

# Full Bore Diaphragm Valve, Metal

## Construction

The GEMÜ 638 motorized 2/2 way full bore diaphragm valve is fitted with a motor/control units made by AUMA.

## Features

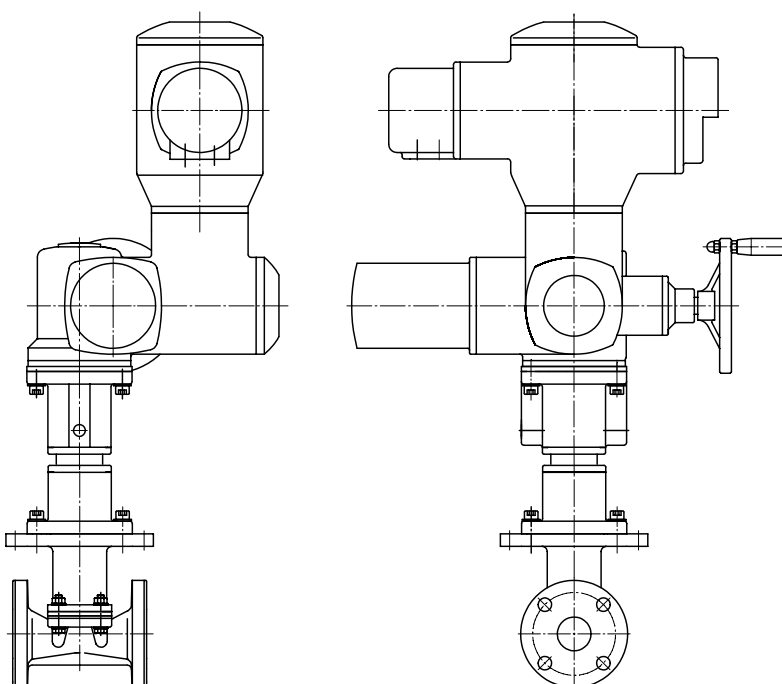
- Optional rubber lining particularly suitable for applications involving particulate media, e.g.:
  - Mining
  - Desulphurisation plants
  - Paper and woodpulp industries
  - Water treatment
  - Ceramics industry
  - Chemical and dyestuff industries
- Valve body and diaphragm available in various materials and designs
- Motorized actuators are available for Open/Close duty and for regulating duties, including various control units.
- No auxiliary air pressure supply required

## Advantages

- High mechanical stability
- High flow rate due to straight through flow
- Optional flow direction
- Valve can be cleaned without disassembly of actuator
- Proven electric actuators and control units in modular design



GEMÜ 638



## 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 material.

Max. perm. temperature of working medium 100 °C  
(depending on medium, body and diaphragm material)

### Ambient conditions

Max. ambient temperature max. 50 °C

**For the technical data of the AUMA actuator, the control or regulating unit and the linear thrust unit please refer to AUMA's own technical data sheet.**

Diaphragm size		Working pressure	Weight, approx.	Kv value
DN		[bar]	[kg]	[m <sup>3</sup> /h]
40	25	0 - 7	39	35
	40		41	38
65	50	0 - 7	61	108
	65		62	114
100	80	0 - 6	79	284
	100		88	298
150	125	0 - 3	131	650
	150		139	680

All pressures are gauge pressures. Operating pressure values were determined with static operating pressure applied on one side of a closed valve. Sealing at the valve seat and atmospheric sealing is ensured for the given values. Information on operating pressures applied on both sides and for high purity media on request.

Valve not suitable for vacuum applications.

### Coordination of actuator types, control and regulating units for the various nominal sizes

MG	DN	638 Open/close actuator	638 Regulating actuator
40	25	LE12.1 (50) + SA07.2 + AM01.1	LE12.1 (50) + SAR07.2 + AC01.2
	40	LE12.1 (50) + SA07.2 + AM01.1	LE12.1 (50) + SAR07.2 + AC01.2
65	50	LE12.1 (50) + SA07.2 + AM01.1	LE12.1 (50) + SAR07.2 + AC01.2
	65	LE12.1 (50) + SA07.2 + AM01.1	LE12.1 (50) + SAR07.2 + AC01.2
100	80	LE25.1 (100) + SA07.6 + AM01.1	LE25.1 (100) + SAR07.6 + AC01.2
	100	LE25.1 (100) + SA07.6 + AM01.1	LE25.1 (100) + SAR07.6 + AC01.2
150	125	LE25.1 (100) + SA07.6 + AM01.1	LE25.1 (100) + SAR07.6 + AC01.2
	150	LE25.1 (100) + SA07.6 + AM01.1	LE25.1 (100) + SAR07.6 + AC01.2

LE 12.1 (50) = AUMA linear thrust unit with 50 mm stroke

LE 25.1 (100) = AUMA linear thrust unit with 100 mm stroke

MG = Diaphragm size

**Our standard motorised actuators are for On/Off duty the Auma AM01.1 and for Regulation duty the Auma AC01.2. Other motorised actuators available on request.**

## Order data

Body configuration	Code
2/2 way	D

Valve body material	Code
EN-GJL-250 (GG 25)	8
EN-GJL-250 (GG 25), Hard rubber lined	13
EN-GJL-250 (GG 25), Soft rubber lined	52

Connection	Code
Flanges EN 1092 / PN16 / Form A, length EN 558, series 7, ISO 5752, basic series 7	53
Flanges ANSI CLASS 125 FF, length EN 558, series 7, ISO 5752, basic series 7	58
For overview of available valve bodies for GEMÜ 638 see page 5.	

Diaphragm material	Code
NBR	2
IIR	6
CR	8
EPDM	14

### Order data: The order must include 2 items!

#### Item 1 Valve with adapter and suitable AUMA linear thrust unit

e.g. 638 80 D 53 13 14

For details of the AUMA linear thrust unit see AUMA's own technical documentation.

#### Item 2 AUMA rotary actuator\*

e.g. SA 07.2F1022D380/506822KN

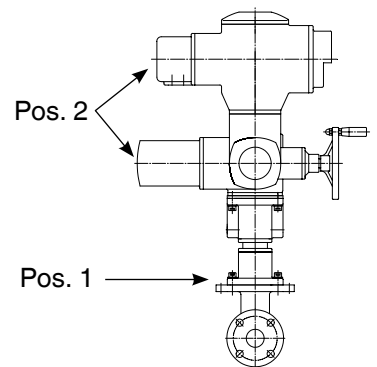
For details see AUMA's own technical documentation.

#### AUMA control unit\*

Standard type AM01.1TP110/001 1110KC3F18E1

For details see AUMA's own technical documentation.

\*Other types on request



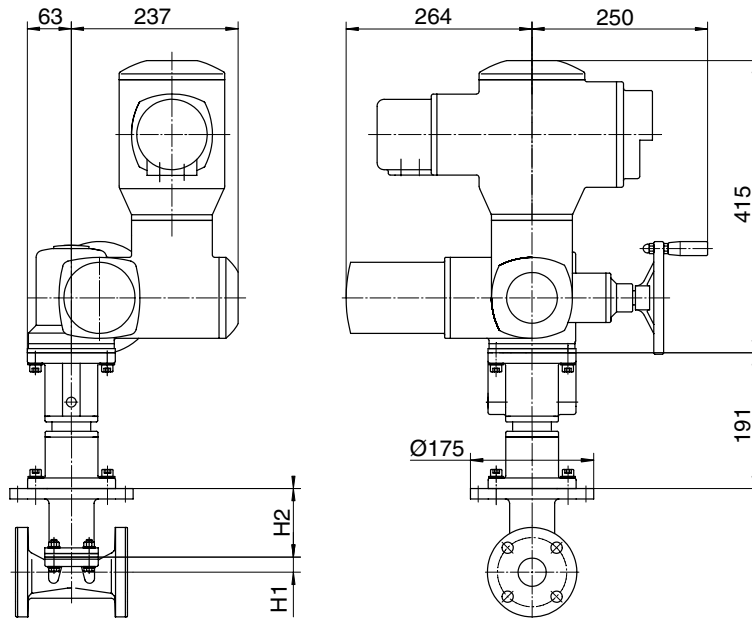
Order example for item 1	628	50	D	53	13	24
Type	628					
Nominal size		50				
Body configuration (code)			D			
Connection (code)				53		
Valve body material (code)					13	
Diaphragm material (code)						24

Other connections, valve body materials, linings and diaphragm materials upon request

## Dimensions [mm]

### Actuator dimensions

Diaphragm size	DN	H1	H2
40	25 - 40	22	98
65	50 - 65	32	141
100	80 - 100	47	191
150	125 - 150	55	302



**Mounting position: vertical, standing**  
**The complete weight of the actuator must be supported by a suitable bracket**

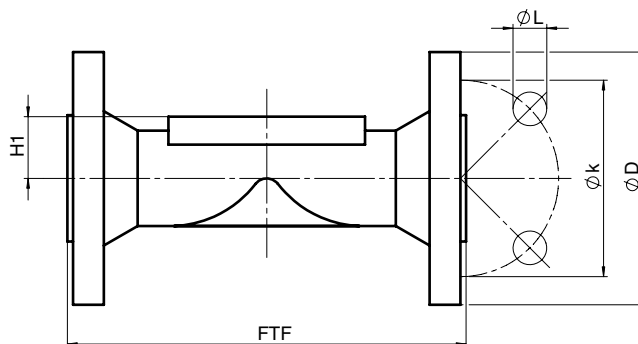
## Body dimensions [mm]

### Flanges, connection code 53 Valve body material GG 25 (code 8, 13, 52)

DN	NPS	Number of bolt	FTF		øD	øK	øL
			Material code 8	Material code 13, 52			
25	1"	4	127	127	115	85	14
40	1 1/2"	4	159	159	150	110	19
50	2"	4	191	191	165	125	19
65	2 1/2"	4	216	216	185	145	19
80	3"	8	254	254	200	160	19
100	4"	8	305	305	220	180	19
125	5"	8	356	366	250	210	19
150	6"	8	406	416	285	240	23

### Flanges, connection code 58 Valve body material GG 25 (code 8, 13, 52)

DN	NPS	Number of bolt	FTF		øD	øK	øL
			Material code 8	Material code 13, 52			
25	1"	4	127	127	110	79.2	15.9
40	1 1/2"	4	159	159	125	98.4	15.9
50	2"	4	191	191	150	120.7	19.0
65	2 1/2"	4	216	216	180	139.7	19.0
80	3"	8	254	254	190	152.4	19.0
100	4"	8	305	305	230	190.5	19.0
125	5"	8	356	366	255	215.9	22.2
150	6"	8	406	416	280	241.3	22.2



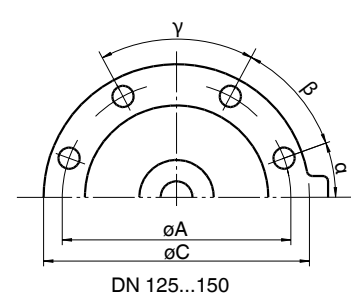
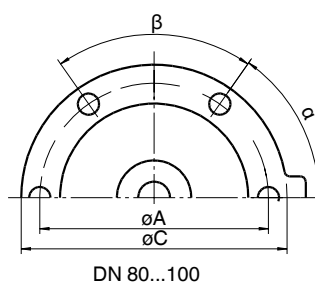
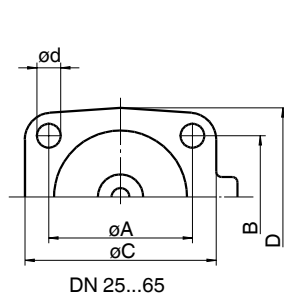
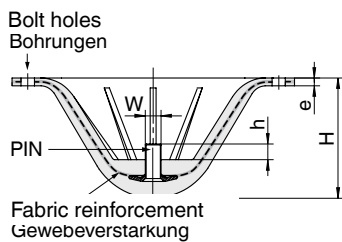
## Overview of valve bodies for GEMÜ 638

Connection code	53			58		
Material code	8	13	52	8	13	52
DN						
25	X	X	X	X	X	X
40	X	X	X	X	X	X
50	X	X	X	X	X	X
65	X	X	X	X	X	X
80	X	X	X	X	X	X
100	X	X	X	X	X	X
125	X	X	X	X	X	X
150	X	X	X	X	X	X

## Diaphragm dimensions

DN	NPS	$\phi A$	B	$\phi C$	D	d	e	h	W	H	$\alpha$	$\beta$	$\gamma$	Number of bolt holes
25	1"	64	51	90	70	9.0	5	8	1/4"	36	-	-	-	4
40	1 1/2"	64	51	90	70	9.0	5	8	1/4"	36	-	-	-	4
50	2"	101	82	159	128	13.5	6	10	5/16"	64	-	-	-	4
65	2 1/2"	101	82	159	128	13.5	6	10	5/16"	64	-	-	-	4
80	3"	175	-	223	-	13.5	6	12	5/16"	80	56°	34°	-	6
100	4"	175	-	223	-	13.5	6	12	5/16"	80	56°	34°	-	6
125	5"	255	-	287	-	13.5	8	16	5/8"	115	20°	40°	60°	8
150	6"	255	-	287	-	13.5	8	16	5/8"	115	20°	40°	60°	8

The thread of the diaphragm stud corresponds to Whitworth standard.



**GEMÜ**® VALVES, MEASUREMENT  
AND CONTROL SYSTEMS

