

BK-G10 and BK-G16

BK-G10T and BK-G16T

Compact commercial diaphragm gas meters



Applications

Media: natural gas, town gas, propane, butane, air *

Industry: gas supply

Tasks: gas measurement at operating conditions **

Brief information

The commercial diaphragm gas meter BK-G10 and BK-G16 meet the highest demands with respect to accuracy of measurement and safety. They combine innovative features with many decades of gas measurement know-how. The BK-G10 and BK-G16 are supplied in folded form as co-axial and two-pipe versions.

The stroke of the diaphragms is pneumatically stopped and therefore ensures both low bearing loads and a quiet operation.

The stadium-shaped synthetic diaphragm is dimensionally stable.

High-grade materials and components as well as the patented curve K-system ensure a high quality standard.

The K-system perfectly coordinates the movement of the valves with the actual gas flow to the measuring chambers. This ensures excellent linearity even when using small valves.

Due to the optimised slides, Q_{\min} of BK-G10 and BK-G16 is stable and the gas meter is not susceptible to contamination (RPF 0.8 to BS4161). The measuring unit is adjusted by a patented needle-and-scale system.

Although the design of the BK-G10 and BK-G16 is very robust, the gas meters are still measuring instruments and as such should be handled with care.

Operating principle

Four measuring chambers are separated by synthetic diaphragms. The chambers are filled and emptied periodically, and the movement of the diaphragms is transferred via a gear to the crankshaft. This shaft moves the valves, which control the gas flow. The rotations of the gear are transferred via a magnetic coupling to the index.

The temperature compensation facility of the BK-G10T and BK-G16T ensures via a bimetallic element that the stroke of the diaphragms is adapted to the current gas temperature.

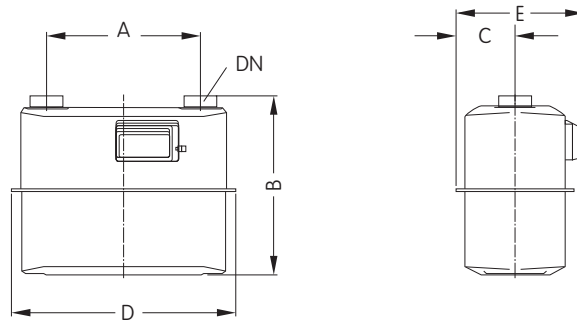
* ... Other media: Inert gases to EN 437

** ... BK-G16T: Measurement of temperature-compensated gas volume

Main features

- MID conformity approved by PTB
- Approved to EN 1359 by German DVGW
- Flow rates from
0.1 m³/h to 16 m³/h (G10)
0.16 m³/h to 25 m³/h (G16)
- Cyclic volume 6 liters
T-version 5.6 liters
- Maximum operating pressure 0.5 bar
- Fire resistant (HTB) up to 0.1 bar according to EN 1359
- High accuracy and long-term stability
- Powder coated pale grey to RAL 7035
- Standard pulse magnet, retrofitable LF pulser (I=0.1 m³/pulse)
- Not susceptible to contamination (RPF=0.8)
- Temperature range:
standard: -10 °C to +40 °C,
other temperatures on request
- Temperature compensation available
- Intelligent index technology, Chekker system, Absolute-ENCODER and radio applications

Dimensions and weights

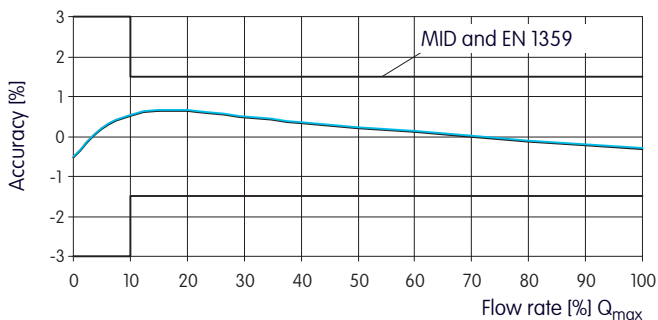


| Type | Q _{max} [m ³ /h] | Q _{min} [m ³ /h] | V [dm ³] | Connection size | | Dimensions [mm] | | | | | Weight [kg] |
|--------|--------------------------------------|--------------------------------------|----------------------|-----------------|-----------------|-----------------|-----|-----|-----|-----|-------------|
| | | | | DN | Thread* | A* | B | C | D | E | |
| BK-G10 | 16 | 0.1 | 6 | 32 | 1 3/4" | 250 | 320 | 85 | 334 | 218 | 4.5 |
| BK-G10 | 16 | 0.1 | 6 | 32 | 1 3/4" | 280 | 330 | 108 | 405 | 234 | 5.7 |
| BK-G10 | 16 | 0.1 | 6 | 40 | 2" | 280 | 330 | 108 | 405 | 234 | 5.7 |
| BK-G10 | 16 | 0.1 | 6 | - | 1 1/4" (BS746)" | 152.4 | 337 | 100 | 264 | 218 | 5.0 |
| BK-G16 | 25 | 0.16 | 6 | 40 | 2" | 280 | 330 | 108 | 405 | 234 | 5.7 |
| BK-G16 | 25 | 0.16 | 6 | - | 2" (BS746)" | 250 | 351 | 108 | 405 | 234 | 6.5 |

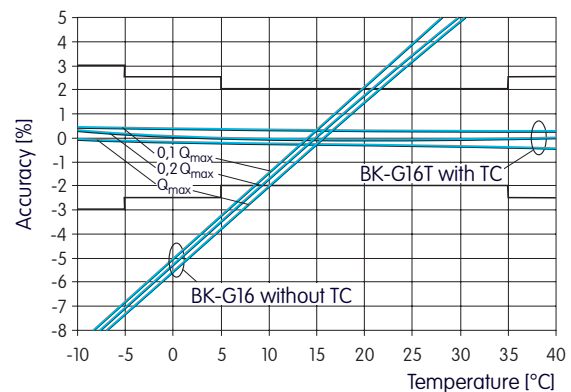
* ISO 228-1 (if not further specified)

Other dimensions on request

Typical error curve BK-G10 and BK-G16

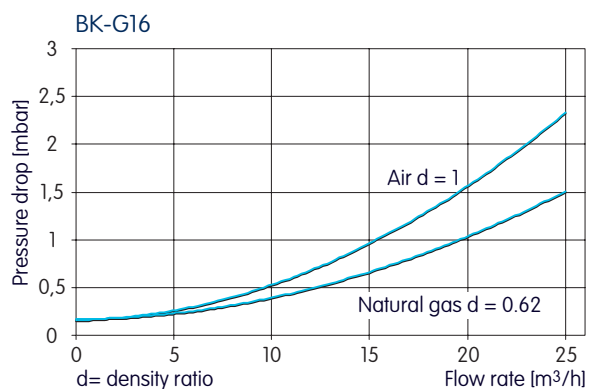
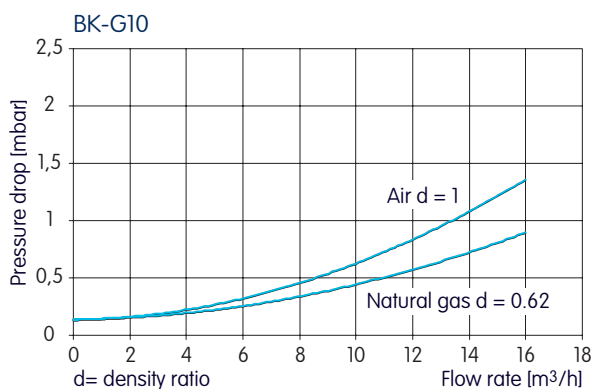


With calibration error limits at test room temperature according to MID and EN 1359



Within the compensation range with error limits to MID and EN 1359

Pressure drop curve



Your contacts



Germany
 Elster GmbH
 Steinern Str. 19 - 21
 55252 Mainz-Kastel
 T +49 6134 605 0
 F +49 6134 605 223
 www.elster-instromet.com
 info@elster-instromet.com

Belgium
 Elster NV/SA
 Rijkmakerlaan 9
 2910 Essen
 T +32 3 670 0700
 F +32 3 667 6940
 www.elster-instromet.com
 sales@elster-instromet.com

Singapore
 Elster-Instromet Sdn. Bhd. (Singapore Branch)
 29 Tai Seng Avenue
 #06-05A Natural Cool Lifestyle Hub
 Singapore 534119
 T +65 6247 7728
 F +65 6848 9003
 sales@elster-instromet.com.sg

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