

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 I DIN
- Body materials: PVC-U, grey
- Liner materials: EPDM I FKM
- Disc materials: PVDF
- Supply voltage: 100 - 120 V AC, 50/60 Hz I 12 - 24 V AC/DC I 220 - 240 V AC, 50/60 Hz I 24 - 240 V AC/DC I 380 - 480 V AC, 50/60 Hz
- Operating time 90°: 4 to 100 s
- Protection class: IP 65, 66, 67, 68
- Conformities: CSA I EAC

Technical data depends on the respective configuration

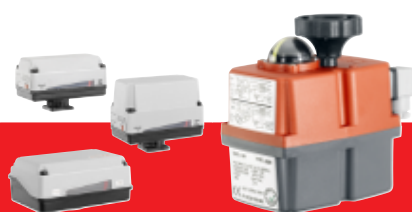


Product line



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

Motorized actuators GEMÜ, J+J



GEMÜ 9428

GEMÜ J4C

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

Comparison of actuator applications



	GEMÜ 9428	GEMÜ J4C
Functional scope		
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	●	●
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



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 ¹⁾	Control module Code ²⁾	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)
1006	A0, AE	X	X	X	X	-
1015	A0, AE	X	-	X	-	-
2006	A0, AE	-	-	-	-	X
2015	A0, AE	-	X	-	X	X
3035	A0, AE	-	-	X	-	X
3055	A0, AE	-	-	X	-	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, O4

2) Control module

Code A0: On/Off actuator

Code AE: On/Off actuator with 2 additional, potential-free limit switches, Class A (EN15714-2)

Availability - J4C actuators

DN	Actuator version ¹⁾
15 – 32	J4C20
40, 50	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

Order 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

Order 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 to 60 °C

Ambient temperature: -10 to 60 °C

Storage temperature: 0 to 40 °C

Pressure

Operating pressure: 0 to 6 bar

Kv values:

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

Kv values in m³/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/EU

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 12 V / 24 V:	1.0 kg
Supply voltage 100-250 V:	1.2 kg
Supply voltage 24 V / 100-250 V	2.4 kg
Actuator version 3035:	2.4 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 mm²

Recommended motor protection:

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

Current data in A

Rated voltage: 12 V / 24 V AC or DC ($\pm 10\%$)
100 - 250 V AC ($\pm 10\%$)

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
1006	30	30	30	30	-
1015	30	-	30	-	-
2006	-	-	-	-	60
2015	-	30	-	30	50
3035	-	-	30	-	50
3055	-	-	30	-	50

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
1006	2.2	2	1.2	1.5	-
1015	2.2	-	1.2	-	-
2006	-	-	-	-	0.25
2015	-	2	-	1.2	0.2
3035	-	-	1.3	-	0.2
3055	-	-	1,3	-	0,2

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
1006	6.3	2.4	4.0	1.8	-
1015	9.2	-	3.8	-	-
2006	-	-	-	-	0.3
2015	-	2.3	-	1.8	0.4
3035	-	-	3.3	-	0.2
3055	-	-	3,3	-	0,2

Current data in A

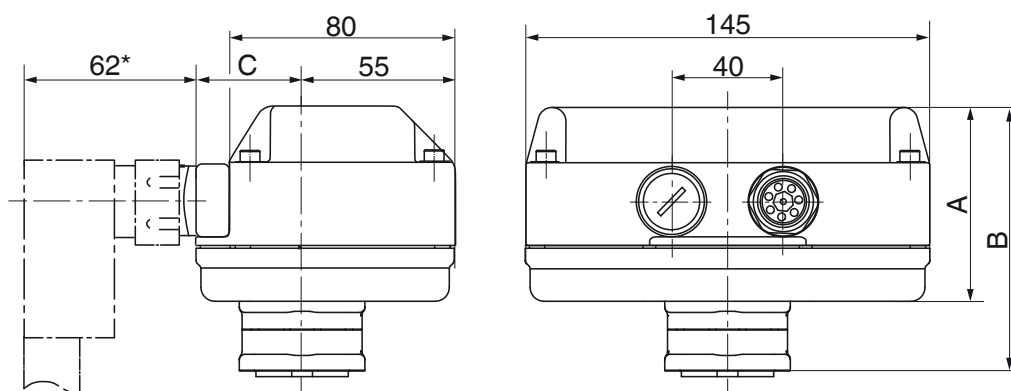
J+J actuators

Note: For technical data see manufacturer's original datasheets

Dimensions

Actuator

Actuator version 1006, 1015, 2006, 2015

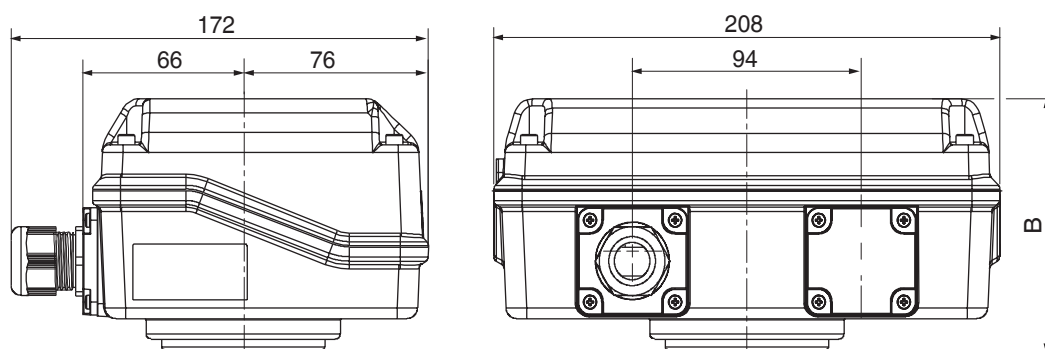


* Standard with supply voltage code O4

Actuator version	A	B	C
1006, 1015	69	94	49
2006, 2015	96	122	53

Dimensions in mm

Actuator version 3035, 3055



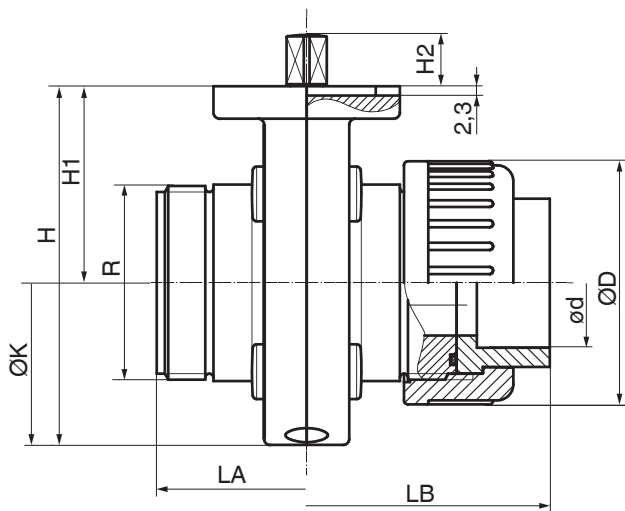
Voltages	B
24 V	100.5
100 V - 250 V	124.5

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	114	89	48.5	13	60	20	1.50	80
20	74	118	89	48.5	13	60	25	1.50	80
25	74	124	89	48.5	13	60	32	1.50	80
32	80	138	106	57.5	13	74	40	2.00	96
40	94	162	112	58.0	13	83	50	2.25	108
50	106	188	137	74.0	13	103	63	2.75	126

Dimensions in mm



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