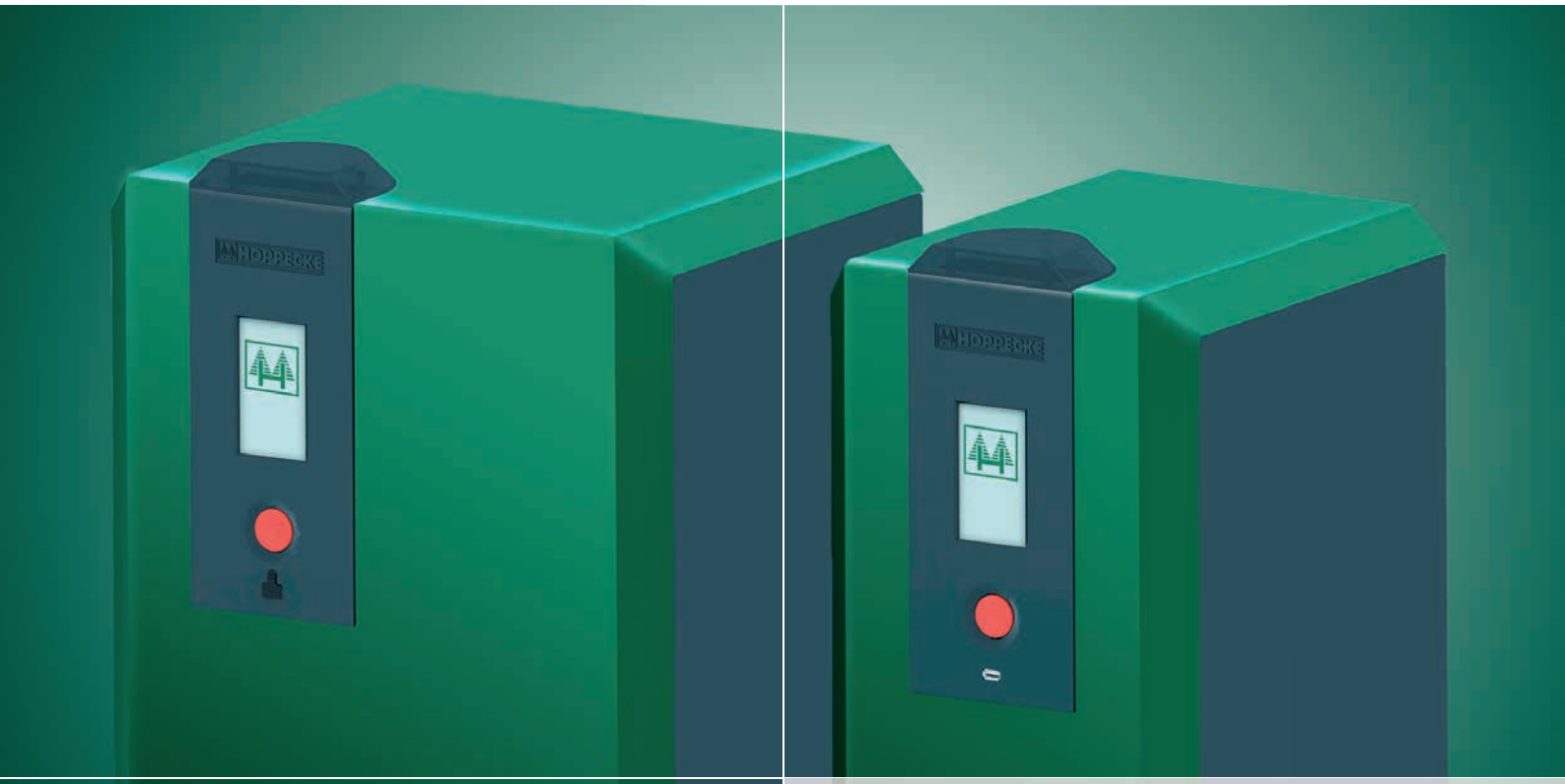
HOPPECKE
POWER FROM INNOVATION



trak | charger HF premium

HF chargers
Efficient and interactive

www.hoppecke.com

HOPPECKE
POWER FROM INNOVATION

Power
is our passion ...

You are looking at the results of 90 years' work. 90 years of passion for innovative solutions for mobile power supplies – 90 years of German engineering skill and the aim of never being satisfied with what we have already achieved.

This is only possible thanks to the employees, who continuously support us along this path. Together with our business partners, we have continued to push the limits forwards and ensure that the impossibilities of yesterday have now become a jointly achieved reality.

Only through our partnership with you, we are able to create the perfect symbiosis of economically optimised solutions and state-of-the-art technological products.

With our structure of nearly 2000 employees at more than 21 locations around the world, we are always close to you and keep our finger on the pulse of pioneering innovations.

Flexibility in the design of your projects and extremely reliable products are our every day aims. With highly available local service we have ensured a thorough understanding of your special challenges for decades.

If you expect more than just a product but a competent partner who is always at your side, HOPPECKE is the right choice for you.

trak | charger HF premium
Efficient and interactive

Modern logistics solutions make continually increasing demands on every component in the process chain. The response to fluctuating energy requirements must be increasingly flexible, and of course with particular consideration of the highest possible efficiency.

With the new trak | charger HF premium HOPPECKE provides a future-proof solution, which in many details has decisive advantages over other chargers. Automatic recharging of all forklift trucks can be implemented regardless of the state of discharge. trak | charger HF premium charges your batteries gently and efficiently, and can be easily integrated into battery monitoring systems to collect, evaluate and visualise all of the data from the network.

Whether for electrically powered goods and warehouse logistics in industry or in commercial environments, optimal networking ensures the greatest possible efficiency and sustainably protects the environment.

By individual adjustment of the charging specification depending on the state of the battery, an optimum charging strategy can be developed.

Automatic compensation charges at the optimum time ensure a longer service life. With the HOPPECKE monitoring systems, the state of usage (SOU) and state of readiness (SOR) are always in view, to ensure the optimum use of the batteries in your business.

With HOPPECKE state-of-the-art products and intelligent networking, potential savings of up to 30% can be achieved. Therefore the trak | charger HF premium is a secure investment in reliability and efficiency.

The most important new features
at a glance

- Improved operating reliability and productivity
- Extremely versatile
- Increase of system efficiency and effectiveness by up to 30%
- Improved vehicle availability (even in shift plus operation)
- Longer battery life
- Reduced maintenance costs
- Greater productivity

Your benefit
with HOPPECKE high frequency technology

First class overall efficiency

In a system with our batteries and controlled by our monitoring systems, you can achieve energy savings of up to 30% in comparison with conventional solutions.

Precise and plannable charging times through power conversion independent of the mains voltage

Thanks to the automatic mains compensation of the high frequency technology, your batteries have a controlled charging curve, which enables precise charging times.

A secure investment for the future

With the trak | charger HF premium you have a charger for gentle and optimum charging of lead acid batteries and AGM batteries in industrial applications.

Lower operating costs

The high quality reactive current compensation as standard and the high efficiency of the trak | charger HF premium of over 93% ensure a considerable reduction of your energy consumption.
Energy savings for each charging cycle of approx. 14% in comparison with conventional 50 Hz chargers can be achieved. This reduces your carbon footprint and makes a positive contribution to the achievement of climate protection targets.

Easy and economical integration

Quick and easy commissioning avoids large and cost-intensive electrical installations.

Higher vehicle availability

Using the quick charge capability, your batteries can be charged to 95% of their original state of charge within 2.5 hours to ensure greater availability of your vehicles.

Greater reliability

Due to the parallel power output stages, vehicles can still be charged, even if a module fails.

Great versatility

Accessory components and options can be retrofitted or enabled at any time. Therefore the system can grow with your requirements, without interrupting operations.

Greater transparency thanks to lifetime documentation

Thanks to the large data memory, the entire service life of the battery charging system can be fully tracked – for simple and paperless evaluation.

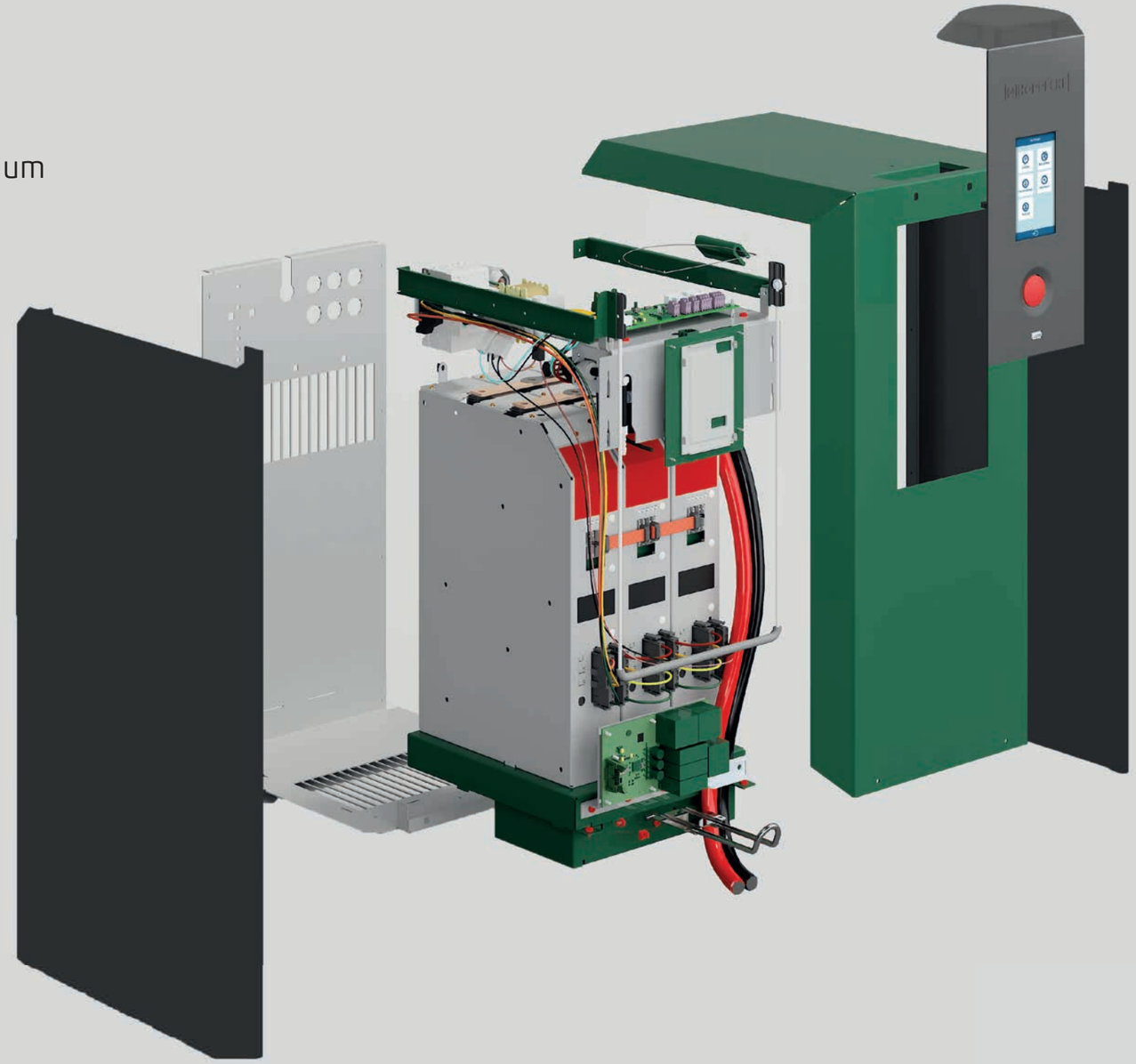
trak | charger HF premium

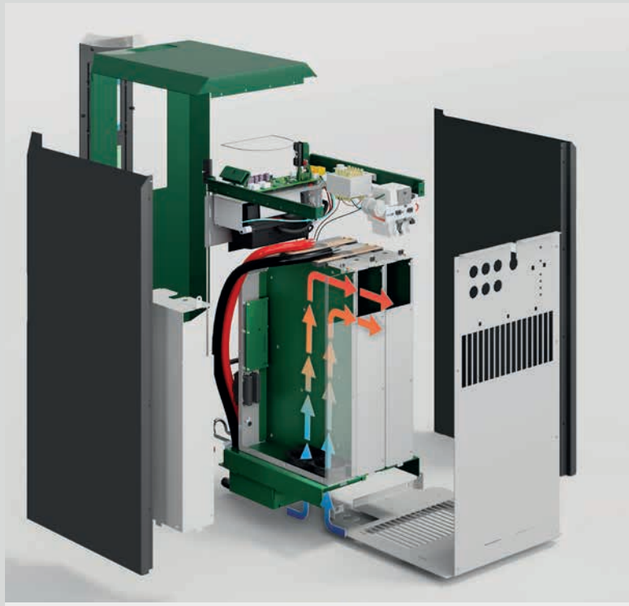
Perfect in every detail

Innovative charging

With the trak | charger HF premium all battery technologies in all possible applications can be charged thanks to adaptable charging processes. In addition, all chargers have a very wide range of battery charging voltages (24 V to 80 V) and capacities (64 Ah to 1550 Ah). Information about all battery charging cycles and their energy consumption is saved over the entire lifetime. This enables evaluation of the performance and consumption data, as well as planning of maintenance cycles.

The stored data can be read out via the USB port which is installed on the front of the charger, and are then available for further processing. These data can also be transmitted to higher level system components via a HOPPECKE trak | monitor system.



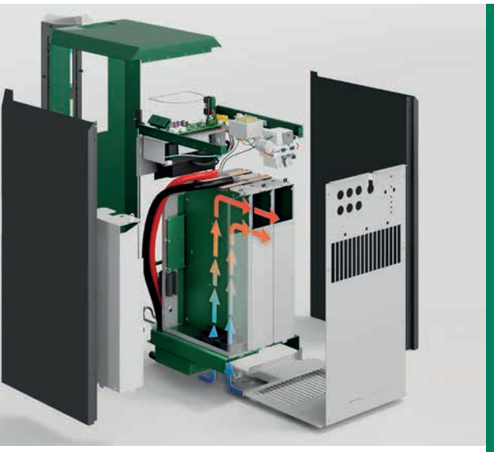


Clever und cooler

The new twin-chamber cooling system with additional encapsulation of the electronic components ensures more efficient cooling of the trak | charger HF premium in a very small space. In addition, this achieves better protection of sensitive components against aerosols and commonly occurring conductive dust, for example due to tyre wear.

Highly effective lacquer coating of the circuit boards for increased reliability is standard with HOPPECKE chargers.

In addition, the modern control electronics and new power output stages ensure especially energy-saving operation.



Compact and lightweight design

Thanks to its clean design and high power density, the trak | charger HF premium is especially space saving and compact to install.

Therefore it is the ideal solution for achieving large energy and space savings when planning new buildings.

The new models are suitable for both – wall and rack mounting. The two housing sizes cover the majority of battery technologies, voltages and capacities which are available on the market.

Modular

With its modular structure, the trak | charger HF premium can be directly adapted to changing conditions, e.g. faster and more flexible charging, greater safety requirements due to redundancy.

The modular design ensures that even if one module fails, the load capacity is secured.

trak | charger HF premium

Perfect in every detail

Robust industrial design

Together with experienced industrial designers, the new trak | charger HF premium has succeeded in perfectly combining our past experience with pioneering and innovative features. Our aim has always been to combine the best possible ergonomy with an optimum service life.

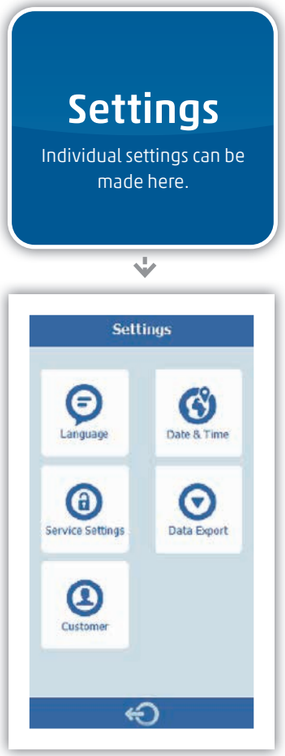
The new design features a special edge profile, protected recessed plastic components and clean routing of the power and communication cables, as well as the new plug-in wall mounting system.

Intuitive touch screen operation

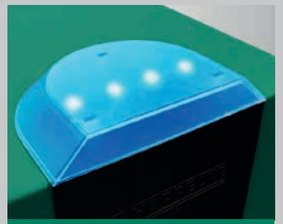
The new series impresses with its intuitive operation and menus. The multi-colour touch screen is the communication centre for the new generation of chargers. With this, all relevant data regarding the state of the charger, parameterisation, run-time analyses and customer data can be accessed and many functions can be controlled in a very user-friendly manner.

Furthermore, national and metric settings can be made and all data can be easily saved on external storage media at any time with the download function.

The 360°-display enables a rapid overview of the readiness and availability of your charging station – even from a long distance.

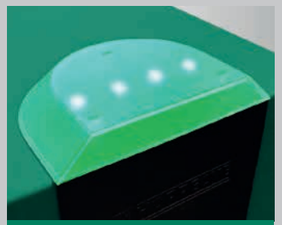


The 360°status board

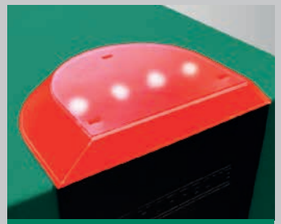


Stand-by

Charging process



Charge complete



Fault

Accessories and options
at a glance

trak | collect

trak | collect is currently the most intelligent batterycontroller for lead-acid traction batteries in all industrial applications. All relevant battery data are measured, evaluated and provided in the network.

During operation, trak | collect records the battery voltage, the average voltage of the battery, the charging and discharge current, the battery temperature and the electrolyte level. On the basis of this, the state of charge, the state of usage, the state of readiness, current profiles as well as the charged and discharged Ampere-hours and Watthours are determined in real time. This enables detailed analysis as well as early rectification of faults.

trak | monitor

Networked chargers

With trak | monitor you have all power and consumption data in view: Information about all chargers and batteries in the company are provided on a central computer and can be easily evaluated. This provides the greatest possible transparency and decisions can be made on the basis of real-time data. You also have access to the control of ventilation, access and water, and can monitor the production of hydrogen. Battery replacements in your fleet can also be optimally controlled with the trak | monitor system. This ensures equal use and a long service life for your batteries. In addition, you also avoid unnecessary charging.

- Support for battery changes – quick and safe
- Always the right battery – fully charged battery in good condition
- Equal use – no under-use or over-use
- The battery can cool down sufficiently after charging
- "Best Charged" function option
- Peak Shaving – Reduction of the total energy demand by controlling the
- simultaneous charging with multiple chargers

trak | remote

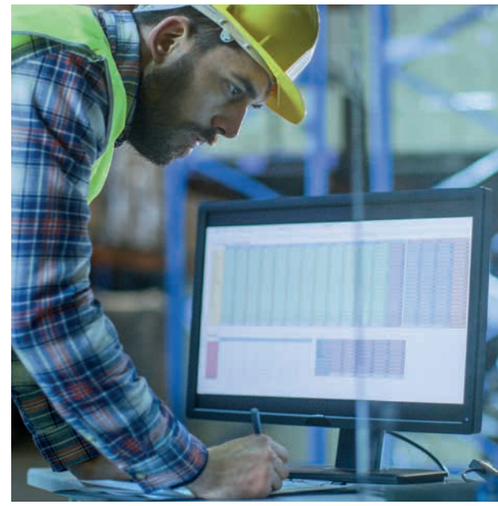
The measurement data which are recorded by the trak | charger HF premium can then be transmitted to the new, central trak | remote system.

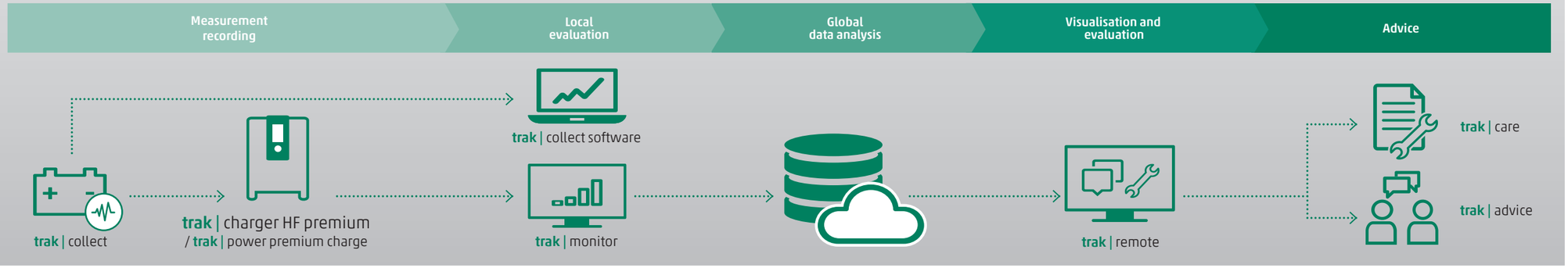
Vehicle pool and rental fleet operators, service technicians as well as vehicle manufacturers can efficiently plan and control logistics processes involving the deployment of electrically powered forklift trucks, which results in greater economic efficiency. By including HOPPECKE service technicians in your processes, immediate response to messages is possible. By means of secure remote access to the systems via a VPN link, interruptions to production can either be avoided in advance or remedied immediately.

There is no need to wait for a technician, and if necessary, spare parts are more quickly available on-site, which saves valuable time. HOPPECKE offers attractive long-term contracts for trak | remote, which sustainably reduce your costs.

trak | air

Use of HOPPECKE trak | air technology optimises your battery charging. Electrolyte circulation with the introduction of air reduces charging times by up to 2.5 hours and considerably reduces energy and maintenance costs by up to 30%. In addition, vehicle pool availability is increased and water consumption is reduced by 75%. This also achieves a greater service life-expectancy and greater efficiency by avoiding undercharging and overcharging.





Wall mounting system
The HOPPECKE wall mounting system is a space-saving solution which is easy to use and can be easily installed using the supplied drilling template.

Dust filter
The HOPPECKE dust filter is designed for use in dusty environments, for example in the wood and paper processing industries.

Transmission from charging stations
HOPPECKE devices are always designed as part of a system. By transmitting the data, for example from the charging stations, to external devices, energy-optimised control of the chargers is possible.

Cable holders
A tidy workplace not only looks good, it also ensures greater safety and prevents unnecessary damage to components. This is achieved by the cable holder for hanging up the charging cable – so that no one is injured due to plugs and cables lying on the floor.

Remote switch-on and switch-off
Remote switching is used to control the charger with signals from other system components, e.g. from energy management systems. It is therefore ideal for integration into automatic charging procedures, for example with driverless transport systems or automatic contact with charging lines.

Automatic water top-up
Avoid unnecessary maintenance effort through the automatic monitoring and control of water top-up for lead-acid batteries. Through a voltage signal at the right time, the automatic filling process for your traction batteries is implemented without effort.

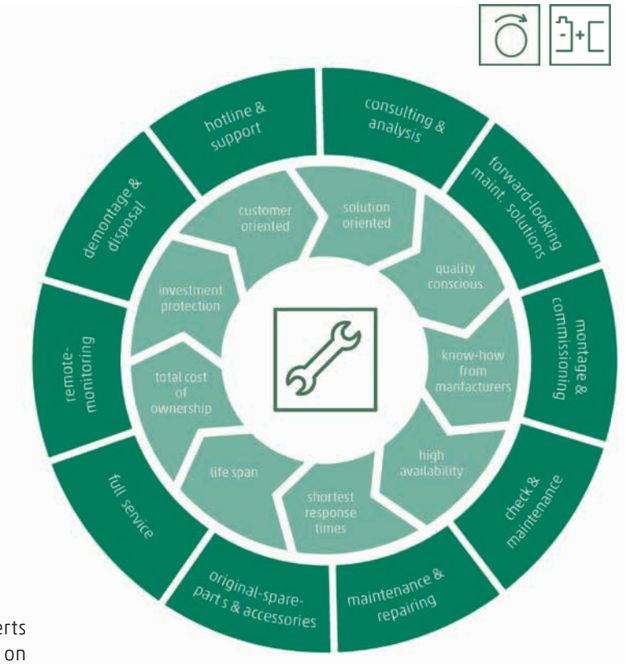
Convenient remote control
To cater for special applications, the HOPPECKE charger provides the option for integrating a remote control. The control unit is mirrored on the remote control and therefore retains all of the facilities for intuitive operation.

Pre-emptive switch-off
HOPPECKE supplies the fastest pre-emptive switch-off available on the market, and therefore ensures greater occupational safety and trouble-free operation.

Statusboard on top
The charging state of the device is also visibly indicated by the use of power LEDs. Therefore, you can see the actual status of the device and the charge at a glance.

Our service
makes the difference

Under the heading "Lifecycle Services" we offer you far more than just products. From the initial idea, to consultation, installation and ongoing service up to disassembly and recycling, you have HOPPECKE professionals at your side, who make processes simple and transparent and ensure the smooth operation of your company in every situation.



Hotline and technical support
Extensive European service network with more than 250 experts at 15 locations, who are always available – by telephone or on site. International Key Account Management for internationally operating partners.

Analysis and advice
Technological and application advice on site. Process, ptimisation, safety and efficiency analyses by certified HOPPECKE professionals. Target group oriented instruction and training for every application.

Monitoring
By linking your systems to the HOPPECKE Remote Service Portal, you integrate our technicians directly into your system environment. In this way, your systems are optimally monitored; HOPPECKE professionals respond proactively to any abnormalities and remedy these immediately.

Installation and commissioning, disassembly and recycling
Our installation teams are professionals in their field and not only ensure simple installation and maintenance according to schedule, but also provide complete turnkey solutions. I. e. complete installation, acceptance and handover to you.

And of course, when the time comes, proper and legally compliant disassembly, including recycling and documentation (certified according to ISO 9001/2008, ISO 14001 and ISO 50001).

Testing, maintenance and repair
With regular servicing, you extend the service life, reduce down times and ensure permanent functional safety. This ensures smooth operation, compliance with all legal regulations and protects your investment.

Device selection list
at a glance

Input AC Voltage [V]*	Nominal DC Voltage	Nominal DC Current [A]	Number of Modules	Housing dimensions [inch]	Charge Curve PzS Battery	Charging time [depends on PzS battery capacity]	
						without electrolyte circulation (trak | air)	with electrolyte circulation (trak | air)
D400	24 V 36 V 48 V	30	1	12.13 x 14.69 x 27.17	IUIa or IUoIa	7-12h	5-10h
		40					
		50					
		60					
		65					
		70	2				
		80					
		90					
		100					
		110					
		120					
		130					
		140	3				
		150					
		160					
		170					
		180					
		190					
		195					
D400	24 V 36 V 48 V	200	4	18.54 x 14.69 x 27.17	IUIa or IUoIa	7-12h	5-10h
		210					
		220					
		230					
		240					
		250					
		260					
		270	5				
		280					
		290					
		300					

* 600VAC also available

Input AC Voltage [V]*	Nominal DC Voltage	Nominal DC Current [A]	Number of Modules	Housing dimensions [inch]	Charge Curve PzS Battery	Charging time [depends on PzS battery capacity]	
						without electrolyte circulation (trak | air)	with electrolyte circulation (trak | air)
D400	72 V 80 V	20	1	12.13 x 14.69 x 27.17	IUIa or IUoIa	7-12h	5-10h
		30					
		40					
		50	2				
		60					
		70					
		80					
		90	3				
		100					
		110					
		120					
		130	4	18.54 x 14.69 x 27.17			
		140					
		150					
		160					
		170	5				
		180					
		190					
		200					

* 600VAC also available

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