



Variable Area Flow Meter

K12

- Flow measuring of liquids and gas
- Can be used in the chemical industry or in medical or laboratory engineering.
- Precision, reliability and efficiency are the remarkable features of this device.
- Robust mechanical system with a low rate of wear



Function

The fluid flows from bottom to top through the meter tube of the flow meter. The float is lifted until an annular gap between the measuring cone and the float is produced which corresponds to the flow.

The forces acting on the float are in equilibrium. The measured value is displayed on the measuring-tube scale with the upper edge or the indicator edge of the float (ball).

The variable-area flowmeter consists of a stainless steel device with an integrated conical measuringtube made of glass and a vertically movable float. The valve for setting the flow rate is built-in

Application

The KD1 meter is suitable for flow measurement of liquid or gaseous products in pipes. It shows the current flow rate in volume or mass per unit in time.

Applications: flow measurement, dosing, monitoring, adjusting and control of liquid and gaseous products.

The devices are available with additional electrical equipment for process monitoring and control.

- A variety of sealing materials
- Wall mounting possibility
- Flow Controller (option) as inlet or outlet differential pressure regulator
- Contacts

Technical Data:

Materials:

Glas tube:	Borosilicate glass
Float:	st.st. 1.4404 (316L),
Float stops	PTFE
Connections	1.4404 (316 L)
	other materials on request
Seals (o-rings):	Meas.glass -Viton, FFKM (Option)
	valve - PTFE

Process connections: ¼" NPT (F), G ¼ , PVC hose connection 8 mm
other connections on request

Max. pressure: Max. 16 (20°C)

Process temperature: -20°C to +100°C
-20°C to +70°C (c/w limit switches)

Ambient temperature: -20°C to +100°C
-20°C to +70°C (c/w limit switches)

Ingress protection: IP 65 (EN 60529)

Measuring accuracy

Liquids / gases: ± 2,5% **QG** 50 acc. VDE/VDI 3513 page 2

K12-...V / N
(differential pressure regulator) ± 3 % / ± 5 % FS
within 10-100% of the range

Repeatability

Liquids / gases: ± 1,0 % FS

K12-...V / N
(differential pressure regulator) ± 1,5 % / 2,5 % FS

**Electrical output signals**

inductive limit switches

Certificates and approvals

Explosion protection:

II 2GD IIC TX (for mech. instrument)

Contacts

PTB 00 ATEX 2128 X (c/w limit switches)

Ignition category

II 2G EEx ia IIC T6-T4

CE-marking:

Ex-guidelines 94/9/EG

EMC:

EMC-guidelines 2004/108/EG

PED:

97/23/EG

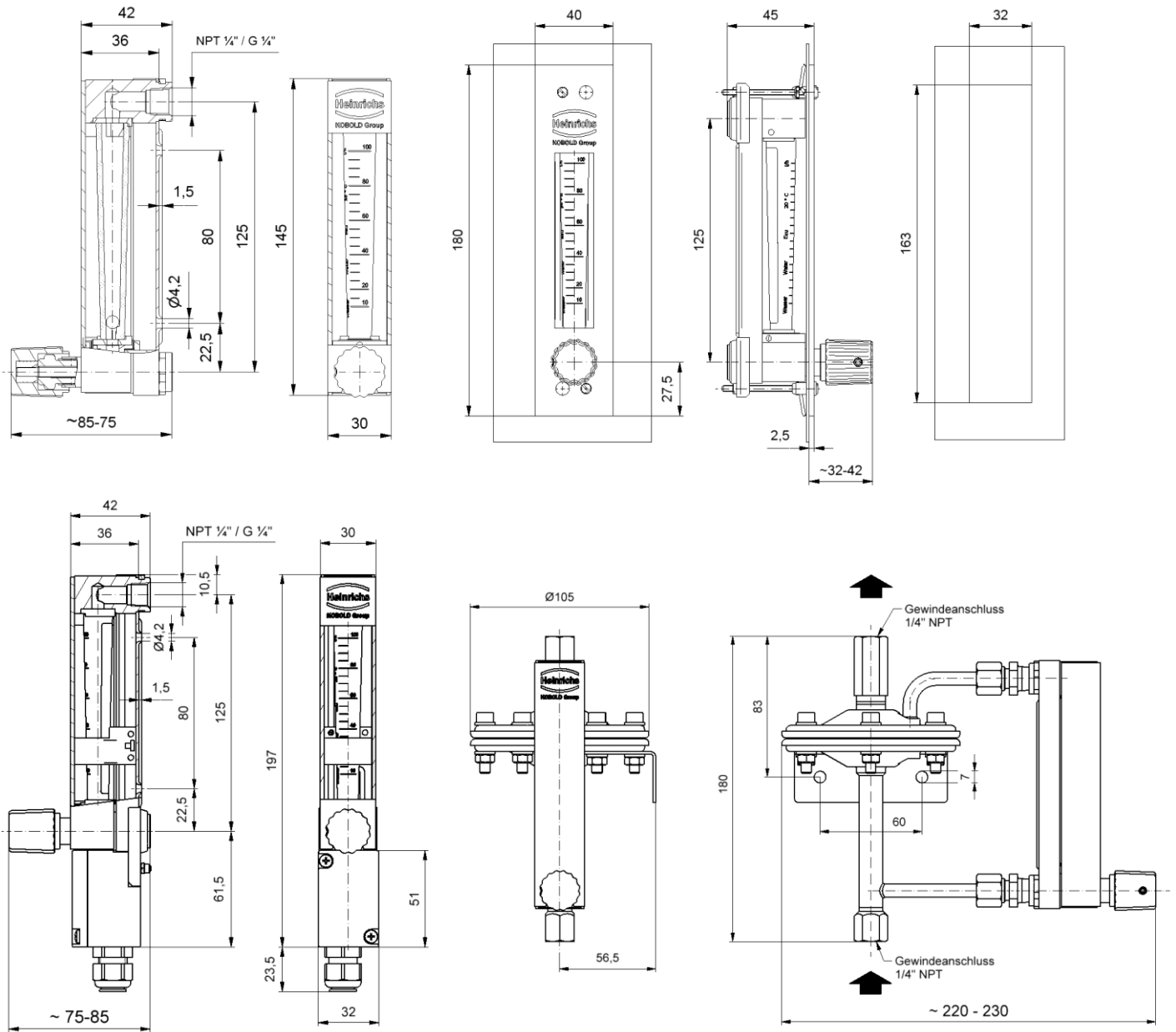
Weights:**0,45 kg****Standard****0,8 kg****c/w differential pressure regulator****Ranges**

Measuring ranges water 20 °C					Measuring ranges air 1,2 bar abs. 20 °C				
Float st.st. 1.4404 (316L)					Float st.st. 1.4404 (316L)				
Range N°	Water l/h	∅ Float (mm)	∅ Valve seat (mm)	Press. loss (mbar)	Range N°	air l/h	∅ Float (mm)	∅ Valve seat (mm)	Press. loss (mbar)
17	0,25-2,5	4	1,2	10	07	0,5-5	4	1,2	15
20	0,5-5	4	1,2	20	09	0,8-8	4	1,2	15
25	1,2-12	6	2,8	10	13	1,6-16	4	1,2	15
28	2,5-25	6	2,8	20	21	4-40	4	1,2	20
30	4-40	6	2,8	30	24	6-60	4	1,2	25
35	6-60	6	2,8	80	29	10-100	6	2,8	15
39*	10-100	6	2,8	125	32	25-250	6	2,8	15
40*	12-120	6	3,4	200	37	50-500	6	2,8	15
41*	16-160	6	3,4	200	42	80-800	6	2,8	20
					46	100-1000	6	2,8	25
					51	180-1800	6	2,8	80
					57*	240-2400	6	2,8	125
					61*	300-3000	6	2,8	150
					64*	400-4000	6	3,4	200
					68*	500-5000	6	3,4	200

All ranges and pressure loss at fully opened valve !

* Limited adjustment range of the contact / contact can only be adjusted as min. contact

Dimensions



More information on device description K12_GB_XX_en.

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