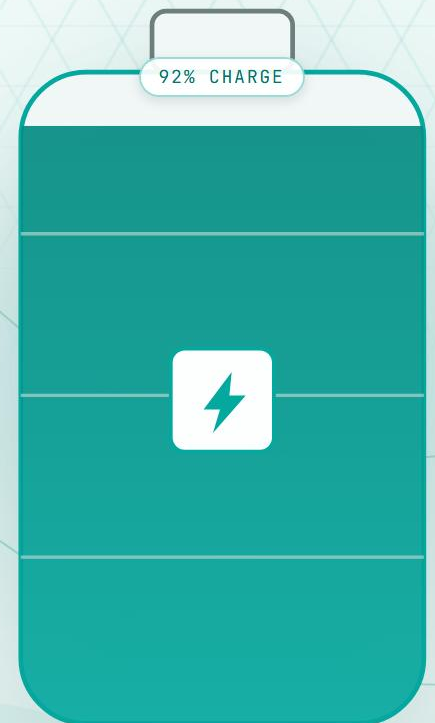


PRODUCT CATALOGUE

Energy Storage Solutions

Engineering Protection. Empowering Performance.

A complete range of LiFePO₄ battery and energy storage systems — from 1.28 kWh residential packs to 6.25 MWh utility-scale containerized storage — built on intelligent battery management and certified international safety standards.



— WHO WE ARE

Engineering protection into every cell.

Protechwell Solutions designs and supplies advanced LiFePO4 battery and energy storage systems built on a simple principle: reliability starts with protection. Every pack we ship carries an intelligent BMS engineered to guard against overcharge, over-discharge, overcurrent and thermal faults — long before performance ever becomes a compromise.

From a single 1.28 kWh residential pack to a 6.25 MWh containerized utility system, our range covers the full spectrum of stationary energy storage — modular, monitored and built to certified international safety standards.



Safety First

Overcharge, over-discharge, overcurrent and thermal protection are standard on every family we ship — not an upgrade.



Innovation

RS485/CAN-connected BMS, mobile app SOC monitoring, and remote firmware upgrades keep every deployment future-ready.



Integrity

We publish real specifications and stand behind them with warranties up to 10 years on our rack and floor-stand systems.



Performance

Up to 6,000 cycles at 80% depth of discharge, across residential, commercial and utility-scale deployments alike.

SOLUTIONS FOR EVERY SCALE

Residential Backup

Commercial & Industrial

Solar Hybrid

Microgrid

Utility-Scale

Peak Shaving

8

PRODUCT FAMILIES

UP TO
6000

CYCLE LIFE

UP TO
10-YR

WARRANTY

6.25 MWh

MAX SYSTEM SIZE

Flicker

1.28 – 2.56 kWh

Lead-acid replacement battery, 12V / 24V



- LiFePO4 chemistry
- Drop-in lead-acid replacement
- Cold-start capable down to 20% capacity
- Up to 10× faster charge/discharge
- Up to 1/3 the weight of comparable lead-acid
- Mobile app + SOC indicator

FULL SPECIFICATIONS

PARAMETER	FLICKER 12.8V 1.28 KWH	FLICKER 25.6V 2.56 KWH
Nominal Voltage [V]	12.8	25.6
Rated Capacity [Ah]	100	100
Charge Voltage [V]	14.6	29.2
Standard Charging Current [A]	20	20
Standard Discharging Current [A]	50	50
Max. Charging Current [A]	100	100
Max. Discharging Current [A]	100	100
Discharge Cut-off Voltage [V]	10	20
Nominal Energy [kWh]	1.28	2.56
Operating Temp. (Charge)	0 to 60°C	0 to 60°C
Operating Temp. (Discharge)	-10 to 65°C	-10 to 65°C
Working Humidity	≤ 90% RH	≤ 90% RH
Working Altitude	≤ 4000 m	≤ 4000 m
IP Rating	IP65	IP65
Weight [kg]	14	26
Mobile App Connectivity	Available	Available
Battery SOC Indicator	Available	Available
Dimension [mm] L×W×H	320×190×250	370×225×175

Pulse

5.1 – 20 kWh

Modular 51.2V wall / floor battery



Standardized 3U/4U modular design

RS485 BMS

Auto cell balancing $\leq 30\text{mV}$

Overcharge / overcurrent / thermal alerts

IP65 outdoor rated

Remote firmware upgrade

FULL SPECIFICATIONS

PARAMETER	PULSE 5.1 KWH	PULSE 11.7 KWH	PULSE 20 KWH
Nominal Voltage [V]	51.2	51.2	51.2
Rated Capacity [Ah]	100	200	400
Charge Voltage [V]	58.4	58.4	58.4
Standard Charging Current [A]	20	20	20×4
Standard Discharging Current [A]	100	200	100×4
Max. Charging Current [A]	100	200	100×4
Max. Discharging Current [A]	100	200	100×4
Discharge Cut-off Voltage [V]	42	42	42
Nominal Energy [kWh]	5.1	11.7	20
Operating Temp. (Charge)	0 to 60°C	0 to 60°C	0 to 60°C
Operating Temp. (Discharge)	-10 to 65°C	-10 to 65°C	-10 to 65°C
Working Humidity	$\leq 90\%$ RH	$\leq 90\%$ RH	$\leq 90\%$ RH
Working Altitude	≤ 4000 m	≤ 4000 m	≤ 4000 m
Weight [kg]	43	106	210
Mobile App Connectivity	Available	Available	Available
Battery SOC Indicator	Available	Available	Available
Dimension [mm] L×W×H	560×470×170	670×485×244	600×600×1000

Spark

14.3 – 30.7 kWh

High-capacity 51.2V modular battery



Standardized 3U/4U modular design

Scalable parallel capacity

Intelligent RS485 BMS

Auto cell balancing

FULL SPECIFICATIONS

PARAMETER	SPARK 14.33 KWH	SPARK 16.07 KWH	SPARK 30.72 KWH
Nominal Voltage [V]	51.2	51.2	51.2
Rated Capacity [Ah]	280	314	600
Charge Voltage [V]	58.4	58.4	58.4
Standard Charging Current [A]	20×3	20×4	20×4
Standard Discharging Current [A]	100×3	100×4	100×4
Max. Charging Current [A]	100×3	100×4	100×4
Max. Discharging Current [A]	100×3	100×4	100×4
Discharge Cut-off Voltage [V]	42	42	42
Nominal Energy [kWh]	14.33	16.07	30.72
Operating Temp. (Charge)	0 to 60°C	0 to 60°C	0 to 60°C
Operating Temp. (Discharge)	-10 to 65°C	-10 to 65°C	-10 to 65°C
Working Humidity	≤ 90% RH	≤ 90% RH	≤ 90% RH
Working Altitude	≤ 4000 m	≤ 4000 m	≤ 4000 m
Weight [kg]	140	180	220
Mobile App Connectivity	Available	Available	Available
Battery SOC Indicator	Available	Available	Available
Dimension [mm] L×W×H	600×600×1000	600×600×1200	600×600×1500

Glow

5 – 30 kWh

Rack-mount high-voltage ESS, 96–576V



Up to 6000 cycles @ 80% DOD

10-year warranty

Up to IP65 indoor/outdoor

CAN / RS485 comms

Up to 90% DOD

FULL SPECIFICATIONS – 5 TO 15 KWH

PARAMETER	GLOW 5 KWH	GLOW 10 KWH	GLOW 15 KWH
Nominal Energy [kWh]	5	10	15
Nominal Power [kW]	2.88	5.76	8.64
Nominal Voltage [V]	96	192	288
Voltage Range [V]	81~108	162~216	243~324
Max. Continuous Charge/Discharge Current [A]	30/30	30/30	30/30
Depth of Discharge	90%	90%	90%
Cooling	Natural	Natural	Natural
Battery Technology	LiFeP04	LiFeP04	LiFeP04
Dimensions [W×H×D mm]	600×289×385	600×428×385	600×567×385
Weight [kg]	64	110.3	156.6
Ingress Protection	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)
Installation Type	Floor Stand	Floor Stand	Floor Stand
Operating Temp. Range	-10 to +55°C	-10 to +55°C	-10 to +55°C
Communication	CAN, RS485	CAN, RS485	CAN, RS485
Cycle Life	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL
Warranty [years]	10	10	10
Operating Altitude	≤ 2000 m	≤ 2000 m	≤ 2000 m

Glow

5 – 30 kWh

Full specifications, continued

— FULL SPECIFICATIONS (CONTINUED)

PARAMETER	GLOW 20 KWH	GLOW 25 KWH	GLOW 30 KWH
Nominal Energy [kWh]	20	25	30
Nominal Power [kW]	11.52	14.4	17.28
Nominal Voltage [V]	384	480	576
Voltage Range [V]	324~432	405~540	486~648
Max. Continuous Charge/Discharge Current [A]	30/30	30/30	30/30
Depth of Discharge	90%	90%	90%
Cooling	Natural	Natural	Natural
Battery Technology	LiFeP04	LiFeP04	LiFeP04
Dimensions [W×H×D mm]	600×706×385	600×845×385	600×984×385
Weight [kg]	202.9	249.2	295.5
Ingress Protection	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)
Installation Type	Floor Stand	Floor Stand	Floor Stand
Operating Temp. Range	-10 to +55°C	-10 to +55°C	-10 to +55°C
Communication	CAN, RS485	CAN, RS485	CAN, RS485
Cycle Life	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL
Warranty [years]	10	10	10
Operating Altitude	≤ 2000 m	≤ 2000 m	≤ 2000 m

Surge

30.7 – 61.4 kWh

High-capacity floor-stand ESS, 307–614V



Up to IP65 outdoor / IP56 indoor

Module-level emergency protection

Remote firmware upgrade & diagnostics

10-year warranty

FULL SPECIFICATIONS – 30.7 TO 46.1 KWH

PARAMETER	SURGE 30.72 KWH	SURGE 35.84 KWH	SURGE 40.96 KWH	SURGE 46.08 KWH
Number of Modules	6	7	8	9
Nominal Energy [kWh]	30.72	35.84	40.96	46.08
Nominal Power [kW]	15	17.5	20	22.5
Nominal Voltage [V]	307.2	358.4	409.6	460.8
Voltage Range [V]	259.2~345.6	302.4~403.2	345.6~460.8	388.8~518.4
Max. Continuous Charge/Discharge Current [A]	50/50	50/50	50/50	50/50
Depth of Discharge	90%	90%	90%	90%
Cooling	Natural	Natural	Natural	Natural
Battery Technology	LiFeP04	LiFeP04	LiFeP04	LiFeP04
Dimensions [W×H×D mm]	600×984×385	600×1123×385	600×1262×385	600×1401×385
Weight [kg]	310	360	410	460
Ingress Protection	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)
Installation Type	Floor Stand	Floor Stand	Floor Stand	Floor Stand
Operating Temp. Range	-10 to +55°C	-10 to +55°C	-10 to +55°C	-10 to +55°C
Communication	CAN, RS485	CAN, RS485	CAN, RS485	CAN, RS485
Cycle Life	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL
Warranty [years]	10	10	10	10
Operating Altitude	≤ 2000 m	≤ 2000 m	≤ 2000 m	≤ 2000 m

Surge

30.7 – 61.4 kWh

Full specifications, continued

— FULL SPECIFICATIONS (CONTINUED)

PARAMETER	SURGE 51.2 KWH	SURGE 56.32 KWH	SURGE 61.44 KWH
Number of Modules	10	11	12
Nominal Energy [kWh]	51.2	56.32	61.44
Nominal Power [kW]	25	27.5	30
Nominal Voltage [V]	512	563.2	614.4
Voltage Range [V]	432~576	475.2~633.6	518.4~691.2
Max. Continuous Charge/Discharge Current [A]	50/50	50/50	50/50
Depth of Discharge	90%	90%	90%
Cooling	Natural	Natural	Natural
Battery Technology	LiFeP04	LiFeP04	LiFeP04
Dimensions [W×H×D mm]	600×1540×385	600×1679×385	600×1818×385
Weight [kg]	510	560	610
Ingress Protection	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)	IP65 (Indoor/Outdoor)
Installation Type	Floor Stand	Floor Stand	Floor Stand
Operating Temp. Range	-10 to +55°C	-10 to +55°C	-10 to +55°C
Communication	CAN, RS485	CAN, RS485	CAN, RS485
Cycle Life	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL	6000 @80% DOD / 25°C / 0.2C / 60% EOL
Warranty [years]	10	10	10
Operating Altitude	≤ 2000 m	≤ 2000 m	≤ 2000 m

Blaze

83.6 – 94 kWh

50 kW hybrid inverter + battery, all-in-one



3 MPPT trackers

Max PV input 75 kWp

Transformerless topology

Aerosol fire suppression

Up to IP65 outdoor cabinet

— SYSTEM SPECIFICATIONS

PV INPUT

Max. Recommended PV Power	75,000 Wp
Max. PV Input Voltage	1000 V
MPPT Voltage Range	350 – 800 V
Rated PV Input Voltage	667 V
Start-up Voltage	350 V
No. of MPPT / Strings per Tracker	3 / 2
Max. PV Input Current	36 / 36 / 36 A

AC INPUT (SHARED)

Rated AC Input Voltage	3/N/PE, 230/400 V
Grid Frequency	50 / 60 Hz

AC OUTPUT (SHARED)

Rated AC Output Voltage	3/N/PE, 230/400 V
Grid Frequency	50 / 60 Hz
Adjustable Power Factor	1 (0.9 leading – 0.9 lagging)
Output THDi (@Rated Output)	< 3%

SYSTEM GENERAL DATA

Dimensions (with Inverter) [mm]	1330×1950×1425
Dimensions (without Inverter) [mm]	1000×1950×1425
Ambient Temperature Range	-20 to +55°C
Relative Humidity	0 – 95%
Operating Altitude	≤ 2000 m
Topology	Transformerless
Cooling	Air-conditioner
Fire Protection	Aerosol
Communication	CAN, RS485, USB Update, WiFi, 4G, Ethernet
Ingress Protection	Cabinet: IP55 · Inverter: IP65
Cycle Life	6000 @90% DOD / 25°C / 0.5C

— BATTERY & PERFORMANCE BY MODEL

PARAMETER	83.6 KWH MODEL	94 KWH MODEL
Battery Technology	LiFePO4	LiFePO4
Nominal Capacity [Ah]	204 (102×2)	204 (102×2)
Battery Configuration	16S2P × 8	16S2P × 9
Nominal Energy [kWh]	83.6	94
Nominal Voltage [V]	409.6	460.8
Voltage Range [V]	358.4 – 467.2	403.2 – 525.6
Max. Continuous Charge/Discharge Current [A]	102 / 102	102 / 102
Nominal Power [kW]	41.8	47
Depth of Discharge	95%	95%
Weight (with Inverter) [kg]	1227	1313.5
Weight (without Inverter) [kg]	1152	1238.5
Max. AC Output Active Power [W]	49,900	50,000
Rated AC Output Current [A]	72.4	72.5
Max. AC Input Apparent Power [VA]	54,890	55,000
Max. AC Input Current [A]	79.6	80.0

Inferno

261 – 1044 kWh

Modular microgrid ESS, 125–500 kW



- PV + battery + generator failover
- Seamless outage handling
- Single unified enclosure
- Auto-switch <100ms

— SYSTEM SPECIFICATIONS

PV INPUT (SHARED)		BATTERY (SHARED)	
Max. PV Power per Single MPPT	20 kWp	Battery Technology	LiFeP04
Max. PV Input Voltage	730 V	Nominal Capacity	314 Ah
MPPT Voltage Range	180 – 600 V	Nominal Voltage	832 V
Rated PV Input Voltage	550 V	Voltage Range	728 – 949 V
Start-up Voltage	200 V	Depth of Discharge	95%
No. of Input Strings per Tracker	2	Cycle Life	6000 @90% DOD / 25°C / 0.5C
Max. PV Input Current per MPPT	40 A		
Max. Short-circuit Current per MPPT	50 A		
AC OUTPUT / INPUT (SHARED)		BACKUP OUTPUT (SHARED)	
Rated AC Voltage	3/N/PE, 400 V	Automatic Switch Time	< 20 ms
Grid Frequency	50 Hz	Overload Capability	1.1× rated long-term, 1.2× rated ≥1 min
Adjustable Power Factor	-1 to +1		
Output THDi (@Rated Output)	< 3%		
Charge/Discharge Switch Time	< 100 ms		
GENERAL DATA (SHARED)			
Ambient Temperature Range	-20 to +50°C		
Relative Humidity	0 – 95%		
Operating Altitude	≤ 2000 m		
Topology	Transformerless		
Cooling	Fan + Liquid (Battery)		
Fire Protection	Aerosol		
Communication	CAN, RS485, USB Update, WiFi, 4G, Ethernet		
Ingress Protection	IP54		

— PERFORMANCE BY MODEL

PARAMETER	INFERNO 125	INFERNO 250	INFERNO 500
Max. Recommended PV Power	187.5 kWp	375 kWp	750 kWp
No. of MPP Trackers	10	10×2	10×4
Battery Configuration	1P260S×1	1P260S×2	1P260S×4
Nominal Energy	261 kWh	522 kWh	1044 kWh
Max. Continuous Charge/Discharge Current	157 / 157 A	314 / 314 A	628 / 628 A
Max. AC Apparent Power	138 kVA	276 kVA	552 kVA
Rated AC Power	125 kW	250 kW	500 kW
Max. AC Current / Backup Output	208 / 181 A	416 / 362 A	832 / 724 A
Max. AC Input Power	250 kVA	500 kVA	800 kVA
Max. AC Input Current	362 A	724 A	1160 A
Dimensions [W×H×D mm]	1850×2100×1400	2800×2100×1400	6058×2591×2438
Weight	3000 kg	5500 kg	12000 kg

Eternity

3.7 – 6.25 MWh

Utility-grade containerized ESS



- Grid-scale peak shaving
- Intelligent temperature control
- Modular & scalable
- Multi-protocol remote monitoring

FULL SPECIFICATIONS

PARAMETER	ETERNITY 3.72 MWH	ETERNITY 5.01 MWH	ETERNITY 6.25 MWH
Cell Chemistry	LiFeP04 (LFP)	LiFeP04 (LFP)	LiFeP04 (LFP)
Assembly Configuration	416S10P	416S12P	416S12P
Nominal Voltage	1331.2 V	1331.2 V	1331.2 V
Voltage Range	1040 – 1500 V	1040 – 1500 V	1040 – 1500 V
Nominal Energy	3.727 MWh	5.016 MWh	6.25 MWh
Dimension [mm]	6058×2438×2896	6058×2438×2896	6058×2438×2896
Weight	36 t	44.5 t	49 t

— READY WHEN YOU ARE

Let's engineer your energy storage system.

Whether you're sizing a residential backup pack or a utility-scale containerized system, our team can help you choose the right family.

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