

BK-G6 AND BK-G6T



High quality residential diaphragm gas meters

Applications

- **Media:**
natural gas, town gas, propane, butane, inert gases.
- **Industry:**
gas suppliers.
- **Tasks:**
BK-G6: measurement of gas volume at operating conditions;
BK-G6T: measurement of temperature-compensated gas volume.

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-G6T ensures via a bimetallic element mounted on the crankshaft that the stroke of the diaphragms in the measuring chambers is adapted to the current gas temperature.

Overview

The residential diaphragm gas meters BK-G6 and BK-G6T have been designed to meet the highest demands with respect to accuracy of measurement and

safety. They incorporate both innovative features and Elster's gas measurement know-how of many decades. The gas meters BK-G6 and BK-G6T 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. Together with the dimensionally stable, bellow-type synthetic diaphragm, this principle allows to use a mechanical compensation element in order to correct the temperature – in case of the BK-G6T – to the reference temperature.

High-grade materials and components as well as the directly driven V-shaped slide control system ensure a high quality standard.

The operation of the proven bellow diaphragm is very similar to the working principle of a piston and therefore excellently suited to achieving an extremely high accuracy of measurement as well as a mechanical temperature compensation across a wide temperature range.

Due to the small slides, Q_{\min} of BK-G6 and BK-G6T is stable, and the gas meters are not susceptible to contamination (RPF of 0.7 to BS4161). The measuring unit is adjusted by a patented needle-and-scale system.

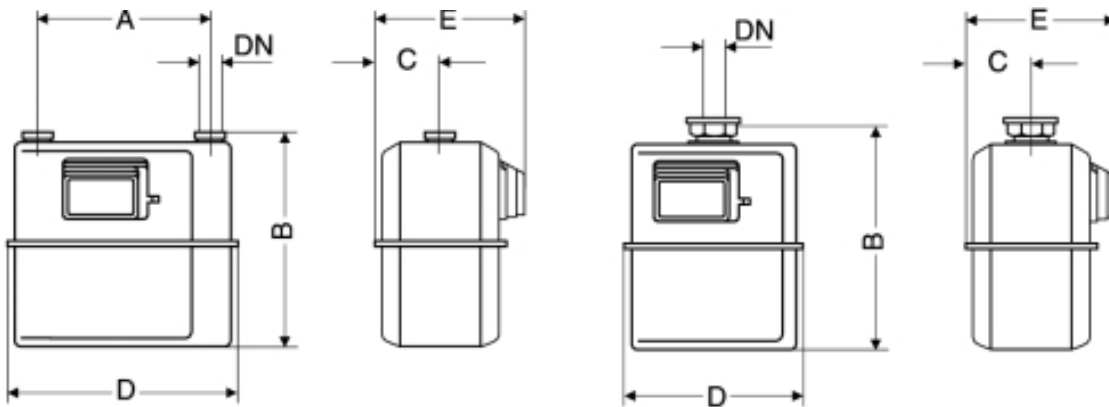
Although the design of BK-G6 and BK-G6T is very robust, the gas meters are still measuring instruments and as such should be handled with care.

Main features

- **EU-approval by German PTB for rates from 0.06 m³/h to 10 m³/h**
- **Approved to EN 1359 by German DVGW**
- **Cyclic Volume: 3.5 Litres**
- **Maximum working pressure: 0.5 bar (0.1 bar for firesafe applications to EN 1359)**
- **High accuracy and long-term stability**
- **Powder coated pale grey to RAL 7035**
- **Standard: pulse magnet; a LF pulser can be added at any time (I = 0.01 m³/pulse)**
- **Low noise level**
- **Not susceptible to contamination (RPF = 0.7)**
- **Gas temperature: -20 °C to +50 °C**
- **Mechanical temperature compensation of BK-G6T: -20 °C to +50 °C**
- **Bellow-type synthetic diaphragm**

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Dimensions and weights

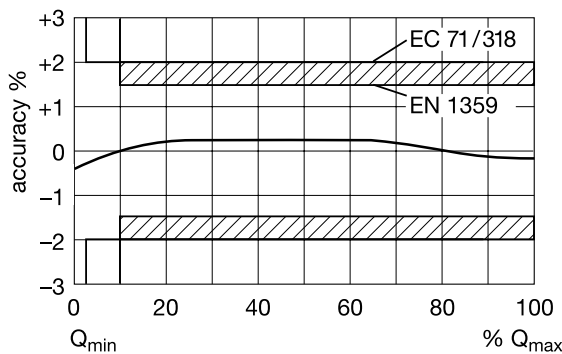
A*	Dimensions (mm)				Weight (Kg)	Connection size* DN**	Thread ISO 228/1 G*
B	C	D	E				
co-axial	323	85	264	218	4.3	25	2"
250	320	85	334	218	4.3	25	1 1/4"
250	320	85	334	218	4.3	32	1 3/4"

* additional connection dimensions on request

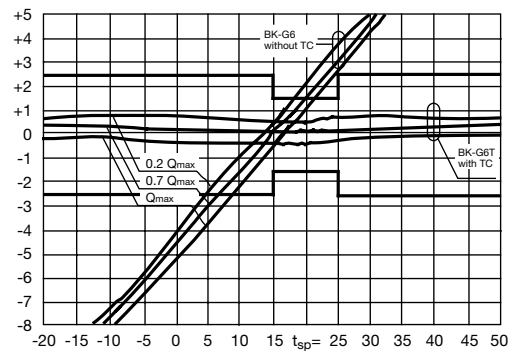
** to DIN 3376

Typical error curve

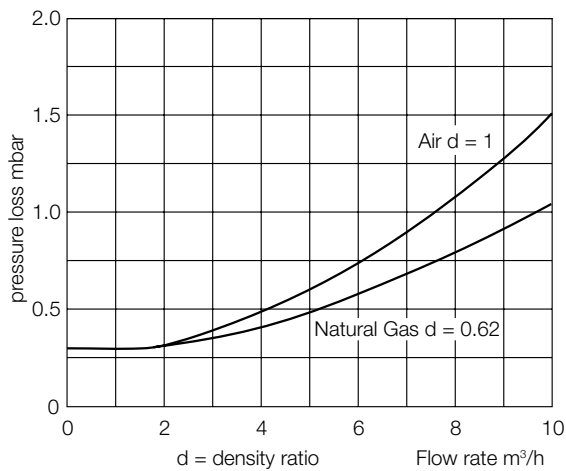
With calibration error limits at test room temperature



For BK-G6T within the compensation range with error limits to PTB TR-G2 Proc. B.



Pressure loss curve of BK-G6 and BK-G6T



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