



**BOSCH**

Invented for life

Driven by  
**IDEAS**

**Professional solutions  
for your industrial projects**  
Bosch electric motors

[www.bosch-ibusiness.com](http://www.bosch-ibusiness.com)





# Your ideas, our solutions

## Bosch electric motors

**Bosch electric motors are highly flexible in use.** The technical requirements decide about the type of motor and its adjustment

Where high quality, reliability and market-conform pricing matter, Bosch electric motors get your project development on track. The electric motors of the global market leader in automotive technology are the ideal solution for a lot of non-automotive applications.

### Competent planning: the earlier the better

Electric motors can have a huge influence on the success of your products and ideas. Bosch thus supports you right from the planning phase.

### Development partner with know-how

Particularly industrial customers expect specialist conversations when talking to their supplier. For this purpose, an own expert team and a network of competent partners have been established. Bosch engineers and partners advise and support you with regard to your application.

### Quality from the very beginning

It is the customers who set the standards for Bosch quality management. Production is also subject to high and globally consistent quality standards. The result: reliable products and satisfied customers. **High quality – made by Bosch**

### Spindle motors



Motor with spindle for linear actuation

### Gear motors



Powerful compact motor with gear, also available with Hall sensor



Powerful compact motor with gear for intermittent operation, Double Hall sensor available



Motor with gear, powerful and quiet, also available with Hall sensor

# A matching solution to meet your requirements: Bosch electric motors

Bosch provides a comprehensive and highly flexible range of DC motors. These motors work with low voltages between 12 and 24 volts. To suit a large variety of applications, different versions featuring different sizes and performance levels are available.



## Non-automotive

Bosch electric motors are successfully used in facility engineering, furniture building, rehabilitation, medical, laboratory and many other applications.



## Off-highway

On land and sea, Bosch electric motors have proven their worth in multiple – both mobile and stationary – off-highway applications.



## On-highway

Wherever vehicles have to provide above-average performance, no matter whether in terms of lifting, passenger transportation or speed, Bosch electric motors are used.

## Non automotive

- ▶ Furniture
- ▶ Housing technology
- ▶ Building technology
- ▶ Medical/laboratory technology
- ▶ Rehabilitation support
- ▶ etc.

## Off-Highway

- ▶ Agriculture
- ▶ Construction
- ▶ Marine
- ▶ Mining
- ▶ Rail transport
- ▶ Handling
- ▶ Stationary engines
- ▶ etc.

## On-Highway

- ▶ Heavy commercial vehicles
- ▶ Light commercial vehicles
- ▶ Passenger traffic
- ▶ Sports cars
- ▶ etc.

## Gearless motors



Compact motor without gear



Quick and powerful motor without gear



Quick and powerful motors, also available with wheel/fan



Powerful water recirculation pump



Solenoid valve with shut-off, switching or timing functions

## Pumps and valves for cooling circuits

# Powerful and reliable

## Electric motors for all stress levels

Driving innovative solutions, Bosch electric motors can increase dynamics and efficiency of your applications. They can be used for drive systems, for realization and monitoring of adjustment functions alike. Day by day, they prove their worth in multiple industrial applications.



**Cutting unit drive:** electric motors for robotic lawn mowers



**Medical and rehab applications:** electric wheelchair

### Advantages at a glance:

**Bosch electric motors are robust and suitable for everyday use. They fulfill their task even under toughest conditions.**

- ▶ Wide performance spectrum and range of applications
- ▶ Lightweight and space-saving drives
- ▶ Compact size
- ▶ High output
- ▶ With and without Hall sensors

### Partner of the industry

The range of Bosch electric motors includes a matching solution for almost any application. As a development partner of several industrial sectors, Bosch is set for most diverse requirements. Combining this fact with the basic and applied knowledge of Bosch engineers, the potential available for industrial solutions is huge. Benefit from this comprehensive know-how and from decades of experience.

### Flexible operation

For many years, Bosch electric motors have well proven themselves millions of times in motor vehicles. Right from the offset, any Bosch product is subject to comprehensive tests analyzing both reliability and functionality under real-life conditions. In this manner, the foundations for industrial applications are laid.



Strong gearless motor with a flat design

# A comprehensive range

## Electric motors for diverse applications

Bosch offers its customers a wide and versatile range of DC motors with or without gear as well as pumps and blowers equipped with these motors. They can be used for a large variety of functions.

### Actuation for movable furniture systems

Bosch electric motors have proven themselves in several industrial applications. Whether a new recliner or a height-adjustable desk, Bosch motor concepts ensure mobility of diverse pieces of furniture.

### Adjustment functions in medical and rehabilitation applications

Electric motors support users operating the adjustment functions of both medical and rehabilitation applications. These are just some examples of successful and highly flexible integration of Bosch electric motors into diverse systems.

**Think flexibly! Even a Bosch wiper motor could be a suitable solution for a new relax chair you are currently planning.**



**Furniture:** height-adjustable solutions (bed, desk, etc.)



**On/off-road motor vehicles:** safe handling support



Powerful and quiet 12 or 24-volts motor

## Electric drives for diverse applications

### Medical /rehabilitation

Care and assistance systems for handicapped persons, wheelchairs, patient lifters

### Facility engineering

Garage door / door openers, roller shutter drives, window adjustment, automatic partition walls / curtains and electric door-closing devices

### Drive units

Sports equipment, drives for golf carts, mechanical sweepers and lawn mowers

### Industrial applications

Linear actuators, positioning mechanisms, closing and output systems, printing machines, logistic systems, laminators and bottle-recycling machines

### Furniture

Adjustable tables and desks, easy chairs, beds

### Food

Flour mills, food slicers, kitchen devices, automatic baking machines and ovens

### Heating, ventilation or cooling fans

# Customer orientation in development, production and sales

Bosch electric motors are developed by a worldwide network, regionally adapted to the requirements of the customers and produced locally. Consistent production and quality standards ensure high and consistent product quality.



Global development and production make Bosch a highly demanded partner – not only for the automotive industry.



As early as at the product management, suitable solutions are developed for the customer's specific area of application.

At Bosch, **development, production and sales** are part of a close global network. International customer teams coordinate customer-specific requirements and their quick implementation.

**Bosch has a local presence around the world** in order to develop the best solutions with its customers as equal partners. This allows quick and flexible reactions to changing requirements on all markets.

## Advantages at a glance:

- ▶ **The high customer satisfaction** is based on technologically leading products, but also on the worldwide availability of the Bosch range of electric motors.
- ▶ **Bosch advises its customers at all phases** – from planning and development to just-in-time delivery to the customer's production facilities.

## Worldwide production and development of electric drives

### North/South America

- Plymouth
- Albion
- Waltham
- Toluca
- Campinas

### Europe

- Tienen
- Mondeville
- Castellet
- Hildesheim
- Budapest
- Bühl/Bühlertal
- Pecinci
- Miskolc



### Africa

- Brits

### Asia

- Chennai
- Changchun
- Buyong
- Ningbo
- Changsha
- Yokohama
- Shanghai
- Amata City

### Key

- Production/development
- Production
- Development

# Motors with gear

## Versatility for all performance levels

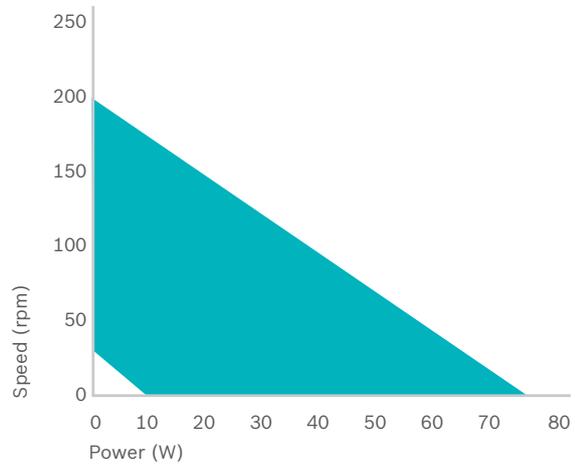
**Powerful geared motors** with proven Bosch quality, available with double Hall sensor



### Advantages at a glance:

- ▶ Dual-speed motors available
- ▶ Rotates in both directions
- ▶ Proven and reliable Bosch quality
- ▶ Available with/without Hall sensor
- ▶ Global availability

### Motor characteristics



Designation	Value
Supply voltage	12 V / 24 V
Rotation	Left / right
Operation mode	S1 / S2
Power range	10 – 75 W
Speed range	25 – 200 rpm

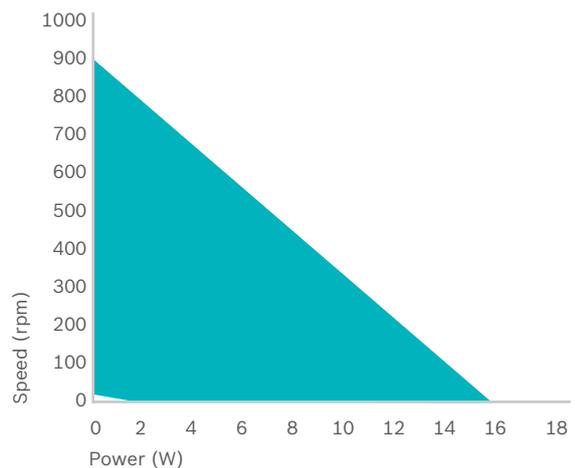
**Geared compact motors for diverse applications**, available with double Hall sensor



### Advantages at a glance:

- ▶ Compact size
- ▶ Rotates in both directions
- ▶ Proven and reliable Bosch quality
- ▶ Double Hall sensor available
- ▶ For universal application
- ▶ Global availability
- ▶ Advantageous price/performance ratio

### Motor characteristics



Designation	Value
Supply voltage	12 V / 24 V
Rotation	Left / right
Operation mode	S2
Power range	1.3 – 15.6 W
Speed range	7 – 910 rpm

# DC motors with gear

## Compact drives with high performance

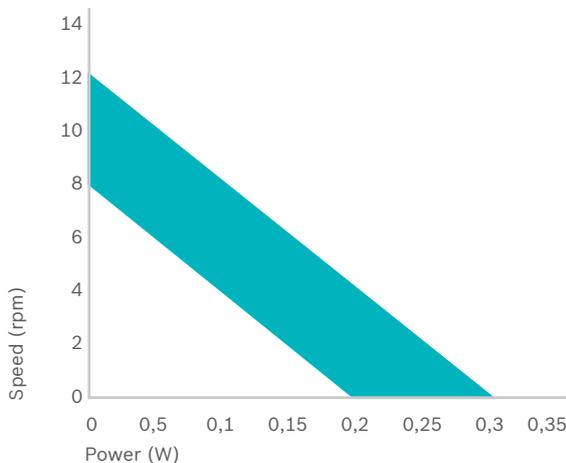
**Small actuators** also available with potentiometer providing position feedback



### Advantages at a glance:

- ▶ Different gear reductions available
- ▶ Rotates in both directions
- ▶ Available with/without potentiometer
- ▶ Compact and robust design
- ▶ Proven and reliable Bosch quality
- ▶ Global availability

### Motor characteristics



Designation	Value
Supply voltage	12 V / 24V
Rotation	Left / right
Operation mode	S2
Power range	0.2 – 0.3 W
Speed range	7.5 – 12 rpm

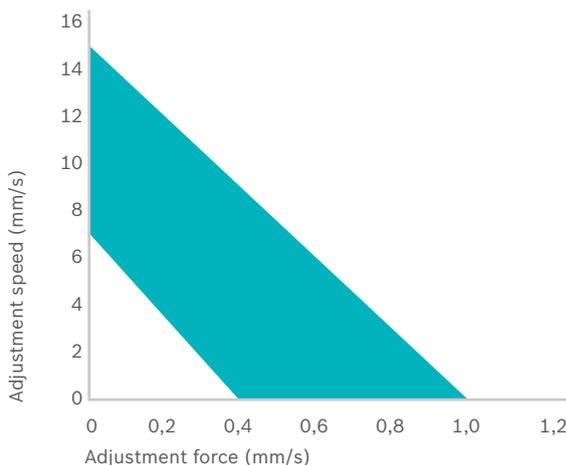
**Robust, powerful and compact actuators** with spindle



### Advantages at a glance:

- ▶ Reliability based on robust design
- ▶ Benchmark regarding efficiency, noise and power density
- ▶ Proven and reliable Bosch quality
- ▶ Available with/without hall sensor
- ▶ For applications with high self locking and forces
- ▶ Part of the kinematic

### Motor characteristics



Designation	Value
Supply voltage	12 V
Rotation	Left / right
Operation mode	S2 + S3
Force	0.4 – 1 kN
Adjustment speed	7 – 15 mm/s

# DC motors without gear

Robust, powerful and compact

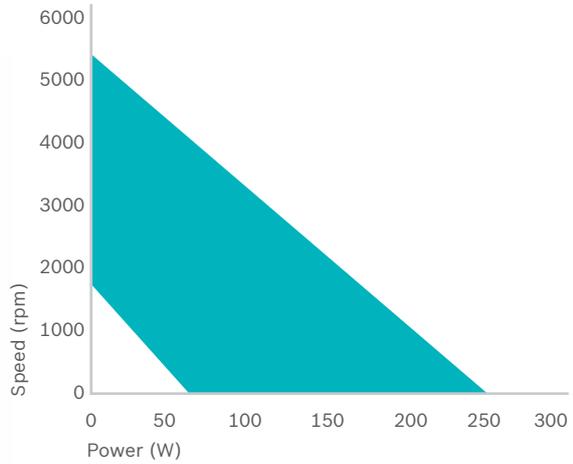
**Gearless motor:** innovative product for complex systems



## Advantages at a glance:

- ▶ Reliability based on robust design
- ▶ Designed to last
- ▶ Innovative all-in-one solution
- ▶ Proven and reliable Bosch quality
- ▶ Universal application

## Motor characteristics



Designation	Value
Voltage	12 V / 24 V
Rotation	Left / right
Operation mode	S1
Power range	60 – 250 W
Speed range	1900 – 5300 rpm

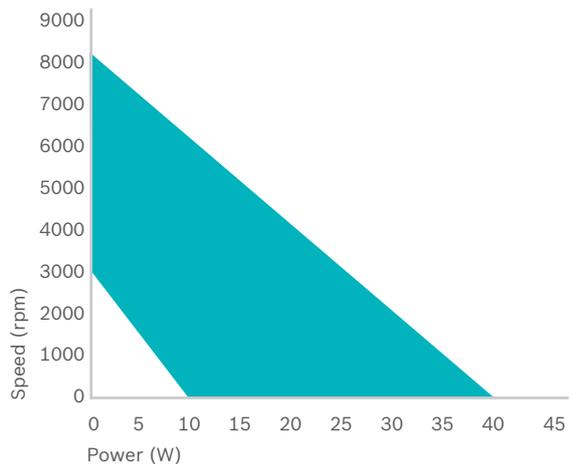
## Compact gearless motor



## Advantages at a glance:

- ▶ Reliability based on robust design
- ▶ Designed to last
- ▶ Benchmark regarding efficiency, noise and power density
- ▶ Optimum combinability with diverse gears
- ▶ Proven and reliable Bosch quality
- ▶ Universal application

## Motor characteristics



Designation	Value
Voltage	12 V/24 V
Rotation	Left / right
Operation mode	S1/S2
Power range	10 – 40 W
Speed range	2700 – 8200 rpm

# Products for cooling and heating circuits

## Pumps and valves

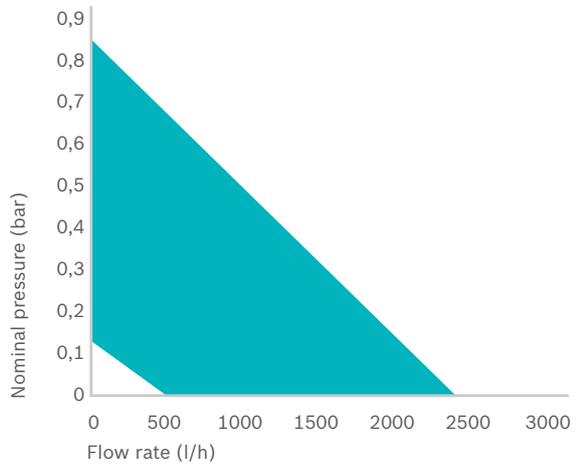
### Water pumps



#### Advantages at a glance:

- ▶ Compact design
- ▶ Suitable for continuous operation
- ▶ High durability
- ▶ Silent
- ▶ Flow rate control via PWM
- ▶ Million times proven and reliable Bosch quality

### Motor characteristics



Designation	Value
Supply voltage	12 V / 24V
Operation mode	S1
Control	Analog / PWM
Flow rate	500 – 2400 l/h
Pressure	0.1 – 0.85 bar

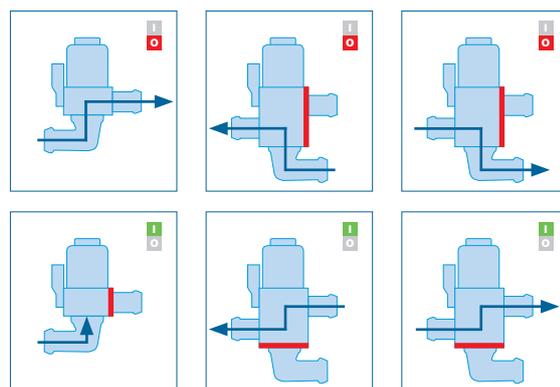
### Solenoid valves



#### Advantages at a glance:

- ▶ Compact size
- ▶ High durability
- ▶ Proven and reliable Bosch quality
- ▶ Proportional valve function possible
- ▶ Degree of protection: IP5K4

### Valve diagram



Switch-off valves

Switch-over valves  
Two input models

Switch-over valves  
Two output models

# Products for cooling and heating circuits

Individual, quiet, powerful

**Brushless drive motor** e.g. for axles of logistics, transport and delivery vehicles



## Advantages at a glance:

- ▶ Reliability based on robust design
- ▶ Innovative all-in-one solution
- ▶ Minimized application and validation effort
- ▶ Proven and reliable Bosch quality

## Motor characteristics

Designation	Value
Stall torque	70 Nm
Rotating speed	430 rpm
Power (rated)	500 W
Voltage	48 V
Diameter	10 inch
Assembly	2-arm swing

## Brushless universal motor

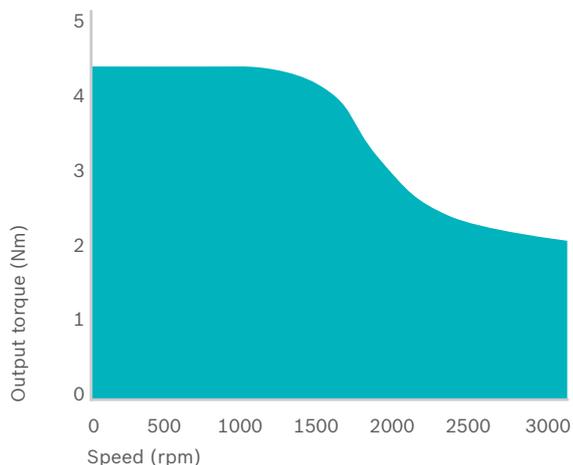
without cogging torque



## Advantages at a glance:

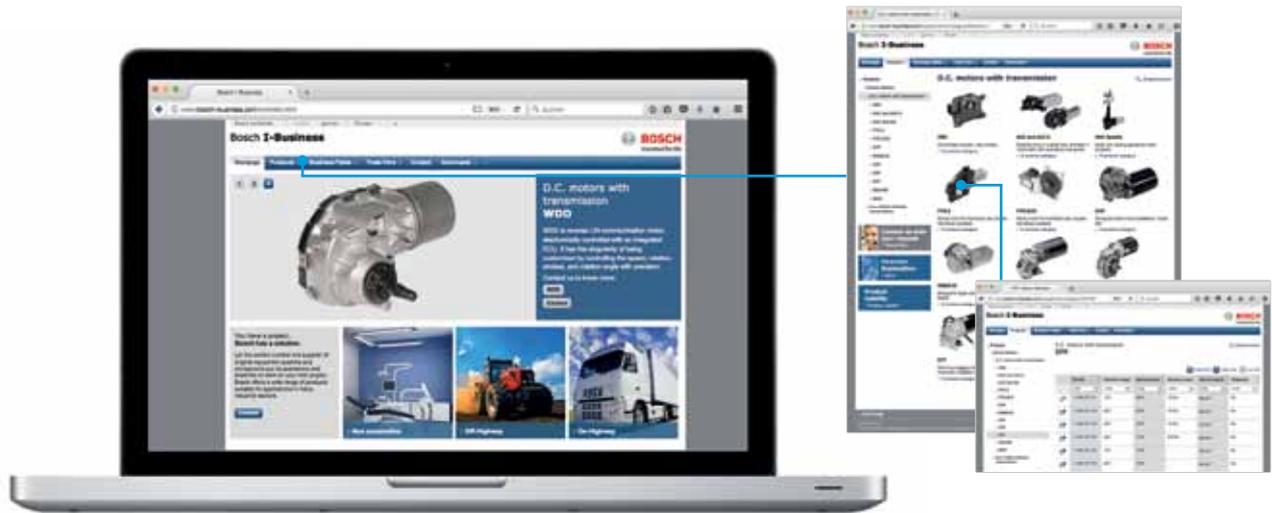
- ▶ Compact design
- ▶ Rotates in both directions
- ▶ With magnet for hall sensor
- ▶ High durability
- ▶ High performance in a short time rating
- ▶ Proven and reliable Bosch quality

## Motor characteristics



Designation	Value
Supply voltage	12 V
Rotation	Left / right
Operation mode	S1, S2, S3
Power range	15.4 – 68.2 W
Torque range	0.3 – 0.7 Nm
Speed range	2000 – 7000 rpm

# Your web portal for industrial products



[www.bosch-ibusiness.com](http://www.bosch-ibusiness.com) – the interactive and innovative web portal for industrial applications

## You have an idea – Bosch has the matching solution.

Rely on the world's No. 1 in automotive equipment and benefit from comprehensive experience and expertise for your next project. Bosch provides a comprehensive high-quality product range for a large variety of industrial applications.

In an informative and interactive manner, this website presents a wealth of Bosch products

for industrial applications – you will find information and product details about electric motors, sensors, relays, starters, alternators, pumps, valves and much more.

- ▶ Product images
- ▶ Technical data
- ▶ Basic technical information
- ▶ Characteristic curves
- ▶ Circuit and connection diagrams
- ▶ Dimensional drawings
- ▶ 3D models

Additional information on Bosch electric motors upon request:

[www.bosch-ibusiness.com](http://www.bosch-ibusiness.com)

**What drives you,  
drives us.**

**Robert Bosch GmbH**  
Automotive Aftermarket

Auf der Breit 4  
76227 Karlsruhe  
Germany

[www.bosch-ibusiness.com](http://www.bosch-ibusiness.com)



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