TURBINE METER- QUANTOMETER

Design and function

The turbine meter / quantometer is a flow meter. The flow of the gas to be measured rotates the impeller wheel. The gas flow is concentrated to an annular cross-section and directed onto the smooth-running aluminium impeller wheel. The number of turbine wheel revolutions is proportional to the flow volume, while the frequency of rotation is proportional to the flow rate. The rotation of the impeller wheel is reduced by means of a reduction gear and transmitted from the gas-filled room to the adjustable roller counter in the ambient atmosphere by means of a magnetic coupling. The quantometers are delivered without flanges als intermediate flange version together with the relevant thread bolts, nuts and flat seals.

Characteristics

PS	16 bar
Ambient temperature	-20 to +55 °C
Housing Material	aluminium
PED- Approval	Hpi / 222-103-Q-01
Reproduzierbarkeit	< 0,2 %
Druckänderungsrate	< 0,35 bar/s
Gas specification	Gas families 1, 2, 3 (DVGW - G 260) and non-aggressive gases. Other gases on request.

Versions

Nominal Size	G- size	Q_{min} [m³/h]	Q_{max} [m³/h]
25/1"	G 10	2,0	16
25/1"	G 16	2,5	25
25/1"	G 25	4,0	40
50/2"	G 40	6,5	65
50/2"	G 65	10,0	100
80/3"	G 100	8,0	160
80/3"	G 160	12,5	250
80/3"	G 250	20,0	400
100/4"	G 160	12,5	250
100/4"	G 250	20,0	400
100/4"	G 400	32,0	650
150/6"	G 400	32,0	650
150/6"	G 650	50,0	1000
150/6"	G1000	80,0	1600

Options

- Factory calibration measuring range 1:20
- aluminium counter head NF Reed contact for aluminium counter head
- 1 x MF for aluminium counter head
- 1 x HF sensor / 2 x HF sensor
- Oil pump
- 1 x thermowell / 2 x thermowell
- Additional copy of the manual
- Test certificate 3.1 without detailed materials list
- Test certificate 3.1 with detailed materials list

Following characteristics are included as standard:

- 1 x NF Reed contact
- 1 x anti-manipulation contact
- Intermediate flange design with mounting aid
- Counter head made of plastic
- 1 x standard documentation
- Test certificate 2.2

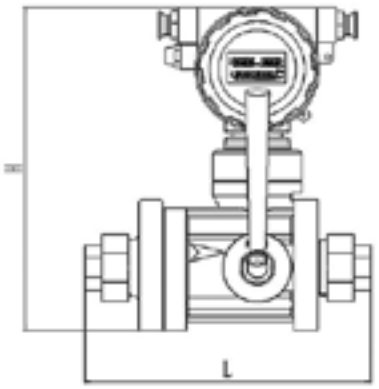
ELECTRONIC TURBINE METER MQME - QUANTOMETER

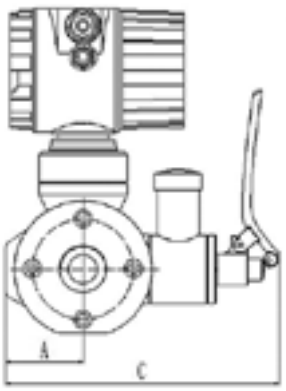
Design and function

The MQMe Quantometer is a turbine gas meter that registers the operating volume using a nine-digit electronic index.
The flow of the gas to be measured causes the turbine rotor to rotate. The gas flow is narrowed on an annular cross section, is accelerated and directed onto the smooth-running Aluminum rotor. The number of rotations is proportional to the measured gas volume; the frequency of rotations is proportional to the actual gas flow.
The rotation of the rotor is transmitted via a magnetoresistance sensor from the gas pressurized area to the electronic index which is in the atmospheric environment. The CPU is receiving the high frequency signal for the magnetoresistance sensor to calculate the gas flow and gas volume under operating conditions. If the optional electronic volume corrector function is installed the gas flow and gas volume under standard conditions will be calculated according AGA NX-19. The calculation can be based on fixed factors for temperature and pressure or on optionally installed temperature and pressure sensors. The MQMe is designed to have one external temperature and one external pressure transmitter installed directly in the meter.

Dimensions / Nominal size

	25 / 1"	25/1"	50 / 2"	80 / 3"	100 / 4"	150 / 6"
L [mm]	150	240	75	120	150	180
A [mm]	65	65	55	70	90	120
B [mm] no pump	55	55	65	90	100	120
B [mm] with pump	165	165	175	200	210	230
C [mm] no pump	120	120	120	160	190	240
C [mm] with pump	230	230	230	270	300	350
H [mm]	275	275	305	340	365	415
Weight [kg] no pump	5,4	6,0	4,3	6,7	8,4	13,0
Weight [kg] with pump	6,1	6,8	5,1	7,4	9,2	13,8





Characteristics

PS	16 bar
Ambient temperature	-25 to +55 °C
Housing Material	aluminium
PED- Approval	Hpi / 222-103-Q-01
Reproducibility	< 0,2 %
Pressure change rate	< 0,35 bar/s
Gas specification	Gas families 1, 2, 3 (DVGW - G 260) and non-aggressive gases. Other gases on request.

Versions

Nominal Size	G-Größe	Q_{min} [m³/h]	Q_{max} [m³/h]
25/1"	G 16	2,5	25
25/1"	G 25	4,0	40
50/2"	G 40	6,5	65
50/2"	G 65	10,0	100
80/3"	G 100	8,0	160
80/3"	G 160	12,5	250
80/3"	G 250	20,0	400
100/4"	G 160	12,5	250
100/4"	G 250	20,0	400
100/4"	G 400	32,0	650
150/6"	G 400	32,0	650
150/6"	G 650	50,0	1000
150/6"	G1000	80,0	1600

Options

- several options to transmit the measured an calculated data to a digital control system (**DCS**) or SCADA
- equipped with alterna tively RS 485 or M-Bus interface and one high frequency (**HF**) as well as one low frequency (**LF**) pulser
- if an external power supply is connec ted to the MQME one 4 to 20 mA configurable sig nal is available
- the rotation of the rotor can be scannes additi onally with one external high frequency (**HF**) sensor
- the HF-sensor signal allows the determination of the actual gas flow in high-resolution and can be transmit to any digital control system (**DCS**) or SCADA for flow cont rol purposes
- integrated electronic volume corrector