



## Variable Area Flow Meter

**K32**

- 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 K32 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 controller
- Contacts

## Technical Data:

### Materials:

Glas tube:	Borosilicate glass
Float:	st.st. 1.4404 (316L) / glass
Connections	1.4404 (316 L) other materials on request
Seals (o-rings):	Measuring tubes -Viton, FFKM (Option)
Valve:	PTFE, hoses: PVC
V/N (option differential pressure controller)	Controller/control pipes: 1.4301

### Process connections:

Special connections:	¼"NPT (F) PVC hose connection 8 mm other connections on request
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### Pressure resistance:

K32:	max. 10 bars. (20°C)
K32-...V / N:	diaphragm on one side max. 7 bars

### 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:	± 1% qG =50% acc. VDE/VDI 3513 page 2
K12-...V / N (option differential pressure controller)	± 1, 5 % / ± 2, 5 % FS within 10-100% of the range



### Repeatability


Liquids / gases  $\pm 0,3 \% \text{ FS}$   
K32-...V / N (option diff. pressure controller)  $\pm 1,5 \% / 2,5 \% \text{ FS}$

### Electrical output (option)



1 or 2 inductive limit switches  
mono- or bistable

### Certificates and approvals

Explosion protection:

Marking  II 2GD IIC TX  
Reg. No.: BVS 10 ATEX H/B 034  
Tech. File Reg. No. HM-K09-32-ATEX-10-01-X

### Marking of the limit transducer:

Make Pepperl & Fuchs		PTB 99 ATEX 2128 X
Typ: RC 15-14 NO/N3		II 2G Ex ia IIC T6
Make ifm electronic		BVS 08 ATEX E026, IECEx BVS 09.0016,
Typ: N7R**A		II 1G Ga Ex ia IIC T4/T5/T6, II 1D Ex iaD 20 T125°C

### CE-marking:

Ex-guidelines 94/9/EG

### EMC:

EMC-guidelines 2004/108/EG

### PED:

97/23/EG

### Weights:

K32: 0,5 kg (Standard)  
K32.V/N: 0,9 kg (c/w differential pressure controller)

### Ranges

All ranges and pressure loss at fully opened valve!

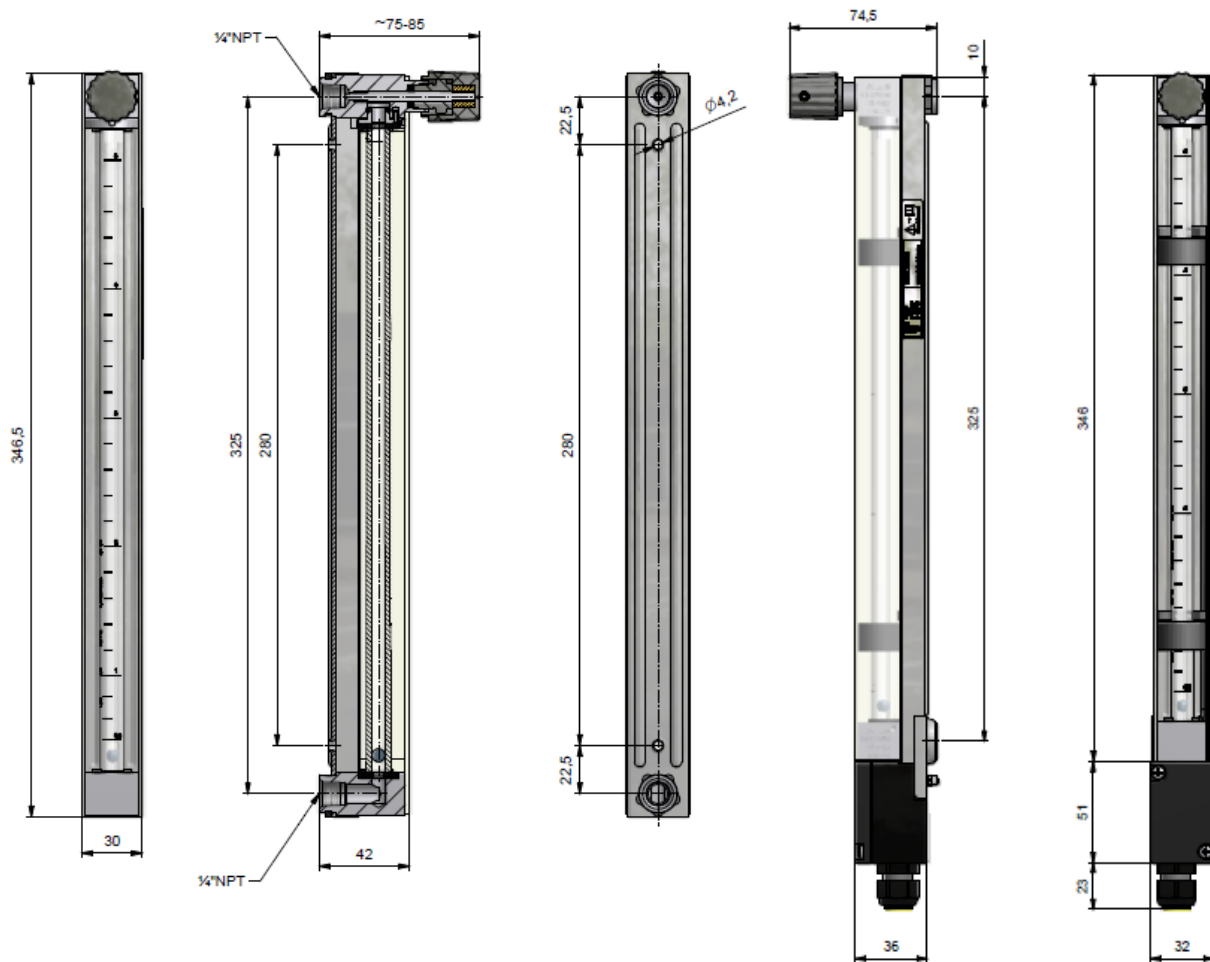
Measuring ranges water 20 °C					Measuring ranges air 1,013 bar abs. 20 °C				
Float st.st. 1.4401 (316L) / glass					Float st.st. 1.4401 (316L) / glass				
Range N°	Water l/h	Float material	Ø Valve Seat (mm)	Press. loss (mbar)	Range N°	Air l/h	Float material	Ø Valve Seat	Press. loss (mbar)
K1	0,6-6	1.4401	2,8	2	M1	30-250	1.4401	2,8	2
K2	1,4-11	1.4401	2,8	3	M2	80-380	1.4401	2,8	3
K3	1,6-16	1.4401	2,8	3	M3	50-500	1.4401	2,8	3
K4	2,5-25	1.4401	2,8	3	M4	70-700	1.4401	2,8	3
K5	4-40	1.4401	2,8	5	M5	110-1100	1.4401	2,8	5
K6*	5-63	1.4401	2,8	5	M6	180-1800	1.4401	2,8	5

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



**Dimensions**

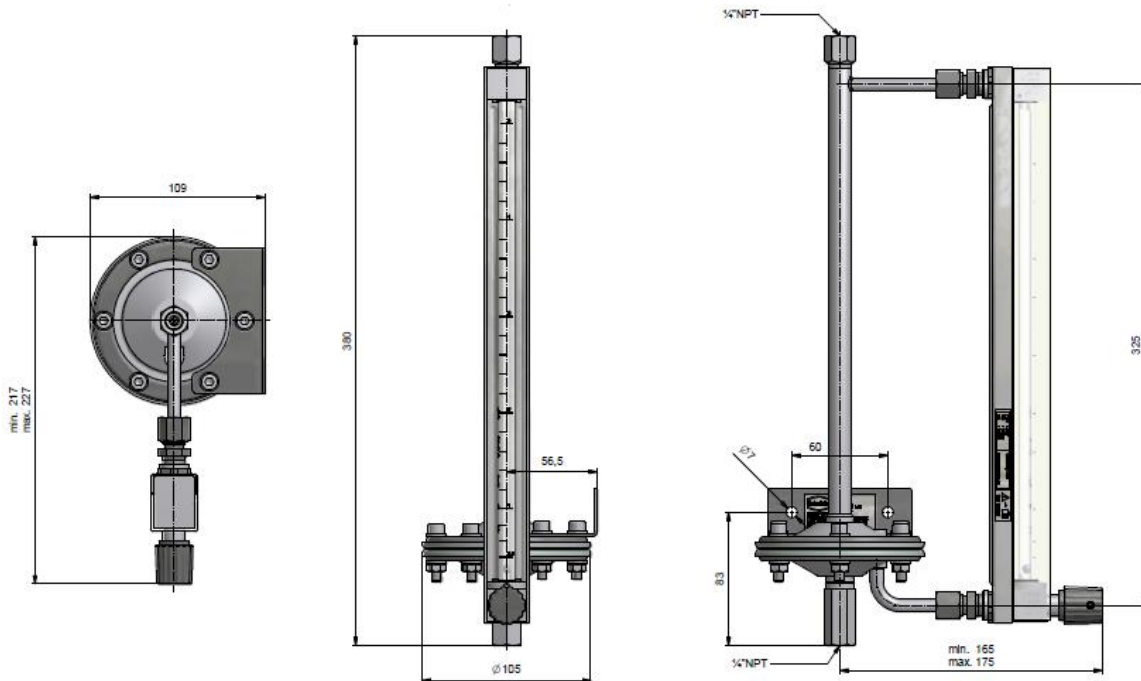
**K32 Standard version (dimensions in mm)**



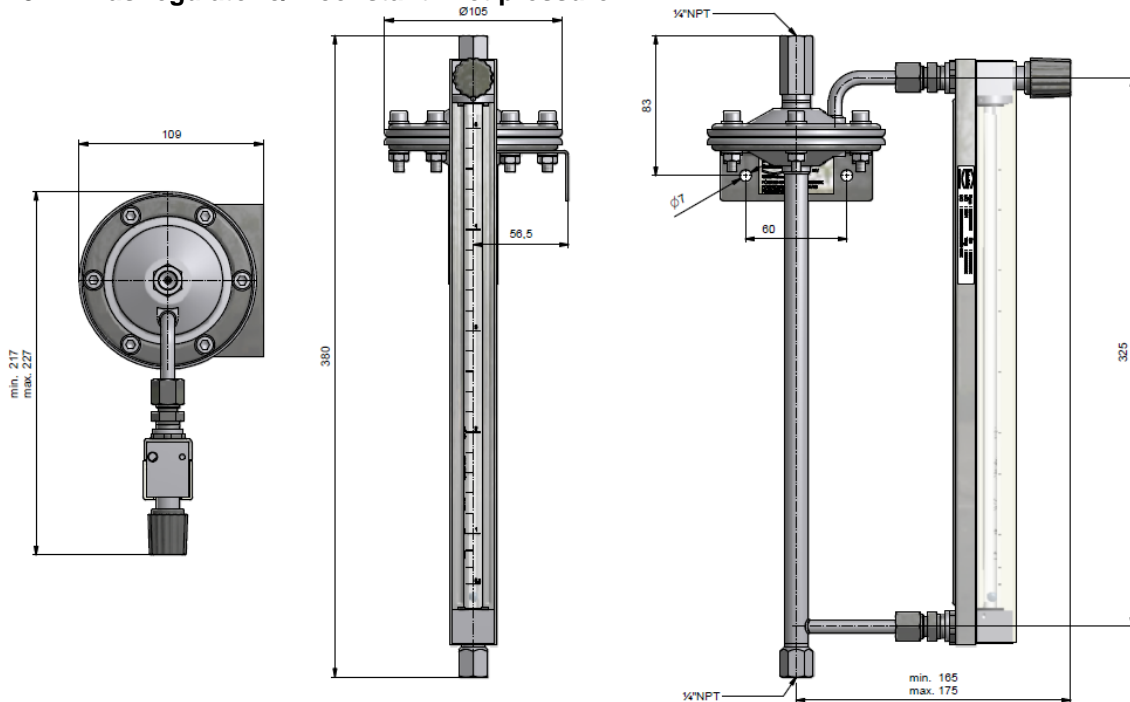


**K32- V / N (Option Vor- Nachdruckregler)**

**K32-...-N as regulator c/w constant outlet pressure**



**K32-...V as regulator c/w constant inlet pressure**



Detailed information about K32 see device description K32\_GB\_01\_en. Subjects to change without notice

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