

GLASS TUBE VARIABLE AREA FLOWMETER



- VARIABLE AREA · NO POWER · READ OFF THE GLASS TUBE
- DN10 ... DN40 · CLAMP, THREAD OR FLANGE
- 304 OR 316 STAINLESS STEEL · WATER, JUICE, MILK, PURE WATER

KEY DATA

Property	Value	Property	Value
Flow range liquid	2.5 L/h ... 25 m³/h, by code	Flow range gas	40 L/h ... 480 m³/h, by code
Nominal size	DN10 · DN20 · DN25 · DN40	Process connection	Clamp · thread · flange
Body material	304 or 316 stainless steel	Weight	0.25 · 2.5 · 2.5 · 5.0 kg by size

A glass tube variable-area meter: the float rides in a conical glass tube and is read off the scale beside it. The meter needs no power and has no output — it is an indicator. The range table lists seventeen liquid and fifteen gas ranges.



MEASUREMENT

Measuring principle	Variable area · float in a conical glass tube, read off the scale
Flow range liquid	2.5 L/h ... 25 m³/h in seventeen steps, see the range table
Flow range gas	40 L/h ... 480 m³/h in fifteen steps, see the range table

MATERIALS AND PROCESS

Body material	304SS or 316SS — the last field of the order code
Tube	Conical glass tube
Media	Water, juice, milk, pure water and other clean liquids · gases by the range table
Process connection	Clamp, thread or flange · G1/4, G3/4, G1 or G1-1/2 by size
Mounting	Vertical, flow from bottom to top
Weight	0.25 kg at G1/4 · 2.5 kg at G3/4 and G1 · 5.0 kg at G1-1/2

ELECTRICAL PROPERTIES

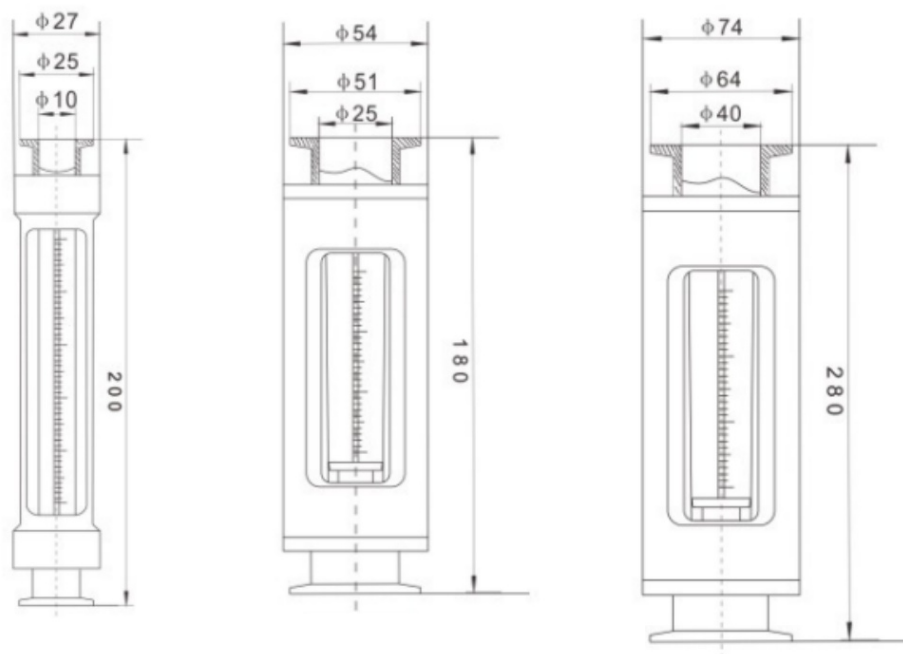
Supply voltage	None. The meter is purely mechanical
Output	None. There is no transmitter, no switch and no contact

READING

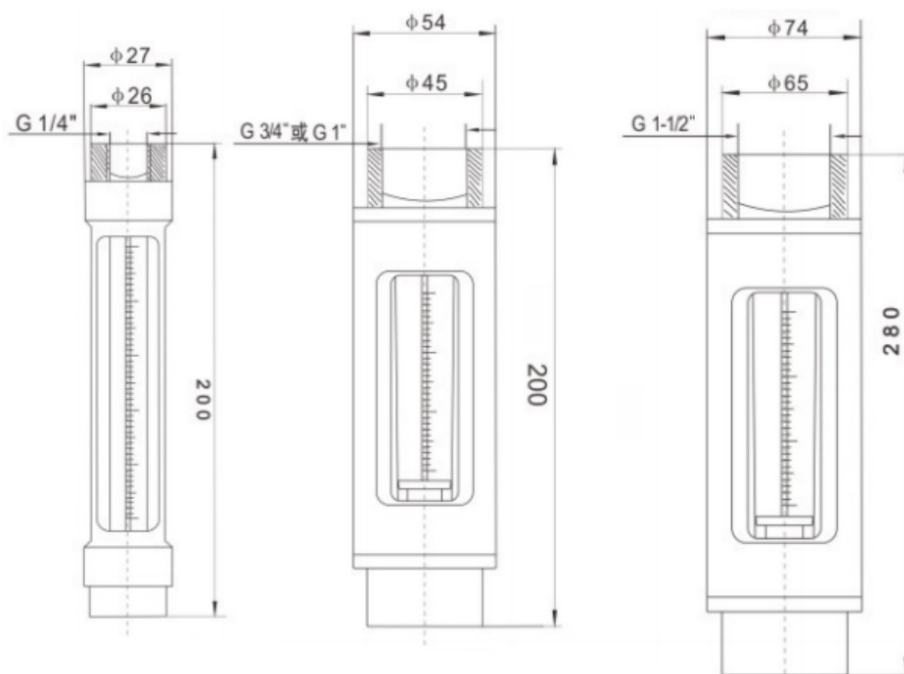
Reading	Float position against the scale on the glass tube
Display	None beyond the scale



DRAWINGS (mm)



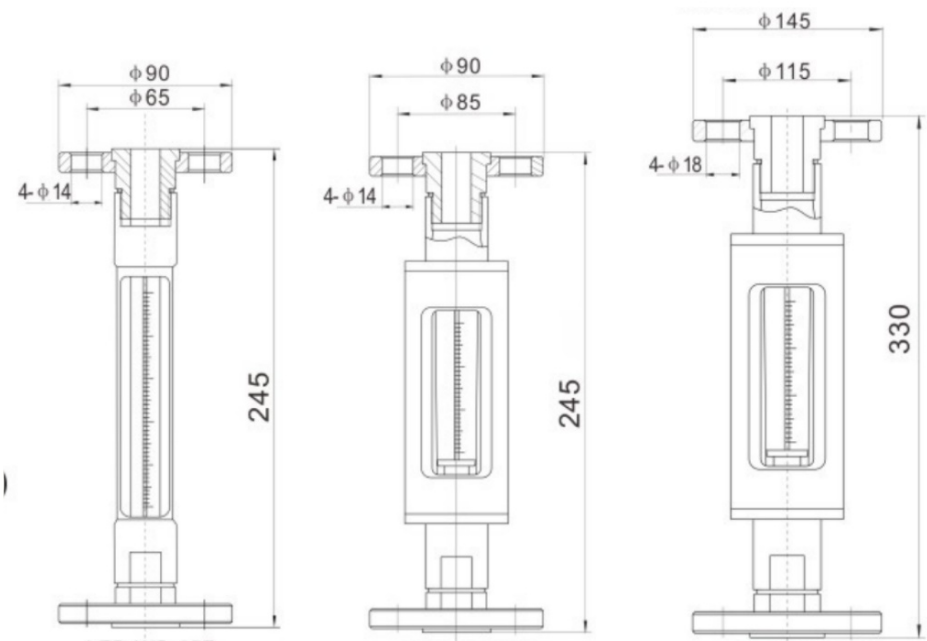
The clamp version, three sizes.



The thread version. The middle drawing carries two threads, G3/4 and G1.



DIMENSIONS AND RANGES



The flange version, the third row of drawings.

Read off the nine drawings: three per connection, small, medium and large.

OVERALL DIMENSIONS (mm)

Connection	Size	Ø outer	Ø flange	Ø bore	Bolts	Height
Clamp	small	27	25	10	—	200
	medium	54	51	25	—	180
	large	74	64	40	—	280
Thread	G1/4	27	26	—	—	200
	G3/4 or G1	54	45	—	—	200
	G1-1/2	74	65	—	—	280
Flange	small	90	65	—	4 x Ø14	245
	medium	90	85	—	4 x Ø14	245
	large	145	115	—	4 x Ø18	330



Seventeen liquid and fifteen gas ranges. The code in the first column is the fourth field of the order code.

RANGE TABLE

Code	Liquid	Code	Liquid	Code	Gas	Code	Gas
L1	2.5 ... 25 L/h	L10	4 ... 40 L/min	A1	40 ... 400 L/h	A9	90 ... 900 L/min
L2	4 ... 40 L/h	L11	5 ... 50 L/min	A2	60 ... 600 L/h	A10	120 ... 1200 L/min
L3	6 ... 60 L/h	L12	12 ... 60 L/min	A3	100 ... 1000 L/h	A11	150 ... 1500 L/min
L4	10 ... 100 L/h	L13	20 ... 100 L/min	A4	160 ... 1600 L/h	A12	400 ... 1800 L/min
L5	16 ... 160 L/h	L14	0.6 ... 6 m³/h	A5	0.25 ... 2.5 m³/h	A13	600 ... 3000 L/min
L6	0.3 ... 5 L/min	L15	1 ... 10 m³/h	A6	0.5 ... 5 m³/h	A14	30 ... 300 m³/h
L7	1 ... 10 L/min	L16	1.6 ... 16 m³/h	A7	40 ... 400 L/min	A15	48 ... 480 m³/h
L8	2 ... 20 L/min	L17	5 ... 25 m³/h	A8	60 ... 600 L/min		
L9	3 ... 30 L/min						



COMPLIANCE AND CERTIFICATION

Measuring principle	Variable area, read off the glass tube
Wetted materials	Body 304 or 316 stainless steel · conical glass tube

Example: QHKB-10-G-A-L1-S1. The fourth and the fifth field belong together: an L code goes with medium L, an A code with medium A. The meter can be customised to customer requirements.

ORDER CODE

Field	Code	Meaning
1 Series	QHKB	QHKB glass tube variable area flowmeter
2 Size	10 · 20	DN10 · DN20
	25 · 40	DN25 · DN40
3 Connection	G	Screw thread
	K	Clamp
	F	Flange
4 Medium	A · L	Gas · liquid
5 Range	L1 ... L17	Liquid ranges, see the range table
	A1 ... A15	Gas ranges, see the range table
6 Material	S1 · S2	304 stainless steel · 316 stainless steel

