

Construction

The flowmeter operates according to the variable area principle. Metering tubes are available in Trogamid-T, suitable for inert media, and polysulfone, suitable for corrosive* media (PVC and PVDF tubes on request). Male threads moulded onto the ends of the metering tube allow for easy mounting of unions. O-ring seals at the faces of the tube ensure reliable sealing between metering tube and union and provide stress-free sealing. The floats are available in stainless steel 1.4571, PP or PVDF (depending on flow medium and measuring range). The scale on the metering tube can be suited to the medium and is available e. g. in l/h, m³/h or %. Dovetail sections moulded onto the metering tube allow for easy mounting of adjustable visual flow indicators, limit switches and a continuous readout transmitter.

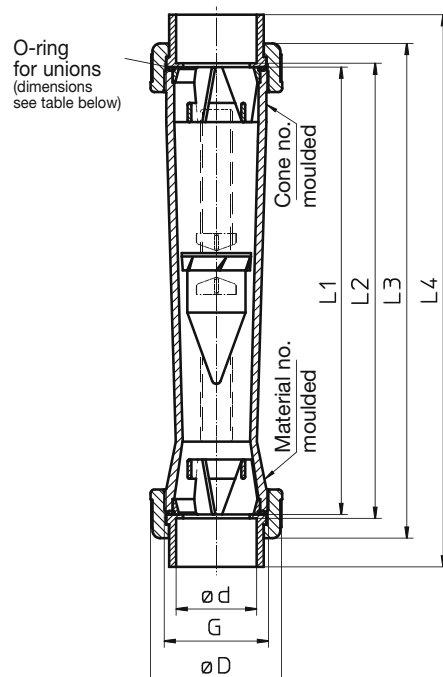
Advantages

- Good level of accuracy, simple operation
- Impact resistant, corrosion resistant
- Over 500 standard scales and 3000 special scales are available with further scales upon request
- Clear and large size printed scale

* see information on working medium on page 2

Dimensions of version with plastic unions Code 1, 5, 20 (mm)

DN	ød	G	øD	L1	L2	L3	L4
20	25	G 1 1/4	53	350	356	375	394
25	32	G 1 1/2	60	350	356	376	400
32	40	G 2	74	350	356	380	408
40	50	G 2 1/4	83	350	356	382	418
50	63	G 2 3/4	103	350	356	386	433
65	75	G 3 1/2	122	350	356	388	445



O-ring dimensions (mm)

DN	
20	28.2 x 3.5
25	33.0 x 3.5
32	46.0 x 3.5
40	50.4 x 3.5
50	68.0 x 3.5
65	85.0 x 4.0



Technical data

Working medium

Inert and corrosive liquid and gaseous media which have no negative impact on the physical and chemical properties of the tube, float, seal and union materials.

Working pressure*

Tubes with plastic unions max. 10 bar

Tubes with metal unions max. 15 bar

*Working pressure dependent on tube material and working temperature

Order data

Versions

Float material	Working medium	Type
PP	Liquids and gases	805
PP with magnet	Liquids and gases	815
St. steel 1.4571	Liquids	807
St. steel 1.4571 with magnet	Liquids	817
PP	Gases	825
PP with magnet	Gases	835
PVDF	Liquids and gases	820
PVDF with magnet	Liquids and gases	830

Nominal size (mm)

Code

DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65

Body configuration

Code

Straight through	D
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Connection

Code

Union ends DIN	7
Union ends - Inch	33
Other connections on request	

Tube material

Code

Trogamid-T	temperature range 0- 60°C*	21
Polysulfone	temperature range 0-100°C*	22
PVC	on request	
PVDF	on request	

* Stated temperatures are valid for water

Material of O-rings

Code

O-ring	FPM	4
O-ring	EPDM	14

Material of unions

Code

PVC-U		1
PP		5
GT	Malleable iron	6
VA	Stainless steel 1.4571	7
PVDF		20

Size of tube

Code

see tables on pages 4 and 5

Measuring range

Code

see tables on pages 4 and 5

Note:

The scale divisions given on pages 4 and 5 correspond to the actual flows.

When ordering, the flow ranges should be stated as follows:

Liquid media: l/h
Gaseous media: Nm³/h

Required information:

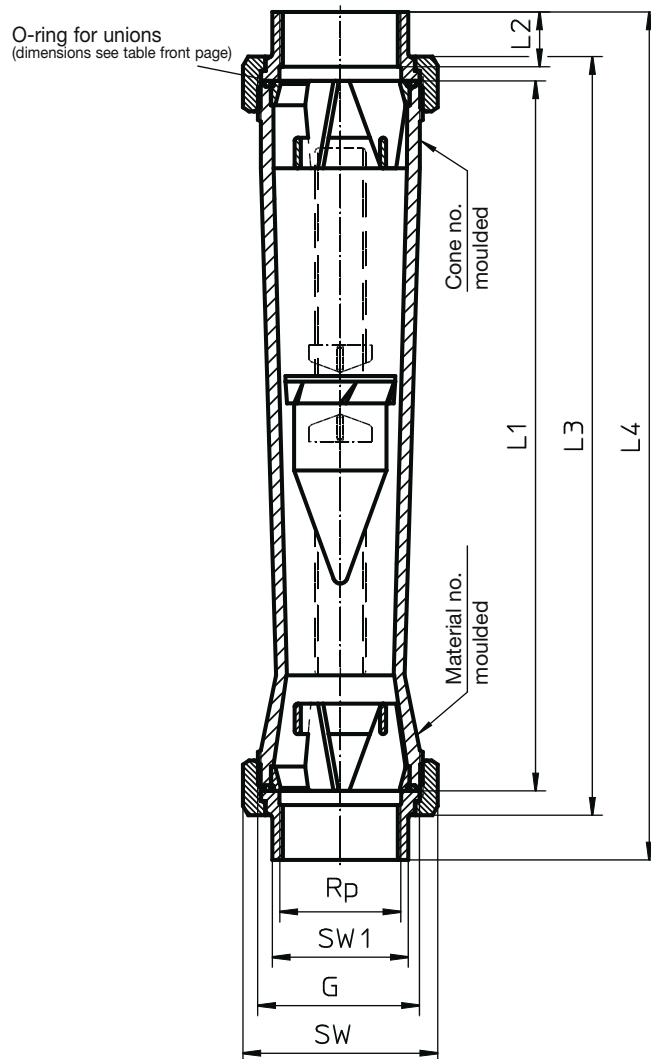
The following data are necessary:

1. Type of medium
2. Concentration of medium (%)
3. Required flow range (l/h, m³/h, kg/h)
4. Working pressure, relative or absolute (bar)
5. Temperature of medium (°C)
6. Viscosity of medium (if available)
7. Specific gravity of medium (if available)
8. Float with or without magnet

Order example	805	25	D	7	21	14	1	52	250
Type (code)	805								
Nominal size (code)		25							
Body configuration (D)			D						
Connection (code)				7					
Tube material (code)					21				
Material of O-ring (code)						14			
Material of unions (code)							1		
Size of tube (code)								52	
Measuring range max. (e.g. 250 l/h H ₂ O)									250

Dimensions of version with metal unions Code 6, 7 (mm)

DN	G	Rp	SW	SW1	L1	L2	L3	L4
20	G 1 1/4	Rp 3/4	50	31	350	16	366	395
25	G 1 1/2	Rp 1	55	38	350	17	369	402
32	G 2	Rp 1 1/4	66	47	350	19	370	410
40	G 2 1/4	Rp 1 1/2	74	53	350	20	372	414
50	G 2 3/4	Rp 2	90	66	350	24	374	420
65	G 3 1/2	Rp 2 1/2	110	83	350	30	374	430



Accuracy class: 4 acc. to VDE/VDI 3513, sheet 2, i.e. $\pm 1\%$ of end value $\pm 3\%$ of measured value.

Selection of scales */** (liquids)

	Size	Water H ₂ O	Hydrochloric acid HCl 30-33%	Sodium NaOH 30%	Sodium NaOH 50%	% scale	Tube size	PVC unions	Malleable iron unions
	(mm)	Tube: Trogamid-T Polysulfone	Tube: Polysulfone	Tube: Trogamid-T Polysulfone	Tube: Trogamid-T Polysulfone	Tube: Trogamid-T Polysulfone	Code	Weight (kg)	
GEMÜ 805/815 Float material PP (GEMÜ 815 with magnet)	20	15 -160 l/h	10 -130 l/h	2.50-57.5 l/h	0.5- 10 l/h	10-100%	46	0.42	0.53
	20	20 -250 l/h	20 -210 l/h	5 -115 l/h	1- 23 l/h	10-100%	47	0.42	0.53
	20	40 -400 l/h	40 -340 l/h	10 -210 l/h	2.5- 57.5 l/h	10-100%	48	0.42	0.53
	20	50 -650 l/h	50 -550 l/h	20 -380 l/h	5- 135 l/h	10-100%	49	0.41	0.52
	25	20 -250 l/h	20 -210 l/h	5 -125 l/h	1- 20 l/h	10-100%	52	0.57	0.74
GEMÜ 820/830 Float material PVDF (GEMÜ 830 with magnet)	25	40 -400 l/h	20 -350 l/h	10 -200 l/h	2.5- 50 l/h	10-100%	53	0.56	0.73
	25	60 -640 l/h	50 -550 l/h	10 -390 l/h	5- 130 l/h	10-100%	54	0.55	0.72
	25	100-1000 l/h	75 -900 l/h	25 -650 l/h	10- 260 l/h	10-100%	55	0.54	0.71
	32	100-1000 l/h	75 -900 l/h	25 -600 l/h	10- 200 l/h	10-100%	61	0.98	1.25
	32	150-1600 l/h	100-1500 l/h	50-1000 l/h	20- 500 l/h	10-100%	62	0.96	1.23
GEMÜ 822/832 Float ma- terial PVDF (GEMÜ 832 with magnet)	32	200-2500 l/h	200-2300 l/h	100-1700 l/h	25- 950 l/h	10-100%	63	0.94	1.21
	40	200-1600 l/h	100-1450 l/h	50-1000 l/h	25- 425 l/h	10-100%	67	1.24	1.56
	40	300-2500 l/h	200-2200 l/h	100-1700 l/h	25- 900 l/h	10-100%	68	1.21	1.52
	40	300-3300 l/h	300-2800 l/h	100-2100 l/h	50-1250 l/h	10-100%	69	1.20	1.52
	50	0.2-2.5 m³/h	200-2300 l/h	50-1700 l/h	25- 800 l/h	10-100%	71	1.52	2.39
		0.4-4.0 m³/h	300-3600 l/h	100-2800 l/h	50-1600 l/h	10-100%	72	1.49	2.36
		0.6-6.4 m³/h	500-6000 l/h	250-5000 l/h	100-3200 l/h	10-100%	73	1.44	2.31
		1.0-11 m³/h	-	-	-	10-100%	73	1.44	2.31
	65	0.75-9 m³/h	0.75-8.0 m³/h	0.5-6.75 m³/h	0.25-4.25 m³/h	10-100%	75	2.42	3.87
	65	1.5-13 m³/h	1.5-11.5 m³/h	0.75-9.75 m³/h	0.25-6.75 m³/h	10-100%	77	2.42	3.87
GEMÜ 807/817 Float material 1.4571 (GEMÜ 817 with magnet)	20	20 - 250 l/h	-	5 -125 l/h	1- 27 l/h	10-100%	46	0.45	0.56
	20	40 - 400 l/h	-	10 -240 l/h	2.5- 70 l/h	10-100%	47	0.45	0.56
	20	60 - 640 l/h	-	25 -425 l/h	5- 170 l/h	10-100%	48	0.45	0.56
	20	75 -1000 l/h	-	25 -725 l/h	10- 350 l/h	10-100%	49	0.44	0.55
	25	40 -400 l/h	-	10 -240 l/h	2.5- 65 l/h	10-100%	52	0.62	0.79
	25	60 -640 l/h	-	20 -420 l/h	5- 145 l/h	10-100%	53	0.61	0.78
	25	100-1000 l/h	-	25 -700 l/h	10- 330 l/h	10-100%	54	0.60	0.77
	25	150-1600 l/h	-	50-1200 l/h	25- 675 l/h	10-100%	55	0.59	0.76
	32	150-1600 l/h	-	50-1150 l/h	25- 550 l/h	10-100%	61	1.11	1.38
	32	200-2500 l/h	-	100-1900 l/h	50-1100 l/h	10-100%	62	1.09	1.36
	32	400-4000 l/h	-	200-3200 l/h	100-2000 l/h	10-100%	63	1.07	1.34
	40	200-2500 l/h	-	100-1700 l/h	50-1000 l/h	10-100%	67	1.42	1.74
	40	400-4000 l/h	-	200-3000 l/h	50-1900 l/h	10-100%	68	1.39	1.71
	40	500-5000 l/h	-	200-3700 l/h	100-2500 l/h	10-100%	69	1.38	1.70
	50	0.4-4.0 m³/h	-	100-3000 l/h	50-1800 l/h	10-100%	71	2.00	2.87
	50	0.6-6.4 m³/h	-	250-5000 l/h	100-3300 l/h	10-100%	72	1.97	2.84
	50	1.0-10 m³/h	-	500-8500 l/h	250-6000 l/h	10-100%	73	1.92	2.79
	65	1.5-14 m³/h	-	1.0-11.5 m³/h	0.25- 8.5 m³/h	10-100%	75	3.31	4.60
	65	2.0-20 m³/h	-	1.5-16.5 m³/h	0.5-12.5 m³/h	10-100%	77	3.31	4.60

* All scales in this datasheet are based on a medium temperature of 20° C.

** For smaller or larger flow ranges see page 5 and datasheets GEMÜ 840, 850.
Further ranges available on request.

Tubes in PVC and PVDF on request

Selection of scales (gases)

	Size	Medium air At 1 bar abs. and 20°C Trogamid-T, Polysulfone	Tube size	PVC-U unions	Malleable iron unions
	(mm)		Code	Weight (kg)	
GEMÜ 825 Float material PP (without magnet)	20	0.2 - 2.5 Nm³/h	46	0.40	0.51
	20	0.3 - 4.0 Nm³/h	47	0.40	0.51
	20	0.5 - 6.5 Nm³/h	48	0.40	0.51
	20	0.75- 10.0 Nm³/h	49	0.39	0.50
	25	0.4 - 4.0 Nm³/h	52	0.54	0.71
	25	0.5 - 6.5 Nm³/h	53	0.53	0.70
	25	1 - 10.0 Nm³/h	54	0.52	0.69
	25	1.5 - 16.0 Nm³/h	55	0.51	0.68
	32	1.5 -16.0 Nm³/h	61	0.88	1.15
	32	2 - 25.0 Nm³/h	62	0.86	1.13
	32	4 - 40.0 Nm³/h	63	0.84	1.11
	40	2 - 25.0 Nm³/h	67	1.10	1.42
	40	4 - 40.0 Nm³/h	68	1.07	1.39
	40	5 - 50.0 Nm³/h	69	1.06	1.38
	50	4 - 40.0 Nm³/h	71	1.17	2.04
	50	6 - 64.0 Nm³/h	72	1.14	2.01
	50	10 - 100.0 Nm³/h	73	1.09	1.95
	65	15 - 140.0 Nm³/h	75	3.31	4.60
	65	20 - 200.0 Nm³/h	77	3.31	4.60
GEMÜ 835 Float material PP (with magnet)	20	0.75 - 6.5 Nm³/h	46	0.43	0.54
	20	1 - 10.0 Nm³/h	47	0.43	0.54
	20	1.5 - 16.0 Nm³/h	48	0.43	0.54
	20	2 - 25.0 Nm³/h	49	0.43	0.53
	25	1.25-10.0 Nm³/h	52	0.59	0.76
	25	1.5 - 16.0 Nm³/h	53	0.58	0.75
	25	3 - 25.0 Nm³/h	54	0.57	0.74
	25	4 - 40.0 Nm³/h	55	0.55	0.73
	32	4 - 40.0 Nm³/h	61	1.03	1.30
	32	6 - 64.0 Nm³/h	62	1.01	1.28
	32	10 - 100.0 Nm³/h	63	0.99	1.25
	40	5 - 60.0 Nm³/h	67	1.30	1.62
	40	10 - 100.0 Nm³/h	68	1.27	1.59
	40	15 - 120.0 Nm³/h	69	1.26	1.58
	50	10 -100.0 Nm³/h	71	1.69	2.57
	50	15 - 160.0 Nm³/h	72	1.66	2.54
	50	20 - 250.0 Nm³/h	73	1.61	2.49
	65	30 - 340.0 Nm³/h	75	3.31	4.60
	65	50 - 450.0 Nm³/h	77	3.31	4.60

To types 825/835:

Caution! With gases the scaling alters according to working pressure. Please state when ordering.

Special scales:

For other media and operating requirements differing from those given for standard versions, special scales are available. Please note the ordering information (see page 2).

Accessories for Flowmeter Series GEMÜ 800

To increase the versatility of the GEMÜ 800 flowmeter, numerous accessories have been developed which can be retrofitted onto the tube without modification. The float, however, must be one containing a magnet, in order for these accessories to function.



GEMÜ 1251
Limit switch (max)
(Switching duty of magnetic switch 10 VA)

GEMÜ 1252
Limit switch (min)
(Switching duty of magnetic switch 10 VA)



GEMÜ 1270
Instrument sensor for continuous
flow readout
(resistance 0-10 kΩ)

GEMÜ 1272
Instrument sensor for continuous
flow readout
(Output signal 4-20 mA from an
integrated 2-wire measuring
transducer)



GEMÜ 1275
Digital display unit
with or without switch points
Panel mounting acc. to
DIN 43700-96x48
Note: The mounting bracket is
supplied with the unit as standard.

Separate data sheets are available for the above accessories upon request.

Other applicable products:

- Plastic valves, pneumatically, electrically and manually operated
- Metal valves, pneumatically, electrically and manually operated

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



GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS