

MobilHybrid

self sufficient | safe | mobile



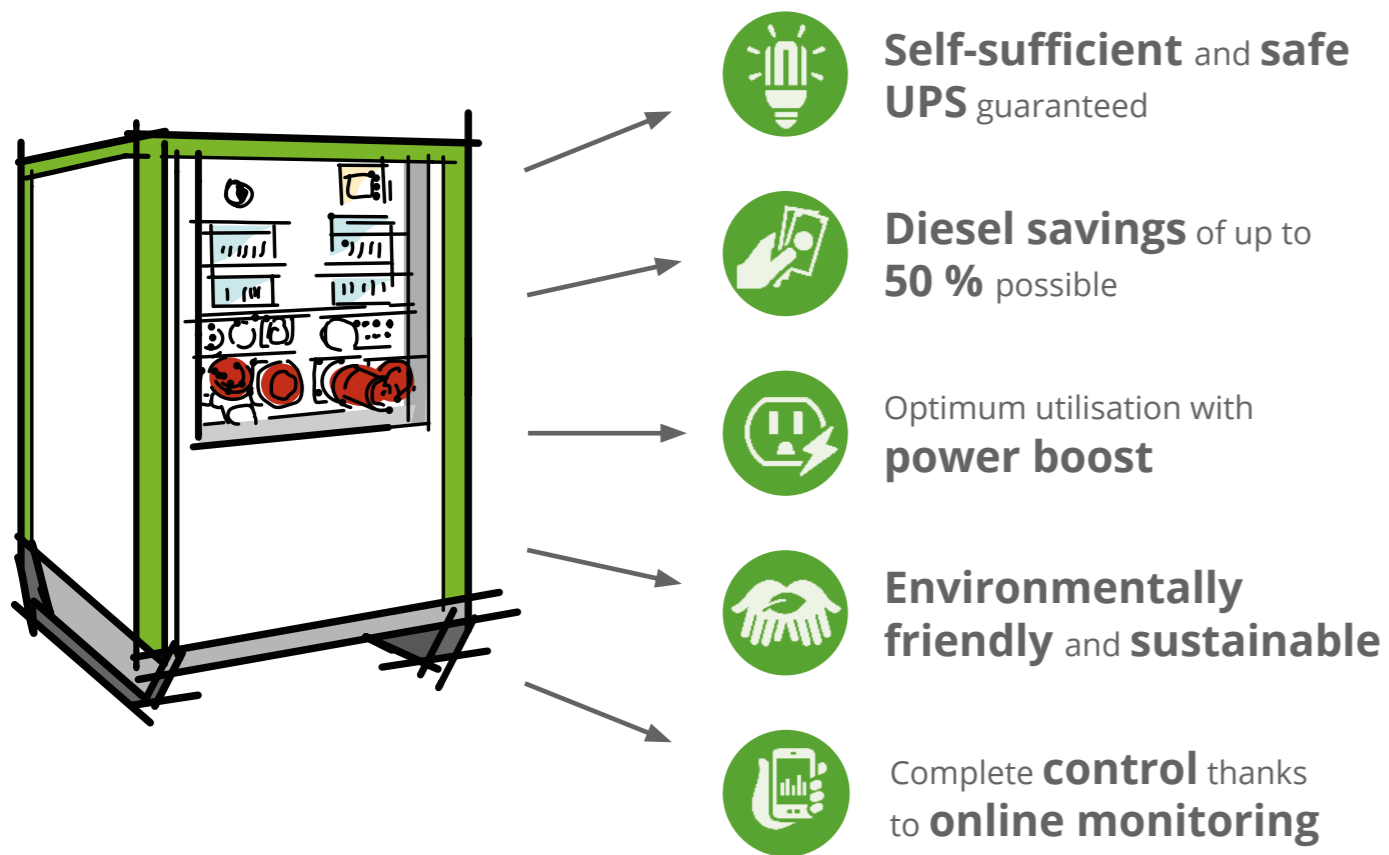
www.MobilHybrid.de



MobilHybrid Highlights

- Guarantees **uninterrupted supply to all consumers** over a long period of time
- **Diesel savings** of up to **50 %** possible, **extends** the **service life** of the generators, **reduces maintenance costs**
- **Optimum utilisation** through **power boost** function
- Significantly **reduces environmental impact** through climate-friendly and sustainable solar power
- **Transparency** thanks to **user-friendly** online monitoring

MobilHybrid the intelligent energy storage system



Start now and reap the comprehensive benefits of our powerful, intelligent and user-friendly **MobilHybrid**.

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MobilHybrid everything works automatically

Fully automatic and demand-based, the intelligent control system of the **MobilHybrid** delivers the required output without wasting any power. If consumption is low, the **MobilHybrid** switches off the power generator and supplies the required power itself, thus avoiding unnecessary diesel consumption. If the power in the storage tank is running low or the required output exceeds the rated power of the **MobilHybrid**, the system automatically switches the power generators back on. A combination of the **MobilHybrid** with photovoltaic systems, in particular, offers huge potential for savings.

MobilHybrid the safe power storage system

The **MobilHybrid** is an innovative and intelligent storage system that is connected between the power generator and the power consumer. The **MobilHybrid** can be used for an uninterrupted power supply in a variety of ways. The intelligent control system ensures optimum load distribution.

The **MobilHybrid** stores the power from the power generator and releases it to the consumers in exactly the right amount as needed, without wasting any power. To do this, the **MobilHybrid** selects the most favourable energy source for the current load condition. Whether on construction sites, at events of all kinds, in remote areas or in areas with vulnerable power grids, the **MobilHybrid** guarantees an uninterrupted power supply.



The **MobilHybrid** ensures optimum power supply and controls everything completely automatically.



The **MobilHybrid** guarantees continuous supply to your consumers.





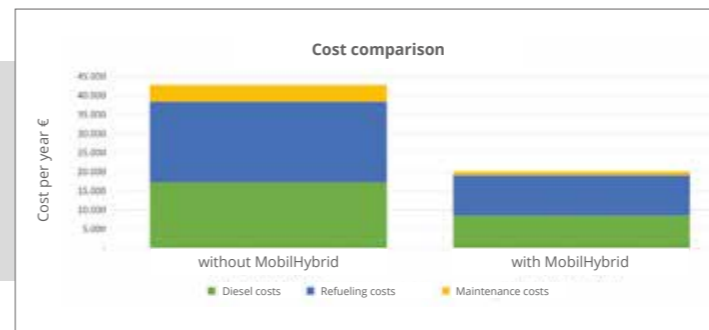
Most of the time, the amount of energy required is not particularly high, or is subject to highly fluctuating power consumption rates. Diesel generators have extremely poor efficiency at low loads, i.e. with few or weak consumers, which drives up fuel consumption disproportionately.

In this operating range, the **MobilHybrid** works from the battery and only starts the diesel generator when the battery needs to be recharged or large loads need to be operated. The considerable diesel savings reduce operating costs and save you money. Power is available continuously without your generator running all the time.

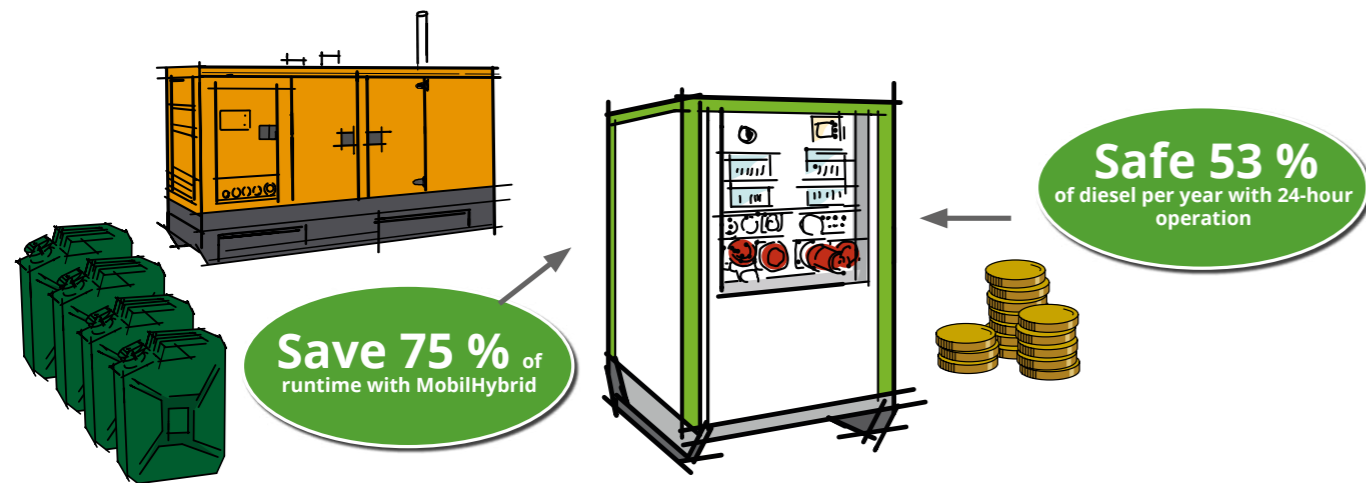
MobilHybrid saves money

On a construction site with 24-hour operation on 250 days, a 40 kVA generator and an MH24 result in savings of 53 % amounting to € 22,700 and a generator runtime reduction of 75 %.

Let the intelligent **MobilHybrid** control your power supplier, its innovative technology makes it possible and helps you save diesel. Even if very little power is drawn, the motor has to run at a constant speed. This results in large quantities of diesel being burned needlessly.



The innovative technology of the **MobilHybrid** makes it possible and helps you save diesel.

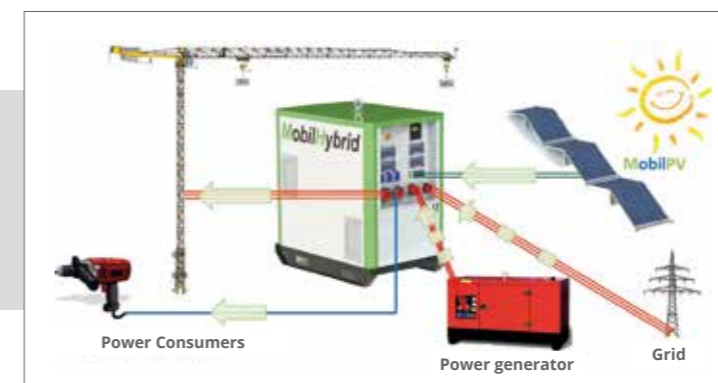




MobilHybrid intelligent and efficient

If the power generator's energy is not sufficient for the load, the **MobilHybrid** is automatically activated and the two power sources add up through the **power boost** function, thereby tripling the overload capacity.

The automatic activation of the **MobilHybrid** ensures a significantly higher peak load, so that the diesel generator can be selected to be significantly smaller and more efficient. You save money if the load is smaller than the generator output, and fuel and maintenance costs are also minimised.



Triple overload ensures high performance.

MobilHybrid mobile and self-sufficient

Thanks to its innovative technology, the **MobilHybrid** ensures that power is continuously available without the generator running or starting up repeatedly for just short periods of low demand. The intelligent control system of the **MobilHybrid** only switches on the generator when the batteries need to be charged or a large load needs to be distributed.

Thanks to its integrated power boost function, the **MobilHybrid** can also supply construction cranes, pumps and machines with very high starting currents and at the same time cap peak loads. The intelligent control system of the state-of-the-art mobile power storage system **MobilHybrid** ensures optimum load distribution. For this purpose, the maximum permissible withdrawal capacity, which is never exceeded, can be set on the **MobilHybrid**. If there is a high load during operation, the MobilHybrid caps the load peaks completely automatically and uses the full output of its own battery in addition to the power from the respective energy generator. In this way, the **MobilHybrid** guarantees a reliable power supply and at the same time significantly reduces the diesel and maintenance costs associated with the operation of diesel generators.



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MobilHybrid sustainable here and now

The **MobilHybrid** can be used where diesel generators are not an option due to noise and emission protection requirements. Thanks to its robust housing and easy handling, outdoor use is no problem.

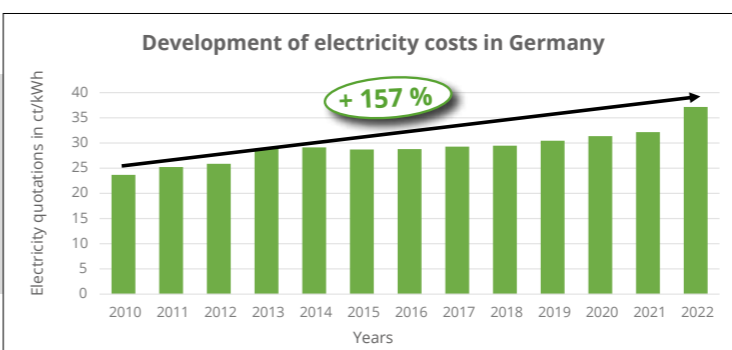
The **MobilHybrid** is the efficient and environmentally friendly alternative to the exclusive use of conventional power generators. The **MobilHybrid** is the perfect solution for leaving a positive ecological footprint.

MobilHybrid innovative and powerful

Gone are the days when no one worried about the fact that diesel engines burn vast amounts of fuel unnecessarily in continuous operation and drive up exhaust emissions disproportionately. What's more, diesel generators can be quite noisy. Nowadays, it is not only important to reduce the operating costs of mobile power supply, but also to reduce the consumption of fossil fuels and the emissions of noise, exhaust fumes and especially CO₂.

The intelligent **MobilHybrid** supplies your consumers with unrestricted energy and controls the power generator via its start/stop function. The connected consumers are supplied by the **MobilHybrid** without any noise or exhaust fumes. Thus, the use of the innovative **MobilHybrid** power storage system reduces noise and environmental pollution by up to 70 %.

Create a sustainable future and generate environmentally friendly power with our innovative **MobilHybrid** power storage system.



Think about tomorrow today!
Electricity prices continue to **rise significantly**.

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MobilHybrid everything in sight

All **MobilHybrid** storage systems are precisely tailored to your requirements. All the necessary components are installed in a space-saving housing, such as inverters, batteries, smart meters and connection options for the generator and power grid. We deliver the **MobilHybrid** ready for connection, so that on-site installation work can be reduced to a minimum. Other components such as our mobile PV systems for your container roof or our fold-out PV modules optimally complement the mobile power storage systems - allowing you to get everything from a single source.

Our user-friendly monitoring platform offers complete transparency and ensures you always have an overview of all the relevant data.

The online-based portal monitoring allows you to view all parameters of your **MobilHybrid** storage systems at any time, whether from your mobile phone, PC or tablet - all you need is an active internet connection or our optionally available integrated LTE modem. This way, you can easily and conveniently call up the current energy status of your power storage system at any time of day or night and are always well informed.

All the recorded data can be viewed at any time and provide precise documentation of your savings. The comprehensive presentation and detailed evaluation of the data contributes to the optimal use. You can see at a glance how much power was produced and consumed.



Everything in sight, thanks to our **user-friendly** online monitoring.





MobilHybrid coordinated individually

We respond to your **requests** and tailor the **MobilHybrid** to your **individual needs**, **freely selectable** options **optimise your performance**.

Option: Night switch

This option gives you the possibility to start the Generator only during the daytime from 7:00 to 20:00. During the night the generator stays switched off and you can sleep peacefully without any noise of the generator. The **MobilHybrid** takes care for fully loaded batteries short before the quiet night starts. Even difficult neighbours in cities or on the country side will not be disturbed. If the demand of energy during the night is higher than the amount of energy stored in the batteries, the generator stays switched off till the night is over.

Option: Load drop

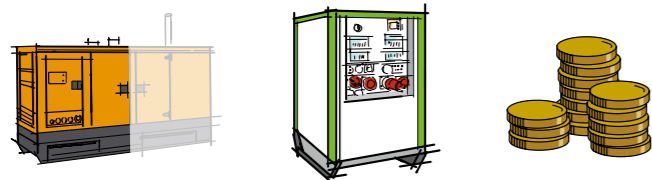
With this option some unimportant loads like heating or air conditioner can be shut off if some other more important loads have a higher demand of energy. In this case the unimportant consumer are connected in the Schuko plugs. This option avoids overload situation and enables a smooth and efficient providing of energy out of the batteries.

MobilHybrid reduce maintenance costs

Diesel generators have very poor efficiency in a load range below 50 %, which drives up fuel consumption disproportionately as well as exhaust emissions. From about 30 % downwards, poor combustion causes soot particles to settle in the oil and cylinder, which in turn reduces the service life of the generator and results in more repairs.

If very little power is drawn, the diesel generator has to run at a constant speed. Large quantities of diesel are thus burned needlessly. In this operating range, the **MobilHybrid** works from the battery and only starts the diesel generator when the battery needs to be recharged or large loads need to be operated. This considerably reduces fuel and maintenance costs and significantly extends the service life of the generators.

Halving the generator running time = Doubling the maintenance intervals



Lower maintenance costs and reduced generator running times.





Option: Grid connection With this option two independent energy sources for the **MobilHybrid** can be connected. The grid (or a hydro power plant) and a diesel generator are examples of what is possible. In cases of grid faults the **MobilHybrid** acts as an UPS and overtakes the power supply automatically without interruption to the load. If you want to connect more output consumers or input sources you can choose different plug sizes from 32A up to 125A as a second input or output plug.

Option: IT-grid An IT-grid is an electrical grid form for higher safety requirement (the neutral of the grid is not connected to ground). For the **MobilHybrid** this is no problem. With its own isolation monitoring the **MobilHybrid** detects an isolation fault and switches the main output power supply off. This system is recommended for wet environment, electrically unskilled staff or bad grounding situations. If the **MobilHybrid** is heavily loaded far beyond the nominal power, the **MobilHybrid** switches off with an overload fault and attempts to restart after 30 seconds. This is done three times after the **MobilHybrid** shuts down and will be repowered by a manual switch off and on operation. The Auto-Reset option will permanently attempt to start until the overload is over or the generator starts up, so no manual operation is required.

MobilHybrid coordinated individually

Option: Solar charger The ideal complementation for every **MobilHybrid** is a photovoltaic plant. Every installed kWp solar power supplies an energy amount of in average of 3 kWh per day. Up to eight units **KlappPV** can be easily connected to only one solar charger in the **MobilHybrid** to take care for full batteries and reduced runtime of the diesel generator. Each solar charger has a nominal power of 6 kW at a maximum voltage of 250V. Four strings can be connected with 20 A per each string. Due to the modular structure of the **MobilHybrid** it is possible to add more battery storage to the unit. You can add storage blocks of 6 kWh up to a total capacity of 72 kWh to the **MobilHybrid**.

Option: Single-phase charging An existing power grid for charging the **MobilHybrid** does not always have to be 400 V. It is also optionally possible to charge the power storage system solely with single-phase 230 V light current in order to safely supply three-phase machines and devices with 400 V. This opens up completely new possibilities for using powerful electrical machines with three-phase current without the need for a power generator.

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MobilHybrid the perfect solution

The right choice of power storage system is crucial to optimising their performance, the decisive factor being their energy demand. This determines the economic size of your power storage system.

How we find the right **MobilHybrid** for your requirements:



Technical data (Subject to change)

Type MobilHybrid	MH -4	MH -8	MH -12	MH -18	MH -24	MH -36	MH -48	MH -72	MH -108	
Size of frame	A	B	B	C	C	D	E	E	Container 20Fuß	
Continuous power VA at 25 ° C	4000	8000	12000	19500	24000	36000	48000	72000	108000	
Peak power VA 25 ° C	10000	18000	30000	48000	60000	75000	120000	150000	225000	
Output voltage AC	1 AC 230V	1o.3AC 230V	3 AC 230 / 400 V							
Input current max. AC	40A 1ph	50A 3ph	50A 3ph	100A 3ph			2*100A 3ph		3*100A 3ph	
Maximum output current (With external AC source)	13A (63A)	21A (121A)	39A (89A)	63A (363A)	78A (378A)	109A (409A)	156A (756A)	218A (818A)	327A (1127A)	
Protective functions	Overload, overtemperature, short circuit, discharged battery									
Ground fault protection	16A, 1ph 30 mA FI	Isowächter o. 30 mA FI	Isowächter o.100mA FI	Isowächter o.300 mA FI						
Usable battery capacity kWh	6	12	12	18	24	36	48	72	108	
Input connector	CEE 16A	CEE 32A 1 o. 3ph	CEE 32A 3ph	63A Option : CEE 125A 3ph			CEE 125A 3ph CEE63A 3ph		Klemmleiste	
Output connector A	Schuko 16A	CEE 32A 1 o.3ph	CEE 32A 3ph	63A Option : CEE 125A 3ph			CEE 125A 3ph CEE63A 3ph		Klemmleiste	
Output connector B	Schuko 16A	3 x Schuk o 16A								
Charging time to full charge	2,5h									
Auxiliary contact (remote start diesel generator)	Harting									
Battery monitoring	LED	LCD display: voltages, power, remaining battery capacity, range, charging cycle								
Battery cycles	1200									
Protection class	IP54									
Operating temperature range	-15 °C bis 45 °C									
Dimensions W x D x H mm	600x900 x700	800x1200 x1290		800x1200 x1690		800x1800 x1690	1270x2490 x2250	1270x2490 x2250	2438x6058 x2591	
Weight kg approx. (Without options)	360	525	750	1230	1480	2035	3000	4070	8405	
Optional photovoltaic connection charger	MPPT 4 kW	MPPT 5,8 kW bis zu 17,6kW					MPPT 5,8 kW bis zu 58kW			

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Technical data (Subject to change)

Mobile KlappPV	KPV740	KPV800
Continuous power STC	740 Wp	800 Wp
Average daily amount of energy	2220 Wh	2400 Wh
Summer days Energy amount	4440 Wh	4800 Wh
Electric wire (optional)	10 (20) m	
Adjustable inclination	30° Grad	
Output connector	Sunclix	
Protection	IP66	
Operating temperature range	-25°...+60°C	
Dimensions set up W x D x H	1840x1220x300 mm	
Weight kg approx. (without options)	61 kg	
Output voltage MMP STC	68,8 V	61,88 V
Open-circuit voltage STC	81,8 V	73,8 V

KlappPV mobile and new

The new mobile **KlappPV** is an innovative solar system for every use: whether construction site, event, disaster relief, mountain hut or holiday home. Simply set up, unfold and connect. The system is individually scalable and adapts specifically to your requirements. The robust mobile **KlappPV** system can be set up flexibly anywhere in the world. To protect against the wind, the system is fixed to the ground at the attachment points. Due to the simple tilting option, the mobile **KlappPV** always generates maximum energy with a 30° inclination and orientation to the south.

The mobile **KlappPV** is ready for use within just 2 minutes and dismantled just as quickly. When folded up, the mobile **KlappPV** can be easily taken away by just one person, e.g. in a wheelbarrow, and securely fixed on the transport pallet for the next use. The new mobile **KlappPV** is the ideal addition to our **MobilHybrid** mobile power storage system, and together they ensure optimal savings in diesel and CO₂.

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ContainerPV as the ideal addition

The new **ContainerPV** is an innovative solar system for your container. Simply place it on the container roof and screw it to the corners of the container using the fasteners supplied, and you can immediately generate your own solar power. The new **ContainerPV** is the ideal addition to our **MobilHybrid** mobile power storage system. You can save money and generate your own power directly from the sun, completely without any environmental pollution.

The robust **ContainerPV** is placed on your container and securely fastened at the container corners with heavy-duty screws. Due to the simple tilting option, the **ContainerPV** always generates maximum energy with a 30° inclination and orientation to the south. If the container is moved to another location, the **ContainerPV** system remains securely screwed to the container even during transport. Two **ContainerPVs** can be connected to a 20-foot container and four to a 40-foot container. Due to the shading of the container, you require significantly less air conditioning in summer.

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Technical data (Subject to change)

ContainerPV	CPV990
Size of frame	10 Fuß
Continuous power STC	990 Wp
High-performance module	3x335Wp
Average daily amount of energy	2980 Wh
Summer days Energy amount	6000 Wh
Electric wire (optional)	10m 30m
Adjustable inclination	30°
Output connector	Sunclixs
Protection	IP 66
Operating temperature range	-25°C...+60°C
Dimensions set up W x D x H	2320x3100x110
Weight kg approx. (without options)	140 kg
Output voltage NTC	102V





Your partner for innovative Energy solutions

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