



Energy Storage Systems for Hybrid Generators



Quiet and Clean Energy, on Demand

On Demand Clean Energy

Arizon's range of clean energy storage systems are specially designed for the industrial worksite. These modular storage systems allow operators to make significant reductions in their CO2 and noise emissions while increasing operating time and efficiency.

Generator fuel consumption and maintenance costs are drastically reduced.

Utilising high energy density, non-dangerous Lithium Ferro-Phosphate batteries and a state-of-the-art Inverter Charger from Victron Energy, these units are perfect for construction sites, telecommunications, rentals and metropolitan sites with noise restrictions.



Hybrid Applications

When used in a Hybrid application, Arizon Energy Storage Systems can be coupled with any diesel generator to load-shift energy consumption. The generator will run at maximum efficiency when used, and the battery system will provide power when the load is low.

This eliminates bore glazing issues produced by running generators below 75% of capacity and maximizes your fuel efficiency.

The Benefits of a Hybrid System

- **Lower Fuel Costs:** Hybrid systems only consume fuel when the generator is required, resulting in lower fuel costs.
- **Less Generator Maintenance:** Hybrid systems use battery power when running below 75% of the generator capacity which minimises bore glazing and maintenance costs.
- **Lower Carbon Emissions:** Consuming less fuel reduces your carbon footprint and results in cleaner air on your worksite.
- **Less Noise Pollution:** Hybrid systems are quieter, making them safer and more suitable for noise regulations.
- **Uninterrupted Long-Term Power Supply:** Long-term and constant flow of electricity regardless of the power required by the load.



Standalone Applications

Arizon Energy Storage Systems can operate as a standalone power solution, providing power while producing zero noise and zero emissions. This is perfect for environments such as night operations with noise restrictions and remote telecom applications.

Quiet

The Arizon ESS produces near-zero noise, making it ideal for situations with noise regulations.



Fast charging

All Arizon Energy Storage Systems can be fully charged in less than 80 minutes.



Efficient

Efficient state of the art Lithium Ferro-Phosphate technology makes the unit compact and allows it to be charged very quickly.



Green

When used as a standalone power supply, Arizon Energy Storage Systems output zero emissions. With the option of recharging from renewables, the CO2 savings can reach up to %100.



Micro-Grid

The Arizon Energy Storage System acts as the heart of the Microgrid. It stores the DC power generated from renewable sources such as solar while allowing AC power from generators or the grid to pass through and power the microgrid.

Building a microgrid around an Arizon Energy Storage System allows you to supply uninterrupted power while utilizing a decentralized power solution with the ability to support the grid.



Victron Energy

Victron Energy is a world-leading manufacturer of off-grid power products with an unrivaled reputation for technical innovation, reliability, and quality. Arizon have been designing products with Victron Energy equipment for many years.

The Victron Inverter Charger models are ideal for producing Energy Storage Systems.



Pylontech Batteries

US5000 lithium iron phosphate battery is the new energy storage product developed and produced by Pylontech. It can be used to provide reliable power for various types of equipment and systems. The US5000 has a built-in BMS battery management system, which can manage and monitor cell information including voltage, current and temperature.

They are designed to provide a longer service life at higher power output/density per module.



Shroud

The Shroud of the Arizon Energy Storage System is constructed with industrial Galvanised Steel and is equipped with:

- Forklift Pockets
- Tie-Down Points
- Lifting Points
- Industrial Skid for Dragging the Unit



Specifications

General Technical Data	Model A	Model B	Model C	Model D	Model E
Nominal Rated Power (kVA)	5	15	45	90	180
Nominal Battery Storage Capacity	5	15	30	60	150
Rated Output Voltage (ACV)	230		230 / 415 (3 phase)		
Battery Voltage (VDC)	48V				
Battery (Pylontech Batteries US3000C)	Model A	Model B	Model C	Model D	Model E
Qty (units)	1	3	6	12	30
Nominal Voltage V	48				
Nominal Capacity (Wh)	4800	14400	28800	57600	144000
Usable Capacity (Wh)	4560	13680	27360	54720	136800
Dimension mm	442*420*161				
Weight Kg	38	114	228	456	1140
Discharge Voltage V	44.5-53.5				
Charge Voltage V	52.5-53.5				
Charge / Discharge Current (Recommended) A	75	225	450	900	2250
Charge / Discharge Current (Max) A	120	360	720	1440	3600
Charge / Discharge Current (Peak - 15 seconds) A	200	600	1200	2400	6000
Communication Port	RS485-CAN				
Working Temperature C°	0-55				
Shelf Temperature C°	-20-60				
Humidity	5%-95%				
Altitude (m)	<4000				
Cycle Life	>6000, 25°C				
Authentication Level	IEC62619/CE /UN38.3				
Inverter/Charger	Model A	Model B	Model C	Model D	Model E
PowerControl / PowerAssist Yes	Yes				
Transfer switch (A)	100	100	300	300	300
Input voltage range	38- 66 V				
Output	Output voltage: 230VAC ± 2% Frequency: 50Hz ± 0,1%				
Cont. output power (VA) at 25°C	5000	15000	45000	90000	180000
Cont. output power (W) at 25°C	4000	12000	36000	72000	144000
Cont. output power (W) at 40°C	3700	10000	30000	60000	120000
Cont. output power (W) at 65°C	3000	7000	21000	42000	84000
Peak power (W)	10000	25000	75000	150000	300000
Maximum efficiency (%)	95	96	288	576	1152
Zero-load power (W)	35	110	330	660	1320
Zero-load power in search mode (W)	15	20	60	120	240

Specifications

Inverter/Charger	Model A	Model B	Model C	Model D	Model E
AC Input	Input voltage range: 187-265 VAC Input frequency: 45 - 65 Hz		Input voltage range: 337-478 VAC Input frequency: 45 - 65 Hz		
Charge voltage 'absorption'	57,6 V				
Charge voltage 'float'	55,2 V				
Storage mode	52,8 V				
Charge Current (A)	70	200	400	800	2000
Battery temperature sensor	Yes				
Programmable relay	Yes				
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, EN 62109-1				
Emission Immunity	EN 55014-1, EN 55014-2, EN-IEC 61000-3-2, EN-IEC 61000-3-3, IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3				
Automotive Directive	ECE R10-5				
Communications / Monitoring	Model A	Model B	Model C	Model D	Model E
Device	Cerbo GX				
Datalogging	Yes				
Wifi	Yes				
LCD Screen	Yes				
Low Battery Alarm	Yes				
Email Alerts	Yes				
Modbus	Yes				
MQTT	Yes				
CANBus	Yes				

Socket Options

Socket Options	Model A	Model B	Model C	Model D	Model E
Nominal Rated Power (kVA)	5	15	45	90	180
Peak power (kW)	10	25	75	150	300
IN	Model A	Model B	Model C	Model D	Model E
CEE 400V 5P 125A			√	√	√
CEE 400V 5P 63A					
CEE 400V 5P 32A					
CEE 230V 3P 63A		√			
CEE 230V 3P 16A	√	√	√	√	√
OUT	Model A	Model B	Model C	Model D	Model E
CEE 400V 5P 125A			√	√	√
CEE 400V 5P 63A			√	√	√
CEE 400V 5P 32A			√	√	√
CEE 230V 3P 63A		√	√	√	√
CEE 230V 3P 16A	√	√	√	√	√



ABOUT ARIZON

Local Support and Locally Sourced, High Quality Components.

Arizon is located in Melbourne, Australia.

Arizon has been designing Off-Grid systems for over 10 years. We have a team of dedicated electrical engineers on hand to give support, recommendations and answer any questions you may have regarding the product. We provide assistance throughout the purchasing journey and continue the support after the product has been installed.

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