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CC&N Global LTD are specialists in the representing major brands offering a complete Sales and Marketing operation, supported by a direct B2B Sales Team and in house Customer Services department. Our warehousing and storage facilities are located in the heart of Worcestershire where we are able to supply a variety of market sectors through established trading relationships.

For Brands looking for Distribution:

We are specialists within our field, developing new and established brands in the UK, Europe and the Middle East. We provide bespoke Marketing and Product solutions, from introducing and growing product ranges to designing bespoke Marketing solutions. We ensure smooth supply of your branded items through established relationships & provide potential markets for growth.

For Retailers/Wholesalers:

We supply major buying groups, National & Regional Wholesalers and Independent customers. If you are not already included in this list, why not get in touch to discuss how we can support your business.

Why choose CC&N Global?

CC&N Global doesn't simply offer a product; we offer complete systems and service solutions for our customers. The Company has a strong brand heritage and long standing relationships with customers, both globally and regional.

We develop a high level of intimacy with our customers and allocate resource to create a long standing strategic partnership. Our teams are embedded with customers and the relationships they build together help to ensure that customers think about CC&N Global first, before anyone else.

In addition, innovative, reliable products and service solutions, coupled with knowledgeable employees who possess a high technical skill set means that we our the supplier of choice for our partners.

CC&N Global invests significantly in the development of new products and on-going product improvements. Each product development is environmentally more effective than the last either through greener materials or improved efficiencies.

Everyday CC&N Global's Sales teams are working to develop strategic customers – improving customer intimacy, building stronger relationships and strengthening the company brand.

Our teams carry the Company values with them, the products, systems and services we offer and support our customers regionally, we deliver on time and continue to improve efficiency and offer future concepts.





Showroom Chargers

Loud and bulky charging solutions may ruin first impressions and affect your bottom line. The Showroom Charger keeps your vehicles fully charged without anyone noticing.

Efficiency

The ShowroomCharger is based on modern Switch-Mode technology and has a 95% efficiency. It uses a 7-step charging cycle that optimizes the performance and durability of the batteries in your vehicles. You can easily upgrade the software via the separate USB port.

Discretion

The charger is compact and can easily be placed under the car. The cable to the clamps can be detached and passed through the engine compartment, hiding the charger from view. It has no fan and makes no noise. Rubber feet and corners are available.

User-friendliness

The ShowroomCharger has only one button and an intuitive display for monitoring the battery status. Modern design and a finish in black anodized aluminum provide an attractive exterior. All DEFA chargers are spark-proof and fully secured against reverse polarity and shortcircuiting.









ShowroomCharger 32A

| Description | Unit |
|--------------------------|------------|
| Part Number | |
| Input Voltage | 230 VAC |
| Charging Voltage | 14.4V |
| Maintenance Charging | 13.6V |
| Charging Current | 2A |
| Dimension (mm) | 227/125/62 |
| Weight | 1.7kg |
| AC Power Cable | 5m |
| DC Charging Cable Length | 2.5m |
| | |

ShowroomCharger 50A

| Description | Unit |
|--------------------------|------------|
| Part Number | |
| Input Voltage | 230 VAC |
| Charging Voltage | 14.4V |
| Maintenance Charging | 13.6V |
| Charging Current | 2A |
| Dimension (mm) | 227/125/62 |
| Weight | 1.7kg |
| AC Power Cable | 5m |
| DC Charging Cable Length | 2.5m |



Workshop Chargers

The WorkshopCharger is designed to give you the power, simplicity, and flexibility that you need. It's a combined charger and a 13,7V power supply and has all the functionality you need.

Technology + Performance

The WorkshopCharger uses Switch-Modetechnology and a temperature compensated charging cycle. It provides excellent efficiency, protects the vehicle's electronics and maintains the performance of the battery. It can also recondition degraded batteries with automatically controlled software.

Simplicity + Flexibility

A simple interface and an intuitive display make our workshop charger very easy to use. Activate the Power supply function by holding the 'ON' button for 5 seconds. A rubber-coated hook lets you hang the charger on the vehicle while working, and you can store the cable on the charger.

Security + Reliability

WorkshopChargers are sturdy and durable. They have full protection against sparks, shortcircuiting and reverse polarity and a compact design and low weight make them easy to handle.



WorkshopCharger 25A

| Description | Unit |
|----------------------------|-----------|
| Part Number | |
| Input Voltage | 230 VAC |
| Charging Voltage | 14.4V |
| Maintenance Charging | 13.6V |
| Charging Current | 25A |
| Dimension (mm) | 202/98/53 |
| Weight | 2.2kg |
| Operating Temperature (°C) | -20/+50 |
| Charger Cable Length (m) | 2,5/5,0 |
| | |



WorkshopCharger 2.0 35A

| Description | Unit |
|----------------------------|-------------|
| Part Number | |
| Input Voltage | 100-240 VAC |
| Charging Voltage | 14.4V |
| Maintenance Charging | 13.6V |
| Charging Current | 35A |
| Dimension (mm) | 227/125/62 |
| Weight | 1.8kg |
| Operating Temperature (°C) | -20/+50 |
| Charger Cable Length (m) | 2,5/5,0 |
| | |



WorkshopCharger 50A

| Description | Unit |
|----------------------------|-------------|
| Part Number | |
| Input Voltage | 100-240 VAC |
| Charging Voltage | 14.4V |
| Maintenance Charging | 13.5/13.6V |
| Charging Current | 50A |
| Dimension (mm) | 280/175/85 |
| Weight | 3.8kg |
| Operating Temperature (°C) | -20/+40 |
| Charger Cable Length (m) | 2,5/5,0 |
| | |



Preheating Products

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.





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 contol 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 excludes the engine heater, which must be ordered separately and integrated in the system.



WarmUp 1400 GPS Link - 471275

| Description | Part Number |
|--|-------------|
| 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

| Part Number |
|-------------|
| 430065 |
| 450015 |
| 460915 |
| 460803 |
| 460802 |
| 460860 |
| 460955 |
| 418801 |
| 440030 |
| 440036 |
| 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

| Description | Part Number |
|--|-------------|
| 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 |
| Bluetooth Hub | 440051 |



WarmUp 1900 Bluetooth® - 471283

| Description | Part Number |
|--|-------------|
| 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 |
| 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

| Description | Part Number |
|--|-------------|
| Termini™ 1400 | 430055 |
| MultiCharger 1205R Flex | 450015 |
| MiniPlug Inlet Cable - 1,5m | 460915 |
| Plugin Extension Cable - 1,0m | 460803 |
| SmartStart™ Wireless Control Unit | 440020 |
| TerminiTM Extension Cable - 1,75m | 460860 |
| MiniPlug Inlet Cable - Fitting Equipment | 418801 |
| MiniPlug Xtreme Connection Cable - 2,5m | 460955 |



WarmUp 1900 SmartStart™ - 471278

| Description | Part Number |
|--|-------------|
| Termini™ 1900 | 430065 |
| MultiCharger 1205R Flex | 450015 |
| MiniPlug Inlet Cable - 1,5m | 460915 |
| Plugin Extension Cable - 1,0m | 460803 |
| SmartStart™ Wireless Control Unit | 440020 |
| TerminiTM 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

| Description | Part Number |
|--|-------------|
| 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

| Description | Part Number |
|--|-------------|
| 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

| Description | Part Number |
|--|-------------|
| 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

| Description | Part Number |
|--|-------------|
| 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

| Description | Part Number |
|--|-------------|
| 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

| Description | Part Number |
|--|-------------|
| 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 1400 - 470060

| Description | Part Number |
|--|-------------|
| 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 TerminiTM II interior heater provides a warm and comfortable cabin and icefree 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

| Description | Info |
|-------------------------|------------|
| 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

| Description | Info |
|-------------------------|------------|
| 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

| Description | Info |
|-------------------------|------------|
| 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™ 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) | 145/127/65 |
| Weight (gr) | 112 |

Sold separately, and can be used together with all Termini $^{\!\top\!\!M}$ interior heaters.



Termini™ Clip

| Item No. | 430101 |
|-------------|--------|
| Height (mm) | 145x70 |

Sold separately, and can be used together with all Termini $^{\text{\scriptsize TM}}$ 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 - 2 x 1,0 m | 460803 |
|------------------------------------|--------|
| PlugIn Y-connector | 460853 |
| Plugin Interior Heater Socket | 460829 |

Branch Set - 460765

| PlugIn Extension Cable - 1,0 m | 460803 |
|--------------------------------|--------|
| PlugIn Extension Cable - 2,0 m | 460804 |
| PlugIn Y-connector | 460853 |
| Plugin Interior Heater Socket | 460829 |

Branch Set - 460766

| PlugIn Extension Cable - 1,0 m | 460803 | |
|--------------------------------|--------|--|
| PlugIn Extension Cable - 1,5 m | 460843 | |
| PlugIn Y-connector | 460853 | |
| Plugin Interior Heater Socket | 460829 | |

Branch Set - 460768

| PlugIn Extension Cable - 0,5 m | 460802 | |
|--------------------------------|--------|--|
| PlugIn Extension Cable - 1,5 m | 460843 | |
| PlugIn Y-connector | 460853 | |
| Plugin Interior Heater Socket | 460829 | |

Branch Set - 460769

| PlugIn Extension Cable - 0,5 m | 460802 |
|--------------------------------|--------|
| PlugIn Extension Cable - 2,0 m | 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.

- · Automatic start controlled by the outside temperature
- DEFA WarmUp ON/OFF
- 1-4 hour 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 *Without GPS module. |
| Operating temperature - °C | -40 - +85 |
| | |

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 *with the ignition off. |
| Protection class - IP | 67 |

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.

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







Bluetooth® Hub Control Unit

| Item No. | 440030 |
|----------------------------------|-------------------------|
| 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/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. | 440051 |
|----------|--------|
|----------|--------|

This power cable with fuse must be ordered separately in case of:

- · 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.

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





| Item No. 24V with car unit | 440020 |
|---|---------------------------|
| Item No. 24V with car unit | 440021 |
| Operating Temp Remote Control (RC) - °C | -10 - +60 |
| Operating Temp 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 | <5μΑ |
| Height/Width/Depth RC - mm | 78/34/16 |
| Height/Width/Depth VU - mm | 69/54/23 |
| Weight RC - gr | 29 |
| 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 |



Control units

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.



Current Consumption - mA

Futura Control Unit

| Description | Info |
|--|----------|
| 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 |
| Mains Voltage - VAC Current, Max A Weight - gr Insulation Class - cl | 230/12, 230/24 16 101 II |



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 | 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 & 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

| | (2,5/5,0/10,0/15,0m) |
|---------------------------------|---------------------------------|
| Weight - gr | 530/915/1520/2260 |
| Current, max A | 16 |
| Voltage - VAC | 230 |
| Number of pcs in Collection Box | 960/22 - 961/12 - 962/1 - 963/5 |
| Item No 15,0m | 460963 |
| Item No 10,0m | 460962 |
| Item No 5,0m | 460961 |
| Item No 2,5m | 460960 |
| Item No 2.5m | 460960 |

DEFA Connection cable 2,5 $\,\mathrm{mm^2}$ 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 2,5 $\,\mathrm{mm^2}$ 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 | 460960 |
|-------------------------------|---|
| Item No. (1,0m) 460901 | 460961 |
| Item No. (1,5m) 460915 | 460962 |
| Item No. (2,0m) 460939 | 460963 |
| Voltage - VAC 230 | 960/22 - 961/12 - 962/1 - 963/5 |
| Current - A 16 | 230 |
| Current, max 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 | 160/40/2 |
| 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 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 & 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 0C | -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 | 460854 |
|----------------------------------|----------------|
| Height/Width/Depth - mm 53/48/24 | 701445 |
| Mains voltage - VAC 230 | 460856 |
| Current, max A 16 | -40 / +80 |
| Weight - gr 23 | 61/31/67 |
| IP rate 44 | 230/12, 230/24 |

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 & Contacts

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 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 |
| Voltge - 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 $1\,\mathrm{m}$.

Installation tool

| Item No. | 460840 |
|-------------------|---------------------------|
| item No. | 400040 |
| 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 |
|----------|--------|
| | |

Put the tools on PlugIn male or female contact for simpler installation through the firewall.

Crow Foot Tool (27mm)

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

Put the tools on PlugIn male or female contact for simpler installation through the firewall.

Tool For Heater 241

| Item No. | 460861 | |
|---------------------------------|--------|--|
| 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

| tem No. | 491012 |
|---------|--------|
| | |

Consists of main tools (491011), 4 extractor tools (491006) og 4 taper clamping sleeves (491005).



Main Tools

| ltem | No. | 491011 |
|--------|------|--------|
| itciii | 140. | 431011 |



Extractor

| Item No. (Full Set) | 491006 |
|---------------------|--------|
| Item No. (Ø20mm) | 491001 |
| Item No. (Ø27mm) | 491002 |
| Item No. (Ø34mm) | 491003 |
| Item No. (Ø41mm) | 491004 |
| | |



Taper Clampings

| Item No. (Full Set) | 491005 |
|---------------------|--------|
| Item No. (Ø31mm) | 491007 |
| Item No. (Ø35mm) | 491008 |
| Item No. (Ø39mm) | 491009 |
| Item No. (Ø46mm) | 491010 |



Extractor Hook

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

28



Chargers & Inverters

DEFA offers battery chargers for a vide variety of vehicles and industrial applications. DEFA develops and manufactures a series of charging products that allow our customers to get the most out of their batteries.





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 sensor



MultiCharger 1x12A

| 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 |
| IP-rate Weight - kg | 2 |
| | |
| Weight - kg | 2 |
| Weight - kg Height/Width/Depth - mm | 2 182x98x53 |
| Weight - kg Height/Width/Depth - mm | 2 182x98x53 EN60335-1 |

| 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 |





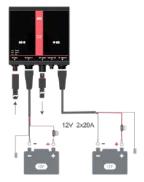


MultiCharger 2x20A

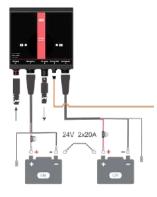
DEFA MultiCharger 2x20A is a powerful and compact charger that is easily installed in all types of vehicles. It is designed to handle any conditions. To make the system more flexible DC cables in desired lengths are ordered separately. Cables available in 2, 4 and 6 meters.



12V SYSTEM



24V SYSTEM



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 |
| | |

| 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 |



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.





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 |
| | |

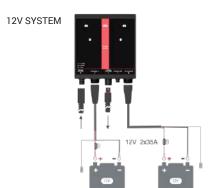
| Item No. | |
|----------|----------------------------|
| 705099 | 2m Charging cable |
| 705147 | 4m Charging cable |
| 705159 | 6m Charging cable |
| 705160 | 8m Charging cable |
| 705294 | 5m Remote panel |
| 705295 | 10m Remote panel |
| 705296 | 20m Remote panel |
| 705297 | 25m Remote panel |
|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



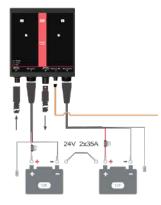
MultiCharger 2x35A

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.





24V SYSTEM



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 |
| | |

| 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 |
| | |



MultiCharger 40A - 24V

DEFA MultiCharger 40A is a 24V charger for trucks and heavy vehicles. It is compact with high efficiency, and robuste 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/Width/Depth - mm | 282/171/82 |
| Certifications | EN60335-1 |
| | EN60335-2-29 |
| | EN55014-1 |
| | EN55014-2 |
| | EN61003-3/2 |
| | |

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







MultiCharger 1205 Flex

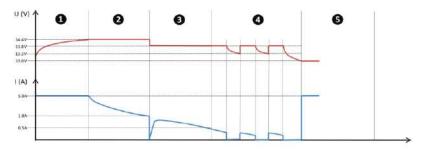
DEFA MultiCharger 1205 Flex is a powerful and compact charger for modern cars It needs 48% less space for installation than its predecessor, and it has flexible cables to allow for easy installation in tight spaces. The bracket allows for easy installation in all cars, and the PlugIn cables integrates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



MultiCharger 1205 Flex

| MultiCharger 1205 Flex | 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 |

CHARGING CURVE





MultiCharger 1205R Flex

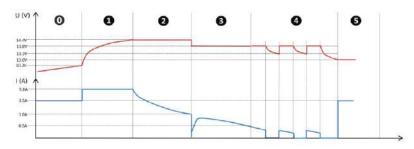
DEFA MultiCharger 1205R Flex is a powerful and compact charger with built-in relay and the best option for charging the vehicle when a pre-heating system is installed. It needs 60% less space for installation than its predecessor. With a bracket with more optional installation ways and flexible connection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



MultiCharger 1205R Flex

| 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 |

CHARGING CURVE





MultiCharger 1210 Flex

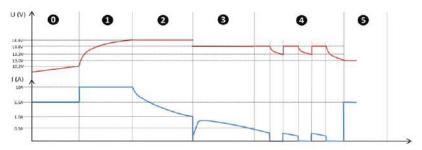
MultiCharger 1210 Flex is a 12V/10A battery charger which is more compact than similar chargers in the category. It needs 89% less space for installation than its predecessor. The new 1210 Flex has more flexible cables making the mounting of the charger easier and faster. The new waterproof 12V connections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



MultiCharger 1205R 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 |

CHARGING CURVE





ChargerKits 1205 Flex & 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 particuarily 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

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 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 | |

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 |



ChargerKits 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 1x20A - 706930

| MultiCharger 1x20A | 705800 |
|--|--------|
| MiniPlug Inlet Cable - 2,0m | 460939 |
| MiniPlug Extreme Connection Cable - 5,0m | 460957 |
| Detachable Cable With 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 Extreme Connection Cable - 5,0m | 460957 |
| Detachable Cable With Temperature Sensor And Fuse - 2x2m | 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 |
| | <u> </u> |

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 lenghts as well as a connection from PlugIn to Schuko. Rettbox is also available for mounting the Rescue chargers.

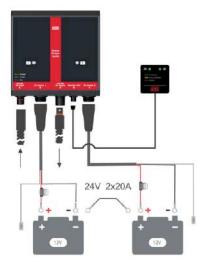






RescueCharger Accessories

| 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 | 1,7kg |
| | |





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/B/H | 202x96x53 |
| IP rate | IP20 |
| Weight | 2,0kg |
| | |



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.



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

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 |
| Mac 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 | 1,8kg |
| | |

Detachable Cables

| 2,5m Cable | 711940 |
|------------------|--------|
| 5,0m Cable | 711950 |
| 2,5m Power Cable | 711533 |





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.

POWER SUPPLY

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



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.

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

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.





12V Battery status indicator

| Item No. | 701758 |
|---------------------|--------|
| Length - mm | 48 |
| Cross section - mm2 | 28 |
| IP rate | 65 |



12V Charging cable, with ring terminals

| Item No. | 701762 |
|---------------------|--------|
| Cable length - m | 1.3 |
| Cross section - mm2 | 1.3 |
| IP rate | 65 |



12V Charging cable, with clamps

| Item No. | 701764 |
|---------------------|--------|
| Cable length - m | 1.3 |
| Cross section - mm2 | 1.3 |
| IP rate | 65 |



12V Charging kit

| Itam Na | 701761 |
|----------|--------|
| Item No. | 701701 |
| | |



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.



12V Battery status indicator

| Item No. | 706611 |
|-----------------------------|--------|
| Length - mm | 48 |
| Dimension - mm ² | 28 |
| Max charging current - A | 3.1 |
| IP Rate 20 | 65 |





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.





11=:=|==

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

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.



Inverter 1200W

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 |
|----------|--------|
| | |



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.



Inverter 2500W - 24V

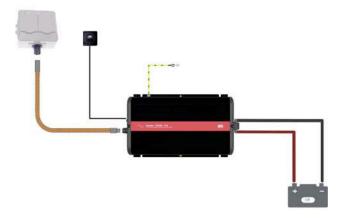
| Item No. with Transfer switch | 709595 | |
|----------------------------------|--------------|--|
| Item No. without Transfer switch | 709597 | |
| Item No. Remote panel | 709340 | |
| Height/width/depth (mm) | 412x254x88,5 | |
| Weight (kg) | 6.3 | |



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 |
|----------|--------|
|----------|--------|





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 | | 300 | 2,6 | 230x151x64 |
| 702937 | PlugIn | | | 600 | 3,5 | 324x170x68 |
| 702941 | PlugIn | | | 1500 | 6,2 | 420x223x101 |
| 702943 | PlugIn | | _ 230 | 2000 | 6,5 | 420x289x100 |
| 702949 | PlugIn | - - 12 - | _ 230 | 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 | Flush Mounted |
|-----------------|---|
| Item No. 705115 | Remote Control for 300/600W inverter, 6 m 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

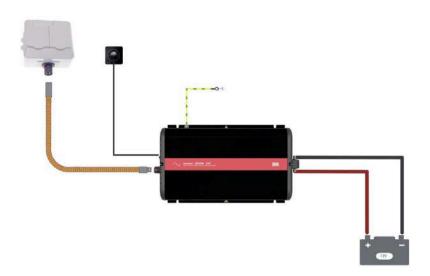
DEFA inverter kits consist of the inverter, a 2m orange extension cable and a double power outlet. It can easily be expanded, as it is based on the DEFA PlugIn system.

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 |



CHARGERS & INVERTERS

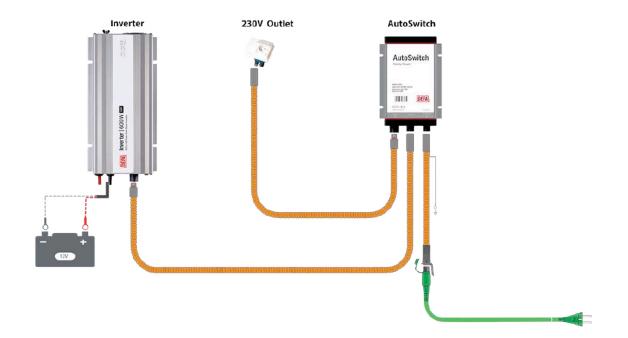
AutoSwitch

AutoSwich 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 |
| | |





AutoSwitch

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 100A

| 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 100A

| 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.



El-centrals

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



El-central

Item No. 700433

Main inlet cabinet 230VAC/16A 1 DEFA PlugIn inlet, DEFA PlugIn outlet - Schuko outlet - grey



El-central

Item No. 700437

Main inlet cabinet 230VAC/16A 1 DEFA PlugIn inlet, 3 DEFA PlugIn outlet - grey

Item No. 700441

Main inlet cabinet 230VAC/16A 2 DEFA PlugIn inlet, 3 DEFA PlugIn outlet, with general switch - grey



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.





| 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 Xtreme 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 Xtreme Connection cable 1,5mm²

| 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 & 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 |
| | |



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.





| Item No. | 701150 |
|---------------|--------|
| Voltage - VAC | 230 |
| Current - A | 16 |
| Weight | 0,158 |



DEFA Rettbox®

| Rettbox® 12V without air | 707175 |
|-------------------------------|--------|
| Rettbox® 24V without air | 706411 |
| Rettbox® cable without air 4m | 706412 |
| Rettbox® 12V with air | 707174 |
| Rettbox® 24V with air | 706413 |
| Rettbox® cable with air 4m | 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 & Frames

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.



Wall outlet

| Item No. | 700399 |
|---------------------|--------|
| Mains voltage - VAC | 230 |
| Weight - kg | 0.200 |
| IP rate - IP | 44 |



Wall outlet

| Item No. | 700401 |
|---------------------|--------|
| Mains voltage - VAC | 230 |
| Weight - kg | 0.100 |
| IP rate - IP | 44 |



Wall outlet

| Item No. | 700403 |
|---------------------|--------|
| Mains voltage - VAC | 230 |
| Weight - kg | 0.200 |
| IP rate - IP | 44 |



Wall outlet

| Item No. | 702779 |
|---------------------|--------|
| Mains voltage - VAC | 230 |
| Weight - kg | 0.058 |
| IP rate - IP | 44 |



Plugin Wall outlet

| Item No. | 700405 |
|---------------------|--------|
| Mains voltage - VAC | 230 |



Wall outlet

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



Manual 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.



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 |



EV Charging Cables

DEFA offers battery chargers for a vide variety of vehicles and industrial applications. DEFA develops and manufactures a series of charging products that allow our customers to get the most out of their batteries.









Electric Vehicle Charging Cables

The EV Premium charging cables are designed for pure performance and unmatched user friendliness, developed for all weather conditions.

We are an OEM supplier to some of the worlds largest car, truck and vehicle manufacturers and offer a standard 5 year warranty suitable for the following models;

Audi, BMW, Ford, Hyundai, Jaguar, KIA, Mercedes, Mini, Nissan Leaf 2018, Porsche, Ranger Rover P400e, Renault, Smart, Tesla, Toyota, Volkswagen, Volvo.







Designed For All Conditions

We have used our extensive experience to ensure that our cables provide the best possible user experience in all conditions. While other cables become stiff in winter, eConnect cables remain soft and flexible even in severe cold. Our cap and terminals are designed to withstand moisture and heat.

User Friendly

An eConnect EV charging cable is made with the user in mind. Since the user might be almost anyone, we have created a lightweight cable, universal ergonomic grips and connectors with different angles suited vehicle and charge point side connection. Our smart cap can be retracted during charging and a range of smart accessories make it easier to safely store and transport the cable when it's not in use.

Robust & Durable

Every component in eConnect cables are made from sturdy and durable materials that can withstand everyday use. Our connectors can withstand accidentally being run over and our robust cables and terminals are resistant to wear and damage from moisture, sunlight and extreme temperatures.

Smart Cap Technology

The vehicle-side connector cap is fastened with an adjustable strap that lets you pull it away from the car during charging. The strap is fastened on the back of the cap so that it is left hanging upside down and doesn't collect water and dirt. This simple solution prevents scratches on your car and water and snow from collecting in the cap and then getting on to the terminals.

Environmental Friendly

eConnect charging cables are designed to be recyclable. In addition to only using recyclable materials, this is achieved by not using so-called potting in our connectors. Potting is a technique for water- and impactproofing that involves filling electronic products with a plastic, rubber or resin compound. This creates additional waste and makes it hard to separate out components and materials for reuse and recycling later.

EV CHARGING CABLES





Electric Vehicle Charging Cable Accessories







Safety Docking

This unique lockable docking unit safeguards your cable from theft, provides a practical way to store the cable, and protects the connector terminals from water and dirt.

Premium Cable Bag

The premium cable bag is made from durable water- and fire retardant material. A hook on the back of the bag can be used to fasten the bag and prevent it from moving during driving.

Basic Cable Bag

This handy cable bag helps you to keep your eConnect cable tidy and dry, both in the car and in the garage. The basic bag can be used with all eConnect Mode 3 cables.





eConnect EV Charging Cable

Premium charging cables made for performance, durability and unmatched userfriendliness in any conditions. eConnect cables can be used to charge all vehicles with a Type 2 interface.

Made for Nordic conditions: eConnect cables remain soft and flexible, even in severe cold. eConnect cables are lightweight and have plugs with universal ergonomic design. These robust cables and terminals are made for long term use. The retractable cap prevents it from collecting water and dirt during charging and from bumping into the car.



eConnect EV Charging Cable Mode 3 | Type 2

| Ratings | See Item no. table |
|--|--------------------------|
| IP rating, connected/with end cap | IP44 |
| Operating temperature [°C] | -40 to +55 |
| Storage temperature [°C] | -50 to +85 |
| Charging cable type | Mode 3 |
| Connection to vehicle/charging station | Type 2/Type 2 |
| Certification | IEC 62196-1, IEC 62196-2 |
| Recycling | EE-waste |
| | |

eConnect is available in the following versions:

InverterKit

| Item no. | Current [A]* | Power [kW]* | Voltage [V~]* | Phase | Length [m] | Weight [kg] |
|----------|--------------|-------------|---------------|-------|------------|-------------|
| 711304 | 20 | 4.6 | 250 | 1 | 5 | 1.4 |
| 711305 | 20 | 4.6 | 250 | 1 | 7.5 | 1.8 |
| 711308 | 32 | 7.4 | 250 | 1 | 5 | 1.9 |
| 711309 | 32 | 7.4 | 250 | 1 | 7.5 | 2.4 |
| 711306 | 20 | 13.8 | 480 | 3 | 5 | 2.1 |
| 711307 | 20 | 13.8 | 480 | 3 | 7.5 | 2.7 |
| 711310 | 32 | 22 | 480 | 3 | 5 | 3.1 |
| 711311 | 32 | 22 | 480 | 3 | 7.5 | 4.0 |

*Maximum rating

The actual charge rate is also determined by the onboard charger (car), the charging station and the temperature of the batteries.

EV Charging Cable (Generic)

Our 10 amp charger is suitable for use with all electric vehicles with a Type 1 vehicle connection and uses a standard domestic UK 3 pin socket outlet. If your daily mileage is less than 80 miles this charger is perfect for your electric vehicle.

The EV Extras charger is rated at 10 amps (law in the UK to protect domestic circuits against overload and fire risk) and delivers 2.3 KW of charge. The 10 amp charging rate translates to approximately 2.3kW or in more real world language approximately 1 mile of range for every 8 minutes of charging* which adds around 80 to 90 miles of range to any electric vehicle or plug in hybrid vehicle when placed on a 12 hour overnight charge.

Our chargers are designed to be as compact and as lightweight as possible reducing the space and weight within the vehicle if you decide you need to charge away from home.

Being a 10 AMP charger the risk of overloading domestic electrical circuits and associated fire risk is practically non existent which can be a hazard with some of the variable rate chargers on the market.

These portable chargers use a standard UK 3 Pin plug and are ideal for plugging in just about anywhere you can access a standard domestic 13 amp power socket. This makes the EV Extras Portable Charger a near necessity for an EV or PHEV owner not just at home but when out and about.



Type 2 Portable Charger UK 13 AMP 3 Pin Plug - 7 metres

| | _ |
|------------------------|--------------------------------------|
| Connector | Type 2 IEC 62196 |
| Cable Type | AC Single Phase Charging Cable IP 65 |
| Rating | 10 amp |
| Charging Rate | 2.3kW |
| Operating Temperature | -30C to +50C |
| Certification | CE and TUV |
| Length and Weight | 7m - 2.1kg |
| Manufacturer Guarantee | 12 Months |
| | |

Type 1 Portable Charger UK 13 AMP 3 Pin Plug - 7 metres

| Connector | Type 1 IEC 62196 | |
|------------------------|--------------------------------------|--|
| Cable Type | AC Single Phase Charging Cable IP 65 | |
| Rating | 10 amp | |
| Charging Rate | 2.3kW | |
| Operating Temperature | -30C to +50C | |
| Certification | CE and TUV | |
| Length and Weight | 7m - 2.1kg | |
| Manufacturer Guarantee | 12 Months | |

Workshop Products





Guniwheel™

GUNIWHEELTM is a universal bolt and lug pattern wheel designed to safely mount and move any vehicle with missing or damaged tyres δ wheels.

GUNIWHEEL $^{\text{m}}$ is a solid steel wheel with an airless polyurethane rubber tread. It comes in three sizes based on the vehicle bolt pattern and size of the vehicle center bore. GUNIWHEEL $^{\text{m}}$ 45S, 56, and 80. Load capacity for the 45 & 56 is 2,500lbs per wheel. 3,500lbs per wheel for the 80.







Guniwheel 45S

Fits most cars and light SUV's with 4 or 5 lug bolts patterns

| Weight Capacity | 1134kg each |
|-----------------|----------------|
| Size | 22.5" D x 3" W |
| Offset | 94mm |
| Weight | 34lbs |
| Center Hub | 77mm |
| Speed Rating | 5mph |

Made of mild steel and an airless polyurethane rubber exterior

Guniwheel 56

Fits most trucks and large SUV's with 5 or 6 lug bolt patterns

| Weight Capacity | 1134kg each |
|-----------------|--------------|
| Size | 22.5"D x 3"W |
| Offset | 51mm |
| Weight | 32lbs |
| Center Hub | 110mm |
| Speed Rating | 5mph |

Made of mild steel and an airless polyurethane rubber exterior

Guniwheel 80

Fits HD/SD trucks & vans with 8 lug patterns

| Weight Capacity | 1588kg each |
|-----------------|------------------|
| Size | 24.5" D x 3.5" W |
| Offset | 60mm |
| Weight | 34lbs |
| Center Hub | 140mm |
| Speed Rating | 5mph |

Made of mild steel and an airless polyurethane rubber exterior

Consumables



Slime Emergency Flat Solutions

Slime Tyre sealant instantly and repeatedly repairs tread area punctures up to 1/4" in diameter using Fibro-Seal® Technology.

Slime is a revolutionary new product which provides instant result to all tyres, being cycles, motorbikes and cars. Slime products are eco friendly, non toxic, non hazardous. A state of the art blend of environmentally friendly fibres, binders, polymers and congealing agents that intertwine and clot to seal all kinds of punctures. By mending punctures it can help you save money and prolong your tyre life.



Tyre Repair Sealant

| Item no | SDS-500/06-IN 10169 | |
|------------------------------------|---------------------|--|
| Sizes | 437ml / 450ml | |
| Quick, easy to use and inexpensive | | |
| Requires additional air source | | |



Smart Repair Kit

Sealant + inflation for 1 easy repair

Tyre is fully inflated

Requires manual sealant insertion

Back on the road in 15 minutes



Flat Tyre Repair Kit

Sealant + inflation for 1 easy repair

Tyre is fully inflated

No valve core removal

Repair with the push of a button

Back on the road in 15 minutes



1-2-Go Kit

Sealant + inflation for 1 easy repair

Tyre is fully inflated

No valve core removal

Repair with the push of a button

Back on the road in 15 minutes

| Does This Product | Tyre Repair Sealant | Flat Tyre Repair Kit | Smart Repair Kit | 1-2-Go Kit |
|------------------------------|-----------------------|------------------------|------------------------|------------------------|
| Include an inflation device? | NO | YES | YES | YES |
| Fully inflate your tyre? | NO, requires inflator | YES, inflator supplied | YES, inflator supplied | YES, inflator supplied |
| Does it clean easily? | YES | YES | YES | YES |
| Have a TPMS Safe formula? | YES | YES | YES | YES |
| Include all necessary tools? | NO, requires inflator | YES | YES | YES |

Nitrile Gloves

Made to hold up well against chemicals, protect the hands from damage. These blue nitrile gloves are non-sterile and ambidextrous. Nitrile Gloves provide maximum durability, much more than that of an average latex or vinyl glove; three times more resistant to perforations than natural rubber. With nitrile gloves, chances of skin irritations or severe allergic reactions are minimized and are less likely to occur.



Orange Microtex Nitrile Gloves (Grippa)

| Description | Info |
|------------------|-----------|
| Quantity per Box | 100 |
| Sizes | M, L, XL |
| Pallet Quantity | 500 boxes |



Black Rhino Nitrile Gloves (Premium - Heavy Duty)

| Info |
|-----------|
| 100 |
| M, L, XL |
| 500 boxes |
| |



INTCO Blue Nitrile Gloves

| Description | Info |
|------------------|-------------|
| Quantity per Box | 100 |
| Sizes | S, M, L, XL |
| Pallet Quantity | 840 boxes |



Components & Accessories Engine Belts & Hosing Hydraulics

