

# Bosch eBike Systems for fast eBikes

## Technical features



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Invented for life



### Product description

The Bosch eBike System comprises the Drive Unit 45 with high performance motor, control unit and sensors, as well as the Battery Pack and the HMI, which enables the operation of the system at the handle bar, and furthermore can be used as a bicycle computer. The special frame interface of the Drive Unit qualifies the system as initial equipment only, no add-on kit is available. The Bosch eBike System is suitable for the usage with derailleurs and gear hubs.

### Realization of the rider's wish

The direct sensing of the rider's wish (torque, pedalling power and speed) together with the intelligent control of the powerful motor offer outstanding performance.

### Cruising Range

Depending on the choice of mode and the riders' riding style, a range from 40 km (Speed 3) to 105 km (Eco 1) can be achieved at an average speed of 27 km/h and with a fully-charged battery.

### Outstanding characteristics

- ▶ Ultimate riding pleasure with pedalling support up to 45 km/h
- ▶ Takes you to your destination even more comfortably with higher power reserves
- ▶ Powerful, comfortable and instant support in a full range of speed
- ▶ Maximum safety via 3-sensor-concept and cell protection
- ▶ Comfortable start-up in difficult terrain due to start-up assistance

### Free choice of assistance mode and assistance level

The Bosch eBike System offers 4 different modes that result in an ideal assistance profile related to the driving situation.

Mode	Assistance profile
Eco	appreciated support at maximum efficiency for maximum cruising range
Tour	smooth riding – ideal for touring and trekking going for a long cruising range
Sport	powerful support – sportive riding off road as well in urban traffic (start/stop)
Speed	maximum power supporting highest cadence for ambitious sportive riding

Subsequently shown is the assistance level in relation to the assistance mode (data in table refer to derailleurs):

Level	Assistance mode			
	Eco	Tour	Sport	Speed
1	30%	45%	70%	90%
2	60%	80%	140%	160%
3	100%	120%	180%	250%

## Technical features of the Bosch eBike System components

### Drive Unit 45:

- ▶ Bottom bracket motor
- ▶ Support up to 45 km/h
- ▶ Motor:
  - Rated or nominal power: 350 W (max. 500 W)
  - 40 Nm nominal/50 Nm peak
  - The supporting torque is directly transferred on the crank.
- ▶ Sensors:
  - Torque
  - Pedal speed
  - Speed
- ▶ Weight: <4 kg (excluding fixation set)

### HMI:

- ▶ Drive control
- ▶ Gear-dependent start-up assistance up to max. 20 km/h
- ▶ Light symbol in accordance with TÜV standard
- ▶ Bicycle computer showing speed (current & average), distance (trip & total) and remaining cruising range
- ▶ Battery monitoring
- ▶ Choice of mode and assistance level
- ▶ Size: (W) 55 mm x (H) 69,5 mm x (D) 15,5 mm
- ▶ Weight: <150 g
- ▶ The HMI is removable and serves as a system key.

### Battery pack:

- ▶ Lithium-Ion battery, 288 Wh, 36 V, 8 Ah
- ▶ 2 Battery versions: rack type and standard
- ▶ Size of standard battery:
  - (H) <260 mm x (L) <90 mm x (W) <85 mm
  - (Without connector holder and lock cover)
- ▶ Size of rack type battery:
  - (H) <45 mm x (L) <360 mm x (W) <110 mm
- ▶ The standard battery version is available in three colours:
  - White (RAL 9003)
  - Black (Pantone Black 6C)
  - Silver (over coated, RAL 9006)

- ▶ The rack type battery is Black (Pantone Black 6C).
- ▶ Turn on/off button; State of charge is shown directly on the battery pack via 5 LED.
- ▶ We guarantee 500 full load cycles or 200 Wh after two years (70% remaining battery capacity).
- ▶ Weight: ca. 2,5 kg
- ▶ Battery cell management (ECP) offers protection of
  - Unbalanced battery cells
  - Overcharging
  - Under voltage
  - Overheating
  - Short circuit
- ▶ Charger
  - Supply voltage 110 or 230 V (AC)
  - Charging time: max. 2,5 hrs (1 h = 50%, 4 A)
  - Size: (L) 150 mm x (W) 83 mm x (H) 47,5 mm
  - Weight: <1 kg
- ▶ Diagnosis tools
  - PC-aided diagnosis

### Valid for all Bosch eBike System components:

- ▶ Compliance with UL safety standards and all requirements for type approval
- ▶ Operating temperature: -5 °C...40 °C
- ▶ Storage temperature and passive mode: surrounding temperature, determined by lowest range (charger): -10 °C...50 °C
- ▶ Maintenance free and water resistant

### The Bosch eBike System isn't just about support for the rider – it's about support for the dealer as well.

With the diagnosis tool the IBD (independent bicycle dealer) can read out the system data. Errors can be diagnosed quickly and replacement parts ordered through the service hotline.

If you have any queries about the system and/or diagnostic issues, the Bosch eBike Service Hotline for dealers is at your disposal. We also offer training programmes for the system.

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