# 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-G6T: 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 $m^3/h$ to 16 $m^3/h$ (G10) 0.16 $m^3/h$ to 25 $m^3/h$ (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 (l=0.1 $m^3$/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

DMS METERING SOLUTIONS

elster Instromet

## Dimensions and weights

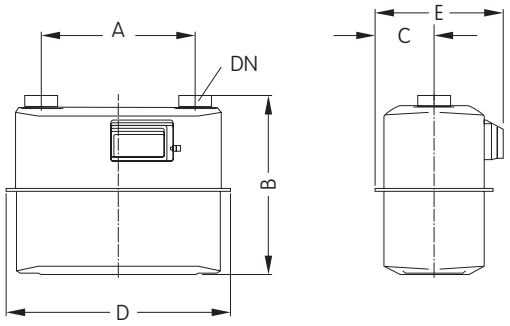



Fig. 1

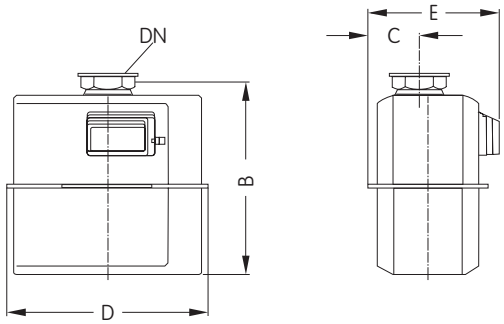
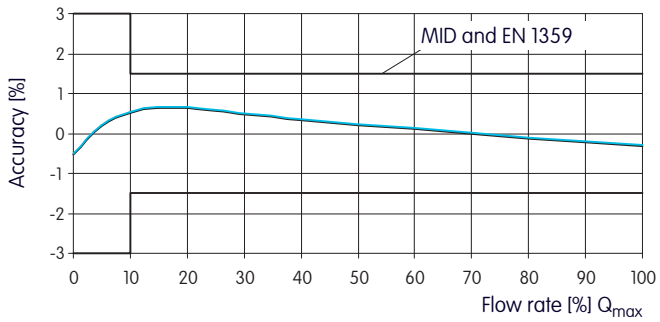



Fig. 2

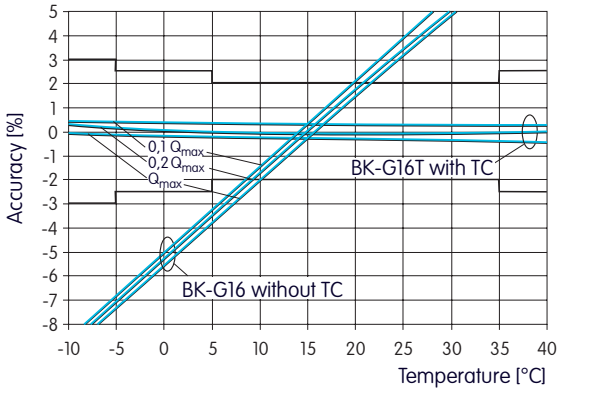
| Type | Fig. | $Q_{max}$ [m³/h] | $Q_{min}$ [m³/h] | V [dm³] | Connection size | | Dimensions [mm] | | | | | Weight [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | DN | Thread* | A* | B | C | D | E | |
| BK-G10 | 2 | 16 | 0.1 | 6 | 40 | 2 ¾" | - | 323 | 85 | 334 | 218 | 5.1 |
| BK-G10 | 1 | 16 | 0.1 | 6 | 32 | 1 ¾" | 250 | 320 | 85 | 334 | 218 | 4.5 |
| BK-G10 | 1 | 16 | 0.1 | 6 | 32 | 1 ¾" | 280 | 330 | 108 | 405 | 234 | 5.7 |
| BK-G10 | 1 | 16 | 0.1 | 6 | 40 | 2" | 280 | 330 | 108 | 405 | 234 | 5.7 |
| BK-G10 | 1 | 16 | 0.1 | 6 | - | 1 ¼" (BS746)" | 152.4 | 337 | 100 | 264 | 218 | 5.0 |
| BK-G16 | 2 | 25 | 0.16 | 6 | 40 | 2 ¾" | - | 323 | 85 | 334 | 218 | 5.1 |
| BK-G16 | 1 | 25 | 0.16 | 6 | 40 | 2" | 280 | 330 | 108 | 405 | 234 | 5.7 |
| BK-G16 | 1 | 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

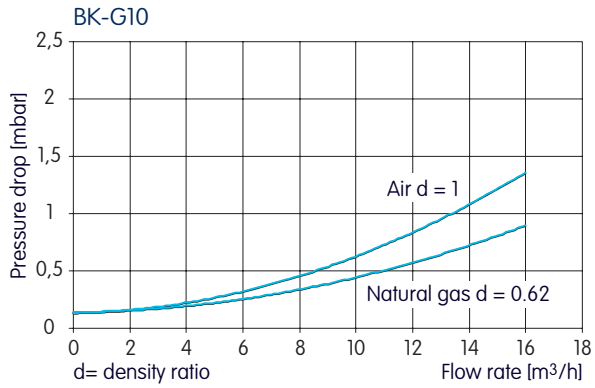


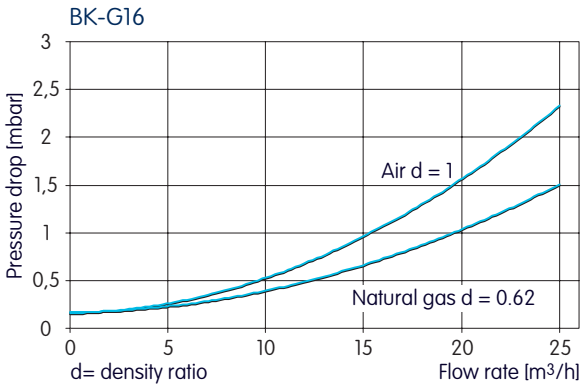

With calibration error limits at test room temperature according to MID and EN 1359




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

## Pressure drop curve




## Your contacts

DMS Metering Solutions
X-Cel House
Chrysalis Way
Langley Bridge
Eastwood
NG16 3RY

Tel.: 01773 534555
Fax: 01773 534666
Email: sales@dmsltd.com
Web: www.dmsltd.com

BK G10 16 EN06
A19.03.2014

73030007

Copyright 2014 Elster GmbH
All rights reserved.
Subject to change without prior notice