

BK-G10 and BK-G16



Compact commercial diaphragm gas meters

Applications

- **Media:**
Natural gas, town gas, propane, butane, inert gases
- **Industry:**
Gas distribution
- **Tasks:**
Measurement of gas volume at operating conditions

Brief Information

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 revolutions of the crankshaft are transferred via a magnetic coupling to the crankshaft.

In preparation: With the versions BK-G10T and BK-G16T a bi-metal element in the gearing system compensates the influence of the gas temperature regarding accuracy.

BK-G10 and BK-G16 are compact commercial diaphragm gas meters which have been designed to meet the highest demand with regard to accuracy of measurement and safety. They incorporate both innovative features and Elster's gas measurement know-how of many decades.

BK-G10 and BK-G16 are supplied with a folded sheet steel housing with either two pipe or co axial connections.

The measuring unit of BK-G10 and BK-G16 works to the proven and state-of-the-art principle of pneumatically stopped diaphragms. This ensures low bearing loads and quiet operation. Together with the dimensionally stable synthetic diaphragm this principle allows the use of a mechanical compensation element in order to correct the measured volume to the given billing temperature for facturation purposes (in preparation).

The proven and patented K-system and the use of high grade materials ensure a high quality standard and a long service life.

Due to the small slides, BK-G10 and BK-G16 are stable in registration at Q_{min} and the meters are not susceptible to contamination or change of friction (RPF of 0,65 to BS4161). The measuring unit is adjusted by a patented needle-and-scale system.

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

Main Features

- **EC-approved by German PTB for flow rates from 0.1 to 25 m³/h**
- **Approved to EN 1359 by German DVGW**
- **Cyclic volume 6 liters**
- **Maximum operating pressure 0.5 bar (0.1 bar 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 = 0.1m³/pulse)**
- **Low noise level**
- **Not susceptible to contamination (RPF = 0.65)**
- **Gas temperature: -20°C bis +50°C**
- **Temperature compensation (option, in preparation)**
- **Compact design, low weight**

Dimensions flow rates and weights

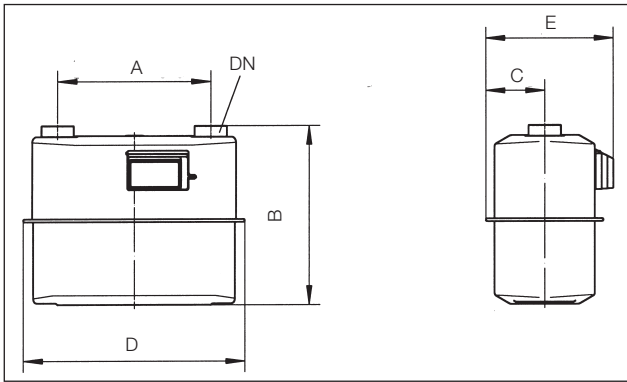


fig. 1

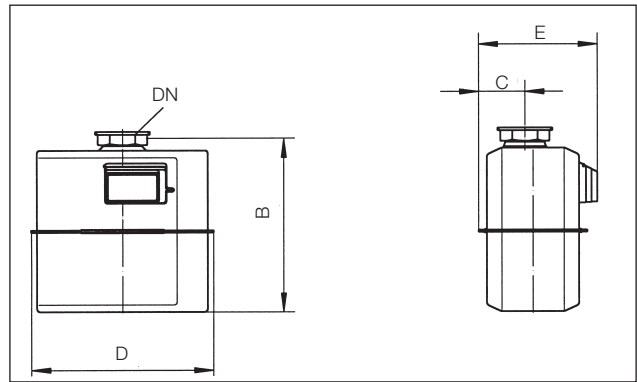
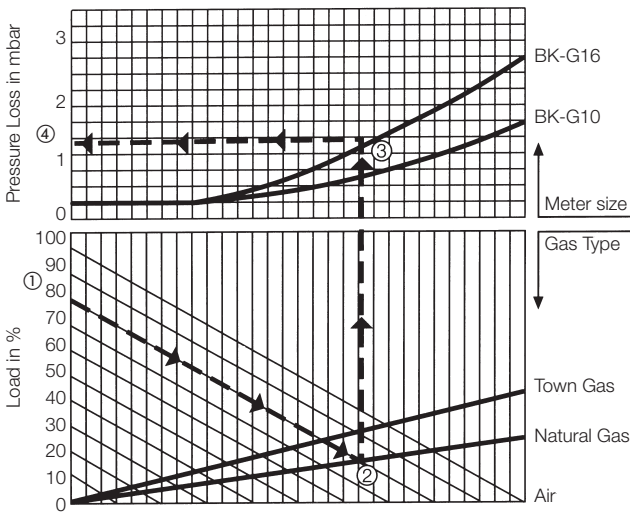


fig. 2

Acc. fig. No.	Type	Q _{max} m ³ /h	Q _{min} m ³ /h	V (dm ³)	DN*	Connection Thread* ISO 228/1 G	Dimensions (mm)					Weight (kg)
							A*	B	C	D	E	
2	BK-G10	16	0.1	6	40	2 ³ / ₄ "	-	323	85	334	218	5.1
1	BK-G10	16	0.1	6	-	1 ¹ / ₄ " BS 746	152.4	341	100	264	218	4.5
1	BK-G16	25	0.16	6	-	2" BS 746	250	358	108	405	234	6.0
1	BK-G10	16	0.1	6	32	1 ³ / ₄ "	250	323	85	334	218	4.5
1	BK-G10	16	0.1	6	32	1 ³ / ₄ "	280	330	108	405	234	5.7
1	BK-G10	16	0.1	6	40	2"	280	330	108	405	234	5.7
2	BK-G16	25	0.16	6	40	2 ³ / ₄ "	-	323	85	334	218	5.1
1	BK-G16	25	0.16	6	40	2"	280	330	108	405	234	5.7
1	BK-G16	25	0.16	6	40	2"	300	330	108	405	234	5.7

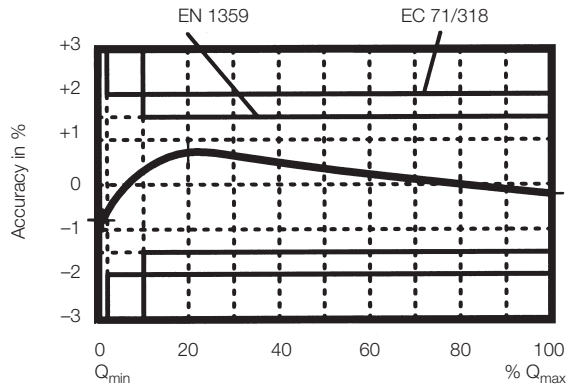
*other dimensions on request

Pressure loss curve



- Example:
- ① Load 80%
 - ② Natural Gas
 - ③ Size: BK-G16
 - ④ Pressure Loss: 1,2 mbar

Typical error curve



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