Transforming power supply with our mobile microgrid

Container energy solutions range

Your path to energy conversion

Atlas Copco's consolidated power management range is at the heart of the energy supply transformation.

Our mobile, containerized energy conversion systems are designed for fast deployment to provide access to reliable power and energy.

In projects such as events powered by generators, the ZBC range acts as a buffer for variable loads and maximizes fuel savings.

In worksites like mines, where power factors are variable, the ZBCs protect the quality of energy.

In applications, such as construction sites, where usually generators are oversized, damaging engines due to low loads, a ZBC can support them as a booster. Peak shaving operations during high demand or while covering inrush peaks of cranes for instance require a ZBC battery energy storage system to optimize the full hybrid solution.

The portable design and fit for versatile applications, make the ZBC range an indispensable asset in rental fleets as a solution that will keep utilization at the highest level. Even when energy is only stored in the ZBC, customers will be able to use it for energy trading. Instead of investing in the network, the ZBC range can be used as a buffer to provide practical solutions for EV charging stations, where capacities are increasing over time. This range of ESS has a structure that serves in cold and hot regions with batteries that are built to last.

Furthermore, operators can synchronize several models. which can become the heart of any microgrid, storing and delivering energy coming from several energy sources, including renewables.

The ZBCs are a full range of battery energy storage systems which are driving power supply needs.

<1 HOUR **FAST RECHARGE**

25 tons & 20 feet
COMPACT& ROBUST

>8 UNITS
HYBRID POWER PLANTS

>50%
INCREASED
PRODUCTIVITY

UP TO
90% LESS
FUEL AND **CO_2**
EMISSIONS*

*When working in hybrid mode with power generators

The solution to meet your needs

MODEL	POWER ENERGY	APPLICATION	MANUFACTURING	EVENTS	TELECOM BROADCAST	CONSTRUCTION	MOTORS CRANES	RECHARGING POINT	GRID JOBS UTILITIES	RENEWABLES
ZBP 2000	2000 VA 2000 Wh	Noise reduction Low loads Prime power		●		●				○
ZBP 15-60 ZBP 35-40 ZBP 45-60 ZBP 45-75	15/45 kVA 40/60/75 kWh	Peak shaving Low loads Prime power	○	●	●	●	●			○
ZBP 120-120 ZBP 150-150	120/150 kVA 150/150 kWh	Peak shaving Low loads Prime power	○	●	●	●	●	●		●
ZBC 250-575	250 kVA 575 kWh	Hybrid Prime power	●	●	○	●		●	●	●
ZBC 300-300	300 kVA 300 kWh	Hybrid Prime power	●	●	○	●	○	○	●	○
ZBC 500-250	500 kVA 250 kWh	Peak shaving Prime power	○			●	●		○	
ZBC 1000-1200	1000 kVA 1200 kWh	Hybrid Prime power Peak shaving Power booster	●	●	●	●	●	●	●	●

Prime power: Non-stationary demand, not UPS
Low loads: Improving a diesel genset performance
Peak shaving: Consume peaks totally or partially

Energy storage: Avoid wasting extra energy production
Noise reduction: Reduce acoustic pollution
Hybrid: Plug and play with other energy sources

● BEST CHOICE
○ SUITABLE

MINING

CONSTRUCTION

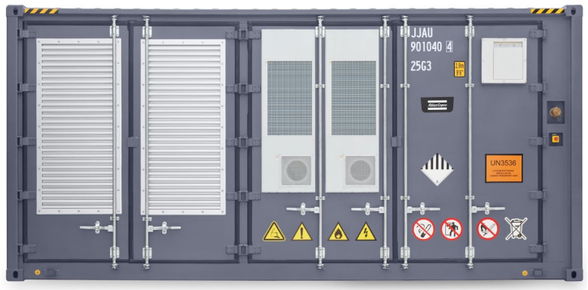
HYBRID PEAK SHAVING

MICROGRID

MUSIC EVENT

E-VEHICLES

A full portfolio ready for versatile performance and applications



ISLAND Mode

The island mode enables our container with integrated inverter and storage, to be used as a standalone power solution. It is an ideal way to meet the needs of noise-sensitive environments like night operations, sensitive events operations , or to resolve low load challenges.

QUIET TECHNOLOGY

ZBC range noise level is 54db only. These models deliver reduced noise emissions, for a safer working environment. They are a perfect choice for increasing the productivity in noise-sensitive applications, such as, events and metropolitan construction sites.

FAST CHARGING

In Island mode, the ZBCs can be connected directly to loads to start working. Fast charging for a full recharge in an hour is possible depending on the power source.

COMPACT DESIGN

All required batteries, power converter systems and all that you need is in one box, enabling you to reduce maintenance costs. Designed for plug and play, the full range of 10 feet and 20 feet high cube versions, are built with high energy density.

CLEAN TECHNOLOGY

When used in island mode, CO_2 savings will grow exponentially if the units are powered by renewable energy sources. You can scale the solution to reach the needed energy demand with the smart paralleling system.

SAFE OPERATIONS

Advanced fire extinguishing systems and leakage current protection systems in the ZBCs provide safe operations.

MORE POWER ENDURANCE

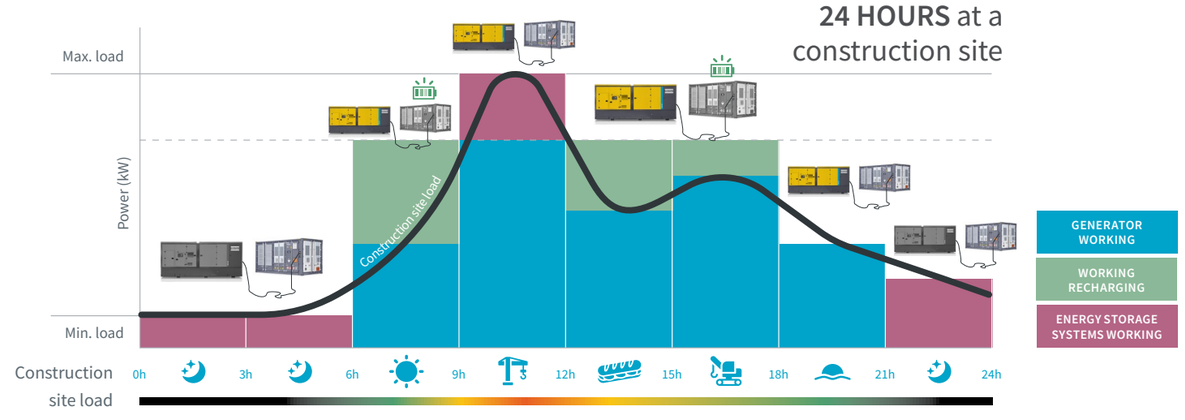
Easily increase both energy and storage capacity by using ZBCs in parallel.

HYBRID Solutions

We offer a product that is compatible with different brands of generators and their control systems, to this we call it Multi-system connection. This will provide versatility to any fleet without investing in new assets. If you prefer to go with Atlas Copco and its PMS controller then you will enjoy the benefits of our ecosystem, efficiency and customer experience taken to its next level.

ZBC range is also compatible for grid jobs. Thanks to their different grid code certificates you can work in many different countries. Also the possibility to work with an isolated input, will provide to this jobs an easy and safe way of working.

With a wide offer of power connection options, the units are easy to connect to the different energy sources available on site. Also, thanks to ECO Controller, Atlas Copco's Energy Management System (EMS), these units can be synchronized to increase the power offering to match the demand.



PROTECT YOUR GENERATOR FLEET

In hybrid mode with a generator, the ZBC range increases the solutions' overall efficiency, accounting for the peaks of power and low loads. They optimize the generator's performance extending its lifespan by up to 15%, and decreasing general maintenance and overhaul cost by 50%. This means that a 40% smaller generator can be used.

Savings depending on application:

- 30 to 90% lower fuel consumption.
- Reduce generator running hours by up to 70%.
- Lower maintenance and operational costs.

MULTIPLE TASK

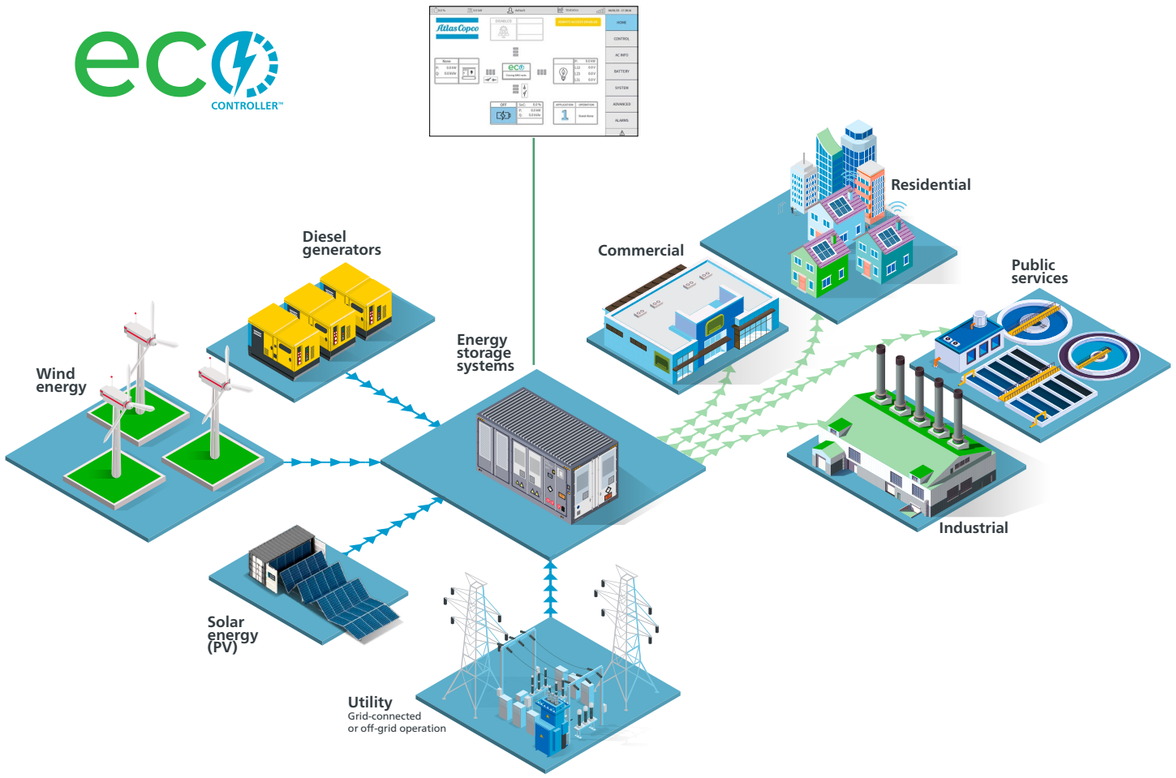
More than just one product. You will find many solutions such as Peak Shaving, Energy Trade, Power Booster, Power Factor correction, continuous power mode in one product.

Lower fuel consumption and emissions.
30 to 90% depending on application (avoiding the average load for the generator being below 30%)

Lower service and maintenance costs.
Depending on application, reduce generator running hours by up to 70%

Long lifetime of generator.
Due to the above points, the lifetime of a generator is extended 5-10 years

A key piece for the optimization of the energy supply



Microgrids:

Energy Storage Systems are the heart of battery based microgrids, and thanks to Atlas Copco's in-house developed EMS, the ECO Controller™, they enhance scalable and decentralized systems with several energy inputs. These microgrids are independent power networks that use local, distributed energy resources to provide grid backup or off-grid power to meet local electricity needs. Enabling the combination of several energy sources, the heart and the brain— Energy Storage Systems and ECO Controller™ help rental companies and operators to deploy flexible power, decarbonizing operations and achieving significant fuel, energy and lifecycle savings.

ECO Controller, the brain of the solution

The ECO Controller™ by Atlas Copco, is a human-machine interface (HMI) that provides operators with full control over their temporary power applications by optimizing energy generation, distribution, and consumption through advanced data management.

WHY ECO CONTROLLER?

- Fully flexible and customizable
- Provides remote control and is open to communicate with third party monitoring systems

VERSATILITY

- The "conductor" that orchestrates energy sources with a demand side craving cleaner solutions

WHAT DOES IT DO?

- It controls and monitors the power output integrating the collected data
- Centralizes all hybrid energy sources

FLEXIBLE AND CONSISTENT SOFTWARE

- In-house development
- Same user experience in all products
- Scalable for global solutions and future applications

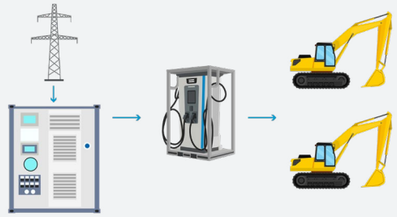
CONNECTED

- Manual and automated controls
- Ensures optimal performance
- Increases component lifetime

FRICTIONLESS

- User friendly
- Dedicated for Rental Industry
- Ensures seamless interface
- Client driven software

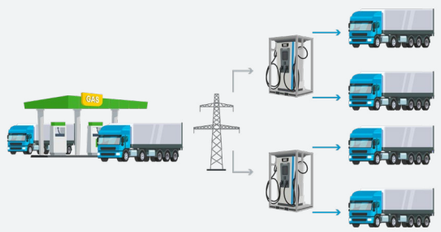
Boosting power on site



Machinery electrification

Boosting the grid

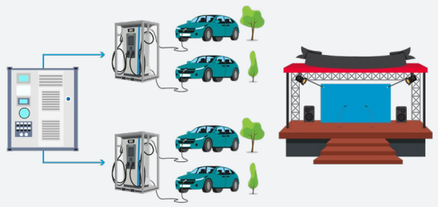
- No need of extending the grid
- Decrease construction project timeline
- Increase operational hours



Temporary recharging station

High demand

- No need of fix installation investment
- Cover seasonal or trend needs
- Scalable



Events

Remote, no access to the grid

- Remote areas with no grid access
- Perfect match with Mobile renewables (solar)
- Mobile around the site for convenience

EV charging station and grid booster

The electrification of the equipment calls for compliant and efficient recharging stations. Providing a full portfolio of and the Fast Charger ensure flexible performance on site. Atlas Copco's FCP range increases the charging rate of battery-driven heavy machinery, equipment and vehicles.

The modularity of this solution will allow the end user to design the best set up for every application. And, when the grid available is limited, and the electric and battery-driven loads are peaking, a ZBC is ideal to boost the grid to cover that high demand.

		FCP 160	FCP 240	FCP 360	FCP 480
General technical data					
Rated power input/output (PF=0.99)	kW	160	240	360	480
Connector type		2 x CCS 2			
Number of ouputs / cable length		2 / 7 meters			
Charging Current	A	200	300	500A(liquid cooled)/ 200A (Air cooled)	
Rated input voltage (50Hz)	VAC	380 VAC +/- 15%			
Ouput voltage range	VDC	200-1.000			
Input Type		4x Powerlock receptacle 400A			
Ingress Portection IP		55			
Peak efficiency		96%			
Cooling methode for AC / DC		Forced Air cooling			
Operating temperature	°C	-25°C to 50°C			
Communication interface		Ethernet/GPS/3G/4G/WIFI			
Sound power level at 1m	dB(A)	<70	<70	<65	<65
Dimensions and weight					
Dimensions (L x W x H)	mm	1.408 x 1.308 x 2.376	1.408 x 1.308 x 2.376	2.000 x 2.600 x 2.343	2.000 x 2.600 x 2.343
Weight	kg	750	850	1.900	2.000

Container range Energy Storage Systems

250 kVA - 500 kVA

SCALABLE SOLUTION

- Paralleling capability with >16 units working as hybrid power plants
- Microgrid possibility with other energy sources such as grid, renewables and generators

>16 UNITS HYBRID POWER PLANTS

Paralleling

PLUG AND PLAY

- External connections Input/Output and control for an easier hybridization
- Alarms and emergency button access
- Fire suppression system as standard (FSS)
- FleetLink real time remote monitoring.

Easy power connections

EFFICIENT PRODUCT DESIGN

- Lithium-ion phosphate batteries (LFP)
- Built sturdy for tough work environments (IP54 design)
- Air forced cooling technology together with high efficient HVAC cooling solutions.

LiFePO4

STURDY IPS4 design

MEET REGULATIONS

- Reduce noise pollution
- Reduce or eliminate CO_2 and NOx emissions during operation
- Provide efficient renewable solutions

UP TO 90% LESS FUEL AND CO_2 EMISSIONS

LOWER COST OF OWNERSHIP

- Increased lifespan of hybrid fleet
- Reduced maintenance cost
- Increased productivity while meeting emission and noise regulations

>50% INCREASED PRODUCTIVITY

<1 HOUR FAST RECHARGE

		ZBC 250-575	ZBC 300-300	ZBC 500-250
General technical data				
Nominal power	kVA/kW	250	300	500
Nominal energy storage capacity	kWh	575	308	246
Nominal voltage (50Hz) (1)	VAC	400	400	400
Battery system voltage	VDC	672-864	672-864	672-864
Nominal current discharge	A	360	433	721
Operating temperature (2)	°C	-20 to 50	-20 to 50	-10 to 50
Sound power level	dB(A)	<60	<60	<60
Battery				
Quantity	units	30	20	20
Battery type		LiFePO4	LiFePO4	LiFePO4
Nominal voltage	VDC	76.8	76.8	76.8
Rated capacity (@25°C)	Ah	250	200	160
C-rate discharge		0.5	1	2
Recommended Depth of discharge (DoD%)	%	90	90	90
End of life (EOL%)	%	70	70	70
Expected cycle life (@DoD,EOL,25°C) (3)	Cycles	6.000	6.000	6.000
Battery callibration (recharge up to 100%)		Once per 3 month	Once per 3 month	Once per 3 month
Inverter				
Quantity (modules)	units	4	5	8
Total nominal power	kW / kVA	250/ 250	300 / 300	500 / 500
Maximum peak power (for seconds) (4)	kVA	275	330	550
Input DC voltage range	Vdc	600-900	600-900	600-900
Maximum passthrough current	A	No limitation (5)	No limitation (5)	No limitation (5)
Built in transformer		Yes	Yes	No
Performance				
Discharge autonomy 100% / 75% rated power	h	2 / 2.6	1 / 1.3	0.5 / 0.7
Discharge autonomy 50% / 25% rated power	h	4 / 8	2 / 4	0.9 / 1.8
Recharging time (@DoD%)	h	2	0.9	0.4
Hybrid recommendation (generator size)	kVA	200-1.000	200-1.000	200-1.000
Power factor acceptance		-1 … 1	-1 … 1	-1 … 1
Heating / Cooling system		HVAC	HVAC	HVAC
Fire extinguisher system included		Yes	Yes	Yes
Derating temperature	°C	from 40°C	from 40°C	from 40°C
On-grid and off-grid applications		Yes	Yes	Yes
CE compliant		Yes	Yes	Yes
Total energy through output up to (4)	MWh	2.400	1.300	1.040
Continous power mode	kW	250	240	300
Dimensions and weight				
Dimensions (L x W x H)	mm	2.991 x 2.438 x 2.896	2.991 x 2.438 x 2.896	2.991 x 2.438 x 2.896
Weight	kg	11.000	10.000	10.000
Protection degree IP		54	54	54
Housing		Container 10 ft high cube		

Container range Energy Storage Systems

ZBC 1000 kVA - 1200 kVA

1000 kW power output and Energy capacity of 1200 kWh packed into a HC 20ft container

EASY REMOTE MONITORING

- ECO Controller™ energy management system
- FleetLink intelligent telematics

PLUG AND PLAY

- Quick to install and use
- Reduced manpower
- Portable and easy to connect

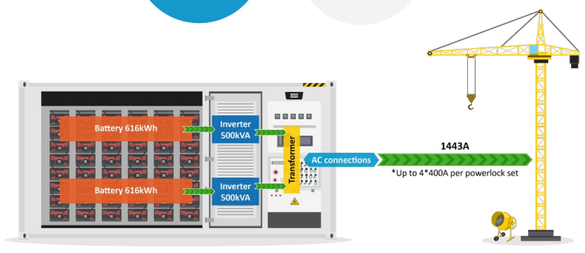
Plug & Play

PERFORMANCE

- Microgrid capabilities
- Scalable with up to 8 units, delivering up to 8 MW of power.
- Twin energy: 2 subsystems working synchronized
- Providing redundancy in critical applications
- Reducing the cycles and battery aging

Paralleling

>8 UNITS HYBRID POWER PLANTS



REDUCED OPERATIONAL COSTS

- Reduced fuel consumption and CO_2 emissions
- Reduced fuel management servicing and maintenance costs
- One energy storage system replaces multiple generators in a power plant
- Thermal management and safe operations

HVAC

Fire suppression

		ZBC 1000-1200
General technical data		
Nominal power	kVA/kW	1.000
Nominal energy storage capacity	kWh	1.200
Nominal voltage (50Hz) (1)	VAC	400
Battery system voltage	VDC	672-864
Nominal current discharge	A	1.443
Operating temperature (2)	°C	+50
Sound power level	dB(A)	<65
Battery		
Quantity	units	80
Battery type		LiFePO4
Nominal voltage	VDC	76.8
Rated capacity (@25°C)	Ah	200
C-rate discharge		1
Recommended Depth of discharge (DoD%)	%	90
End of life (EOL%)	%	70
Expected cycle life (@DoD,EOL,25°C) (4)	Cycles	6.000
Battery callibration (recharge up to 100%)		Once per 3 month
Inverter		
Quantity (modules)	units	16
Total nominal power	kW / kVA	1.000
Maximum peak power (for seconds) (4)	kVA	1.100
Input DC voltage range	VDC	600-900
Maximum passthrough current	A	NA
Build in transformer		No
Performance		
Discharge autonomy 100% / 75% rated power	h	1 / 1.3
Discharge autonomy 50% / 25% rated power	h	2 / 4
Recharging time (@DoD%)	h	0.9
Hybrid recommendation (generator size)	kVA	500-2.000
Power factor acceptance		-1 … 1
Heating / Cooling system		HVAC
Fire extinguisher system included		Yes
Derating temperature	°C	from 40°C
On-grid and off-grid applications		Yes
CE compliant		Yes
Total energy through output up to (4)	MWH	5.200
Continous power mode	KW	800
Dimensions and weight		
Dimensions (L x W x H)	mm	6.058 x 2.438 x 2.896
Weight	kg	25.000
Protection degree IP		54
Housing		Container 20 ft high cube

Mobile Solar Containers

ZSC 100-400, ZSC 50-200

LOW OPERATIONAL COSTS

- Virtually no maintenance
- Renewable energy from the sun
- Meets noise and emission norms
- ZSC 100-400 can save up to 108 tons of CO_2 per year as compared to traditional diesel gensets

UP TO **90%** LESS **FUEL** AND **CO_2 EMISSIONS***

EFFICIENT DESIGN

- East-West installation
- Compact and mobile

PLUG AND PLAY

- Easy installation and commissioning
- Easy and automatic operations

VERSATILE OPERATIONS

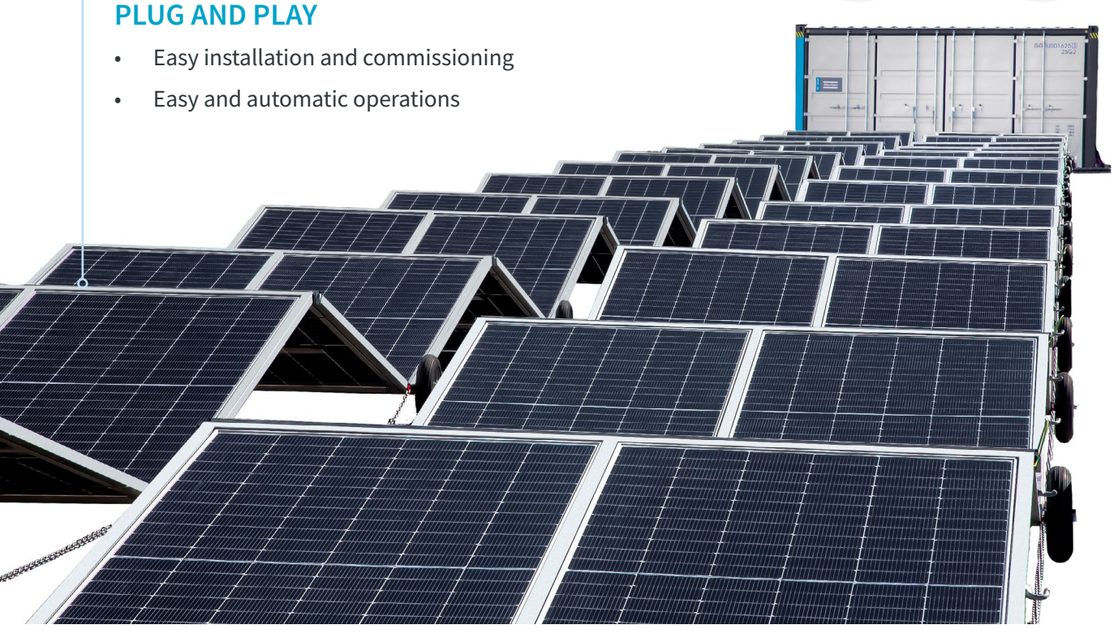
- Renewable energy solutions for temporary power requirements
- Solar power generation to meet needs of temporary energy providers or mobile power projects

SMART LOAD MANAGEMENT

- Paralleling capability – scalable solution
- Microgrid possibility with other energy sources

ZSC 100-400
20 ft

ZSC 50-200
10 ft



Mobile solar containers are designed to provide reliable and renewable energy solutions, especially in remote or off-grid locations.

ZSC containers are highly portable, allowing for easy transportation and deployment, making them ideal for temporary setups or locations where traditional power infrastructure is not available.

By harnessing solar energy, they reduce reliance on fossil fuels and minimize carbon emissions, to meet regulatory norms. Once installed, the ZSC containers provide free energy from the sun, leading to significant savings on energy costs over time. The minimal maintenance of the ZSC, reduces operational expenses.

The ZSC containers can be used in versatile applications like construction sites, disaster relief operations, remote research stations, and more. Their ability to provide a stable and reliable power source in diverse environments makes them a valuable asset.

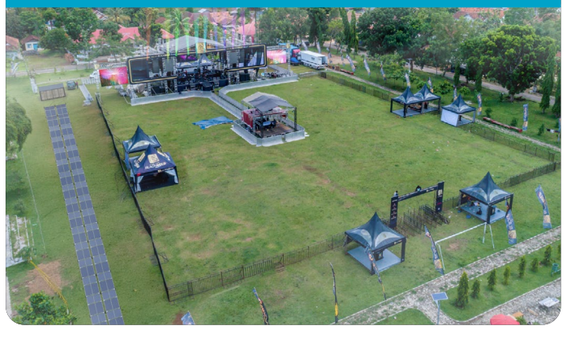
These containers are also scalable. Depending on the energy needs, multiple units can be deployed to increase power capacity. This flexibility allows for tailored energy solutions that can grow with project requirements.

		ZSC 50-200	ZSC 100-400
General technical data			
Solar capacity	kWp	50	100
Energy average generation per day	kWh/day	200	400
Rated output current (400V)	A	72	144
(Un)folding time	min	120	240
Voltage output AC	V	400	400
Frequency output	Hz	50	50
Orientation		Any azimuth (east to west ideally)	
Module tilt angle		15°	15°
Slope limit		No need for leveling	
Operating temperature	°C / °F	-20 to 60 / -4 to 140	
Communication interface		CAN-PMS / Modbus / RS485 / webconnect	
Area required (complete unfolded+workspace)	m2 / sqft	872 (109m x 8m.)	1.199 (109m x 11m.)
Area required (split unfolded+workspace)	m2 / sqft	754 (58m x 13m.)	986 (58m x 17m.)
Dimensions and weight			
Weight	kg / Lbs	6.400 kg	12.600 kg
Unfolded Dimensions (L x W x H)	m / ft	102 x 3 x 1 / 335 x 10 x 3.2	102 x 6 x 1 / 335 x 20 x 3.2
Folded Dimensions (L x W x H) ISO 20ft	m / ft	754 (58m x 13m.)	986 (58m x 17m.)

Temporary power solutions:

CAMPING

EVENTS



Product portfolio

ENERGY STORAGE SYSTEMS

PORTABLE
2–10 kVA

MOBILE
15-150 kVA

CONTAINER
250–1000 kVA

FAST CHARGER
160-480 kW

HYBRID GENERATORS

HYBRID

LIGHT TOWERS

SOLAR

ELECTRIC

DIESEL

GENERATORS

PORTABLE
1,6–12 kVA

SPECIALIZED
9–660* kVA

VERSATILE
9–1250* kVA

LARGE POWER
800–1450 kVA

*Multiple configurations available to produce power for any size application

DEWATERING PUMPS

ELECTRIC SUBMERSIBLE
up to 18 000 l/min

ELECTRIC SELF-PRIMING CENTRIFUGAL
833–23.300 l/min

SELF-PRIMING CENTRIFUGAL
833–23.300 l/min

ONLINE SOLUTIONS

FLEETLINK

Intelligent telematics is a system that helps optimize fleet usage and reduce maintenance, ultimately saving time and cutting operating costs.

PUMP SIZING CALCULATOR

With a few inputs, this pump sizing calculator will help you to compare dewatering submersible models and find the right one for you.

ECO CALCULATOR: YOUR SIZING TOOL

A useful calculator to help you choose the best solution for your power and light needs.

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