# BG motor

Information

VARIODRIVE

VARIODRIVE Compact

VarioDrive C

ECI motor

BG motor

BCI motor

AC motors

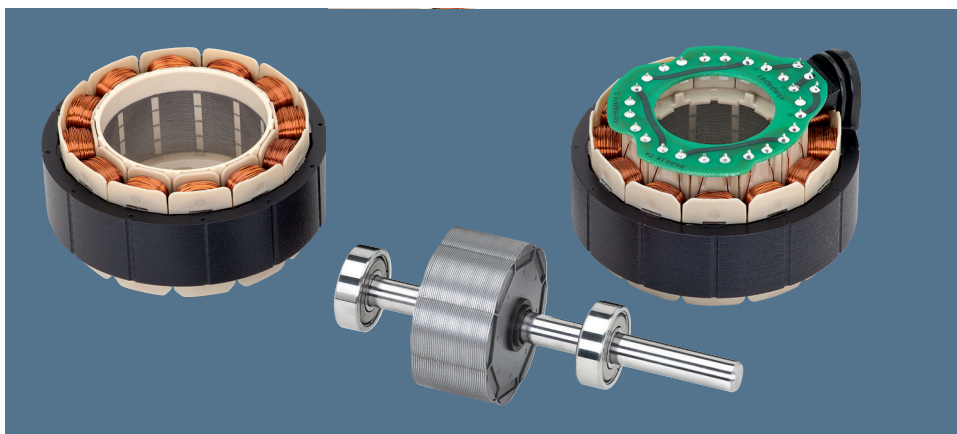Specifications

Representatives

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# BG 43 motor

## Technical information

The new EC motor of the size 43 series from ebm-papst features outstandingly robust technology, simple control and a long service life. It unites high efficiency with exceptional noise characteristics. The size 43 features high-performance commutation and control electronics that can also be positioned remotely from the motor.

**Facts and figures:**

– EC motor for mains supply voltage (AC), but also for low voltage (DC)
– 3-core internal rotor motor in three sizes
– Efficiency up to 80%
– High start-up and operating torque
– Precision ball bearings for long service life and low-noise performance
– 8-pole rotor with neodymium iron boron (NdFeB) magnet
– Sensorless sine commutation
– Optionally with PFC (Power Factor Correction)
– Die-cast aluminium bearing shields
– Type of protection: IP 20 (optionally IP 54)
– Protection class I
– Clockwise and counter-clockwise operation possible
– Wide variety of customer or application-specific versions possible (see next page)

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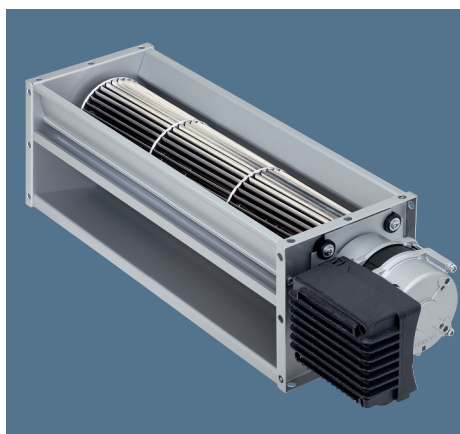
Representatives

**Application area:**

The newly developed, high-efficiency size 43 motor with a maximum output power of 300 watts enables a broad spectrum of applications:

– Tangential blowers for underfloor convection heating, cold/hot air door curtains and air-conditioning units
– Pump drives, for example for heating engineering and medical technology
– Applications in the drive engineering area, also possible with various gearboxes, for example
– And many more ...

**Customer-specific solution options:**

The motor can be adapted electrically and mechanically to the specific requirements:

– Drive shaft on one or both sides possible
– Clockwise and counter-clockwise operation
– Reversible operation
– Possible shaft diameters: 8, 12 and 12.7 mm
– Various interfaces for speed-controlled operation
– External operating electronics adapted optimally to the motor characteristics, can be installed either on the motor or remotely (see page 109)
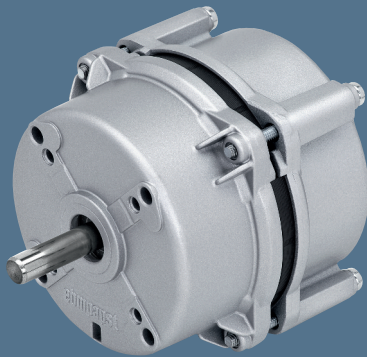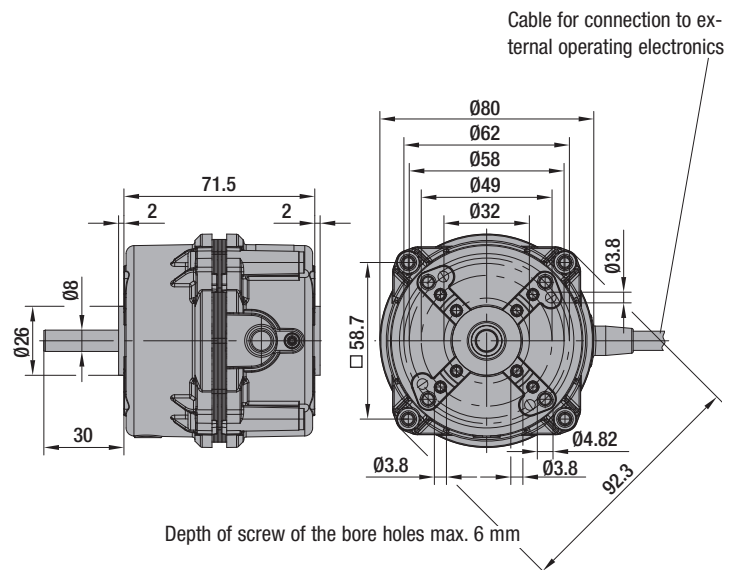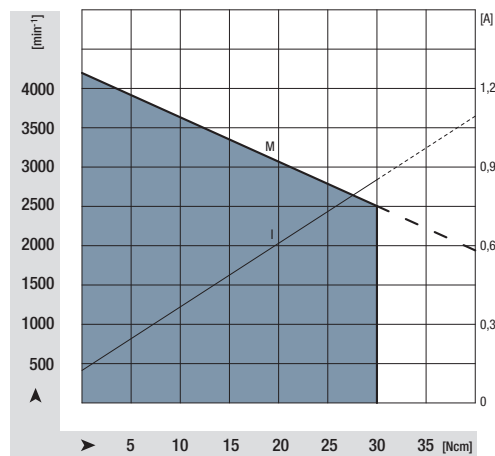
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# BG 43 motor

## BG 4310

– 3-core internal rotor motor.
– 8-pole rotor with neodymium iron boron (NdFeB) magnet.
– Precision ball bearings for long service life and low-noise performance.
– Motor supply and control via external operating electronics (see page 109).
– Protection class I.
– Optionally with PFC (Power Factor Correction).
– Customer-specific versions possible (see page 105).
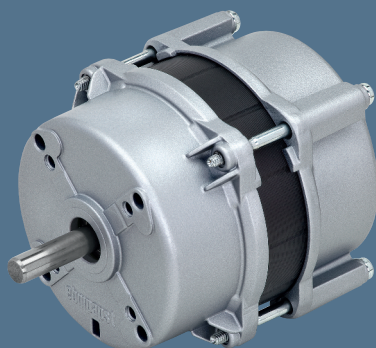
### Nominal data*

| Type BG 4310 | | |
|---|---|---|
| Nominal voltage ($U_{BN}$) | V AC | 230 |
| Nominal speed ($n_N$) | rpm | 2 500 |
| Nominal torque ($M_N$) | Ncm | 30 |
| Nominal current ($I_{BN}$) | A | 0,85 |
| Nominal output power ($P_N$) | W | 78 |
| Starting torque ($M_N$) | Ncm | 30 |
| Starting current (max.) | A | 0,85 |
| Direction of rotation (seen on shaft) | | clockwise (optionally counter-clockwise) |
| Protection class | | IP 20 (optionally IP 54) |
| Perm. amb. temp. range ($T_U$) | °C | 0 to +40 |
| Motor mass (m) | kg | 0,17 |

*The power range can be limited at the bottom or extended upwards by various factors (including ambient
   temperatures, installation situation, type of protection and model of the motor).

Cable for connection to external operating electronics

Depth of screw of the bore holes max. 6 mm

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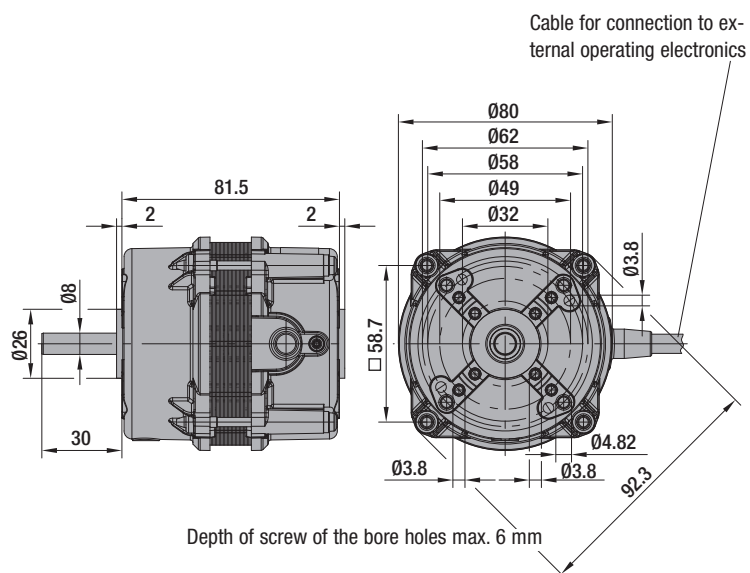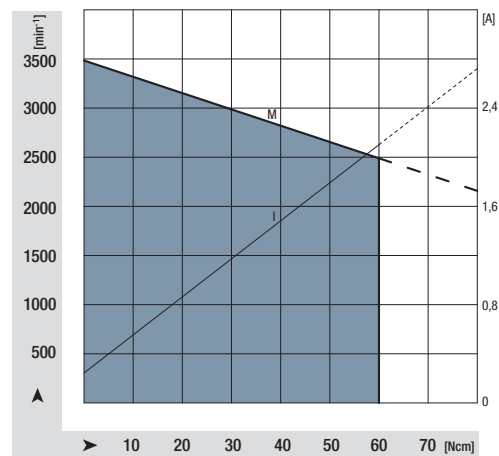Specifications

Representatives

# BG 43 motor

## BG 4320

– 3-core internal rotor motor.
– 8-pole rotor with neodymium iron boron (NdFeB) magnet.
– Precision ball bearings for long service life and low-noise performance.
– Motor supply and control via external operating electronics (see page 109).
– Protection class I.
– Optionally with PFC (Power Factor Correction).
– Customer-specific versions possible (see page 105).

## Nominal data*

| Type BG 4320 | | |
|---|---|---|
| Nominal voltage ($U_{BN}$) | V AC | 230 |
| Nominal speed ($n_N$) | rpm | 2 500 |
| Nominal torque ($M_N$) | Ncm | 60 |
| Nominal current ($I_{BN}$) | A | 2,1 |
| Nominal output power ($P_N$) | W | 157 |
| Starting torque ($M_N$) | Ncm | 60 |
| Starting current (max.) | A | 2,1 |
| Direction of rotation (seen on shaft) | | clockwise (optionally counter-clockwise) |
| Protection class | | IP 20 (optionally IP 54) |
| Perm. amb. temp. range ($T_U$) | °C | 0 to +40 |
| Motor mass (m) | kg | 0,44 |

*The power range can be limited at the bottom or extended upwards by various factors (including ambient
  temperatures, installation situation, type of protection and model of the motor).

Cable for connection to ex-
ternal operating electronics

Depth of screw of the bore holes max. 6 mm

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# BG 43 motor

## BG 4340



– 3-core internal rotor motor.
– 8-pole rotor with neodymium iron boron (NdFeB) magnet.
– Precision ball bearings for long service life and low-noise performance.
– Motor supply and control via external operating electronics (see page 109).
– Protection class I.
– Optionally with PFC (Power Factor Correction).
– Customer-specific versions possible (see page 105).
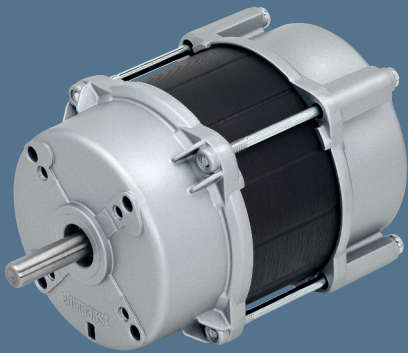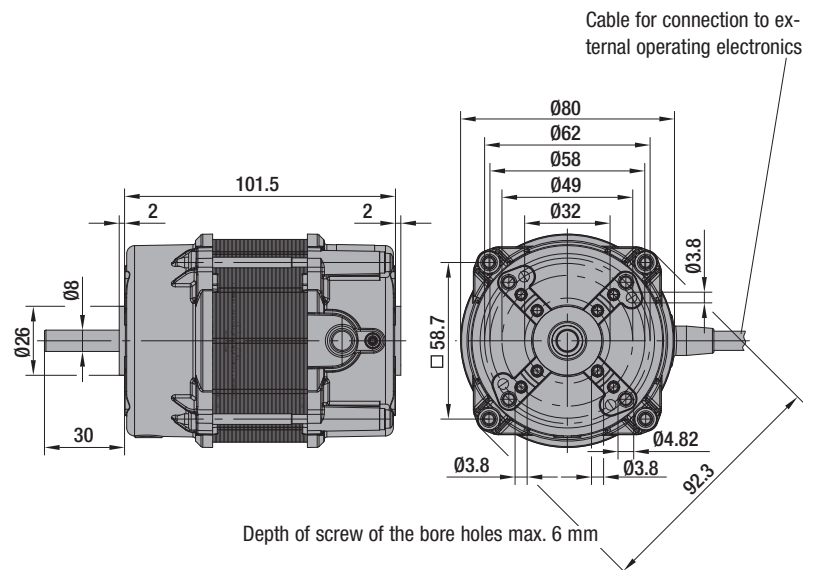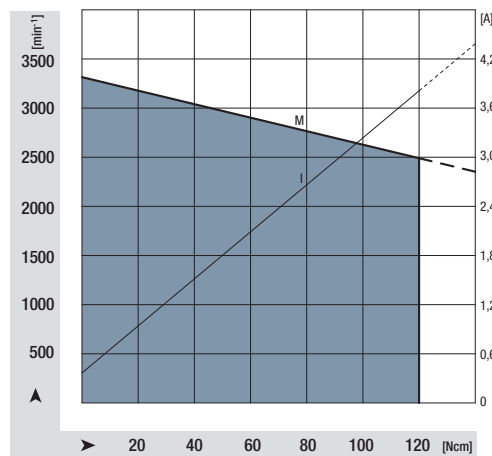
### Nominal data*

| Type BG 4340 | | |
|---|---|---|
| Nominal voltage ($U_{BN}$) | V AC | 230 |
| Nominal speed ($n_N$) | rpm | 2 500 |
| Nominal torque ($M_N$) | Ncm | 120 |
| Nominal current ($I_{BN}$) | A | 3,8 |
| Nominal output power ($P_N$) | W | 314 |
| Starting torque ($M_N$) | Ncm | 120 |
| Starting current (max.) | A | 3,8 |
| Direction of rotation (seen on shaft) | | clockwise (optionally counter-clockwise) |
| Protection class | | IP 20 (optionally IP 54) |
| Perm. amb. temp. range ($T_U$) | °C | 0 to +40 |
| Motor mass (m) | kg | 1,0 |

*The power range can be limited at the bottom or extended upwards by various factors (including ambient
  temperatures, installation situation, type of protection and model of the motor).



Cable for connection to external operating electronics

Depth of screw of the bore holes max. 6 mm

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# BG 43 motor

External operating electronics

The external operating electronics for the three-phase size 43 motor are available in various designs and numerous hardware extension levels. The motor is safeguarded using electronics software. These electronics allow you to control the size 43 motor exactly as desired, whether you need a change of direction of rotation, high-precision closed-loop speed control or a fixed speed profile. Depending on the power range and ambient conditions, the electronics can be ventilated using the motor or externally. Additional details are available on request.

**Features:**

**Activation options:**

– Analogue signal (0-10 volts)
– PWM signal (rectangular signal)
– Additional customer-specific solutions

**Installation options:**

– Directly on the motor
– Remotely in the customer's application









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