

PRD Energy Europe

LiFePO4 Battery & Charger Solutions

Premium, heavy-duty energy solutions specifically engineered for professional cleaning machines and demanding European B2B environments.



Warranty
**5-Year
Premium**

Durability
**3500+
Cycles**

European HQ
**Poland,
Europe**

Edition 2026
www.prdenergy.eu

About Our Company

PRD Energy Europe

Based in Poland, **PRD Energy Europe** is a specialized technology pioneer dedicated to the design, production, and distribution of top-tier lithium battery solutions and advanced intelligent chargers.

Our mission is to replace legacy lead-acid systems with robust, high-efficiency Lithium Iron Phosphate (LiFePO4) power matrices that minimize equipment downtime, optimize total cost of ownership (TCO), and guarantee stable operation for industrial cleaning machinery.



Technology & Quality Advantages



Automotive-Grade Cells

Exclusively utilizing premium, A-grade LiFePO4 cells from world-class tier-1 manufacturers (CATL, EVE, CALB) to ensure maximum safety and a stable life cycle of over 3,500 charges.



Intelligent Smart BMS

Features 9 comprehensive levels of battery management system (BMS) protection, covering overvoltage, temperature, leak detection, short circuit, and dynamic cell balancing.



Voice & Bluetooth Diagnostics

Pioneering diagnostic suite featuring real-time Bluetooth app tracking, external LCD status displays, and vocal synthesized system status alerts for operators.



OEM Brand Compatibility

Perfect dimensions and plug-and-play electrical compliance designed directly to fit major European cleaning machine brands such as KARCHER, Tennant, Nilfisk, JIECHI, and Bennett.

International Trust & Safety Certifications:

CE • UN38.3 • MSDS • CB • ETL

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email:
sales@prdenergy.eu

tel.:
+48 535 464 297

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Strategic Shift


Why **LiFePO4** for Cleaning Machines?

Traditional Lead-Acid/Gel batteries impose heavy operational burdens: long charge cycles, high maintenance, short life expectancy, and high lifecycle cost. **Lithium Iron Phosphate (LiFePO4)** solves these pain points completely.




Fast & Opportunity Charging

Full charge in less than 2 hours. Supports safe opportunity charging (during coffee breaks or shifts) without memory effect or capacity degradation.




Zero Maintenance

No acid top-ups, no venting, and no dedicated charging rooms required. Reduces labor costs and guarantees safe, clean indoor air.



3500+ Deep Cycles (100% DoD)

Delivers more than 5 times the lifetime of traditional lead-acid batteries. Operates safely at 100% Depth of Discharge with constant voltage output.



Lower TCO & High Uptime

Although initial costs are higher, the long life, lack of maintenance, and high energy efficiency result in a dramatic 50%+ reduction in Total Cost of Ownership.

Technology Comparison Table

FEATURE / METRIC	LEAD-ACID / GEL BATTERY	PRD LIFEPO4 BATTERY
Cycle Life (80% DoD)	~500 - 700 cycles	3500+ cycles
Charging Duration	8 to 12 hours	1.5 to 2 hours
Opportunity Charging	Strictly forbidden (ruins life)	Fully supported
Weight / Density	Heavy (high floor load)	Up to 60% lighter
Daily Maintenance	Regular watering & cleaning	100% Maintenance-Free

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Professional Lithium Power

PRD P24050



Nominal Voltage

25.6V

Rated Capacity

50Ah

Stored Energy

1280Wh

Net Weight

12 kg

Primary Applications

Optimized for compact pedestrian walk-behind scrubbers and small commercial sweeping equipment. Compact, highly vibration-resistant, and drop-in fit.

Bluetooth Monitoring

3500+ Deep Cycles

Heating Option

Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	25.6V / 50Ah	Dimensions (L x W x H)	200x165x245 mm
Total Energy	1280 Wh	Weight	12.0 kg
Charge Voltage	29.2V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	10 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	25 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	25A / 50A	Optional Features	BT / Heat / Comm

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Professional Lithium Power

PRD P24060



Nominal Voltage

25.6V

Rated Capacity

60Ah

Stored Energy

1536Wh

Net Weight

15 kg

Primary Applications

Designed as a direct physical and electrical upgrade for small and medium floor scrubbing equipment. Delivers robust current and seamless OEM brand integration.

Bluetooth Monitoring

3500+ Deep Cycles

Heating Option

Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	25.6V / 60Ah	Dimensions (L x W x H)	293x202x230 mm
Total Energy	1536 Wh	Weight	15.0 kg
Charge Voltage	29.2V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	15 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	30 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	30A / 50A	Optional Features	BT / Heat / Comm

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Professional Lithium Power

PRD P24080



Nominal Voltage

25.6V

Rated Capacity

80Ah

Stored Energy

2048Wh

Net Weight

19 kg

Primary Applications

High energy density unit ideal for heavy duty walk-behind and ride-on cleaning equipment. Built to withstand continuous vibration and demanding duty cycles.

Bluetooth Monitoring

3500+ Deep Cycles

Heating Option

Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	25.6V / 80Ah	Dimensions (L x W x H)	293x202x230 mm
Total Energy	2048 Wh	Weight	19.0 kg
Charge Voltage	29.2V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	15 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	30 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	40A / 50A	Optional Features	BT / Heat / Comm

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Professional Lithium Power

PRD P24105



Nominal Voltage

25.6V

Rated Capacity

105Ah

Stored Energy

2688Wh

Net Weight

24 kg

Primary Applications

Professional-grade power solution for medium-to-large floor scrubbers. Perfect drop-in replacement for high-demand industrial equipment.

Bluetooth Monitoring

3500+ Deep Cycles

Heating Option

Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	25.6V / 105Ah	Dimensions (L x W x H)	350x296x220 mm
Total Energy	2688 Wh	Weight	~24.0 kg
Charge Voltage	29.2V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	15 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	50 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	50A / 100A	Optional Features	BT / Heat / Comm / Voice

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Professional Lithium Power

PRD P24150



Nominal Voltage

25.6V

Rated Capacity

150Ah

Stored Energy

3840Wh

Net Weight

34.5 kg

Primary Applications

High-performance power station designed for large-scale ride-on industrial floor scrubbers and heavy machinery. Operates with maximum uptime.

Bluetooth Monitoring

3500+ Deep Cycles

Heating Option

Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	25.6V / 150Ah	Dimensions (L x W x H)	350x338x253 mm
Total Energy	3840 Wh	Weight	~34.5 kg
Charge Voltage	29.2V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	30 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	100 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	75A / 100A	Optional Features	BT / Heat / Comm / Voice

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Professional Lithium Power

PRD P24210



Nominal Voltage

25.6V

Rated Capacity

210Ah

Stored Energy

5376Wh

Net Weight

42 kg

Primary Applications

Ultra-high capacity battery for the most demanding ride-on floor scrubbers and airport cleaners. Keeps heavy-duty machinery operational all day.

Bluetooth Monitoring

3500+ Deep Cycles

Heating Option

Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	25.6V / 210Ah	Dimensions (L x W x H)	420x350x240 mm
Total Energy	5376 Wh	Weight	42.0 kg
Charge Voltage	29.2V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	30 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	100 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	100A / 150A	Optional Features	BT / Heat / Comm / Voice

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Professional Lithium Power

PRD P24315



Nominal Voltage

25.6V

Rated Capacity

315Ah

Stored Energy

8064Wh

Net Weight

60 kg

Primary Applications

Ultra-high capacity battery for the most demanding ride-on floor scrubbers and airport cleaners. Keeps heavy-duty machinery operational all day.

 Bluetooth Monitoring

 3500+ Deep Cycles

 Heating Option

 Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	25.6V / 315Ah	Dimensions (L x W x H)	520x360x245mm
Total Energy	8064 Wh	Weight	60.0 kg
Charge Voltage	29.2V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	30 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	100 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	100A / 150A	Optional Features	BT / Heat / Comm / Voice

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Professional Lithium Power

PRD P36210



Nominal Voltage

38.4V

Rated Capacity

210Ah

Stored Energy

8064Wh

Net Weight

53kg

Primary Applications

Extreme-duty 36V power system designed for heavy industrial ride-on scrubbers, airport cleaning systems, and intensive logistics operations.

 Bluetooth Monitoring

 3500+ Deep Cycles

 Heating Option

 Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	38.4V / 210Ah	Dimensions (L x W x H)	510x360x245mm
Total Energy	8064 Wh	Weight	53.0 kg
Charge Voltage	43.8V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	40 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	100 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	100A / 250A	Optional Features	BT / Heat / Comm / Voice

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Professional Lithium Power

PRD P36315



Nominal Voltage

38.4V

Rated Capacity

315Ah

Stored Energy

12096Wh

Net Weight

87 kg

Primary Applications

Extreme-duty 36V power system designed for heavy industrial ride-on scrubbers, airport cleaning systems, and intensive logistics operations.

 Bluetooth Monitoring

 3500+ Deep Cycles

 Heating Option

 Smart BMS Control

Detailed Technical Specifications

ELECTRICAL SPECIFICATION	VALUE	PHYSICAL & OPERATIONAL	VALUE
Nominal Voltage / Capacity	38.4V / 315Ah	Dimensions (L x W x H)	510x510x245mm
Total Energy	12096 Wh	Weight	87.0 kg
Charge Voltage	43.8V ±0.2V	Internal Resistance	< 20 mΩ
Rated Charge Current	40 A	Operating Temp. (Charge)	0 to 55°C
Max Charge Current	100 A	Operating Temp. (Discharge)	-20 to 55°C
Rated / Max Discharge Current	100A / 250A	Optional Features	BT / Heat / Comm / Voice

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Professional Lithium Power

PRD QY500H-29.2V 15A



Max Power

500W

Output Charging

29.2V / 15A

Efficiency

≥88%

Cooling System

Smart Air

LED Status Indicators

- **Standby:** Red Solid ON
- **Pre-charge:** Red Flashing
- **Charging:** Yellow Flashing
- **Near Full:** Green Flashing
- **Fully Charged:** Green Solid ON

Detailed Technical Specifications

INPUT & EFFICIENCY	VALUE	PROTECTIONS & STANDARDS	VALUE
Input Voltage / Freq.	200-240Vac, 47-63Hz	Safety Protections	Overvoltage, Overheat, Short Circuit
Max Input Current	≤4.5A	Insulation Voltage / Resistance	1500Vac / ≥100MΩ
Output Voltage Range	29.1V - 29.4V	Dimensions (L × W × H)	181×130×110 mm
Output Current Range	13A - 15A	Net Weight	1.5 kg
Precharge Voltage / Current	14.0-23.0V / 1.0-2.5A	Cable Lengths (AC / DC)	1.1 m / 1.4 m
Voltage Stabilization Precision	±1.0%	Operating Temperature	-10 to +40°C

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Professional Lithium Power

PRD QY1200S-29.2V 30A



Max Power

1000W

Output Charging

29.2V / 30A

Precharge Current

12.0-14.5A

Cooling System

Smart Fan

Advanced Diagnostics

Designed for fast charging of larger battery capacities (100Ah to 210Ah+). Features dynamic protection modes with dedicated failure LED logic.

⚠ Over-temperature Protection • Automatic shut-off if safe temperatures are exceeded.

🔋 Battery Failure Indicators • Advanced diagnosis for faulty or deteriorated battery packs.

Detailed Technical Specifications

INPUT & EFFICIENCY	VALUE	PROTECTIONS & STANDARDS	VALUE
Input Voltage / Freq.	200-240Vac, 47-63Hz	Safety Protections	Short circuit, Overvoltage, Input limit
Max Input Current	≤6.5A	Insulation Voltage	1500Vac / ≥100MΩ
Output Voltage Range	29.1V - 29.4V	Dimensions (L x W x H)	281x160x82 mm
Output Current Range	27A - 30A	Net Weight	2.7 kg
Precharge Voltage / Current	14.0-23.0Vdc / 12.0-14.5A	Cable Lengths (AC / DC)	1.1 m / 1.4 m
Voltage Stabilization Precision	±1.0%	Operating Temperature	-10 to +40°C

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Professional Lithium Power

PRD QY1500S-29.2V 50A



Max Power

1000W

Output Charging

29.2V / 30A

Precharge Current

12.0-14.5A

Cooling System

Smart Fan

Advanced Diagnostics

Designed for fast charging of larger battery capacities (100Ah to 210Ah+). Features dynamic protection modes with dedicated failure LED logic.

⚠ Over-temperature Protection • Automatic shut-off if safe temperatures are exceeded.

🔋 Battery Failure Indicators • Advanced diagnosis for faulty or deteriorated battery packs.

Detailed Technical Specifications

INPUT & EFFICIENCY	VALUE	PROTECTIONS & STANDARDS	VALUE
Input Voltage / Freq.	200-240Vac, 47-63Hz	Safety Protections	Short circuit, Overvoltage, Input limit
Max Input Current	≤6.5A	Insulation Voltage	1500Vac / ≥100MΩ
Output Voltage Range	29.1V - 29.4V	Dimensions (L × W × H)	281×160×82 mm
Output Current Range	27A - 30A	Net Weight	3.5 kg
Precharge Voltage / Current	14.0-23.0Vdc / 12.0-14.5A	Cable Lengths (AC / DC)	1.1 m / 1.4 m
Voltage Stabilization Precision	±1.0%	Operating Temperature	-10 to +40°C

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LiFePO4 Portfolio

Battery Comparison Matrix

A comprehensive overview of the PRD Energy Europe LiFePO4 battery line-up. Every battery utilizes premium A-grade automotive cells and intelligent BMS systems, delivering 3,500+ cycles at 100% Depth of Discharge.

MODEL	VOLTAGE (V)	CAPACITY (AH)	ENERGY (WH)	CHARGE (A)	DISCHARGE (A)	WEIGHT (KG)	DIMENSIONS (MM)
P24050	25.6V	50Ah	1280Wh	10A / 25A	25A / 50A	12.0 kg	200×165×245
P24060	25.6V	60Ah	1536Wh	15A / 30A	30A / 50A	15.0 kg	293×202×230
P24080	25.6V	80Ah	2048Wh	15A / 30A	40A / 50A	19.0 kg	293×202×230
P24105	25.6V	105Ah	2688Wh	15A / 50A	50A / 100A	24.0 kg	350×296×220
P24150	25.6V	150Ah	3840Wh	30A / 100A	75A / 100A	34.5 kg	350×338×253
P24210	25.6V	210Ah	5376Wh	30A / 100A	100A / 150A	42.0 kg	420×350×240
P24315	25.6V	315Ah	8064Wh	30A / 100A	100A / 150A	60.0 kg	520×360×245
P36210	38.4V	210Ah	8064Wh	30A / 100A	100A / 150A	53.0 kg	510×360×245
P36315	38.4V	315Ah	12096Wh	40A / 100A	100A / 250A	87.0 kg	510×510×245

Standard & Custom Features Available

All batteries can be custom configured with optional technological advancements to optimize fleet operations and operator experience:

Bluetooth App

Real-time wireless diagnostics, cell voltage, SoC, temperature, and health tracking.

Self-Heating Matrix

Enables safe charging and reliable performance down to -20°C in cold storage or winter outdoor environments.

Integrated Voice Alerts

Synthesized voice announcements to immediately notify operator of battery state or alerts.

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Connect With Us

Start Your Power Revolution

Partner with PRD Energy Europe to optimize your cleaning fleet performance, reduce long-term operational costs, and implement clean, worry-free energy solutions.

Sales team



Kajetan Łunkiewicz

Sales Director | EUROPE

✉ kajetan.lunkiewicz@prdenergy.eu

☎ +48 535 464 297



Łukasz Kubacki

Sales Director | POLAND

✉ lukasz.kubacki@prdenergy.eu

☎ +48 603 922 183

PRD Energy Europe HQ

Poland, Europe
Strategic warehousing, product assembly, rigorous QC laboratories, and localized European customer care.

Contact us:

email:
sales@prdenergy.eutel.:
+48 535 464 297

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