

GEMÜ R481 Victoria

Pneumatically operated butterfly valve



Features

- Low torques thanks to PTFE coated bushes
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A
- Liner material is easy to read when installed
- Sleek disc design for higher Kv values
- Robust body coating comparable to ISO 12944-6 C5
- Various actuator types can be selected
- Optional accessories are installed, set and tested so they are ready for operation

Description

The GEMÜ R481 Victoria soft seated metal butterfly valve has a metal actuator and is pneumatically operated. Normally Closed, Normally Open and Double Acting control functions are available. Various pneumatic actuators are available. The butterfly valve is available in nominal sizes DN 25 to 600 and in standard installation lengths ISO 5752/20 | EN 558-1/20 | API 609 category A (DIN 3202 K1) in wafer, lug and U section body versions.

Technical specifications

- **Media temperature:** -10 to 160 °C
- **Ambient temperature:** -10 to 70 °C
- **Operating pressure :** 0 to 16 bar
- **Nominal sizes:** DN 25 to 600
- **Body configurations:** Lug | U section | Wafer
- **Connection standards:** ANSI | AS | BS | DIN | EN | ISO | JIS
- **Body materials:** EN-GJS-400-15, SG iron material | EN-GJS-400-18-LT, SG iron material
- **Body coating:** Epoxy
- **Liner materials:** EPDM | FKM | NBR | SBR, abrasion resistant | Silicone
- **Disc materials:** 1.4408, investment casting material | 1.4408, polished investment casting material | 1.4469, Duplex cast steel material | EN-GJS-400-15, SG iron material
- **Disc coating:** Epoxy | Halar® | Rilsan®
- **Conformities:** ACS | ASME GEMÜ B31.3 | ATEX | Belgaqua | DNV GL | DVGW Drinking water | DVGW Gas | EAC | FDA | Functional safety | NSF | Oxygen | Regulation (EC) No. 1935/2004 | TA Luft (German Clean Air Act) | WRAS

Technical data depends on the respective configuration



further information
webcode: GW-R481



Product line



GEMÜ R480
Victoria

GEMÜ R481
Victoria

GEMÜ R487
Victoria

GEMÜ R488
Victoria

Operation				
With bare shaft	●	-	-	-
Manual	-	-	●	-
Pneumatic	-	●	-	-
Motorized	-	-	-	●
Nominal sizes	DN 25 to 600	DN 25 to 600	DN 25 to 600	DN 25 to 600
Media temperature	-10 to 160 °C	-10 to 160 °C	-10 to 160 °C	-10 to 160 °C
Operating pressure	0 to 16 bar	0 to 16 bar	0 to 16 bar	0 to 16 bar
Connection types				
Flange (lug)	●	●	●	●
Flange (U section)	●	●	●	●
Flange (wafer)	●	●	●	●
Conformities				
ACS	●	●	●	●
ASME GEMÜ B31.3	●	●	●	●
ATEX	●	●	●	●
Belgaqua	●	●	●	●
DNV GL	●	●	●	●
DVGW Drinking water	●	●	●	●
DVGW Gas	●	●	●	●
EAC	●	●	●	●
FDA	●	●	●	●
Functional safety	●	●	●	●
NSF	●	●	●	●
Oxygen	●	●	●	●
Regulation (EC) No. 1935/2004	●	●	●	●
TA Luft (German Clean Air Act)	●	●	●	●
WRAS	●	●	●	●

Comparison of actuator applications



GEMÜ ADA/ASR

GEMÜ DR/SC

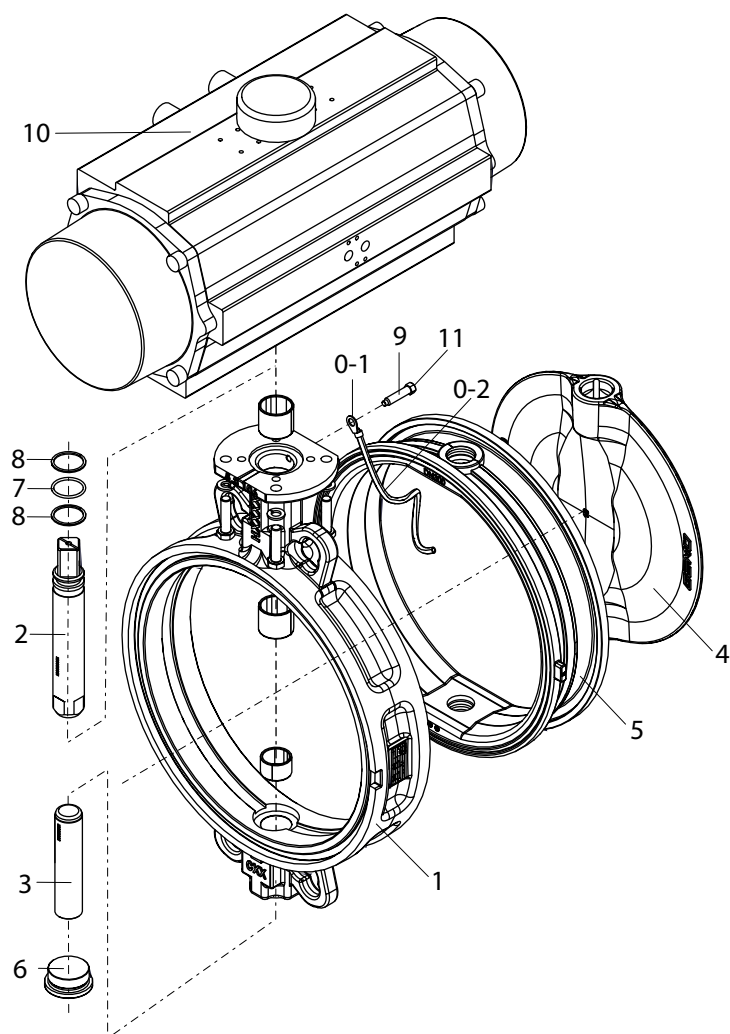
GEMÜ GDR/GSR

Industrial sectors

Chemical processes	●	●	●
Surface finishing	●	●	●
Water treatment	●	●	●
Mechanical engineering	●	●	●
Power generation and environmental systems	●	●	●
Food processing technology	●	●	●
Semiconductor	●	●	●
Medical systems	●	●	●
Pharmaceutical industry	●	●	●

Product description

Construction



Item	Name	Materials
1	Body	SG iron 5.3106, epoxy coated (RAL 5021)
2	Shaft	1.4021
3	Axis	1.4021
4	Disc	Various materials (see order data)
5	Liner	Various materials (see order data)
6	Threaded plug	1.4408
7	O-ring	NBR
8	Support rings	PTFE
9	Hexagon head bolts	Stainless steel A2-70
0	Earthing kit for ATEX version	
0-1	Cable lug (ATEX version)	
0-2	Stranded wire (ATEX version)	
10	Pneumatic actuator	Aluminium
11	CONEXO RFID chip (see "GEMÜ CONEXO", page 43)	

Actuator assignment

Design: Liquids +20 °C and control pressure 6 bar

Application: Industrial water +20 °C without additives

For different media/temperatures, e.g. chlorinated swimming pool water, cold well water or chemical additives, GEMÜ must be consulted.

Operating pressure 16 bar (code 3)

GEMÜ type ADA/ASR

DN	Double acting ADA	Code	Single acting ASR	Code
25	ADA0020U F05 Y S14/S11A	BU02AB0	ASR0020U S08 F03F05Y S09A	AU02FN0
32	ADA0020U F05 Y S14/S11A	BU02AB0	ASR0020U S08 F03F05 Y S09A	AU02FN0
40	ADA0020U F05 Y S14/S11A	BU02AB0	ASR0020U S08 F03F05 Y S09A	AU02FN0
50	ADA0020U F05 Y S14/S11A	BU02AB0	ASR0020U S08 F03F05 Y S09A	AU02FN0
65	ADA0020U F05 Y S14/S11A	BU02AB0	ASR0040U S14 F05 Y S14/S11A	AU04KB0
80	ADA0040U F05 Y S14/S11A	BU04AB0	ASR0080U S14 F05F07 Y S17/S14A	AU08KC0
100	ADA0080U F05F07 Y S17/S14A	BU08AC0	ASR0200U S14 F07F10 Y S17/S14A	AU20KE0
125	ADA0080U F05F07 Y S17/S14A	BU08AC0	ASR0200U S14 F07F10 Y S17/S14A	AU20KE0
150	ADA0130U F05F07 Y S17/S14A	BU13AC0	ASR0300U S14 F07F10 Y S22A	AU30KD0
200	ADA0300U F07F10 Y S22A	BU30AD0	ASR0850U S14 F10F12 Y S27A	AU85KG0

GEMÜ type DR/SC

DN	Double acting DR	Code	Single acting SC	Code
25	DR0015U F03F05NS11A	DU01AW0	SC0015U 8 F03F05NS11A	SU01KW0
32	DR0015U F03F05NS11A	DU01AW0	SC0015U 8 F03F05NS11A	SU01KW0
40	DR0015U F03F05NS11A	DU01AW0	SC0015U 8 F03F05NS11A	SU01KW0
50	DR0015U F03F05NS11A	DU01AW0	SC0015U 8 F03F05NS11A	SU01KW0
65	DR0015U F03F05NS11A	DU01AW0	SC0060U 6 F05F07NS14A	SU06KP0
80	DR0030U F05F07NS14A	DU03AP0	SC0100U 6 F05F07NS17A	SU10KC0
100	DR0060U F05F07NS14A	DU06AP0	SC0150U 6 F05F07NS17A	SU15KC0
125	DR0060U F05F07NS14A	DU06AP0	SC0220U 6 F07F10NS22A	SU22KD0
150	DR0150U F07F10NS22A	DU15AD0	SC0300U 6 F07F10NS22A	SU30KD0
200	DR0220U F07F10NS22A	DU22AD0	SC0600U 6 F10F12NS27A	SU60KG0

GEMÜ type GDR/GSR

DN	Double acting GDR	Code	Single acting GSR	Code
25	GDR0050 F03/05 S11A	HR05AW0	GSR0050 SC5F03/05 S11A	GR05SW0
32	GDR0050 F03/05 S11A	HR05AW0	GSR0050 SC5F03/05 S11A	GR05SW0
40	GDR0050 F03/05 S11A	HR05AW0	GSR0065 SC5F05/07 S14A	GR06SP0
50	GDR0050 F03/05 S11A	HR05AW0	GSR0065 SC5F05/07 S14A	GR06SP0
65	GDR0050 F03/05 S11A	HR05AW0	GSR0075 SC5F05/07 S14A	GR07SP0
80	GDR0065 F05/07 S14A	HR06AP0	GSR0085 SC5F05/07 S14A	GR08SP0
100	GDR0075 F05/07 S14A	HR07AP0	GSR0115 SC5F07/10 S17A	GR11SE0
125	GDR0085 F05/07 S17A	HR08AC0	GSR0125 SC5F07/10 S17A	GR12SE0
150	GDR0100 F07/10 S17A	HR10AE0	GSR0140 SC5F10/12 S22A	GR14SA0
200	GDR0125 F07/10 S22A	HR12AD0	GSR0180 S14F10/14 S27A	GR18KB0

Operating pressure 10 bar (code 2)**GEMÜ type ADA/ASR**

DN	Double acting ADA	Code	Single acting ASR	Code
250	ADA0500U F10 Y S22A	BU50AF0	ASR1200U S14 F10F14 Y S36A	A12UKH0
300	ADA0500U F10 Y S22A	BU50AF0	ASR1200U S14 F10F14 Y S36A	A12UKH0
350	ADA0850U F10F12 Y S27A	BU85AG0	ASR1750U S14 F14 Y S36A	A17UKK0
400	ADA1200U F10F14 Y S36A	B12UAH0	ASR2500U S14 F14 Y S36A	A25UKK0
450	ADA1750U F14 Y S36 A	B17UAK0	ASR2500U S14 F14 Y S36A	A25UKK0
500	ADA1750U F14 Y S36 A	B17UAK0	ASR4000U S14 F16F25 Y S55A	A40UKM0
600	ADA2100U F16 Y S46A	B21UAL0	-	-

GEMÜ type DR/SC

DN	Double acting DR	Code	Single acting SC	Code
250	DR0300U F07F10NS22A	DU30AD0	SC0900U 6 F10F12NS27A	SU90KG0
300	DR0300U F07F10NS22A	DU30AD0	SC0900U 6 F10F12NS27A	SU90KG0
350	DR0450U F10F12NS27A	DU45AG0	SC1200U 6 F10F12NS27A	S12UKG0
400	DR1200U F14NS36A	D12UAK0	SC3000U 6 F14NS36A	S30UKK0
450	DR1200U F14NS36A	D12UAK0	SC3000U 6 F14NS36A	S30UKK0
500	DR1200U F14NS36A	D12UAK0	SC3000U 6 F14NS36A	S30UKK0
600	DR2000U F16NS46A	D20UAL0	SC5000U 6 F16F25NS46A	S50UKS0

GEMÜ type GDR/GSR

DN	Double acting GDR	Code	Single acting GSR	Code
250	GDR0125 F07/10 S22A	HR12AD0	GSR0180 S14F10/14 S27A	GR18KB0
300	GDR0125 F07/10 S22A	HR12AD0	GSR0180 S14F10/14 S27A	GR18KB0
350	GDR0160 F10/12 S27A	HR16AG0	GSR0210 S14F14 S36A	GR21KK0
400	GDR0180 F10/14 S36A	HR18AH0	GSR0270 S14F16 S46A	GR27KL0
450	GDR0210 F14 S36A	HR21AK0	GSR0300 S14F16 S46A	GR30KL0
500	GDR0210 F14 S36A	HR21AK0	GSR0300 S14F16 S46A	GR30KL0
600	GDR0240 F16 S46A	HR24AL0	-	-

Operating pressure 3 bar (code 0)**GEMÜ type ADA/ASR**

DN	Double acting ADA	Code	Single acting ASR	Code
200	ADA0200U F07F10 Y S17/S14A	BU20AE0	ASR0500U S14 F10 Y S22A	AU50KF0
250	ADA0200U F07F10 Y S17/S14A	BU20AE0	ASR0500U S14 F10 Y S22A	AU50KF0
300	ADA0300U F07F10 Y S22A	BU30AD0	ASR0850U S14 F10F12 Y S27A	AU85KG0
350	ADA0300U F07F10 Y S22A	BU30AD0	ASR0850U S14 F10F12 Y S27A	AU85KG0
400	ADA1200U F10F14 Y S36A	B12UAH0	ASR1750U S14 F14 Y S36A	A17UKK0
450	ADA1200U F10F14 Y S36A	B12UAH0	ASR1750U S14 F14 Y S36A	A17UKK0
500	ADA1200U F10F14 Y S36A	B12UAH0	ASR2100U S14 F14 Y S36A	A21UKK0
600	ADA2100U F16 Y S46A	B21UAL0	ASR4000U S14 F16F25 Y S55A	A40UKM0

GEMÜ type DR/SC

DN	Double acting DR	Code	Single acting SC	Code
200	DR0150U F07F10NS22A	DU15AD0	SC0450U 6 F10F12NS27A	SU45KG0
250	DR0150U F07F10NS22A	DU15AD0	SC0450U 6 F10F12NS27A	SU45KG0
300	DR0220U F07F10NS22A	DU22AD0	SC0600U 6 F10F12NS27A	SU60KG0
350	DR0220U F07F10NS22A	DU22AD0	SC0600U 6 F10F12NS27A	SU60KG0
400	DR0900U F14NS36A	DU90AK0	SC2000U 6 F14NS36A	S20UKK0
450	DR0900U F14NS36A	DU90AK0	SC2000U 6 F14NS36A	S20UKK0
500	DR0900U F14NS36A	DU90AK0	SC2000U 6 F14NS36A	S20UKK0
600	DR2000U F16NS46A	D20UAL0	SC4000U 6 F16NS46A	S40UKL0

GEMÜ type GDR/GSR

DN	Double acting GDR	Code	Single acting GSR	Code
200	GDR0100 F07/10 S17A	HR10AE0	GSR0140 SC5F10/12 S22A	GR14SA0
250	GDR0100 F07/10 S17A	HR10AE0	GSR0160 SC5F10/12 S22A	GR16SA0
300	GDR0115 F07/10 S17A	HR11AE0	GSR0180 S14F10/14 S27A	GR18KB0
350	GDR0140 F10/12 S27A	HR14AG0	GSR0180 S14F10/14 S36A	GR18KH0
400	GDR0180 F10/14 S27A	HR18AB0	GSR0240 S14F16 S46A	GR24KL0
450	GDR0180 F10/14 S27A	HR18AB0	GSR0240 S14F16 S46A	GR24KL0
500	GDR0180 F10/14 S27A	HR18AB0	GSR0240 S14F16 S46A	GR24KL0
600	GDR0240 F16 S36A	HR24AV0	GSR0350 S14F16/25 S46A	GR35KS0

Product conformities

	Approved designs			Special function (code)
	Disc material	Liner material	Liner fixing	
Drinking water				
ACS	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B) Super Duplex, 1.4469 (code D) EN-GJS-400-15 (GGG-40), epoxy coated (code E) EN-GJS-400-15, GGG40 Rilsan® PA11 coated (code R)	EPDM (code W)	All versions	A
Belgaqua	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B) Super Duplex, 1.4469 (code D)	EPDM (code W)	Loose (code L)	B
DVGW Water	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B) Super Duplex, 1.4469 (code D)	EPDM (code W)	Loose (code L)	D
NSF	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B) Super Duplex, 1.4469 (code D)	EPDM (code W)	All versions	N
WRAS	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B) Super Duplex, 1.4469 (code D)	EPDM (code W)	All versions	W
Food				
FDA	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B) Super Duplex, 1.4469 (code D)	EPDM-AB/W (code I) EPDM, white (code M) NBR, white (code U) EPDM-HT (code Z)	Loose (code L)	no order code required
Regulation 1935/2004	CF8M, 1.4408 polished (code B)	EPDM, white (code M) NBR (W) (code U) NR, white (code I) EPDM-HT (code Z)	Loose (code L)	no order code required
Gas				
DVGW Gas	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B)	NBR (code J)	Loose (code L)	G
Oxygen				
Oxygen	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B)	EPDM (code E)	All versions	O
Air				
TA Luft (German Clean Air Act)	All materials	All materials	All versions	no order code required
Ship approval				
DNV GL	All materials	All materials	All versions	S

	Approved designs			Special function (code)
	Disc material	Liner material	Liner fixing	
Explosion protection				
ATEX internal and ex- ternal	CF8M, 1.4408 (code A) CF8M, 1.4408 polished (code B) Super Duplex, 1.4469 (code D) 2.0975/CC333G (code G) 1.4435/ASTM A351/CF3M/AISI 316L (code I)	EPDM (code E) SBR (code F) NBR (code N) ECO (code C) EPDM-HT (code Z)	All versions	Y
ATEX external	All materials	All materials	All versions	X
Functional safety				
Functional safety	All materials	All materials	All versions	no order code required
Pressure equipment standards				
ASME GEMÜ B31.3 (DN 25–350)	All materials	All materials	All versions	P, N
2014/68/EU	All materials	All materials	All versions	no order code required

Other features are not relevant for the product conformities

Availabilities - Type of design

Type of design (code) ¹⁾	
0101	All except liner code V, EPDM-HT code Z and silicone code S
1782	Only disc material code B

All other types of design can be freely combined.

1) Type of design

Code 0101: Media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag

Code 1782: Stainless steel valve disc, mechanically polished to 1.6 µm and electropolished, spigot internally polished to 1.6 µm

Order data

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

Products ordered with **bold marked ordering options** are so-called preferred series. Depending on the nominal size, these are available more quickly.

Order codes

1 Type	Code
Butterfly valve, pneumatically operated, body with C5-M coating (min. 250 µm) and integrated leakage groove, blow-out proof shaft with dust protection, multiple bearings through PTFE bushing, multiple sealing system with insertion slope, material easy to read when installed	R481

2 DN	Code
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65
DN 80	80
DN 100	100
DN 125	125
DN 150	150
DN 200	200
DN 250	250
DN 300	300
DN 350	350
DN 400	400
DN 450	450
DN 500	500
DN 600	600

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

4 Operating pressure	Code
3 bar	0
6 bar	1
10 bar	2
16 bar	3

5 Connection type	Code
PN 6/flange EN 1092, face-to-face dimension FTF EN 558 series 20	1
PN 10/flange EN 1092, face-to-face dimension FTF EN 558 series 20	2
PN 16/flange EN 1092, face-to-face dimension FTF EN 558 series 20	3

5 Connection type	Code
ANSI B16.5, Class 150, face-to-face dimension FTF EN 558 series 20	D
Flange BS 10 Tab E, face-to-face dimension FTF EN 558 series 20	S
Flange AS 2129 Tab D, face-to-face dimension FTF EN 558 series 20	T
Flange AS 2129 Tab E, face-to-face dimension FTF EN 558 series 20	U
Flange BS 10 Tab D, face-to-face dimension FTF EN 558 series 20	H
JIS 10 K, face-to-face dimension FTF EN 558 series 20	G
JIS 16 K, face-to-face dimension FTF EN 558 series 20	J

6 Body material	Code
EN-GJS-400-15 (GGG-40), epoxy coated 250 µm	2
EN-GJS-400-18-LT (GGG-40.3), epoxy coated 250 µm	3

7 Disc material	Code
1.4408 / ASTM A351 CF8M	A
1.4408, polished, roughness Ra 0.6–3.2, except disc marking	B
1.4408, HALAR coated	C
1.4469 / ASTM GR5A	D
EN-GJS-400-15 (GGG-40), epoxy coated	E
EN-GJS-400-15 (GGG-40), HALAR coated	P
EN-GJS-400-15 (GGG-40), RILSAN PA11 coated	R
2.0975/CC333G	G
1.4435/ASTM A351/CF3M/AISI 316L	I

8 Shaft material	Code
1.4021 / AISI 420	1

9 Shut-off seal material	Code
EPDM	E
SBR-AB/P (abrasion resistant)	F
CSM	H
NR (FDA/1935-2004 certification), white AB/W	I
NBR (DVGW Gas certification)	J
EPDM (FDA/1935-2004 certification), white	M
NBR	N
FKM +	O
EPDM-SHT (steam)	T
NBR (FDA/1935-2004 certification), white	U
FKM	V
EPDM (drinking water compliant)	W
EPDM-HT (FDA/1935-2004 certification)	Z

10 Liner fixing	Code
Liner bonded into body	B
Loose liner	L

11 Type of design	Code
Without	
Media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101
Valve free of oil and grease, media wetted area cleaned and packed in PE bag	0107
Stainless steel valve disc, without characters, mechanically polished to 1.6 µm and electropolished,	1782
Butterfly valve body powder coated, RAL 5015, sky blue	1892
Butterfly valve body powder coated, RAL 1023, traffic yellow	1925
Mounting parts in A4 quality. Caution! Danger of galling! Customer must provide for this!	5143
Thermal separation between actuator and valve body via mounting kit	5222
Thermal separation between actuator and valve body via dew point barrier	5226
Alu product label, black anodized, lasered marking, riveted to the body	6061

12 Special version	Code
Without	
ACS certification	A
BELGAQUA certification	B
DVGW Water certification	D
Country of origin Germany	E
DVGW Gas certification	G
NSF 61 water certification	N
Special version for oxygen maximum medium temperature: 60 °C, Media wetted materials cleaned, and grease and seal with BAM testing	O
ASME B31.3	P
DNV GL certification	S
WRAS certification	W
ATEX certification	X
ATEX certification (in the piping system)	Y

13 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

14 Actuator version	Code
Actuator version (see "Actuator assignment", page 5)	

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

Order example - standard version

Ordering option	Code	Description
1 Type	R481	Butterfly valve, pneumatically operated, body with C5-M coating (min. 250 µm) and integrated leakage groove, blow-out proof shaft with dust protection, multiple bearings through PTFE bushing, multiple sealing system with insertion slope, material easy to read when installed
2 DN	80	DN 80
3 Body configuration	W	Intermediate flange design (wafer), face-to-face dimension FTF EN 558 series 20
4 Operating pressure	3	16 bar
5 Connection type	3	PN 16/flange EN 1092, face-to-face dimension FTF EN 558 series 20
6 Body material	2	EN-GJS-400-15 (GGG-40), epoxy coated 250 µm
7 Disc material	A	1.4408 / ASTM A351 CF8M
8 Shaft material	1	1.4021 / AISI 420
9 Shut-off seal material	E	EPDM
10 Liner fixing	L	Loose liner
11 Type of design		Without
12 Special version		Without
13 Control function	1	Normally closed (NC)
14 Actuator version	SU10KC	Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0100U 6F05/07S17D11
15 CONEXO		Without

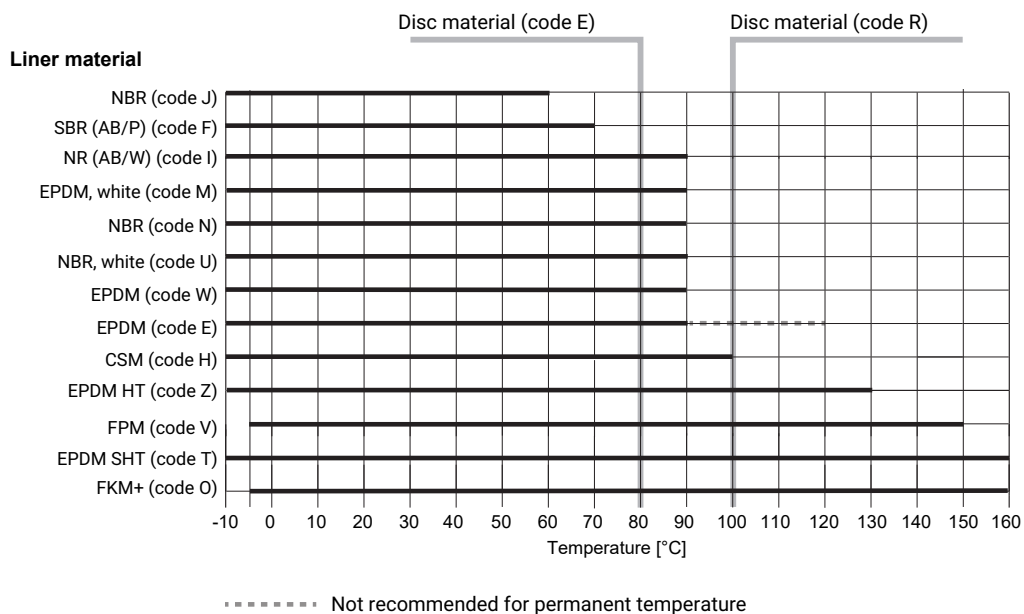
Technical data

Medium

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

Temperature

Media temperature: -10 – 160 °C
Depending on the liner and disc material or the type of liner fixing



FKM material not suitable for water/steam applications above 100 °C, Observe Pressure/Temperature diagram.

Ambient temperature: -10 – 70 °C

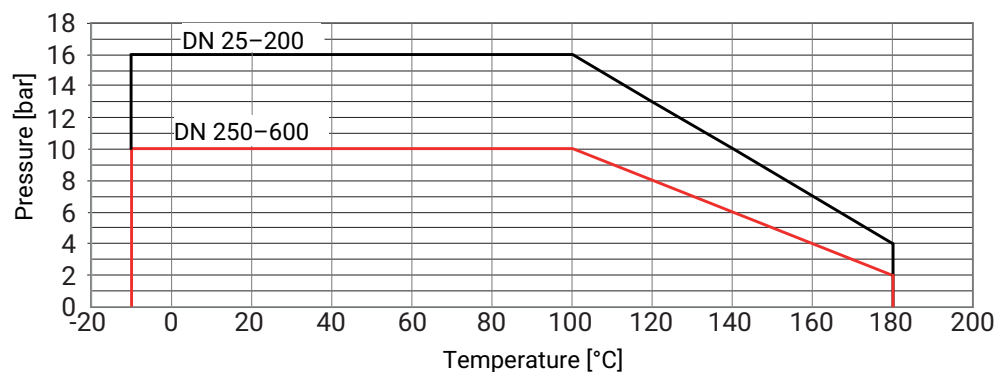
Storage temperature: -20 – 40 °C

Pressure

Operating pressure: DN 25–200: 0–16 bar
DN 250–600: 0–10 bar
Observe pressure/temperature diagram
Use as an end-of-line valve:
DN 25–200: 10 bar
DN 250–600: 6 bar

Vacuum: Can be used up to a vacuum of 800 mbar (abs) with replaceable liner or with bonded liner up to a vacuum of 2 mbar (abs) through a leakage 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 rating:

PN 3
PN 6
PN 10
PN 16

Control pressure:

6 – 8 bar

Kv values:

DN	PS [bar]	Kv values at opening angle							
		20°	30°	40°	50°	60°	70°	80°	90°
25	16	0.7	2.0	4.1	7.2	11.0	14.5	16.6	17.2
40	16	2.5	7.0	14.4	25.1	38.3	50.6	57.8	60.0
50	16	3.0	9.0	20.0	33.0	65.0	110.0	124.0	125.0
65	16	9.0	15.0	30.0	64.0	118.0	195.0	214.0	222.0
80	16	19.0	40.0	66.0	117.0	196.0	321.0	353.0	363.0
100	16	29.0	75.0	137.0	213.0	316.0	487.0	584.0	618.0
125	16	48.0	100.0	185.0	315.0	550.0	895.0	1060.0	1120.0
150	16	60.0	150.0	281.0	450.0	789.0	1280.0	1630.0	1730.0
200	3/16	110.0	281.0	472.0	759.0	1480.0	2880.0	3710.0	3900.0
250	3/10	200.0	444.0	738.0	1190.0	2110.0	3880.0	5180.0	5410.0
300	3/10	250.0	682.0	1060.0	1670.0	3120.0	6360.0	8620.0	8930.0
350	3/10	466.0	1036.0	1721.0	2767.0	4397.0	6803.0	9097.0	9494.0
400	3/10	644.0	1431.0	2376.0	3820.0	6072.0	9394.0	12561.0	13110.0
450	3/10	1039.0	2308.0	3834.0	6163.0	9796.0	15154.0	20264.0	21149.0
500	3/10	1083.0	2406.0	3997.0	6425.0	10213.0	15800.0	21127.0	22050.0
600	3/10	1563.0	3473.0	5770.0	9276.0	14744.0	22809.0	30500.0	31832.0

Kv values in m³/h

When the opening angle is below 30° no regulation should be made!

Product conformity

Machinery Directive: 2006/42/EC

Pressure equipment standards: ASME GEMÜ B31.3
2014/68/EU

The butterfly valve fulfils the technical requirements of pressure equipment categories I and II and can be used under the following conditions.

Areas of use for R481 butterfly valve as in-line valve (classification as per Pressure Equipment Directive 2014/68/EC Article 4 and Annex II)				
	Media of fluid group 1 (dangerous)		Media of fluid group 2 (other)	
PS	Gases (Section 4 (1) c) i), diagram 6)	Liquids (Section 4 (1) c) ii), diagram 8)	Gases (Section 4 (1) c) i), diagram 7)	Liquids (Section 4 (1) c) ii), diagram 9)
16	DN25 – DN200	DN25 – DN200*	DN25 – DN200*	DN25 – DN200*
10	DN25 – DN350	DN25 – DN600	DN25 – DN500	DN25 – DN600
6	DN25 – DN350	DN25 – DN600	DN25 – DN600	DN25 – DN600
3	DN25 – DN350	DN25 – DN600	DN25 – DN600	DN25 – DN600

* Limit of the technical specification

When used as an end-of-line valve, a mating flange must be fitted.

Special conditions of use as an end-of-line valve: See section 7.3.

Food: FDA
Regulation (EC) No. 1935/2004

Drinking water: DVGW
ACS
WRAS
Belgaqua
NSF

Oxygen: BAM compliant, the product is suitable for application with oxygen

Gas: DVGW

Ship approval: DNV GL

Explosion protection: ATEX (2014/34/EU), order code Special version X and Y

ATEX marking: **Assessment of the body**
Special function code X
Gas:  II -/2 G Ex h -/IIB T6...T3 -/Gb X
Dust:  II -/2D Ex h -/IIIC T150°C -/Db X

Special function code Y
Gas:  II 2 G Ex h IIC/IIB T6 ... T3 Gb X
Dust:  II 2 D 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

Actuator type DR/SC
Gas:  II 2 G Ex h IIC T6...T3 Gb X
Dust:  II 2 D Ex IIIC T85°C ... T165°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	PS			
	3 bar	6 bar	10 bar	16 bar *
25	-	-	-	4.0
40	-	-	-	7.0
50	3.0	5.0	7.0	9.0
65	8.0	10.0	13.0	15.0
80	10.0	15.0	20.0	25.0
100	15.0	20.0	30.0	40.0
125	25.0	35.0	45.0	60.0
150	40.0	50.0	80.0	100.0
200	100.0	-	-	160.0
250	140.0	-	200.0	-
300	200.0	-	330.0	-
350	255.0	-	430.0	-
400	580.0	-	1035.0	-
450	600.0	-	1150.0	-
500	860.0	-	1250.0	-
600	1441.0	-	2140.0	-

Torques in Nm

* Standard

Working medium water (20 °C) and optimal operating conditions

Weight:**Butterfly valve**

DN	Wafer	Lug	U section
25	1.2	-	-
40	1.5	-	-
50	1.7	2.2	-
65	2.5	2.9	-
80	3.2	4.4	-
100	4.4	6.2	-
125	5.9	8.1	-
150	7.7	10.1	-
200	13.9	18.4	-
250	19.6	28.7	-
300	27.3	36.8	-
350	48.0	66.0	-
400	72.0	110.0	107.0
450	95.0	-	125.0
500	120.0	-	164.0
600	192.0	-	261.0

Weights in kg

Actuator type ADA/ASR

Type	ADA (double acting)	ASR (single acting)
0020U	1.4	1.5
0040U	2.1	2.3
0080U	3.0	3.7
0130U	3.8	4.8
0200U	5.6	7.3
0300U	8.5	10.8
0500U	11.2	15.4
0850U	16.9	22.2
1200U	25.8	34.3
1750U	32.5	46.0
2100U	49.0	68.0
2500U	69.6	99.9
4000U	129.4	182.9

Weights in kg

Weight:

Actuator DR/SC

Type	DR (double acting)	SC (single acting)
0015U	1.0	1.1
0030U	1.6	1.7
0060U	2.7	3.1
0100U	3.7	4.3
0150U	5.2	6.1
0220U	8.0	9.3
0300U	9.8	12.0
0450U	14.0	17.0
0600U	18.0	22.0
0900U	24.0	33.0
1200U	34.0	42.0
2000U	53.0	67.0
3000U	74.0	93.0
4000U	123.0	155.0
5000U	127.0	169.0

Weights in kg

Type	GDR (double acting)	GSR (single acting)
0032	0.5	-
0050	1.1	1.2
0065	1.5	1.8
0075	2.6	3.2
0085	3.4	4.3
0100	5.1	6.6
0115	8.0	10.6
0125	10.0	13.4
0140	11.0	17.2
0160	19.5	24.4
0180	26.0	37.5

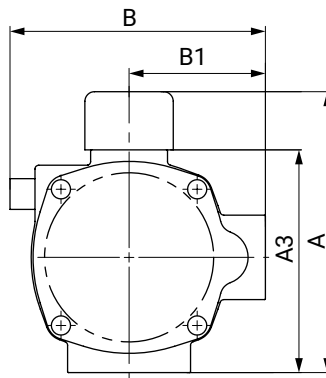
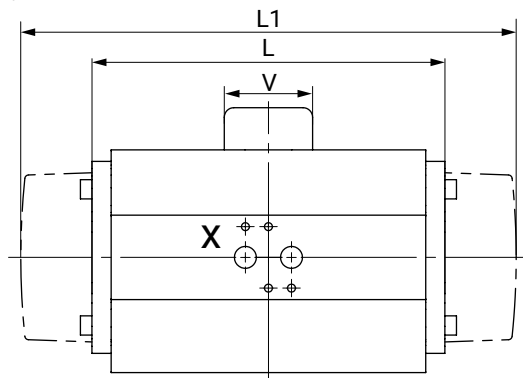
Weights in kg

Dimensions

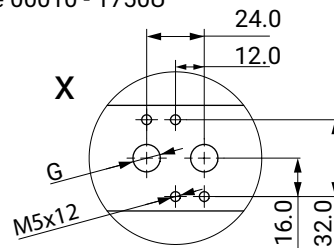
Actuator dimensions

ADA/ASR

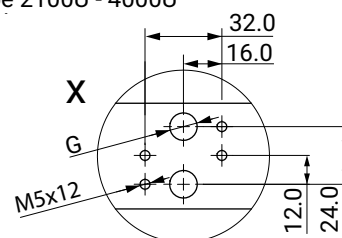
Type 00010 - 4000U



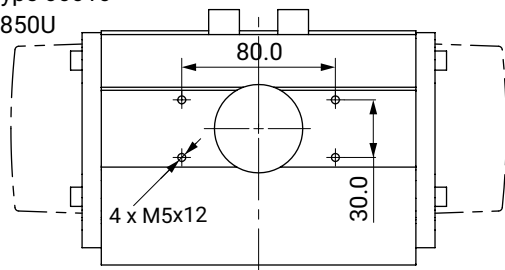
Type 00010 - 1750U



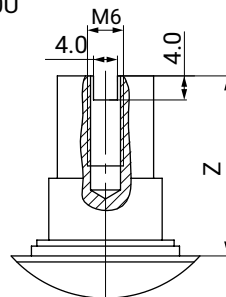
Type 2100U - 4000U



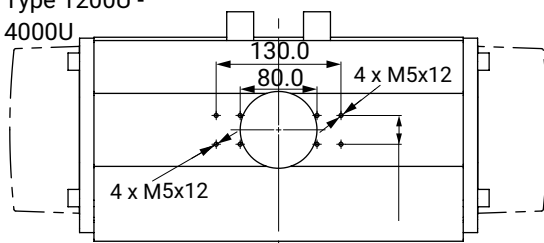
Type 00010 - 0850U



Type 00010 - 4000U



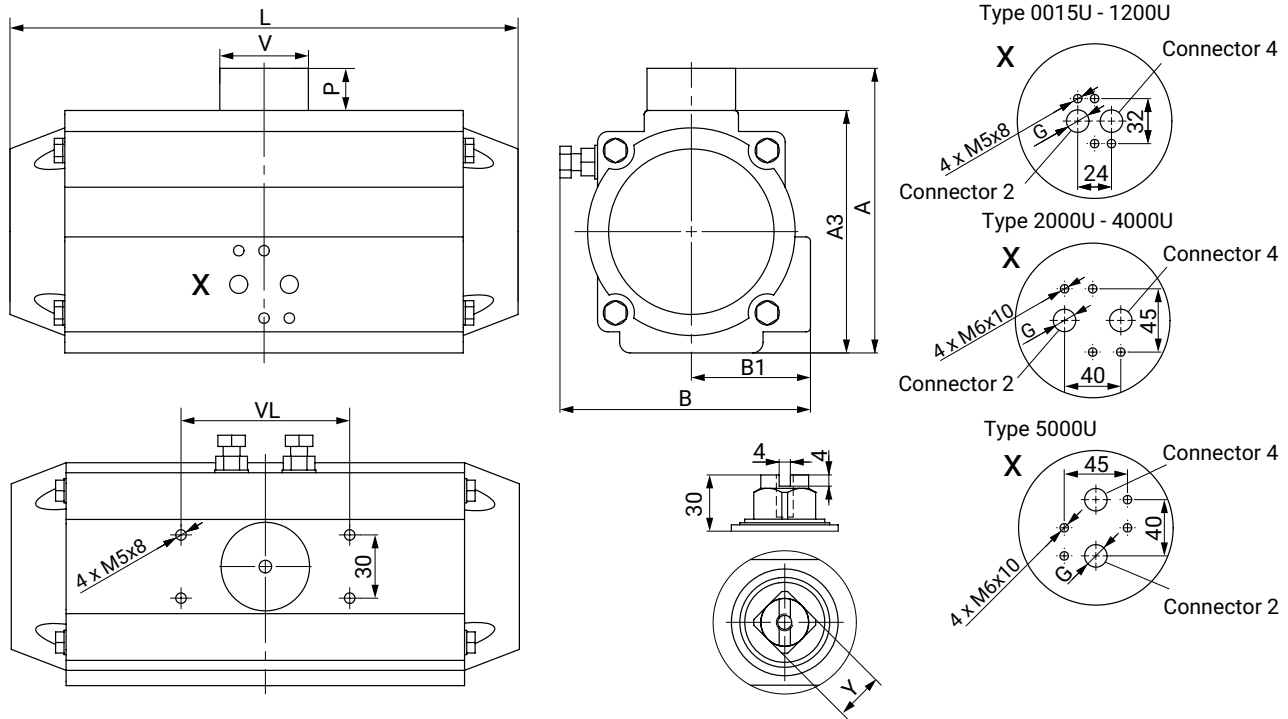
Type 1200U - 4000U



Type	A	A3	B	B1	G	L	L1	V	Z
0020U	96.0	66.0	76.0	48.0	G1/4"	145.0	163.0	40.0	30.0
0040U	115.0	85.0	91.0	56.0	G1/4"	158.0	195.0	40.0	30.0
0080U	137.0	107.0	111.0	66.0	G1/4"	177.0	217.0	40.0	30.0
0130U	147.0	117.0	122.0	71.0	G1/4"	196.0	258.0	40.0	30.0
0200U	165.0	135.0	135.5	78.0	G1/4"	225.0	299.0	40.0	30.0
0300U	182.0	152.0	152.5	86.0	G1/4"	273.0	348.5	40.0	30.0
0500U	199.0	169.0	173.0	96.0	G1/4"	304.0	397.0	40.0	30.0
0850U	221.0	191.0	191.5	106.0	G1/4"	372.0	473.0	40.0	30.0
1200U	249.0	219.0	212.5	116.0	G1/4"	439.0	560.0	65.0	30.0
1750U	280.0	250.0	242.5	131.0	G1/4"	461.0	601.0	65.0	30.0
2100U	313.0	283.0	276.5	148.0	G1/4"	510.0	702.0	65.0	30.0
2500U	383.0	353.0	356.0	177.5	G1/4"	518.0	738.0	65.0	30.0
4000U	434.0	404.0	415.0	213.0	G1/4"	630.0	940.0	65.0	30.0

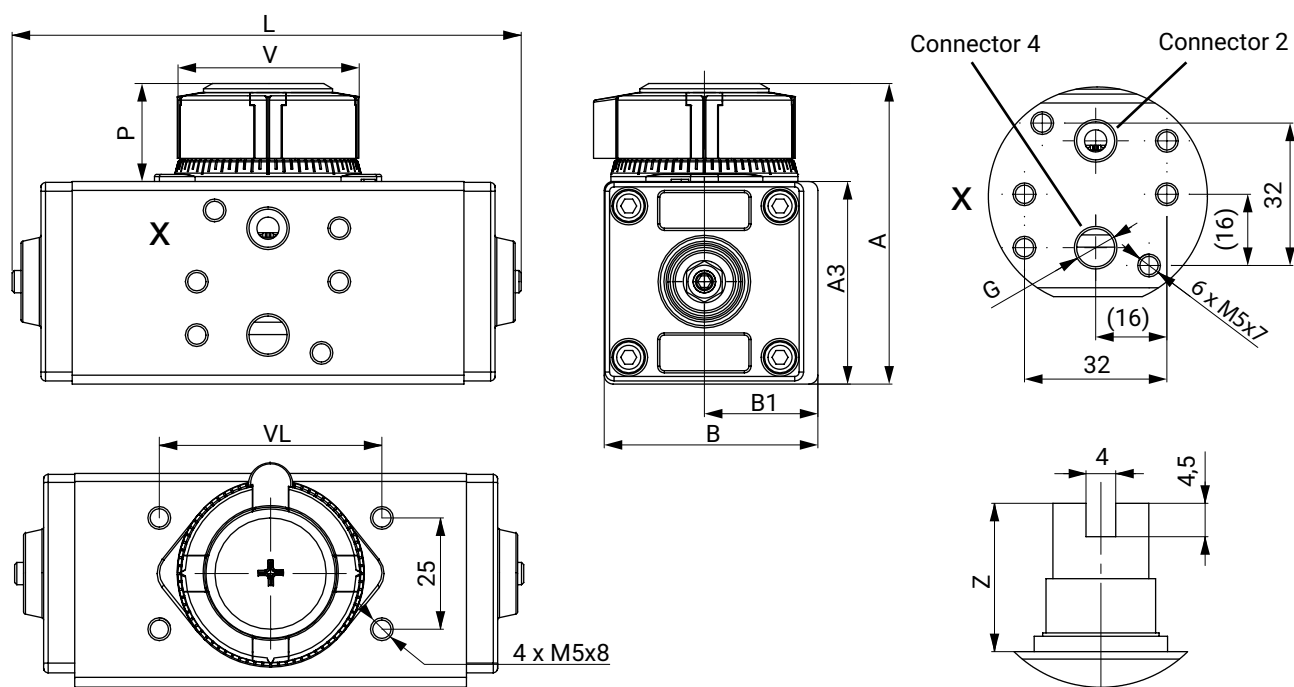
Dimensions in mm

DR/SC



Type	A	A3	B	B1	V	VL	G	P	L	Y
0015U	89.0	69.0	72.0	43.0	42.0	80.0	G1/8"	20.0	136.0	11.0
0030U	105.0	85.0	84.5	48.5	42.0	80.0	G1/8"	20.0	153.5	11.0
0060U	122.0	102.0	93.0	50.5	42.0	80.0	G1/8"	20.0	203.5	17.0
0100U	135.0	115.0	106.0	56.5	42.0	80.0	G1/8"	20.0	241.0	17.0
0150U	147.0	127.0	118.5	63.0	42.0	80.0	G1/4"	20.0	259.0	17.0
0220U	175.0	145.0	136.0	72.0	58.0	80.0	G1/4"	30.0	304.0	27.0
0300U	187.0	157.0	146.5	77.0	58.0	80.0	G1/4"	30.0	333.0	27.0
0450U	207.0	177.0	166.0	86.0	67.5	80.0	G1/4"	30.0	394.5	27.0
0600U	226.0	196.0	181.0	93.0	67.5	80.0	G1/4"	30.0	422.5	27.0
0900U	270.5	220.5	200.0	101.0	80.0	130.0	G1/4"	50.0	474.0	36.0
1200U	295.0	245.0	221.5	111.5	80.0	130.0	G1/4"	50.0	528.0	36.0
2000U	348.5	298.5	262.0	131.0	115.0	130.0	G3/8"	50.0	605.0	36.0
3000U	380.0	330.0	330.0	165.0	115.0	130.0	G1/2"	50.0	710.0	36.0
4000U	433.0	383.0	371.0	185.5	115.0	130.0	G1/2"	50.0	812.0	36.0
5000U	460.0	410.0	418.0	214.0	115.0	130.0	G1/2"	50.0	876.0	36.0

Dimensions in mm

GDR/GSR**Type G0032**

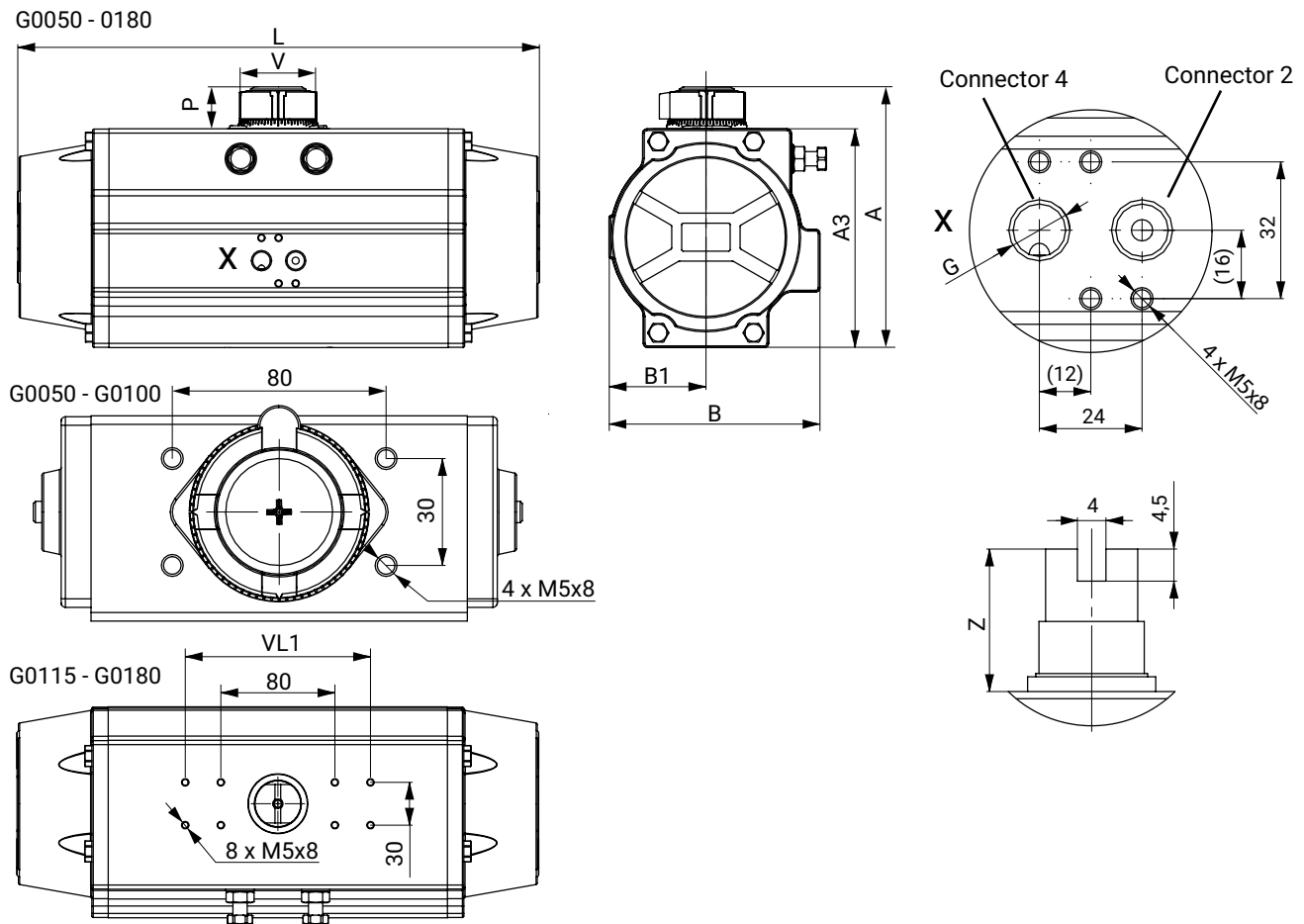
The control air connector (view X) for GDR0032 is not compatible for direct mounting with a Namur pilot valve, or a throttle of type 8500/8506.

Provide the control air connector with external thread fittings and a compressed air hose

Type	A	A3	B	B1	V	G	P	VL	Z	L
G0032	67.5	45.5	49.0	26.5	40.0	G1/8"	22.0	50.0	20.0	115.0

Dimensions in mm

Type G0050 – G0180

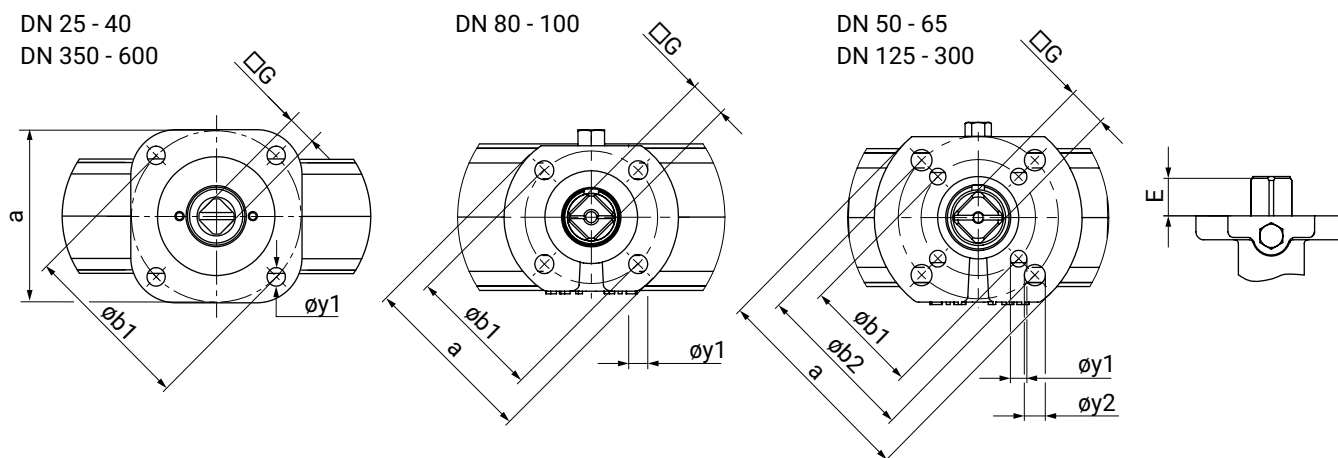


Type	A	A3	B	B1	V	G	P	VL	Z	L	VL1
G0050	92.0	70.0	71.0	30.0	40.0	G1/8"	22.0	80.0	20.0	141.0	-
G0065	102.5	80.5	80.5	35.5	40.0	G1/8"	22.0	80.0	20.0	162.0	-
G0075	119.0	97.0	94.5	42.0	40.0	G1/8"	22.0	80.0	20.0	208.0	-
G0085	130.5	108.5	106.0	47.5	40.0	G1/8"	22.0	80.0	20.0	237.0	-
G0100	143.5	121.5	123.0	55.0	40.0	G1/4"	22.0	80.0	20.0	271.5	-
G0115	174.0	142.0	137.0	64.0	65.0	G1/4"	32.0	80.0	30.0	337.0	130.0
G0125	185.5	153.5	148.0	68.0	65.0	G1/4"	32.0	80.0	30.0	366.0	130.0
G0140	207.9	175.9	164.0	76.5	65.0	G1/4"	32.0	80.0	30.0	428.5	130.0
G0160	225.0	193.0	188.0	88.0	65.0	G1/4"	32.0	80.0	30.0	512.0	130.0
G0180	251.0	219.0	212.5	96.5	65.0	G1/4"	32.0	80.0	30.0	573.0	130.0

Dimensions in mm

Body dimensions

Actuator flange



DN	ISO 5211	a	øb1	øy1	øb2	øy2	E		□G		Code
							PS3	PS10/ PS16	PS3	PS10/ PS16	
25	F05	50.0	50.0	7.0	-	-	-	19.0	-	9.0	05 D09
32	F05	□50,0	50,0	7,0	-	-	-	19.0	-	9.0	05 D09
40	F05	50.0	50.0	7.0	-	-	-	19.0	-	9.0	05 D09
50	F03 F05	65.0	36.0	6.0	50.0	7.0	-	19.0	-	9.0	05 D09
65	F03 F05	65.0	36.0	6.0	50.0	7.0	-	19.0	-	11.0	05 D11
80	F05	65.0	50.0	7.0	-	-	-	19.0	-	11.0	05 D11
100	F05	65.0	50.0	7.0	-	-	-	19.0	-	14.0	05 D14
125	F05 F07	90.0	50.0	7.0	70.0	9.0	-	25.0	-	17.0	07 D17
150	F05 F07	90.0	50.0	7.0	70.0	9.0	-	25.0	-	17.0	07 D17
200	F07 F10	125.0	70.0	9.0	102.0	11.0	25.0	32.0	17.0	22.0	10 D22
250	F07 F10	125.0	70.0	9.0	102.0	11.0	25.0	32.0	17.0	22.0	10 D22
300	F07 F10	125.0	70.0	9.0	102.0	11.0	25.0	32.0	17.0	22.0	10 D22
350	F12	130.0	125.0	13.0	-	-	28.0	28.0	22.0	27.0	12 D27
400	F14	160.0	140.0	17.0	-	-	28.0	37.0	27.0	36.0	14 D36
450	F14	160.0	140.0	17.0	-	-	28.0	37.0	27.0	36.0	14 D36
500	F14	160.0	140.0	17.0	-	-	28.0	37.0	27.0	36.0	14 D36
600	F16	200.0	165.0	21.0	-	-	37.0	47.0	36.0	46.0	16 D46

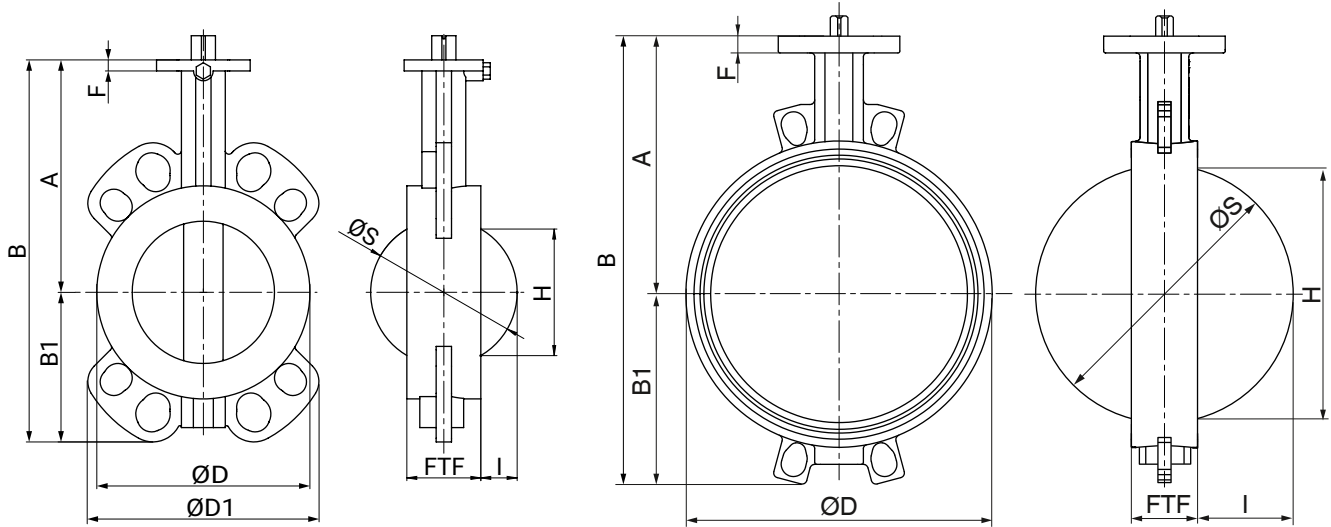
Dimensions in mm

Body

Wafer body configuration

DN 25 - 100

DN 125 - 600



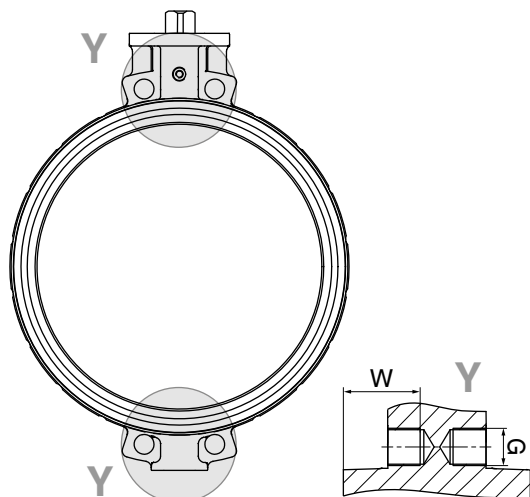
DN	A	B	B1	ØD	ØD1	F	FTF	H*	ØS	I
25	100.0	141.3	41.3	59.5	88.6	12.0	25.0	16.0	26.5	0.5
32	120.0	173.8	53.8	75.8	109.8	12.0	43.0	24.5	41.5	4.0
40	120.0	173.8	53.8	75.8	109.8	12.0	43.0	24.5	41.5	4.0
50	120.0	182.0	62.0	90.0	118.0	12.0	43.0	29.0	52.0	5.0
65	137.0	218.0	81.0	108.0	133.0	12.0	46.0	48.0	67.0	10.0
80	145.0	231.0	87.0	130.0	141.0	12.0	46.0	68.0	82.0	18.0
100	166.0	271.0	105.0	150.0	163.0	14.0	52.0	88.0	102.0	25.0
125	187.0	304.0	117.0	175.0	120.0	16.0	56.0	114.0	127.0	35.0
150	200.0	332.0	132.0	207.0	129.0	16.0	56.0	141.0	152.0	48.0
200	240.0	413.0	173.0	263.0	157.0	17.0	60.0	193.0	202.0	71.0
250	265.0	466.0	201.0	317.0	185.0	17.0	68.0	242.0	252.0	92.0
300	290.0	531.0	241.0	366.0	164.0	17.0	78.0	291.0	302.0	112.0
350	321.0	587.0	266.0	440.0	440.0	15.0	78.0	329.0	337.4	130.0
400	347.0	655.0	308.0	485.0	485.0	20.0	102.0	379.0	391.4	145.0
450	372.0	705.0	333.0	541.0	541.0	20.0	114.0	428.0	441.4	164.0
500	398.0	756.0	358.0	600.0	600.0	20.0	127.0	478.0	493.4	183.5
600	470.0	912.0	442.0	700.0	700.0	24.0	154.0	574.0	593.4	220.0

Dimensions in mm

* Please note dimension H to prevent disc binding on internal pipe

Please note: chamfer flanges for plastic pipelines if necessary

Threaded hole



Threaded hole (detail Y)

DN	Connection type code ¹⁾					
	2		3		D	
	G	W	G	W	G	W
450	M24	46	M27	46	Ø 31,7	-

Dimensions in mm

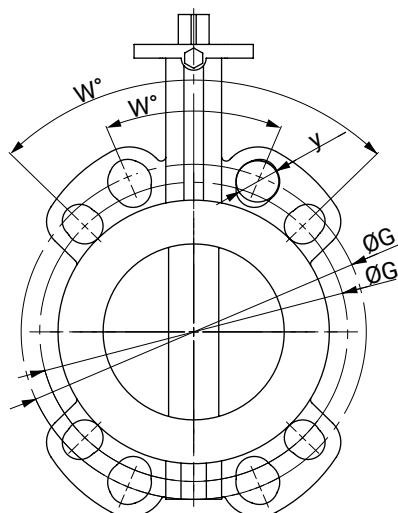
1) Connection type

Code 2: PN 10/flange EN 1092, face-to-face dimension FTF EN 558 series 20

Code 3: PN 16/flange EN 1092, face-to-face dimension FTF EN 558 series 20

Code D: ANSI B16.5, class 150, face-to-face dimension FTF EN 558, series 20, For lug bodies/threaded holes with UNC thread

Connections

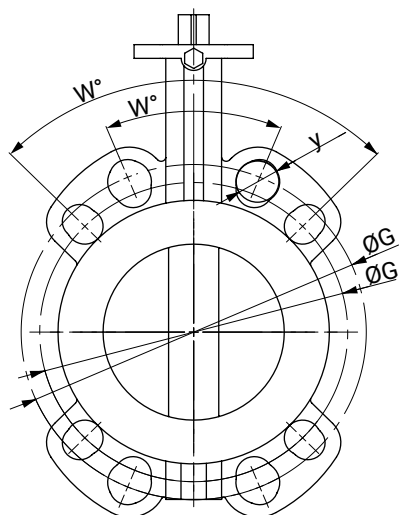


Connection EN1092, ANSI B16.5

DN	INCH	Connection (code)															
		EN1092-1 PN6 (code 1)				EN1092-1 PN10 (code 2)				EN1092-1 PN16 (code 3)				ANSI B16.5/CL150 (code D)			
DIN	ANSI	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y
25	1"	90	4	75.0	M10	90	4	85.0	M12	90	4	85.0	M12	90	4	79.0	1/2"
32	1¼"	90	4	90.0	M12	90	4	100.0	M16	90	4	100.0	M16	90	4	89.0	1/2"
40	1½"	90	4	100.0	M12	90	4	110.0	M16	90	4	110.0	M16	90	4	98.0	1/2"
50	2"	90	4	110.0	14.0	90	4	125.0	18.0	90	4	125.0	18.0	90	4	120.6	19.0
65	2½"	90	4	130.0	14.0	45	8	145.0	18.0	45	8	145.0	18.0	90	4	139.7	19.0
80	3"	90	4	150.0	18.0	45	8	160.0	18.0	45	8	160.0	18.0	90	4	152.4	19.0
100	4"	90	4	170.0	18.0	45	8	180.0	18.0	45	8	180.0	18.0	45	8	190.5	19.0
125	5"	45	8	200.0	18.0	45	8	210.0	18.0	45	8	210.0	18.0	45	8	215.9	22.2
150	6"	45	8	225.0	18.0	45	8	240.0	22.0	45	8	240.0	22.0	45	8	241.3	22.2
200	8"	45	8	280.0	18.0	45	8	295.0	22.0	30	12	295.0	22.0	45	8	298.5	22.2
250	10"	30	12	335.0	18.0	30	12	350.0	22.0	30	12	355.0	26.0	30	12	362.0	25.4
300	12"	30	12	395.0	22.0	30	12	400.0	22.0	30	12	410.0	26.0	30	12	431.8	25.4
350	14"	-	-	-	-	22.5	16	460.0	M20	22.5	16	470.0	M24	30	12	476.0	1"
400	16"	-	-	-	-	22.5	16	515.0	M24	22.5	16	525.0	M27	22.5	16	540.0	1"
450	18"	-	-	-	-	18	20	565.0	M24	18	20	585.0	M27	22.5	16	578.0	1⅝"
500	20"	-	-	-	-	18	20	620.0	M24	18	20	650.0	M30	18	20	635.0	1⅝"
600	24"	-	-	-	-	18	20	725.0	M27	18	20	770.0	M33	18	20	749.0	1¼"

Dimensions in mm

n = number of bolts

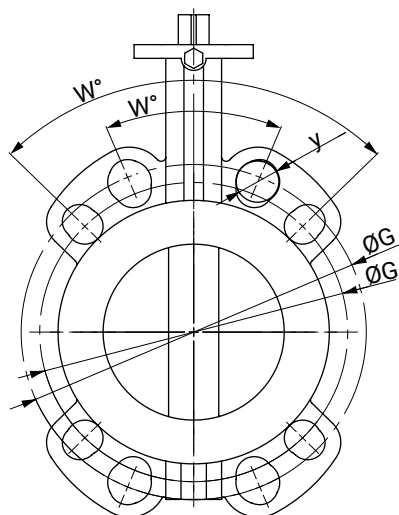


Connection AS2129, BS10

DN	INCH	Connection (code)															
		AS 2129 D (code T)				AS 2129 E (code U)				BS10 D (code H)				BS10 E (code S)			
DIN	ANSI	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y
25	1"	90	4	83.0	M12	90	4	83.0	M12	90	4	83.0	M12	90	4	83.0	M12
32	1¼"	90	4	87.0	M12	90	4	87.0	M12	90	4	87.0	M12	90	4	87.0	M12
40	1½"	90	4	98.0	M12	90	4	98.0	M12	90	4	98.0	M12	90	4	98.0	M12
50	2"	90	4	114.0	18.0	90	4	114.0	18.0	90	4	114.3	17.5	90	4	114.3	17.5
65	2½"	90	4	127.0	18.0	90	4	127.0	18.0	90	4	127.0	17.5	90	4	127.0	17.5
80	3"	90	4	146.0	18.0	90	4	146.0	18.0	90	4	146.1	17.5	90	4	146.1	17.5
100	4"	90	4	178.0	18.0	45	8	178.0	18.0	90	4	177.8	17.5	45	8	177.8	17.5
125	5"	45	8	210.0	18.0	45	8	210.0	18.0	45	8	209.6	17.5	45	8	209.6	17.5
150	6"	45	8	235.0	18.0	45	8	235.0	22.0	45	8	235.0	17.5	45	8	235.0	20.6
200	8"	45	8	292.0	18.0	45	8	292.0	22.0	45	8	292.1	17.5	45	8	292.1	20.6
250	10"	45	8	356.0	22.0	30	12	356.0	22.0	45	8	355.6	22.2	30	12	355.6	22.2
300	12"	30	12	406.0	22.0	30	12	406.0	26.0	30	12	406.4	22.2	30	12	406.4	25.4
350	14"	30	12	470.0	M22	30	12	470.0	M27	30	12	470.0	M22	30	12	470.0	M27
400	16"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
450	18"	-	-	-	-	22.5	16	584.0	M24	-	-	-	-	22.5	16	584.0	M24
500	20"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	24"	22.5	16	756.0	M27	22.5	16	756.0	M30	22.5	16	756.0	M27	22.5	16	756.0	M30

Dimensions in mm

n = number of bolts


Connection JIS K10, K16

DN	INCH	Connection (code)							
		JIS-K10 (code G)				JIS-K16 (code J)			
DIN	ANSI	w°	n	$\varnothing G$	y	w°	n	$\varnothing G$	y
25	1"	90	4	90.0	M16	90	4	90.0	M16
32	1¼"	90	4	100.0	M16	90	4	100.0	M16
40	1½"	90	4	105.0	M16	90	4	105.0	M16
50	2"	90	4	120.0	19.0	45	8	120.0	19.0
65	2½"	90	4	140.0	19.0	45	8	140.0	19.0
80	3"	45	8	150.0	19.0	45	8	160.0	23.0
100	4"	45	8	175.0	19.0	45	8	185.0	23.0
125	5"	45	8	210.0	23.0	-	-	-	-
150	6"	45	8	240.0	23.0	-	-	-	-
200	8"	30	12	290.0	23.0	30	12	305.0	25.0
250	10"	30	12	355.0	25.0	-	-	-	-
300	12"	22,5	16	400.0	25.0	-	-	-	-
350	14"	-	-	-	-	-	-	-	-
400	16"	22.5	16	510.0	M24	-	-	-	-
450	18"	18	20	565.0	M24	-	-	-	-
500	20"	18	20	620.0	M24	-	-	-	-
600	24"	15	24	730.0	M30	-	-	-	-

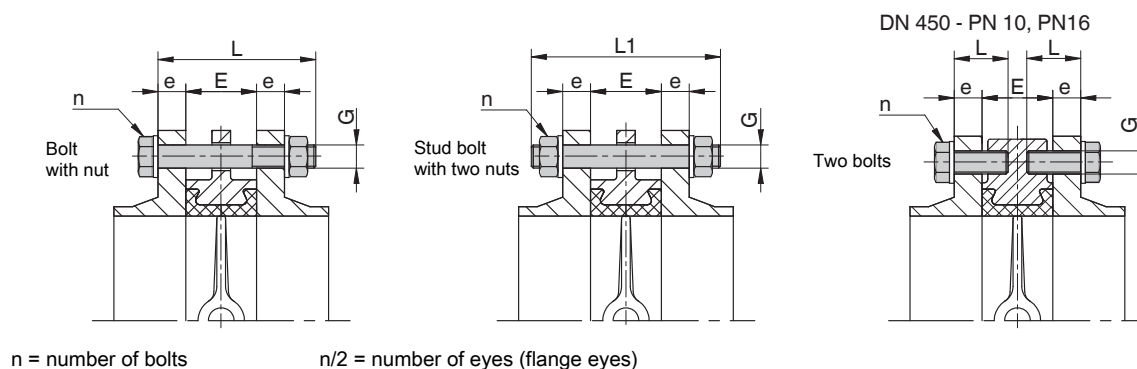
Dimensions in mm
n = number of bolts

Availabilities

Flange	Wafer																
	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
EN1092-1 PN6	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-
EN1092-1 PN10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EN1092-1 PN16	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ANSI B16.5/CL150	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	T	T	-	-	T
AS 2129 E	U	U	U	U	U	U	U	U	U	U	U	U	U	U	-	U	U
JIS 5 K	K	K	K	-	K	K	-	K	K	K	K	-	-	-	-	-	-
JIS-K10	G	G	G	G	G	G	G	G	G	G	G	G	-	G	G	G	G
JIS-K16	J	J	J	J	J	J	J	-	-	J	-	-	-	-	-	-	-
BS10 D	H	H	H	H	H	H	H	H	H*	H*	H	H*	H	-	-	-	H
BS10 E	S	S	S	S	S	S	S	S	S	S*	S*	S	S	-	S	-	S

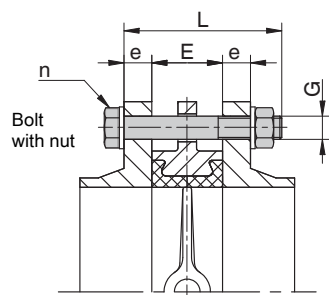
* Note: It is important to centrically align the butterfly valve during installation

Connection – screws, bolts

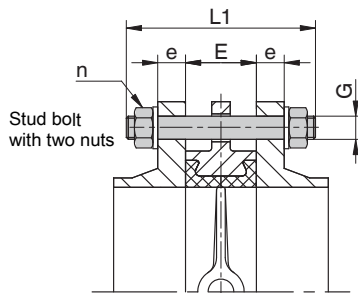


DN	E	Connection (code)									
		EN1092-1 PN10 (code 2)					EN1092-1 PN16 (code 3)				
		e	L	L1	n	G	e	L	L1	n	G
25	25	18	85	100	4	M12	18	85	100	4	M12
32	33	18	90	110	4	M12	18	90	110	4	M16
40	33	18	90	110	4	M12	18	90	110	4	M16
50	43	18	100	120	4	M16	18	100	120	4	M16
65	46	18	100	120	4	M16	18	100	120	4	M16
80	46	20	110	130	8	M16	20	110	130	8	M16
100	52	20	110	130	8	M16	20	110	130	8	M16
125	56	22	120	140	8	M16	22	120	140	8	M16
150	56	22	130	150	8	M20	22	130	150	8	M20
200	60	24	130	160	8	M20	24	130	160	12	M20
250	68	26	150	170	12	M20	26	150	170	12	M24
300	78	26	160	180	12	M20	28	160	180	12	M24
350	78	26	170	180	16	M20	30	170	190	16	M24
400	102	26	180	210	16	M24	32	200	220	16	M27
450	114	26	190	220	16	M24	32	210	240	16	M27
	114	26	60	-	8	M24	32	60	-	8	M27
500	127	28	210	230	20	M24	34	230	260	20	M30
600	154	28	240	270	20	M27	36	260	290	20	M33

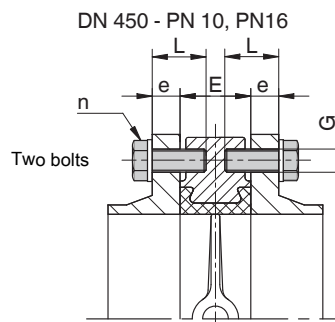
Dimensions in mm



Bolt with nut



Stud bolt with two nuts



DN 450 - PN 10, PN 16

Two bolts

n = number of bolts

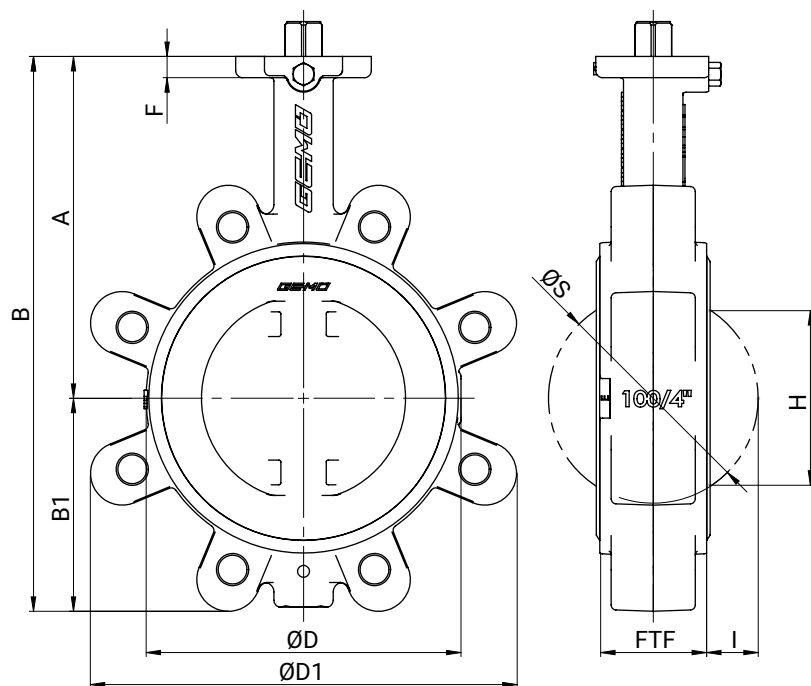
n/2 = number of eyes (flange eyes)

DN	E	ANSI B16.5/CL150 (code D)				
		e	L	L1	n	G ¹⁾
25	25	14.3	85	100	4	1/2"-13
32	33	17.5	90	110	4	1/2"-13
40	33	17.5	90	110	4	1/2"-13
50	43	19.0	100	120	4	5/8"-11
65	46	22.2	110	130	4	5/8"-11
80	46	23.8	110	130	4	5/8"-11
100	52	23.8	120	140	8	5/8"-11
125	56	23.8	130	150	8	3/4"-10
150	56	25.4	130	150	8	3/4"-10
200	60	28.6	140	160	8	3/4"-10
250	68	30.2	160	180	12	7/8"-9
300	78	31.7	170	190	12	7/8"-9
350	78	34.9	180	200	12	1"-8
400	102	36.5	210	230	16	1"-8
450	114	39.7	230	250	16	1 1/8"-7
450	114	39.7	230	250	16	1 1/8"-7
500	127	46.0	250	280	20	1 1/8"-7
600	154	47.6	280	310	20	1 1/4"-7

Dimensions in mm

1) Thread acc. to UNC

Lug body configuration



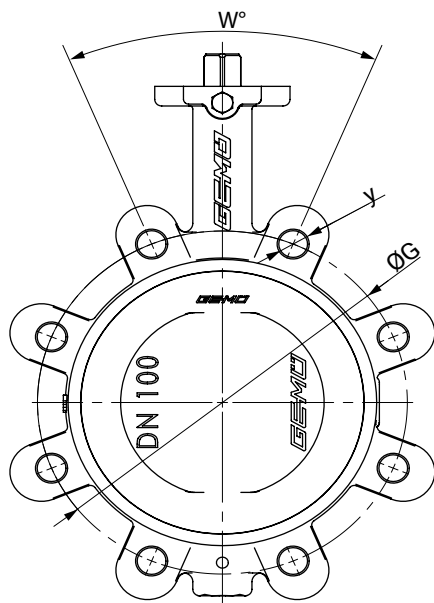
DN	A	B	B1	ØD	ØD1	F	FTF	H*	ØS	I
50	120.0	182.0	62.0	91.0	116.0	12.0	44.0	29.0	52.0	4.0
65	137.0	219.0	82.0	109.0	126.0	12.0	46.0	48.0	67.0	10.0
80	145.0	234.0	89.0	131.0	177.0	12.0	46.0	68.0	82.0	18.0
100	166.0	270.0	104.0	153.0	207.0	14.0	52.0	88.0	102.0	25.0
125	187.0	305.0	118.0	175.0	231.0	16.0	56.0	114.0	127.0	36.0
150	200.0	333.0	133.0	208.0	255.0	16.0	56.0	141.0	152.0	48.0
200	240.0	415.0	175.0	264.0	325.0	17.0	60.0	193.0	202.0	71.0
250	265.0	467.0	202.0	317.0	386.0	17.0	68.0	242.0	252.0	92.0
300	290.0	531.0	241.0	366.0	459.0	17.0	78.0	291.0	302.0	112.0
350	321.0	581.0	260.0	520.0	520.0	15.0	78.0	329.0	337.4	130.0
400	347.0	647.0	300.0	596.0	596.0	20.0	102.0	379.0	391.4	145.0

Dimensions in mm

* Please note dimension H to prevent disc binding on internal pipe

Please note: chamfer flanges for plastic pipelines if necessary

Connections



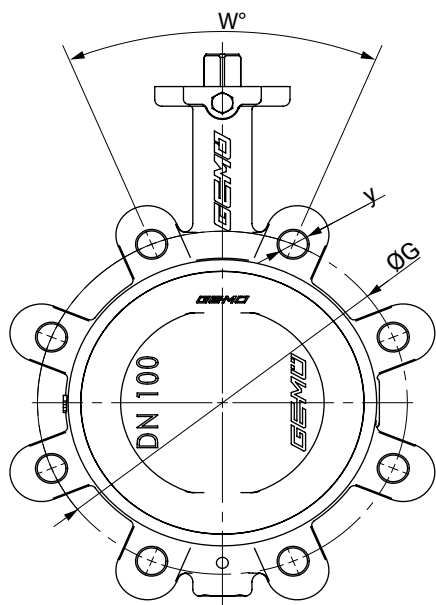
Connection EN1092, ANSI B16.5

DN	INCH	Connection (code)															
		EN1092-1 PN6 (code 1)				EN1092-1 PN10 (code 2)				EN1092-1 PN16 (code 3)				ANSI B16.5/CL150 (code D)			
DIN	ANSI	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y
50	2"	90	4	110.0	M12	90	4	125.0	M16	90	4	125.0	M16	90	4	120.6	5/8"
65	2½"	90	4	130.0	M12	90	4*	145.0	M16	45	8*	145.0	M16	90	4	139.7	5/8"
80	3"	90	4	150.0	M16	45	8	160.0	M16	45	8	160.0	M16	90	4	152.4	5/8"
100	4"	90	4	170.0	M16	45	8	180.0	M16	45	8	180.0	M16	45	8	190.5	5/8"
125	5"	45	8	200.0	M16	45	8	210.0	M16	45	8	210.0	M16	45	8	215.9	3/4"
150	6"	45	8	225.0	M16	45	8	240.0	M20	45	8	240.0	M20	45	8	241.3	3/4"
200	8"	45	8	280.0	M16	45	8	295.0	M20	30	12	295.0	M20	45	8	298.5	3/4"
250	10"	30	12	335.0	M16	30	12	350.0	M20	30	12	355.0	M24	30	12	362.0	7/8"
300	12"	30	12	395.0	M20	30	12	400.0	M20	30	12	410.0	M24	30	12	431.8	7/8"
350	14"	30	12	445.0	M20	22.5	16	460.0	M20	22.5	16	470.0	M24	30	12	476.0	1"
400	16"	22.5	16	495.0	M20	22.5	16	515.0	M24	22.5	16	525.0	M27	22.5	16	540.0	1"

Dimensions in mm

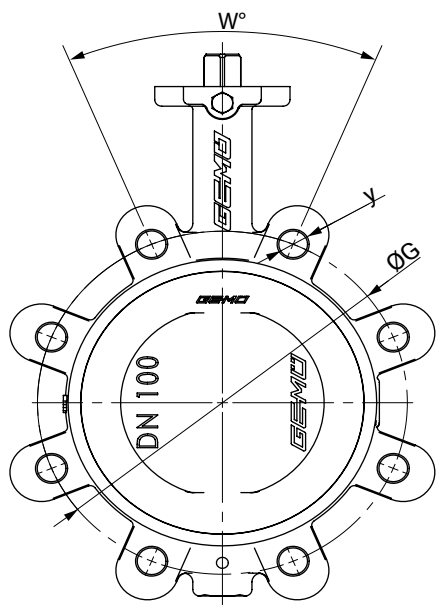
n = number of bolts

* Standard: 8 holes code 3 (PN16); if 4 holes are required, select code 2 (PN10);


Connection AS 2129, BS10

DN	INCH	Connection (code)															
		AS 2129 D (code T)				AS 2129 E (code U)				BS10 D (code H)				BS10 E (code S)			
DIN	ANSI	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y
50	2"	90	4	114.0	M16	90	4	114.0	M16	90	4	114.3	M16	90	4	114.3	M16
65	2½"	90	4	127.0	M16	90	4	127.0	M16	90	4	127.0	M16	90	4	127.0	M16
80	3"	90	4	146.0	M16	90	4	146.0	M16	90	4	146.1	M16	90	4	146.1	M16
100	4"	90	4	178.0	M16	45	8	178.0	M16	90	4	177.8	M16	45	8	177.8	M16
125	5"	45	8	210.0	M16	45	8	210.0	M16	45	8	209.6	M16	45	8	209.6	M16
150	6"	45	8	235.0	M16	45	8	235.0	M20	45	8	235.0	M16	45	8	235.0	M20
200	8"	45	8	292.0	M16	45	8	292.0	M20	45	8	292.1	M16	45	8	292.1	M20
250	10"	45	8	356.0	M20	30	12	356.0	M20	45	8	355.6	M20	30	12	355.6	M20
300	12"	30	12	406.0	M20	30	12	406.0	M22	30	12	406.4	M20	30	12	406.4	M22
350	14"	30	12	470.0	M22	30	12	470.0	M27	30	12	470.0	M22	30	12	470.0	M27

Dimensions in mm
n = number of bolts



Connection JIS-K10

DN	INCH	Connection (code)			
		JIS-K10 (code G)			
DIN	ANSI	w°	n	ØG	y
50	2"	90.0	4	120.0	M16
65	2½"	90.0	4	140.0	M16
80	3"	45.0	8	150.0	M16
100	4"	45.0	8	175.0	M16
125	5"	45.0	8	210.0	M20
150	6"	45.0	8	240.0	M20
200	8"	30.0	12	290.0	M20
250	10"	30.0	12	355.0	M24
300	12"	22.5	16	400.0	M24
350	14"	22.5	16	445.0	M22
400	16"	22.5	16	510.0	M24

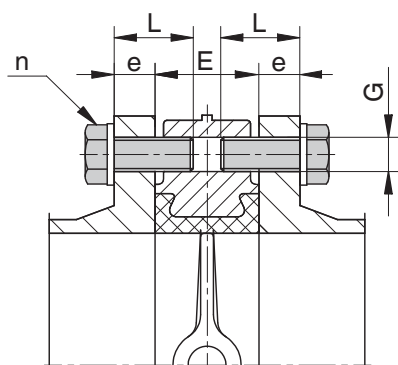
Dimensions in mm
n = number of bolts

Availabilities

Flange	Lug										
	50	65	80	100	125	150	200	250	300	350	400
EN1092-1 PN6	1	1	1	1	1	1	1	1	1	-	-
EN1092-1 PN10	3	3*	3	3	3	3	2	2	2	2	2
EN1092-1 PN16	3	3*	3	3	3	3	3	3	3	3	3
ANSI B16.5/CL150	D	D	D	D	D	D	D	D	D	D	D
AS 2129 D	T	-	T	T	T	T	T	-	T	-	-
AS 2129 E	U	-	U	U	U	U	U	U	U	-	-
JIS-K10	G	G	G	G	G	G	G	G	-	G	G
BS10 D	H	-	H	H	H	H	H	-	H	-	-
BS10 E	S	-	S	S	S	S	S	S	S	-	-

* drilled, with four threaded holes

Connection – screws, bolts

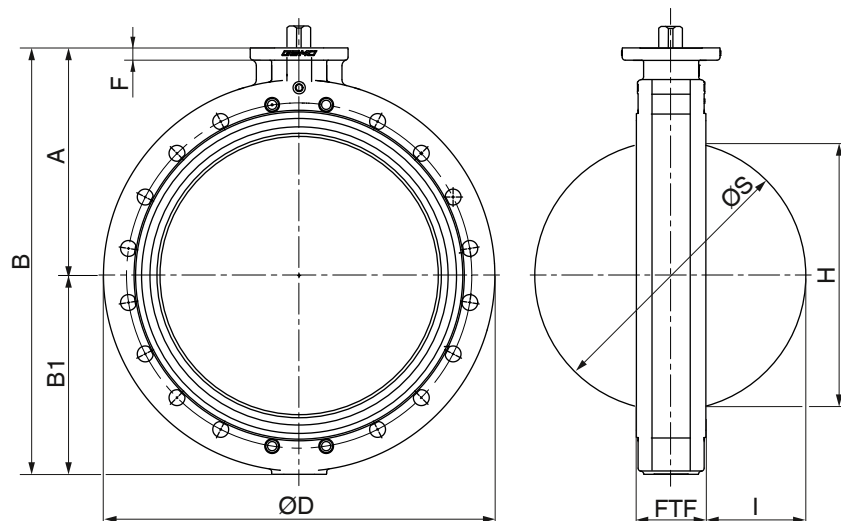


n = number of bolts (thread)

DN	E	Connection (code)											
		EN1092-1 PN10 (code 2)				EN1092-1 PN16 (code 3)				ANSI B16.5/CL150 (code D)			
		e	L	n	G	e	L	n	G	e	L	n	G ¹⁾
50	43	18	35	8	M16	18	40	8	M16	19	40	8	5/8"-11
65	46	18	40	8	M16	18	40	8	M16	22.2	45	8	5/8"-11
80	46	20	40	16	M16	20	40	16	M16	23.8	45	8	5/8"-11
100	52	20	45	16	M16	20	45	16	M16	23.8	50	16	5/8"-11
125	56	22	45	16	M16	22	45	16	M16	23.8	55	16	3/4"-10
150	56	22	45	16	M20	22	45	16	M20	25.4	55	16	3/4"-10
200	60	24	50	16	M20	24	50	24	M20	28.6	65	16	3/4"-10
250	68	26	55	24	M20	26	55	24	M24	30.2	70	24	7/8"- 9
300	78	26	60	24	M20	28	65	24	M24	31.7	80	24	7/8"- 9
350	78	26	60	32	M20	30	60	32	M24	34.9	75	24	1"- 8
400	102	26	65	32	M24	32	65	32	M27	36.5	85	32	1"- 8

Dimensions in mm

1) Thread acc. to UNC

U section body configuration

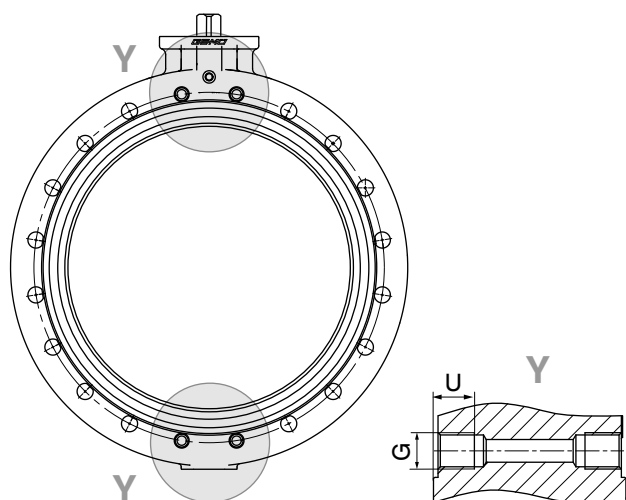
DN	A	B	B1	ØD	F	FTF	H*	I	ØS
400	347.0	662.0	315.0	596.0	20.0	102.0	379.0	145.0	391.4
450	372.0	712.0	340.0	640.0	20.0	114.0	428.0	164.0	441.4
500	398.0	763.0	365.0	715.0	20.0	127.0	478.0	183.5	493.4
600	470.0	917.0	447.0	840.0	24.0	154.0	574.0	220.0	593.4

Dimensions in mm

* Please note dimension H to prevent disc binding on internal pipe

Please note: chamfer flanges for plastic pipelines if necessary

Threaded hole



Threaded hole (detail Y)

DN	Connection type code ¹⁾					
	2		3		D	
	G	U	G	U	G ²⁾	U
400	M24	24	M27	27	1"-8	-
450	M24	24	M27	27	1 1/8"-7	30
500	M24	24	M30	30	1 1/8"-7	30
600	M27	27	M33	33	1 1/4"-7	33

Dimensions in mm

1) Connection type

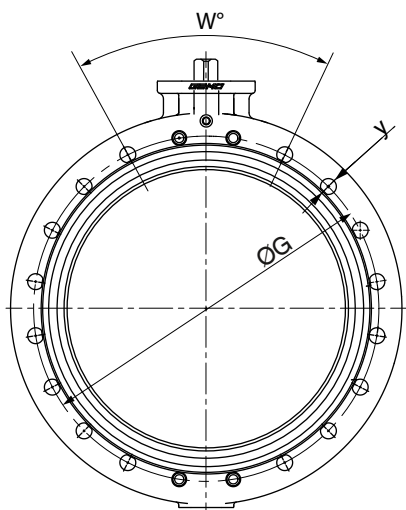
Code 2: PN 10/flange EN 1092, face-to-face dimension FTF EN 558 series 20

Code 3: PN 16/flange EN 1092, face-to-face dimension FTF EN 558 series 20

Code D: ANSI B16.5, class 150, face-to-face dimension FTF EN 558, series 20, For lug bodies/threaded holes with UNC thread

2) Thread acc. to UNC

Connections



DN	INCH	Connection (code)											
		EN1092-1 PN10 (code 2)				EN1092-1 PN16 (code 3)				ANSI B16.5/CL150 (code D)			
DIN	ANSI	w°	n	ØG	y	w°	n	ØG	y	w°	n	ØG	y
400	16"	22.5	16	515.0	M24	22.5	16	525.0	M27	22.5	16	540.0	1"
450	18"	18	20	565.0	M24	18	20	585.0	M27	22.5	16	578.0	1½"
500	20"	18	20	620.0	M24	18	20	650.0	M30	18	20	635.0	1½"
600	24"	18	20	725.0	M27	18	20	770.0	M33	18	20	749.0	1¼"

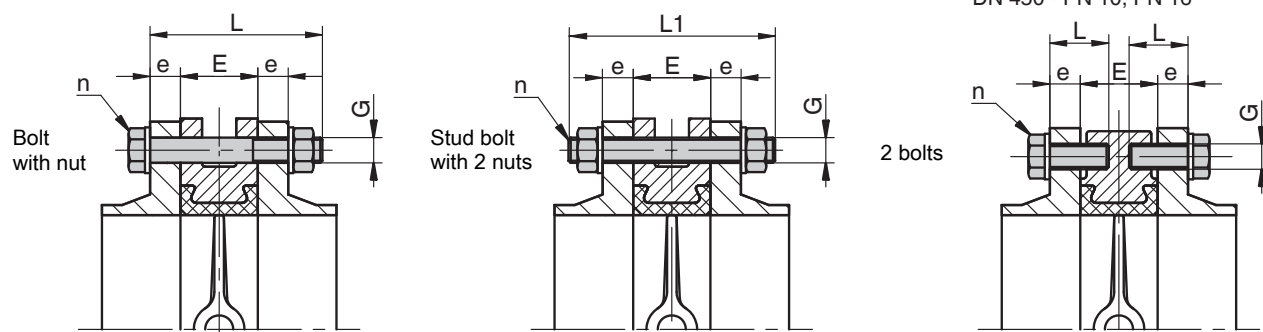
Dimensions in mm

Availabilities

U section				
Flange	400	450	500	600
EN1092-1 PN6	1*	1*	1*	1*
EN1092-1 PN10	2	2	2	2
EN1092-1 PN16	3	3	3	3
ANSI B16.5/CL150	D	D	D	D
AS 2129 E	-	U	-	-
BS10 D	-	-	-	H
BS10 E	-	S	-	-

* only available with threaded holes

Connection – screws, bolts



n = number of bolts

DN	E	Connection (code)									
		EN1092-1 PN10 (code 2)					EN1092-1 PN16 (code 3)				
		e	L	L1	n	G	e	L	L1	n	G
400	102	26	180	210	12	M24	32	200	220	12	M27
	102	26	50	210	8	M24	32	55	220	8	M27
450	114	26	190	220	16	M24	32	210	240	16	M27
	114	26	50	220	8	M24	32	55	240	8	M27
500	127	28	210	230	16	M24	34	230	260	16	M30
	127	28	50	230	8	M24	34	60	260	8	M30
600	154	28	240	270	16	M27	36	260	290	16	M33
	154	28	50	270	8	M27	36	60	290	8	M33

Dimensions in mm

DN	E	ANSI B16.5/CL150 (code D)				
		e	L	L1	n	G ¹⁾
400	102	36.5	210	230	12	1"-8
	102	36.5	210	230	8	1"-8
450	114	39.7	230	250	16	1 1/8"-7
	114	39.7	65	250	8	1 1/8"-7
500	127	46.0	250	280	16	1 1/8"-7
	127	46.0	70	280	8	1 1/8"-7
600	154	47.6	280	310	16	1 1/4"-7
	154	47.6	70	310	8	1 1/4"-7

Dimensions in mm

1) Thread acc. to UNC

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

Throttle valve

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

Certificates

Certificate	Standard	Item number
2.1 Certificate of compliance with the order	EN 10204	88039442
2.2 Functionality	EN 10204/EN 12266-2 F20	88439527
2.2 Pressure test	EN 10204, DIN EN 12266 P10, P11, P12	88039443
3.1 Body material	EN 10204	88314529
3.1 Disc material	EN 10204	88314530
3.1 Shaft material		88734227
3.1 Pressure test	EN 10204, DIN EN 12266 P10, P11, P12	88337125
3.1 Layer thickness measurement		88460229
3.1 Surface roughness measurement (only disc code B)		88094384

GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.



Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the maintenance 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

Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO".



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