



Product catalogue

Preheating - Charging - Power Supply - Security
2020-21



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COVERS
PRODUCTS FOR:



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How to find your way

In this product catalogue you will find our full range of products in these main categories; preheating, charging, power supply and security. Each product page includes the product name, item number, product photo, and technical specifications.

For more information, guides and manuals - visit defa.com

OTHER RESOURCES

www.defa.com is a very useful source of information about DEFA and our products. Here you will find all necessary information and documentation, such as user manuals and installation guides. You can also find the correct engine heater for your car. For more information regarding this matching tool, check page 13. We do our best to keep defa.com updated at all times. Check back if you have questions or if you are curious about our new products.

At defa.com you can also log in to the following portals:

- Link installation portal
- Security installation portal
- Tracking portal

All logins must be approved by DEFA.

SUPPORT

If you want information, help or guidance regarding any of our products, please contact our support service telephone or Phone: +47 32 06 77 00 or our local distributor.

ORDERS

You can place orders by phone or by mail:

Mail: orders@defa.com

Phone: +47 32 06 77 00

MARKETING

We want to make it as easy as possible for you to sell and install our products. We update defa.com regularly, we provide marketing materials and product catalogues, and we make further sales materials available to dealers and distributors, so they are in the best possible position to sell our products and make their customers happy.

We hope you find what you are looking for in the catalogue.

Preheating products

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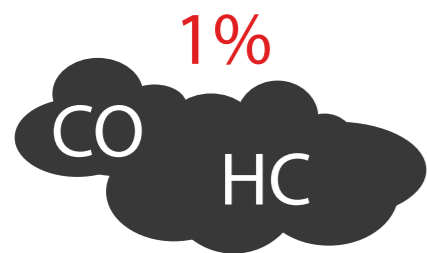


As winter arrives and temperatures drop, the subject of harmful emissions from private cars once again come to the forefront among politicians and journalists. The proposed solutions usually consist of fees, bans, and restrictions, but we offer a cheaper, simpler and equally efficient alternative - DEFA WarmUp.

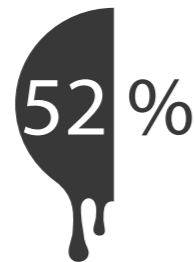
The independent institute VTT in Finland has conducted a series of tests on emission levels

from cars preheated with DEFA WarmUp, compared to cars going through a regular cold start. The results show that preheating with WarmUp dramatically reduces all types of harmful emissions on cold days. And that's not all, WarmUp also reduces your fuel consumption and saves you money.

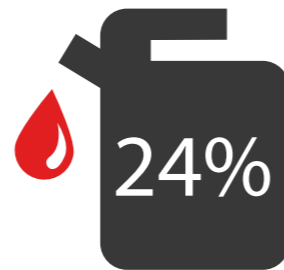
The results are presented below*:



Hydrocarbons (HC) and Carbon Monoxide (CO) are reduced by up to 99%



Nitrogen Oxide (NOx) is reduced by up to 52%



Fuel consumption reduced by up to 24%

*The independent Finnish test institute VTT conducted full scale tests on cars with and without WarmUp installed. The tests were based on the New European Driving Cycle - NEDC, and were focused on the effect of electrical pre-heating on Euro5 and Euro6 cars. Read more at defa.com

About WarmUp



WarmUp is an electrical preheating system consisting of an engine heater, a cabin heater (Termini™ 1400/1900W), a battery charger, the requisite cables, and a control unit. The engine heater is specialized for each car model, providing the best possible results.

A complete WarmUp system ensures a warm a comfortable cabin, ice-free windows, a fully charged battery, and a preheated, fuel efficient, environmentally friendly and smooth running engine. WarmUp is controlled directly from your phone with DEFA Link.

DEFA WarmUp - Start your day in a better way!



Engine heater:

- ✓Lowers fuel consumption
- ✓Reduces emissions
- ✓Reduces wear on the engine



Interior heater:

- ✓Comfortable, preheated cabin
- ✓Ice-free windows
- ✓Better visibility and safety



Battery charger:

- ✓ Makes sure your car starts
- ✓ Improves battery lifetime
- ✓ Reduces emissions

Control through the DEFA App:

- ✓ Pre-program pick-up times and desired cabin temperature
- ✓ Monitor battery status
- ✓ Check interior and exterior temperature



The DEFA App - installer information

Here are information about how to set up an installer account and add a new device for DEFA Link* or DEFA Bluetooth. On defa.com under Log-in in the top menu you will find the link to the portal where you apply for an installer account, or log-in when you need to set up a new subscription and device for your customers. www.defa.com

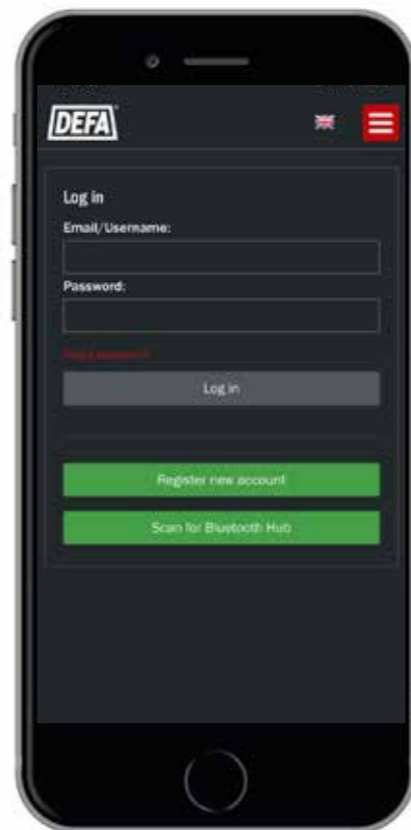
Some guidelines:

- Setting up a device and testing the system can be done on the DEFA App on your smartphone, or on the DEFA website.
- The installer start the process of registration, and the customers contribute to part of the registration process.
- The customer (car owner) can terminate the subscription.
- The customer (car owner) can transfer the subscription to a new owner.
- Installer can replace a device when repair is needed, or following a complaint.

On the website you can apply for an installer account, and log-in to set up a new device.



Download the DEFA App in AppStore or GooglePlay Store



Register a new device or log in using the DEFA App on your smartphone.

*) DEFA Link is available in Norway, Sweden, Denmark and Finland.

DEFA Link/GPS*

Control your WarmUp preheating system, receive alerts if the car is moved and track its location, all on your mobile. Link will give you total control of your car, wherever you are.

WARMUP

With WarmUp Link it is easy to control the WarmUp system using your mobile, wherever you are. WarmUp Link makes it possible to pre-set when you want your car to be at room temperature and have ice-free windows.

You can monitor the outside and the inside temperature of the car, check the battery status and receive an alert if the voltage gets low.

Security

- Receive an alert if your car is started or moved - even with the original key.
- Speed Alert: Set a maximum speed limit, and receive an alert if the limit is exceeded.

Finder

- Track and locate your car
- Share location information with the police and insurance company

Is suitable for all vehicles, 12 or 24V.

Vehicles already equipped with DEFA preheating systems can be upgraded with DEFA Link.

For more information about which phones can be used, subscription terms and prices, check www.defa.com

*) Available in Norway, Sweden, Denmark and Finland.



DEFA Bluetooth®

Control your WarmUp preheating-system using Bluetooth® Low Energy technology on your mobile. You can use Bluetooth to pre-program heating times when you are in or around the car with Bluetooth activated. You need to download the DEFA-App to get started, and your phone must support Bluetooth® Low Energy*. Unlike DEFA Link, Bluetooth® requires no subscription.

WARMUP BLUETOOTH

With WarmUp Bluetooth® you can pre-set when you want your car to be heated. The system calculate when to start heating, based on the outside temperature, giving you a comfortable start of the day. All you have to do is to connect the cable.

*Bluetooth® Low Energy is available for most newer smartphones. Check details in App Store or Google Play store.



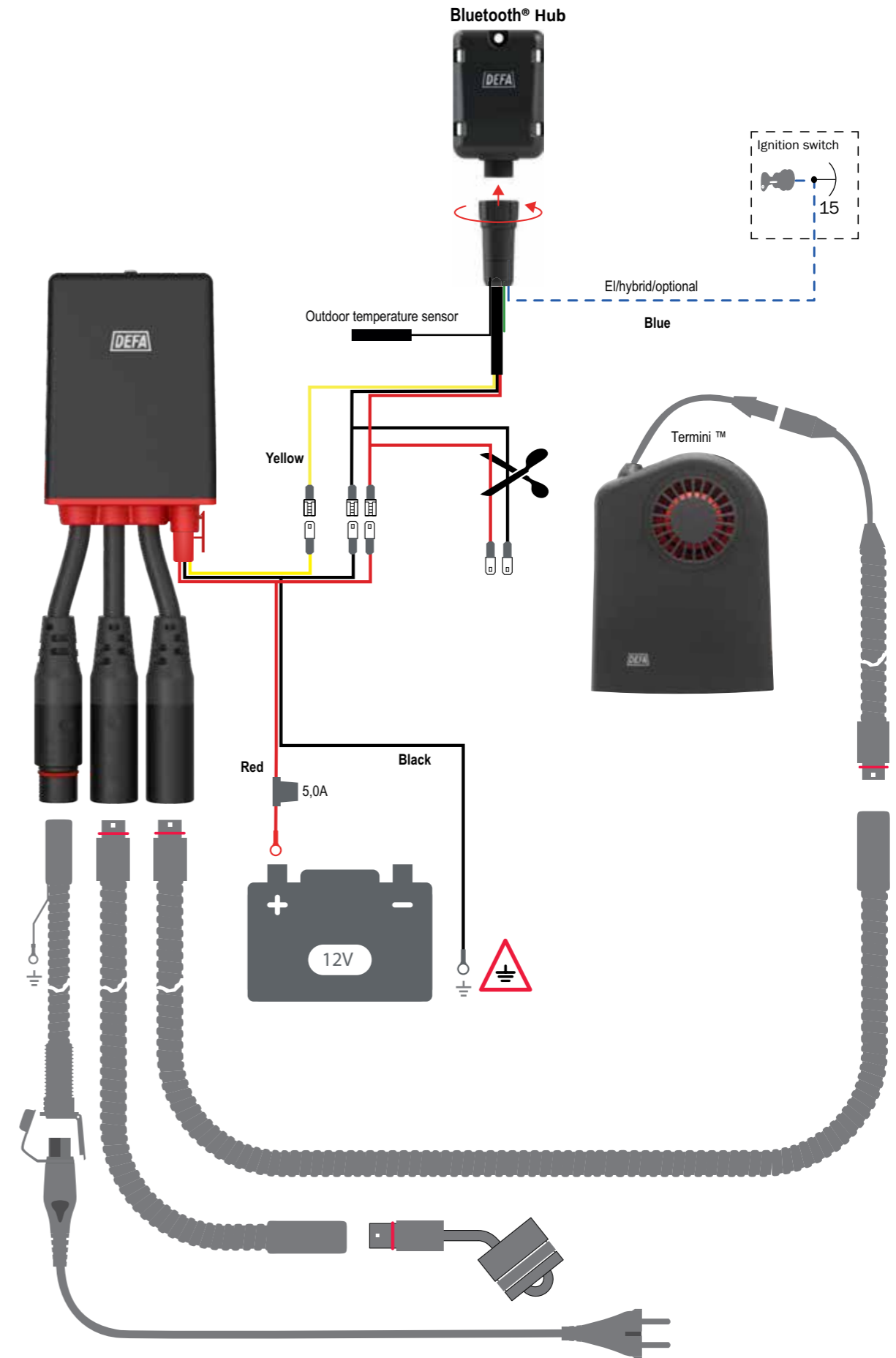
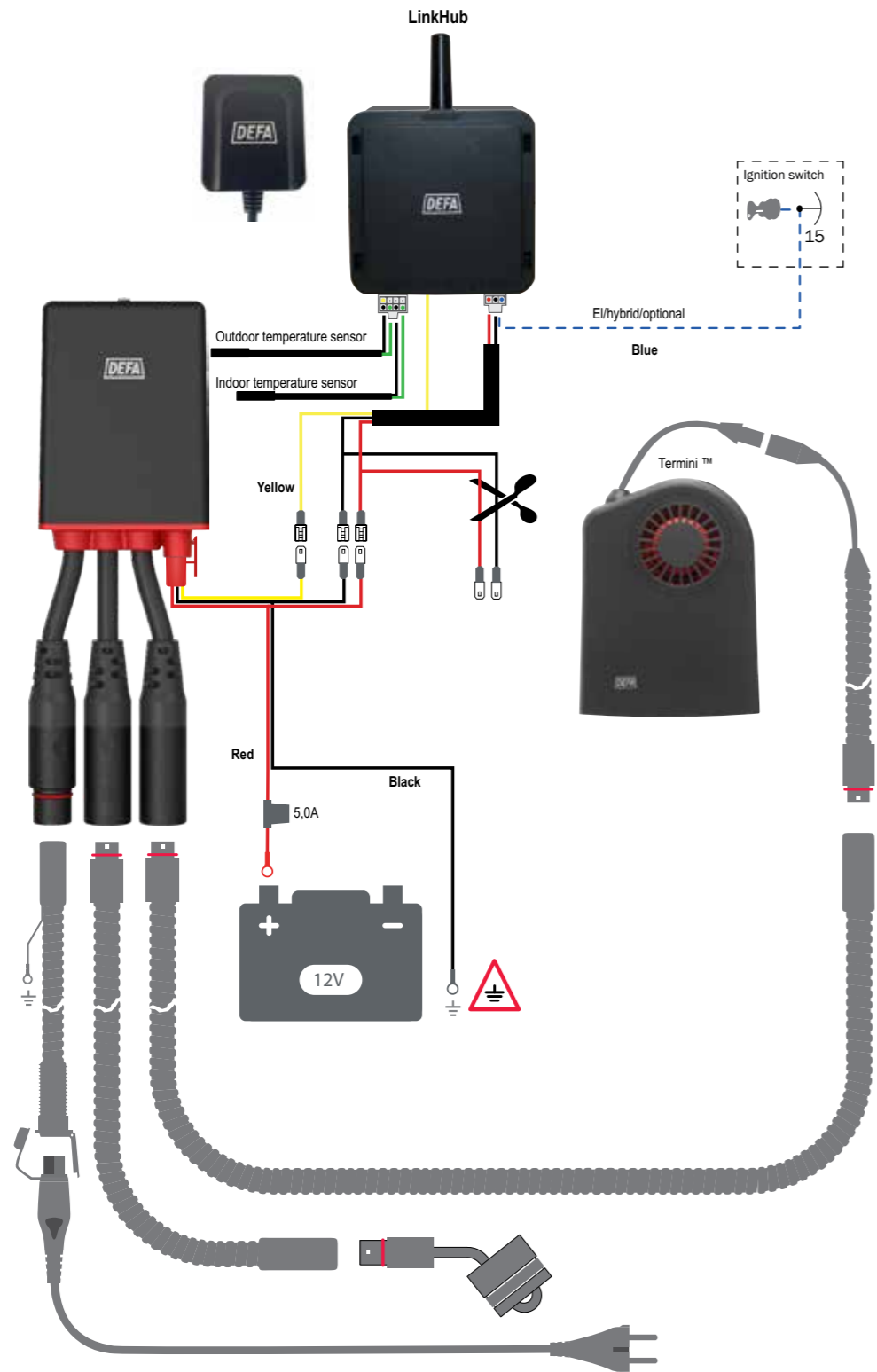
"The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by DEFA is under license."



System overview

The circuit diagram illustrates temperature/time control of engine and interior heater through DEFA Link*. The battery charger will charge independently of the heating settings. The overview also includes the GPS Link unit, to control Security and Finder functionalities in WarmUp GPS Link and Finder Link

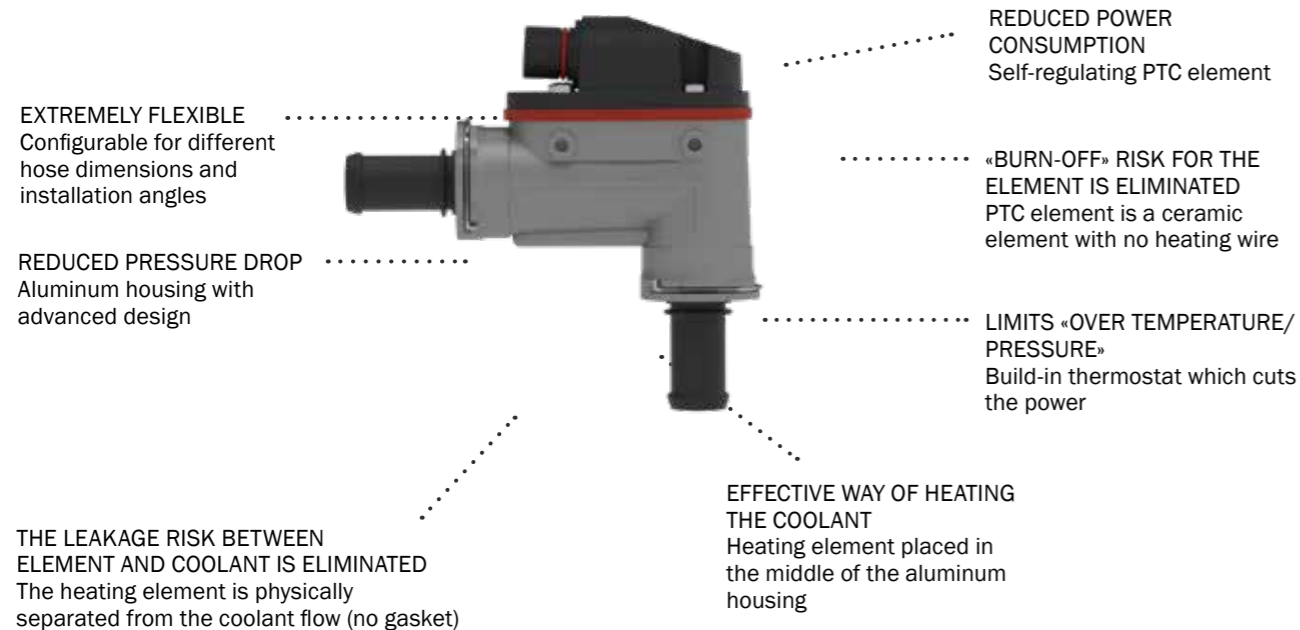
*Available in Norway, Sweden, Finland and Denmark.



Engine heaters

With an engine heater from DEFA you get an engine that always starts, with less wear, reduced fuel consumption and reduced harmful emissions.

DEFA PTC Hose heater 90° - flexible and safe.



DEFA Engine heaters

A preheated engine is easier to start, is exposed to less wear, has reduced fuel consumption and provides up to a 71 % reduction in harmful emissions the first 20 minutes of driving on cold days. An electric engine heater is the most environmentally friendly way to achieve these benefits.

The purpose of an engine heater is to transfer heat to the engine in the most effective way possible. This can either be done indirectly, by heating the motor oil or antifreeze fluid, or directly, by heating the engine block or oil pan using a contact heater.

A DEFA engine heater raises the temperature of the engine to as much as 30-40 degrees above the outside temperature, depending the type of heater, where it is placed, and antifreeze volume. At -15 degrees, thermal balance is achieved when the heater has been connected for 3 hours, this means that any heat produced after that point only goes towards maintaining the engine temperature. By controlling your preheating through DEFA Link or DEFA Bluetooth you get the optimal effect, without using excess energy.

DEFA offers heating solutions for all types of vehicles and engines. Including tractors, trucks and buses. DEFA strives to find the best solution for every engine, whether it is big or small, cooled by air or water, and with or without core plugs.

PTC Hose heater

The new PTC hose heater is a flexible and safe engine heater solution which is easy to install in most car models. It is available in three dimensions: Ø16, Ø18 og Ø19. The heater is delivered with two hose angles of 180° mounted (see image above) and additionally 1x90° and 1x135° is included in the kit.

PTC Hose heater 90° kit - 230V		
PTC Hose heater 90° - Ø16 mm	Item no.	413791
PTC Hose heater 90° - Ø18 mm	Item no.	413792
PTC Hose heater 90° - Ø19 mm	Item no.	413793



PTC Hose heater 180° kit - 230V		
PTC Hose heater Ø16 mm	Item no.	412761
PTC Hose heater Ø18 mm	Item no.	412762
PTC Hose heater Ø19 mm	Item no.	412763

New! PTC Contact heater

Developed to meet requirements from WLTP and Euro6 engines.

Our new PTC contact heater is developed and patented to meet the requirements of the WLTP. In the WLTP, emissions are measured during actual driving and data are collected from temperature sensors in coolant. Pre-heating with a hose heater may affect these temperature readings and trigger warnings. For this reason, our new PTC contact heater is the best solution for many new engines. It provides:

- Good heat distribution in the engine and more complete combustion from when the engine is started.
- Proper heating of the oil that reduces its viscosity allows it to better lubricate the engine.

THE QUICKEST WAY TO THE MARKET

Our solution is based on combining a universal heating element with adaptor pieces customized for each car model. This allows us to quickly have solutions for new cars on the market.

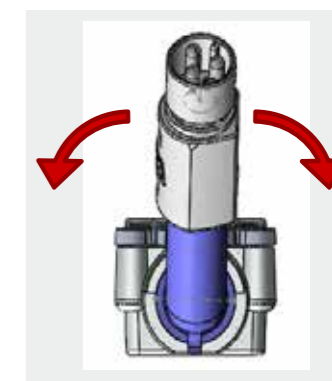
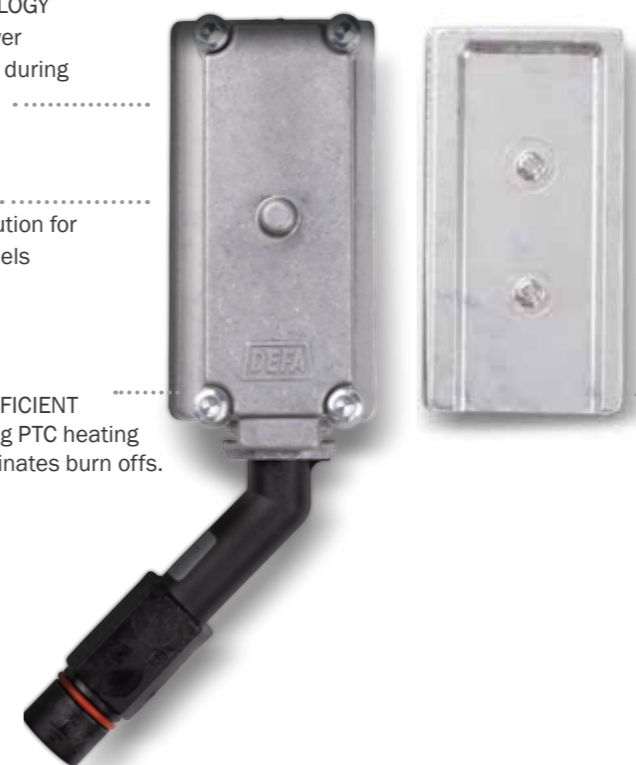
PTC TECHNOLOGY

Reduces power consumption during preheating

PATENTED

A unique solution for your car models

SAFE AND EFFICIENT
Self-regulating PTC heating element eliminates burn offs.

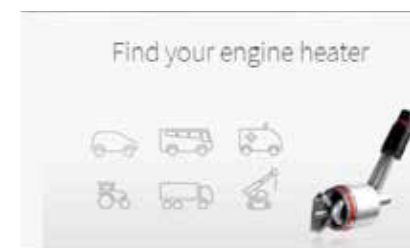


REVOLVABLE PLUG-IN CONTACT
Easier and more flexible installations

ADAPTER PIECES
Customized for each car model

NOTE! IT IS IMPORTANT THAT ONLY RECOMMENDED ENGINE HEATERS ARE USED FOR EACH CAR MODEL. INSTALLATION OF AN ENGINE HEATER NOT RECOMMENDED BY DEFA, OR AN INSTALLATION THAT IS NOT ACCORDING TO GUIDELINES, CAN RESULT IN THE ENGINE HEATER NOT FUNCTIONING AND THE ELECTRONICS OF THE ENGINE BEING AFFECTED. DEFA CAN TAKE NO LIABILITY IF OUR RECOMMENDATION IS NOT FOLLOWED.

In order to find the correct engine heater for the correct car model/engine, go to www.defa.com and 'Find your engine heater'. When correct car model and engine type has been chosen it will be possible to download the last version of the installation guide.



WarmUp GPS Link

WarmUp GPS Link is a complete preheating and security system for your car that can be controlled with your mobile phone. Need subscription.

Maintain total control over your car - wherever you are. WarmUp GPS Link lets you control the preheating in your car and track the car's location on your mobile phone. In addition, you will be alerted if the car is moved, you can track its location in your Link app, and you can set a maximum speed and be alerted if someone is driving too fast while borrowing your car. WarmUp also reduces fuel consumption and harmful emissions. **Available in Norway, Sweden, Denmark and Finland.*

- WarmUp GPS Link is available in two different versions depending on the required power of the Termini™ interior heater.
- WarmUp GPS Link includes everything besides the engine heater, which must be ordered separately and integrated in the system.



WarmUp 1400 GPS Link - 471275	
Termini™ 1400	430055
MultiCharger 1205R Flex	450015
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn extension cable - 0,5m	460802
Termini™ extension cable - 1,75m	460860
MiniPlug Xtreme connection cable - 2,5m	460955
MiniPlug inlet cable - fitting equipment	418801
LinkHub	440030
LinkHub mounting kit	440036
GPS antenna	440037

WarmUp 1900 GPS Link - 471276	
Termini™ 1900	430065
MultiCharger 1205R Flex	450015
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn extension cable - 0,5m	460802
Termini™ extension cable - 1,75m	460860
MiniPlug Xtreme connection cable - 2,5m	460955
MiniPlug inlet cable - fitting equipment	418801
LinkHub	440030
LinkHub mounting kit	440036
GPS antenna	440037

WarmUp Bluetooth®

WarmUp Bluetooth® is a complete preheating system that can be controlled with the DEFA app and Bluetooth Smart technology. With WarmUp your car will always be warm and comfortable, and your battery will always be fully charged and ready to go. WarmUp also reduces fuel consumption and harmful emissions.

- Pre-program your WarmUp system when you are in the vicinity of your car.
- WarmUp Bluetooth® is available in two different versions depending on the required power of the Termini™ interior heater.
 - WarmUp Bluetooth® includes everything besides the engine heater, which must be ordered separately and integrated in the system.



WarmUp 1400 Bluetooth® - 471282	
Termini™ 1400	430055
MultiCharger 1205R Flex	450015
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn extension cable - 0,5m	460802
Termini™ extension cable - 1,75 m	460860
MiniPlug Xtreme connection cable - 2,5m	460955
MiniPlug inlet cable - fitting equipment	418801
Bluetooth Hub	440051

WarmUp 1900 Bluetooth® - 471283	
Termini™ 1900	430065
MultiCharger 1205R Flex	450015
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn extension cable - 0,5m	460802
Termini™ extension cable - 1,75 m	460860
MiniPlug Xtreme connection cable - 2,5m	460955
MiniPlug inlet cable - fitting equipment	418801
Bluetooth Hub	440051

WarmUp SmartStart™

WarmUp SmartStart™ is a complete preheating system that is controlled with a two-way wireless control unit. With WarmUp your car will always be warm and comfortable, and your battery will always be fully charged and ready to go. WarmUp also reduces fuel consumption and harmful emissions.

- WarmUp SmartStart™ is a two-way wireless Control Unit to control your car heating system.
- WarmUp SmartStart™ is delivered in two versions, the effect on the DEFA Termini™ cabin heater differs. An engine heater can be ordered separately and integrated in the system




WarmUp 1400 SmartStart™ - 471277	
Termini™ 1400	430055
MultiCharger 1205R Flex	450015
MiniPlug Inlet Cable - 1,5m	460915
PlugIn Extension Cable- 0,5m	460802
PlugIn Extension Cable - 1,0m	460803
SmartStart™ wireless Control Unit	440020
Termini™ Extension Cable - 1,75m	460860
MiniPlug Inlet Cable - fitting equipment	418801
MiniPlug Xtreme Connection Cable - 2,5m	460955

WarmUp 1900 SmartStart™ - 471278	
Termini™ 1900	430065
MultiCharger 1205R Flex	450015
MiniPlug Inlet Cable- 1,5m	460915
PlugIn Extention Cable- 0,5m	460802
PlugIn Extension Cable - 1,0m	460803
SmartStart™ wireless Control Unit	440020
Termini™ Extension Cable - 1,75m	460860
MiniPlug Inlet Cable- fitting equipment	418801
MiniPlug Xtreme Connection Cable- 2,5m	460955

WarmUp Futura

WarmUp Futura is a complete preheating system that is controlled by a timer placed inside the compartment in the car. Futura can be pre-programmed and ensures that the car is preheated when you need it.

Futura can be programmed with set departure times, for which the car will be preheated. This feature is very useful for people who leave for work at the same time every morning. The system can either be programmed to preheat for a set duration, or to automatically determine the required heating period based on the outside temperature.




WarmUp 1400 Futura - 471284	
Termini™ 1400	430055
MultiCharger 1205R Flex	450015
MiniPlug Inlet Cable - 1,5m	460915
PlugIn Extension cable - 0,5m	460802
PlugIn Extension cable - 1,0m	460803
Futura timer	440010
Termini™ Extension cable - 1,75m	460860
MiniPlug Inlet Cable - fitting equipment	418801
MiniPlug Xtreme connection cable - 2,5m	460955

WarmUp 1900 Futura - 471285	
Termini™ 1900	430065
MultiCharger 1205R Flex	450015
MiniPlug Inlet cable - 1,5m	460915
PlugIn Extension cable - 0,5m	460802
PlugIn Extension cable - 1,0m	460803
Futura timer	440010
Termini™ Extension cable - 1,75m	460860
MiniPlug Inlet Cable - fitting equipment	418801
MiniPlug Xtreme connection cable - 2,5m	460955

ComfortKit Plus

The ComfortKit Plus is a simple way to ensure a warm and comfortable cabin and windows free of ice. ComfortKit Plus also includes a MultiCharger 1205 Flex and the necessary connection components. The different sets have varying outputs - 1400 or 1900W. The ComfortKit can be expanded with an engine heater and a control unit or app control.



ComfortKit 1400 Plus - 470073	
Termini™ 1400	430055
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn Y-connector	460853
PlugIn extension cable - 0,5m	460802
Termini™ extension cable - 1,75m	460860
MiniPlug inlet cable - fitting equipment	418801
MiniPlug Xtreme connection cable - 2,5m	460955
MultiCharger 1205 Flex	450016

ComfortKit 1900 Plus - 470074	
Termini™ 1900	430065
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn Y-connector	460853
PlugIn extension cable - 0,5m	460802
Termini™ extension cable - 1,75m	460860
MiniPlug inlet cable - fitting equipment	418801
MiniPlug Xtreme connection cable - 2,5m	460955
MultiCharger 1205 Flex	450016

ComfortKit

The ComfortKit is a simple way to ensure a warm and comfortable cabin and windows free of ice. The different sets have varying outputs - 1400 or 1900W. The ComfortKit can be expanded with an engine heater, a battery charger and a control unit or app control.



ComfortKit 1400 - 470066	
Termini™ 1400	430055
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn Y-connector	460853
Termini™ extension cable - 1,75m	460860
MiniPlug inlet cable - fitting equipment	418801
MiniPlug Xtreme connection cable - 2,5m	460955

ComfortKit 1900 - 470067	
Termini™ 1900	430065
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn Y-connector	460853
Termini™ extension cable - 1,75m	460860
MiniPlug inlet cable - fitting equipment	418801
MiniPlug Xtreme connection cable - 2,5m	460955

ComfortKit 2100 - 470060	
Termini™ 2100	430060
MiniPlug inlet cable - 1,5m	460915
PlugIn extension cable - 1,0m	460803
PlugIn Y-connector	460853
Termini™ extension cable - 1,75m	460860
MiniPlug inlet cable - fitting equipment	418801
MiniPlug Xtreme connection cable - 2,5m	460955

Termini™

The Termini™ II interior heater provides a warm and comfortable cabin and ice-free windows. The output is adjusted in relation to the interior temperature, by the PTC (PTC = Positive Temperature Coefficient) heating element.

A 20°C temperature increase will result in a 10% power reduction and as the interior temperature increases the power will gradually be reduced accordingly. The interior heater is equipped with an automatic over-temperature protection. All interior heaters are approved by: Safety EN 60335-1 and EN 50408. Termini has IP rate 20.



Termini™ 1000

Item No. Schuko	430072
Collection box - pcs	10
Output -25°C - W	0/1000
Height/Width/Depth - mm	32/138/182
Weight - gr	595
Bracket weight - gr	20



Termini™ 1200

Item No. Schuko	430058
Collection box - pcs	12
Output -25°C - W	0/1200
Height/Width/Depth - mm	32/138/182
Weight - gr	595
Bracket weight - gr	20



Termini™ 1400

Item No. Mini contact	430055
Item No. Schuko	430056
Collection box - pcs	12
Output -25°C - W	0/1400
Height/Width/Depth - mm	32/138/182
Weight - gr	595
Bracket weight - gr	20

Termini™



Termini™ 1700

Item No. Schuko	430068
Collection box - pcs	10
Output -25°C - W	0/830/1700
Height/Width/Depth - mm	38/138/183
Weight - gr	665
Bracket weight - gr	20



Termini™ 1900

Item No. Mini contact	430065
Item No. Schuko	430066
Collection box - pcs	10
Output -25°C - W	0/1150/1900
Height/Width/Depth - mm	38/138/183
Weight - gr	665
Bracket weight - gr	20



Termini™ 2100

Item No. Mini contact	430060
Item No. Schuko	430061
Collection box - pcs	10
Output -25°C - W	0/1350/2100
Height/Width/Depth - mm	47/141/183
Weight - gr	745
Bracket weight - gr	20



Termini™ Stand

Item No.	430100
Height/Width/Depth - mm	145x127x65
Weight - gr	112

Sold separately, and can be used together with all Termini™ interior heaters.



Termini™ Clip

Item No.	430101
Height - mm	145x70

Sold separately, and can be used together with all Termini™ interior heaters.

PlugIn branch sets

DEFA branch set consists of DEFA PlugIn extension cables in different lengths and DEFA PlugIn Y-connector for connecting engine and interior heaters.

The sets are also suitable for those who have engine heaters and want to upgrade to a complete preheating system combined with an interior heater. If you want to connect DEFA Termini™ with Termini™ Mini Contact, you can use branch set 460750 or 460751. If the interior heater has a Schuko plug, use 760/762/766/768/769. The difference lies in the length of the cables. Different car models require separate sets. See Code Type List column 8.

	Branch set - 460750	
	PlugIn extension cable - 1,0 m	460803
	PlugIn Y-connector	460853
	Termini™ extension cable - 1,75 m	460860
	Branch set - 460751	
	PlugIn extension cable - 1,5 m	460843
	PlugIn Y-connector	460853
	Termini™ extension cable - 1,75 m	460860
	Branch set - 460760	
	PlugIn extension cable - 0,5 m	460802
	PlugIn extension cable - 1,0 m	460803
	PlugIn Y-connector	460853
	PlugIn interior heater socket	460829
	Branch set - 460762	
	PlugIn extension cable x 2 - 1,0 m	460803
	PlugIn Y-connector	460853
	PlugIn interior heater socket	460829
	Branch set - 460765	
	PlugIn extension cable - 1,0m	460803
	PlugIn extension cable - 2,0m	460804
	PlugIn Y-connector	460853
	PlugIn interior heater socket	460829
	Branch set - 460766	
	PlugIn extension cable - 1,0m	460803
	PlugIn extension cable - 1,5m	460843
	PlugIn Y-connector	460853
	PlugIn interior heater socket	460829
	Branch set - 460768	
	PlugIn extension cable - 0,5m	460802
	PlugIn extension cable - 1,5m	460843
	PlugIn Y-connector	460853
	PlugIn interior heater socket	460829
	Branch set - 460769	
	PlugIn extension cable - 0,5m	460802
	PlugIn extension cable - 2,0m	460804
	PlugIn Y-connector	460853
	PlugIn interior heater socket	460829

Link*

Control and monitor your preheating and security systems with your mobile phone - wherever you are. With DEFA Link you never have to get in to a cold car again.



*Available in Norway, Sweden, Finland and Denmark.

THE FOLLOWING PROGRAMS CAN BE USED

- Automatic start controlled by the outside temperature
- DEFA WarmUp ON/OFF
- 1 hour preheating time
- 2 hours preheating time
- 3 hours preheating time
- 4 hours preheating time
- Check Battery Status
- Check temperature in the car and outside
- Receive alert if power cable is not connected

	LinkHub	
	Item No.	440030
	Height/Width/Depth - mm	78 (114)/78/23
	Weight - g	170
	Voltage - V	8 - 32V
	Current draw, average - mA	19 *)
	Operating temperature - °C	-40 - +85
	*) Without GPS module.	
	Mounting Kit WarmUp Link	
	Item No.	440036
	Weight - g	360
	GPS Link	
	Item No.	440037
	Height/Width/Depth - mm	44/38/19
	Weight - g	130
	Average power consumption - mA	5 *)
	Protection class - IP	67
	*) with the ignition off.	
	Link GPS Upgrade - 440038	
	LinkHub	440030
	WarmUp Link mounting kit	440036
	GPS Link	440037
	PlugIn Relay contact	460854
	PlugIn extension cable - 0,5m	460802
	Total weight - g	1000

Bluetooth®

Control DEFA WarmUp with Bluetooth® from your mobile without the need for a subscription. Pre-program the system in the vicinity of the car when Bluetooth is activated, and you never have to get in to a cold car again. The Bluetooth Hub control unit can be installed in the engine compartment, without any cables into the interior compartment.



THE FOLLOWING PROGRAMS CAN BE USED

- Automatic start controlled by the outside temperature
- 1 hour preheating time
- 2 hours preheating time
- 3 hours preheating time
- 4 hours preheating time
- DEFA WarmUp ON
- DEFA WarmUp OFF



Bluetooth® Hub Control Unit

Item No.	440051
Operating temperature	-40 - +80 °C
Voltage - V	8 - 32VDC
Average current consumption - mA	2mA
Height/Width/Depth - mm	112/46/24
IP rate	IP6k9k
Frequency/Radio protocol	2,4GHz /Bluetooth Smart
Range	In and around the car
Weight, Bluetooth® Hub	35g
Weight, cables	150g



Bluetooth Upgrade - 440052

Bluetooth Hub Control Unit	440051
Power cable with fuse	418105
PlugIn Relay connector	460854
PlugIn Extension cable 0,5 m	460802



Power cable with fuse

Item No.	418105
This power cable with fuse must be ordered separately in case of:	
<ul style="list-style-type: none"> • Upgrade of existing pre-heating systems without control unit • Installation of Bluetooth® Hub and relay 	

SmartStart™

The control unit DEFA SmartStart™ 12/24V, which is included in the WarmUp SmartStart™ kits, is a two-way wireless control unit that makes sure that the car is preheated when you need it.

SmartStart can be programmed with set departure times, for which the car will be preheated. This feature is very useful for people who leave for work at the same time every morning. The system can either be programmed to preheat for a set duration, or to automatically determine the required heating period based on the outside temperature.

THE FOLLOWING PROGRAMS CAN BE USED:

- Automatic start adjusted according to the outside temperature
- 1 hour preheating time
- 2 hours preheating time
- 3 hours preheating time
- 4 hours preheating time
- Control of fuel heat (analogue control signal)
- DEFA WarmUp ON
- DEFA WarmUp OFF



SmartStart™

Item No. 12V with car unit	440020
Item No. 24V with car unit	440021
Operating temperature remote control (RC) - °C	-10 - +60
Operating temperature car unit (VU) - °C	-40 - +80
Battery RC ⚠	6V Lithium 2CR-1/3N
Range - m	up to 400
Frequency - MHz	868, 370
Current consumption RC	<5µA
Height/Width/Depth RC - mm	78/34/16
Height/Width/Depth VU - mm	69/54/23
Weight RC - gr	29
Test and approval	EN 301 489-1:2005-04, ETSI EN 300 220-1:2000-09 EN 301489-1



SmartStart™ spare parts

SmartStart™ remote control RC	418100
SmartStart™ VU 12V	418101
SmartStart™ VU 24V	418102
Lithium battery ⚠	418103
Cable harness	418072

Futura

DEFA Futura is a control unit included in WarmUp Futura kits and installed in the drivers compartment of the car. It ensures that the car is preheated when you need it.

Futura can be programmed with set departure times, for which the car will be preheated. This feature is very useful for people who leave for work at the same time every morning. The system can either be programmed to preheat for a set duration, or to automatically determine the required heating period based on the outside temperature.



Futura control unit

Item No. without relay box	440010
Best.nr. with relay box	440011
Voltage - V	12
Current consumption - mA	3,5
Height/Width/Depth - mm	37/47/13
Weight - gr	19
Test and approval	EN 50081-1, EN 50082-1

Futura spare parts

Wire harness WarmUp with temperature sensor 12V	418007
Wire harness without temperature sensor 12V	418059
Temperature sensor	418071
Control unit	418067



PlugIn relay box

Item No. 12V	460838
Item No. 24V	460863
Range of use °C	-40 / +80
Height/Width/Depth - mm	63/56/70
Mains voltage - VAC	230/12, 230/24
Current, max. - A	16
Weight - gr	101
Insulation class - cl	II
IP rate	44

NB! Can not be used together with SmartStart, Bluetooth and Link

Connection cables

DEFA Connection cables are developed for DEFA MiniPlug and provides a reliable connection from your mains power outlet to the car. The MiniPlug Xtreme is more durable and is suited for cold weather and rough treatment. Xtreme has a black cap to distinguish it from the MiniPlug.



MiniPlug Xtreme Connection cable 1,5mm²

Item No. - 2,5m	460955
Item No. - 5,0m	460957
Number of pcs in collection box	955: 22 957: 12
Voltage - VAC	230
Current, max. - A	16
Weight - gr	955/309 - 957/535



MiniPlug Connection cable 1,5mm²

Item No. - 2,5m	460920
Item No. - 2,5m with angle contact	460933
Item No. - 3,5m	460938
Item No. - 3,5m with angle contact	460942
Item No. - 5,0m	460921
Number of pcs in collection box	920: 30 - 933: 22 - 938: 22 - 942: 22 - 921:12
Voltage - VAC	230
Current, max. - A	16
Weight - gr	920/390 - 933/450 - 938/510 - 942/530 - 921/600



MiniPlug CableBag

Item No.	460945
Diameter - mm	280
Weight - gr	73



Power cable LED

Item No.	460964
Height/Width/Depth - mm	12/18/28
Weight - gr	8

Connection cables and sets

The DEFA MiniPlug Inlet cable is developed to fit all new cars. Flush and bracket mounting is equally simple. DEFA MiniPlug was developed with the goal of creating user friendly design, better safety and total reliability.



MiniPlug Connection cable 2,5mm²

Item No. - 2,5m	460960
Item No. - 5,0m	460961
Item No. - 10,0m	460962
Item No. - 15,0m	460963
Number of pcs in collection box	960/22 - 961/12 - 962/1 - 963/5
Voltage - VAC	230
Current, max. - A	16
Weight - gr	530/915/1520/2260 (2,5/5,0/10,0/15,0m)

DEFA Connection cable 2,5 mm² is used for vehicles with special requirements for connection cables, such as ambulances and fire engines with special equipment. Even if the cable is available with a 2,5mm² core cross-section, the maximum power consumption is 16A.

Connection set 460785

MiniPlug Inlet cable - 1,5 m	460915
MiniPlug Xtreme Connection cable - 2,5 m	460955
MiniPlug Inlet cable - fitting equipment	418801

Connection set 460787

MiniPlug Inlet cable - 1,5 m	460915
MiniPlug Xtreme Connection cable - 5,0 m	460957
MiniPlug Inlet cable - fitting equipment	418801

Connection set 460789

MiniPlug Inlet cable - 1,5 m	460915
MiniPlug Connection cable angle - 2,5 m	460933
MiniPlug Inlet cable - fitting equipment	418801

Inlet cables

DEFA MiniPlug Inlet cables are tailor-made for all new car models, and are delivered with improved mounting equipment to make the installation easier. The new mounting equipment consists of a set of mounting rings to be used for optimal installation in the car's front, and a bracket to be used behind the license plate.



MiniPlug Inlet cables

Item No. (0,6m)	460902
Item No. (1,0m)	460901
Item No. (1,5m)	460915
Item No. (2,0m)	460939
Voltage - VAC	230
Current - A	16
Weight (Length/Weight) - m/kg	0,6/0,23 - 1,0/0,35 - 1,5/0,41 - 2,0/0,57

The Inlet cable has a MiniPlug 'female-connector' with a cap in one end and a DEFA PlugIn connector in the other. In addition, it has an earth connector for earthing the system.



MiniPlug Mounting Bracket

Item No.	460996
Height/Width/Thickness - mm	160x40x2
Dimension mounting holes - mm	6

The bracket fixed behind the license plate makes it possible to install the inlet in the front of the car - vertically or horizontally, whichever is more suitable for each vehicle.

PlugIn extension cables

The components are easily connected together with DEFA's armored PlugIn extension cables. The system ensures a reliable and tight connection and eliminates incorrect connections.



PlugIn extension cables	
Length - m	0,5 - 1 - 1,5 - 2 - 3 - 4 - 5 - 8 - 10 - 12
Voltage - VAC	230
Current - A	16
IP rate	44

PlugIn extension cables			
Item No.	Length - m	Weight - gr	Pcs. in collection box
460802	0,5	145	22
460803	1,0	265	22
460843	1,5	380	22
460804	2,0	497	22
460844	3,0	731	12
460846	4,0	965	12
460809	5,0	1200	1
460847	8,0	1900	1
460851	10,0	2420	1
460850	12,0	2838	1



Termini™ interior heater cable with Mini-contact	
Item No.	460860
Length - m	1,75 (soft part 0,6m - armored part 1,15m)
Number of pcs in collection box	Single box or 22
Voltage - VAC	230
Current, max. - A	16
Weight - gr	250
IP rate	44

PlugIn branches and connectors

The DEFA relay connector is adapted to DEFA PlugIn contacts and used to control the engine and interior heater, together with a DEFA control units. It can also be used for separate control of engine and interior heaters together with DEFA SmartStart. At branching, use H-, T- or Y- connectors.



PlugIn Relay connector	
Item No. 12V	460854
Item No. 12V - two rack connectors	701445
Item No. 24V - two rack connectors	460856
Range of use °C	-40 / +80
Height/Width/Depth - mm	61/31/67
Mains voltage- VAC	230/12, 230/24
Current - A	Max 16
Weight - gr	59
Insulation class - cl	II
IP rate	44



PlugIn Y-connector	
Item No.	460853
Height/Width/Depth - mm	53/48/24
Mains voltage - VAC	230
Current, max. - A	16
Weight - gr	23
IP rate	44

DEFA Y-connector is an all-welded connector for connecting engine and interior heater or MultiCharger battery charger.



PlugIn H-connector	
Item No.	460857
Height/Width/Depth - mm	42/63/21
Mains voltage - VAC	230
Current. - A	16
Weight - gr	30
IP rate	44

DEFA H-connector is an all-welded connector for more flexible connection of engine and interior heater or MultiCharger battery charger

PlugIn branches and contacts



PlugIn T-connector 90°

Item No.	460831
Height/Width/Depth - mm	42/63/21
Mains voltage - VAC	230
Current, max. - A	16
Weight - gr	22
IP rate	44

DEFA T-connector is an all-welded connector for connecting the engine and interior heater or the MultiCharger battery charger.



LED Indicator Kit

Item No.	460881
Mains voltage - VAC	110-240
Current, max. - A	16
IP rate, PlugIn/LED	44/67



PlugIn Interior heater socket

Item No.	460829
Height/Width/Depth - mm	70/54/41
Voltage - V	250/12
Current, max. - A	16
IP rate	20



Termini™ Adapter cable

Item No.	418069
Length - m	0,25
Voltage- V	250/12
Current, max. - A	10
Weight - gr	54
IP rate	44

Special tools

Tools for installation of MiniPlug and of cables through firewalls.



Pullwire kit 866

Item No.	460866
No. of pcs.	1 set

Tool for simpler installation of PlugIn extension cables with male or female contact through the firewall.



Pullwire kit 868

Item No.	460868
No. of pcs.	2

Tool for simpler installation of PlugIn extension cables with male or female contact through the firewall. Delivered with 2 extensions of 1m.



Installation tool

Item No.	460840
Hole saw Ø24mm	For MiniPlug inlet cable
Hole saw Ø20mm	For Interior heater cable
File	For MiniPlug feed track
Hole saw retainer	With pilot hole drill



Tools for feed through bulkhead

Item No.	460862
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Put the tools on PlugIn male or female contact for simpler installation through the firewall.



Crow foot tool

Item No.	460867
----------	--------

Crow foot 27mm. Mounting- and dismounting tool for simpler installation of the following engine heaters: 241, 277, 292, 299.



Tool for heater 241

Item No.	460861
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Steering tool for Allen wrench.

Extractor tools

To use these tools, you need the main tools, the extractor and the taper clamping sleeve. The extractor and taper clamping sleeve can be purchased separately in 4 different sizes, depending on the inside diameter of the frost plug you wish to remove.

The tool is suitable for deep frost plugs and functions like an extractor. It is securely tightened around the side walls of the frost plug by tightening the nut. Next, a suitable adapter sleeve is attached. The frost plug is gradually pulled off by tightening the nut. Follow the instructions that come with the tools! These tools come separately or in a complete set.



Complete extractor tools

Item No.	491012
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Consists of main tools (491011), 4 extractor tools (491006) og 4 taper clamping sleeves (491005).



Main tools

Item No.	491011
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Extractor

Item No. complete set (4 extractors)	491006
--------------------------------------	--------

Item No. (Ø20mm)	491001
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Item No. (Ø27mm)	491002
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Item No. (Ø34mm)	491003
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Item No. (Ø41mm)	491004
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Taper clampings

Item No. complete set (4 taper clampings)	491005
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Item No. (Ø31mm)	491007
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Item No. (Ø35mm)	491008
------------------	--------

Item No. (Ø39mm)	491009
------------------	--------

Item No. (Ø46mm)	491010
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Extractor hook

Item No. 30,5mm	460835
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Item No. 37,5mm	460836
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Item No. 44,5mm	460837
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NOTES

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DEFA Charging products



DEFA offers battery chargers for a wide variety of vehicles, the maritime sector, and industrial applications.

DEFA develops and manufactures a series of charging products that allow our customers to get the most out of their batteries.

Emergency vehicles and boats, life-saving equipment and electronic wheelchairs impose the strictest standards both on us and our products, and are just some of the things that drive us to always want to do better.

We continuously strive to meet the highest standards of quality, safety and flexibility, and to keep our customers going - for longer than ever.

DEFA charging products have been developed for use with our own protected and splash proof cables with PlugIn connectors. The system eases installation of 230VAC in boats, mobile units and military equipment, and 42VAC charging systems for life- and rescue boats. The system is intuitive, reliable and durable, and can be installed without tools or a certified installer.

The 230VAC shore power system for boats includes a distribution box with fuses, a ground leakage circuit breaker, mains connections, outlets, PlugIn battery chargers and galvanic isolators to reduce the risk of galvanic corrosion and ground leakage. The system is module-based, enabling extension with additional components, such as engine heaters and auxiliary equipment.

Our customers are professional and private users in such areas where strict demands are required to meet expectations on functionality and a high degree of readiness. Quality control, knowledge and customer demand is an important part of our development and product philosophy.

Battery care

The best way of charging a 24V system is to charge each 12V battery with a separate charger. An alternative to this is to charge with a 24V charger even if this will not provide an optimal charge for both batteries.

NEGATIVE CHARGING

Negative charging is an unfamiliar term for most owners of cars, trucks and busses. Even so, the problem of negative charging is commonplace.

A battery consists of a collection of cells that provide energy. A 12V battery, commonly found in private cars and smaller boats, normally contains six such cells. For heavier vehicles, such as trucks and buses, 24V is preferred, since they require more "pressure" (voltage) to start. A 24V setup is often made by connecting two 12V batteries in a series.

When charging these batteries, a sufficiently high voltage is necessary to ensure that they are fully charged. Generally speaking, a low charging voltage reduces battery lifespan. The proper charging voltage for 12V lead/acid car batteries is 14,4V at a temperature of 20 degrees.

Most cars produce insufficient charging voltage, and the problem of negative charging will be especially noticeable in 24V setups. Charging the batteries separately over night is the best way to avoid this issue.

A quality charger must also switch to maintenance voltage when the batteries are fully charged. This voltage is a little lower, and makes sure that the batteries do not expend too much fluid.

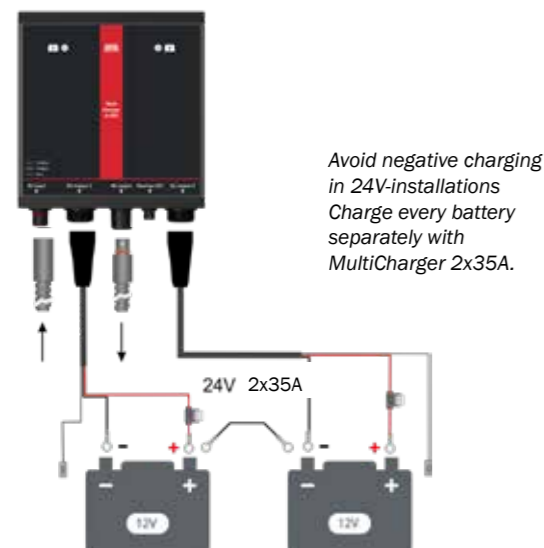
LONGEVITY

One can generally say that low charging voltage gives the batteries a short lifespan. When charging, it is necessary that the charger's voltage is high enough to fill the batteries completely. Correct charging voltage for a lead/acid car battery is 14,4V (for a "12V" battery) at 20 °C. Most cars give too low charging voltage and in 24V installations negative charging will intensify the problem even more. It is therefore important to charge the batteries separately (see figure below) during the night. In that way both batteries achieve the correct voltage. When choosing a charger one should also make sure that the charger automatically changes to maintenance voltage when the batteries are full. This voltage should stay a little lower in order to make sure that the batteries are not "cooked", i.e. that the batteries consume too much fluid.

IN SHORT

Excellent operating economy is achieved by charging batteries in a 24V setup at a voltage of 14,4V at a temperature of 20 degrees.

- Negate negative charging by using a charger that charges the batteries individually
- Use a charger that switches to maintenance voltage when the batteries are fully charged.
- Keep batteries and cables clean, and make sure that the fluid levels in the batteries are correct.



MultiCharger 1x12A

DEFA MultiCharger 1x12A is a battery charger made for permanent installation in vehicles. It is well suited for all lead/acid batteries (AGM,GEL,EFB, Start&Stop) up to 150Ah. With the DEFA Plugin connectors, both input and output, this charger integrates perfectly into the rest of the DEFA system.

The charger is delivered with 2 meter fixed cable including temperature sensor



MultiCharger 1x12A

Item No	705200
Mains Voltage [VAC]	230
Operating temperature [°C]	-35 +50
Charging voltage [VDC]	14,4
Float voltage [VDC]	13,5
Charging current [A]	12
Battery size. [Ah]	150
IP-rate	44
Weight [kg]	1
Height/Width/Depth [mm]	138x98x53
Certifications	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

* Temperature compensated ca 5,0 mV/°C/celle. Ref. 25 °C

MultiCharger 2x12A

DEFA MultiCharger 2x12A consists of two 12A battery chargers mounted on the same bracket. This combination is made for permanent installation in vehicles. It is well suited for all lead/acid batteries (AGM,GEL,EFB, Start&Stop) up to 2x150Ah. With the DEFA Plugin connectors, both input and output, this charger integrates perfectly into the rest of the DEFA system.

The charger is delivered with 2 meter fixed cable including temperature sensors.



MultiCharger 2x12A

Item No	705300
Mains Voltage [VAC]	230
Operating temperature [°C]	-35 +50
Charging voltage [VDC]	14,4
Float voltage [VDC]	13,5
Charging current. [A]	2x12
Battery size [Ah]	2x150
IP-rate	44
Wight [kg]	2
Height/Width/Depth [mm]	138x201x53
Certifications	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

* Temperature compensated ca 5,0 mV/°C/celle. Ref. 25 °C

MultiCharger 1x20A

DEFA MultiCharger 1x20A is a powerful and compact charger that is easily installed in all types of vehicles. It is designed to handle any conditions. To make the system more flexible, DC cable in the desired length is ordered separately. Cables available in 2, 4 and 6 meters.



MultiCharger 1x20A

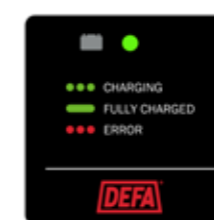
Item No.	705800
Mains Voltage - VAC/Hz	230/50-60
Operating temperature - °C	-35 +50
Charging Voltage- VDC	14,4
Float voltage- VDC	13,5
Charging Current - A	20
Battery size - Ah	250
IP-rate	44
Weight - kg	2
Height/Width/Depth - mm	182x98x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

ACCESSORIES:

Item No:	
706483	2m Charging cable
706484	4m Charging cable
706485	6m Charging cable
705294	5m Remote panel
705295	10m Remote panel
705296	20m Remote panel
705297	25m Remote panel
705463	Connection Schuko - PlugIn



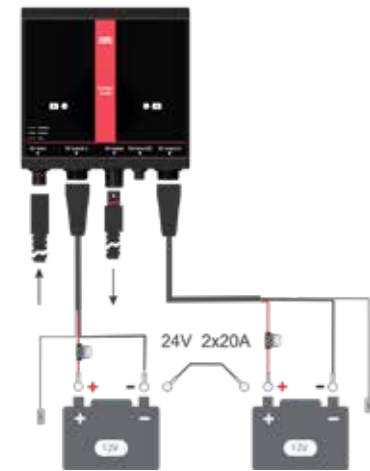
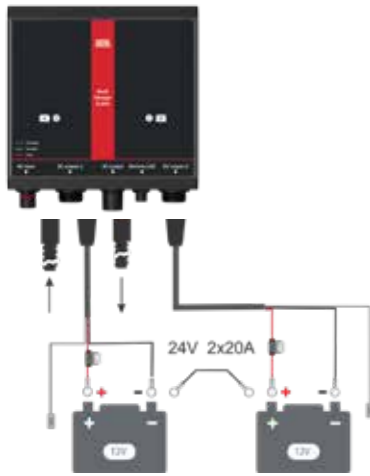
12V 1x20A



Connection Schuko - PlugIn

MultiCharger 2x20A

DEFA MultiCharger 2x20A is a powerful and compact charger that is easily installed in all types of vehicles. It is designed to handle any conditions. To make the system more flexible DC cables in desired lengths are ordered separately. Cables available in 2, 4 and 6 meters.



MultiCharger 2x20A

Item.No.	705900
Mains Voltage - VAC/Hz	230/50-60
Operating temperature - °C	-35 +50
Charging Voltage - VDC	14,4
Float voltage - VDC	13,5
Charging Current- A	2x20
Battery size- Ah	2x250
IP-rate	44
Weight - kg	3
Height/Width/Depth- mm	182x190x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

ACCESSORIES:

Item No:	
706483	2m Charging cable
706484	4m Charging cable
706485	6m Charging cable
705162	5m Remote panel
705163	10m Remote panel
705164	20m Remote panel
705165	25m Remote panel
705463	Connection Schuko - PlugIn



Connection Schuko - PlugIn

MultiCharger 1x35A

DEFA MultiCharger 1x35A is a small and powerful charger for use in all types of vehicles and in any conditions. To make the system more flexible, cables are ordered separately in desired lengths.



12V 1x35A

MultiCharger 1x35A

Item No. with PlugIn 1x35A	708501
Mains voltage - VAC/Hz	230/50-60
Ambient temperature [°C]	-35 +50
Charging voltage [VDC]	14,4
Float voltage [VDC]	13,5
Max charging current [A]	35
Recommended battery max[Ah]	600
IP rate [IP]	44
Weight [kg]	1,6
1x35A Height/Width/Depth - mm	200x98x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

ACCESSORIES:

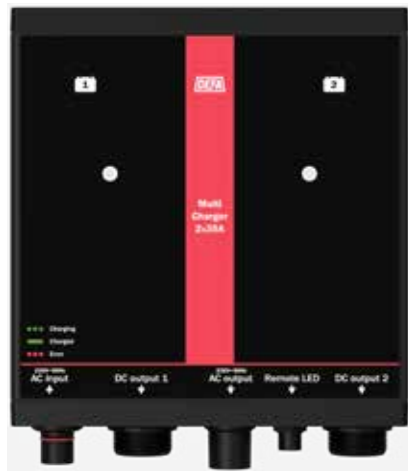
Item No:	
705099	2m Charging cable
705147	4m Charging cable
705159	6m Charging cable
705160	8m Charging cable
705294	5m Remote panel
705295	10m Remote panel
705296	20m Remote panel
705297	25m Remote panel
705463	Connection Schuko - PlugIn



Connection Schuko - PlugIn

MultiCharger 2x35A

DEFA MultiCharger 2x35A is a small and powerful charger for use in all types of vehicles and in any conditions. To make the system more flexible, cables are ordered separately in desired lengths.

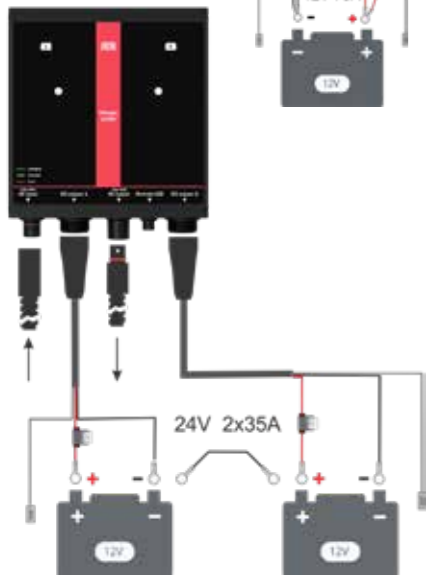


MultiCharger 2x35A	
Item no. with PlugIn 2x35A	708502
Mains voltage - VAC/Hz	220-240/50-60
Ambient temperature [°C]	-35 +50
Max charging voltage [VDC]	14,4
Float voltage [VDC]	13,5
Max charging current [A]	2x35
Recommended battery max[Ah]	2x600
IP rate [IP]	44
Weight [kg]	3,3
2x35A Height/Width/Depth - mm	200x190x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

12V SYSTEM



24V SYSTEM



ACCESSORIES:

Item No:	
705099	2m Charging cable
705147	4m Charging cable
705159	6m Charging cable
705160	8m Charging cable
705162	5m Remote panel
705163	10m Remote panel
705164	20m Remote panel
705165	25m Remote panel
705463	Connection Schuko - PlugIn



Connection Schuko - PlugIn

MultiCharger 40A - 24V

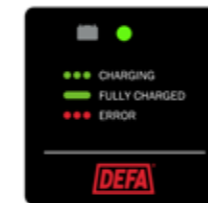
DEFA MultiCharger 40A is a 24V charger for trucks and heavy vehicles. It is compact with high efficiency, and robust for tough environments. To make it even more flexible to mount in tight spaces, remote panels are available as accessory.



MultiCharger 40A 24V	
Item no.	708400
Mains voltage - VAC/Hz	230/50-60
Ambient temperature [°C]	-30 +50
Max charging voltage [VDC]	28,8
Float voltage [VDC]	27,2
Max charging current [A]	40
IP rate [IP]	67
Weight [kg]	4
Height x Width x Depth - mm	280 x 175 x 85
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

ACCESSORIES:

Item No:	
705294	5m Remote panel
705295	10m Remote panel
705296	20m Remote panel
705297	25m Remote panel
705480	Connection Schuko - PlugIn



Connection Schuko - PlugIn

MultiCharger 1205 Flex

DEFA MultiCharger 1205 Flex is a powerful and compact charger for modern cars. It needs 48% less space for installation than its predecessor, and it has flexible cables to allow for easy installation in tight spaces. The bracket allows for easy installation in all cars, and the PlugIn cables integrates it perfectly with the rest of the DEFA system.



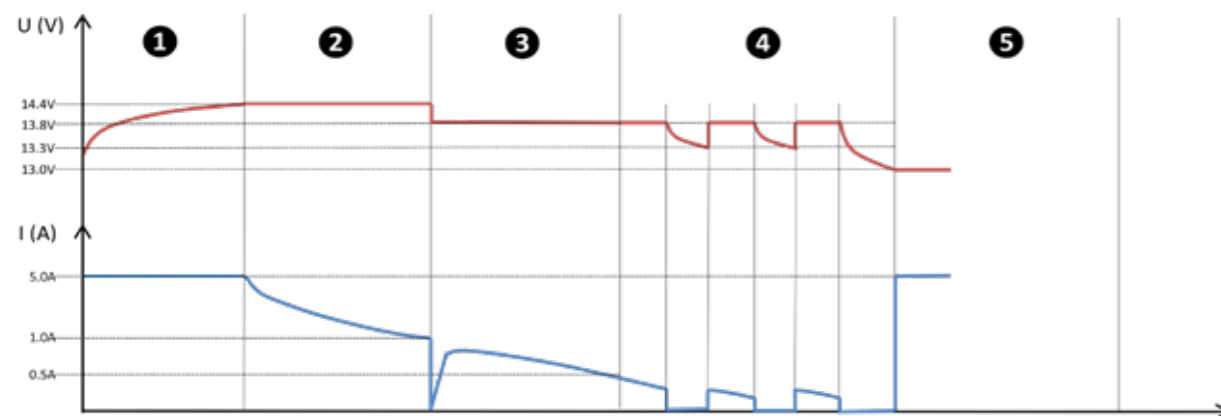
MultiCharger 1205 Flex

Item No.	450016
Charging current - A	5
Charging voltage - V	> 14,4
Float voltage - VDC	13,3 - 13,8
Height/Width/Depth - mm	95/71/38
Weight - gr	369
Fuse - A	7,5
IP rate	65



EXTREMELY EASY TO INSTALL
Flexible 230V connections, reduced size and flexible bracket

CHARGING CURVE:



MultiCharger 1205R Flex

DEFA MultiCharger 1205R Flex is a powerful and compact charger with built-in relay and the best option for charging the vehicle when a pre-heating system is installed. It needs 60% less space for installation than its predecessor. . With a bracket with more optional installation ways and flexible connection cables it is still 37% smaller than the previous.



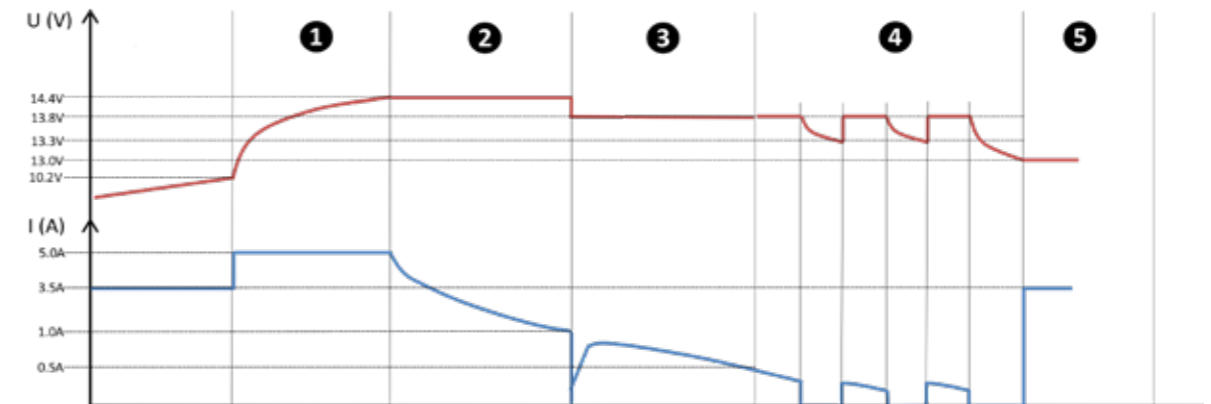
MultiCharger 1205R Flex with relay

Item No.	450015
Charging current - A	5
Charging voltage - V	> 14,4
Float voltage - VDC	13,3-13,8
Height/Width/Depth - mm	95/71/38
Weight - gr	325
Fuse - A	7,5
IP rate	65



EXTREMELY EASY TO INSTALL
Flexible 230V connections, reduced size and flexible bracket

CHARGING CURVE:



MultiCharger 1210 Flex

MultiCharger 1210 Flex is a 12V/10A battery charger which is more compact than similar chargers in the category. It needs 89% less space for installation than its predecessor. The new 1210 Flex has more flexible cables making the mounting of the charger easier and faster. The new waterproof 12V connections reduced corrosion risk and improves the durability of the charger. Our most powerful and compact charger for modern cars.



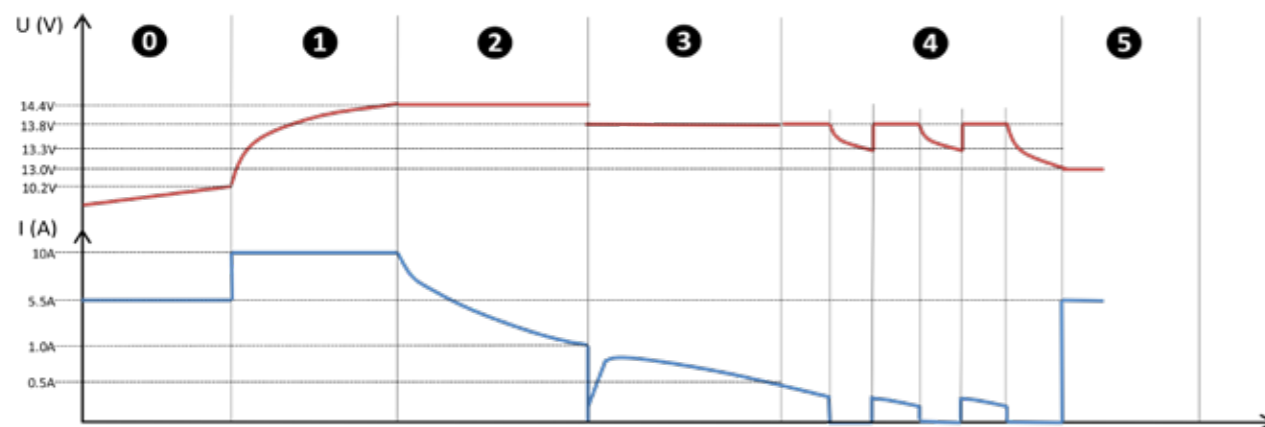
MultiCharger 1210 Flex

Item No.	450017
Mains voltage - VAC/Hz	230
Charging voltage - VDC	14,4
Maintenance charging - VDC	13,6
Max. Charging current - A	10
Height/Width/Depth - mm	105/71/42
Weight - gr	384
IP rate - IP	65

The charger is delivered with a bracket for easier mounting



CHARGING CURVE:



ChargerKits 1205 Flex and 1210 Flex

A battery charger keeps your batteries fully charged, extends the its lifespan and ensures that your car starts regardless of weather or temperature. DEFA ChargerKit is available with MultiCharger 1205 Flex or MultiCharger 1210 Flex and the kit includes all necessary cables for easier installation. These ChargerKits are particularly suitable for cars with parking heaters. Choose the ChargerKit 1210 Flex if you appreciate faster charging. Because of the charger's advanced and responsive charging cycle, your battery is charged even when other chargers would fail.



ChargerKit 1205 Flex

Item No.	450034
Collection box - pcs	12
MultiCharger 1205 Flex	450016
Cable set 12V	418109
MiniPlug inlet cable 1,5 m	460915
MiniPlug Xtreme connection cable 2,5 m	460955
MiniPlug inlet cable - fitting equipment	418801



ChargerKit 1210 Flex

Item No	450033
MultiCharger 1210 Flex	450017
Cable set 12V	418107
MiniPlug inlet cable 1,5 m	460915
MiniPlug Xtreme connection cable 2,5 m	460955
MiniPlug inlet cable - fitting equipment	418801

QUALITIES

- A highly efficient switch mode and advanced charging profiles prevent damage to the battery
- The charger can therefore be continuously connected
- Temperature compensated charging voltage ensures that the battery is fully charged regardless of the condition of the battery. No risk for overcharging.
- Light indication of charging mode
- The chargers are protected against short circuits and reverse polarity
- Does not harm advanced electronics
- Small dimensions
- Protects the battery from breaking down (sulphating) and extends the batteries lifetime.

DEFA's chargers are all approved by;EN 60335-2-29:2004 + A2:210, EN 60335-1:2012 + A11:2014, EN 62233:2008, EN 550141:2006 + A1:2009 + A2:2011, EN 61000-3-3:2013, EN 610003-2:2014, EN 55014-2:2015

ChargerKits 12A, 20A and 40A

Chargerkits includes the battery charger and necessary cables. Easily install the DEFA ChargerKit by connecting the DEFA MiniPlug inlet into the front of the vehicle and the connection cable to the nearest mains outlet.



ChargerKit cables of different lengths

ChargerKit 1x12A - 706252	
MultiCharger 1x12A	705200
MiniPlug Inlet Cable - 2,0m	460939
MiniPlug Xtreme Connection Cable - 5,0m	460957
MiniPlug inlet cable - fitting equipment	418801

ChargerKit 1x12A - 706910	
MultiCharger 1x12A	705200
MiniPlug Inlet Cable - 1,5m	460915
MiniPlug Xtreme Connection Cable - 2,5m	460955
MiniPlug inlet cable - fitting equipment	418801

ChargerKit 2x12A - 706253	
MultiCharger 2x12A	705300
MiniPlug Inlet Cable- 2,0m	460939
MiniPlug Xtreme Connection Cable - 5,0m	460957
MiniPlug inlet cable - fitting equipment	418801



ChargerKit 1x20A - 706930	
MultiCharger 1x20A	705800
MiniPlug Inlet Cable - 2,0m	460939
MiniPlug Xtreme Connection Cable - 5,0m	460957
Detachable charging cable w temperature sensor and fuse -2m	706930
MiniPlug inlet cable - fitting equipment	418801

ChargerKit 2x20A - 706931	
MultiCharger 2x20A	705900
MiniPlug Inlet Cable- 2,0m	460939
MiniPlug Xtreme Connection Cable - 5,0m	460957
2 x detachable charging cable w temperature sensor and fuse -2m	706931
MiniPlug inlet cable - fitting equipment	418801



ChargerKit 40A 24V - 711152	
MultiCharger 40A 24V	708400
MiniPlug Inlet Cable- 2,0m	460939
MiniPlug Xtreme Connection Cable - 5,0m	460957



RescueCharger 1x12A, 1x20A, 1x35A

DEFA RescueChargers are specifically adjusted to emergency response vehicles which are connected and disconnected several times during a 24-hour period. The charger is suitable for vehicles with battery sizes up to 600Ah. The charger gives a galvanic isolation between net earth and the battery. NEW! The 1x12A charger is delivered with starter kill and remote LED.



RescueCharger 1x12A	
Item No. with PlugIn	706700
Mains voltage - VAC/Hz	230/50-60
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Charging current - A	12
Recommended battery max - Ah	150
Height/Width/Depth - mm	138x98x53
Weight - kg	1
IP rate	44



RescueCharger 1x20A	
item No. with PlugIn	706200
Mains voltage - VAC/Hz	230/50-60
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Charging current - A	20
Recommended battery max - Ah	250
Height/Width/Depth - mm	182x98x53
Weight - kg	1,5
IP rate	44



RescueCharger 1x35A	
Item No. with PlugIn	708505
Mains voltage - VAC/Hz	230/50-60
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Charging current - A	35
Recommended battery max - Ah	600
Height/Width/Depth - mm	200x98x53
Weight - kg	1,6
IP rate	44

RescueCharger 2x12A, 2x20A, 2x35A

DEFA RescueChargers are specifically adjusted to emergency response vehicles which are connected and disconnected several times during a 24-hour period. The charger is suitable for vehicles with battery sizes up to 2x600Ah. The charger gives a galvanic isolation between net earth and the battery.



RescueCharger 2x12A	
Item No. with PlugIn	705700
Mains voltage - VAC/Hz	230/50-60
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Charging current - A	2x12
Recommended battery max - Ah	2x150
Height/Width/Depth - mm	138x201x53
Weight - kg	2
IP rate	44



RescueCharger 2x20A	
Item No. with PlugIn	706300
Mains voltage - VAC/Hz	230/50-60
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Charging current - A	2x20
Recommended battery max - Ah	2x250
Height/Width/Depth - mm	182x190x53
Weight - kg	3
IP rate	44



RescueCharger 2x35A	
Item No. with PlugIn	708506
Mains voltage - VAC/Hz	220-240/50-60
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Charging current - A	2x35
Recommended battery max - Ah	2x600
Height/Width/Depth - mm	200x190x53
Weight - kg	3,3
IP rate	44

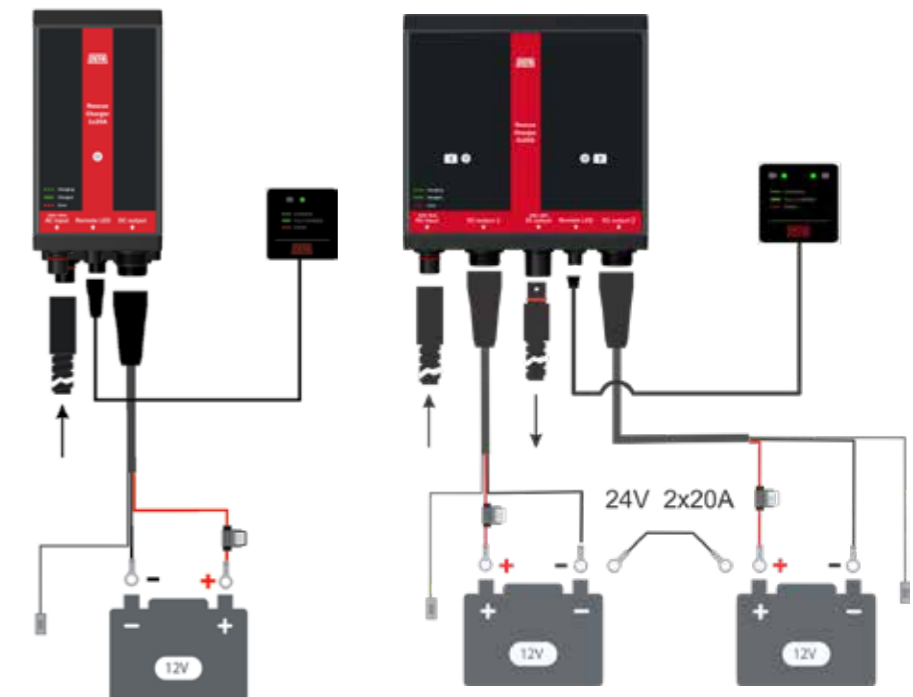
RescueCharger accessories

Accessory for DEFA RescueChargers consists of charging cables and remote panels with a range of cable lengths as well as a connection from PlugIn to Schuko. Rettbox is also available for mounting the Rescue chargers.



Connection Schuko - PlugIn

RescueCharger ACCESSORIES	
Item No.	
706483	2m Charging cable 20A
706484	4m Charging cable 20A
706485	6m Charging cable 20A
705099	2m Charging cable 35A
705147	4m Charging cable 35A
705159	6m Charging cable 35A
715160	8m Charging cable 35A
705294	5m Remote panel 1x12A, 1x20A, 1x35A
705295	10m Remote panel 1x12A, 1x20A, 1x35A
705296	20m Remote panel 1x12A, 1x20A, 1x35A
705297	25m Remote panel 1x12A, 1x20A, 1x35A
705162	5 m Remote panel 2x20A, 2x35A
705163	10m Remote panel 2x20A, 2x35A
705164	20m Remote panel 2x20A, 2x35A
705165	25m Remote panel 2x20A, 2x35A
705463	Connection Schuko - PlugIn



ShowroomCharger 32A

DEFA Showroom Charger 32A is based on modern switchmode technology and galvanised divisions, and represents the latest technology within battery charging. It is well suited to maintenance charge the battery for an unlimited time, and will always keep your cars in the showroom ready for demonstration. The detachable cables and compact size, makes it easy to move from car to car, and will hardly be noticeable under the car.



ShowroomCharger 32A	
Item No. Standard clamps	707000
Item No. Special clamps	708800
Volt	12V Charging
Rated voltage AC	220-240VAC, 50-60Hz
Charging voltage	14.4V
Float charging	13,6V
Min battery voltage	2.0V
Max charging current	32A
Back current drain	<1Ah/month
Ambient temperature	-20°C ~ +40°C
Charging types	7 step, fully automatic charging cycle (Analyze/main charge/top charge/analyze/float/sleep/wake Up)
Battery types	All 12V lead-acid batteries (WET, MF, Ca/Ca, AGM, EFB and GEL) Start-Stop Batteries
Battery Capacity	30-600Ah
Dimensions L/B/H	219/125/62
IP rate	IP40
Weight	1,7 kg



Standard clamps



Special clamps, Suitable for Mercedes-Benz

Detachable cables:	
2,5m charging cable with standard clamps	708227
2,5m charging cable with special clamps	711400

WorkshopCharger 25A

The new WorkShopCharger 25A from DEFA is a battery charger as well as 13,7V power supply. Its unique display makes every function available with one button access, and allows for easy monitoring of the charging process. It provides continuous current when you need stable voltage to avoid lost data during ECU programming or battery change. It is delivered with cable, a wall bracket and isolated hood for easy storage and use.



WorkShopCharger 25A	
Item No.	706900
Volt	12V Charging / Powersupply 13,7 Volt
Rated voltage AC	230VAC
Charging voltage	14.4V/14,7V
Float charging	13,6V
Min battery voltage	2.0V
Max charging current	25A
Back current drain	<1Ah/month
Ambient temperature	-20°C ~ +50°C
Charging types	7 step, fully automatic charging cycle (Analyze/main charge/top charge/analyze/float/sleep/wake Up)
Battery types	All types of 12V lead-acid batteries (WET, MF, Ca/Ca, AGM, EFB and GEL) Start-Stop Batteries
Battery capacity	30-500Ah
Dimensions L/W/H	202x96x53
IP rate	IP20
Weight	2 kg

NEW! WorkshopCharger_{2.0} | 35A

The 35A WorkshopCharger 2.0 is a versatile and efficient battery charger and power supply that helps you save time in the workshop. It is delivered with a detachable charging cable, a wall bracket and an isolated hook that makes it easy to place wherever you need. The new WorkshopCharger is compatible with all types of automotive batteries - both lead/acid and Li-ion. It has no fan and produces no noise. The power supply function provides continuous current and stable volt and helps you avoid lost data during ECU programming or a battery change.



WorkshopCharger 2.0 35A	
Item No. with 2,5m cable	707700
Item No. with 5m cable	709100
Volt	12V Charging / Powersupply 13,7 Volt
Rated voltage AC	100-230VAC
Charging voltage	14,4V/14,7V
Float charging	13,6V
Minimum battery voltage	2.0V
Max charging current	35A
Back current drain	<1Ah/month
Ambient temperature	-20°C ~ +50°C
Charging types	7 step, fully automatic charging cycle (Analyze/main charge/top charge/analyze/float/sleep/wake Up)
Battery types	All types of 12V lead-acid batteries (WET, MF, Ca/Ca, AGM, EFB and GEL), Start-Stop Batteries and Li-ion
Battery capacity	30-600Ah
Size L/W/H	227x125x62 mm
Insulation class	IP40
Weight	1,8 kg



The detachable cables can easily be connected and disconnected to improve the user friendliness of the charger at the workshop - 2,5 meter or 5 meter cable available.

Detachable cables as spare parts:
 2,5m cable - Item No: 711940
 5,0m cable - Item No: 711950
 2,5m power cable - Item No: 712510

SmartCharge 4A and 6A

SmartCharge 4A and 6A are intelligent chargers which makes it easy and safe to charge your batteries. All you have to do is connect the charger to an outlet, connect the clips to your battery, and then press "On". SmartCharge recognizes which type of battery it is connected to, and charges it accordingly. When you are done, wind it up, click the parts in place and keep it handy. SmartCharge has Powersupply for access to continuous current.



SmartCharge 4A / 6A

Item No. 4A	701515
Item No. 6A	706060
Height/Width/Depth - mm	210/90/54
Weight- gr	620
IP-rate	65



EASY TO USE

- On/off button
- Backlit user friendly interface and display.
- Adapts automatically to the size (Ah) of your battery.
- A display to easily read the actual power level of your battery.
- Integrated cable storage solution.
- It will never over-charge your battery. Ever.
- Temperature compensated charging cycle.



AWARD FOR DESIGN EXCELLENCE
 NORWEGIAN DESIGN COUNCIL

POWERSUPPLY

Every so often you need access to continuous current, for instance when changing the battery in your car. With PowerSupply you can avoid leaving the car without power and having to reset every setting in the car later. You can also use PowerSupply to power 12V units such as an icebox or a portable sound system. The PowerSupply function is now available with all SmartCharge versions.

It is activated by pressing and holding the ON button for 5 seconds. The charger will then generate 13,6V, indicated by 5 LED segments lighting from bottom to top.

SmartCharge 8A and 10A

SmartCharge 8A and 10A are larger and more powerful chargers designed for more rapid charging of larger batteries, such as in a car or boat. SmartCharge has Powersupply for access to continuous current.



SmartCharge 8A / 10A

Item no 8A	701785
Item no 10A	706161
Height/Width/Depth - mm	235/90/54
Weight - gr	750
IP-rate	65



CHARGING BATTERIES WITH LOW VOLTAGE

If your battery is running low, then what you need is SmartCharge 8A or 10A. It will charge 12V batteries with voltages as low as 2V.

CHARGES BOTH LARGE AND SMALL BATTERIES

SmartCharge 8A/10A is suitable for batteries from 20 to 250Ah. The charger is only 2,5 cm higher than 4A and 6A, and faster.

Which SmartCharge do I need?

SmartCharge version

SmartCharge 4A	2 -110Ah battery
SmartCharge 6A	10 - 150Ah battery
SmartCharge 8A	20 - 200Ah battery
SmartCharge 10A	30 - 250Ah battery



Display for promotion of SmartCharge:

SmartCharge display:

Item No. 706782

Fits 8 chargers of any version

SmartCharge Accessories





We offer a wide range of accessories for DEFA SmartCharge. These accessories address your everyday need to charge your various devices. Our range of accessories consists of cables, connectors, battery status indicators, and outlets which can be adapted to your every need. For more information, visit www.defa.com

CHARGE CONNECTOR AND POWER OUTLET - SIDE BY SIDE

With an extra DEFA power outlet installed in your boat or vehicle, you can easily charge your mobile phone or power your icebox, and charge your battery at the same time. When your battery needs charging, simply connect your SmartCharge when docking and you have access to 230V. Nothing could be easier.




SmartCharge accessories

	12V Battery status indicator	
	Item No.	701758
	Length - mm	48
	Cross section - mm ²	28
	IP rate	65
	12V Charging cable, with ring terminals	
	Item No.	701762
	Cable length - m	1,3
	Cross section - mm ²	1,3
	IP rate	65
	12V Charging cable, with clamps	
	Item No.	701764
	Cable length - m	1,3
	Cross section - mm ²	1,3
	IP rate	65
	12V Charging kit	
	Item No.	701761

DEFA USB Charger

USB Charger with two outlets makes it possible to charge both tablet and smartphones at the same time. Delivered in a handy packaging that can be displayed in the showroom or reception.

	Item No.	706611
	Length - mm	48
	Dimension - mm ²	28
	Max charging current - A	3.1
	IP Rate	20

Inverter 1200W 12V

The Inverter 1200W 12V is 20% smaller than previous inverters. The inverter is available with or without transfer switch*. Due to the DEFA PlugIn connectors the inverter fits perfectly into a DEFA charging system.

The inverters will provide access to 230VAC mains voltage. They deliver pure sinus and are therefore excellent for TV and DVD-equipment as well as laptop computers.

Transfer switch*:
Integrated transfer switch automatically ensures that 230V power is supplied from a connected mains outlet when possible. This prevents the inverter from drawing power from the battery, allowing it to recharge. When mains power is disconnected power supply is switched back to the inverter.



Inverter 1200W	
Item No. w/Transfer switch	709090
Item No. wo/Transfer switch*	709191
Item No. Remote panel	709340
Height/Width/Depth (mm)	360x225x98*
Weight (kg)	4,7*

PlugIn extension cable (orange)	
Item No (0,5m)	704547
Item No (1m)	704548
Item No (1,5m)	704549
Item No (2m)	704550
Item No (3m)	704551
Item No (4m)	704552
Item No (5m)	704553
Item No (8m)	704554
Item No (10m)	704555
Item No (12m)	704556

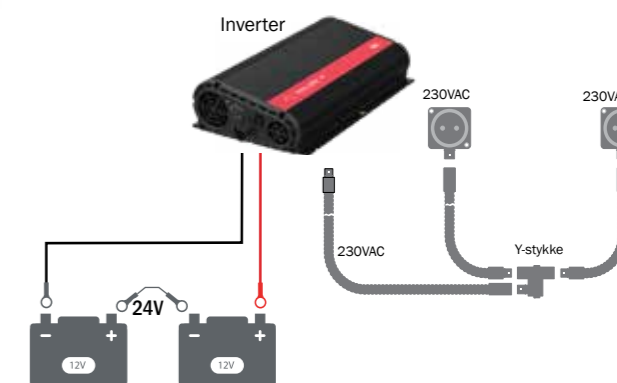


Recommended to visually identify this as 230V and help avoid the risk of mistakes.

Remote panel

For Inverter 1200W 12V

The inverter can be installed in hard-to-reach areas, and be operated with a remote panel With 6 meter cable
Item no: 709340



NEW! Inverter 2500W 24V

The new Inverter 2500W 24V is 20% smaller than previous inverters. The inverter is available with or without transfer switch*. Due to the DEFA PlugIn connectors the inverter fits perfectly into a DEFA charging system.

The inverters will provide access to 230VAC mains voltage. They deliver pure sinus and are therefore excellent for TV and DVD-equipment as well as laptop computers.



Transfer switch*:

Integrated transfer switch automatically ensures that 230V power is supplied from a connected mains outlet when possible. This prevents the inverter from drawing power from the battery, allowing it to recharge. When mains power is disconnected power supply is switched back to the inverter.

Remote panel

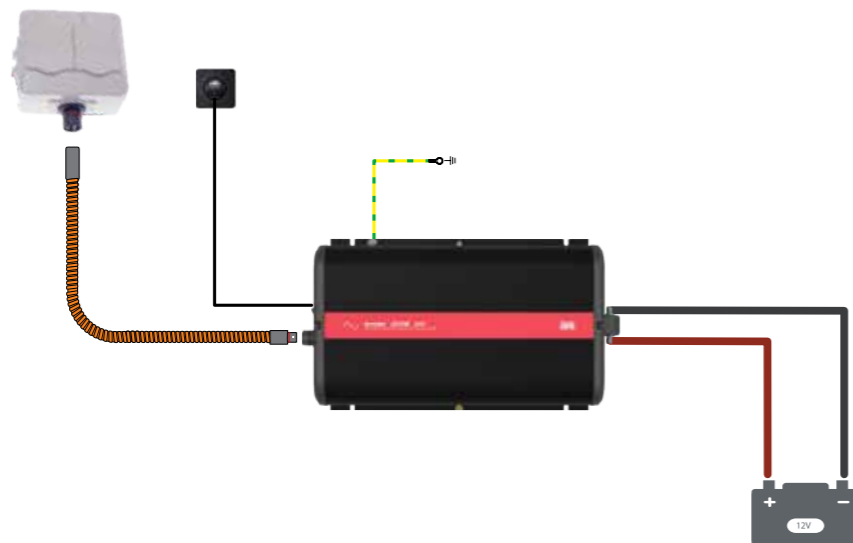
For Inverter 2500W 24V

The inverter can be installed in hard-to-reach areas, and be operated with a remote panel With 6 meter cable
Item no: 709340



Inverter 2500W - 24V

Item No. with Transfer switch	709595
Item No. without Transfer switch	709597
Item No. Remote panel	709340
Height/width/depth (mm)	412x254x88,5
Weight (kg)	6,3



Inverters - PlugIn / Schuko

Our high quality inverters are safe to use and make it possible to use electrical equipment in boats and vehicles.



Item no	Connection	Input - VDC	Output - VAC	Output Power-W	Weight - kg	Size - mm
702935	PlugIn	12	230	300	2,6	230x151x64
702937	PlugIn			600	3,5	324x170x68
702941	PlugIn			1500	6,2	420x223x101
702943	PlugIn			2000	6,5	420x289x100
702949	PlugIn	24		1000	5,2	390x223x101
702951	PlugIn			1500	6,2	420x223x101
702953	PlugIn			2000	6,5	420x289x100
703254	PlugIn			2500	8,0	480x289x100
702950	Schuko	24	250	1000	5,2	390x223x101

Inverter control panels

All inverters can be remotely controlled from a separate control panel. This makes it easier to use the inverter when it is not easily accessible.



Remote control Flush mounted

Item No. 702912	Remote Control for 300/600W inverter, 6 m cable.
Item No. 702913	Remote Control for 1000/1500/2000/2500/3000W inverter, 6m cable
Item No. 704030	Remote Control for 1000/1500/2000/2500/3000W inverter, 10m cable.



Remote control Surface mounted

Item No. 705115	Remote Control for 300/600W inverter, 6m cable
Item No. 705116	Remote Control for 1000/1500/2000/2500/3000W inverter, 6m cable
Item No. 705117	Remote Control for 1000/1500/2000/2500/3000W inverter, 10m cable

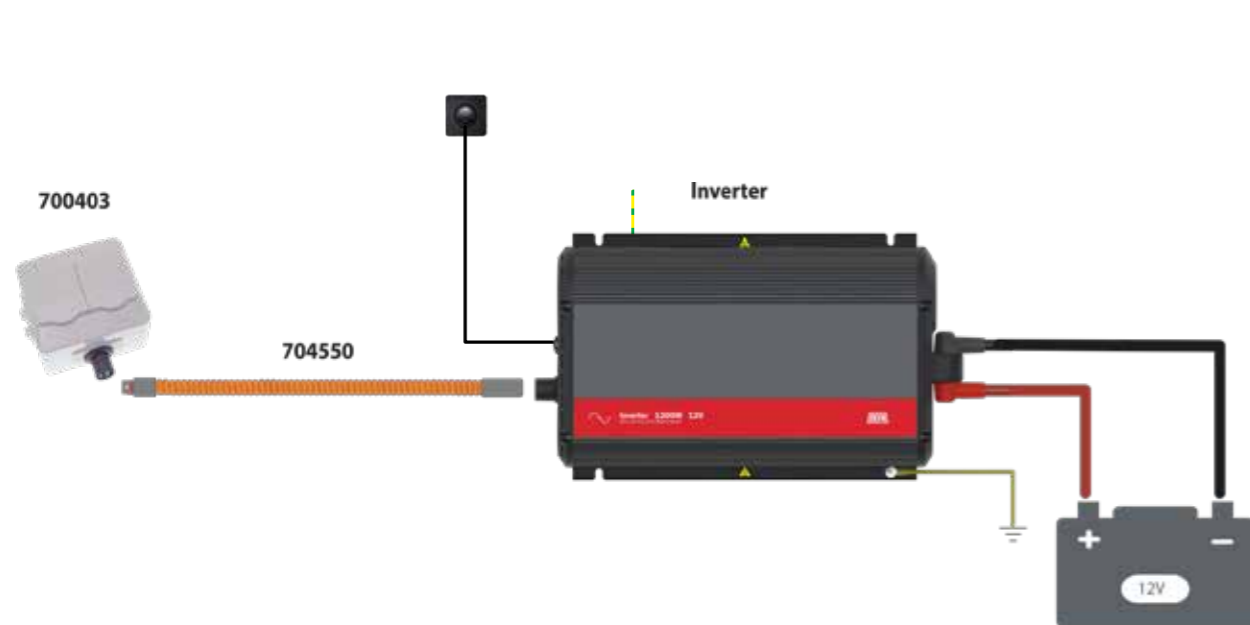
InverterKit

DEFA inverter kits consist of the inverter, a 2m orange extension cable and a double power outlet. It can easily be expanded, as it is based on the DEFA PlugIn system.



The new inverter in the InverterKit 1200W is 20% smaller than the predecessor.

InverterKit					
Item no:	Item name:	Inverter:	Cable:	Outlet:	Remote:
704070	Inverter Kit 1 - 300W/12V	702935	704550	700403	702912
704071	Inverter Kit 2 - 600W/12V	702937	704550	700403	702912
711997	InverterKit 1200W - 12V	709191	704550	700403	709340
704073	Inverter Kit 4 - 1500W/12V	702941	704550	700403	702913
704074	Inverter Kit 5 - 2000W/12V	702943	704550	700403	702913
704075	Inverter Kit 6 - 1000W/24V	702949	704550	700403	702913
704076	Inverter Kit 7 - 1500W/24V	702951	704550	700403	702913
704077	Inverter Kit 8 - 2000W/24V	702953	704550	700403	702913
704078	Inverter Kit 9 - 2500W/24V	703254	704550	700403	702913
712001	NEW! InverterKit 2500W - 24V	709597	704550	700403	709340

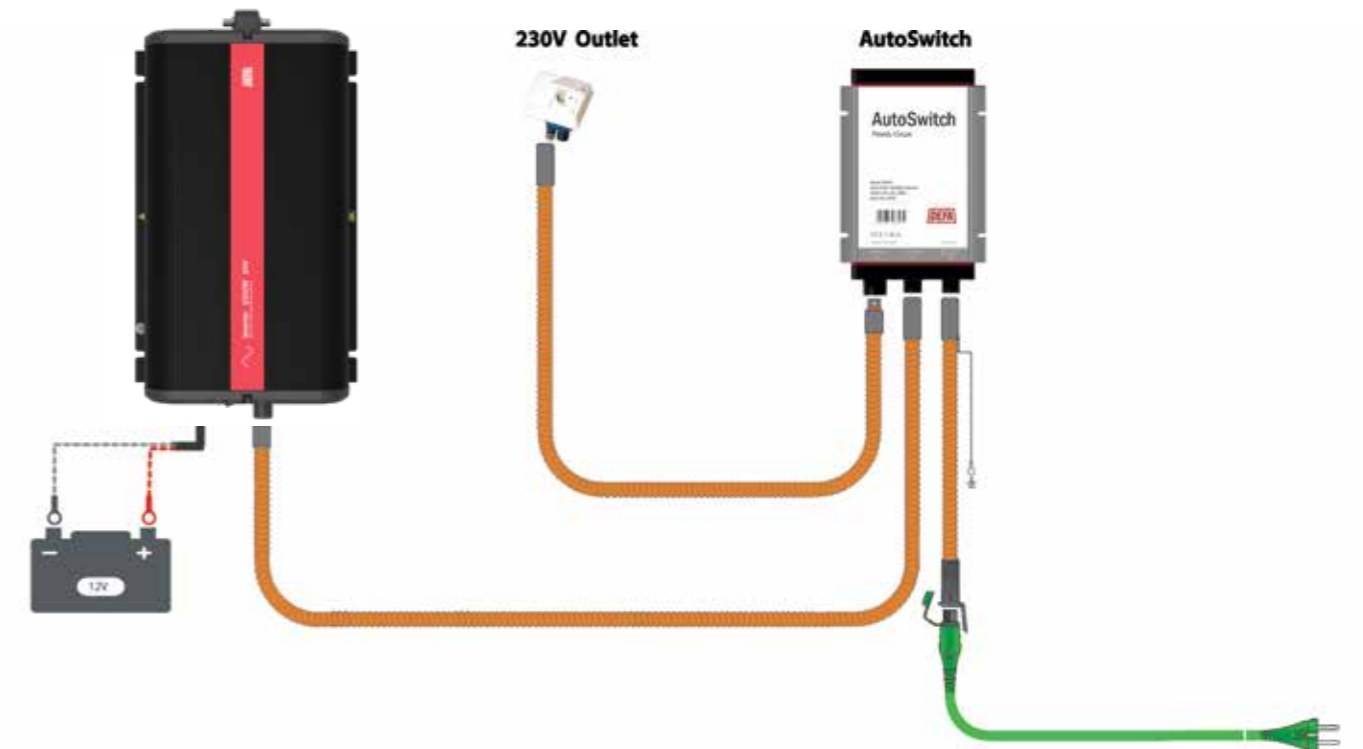


AutoSwitch

AutoSwitch makes sure that the mains power always has priority when both it and the inverter are connected to the same outlets. This ensures that the batteries are not used to power the outlets when the vehicle is plugged into mains. The AutoSwitch also makes sure that there is no power in the mains inlet when the inverter is in use.



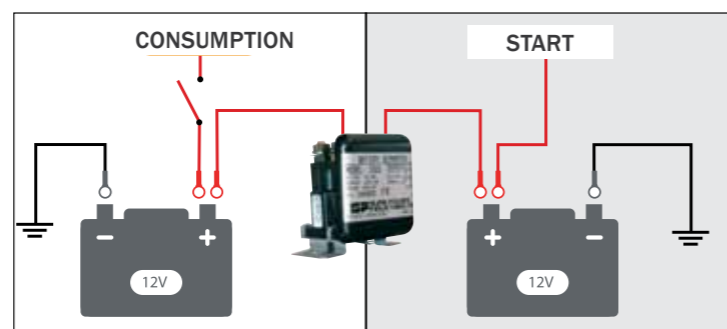
AutoSwitch	
Item no	703697
Input voltage (V/Hz)	230/50-60
Output voltage (VAC)	230
Max current (A)	16
Max power (W)	3680
Fuse (A/V)	16/T250
Height/Width/Depth- mm	58/132/205
IP rate	44



Battery separators

The battery separator connects two separate battery groups, for instance the start and consumption battery during charging. If the charging is interrupted, the batteries are separated again. The battery separators measure voltage on both battery groups and are activated automatically.

Installation of the separator is simple, and it is an optimal solution for a 2-circuit system that does not require changing the original set-up.



Battery separator 12V 100A

Item No.	700595
Function	Separator
Continuous current - A	100
Max output - A	400
On function (typical) - V	13,2
Off function (typical) - V	12,8
Height/Width/Depth - mm	76/83/64

Special characteristics: Both batteries will activate the separator.



Battery separator 12V 200A

Item No.	700596
Function	Separator
Continuous current - A	200
Max output - A	1000
On function (typical) - V	13,2
Off function (typical) - V	12,8
Height/Width/Depth - mm	76/83/64

Special characteristics: Both batteries will activate the separator.



Battery separator 12V/24V

Item No.	707680
Function	Separator
Continuous current - A	150
Max output - A	500
On function (typical) - V	10,2V-14,85V/19,5V-30,15V
Off function (typical) - V	9,7V-14,35V/18,35V-29V
Height/Width/Depth - mm	180/100/18

Special characteristics: Both batteries will activate the separator.

Adjustable voltage thresholds.

EI-centrals

The system can be installed without the need for tools or a certified installer.



EI-central

Main inlet cabinet 230VAC/16A 1 DEFA PlugIn inlet, DEFA PlugIn outlet - Schuko outlet - grey	Item No. 700433
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EI-central

Main inlet cabinet 230VAC/16A 1 DEFA PlugIn inlet, 3 DEFA PlugIn outlet - grey	Item No. 700437
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Main inlet cabinet 230VAC/16A 2 DEFA PlugIn inlet, 3 DEFA PlugIn outlet, with general switch - grey	Item No. 700441
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Connection cables

DEFA Connection cables are developed for DEFA MiniPlug and provides a reliable connection from your mains power outlet to the car. The MiniPlug Xtreme is more durable and is suited for cold weather and rough treatment. Xtreme has a black cap to distinguish it from the MiniPlug.



MiniPlug Xtreme Connection cable 1,5mm²

Item No. - 2,5m	460955
Item No. - 5,0m	460957
Number of pcs in collection box	460955: 22 460957: 12
Voltage - VAC	230
Current, max. - A	16
Weight - gr	460955/309 - 460957/535



MiniPlug Connection cable 1,5mm²

Item No. - 2,5m	460920
Item No. - 2,5m with angle contact	460933
Item No. - 3,5m	460938
Item No. - 3,5m with angle contact	460942
Item No. - 5,0m	460921
Number of pcs in collection box	920: 30 - 933: 22 - 938: 22 - 942: 22 - 921:12
Voltage - VAC	230
Current, max. - A	16
Weight - gr	920/390 - 933/450 - 938/510 - 942/530 - 921/600



MiniPlug Connection cable 2,5mm²

Item No. - 2,5m	460960
Item No. - 5,0m	460961
Item No. - 10,0m	460962
Item No. - 15m	460963
Number of pcs in collection box	960/22 - 961/12 - 962/1
Voltage - VAC	230
Current, max. - A	16
Weight - gr	530/915/1520 (2,5/5,0/10,0m)

DEFA Connection cable 2,5 mm² is used for vehicles with special requirements for connection cables, such as ambulances and fire engines with special equipment. Even if the cable is available with a 2,5mm² core cross-section, the maximum power consumption is 16A.

Connection cables and sets

The DEFA MiniPlug Inlet cable is developed to fit all new cars. Flush and bracket mounting is equally simple. DEFA MiniPlug was developed with the goal of creating user friendly design, better safety and total reliability.



Connection set 460785

MiniPlug Inlet cable - 1,5 m	460915
MiniPlug Xtreme Connection cable - 2,5 m	460955
MiniPlug Inlet cable - fitting equipment	418801

Connection set 460787

MiniPlug Inlet cable - 1,5 m	460915
MiniPlug Xtreme Connection cable - 5,0 m	460957
MiniPlug Inlet cable - fitting equipment	418801

Connection set 460789

MiniPlug Inlet cable - 1,5 m	460915
MiniPlug Connection cable angle - 2,5 m	460933
MiniPlug Inlet cable - fitting equipment	418801

Inlet cables

DEFA MiniPlug Inlet Cable is adjusted to all new cars. Both flush mounted and bracket mounted versions are equally functional and easy to install. During the development of DEFA MiniPlug we have focused on user friendly design, safety, and ease of installation.



MiniPlug Inlet cable	Black
Item No (0,6m)	460902
Item No. (1,0m)	460901
Item No. (1,5m)	460915
Item No. (2,0m)	460939
Voltage - VAC	230
Current - A	16
Weight (Length/Weight) - m/kg	0,6/0,23 - 1,0/0,35 - 1,5/0,41 - 2,0/0,57

The Inlet Plug has MiniPlug with lid in one end and DEFA PlugIn contact in the other end. In addition, it has a ground conductor with cable clip for grounding the system.



MiniPlug Inlet cable	Orange
Item No (0,6m)	704557
Item No. (1,0m)	704558
Item No. (1,5m)	704559
Item No. (2,0m)	704561
Voltage - VAC	230
Current - A	16
Weight (Length/Weight) - m/kg	0,6/0,23 - 1,0/0,35 - 1,5/0,41 - 2,0/0,57



CEE / PlugIn Contact	
Item No.	701150
Voltage - VAC	230
Current - A	16
Weight	0,158



DEFA Rettbox®	
Rettbox® 12V without air - Item No.	707175
Rettbox® 24V without air - Item No	706411
Rettbox® cable without air 4m - Item No	706412
Rettbox® 12V with air - Item No	707174
Rettbox® 24V with air - Item No	706413
Rettbox® cable with air 4m - Item No	706414

The RETTBOX® is an electromagnetic self-eject system comprising coupler socket and an inlet mounted in a box. The self-ejection of the coupler socket is activated electrically via the vehicle's ignition system. The release mechanism is housed in a compact enclosure fitted into the vehicle. On ignition, a solenoid plunger lifts the socket release latch thus ejecting it from the inlet. Rettbox® is available with DEFA PlugIn for easy installation in a DEFA system.

Outlets and frames

All 230VAC Schuko outlets have DEFA PlugIn connections. The connections are available in both flush mounted and wall mounted versions.



Wall outlet - flush mounted single stainless steel

Item No.	700399
Mains voltage - VAC	230
Weight - kg	0,200
IP rate - IP	44



Wall outlet - on-wall mounted single

Item No.	700401
Mains voltage - VAC	230
Weight - kg	0,100
IP rate - IP	44



Wall outlet - on-wall mounted double

Item No.	700403
Mains voltage - VAC	230
Weight - kg	0,200
IP rate - IP	44



Wall outlet - on-wall mounted double with PlugIn, in- and outlet

Item No.	702779
Mains voltage - VAC	230
Weight - kg	0,058
IP rate - IP	44



PlugIn wall outlet Main outlet double 16A

Item No recessed with cover - white	700405
Mains voltage - VAC	230

Notes



Wall outlet - flush mounted single

Item No. (White)	701317
Item No. (Brown)	701316
Item No. (Grey)	701315



Frames for wall outlets

Item No. Single frame for wall outlet - white	701307
Item No. Single frame for wall outlet - brown	701306
Item No. Single frame for wall outlet - grey	701305
Item No. Double frame for wall outlet - white	701310
Item No. Double frame for wall outlet - brown	701309
Item No. Double frame for wall outlet - grey	701308



Manual summer and winter switch

Item No.	701123
Height/Width/Depth - mm	67/135/76
Weight - kg	0,200

The summer/winter switch is a manual switch which makes it possible for an engine heater/interior heater to be disconnected during the summer without the battery charger being disconnected.

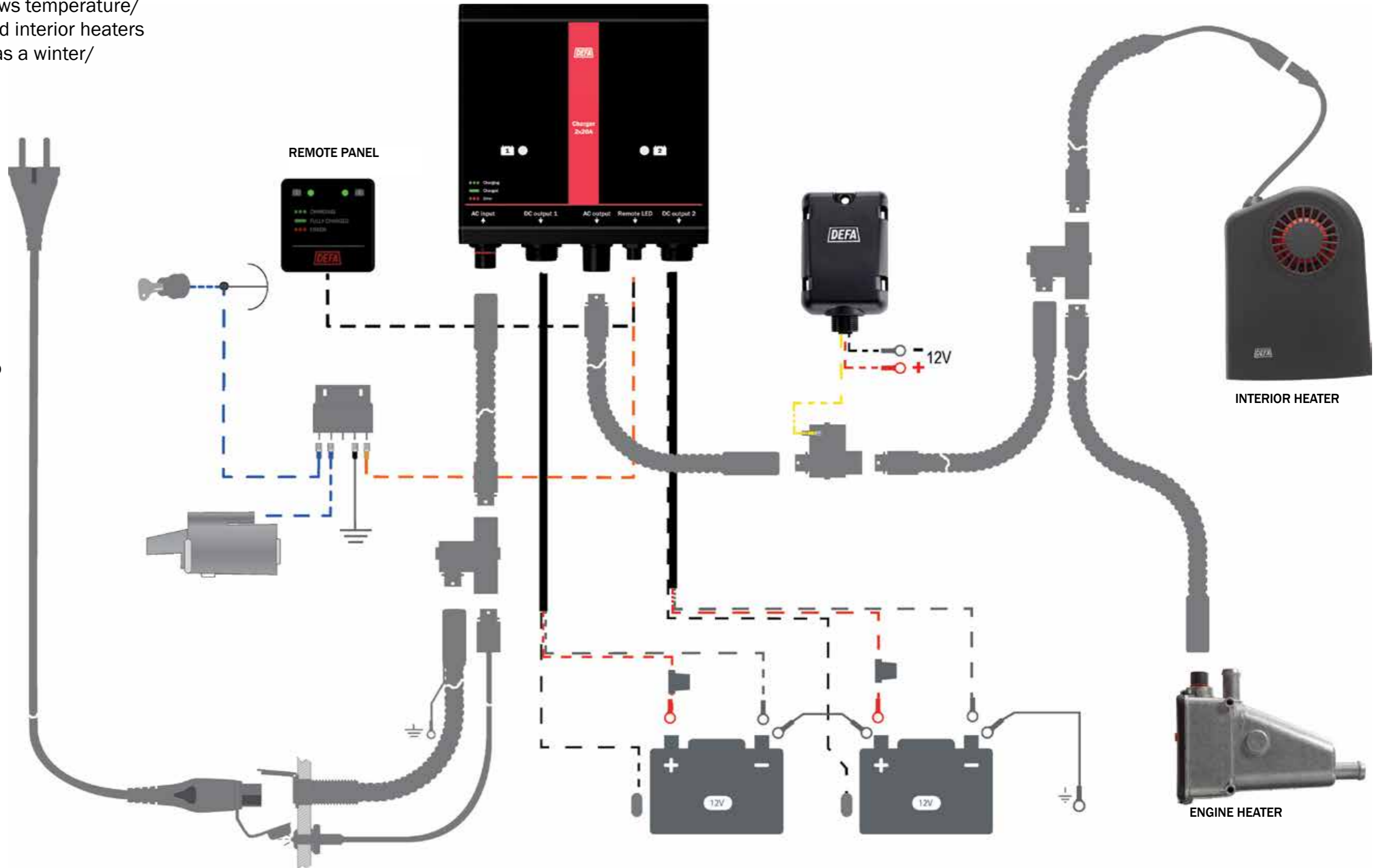
System overview

The circuit schematic shows temperature/ time control of engine- and interior heaters by using DEFA Bluetooth as a winter/ summer switch.

The battery charger will charge independent of winter/summer settings.

In addition, the diagram shows the "starter kill" device function through a separate relay.

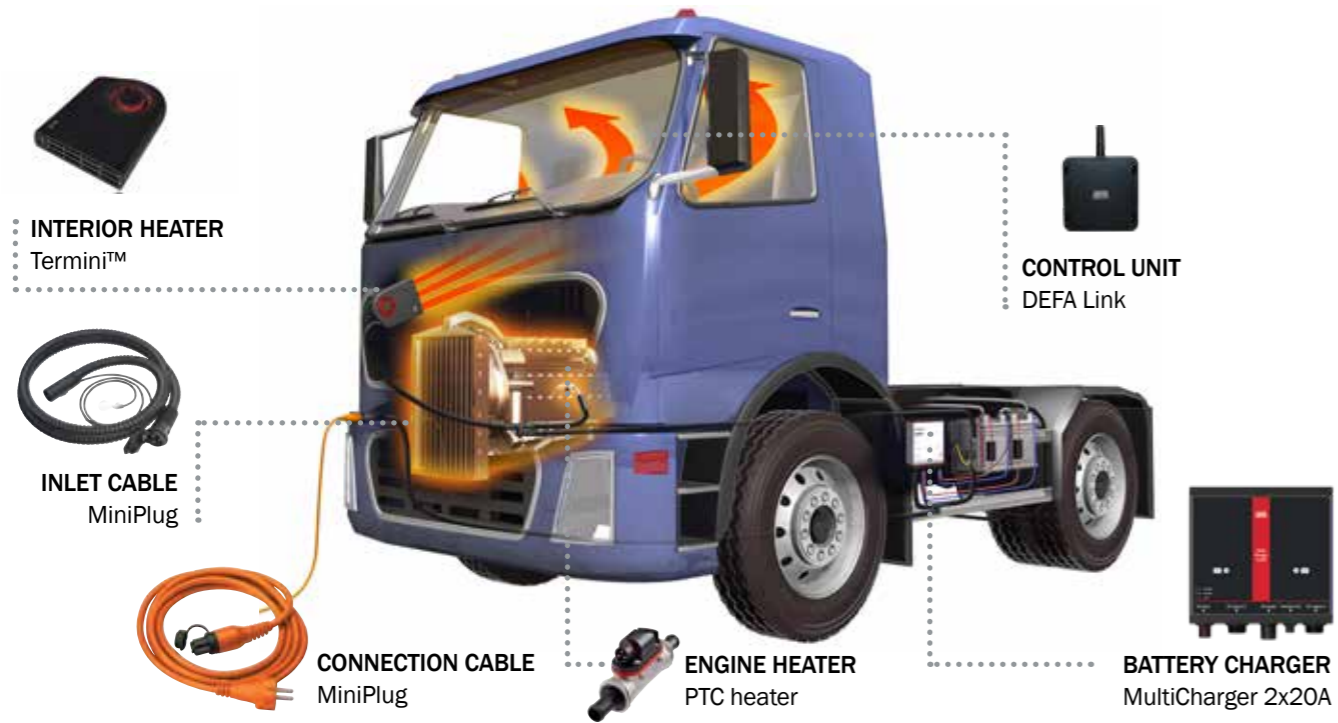
Remote LED shows the charging status of two batteries with red, yellow or green LED light.



Trucks and GenSet

The DEFA Charging system is developed with the intention of simplifying installations of battery chargers in cars, trucks, buses, tractors and construction equipment.

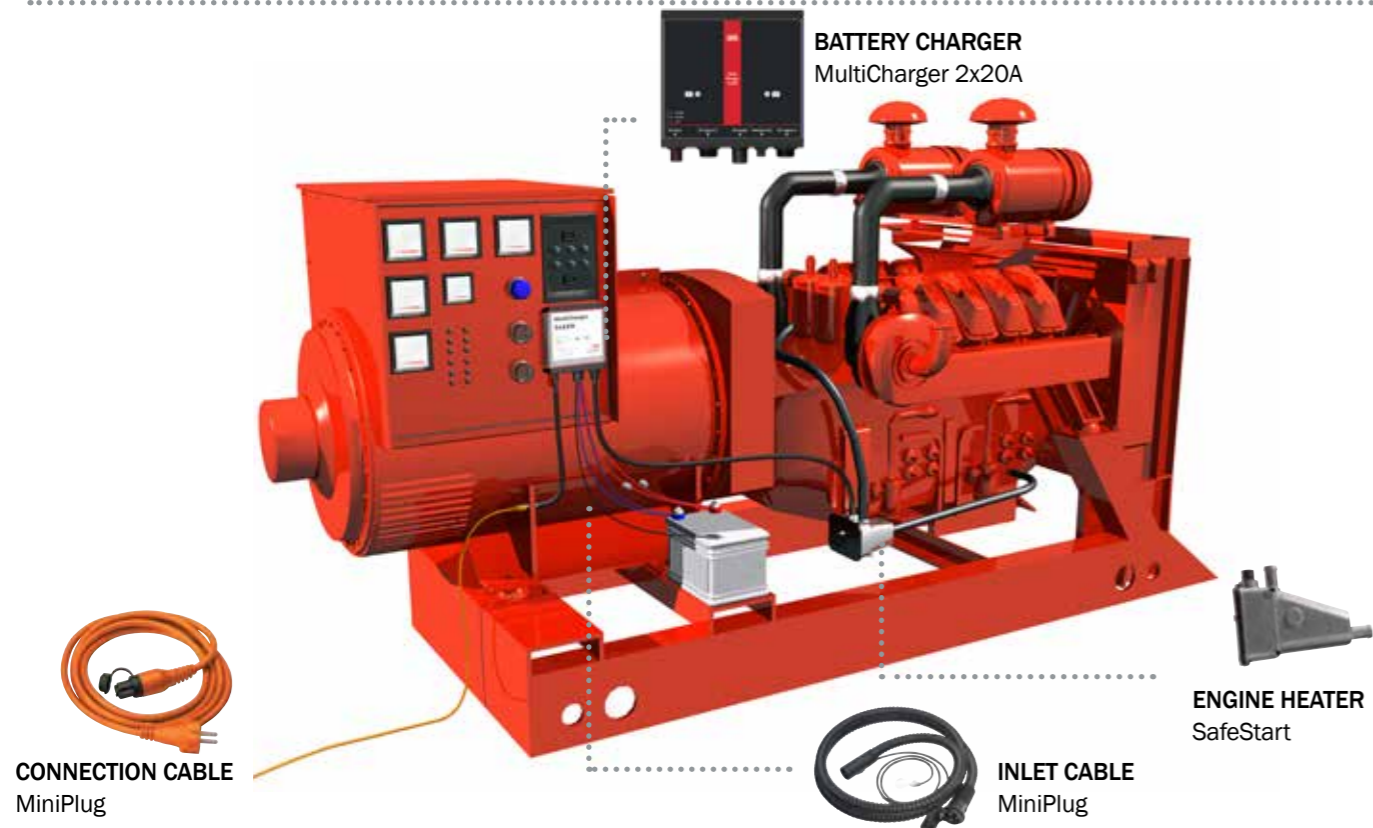
The system eases and enables connections with DEFA PlugIn cables, and eliminates the need for tools, and can be installed without assistance from a certified installer.



Agriculture and Construction

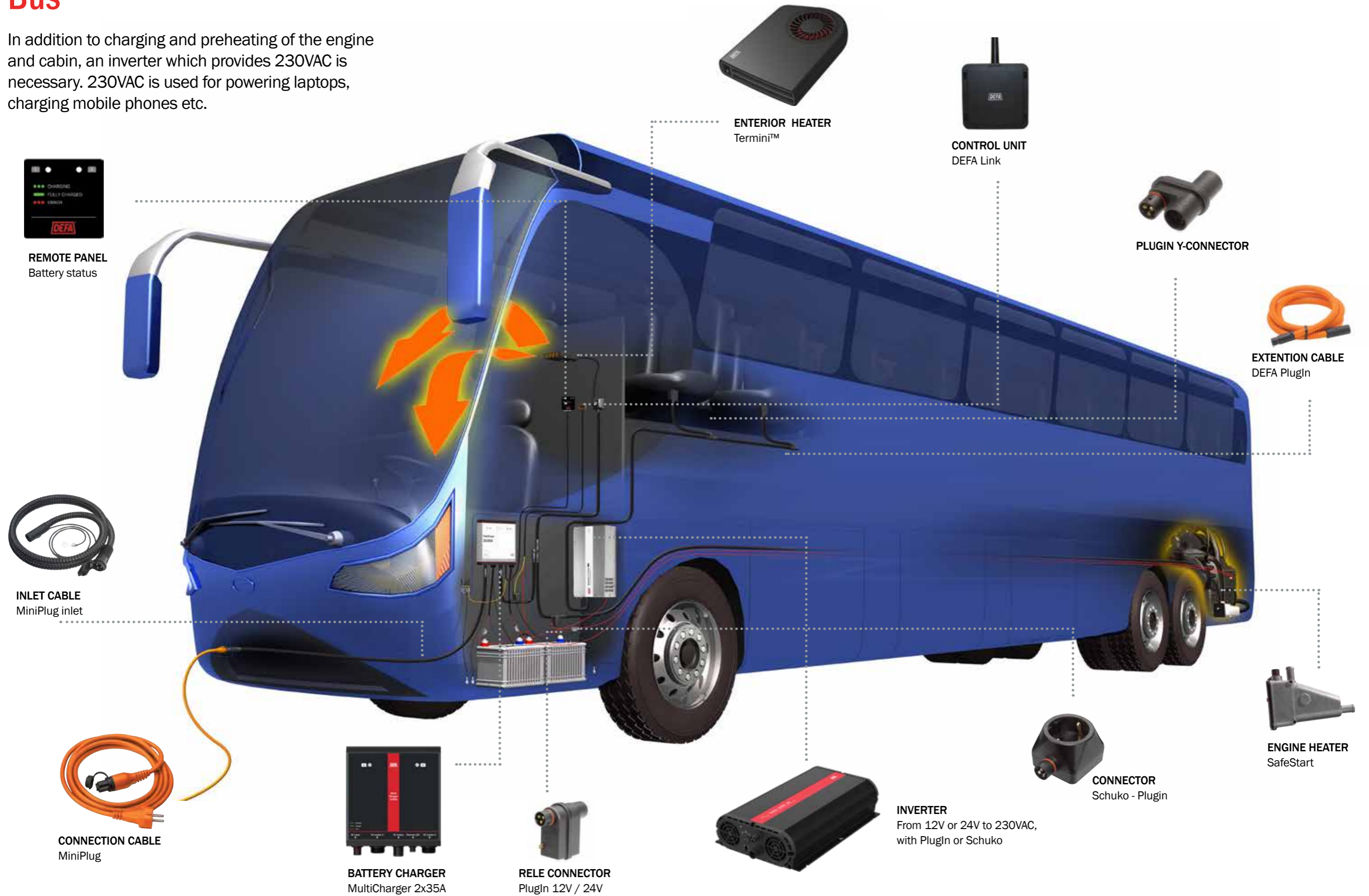
The DEFA charging system is simple, reliable and durable.

All cables and connectors are waterproof. DEFA PowerSystems is a module based system which makes it easy to to expand the system with additional components, such as engine and interior heaters.



Bus

In addition to charging and preheating of the engine and cabin, an inverter which provides 230VAC is necessary. 230VAC is used for powering laptops, charging mobile phones etc.



Fire engine

DEFA RescueCharger has a specialized charging profile for emergency response vehicles.



Ambulance

In addition to charging and preheating the engine and the cabin, an inverter for medical equipment is essential. The inverter delivers 230VAC while driving.



DEFA PlugIn system for Rescue can also use Rettbox connector.



INLET CABLE
MiniPlug



ENGINE HEATER
Safestart



CONTROL UNIT
DEFA Link



REMOTE LED
Charge indicator



CONNECTION CABLE
Miniplug



DUAL SCHUKO OUTLET
PlugIn



INTERIOR HEATER
Termini



INVERTER
From 12V or 24V to 230VAC,
with PlugIn or Schuko



BATTERY SEPARATOR



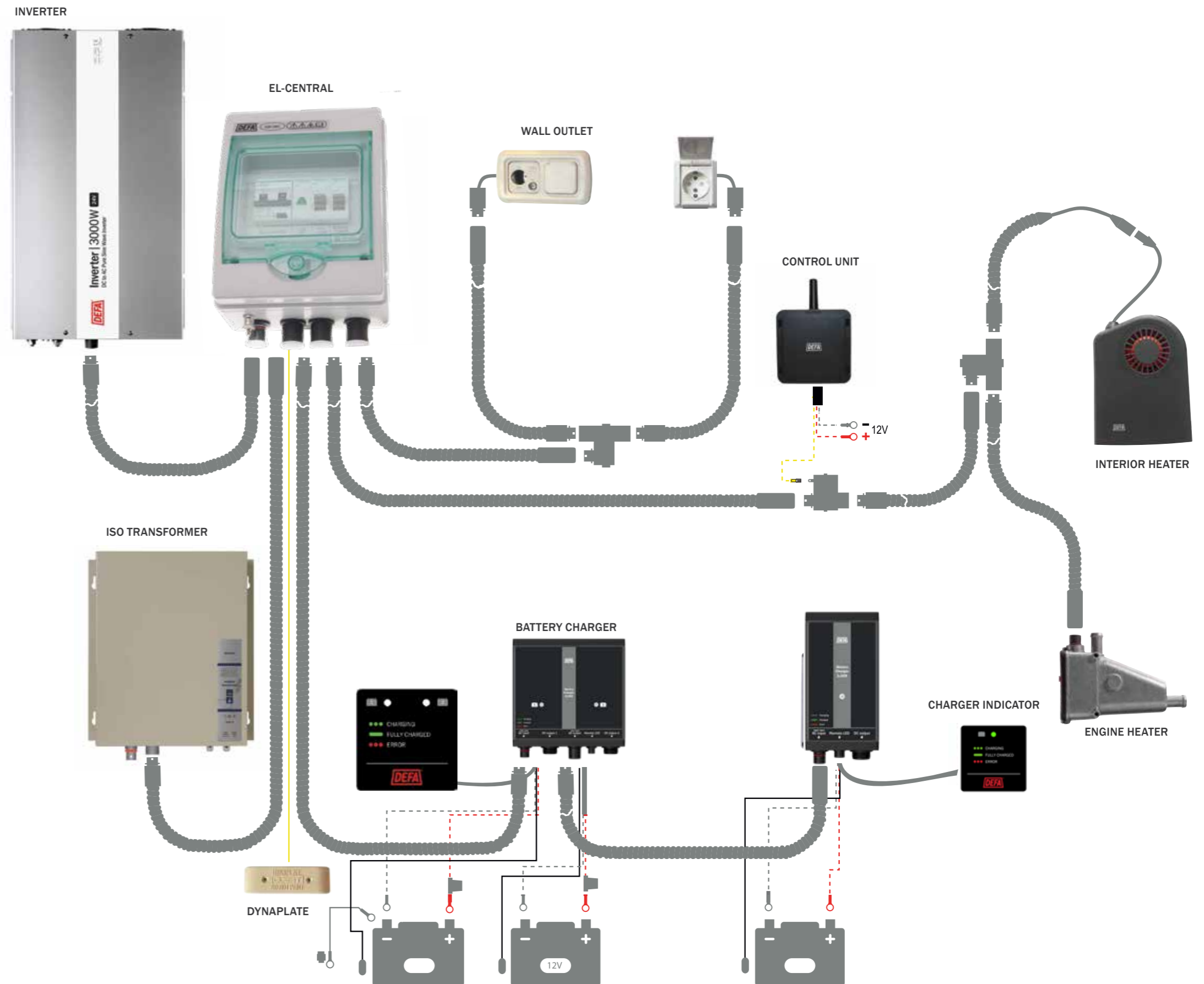
BATTERY CHARGER
RescueCharger 1x20A

DEFA Marine - PlugIn System

DEFA charging systems has been developed to ease 230VAC installation and connection. This is made possible by splash proof PlugIn connectors and fitted cables.

The system is very simple, reliable and durable, and can be installed without assistance from a certified installer.

There are different functional demands for boat installations. In addition, the boat system features a distribution box. This contains fuses, earth leakage circuit breakers and galvanic isolators to reduce the risk of galvanic corrosion and earth leakage from shore power. The best way to protect against galvanic corrosion is to use an ISO transformer. DEFA charging system is module-based, facilitating the addition of other functions (e.g. engine heaters) and auxiliary equipment.



MarineCharger 1x12A

DEFA MarineCharger 1x12A is a battery charger made for permanent installation in all types of boats. It is well suited for all lead/acid batteries (AGM,GEL, EFB, Start&Stop) up to 150Ah. With the DEFA Plugin connectors, both input and output, this charger integrates perfectly into the rest of the DEFA system.

The charger is delivered with 2 meter fixed cable including temperature sensors.



MarineCharger 1x12A

Item No	705400
Mains voltage [VAC]	230
Operating temperature [°C]	-35 +50
Charging voltage[VDC]	14,4
Float voltage [VDC]	13,5
Charging current [A]	12
Battery size. [Ah]	150
IP rate [IP]	44
Weight [kg]	1
Height/Width/Depth - mm	138x98x53
Certifications	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

* Temperature compensated ca 5,0 mV/°C/celle. Ref. 25 °C

MarineCharger 2x12A

DEFA MarineCharger 2x12A is a battery charger made for permanent installation in all types of boats. It is well suited for all lead/acid batteries (AGM,GEL, EFB, Start&Stop) up to 2x150Ah. With the DEFA Plugin connectors, both input and output, this charger integrates perfectly into the rest of the DEFA system.

The charger is delivered with 2 meter fixed cable including temperature sensors.



MarineCharger 2x12A

Artikelnummer	705500
Mains voltage [VAC]	230
Operating temperature [°C]	-35 +50
Charging voltage [VDC]	14,4
Float voltage [VDC]	13,5
Charging current. [A]	2x12
Battery size. [Ah]	2x150
IP rate [IP]	44
Weight [kg]	2
Height/Width/Depth - mm	138x201x53
Certifications	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

* Temperature compensated ca 5,0 mV/°C/celle. Ref. 25 °C

MarineCharger 1x20A

DEFA MarineCharger 1x20A is a powerful and compact charger that is easily installed in all types of boats. It is designed to handle any conditions. To make the system more flexible, DC cable in the desired length is ordered separately. Cables available in 2, 4 and 6 meters.



MarineCharger 1x20A	
Item No.	706000
Mains Voltage - VAC/Hz	230/50-60
Operating temperature - °C	-35 +50
Charging voltage- VDC	14,4
Float voltage- VDC	13,5
Charging Current - A	20
Battery size - Ah	250
IP-rate	44
Weight - kg	2
Height/Width/Depth - mm	182x98x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

ACCESSORIES:

Item No:	
706483	2m Charging cable
706484	4m Charging cable
706485	6m Charging cable
705294	5m Remote panel
705295	10m Remote panel
705296	20m Remote panel
705297	25m Remote panel
705463	Connection Schuko - PlugIn



Connection Schuko - PlugIn

MarineCharger 2x20A

DEFA MarineCharger 2x20A is a powerful and compact charger that is easily installed in all types of boats. It is designed to handle any conditions. To make the system more flexible DC cables in desired lengths are ordered separately. Cables available in 2, 4 and 6 meters.



MarineCharger 2x20A	
Item.No.	706100
Mains Voltage - VAC/Hz	230/50-60
Operating temperature - °C	-35 +50
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Charging Current- A	2x20
Battery size- Ah	2x250
IP-rate	44
Weight - kg	3
Height/Width/Depth- mm	182x190x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

ACCESSORIES:

Item No:	
706483	2m Charging cable
706484	4m Charging cable
706485	6m Charging cable
705162	5m Remote panel
705163	10m Remote panel
705164	20m Remote panel
705165	25m Remote panel
705463	Connection Schuko - PlugIn



Connection Schuko - PlugIn

MarineCharger 1x35A

DEFA MarineCharger 1x35A is a small and powerful charger for use in all types of boats, under all kinds of conditions. To make the system more flexible, cables are ordered separately in required lengths.



MarineCharger 1x35A	
Item No. with PlugIn 1x35A	708503
Mains voltage - VAC/Hz	230/50-60
Ambient temperature - °C	-35 +50
Charging voltage - VDC	14,4
Float voltage - VDC	13,5
Max charging current - A	35
Recommended battery max - Ah	600
IP rate - IP	44
Weight - kg	1,6
Height/Width/Depth - mm	200x98x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

12V SYSTEM



ACCESSORIES:	
Item No:	
705099	2m Charging cable
705147	4m Charging cable
705159	6m Charging cable
705160	8m Charging cable
705294	5m Remote panel
705295	10m Remote panel
705296	20m Remote panel
705297	25m Remote panel
705463	Connection Schuko - PlugIn



Connection Schuko - PlugIn

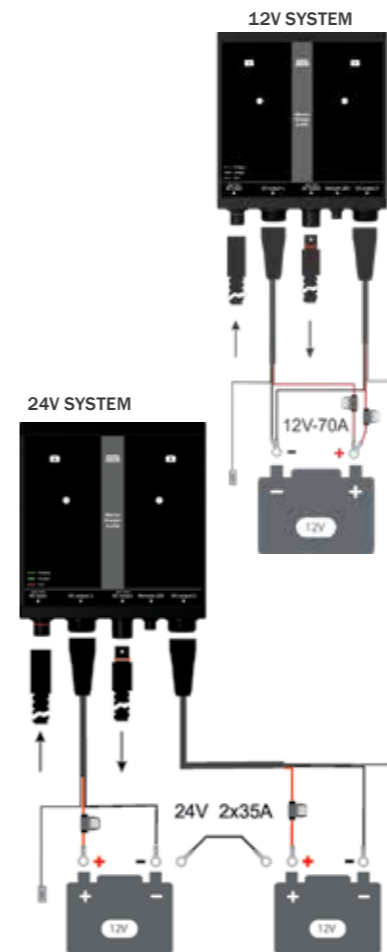
MarineCharger 2x35A

DEFA MarineCharger 2x35A is a small and powerful charger for use in all types of boats, under all kinds of conditions. To make the system more flexible, cables are ordered separately in required lengths.



MarineCharger 2x35A	
Item no. with PlugIn 2x35A	708504
Mains voltage - VAC/Hz	220-240/50-60
Ambient temperature - °C	-35 +50
Max charging voltage - VDC	14,4
Float voltage - VDC	13,5
Max charging current - A	2x35
Recommended battery max - Ah	2x600
IP rate - IP	44
Weight - kg	3,3
Height/Weight/Depth - mm	200x190x53
Certifications:	EN60335-1, EN60335-2-29, EN55014-1, EN55014-2, EN61003-3/2

ACCESSORIES:	
Best.nr.	
705099	2m Charging cable
705147	4m Charging cable
705159	6m Charging cable
705160	8m Charging cable
705162	5m Remote panel
705163	10m Remote panel
705164	20m Remote panel
705165	25m Remote panel
705463	Connection Schuko - PlugIn



Connection Schuko - PlugIn

Boat packages

There are three different boat packages to choose from. Each package can easily be installed without the need for an electrician. Chargers are bought separately, as this choice depends on the size and number of battery banks in the boat. The system is rated for 16A and can easily be expanded using the DEFA PlugIn system.



Boat package 1

Item No.	706272
Shore power cable 10m, 2,5mm ² -DEFA MiniPlug - CEE	706285
Adapter CEE2166 Male - Schuko Female - yellow - 1 pcs	700574
Inlet cable 1,5m - 1 pcs	701099
El-central 230VAC - 1 pcs	700433
Extension cable 1,0m - 1 pcs	460803
Bag for shore power system - 1 pcs	701097



Boat package 2

Item No.	701183
Shore power cable 25m, 2,5mm ² CEE2166 Male - yellow	700577
Adapter Schuko Male CEE 2166 Female - yellow - 1 pcs	700574
Inlet cable 1,5m - 1 stk	700459
El-central 230VAC/16A - 1 pcs	700437
Extension cable 1,0m - 1 pcs	460803
Extension cable 2m - 3 pcs	460804
Wall outlet, single - 1 pcs	700401
Bag for shore power system - 1 pcs	701097



Boat package 3

Item No.	706274
Shore power cable 10m, 2,5mm ² - IP67 - DEFA MiniPlug - CEE	706288
Adapter CEE2166 Male - Schuko Female - yellow - 1 pcs	700574
Inlet cable 0,6m, IP67 - 1 pcs	701821
El-central 230VAC - 1 pcs	700437
Extension cable 2,0m - 3 pcs	460804
Wall outlet single - 1 pcs	700401
Bag for shore power system - 1 pcs	701097



Inlet and shore power cables



Inlet stainless steel

Item No. Inlet stainless steel	700578
Voltage - VAC	230
Current - A, max.	16
IP rate	67



Inlet stainless steel

Item No. with DEFA PlugIn, Inlet stainless steel	700459
Voltage - VAC	230
Current - A, max.	6
IP rate	67



Shore power cable - for Item No. 700578/700459

Item No.	700577
Voltage - VAC	230
Current - A, max.	16
Dimensions - mm ² - m	2,5 - 25
IP rate	67



Main adapter

Item No. adapter schuko male/CEE female - yellow	700574
Item No. adapter schuko female/CEE male - yellow	701096
Voltage - VAC	230
Current - A, max.	16



Inlet MiniPlug

Item No. - m - colour	701098 - 0,6 - chrome
Item No. - m - colour	701099 - 1,5 - chrome
Item No. - m - colour	701100 - 3,0 - chrome
Voltage - VAC	230
Current - A, max.	16
Weight - gr	098/180 - 099/550 - 100/850
Test and approval	EN 50066-, EN 60309-1



CEE Shore power cable 2,5mm² - for Inlet MiniPlug

Item No. with MiniPlug, 5,0 m	706284
Item No. with MiniPlug, 10,0 m	706285
Item No. with MiniPlug, 15,0 m	706286
Item No. with MiniPlug, 25,0 m	706287
Voltage - VAC	230
Current - A, max.	16
Weight - gr	840/1565/2260/3745
Length - m	5,0/10,0/15,0/25,0
Test and approval	EN 50066-1, EN 60309-1

Inlet and shore power cables



Inlet, stainless steel IP67

Item No. - m - colour	701821 - 0,6 - chrome
Item No. - m - colour	701822 - 1,5 - chrome
Item No. - m - colour	701823 - 3,0 - chrome
Voltage - VAC	230
Current - A, max.	16
Weight - gr	821/500 - 822/720 - 823/1090
Test and approval	EN 50066-, EN 60309-1



CEE Shore power cable 2,5mm² - for IP67 Inlet

Item No. with MiniPlug, 10,0 m	706288
Item No. with MiniPlug, 15,0 m	706289
Item No. with MiniPlug, 25,0 m	706290
Voltage - VAC	230
Current, max. - A	16
Weight - gr - m	1565/2260/3745 - 10,0/15,0/25,0
Test and approval	EN 50066-1, EN 60309-1



Bag for shore power cable

Item No.	701097
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PlugIn extension cables

Item No. black	Item No. orange	Length
460802	704547	0,5 m
460803	704548	1,0 m
460843	704549	1,5 m
460804	704550	2,0 m
460844	704551	3,0 m
460846	704552	4,0 m
460809	704553	5,0 m
460847	704554	8,0 m
460851	704555	10,0 m
460850	704556	12,0 m

Voltage 230 VAC, max. current 16A, IP 44.
Test and approval EN 50066 -, EN 60309-1



LED Indicator kit

Item No.	460881
Mains voltage - VAC	110-240
Current, max. - A	16
IP rate, PlugIn/LED	44/67

PlugIn branches and contacts

The DEFA relay connector is adapted to DEFA PlugIn and used for controlling the engine and interior heater, together with DEFA control units. It can also be used for separate control of engine and interior heater together with DEFA SmartStart. At branching, use H-, T- or Y- connectors.



PlugIn Relay connector

Item No. 12V	701445
Item No. 24V	460856
Range of use °C	-40 / +80
Height/Width/Depth - mm	61/31/67
Mains voltage - VAC	230/12, 230/24
Current, max. - A	16
Weight - gr	59
Insulation class - cl	II
IP rate	44



PlugIn Y-connector

Item No.	460853
Height/Width/Depth - mm	53/48/24
Mains voltage - VAC	230
Current, max. - A	16
Weight - gr	23
IP rate	44

DEFA Y-connector is an all-welded connector for connecting the engine and interior heater or the MarineCharger battery charger.



PlugIn T-connector 90°

Item No.	460831
Height/Width/Depth - mm	42/63/21
Mains voltage - VAC	230
Current, max. - A	16
Weight - gr	22
IP rate	44

DEFA T-connector is an all-welded connector for connecting the engine and interior heater or the MarineCharger battery charger.



PlugIn H-connector

Item No.	460857
Height/Width/Depth - mm	42/63/21
Mains voltage - VAC	230
Current. - A	16
Weight - gr	30
IP rate	44

DEFA H-connector is an all-welded connector for connecting the engine and interior heater or the MarineCharger battery charge

EI-centrals

The system eliminates the need of tools, and can be installed without assistance from a certified installer.



EI-central

Main inlet cabinet 230VAC/16A 1 DEFA PlugIn inlet, DEFA PlugIn outlet - Schuko outlet - grey	Item No:	700433
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EI-central

Main inlet cabinet 230VAC/16A 1 DEFA PlugIn inlet, 3 DEFA PlugIn outlet - grey	Item No.	700437
Main inlet cabinet 230VAC/16A 2 DEFA PlugIn inlet, 3 DEFA PlugIn outlet, with general switch - grey	Item No.	700441



Dynaplate

Item No. Dynaplate 1,12m ²	700581
Item No. Dynaplate 1,86m ²	700582

Outlets and frames

All 230VAC Schuko outlets have DEFA PlugIn connections. The connections are available in both flush and wall mounted versions.



Wall outlet - flush mounted single stainless steel

Item No.	700399
Mains voltage - VAC	230
Weight - kg	0,200
IP rate	44



Wall outlet - on-wall mounted single

Item No.	700401
Mains voltage - VAC	230
Weight - kg	0,100
IP rate	44



Wall outlet - on-wall mounted double

Item No.	700403
Mains voltage - VAC	230
Weight - kg	0,200
IP rate	44



Wall outlet - on-wall mounted double with PlugIn, in- and output

Item No.	702779
Mains voltage - VAC	230
Weight - kg	0,058
IP rate	44

PlugIn wall outlets and fuse



PlugIn wall outlet

Item No. Main outlet double 230VAC/16A, recessed with cover - white	700405
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Wall outlet - flush mounted single

Item No. Single main outlet, 230VAC/16A, recessed - white	701317
Item No. Single main outlet, 230VAC/16A, recessed - brown	701316
Item No. Single main outlet, 230VAC/16A, recessed - grey	701315



PlugIn fuse

Item No. Automatic fuse 230V 16A PlugIn/Out	700429
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Wall outlets and frames



Frames for wall outlets

Item No. single frame for wall outlet - white	701307
Item No. single frame for wall outlet - brown	701306
Item No. single frame for wall outlet - grey	701305
Item No. double frame for wall outlet - white	701310
Item No. double frame for wall outlet - brown	701309
Item No. double frame for wall outlet - grey	701308
Item No. triple frame for wall outlet - brown	701312
Item No. triple frame for wall outlet - grey	701311



Wall outlets 12VDC/TV

Item No. wall outlet 12VDC/TV - white	701323
Item No. wall outlet 12VDC/TV - brown	701322
Item No. wall outlet 12VDC/TV - grey	701321



Wall outlets 12VDC with cover

Item No. Wall outlet 12VDC with cover - white	701320
Item No. Wall outlet 12VDC with cover - brown	701319
Item No. Wall outlet 12VDC with cover - grey	701318



Switch 12V single, large

Item No. Single switch - white	701342
Item No. Single switch - brown	701341
Item No. Single switch - grey	701340



Switch 12V double

Item No. Double switch - white	701333
Item No. Double switch - brown	701332
Item No. Double switch - grey	701331

Switches



Switch 12V single, small

Item No. single switch - white	701339
Item No. single switch - brown	701338
Item No. single switch - grey	701337



Switch 12V single, small with LED

Item No. single switch with light - white	701336
Item No. single switch with light - brown	701335
Item No. single switch with light - grey	701334



Dimmer

Item No. dimmer 12V/22V 120W/240W - white	701330
Item No. dimmer 12V/22V 120W/240W - brown	701329
Item No. dimmer 12V/22V 120W/240W - grey	701328

ISO Transformer

The isolation transformer (separation transformer) is the best solution for transferring 250VAC mains shore power to the boat. This ensures personal safety, meets required standards and directives, and removes corrosion problems. By preventing corrosion problems, an isolator can save you large amounts of money.



ISO Transformator

Item No. with PlugIn	700473
Item No. with PG nipple	700471
Voltage - in/out - VAC	230
Power - W	3600
Charging current - A	16
Height/Width/Depth - mm	295/115/295
Weight - kg	17

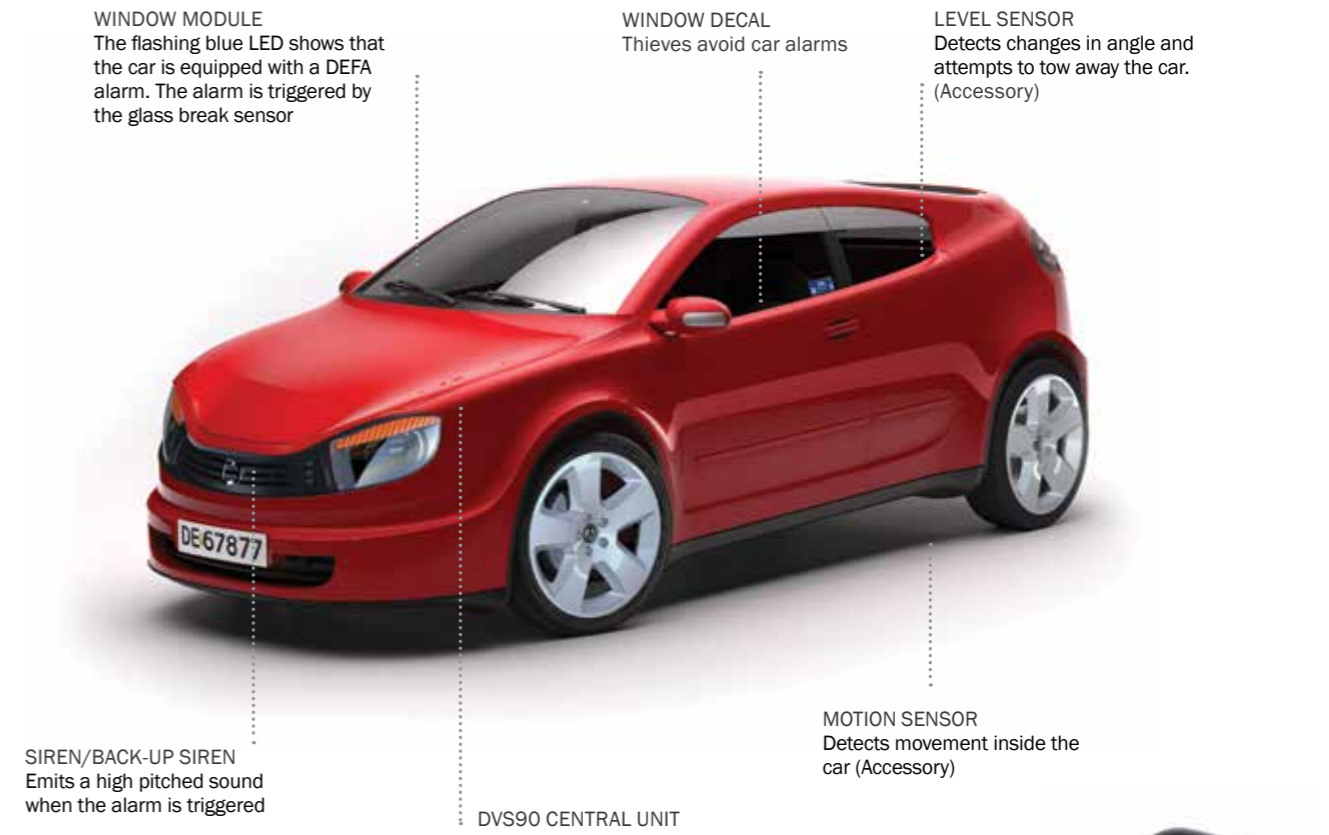
Security products

Car alarm:

Security	101
Finder Link	102
Security combined with Link	103
Accessory and tools	104

Security

DVS90 is a modern alarm system designed on a flexible electronic platform that ensures a very easy set up and installation. The alarm can be installed in all vehicles regardless of electrical supply and electronic systems. To raise the security level further, additional plug and play sensors and Second Authorization remote control are available.



SECOND AUTHORIZATION

Protect your car against the most advanced methods of car theft: Original alarm and original start-up protection without any other authorization functionality can easily be turned off by stealing the signals from the car's keyless system. PC programs can activate and deactivate the keyless system and start the car. DEFA DVS90 and Second Authorization as an extra remote control makes it impossible to open the door and start the car, because of the rolling "anti-grabbing" code that protects the system.



Car specific installation drawings and dedicated support from DEFA makes DVS90 a number one in rapid installation and reliability. DVS90 has digital interfaces for all types of CAN buses found in modern cars. It also provides interfaces for analogue and semi-digital inputs with corresponding functionality, for support of older vehicles or boats. The alarm can be installed in all vehicles using 12V or 24V battery systems. www.defa.com

Security DVS90 - Car Alarm Kit	
Item No.	600900

Finder Link

Finder Link alerts you if your car is stolen, and helps you track its location on your mobile. You will receive an alert to your phone if the car is started - even with the original key - or if the car is moved in any way. Then you can easily track its location and share the coordinates. To get started, install Finder Link in your car, and sign up on defa.com. The App can be downloaded free of charge.

FINDER AND SECURITY

Finder Link includes our Security and Finder solutions, and consists of a GPS/GSM unit that is installed in your car, and connected with the DEFA App.

Security

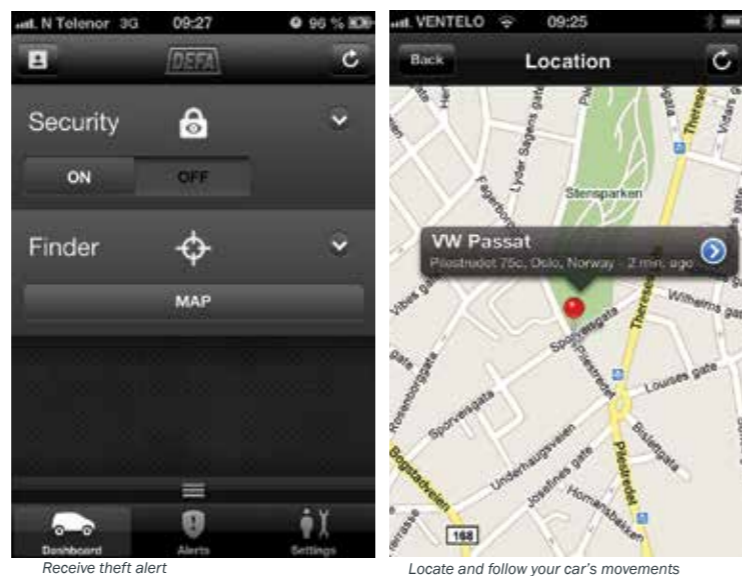
Security protects your car from theft, with a visible sticker in the window.

- Alerts you if the car is moved or started - even with original keys.
- Let you set a maximum speed, and alerts if this speed is exceeded.

Finder

- Helps you track and locate your car in the app
- Lets you share the coordinates of your car's location with the police and insurance company.

Tip: Don't forget to ask your insurance company for better terms after installing Finder Link!



Receive theft alert

Locate and follow your car's movements



Finder Link - 440034

Link Hub module	440030
GPS Link module	440037

Security combined with Link

With the combination of the DEFA Car Alarm Kit (DVS90) and Finder Link, the car owner will receive a burglar alarm on the mobile phone if the car is broken into, moved or started. Then the functionality Finder will locate the car on a map on the mobile App. Further increase the security with sensors and the remote control Second Authorization.



DEFA ALARM SYSTEM COMBINATIONS:

Alarm system with burglar alarm notification on the mobile:

Vehicles with no alarm installed:

- DVS90 Alarm Kit Item No. 600900
- Finder Link Item No. 440034.
- Input wire for Link Hub Item No. 440060.

Vehicles with DVS90 (600900), for upgrade to Link:

- Finder Link Item No. 440034.
- Input wire for Link Hub Item No. 440060.

Vehicles with Finder Link (440034) for increased security with DVS90 Alarm kit:

- DVS90 Alarm Kit Item No. 600900.
- Input wire for Link Hub Item No. 440060.









Vehicles with WarmUp GPS Link for increased security with DVS90 Alarm kit:

- DVS90 Alarm Kit Item No. 600900.
- Input wire for Link Hub Item No. 440060.

For increased security, DVS90 (Item No. 600900) can be supplemented with:

- Motion sensor Item No. 600914.
- Level sensor Item No. 600922.
- Second Authorization Item No. 600678.
- 2-circuit immobiliser Item No. 600890.

Accessories and tools for Security

	Motion sensor	
	Item No. 2,5 m cable	600914
	Item No. 5 m cable	600916
	Level sensor	
	Item No.	600915
	Sirens	
	Standard Siren	Item No. 600911
	Back-up Siren	Item No. 600912
	2-circuit immobiliser	
	Item No.	600890
	Remote control	
	Item No.	600677
	Second Authorization	
	Second Authorization remote control	Item No. 600676
	2 Second Authorization remote control and user manual	Item No. 600678
	Accessories and tools	
	1. Extractor tools for P2	Item No. 600525
	2. Splitter kit	Item No. 600913
	3. Hood switch	Item No. 600523
	4. Central locking module	Item No. 600295
	5. Extractor tools for P4,P5,P6 and P7	Item No. 600930
	Input wire - upgrade to Finder Link	
	Item No.	440060

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Look up your local distributor on
www.defa.com

About DEFA

DEFA is a Norwegian-owned company with a long history and proud traditions. Ever since DEFA was established in 1946, we have been focused on innovative solutions and quality products. Today our product development, production, marketing and sales offices are based in Norway, Sweden, Finland, Germany, Canada and China, and our products are distributed in more than 40 countries.

DEFA is the European market leader in electrical preheating solutions. We also offer a full range of fixed and portable chargers for all types of vehicles and boats, for both private and professional use. In addition, we offer security systems for vehicles, and innovative lighting solutions for offices, healthcare, schools, industry and outdoor use.

In order to give our customers the best in convenience and control, both our preheating and security systems can be controlled by the DEFA app.

DEFA is also the Nordic market leader in EV charging, with e-mobility business in Norway, Sweden and Finland. Our administration system CloudCharge is in use in several countries in Europe.

www.defa.com



WARMUP



LADERE



SECURITY



FINDER

