

The base for your electromobility

ULF – Universal charging station foundation



Legal requirements

EU directive on electric mobility infrastructure in buildings

At new and renovated residential buildings with more than ten parking spaces, each parking space must be equipped to facilitate the charging infrastructure for electromobility.

At non-residential buildings with more than 20 parking spaces, a number of parking spaces determined by the respective country must be equipped with charging points for electromobility.

The line infrastructure includes the entirety of all cable routing to accommodate electrical and data cables, i.e. cable routes in the form of empty conduits, cable ducts, cable trays, etc. must be installed.

The basis for this is Directive (EU) 2018/844 of the European Parliament. In addition, each country is free to introduce more stringent requirements than the ones contained in the directive.

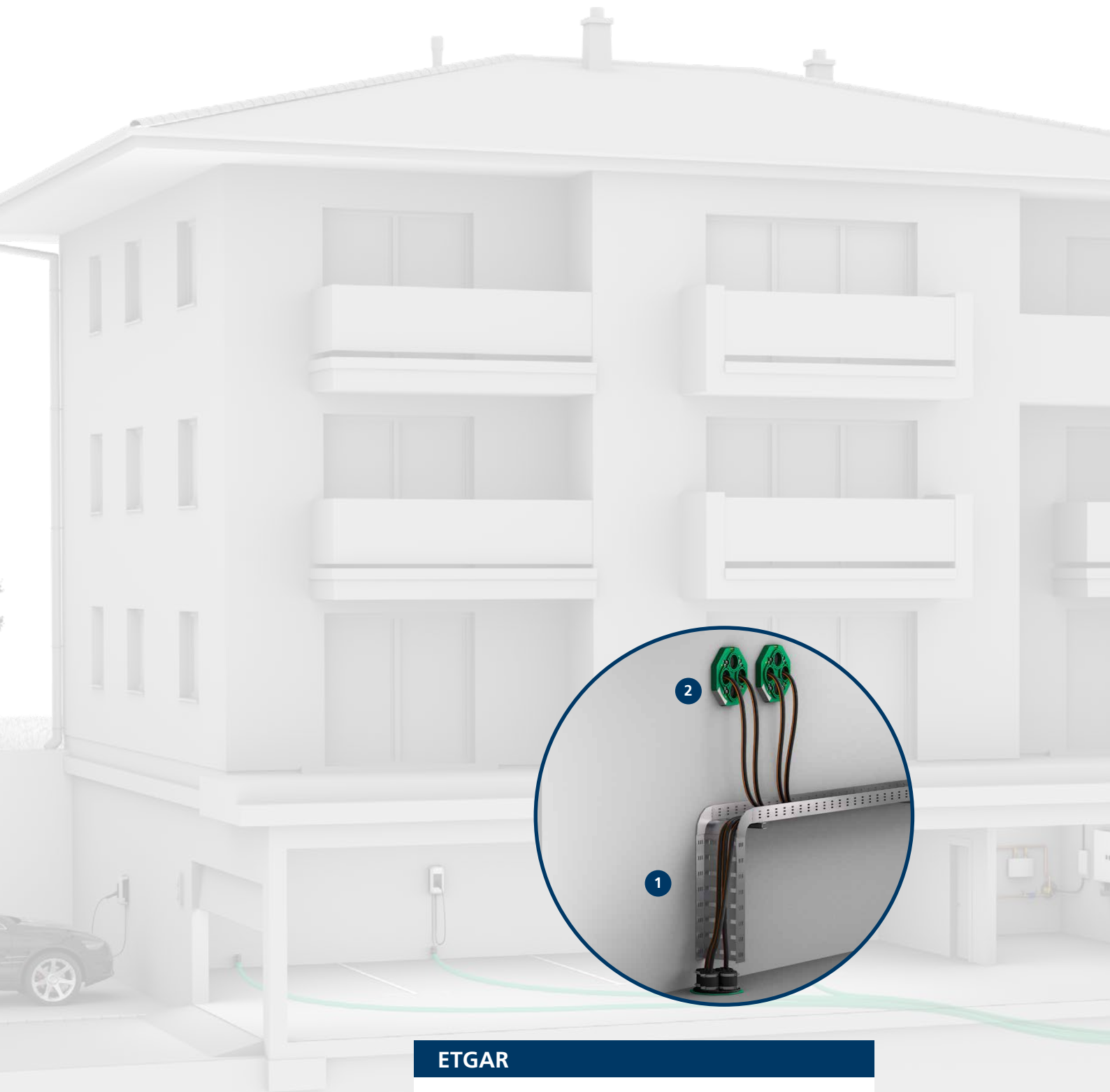
Source: Official Journal of the European Union, Directive (EU) 2018/844 of the European Parliament and of the Council of May 30, 2018.



Our solutions


We offer various solutions for setting up a charging infrastructure that meets your needs.

While our ULF foundation solution is speeding up expansion in public and semi-public areas, our comprehensive ETGAR system makes it possible to not only set up a charging station, but also to supply entire outdoor areas with electricity.



ETGAR

Building services outlet

-  HAB ETGAR BHP 1
-  HAW-M ETGAR BHP 2



The ETGAR building services outlet routes the electrical cables from the connection room to all the facilities on the property and the associated parking spaces that are subsequently to be supplied with electricity. The building services outlets meets all building sealing requirements – such as gas and water tightness as well as radon protection.



Our solutions for buildings without basement



Our solutions for buildings with basement

Ready for electromobility!

Benefits of our overall solution

- complete system for distributing electric power supply to the properties entire grounds from the building connection room
- retrofitting the empty conduit system is possible at any time without digging
- can be individually expanded, combined and extended thanks to the modular structure



ULF

Connection point

ULF 3

The universal charging station foundation is suitable for quickly and easily setting up a charging infrastructure at parking spaces, for example. Its low weight makes installation and assembly particularly easy. It can be combined and expanded with the ETGAR system or other empty pipe solutions.



ETGAR – foundation box

Connection point

ETGAR 4

The ETGAR foundation box serves as a connection point for the empty conduit system. In conjunction with the polymer concrete carrier plate, charging stations and other equipment can be built onto it. Furthermore, the ETGAR system provides the option of powering additional electrical devices in outdoor facilities.



Commercial and public spheres

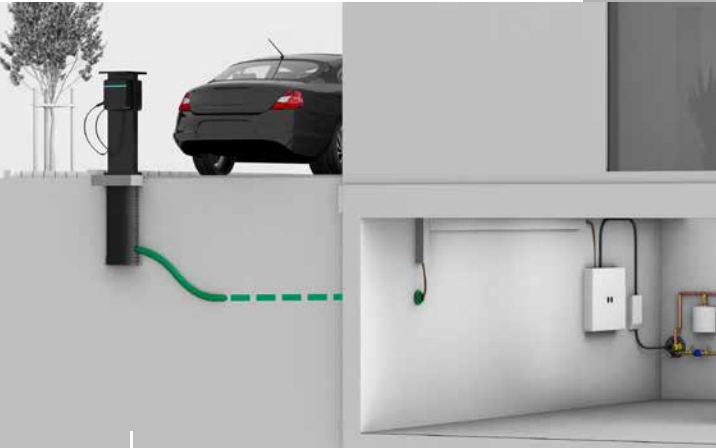
Intelligent charging infrastructure for powering vehicles in the commercial and public spheres:

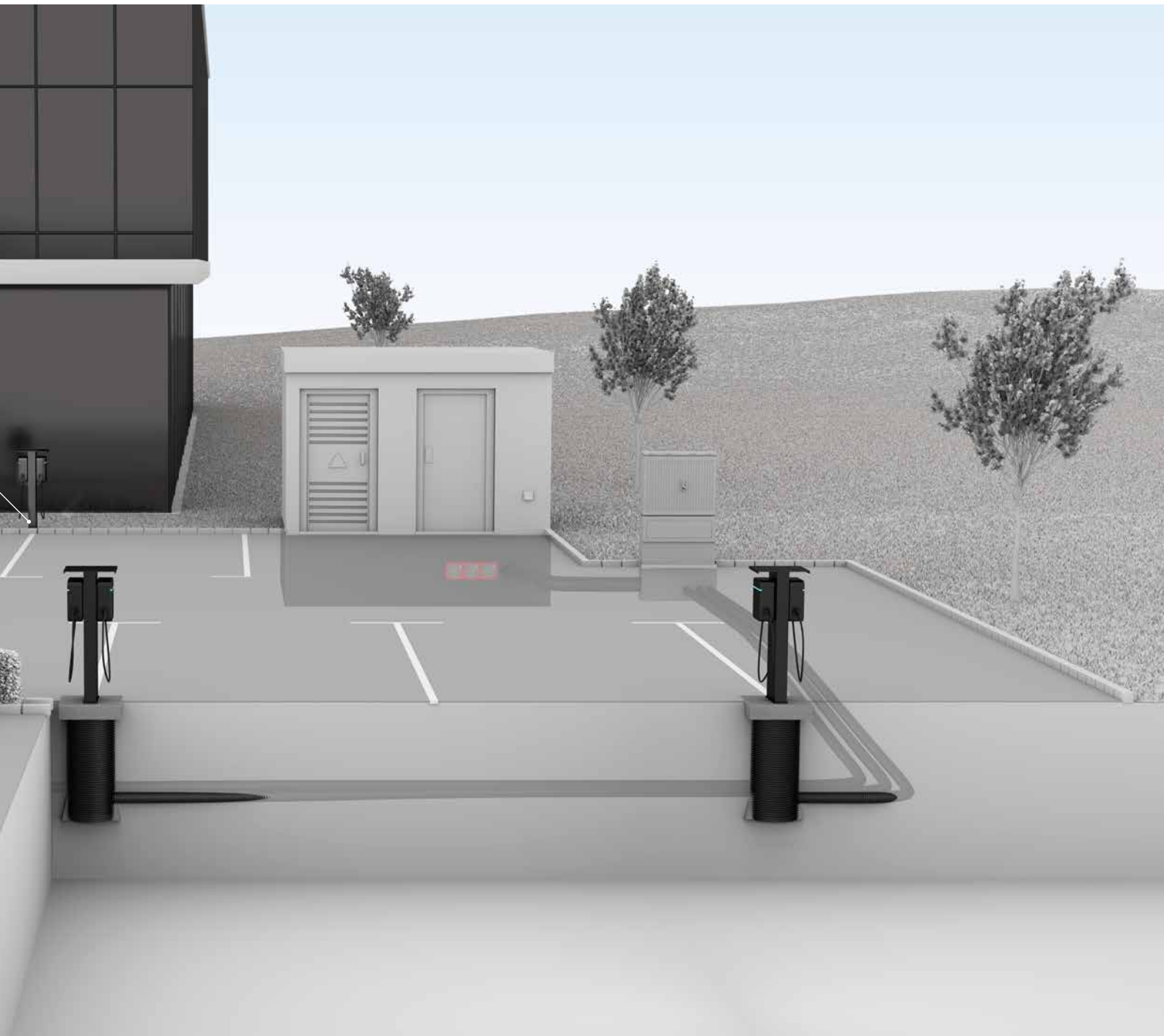
Commercial sphere

- companies
- hotels
- gastronomy
- housing industry

Public sphere

- cities
- municipalities
- public institutions





Integrated charging infrastructure

Companies, service providers, hotels and other semi-public facilities will demonstrate a greater need for charging stations in the future.

For the predicted upturn in electromobility, it is therefore necessary that the corresponding charging infrastructure will be expanded. Moreover, the European government supports the Europe-wide expansion of the charging infrastructure through Directive (EU) 2018/844. Here, the individual member

states are asked to define country-specific regulations for the minimum number of charging points.

With the universal charging station foundation, Hauff-Technik has created an innovative and universal foundation for charging stations.

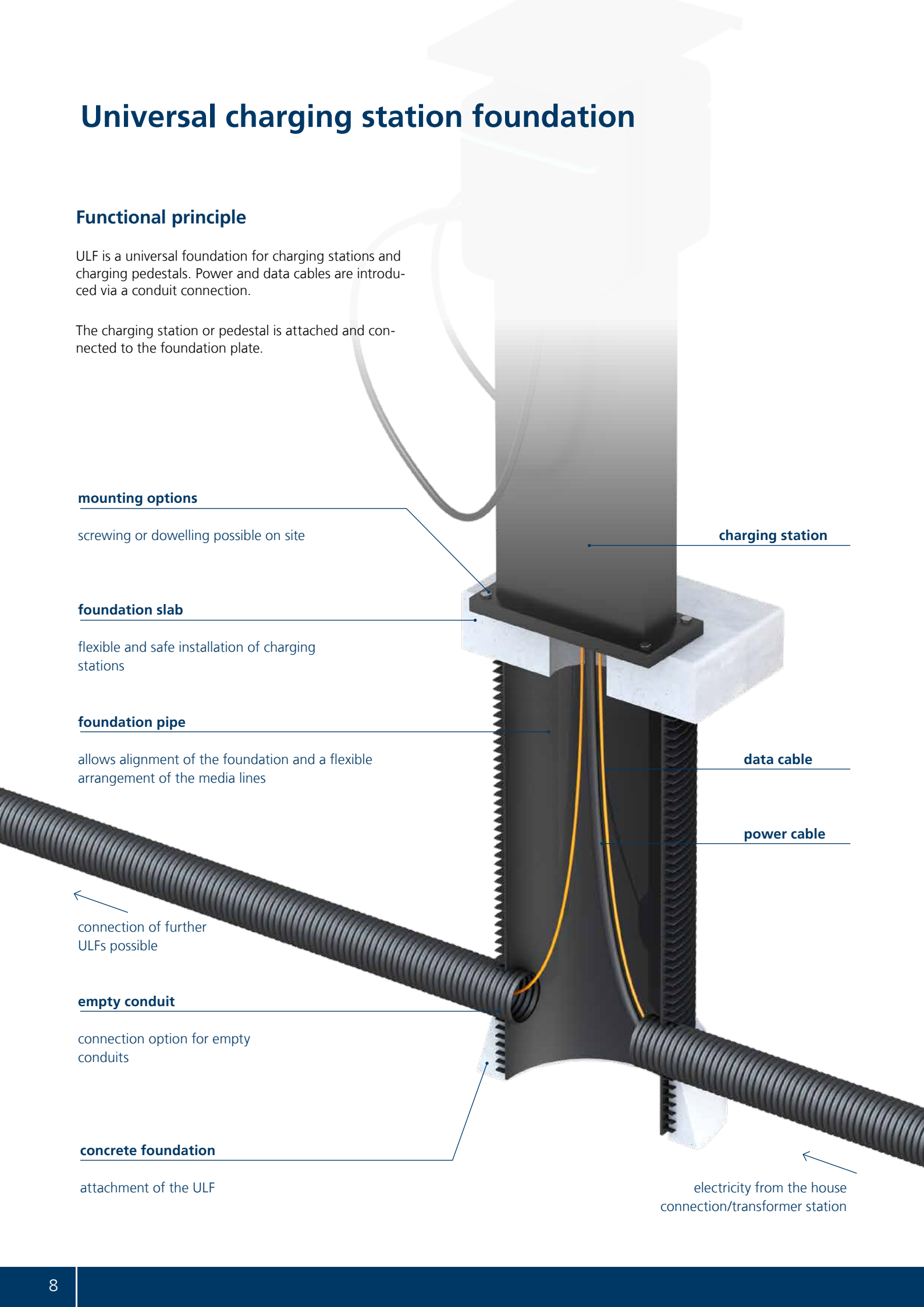
ULF offers a foundation solution for various types of charging stations and charging pedestals and for a variety of installation situations.

Universal charging station foundation

Functional principle

ULF is a universal foundation for charging stations and charging pedestals. Power and data cables are introduced via a conduit connection.

The charging station or pedestal is attached and connected to the foundation plate.



mounting options

screwing or dowelling possible on site

charging station

foundation slab

flexible and safe installation of charging stations

foundation pipe

allows alignment of the foundation and a flexible arrangement of the media lines

data cable

power cable

connection of further ULFs possible

empty conduit

connection option for empty conduits

concrete foundation

attachment of the ULF

electricity from the house connection/transformer station

Foundation comparison



Precast foundation



ULF



Foundation concreted on-site

Features

Weight	100 kg – 900 kg	< 60 kg	–
Chemical resistance	depending on the concrete quality	acid and alkali resistance	depending on the concrete quality
Surface	smooth and even	very smooth and even	depending on the processor
Frost and de-icing salt resistance	only with special concrete	resistant through polymer concrete (FX4)	only with special concrete
Height adjustment	–	can be cut to length on site	–
Water absorption	depending on the concrete quality	low	depending on the concrete quality

Installation

Installation complexity	low	low	very high
Formwork work	–	–	laborious/complex
Laying foundation	only possible with crane/excavator	1 person	2 persons
Installation time	fast	fast	time consuming
Transport costs	very high	low	low
Cable routing	integrated	integrated	on site

Installation

Variety of charging station models	type-related	flexibly applicable	type-related
Mounting options	threaded sleeves, tie rods, concrete screws, dowels	threaded sleeves, tie rods, concrete screws, dowels	concrete screws, dowels, tie rods

Universal charging station foundation

for the installation of charging stations and charging pedestals

ULF

Universal foundation solution for installing charging stations and charging pedestals. Option for mounting on the polymer concrete slab. Connection of power and data cables via an empty pipe connection.



Features and benefits



- universal foundation system for various charging stations and charging pedestals
- adaptation option for empty conduits
- lightweight
- can be installed easily and quickly on-site

Scope of delivery:

- 1 x ULF with blind cover

Dimensions:

- total length: 850 mm
- height foundation slab: ULF300: 80 mm, ULF380/ULF470: 100 mm
- foundation slab opening: ULF300/ULF380: 110 mm, ULF470: 150 mm

Properties

- weight: ULF300: 17 kg, ULF380: 38 kg, ULF470: 54 kg

Material:

- foundation slab: polymer concrete
- foundation pipe: PE

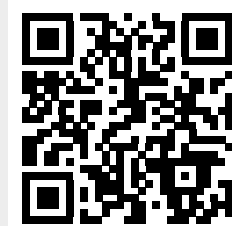
Size	Foundation pipe Ø1 (mm)	Article code	Article number
300 mm x 300 mm	200	ULF300	3030512350
380 mm x 380 mm	250	ULF380	3030490218
470 mm x 470 mm	300	ULF470	3030490219

www.bit.ly/ulf-en



The universal charging column foundation is compatible with the charging columns and wallbox pedestals of various manufacturers.

Find the solution that suits you on our website!





ULF – Universal charging station foundation

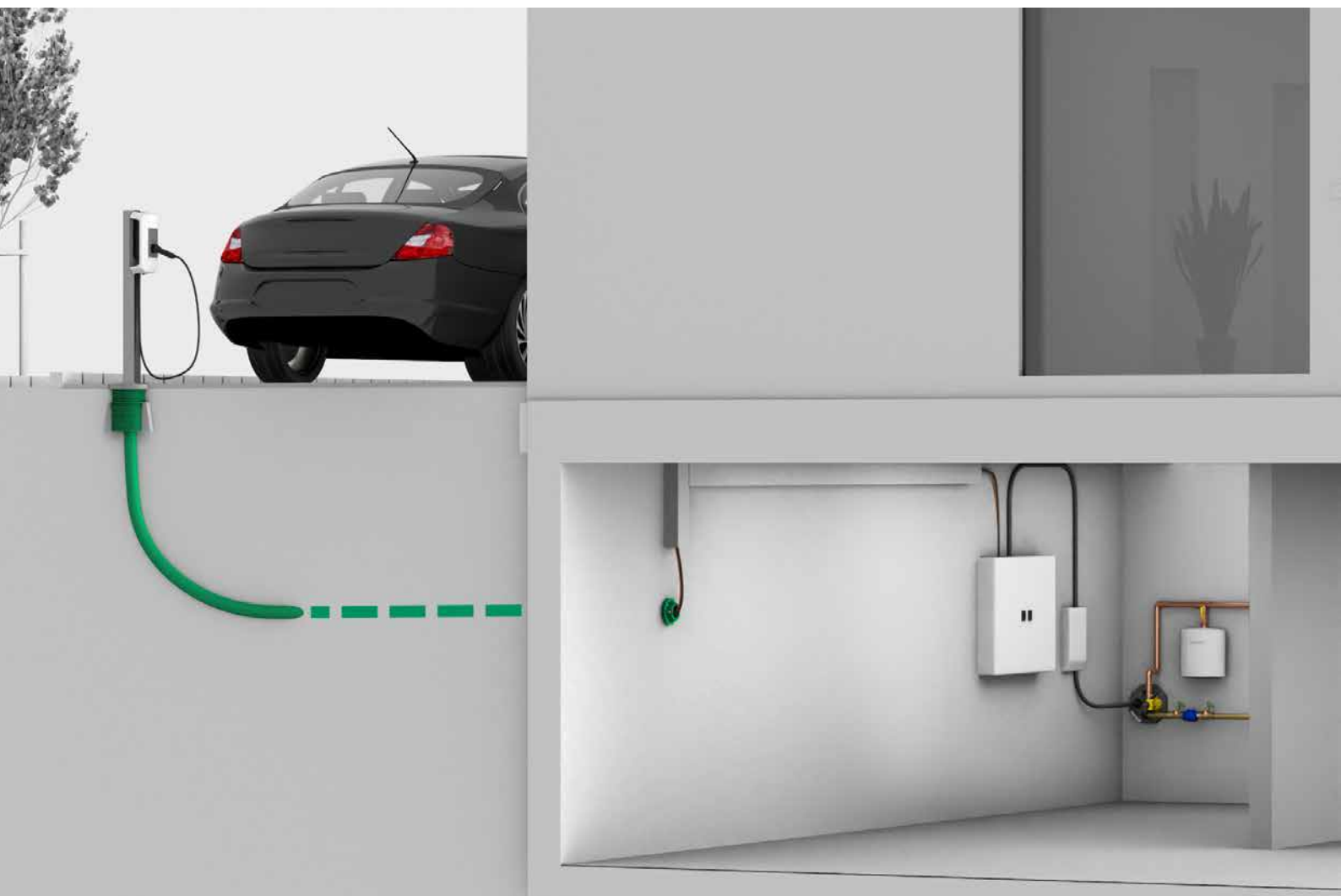
Electromobility in the private sphere

With our solutions you can also create a basis for e-mobility in your private sphere.

The complete ETGAR system is suitable for distributing electricity easily and reliably across the entire property. The electricity is routed out of the building via the building services outlet to precisely where it is needed using an empty conduit system.

The ETGAR foundation box serves as a ready-to-connect foundation system with which the empty conduits are connected.

Various end devices, such as a charging pedestal, can be built on the foundation box using the ETGAR carrier plate.



Single building services outlet for connecting an electronic device.

Electromobility system overview

Power source

Distribution

Deployment

Power distribution via the house connection



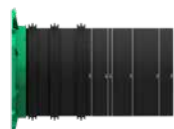
ETGAR building package for single-line building service outlets
for buildings with basement and one corrugated pipe connection



Universal wall sleeve 100
for new construction and one corrugated pipe connection



ETGAR building package for multi-line building service outlets
for buildings with basement and four corrugated pipe connections



ETGAR building developer package for building services outlets
for new construction and four corrugated pipe connections



Building services outlets, ETGAR multiple/single outer sealing element
for stock



ETGAR building package for building services outlets
for buildings without basement and four corrugated pipe connections



ETGAR corrugated pipe
ø 75 mm



ETGAR foundation box & ETGAR carrier plate



PE corrugated pipe

cable duct as intermediate distributor necessary



ULF

Power distribution via a transformer station



HSI150
single wall insert



HSI150 system cover



HSI150 DFK
polymer flange for dowelling




Building services outlets for buildings without a basement

Figure	Article	Article code	Article number
	ETGAR building developer package for building services outlets	HAB ETGAR BHP*	3030404422






* Scope of delivery: basic unit, seal insert, sealing elements (locking sleeves), ETGAR DN75 30 m corrugated pipe, sealing caps

Building services outlets for buildings with a basement

Figure	Article	Article code	Article number
	ETGAR building package for multi-line building service outlets	HAW-M ETGAR BHP*	3030458211
	ETGAR wall sleeve for building services outlet	HAW-M ETGAR FR	3030458206
	Building services outlets, ETGAR multiple/single outer sealing element	HAW-M ETGAR AD	3030490272



* Scope of delivery: basic unit, insulating plate, ETGAR sealing elements, lubricant, pipe connection set

Figure	Article	Article code	Article number
	ETGAR building package for single-line building service outlets	HAW-E ETGAR BHP*	3030458211
	Universal wall sleeve for any type of wall	UFR100/200	3030300244
	ETGAR exterior sealing element for single-line building service outlet	HAW-E ETGAR AD	3030491405



* Scope of delivery: basic unit, insulating plate, ETGAR sealing elements, lubricant, pipe connection set

Distribution on the property or to the parking spaces

Figure	Article	Article code	Article number
	PE corrugated pipe for ETGAR building package	HAB ETGAR WR75 GR30000	3030401995
	ETGAR extension set for ETGAR building package	HAB ETGAR VLS	3030404455
	ETGAR sleeve capse for ETGAR foundation box	ETGAR ANS 4x5-25	3030449206
	Extension sleeve for ETGAR building services outlet	ETGAR MA70-84/70-84	3030403633
	ETGAR carrier plate for ETGAR foundation box	ETGAR FB TPL	3030454138
	ETGAR foundation box for ETGAR building package	ETGAR FB	3030454134
	ETGAR foundation box for ETGAR building package	ETGAR FB SET*	3030482075



* Scope of delivery per set: ETGAR foundation box, ETGAR foundation box carrier plate, 2 x ETGAR connection sleeves



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