

Brushless DC-Motors Technical Information



Brushless DC-Servomotors 2 Pole Technology, sensorless

The brushless, sensorless DC-Servomotors can be used even in the most challenging applications where space is extremely limited. After many years of development and experience in microsystem technology, FAULHABER has succeeded in reducing the size of all components and modules to a minimum in order to provide reliable drive functions even with the smallest of dimensions. The brushless DC-Servomotors are sensorless and available with matching, highly compact gearheads for increasing the output torque, and speed controllers. The brushless DC-Servomotors provide a technology basis that can be modified for projects according to the requirements of the individual customer.

Series

0308 ... B 0515 ... B

Key Features

Motor diameter	3 ... 5 mm
Motor length	8 ... 15 mm
Nominal voltage	3 ... 6 V
Speed	up to 96.000 min ⁻¹
Torque	up to 0,13 mNm
Continuous output	up to 0,44 W



Product Code

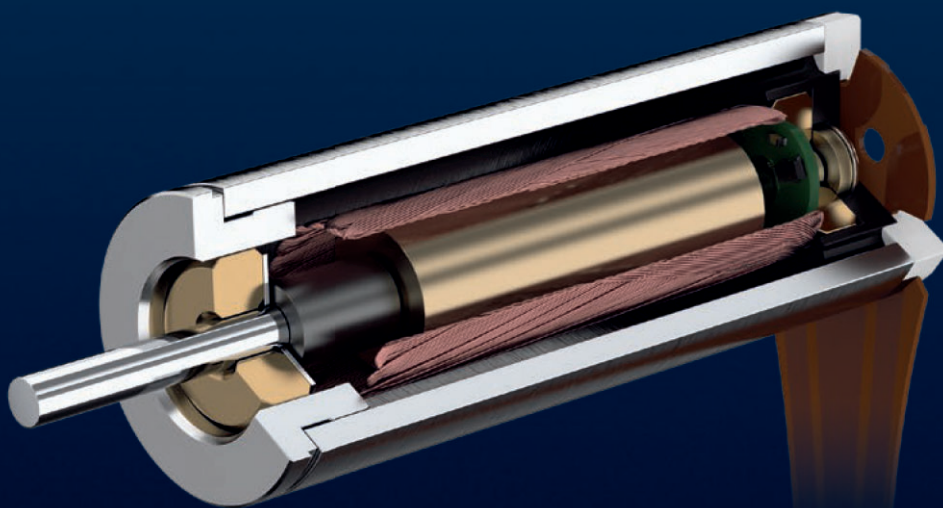
05	Motor diameter [mm]
15	Motor length [mm]
G	Shaft type
006	Nominal voltage [V]
B	Product family

WE CREATE MOTION

FAULHABER B-Micro

Advantages of this series at a glance

- Extremely compact design.
Diameters ranging from 3 mm to 5 mm
- For applications where space is very limited
- 2-pole design with medium to high speeds
- Matching, highly compact gearheads available
- Matching speed controllers available



Brushless DC-Servomotors 2 Pole Technology

The original FAULHABER brushless DC servomotors. These ironless slotless motors are built for use in highly challenging areas of application and environmental conditions from the vacuum of space to medical device technology. They are precise, have extremely long operational lifetimes, and are highly reliable. They are available with a wide variety of complementary products such as high resolution encoders and precision gearheads. For maximum integration and reduction of size the standard digital hall sensors in the motors can be replaced with optional analog (linear) hall sensors which can eliminate the need for an encoder in most applications.

Series

0620 ... B	0824 ... B
1028 ... B	1218 ... B
1226 ... B	1628 ... B
2036 ... B	2057 ... B
2057 ... BA	2444 ... B
3056 ... B	3564 ... B
4490 ... B	4490 ... BS

Key Features

Motor diameter	6 ... 44 mm
Motor length	18 ... 90 mm
Nominal voltage	24 ... 48 V
Speed	up to 100.000 min ⁻¹
Torque	up to 217 mNm
Continuous output	up to 282 W



Product Code

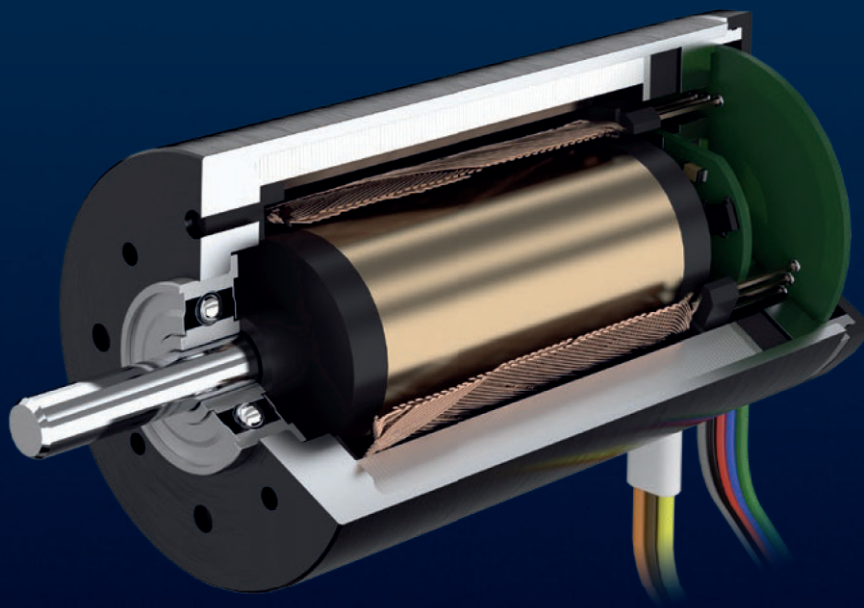
35	Motor diameter [mm]
64	Motor length [mm]
K	Shaft type
024	Nominal voltage [V]
B	Product family

WE CREATE MOTION

FAULHABER B

Advantages of this series at a glance

- High density ironless system FAULHABER winding
- Extremely smooth speed control
- Digital or analog hall sensors available
- Sensitive positioning control



Brushless DC-Servomotors 2 Pole Technology

The BHx series uses 2-pole brushless technology based on an innovative and robust design to deliver high power in a compact size. These motors come in 2 distinct versions to support a wide variety of different application needs: the BHT variant is dedicated to high torque for large impulsive cycles, and the BHS model is focused on very high speed for continuous use.

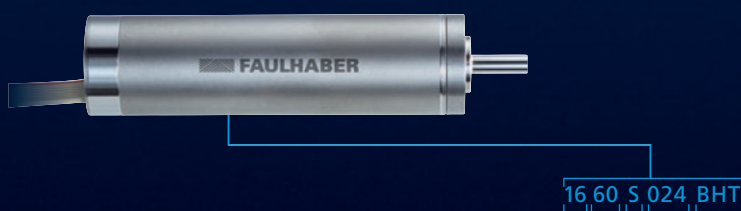
BHx series is capable of driving variable load with minimum speed fluctuation to guarantee smooth behavior at constant speed. Furthermore their low inertia and short response time provide also high dynamics. Those characteristics make BHx series ideal for both-high speed operation and fast accurate positioning, especially in intermittent operation when combined with integrated high resolution encoder. BHx series exhibits low vibration level and low noise to reduce human fatigue and stress inside application environment. Their high efficiency minimizes heat generation and helps to increase comfort when used as handtools.

Series

1645 ... BHS	1660 ... BHS
1660 ... BHT	

Key Features

Motor diameter	16 mm
Motor length	45 ... 60 mm
Nominal voltage	24 ... 48 V
Speed	up to 100.000 min ⁻¹
Torque	up to 18,7 mNm
Continuous output	up to 96 W



Product Code

16	Motor diameter [mm]
60	Motor length [mm]
S	Shaft type
024	Nominal voltage [V]
BHT	Product family

WE CREATE MOTION

FAULHABER BHx

Advantages of this series at a glance

- Large power up to 96 W in small diameter
- High speed close to 100'000 min⁻¹ (BHS version)
- Huge impulsive torque > 30 mNm (BHT version)
- Very dynamic and responsive with low inertia
- Low vibration and low noise, suitable for handtools
- Optional integrated encoder

