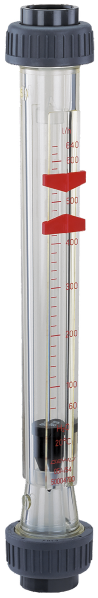
GEMÜ 800

Variable area flowmeter



Features

- Good level of accuracy, simple operation
- Clear and large size printed scale
- ATEX version available as an option
- Over 500 standard scales and 13,000 special scales are available with further scales on request
- Corrosion-resistant plastic parts

Description

The GEMÜ 800 flowmeter operates according to the variable area principle and has a transparent metering tube. The scale printed onto the metering tube is suited to the medium. Dovetail sections moulded onto the metering tube allow for easy mounting of adjustable visual flow indicators, limit switches and a continuous readout transmitter.

Technical specifications

- **Connection types:** Flange I Spigot I Union end
- **Measuring range - Liquids:** 0.5 to 33000 l/h
- **Measuring range - Gases:** 0.2 to 450 Nm³/h
- **Error of measurement:** ± 1% of final value and ± 3% of measured value
- **Media temperature :** -20 to 120 °C
- **Operating pressure :** 0 to 15 bar
- **Nominal sizes:** DN 20 to 65
- **Metering tube materials:** PA I PSU I PVC-U
- **Float materials:** 1.4571 (316 Ti) I PP I PVC-U I PVDF
- **Conformities:** EAC

Technical data depends on the respective configuration

further information
webcode: GW-800

Product line GEMÜ 800

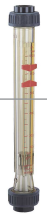
Product line

	GEMÜ 801	**GEMÜ 805**	**GEMÜ 806**	**GEMÜ 807**	**GEMÜ 811**
Working medium					
Gases	●	●	-	●	●
Liquids	●	●	●	●	●
Nominal sizes	DN 20 to 65	DN 20 to 65	DN 65	DN 20 to 65	DN 20 to 65
Metering tube materials					
PA, transparent	●	●	●	●	●
PSU	●	●	●	●	●
PVC-U, transparent	●	●	●	●	●
Magnet					
No	●	●	●	●	-
Yes	-	-	-	-	●
Float materials					
1.4571 (316 Ti)	-	-	●	●	-
PP	-	●	-	-	-
PVC-U	●	-	-	-	●
Conformities					
EAC	●	●	●	●	●

Product line GEMÜ 800

Product line

	GEMÜ 815	**GEMÜ 816**	**GEMÜ 817**	**GEMÜ 820**	**GEMÜ 822**
Working medium					
Gases	●	-	●	●	●
Liquids	●	●	●	●	●
Nominal sizes	DN 20 to 65	DN 20 to 65	DN 20 to 65	DN 20 to 50	DN 50
Metering tube materials					
PA, transparent	●	●	●	●	●
PSU	●	●	●	●	●
PVC-U, transparent	●	●	●	●	●
Magnet					
No	-	-	-	●	●

					
	GEMÜ 815	**GEMÜ 816**	**GEMÜ 817**	**GEMÜ 820**	**GEMÜ 822**
Yes	●	●	●	-	-
Float materials					
1.4571 (316 Ti)	-	●	●	-	-
PP	●	-	-	-	-
PVDF	-	-	-	●	●
Conformities					
EAC	●	●	●	-	-

Product line GEMÜ 800

Product line

	GEMÜ 825	**GEMÜ 830**	**GEMÜ 831**	**GEMÜ 832**	**GEMÜ 835**
Working medium					
Gases	●	●	●	●	●
Liquids	-	●	●	●	●
Nominal sizes	DN 20 to 65	DN 20 to 50	DN 20 to 65	DN 20 to 65	DN 20 to 65
Metering tube materials					
PA, transparent	●	●	●	●	●
PSU	●	●	●	●	●
PVC-U, transparent	●	●	●	●	●
Magnet					
No	●	-	-	-	-
Yes	-	●	●	●	●
Float materials					
PP	●	-	-	-	●
PVC-U	-	-	●	-	-
PVDF	-	●	-	●	-
Conformities					
EAC	●	●	-	●	●

Product line GEMÜ 850

Product line

	GEMÜ 851	**GEMÜ 855**	**GEMÜ 857**	**GEMÜ 861**	**GEMÜ 865**
Working medium					
Gases	●	●	●	●	●
Liquids	●	●	●	●	●
Nominal sizes	DN 15 to 25	DN 10 to 25	DN 10 to 25	DN 10 to 25	DN 10 to 25
Metering tube materials					
PA, transparent	●	●	●	●	●
PSU	●	●	●	●	●
PVC-U, transparent	●	●	●	●	●
PVDF	●	●	●	●	●
Magnet					
No	●	●	●	-	-
Yes	-	-	-	●	●
Float materials					
1.4571 (316 Ti)	-	-	●	-	-
PP	-	●	-	-	●
PVC-U	●	-	-	●	-
Conformities					
EAC	●	●	●	●	●

Product line GEMÜ 850

Product line

	GEMÜ 867	**GEMÜ 870**	**GEMÜ 875**	**GEMÜ 880**	**GEMÜ 885**
Working medium					
Gases	●	●	●	●	●
Liquids	●	●	-	●	●
Nominal sizes	DN 10 to 25	DN 10 to 25	DN 10 to 25	DN 10 to 25	DN 20 to 25
Metering tube materials					
PA, transparent	●	●	●	●	●
PSU	●	●	●	●	●
PVC-U, transparent	●	●	●	●	●
Magnet					

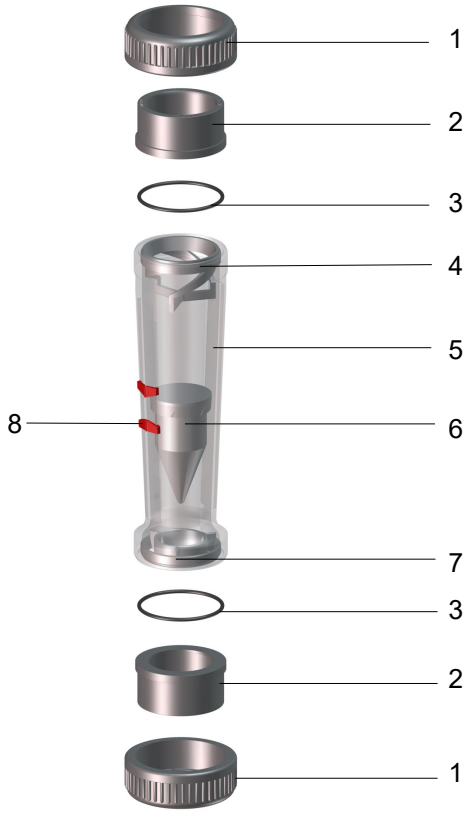
	GEMÜ 867	**GEMÜ 870**	**GEMÜ 875**	**GEMÜ 880**	**GEMÜ 885**
No	-	●	●	-	-
Yes	●	-	-	●	●
Float materials					
1.4571 (316 Ti)	●	-	-	-	-
PP	-	-	●	-	●
PVDF	-	●	-	●	-
Conformities					
EAC	●	●	●	●	●

Product line GEMÜ 840

Product line

	GEMÜ 840	**GEMÜ 841**	**GEMÜ 845**	**GEMÜ 846**
Working medium				
Water	●	●	●	●
Nominal size	DN 65	DN 65	DN 65	DN 65
Metering tube materials Main flow unit				
PP	-	-	●	●
PVC-U	●	●	-	-
Magnet				
No	●	-	●	-
Yes	-	●	-	●
Float materials				
PP	●	-	●	●
PVC-U	●	●	-	-
Conformities				
EAC	●	●	●	●

Product description



Item	Name	Materials
1	Union nut	PP, PVDF, stainless steel
2	Union (insert)	PVC-C, PP, PVDF, 1.4408, 1.4435, 1.4404, malleable iron
3	O-ring	FPM, EPDM, FEP encapsulated
4	Upper float stop	PP, PVDF
5	Metering tube	PA transparent / Polysulphone (working medium air, water and sodium hydroxide) Polysulphone (working medium hydrochloric acid) PVC-U (working medium air) PVDF on request
6	Float	PVDF, PP, PVC, stainless steel
7	Lower float stop	PP, PVDF
8	Flow indicator	

GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.

Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the maintenance process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides him with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

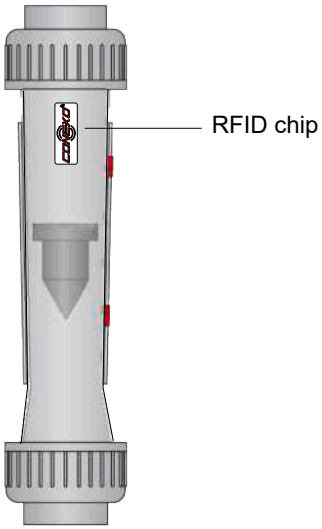
For further information on GEMÜ CONEXO please visit:
www.gemu-group.com/conexo

Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO" (see order data).

In the corresponding design with CONEXO, this product has an RFID chip (1) for electronic recognition. The position of the RFID chip can be seen below.

Installing the RFID chip



Availability

DN	Union material (code) [1]																							
	1						5					7		1, 6, 7, 1V, 2V	20			41, 1V, 2V						
	Connection type (code) [2]																							
	4	7	7R	33	39	3M	4	7	39	71	78	8	39	7R	7	71	78	0	16	17	18	37	59	60
20	X	X	X	X	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	X	X	X	X	X
32	X	X	X	X	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	X	X	X	X	X
50	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	-	X	X	X	X	X	X	X	X
65	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X	-	-	-	X	-	X	X	X

1) **Union material**
Code 1: Insert PVC-U, union nut PP grey
Code 1V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PP beige union nut
Code 20: Insert PVDF, union nut PVDF
Code 2V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PVDF union nut
Code 41: Insert 1.4435 (butt weld spigot), union nut stainless steel
Code 5: Insert PP, union nut PP beige
Code 6: Malleable iron
Code 7: Insert 1.4404 (RP threaded socket), union nut stainless steel

2) **Connection type**
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 18: Spigot DIN 11850 series 3
Code 37: Spigot SMS 3008
Code 59: Spigot ASME BPE
Code 60: Spigot ISO 1127/EN 10357 series C
Code 33: Union end with inch insert - BS (socket)
Code 7: Union end with DIN insert (socket)
Code 78: Union end with DIN insert (for IR butt welding)
Code 7R: Union end with Rp threaded socket insert
Code 4: Plastic loose backing flange, flange EN 1092, PN 10, form B
Code 8: Flange EN 1092, PN 16, form B
Code 39: Flange ANSI Class 125/150 RF

Selection of scales

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

Scales in % (10 - 100)

The scale divisions correspond to the actual flows.

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

Liquid media: l/h

Gaseous media: Nm³/h

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

Flowmeters for liquid media, types 801, 805, 811, 815

Order code - Types 801 [1], 805 [1], 811 [1], 815 [1]

DN	Unit	Metering tube size code	Water	Hydrochloric acid	Sodium hydroxide	
			H_2O	HCl 30-33 %	NaOH 30 %	NaOH 50 %
			Metering tube material			
			PVC-U (code 3) PA (code 21), PSU (code 22)	PVC-U (code 3) PSU (code 22)	PVC-U (code 3) PA (code 21), PSU (code 22)	
20	**l/h**	46	15 - 160	10 - 130	2.5 - 57.5	0.5 -10
		47	20 - 250	20 - 210	5 - 115	1 - 23
		48	40 - 400	40 - 340	10 - 210	2.5 - 57.5
		49	50 - 650	50 - 550	20 - 380	5 - 135
25	**l/h**	52	20 - 250	20 - 210	5 - 125	1.0 - 20
		53	40 - 400	20 - 350	10 - 200	2.5 - 50
		54	60 - 640	50 - 550	10 - 390	5 - 130
		55	100 - 1000	75 - 900	25 - 650	10 - 260
32	**l/h**	61	100 - 1000	75 - 900	25 - 600	10 - 200
		62	150 - 1600	100 - 1500	50 - 1100	20 - 500
		63	200 - 2500	200 - 2300	100 - 1700	25 - 950
40	**l/h**	67	150 - 1600	100 - 1450	50 - 1000	25 - 425
		68	200 - 2500	200 - 2200	100 - 1700	25 - 900
		69	300 - 3300	300 - 2800	100 - 2100	50 - 1250
50	**l/h**	71	-	200 - 2300	50 - 1700	25 - 800
		72	-	300 - 3600	100 - 2800	50 -1600
		73	-	500 - 6000	250 - 5000	100 - 3200
50	**m³/h**	71	0.2 - 2.5	-	-	-
		72	0.4 - 4	-	-	-
		73	0.6 - 6.4	-	-	-
65	**m³/h**	75	0.75 - 9	0.75 - 8	0.5 - 6.75	0.25 - 4.25
		77	1.5 - 13	1.5 - 11.5	0.75 - 9.75	0.25 - 6.75

1) **Type**
Code 801: Variable area flowmeter, PVC float, (series 800)
Code 805: Variable area flowmeter, PP float, (series 800)
Code 811: Variable area flowmeter, PVC float with magnet, (series 800)
Code 815: Variable area flowmeter, PP float with magnet (series 800)

Flowmeters for liquid media, types 806, 816

Order code - Types 806 [1], 816 [1]

DN	Unit	Metering tube size code	Water	Hydrochloric acid	Sodium hydroxide	
			H_2O	HCl 30-33 %	NaOH 30 %	NaOH 50 %
			Metering tube material			
			PA (code 21), PSU (code 22)	PSU (code 22)	PA (code 21), PSU (code 22)	
65	**m³/h**	75	10 - 24	-	-	-
		77	10 - 33	-	-	-

1) **Type**
Code 806: Variable area flowmeter, 1.4571 (316Ti) stainless steel float, guided float, (series 800)
Code 816: Variable area flowmeter, 1.4571 (316Ti) stainless steel float with magnet, guided float, (series 800)

Flowmeters for liquid media, types 807, 817

Order code - Types 807 [1], 817 [1]

DN	Unit	Metering tube size code	Water	Hydrochloric acid	Sodium hydroxide	
			H_2O	HCl 30-33 %	NaOH 30 %	NaOH 50 %
			Metering tube material			
			PA (code 21), PSU (code 22)	PSU (code 22)	PA (code 21), PSU (code 22)	
20	**l/h**	46	20 - 250	-	5 - 125	1 - 27
		47	40 - 400	-	10 - 240	2.5 - 70
		48	60 - 640	-	25 - 425	5 - 170
		49	75 -1000	-	25 - 725	10 - 350
25	**l/h**	52	40 - 400	-	10 - 240	2.5 - 65
		53	60 - 640	-	20 - 420	5.0 - 145
		54	100 - 1000	-	25 - 700	10.0 - 330
		55	150 - 1600	-	50 - 1200	25.0 - 675
32	**l/h**	61	150 - 1600	-	50 - 1150	25 - 550
		62	200 - 2500	-	100 - 1900	50 - 1100
		63	400 - 4000	-	200 - 3200	100 - 2000
40	**l/h**	67	200 - 2500	-	100 - 1700	50 - 1000
		68	400 - 4000	-	200 - 3000	50 - 1900
		69	500 - 5000	-	200 - 3700	100 - 2500
50	**l/h**	71	-	-	100 - 3000	50 - 1800
		72	-	-	250 - 5000	100 - 3300
		73	-	-	500 - 8500	250 - 6000
50	**m³/h**	71	0.4 - 4	-	-	-
		72	0.6 - 6.4	-	-	-
		73	1 - 10	-	-	-
65	**m³/h**	75	1.5 - 14	-	1 - 11.5	0.25 - 8.5
		77	2 - 20	-	1.5 - 16.5	0.5 - 12.5

1) **Type**
Code 807: Variable area flowmeter, 1.4571 (316Ti) stainless steel float, (series 800)
Code 817: Variable area flowmeter, 1.4571 (316Ti) stainless steel float with magnet, (series 800)

Flowmeters for liquid media, types 820, 830

Order code - Types 820 [1], 830 [1]

DN	Unit	Metering tube size code	Water	Hydrochloric acid	Sodium hydroxide	
			H_2O	HCl 30-33 %	NaOH 30 %	NaOH 50 %
			Metering tube material			
			PA (code 21), PSU (code 22)	PSU (code 22)	PA (code 21), PSU (code 22)	
20	**l/h**	46	15 - 160	10 - 130	-	-
		47	20 - 250	20 - 210	-	-
		48	40 - 400	40 - 340	-	-
		49	50 - 650	50 - 550	-	-
25	**l/h**	52	20 - 250	20 - 210	-	-
		53	40 - 400	20 - 350	-	-
		54	60 - 640	50 - 550	-	-
		55	100 - 1000	75 - 900	-	-
32	**l/h**	61	100 - 1000	75 - 900	-	-
		62	150 - 1600	100 - 1500	-	-
		63	200 - 2500	200 - 2300	-	-
40	**l/h**	67	150 - 1600	100 - 1450	-	-
		68	200 - 2500	200 - 2200	-	-
		69	300 - 3300	300 - 2800	-	-
50	**l/h**	71	-	200 - 2300	-	-
		72	-	300 - 3600	-	-
		73	-	500 - 6000	-	-
50	**m³/h**	71	0.2 - 2.5	-	-	-
		72	0.4 - 4	-	-	-
		73	0.6 - 6.4	-	-	-

1) **Type**
Code 820: Variable area flowmeter, PVDF float (series 800)
Code 830: Variable area flowmeter, PVDF float with magnet, (series 800)

Flowmeters for liquid media, types 822, 832

Order code - Types 822 [1], 832 [1]

DN	Unit	Metering tube size code	Water	Hydrochloric acid	Sodium hydroxide	
			H_2O	HCl 30-33 %	NaOH 30 %	NaOH 50 %
			Metering tube material			
			PA (code 21), PSU (code 22)	PSU (code 22)	PA (code 21), PSU (code 22)	
50	**m³/h**	73	1.5 - 11.0	-	-	-

1) **Type**
Code 822: Variable area flowmeter, PVDF float, for DN 50 with conus 73, (series 800)
Code 832: Variable area flowmeter, PVDF float with magnet, for DN 50 with conus 73, (series 800)

Flowmeter for gaseous media, type 825

Caution! With gaseous media the scaling alters according to operating pressure. Please state when ordering.

Standard conditions to DIN 1343

Order code - Type 825 [1)]

DN	Unit	Metering tube size code	Medium air [2)] Metering tube material PVC-U (code 3) PA (code 21), PSU (code 22)
20	**Nm³/h**	46	0.2 - 2.5
		47	0.3 - 4.0
		48	0.5 - 6.5
		49	0.75 - 10
25	**Nm³/h**	52	0.4 - 4.0
		53	0.5 - 6.5
		54	1 - 10
		55	1.5 - 16
32	**Nm³/h**	61	1.5 -16
		62	2 - 25
		63	4 - 40
40	**Nm³/h**	67	2 - 25
		68	4 - 40
		69	5 - 50
50	**Nm³/h**	71	4 - 40
		72	6 - 64
		73	10 - 100
65	**Nm³/h**	75	15 - 140
		77	20 - 200

1) **Type**
Code 825: Variable area flowmeter, PP float, (series 800)

2) At 1 bar absolute and 20 °C

Flowmeters for gaseous media, types 831, 835

Caution! With gaseous media the scaling alters according to operating pressure. Please state when ordering.

Standard conditions to DIN 1343

Order code - Types 831 [1], 835 [1]

DN	Unit	Metering tube size code	Medium air [2] Metering tube material PVC-U (code 3) PA (code 21), PSU (code 22)
20	**Nm³/h**	46	0.75 - 6.5
		47	1 - 10
		48	1.5 - 16
		49	2 - 25
25	**Nm³/h**	52	1.25 - 10
		53	1.50 - 16
		54	3 - 25
		55	4 - 40
32	**Nm³/h**	61	4 - 40
		62	6 - 64
		63	10 - 100
40	**Nm³/h**	67	5 - 60
		68	10 - 100
		69	15 - 120
50	**Nm³/h**	71	10 -100
		72	15 - 160
		73	20 - 250
65	**Nm³/h**	75	30 - 340
		77	50 - 450

1) **Type**
Code 831: Variable area flowmeter, PVC float with magnet, (series 800)
Code 835: Variable area flowmeter, PP float with magnet, (series 800)

2) At 1 bar absolute and 20 °C

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

The following data are necessary:

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

Order codes

1 Type	Code
Variable area flowmeter, PVC float, (series 800)	801
Variable area flowmeter, PP float, (series 800)	805
Variable area flowmeter, 1.4571 (316Ti) stainless steel float, guided float, (series 800)	806
Variable area flowmeter, 1.4571 (316Ti) stainless steel float, (series 800)	807
Variable area flowmeter, PVC float with magnet, (series 800)	811
Variable area flowmeter, PP float with magnet (series 800)	815
Variable area flowmeter, 1.4571 (316Ti) stainless steel float with magnet, guided float, (series 800)	816
Variable area flowmeter, 1.4571 (316Ti) stainless steel float with magnet, (series 800)	817
Variable area flowmeter, PVDF float (series 800)	820
Variable area flowmeter, PVDF float, for DN 50 with conus 73, (series 800)	822
Variable area flowmeter, PP float, (series 800)	825
Variable area flowmeter, PVDF float with magnet, (series 800)	830
Variable area flowmeter, PVC float with magnet, (series 800)	831

1 Type	Code
Variable area flowmeter, PVDF float with magnet, for DN 50 with conus 73, (series 800)	832
Variable area flowmeter, PP float with magnet, (series 800)	835

2 RoHS conformance	Code
Conformance to RoHS	R

3 DN	Code
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65

4 Body configuration	Code
Straight through pipe	D

5 Connection type	Code
Union end with DIN insert (socket)	7
Union end with inch insert - BS (socket)	33
Union end with DIN insert (for butt welding)	71
Union end with DIN insert (for IR butt welding)	78
Union end with Rp threaded socket insert	7R
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 DIN 11850 series 3	18
Spigot SMS 3008	37
Spigot ASME BPE	59
Spigot ISO 1127/EN 10357 series C	60
Plastic loose backing flange, flange EN 1092, PN 10, form B	4
Flange EN 1092, PN 16, form B	8
Flange ANSI Class 125/150 RF	39

6 Metering tube material	Code
PVC-U, transparent	3
PA, transparent	21
PSU	22

7 O-ring material	Code
FPM	4
EPDM	14
FEP encapsulated	55

8 Union material	Code
Insert PVC-U, union nut PP grey	1
Insert PP, union nut PP beige	5
Malleable iron	6
Insert 1.4404 (RP threaded socket), union nut stainless steel	7
Insert PVDF, union nut PVDF	20

8 Union material	Code
Insert 1.4435 (butt weld spigot), union nut stainless steel	41
Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PP beige union nut	1V
Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PVDF union nut	2V

9 Metering tube size	Code
See table (see “Selection of scales“, page 9)	

10 Measuring range	Code
See table (see “Selection of scales“, page 9)	

11 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Ordering option	Code	Description
1 Type	805	Variable area flowmeter, PP float, (series 800)
2 RoHS conformance	R	Conformance to RoHS
3 DN	25	DN 25
4 Body configuration	D	Straight through pipe
5 Connection type	7	Union end with DIN insert (socket)
6 Metering tube material	21	PA, transparent
7 O-ring material	14	EPDM
8 Union material	1	Insert PVC-U, union nut PP grey
9 Metering tube size	52	Conus 52
10 Measuring range	250	Upper measuring range limit of the scale
11 CONEXO		Without

Technical data

Medium

Working medium: Corrosive and inert gaseous and liquid media which have no negative impact on the physical and chemical properties of the metering tube, float, seal and union materials as well as other media wetted parts.

Temperature

Media temperature: -20 — 120 °C

Storage temperature: 0 — 40 °C

Pressure

Operating pressure: Metering tubes with plastic unions: Max. 10 bar
Metering tubes with metal unions: Max. 15 bar

Pressure loss:

DN	Type Code						
	801, 805, 811, 815	806, 816	807, 817	820, 830	822, 832	825	831, 835
20	8.0	-	17.0	8.0	-	2.0	11.0
25	10.0	-	19.0	10.0	-	2.5	13.0
32	13.0	-	27.0	13.0	-	3.5	18.0
40	15.0	-	30.0	15.0	-	4.0	20.0
50	20.0	-	41.0	20.0	26.5	5.5	28.0
65	24.0	47.0	50.0	-	-	6.0	34.0

Pressures in mbar
Medium: Water, 20 °C

Pressure/temperature correlation

Metering tube material code [1]	Union material code [2]	Temperature																
		-20	-10	±0	5	10	20	25	30	40	50	60	70	80	90	100	110	120
		Permissible operating pressure																
3	**1**	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	-	-	-	-	-	-	-
	6	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	-	-	-	-	-	-	-
	7	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	-	-	-	-	-	-	-
	1V	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	-	-	-	-	-	-	-
20	**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	3.6	2.5	1.7	1.2
	7/41	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	3.6	2.5	1.7	1.2
	2V	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	3.6	2.5	1.7	1.2
21	**1**	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-	-	-	-	-
	5	-	-	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	-	-	-	-	-	-
	20	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0	7.1	6.3	-	-	-	-	-	-
	6	15.0	15.0	15.0	15.0	15.0	15.0	15.0	13.5	12.0	10.7	9.5	-	-	-	-	-	-
	7/41	15.0	15.0	15.0	15.0	15.0	15.0	15.0	13.5	12.0	10.7	9.5	-	-	-	-	-	-
	1V	-	-	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	-	-	-	-	-	-

Metering tube material code [1]	Union material code [2]	Temperature																
		-20	-10	±0	5	10	20	25	30	40	50	60	70	80	90	100	110	120
		Permissible operating pressure																
22	**1V**	-	-	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	2.7	1.5	0.8	-	-	-
	1	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-	-	-	-	-
	5	-	-	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	2.7	1.5	0.8	-	-	-
	20	-	-	-	10.0	10.0	10.0	10.0	9.0	8.0	7.1	6.3	5.4	4.7	3.6	2.5	-	-
	6	-	-	-	15.0	15.0	15.0	15.0	14.0	13.0	12.0	11.0	9.7	8.5	7.7	6.0	-	-
	7/41	-	-	-	15.0	15.0	15.0	15.0	14.0	13.0	12.0	11.0	9.7	8.5	7.7	6.0	-	-

Temperatures in °C
Permissible operating pressure in bar
For flowmeters that have a permanent magnet in the float, the max. temperature is 80 °C.

1) **Metering tube material**
   Code 3: PVC-U, transparent
   Code 20: PVDF
   Code 21: PA, transparent
   Code 22: PSU

2) **Union material**
   Code 1: Insert PVC-U, union nut PP grey
   Code 1V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PP beige union nut
   Code 20: Insert PVDF, union nut PVDF
   Code 2V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PVDF union nut
   Code 41: Insert 1.4435 (butt weld spigot), union nut stainless steel
   Code 5: Insert PP, union nut PP beige
   Code 6: Malleable iron
   Code 7: Insert 1.4404 (RP threaded socket), union nut stainless steel

Mechanical data

Weight:

Flowmeters for liquid media

DN	Metering tube size code	Type									
		801, 805, 811, 815		806, 816		807, 817		820, 830		822, 832	
		Union material									
		PVC	Malle-able iron	PVC	Malle-able iron	PVC	Malle-able iron	PVC	Malle-able iron	PVC	Malle-able iron
20	**46**	0.42	0.53	-	-	0.45	0.56	0.42	0.53	-	-
	47	0.42	0.53	-	-	0.45	0.56	0.42	0.53	-	-
	48	0.42	0.53	-	-	0.45	0.56	0.42	0.53	-	-
	49	0.41	0.52	-	-	0.44	0.55	0.41	0.52	-	-
25	**52**	0.57	0.74	-	-	0.62	0.79	0.57	0.74	-	-
	53	0.56	0.73	-	-	0.61	0.78	0.56	0.73	-	-
	54	0.56	0.72	-	-	0.60	0.77	0.55	0.72	-	-
	55	0.54	0.71	-	-	0.59	0.76	0.54	0.71	-	-
32	**61**	0.98	1.25	-	-	1.11	1.38	0.98	1.25	-	-
	62	0.96	1.23	-	-	1.09	1.36	0.96	1.23	-	-
	63	0.94	1.21	-	-	1.07	1.34	0.94	1.21	-	-
40	**67**	1.24	1.56	-	-	1.42	1.74	1.24	1.56	-	-
	68	1.21	1.52	-	-	1.39	1.71	1.21	1.52	-	-
	69	1.20	1.52	-	-	1.38	1.70	1.20	1.52	-	-
50	**71**	1.52	2.39	-	-	2.00	2.87	1.52	2.39	-	-
	72	1.49	2.36	-	-	1.97	2.84	1.49	2.36	-	-
	73	1.44	2.31	-	-	1.92	2.79	1.44	2.31	-	-
	71	1.52	2.39	-	-	2.00	2.87	1.52	2.39	-	-
	72	1.49	2.36	-	-	1.97	2.84	1.49	2.36	-	-
	73	1.44	2.31	-	-	1.92	2.79	1.44	2.31	1.44	2.31
65	**75**	2.42	3.87	3.31	4.60	3.31	4.60	-	-	-	-
	77	2.42	3.87	3.31	4.60	3.31	4.60	-	-	-	-

Weights in kg

Weight:

Flowmeters for gaseous media

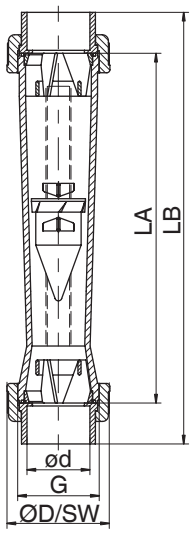
DN	Metering tube size code	Type			
		825		831, 835	
		Union material			
		PVC	Malleable iron	PVC	Malleable iron
20	**46**	0.4	0.51	0.43	0.54
	47	0.4	0.51	0.43	0.54
	48	0.4	0.51	0.43	0.54
	49	0.39	0.5	0.43	0.53
25	**52**	0.54	0.71	0.59	0.76
	53	0.53	0.7	0.58	0.75
	54	0.52	0.69	0.57	0.74
	55	0.51	0.68	0.55	0.73
32	**61**	0.88	1.15	1.03	1.3
	62	0.86	1.13	1.01	1.28
	63	0.84	1.11	0.99	1.25
40	**67**	1.1	1.42	1.3	1.62
	68	1.07	1.39	1.27	1.59
	69	1.06	1.38	1.26	1.58
50	**71**	1.17	2.04	1.69	2.57
	72	1.14	2.01	1.66	2.54
	73	1.09	1.95	1.61	2.49
65	**75**	3.31	4.6	3.31	4.6
	77	3.31	4.6	3.31	4.6

Weights in kg

Dimensions

Plastic union

Union end with DIN insert, inch-BS (socket)



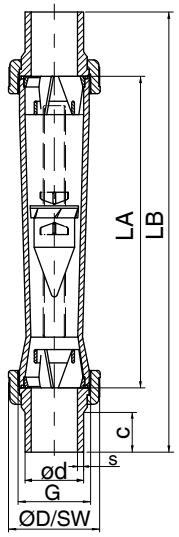
DN	Connection type (code 1))								
	7, 33				7	33	7, 33	7	
	Union material (code 2))								
	1, 5, 20					1		5	20
	G	LA	O-ring	øD/SW	ød		LB		
20	G 1¼	350.0	28.0 x 3.5	53.0	25.0	26.8	394.0	388.0	392.0
25	G 1½	350.0	33.0 x 3.5	60.0	32.0	33.6	400.0	392.0	396.0
32	G 2	350.0	46.0 x 3.5	74.0	40.0	42.3	408.0	397.0	400.0
40	G 2¼	350.0	50.4 x 3.5	83.0	50.0	48.3	418.0	403.0	406.0
50	G 2¾	350.0	68.0 x 3.5	103.0	63.0	60.4	432.0	411.0	414.0
65	G 3½	350.0	85.0 x 4.0	122.0	75.0	75.0	444.0	420.0	420.0

Dimensions in mm
Dimension L of metering tube material PVDF (code 20) reduced by 7 mm.

1) **Connection type**
   Code 7: Union end with DIN insert (socket)
   Code 33: Union end with inch insert - BS (socket)

2) **Union material**
   Code 1: Insert PVC-U, union nut PP grey
   Code 5: Insert PP, union nut PP beige
   Code 20: Insert PVDF, union nut PVDF

Union end with DIN insert (butt welding, IR)



DN	Connection type (code [1])												
	71, 78					71	78	78	71	78		71, 78	
	Union material (code [2])												
	5, 20						5	20	5, 20	5	20	5	20
	G	LA	O-ring	ød	ØD/SW	c			LB			s	
20	G 1¼	350.0	28.0 x 3.5	25.0	53.0	-	39.0	39.0	-	462.0	462.0	2.3	1.9
25	G 1½	350.0	33.0 x 3.5	32.0	60.0	-	40.0	40.0	-	468.0	468.0	2.9	2.4
32	G 2	350.0	46.0 x 3.5	40.0	74.0	-	41.0	41.0	-	474.0	474.0	3.7	2.4
40	G 2¼	350.0	50.4 x 3.5	50.0	83.0	-	43.0	43.0	-	480.0	480.0	4.6	3.0
50	G 2¾	350.0	68.0 x 3.5	63.0	103.0	-	43.0	43.0	-	486.0	486.0	5.8	3.0
65	G 3½	350.0	85.0 x 4.0	75.0	122.0	16.0	91.0	-	466.0	616.0	-	7.3	3.6

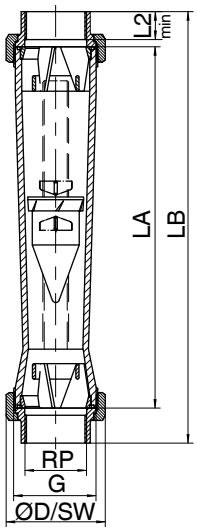
Dimensions in mm
Dimension L of metering tube material PVDF (code 20) reduced by 7 mm.

1) **Connection type**
   Code 78: Union end with DIN insert (for IR butt welding)
   Code 71: Union end with DIN insert (for butt welding)

2) **Union material**
   Code 5: Insert PP, union nut PP beige
   Code 20: Insert PVDF, union nut PVDF

Metal and plastic union

Union end with Rp threaded socket insert



DN	Connection code 7R [1]									
	Union material code [2]									
	1, 6, 7					1	6, 7	1	6	7
	G	LA	O-ring	Rp	L2 min	øD/SW		LB		
20	G 1¼	350.0	28.0 x 3.5	Rp 3/4	16.3	53.0	50.0	394.0	394.0	404.0
25	G 1½	350.0	33.0 x 3.5	Rp 1	19.1	60.0	55.0	400.0	402.0	406.0
32	G 2	350.0	46.0 x 3.5	Rp 1¼	21.4	74.0	66.0	408.0	412.0	416.0
40	G 2¼	350.0	50.4 x 3.5	Rp 1½	21.4	83.0	74.0	418.0	415.0	418.0
50	G 2¾	350.0	68.0 x 3.5	Rp 2	25.7	103.0	90.0	432.0	420.0	430.0
65	G 3½	350.0	85.0 x 4.0	Rp 2½	30.2	122.0	110.0	444.0	428.0	436.0

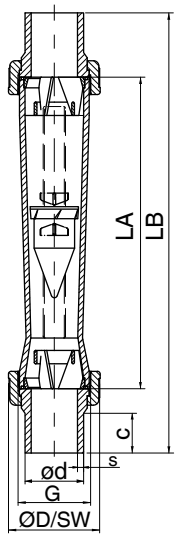
Dimensions in mm
Dimension L of metering tube material PVDF (code 20) reduced by 7 mm.

1) **Connection type**
   Code 7R: Union end with Rp threaded socket insert

2) **Union material**
   Code 1: Insert PVC-U, union nut PP grey
   Code 6: Malleable iron
   Code 7: Insert 1.4404 (RP threaded socket), union nut stainless steel

Metal union

Connection type code 0, 16, 17, 18



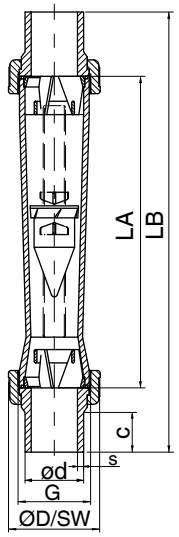
DN	Connection type (code [1])													
	0, 16, 17, 18						0	16	17	18	0	16	17	18
	Union material (code [2])													
	41, 1V, 2V				41	41, 1V, 2V								
	G	LA	O-ring	c	ØD/SW	LB	ød				s			
20	G 1¼	350.0	28.0 x 3.5	34.0	50.0	426.0	22.0	22.0	23.0	24.0	1.5	1.0	1.5	1.65
25	G 1½	350.0	33.0 x 3.5	34.0	55.0	429.0	28.0	28.0	29.0	30.0	1.5	1.0	1.5	1.65
32	G 2	350.0	46.0 x 3.5	36.0	66.0	432.0	34.0	34.0	35.0	36.0	1.5	1.0	1.5	1.65
40	G 2¼	350.0	50.4 x 3.5	36.0	74.0	432.0	40.0	40.0	41.0	42.0	1.5	1.0	1.5	1.65
50	G 2¾	350.0	68.0 x 3.5	36.0	90.0	432.0	52.0	53.0	53.0	54.0	1.5	1.0	1.5	1.65
65	G 3½	350.0	85.0 x 4.0	36.0	110.0	433.0	-	-	70.0	-	1.5	-	2.0	1.65

Dimensions in mm
Dimension L of metering tube material PVDF (code 20) reduced by 7 mm.

1) **Connection type**
   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 18: Spigot DIN 11850 series 3

2) **Union material**
   Code 1V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PP beige union nut
   Code 2V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PVDF union nut
   Code 41: Insert 1.4435 (butt weld spigot), union nut stainless steel

Connection type code 37, 59, 60



DN	Connection type (code [1])											
	37, 59, 60						37	59	60	37	59	60
	Union material (code [2])											
	41, 1V, 2V				41	41, 1V, 2V						
	G	LA	O-ring	c	ØD/SW	LB	ød			s		
20	G 1¼	350.0	28.0 x 3.5	34.0	50.0	426.0	-	19.1	26.9	-	1.65	1.6.0
25	G 1½	350.0	33.0 x 3.5	34.0	55.0	429.0	25.0	25.4	33.7	1.2	1.65	2.0
32	G 2	350.0	46.0 x 3.5	36.0	66.0	432.0	33.7	-	42.4	1.2	-	2.0
40	G 2¼	350.0	50.4 x 3.5	36.0	74.0	432.0	38.0	38.1	48.3	1.2	1.65	2.0
50	G 2¾	350.0	68.0 x 3.5	36.0	90.0	432.0	51.0	50.8	60.3	1.2	1.65	2.0
65	G 3½	350.0	85.0 x 4.0	36.0	110.0	433.0	63.5	63.5	76.1	1.2	1.65	2.0

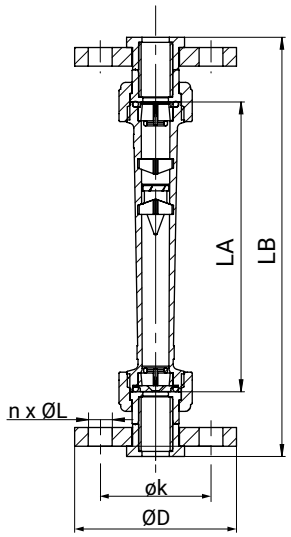
Dimensions in mm

1) **Connection type**
   Code 37: Spigot SMS 3008
   Code 59: Spigot ASME BPE
   Code 60: Spigot ISO 1127/EN 10357 series C

2) **Union material**
   Code 1V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PP beige union nut
   Code 2V: Insert 1.4435 (butt weld spigot), insert 1.4404 (Rp threaded socket), PVDF union nut
   Code 41: Insert 1.4435 (butt weld spigot), union nut stainless steel

Dimension L of metering tube material PVDF (code 20) reduced by 7 mm.

Flange connection code 4, 8, 39



DN	Connection type (code) [1]									
	4, 8, 39		4, 39		8, 39	4, 8, 39	4	8, 39	4, 8	39
	Union material (code) [2]									
	1, 5, 7		1	5	7	1, 5, 7	1, 5,	1, 5, 7		
	LA	O-ring	LB			ØD	øk		n x ØL	
20	350.0	28,0 x 3.5	438.0	444.0	491.0	105.0	75.0	70.0	4 x 14.0	4 x 16.0
25	350.0	33,0 x 3.5	450.0	452.0	494.0	115.0	85.0	79.0	4 x 14.0	4 x 16.0
32	350.0	46.0 x 3.5	466.0	462.0	501.0	140.0	100.0	89.0	4 x 18.0	4 x 16.0
40	350.0	50.4 x 3.5	486.0	472.0	505.0	150.0	110.0	98.0	4 x 18.0	4 x 16.0
50	350.0	68.0 x 3.5	514.0	490.0	511.0	165.0	125.0	121.0	4 x 18.0	4 x 19.0
65	350.0	85.0 x 4.0	538.0	514.0	514.0	185.0	145.0	140.0	4 x 18.0	4 x 19.0

Dimensions in mm

1) **Connection type**
   Code 4: Plastic loose backing flange, flange EN 1092, PN 10, form B
   Code 8: Flange EN 1092, PN 16, form B
   Code 39: Flange ANSI Class 125/150 RF

2) **Union material**
   Code 1: Insert PVC-U, union nut PP grey
   Code 5: Insert PP, union nut PP beige
   Code 7: Insert 1.4404 (RP threaded socket), union nut stainless steel

Accessories

Information on accessories for 800, 840, 850

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

GEMÜ 125x

Limit switches

Limit switches with bistable reed contact (change-over contact or make contact) can be combined with GEMÜ flowmeters with magnetic float. They can be easily mounted and adjusted by clamping them onto the flowmeter. The electrical connection is via a cable gland. An ATEX version is available on request.

GEMÜ 1276

Digital display unit

The GEMÜ 1276 digital display unit is available as types M11 (4-digit) and M21, M31 (5-digit). The device can be programmed at the front using a disconnectable keypad. Programming is made using the easy to understand menu guidance.

GEMÜ 127x

Instrument sensor

Instrument sensors are suitable for continuous flow monitoring of GEMÜ flowmeters with magnetic float. They can be easily mounted and adjusted by clamping them onto the flowmeter. The electrical connection is via a cable gland.

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