

TRUSTEC[®]
energy products

E-HYB
mobil

trust creates energy™



Energy technology for every area

TRUSTEC E-HYB mobil - the flexible energy storage

The new **TRUSTEC E-HYB** mobil is characterized by its modular technical equipment options:

The **TRUSTEC E-HYB** mobil can be manufactured **individually modified** depending on the application and requirement

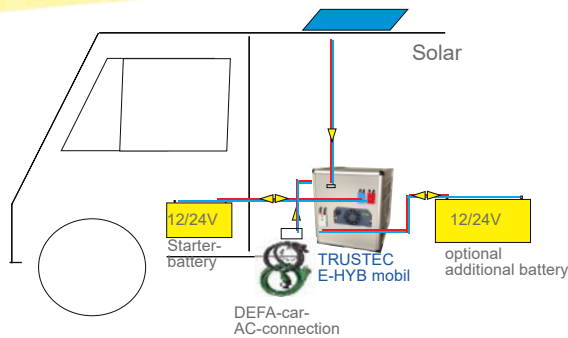


TRUSTEC E-HYB mobil - the compact energy storage

- for **new vehicles**
- as **vehicle retrofit**
- **only 1 TRUSTEC E-HYB mobil needed since changeable** for the 230V supply with a wide range of applications
 - ambulances
 - all kinds of emergency vehicles
 - assembly vehicles (portable for the construction site)
 - Buses, motorhomes
 - work platforms
 - boats
 - house/office-safety-energy - 230V emergency power
 - from mains/car/generator/solar

The new **TRUSTEC E-HYB** mobil offers:

- safe 230V pure sine up to 2000W from battery, car, mains, additional battery, solar
- complete electrical installation
- plug connctions
quick installation and use in different vehicles
voltage input from: car, AC grid, solar, external additional battery
output: 2 x Schuko 230 V AC, 12V DC, 5V USB
- highest electrical personal protection
thanks to TRUSTEC insulation monitor plus FI, plus circuit breaker according to VDE



The **TRUSTEC - E-HYB** mobil is an electrical system and contains all the desired electronic technologies that serve the mobile power supply and electrical safety:.

only 3 parts

- **TRUSTEC E-HYB mobil** - in selected equipment, ready to plug in
- **Connection plug cable** for starter battery Plus and Minus, standard equipment
- **DEFA cabelset for AC-Network** - external cabel/wall socket/internal protective socket - optional

The use is varied, can be used in vehicles of any kind and as a stationary energy storage system. Installation in the vehicle is quick and inexpensive because the **TRUSTEC E-HYB** mobil is delivered **ready to plug in and function**.

only 6 operations - approx. 1 hour

The **TRUSTEC - E-HYB** mobil can be plugged in and used in a wide variety of vehicles depending on the power requirements of everyday use.

The equipment, which can be modified in terms of power, system voltage, storage capacity, battery technology and battery charging technology, consists of:

- **COTEK SC Pure Sine Combination Inverter - 1200W and 2000W**
mains connection, charging technology "battery technology open", power sharing
- **TRUSTEC battery technology**
ead-gel AGM, Gel Hawker high power or lithium in IP65 in an aluminum press housing, as well as a very sensible plug-in connection of an external additional battery, DC circuit breaker for direct restart in the event of overload, optional Device battery capacity indicator with USB or RS232 interface
- **TRUSTEC charging converter**
for universal battery charging 12/12V, 12/24V, 24/12V or 24/24V
Car battery deep discharge protection, car battery recharge, solar charge controller in various services
- **TRUSTEC Insulation monitor**
the perfect electronic electrical personal protection:
Circuit breaker, RCD, insulation monitor, so that personal protection inside and outside the vehicle is ensured even when wet and simultaneous use of several consumers according to VDE regulations
- **Housing**
the housing is an aluminum frame construction from a German manufacturer consisting of:
 - aluminum floor
 - Cable compartment on top and side surfaces made of foam PVC panels with sliding technology
stowed in the cable compartment are:
 - 2 carrying straps (preassembled)
 - Connection cable 230V AC power cable with IEC right-angled plug (on the side)
 - DC / DC vehicle connection cable 25qmm, 3m, 50A plug, fuse 60A, connection cable eyelet M6
 - DC / DC additional battery connection cable 35qmm, 1.5m long
 - DC fuse (power and voltage designed accordingly)

The comfortable design in the frame construction and control of the COTEK SC combi inverter allows the replacement of individual elements of the device and the adaptation to any later, new battery technologies.

energy - long-term - investment

TRUSTEC E-HYB mobil - the *variable* energy storage

The **TRUSTEC E-HYB** mobil has a modular structure, is supplied in 5 different basic versions and can be adapted according to customer needs - from the basic to the full version

The following adjustment options are available:

- **Battery-Technology:**
 - Lead gel, lead gel high load, lithium from 232Wh to 2kWh plus external accessory battery
- **Inverter Power:**
 - 1,2kW or 2kW
- **Comfort features:**
 - Display CR20 - programmable, can be removed and with the associated 7m cable as a remote control, ALTERNATIVE: Bluetooth Dongle with Smartphone-use
 - Battery meter
- **Personal protection:**
 - Insulation monitor
- **DC charging voltage:**
 - 12V or 24V vehicle system
- **Solar charging equipment:**
 - Power of 40-430Wp

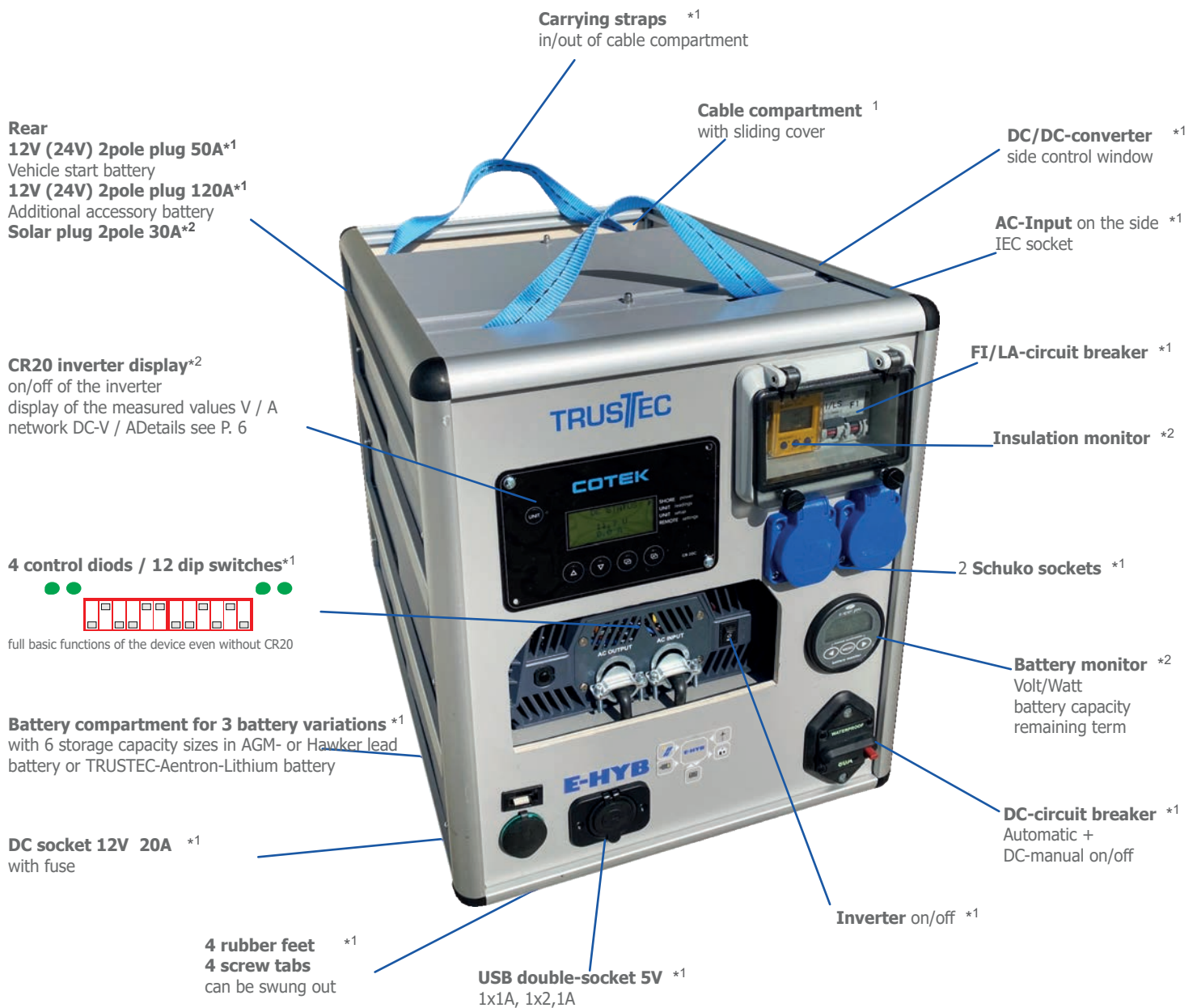


Basis Version



Comfort Version



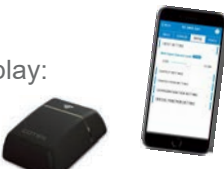


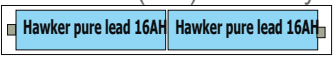


the universal complete 230V energy unit with robust aluminum profile
highest electrical safety - individual - comfortable



*1 Basic Version
*2 Comfort Version

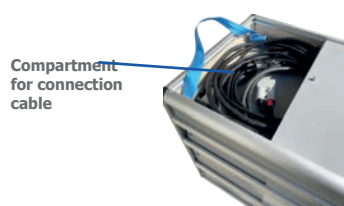
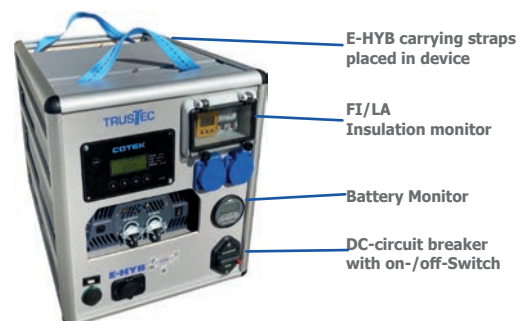
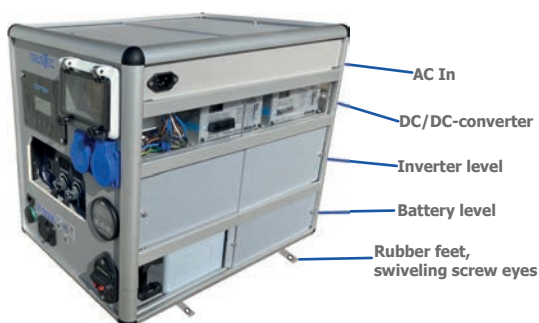
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TRUSTEC E-HYB mobil equipment

Basic equipment	Comfort equipment
<p>COTEK SC Inverter combi device continuous power 1200W (approx. 1380W 1Min./2000W 1Sec) or 2000W (approx. 2300W 1Min./4000W 1 Sec) Bi-directional converter AC grid connection AC power sharing = selectable amp from the power grid and power sharing AC/DC battery Charging technology 50A / 100A with variable and freely adjustable charging characteristic R232 communication interface Bluetooth for mobile phone communication can be plugged in as an add-on (from Q3 2020) Fan, load and temperature controlled</p>	
<p>simple, solid operation On / off toggle switch, 3 control diodes Fixed setting of the inverter and charging functions via DIP switches 2 safety sockets 1 IEC socket for mains AC input 20A 12V output socket 5V USB connection FI / LS circuit breaker DC circuit breaker with manual switching</p>	<p>COTEK CR20 Display Switch the device on / off (instead of the toggle switch) Display of the measured values Convenient setting / programming of inverters, current flow and charger functions, power sharing night mode. A total of approx. 50 displays / selection / detailed settings also open to future battery technologies</p>  <p>removable and installation with 7m cable in the vehicle, front lock cover optional</p> <p>alternative to the COTEK CR20 display: COTEK Bluetooth Dongle for controlling the inverter with a smartphone</p> 
<p>E-HYB 1200-G 600 and E-HYB 2000-G 600 are equipped with AGM-batteries in the Basic version, since many users only need less power and this in the vehicle with the plug connection to the original additional battery or start battery or plug-in battery is guaranteed</p> <p>lying flat in E-HYB battery compartment 2 x SUN-Gel in battery compartment in a row</p>  <p>optional 2x2 in a row = 4 x SUN-Gel in battery compartment</p> 	<p>for higher power output we optionally offer equipment with Hawker pure lead batteries 2x16Ah battery compartment in a row</p>  <p>or 4x16Ah (2x2) in battery compartment</p>  <p>For professional high-performance operation, we equip the devices in the Li version with the 24V TRUSTEC-Lithium batteries in 1kWh or 2kWh in an IP65 cast aluminum housing. The plug connections for car and side battery are also available</p>  <p>1 x 1kWh Lithium in battery compartment</p>  <p>2 x 1kWh Lithium = 2kWh in battery compartment</p>

TRUSTEC E-HYB mobil equipment

Basic equipment	Comfort equipment
<p align="center">TRUSTEC DC/DC converter</p> <p>guarantee the optimal full charge of the device batteries from the vehicle starter battery, additional battery or alternator, without discharging the starter battery too deeply. When the E-HYB batteries are charged externally from the mains, they are also recharged to the starter battery. DC charging technologies can be operated via transparent sliding windows on the side if required.</p>	
<p>TRUSTEC DC/DC converter DC/DC 12/12 50A</p>	<p>TRUSTEC DC/DC converter DC/DC 12/12 50A DC/DC 24/12 25A DC/DC 24/24 25A DC/DC 12/24 25A - standard with Lithium batteries Solar charging converter 10/26/21/26A</p>
<p>in der basic version, the TRUSTEC E-HYB mobil is equipped with a combined FI/LA load circuit breaker in accordance with VDE under a safety flap</p>	<p>for 230V outdoor work, only a TRUSTEC Insulation monitor with the corresponding relay required for the AC mains connection offers optimal personal protection</p>
	<p>battery monitor for displaying the current flows in and out of the battery. V/A battery status in% with approx. remaining runtime with available residual energy with the same load profile</p>
<p align="center">DC plug connections 20A DC 12V car socket 5V USB double socket 50A car power cable 120A accessory battery</p>	



TRUSTEC - E-HYB mobil ADVANTAGES



Plug In in various vehicles

- vehicle plug-in connection cable
- Schuko plug to DEFA external socket
- > 1 device with electrical safety can be used in any other vehicle depending on the daily work area
- > TRUSTEC E-Hyb mobil can quickly be taken out of the vehicle to the workplace

Fixed Assembly highest security / few steps

- all technologies are pre-assembled in the TRUSTEC E-HYB mobil with RCD and load circuit breaker
- only battery connection cable with 120A flat plug and DC fuse and DEFA external socket
- optional **Insulation monitor** with maximum personal protection
- optional inverter control panel CR20 can be removed with 4 screws and placed up to 7m away as desired. . (Cover plate for TRUSTEC E-HYB mobil is included)
- device is CE certified

Battery equipment can be selected individually for each area of application

- for light sporadic power supply in the car with Gel-AGM batteries
- for sometimes tougher short-term use with Gel-Hawker high-performance battery
- for tough professional use with TRUSTEC lithium battery in an aluminum press housing IP65
- TRUSTEC E-HYB mobil is constantly connected to a car battery or starter battery, this energy can also be used. Deep discharge protection via DC / DC converter is integrated
- the DC / DC converter always guarantees optimal vehicle charging of the TRUSTEC E-HYB mobile battery (from 12V or optionally 24V)
- in the case of battery aging, any battery technology can be installed - making this storage a timeless investment

COTEK inverter equipment ingenious SC technology

- pure sine current | Continuous power 1200W or 2000W | Overload protection high load capacity for starting currents
- network connection | Power sharing (AC current limitation and supplementation with DC current) | DIP switch setting or optional integrated remote control (7m cable)
- charging level with 3 programs plus 1x freely adjustable battery charging values also for future technologies

optional **Battery monitor**

- adjustable to different battery capacities
- shows remaining battery capacity, current flow and voltage

additional equipment

- USB charging socket 5V - standard
- 12V socket 20A - standard
- Solar charge controller and solar terminal connection - optional
- LLoad safety device for the battery Protection - standard aluminum frame housing

Aluminium frame housing

- robust, durable, with carrying straps and fastening straps
- with sliding access technology in the side walls
- connection cable compartment at the top with sliding cover
- Service-friendly

Stationary use

- TRUSTEC E-HYB mobil can also be operated stationary as a safety energy store by connecting solar modules

the SC series of COTEK inverters offers a UPS function

Vehicle installation

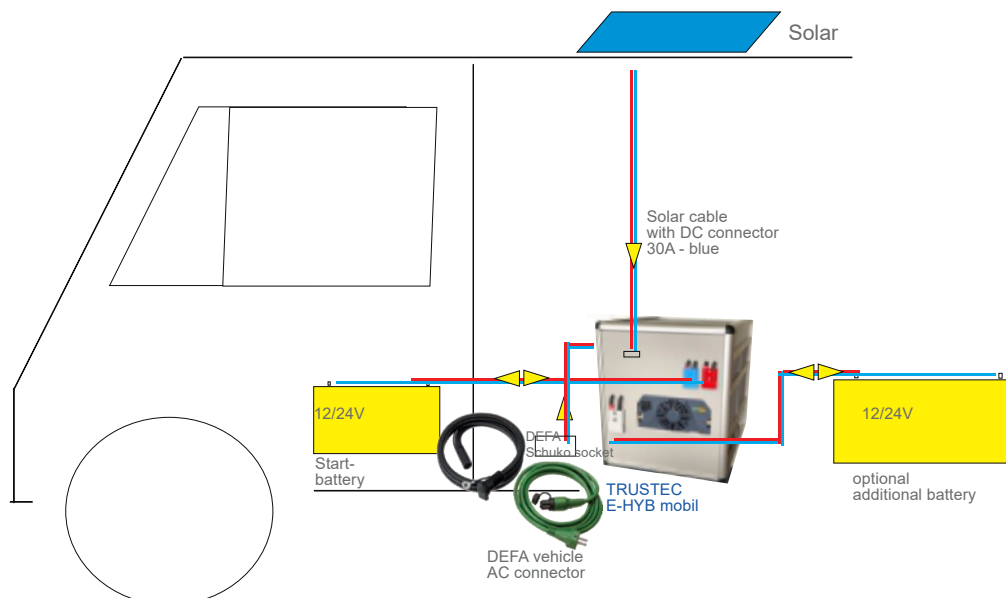
only 3 parts

- **TRUSTEC E-HYB mobil** - in selected equipment, ready to plug in
- **Plug-in cable** for starter battery plus and minus, standard equipment
- **DEFA cable set for AC network** - external cable / wall socket / internal protective socket - optional
- additional battery DC / DC cable connector 120A - optional

only 6 operations - approx. 1 hour

- **Start battery plug-in cable** - screw on fuse to battery pole
- Drill a **25mm hole** in the car wall
- screw in the **DEFA vehicle socket** IP65 with a 1,5m inner cable
- screw on the **DEFA Schuko socket** inside
- place the **E-HYB** in the vehicle / fasten/screw in the vehicle
- **connect cable** 1xbattery plug cable
1xAC power cord in DEFA Schuko socket
1xDEFA external cable 5m in house socket

switch on the E-Hyb - DONE!
CE-certified



technical data

	TEH-M 1200-G 300	TEH-M 2000-G 600	TEH-M 1200-Li 1000	TEH-M 2000-Li 1000	TEH-M 2000-Li 2000
	SUN-Gel		Lithium iron		
	Hawker lead gel high current		die-cast aluminum safety housing according to IP65		
COTEK-SC-Series	SC 1200-212	SC 2000-212	SC 1200-224	SC 2000-224	SC 2000-224
Power 230V pure sine VA cont./1min.2sec	1200/1380/2400	2000/2300/4000	1200/1380/2400	1500/1550/1600	2000/2300/4000
with connection to 96Ah car battery	double term	double term	double term	2000/2300/4000	2000/2300/4000
Charging power A	12,5/25/37/50A	25/50/75/100A	6,2/12,5/18,7/25A	6,2/12,5/18,7/25A	12,5/25/37/50A
Netzdurchschaltung	yes				
Power sharing (load sharing max. Mains A / battery)	yes				
UPS function	yes				
AC input	yes = permanent charging of the batteries				
Performance data approx.					
Own consumption standby A	0,2		0,1		
Own consumption without load A	3,0	4,0	1,5	2,0	2,0
Control panel inverter control CR20	optional				
Output load AC circuit breaker FI / LA	16 A				
Insulation guard (personal protection)	optional				
BASIS-Version - integrated battery storage	36Ah SUN Gel battery	72Ah SUN Gel battery			
sporadic use or with additional battery pack	AGM lead fleece	AGM lead fleece			
Battery capacity (approx.)	0,432kWh	0,864kWh ¹			
Discharge capacity up to (approx.)	50% DOD				
Total battery power at 50% DOD (approx.)	216kWh	432kWh			
alternative battery storage:					
PROFI-Version - integrated battery storage	32Ah Gel Hawker	64Ah Gel Hawker	Lithium battery	Lithium battery	Lithium battery
	high current resistant		die-cast aluminum safety housing IP65		
Battery capacity (approx.)	0,307kWh 80%	0,614 80% ¹	1kWh ¹		2kWh
Discharge capacity up to (approx.)	80% DOD		90% DOD		
Total battery power (approx.)	384Wh	768Wh	900Wh		1800Wh
DC load circuit breaker	100A / 12V	150A / 12V	50A / 24V	80A / 24V	
Battery monitor (residual Ah / A / V / runtime with shunt)	optional				
DC/DC charge converter					
12/12V for 12V car connection / E-HYB charge	50A		-	-	-
12/24V for 12V car connection / E-HYB charging	-	-	12V 50A / 24V 25A		
24/12V 25A	optional for installation in 24V vehicles				
24/24V 25A	optional for installation in 24V vehicles				
MPP 50V solar controller (types see below)	optional				
Plug connection output					
Schuko plug with protective cap	2 x 16A				
12V socket	20A				
USB charging plug	5V				
Plug connection input					
IEC socket 230V / power cord / Schuko 1.5m	10A				
Vehicle charging connector 50A / connecting cable / fuse	25qmm / 3m / 80A		25qmm / 3m / 80A		
optional connection cable	25qmm/3m/80A	35qmm/3m/80A	25qmm/3m/80A		35qmm/3m/80A
external battery connector 120A					
Dimensions W x H x D (in mm approx.)	360 x 415 x 500				
Weight (in kg approx.)					
with SUN Gel battery	26	39	-		
with Hawker Gel battery	28	43	-		
with Lithium battery	-		22	30	33

*1 to use the full inverter capacity 2kW, a car battery connection or a battery extension is required

technical data

	TEH-M 1200-G 300	TEH-M 2000-G 600	TEH-M 1200-Li 1000	TEH-M 2000-Li 1000	TEH-M 2000-Li 2000
	SUN-Gel Hawker lead gel high current		Lithium iron die-cast aluminum safety housing according to IP65		
alternative or optional additional equipment					
SUN gel battery from 32 to 64Ah = + 23Kg	1				
Hawker battery pure lead for high load					
32Ah instead SUN Gel 36Ah = +4Kg	1				
64Ah instead SUN Gel 36Ah = +8Kg	1				
64Ah instead SUN Gel 72Ah =		1			
Lithium battery capacity from 1 kWh to 2 kWh = + 8.1Kg			1	1	standard
Solar charge converter MPP 50V 10A 40-165Wp	1				
15A 40-250Wp	1				
21A 50-350Wp	1				
26A 50-430Wp	1				
DC charging of 24/24V 25A KFZ (parallel to 12V vehicle)	1				
DEFA cable set IP44					
5m power cord green, 1.5m indoor cable, car socket	1				
5m power cord orange, 1.5m indoor cable, car socket	1				
Additional battery pack variants and plug cable					
120Ah SUN AGM 1440Wh / 50% 720Wh	1				
208Ah SUN AGM 2496Wh / 50% 1248Wh	1				
42Ah Hawker 504Wh / 80% 403Wh	1				
72Ah Hawker 864Wh / 80% 691Wh	1				
Cable 35qmm 2m for external battery, plug & fuse	1				

	TEH-M 1200-G 300				TEH-M 2000-G 600		TEH-M 1200-Li 1000	TEH-M 2000-Li 1000	TEH-M 2000-Li 2000
Operating times 230V hours from ½ battery compartment capacity to full battery compartment capacity approx.									
Basis-Version=SUN Profi-Version=Hawker + Lithium	SUN-Gel		Hawker		SUN-Gel	Hawker	TRUSTEC Aentron lithium aluminum die casting IP66		
Battery elements ST / Ah	2x18Ah	4x18Ah	2x16Ah	4x16Ah	4x18Ah=72Ah/12V	4x16Ah=64Ah/12V	1kWh/24V	2kWh/24V	2kWh/24V
Efficiency: SUN 50% DOD, Hawker 80% DOD	216Wh	432Wh	384Wh	768Wh	432Wh	768Wh	900Wh	1800Wh	1800Wh
Charging time approx.	2h	4h	2h	4h	4h	4h	1,2h	1,2h	1,2h
200W	0.8h	1.6h	1.5h	3.0h	1.6h	3.0h	3.5h	7h	7.0h
500W	0.4h	0.7h	0.7h	1.3h	0.7h	1.3h	1.5h	3.0h	3.0h
1000W	0.2h	0.4h	0.3h	0.7h	0.4h	0.7h	0.8h	1.6h	1.6h
Operating times with additional battery connection 96Ah 12V (often standard in vehicles) approx.									
200W	3.0h	3.8h	3.7h	5.2h	3.8h	5.2h	5.7h	9.2h	9.2h
500W	1.3h	1.7h	1.6h	2.3h	1.7h	2.3h	2.5h	4.0h	4.0h
1000W	0.7h	0.9h	0.9h	1.2h	0.9h	1.2h	1.3h	2.1h	2.1h

optional DEFA accessories for E-HYB mobil

Article No.	DEFA cable set
4712460785	DEFA MiniPlug cable set Xtreme, power cord 2,5m, inlet 1.5m, green
4712460787	DEFA MiniPlug cable set Xtreme, power cord 5m, inlet 1.5m, green
4712460789	DEFA MiniPlug cable set, power cord 2,5m, inlet 1.5m, green
4712706960	DEFA MiniPlug cable set, power cord 2,5m, inlet 1,5m, orange
4712706961	DEFA MiniPlug cable set, power cord 5,0m, inlet 1,5m, orange
4712706962	DEFA MiniPlug cable set, power cord 2,5m CEE, inlet 1,5m, orange
4712706963	DEFA MiniPlug cable set, power cord 5m CEE, inlet 1,5m, orange



Energy technology for every area



trust creates energy™

our product range



COTEK Inverter & Charger

- Pure sine wave inverters in perfection
- High-performance combi-inverters
- Advanced battery chargers



DEFA cable and plug IP44/65

- ideal, highly secure 230V cable connection technology inside and outside
- smallest external plug with end flap

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