TRZ | EQZ EQZK

TURBINE GAS METERS

GAS METERS

RIELS® INSTRUMENTS

TRZ, EQZ, EQZK

ELGAS radial-blade turbine meter is a velocity meter designed for industrial and commercial use.

Radial-blade turbine gas meter

- Meter sizes G/Q from 16 up to 400
- Measuring range from 3 up to 650 m^3/h
- There is a solution for each demand

Over-run brake (optional)

- Suppression of after-run error at intermittent operation without restriction of the measuring range
- For TRZ and EQZ only

Monopipe adaptor EAS

- Component of the pipeline
- Flange connection DN 50 – DN 100
- Thread connection G 1½" and G 2"
- The monopipe adaptor can be installed into the pipeline in advance with an over flow cap or lid cap

Installation and maintenance

- Can be installed in any position from horizontal to vertical
- Simple exchange of the meters on site. The heavyweight monopipe adaptor remains in the pipeline
- The disconnection of the meter and monopipe adaptor allows a tension-free meter installation

Why an over-run brake?

Axial-blade turbine or radial-blade turbine gas meters are most often used for measuring consumption of heating gas supply systems. All turbine meters of this construction are based on the principle of velocity measurement. The advantages of the radial blade turbine gas meter are mainly to be found in its simple installation, small size,

Highlights

- Sizes DN (40) 50-100 G 16-400
- Accuracy +/- 1% (TRZ), +/- 1.5% (EQZ/K)
- Self lubricated longlife bearings
- Designed for easy replacement
- Optional over-run brake

Radial-blade turbine gas meters

Radial-blade turbine gas meter head

Over-run brake (optional)

Monopipe adaptor EAS

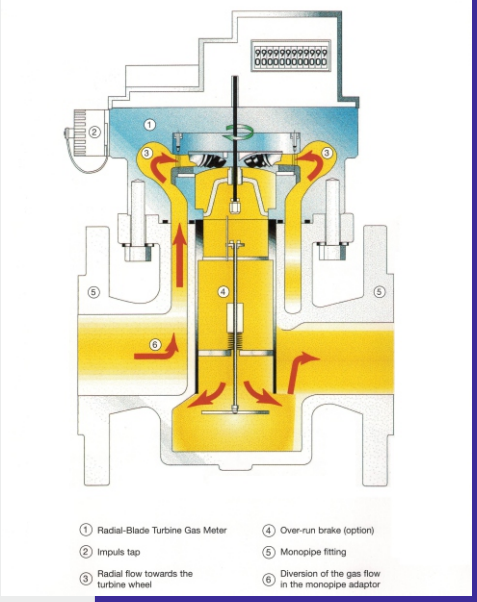
light weight, in any installation arrangement and low cost. However gas meters with the velocity measuring principle are not ideal for intermittent operation. When an energy consuming installation is suddenly switched off, the meter does not react immediately. The freely moving turbine wheel continues to rotate at a slowly decreasing speed andwill produce an error. In such case this error can be eliminated by installation of over-run brake.

Radial-blade turbine gas meter TRZ

Technical characteristics

- Principle of velocity measurement
- For measurements requiring obligatory verification (for MID versions)
- Accuracy:
  - from $0.2Q_{max}$ to Q_{max} ... +/-1 %
  - below $0.2Q_{max}$ ... +/- 2 %
- Sizes G 16 up to G 400
- Dimensions DN 50, 80 and 100
- Different G-sizes per nominal width:
  - DN 50: G 16 up to G 100
  - DN 80: G 65 up to G 250
  - DN 100: G 160 up to G 400
- Operating pressure max. 6 bar
- Measuring head can be calibrated without monopipe fitting
- The counter is in a gas-free space
- High measurement stability and operational security due to high-quality, wear-resistant components
- Self-lubricating ball bearings
- Pressure extraction connection inside the meter
- Designed for simple servicing (measurement-cartridge principle)
- LF-pulse generator (in standard)
- Integrated flow strainer
- Short straight inlet lengths (2 x DN)
- Operation temperature range:
  - gas temperature from -10°C up to +60°C (+55°C)
  - ambient temperature from -10°C up to +60°C

Schematic sectional view of the Radial-Blade Turbine Gas Meter



Options

- Over-run brake: Mechanical over-run brake not influencing the measuring range for intermitting operation
- Pulse generators: 2nd LF-REED, it can be retrofitted without breaking the verification seal - MF-NAMUR
- Temperature sensor pockets in monopipe fitting

Standards and approvals

- International/national type approval MID TCM 143/13-5110
- EC registration cerfticate

Mounting and maintenance

- Mounting/dismounting of the measuring head is possible without disconnecting the monopipe fitting from the pipe.
  The measuring head itself is not influenced by the tension from the pipeline
- Gas meter can be installed in any position from horizontal to vertical (turbine axis not suspended and roller counter axis always horizontal)

Generation 4 you

Radial-blade turbine gas meter EQZ and EQZK

Technical characteristics

- Principle of velocity measurement
- For measurements not requiring obligatory verification
- Accuracy:
  - from 0.2Qmax to Qmax ... +/-1.5 %
  - below 0.2Qmax ... +/- 2 %
- Sizes Q 16 up to Q 400
- Dimensions DN 40, 50, 80 and 100
- Different Q-sizes per nominal width:
  - DN 40: Q 16 up to Q 65
  - DN 50: Q 16 up to Q 100
  - DN 80: Q 65 up to Q 250
  - DN 100: Q 160 up to Q 400
- Operating pressure max. 6 bar
- Measuring head can be calibrated without monopipe fitting
- Pressure extraction connection inside the meter
- High measurement stability and operational security due to high quality, wear-resistant components
- Self-lubricating ball bearings
- Counter is in a gas-free space
- Designed for simple servicing (measurement-cartridge principle)
- Standard integrated flow strainer
- Short straight inlet lengths (2 × DN)
- Operation temperature range:
  - gas temperature -10°C up to +60°C
  - ambient temperature -10°C up to +60°C

Options

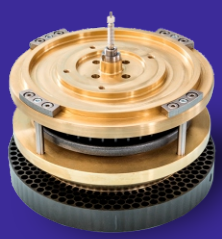
- Over-run brake:
  Mechanical over-run brake not influencing the measuring range for intermitting operation (only for EQZ)
- Pulse generators:
  - LF-REED
  - 2nd LF-REED
  - MF-NAMUR
- Temperature sensor pockets in monopipe fitting

Mounting and maintenance

- Mounting/dismounting of the measuring head possible without disconnecting the monopipe fitting from the pipe. The measuring head itself is not influenced by the tension from the pipeline
- Gas meter can be installed in any position from horizontal to vertical (turbine axis not suspended and roller counter axis always horizontal)

Standards and approvals

- Developed and produced according to Quality Standard ISO 9001:2008
- EC registration certicate CE 0085



EQZK - special features

- Special version for measuring of sewer gas and biogas (without verification)
- Internal surface protected against corrosion with PTFE (Teflon).
- Wear-resistant ceramic ball bearings
- Calibration without fitting disassembly
- All components of have a surface treatment for passive corrosion protection
- Limited warranty of durability due to chemical factors as:
  - hydrogen sulphide
  - amonia
  - humidity
  - dirt
- The sewer gas meter EQZK may not be used upstream the gas-storage unit
- The gas should be filtered before it flows to the meter
- The meter should not be installed at the lowest point of an installation in order to avoid any accumulation of condensate inside the meter
- In case of strong condensation a condensate drain should be provided upstream and downstream the meter

Technical specifications

Radial-blade turbine gas meter TRZ

		Load range		Max. operating pressure	Pulse generators		
DN [mm]	G-value	Q_{min} [m^3/h]	Q_{max} [m^3/h]	P [bar]	LF (standard) [imp/m^3]	2nd LF (option) [imp/m^3]	MF (option) [imp/m^3]
50	G 16	5	25	6	1	1	0.01
50	G 25	4	40	6	1	1	0.01
50	G 40	6	65	6	1	1	0.01
50	G 65*	5	100	6	1	1	0.01
50	G 100*	8	160	6	1	1	0.01
80	G 65	10	100	6	1	1	0.01
80	G 100	16	160	6	1	1	0.01
80	G 160*	13	250	6	1	1	0.01
80	G 250*	13	400	6	1	1	0.01
100	G 160*	13	250	6	1	1	0.01
100	G 250*	20	400	6	1	1	0.01
100	G 400*	20	650	6	1	1	0.01

* Available in MID version with obligatory verification.

Radial-blade turbine gas meter EQZ and EQZK

		Load range		Max. operating pressure	Pulse generators		
DN [mm]	G-value	Q_{min} [m^3/h]	Q_{max} [m^3/h]	P [bar]	LF (option) [imp/m^3]	2nd LF (option) [imp/m^3]	MF (option) [imp/m^3]
40/50	G 16	3	25	6	1	1	0.01
40/50	G 25	4	40	6	1	1	0.01
40/50	G 40	5	65	6	1	1	0.01
40/50	G 65	6	100	6	1	1	0.01
40/50	G 100	10	160	6	1	1	0.01
80	G 65	10	100	6	1	1	0.01
80	G 100	12	160	6	1	1	0.01
80	G 160	15	250	6	1	1	0.01
80	G 250	20	400	6	1	1	0.01
100	G 100	13	160	6	1	1	0.01
100	G 160	15	250	6	1	1	0.01
100	G 250	20	400	6	1	1	0.01
100	G 400	25	650	6	1	1	0.01