.68	4.21
80 - 125	VHL17	0.94	10.51	4.21

Dimensions in inch

#### GB 232



#### GB 880



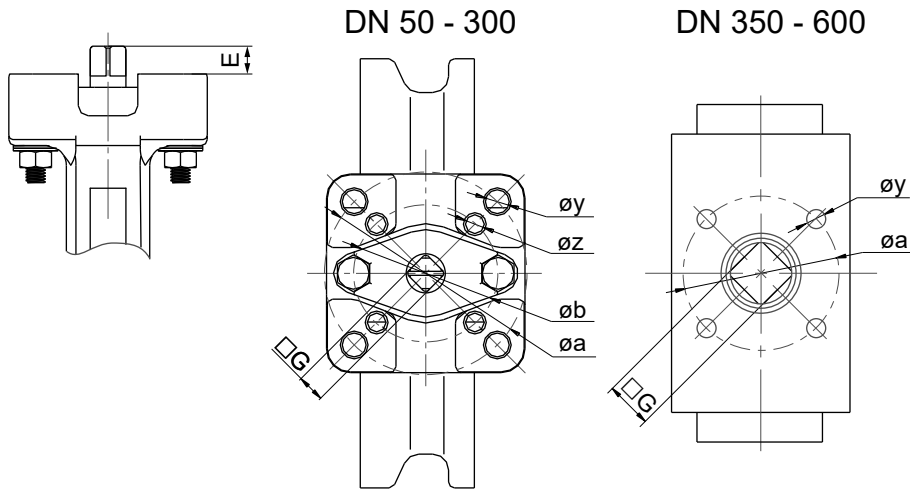
Code	DN	A	B	C	D	E	H	ØR
GB 232	50	3.15	4.49	1.67	1.89	4.76	2.09	3.94
	125	3.15	4.49	1.67	1.89	6.73	2.32	3.94
	150	3.15	4.49	1.67	1.89	6.73	2.32	6.30
	200 - 350	3.94	5.16	1.97	2.20	7.68	2.64	7.87
GB880N	400- 600	7.87	8.90	3.39	3.94	18.31	3.66	31.50

Dimensions in inch

## Body dimensions

### Actuator flange

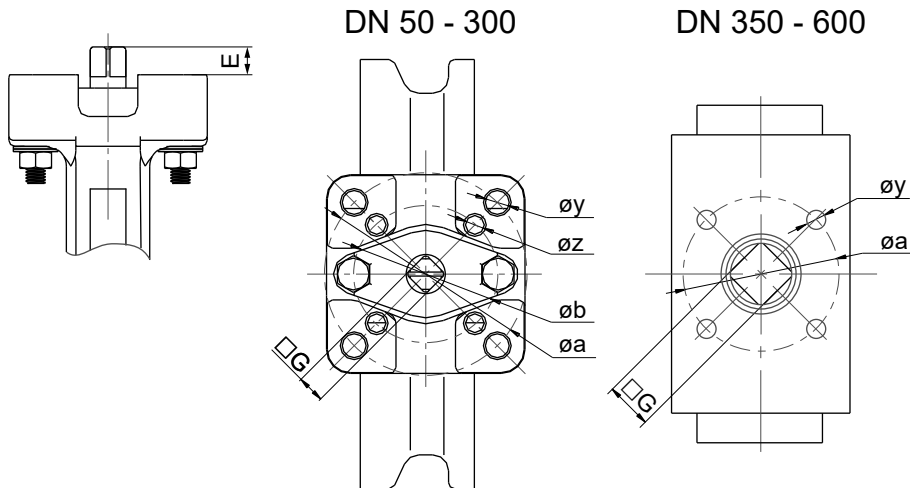
Flange PN10 (code 2), PN16 (code 3), CLASS 150 (code D)



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)**



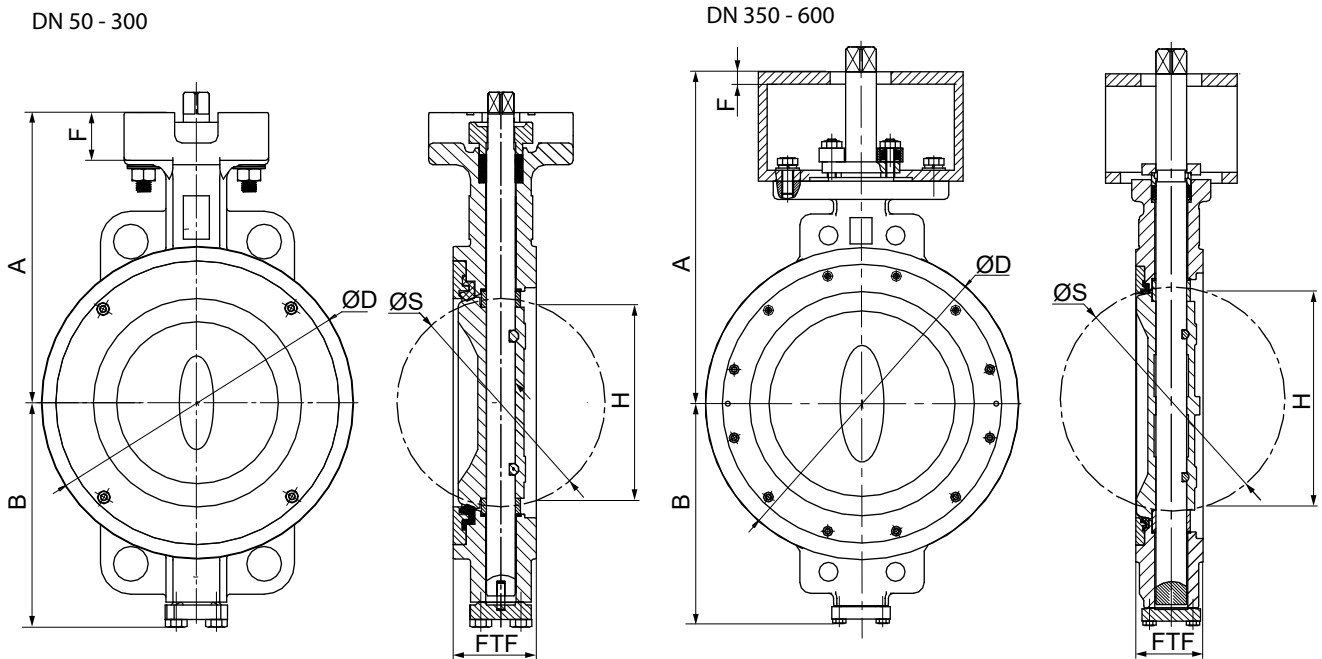
DN	NPS	ISO 5211	øa	øb	E	G	øy	øz
50	2"	F05	1.97	-	0.59	0.43	4 x 0.28	-
65	2½"	F05/F07	2.76	1.97	0.59	0.43	4 x 0.37	4 x 0.28
80	3"	F05/F07	2.76	1.97	0.59	0.43	4 x 0.37	4 x 0.28
100	4"	F07	2.76	-	0.75	0.55	4 x 0.37	-
125	5"	F07	2.76	-	0.75	0.55	4 x 0.37	-
150	6"	F10	4.02	-	0.87	0.67	4 x 0.47	-
200	8"	F10/F12	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)

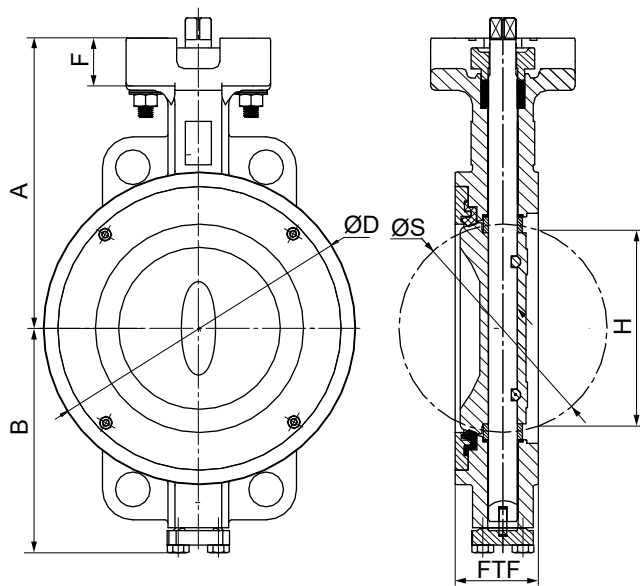


DN	NPS	A	B	ØD	F	FTF	H	ØS
50	2"	4.88	3.80	3.94	-	1.97	0.59	1.52
65	2½"	4.80	3.98	4.13	-	2.03	1.93	2.24
80	3"	5.65	4.53	5.20	-	1.95	2.72	2.91
100	4"	6.30	5.04	6.22	-	2.22	3.58	3.78
125	5"	6.95	5.83	7.32	-	2.24	4.06	4.37
150	6"	7.80	6.18	8.50	1.30	2.26	5.51	5.67
200	8"	9.06	7.68	10.47	1.38	2.48	7.05	7.40
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

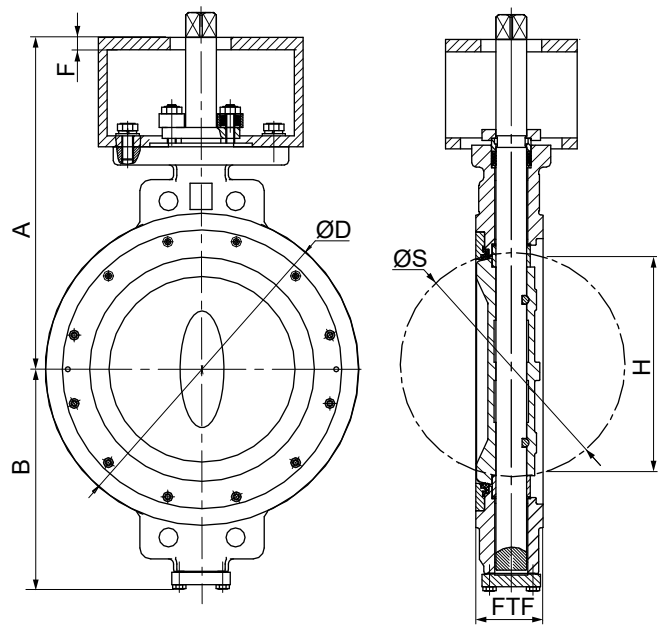
Dimensions in inch

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

DN 50 - 300



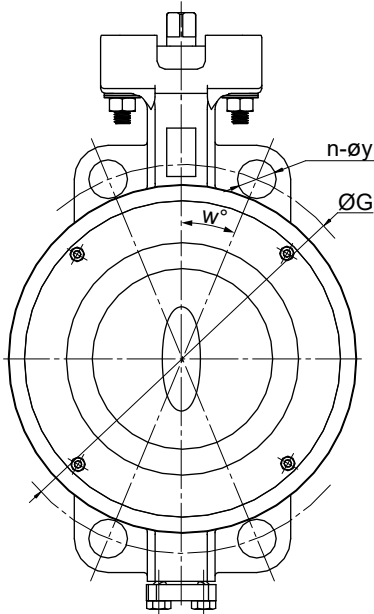
DN 350 - 600



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

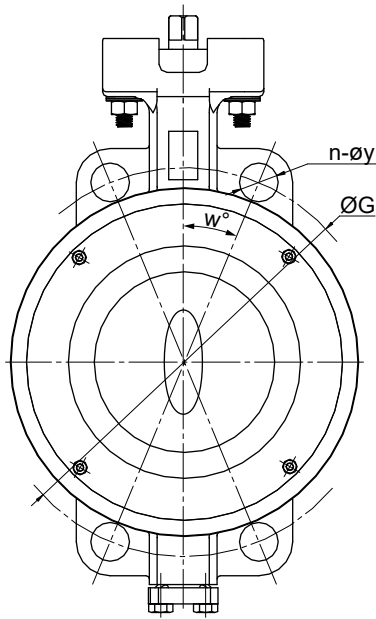
**Connections**



DN	NPS	PN10				PN16				PN25				PN40			
		n	ØG	w°	øy	n	ØG	w°	øy	n	ØG	w°	øy	n	ØG	w°	øy
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

## Dimensions

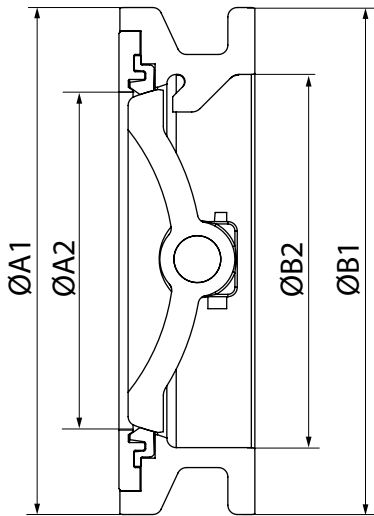


DN	NPS	CLASS 150				CLASS 300			
		n	ØG	w°	øy	n	ØG	w°	øy
50	2"	4	4.74	45.0	0.75	8	5.00	22.5	0.71
65	2½"	4	5.49	45.0	0.71	8	5.87	22.5	0.87
80	3"	4	6.00	45.0	0.75	8	6.63	22.5	0.87
100	4"	8	7.50	22.5	0.75	8	7.87	22.5	0.87
125	5"	8	8.50	22.5	0.94	8	9.25	22.5	0.87
150	6"	8	9.49	22.5	0.94	12	10.63	15.0	0.94
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	1½" x 8UN
350	14"	12	18.74	15.0	1.18	20	20.26	9.0	1½" 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	1½" x 8UN	24	24.74	7.5	1¼" x 8UN
500	20"	20	25.00	9.0	1½" 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

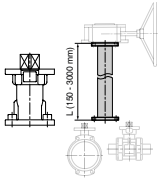
**Gasket**



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

## Accessories



### GEMÜ RCO

#### Shaft extension

The RCO 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.



### 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 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](http://www.gemu-group.com/conexo)



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