

BK-G40/65/100

BK-G40T/65T/100T

Industrial diaphragm gas meters



Applications

Media: Natural gas, city gas, propane, butane, inert gases

Branches: Gas industry

Tasks: Measuring of the actual volume

Brief information

The metering gear of the BK-G40, BK-G65 and BK-G100 industrial diaphragm meters consists of up to 8 measuring units (depending on the size of the meter) operating in parallel. Each of the measuring units contains 4 measuring chambers, separated from each other by synthetic diaphragms. The chambers are periodically filled and emptied. A gear transmits the movement of the diaphragm to the corresponding crankshaft. The shaft then drives the valves which control the gas flow. The revolutions of the gear are transmitted via a magnetic coupling to the index.

Elster-Instromet's industrial diaphragm meters are compact and have a perfect weight ratio. They meet the highest standards in terms of metering accuracy and safety. The BK series of industrial diaphragm meters combines innovative new developments with decades of Elster-Instromet experience. The meters come with a deep-drawn, screwed, or welded, steel housing and can be supplied either with co-axial or twin-pipe connections.

The gas meters can be equipped with different index solutions.

The measuring units in the industrial diaphragm meters operate in line with the principle of pneumatic control, meaning less force is exerted on the bearings, which results in low-noise operation.

The well-proven and patented K-System for adjusting and synchronising the measuring units together with the use of high-grade materials guarantees a high degree of quality and metering accuracy.

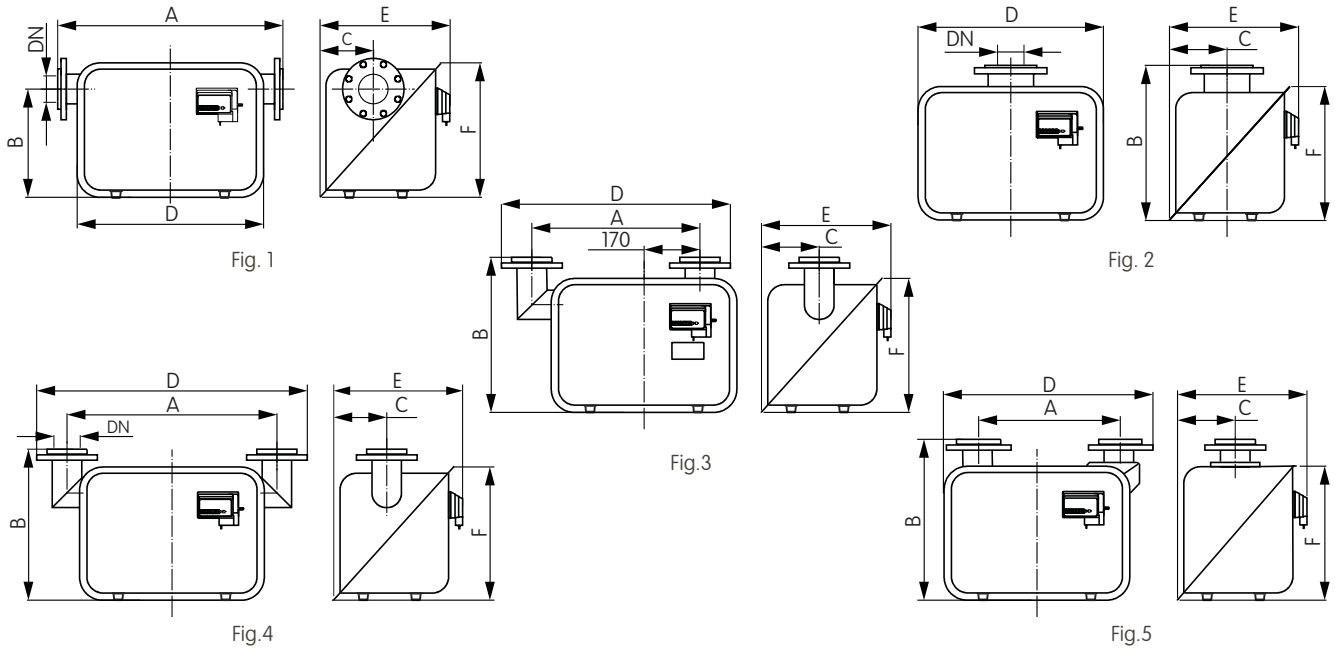
The use of small valves ensures that the industrial diaphragm meters are Q_{\min} stable and are not susceptible to dirt or any other contamination.

The new generation of industrial diaphragm meters are extremely robust but should, nevertheless, be handled with the same care that every metering device deserves.

Main features

- MID conformity approved by PTB
- EC-approved by German PTB for flow rates from 0.40 m³/h to 160 m³/h
- Approved to EN 1359 by German DVGW
- Cyclic volume:
BK-G40: 18 litres, BK-G40T: 16.8 litres
BK-G65: 24 litres, BK-G65T: 22.4 litres
BK-G100: 48 litres, BK-G100T: 44.8 litres
- Maximum operating pressure 0.5 bar (0.1 bar for fireproof applications to EN 1359)
- High accuracy and long term reliability
- Powder coated pale grey to RAL 7035
- Pulse magnet as standard;
a LF-pulsar can be added at any time
BK-G40/G65: $I = 0.1 \text{ m}^3/\text{pulse}$
BK-G100 standard:
 $I = 1 \text{ m}^3/\text{pulse}$
BK-G100 with S1 index:
 $I = 0.1 \text{ m}^3/\text{pulse}$
- Low noise level
- Not susceptible to contamination (RPF=0.8)
- Gas temperature: -10 °C to +40 °C
other temperatures on request
- Mechanical temperature compensation (option)
- Compact and handy design
- Reverse flow valve (option)

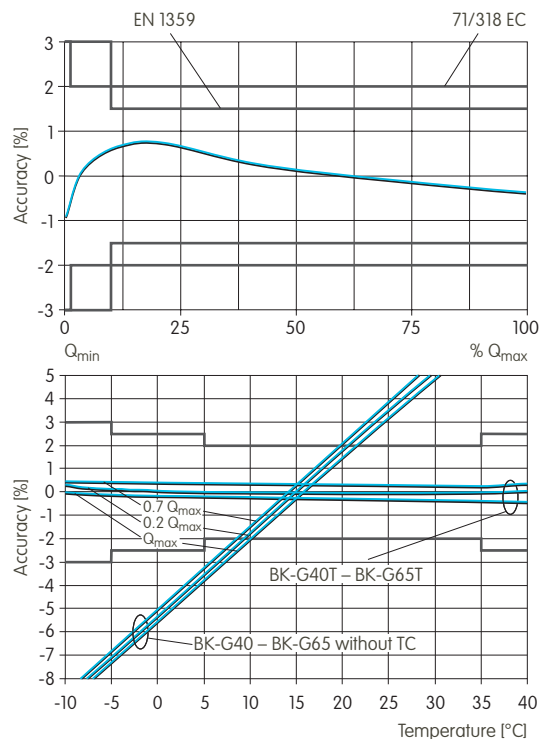
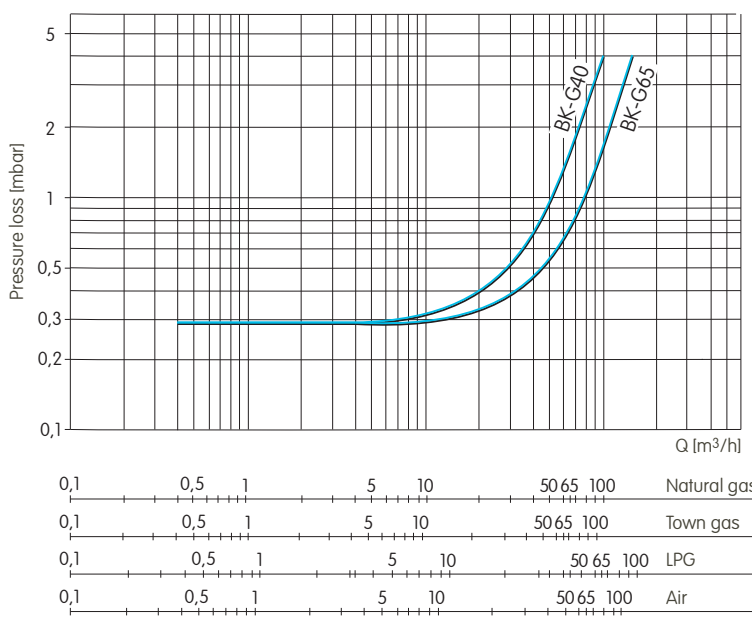
BK-G40 and BK-G65: Dimensions and weights



| Fig. | Type | Q _{max} [m ³ /h] | Q _{min} [m ³ /h] | V [dm ³] | Mounting flange*** | | Dimensions [mm] | | | | | | Weight [kg] |
|------|--------|---|---|-------------------------|--------------------|----------|-----------------|-----|-----|------|-----|-----|----------------|
| | | | | | Standard | Optional | A**** | B | C | D | E | F | |
| 1 | BK-G40 | 65 | 0.40 | 18 | DN80 | DN65 | 570 | 337 | 161 | 564 | 392 | 413 | 28 |
| 2 | BK-G40 | 65 | 0.40 | 18 | DN80** | DN65** | - | 480 | 175 | 564 | 392 | 413 | 26 |
| 3 | BK-G40 | 65 | 0.40 | 18 | DN80 | DN65 | 510 | 480 | 175 | 710* | 392 | 413 | 29 |
| 5 | BK-G40 | 65 | 0.40 | 18 | DN65 | - | 335 | 480 | 175 | 520 | 392 | 413 | 28 |
| 1 | BK-G65 | 100 | 0.65 | 24 | DN80 | DN100 | 680 | 337 | 161 | 564 | 392 | 413 | 29 |
| 2 | BK-G65 | 100 | 0.65 | 24 | DN80** | - | - | 480 | 175 | 564 | 392 | 413 | 28 |
| 3 | BK-G65 | 65 | 0.65 | 24 | DN80 | - | 500 | 480 | 175 | 712 | 392 | 413 | 29 |
| 4 | BK-G65 | 100 | 0.65 | 24 | DN80 | DN100 | 640 | 470 | 161 | 840* | 392 | 413 | 32 |
| 5 | BK-G65 | 100 | 0.65 | 24 | DN80 | - | 430 | 498 | 175 | 632 | 392 | 413 | 30 |

* for DN80 ** according to DIN 3376 *** flanges according to DIN 2642, PN10 **** other dimensions on request

BK-G40 and BK-G65: Typical pressure loss and error curve



Typical error curve BK-G40T - BK-G65T within the compensation range with error limits to EN 1359:1998/A1:2006, Annex B

BK-G100: Dimensions and weights

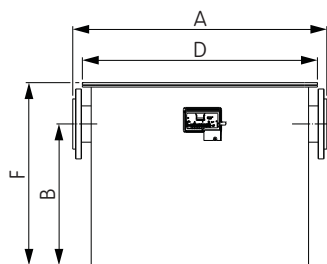


Fig. 1

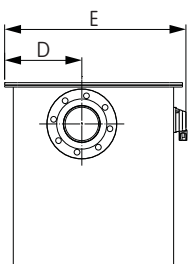


Fig. 2

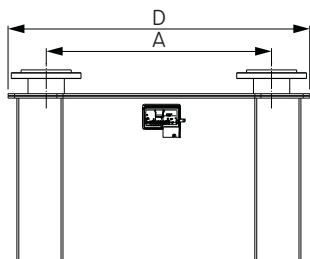
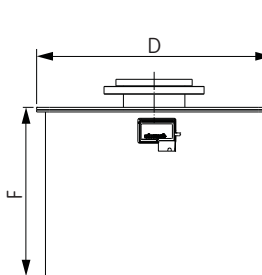


Fig. 3

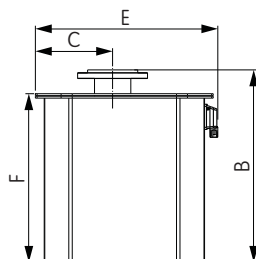


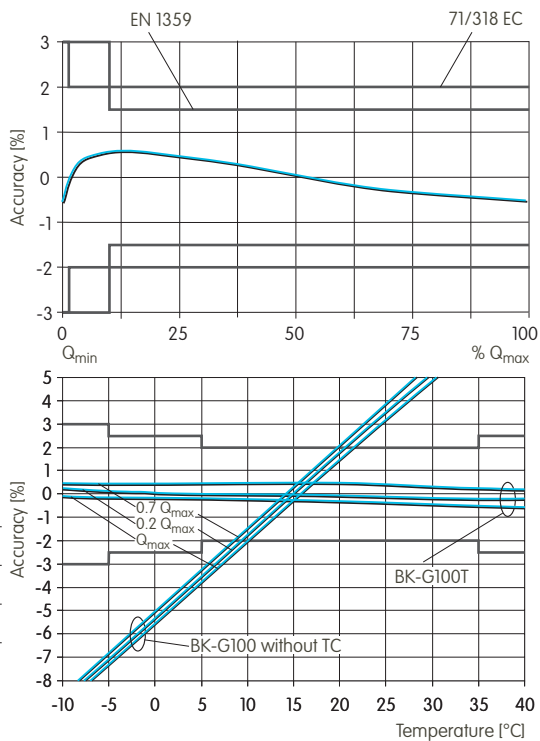
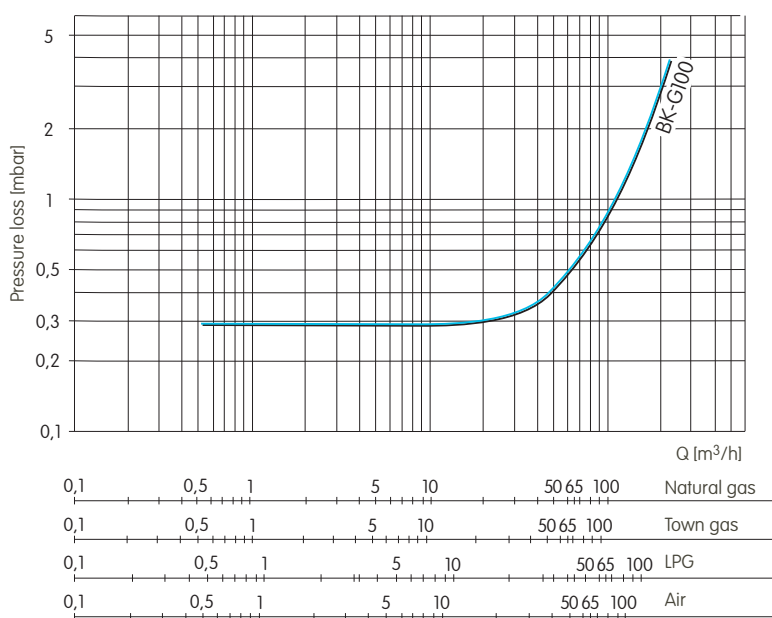
Fig. 4

| Fig. | Type | Q _{max} [m ³ /h] | Q _{min} [m ³ /h] | V [dm ³] | Mounting flange | Dimensions [mm] | | | | | | Weight [kg] | |
|------|---------|---|---|-------------------------|-----------------|-----------------|-----|-----|-----|-----|-----|----------------|-----|
| | | | | | | A | B | C | D | E* | E** | | F |
| 1 | BK-G100 | 160 | 1 | 48 | DN100 | 800 | 448 | 243 | 740 | 571 | 606 | 577 | 95 |
| 2 | BK-G100 | 160 | 1 | 48 | DN100 | - | 621 | 243 | 740 | 571 | 606 | 533 | 100 |
| 3 | BK-G100 | 160 | 1 | 48 | DN100 | 710 | 608 | 243 | 950 | 571 | 606 | 533 | 105 |
| 3 | BK-G100 | 100 | 1 | 48 | DN100 | 675 | 608 | 243 | 950 | 571 | 606 | 535 | 105 |
| 4 | BK-G100 | 160 | 1 | 48 | DN100 | 430 | 608 | 280 | 740 | 571 | 606 | 533 | 95 |

* standard

** with S1 index

BK-G100: Typical pressure loss and error curve



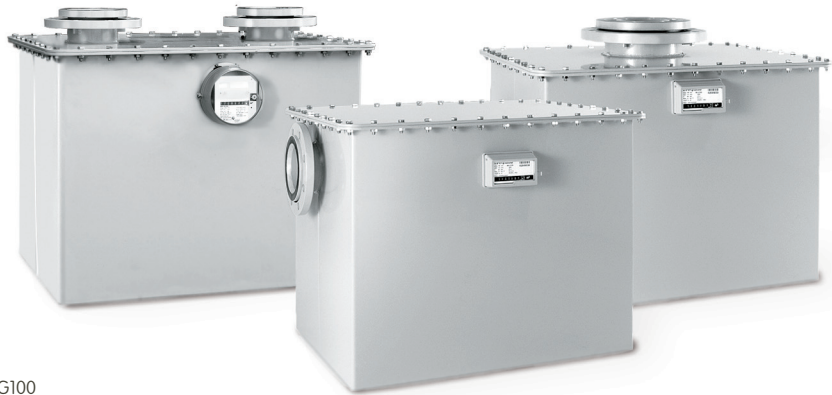
Typical error curve BK-G100T within the compensation range with error limits to EN 1359:1998/A1:2006, Annex B

BK-G40(T), BK-G65(T) and BK-G100(T): Industrial diaphragm gas meters

Versions

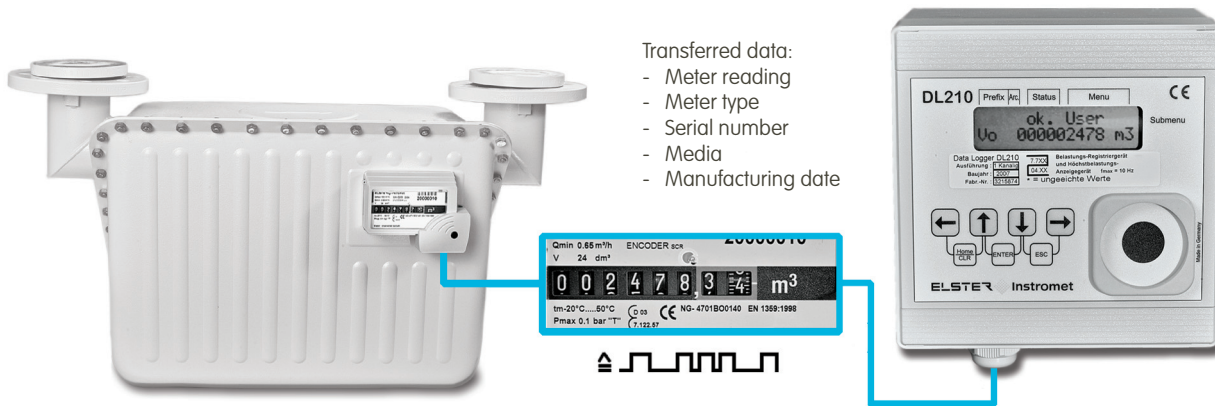


BK-G40 / BK-G65



BK-G100

Industrial gas meter with Absolute ENCODER technology (option)



Schematic representation of transferring the original meter reading via SCR interface to a data logger DL210
The Absolute ENCODER index is available with the M-BUS and SCR interface variants.

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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