

Prepared by: Sureserve**For:** 8 Risley Avenue, London, N17
7EU**Quote #:**
Valid until:

Solar Energy System Proposal

Thank you for the opportunity to present your Solar Energy System Proposal.

Best Regards,
Justin Joseph

Sureserve Energy Services UK Limited

Recommended System Option

2.79_{kW}

System Size

£258

Estimated Annual
Energy Bill Savings

£0

Total System Price

£0

Net System Price



Your Solution

Solar Panels

Hengdian Group DMEGC Magnetics

2.790 kW Total Module Power

6 x 465 Watt Panels (DM465G12RT-B48HBB)

960 kWh per year

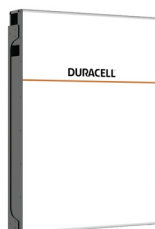
Dura5

4.6 kWh of Usable Capacity

Duracell

1 x PD-5KWH-50V-2G

10 Year Warranty



DURACELL
ENERGY

Dura-i Inverter

3.6 kW of Inverter Power

Duracell

1 x PD-DH1P-3.6K-G1 [10 Years]

10 Year Warranty Parts & Labour



DURACELL
ENERGY

IMO Stag AC Isolator 4 Pole 32 Amp

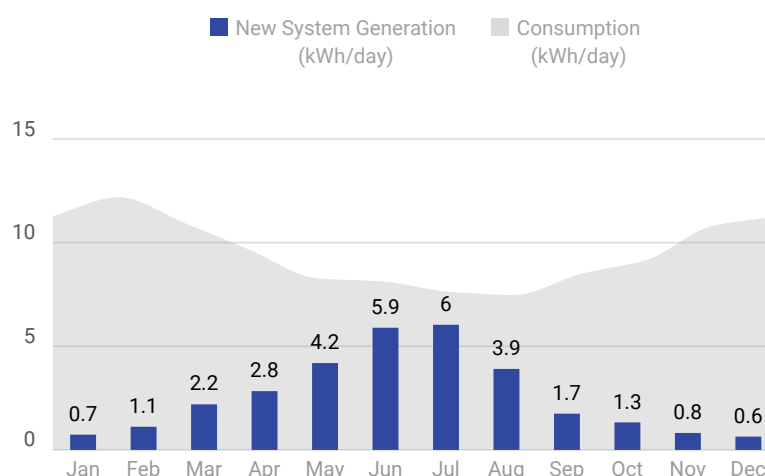
IMO Stag AC Isolator 4 Pole 32 Amp

1 x IMO-IS4P32

Warranties: 25 Year Panel Product Warranty, 30 Year Panel Performance Warranty, 10 Year Inverter Product Warranty, 10 Year Battery Product Warranty

System Performance

27%
Energy From Solar



System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 37.2%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 6 panels with Azimuth 2 and Slope 34.

The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the standard MCS procedure is given as guidance only. It should not be considered as a guarantee of performance. The solar PV self-consumption has been calculated in accordance with the most relevant methodology for your system. There are a number of external factors that can have a significant effect on the amount of energy that will be self-consumed.

Shading will be present on your system that will reduce its output to the factor stated. This factor was NOT calculated using the MCS shading methodology, but we can confirm that the system as quoted, taking into account the shading present, will deliver at least 90% of the energy (in kWh) as set out in this performance estimate.

This system performance calculation has been undertaken using estimated values for array orientation, inclination, or shading. Actual performance may be significantly lower or higher if the characteristics of the installed system vary from the estimated values.

Important Note: The energy performance and benefits of EESS is impossible to predict with certainty due to the numerous functions a system can be programmed to perform. This estimate is based upon the standard MCS procedure and is given as guidance only. It should not be considered as a guarantee of performance.

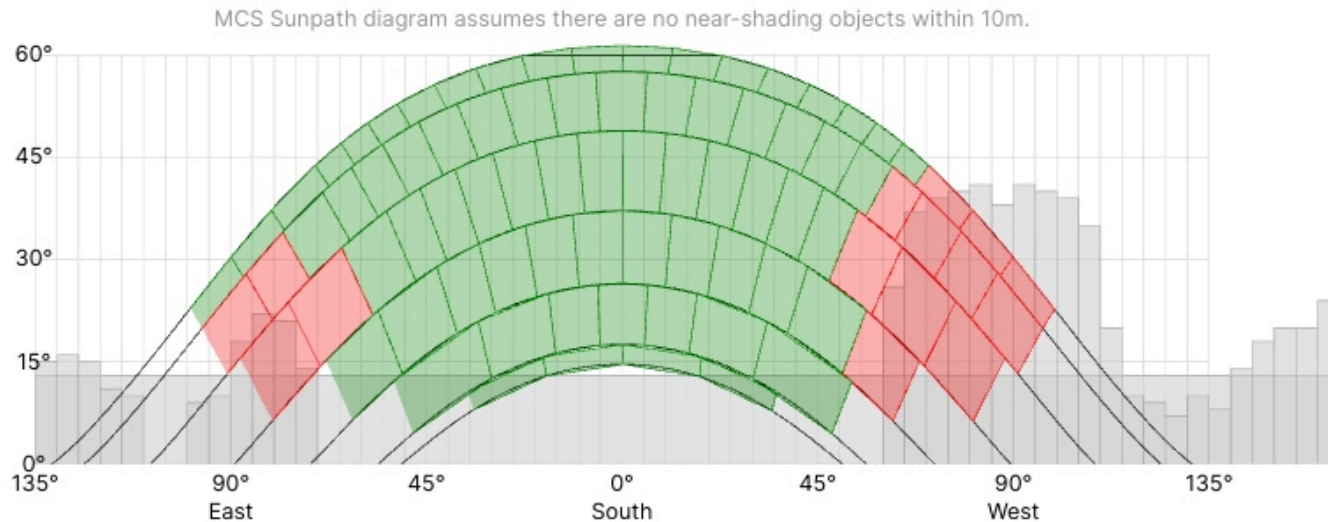
[EESS capacity not used for self consumption] Storage capacity of the battery - assumed usable capacity of battery [Total energy discharged per annum] Assumed usable capacity of battery x 730 [Additional self consumption] Estimated annual output (Section B) x self consumption rate with battery as a % (no higher than 95%) - Expected solar PV self-consumption (with EESS) (Section D)

A. Installation data		
Installed capacity of PV system - kWp (stc)	2.790	kWp
Orientation of the PV system - degrees from South	Group 1: 6 panels with Orientation: 180 °	°
Inclination of system - degrees from horizontal	Group 1: 6 panels with Tilt: 34°	°
Postcode region	1	
B. Performance calculations		
kWh/kWp (Kk) from table	Group 1: 548	kWh/kWp

Shade Factor (SF)	0.628	
Estimated annual output (kWp x Kk x SF)	960	kWh
C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	3,500	kWh
Assumed annual electricity generation from solar PV system, kWh	960	kWh
Expected solar PV self-consumption (PV Only)	461	kWh
Grid electricity independence / Self-sufficiency (PV Only)	13.2	%
D. Estimated PV self-consumption - with EESS		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	4.60	kWh
Expected solar PV self-consumption (with EESS)	903	kWh
Grid electricity independence / Self-sufficiency (with EESS)	26.0	%
E. Additional benefits from PV and EESS		
EESS capacity not used for self-consumption	0.52	kWh
Total energy discharged per annum	3,358	kWh
Additional self-consumption for EV, heat pumps, diverters (only when present)	0.00	kWh

Sunpath Diagram

Disclaimer: The shade mask mapped onto the sunpath diagram is based off the field of view from a point in the center of the array. This means that the shade mask shown will only capture the shading experienced at the array center point, and will not reflect the shading casted onto other locations on the array.



Environmental Benefits

Solar has no emissions. It just silently generates pure, clean energy.



Each Year

27%

Consumption Offset

0.2^{tons}

of CO₂ reduced per year
(all energy)

Over System Lifetime

7,271^{km}

Car distance avoided
(lifetime, all energy)

47

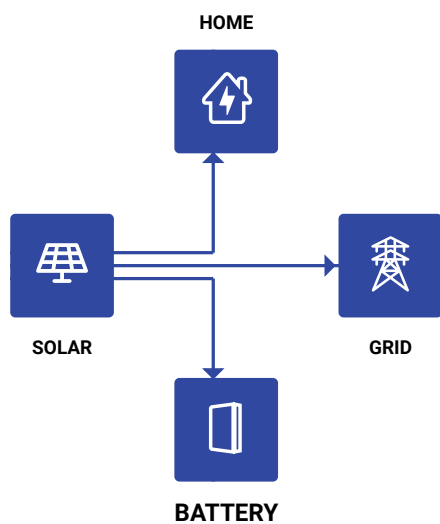
Trees planted (all
energy)

5

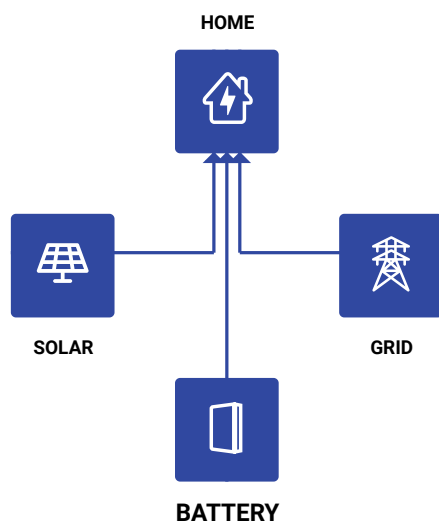
Long haul flights
avoided (all energy)

How your system works

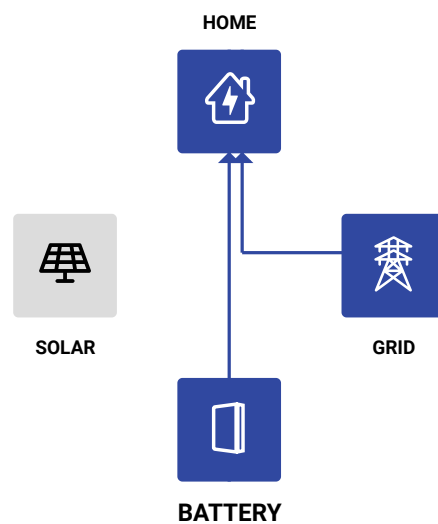
Generating Excess Solar



Partially Offset Usage

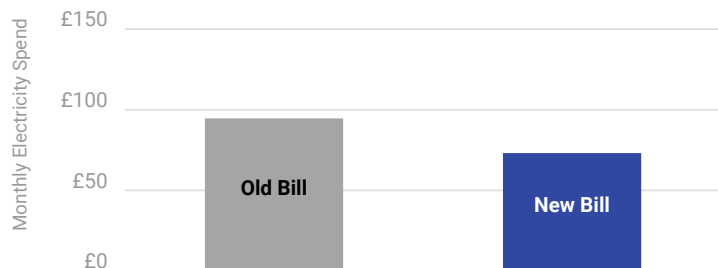


Night

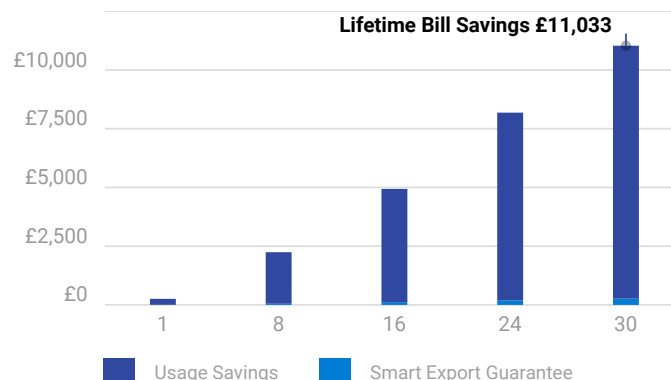


Electricity Bill Savings

First Year Monthly Bill Savings



Cumulative Bill Savings



Month	Solar Generation (kWh)	Net Grid Consumption before new system (kWh)	Electricity Imported after new system (kWh)	Electricity Exported after new system (kWh)	Export Credit (£)	Utility Bill before new system (£)	Utility Bill after new system (£)	Estimated Savings (£)
Jan	23	350	327	0	0	110	105	6
Feb	31	341	310	0	0	107	98	8
Mar	68	339	271	0	0	108	89	19
Apr	85	289	210	6	1	94	72	22
May	130	257	136	10	1	86	49	36
Jun	177	244	79	14	1	82	34	48
Jul	187	236	62	14	1	80	30	50
Aug	121	232	119	9	1	79	45	34
Sep	52	255	205	3	0	85	71	13
Oct	41	284	243	0	0	93	82	11
Nov	25	324	300	0	0	103	97	6
Dec	20	349	329	0	0	110	105	5

Rate not specified specified, using Octopus Flux S Scotland - Jul 25 based on location.

Your projected energy cost is calculated by considering a 2.7% increase in energy cost each year, due to trends in the raising cost of energy. This estimate is based on your selected preferences, current energy costs and the position and orientation of your roof to calculate the efficiency of the system. Projections are based on estimated usage of 3500 kWh per year, assuming Octopus Flux S Scotland - Jul 25 Electricity Tariff.

Your electricity tariff rates may change as a result of installing the system. You should contact your electricity retailer for further information.

Proposed Tariff Details - Octopus Energy Octopus Flux S Scotland - Jul 25

Energy Charges

Peak Import

4pm-7pm Mon-Sun

£0.36 / kWh

Standard Import

5am-4pm & 7pm-2am Mon-Sun

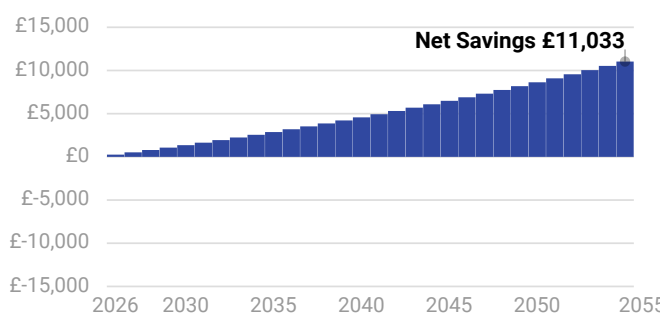
£0.26 / kWh

Flux Import <i>2am-5am\Mon-Sun</i>	£0.15 / kWh
Smart Export Guarantee	
Peak Export <i>4pm-7pm\Mon-Sun</i>	£0.27 / kWh
Standard Export <i>5am-4pm\Mon-Sun & 7pm-2am\Mon-Sun</i>	£0.10 / kWh
Flux Export <i>2am-5am\Mon-Sun</i>	£0.04 / kWh
Fixed Charges	
Standing Charge	£0.54 / day

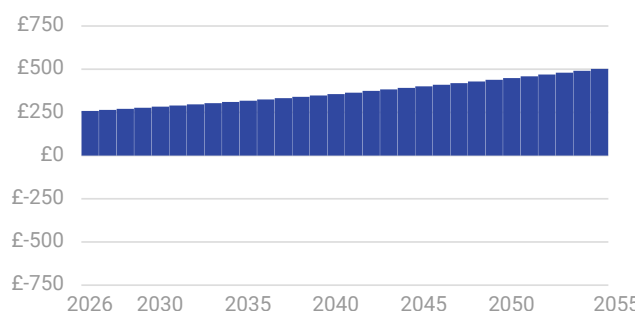
Net Financial Impact Cash

$$\begin{array}{rcl}
 \text{£11,033} & - & \text{£0} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} \\
 & = & \text{£11,033} \\
 & & \text{Estimated Net Savings}
 \end{array}$$

Cumulative Savings



Annual Savings



Estimates do not include replacement costs of equipment not covered by a warranty. Components may need replacement after their warranty period. Financial discount rate assumed: 6.75%

Quotation

Payment Option: Cash

6 x Hengdian Group DMEGC Magnetics 465 Watt Panels (DM465G12RT-B48HBB)
1 x PD-DH1P-3.6K-G1 [10 Years] (Duracell)
1 x PD-5KWH-50V-2G (Duracell)
1 x IMO-IS4P32

Total System Price	£0.00 Excluding £0.00 VAT
Purchase Price	£0.00 Including £0.00 VAT
No Deposit	£0.00

Price excludes Retailer Smart Meter should you want us to install your Smart Meter it will be an additional cost.
This proposal is valid until 17th September 2026.

Quote Acceptance

I have read & accept the terms and conditions.

Signature

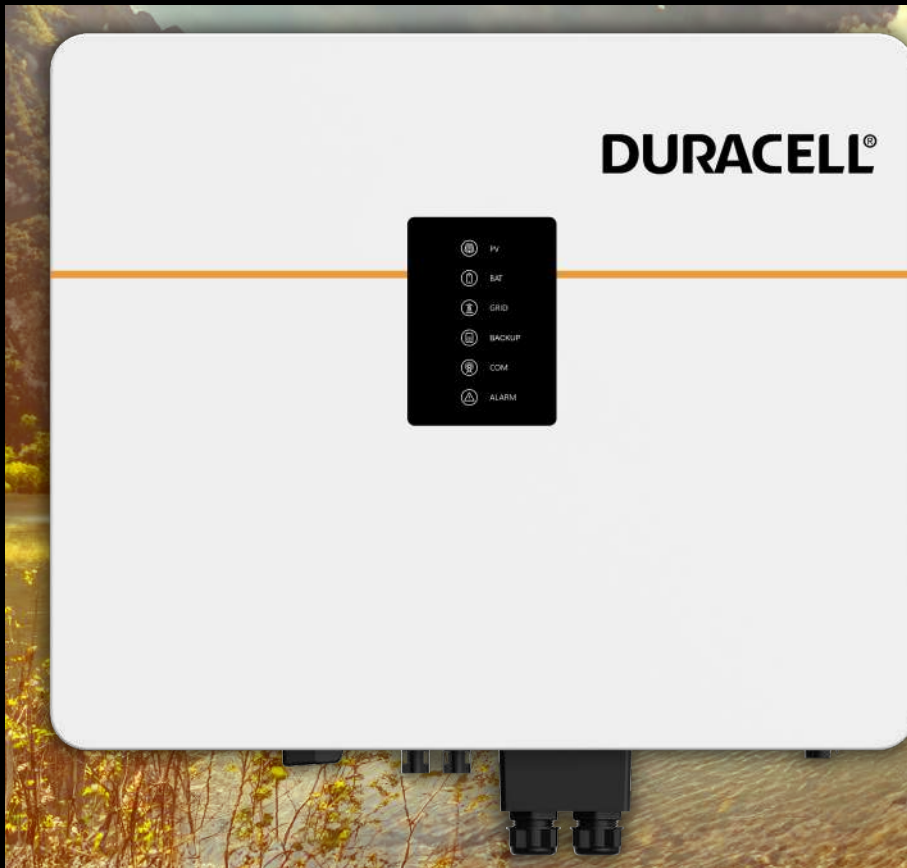
Name

Date



This proposal has been prepared by Sureserve Energy Services UK Limited using tools from OpenSolar. Please visit www.opensolar.com/proposal-disclaimer for additional disclosures from OpenSolar.

Dura-i Inverter



**Dura5 battery
compatible with Dura-i**



Dura-i Inverter

**Model Nos. PD-DH1P-3.6K-G1
PD-DH1P-4.6K-G1
PD-DH1P-5K-G1
PD-DH1P-6K-G1**

Key Inverter Features

-  Hybrid & Connects as AC
-  9KWp of PV
-  Integrated Energy Meter
-  Modular - connect up to 6 inverters in parallel
-  Dura5 Battery compatible

Dura-i Inverter - Technical Specification

Product	Dura-i Inverter			
Model No.	PD-DH1P-3.6K-G1	PD-DH1P-4.6K-G1	PD-DH1P-5K-G1	PD-DH1P-6K-G1
Efficiency				
Max. efficiency (PV to AC)	97.30%			
Eur. Efficiency (PV to AC)	96.8%			
Max. efficiency (BAT to AC)	94.30%			
Input (PV)				
Max. PV power (W)	9000W			
Max. PV voltage (V)	550V			
Max. input current (input A/input B) (A)	15A/15A			
Max. short current (input A/input B) (A)	20A/20A			
Start operating voltage (V)	90V			
MPPT voltage range @full load (V)	70-540V			
No. of MPPT	2			
String per MPPT	1			
Input (BAT)				
Compatible battery type	Lithium-ion			
Nominal battery voltage	48V			
Battery voltage range	40V-65V			
Max. charge/discharge current (A)	60A/60A	120A/120A	120A/120A	120A/120A
Max. charge/discharge power (W)	3,000W/3,000W	5,000W/5,000W	5,000W/5,000W	6,000W/6,000W
Lithium battery charge curve	Self-adaption to BMS			
Output (Grid)				
Nominal AC output power (W)	3,600W	4,600W	5,000W	6,000W
Max. AC output apparent power (VA)	3,960VA	4,600VA	5,500VA	6,000VA
Max. AC output power (PF=1) (W)	3,960W	4,600W	5,500W	6,000W
Max. AC Output current (A)	18A	22A	25A	27.2A
Rated AC voltage (V)	230V			
AC voltage range (V)	150-300V (adjustable)			
Rated grid frequency (Hz)	50/60			
AC frequency range (Hz)	45-55 /55-65 (adjustable)			
Grid connection	Single phase			
Power factor	0.99 @rated power (adjustable 0.8 LG – 0.8 LD)			
THDI	<3%			
Output (Back up)				
Nominal output voltage (V)	230V			
Nominal output frequency (Hz)	50/60Hz			
Nominal output power (W)	3000W	4600W	5000W	6000W
Nominal output current (A)	13.1A	20A	21.7A	26.1A
Peak Output Apparent Power (>1s)	4,500VA	6,900VA	7,500VA	9,000VA
Transfer Time (ms)	10ms (typ) / 20ms (max)			
THDV	<3% @100% R Load			

Dura-i Inverter - Technical Specification

Product	Dura-i Inverter			
Model No.	PD-DH1P-3.6K-G1	PD-DH1P-4.6K-G1	PD-DH1P-5K-G1	PD-DH1P-6K-G1
Protection				
Protection category	Class I			
DC switch	Yes			
Anti-islanding protection	Yes			
AC overcurrent protection	Yes			
DC/AC overvoltage protection	Yes			
AC short circuit protection	Yes			
DC reverse protection	Yes			
Surge arrester	DC Type III, AC Type III			
Insulation detection	Yes			
Leakage current protection	Yes			
PV overvoltage category	II			
AC overvoltage category	III			
General				
Max. operation altitude (m)	4000m			
Noise emission (DB)	<35			
Ingress protection degree	IP65			
Operating temperature range (°C)	-25°~60°			
Relative humidity (%)	0~100%			
Cooling concept	Natural Cooling			
Mounting	Wall bracket			
Dimensions (mm, W x H x D)	585 x 485 x 175mm			
Weight (kg)	25kg			
PV connection type	MC4/H4			
Battery connection type	Dedicated DC connector			
AC connection type	Dedicated AC connector			
HMI & COM				
Display	LED + APP			
Communication Interface	RS485/CAN (for BMS), RS485, USB, Ethernet, DRM/RS485 for meter, Optional: WiFi/GPRS			
Monitoring				
Monitoring	APP (OS/Android)			
Certification				
Grid safety	IEC62109-1/-2, EN/IEC 61000-6-1/-2/-3/-4, G98/G99/G100/G100			
EMC	IEC61000-6-2/3			
Warranty (years)	10 years			



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Dura5

Stack or Wall-Mount Battery



Dura5

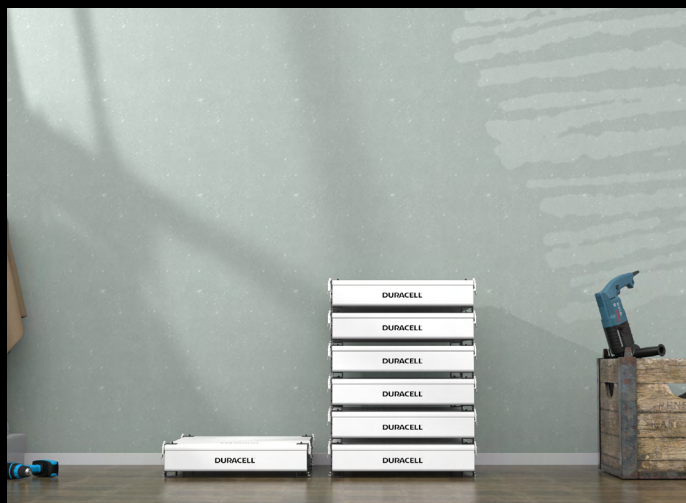
51.2V 100Ah LiFePO4

This 5.12kWh battery utilises the safest and highest performing chemistry; lithium iron phosphate.

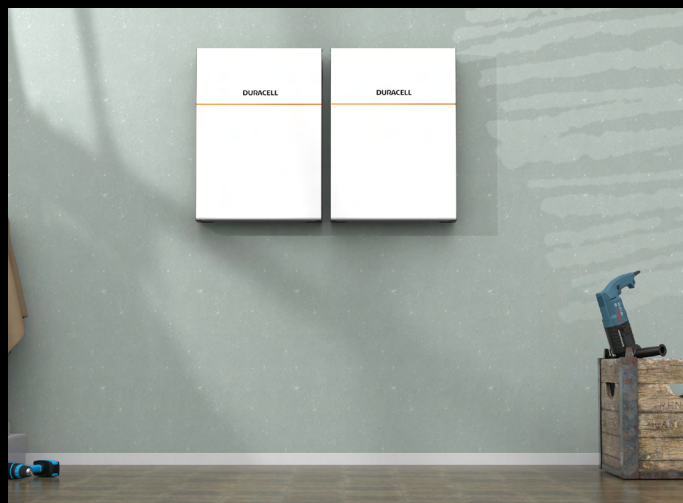
The Dura5 boasts a 10 year warranty and 1C operation allowing you to charge each battery by 100A.

Key Features

-  1C/1C charge and discharge
-  Plug-and-play (all cables included)
-  Master BMS autoselect
-  Modular up to 32 units (stacks of 16)
-  Module-level auto-balancing.
Add additional batteries at any time
-  10 Year warranty



Stack (16 x 2)



Wall-Mount

Dura5 5.12KWh LiFePO4 Technical Specification

Product	Dura5
Model No.	PD-5KWH-50V-2G
Battery module energy (kWh)	5.12kWh
Useable energy (kWh)	4.6kWh
Max output power (A)	100A
Peak output power (A)	110A
Nominal voltage (V)	51.2Vdc
Operating voltage range (single phase)	43.2V-56.8V
Dimensions (mm, W x D x H)	490 x 90 x 675mm
Weight (kg)	45±1kg
Installation	Stackable or Wall-mount
Operating temperature (°C)	-10°C~+55°C
Operating altitude	0-3000m (Derating above 2000m)
Environment	Indoor
Relative humidity	5%~95%
Cooling	Natural Convection
Display	LED Indicator
Cell technology	LiFePO4
Scalability	Max 32 Systems In Parallel Operation
Communication ports	CAN / RS485
Cycles	8000
Warranty	10 years

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