Installation of a charging station

Using the Webasto Next as an example

A powerful charging station is one thing, setting up the perfect charging infrastructure is another. This includes, above all, a professionally executed installation of your Webasto Next charging station, so that everything is really safe and working perfectly.

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Checking the infrastructure

Before deciding to purchase a charging station, an electrician should first check the existing infrastructure: Is the domestic infrastructure sufficient? Do new/higher capacity power cables need to be installed? Is space still available inside the existing empty conduits? Especially in the case of older buildings, it may be necessary to apply to the transmission system operator to increase the grid connection capacity.

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Dimensioning of the system

When deciding which charging station to select, it is important to know how many kilowatts of power the vehicle will draw for charging. Because a car that can only charge at 3.7 kW does not need a 22 kW charging station.

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RCD (type A)/FI and circuit breaker

Based on the rated output of the charging station, the cable length, and the way in which they are installed, the electrician determines the necessary cable cross-section and type. The recommended cross-sections lie between 6 and 10 mm2. There must be sufficient space inside the control cabinet for an RCD/FI (residual current device) and a circuit breaker (fuse) to protect the wallbox. The charging station should have integrated DC residual current protection. Otherwise, an external "type B RCD" circuit breaker must be installed in addition, which can quickly become expensive. The electrician will in any event pre-install a "type A RCD" circuit breaker (see above), but the cost of this remains reasonable (approx. EUR 40). If the regional energy utility offers special electricity tariffs for charging e-vehicles, a separate electricity meter may be required, which is usually sealed.

Once all of the prerequisites have been clarified, the specialist will prepare a cost estimate for installing the charging station.

Charging cable with Type 2 plug

4 Cable connector type

The Type 2 plug has generally been the standard plug connection for alternating current (AC) charging in the EU since 2014; older American or Japanese cars usually still have the Type 1 plug. When buying a used electric car, you should therefore pay attention to which plug type the car requires to ensure the charging station cable is also compatible, or whether an adapter is necessary.

5 Optimal installation location

Together with the installer and the house owner (in the case of a tenancy) the optimal location for the charging station should be determined. In this context it is important to know where the car's charging socket is located (front/rear/side) to ensure the cable is of sufficient length. Moreover, consideration must be given to protecting the wallbox against theft, vandalism and direct sunlight.

6 Delivery and scope of delivery of the charging station

Once all of the issues have been clarified, the charging station and the necessary installation materials can be ordered, for instance directly from the electrician. The scope of delivery includes the charging cable, a mounting template, the charging station itself, installation instructions and the wall mounting.

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7 App-guided installation

In addition to printed installation instructions, providers like Webasto also make special apps available to electricians to guide them step-by-step through the installation process. The information is therefore always right up-to-date.
The installer also uses the app to set the charging capacity.

8 Mounted charging station

The charging station is mounted once the installation location has been determined.

9 Power connection

The main power connection is made.

10 Charging cable connection

The charging cable is connected to the wallbox.

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Connection to the internet

Whenever the charging station is intended to be capable of more than just charging i.e. "smart", it requires a back-end connection. Sometimes the different services are offered with the charging station itself via the Internet or an app. Some charging stations are also capable of communicating with different systems, which can then be connected too. Such communication ensures, for example, that one is able to control the wallbox (even remotely), to charge according to a fixed schedule or according to power availability. You can also receive individual statistics for data evaluation purposes, and have it serviced or – if there are multiple users – reserve a time to use it.
If electricity from a photovoltaic system is to be used for charging, you need an Energy Management System (EMS), a smart meter (intelligent electricity meter) and a charging station with an appropriate communication interface (e.g. Modbus TCP).


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Electrical test

To complete installation, measurements are taken pursuant to the installation standard and a test report prepared. This documents that the installation has been carried out professionally.

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Registering the transmission system operator

Charging stations are typically offered with a charging capacity of 11 or 22 kW. The installing electrician must register 11 kW charging stations with the local transmission system operator, while in Germany, 22 kW charging stations must already be approved by the transmission system operator beforehand.

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Controlling access to the charging station

If the charging station also has to be available to friends or neighbors, it must be made accessible to all potential users. Access to the charging station can then be restricted to protect it from unauthorized users. This can be achieved via authentification by scanning a QR code with a mobile phone.

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Ready for use

The charging station is ready for use.

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