

GEMÜ 410

Pneumatically operated butterfly valve



Features

- Low weight
- Corrosion resistant plastic body
- Simple installation with union nut
- Space-saving piston actuator made of plastic

Description

The GEMÜ 410 butterfly valve is pneumatically operated. Normally Closed and Normally Open control functions are available. The valve body is available in a plastic design.

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
- **Housing materials:** PVC-U, grey
- **Liner materials:** EPDM I FKM
- **Disc materials:** PP-H
- **Conformities:** 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	-	-	-	●
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	●	●	●	●
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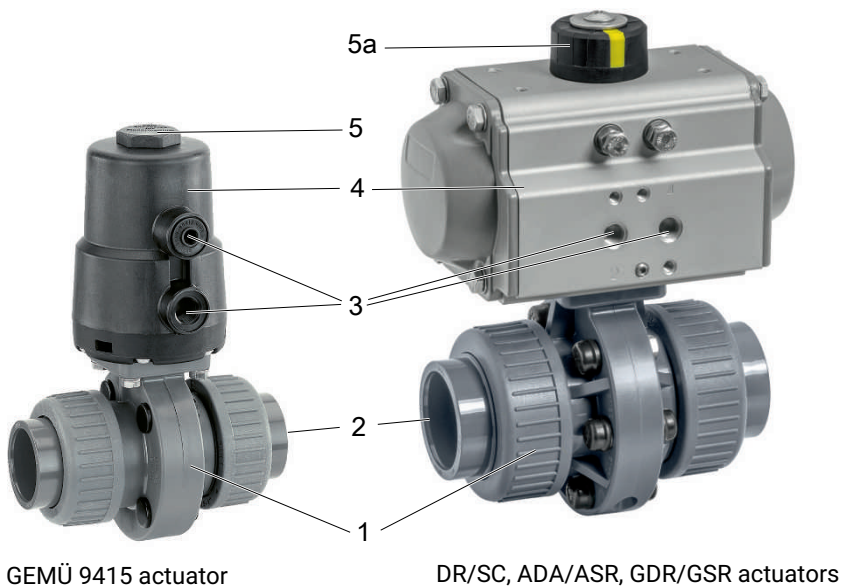
Conformities

CSA	-	-	-	●
EAC	●	●	●	●

Comparison of actuator applications

				
	GEMÜ ADA/ASR	GEMÜ DR/SC	GEMÜ GDR/GSR	GEMÜ 9415
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	Butterfly valve body	PVC-U, grey
2	Pipe connections	PVC-U, grey
GEMÜ 9415 actuator		
3	Control air connectors	PP, glass fibre reinforced
4	Actuator housing	PP, glass fibre reinforced
5	Connection facility for position indicator	PP, glass fibre reinforced
DR/SC, ADA/ASR, GDR/GSR actuators		
3	Control air connectors	Aluminium
4	Actuator housing	Aluminium

Product description

Item	Name	Material
5a	Position indicator	Polypropylene

Actuator assignment

GEMÜ 9415 - plastic

DN	Size 0	Size 1
	Code ¹⁾	
15	0	-
20	0	-
25	0	-
32	-	1
40	-	1
50	-	1

1) Actuator version

Code 0: GEMÜ actuator, pneumatic, size 0, piston diameter 50 mm

Code 1: GEMÜ actuator, pneumatic, size 1, piston diameter 70 mm

GEMÜ ADA/ASR - metal

DN	Double acting ADA	Code	Single acting ASR	Code
15	ADA0020U F05YS14A	BU02AB	ASR0020U S08 F05YS14/S11A	AU02FB
20	ADA0020U F05YS14A	BU02AB	ASR0020U S08 F05YS14/S11A	AU02FB
25	ADA0020U F05YS14A	BU02AB	ASR0020U S08 F05YS14/S11A	AU02FB
32	ADA0020U F05YS14A	BU02AB	ASR0040U S14 F05YS14/S11A	AU04KB
	ADA0040U F05YS14A	BU04AB		
40	ADA0040U F05YS14A	BU04AB	ASR0040U S14 F05YS14/S11A	AU04KB
50	ADA0040U F05YS14A	BU04AB	ASR0040U S14 F05YS14/S11A	AU04KB

GEMÜ DR/SC - metal

DN	Double acting DR	Code	Single acting SC	Code
15	DR0015U F03F05NS11A	DU01AW	SC0015U 6 F03F05NS11A	SU01KW
			SC0030U 6 F05F07NS14A	SU03KP
20	DR0015U F03F05NS11A	DU01AW	SC0015U 6 F03F05NS11A	SU01KW
			SC0030U 6 F05F07NS14A	SU03KP
25	DR0015U F03F05NS11A	DU01AW	SC0015U 6 F03F05NS11A	SU01KW
			SC0030U 6 F05F07NS14A	SU03KP
32	DR0015U F03F05NS11A	DU01AW	SC0030U 6 F05F07NS14A	SU03KP
	DR0030U F05F07NS14A		SC0060U 6 F05F07NS14A	SU06KP
40	DR0030U F05F07NS14A	DU03AP	SC0060U 6 F05F07NS14A	SU06KP
50	DR0030U F05F07NS14A	DU03AP	SC0060U 6 F05F07NS14A	SU06KP

GEMÜ GDR/GSR - metal

DN	Double acting GDR	Code	Single acting GSR	Code
15	GDR0050 F03/05 S11A	HR05AW	GSR0050 SC5F03/05 S11	GR05SW
20	GDR0050 F03/05 S11A	HR05AW	GSR0050 SC5F03/05 S11	GR05SW
25	GDR0050 F03/05 S11A	HR05AW	GSR0050 SC5F03/05 S11	GR05SW
32	GDR0050 F03/05 S11A	HR05AW	GSR0065 SC5F05/07 S14A	GR06SP
40	GDR0050 F03/05 S11A	HR05AW	GSR0065 SC5F05/07 S14A	GR06SP
50	GDR0050 F03/05 S11A	HR05AW	GSR0065 SC5F05/07 S14A	GR06SP

Order data

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, pneumatically operated	410

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 insert (socket) – DIN	7
Union end with inch insert – BS (socket)	33

5 Body material	Code
PVC-U, grey	1

6 Shut-off seal material	Code
FKM	4
EPDM	14

7 Control function	Code
Actuator GEMÜ 9415	
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3
GEMÜ ADA/ASR, DR/SC, GDR/GSR actuators	
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

8 Actuator version	Code
Actuator GEMÜ 9415	
GEMÜ actuator, pneumatic, size 0, piston diameter 50 mm	0
GEMÜ actuator, pneumatic, size 1, piston diameter 70 mm	1
Actuator GEMÜ DR and SC	
Actuator, pneumatic, double acting, clockwise rotation, DR0015U F03/05 S11	DU01AW
Actuator, pneumatic, double acting, clockwise rotation, DR0030U F05/07 S14	DU03AP

8 Actuator version	Code
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0015U 6F03/05 S11	SU01KW
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0030U 6F05/07 S14	SU03KP
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0060U 6F05/07 S14	SU06KP
Actuator GEMÜ ADA and ASR	
Actuator, pneumatic, double acting, clockwise rotation, ADA0020U F05 S14S11	BU02AB
Actuator, pneumatic, double acting, clockwise rotation, ADA0040U F05 S14S11	BU04AB
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0020US08F05 S14S11	AU02FB
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0040US14F05 S14S11	AU04KB
Actuator GEMÜ GDR and GSR	
Actuator, pneumatic, double acting, clockwise rotation, GDR0050 F03/05 S11	HR05AW
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0065 SC5F05/07 S14	GR06SP

Order example

Ordering option	Code	Description
1 Type	410	Butterfly valve, pneumatically operated
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	7	Union end with insert (socket) – DIN
5 Body material	1	PVC-U, grey
6 Shut-off seal material	14	EPDM
7 Control function	1	Normally closed (NC)
8 Actuator version	0	GEMÜ actuator, pneumatic, size 0, piston diameter 50 mm

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.

Control medium: Inert gases

Temperature

Media temperature: 0 – 60 °C

Ambient temperature: -10 – 60 °C

Storage temperature: 0 – 40 °C

Control medium temperature: max. 60 °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 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

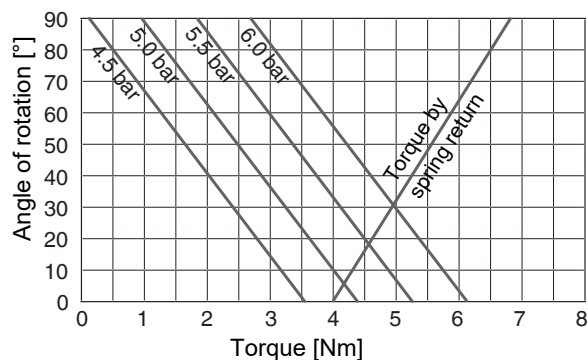
All pressures are gauge pressures.

The permissible operating pressure depends on the working medium temperature.

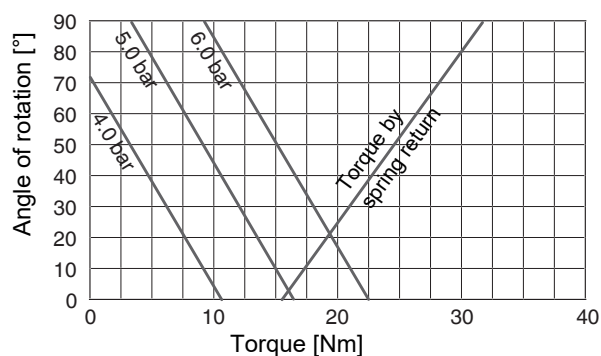
Filling volume: Actuator size 0: 0.05 NI
Actuator size 1: 0.20 NI

Control pressure: 4 to 6 bar

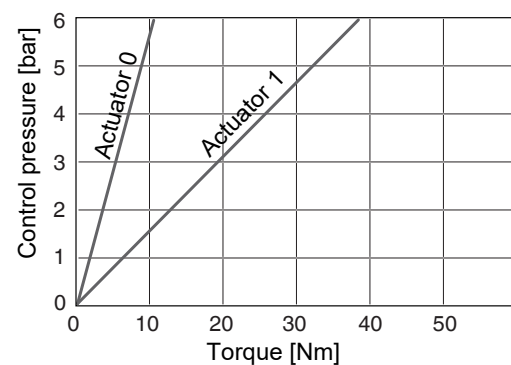
Control pressure-Torque diagram: **Actuator size 0, control function 1**



Actuator size 1, control function 1



Actuator size 0 and 1, control function 3



Product compliance

Machinery Directive: 2006/42/EC

Pressure Equipment Directive: 2014/68/EU

Mechanical data

Torques:

DN	Torques
15	6.0
20	6.0
25	6.0
32	8.0
40	20.0
50	21.0

Torques in Nm

Weight:

Body

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

Weight in g

Actuator 9415

Actuator size 0:	Control function 1:	435 g
	Control function 3:	325 g
Actuator size 1:	Control function 1:	1470 g
	Control function 3:	1100 g

Actuator ADA / ASR

Type	ADA	ASR
0020U	1.4	1.5
0040U	2.1	2.3

Weights in kg

Actuator DR/SC

Type	DR	SC
0015U	1.0	1.1
0030U	1.6	1.7
0060U	2.7	3.1

Weights in kg

Actuator GDA/GSR

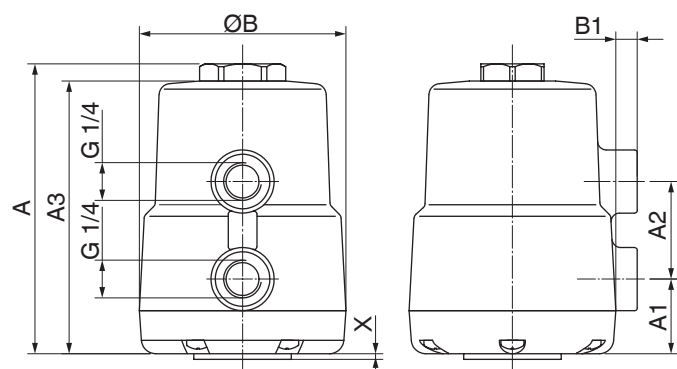
Type	GDA	GSR
0050	1.1	1.2
0065	1.5	1.8

Weights in kg

Dimensions

Actuator

GEMÜ 9415



Actuator size	A	A1	A2	A3	ØB	B1	X
0	112.0	37.0	34.0	106.0	72.0	7.0	2.0
1	177.0	41.0	65.0	171.0	97.0	3.0	2.0

Dimensions in mm

ADA/ASR

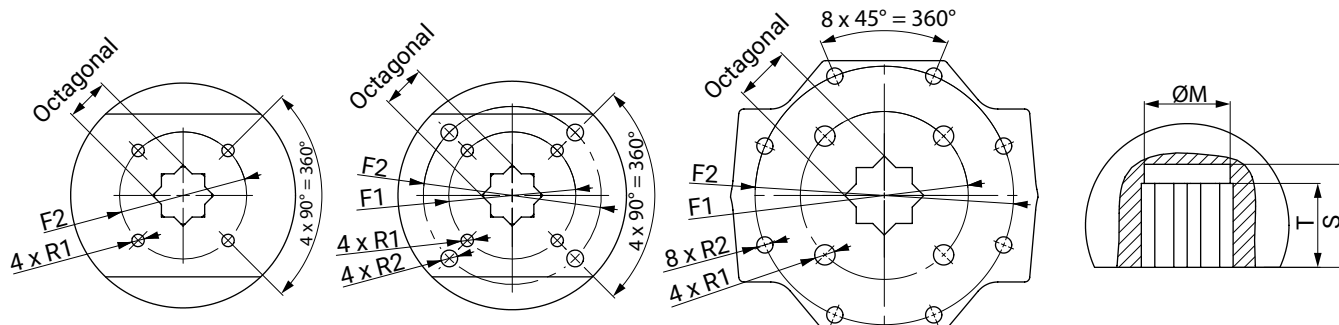
Actuator flange ISO5211

Type 00010, 0020U, 0040U,
0500U, 0750U, 2100U, 2500U

Type 0020U, 0080U, 0130U,
0300U, 0850U, 1200U

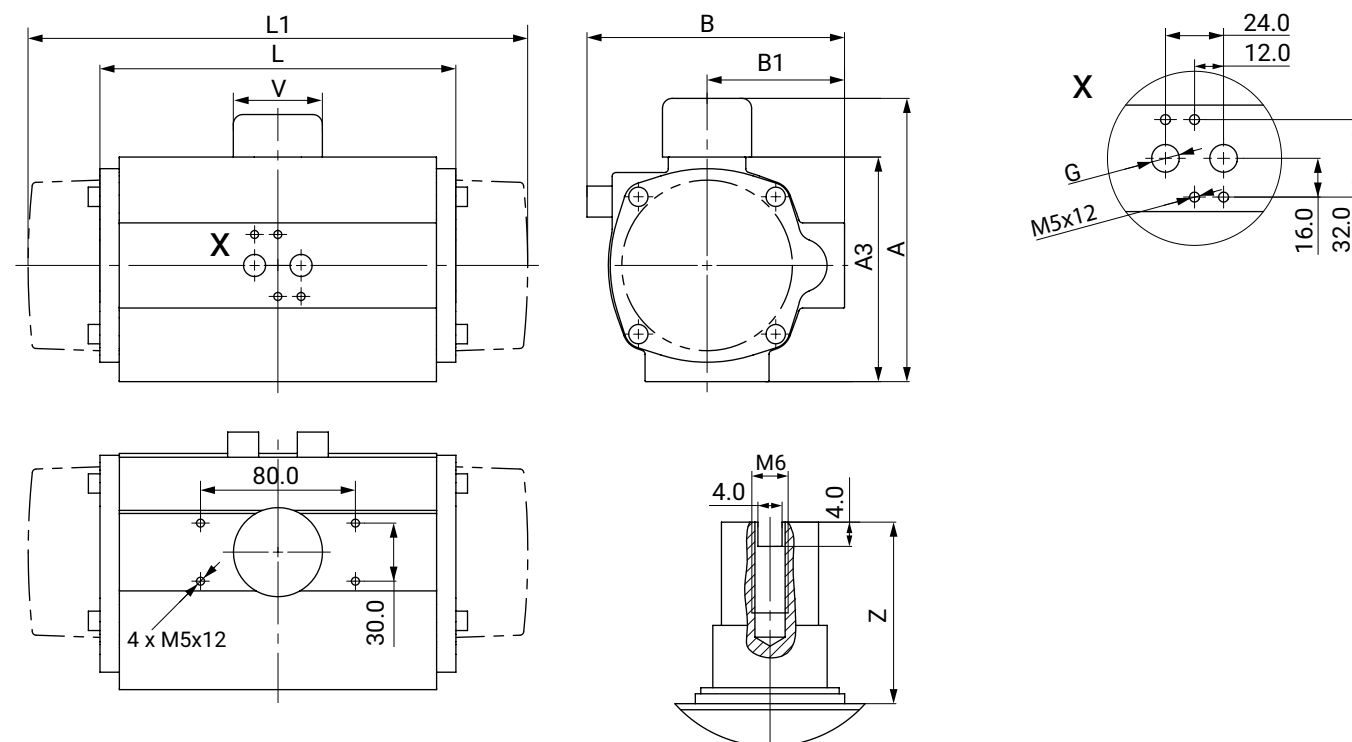
Type 4000U

Type 00010 - 4000U



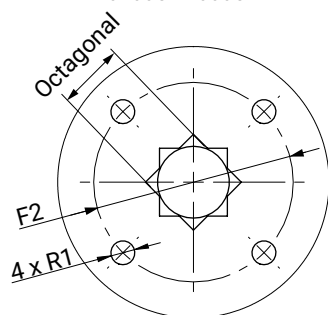
Type	Actuator flange	Octagonal	M	T	S	F1	R1	F2	R2
0020U	F05	14.0	18.1	12.0	16.0	50.0	M6 x 10.0	-	-
0040U	F05	14.0	18.1	12.0	16.0	50.0	M6 x 10.0	-	-

Dimensions in mm

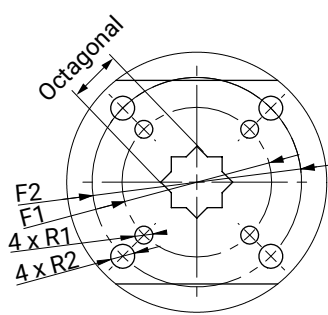


Type	A	A3	B	B1	G	L	L1	V	Z
0020U	96.0	66.0	76.0	48.0	G1/4"	145.0	163.0	40.0	30.0
0040U	115.0	85.0	91.0	56.0	G1/4"	158.0	195.0	40.0	30.0

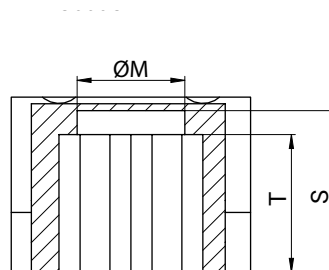
Dimensions in mm

DR/SCType 0010U - 0030U
0900U - 4000U

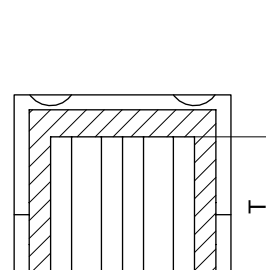
Type 0030U - 1200U, 5000U



Type 0010U - 1200U, 5000U

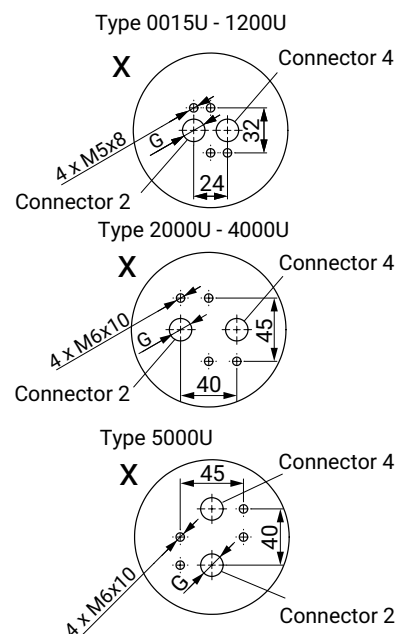
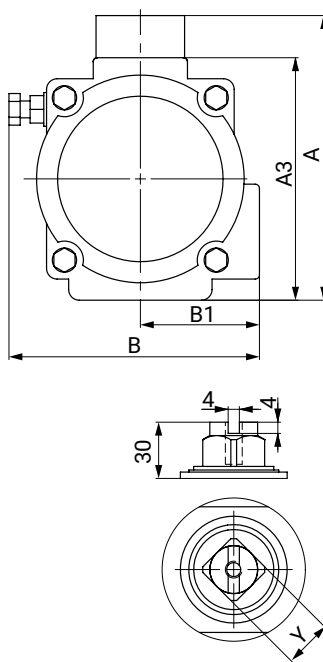
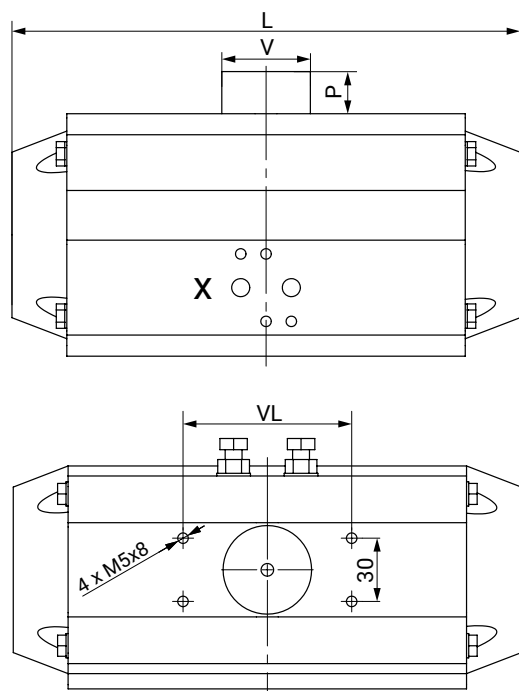


Type 2000U - 4000U



Type	ISO flange	Octagonal	M	T	S	F1	R1	F2	R2
0015U	F04	11.0	15.5	11.5	13.5	42.0	M5	-	-
0030U	F05/F07	14.0	18.6	14.5	16.5	50.0	M6	70.0	M8
0060U	F05/F07	17.0	22.7	17.5	20.0	50.0	M6	70.0	M8

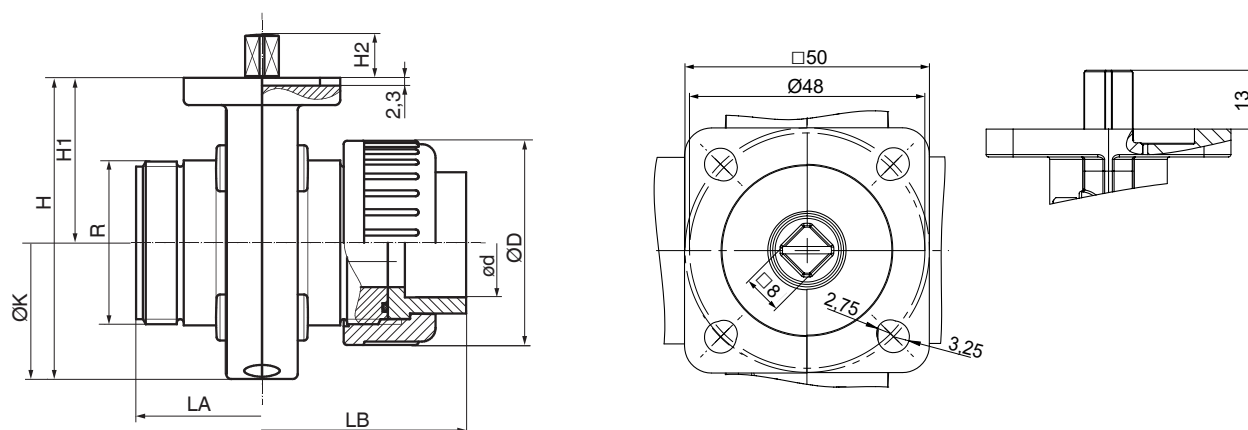
Dimensions in mm



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

Dimensions in mm

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

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 1225

Electrical position indicator

The GEMÜ 1225 electrical position indicator for GEMÜ butterfly valves 410, 411, 415, 417, 423 and 428 has two adjustable trip cams which are non-positively operated by the switching shaft.



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