

Quantometer: non fiscal gas meter

According to the following regulations:

OIML R6 (1989) Annex A.

All meters are manufactured in accordance with ISO 9001 and satisfy ISO 9951, DIN 33800.

Possible sizes of the meters from Qa10 to Qa 40, in execution with threaded holes on the front and rear flange.

Flow rate: 1.6 - 65 m³/h.

For sizes of the meters from Q65(DN50) to Q1000 (DN 150) without flanges.

Flow rate: 10 - 1600 m³/h.

Qmin to Qmax Ratio 1:20 (1:10).

Pressure rate from PN10 to PN16 and ANSI 150.

Low pressure loss.

High measuring accuracy and long term stability.

Solid and strong construction.

The meter body is manufactured in aluminium.

Suitable for natural gas, refinery gas, city gas, butane, ethylene, air, nitrogen.

Other gases upon request.

Suitable for outdoor installation.

Reed contact pulse generator (LF) with following characteristics:

V_{max}=24 V;

I_{max}= 100 mA;

R=0.15 Ω;

F_{max}=500 Hz;

High frequency pulse generator HF (NAMUR) as an optional.



▼ Functioning

The measurement principle of the quantometer is based on the proportionality between gas velocity in an annular space and turbine wheel angular velocity.

Magnetic coupling system ensures the gas tight separation from the outside. Mechanical transmission moves the counter drums that displays quantity of a gas.

Recommendations for the installation and the use:

The turbine gas flow meter must be transported in the original packaging to the installation site.

Storage in a dry place. Handle with extreme care. The meter should be installed in as dry as possible place.

The best installing position is an horizontal one. However, a vertical position is possible for the meters of a size up to DN80. In that case, the gas flow must be downward.

The counter head is rotatable around 350°.

If possible, a filter has to be installed in front of the gas meter (0.5μ)

In the starting phase a start sieve is recommendable.

To avoid damages to the counter head, open and close the valves very slowly.

The installation must be done by authorised personal only.

▼ Headquarters and Sales offices:

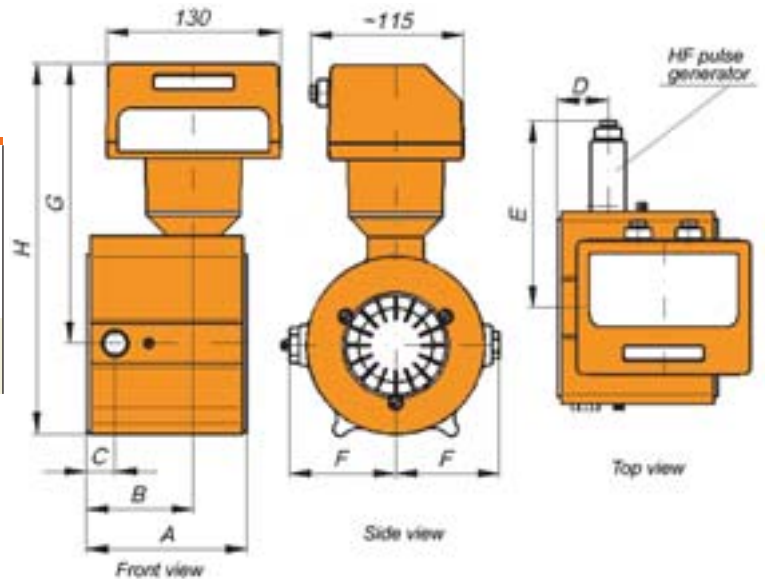
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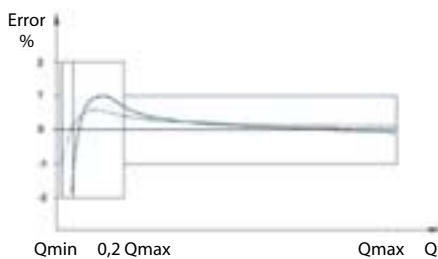
technical data



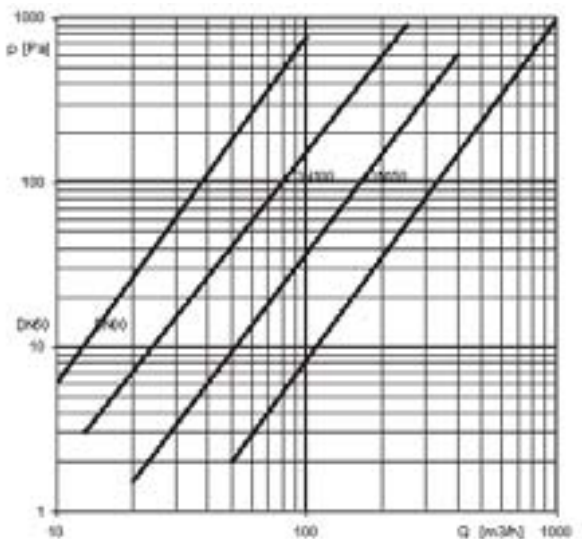
DN		Pressure rate	A	B	C	D	E	F	G	H	Weight
mm	inch		mm	mm	mm	mm	mm	mm	mm	mm	kg
25	1	PN10/16 ANSI150	132	Threaded 1"						240	1
50	2		100	65	18	32	140	65	199	252	3,6
80	3		120	80	21	38	150	77	211	278	5,3
100	4		150	100	29	53	165	91	225	305	7,4
150	6		180	127	50	76	190	116	243	351	11,6

DN		G Type	Measurement range	Ratio	Δp mbar a Qmax	E1
mm	inch					
25	1	threaded	10	1,6 - 16	1:10	0,1
			16	2 - 25	1:10	0,1
			25	2,5 - 40	1:20	0,1
			40	3,3 - 65	1:20	0,1
50	2	sandwich	65	10-100	1:10	6,4
80	3		100	8-160	1:20	4,5
			160	13-250		7,7
			250	20-400		10,8
100	4		160	13-250	3,2	1
			250	20-400	5,1	1
			400	32-650	8,3	1
150	6		400	32-650	3,8	1
		650	50-1000	5,1	1	
		1000	80-1600	9,2	10	

Error curve:
 $< \pm 3,0\%$ between Q_{min} to $0,2 Q_{max}$
 $< \pm 1,5\%$ between $0,2 Q_{max}$ to Q_{max}



Parametri caratteristici diagramma della perdita di pressione



$$\Delta p_{re} = \frac{\rho}{\rho_0} \cdot \frac{p_a - p}{p_a} \Delta p$$

Δp_{re} = operating pressure loss

Definition:
 ρ = gas over pressure in front of the meter

ρ_0 = reference gas density (= 1 Kg/m³) p_a = atmospheric pressure
 Δp = pressure loss for gas density ρ = gas density