



An intelligent solution for remote power

NEOSUN™ PowerHub is the lowest cost source of clean and reliable off-grid power for remote locations. It is a stand-alone, turn-key system that combines solar energy production with integrated energy storage in a readily deployable and easily movable form that's ideal for remote power applications.

The system is entirely self-powered, removing the need for fuel shipments. Once set up, the system operates autonomously, with the capability of remote monitoring and control.

PowerHub is delivered in a shipping container that includes solar photovoltaic (PV) arrays, solar mounting components, batteries, an intelligent control system, and the supporting electronics to supply energy. It is a Plug & Play system. The entire system can be assembled and fully operational in less than two hours by two people.

It is configurable to fit specific needs and comes in stackable 20 kW or 50 kW options. It's capable of producing up to 90 kWh or 150 kWh of energy per day, respectively. Customized solutions can be designed upon request.

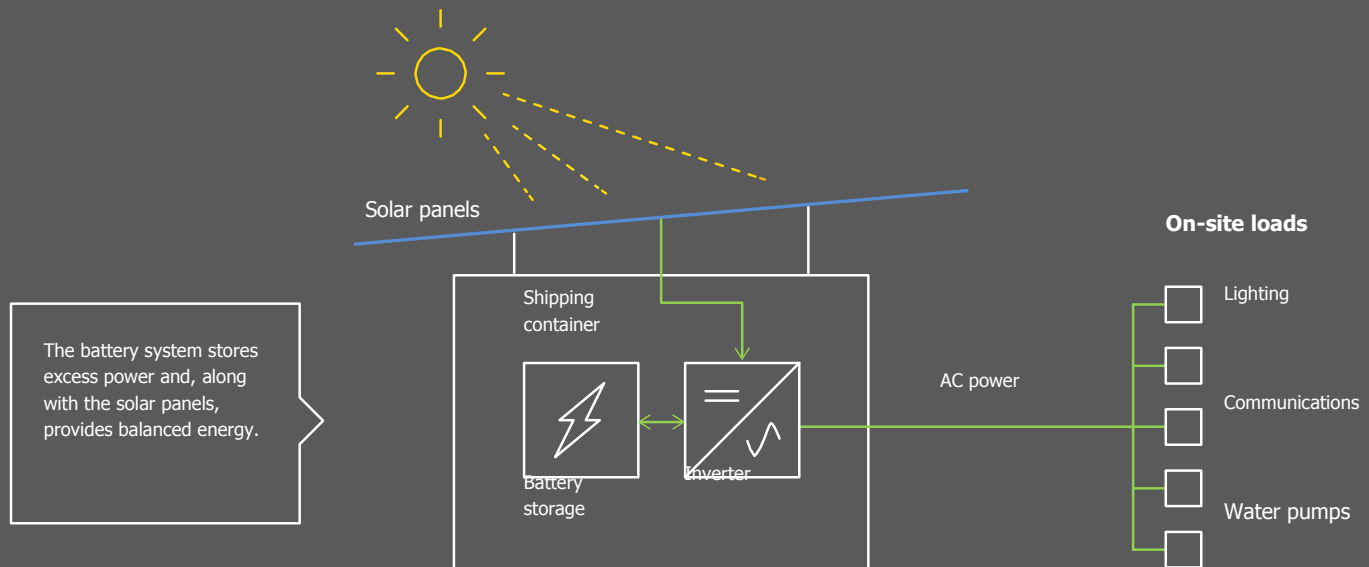
PowerHub at a glance

- 20 kW or 50 kW Power output¹
- 90 or 150 kWh¹ Daily energy production
- 51.3kWh Battery Storage capacity (Li-ion, >8000 cycles)
- High level of reliability provided through built-in redundancy
- From 2 to 5 hours assembly time
- Easily scales for larger installations
- Genset backup
- Plug & Play design

How does it work?

NEOSUN PowerHub is powered entirely by solar and batteries. The solar modules produce energy during the day, storing the excess energy in the batteries. In the evening, batteries discharge to provide energy to the site.

The inverters provide a 380-400V three phase output to a site electrical panel or 220-240V single phase to standard electrical outlets. The design architecture provides redundancy to ensure continuous operation.



Features

Reliable

PowerHub includes best-in-class components. It is designed to withstand a wide range of extreme weather conditions. Redundancy of components ensures continuous operation.

Mobile

PowerHub is easily transported to the service area in a single 20-foot shipping container by plane, truck or ship. It is pre-wired and preconfigured, such that two people can assemble the system within two hours.

Scalable

PowerHub is highly modular and scalable. You can network multiple PowerHub systems to meet the needs of a site.

Maintenance-free

PowerHub operates continuously without a fuel re-supply and requires minimal maintenance.

Autonomous

Once assembled, PowerHub operates independently, so on-site personnel can focus on the mission. PowerHub is monitored and controlled both through an on-site interface and remotely.

Low noise

PowerHub generates less than 50dB noise; there are no moving parts during operation. The system results in minimal disturbances to the local environment.

Views

Interior view



Top view



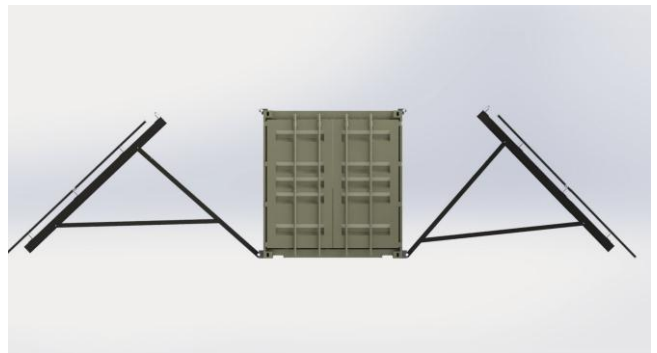
Top view - fully disassembled



End view



End view - stowed



Specifications¹

Physical characteristic	Units	PowerHub 20	PowerHub 50
Recommended operating temp		-40°C ~ 50°C	
Weight	kg	4,920	8,200
Container size	m	20' - 6.1 x 2.4 x 2.6	40' - 12.2 x 2.4 x 2.6
Array size (fully assembled)	m	10 x 8	16 x 8
Wind load resistance	kph	160	160
Monitoring & Control			
Communications		Wi-Fi/GSM (satellite optional)	
Control System		EMS	
Power output			
Maximum AC power output	kW	20	50
Nominal DC power output	kW	16.4 kW (40 x 410W)	26.2 kW (64 x 410W)
Output voltage	V	400V (3 phase)	
Output frequency	Hz	50/60	
Daily energy production ²	kWh	90kWh	150kWh
Solar generation			
Solar panels		NEOSUN 360W (Mono, PERC technology)	
Module tilt	degrees	15 (45 optional)	15 (45 optional)
Storage			
Battery technology		NEOSUN Li-ion (LiFePO4), >6000 cycles	
Storage capacity (BOL)	kWh	21.6 kWh	51.3 kWh
Depth of discharge (DoD)	%	90%	90%
Expected lifetime	Years	20 years	20 years
Backup Genset (optional)	kW	10kW	20kW

¹. Customized solutions can be designed upon request.

². Daily energy output will vary depending on the location and weather conditions.

Warranty

- Solar panels performance warranty is 30 year;
- Battery performance warranty is 10 years.

Standards and Certifications

- IEC1973, IEC61215, IEC61730, IEC62619