

# GEMÜ 423

## Motorized butterfly valve



### Features

- Low weight
- Adjustable end positions by means of microswitches
- Corrosion resistant plastic body
- Simple installation with union nut
- Compact design

---

### Description

The GEMÜ 423 butterfly valve has a low maintenance motorized quarter turn actuator. A manual override and an optical position indicator are integrated as standard.

### Technical specifications

- **Media temperature:** 0 to 60 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure:** 0 to 6 bar
- **Nominal sizes:** DN 15 to 50
- **Connection types:** Union end
- **Connection standards:** BS | DIN
- **Housing materials:** PVC-U, grey
- **Liner materials:** EPDM | FKM
- **Disc materials:** PVDF
- **Supply voltage:** 100 - 120 V AC, 50/60 Hz | 12 - 24 V AC/DC | 220 - 240 V AC, 50/60 Hz | 24 - 240 V AC/DC | 380 - 480 V AC, 50/60 Hz
- **Operating time 90°:** 4 to 100 s
- **Protection class:** IP 65, 66, 67, 68
- **Conformities:** CSA | EAC

Technical data depends on the respective configuration



**Product line****GEMÜ K410****GEMÜ 417****GEMÜ 410****GEMÜ 423****Operation**

With bare shaft	●	-	-	-
Manual	-	●	-	-
Pneumatic	-	-	●	-
Motorized	-	-	-	●
<b>Nominal sizes</b>	DN 15 to 50	DN 15 to 50	DN 15 to 50	DN 15 to 50
<b>Media temperature</b>	0 to 60 °C	0 to 60 °C	0 to 60 °C	0 to 60 °C
<b>Operating pressure</b>	0 to 6 bar	0 to 6 bar	0 to 6 bar	0 to 6 bar
<b>Connection types</b>				
Union end	●	●	●	●
<b>Conformities</b>				
CSA	-	-	-	●
EAC	●	●	●	●

## Motorized actuators GEMÜ, J+J



	GEMÜ 9428	GEMÜ J4C
<b>Manufacturer</b>	GEMÜ	J+J
<b>Manufacturer type</b>	9428	J4C
<b>Torques</b>	6 to 55 Nm	20 to 300 Nm
<b>Duty cycle</b>	100 % (12 V/24 V) 40 % (100 - 250 V)	75 %
<b>Heating</b>	No	Yes
<b>Voltage</b>		
100 - 250 V, 50/60 Hz	●	-
12 V AC, 50/60 Hz	●	-
12 V DC	●	●
230 V AC, 50 Hz	●	-
24 - 240 V AC/DC	-	●
24 V AC, 50/60 Hz	●	-
24 V DC	●	-
<b>Protection class</b>	IP 65, IP 67	IP 67
<b>Ambient temperature</b>	-10 to 60 °C	-20 to 70 °C
<b>Housing materials</b>		
Polyamide (PA6)	-	●
PP	●	-
<b>Versions</b>		
Limit switches	●	●
ON/OFF actuator	●	-
Optional battery pack	-	●
Optional positioner	-	●
Optional positioning actuator	-	●
Optionally 3 positions	-	●

## Comparison of actuator applications



	GEMÜ 9428	GEMÜ J4C
<b>Range of functions</b>		
Use in non-aggressive environment (up to C3)	●	●
Use in aggressive environment (C5)	●	●
Use in protected outdoor areas	●	●
Use in unprotected outdoor areas	●	●
Applications with many/frequent cycle duties	●	●
Fail-safe option	●	●
Positioning application	●	●
<b>Industrial sectors</b>		
Chemical processes	●	●
Surface finishing	●	●
Water treatment	●	●
Mechanical engineering	●	●
Power generation and environmental systems	●	●
Food processing technology	●	●
Semiconductor	●	●
Medical systems	●	●
Pharmaceutical industry	●	●

## Product description



Item	Name	Material
1	Valve body	PVC-U, grey
2	Pipe connections	PVC-U, grey
3	Housing base	Actuator versions 1006, 1015, 2006, 2015: PP + 30 % glass fibre reinforced Actuator version 3035: PP + 20 % glass bead reinforced
4	Connection for manual override	
5	Optical position indicator	PP-R natural
6	Housing cover	Actuator versions 1006, 1015, 2006, 2015: PPE + 30 % glass fibre reinforced Actuator version 3035: PP + 20 % glass bead reinforced

## Actuator availability

### Availability - GEMÜ 9428

Actuator version Code <sup>1)</sup>	Control module Code <sup>2)</sup>	Voltage/Frequency				
		12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)	100-250 V AC (code O4)
<b>A3</b>	<b>A0, AE</b>	X	X	X	X	-
<b>A4</b>	<b>A0, AE</b>	X	-	X	-	-
<b>A5</b>	<b>A0, AE</b>	-	-	-	-	X
<b>A6</b>	<b>A0, AE</b>	-	X	-	X	X
<b>A7</b>	<b>A0, AE</b>	-	-	X	-	X
<b>A8</b>	<b>A0, AE</b>	-	-	X	-	-

#### 1) Actuator version

Code 1006: GEMÜ actuator, motorized, size 1, operating time 4 s, torque 6 Nm, supply voltage B1, C1, B4, C4

Code 1015: GEMÜ actuator, motorized, size 1, operating time 11 s, torque 15 Nm, supply voltage B1, C1

Code 2006: GEMÜ actuator, motorized, size 2, operating time 4 s, torque 6 Nm, supply voltage O4

Code 2015: GEMÜ actuator, motorized, size 2, operating time 11 s, torque 15 Nm, supply voltage B4, C4, O4

Code 3035: GEMÜ actuator, motorized, size 3, operating time 15 s, torque 35 Nm, supply voltage C1, O4

Code 3055: GEMÜ actuator, motorized, size 3, operating time 15 s, torque 55 Nm, supply voltage C1

#### 2) Control module

Code A0: ON/OFF actuator

Code AE: OPEN/CLOSE control, 2 additional potential-free limit switches, Class A (EN15714-2)

### Availability - J4C actuators

DN	Actuator version <sup>1)</sup>
<b>15 – 32</b>	J4C20
<b>40, 50</b>	J4C35

#### 1) Actuator version

Code J4C20: J+J actuator, motorized, type J4C, operating time 10 s, torque 20 Nm, heating, IP 67

Code J4C35: J+J actuator, motorized, type J4C, operating time 10 s, torque 35 Nm, heating, IP 67

## Order data

### Butterfly valve with GEMÜ actuator

The order data provide an overview of standard configurations.

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

### Order codes

1 Type	Code
Butterfly valve, motorized	423

2 DN	Code
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Union end with DIN insert (socket)	7
Union end with inch insert - BS (socket)	33

5 Body material	Code
PVC-U, grey	1

6 Liner	Code
FPM	4
EPDM	14

7 Voltage/Frequency	Code
12 VDC	B1
12 V 50/60 Hz	B4
24 VDC	C1
24 V 50/60 Hz	C4

7 Continuation of Voltage/Frequency	Code
100-250V 50/60Hz	O4

8 Control module	Code
On/Off actuator	A0
On/Off actuator, 2 additional potential-free limit switches, Class A (EN15714-2)	AE

9 Actuator version	Code
GEMÜ actuator, motorized, size 1, operating time 4 s, torque 6 Nm, supply voltage B1, C1, B4, C4	1006
GEMÜ actuator, motorized, size 1, operating time 11 s, torque 15 Nm, supply voltage B1, C1	1015
GEMÜ actuator, motorized, size 2, operating time 4 s, torque 6 Nm, supply voltage O4	2006
GEMÜ actuator, motorized, size 2, operating time 11 s, torque 15 Nm, supply voltage B4, C4, O4	2015
GEMÜ actuator, motorized, size 3, operating time 15 s, torque 35 Nm, supply voltage C1, O4	3035

10 Special specification	Code
Parallel operation of several actuators	6410
1 Hirschmann connector N6R	6598
2 Harting connectors Han 7D	6722
Without	

### Order example

Ordering option	Code	Description
1 Type	423	Butterfly valve, motorized
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	7	Union end with DIN insert (socket)
5 Body material	1	PVC-U, grey
6 Liner	14	EPDM
7 Voltage/Frequency	C1	24 VDC
8 Control module	A0	On/Off actuator
9 Actuator version	1006	GEMÜ actuator, motorized, size 1, operating time 4 s, torque 6 Nm, supply voltage B1, C1, B4, C4
10 Special specification		Without

## Butterfly valve with J+J actuator

The order data provide an overview of standard configurations.

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

### Order codes

1 Type	Code
Butterfly valve, motorized	423
2 DN	Code
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
3 Body configuration	Code
2/2-way body	D
4 Connection type	Code
Union end with DIN insert (socket)	7
Union end with inch insert - BS (socket)	33
5 Body material	Code
PVC-U, grey	1
6 Liner	Code
FPM	4
EPDM	14
7 Voltage/Frequency	Code
12 VDC	B1
24-240V AC/DC	U5
8 Control module	Code
On/Off actuator, 2 additional potential-free limit switches, Class A (EN15714-2)	AE
On/Off actuator, 2 additional potential-free limit switches, BSR battery pack (NC)	AE1
On/Off actuator, 2 additional potential-free limit switches, BSR battery pack (NO)	AE2
On/Off actuator, potentiometer output, Class A (EN15714-2)	AP
Control actuator, external set value 0–10 VDC	E1
Control actuator, external set value 0/4–20 mA	E2
9 Actuator version	Code
J+J actuator, motorized, type J4C, operating time 10 s, torque 20 Nm, heating, IP 67	J4C20

9 Continuation of Actuator version	Code
J+J actuator, motorized, type J4C, operating time 10 s, torque 35 Nm, heating, IP 67	J4C35

10 Special specification	Code
Without	
Media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101
Media wetted parts cleaned for high purity media and packed in plastic bag	0104
Short insert, material PE, PN 10, (butt welding)	1094
Insert PP, for butt welding	1146
K-no.1060, K-no. 0101, 1060 - insert made of PP 0101 - media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	1174
Parallel operation of several actuators	6410
1 Hirschmann connector N6R	6598
2 Harting connectors Han 7D	6722
Connection with 2 Hirschmann plugs N6R, control mains cable galvanically isolated	6812
K-no. 6722, K-no.1094, 6722 - wired with 2 Harting plugs HAN7D (only possible for functional module AE), 1094 - insert PE, short (for butt welding)	7055



**Order example**

Ordering option	Code	Description
1 Type	423	Butterfly valve, motorized
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	7	Union end with DIN insert (socket)
5 Body material	1	PVC-U, grey
6 Liner	14	EPDM
7 Voltage/Frequency	U5	24-240V AC/DC
8 Control module	AE	On/Off actuator, 2 additional potential-free limit switches, Class A (EN15714-2)
9 Actuator version	J4C20	J+J actuator, motorized, type J4C, operating time 10 s, torque 20 Nm, heating, IP 67
10 Special specification		Without

## Butterfly valve technical data

### Medium

**Working medium:** Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body, disc and seal material. The product is only suitable for use with fluids of group 2 according to the Pressure Equipment Directive.

### Temperature

**Media temperature:** 0 – 60 °C

**Ambient temperature:** -10 – 60 °C

**Storage temperature:** 0 – 40 °C

### Pressure

**Operating pressure:** 0 – 6 bar

**Kv values:**

DN	Kv values
15	7
20	13
25	17
32	33
40	53
50	74

Kv values in m<sup>3</sup>/h

**Pressure/temperature correlation:**

Material	Code	Temperature in °C (valve body)						
		10	20	25	30	40	50	60
PVC-U	1	6.0	6.0	6.0	6.0	6.0	3.5	1.5

All pressures are gauge pressures.

The permissible operating pressure depends on the working medium temperature.

### Product compliance

**Machinery Directive:** 2006/42/EC

**EMC Directive:** 2014/30/EU

**Low Voltage Directive:** 2014/35/EU

### Mechanical data

**Weight:**

DN	Weights
15	360
20	390
25	400
32	700
40	1072
50	1200

Weight in g

## Technical data of actuator

### GEMÜ 9428 actuators

#### Mechanical data

Weight: **GEMÜ 9428**

Supply voltage 24 V / 100-250 V	2.4 kg
Actuator version 3035:	2.4 kg
Actuator version 3055:	2.8 kg

#### Electrical data

**Duty cycle:** Supply voltage 12 V / 24 V: Continuous duty  
Supply voltage 100 - 250 V: 40 % duty

**Electrical protection:** Supply voltage 12 V / 24 V:  
Motor protective system by customer  
Supply voltage 100 - 250 V:  
Integrated stall and overload protection  
plus excess current release T 1A 5x20 mm

**Electrical protection class:** I (DIN EN 61140)

#### Electrical connection

**Electrical connection type:** Supply voltage 12 V / 24 V: Cable gland PG 13.5  
Supply voltage 100 - 250 V: Hirschmann plug Type N6RFFS11 (PG 11)

**Cable diameter:** Supply voltage 12 V / 24 V: 7.5 to 12.5 mm  
Supply voltage 100 - 250 V: 7.0 to 9.0 mm

**Max. cross section of wire:** 1.5 mm<sup>2</sup>

**Recommended motor protection:**

Voltage	12 V DC	24 V DC	120 V AC	230 V AC
<b>Motor protection switch type</b>	Siemens 3RV 1011-1CA10	Siemens 3RV 1011-1BA10	Siemens 3RV 1011-OGA10	Siemens 3RV 1011-OGA10
<b>Set current</b>	2.20	1.70	0.60	0.45

Current data in A

**Rated voltage:** 12 V / 24 V AC or DC (± 10 %)  
100 – 250 V AC (± 10 %)

**Rated frequency:** 50/60 Hz (at AC rated voltage)

**Power consumption:**

Actuator version	12 V DC	12 V AC	24 V DC	24 V AC	100-250 V AC
	Code B1	Code B4	Code C1	Code C4	Code O4
<b>1006</b>	30.0	30.0	30.0	30.0	-
<b>1015</b>	30.0	-	30.0	-	-
<b>2006</b>	-	-	-	-	60.0
<b>2015</b>	-	30.0	-	30.0	50.0
<b>3035</b>	-	-	30.0	-	50.0
<b>3055</b>	-	-	40.0	-	-

Power consumption in W

Technical data of actuator

**Current consumption:**

Actuator version	12 V DC	12 V AC	24 V DC	24 V AC	100-250 V AC
	Code B1	Code B4	Code C1	Code C4	Code O4
<b>1006</b>	2.2	2.0	1.20	1.5	-
<b>1015</b>	2.2	-	1.20	-	-
<b>2006</b>	-	-	-	-	0.25
<b>2015</b>	-	2.0	-	1.2	0.20
<b>3035</b>	-	-	1.30	-	0.20
<b>3055</b>	-	-	1.65	-	-

Current data in A

**Max. current at start up:**

Actuator version	12 V DC	12 V AC	24 V DC	24 V AC	100-250 V AC
	Code B1	Code B4	Code C1	Code C4	Code O4
<b>1006</b>	6.3	2.4	4.0	1.8	-
<b>1015</b>	9.2	-	3.8	-	-
<b>2006</b>	-	-	-	-	0.3
<b>2015</b>	-	2.3	-	1.8	0.4
<b>3035</b>	-	-	3.3	-	0.2
<b>3055</b>	-	-	7.0	-	-

Current data in A

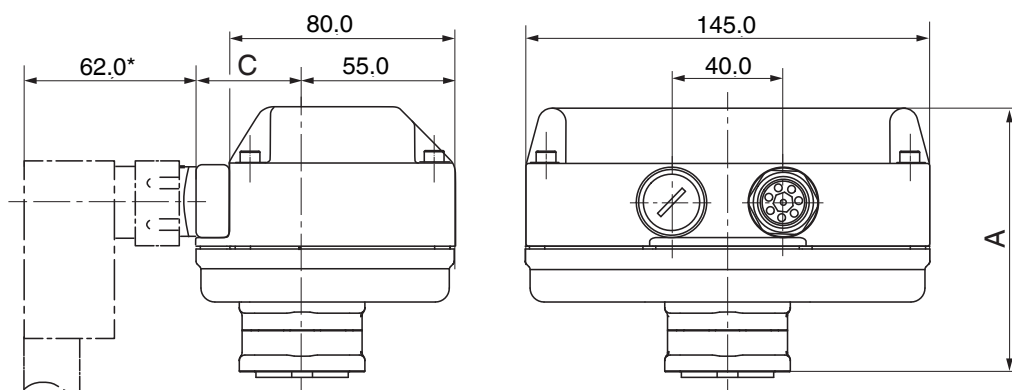
**J+J actuators**

Note: For technical data see manufacturer's original datasheets

## Dimensions

### Actuator

#### Actuator version 1006, 1015, 2006, 2015

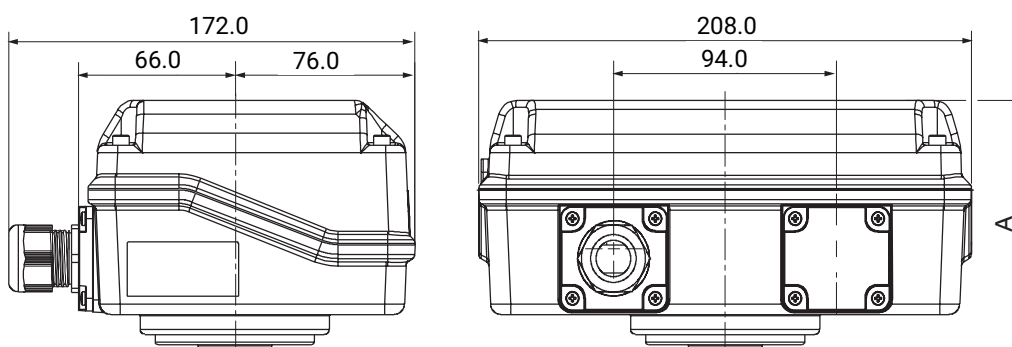


\* Standard with supply voltage code O4

Actuator version	A	C
<b>1006, 1015</b>	94.0	49.0
<b>2006, 2015</b>	122.0	53.0

Dimensions in mm

#### Actuator version 3035, 3055



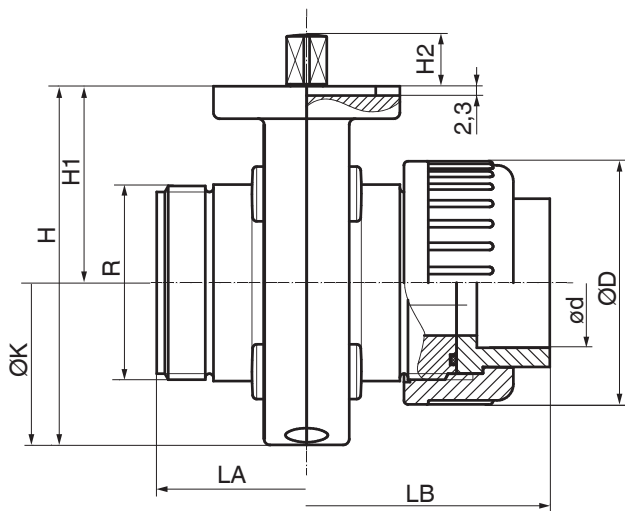
Voltages	B
<b>24 V</b>	100.5
<b>100 V - 250 V</b>	124.5

Dimensions in mm

### Third-party actuators

For more detailed information on third-party actuators, refer to the manufacturers' documentation

**Body**



DN	LA	LB	H	H1	H2	øD	ød	R	øK
15	74.0	114.0	89.0	48.5	13.0	60.0	20.0	G 1 1/2	80.0
20	74.0	118.0	89.0	48.5	13.0	60.0	25.0	G 1 1/2	80.0
25	74.0	124.0	89.0	48.5	13.0	60.0	32.0	G 1 1/2	80.0
32	80.0	138.0	106.0	57.5	13.0	74.0	40.0	G 2	96.0
40	94.0	162.0	112.0	58.0	13.0	83.0	50.0	G 2 1/4	108.0
50	106.0	188.0	137.0	74.0	13.0	103.0	63.0	G 2 3/4	126.0

Dimensions in mm



GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG  
Fritz-Müller-Straße 6-8, 74653 Ingelfingen-Criesbach, Germany  
Phone +49 (0) 7940 1230 · info@gemu.de  
www.gemu-group.com