GEMÜ®

Butterfly valve, Metal

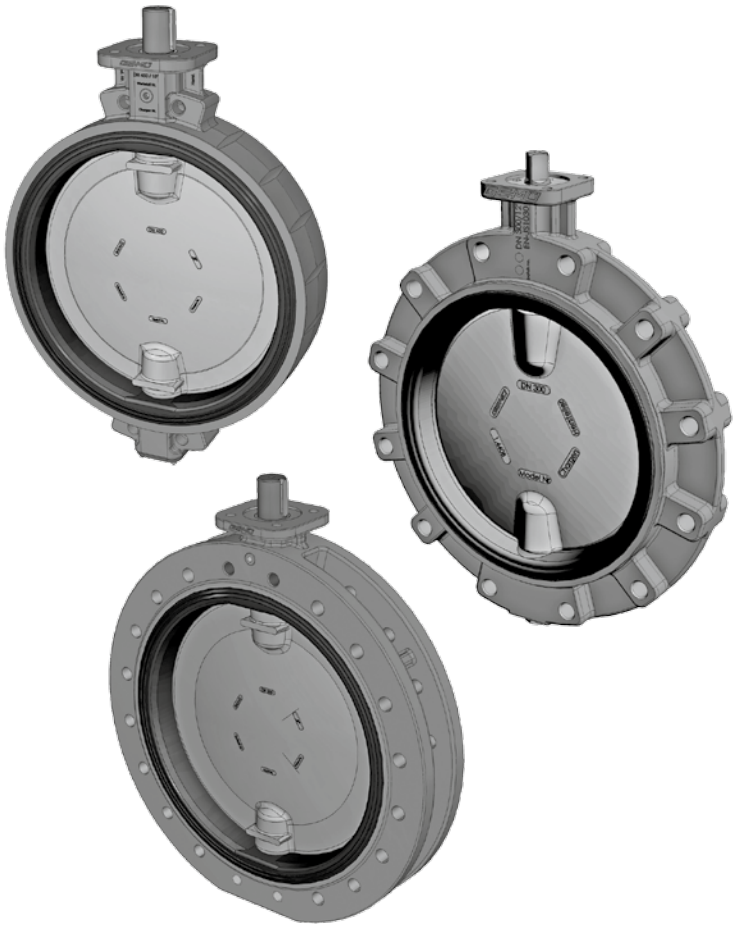
Construction

The GEMÜ Victoria is a soft seated butterfly valve. It is available in nominal sizes DN 25 - 600 and in various body versions such as Wafer, Lug and U section.
The butterfly valve can be supplied with various operators: GEMÜ 487 with lever or gearbox, GEMÜ 481 with pneumatic actuator, GEMÜ 488 with motorized on/off or control actuator.

Features

- Suitable for gaseous and liquid media in industrial applications as well as water treatment
- Installation length acc. to ISO 5752/20, EN 558-1/20
- Top flange acc. to EN ISO 5211
- Max. operating pressure 10/16 bar
- Connection standards PN 10, PN 16, ASME B16.5 cl. 150
- Leak test acc. to. EN 12266-1/P12 leakage rate A
- The butterfly valve complies with the safety requirements of Annex I of the European Pressure Equipment Directive 97/23/EC for fluids of group 1 and 2
- ATEX compliant version and version without paint adhesion interfering substances available as an option

DVGW CERT



GEMÜ 487

GEMÜ 481

GEMÜ 488

GEMÜ® Victoria

480, 481, 487, 488

Technical data

Working medium

Gaseous and liquid media which have no negative impact on the physical and chemical properties of the disc and seal material.

Perm. temperature of working medium

-10 ... 150 °C dependent on liner material

Other temperatures on request

No water hammer permissible

Ambient conditions

Perm. ambient tempertature	-10 ... 70 °C

Max. perm. pressure of working medium

PS	Fluid Group 1		Fluid group 2	
	Gases	Liquids	Gases	Liquids
16 bar	DN 25 - 200	DN 25 - 200	DN 50 - 200	DN 50 - 200
10 bar	DN 250 - 350	DN 250 - 600	DN 250 - 500	DN 250 - 600
6 bar	-	-	DN 600	-

For liquids the max. operating pressure for end-of-line valves DN 50 - 200 10 bar
DN 250 - 600 6 bar

Torque / Kv values

DN	Torque*	Kv values [m^3/h] / opening angle [°]							
	[Nm]	20°	30°	40°	50°	60°	70°	80°	90°
25	4	0.7	2	4.1	7.2	11	14.5	16.6	17.2
40	7	2.5	7	14.4	25.1	38.3	50.6	57.8	60
50	7	3.4	8.5	20	33	52	80	90	91
65	15	8.5	15	30	64	95	129	142	147
80	28	19	40	66	117	168	250	275	283
100	55	29	75	137.0	213	316	432	518	548
125	66	48	100	185	315	470	660	785	826
150	120	60	150	281	450	702	1039	1325	1407
200	242	110	281	472	759	1210	1835	2360	2482
250	360	200	444	738	1187	1886	2918	3902	4072
300	360	250	946	1064	1668	2539	3860	5400	5420
350	720	466	1036	1721	2767	4397	6803	9097	9494
400	1080	644	1431	2376	3820	6072	9394	12561	13110
450	1248	1039	2308	3834	6163	9796	15154	20264	21149
500	1596	1083	2406	3997	6425	10213	15800	21127	22050
600	2412	1563	3473	5770	9276	14744	22809	30500	31832

When the opening angle is below 30° no regulation should be made.
*Working medium water (20 °C) and optimal operating conditions.

Special function (approvals)

Approval	Approved versions			Code
	Disc material	Seat (liner) material	Liner fixing	
DVGW Water	CF8M, 1.4408 (Code A)	EPDM (Code W)	Loose (Code L)	D
ACS	CF8M, 1.4408 (Code A) EN-GJS-400-15, GGG40 Rilsan® PA11 coated (Code R)	EPDM (Code W)	Loose (Code L)	A
WRAS	CF8M, 1.4408 (Code A)	EPDM (Code W)	Loose (Code L)	W
ATEX *	CF8M, 1.4408 (Code A)	all materials	all versions	X

* only GEMÜ 480
Other features are not relevant for the approvals

Order data

1 Type	Code
Butterfly valve with bare shaft	480
Butterfly valve with pneumatic actuator	481
Butterfly valve with manual operator	487
Butterfly valve with motorized actuator	488

2 Nominal size	Code
DN 25 - DN 600	050 - 600

3 Body configuration		Code
Wafer	(DN 25 - DN 600)	W
Lug	(DN 50 - DN 400)	L
U section	(DN 400 - DN 600)	U

4 Operating pressure (Body material EN-GJS 400-15)

	DN	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
PS 10 bar	Code	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PS 16 bar	Code	3	3	3	3	3	3	3	3	3							

Standard

5 Connection

		DN	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Wafer	PN 6	Code	3	3	3	3	3	3	3	3	3	3				1		1
	PN 10	Code	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2
	PN 16	Code	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Lug	PN 10	Code			3	3	3	3	3	3	2	2	2	2	2			
	PN 16	Code			3	3	3	3	3	3	3	3	3	3	3			
U-Section	PN 10	Code													2	2	2	2
	PN 16	Code													3	3	3	3

Standard

For further connections see page 9

6 Body material	Code
EN-GJS-400-15 (GGG 40), Epoxy coated 120µm	2

7 Disc material	Code
CF8M, 1.4408	A
EN-GJS-400-15, GGG40 Epoxy coated	E
CF8M, 1.4408 Halar coated	C
CF8M, 1.4408 polished	B
Super Duplex, 1.4469	D
EN-GJS-400-15, GGG40 Rilsan® PA11 coated	R

8 Shaft material	Code
AISI 420 / 1.4021	1

9 Seat (liner) material		Code
EPDM	-10 ... +120 °C	2
NBR*	-10 ... +100 °C	3*
FPM*	-10 ... +150 °C	4*
EPDM ACS, WRAS, FDA-, DVGW-water approval	-10 ... + 95 °C	W
* max. operating pressure 10 bar		
Other materials on request		

10 Liner fixing		Code
Loose liner (Standard)		L
Bonded liner	-10 ... + 80 °C	B
Vulcanized liner		V

11 Control function		Code
Butterfly valve with bare shaft	Typ 480	F
Butterfly valve with manual operator	Typ 487	0
Normally closed (NC),	Typ 481	1
Normally open (NO),	Typ 481	2
Double acting (DA),	Typ 481	3

12 Operator size	Code
480 (Column 12)	see page 10
481 (Column 12)	see page 12/14
487 (Column 12)	see page 11
488 (Column 13,14,15)	see page 16/19

13 Special function	Code
DVGW water approval	D
ACS	A
ATEX	X
WRAS	W
See table on page 2	

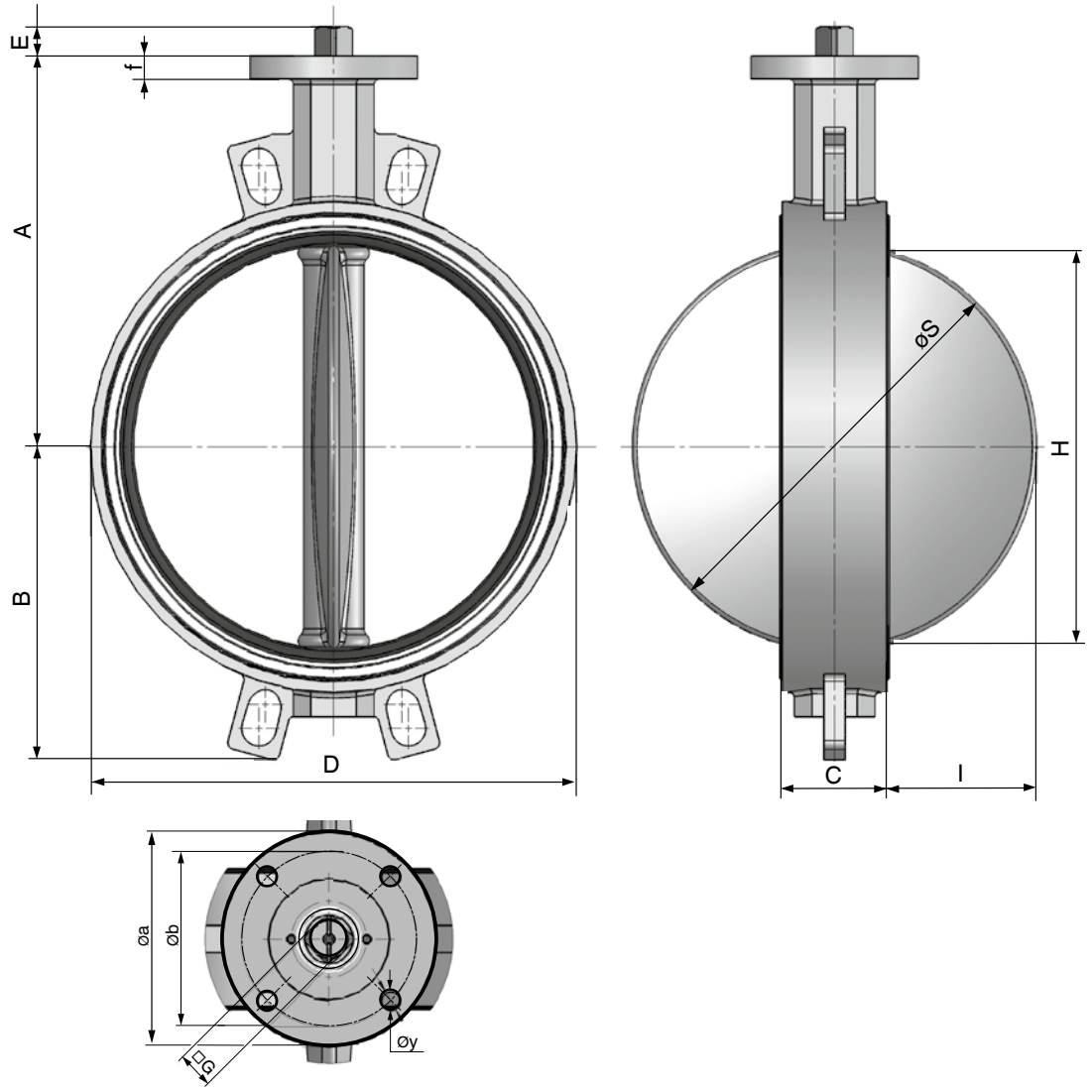
Order example	1	2	3	4	5	6	7	8	9	10	11	12	13
Code	487	100	W	3	3	2	A	1	2	L	0	AHL14	-

Other designs and materials on request

Body dimensions [mm]

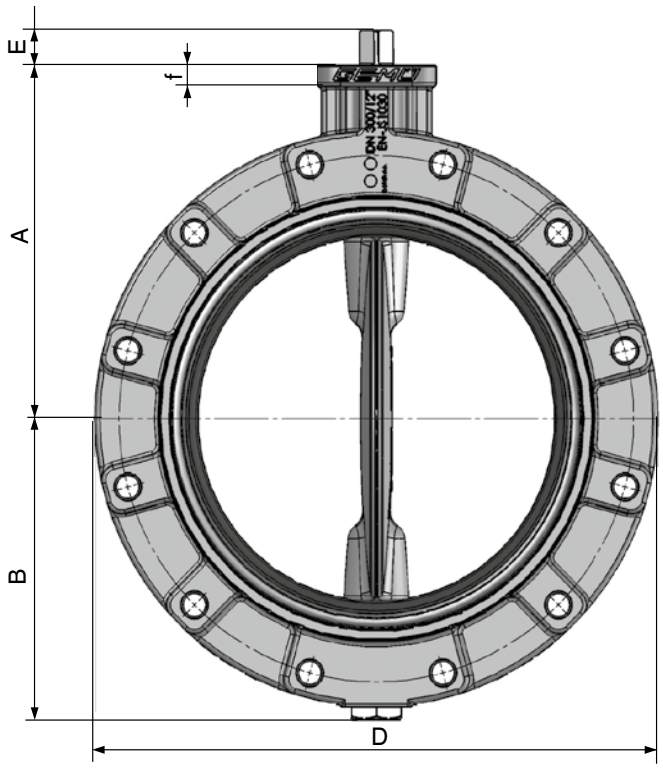
Body configuration - Wafer (code W)															
DN	A	B	C	D	E	H*max	øSmax	l	□G	ISO	a	øb	f	øy	Weight [kg]
25	100	41.3	25	59.5	19	16.0	26.5	0.5	9	F05	□50	50	12	7	1.2
40	120	53.8	33	75.8	19	24.5	41.5	4.0	9	F05	□50	50	12	7	1.5
50	120	60.2	43	91.0	19	27.4	51.5	4.0	9	F05	ø65	50	12	7	3.0
65	140	67.6	46	111	19	47.6	66.7	10.1	11	F05	ø65	50	12	7	3.6
80	145	90.4	46	130	19	66.9	81.7	17.6	11	F05	ø65	50	12	7	4.0
100	166	105.1	52	150	19	87.1	101.9	24.7	14	F05	ø65	50	14	7	5.5
125	187	119.6	56	179	25	113.3	126.9	35.2	17	F07	ø90	70	16	9	7.5
150	200	131.5	56	210	25	140.7	151.9	47.7	17	F07	ø90	70	16	9	8.6
200	240	160.0	60	264	32	192.7	202.3	70.9	22	F10	ø125	102	17	11	12.7
250	265	195.3	68	314	32	242.4	252.3	91.9	22	F10	ø125	102	17	11	22.2
300	290	236.3	78	364	32	292.3	303.0	112.2	22	F10	ø125	102	17	11	30.8
350	321	266.0	78	440	28	329.0	337.4	130.0	27	F12	□130	125	15	13	48.0
400	347	308.0	102	485	37	379.0	391.4	145.0	36	F14	□160	140	20	17	72.0
450	372	333.0	114	541	37	428.0	441.4	164.0	36	F14	□160	140	20	17	95.0
500	372	358.0	127	600	37	478.0	493.4	183.5	36	F14	□160	140	20	17	120.0
600	470	442.0	154	700	47	574.0	593.4	220.0	46	F16	□200	165	24	21	192.0

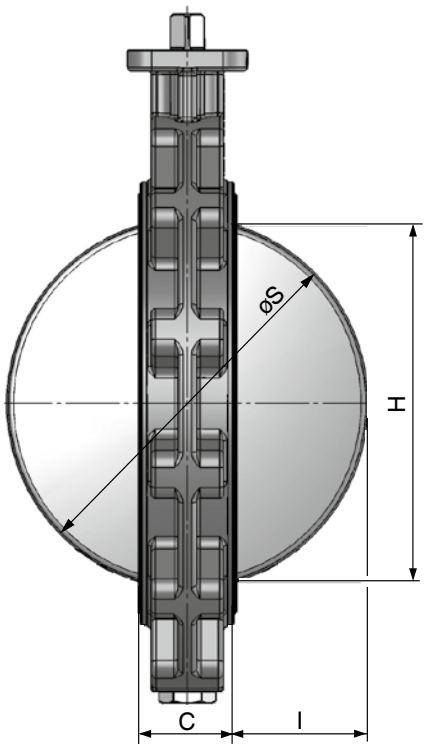
*Please note dimension H when using plastic piping systems to prevent disc binding on pipe internal

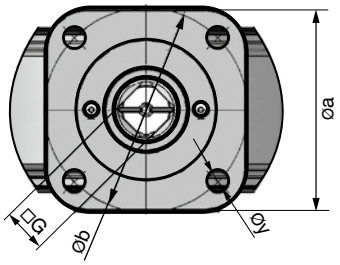


Body configuration - Lug (code L)															
DN	A	B	C	D	E	H*max	øSmax	I	□G	ISO	□a	øb	f	y	Weight [kg]
50	120	60.0	43	151.0	19	27.4	51.5	4.0	9	F05	50	50	12	7	3.7
65	140	67.0	46	171.0	19	47.6	66.7	10.1	11	F05	50	50	12	7	4.0
80	145	89.0	46	188.0	19	66.9	81.7	17.6	11	F05/F07	75	50/70	12	7/9	7.0
100	166	103.0	52	218.5	19	87.1	101.9	24.7	14	F05/F07	75	50/70	14	7/9	7.5
125	187	119.0	56	250.0	25	113.3	126.9	35.2	17	F07	75	70	16	9	11.0
150	200	130.5	56	275.0	25	140.7	151.9	47.7	17	F07	75	70	16	9	14.0
200	240	170.5	60	330.0	32	192.7	202.3	70.9	22	F10	100	102	17	11	21.0
250	265	203.0	68	402.0	32	242.4	252.3	91.9	22	F10	100	102	17	11	32.0
300	290	236.0	78	472.0	32	292.3	302.6	112.2	22	F10	100	102	17	11	43.0
350	321	260.0	78	520.0	28	329.0	337.4	130.0	27	F12	130	125	15	13	66.0
400	347	300.0	102	596.0	37	379.0	391.4	145.0	36	F14	160	140	20	17	110.0

*Please note dimension H when using plastic piping systems to prevent disc binding on pipe internal

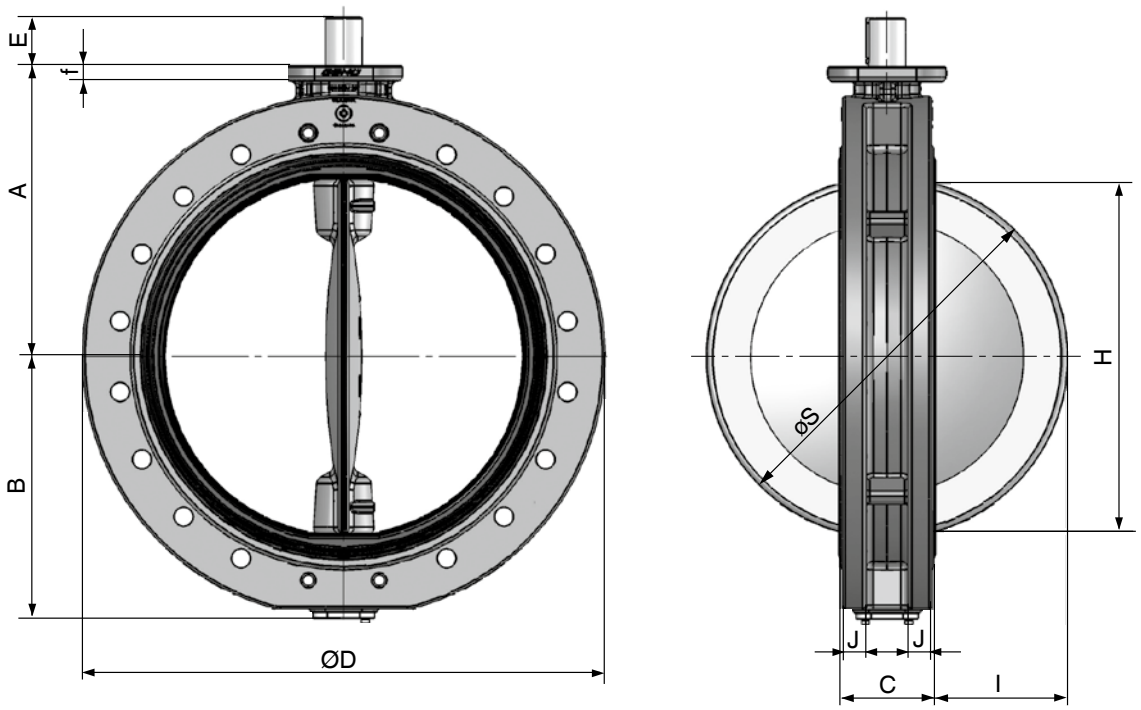


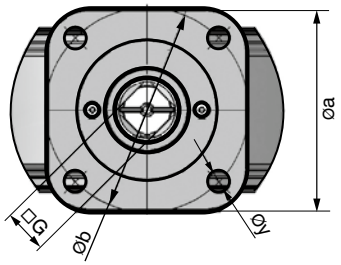




Body configuration - U section (code U)																
DN	A	B	C	D	E	H*max	øSmax	I	J	□G	ISO	□a	øb	f	y	Weight [kg]
400	347	308	102	485	37	379	391.4	145.0	28.0	36	F14	16	140	20	17	105
450	372	333	114	541	37	428	441.4	164.0	28.0	36	F14	160	140	20	17	128
500	398	358	127	715	37	478	493.4	183.5	31.5	36	F14	160	140	20	17	165
600	470	442	154	840	47	574	593.4	220.0	36.0	46	F16	200	165	24	21	263

*Please note dimension H when using plastic piping systems to prevent disc binding on pipe internal

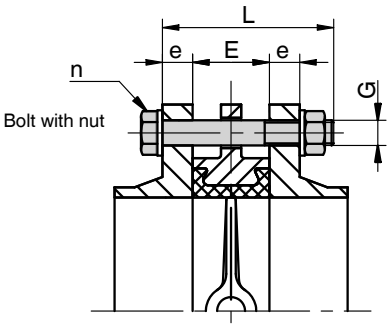


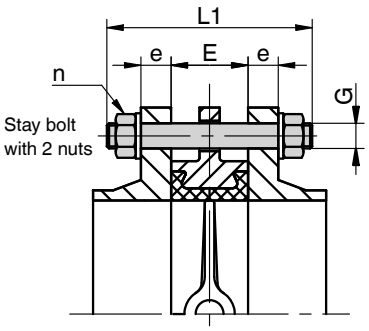


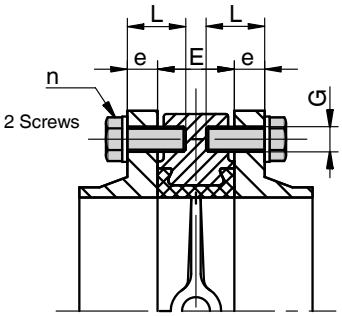
Mounting dimensions [mm]

Body configuration Wafer (Code W)

DN	E	PN 10					PN 16					ASME B16.5 cl. 150				
		e	L	L1	n	G	e	L	L1	n	G	e	L	L1	n	G
25	25	18	85	100	4	M12	18	85	100	4	M12	14.3	85	100	4	1/2″-13 UNC
40	33	18	90	110	4	M12	18	90	110	4	M16	17.5	90	110	4	1/2″-13 UNC
50	43	18	100	120	4	M16	18	100	120	4	M16	19.0	100	120	4	5/8″-11 UNC
65	46	18	100	120	4	M16	18	100	120	4	M16	22.2	110	130	4	5/8″-11 UNC
80	46	20	110	130	8	M16	20	110	130	8	M16	23.8	110	130	4	5/8″-11 UNC
100	52	20	110	130	8	M16	20	110	130	8	M16	23.8	120	140	8	5/8″-11 UNC
125	56	22	120	140	8	M16	22	120	140	8	M16	23.8	130	150	8	3/4″-10 UNC
150	56	22	130	150	8	M20	22	130	150	8	M20	25.4	130	150	8	3/4″-10 UNC
200	60	24	130	160	8	M20	24	130	160	8	M20	28.6	140	160	8	3/4″-10 UNC
250	68	26	150	170	12	M20	26	150	170	12	M24	30.2	160	180	12	7/8″- 9 UNC
300	78	26	160	180	12	M20	28	160	180	12	M24	31.7	170	190	12	7/8″- 9 UNC
350	78	26	170	180	16	M20	30	170	190	16	M24	34.9	180	200	12	1″- 8 UNC
400	102	26	180	210	16	M24	32	200	220	16	M27	36.5	210	230	16	1″- 8 UNC
450	114	26	190 60	220	16 8	M24	32	210 60	240	16 8	M27	39,7	230	250	16	1 1/8″-7 UNC
500	127	28	210	230	20	M24	34	230	260	20	M30	46.0	250	280	20	1 1/8″-7 UNC
600	154	28	240	270	20	M27	36	260	290	20	M33	47.6	280	310	20	1 1/4″-7 UNC



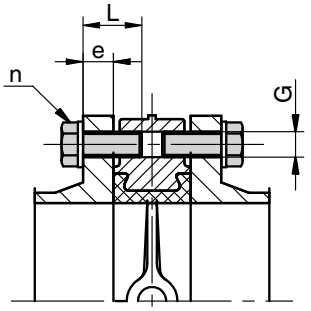




DN 450 - PN 10, PN 16

Body configuration Lug (Code L)

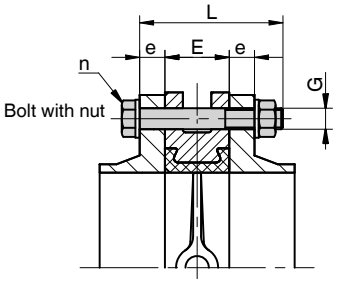
DN	E	PN 10				PN 16				ASME B16.5 cl. 150			
		e	L	n	G	e	L	n	G	e	L	n	G
50	43	18	35	8	M16	18	35	8	M16	19.0	35	8	5/8″-11 UNC
65	46	18	40	8	M16	18	40	8	M16	22.2	45	8	5/8″-11 UNC
80	46	20	40	16	M16	20	40	16	M16	23.8	45	8	5/8″-11 UNC
100	52	20	45	16	M16	20	45	16	M16	23.8	45	16	5/8″-11 UNC
125	56	22	50	16	M16	22	50	16	M16	23.8	50	16	3/4″-10 UNC
150	56	22	50	16	M20	22	50	16	M20	25.4	50	16	3/4″-10 UNC
200	60	24	50	16	M20	24	50	24	M20	28.6	55	16	3/4″-10 UNC
250	68	26	60	24	M20	26	60	24	M24	30.2	60	24	7/8″- 9 UNC
300	78	26	65	24	M20	28	65	24	M24	31.7	70	24	7/8″- 9 UNC
350	78	26	65	32	M20	30	65	32	M24	34.9	70	24	1″- 8 UNC
400	102	26	75	32	M24	32	80	32	M27	36.5	85	32	1″- 8 UNC

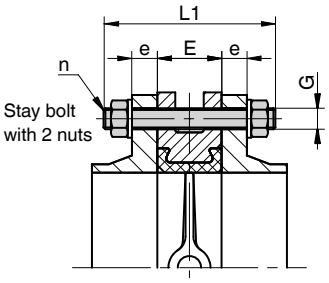


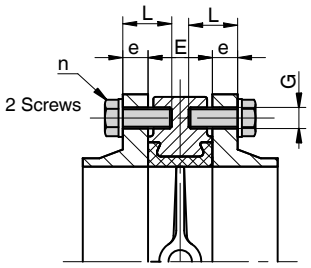
n = number of screws

Body configuration U-Section (Code U)

DN	E	PN 10					PN 16					ASME B16.5 cl. 150				
		e	L	L1	n	G	e	L	L1	n	G	e	L	L1	n	G
400	102	26	180	210	16	M24	32	200	220	16	M27	36.5	210	230	16	1″-8 UNC
450	114	26	190 60	220	16 8	M24	32	210 60	240	16 8	M27	39,7	230	250	16	1 1/8″-7 UNC
500	127	28	210	230	20	M24	34	230	260	20	M30	46.0	250	280	20	1 1/8″-7 UNC
600	154	28	240	270	20	M27	36	260	290	20	M33	47.6	280	310	20	1 1/4″-7 UNC

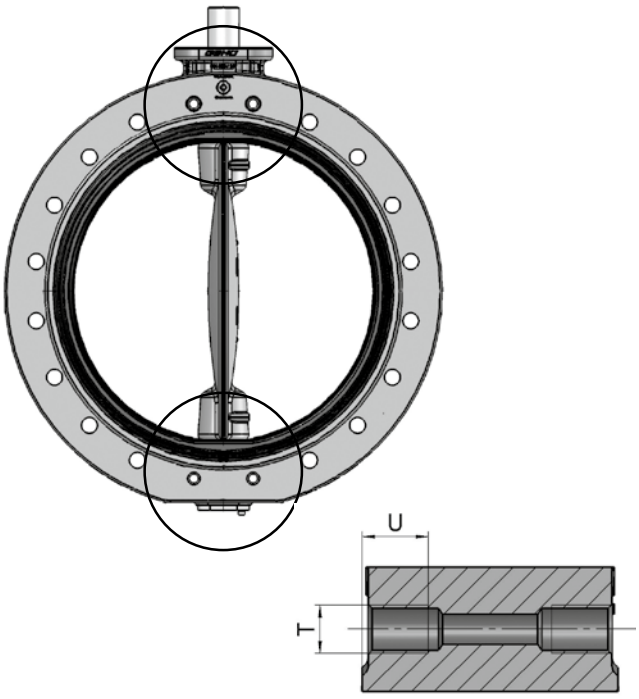


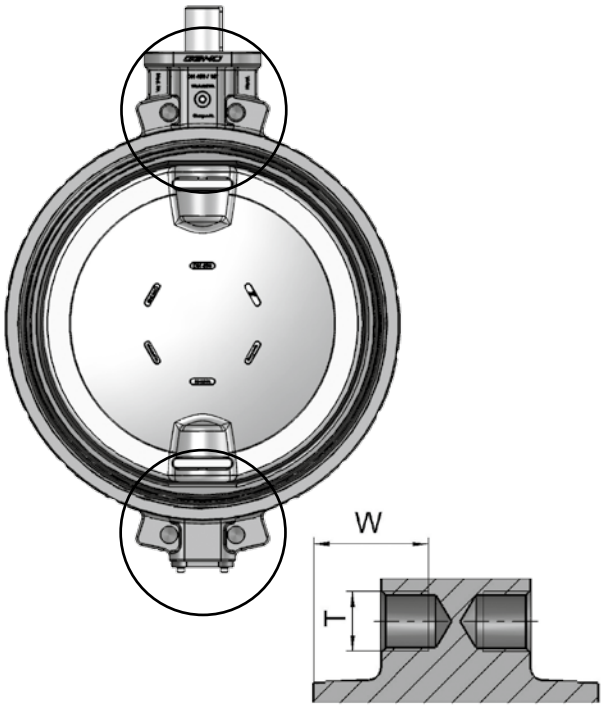




DN 450 - PN 10, PN 16

Dimensions of threaded holes [mm]





Flange connection holes - U section

DN	DIN EN 1092-2 PN 10		DIN EN 1092-2 PN 16		ASME B16.5 cl. 150	
	T	U	T	U	T	U
400	M24	24	M27	27	1″-8 UNC	-
450	M24	24	M27	27	1 1/8″-7 UNC	30
500	M24	24	M30	30	1 1/8″-7 UNC	30
600	M27	27	M33	33	1 1/4″-7 UNC	33

Flange connection holes - Wafer

DN	DIN EN 1092-2 PN 10		DIN EN 1092-2 PN 16		ASME 16.5 Kl. 150	
	T	W	T	W	T	W
450	M24	46	M27	46	Ø 31,7	-

Availability / code - Body configuration / connection

Wafer (Code)																		
Flange	**20**	**25**	**32**	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**600**
DIN EN1092 PN06	3	3	3	3	3	3	3	3	3	3	3	3	3	-	-	1	-	1
DIN EN1092 PN10	3	3	3	3	3	3	3	3	3*	3	3	3*	3*	3	3	2	3	2
DIN EN1092 PN16	3	3	3	3	3	3	3	3	3*	3	3	3	3*	3	3	3	3	3
ASME B16.5 cl. 150	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
AS 2129 D	T	T	T	T	T	-	-	T*	T*	T*	T*	-	T*	T	-	-	-	T
AS 2129 E	U	U	U	U	U	-	-	U	U*	U	U*	U*	U*	U	-	U	-	U
JIS 10 K	G	G	G	G	G	G	G	G	G	G	G	-	-	-	G	G	G	G
BS 10 D	H	H	H	H	H	-	-	-	H	-	-	-	-	H	-	-	-	H
BS 10 E	S	S	S	S	S	-	-	S	S	S	S	-	-	S	-	S	-	S

* **Caution:** During installation it is important to centrically align the butterfly valve

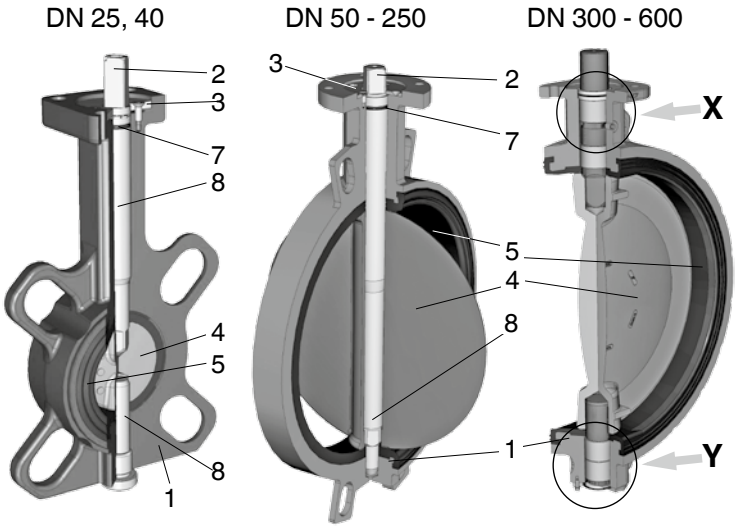
Lug (Code)											
Flange	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**	**350**	**400**
DIN EN1092 PN06	1	1	1	1	1	1	1	1	1	-	-
DIN EN1092 PN10	3	3*	3	3	3	3	2	2	2	2	2
DIN EN1092 PN16	3	3*	3	3	3	3	3	3	3	3	3
ASME B16.5 cl. 150	D	D	D	D	D	D	D	D	D	-	D
AS 2129 D	T	-	T	T	T	T	T	-	T	D	-
AS 2129 E	U	-	U	U	U	U	U	U	U	-	-
JIS 10 K	G	G	G	G	G	G	G	G	-	G	G
BS 10 D	H	-	H	H	H	H	H	-	H	-	-
BS 10 E	S	-	S	S	S	S	S	S	S	-	-

* drilled, with 4 threaded holes

U-Section (Code)				
Flange	**400**	**450**	**500**	**600**
DIN EN1092-2 PN06	1*	1*	1*	1*
DIN EN1092-2 PN10	2	2	2	2
DIN EN1092-2 PN16	3	3	3	3
ASME B16.5 cl. 150	D	D	D	D
AS 2129 E	-	U	-	-
BS 10 D	-	-	-	H
BS 10 E	-	S	-	-

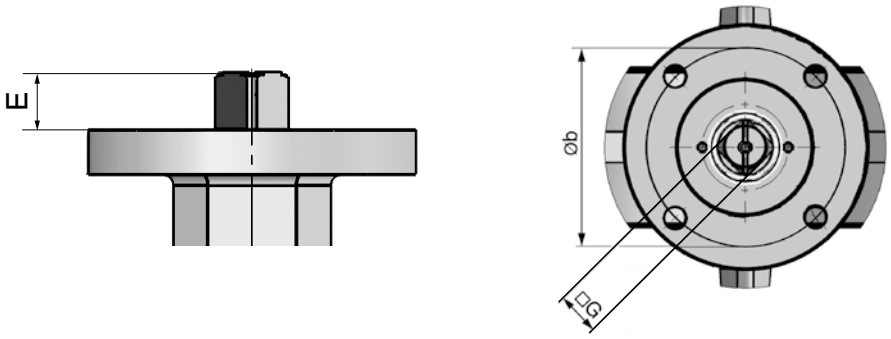
* only available with threaded holes

Sectional drawing



Item	Designation		
	DN 25/40	DN 50 - 250	DN 300 - 600
1	Body		
2	Shaft with position indicator		
3	Shaft lock		
4	Disc		
5	Seat (liner)		
6	-	-	Support ring (from DN 350)
7	External shaft seal		
8	Axis	-	Axis
9	-	-	Bearing

12 Order data / Connection size - Type 480 - Butterfly valve with bare shaft [mm]



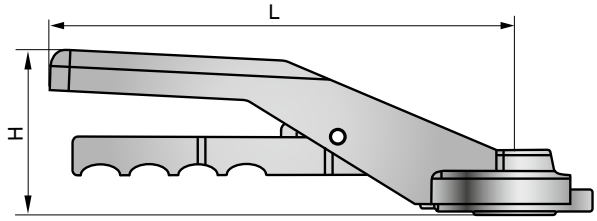
12 Operator flange

DN	ISO	Øb	Shaft connection	□G	E	Code
25	F05	50	D	09	19	05 D09
40	F05	50	D	09	19	05 D09
50	F05	50	D	09	19	05 D09
65	F05	50	D	11	19	05 D11
80	F05	50	D	11	19	05 D11
100	F05	50	D	14	19	05 D14
125	F07	70	D	17	25	07 D17
150	F07	70	D	17	25	07 D17
200	F10	102	D	22	32	10 D22
250	F10	102	D	22	32	10 D22
300	F10	102	D	22	32	10 D22
350	F12	125	D	27	28	12 D27
400	F14	140	D	36	37	14 D36
450	F14	140	D	36	37	14 D36
500	F14	140	D	36	37	14 D36
600	F16	165	D	46	47	16 D46

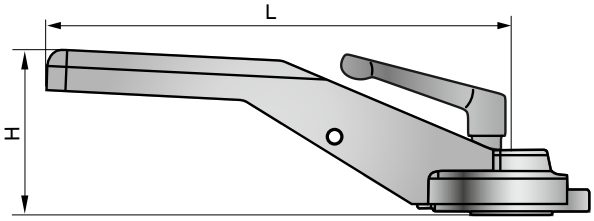
Order example	1	2	3	4	5	6	7	8	9	10	11	12	13
Code	480		Order data butterfly valve (page 3)								F	07 D17	

12 Order data / dimensions - Type 487 - Butterfly valve with manual operator [mm]

AHL version = Latching hand lever with 10° notches



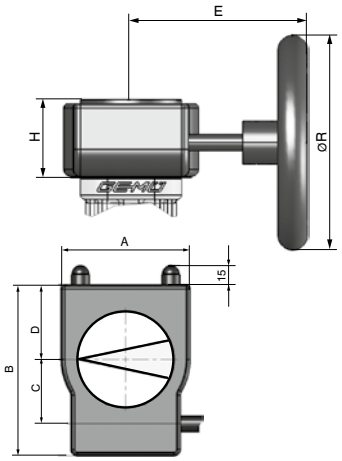
SAHL version = Continuously adjustable hand lever



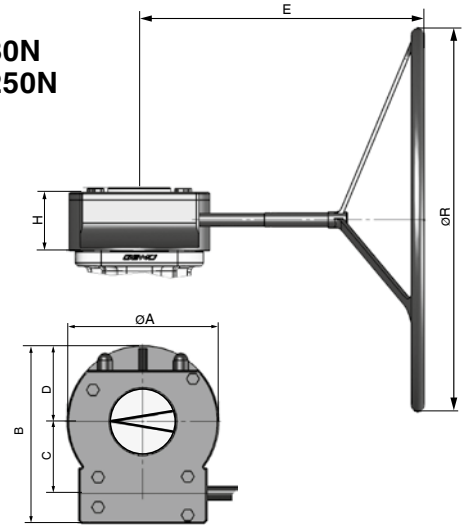
DN	L	H	Weight [kg]	Top flange	Latching hand lever		Continuously adjustable hand lever	
					Designation	Code	Designation	Code
25,40,50	200	70	0.314	F05	AHL09.F05.200	AHL09	SAHL09.F05.200	SAHL09
65-80	200	70	0.314	F05	AHL11.F05.200	AHL11	SAHL11.F05.200	SAHL11
100	200	70	0.314	F05	AHL14.F05.200	AHL14	SAHL14.F05.200	SAHL14
125-150	270	90	0.716	F07	AHL17.F07.270	AHL17	SAHL17.F07.270	SAHL17
200	340	75	0.730	F10	AHL22.F10.340	AHL22	-	-

Material: Aluminium

GB232



GB880N
GB1250N



DN	Designation	A	B	C	D	E	H	ØR	n	[kg]	Code
25,40,50	GB23205F05-F07D9 PS100	80	114	42.5	48	121	53	100	10.0	0.8	GB232
65-80	GB23205F05-F07D11 PS100	80	114	42.5	48	121	53	100	10.0	0.8	GB232
100	GB23205F05-F07D14 PS100	80	114	42.5	48	121	53	100	10.0	0.8	GB232
125	GB23206F05-F07D17 PS100	80	114	42.5	48	171	59	100	10.0	0.9	GB232
150	GB23206F05-F07D17 PS160	80	114	42.5	48	171	59	160	9.3	0.9	GB232
200-300	GB23208F07-F10D22 PS200	100	131	50.0	56	195	67	200	9.3	1.4	GB232
350	GB23214F10-F12D27 SG500	175	209	80.0	83	293	85	500	10.0	4.7	GB232
400	GB23214 F14D36 SG500	175	209	80.0	83	376	85	500	11.3	4.7	GB232
450-500	GB880NF10-F14D36 SG800	200	226	86.0	100	339	93	800	9.5	14.0	GB880N
600	GB1250NF12-F16D46 SG700	220	258	105.0	110	305	102	700	13.8	22.0	GB1250N

n*: Handwheel turns OPEN/CLOSED
Material: GB232 (Aluminium. polyurethane coated); GB880N. GB1250N (Cast iron. polyurethane coated)

Order example	1	2	3	4	5	6	7	8	9	10	11	12	
Code	487		Order data butterfly valve (page 3)								0	AHL09	

Technical data - GEMÜ 481 with pneumatic actuator type ADA/ASR

Control medium

Filtered, dry compressed air, non-corrosive medium

Temperature range

-30 ... +100 °C, other temperatures on request

Control pressure

6 - 8 bar

Angle of rotation

±5° adjustable (85° - 95°) 90°

12 Order data - GEMÜ 481 with pneumatic actuator type ADA/ASR

12 Actuator size*				
Operating pressure 16 bar (see order data - operating pressure code 3)				
DN	**Pneumatic double acting**	**Code**	**Pneumatic single acting**	**Code**
25	ADA0020U F03F05 Y S09 A	BU02AN0	ASR0020U S08 F03F05 Y S09 A	AU02FN0
40	ADA0020U F03F05 Y S09 A	BU02AN0	ASR0040U S14 F05 Y S14/S11 A	AU04KB0
50	ADA0040U F05 Y S14/S11 A	BU04AB0	ASR0040U S14 F05 Y S14/S11 A	AU04KB0
65	ADA0040U F05 Y S14/S11 A	BU04AB0	ASR0080U S14 F05F07 Y S17/S14 A	AU08KC0
80	ADA0040U F05 Y S14/S11 A	BU04AB0	ASR0130U S14 F05F07 Y S17/S14 A	AU13KC0
100	ADA0080U F05F07 Y S17/S14 A	BU08AC0	ASR0200U S14 F07F10 Y S17/S14 A	AU20KE0
125	ADA0080U F05F07 Y S17/S14 A	BU08AC0	ASR0200U S14 F07F10 Y S17/S14 A	AU20KE0
150	ADA0130U F05F07 Y S17/S14 A	BU13AC0	ASR0300U S14 F07F10 Y S22 A	AU30KD0
200	ADA0300U F07F10 Y S22 A	BU30AD0	ASR0850U S14 F10F12 Y S27 A	AU85KG0
Operating pressure 10 bar (see order data - operating pressure code 2)				
200	ADA0300U F07F10 Y S22 A	BU30AD0	ASR0500U S14 F10 Y S22 A	AU50KF0
250	ADA0500U F10Y S22 A	BU50AF0	ASR1200U S14 F10F14 Y S36 A	A12UKH0
300	ADA0300U F07F10 Y S22 A	BU30AD0	ASR0850U S14 F10F12 Y S27 A	AU85KG0
350	ADA0850U F10F12 Y S27 A	BU85AG0	ASR2500U S14 F16 Y S46 A	A25UKL0
400	ADA1200U F10F14 Y S36 A	B12UAH0	ASR2500U S14 F16 Y S46 A	A25UKL0
450	ADA1750U F14 Y S36 A	B17UAK0	ASR2500U S14 F16 Y S46 A	A25UKL0

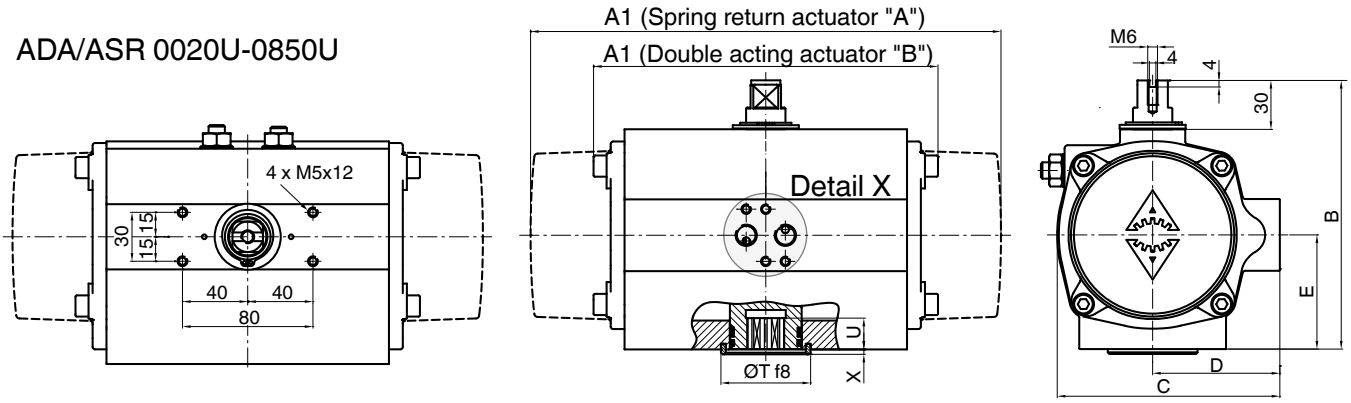
*Technical data for liquids +20 to +80°C with control pressure 6 bar

Order example	1	2	3	4	5	6	7	8	9	10	11	12
Code	481		Order data butterfly valve (page 3)									BU13AC0

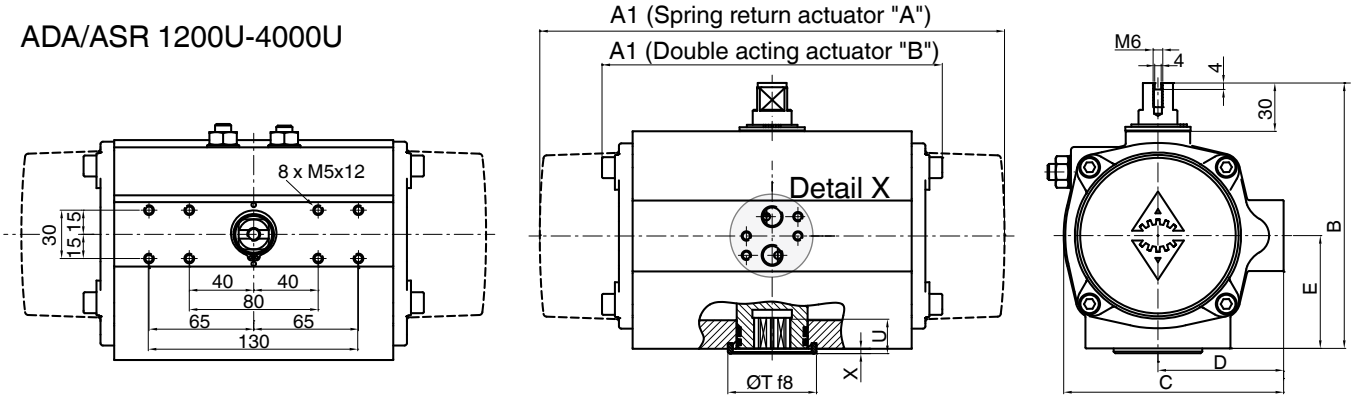
Stroke limiter on request

Actuator dimensions ADA/ASR [mm]

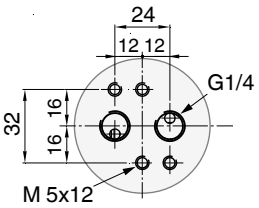
ADA/ASR 0020U-0850U



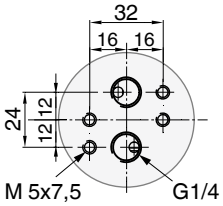
ADA/ASR 1200U-4000U



Detail X
ADA/ASR
0020U-1750U



Detail X
ADA/ASR
2100U-4000U



ADA/ASR	0020U			0040U		0080U	0130U	0200U	0300U	0500U	0850U	1200U	1750U	2100U	2500U	4000U
ISO 5211	F03/ F05	F04	F05	F04	F05	F05	F05	F07	F07	F10	F10	F10	F14	F16	F16	F16
Octagonal	9	14		14		17	17	17	22	22	27	36	36	46	46	55
Air connector	G¼			G¼		G¼	G¼	G¼	G¼	G¼	G¼	G¼	G¼	G¼	G¼	G¼
A	145			158		177	196	225	273	304	372	439	461	510	518	630
A1	163			195		217	258	299	348.5	397	473	560	601	702	738	940
B	96			115		137	147	165	182	199	221	249	280	313	383	434
C	76			91		111	122	135.5	152.5	173	191.5	212.5	242.5	276.5	356	415
D	48			56		66	71	78	86	96	106	116	131	148	177.5	213
E	34			45		55	60	70	80	85	98	114	130	147	176.5	201
ØT	25	35		35		55	55	55	70	70	85	100	100	130	130	200
U	10	12		12		19	22	23	24	32	39	48	50	50	58	60
Weight [kg]																
ADA	1.4			2.1		3.0	3.8	5.6	8.5	11.2	16.9	25.8	32.5	49.0	69.6	129.4
ASR	1.5			2.3		3.7	4.8	7.3	10.8	15.4	22.2	34.3	46.0	68.0	99.9	182.9

Technical data - GEMÜ 481 with pneumatic actuator type DR/SC

Control medium

Filtered, dry compressed air, non-corrosive medium

Temperature range

-30 ... +100 °C, other temperatures on request

Control pressure

6 - 8 bar

Angle of rotation

±20° adjustable (75° - 95°) 90°

12 Order data - GEMÜ 481 with pneumatic actuator type DR/SC

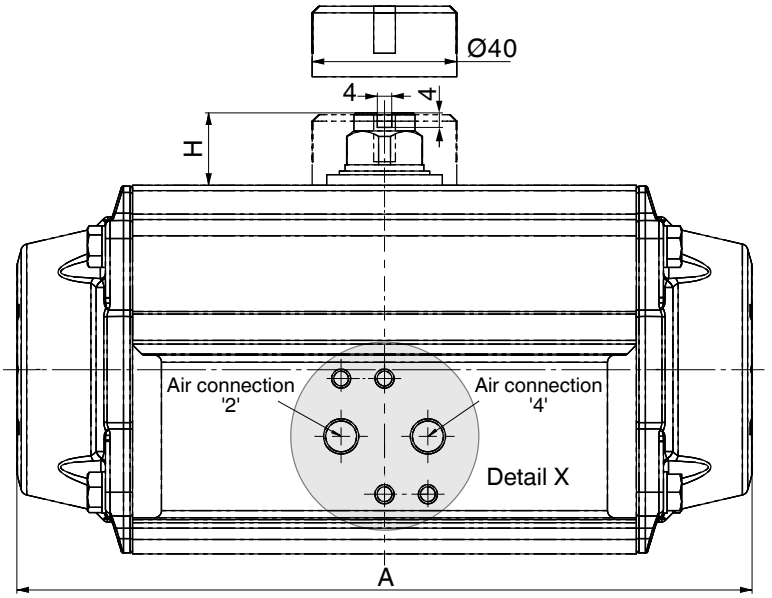
12 Actuator size*				
Operating pressure 16 bar (see order data - operating pressure code 3)				
DN	**Pneumatic double acting**	**Code**	**Pneumatic single acting**	**Code**
25	DR0015U F03F05 N S11 A	DU01AW0	SC0030U 6 F05F07 N S14 A	SU03KP0
40	DR0015U F03F05 N S11 A	DU01AW0	SC0030U 6 F05F07 N S14 A	SU03KP0
50	DR0030U F05F07 N S14 A	DU03AP0	SC0060U 6 F05F07 N S14 A	SU06KP0
65	DR0030U F05F07 N S14 A	DU03AP0	SC0100U 6 F05F07 N S17 A	SU10KC0
80	DR0030U F05F07 N S14 A	DU03AP0	SC0100U 6 F05F07 N S17 A	SU10KC0
100	DR0060U F05F07 N S17 A	DU06AC0	SC0150U 6 F05F07 N S17 A	SU15KC0
125	DR0060U F05F07 N S17 A	DU06AC0	SC0220U 6 F07F10 N S22 A	SU22KD0
150	DR0150U F07F10 N S22 A	DU15AD0	SC0300U 6 F07F10 N S22 A	SU30KD0
200	DR0220U F07F10 N S22 A	DU22AF0	SC0600U 6 F10F12 N S27 A	SU60KG0
Operating pressure 10 bar (see order data - operating pressure code 2)				
200	DR0220U F07F10 N S22 A	DU22AF0	SC0450U 6 F10F12 N S27 A	SU45KU5
250	DR0450U F10F12 N S27 A	DU45AG0	SC0900U 6 F10F12 N S27 A	SU90KG0
300	DR0300U F07F10 N S22 A	DU30AD0	SC0900U 6 F10F12 N S27 A	SU90KG0
350	DR0900U F10F12 N S27 A	DU90AG0	SC2000U 6 F12 N S27 A	S20UKQ0
400	DR1200U F14 N S36 A	D12UAK0	SC3000U 6 F14 N S36 A	S30UKK0
450	DR1200U F14 N S36 A	D12UAK0	SC3000U 6 F14 N S36 A	S30UKK0
500	DR2000U F14 N S36 A	D20UAK0	SC3000U 6 F14 N S36 A	S30UKK0
600	DR2000U F16 N S46 A	D20UAL0	SC5000U 6 F16F25 N S46 A	S50UKS0

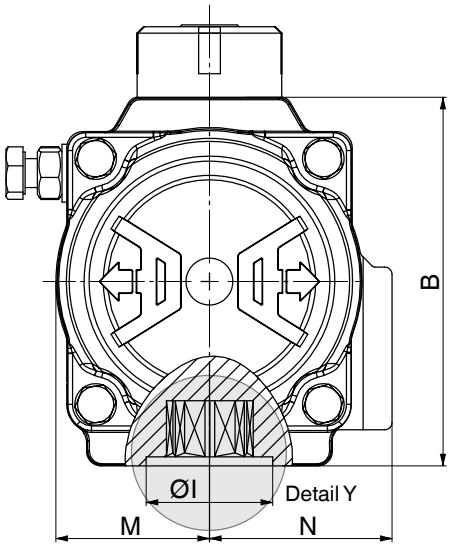
* Technical data for liquids +20 to +80°C with control pressure 6 bar

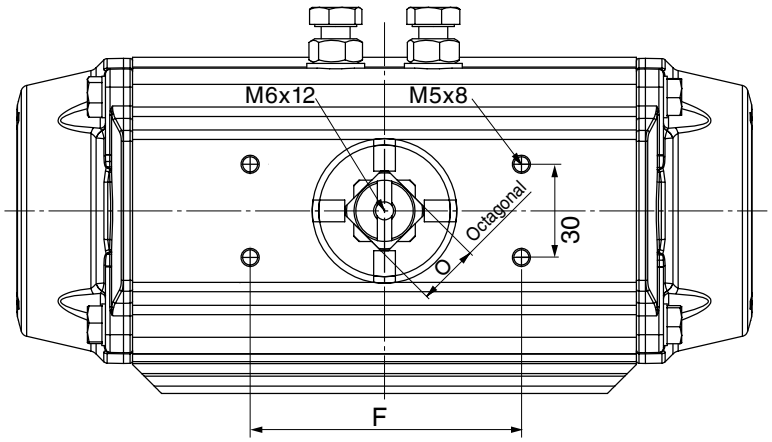
Order example	1	DN	2	3	4	5	6	7	8	9	10	11
Code	481		Order data butterfly valve (page 3)									DU15AD0

Stroke limiter on request

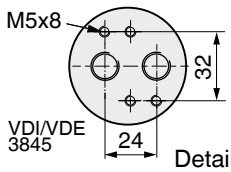
Actuator dimensions - DR/SC [mm]

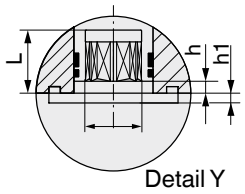




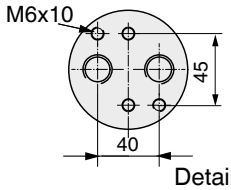


Type 0015U-1200U

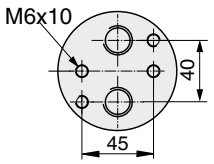




Type 2000U-4000U



Type 5000U



Type	0015U	0030U	0060U	0100U	0150U	0220U	0300U	0450U	0600U	0900U	1200U	2000U	3000U	4000U	5000U
ISO Flange	F04	F04 F05/07	F05/07	F05/07	F07/10	F07/10	F07/10	F10/12	F10/12	F14	F14	F16	F16	F16	F25
Octagonal	11	14	14	17	17	22	22	27	27	36	36	46	46	46	55
L	12	16	19	19	25	24	24	29	40	38	38	48	48	49	57
Air connector	G 1/8	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 3/8	G 1/2	G 1/2	G 1/2
A	136,0	153,5	203,5	241,0	259,0	304,0	333,0	394,5	422,5	474,0	528,0	605,0	710,0	812,0	876,0
B	69,0	85,0	102,0	115,0	127,0	145,0	157,0	177,0	196,0	220,5	245,0	298,5	330,0	383,0	410,0
F	80	80	80	80	80	80	80	80	80	130	130	130	130	130	130
H	20	20	20	20	20	30	30	30	30	50	50	50	50	50	50
Ø I	30	35	35	40	55	55	55	70	70	100	100	130	130	130	200
M	29,0	36,0	42,5	49,5	55,5	64,0	69,5	80,0	88,0	99,0	110,0	131,0	165,0	185,5	204,0
N	43,0	48,5	50,5	56,5	63,0	72,0	77,0	86,0	93,0	101,0	111,5	131,0	165,0	185,5	214,0
O	11	11	17	17	17	27	27	27	27	36	36	36	36	36	36
R	32	32	32	32	32	32	32	32	32	32	32	45	45	45	45
S	24	24	24	24	24	24	24	24	24	24	24	40	40	40	40
h	0,5	0,5	0,5	1,5	1,5	1,5	1,5	1,5	1,5	2	2	2,5	2,5	2,5	2,5
h1	1,5	1,5	2	1,5	2	2	2	3	3	3	3	2,5	2,5	4	3,5
L	11	11/16	19	19	19	19	25	32	40	38	38	38	40	57	57
Weight [kg]															
DR	1,0	1,6	2,7	3,8	5,4	8,4	10,2	14,5	19,8	25,0	35,5	53,0	83,0	118,0	134,0
SC	1,1	1,7	3,2	4,4	6,5	9,8	12,6	18,1	24,0	31,6	45,1	64,2	102,2	150,0	169,0

Technical data - Motorized GEMÜ actuators

Min. / max. ambient temperature

-10 to +60° C

Special feature

Standard manual override

Protection class to EN 60529

IP 65

Power supply

Rated voltage	24 V DC / 24 V, 120 V, 230 V AC
Rated frequency at AC rated voltage	50/60 Hz
Voltage tolerance	+10% / -15%

Weight

Actuator version 1015	0.9 kg
Actuator version 2015	1.2 kg
Actuator version 3035	2.4 kg
Actuator version 2070	4.6 kg
Actuator version 4100, 4200	11.0 kg
Actuator version 6400	14.0 kg

Operating time

Actuator version 1015, 2015	approx. 11 sec
Actuator version 2070, 3035	approx. 15 sec
Actuator version 4100	approx. 20 sec
Actuator version 4200	approx. 16 sec
Actuator version 6400	approx. 29 sec

Directives

EC Machinery directive 98/37/EC, annex II B

EC EMC directive 89/336/EEC

Power and current consumption [W]

Actuator version (code)	12 V DC	12 V AC	24 V DC		24 V AC		120 V AC		230 V AC		100-250 V AC
	A0, AE	A0, AE	A0/AE/AP E1/E2	00/0E 0P	A0/AE/AP E1/E2	00/0E 0P	A0/AE/AP E1/E2	00/0E 0P	A0/AE/AP E1/E2	00/0E 0P	A0/AE
1006	24	24	24	-	24	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	30
1015	24	-	24	-	-	-	-	-	-	-	-
2015	-	24	-	-	24	-	-	-	-	-	30
3035	-	-	24	-	24	-	-	-	-	-	30
2070	-	-	96	63	-	63	160	-	161	-	-
4100	-	-	96	105	-	140	160	105	161	130	-
4200	-	-	96	90	-	110	160	90	161	105	-
6400	-	-	120	120	-	120	170	120	185	145	-

Correlation actuator version / functional module

Actuator version code	Functional module (code)							
	A0	AE	AP	E2	E1	00	0E	0P
1006, 2006, 1015, 2015, 3035	X	X	-	-	-	-	-	-
2070*, 4100*, 4200*, 6400*	X	X	X	X	X	X	X	X

* Combinations voltage / functional module see data sheet GEMÜ 9468

Correlation actuator version / nominal size

DN	Actuator version (code)								
	1006	2006	1015	2015	3035	2070	4100	4200	6400
25	X	X	-	-	-	-	-	-	-
40	-	-	X	X	-	-	-	-	-
50 - 65	-	-	-	-	X	-	-	-	-
80 - 100	-	-	-	-	-	X	-	-	-
125	-	-	-	-	-	-	X	-	-
150	-	-	-	-	-	-	-	X	-
200-300	-	-	-	-	-	-	-	-	X

Note: For connection and wiring diagrams for motorized GEMÜ actuators see data sheet

Actuator version code 1006, 2006,1015, 2015, 3035 - Data sheet GEMÜ 9428
Actuator version code 2070, 4100, 4200, 6400 - Data sheet GEMÜ 9468

Technical data - Motorized GEMÜ actuators

Travel	
Nominal travel	90°
Max. travel	93°
Setting range limit switch	
GEMÜ 9428	min. 2 - 12° / max. 76 - 91°
GEMÜ 9428	min. 0 - 20° / max. 70 - 93°

Rating	
Actuator version 1006, 1015, 2006, 2015, 3035 (voltage O4)	40 % ED
Actuator version 1006, 1015, 2006, 2015, 3035, 2070, 4100, 4200 (voltage B1)	100 % ED
Actuator version 6400	70 % ED

Power and current consumption

Actuator version (code)	Supply voltage/mains frequency (code)						
	12 V		24 V		120 V	230 V	100-250 V
	B1	B4	C1	C4	G4	L4	O4
1006 (6 Nm)	X	X	X	X	-	-	-
2006 (6 Nm)	-	-	-	-	-	-	X
1015 (15 Nm)	X	-	X	-	-	-	-
2015 (15 Nm)	-	X	-	X	-	-	X
3035 (35 Nm)	-	-	X	X	-	-	X
2070 (70 Nm)	-	-	X	X	X	X	-
4100 (100 Nm)	-	-	X	X	X	X	-
4200 (200 Nm)	-	-	X	X	X	X	-
6400 (400 Nm)	-	-	X	X	X	X	-

B1, C1 = DC / B4, C4, G4, L4, O4 = AC

Actuator material

Actuator version	1006, 1015	2006, 2015, 3035	2070	4100, 4200, 6400
Housing base	PP (30 % gr)	PP (30 % gr)	ABS	Aluminium
Housing cover	PPO (10 % gr)	PP (30 % gr)	ABS	Aluminium
Indicator	PPR natur	PPR natur	PPR natur	PMMA

gr = glass reinforced

GEMÜ 488 with motorized GEMÜ actuators

14 Voltage/frequency	Code
24 V DC	C1
24 V AC 50/60 Hz	C4
120 V AC 50/60 Hz	G4
100 - 250 V AC 50/60 Hz	O4
230 V AC 50/60 Hz	L4

15 Functional module	Code
OPEN/CLOSE control	A0
OPEN/CLOSE control with 2 additional potential-free limit switches	AE
OPEN/CLOSE control with potentiometer output	AP
Control module; for external set value 0/4-20 mA	E2
Control module; for external set value 0-10V DC	E1
OPEN/CLOSE control with relay, not reversible	00
OPEN/CLOSE control with 2 additional potential-free limit switches, with relay, not reversible	0E
OPEN/CLOSE control, not reversible with potentiometer output	0P

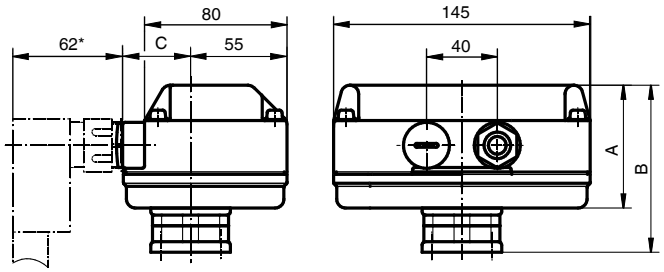
16 Actuator version		Code
DN 25	Torque 6 Nm, operating time 4 sec; supply voltage B1,C1,B4,C4	1006
DN 25	Torque 6 Nm, operating time 4 sec; supply voltage O4	2006
DN 40	Torque 15 Nm, operating time 11 sec; supply voltage C1	1015
DN 40	Torque 15 Nm, operating time 11 sec; supply voltage C4, O4	2015
DN 50-65	Torque 35 Nm, operating time 15 sec; supply voltage C1, C4, O4	3035
DN 80-100	Torque 70 Nm, operating time 15 sec; supply voltage C1, C4, G4, L4	2070
DN 125	Torque 100 Nm, operating time 20 sec; supply voltage C1, C4, G4, L4	4100
DN 150	Torque 200 Nm, operating time 16 sec; supply voltage C1, C4, G4, L4	4200
DN 200-300	Torque 400 Nm, operating time 29 sec; supply voltage C1, C4, G4, L4	6400

Technical data for liquids +20 ... +80 °C

Order example	1	2	3	4	5	6	7	8	9	10	14	15	16
Code	488		Order data butterfly valve (page 3)								C1	A0	2070

Actuator dimensions [mm]

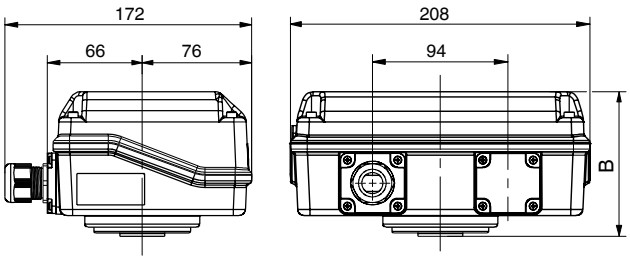
Actuator version 1015, 2015



Voltages	A	B	C
24 V	69	94	49
100 V - 250 V	99	124	53

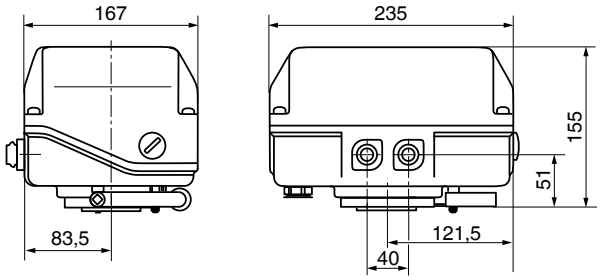
* Standard with supply voltage code O4*

Actuator version 3035

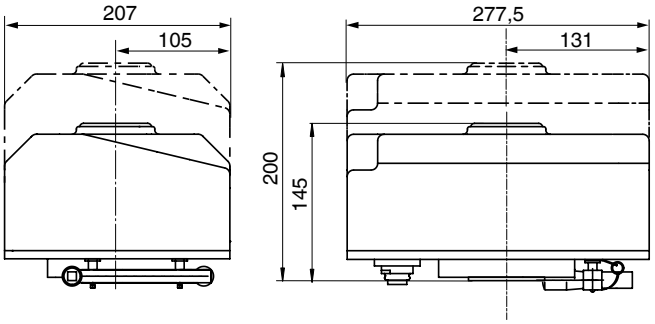


Voltages	B
24 V	100,5
100 V - 250 V	124,5

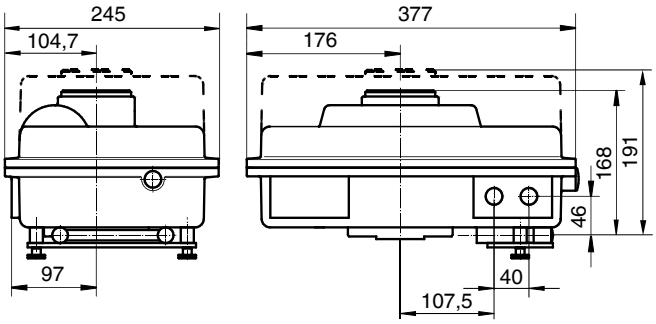
Actuator version 2070



Actuator version 4100, 4200



Actuator version 6400



——— full line ≙ overall height 1
version functional module code 00, 0E, 0P
- - - - - broken line ≙ overall height 2
version functional module code A0, AE, AP, E2, E1

Technical data - Motorized J+J actuators

Min. / max. ambient temperature

-20 to +70 °C

Protection class to EN 60529

IP 67 - J3C20, J3C35, J3C55, J3C85

IP 65 - J2140, J2300

Special feature

Standard manual override

Weight

Actuator version J3C20	1.8 kg
Actuator version J3C35	1.9 kg
Actuator version J3C55	2.3 kg
Actuator version J3C85	3.0 kg
Actuator version J2140 / J2300	5.2 kg

Power supply

Rated voltage

Version J3C..	(R5)	12 - 24 V AC/DC (± 5%)
	(S5)	85 - 240 V AC/DC (0/+ 5%)
Version J2 ...	(R5)	12 - 48 V DC (0/+ 5%)
	(R5)	15 - 48 V AC (0/+ 5%)
	(S5)	85 - 240 V AC/DC (0/+ 5%)

Rated frequency at AC rated voltage	50/60 Hz
Rating	75 %

Correlation actuator version / nominal size

DN	Actuator version - Standard (code)					
	J3C20 20 Nm	J3C35 35 Nm	J3C55 55 Nm	J3C85 85 Nm	J2140 140 Nm	J2300 300 Nm
25/40-50	X	-	-	-	-	-
65	-	X	-	-	-	-
80	-	-	X	-	-	-
100-125	-	-	-	X	-	-
150	-	-	-	-	X	-
200	-	-	-	-	-	X

Technical data for EPDM, +20 °C, Medium water

Operating time

Actuator version	J2...: 12 - 48 V DC J2...: 15 - 48 V AC J3...: 12 - 24 V AC/DC Code R5	J2.../J3...: 85 - 240 V AC/DC Code S5
J3C20	12 s	11 s
J3C35	12 s	11 s
J3C55	17 s	13 s
J3C85	30 s	35 s
J2140	31 s	31 s
J2300	66 s	60 s

Order data - Motorized J+J actuators

14 Voltage/frequency	Code
12 - 24 V AC/DC (Voltage range LOW)	R5
85 - 240 V AC/DC (Voltage range HIGH)	S5

15 Functional module	Code
OPEN/CLOSE control with 2 additional potential-free limit switches	AE
Control module; for external set value 0/4-20 mA	E2
Control module; for external set value 0-10V DC	E1
With BSR accu pack - NC	AE1
With BSR accu pack - NO	AE2

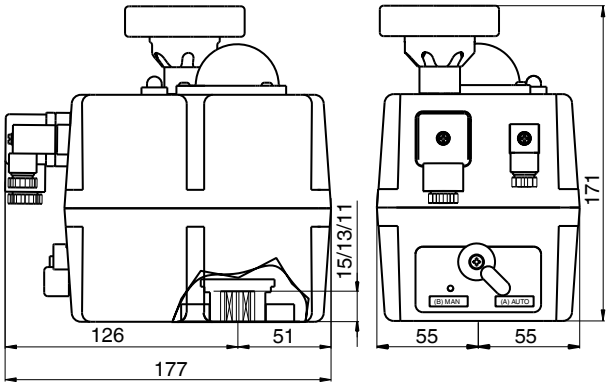
16 Actuator version		Code
DN 25-50	(Torque 20 Nm)	J3C20
DN 65	(Torque 35 Nm)	J3C35
DN 80	(Torque 55 Nm)	J3C55
DN 100-125	(Torque 85 Nm)	J3C85
DN 150	(Torque 140 Nm)	J2140
DN 200	(Torque 300 Nm)	J2300

Technical data for liquids +20 ... +80 °C

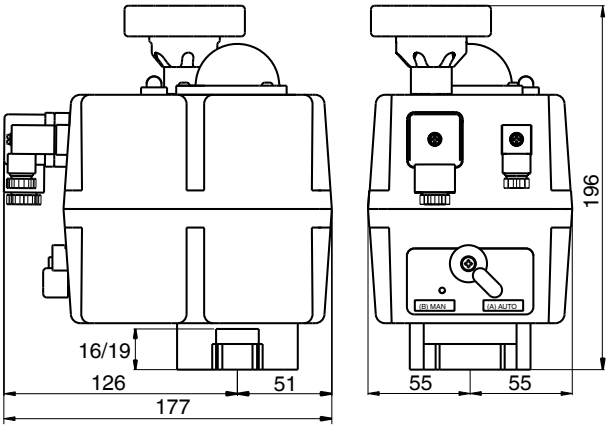
Order example	1	2	3	4	5	6	7	8	9	10	14	15	16
Code	488	Order data butterfly valve (page 3)									L	AE	J3C85

Actuator dimensions [mm]

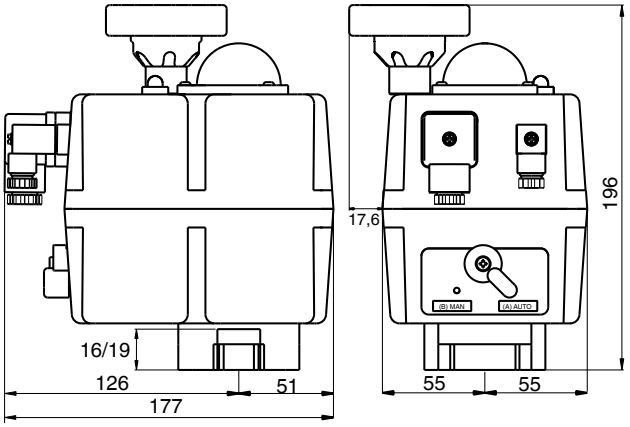
Actuator version - J3C20/J3C35



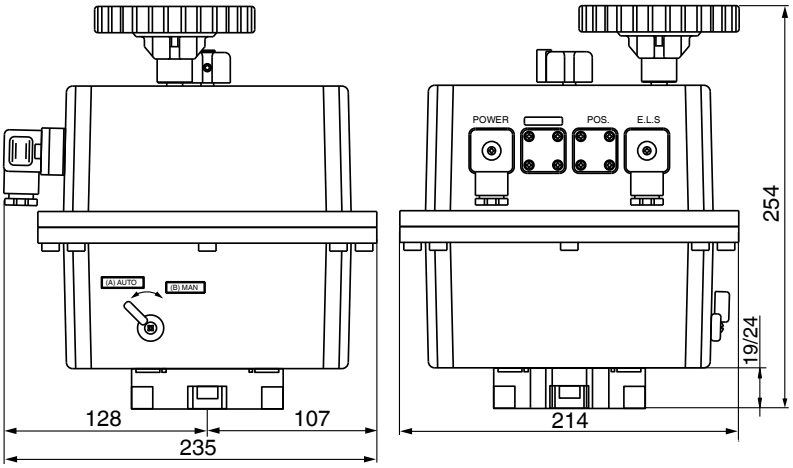
Actuator version - J3C55



Actuator version - J3C85



Actuator version - J2300



For further butterfly valves, accessories and other products, please see our Product Range catalogue and Price List.
Contact GEMÜ.

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