

Technical data

Technical data of Radial-Blade Turbine Gas Meter TRZ								
DN [mm]	Size	Load range		Max. operating pressure P [bar]	Pulse generators			
		Q <sub>min</sub> [m <sup>3</sup> /hr]	Q <sub>max</sub> [m <sup>3</sup> /hr]		LF (standard) 1 imp = m <sup>3</sup>	2 <sup>nd</sup> LF (option) 1 imp = m <sup>3</sup>	MF (option) 1 imp = m <sup>3</sup>	HF (option) approx. f at Q <sub>max</sub> [Hz]
50	G 16	5	25	6	1	1	0,01	350
50	G 25	4	40	6	1	1	0,01	550
50	G 40	6	65	6	1	1	0,01	850
50	G 65*	5	100	6	1	1	0,01	1300
50	G 100*	8	160	6	1	1	0,01	1300
80	G 65	10	100	6	1	1	0,01	200
80	G 100	16	160	6	1	1	0,01	320
80	G 160 *	13	250	6	1	1	0,01	500
80	G 250 *	13	400	6	1	1	0,01	800
100	G 160 *	13	250	6	1	1	0,01	440
100	G 250 *	20	400	6	1	1	0,01	380
100	G 400 *	20	650	6	1	1	0,01	610

\* Available in MID version with obligatory verification

Technical data of Quanto Monopipe EQZ								
DN [mm]	Size	Load range		Max. operating pressure P [bar]	Pulse generators			
		Q <sub>min</sub> [m <sup>3</sup> /hr]	Q <sub>max</sub> [m <sup>3</sup> /hr]		LF (option) 1 imp = m <sup>3</sup>	2 <sup>nd</sup> LF (option) 1 pulse = m <sup>3</sup>	MF (option) 1 pulse = m <sup>3</sup>	HF (option) approx. f at Q <sub>max</sub> [Hz]
40/50	Q 16	3	25	6	1	1	0,01	350
40/50	Q 25	4	40	6	1	1	0,01	550
40/50	Q 40	5	65	6	1	1	0,01	850
40/50	Q 65	6	100	6	1	1	0,01	1300
40/50	Q 100	10	160	6	1	1	0,01	1300
80	Q 65	10	100	6	1	1	0,01	200
80	Q 100	12	160	6	1	1	0,01	320
80	Q 160	15	250	6	1	1	0,01	500
80	Q 250	20	400	6	1	1	0,01	800
100	Q 100	13	160	6	1	1	0,01	280
100	Q 160	15	250	6	1	1	0,01	440
100	Q 250	20	400	6	1	1	0,01	380
100	Q 400	25	650	6	1	1	0,01	610

Technical data of Quanto Monopipe EQZK								
DN [mm]	Size	Load range		Max. operating pressure P [bar]	Pulse generators			
		Q <sub>min</sub> [m <sup>3</sup> /hr]	Q <sub>max</sub> [m <sup>3</sup> /hr]		LF (option) 1 imp = m <sup>3</sup>	2 <sup>nd</sup> LF (option) 1 imp = m <sup>3</sup>	MF (option) 1 imp = m <sup>3</sup>	
40/50	Q 16	3	25	6	1	1	0,01	
40/50	Q 25	4	40	6	1	1	0,01	
40/50	Q 40	5	65	6	1	1	0,01	
40/50	Q 65	6	100	6	1	1	0,01	
40/50	Q 100	10	160	6	1	1	0,01	
80	Q 65	10	100	6	1	1	0,01	
80	Q 100	12	160	6	1	1	0,01	
80	Q 160	15	250	6	1	1	0,01	
80	Q 250	20	400	6	1	1	0,01	
100	Q 100	13	160	6	1	1	0,01	
100	Q 160	15	250	6	1	1	0,01	
100	Q 250	20	400	6	1	1	0,01	
100	Q 400	25	650	6	1	1	0,01	

GAS METERS and QUANTO METERS

# TRZ, EQZ, EQZK

for high precision gas volume measurement

Radial-Blade Turbine Gas Meter TRZ  
- for obligatory verification -



Technical characteristics

- Principle of velocity measurement
- For measurements requiring obligatory verification (for MID versions)
- Accuracy:
  - from 0.2Q<sub>max</sub> to Q<sub>max</sub> ... +/- 1 %
  - below 0.2Q<sub>max</sub> ... +/- 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
- Meter element can be calibrated without monopipe fitting
- Counting device is in a gas-free space
- Low starting value
- 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 (standard)
- Integrated flow strainer (standard)
- Short straight inlet lengths (2 × DN)
- Operation temperature range:
  - gas temperature from -10°C up to +60°C (+55°C)
  - ambient temperature from -10°C up to +60°C

Options

- Over-run brake: Mechanical over-run brake without measuring range for intermitting operation
- Pulse generator:
  - 2nd LF-REED, it can be retrofitted without breaking the verification seal
  - MF-NAMUR
  - HF-NAMUR

- Temperature sensor pockets in monopipe fitting

Mounting and maintenance

- Mounting /dismounting of the meter element possible without disconnecting the monopipe fitting
- The monopipe fitting remaining in the pipe network enables mounting /dismounting of the meter element without tension from the pipe network
- Can be installed in any position from horizontal to vertical (turbine axis not suspended and roller counter axis always horizontal)

Norms and approvals

- Developed and produced according to Quality Standard ISO 9001:2008
- International / national type approvals MID TCM 143/13-5110
- EC registration certificate **0085**



## Quanto monopipe EQZ - for internal and industrial measurements -



### Technical characteristics

- Principle of velocity measurement
- For measurements not requiring obligatory verification
- Accuracy:
  - from  $0.2Q_{max}$  to  $Q_{max}$  ... +/-1.5 %
  - below  $0.2Q_{max}$  ... +/- 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
- Meter element 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

### Options

- Self-lubricating ball bearings
- Operating pressure max. 6 bar
- Counting device is in a gas-free space
- Low starting value
- Designed for simple servicing (measurement-cartridge principle)
- Standard integrated flow strainer
- Short straight inlet lengths ( $2 \times DN$ )
- Operation temperature range:
  - gas temperature  $-10^{\circ}C$  up to  $+60^{\circ}C$
  - ambient temperature  $-10^{\circ}C$  up to  $+60^{\circ}C$
- Over-run brake: Mechanical over-run brake without measuring range for intermitting operation
- Pulse generator:
  - LF-REED
  - 2nd LF-REED, it can be retrofitted without breaking the verification seal
  - MF-NAMUR, HF-NAMUR

- Temperature sensor pockets in monopipe fitting

### Mounting and maintenance

- Mounting/dismounting of the meter element possible without disconnecting the monopipe fitting
- The monopipe fitting remaining in the pipe network enables mounting/dismounting of the meter element without tension from the pipe network
- Can be installed in any position from horizontal to vertical (turbine axis not suspended and roller counter axis always horizontal)

### Norms and approvals

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

## Quanto monopipe EQZK - for measuring of sewer gas -



### Technical characteristics

- Principle of velocity measurement
- Special version for measuring of sewer gas (without verification)
- Internal surface protected against corrosion with special coating
- Wear-resistant ceramic ball bearings
- Accuracy:
  - from  $0.2Q_{max}$  to  $Q_{max}$  ... +/-1.5 %
  - below  $0.2Q_{max}$  ... +/- 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
- Calibration without fitting disassembly
- Pressure extraction connection inside the meter
- Counting device is in a gas-free space
- Low starting value
- Designed for simple servicing (measurement-cartridge principle)
- Standard integrated flow strainer
- Short straight inlet lengths ( $2 \times DN$ )
- Operation temperature range:
  - gas temperature  $-10^{\circ}C$  up to  $+60^{\circ}C$
  - ambient temperature  $-10^{\circ}C$  up to  $+60^{\circ}C$

### Options

- Pulse generator:
  - LF-REED
  - 2nd LF-REED
  - MF-NAMUR

### Mounting and maintenance

- Mounting/dismounting of the meter element possible without disconnecting the monopipe fitting
- The monopipe fitting remaining in the pipe network enables mounting /dismounting of the meter element without tension from the pipe network
- Can be installed in any position from horizontal to vertical (turbine axis not suspended and roller counter axis always horizontal)

### Norms and approvals

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

### Corrosion / Guarantee

All components of the special version designed for bio and sewer gas have a surface treatment, a so-called passive corrosion protection (surface treated monopipe adaptors available on request).

For the operation of EQZK with sewage gas we cannot grant any warranty of durability as the chemical condition of the gas has an important influence to the working life of the meter.

Factors as:

- sulfurated hydrogen
  - humidity
  - dirt
  - dew point of gas lead often to an unknown aggressiveness of the gas
- Ammonia in the sewer gas attack all nonferrous metals. Therefore, all surfaces of meter parts in contact with the biogas are PTFE-coated (Teflon).

### Installations and operations

- The sewer gas meter EQZK may not be used upstream the gas-storage unit
- The gas should be filtered before passing the meter, so that the gas can be measured in dry condition and without impurities
- 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