

# Full Bore Diaphragm Valve, Metal

## Construction

The GEMÜ 655 manually operated 2/2 way full bore diaphragm valve has a metal bonnet and a non-rising handwheel.

## Features

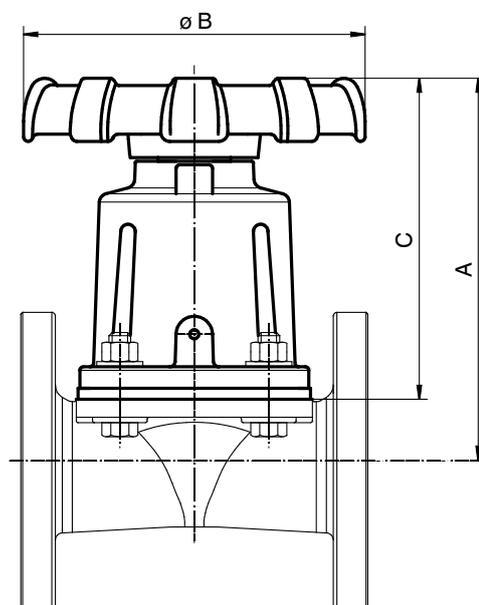
- Optional rubber lining suitable for applications involving particulate media, e.g.:
  - Mining
  - Paper and woodpulp industry
  - Water treatment
  - Ceramics industry
  - Chemical and dyestuff industry
- Valve body and diaphragm available in various materials and designs

## Advantages

- High mechanical stability
- High flow rate due to straight through flow
- Optional flow direction
- Installation for an optimized draining is possible
- Valve can be cleaned without disassembly of bonnet
- Can be retrofitted with a pneumatic actuator (GEMÜ 9656)

Bonnet dimensions [mm]

DN	NPS	øB	A	C
25 - 40	1" - 1 1/2"	118	148	130
50 - 65	2" - 2 1/2"	188	206	178
80 - 100	3" - 4"	238	269	229
125 - 150	5" - 6"	316	407	307
200	8"	416	415	359
250	10"	416	538	484
300	12"	700	687	562



## 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\*

### Ambient conditions

Max. ambient temperature max. 60 °C

Nominal size	NPS	Operating pressure	Kv-value	Weight
DN		[bar]	[m <sup>3</sup> /h]	[kg]
25	1"	0 - 7.0	35	4
40	1 1/2"	0 - 7.0	38	5
50	2"	0 - 7.0	108	15
65	2 1/2"	0 - 7.0	114	16
80	3"	0 - 7.0	284	25
100	4"	0 - 7.0	298	36
125	5"	0 - 5.5	650	73
150	6"	0 - 5.5	680	76
200	8"	0 - 3.5	1790	127
250	10"	0 - 3.5	2920	214
300	12"	0 - 3.0	5180	408

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. Kv values determined acc. to IEC 534 standard, inlet pressure 6 bar, Δp 1 bar, valve body material cast iron EN-GJL-250 and flanges EN 1092 length EN 558 series 7 and soft elastomer diaphragm.

Valve not suitable for vacuum applications

## Order data

### Body configuration

2/2-way

### Code

D

### Connection

Flanges EN 1092 / PN10 / form A, length EN 558, series 7, ISO 5752, basic series 7

52

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 655 see page 3

### Valve body material

EN-GJL-250 (GG 25 cast iron)

### Code

8

EN-GJL-250 (GG 25 cast iron), hard rubber lined

13

EN-GJL-250 (GG 25 cast iron), soft rubber lined

52

### Diaphragm material

NBR

### Code

2

IIR

6

CR

8

EPDM

14

NR

15

### Control function

Manually operated

### Code

0

### Order example

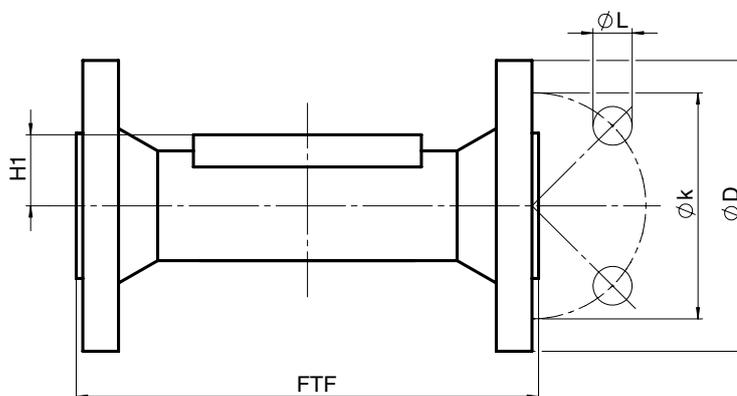
Order example	655	50	D	53	8	14	0
Type	655						
Nominal size		50					
Body configuration (code)			D				
Connection (code)				53			
Valve body material (code)					8		
Diaphragm material (code)						14	
Control function (code)							0

Other connections, valve body materials, linings and diaphragm materials on request.

## Body dimensions [mm]

### Flanges, connection code 52, 53, 58

DN	NPS	Number of bolt	Connection code 52, 53						Connection code 58					
			FTF		ØD	Øk	ØL	H1	FTF		ØD	Øk	ØL	H1
			Body material						Body material					
			Code 8	Code 13, 52					Code 8	Code 13, 52				
25	1"	4	127	127	115	85	14	19.0	127	127	110	79.4	15.9	21.0
40	1 1/2"	4	159	159	150	110	18	28.0	159	159	125	98.4	15.9	30.0
50	2"	4	191	191	165	125	18	35.0	191	191	150	120.7	19.0	37.0
65	2 1/2"	4	216	216	185	145	18	27.5	216	216	180	139.7	19.0	29.5
80	3"	8	254	254	200	160	18	33.0	254	254	190	152.4	19.0	35.0
100	4"	8	305	305	220	180	18	43.0	305	305	230	190.5	19.0	45.0
125	5"	8	356	366	250	210	18	65.0	356	366	255	215.9	22.2	65.0
150	6"	8	406	416	285	240	22	58.0	406	416	280	241.3	22.2	60.0
200	8"	8	521	531	340	295	22	88.0	521	531	345	298.5	22.2	90.0
250	10"	12	635	647	395	350	22	120.5	635	647	405	362.0	22.2	122.5
300	12"	12	749	761	445	400	22	142.5	749	761	485	431.8	22.2	144.5



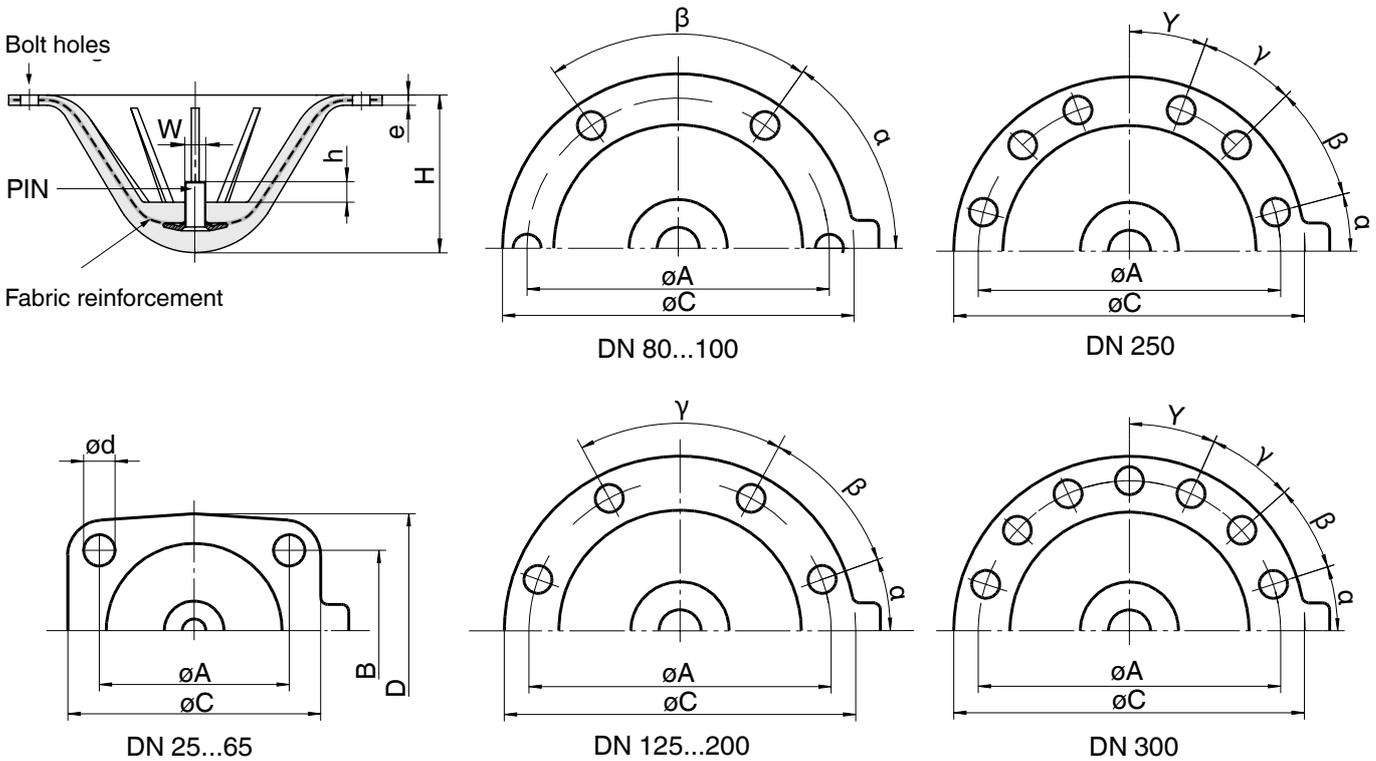
### Overview of valve bodies for GEMÜ 655

Connection code	52			53			58		
Material code	8	13	52	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
200	X	X	X	-	-	-	X	X	X
250	X	X	X	-	-	-	X	X	X
300	X	X	X	-	-	-	X	X	X

## Diaphragm dimensions

DN	NPS	øA	B	øC	D	d	e	h	W	H	α	β	γ	Y	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
200	8"	305	-	341	-	18.5	8	20	5/8"	145	30°	40°	40°	-	8
250	10"	381	-	410	-	17.0	10	20	5/8"	178	15°	30°	25°	20°	12
300	12"	528	-	576	-	22.0	12	25	1"	280	18°	24°	24°	24°	14

The thread of the diaphragm pin corresponds to Whitworth standard.



For further metal diaphragm valves, accessories and other products,  
please see our Product Range catalogue and Price List.  
Contact GEMÜ.

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AND CONTROL SYSTEMS

