

GEMÜ 415

Pneumatically operated butterfly valve



Features

- Suitable for vacuum applications and low temperatures
- High-quality butterfly valve made from stainless steel or brass
- Available in small nominal sizes
- Compact and robust body
- Corrosion-resistant and space-saving piston actuator made from plastic or metal

Description

The GEMÜ 415 soft seated butterfly valve made from stainless steel or brass is pneumatically operated by a space-saving piston actuator. Normally Closed, Normally Open and Double Acting control functions are available. A low-cost rack and pinion actuator can also be fitted. With its rounded and polished disc edges, the butterfly valve is optimized for frequent cycle duties. The surface of the butterfly valve can be further finished.

Technical specifications

- **Media temperature:** -20 to 120 °C
- **Ambient temperature:** 0 to 60 °C
- **Operating pressure :** 0 to 10 bar
- **Nominal sizes:** DN 15 to 50
- **Connection types:** Clamp | Spigot | Threaded connection
- **Connection standards:** ASME | DIN | EN | ISO | SMS
- **Housing materials:** 1.4408, investment casting material | CW614N, brass | CW617N, brass
- **Liner materials:** EPDM | FKM | Silicone
- **Disc materials:** 1.4408, investment casting material | CW614N, brass | CW617N, brass
- **Conformities:** EAC | FDA

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	-20 to 160 °C	-20 to 120 °C	-20 to 120 °C	-20 to 120 °C
Operating pressure	0 to 10 bar	0 to 10 bar	0 to 10 bar	0 to 10 bar
Connection types				
Clamp	●	●	●	●
Spigot	●	●	●	●
Threaded connection	●	●	●	●
Conformities				
ATEX	●	-	-	-
CSA	-	-	-	●
EAC	●	●	●	●
FDA	●	●	●	●

Comparison of actuator applications



GEMÜ ADA/ASR



GEMÜ DR/SC



GEMÜ GDR/GSR

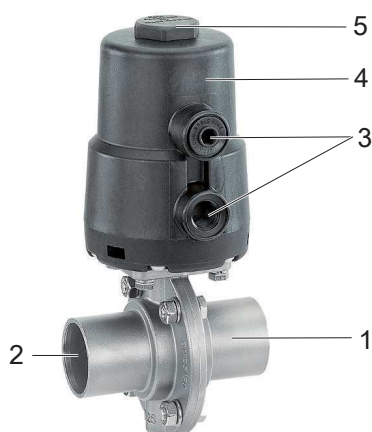


GEMÜ 9415

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	Valve body	Brass (CW617N), investment casting (1.4408)
2	Pipe connections	Brass (CW617N), investment casting (1.4408)
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

Availability

Body

DN	NPS	Body material code ¹⁾									
		Brass code 12		Investment casting code 37							
		Connection type code ²⁾									
		Threaded socket		Spigot						Clamp	
1	31	0	16	17	37	59	60	86	88		
15	1/2"	X	X	X	X	X	-	X	X	X	X
20	3/4"	X	X	X	X	X	-	X	X	X	X
25	1"	X	X	X	X	X	X	X	X	X	X
32	1 1/4"	X	X	X	X	X	X	-	X	X	-
40	1 1/2"	X	X	X	X	X	X	X	X	X	X
50	2"	X	X	X	X	X	X	X	X	X	X

1) **Body material**

Code 12: CW614N, CW617N (brass)

Code 37: 1.4408, investment casting

2) **Connection type**

Code 1: Threaded socket DIN ISO 228

Code 31: Threaded socket NPT

Code 0: Spigot DIN

Code 16: Spigot EN 10357 series B (formerly DIN 11850 series 1)

Code 17: Spigot EN 10357 series A (formerly DIN 11850 series 2)

Code 37: Spigot SMS 3008

Code 59: Spigot ASME BPE

Code 60: Spigot ISO 1127 / EN 10357 series C

Code 86: Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 14

Code 88: Clamp ASME BPE, face-to-face dimension FTF EN 558 series 14

Actuators

GEMÜ 9415 - plastic

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

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

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

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	415

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
Spigot	
Spigot DIN	0
Spigot EN 10357 series B (formerly DIN 11850 series 1)	16
Spigot EN 10357 series A (formerly DIN 11850 series 2)	17
Spigot SMS 3008	37
Spigot ASME BPE	59
Spigot ISO 1127 / EN 10357 series C	60
Threaded socket	
Threaded socket DIN ISO 228	1
Threaded socket NPT	31
Clamp	
Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 14	86
Clamp ASME BPE, face-to-face dimension FTF EN 558 series 14	88

5 Body material	Code
CW614N, CW617N (brass)	12
1.4408, investment casting	37

6 Liner	Code
FPM (FKM)	4
Silicone (MVQ)	9
EPDM	14

7 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3

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 F03F05NS11A	DU01AW
Actuator, pneumatic, double acting, clockwise rotation, DR0030U F05F07NS14A	DU03AP
Actuator, pneumatic, single acting, spring closing, clockwise rotation, SC0015U 6 F03F05NS11A	SU01KW
Actuator, pneumatic, single acting, spring closing, clockwise rotation, SC0030U 6 F05F07NS14A	SU03KP
Actuator, pneumatic, single acting, spring closing, clockwise rotation, SC0060U 6 F05F07NS14A	SU06KP
Actuator GEMÜ ADA and ASR	
Actuator, pneumatic, double acting, clockwise rotation, ADA0020U F05YS14A	BU02AB
Actuator, pneumatic, double acting, clockwise rotation, ADA0040U F05YS14A	BU04AB
Actuator, pneumatic, single acting, spring closing, clockwise rotation, ASR0020U S08 F05YS14/S11A	AU02FB
Actuator, pneumatic, single acting, spring closing, clockwise rotation, ASR0040U S14 F05YS14/S11A	AU04KB
Actuator GEMÜ GDR and GSR	
Actuator, pneumatic, double acting, clockwise rotation, GDR0050 F03/05 S11A	HR05AW
Actuator, pneumatic, single acting, clockwise rotation, GSR0050 SC5F03/05 S11A	GR05SW
Actuator, pneumatic, single acting, clockwise rotation, GSR0065 SC5F05/07 S14A	GR06SP

9 Type of design	Code
without	

9 Continuation of Type of design	Code
Media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101

9 Continuation of Type of design	Code
Valve free of oil and grease, media wetted area cleaned and packed in PE bag	0107

Order example

Order option	Code	Description
1 Type	415	Butterfly valve, pneumatically operated
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	0	Spigot DIN
5 Body material	12	CW614N, CW617N (brass)
6 Liner	14	EPDM
7 Control function	1	Normally closed (NC)
8 Actuator version	0	GEMÜ actuator, pneumatic, size 0, piston diameter 50 mm
9 Type of design		without

Technical data

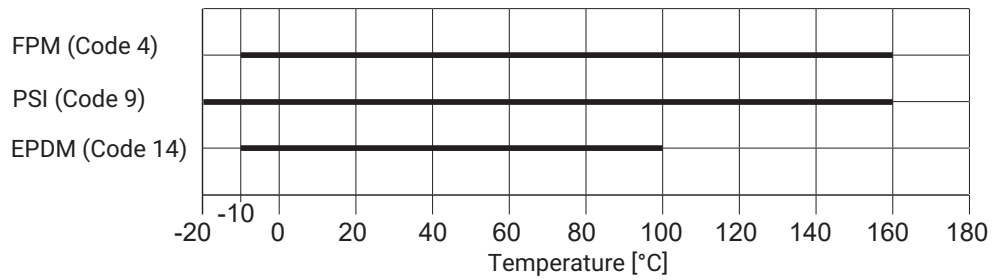
Medium

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: Liner material



For media temperatures above 100 °C additionally use mounting kit GEMÜ MSC (see accessories).

Ambient temperature: 0 – 60 °C

Storage temperature: -20 – 40 °C

Control medium temperature: max. 60 °C

Pressure

Operating pressure: 0 to 10 bar

Control pressure: 4 to 6 bar

Pressure rating: PN 10

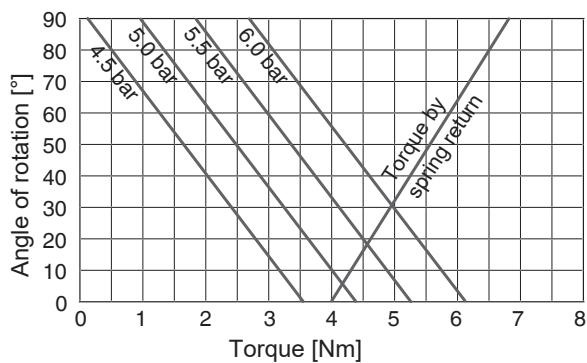
Kv values:

DN	Threaded socket	Butt weld spigot
	Body material	
	Code 12	Code 37
15	7	7
20	12	15
25	17	20
32	40	55
40	60	90
50	100	140

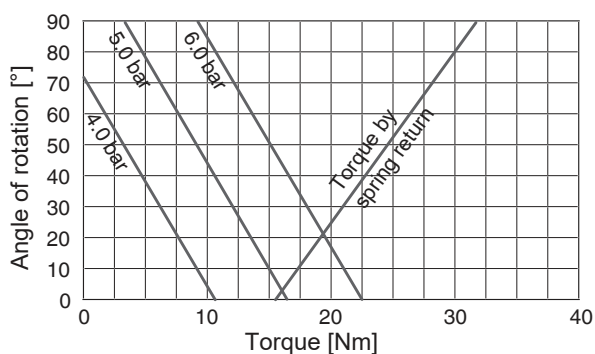
Kv values in m³/h

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

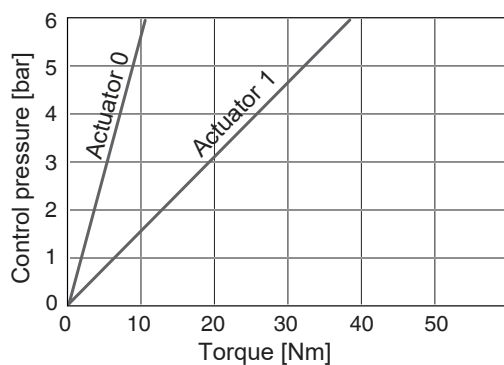
Control pressure-Torque diagram: Actuator size 0, control function 1



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

Approvals: FDA

Mechanical data

Weight:

Body

DN	Body material ¹⁾	
	Code 12	Code 37
15	670	900
20	750	940
25	910	1020
32	930	1100
40	1410	1500
50	2020	1950

Weight in g

1) Body material

Code 12: CW614N, CW617N (brass)

Code 37: 1.4408, investment casting

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

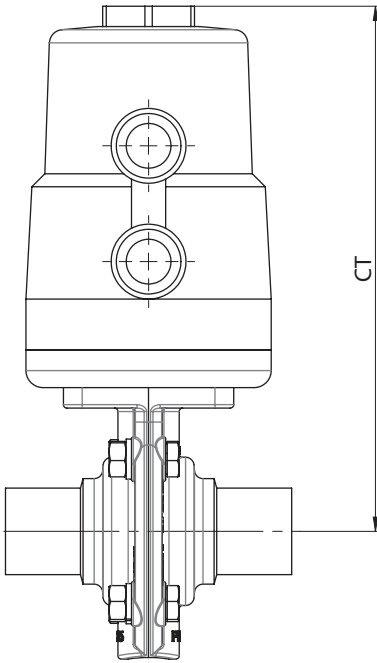
Actuator GDA/GSR

Type	GDA	GSR
0050	1.1	1.2
0065	1.5	1.8

Weights in kg

Dimensions

Mounting height

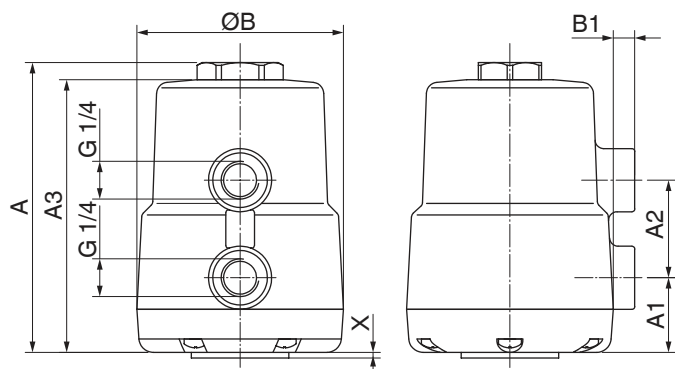


DN	CT	
	Actuator size	
	0	1
15	153.5	-
20	153.5	-
25	153.5	-
32	-	225
40	-	233
50	-	242

Dimensions in mm

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

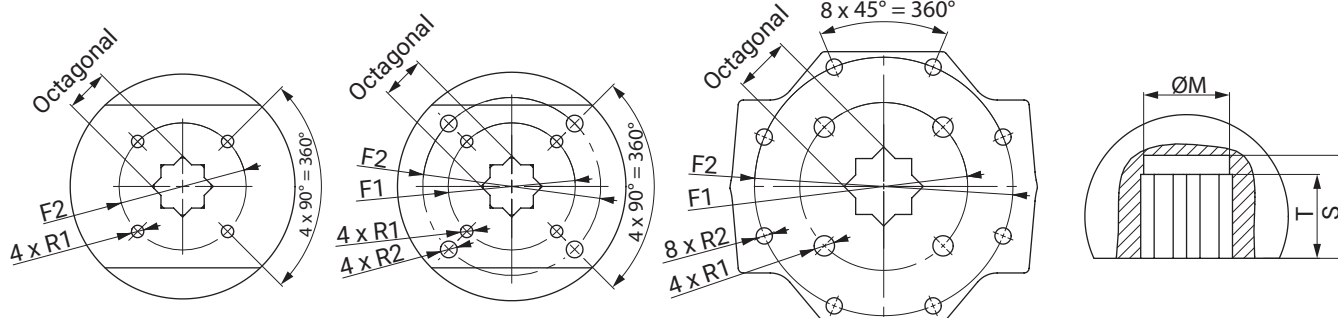
ADA/ASR

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

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

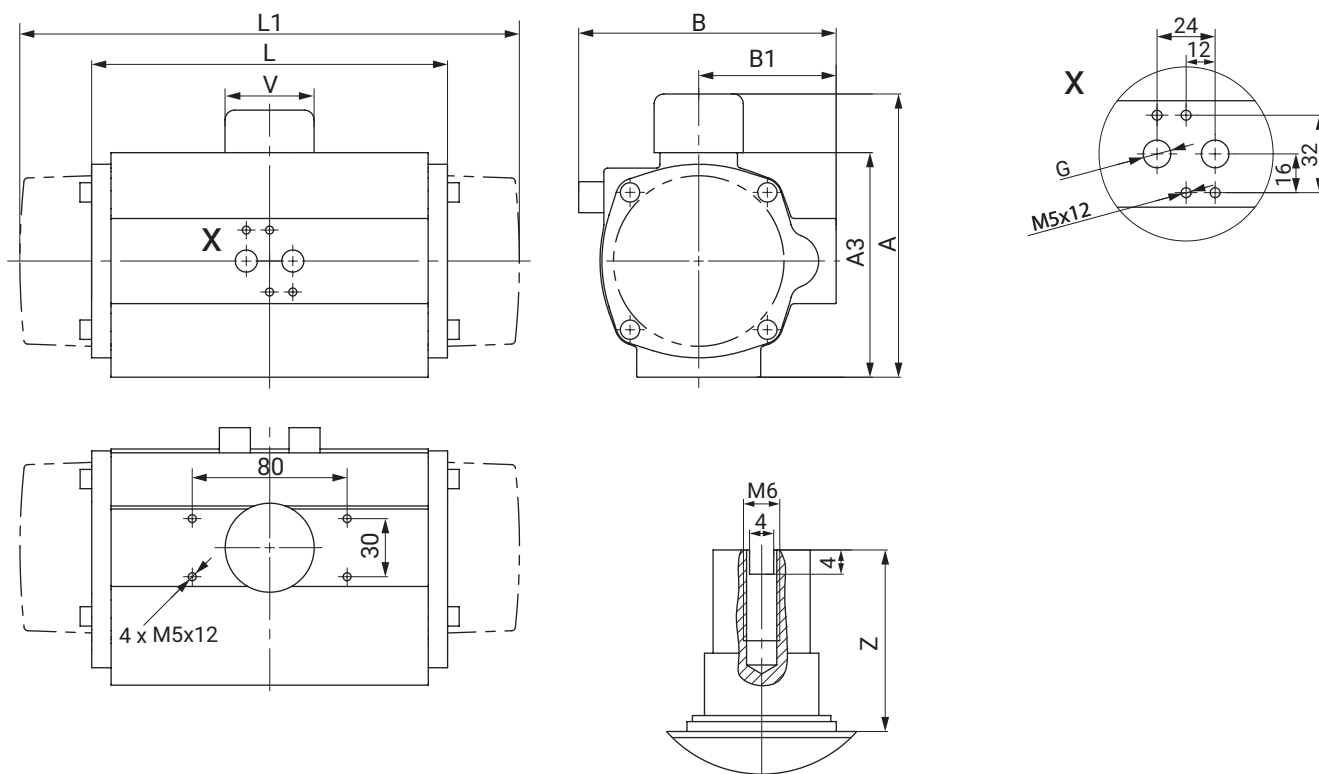
Type 4000U

Type 00010 - 4000U



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

Dimensions in mm

Dimensions

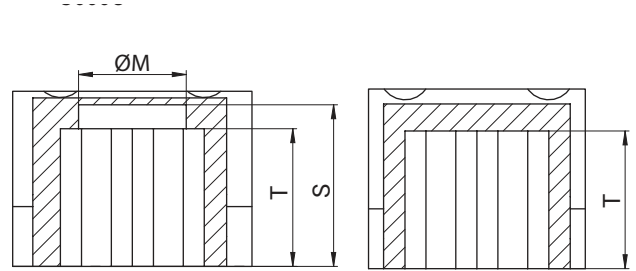
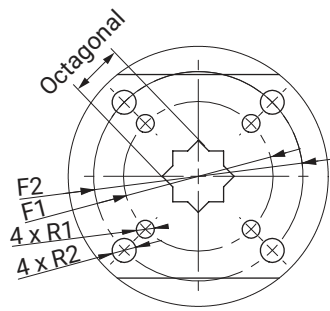
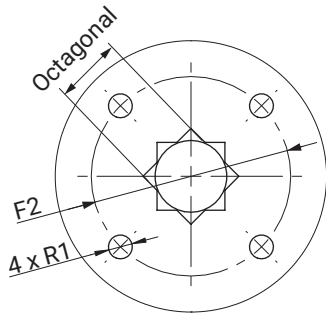
DR/SC

Type 0010U - 0030U
0900U - 4000U

Type 0030U - 1200U, 5000U

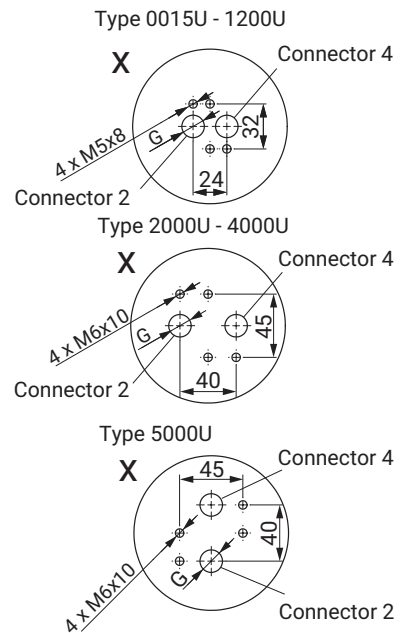
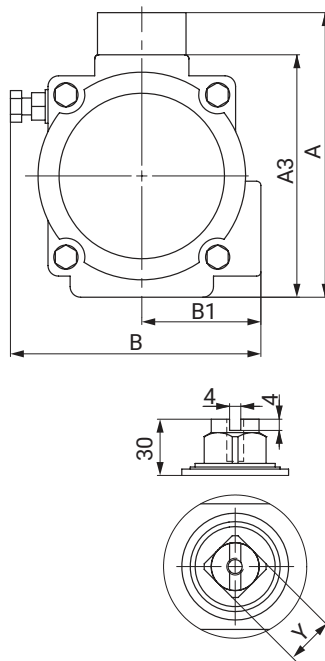
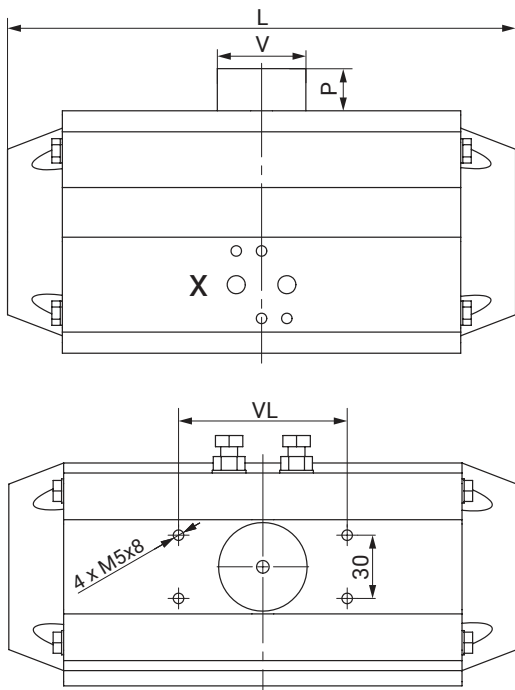
Type 0010U - 1200U, 5000U

Type 2000U - 4000U



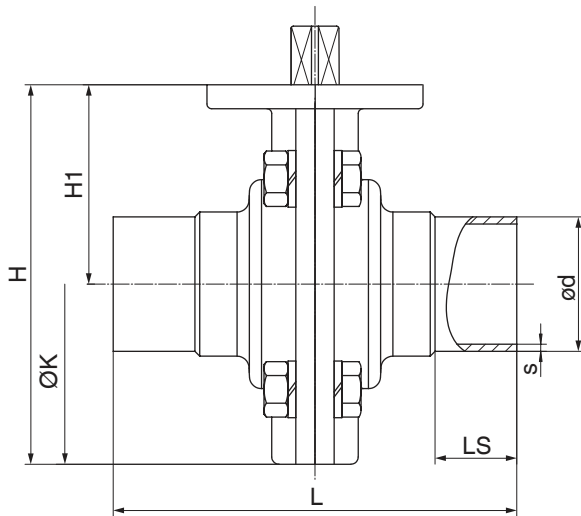
Type	ISO flange	Octagonal	M	T	S	F1	R1	F2	R2
0015U	F04	11,0	15,5	11,5	13,5	42,0	M5	-	-
0030U	F05/F07	14,0	18,6	14,5	16,5	50,0	M6	70,0	M8
0060U	F05/F07	17,0	22,7	17,5	20,0	50,0	M6	70,0	M8

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

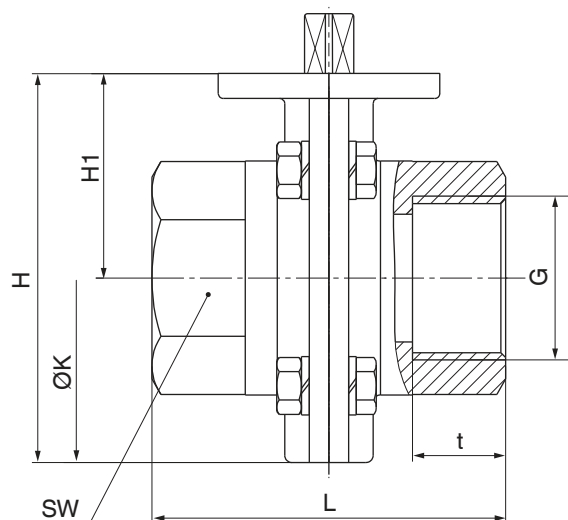
Body**Butt weld spigot (connection type code 0, 16, 17, 37, 59, 60)**

DN	NPS	L	H	H1	øK	LS	DIN		EN 10357			
							Code 0		Code 16		Code 17	
							ød	s	ød	s	ød	s
15	1/2"	80	79	41.5	75	20	18	1.5	18	1	19	1.5
20	3/4"	84	79	41.5	75	22	22	1.5	22	1	23	1.5
25	1"	84	79	41.5	75	22	28	1.5	28	1	29	1.5
32	1¼"	88	91	48.0	85	25	34	1.5	34	1	35	1.5
40	1½"	96	108	56.0	103	25	40	1.5	40	1	41	1.5
50	2"	110	123	65.0	116	30	52	1.5	52	1	53	1.5

DN	NPS	L	H	H1	øK	LS	SMS 3008		EN ISO 1127		ASME BPE	
							Code 37		Code 60		Code 59	
							ød	s	ød	s	ød	s
15	1/2"	80	79	41.5	75	20	-	-	21.3	1.6	12.7	1.65
20	3/4"	84	79	41.5	75	22	-	-	26.9	1.6	19.1	1.65
25	1"	84	79	41.5	75	22	25.0	1.2	33.7	2.0	25.4	1.65
32	1¼"	88	91	48.0	85	25	33.7	1.2	42.4	2.0	-	-
40	1½"	96	108	56.0	103	25	38.0	1.2	48.3	2.0	38.1	1.65
50	2"	110	123	65.0	116	30	51.0	1.2	60.3	2.0	50.8	1.65

Dimensions in mm

Threaded socket (connection type code 1, 31)

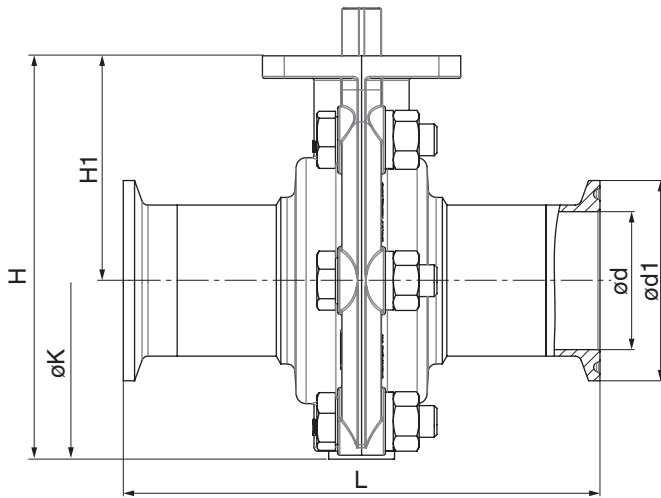


DN	G	L	H	H1	t	øK	SW	n
15	1/2"	72	79	41.5	15.0	75	27	6
20	3/4"	72	79	41.5	16.0	75	32	6
25	1"	72	79	41.5	19.0	75	41	6
32	1¼"	72	91	48.0	21.4	85	50	8
40	1½"	83	108	56.0	21.4	103	55	8
50	2"	88	123	65.0	25.7	116	70	8

Dimensions in mm

n = number of flats

Clamp (connection type code 86, 88)



DN	NPS	L	H	H1	øK	DIN 32676 series A		ASME BPE	
						Code 86		Code 88	
						ød	ød1	ød	ød1
15	1/2"	115	79	41.5	75	16	34.0	9.4	25.0
20	3/4"	120	79	41.5	75	20	34.0	15.8	25.0
25	1"	125	79	41.5	75	26	50.5	22.1	50.5
32	1¼"	130	91	48.0	85	32	50.5	-	-
40	1½"	140	108	56.0	103	38	50.5	34.8	50.5
50	2"	150	123	65.0	116	50	50.5	47.5	64.0

Dimensions in mm

Accessories



GEMÜ MSC

Mounting kit

The MSC mounting kit is an interface, for the same and different ends, to join flange designs according to ISO 5211. This mounting kit ensures thermal separation of actuator and valve body. It can also be used as height compensation for insulated pipelines. The mounting kit is available in steel, electrogalvanized and stainless steel in an open or closed design.

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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