

GEMÜ D450

Butterfly valve with bare shaft



Features

- Simple installation
- Low pressure loss
- Low weight
- Excellent corrosion protection
- UV resistant
- Optimized for installation in plastic piping
- Low torque

Description

The GEMÜ D450 soft seated butterfly valve has a bare shaft. The butterfly valve is available in nominal sizes DN 50–300 and has a wafer body version.

Technical specifications

- **Media temperature:** 5 to 90 °C
- **Ambient temperature:** -20 to 60 °C
- **Operating pressure:** 0 to 10 bar
- **Nominal sizes:** DN 50 to 300
- **Body configurations:** Wafer
- **Connection standards:** ANSI | EN | JIS
- **Body materials:** PP, reinforced
- **Liner materials:** EPDM | FKM
- **Disc materials:** PP-H | PVC-C | PVC-U
- **Conformities:** EAC

Technical data depends on the respective configuration

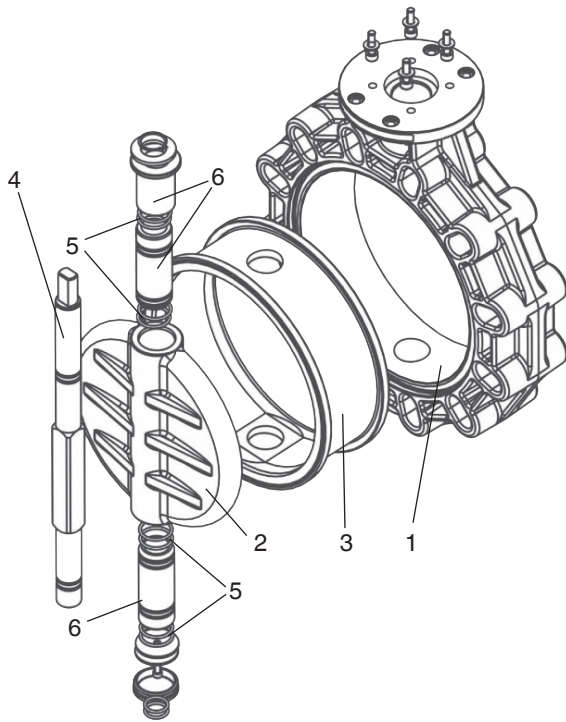


Product line



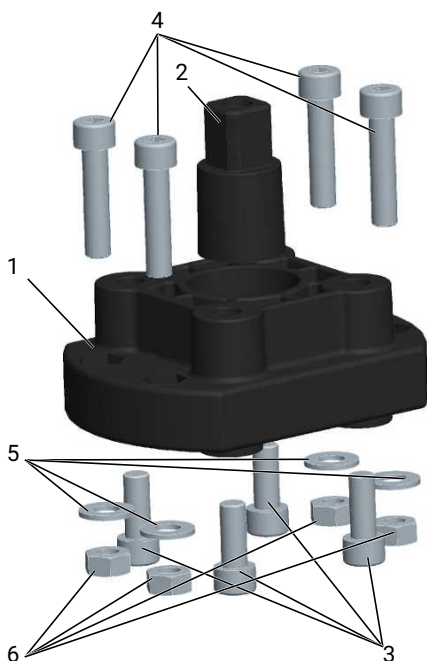
	GEMÜ D450	GEMÜ D451	GEMÜ D457	GEMÜ D458
Operation				
With bare shaft	●	-	-	-
Manual	-	-	●	-
Pneumatic	-	●	-	-
Motorized	-	-	-	●
Nominal sizes	DN 50 to 300	DN 50 to 300	DN 50 to 300	DN 50 to 300
Media temperature	5 to 90 °C	5 to 90 °C	5 to 90 °C	5 to 90 °C
Operating pressure	0 to 10 bar	0 to 10 bar	0 to 10 bar	0 to 10 bar
Connection types				
Flange	●	●	●	●
Conformities				
CSA	-	-	-	●
EAC	●	●	●	●

Product description



Item	Name	Materials
1	Housing	PP (glass fibre reinforced)
2	Disc	PVC-U/PVC-C/PP-H
3	Liner	EPDM/FKM
4	Axis	Stainless steel AISI 630
5	O-ring	EPDM/Viton®
6	Bush	PP (glass fibre reinforced)

Individual components mounting kit



Product description

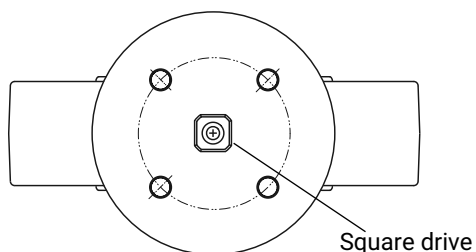
Item	Name	DN	Dimensions	Materials	Order number
1	Mounting kit	50	-	-	-
		65	-	-	-
		80	-	PP (glass fibre reinforced)	058311020
		100	-		058311020
		125	-		058311020
		150	-		058311020
		200	-		058320020
		250	-		058331520
		300	-		058331520
2	Adapter	50	-	-	-
		65	-	-	-
		80	-	Aluminium	058311021
		100	-		058311021
		125	-		058314022
		150	-		058314022
		200	-	Stainless steel AISI 302	058331521
		250	-		058331521
		300	-	Stainless steel AISI 303	058331522
3	Bolts	50	-	-	-
		65	-	-	-
		80	M8x20	Stainless steel AISI 304	710708020
		100	M8x20		710708020
		125	M8x25		710708025
		150	M8x25		710708025
		200	M12x25		710710025
		250	M10x30		710710030
		300	M10x30		710710030
4	Bolts	50	-		-
		65	-	-	-
		80	M8x35	Stainless steel AISI 304	710708035
		100	M8x35		710708035
		125	M8x35		710708035
		150	M8x35		710708035
		200	M10x45		710710045
		250	M10x55		710710055
		300	M10x55		710710055
5	Washers	50	-		-
		65	-	-	-
		80	M8	Stainless steel AISI 302	711908000
		100	M8		711908000
		125	M8		711908000
		150	M8		711908000
		200	M10	Stainless steel AISI 304	711910000
		250	M10		711910000
		300	M10		711910000
6	Nuts	50	-	-	-
		65	-	-	-

Item	Name	DN	Dimensions	Materials	Order number
		80	M8	Stainless steel AISI 302	712108000
		100	M8		712108000
		125	M8		712108000
		150	M8		712108000
		200	M10		712110000
		250	M10		712110000
		300	M10		712110000

Availabilities

DN	Wafer		
	Connection		
	PN 10	ASME B16.5 Class 150	JIS 10k
50 – 300	•	•	•

Actuator flange correlation



DN	WAF [mm]	Body/shaft connection code	Mounting kit order key*
50/65	17	F07 D17	D450 65S01 F07 D17
80	17	F07 D17	D450 80S01 F07 D17
100	17	F07 D17	D450 80S01 F07 D17
125	17	F07 D17	D450 125S01 F07 D17
150	17	F07 D17	D450 125S01 F07 D17
200	17	F07 F10 D17	D450 200S01 F07/F10 D17**
	22	F07 F10 D22	D450 200S01 F07/F10 D22
250	22	F10 F12 D22	D450 250S01 F10/F12 D22
300	22	F10 F12 D22	D450 250S01 F10/F12 D22
	27	F10 F12 D27	D450 300S01 F10/F12 D27***

* Mounting kits for pneumatic and motorized actuators (please order separately)

** For pneumatic actuators, control function 3

*** For pneumatic actuators, control function 1

Order data

The order data provide an overview of standard configurations.

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

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, bare shaft	D450

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

3 Housing configuration	Code
Intermediate flange design (wafer), face-to-face dimension FTF EN 558 series 20	W

4 Operating pressure	Code
DN 50 to 200	
10 bar	2
DN 250 to 300	
6 bar	1

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

6 Housing material	Code
PP, reinforced	5

7 Disc material	Code
PVC-U	1
PVC-C	2
PP-H	G5

8 Liner material	Code
EPDM	14
FKM	4

9 Body connection	Code
F07, flange type DIN EN ISO 5211	F07
F10, flange type DIN EN ISO 5211	F10

10 Shaft connection and size	Code
Square drive, diagonal, WAF 11 mm	D11
Square drive, diagonal, WAF 17 mm	D17
Square drive, diagonal, WAF 22 mm	D22
Square drive, diagonal, WAF 27 mm	D27

Order example

Ordering option	Code	Description
1 Type	D450	Butterfly valve, bare shaft
2 DN	65	DN 65
3 Housing configuration	W	Intermediate flange design (wafer), face-to-face dimension FTF EN 558 series 20
4 Operating pressure	2	10 bar
5 Connection type	2	PN 10/flange EN 1092, face-to-face dimension FTF EN 558 series 20
6 Housing material	5	PP, reinforced
7 Disc material	1	PVC-U
8 Liner material	4	FKM
9 Body connection	F07	F07, flange type DIN EN ISO 5211
10 Shaft connection and size	D17	Square drive, diagonal, WAF 17 mm

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: 5 – 90 °C

Ambient temperature: -20 – 60 °C

Storage temperature: 0 – 40 °C

Pressure

Operating pressure: 0 – 10 bar

Pressure/temperature correlation:

Material	Code	Media temperature in °C											
		0	5	10	20	25	30	40	50	60	70	80	90
PVC-U	1	-	-	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-	-
PVC-C	2	-	-	10.0	10.0	10.0	8.5	6.5	5.0	3.5	2.5	1.5	-
PP-H, grey	G5	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	2.7	1.5	0.8

All pressures are gauge pressures.

The permissible operating pressure depends on the working medium temperature.

Data for extended temperature ranges on request. Please note that the ambient temperature and media temperature generate a combined temperature at the valve body which must not exceed the above values.

No water hammer permissible

Cv values:

DN	Cv values
50/65	108.0
80	241.0
100	497.0
125	706.0
150	972.0
200	1980.0
250	3132.0
300	4714.0

Cv values in m³/h

Product conformities

Pressure Equipment Directive: 2014/68/EU

EAC: The product is certified according to EAC.

RoHS Directive: 2011/65/EU

Mechanical data

Torques:

DN	Torques
50/65	25.0
80	28.0
100	35.0
125	85.0
150	110.0
200	110.0
250	180.0
300	285.0

Torques in Nm

Weight:

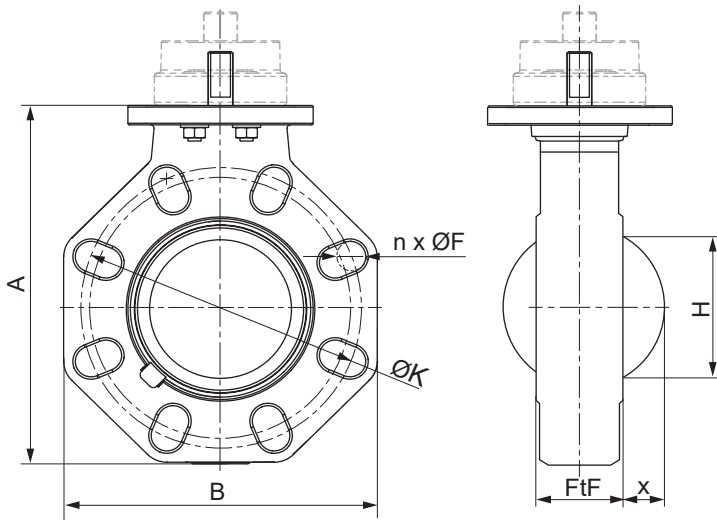
DN	Weights
50/65	1.2
80	1.4
100	1.9
125	2.7
150	3.7
200	6.7
250	13.2
300	18.0

Weights in kg

Dimensions

Body dimensions

Housing



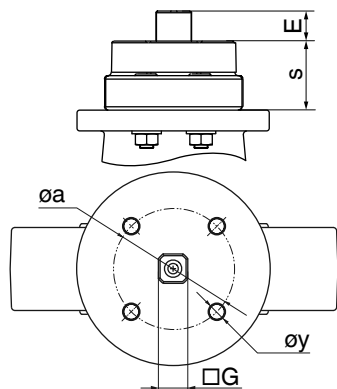
DN	NPS	A	B	n x $\varnothing F$	FtF	H	$\varnothing K$	x
50/65	2 1/2"	190.0	156.0	4 x 18.0	46.0	44.0	125.0 - 145.0	8.5
80	3"	221.0	190.0	8 x 19.0	49.0	66.0	150.0 - 170.0	15.5
100	4"	244.0	212.0	8 x 19.0	56.0	85.0	180.0 - 192.0	22.5
125	5"	273.0	238.0	8 x 22.0	64.0	105.0	190.0 - 215.0	28.5
150	6"	303.0	265.0	8 x 24.0	72.0	133.0	240.0	39.0
200	8"	366.0	320.0	8 x 23.0	73.0	180.5	270.0 - 298.0	60.0
250	10"	450.0	453.0	12 x 29.0	114.0	212.0	335.0 - 362.0	61.5
300	12"	545.0	477.0	12 x 29.0	114.0	279.0	390.0 - 432.0	91.5

Dimensions in mm

Without mounting kit

With parallel 2-flat

Actuator flange



DN	øa	E	□G	s	øy
50/65	70.0	19.0	17.0	40.0	4 x 9.0
80	70.0	19.0	17.0	40.0	4 x 9.0
100	70.0	19.0	17.0	40.0	4 x 9.0
125	70.0	22.0	17.0	40.0	4 x 9.0
150	70.0	22.0	17.0	40.0	4 x 9.0
200	102.0	19.0	17.0	55.0	4 x 11.0
	102.0	22.0	22.0	55.0	4 x 11.0
250	102.0	22.0	22.0	55.0	4 x 11.0
300	102.0	22.0	22.0	56.0	4 x 11.0
	102.0	29.0	27.0	56.0	4 x 11.0

Dimensions in mm

Add-on components



GEMÜ GDR/GSR

Pneumatic basic quarter turn actuators

The pneumatic basic actuators GEMÜ GSR and GEMÜ GDR are quarter turn actuators with clockwise rotation for Open/Close applications. Single acting (GEMÜ GSR) or double acting versions (GEMÜ GDR) are available. With their standardized connection for pilot valves, position feedback and flanged connection according to ISO 5211, they are suitable for mounting on butterfly valves and ball valves.



GEMÜ DR/SC

Pneumatic premium quarter turn actuators

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



GEMÜ 9428

Motorized quarter turn actuator

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



GEMÜ 9468

Motorized quarter turn actuator

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



GEMÜ J4C

Motorized quarter turn actuator

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



GEMÜ PHL

Hand lever

Lockable plastic hand lever for manual operation (latch positions or continuous) of butterfly valves.



GEMÜ GB

Handwheel with gearbox

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



GEMÜ LSC

Limit switch box for quarter turn actuators

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



GEMÜ LSF

Inductive dual sensor for quarter turn valves

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



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