

# BK-G4 AND BK-G4T



*High quality residential  
diaphragm gas meters*

## Applications

- **Media:**  
natural gas, town gas, propane, butane, inert gases.
- **Industry:**  
gas suppliers.
- **Tasks:**  
BK-G4: measurement of gas volume at operating conditions;  
BK-G4T: 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-G4T 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-G4 and BK-G4T are compact gas meters which 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-G4 and BK-G4T 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, stadium shaped synthetic diaphragm, this principle allows to use a mechanical compensation element in order to correct the temperature – in case of the BK-G4T – to the reference temperature.

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

Due to the small slides,  $Q_{\min}$  of BK-G4 and BK-G4T is stable, and the gas meters are not susceptible to contamination (RPF 0.62 to BS4161). The measuring unit is adjusted by a patented needle-and-scale system.

Although the design of BK-G4 and BK-G4T is very robust, the gas meters are still measuring instruments and as such should be handled with care.

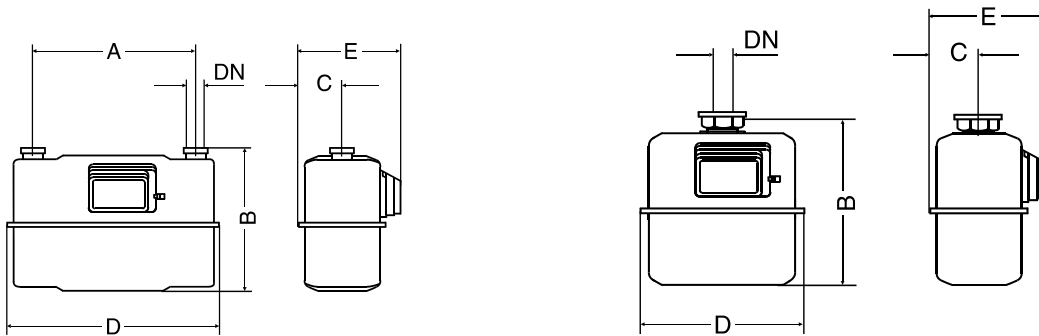
## Main features

- **EU approval by German PTB for flow rates from 0.04 m<sup>3</sup>/h to 6 m<sup>3</sup>/h**
- **Approved to EN 1359 by German DVGW**
- **Cyclic Volume: 2 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 m<sup>3</sup>/pulse)**
- **Low noise level**
- **Not susceptible to contamination (RPF = 0.62)**
- **Gas temperature: -20 °C to +50 °C**
- **Mechanical temperature compensation: -5 °C to +35 °C, Option: -20 °C to +50 °C**

**ELSTER**

**COMBUTEC**

**BK-G4 AND BK-G4T** High quality residential diaphragm gas meters



**Dimensions and weights**

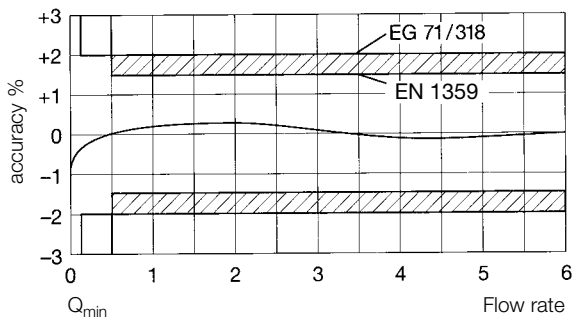
A*	Dimensions (mm)				Weight (Kg)	Connection size* DN**	Thread ISO 228/1 G*
	B	C	D	E			
co-axial	251	71	226	163	3.0	25	2"
152.4	262	71	226	163	3.0	-	1" BS 746
250	241	71	327	163	3.5	25	1 1/4"

\* additional connection dimensions on request

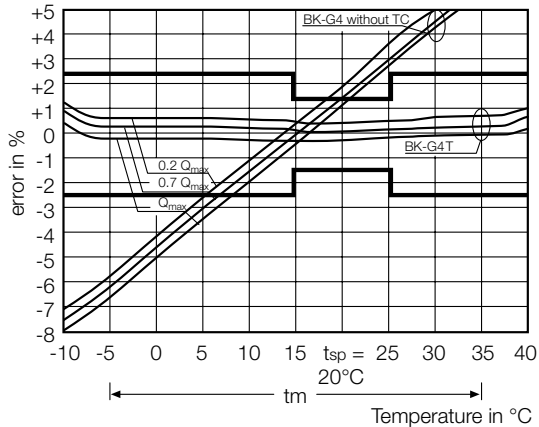
\*\* to DIN 3376

**Typical error curve**

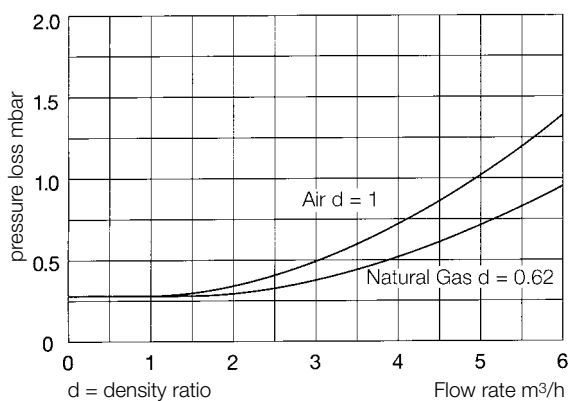
With calibration error limits at test room temperature



For BK-G4T within the compensation range with error limits to PTB TR-G2 Proc. B.



**Pressure drop curve of BK-G4 and BK-G4T**



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**BK G4 EN 02**

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