Your path to clean and quiet energy

Energy Storage Systems portfolio

Your path to clean and quiet energy

Atlas Copco's consolidated Energy Storage System (ESS) range is at the heart of the power supply transformation.

Developed with sustainability in mind, it helps operators dramatically reduce their fuel consumption and CO2 emissions, while delivering optimal performance with reduced noise and service cycles. Leveraging the benefits of high-density lithium-ion batteries, these units are compact and light compared to traditional alternatives, yet capable of providing days of autonomy of power with a single charge. They are ideally suited for noise-sensitive environments, such as events and metropolitan construction sites, telecom, rental applications and to efficiently cover low loads.

These Energy Storage Systems are a perfect fit for applications with a high energy demand and variable load profiles, as they successfully cover both low loads and peaks. For example, they can properly size cranes and other electric motors, and efficiently manage peaks in energy demand for noise-sensitive events and for electric vehicle (EV) recharging stations.

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.

<1 HOUR **FAST RECHARGE**

70% MORE **COMPACT & LIGHTER** IN WEIGHT

>30 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	MANUFAC-TURING	EVENTS	TELECOM BROADCAST	CONSTRUC-TION	MOTORS CRANES	RECHARGING POINT	GRID JOBS UTILITIES	RENEWABLES
ZBP 2000	2000 VA 2000 Wh	Noise reduction Low loads Prime power		●		●				○
ZBP 15-60 ZBP 45-60 ZBP 45-75	15/45 kVA 60/75 kWh	Peak shaving Low loads Prime power	○	●	●	●	●			○
ZBC 250-575	250 kVA 575 kWh	Energy storage Hybrid Prime power	●	●	○	●		●	●	●
ZBC 300-300	300 kVA 300 kWh	Hybrid Prime power	●	●	○	●	○	○	●	○
ZBC 500-250	500 kVA 250 kWh	Peak shaving Prime power	○			●	●		○	

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

HYBRID MICROGRIDS

CRANE CONSTRUCTION

MOTORS

SOLAR PLANT

RECHARGING STATION

EVENTS

Medium range
Energy Storage Systems

EXCELLENT PERFORMANCE

- Paralleling capability – scalable solution
- Microgrid possibility with other energy sources surch as grid, renewables and generators
- Lithium-ion benefits

>30 UNITS HYBRID POWER PLANTS

PLUG AND PLAY

- External connections Input/Output and control for an easier hybridization
- Alarms and emergency button access
- Fire extinguisher system as standard

<1 HOUR FAST RECHARGE

eco CONTROLLER™

>50% INCREASED PRODUCTIVITY

MEET REGULATIONS

- Reduce noise pollution
- Reduce or eliminate CO2 and NOx emissions during operation*
- Provide efficient renewable solutions

LOWER COST OF OWNERSHIP

- Increase the lifespan of hybrid fleet and reduce maintenance
- Increase your productivity while meeting emission/noise regulations

*depending on application

		ZBC 250-575	ZBC 300-300	ZBC 500-250
General technical data				
Rated power	kVA	250	300	500
Rated energy storage capacity	kWh	576	307	246
Rated voltage (50Hz) (1)	VAC	400	400	400
Battery rated voltage	VDC	768	768	768
Rated current discharge	A	360	451	720
Operating temperature (2)	°C	-10 to 50	-10 to 50	-10 to 50
Sound power level	dB(A)	<80	<80	<80
Battery				
Quantity	units	30	30	20
Battery type		LiFePO4	LiFePO4	LiFePO4
Rated voltage	VDC	76,8	51,2	76,8
Rated capacity (@25°C)	Ah	250	200	160
C-rate discharge		0,5	1	2
Recommended Depth of discharge (DoD%)	%	80	80	80
End of life (EOL%)	%	70	70	70
Expected cycle life (@DoD,EOL,25°C) (3)	Cycles	6000	6000	6000
Battery balanced (recharge up to 100%)		Once per 3 month	Once per 3 month	Once per 3 month
Inverter				
Quantity	units	4	5	8
Maximum apparent power (for seconds) (4)	kVA	275	330	550
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	0,9 / 1,3	0,4 / 0,6
Discharge autonomy 50% / 25% rated power	h	4 / 8	2 / 4	0,9 / 1,8
Recharging time (@DoD%)	h	2,5	1,2	0,5
Hybrid recommendation (generator size)	kVA	>50	>50	>50
Power factor acceptance		-1 … 1	-1 … 1	-1 … 1
Heating / Cooling system		HVAC	HVAC	HVAC
Fire extinguisher system included		Yes	Yes	Yes
Maximum auxiliary consumption	kW	22	22	22
Total energy through output up to (5)	MWh	2400	1300	1000
Dimensions and weight				
Dimensions (L x W x H)	mm	2991 x 2438 x 2896	2991 x 2438 x 2896	2991 x 2438 x 2896
Weight	kg	11000	9000	10600
Protection degree IP		55	55	55
Housing		Container 10 ft high cube		

(1) Switchable 50/60Hz, Voltage range 380-415V (check with technical support) **(2)** Cold weather option advisable. **(3)** Lithium iron phosphate **(4)** Under specific conditions (check with technical support) **(5)** Parallelling capabilities available (check with technical support)

Atlas Copco is not responsible for any problem that may occur due to errors or changes of these data. They can also be changed or rectify without prior notification. Some of our certificates (Batteries UL1973, UN38.3, IEC62281, IEC62619) (Performance EN-IEC 61000, EN-IEC 60335, EN-IEC 60335, EN-IEC 62109, EN 55014, UL1741, IEEE1547, UL1741, UL9540, NEMA250) Road and sea transport ADR class 9, UN 3536, CE, NEN3140, NEN3840, ISO9001, ISO14001, Low Voltage Directive 2014/35/EU, EMC directive 2014/30/EU (for further information check with Atlas Copco technical support)

Small range
Energy Storage Systems

THE ERA OF CONNECTIVITY

- ECO controller™, dedicated management system - the brain of the solution
- Remote monitoring system
- Master system for: Technical diagnosis and fuel saving calculations

LITHIUM-ION TECHNOLOGY

- Perfect match for short cycles (charge and discharge) performance
- Large usable energy range compared to other technologies
- Low total cost of ownership

HIGH CAPACITY
LITHIUM ION
BATTERY

FAST
HYBRID SET UP
1 MINUTE

MODULAR AND MOBILE

- Water and dust isolation IP55
- Galvanized skid
- Integrated lifting structure with single elevation point
- Dedicated maintenance doors
- Sling guides

PLUG AND PLAY

- Wide connection panel for multiple socket combinations
- Plug and play sockets with any genset and load
- Passthrough limitation 100A

Extra small range
Energy Storage Systems

MEET REGULATIONS

- Reduced noise and no emissions working standalone and with renewable energy sources
- Two foldable solar panels to recharge
- Distribution box

PORTABLE SOLUTION

- Light and compact
- Less than 1m³ footprint
- Handle to pull
- IK09 certified: impact test resistance

With trolley handle for **EASE OF TRANSPORT**

Up to **5** UNITS **PARALLEL CAPABILITY**

EXCELLENT PERFORMANCE

- Paralleling capabilities up to 5 units
- IP65 classified: water and dust isolation
- Fire extinguishing system included

eco CONTROLLER™

THE ERA OF CONNECTIVITY

- WIFI and APP connection
- Defined alarms
- System status capacity

Options

+ Heater for cold temperatures
+ Solar panels 200W or 400W

+ Socket configuration:
- 2 x CE 230VAC
- 2 x AUS 220VAC
- 2 x UKCA 110VAC
- USB

The lightest and most portable of our Energy Storage Systems

The lightest and most portable of our Energy Storage Systems, the ZBP 2000, is built for small events and small construction sites, and to power electric tools. Compact and lightweight, the unit has IK09 impact resistance classification and has an Ingress Protection rating of IP65, meaning it provides exceptional protection from dust and water in harsh environments.

With the option to parallel up to 5 units, the solution can be scaled up to 10kWh of modular energy storage, enhancing performance and reducing total cost of ownership. The ZBP 2000 also comes with two small foldable solar panels that could be used to recharge in great weather conditions or to maintain a proper battery level during less efficient production days.

		ZBP 2000	ZBP 15-60	ZBP 45-60	ZBP 45-75
General technical data					
Rated power	kVA	2	15	45	45
Rated energy storage capacity	kWh	2,16	58	58	77
Rated voltage (50Hz) (1)	VAC	230	230	400 / 230	400 / 230
Battery rated voltage	VDC	48	48	48	48
Rated current discharge	A	9	65	65	65
Operating temperature (2)	°C	-10 to 45	-10 to 50	-10 to 50	-10 to 50
Sound power level	dB(A)	<80	<80	<80	<80
Battery					
Quantity	units	1	12	12	16
Battery type		LiFePO4	LiFePO4	LiFePO4	LiFePO4
Rated voltage	VDC	48	48	48	48
Rated capacity (@25°C)	Ah	45	100	100	100
C-rate discharge		1	1	1	1
Recommended Depth of discharge (DoD%)	%	90	80	80	80
End of life (EOL%)	%	80	70	70	70
Expected cycle life (@DoD,EOL,25°C) (3)	Cycles	2000	6000	6000	6000
Battery balanced (recharge up to 100%)		Once per month	Once per month	Once per month	Once per month
Inverter					
Quantity	units	1	1	3	3
Maximum apparent power (for seconds) (4)	kVA	4	22,5	67,5	67,5
Maximum passthrough current	A	18	100	100	100
Built in transformer		No	Yes	Yes	Yes
Performance					
Discharge autonomy 100% / 75% rated power	h	0,9 / 1,3	4 / 5,3	1,3 / 1,8	1,8 / 2,4
Discharge autonomy 50% / 25% rated power	h	2 / 4	8 / 16	2,7 / 5,3	3,5 / 7,1
Recharging time (@DoD%)	h	3	7	2,3	3,1
Hybrid recommendation (generator size)	kVA	3,5	30	45-120	45-120
Power factor acceptance		-1 … 1	-1 … 1	-1 … 1	-1 … 1
Heating / Cooling system		Air cooled	Heaters* / Air cooled	Heaters* / Air cooled	Heaters* / Air cooled
Fire extinguisher system included		Yes	NA	NA	NA
Maximum auxiliary consumption	kW	0,03	5,3	5,4	5,5
Total energy through output up to (5)	MWh	4	200	200	250
Dimensions and weight					
Dimensions (L x W x H)	mm	570 x 367 x 478	1450 x 230 x 1865	1450 x 230 x 1865	1450 x 230 x 1865
Weight	kg	37	1285	1511	1618
Protection degree IP		65	55	55	55
Housing		Plastic	Metal canopy		

(1) Switchable 50/60Hz, Voltage range 380-415V (check with technical support) **(2)** Cold weather option advisable. **(3)** Lithium iron phosphate **(4)** Under specific conditions (check with technical support) **(5)** Parallelling capabilities available (check with technical support)

* Optional

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A full portfolio, multiple energy-efficient solutions

ISLAND Mode

The island mode enables our Energy Storage Systems to be used as a standalone power solution. It is an ideal way to meet the needs of noise-sensitive environments like night operations, remote telecom applications, or to resolve low load challenges.

QUIET TECHNOLOGY

These models are silent in operation, delivering reduced noise emissions, thereby contributing to a safer working environment. They are a perfect choice for noise-sensitive applications, such as events and metropolitan construction sites. Allowing to increase the productivity of the core business **up to 50%**

COMPACT DESIGN

Battery technology allows us to reach high power machines in the most compact version, making them easier to transport and **up to 70%** lighter in weight than other battery types in the market. Modularity is a big benefit while talking about transportability.

FAST CHARGING

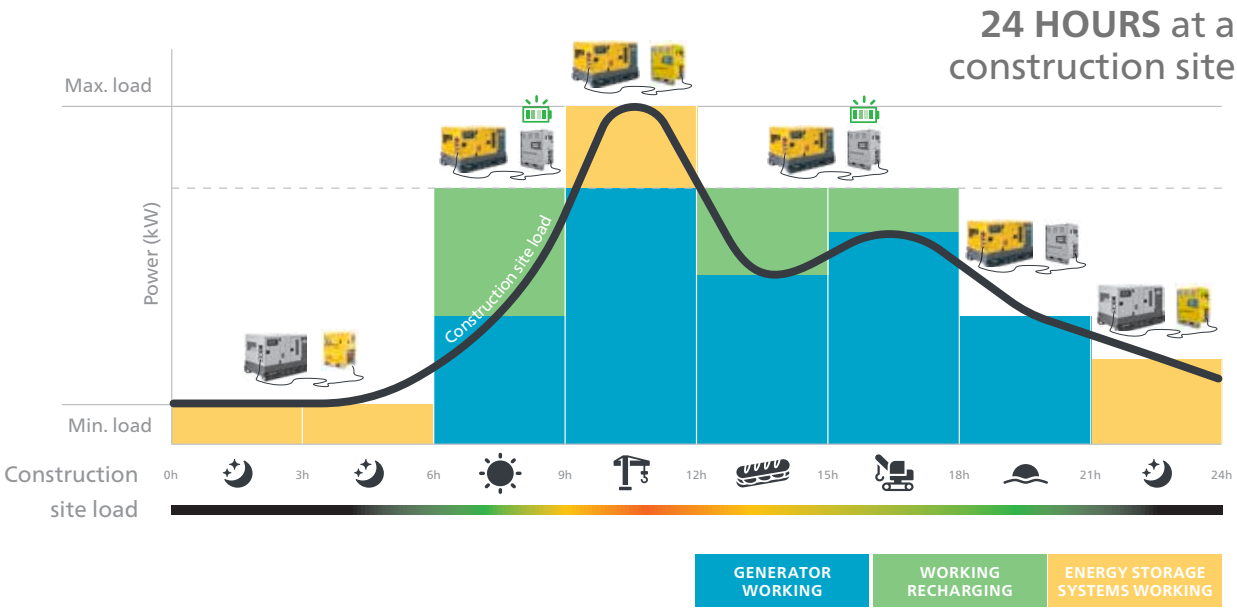
In Island mode, the machines are ready to perform in a very easy way. Connect them directly to the loads and start working. And as they need to be ready at any moment, fast charging is a must, these units can be fully recharged in **less than 1 hour** depending on the model, thanks to its lithium-ion batteries.

CLEAN TECHNOLOGY

When used in island mode, CO2 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.

HYBRID Mode

In hybrid mode, these Energy Storage Systems successfully manage energy coming from different sources, including renewables (like solar and wind), the power grid and diesel generators.
These battery-based units provide resilient and reliable energy on demand, helping operators lower their emissions, meet regulations and cut costs in an broad spectrum of applications.



HYBRID SOLUTIONS

With a wide offer of socket options, the units are easy to connect to the different energy sources available on site. Also, thanks to ECO, 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

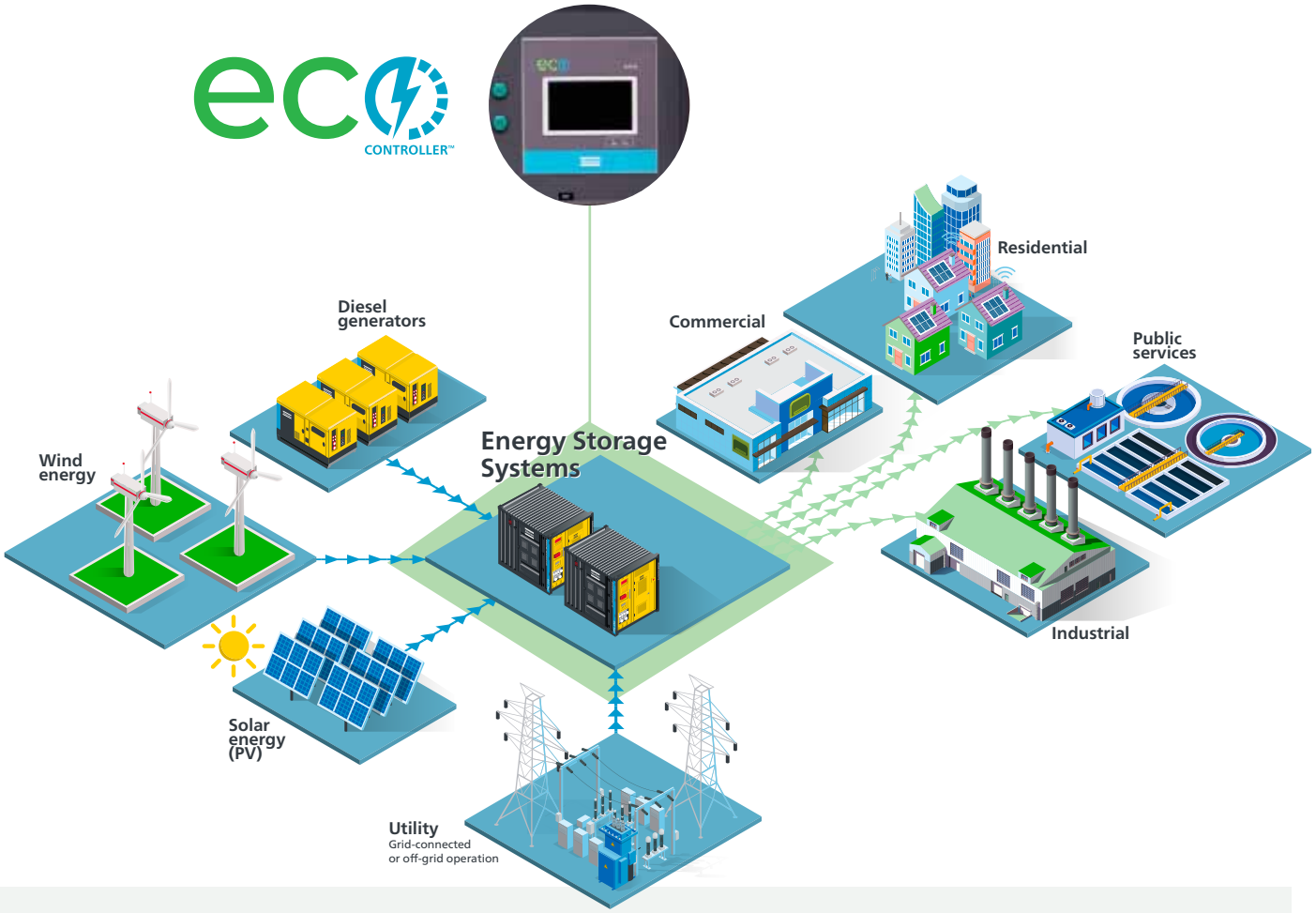
In hybrid mode with a generator, these Energy Storage Systems increase the solutions' overall efficiency, accounting for the peaks of power and low loads. They optimize the generator's performance extending its lifespan by **up to 15%**, and decreasing general maintenance and overhaul cost **by 50%**.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

ENERGY SAVINGS

When an Energy Storage System is managing energy coming from renewables, the grid or even from a hydrogen fuel cell, there is no fuel consumption and no CO2 emissions during operation. In hybrid mode with a diesel generator, users can reduce daily fuel consumption by **up to 90%**, saving more than 200 tons of CO2 during its operating life.

- **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 future-proof approach to optimized 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— help rental companies and operators to deploy flexible power, decarbonizing operations and achieving significant fuel, energy and lifecycle savings.

ECO, 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?

- 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 Energy Storage Systems, integrating the collected data
- Centralizes all hybrid energy sources

FLEXIBLE & 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

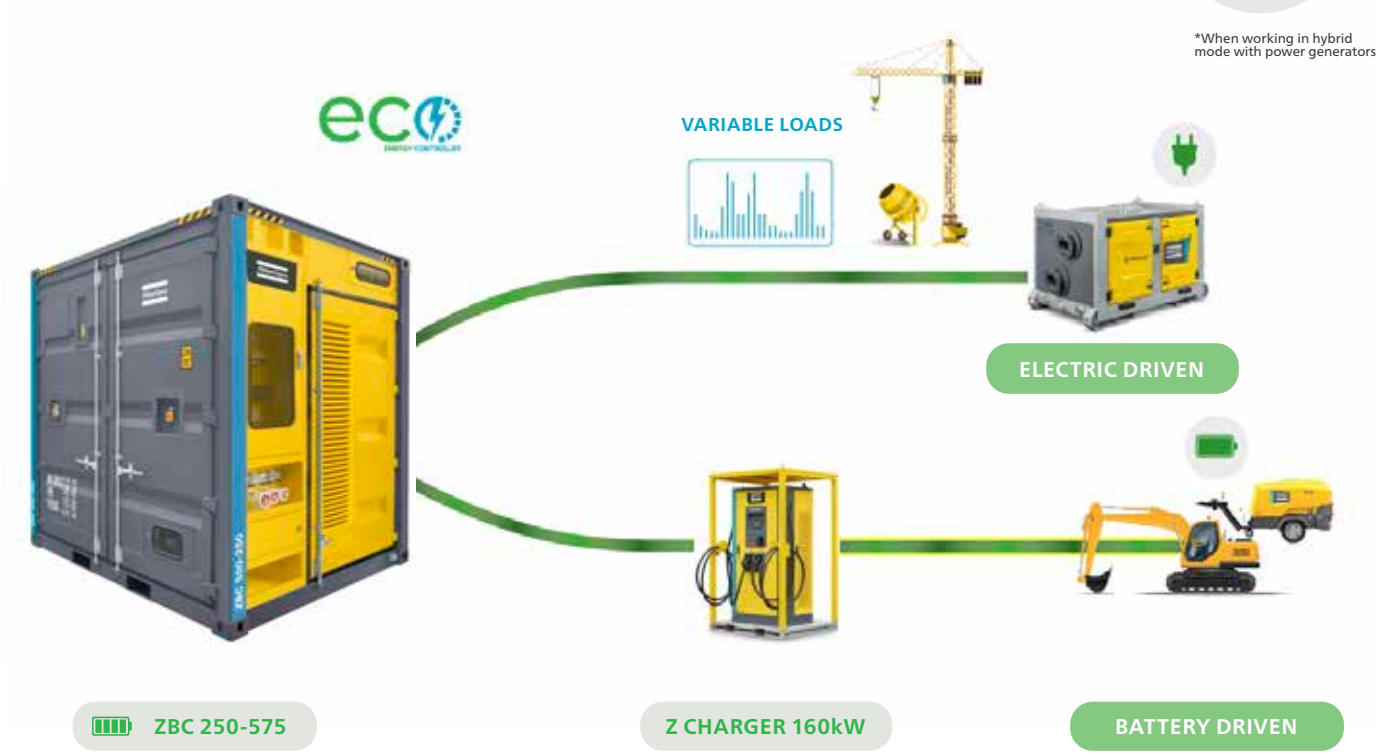
FRICTIONLESS

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

Accelerating the electrification of key sectors

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

*When working in hybrid mode with power generators



Recharging station and grid booster

The electrification of the equipment calls for compliant and efficient recharging stations. Providing a full porfolio of Energy Storage Systems and the Z Charger ensure flexible performance on site. Atlas Copco's fast charger 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 Energy Storage System is ideal to boost the grid to cover that high demand.

		Z Charger 160
General technical data		
Rated power input/output (PF=0,99)	kW	160
Connector type		CCS 2
Number of outputs / cable length		2 / 7 meters
Power per charging connector	kW	80
Rated input voltage (50Hz)	VAC	400
Ouput voltage range	VDC	200-1000
Rated input/output current	A	200
Ingress Protection IP		55
Peak efficiency		95%
Cooling method		Forced Air cooling
Operating temperature	°C	-20 to 65
Communication interface		Ethernet/GPS/3G/4G/WIFI
Sound power level	dB(A)	<70
Dimensions and weight		
Dimensions (L x W x H)	mm	1400 x 1300 x 2375
Weight	kg	650

Product portfolio

ENERGY STORAGE SYSTEMS

EXTRA SMALL
2–10 kVA

SMALL
15-150 kVA

MEDIUM
200–500 kVA

FAST CHARGER
160 kw

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

LIGHT TOWERS

DIESEL

BATTERY

ELECTRIC

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.

LIGHT THE POWER: YOUR SIZING TOOL
A useful calculator to help you choose the best solution for your power and light needs.

Atlas Copco Power Technique
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