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VOLUMETRIC SINGLE - JET METERS WITH PULSE TRANSMITTER 100 Liters/pulse

KUD Eng.

DISCONTINUED PRODUCT

TO SEE A SUITABLE REPLACEMENT PRODUCT

- **Single-jet turbine**
- **For cold or hot (max. 90 °C) water**
- **Connections with male screwed unions 1" to 1"1/2**
- **Costructed according to EEC standards**
  - horizontal mounting in Class B
  - vertical mounting in Class A

CE

Code	DN	PN	Protect.	t°max °C	Qmax m³/h	Qn m³/h	Qt (lt./h) cl. B	Qt (lt./h) cl. A	Qmin (lt./h) cl. B	Qmin (lt./h) cl. A	Qs lt./h	Pulse transmitter pul./lit(K)	Pulse transmitter pul./m³	Pulse transmitter lt / pul	Approval
KUD 25	1"	16	IP54	90	7	**3.5**	280	350	70	140	20	0.01	10	**100**	–
KUD 32	1"1/4	16	IP54	90	10	**5**	400	500	100	200	20	0.01	10	**100**	–
KUD 40	1"1/2	16	IP54	90	20	**10**	800	1,000	200	400	25	0.01	10	**100**	–

Qmax – Maximum flow with Δp of 10 mWG: Maximum temporary flow measurable by meter.
Qn – Nominal flow with Δp of 2.5 mWG (0.5 Qmax) : Continuous maximum flow measurable by meter.
Qt – Transitory flow (in Class B = 0.08 Qn) : minimum limit with error less than ± 2%.
Qmin – Minimum flow (in Class B = 0.02 Qn): minimum limit with error less than ± 5 %.
S – Sensitivity: minimum flow which (without surges and at constant pressure) overcomes inertia of meter.

APPLICATION

The volumetric meters are used to measure the flow of hot or cold water circulating in heating or cooling installations or the quantity of water consumed in DHW distribution plants.
By means of the pulse transmitter they send the instantaneous value measured to an electronic device which processes the data according to the specific requirements.

DIMENSIONING

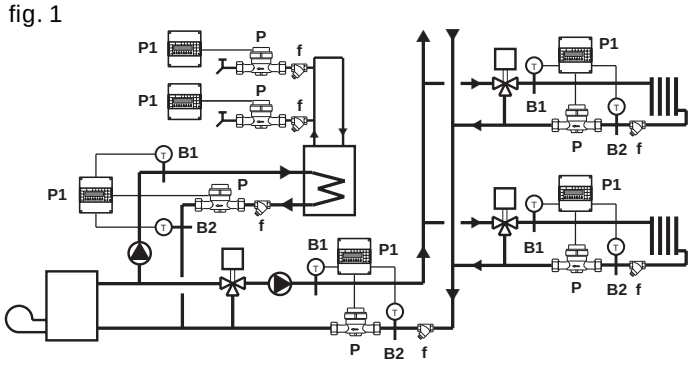
The volumetric meter does not have to be dimensioned according to the diameter of the pipework but according to the plant flow rates. **The maximum plant flow must be as near as possible to the nominal flow Qn of the meter, but must not exceed it.**

OPERATION

The meters use a single-jet turbine. The number of revolutions of the turbine is directly proportional to the quantity of fluid in circulation. The rotary movement of the turbine is transmitted, by means of calibrated mechanisms, to the mechanical totaliser and to the pulse transmiitter which sends a pulse (closure Reed contact) every 100 liters.

SCHEMATIC DIAGRAM

fig. 1



B1 – Flow detector
B2 – Return detector
f – Impurity filter
P – Volumetric meter
P1 – Energy metering integrator

INSTALLATION

So that the volumetric meter continues to maintain its metering capacity within the stated error margins (fig. 3) the instructions for installation as shown in fig. 4 must be strictly observed.

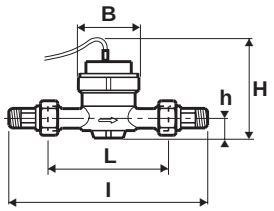
- It must be installed on the return pipe of the plant, respecting the direction of flow shown on the body, and positioned between the two shut-off valves so as to ensure that it is accessible for maintenance.
- Upstream of the meter a filter should be installed to ensure that any impurities present in the plant do not compromise the accuracy of the meter. The filter must be cleaned two days after the first startup of the plant and thereafter at least once a year.
- It is advisable to ensure that, upstream of the meter, there is a straight length of pipe three time its diameter and, downstream, a length one time its diameter.
- Reductions in diameter either above or below the meter should be avoided.

PULSE TRANSMITTER

Each meter is provided with pulse transmitter with connecting cable (2 m) for remote transmitting of the flow rate measured. The pulse transmitter consists of a rotating magnet, moved by the mechanical totaliser, which acts on a Reed electric contact which opens and closes with a frequency equal to the number of rotations of the magnet and therefore proportional to the flow value measured.

OVERALL DIMENSIONS

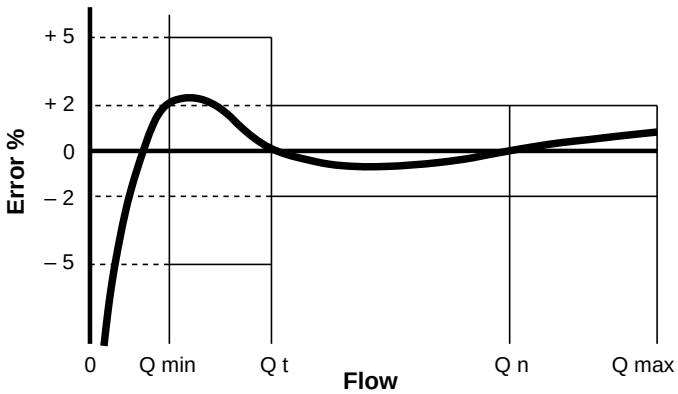
fig. 2



Model	L mm	l mm	H mm	h mm	B mm	weight kg
KUD 25	160	260	138	34	100	1.9
KUD 32	160	280	138	34	100	2.2
KUD 40	200	340	152	42	110	3.6

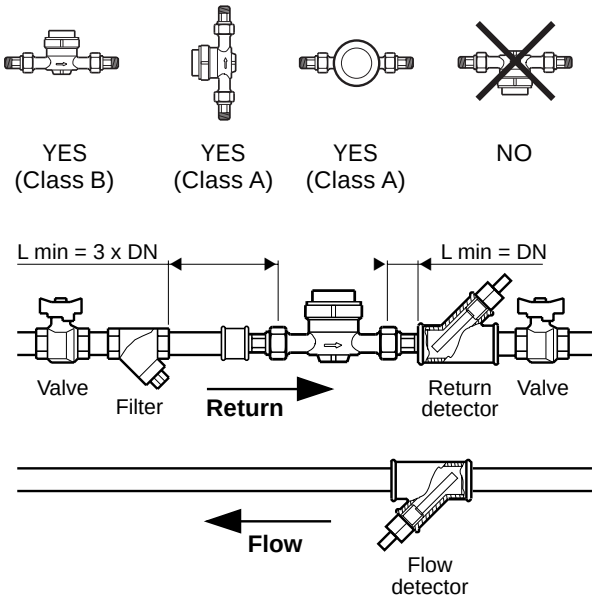
ERROR CURVE

fig. 3



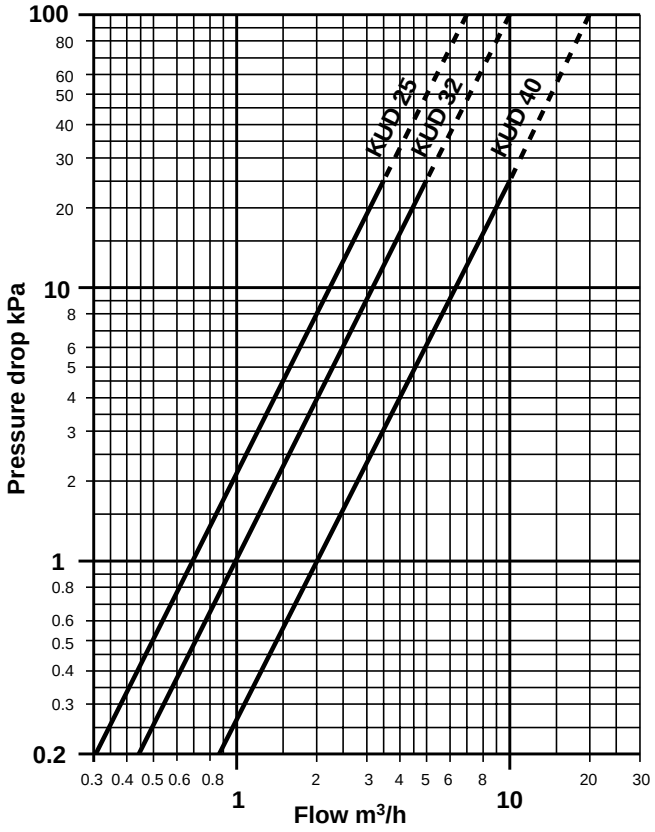
INSTALLATION

fig. 4



PRESSURE DROP

fig. 5



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