

# The base for your electromobility

ULF – Universal charging station foundation



# Electromobility

## Growing significance

The importance of electromobility is growing worldwide, as it defines a sustainable approach within the transportation. The increasing demand for electric vehicles is driven by the increasing environmental awareness, resource conservation, cost savings and new innovations. It not only promotes sustainability through lower emissions and the use of renewable energies, but also improves the quality of life in populated areas.

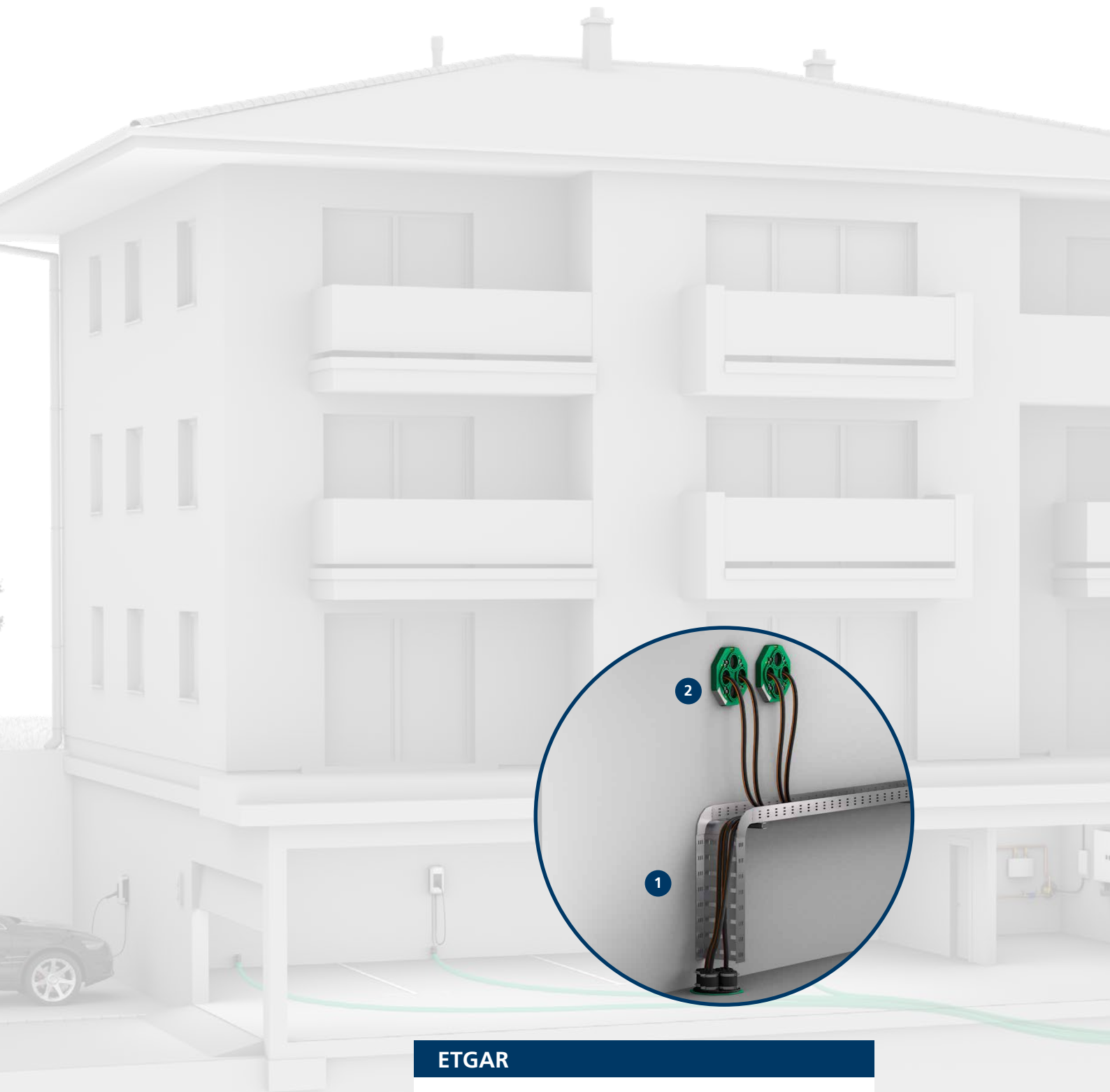
A decisive step for the future of electromobility is the expansion of the charging infrastructure. The availability of charging stations defines an important role in the use of electric vehicles. A nationwide network of fast-charging and standard charging stations enables users to charge their vehicles conveniently. The expansion of the charging infrastructure not only contributes to the achievement of sustainability goals, but also makes your building stand out with advantages for consumers.



## 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 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 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. 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 spaces

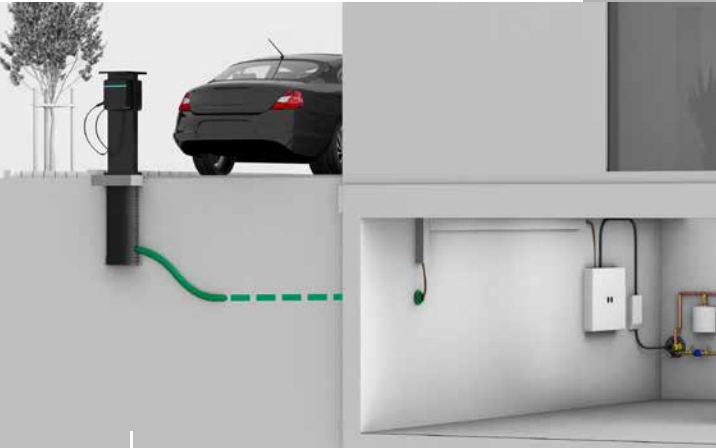
Intelligent charging infrastructure for powering vehicles in the commercial and public spaces:

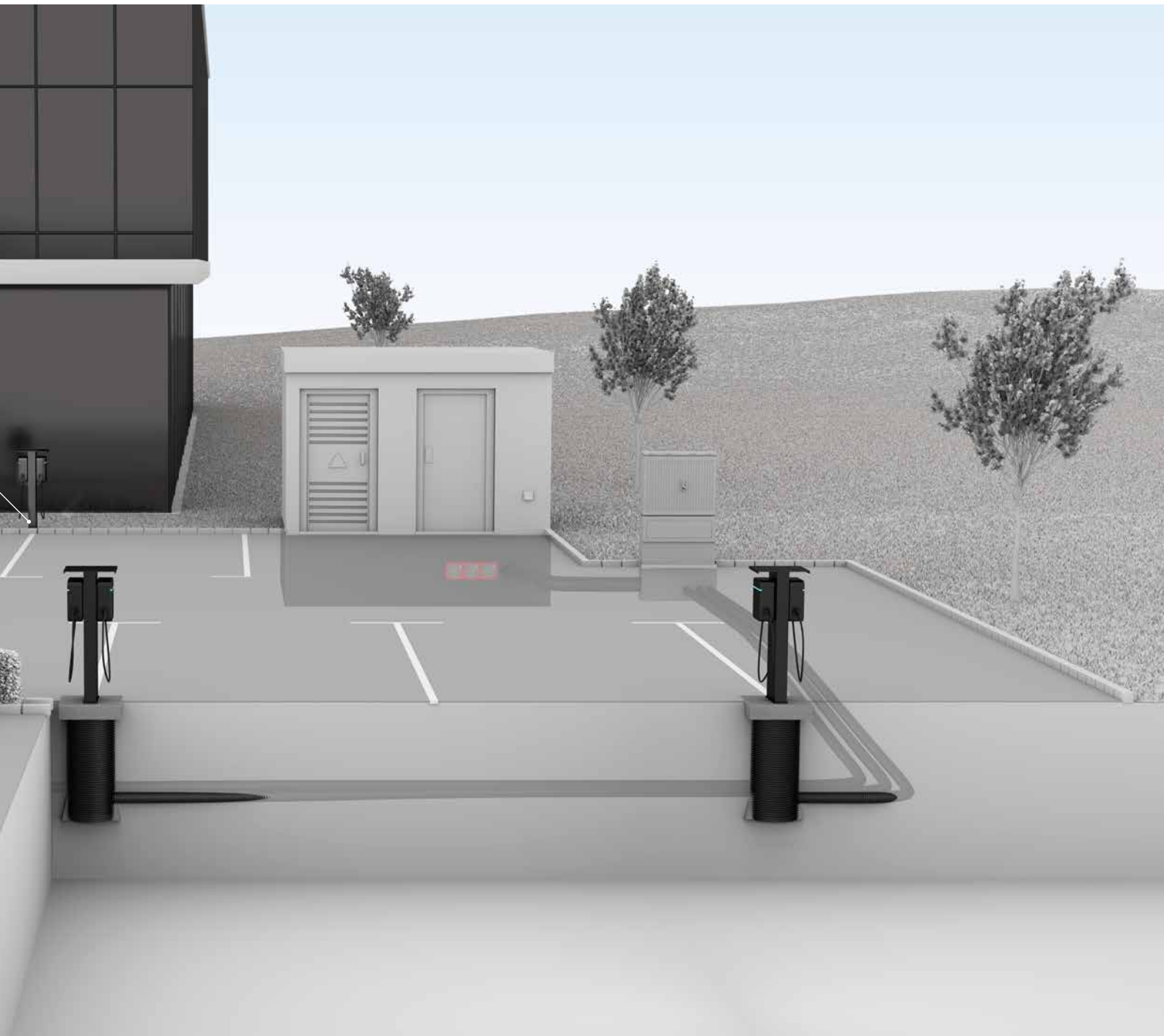
## Commercial space

- companies
- hotels
- gastronomy
- housing industry

## Public space

- 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, the corresponding charging infrastructure will be expanded.

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

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



# Universal charging station foundation

## Functional principle

ULF is a universal foundation for charging stations and charging columns. 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

### foundation slab

flexible and safe installation of charging stations

### foundation pipe

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

### empty conduit

connection option for empty conduits

### concrete foundation

attachment of the ULF

charging station

data cable

power cable

connection of further ULFs possible

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

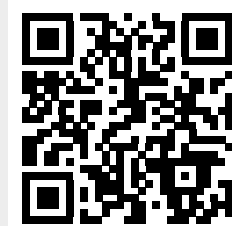
Size	Foundation pipe Ø1 (mm)	Article code	Article number
300 mm x 300 mm	200	<b>ULF300</b>	3030512350
380 mm x 380 mm	250	<b>ULF380</b>	3030490218
470 mm x 470 mm	300	<b>ULF470</b>	3030490219

[www.bit.ly/ulf-en](http://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

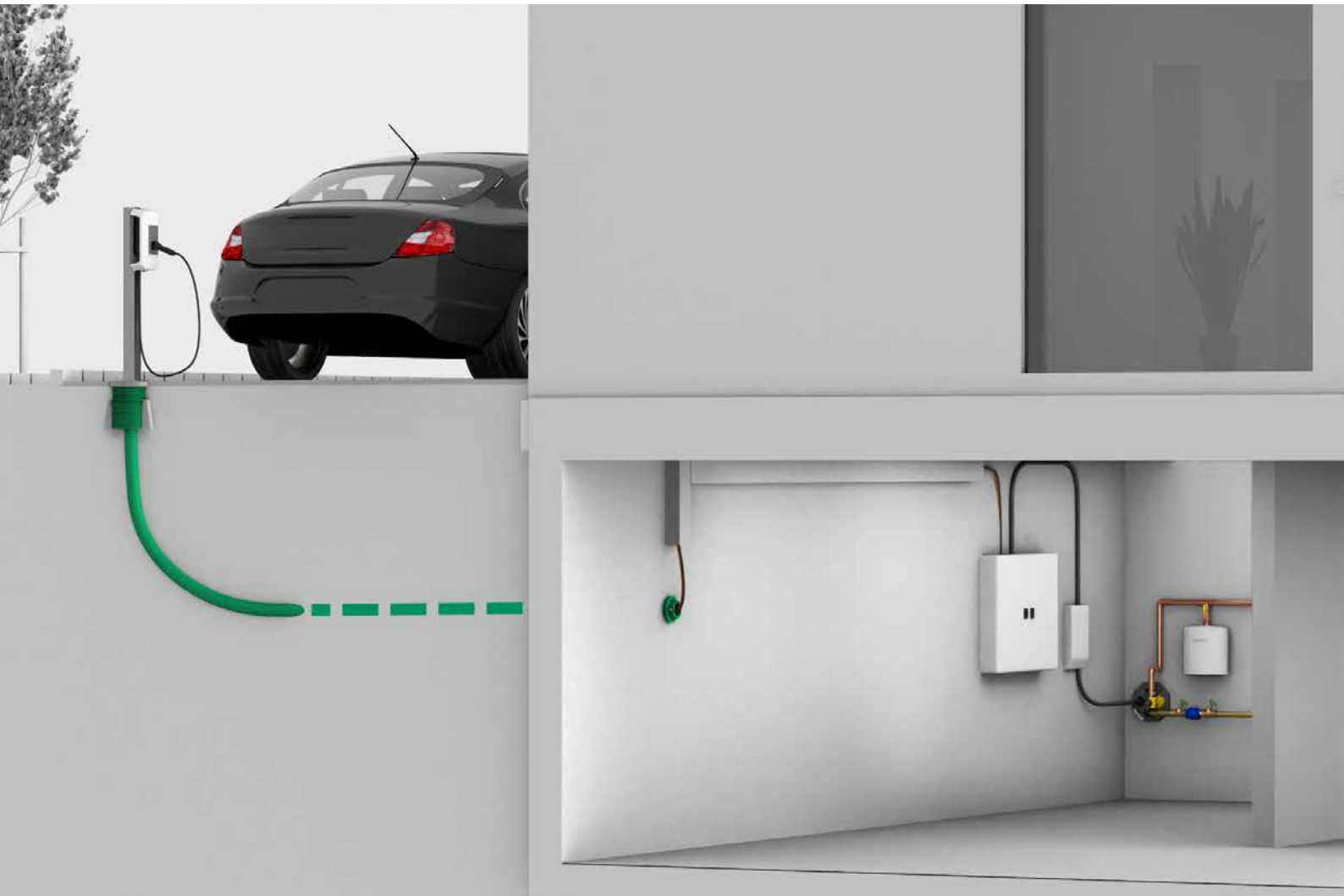
# Electromobility in the private spaces

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

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	<b>HAB ETGAR BHP*</b>	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	<b>HAW-M ETGAR BHP*</b>	3030458211
	ETGAR wall sleeve for building services outlet	<b>HAW-M ETGAR FR</b>	3030458206
	Building services outlets, ETGAR multiple/single outer sealing element	<b>HAW-M ETGAR AD</b>	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	<b>HAW-E ETGAR BHP*</b>	3030458211
	Universal wall sleeve for any type of wall	<b>UFR100/200</b>	3030300244
	ETGAR exterior sealing element for single-line building service outlet	<b>HAW-E ETGAR AD</b>	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	<b>HAB ETGAR WR75 GR30000</b>	3030401995
	ETGAR extension set for ETGAR building package	<b>HAB ETGAR VLS</b>	3030404455
	ETGAR sleeve capse for ETGAR foundation box	<b>ETGAR ANS 4x5-25</b>	3030449206
	Extension sleeve for ETGAR building services outlet	<b>ETGAR MA70-84/70-84</b>	3030403633
	ETGAR carrier plate for ETGAR foundation box	<b>ETGAR FB TPL</b>	3030454138
	ETGAR foundation box for ETGAR building package	<b>ETGAR FB</b>	3030454134
	ETGAR foundation box for ETGAR building package	<b>ETGAR FB SET*</b>	3030482075



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





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