

Diaphragm Valve, Plastic

Construction

The GEMÜ 630 2/2-way diaphragm valve has a low-maintenance piston actuator with integrated optical position indicator.

Features

- Suitable for inert, corrosive* liquid and gaseous media
- Valve body and diaphragm are available in various materials and designs
- Various connections available

Advantages

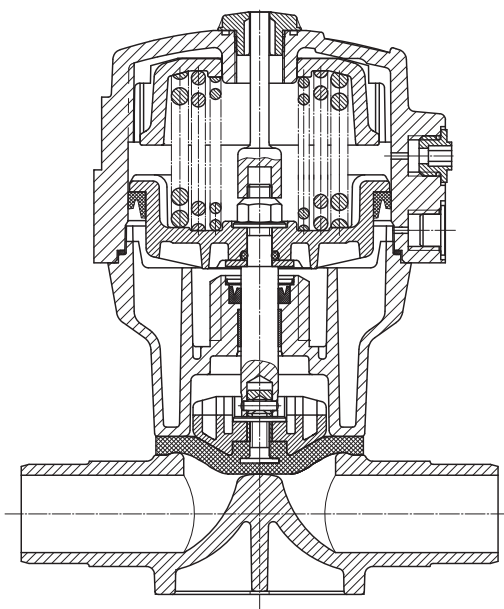
- Optional mounting plate for height compensation of differing body dimensions
- Compact design
- Optional accessories
 - Electrical position indicators
 - Pneumatic or electro-pneumatic positioners

* see information on working medium on page 2



Actuator size 1

Sectional drawing



Actuator size 2 - 4

Technical data

Working medium

Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body and diaphragm materials.

Ambient temperature

Valve body PVC-U / PP	5 to 60° C
Valve body ABS / PVDF	-20 to 60° C

Working medium temperature

Valve body PVC-U	5 to 60° C
Valve body ABS	-20 to 60° C
Valve body PP	5 to 80° C
Valve body PVDF	-20 to 80° C

The permissible operating pressure depends on the working medium temperature.

Control medium

Inert gases	
Min. required control pressure	see table below
Max. permissible control pressure	6 bar
Max. perm. temp. of control medium	40° C

Pressure / temperature correlation for PN 6 (valve body - diaphragm size 10)

Temperature in °C (plastic body)		-20	-10	±0	5	10	20	25	30	40	50	60	70	80
Valve body material		permissible operating pressure in bar												
PVC-U	Code 1	-	-	-	6.0	6.0	6.0	6.0	4.8	3.6	2.1	0.9	-	-
PP	Code 5	-	-	-	6.0	6.0	6.0	6.0	5.1	4.2	3.3	2.4	1.6	0.9
PVDF	Code 20	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.4	4.8	4.3	3.8	3.2	2.8

Pressure / temperature correlation for PN 10 (valve body from diaphragm size 25)

Temperature in °C (plastic body)		-20	-10	±0	5	10	20	25	30	40	50	60	70	80
Valve body material		permissible operating pressure in bar												
PVC-U	Code 1	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-
ABS	Code 4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.0	6.0	4.0	2.0	-	-
PP-H	Code 70/71	-	-	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	2.7	1.5
PVDF	Code 20	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0	7.1	6.3	5.4	4.7

Data for extended temperature ranges on request.

Please note that the ambient temperature and medium temperature generate a combined temperature at the valve body which must not exceed the above values.

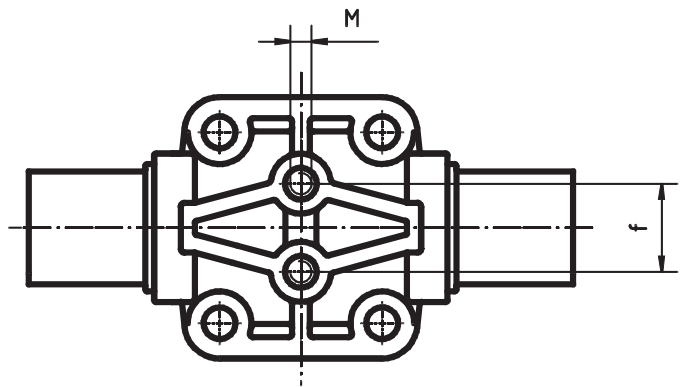
		Operating pressure [bar]		Control function 1	Control function 2	K _v value	Weight
MG	DN	EPDM / FPM	PTFE	Control pressure	Control pressure	[m³/h]	[kg]
10	12	0 - 6 bar	0 - 6 bar	3.2 - 6 bar	-	2.8	0.40
	15					3.5	0.50
25	15	0 - 10 bar	0 - 6 bar	3.8 - 6 bar	max. 3.8 bar	5.6	1.80
	20					8.2	1.80
	25					10.5	1.80
40	32	0 - 10 bar	0 - 6 bar	3.8 - 6 bar	max. 4.5 bar	18.0	4.00
	40					25.0	4.00
50	50	0 - 10 bar	0 - 6 bar	4.7 - 6 bar	max. 4.5 bar	46.0	7.40

All pressures are given as gauge pressures.

MG = Diaphragm size

O-ring material for valve bodies with union ends	
Diaphragm material	O-ring material
CSM	EPDM
NBR	EPDM
FPM	FPM
EPDM	EPDM
PTFE	FPM
Other combinations on request.	

Mounting dimensions [mm]		
Diaphragm size	M	f
10	M5	35.0
25	M6	25.0
40	M8	44.5
50	M8	44.5



Order data

Body configuration	Code
2/2 way	D

Connection	Code
Spigots DIN for socket welding	0
Threaded sockets DIN ISO 228	1
Solvent cement sockets DIN	2
Flanges EN 1092 / PN10 / form B (ex DIN 2501 / PN10 / form C) length EN 558-1, series 1 ISO 5752, basic series 1 (ex DIN 3202-1, series F1)	4
Union ends with DIN insert (socket)	7
Spigots for IR butt welding	20
Spigots for IR butt welding, BCF	28
Spigots - inch	30
Union ends with inch insert (socket)	33
Flanges ANSI class 125/150 RF length EN 558-2, series 1 ISO 5752, basic series 1 (ex DIN 3202-1, series F1)	39
Union ends with DIN insert (IR butt welding)	78

Valve body material	Code
PVC-U, grey	1
ABS	4
PVDF	20
Lining PPH - natural	70
Lining PPH - grey acc. to RAL 7032	71

Diaphragm material	Code
NBR	2
FPM	4
EPDM	14
PTFE/EPDM	PTFE laminated 52*
PTFE/EPDM convex	PTFE loose 5E*
PTFE/FPM convex	PTFE loose 5F
* Material complies with FDA requirements	

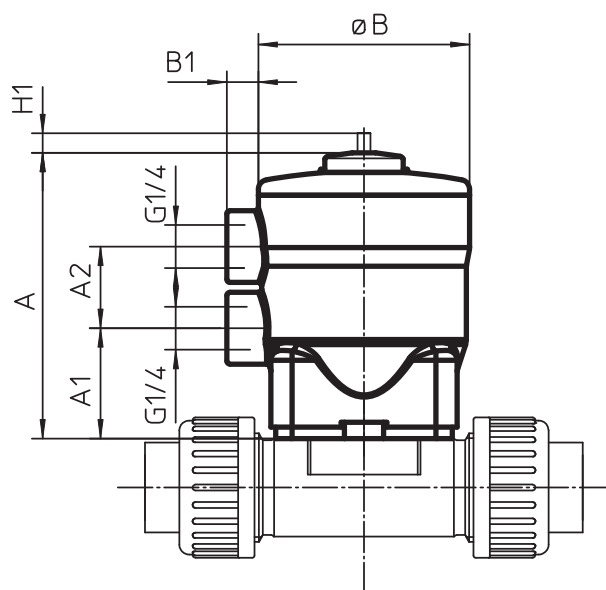
Control function	Code
Normally closed	Diaphragm size 10 - 50 1
Normally open	Diaphragm size 25 - 50 2
Double acting	Diaphragm size 50 3

Actuator size	Code
Piston ø 54	Diaphragm size 10 1
Piston ø 85	Diaphragm size 25 2
Piston ø 105	Diaphragm size 40 3
Piston ø 125	Diaphragm size 50 4

Order example	630	15	D	7	1	14	1	2
Type	630							
Nominal size		15						
Body configuration (Code)			D					
Connection (Code)				7				
Valve body material (Code)					1			
Diaphragm material (Code)						14		
Control function (Code)							1	
Actuator size (Code)								2

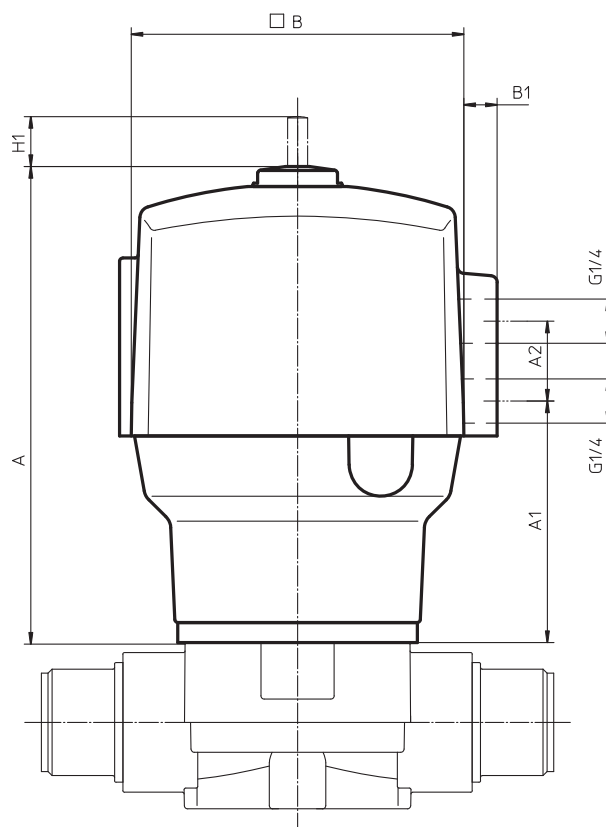
Dimensions - Actuator size 1, diaphragm size 10 [mm]

Diaphragm size	B	B1	A	A1	A2	H1	Actuator weight [kg]
10	65	9	88	34	25	6	0.3



Dimensions - Actuator size 2-4, DN 15-50 [mm]

Diaphragm size	B	B1	A	A1	A2	H1	Actuator weight [kg]
25	100	11	141	73	24	9	1.0
40	125	9	192	93	65	13	2.5
50	150	8	230	110	65	18	4.5



Body dimensions

Spigots DIN, connection code 0, (for actuator 2-4, DN 15 - 50) [mm]
 Valve body material: PVC-U (Code 1), PVDF (Code 20), Lining PPH (Code 70, 71)

MG	DN	L	H		H1	ød	c	
			Material code 1	Material code 20, 70, 71			Material code 1	Material code 20, 70, 71
25	15	124	45	50	26	20	16	18
	20	144	45	50	26	25	19	19
	25	154	45	50	26	32	22	22
40	32	174	74	74	40	40	26	24
	40	194	74	74	40	50	31	26
50	50	224	78	82	40	63	39	29

For materials see overview on page 11

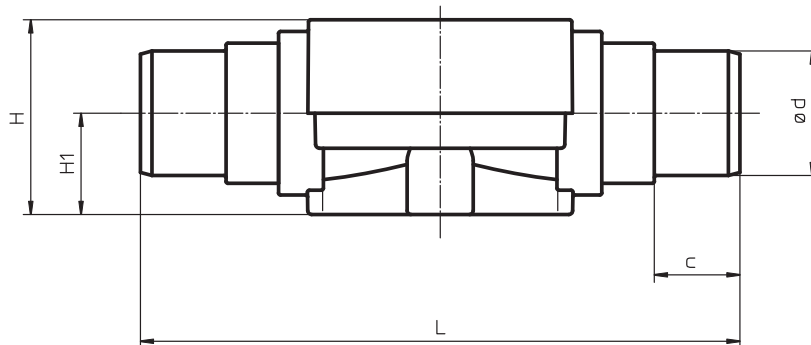
MG = diaphragm size

Spigots INCH, connection code 30 [mm]
 Valve body material: PVC-U (Code 1), ABS (Code 4)

MG	DN		L	H	H1	ød	c
25	15	1/2"	141	45	26	21.4	24
	20	3/4"	145	45	26	26.7	27
	25	1"	154	45	26	33.6	30
40	32	1 1/4"	174	68	40	42.2	33
	40	1 1/2"	194	68	40	48.3	39
50	50	2"	224	75	40	60.3	40

For materials see overview on page 11

MG = diaphragm size



Threaded sockets, connection code 1 [mm]
 diaphragm size 10, DN 12
 Valve body material: PVC-U (Code 1), PVDF (Code 20)

MG	DN	D	c	H		H1		L
				Material code 1	Material code 20	Material code 1	Material code 20	
10	12	G3/8	13	27.5	31.5	15	19	55

For materials see overview on page 11

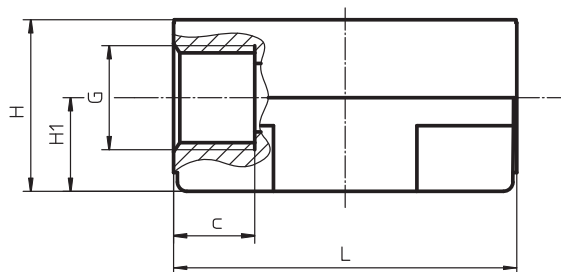
MG = diaphragm size

Solvent cement sockets, connection code 2 [mm]
 diaphragm size 10, DN 12
 Valve body material: PVC -U(Code 1)

MG	DN	D	c	H	H1	L
10	12	ø 16	13	27.5	15	55

For materials see overview on page 11

MG = diaphragm size



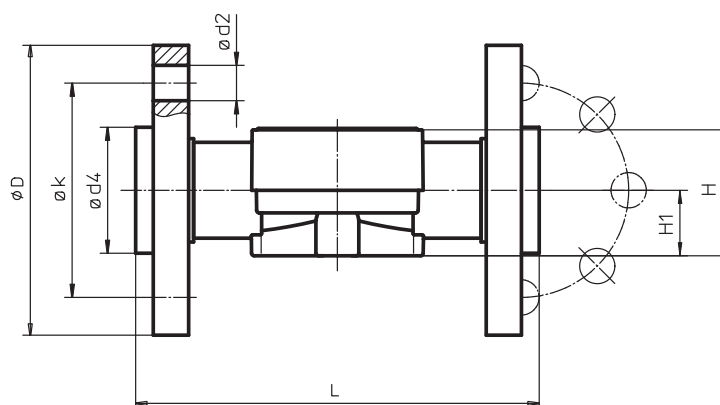
Flanges, connection code 4, 39 [mm]
Valve body material PVDF (code 20), Lining PPH (code 71)

					Connection code 4					Connection code 39						
MG	DN	L	H	H1	ø D	ø d2	ø d4	ø k	Number of bolt holes	ø D	ø d2	ø d4	ø k	Number of bolt holes		
Material code			depending on material code see body dimensions page 6 connection 0	depending on material code see body dimensions page 6 connection 0			5, 71	20				5, 71	20			
25	15	150*			95	14	45	45	65	4	95	16	45	45	60	4
	20	150			105	14	58	58	75	4	105	16	54	58	70	4
	25	160			115	14	68	68	85	4	115	16	63	68	79	4
40	32	180			140	18	78	78	100	4	140	16	73	78	89	4
	40	200			150	18	88	88	110	4	150	16	82	88	98	4
50	50	230			165	18	102	102	125	4	165	19	102	102	121	4

For materials see overview on last page.

MG = diaphragm size

* Length is not according to EN 558-1 series 1

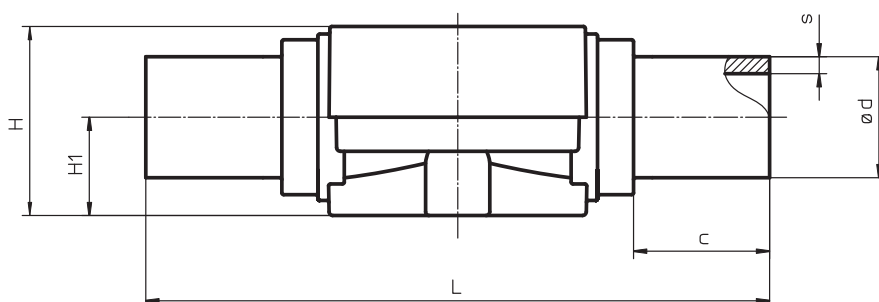


Spigots for IR butt welding, connection code 20 [mm]
Valve body material: Lining PPH (Code 70, 71)

MG	DN	L	H	H1	ø d	s	c
25	15	154	50	26	20	1.9	33
	20	154	50	26	25	2.3	33
	25	154	50	26	32	3.0	33
40	32	194	74	40	40	3.7	33
	40	194	74	40	50	4.6	33
50	50	224	82	40	63	5.8	33

For materials see overview on page 11

MG = diaphragm size



Union ends with DIN insert, connection code 7 [mm] Valve body material: PVC-U (Code 1), PVDF (Code 20), Lining PPH (Code 70, 71)											
MG	DN	G	øD	LA	H	ød	H1		LB		
							Material code 1	Material code 20, 70, 71	Material code 1	Material code 20	Material code 5, 70, 71
10	15	G1	43	90	30	20	15	25	128	128	125
25	15	G1	43	108	50	20	26	26	146	146	143
	20	G11/4	53	108	50	25	26	26	152	150	146
	25	G11/2	60	116	50	32	26	26	166	162	158
40	32	G2	74	134	74	40	40	40	192	184	181
	40	G21/4	83	154	74	50	40	40	222	210	207
50	50	G23/4	103	182	82	63	40	40	264	246	243

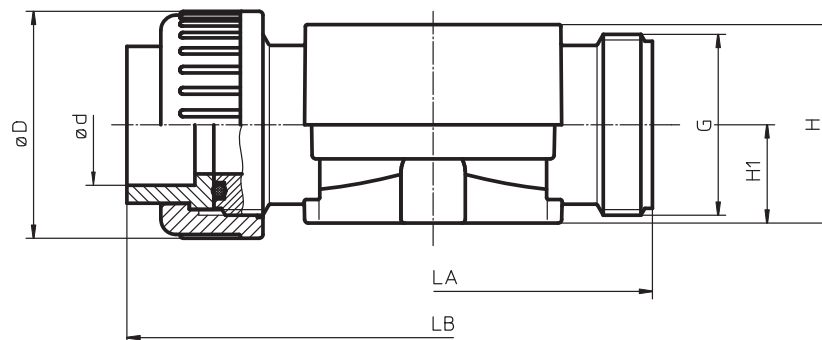
For materials see overview on page 11

MG = diaphragm size

Union ends with INCH insert connection code 33 [mm] Valve body material: PVC-U (Code 1)									
MG	DN	G	NPS	øD	LA	H	H1	ød	LB
10	15	G1	1/2"	43	90	30	15	21.4	128
25	15	G1	1/2"	43	108	50	26	21.4	146
	20	G11/4	3/4"	53	108	50	26	26.7	152
	25	G11/2	1"	60	116	50	26	33.6	166
40	32	G2	1 1/4"	74	134	74	40	42.2	192
	40	G21/4	1 1/2"	83	154	74	40	48.3	222
50	50	G23/4	2"	103	182	82	40	60.3	264

For materials see overview on page 11

MG = diaphragm size



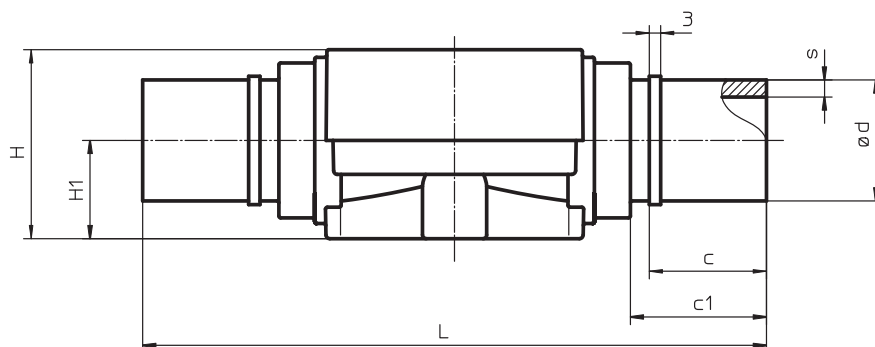
Spigots for IR butt welding, BCF, connection code 28 [mm]

Valve body material: PVDF (Code 20)

MG	DN	L	H	H1	ød	c	c1	s
10	15	134	41	25	20	31	37	1.9
25	15	154	50	26	20	31	37	1.9
	20	154	50	26	25	31	37	1.9
	25	154	50	26	32	31	37	2.4
40	32	194	74	40	40	40	46	2.4
	40	194	74	40	50	40	46	3.0
50	50	224	82	40	63	40	46	3.0

For materials see overview on page 11

MG = diaphragm size



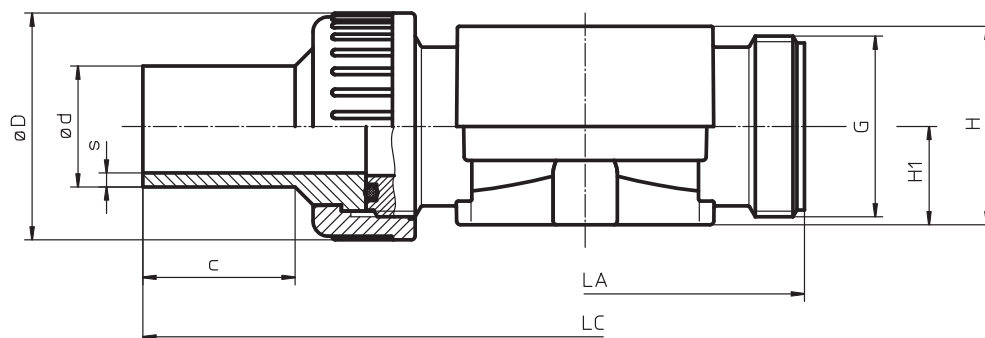
Union ends with insert, connection code 78 [mm]

Valve body material: PP (Code 5), PVDF (Code 20), Lining PPH (Code 70, 71)

MG	DN	LA	LC	H	H1	øD	ød	G	Material code 20	Material code 70, 71	c
10	15	90	196	41	25	42	20	G1	1.9	-	37
25	15	108	214	50	26	43	20	G1	1.9	1.9	37
	20	108	220	50	26	53	25	G 1 1/4	2.3	1.9	39
	25	116	234	50	26	60	32	G 1 1/2	3.0	2.4	40
40	32	134	258	74	40	74	40	G2	3.7	2.4	41
	40	154	284	74	40	83	50	G 2 1/4	4.6	3.0	43
50	50	182	318	82	40	103	63	G 2 3/4	5.8	3.0	43

For materials see overview on page 11

MG = diaphragm size



Overview of valve bodies for GEMÜ 630, actuator 1, DN 12-15

Material code		PVC-U (Code 1)			PVDF (Code 20)			
Connection code		1	2	7	1	7	28	78
Diaphragm size	DN							
10	12	X	X	-	X	-	-	-
10	15	-	-	X	-	X	X	X

Overview of valve bodies for GEMÜ 630, actuator 2-4, diaphragm size 25 - 50

Material code		PVC-U (Code 1)				PP (Code 70, Code 71)						PVDF (Code 20)						ABS (Code 4)
Connection code		0	7	30	33	0	4	7	20	39	78	0	4	7	28	39	78	30
25	15	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
	20	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
	25	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
40	32	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
	40	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X
50	50	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X

* Valve bodies are suitable for use with diaphragms code 5E and 5F.

Accessories for GEMÜ 630 - Please order the respective data sheets separately



Electrical position indicator
GEMÜ 1235



Electrical position indicator
with microswitch GEMÜ 1215



Intelligent positioner
GEMÜ 1435



Intelligent positioner
with optional integrated process controller
GEMÜ 1436



Mounting plate
GEMÜ 1041



Pilot valve
GEMÜ 320 - 326

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AND CONTROL SYSTEMS