

C.P.T. Quantometer Range

With Low Pressure Drop



General

The Quantometer is a turbine meter based on the rotation of an impellor, the speed of rotation being proportional to the flow rate of the gas. The meters are constructed for installation between flanges like a “sandwich”.

The index head can be rotated through 350 degrees.

The gas enters the meter through a built-in flow conditioner that increases the gas velocity.

The gas continues along the flow channel and enters the measuring cartridge.

The turbine rotors extract the maximum energy before the gas exits, expanding to minimise pressure losses.

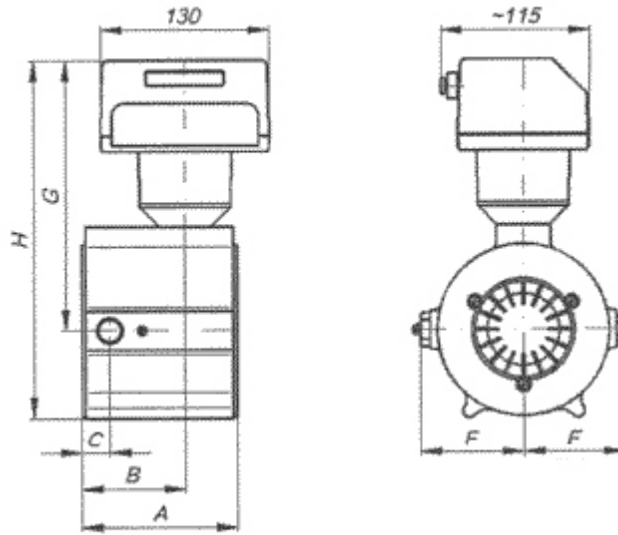
The rotation of the turbine rotor is transmitted via a gear train from the pressurised meter body to the counter head via a gas tight magnetic coupling drive which enables the counter to register volumes metered at the operating conditions.

Technical Data

DN		G	Measuring Range	Operating Range	Pressure loss(*)mbar			Std (m ³ vs. pulse)
mm	inch.		Q _{min} - Q _{max} m ³ /h		Q _{max}	Q _{nom}	0.4Q _{max}	m ³ /imp
50	2	40	6 - 65	1 : 10	3.2	1.2	0.5	0,1
		65	10 - 100		5.0	1.8	0.8	
80	3	100	8 - 160	1 : 20	3.5	1.2	0.6	1
		160	13 - 250		6.1	2.7	1.0	
		250	20 - 400		8.5	3.8	1.4	
100	4	160	13 - 250	1 : 20	2.5	1.1	0.4	1
		250	20 - 400		4.0	1.8	0.6	
150	6	400	32 - 650	1 : 20	3.0	1.3	0.5	1
		650	50 - 1000		4.0	1.8	0.6	
		1000	80 - 1600		7.2	3.2	1.2	

(*) – based on natural gas, density = 0.64 kg/m³.

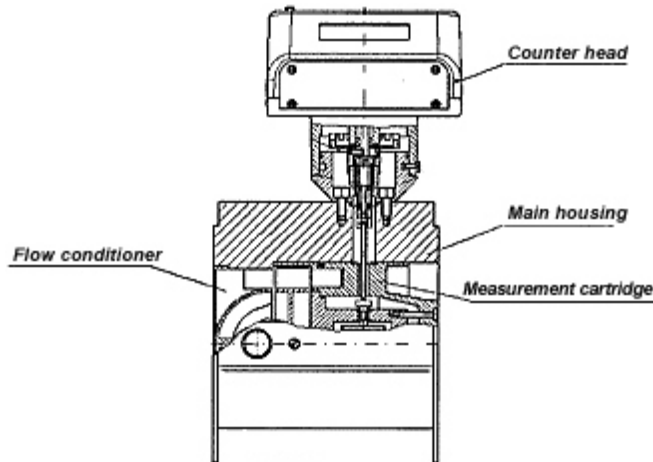
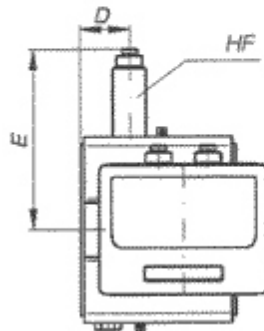
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Construction

The meter comprises 4 main elements:-

- The counter head
- The main housing
- The measuring cartridge
- The flow conditioner



Dimensions

DN	A	B	C	D	E	F	G	H	Flange	Weight [Kg]
mm	Inch.	mm	mm	mm	mm	mm	mm	mm		
50	2	100	65	18	32	140	65	199	PN 10/16 ANSI 150	3,6
80	3	120	80	21	38	150	77	211		5,3
100	4	150	100	29	53	165	91	225		7,4
150	6	180	127	50	76	190	116	243		11,6

Pressure Ratings	PN 10 to PN16: ANSI 150
Calibration Range	DN50 to DN 150 - std.
Meter Body	Aluminium Alloy
Flow Range	6 to 1600 m ³ /h
Installation	Horizontal, Vertical
Turndown Ratios	> G 100 - ratio 1:20 at atmospheric pressure The turndown ratio increases with increased operating pressure due to the increase in density of gas.
Straight Lengths	Minimum = 5 x DN (away from any bend)
Accuracy of Measurement	Error as a function of flow Qmin - 0,2 Qmax: < +/- 2% 0,2 Qmax - Qmax: < +/- 1%