GEMÜ®

Flowmeter, Plastic

Construction

The GEMÜ 840 flowmeter operates according to the part flow principle and consists essentially of three parts:
Main flow unit, part flow unit and manual diaphragm valves.

Main flow unit: The housing material used is PVC-U or PP. The orifice material can be selected as either PVC-U, PP or stainless steel. The flowmeter has solvent cement or welded spigots enabling it to be connected by means of unions or flanges.

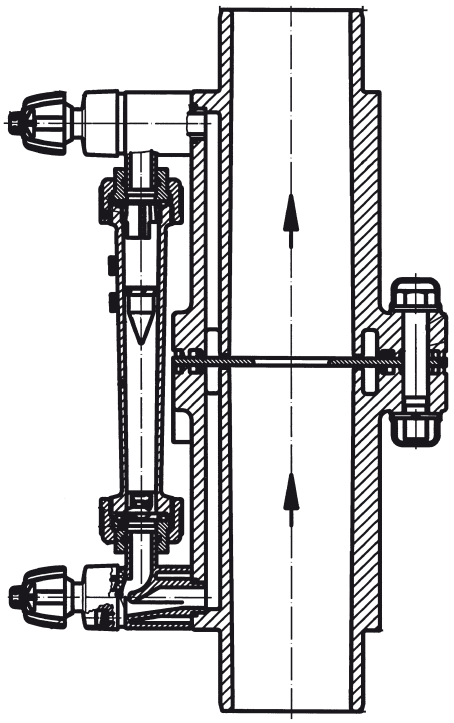
Part flow unit: Plastic flowmeter which operates according to the variable area principle with integral metering orifice, housing material: Polysulphone. The float is made of PVC-U or PP which can also be fitted with a magnet for electrical detection of the flow rate. Dovetail sections moulded onto the metering tube allow for easy mounting of adjustable visual flow indicators (supplied with the flowmeter) and limit switches/instrument sensors.

Manual diaphragm valves: The part flow unit can be removed from the main body of the flowmeter without interrupting the main flow by closing the manual by-pass valves.

Advantages

- Good level of accuracy, simple operation
- Impact resistant, corrosion resistant
- Large measuring range 3 - 50 m^3/h (depending on orifice diameter)
- Part flow metering tube can also be easily replaced without downtime

Sectional drawing



GEMÜ® 840

840 / 841 / 845 / 846

Technical data

Working medium

Corrosive and inert liquid media which have no negative impact on the physical and chemical properties of the tube, float, seal and union materials or any other medium wetted parts.

Standard range: Measuring ranges are based on medium water at 20° C

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

Operating pressure: max.10 bar

Maximum permissible temperature of working medium: see table

Tube material

Main flow unit	PVC-U, grey PP, Polypropylene
Part flow unit	PSU, Polysulphone

ø Orifice [mm] Code	Measuring range [m^3/h]	Pressure loss [bar]
36	2.5 - 20	0.01 - 0.25
40	3 - 25	0.01 - 0.23
44	4 - 32	0.01 - 0.20
48	5 - 40	0.01 - 0.17
52	6 - 50	0.01 - 0.13

Versions

Float material	Working medium	Type	Weight [kg] (dependent on version)
PVC-U	Liquids	840	2.8 - 3.5
PVC-U with magnet	Liquids	841	
PP	Liquids	845	2.2 - 3.0
PP with magnet	Liquids	846	

Pressure / temperature correlation - variable area flowmeter

Temperature in °C			-20	-10	±0	5	10	20	25	30	40	50	60	70	80	90	100	110	120
Tube material	Union material		Operating pressure [bar]																
Polysulphone	PVC-U	Code 1	-	-	-	-	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-	-	-	-	-
	PP	Code 5	-	-	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	2.7	1.5	0.8	-	-	-

Order data

Version	
Float material	**Type**
PVC-U	840
PVC-U with magnet	841
PP	845
PP with magnet	846

Nominal size	Code
DN 65	65

Body configuration	Code
Straight through tube	D

Connection of metering tube	Code
Spigots DIN	0

Tube material of main flow unit		Code
PVC-U, grey	GEMÜ 840, 841	1
PP	GEMÜ 845, 846	5

O-ring material	Code
FPM	4
EPDM	14

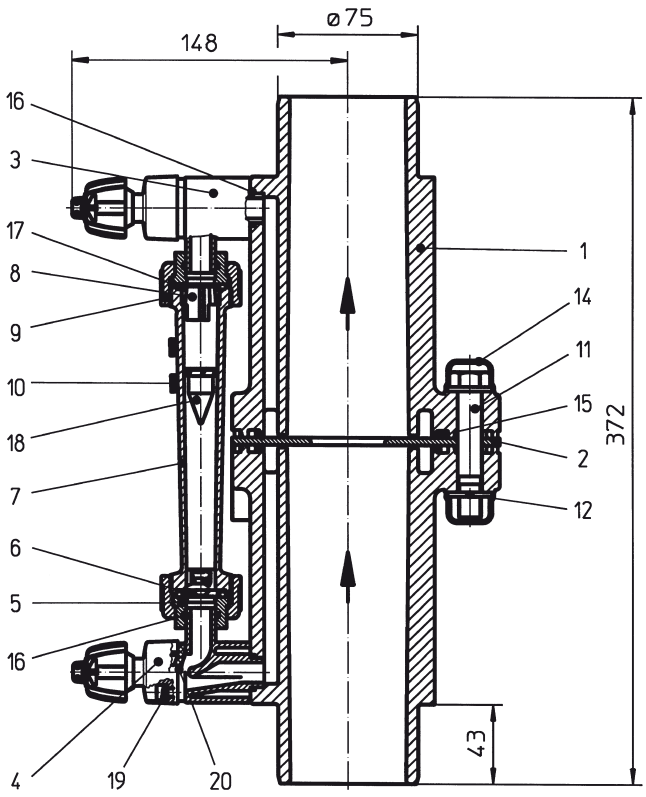
Orifice material of main flow unit		Code
PVC-U, grey	GEMÜ 840, 841	1
PP	GEMÜ 845, 846	5
Stainless steel 1.4571		7

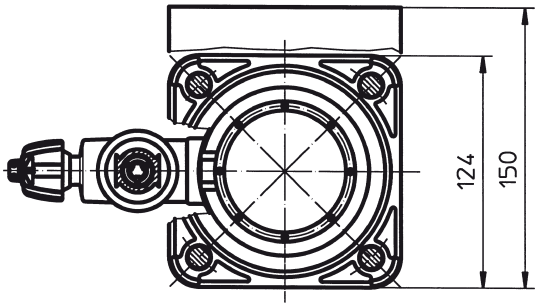
Orifice diameter	Code
Diameter 36 mm (2.5-20 m^3/h)	36
Diameter 40 mm (3-25 m^3/h)	40
Diameter 44 mm (4-32 m^3/h)	44
Diameter 48 mm (5-40 m^3/h)	48
Diameter 52 mm (6-50 m^3/h)	52

Measuring range	Code
2.5-20 m^3/h (Diameter 36 mm)	20000
3-25 m^3/h (Diameter 40 mm)	25000
4-32 m^3/h (Diameter 44 mm)	32000
5-40 m^3/h (Diameter 48 mm)	40000
6-50 m^3/h (Diameter 52 mm)	50000

Order example	840	65	D	0	1	14	1	36	20000
Version (Type)	840								
Nominal size (code)		65							
Body configuration (code)			D						
Connection (code)				0					
Tube material of main flow unit (code)					1				
O-ring material (code)						14			
Orifice material of main flow unit (code)							1		
Orifice diameter (code)								36	
Measuring range (code)									20000

Dimensions [mm]





Item	Description	Pieces
1	Main flow housing	2
2	Main flow orifice plate	1
3	Diaphragm valve body	2
4	Top assembly of diaphragm valve	2
5	Union socket	2
6	Part flow orifice plate	1
7	Part flow metering tube	1
8	Float stop	1
9	Union nut	2
10	Flow indicator	2
11	Fitted bolt	4
12	Washer	8
13	Hexagon nut	4
14	Protective cap	8
15	O-ring	2
16	O-ring	4
17	O-ring	2
18	Float	1
19	Fixing screw	8
20	Diaphragm	2

Installation note: In order to achieve the specified accuracy for the flowmeter, a straight inlet distance of approx. 3 D (D = inside diameter of the pipeline) should be provided before and after the measurement device.

Accessories for flowmeters GEMÜ 841/846

To increase the versatility of the GEMÜ 840 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 1256 for DN 10, 15, 20
Maximum limit switch
(Switching duty of magnetic switch 10 VA)

GEMÜ 1257 for DN 10, 15, 20
Minimum limit switch
(Switching duty of magnetic switch 10 VA)

GEMÜ 1271 for DN 10, 15, 20
Instrument sensor for continuous flow readout (resistance 0-10 kΩ).

GEMÜ 1273 for DN 10, 15, 20
Instrument sensor for continuous flow readout via output signal 4-20 mA from an 2-wire measuring transducer

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

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

TÜV CERT
DIN EN ISO 9001
Zertifikat: 09 100 4136

GEMÜ® VALVES, MEASUREMENT AND CONTROL SYSTEMS

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