



PORSCHE

Porsche Engineering  
driving technologies

Excellent performance  
starts with charging.

Porsche Engineering Charging Solutions.



## Like on the race track: maximum performance, minimum pit stops.

### The Charging Solutions by Porsche Engineering.

As a globally successful sports car manufacturer, the product development at Porsche focuses on the customer's perspective. This is no different with the fast-charging system by Porsche Engineering. Progressive technical solutions and the modern Porsche Design form a unique symbiosis in this competitive environment, and generate valuable benefits for charging station providers and end users. With a portfolio of solutions which adapts to every need. The Charging Solutions by Porsche Engineering.

**Maximal flexibility for tailor-made charging solutions.** Porsche Engineering offers fast-charging concepts based on a modular building block system to meet the different requirements of the operator regarding the size of the fast-charging system, number of charging stations and vehicle throughput.





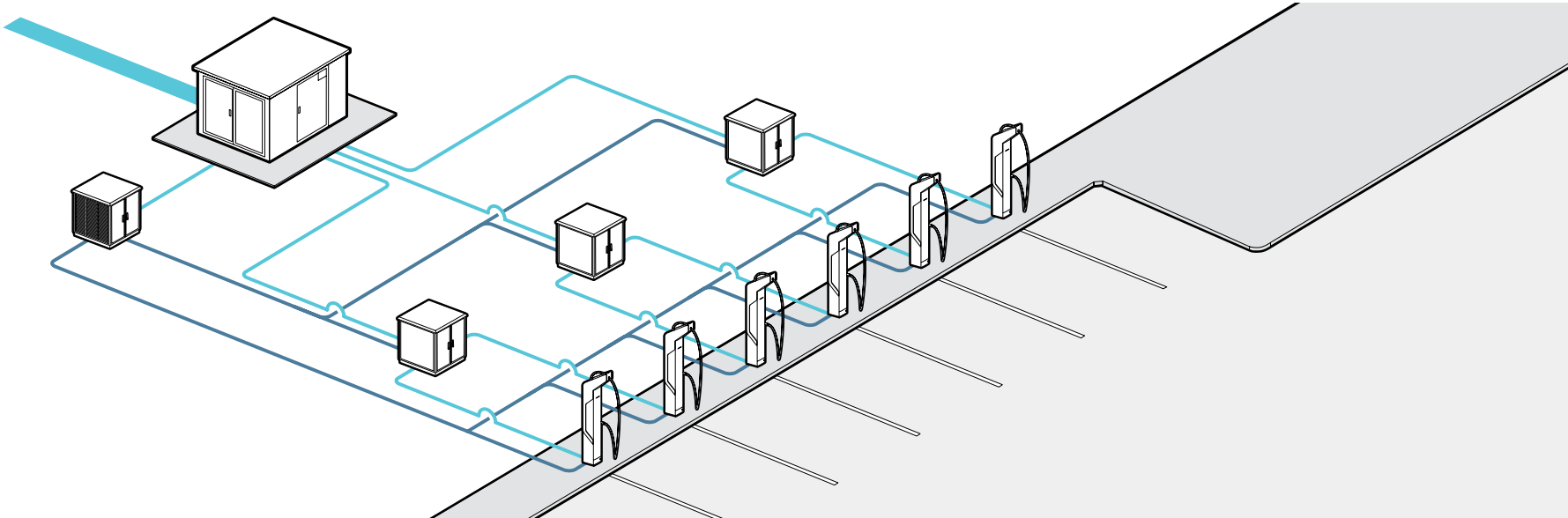
# Personalized thinking. Intelligent implementation.

## The fast-charging park.

Thanks to its modular layout, the charging park system by Porsche Engineering can be tailored to the current needs of charging park providers and can be expanded later at little expense. The individual functional components are kept in so-called boxes which can be positioned at different locations.

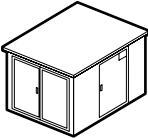
This enables freedom when considering the layout of the charging park. Function boxes can be positioned out of the view of the user or could be located within the existing development of the facility. Porsche Engineering especially valued high cost efficiency when designing the charging park system.

Thanks to intelligent system architecture and progressive technology, the fast-charging parks by Porsche Engineering are extremely efficient. A total system efficiency rate of more than 95 percent means substantially lower operating costs for providers and less burden on the environment.



# Modular components. Maximum flexibility.

## The fast-charging park.



### Transformer station

- converts medium voltage into low voltage
- ensures galvanic isolation
- hosts the central control system for communication with the provider's back-end



### Power Box

- performance unit converts the alternating current from the transformer into direct current
- powers up to two charging points with up to 350 kW<sup>1)</sup> each
- flexible placement based on the customer's wishes



### Cooling Box

- central liquid cooling for charging stations and power electronics
- with up to two internal cooling units for reliable cooling and system protection



### Combo Box

- allows the combination of cooling and power units in one box
- powers a charging station with direct current and liquid cooling



### Charging station

- ergonomically and functionally optimized
- slim appearance with a modern design
- with various positioning options, also accessible barrier free
- 10-inch HD touchscreen display for customer interaction

1) Up to 475kW technically available.

## High performance to the point.

### The Charge Box.

Whenever the vehicle throughput at the charging stations does not economically justify the high investment costs or the grid operator does not supply sufficient power, the Charge Box offers a fitting charging solution. It works using a conventional 400 V supply to one- or three-phase network, which is available everywhere, and integrates all the components of the fast-charging park into a single compact unit. Typical application scenarios of the Charge Box are, for example, car dealerships, petrol

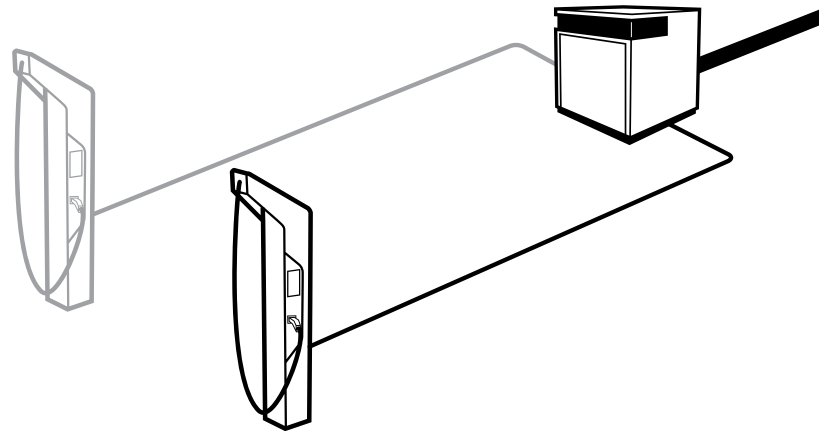
stations, car rental companies, car parks and hotels. However, retailers or businesses can also offer the additional fast-charging service to their customers and business partners.

#### **Reduced to the basics. Optimized for efficiency.**

So that the Charge Box can provide sufficient power output for fast-charging, it works with a battery as a buffer. This is supplied with 20 to 110 kW from the mains. The box delivers a total power output

of 320 kW which can be shared between one or two charging stations. Thanks to the power from the mains and the built-in back-up battery, the Charge Box is able to fully charge multiple long-range electric vehicles of the next generation.

Whether for your own fleet or for high charging power at small locations: the Charge Box saves money and space. Big ideas don't have to take up a lot of space.



## Design, technology, flexibility: an all around ground-breaking concept.

### The charging station.

The charging station offers the customer first-rate service even before the charging process begins. The top requirements here being, for example, the design of the charging station, the excellent ergonomics, the high operating comfort and an easy, self-explanatory usage. As a direct point of contact with the customer, the charging station is responsible for the unique charging experience.

#### **Excellent design for a first-rate charging experience.**

The extremely slim and elegant station offers an ergonomic above-ground charging cable routing which therefore does not get dirty and is easy to move. The high-contrast, 10-inch HD touchscreen display is also easy to read even in direct sunlight. The heat exchanger for the cooled charging cable can be located in the upper part of the charging station, so that customers are not disturbed either audibly or by the waste heat of the system during the charging process.

At the start of charging, the European standard Combined Charging System (CCS2) is used. The alternative charging standards CCS1, CHAdeMO and GT/T will also be supported in the near future.

Non-fast-charging vehicles can be charged too – the charging station adapts to the power requirements of the vehicle. This ensures that all vehicles always receive the correct power.

Thanks to smart technology, an elegant design, uncomplicated operating elements and simple authentication methods, customers enjoy a unique charging experience. Just a typical solution by Porsche Engineering.

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