

Energy Pod 200

The Redflow Energy Pod 200 is a scalable storage solution with the capability to store up to 200kWh of energy. Our ZBM flow batteries are encased in a custom enclosure which provides electrical protection and power conditioning, enabling it to deliver energy safely and reliably in a range of applications.



Key applications

- + Peak shaving
- + Bulk Energy Shifting
- + Renewables integration
- + Smart grid support
- + Backup power
- + Micro-grid

IN-BUILT BATTERY CONDITIONER

Equipped with a DC-DC converter to optimize the output voltage

BUILDING BLOCKS

- + Compatible with central inverter
- + Compatible with DC-coupled architecture

HARDWARE PROTECTION

- + Leak sensors
- + Secondary containment
- + Circuit breaker protection on each battery
- + Over current and over voltage protection
- + Auxiliary power circuit breaker
- + Software protection for charge and discharge limits
- + Electrolyte and ambient temperature sensors
- + Operational status of pumps and fans
- + Fire suppression not required. Non-flammable electrolyte which is not subject to thermal runaway (tested to UL9540a). Fire test reports available upon request.

ELECTRICAL RATINGS

- + **DC link voltage:** 765 Vdc to 950 Vdc (range)
850 Vdc \pm 10% (balanced to Earth)
- + **Battery Voltage:** 48 Vdc

AUXILIARY POWER

- + **Type:** Single phase plus ground, 50/60 Hz
- + **Voltage range:** 110-240 Vac
- + **Power:** 250 W

COMMUNICATION

- + **Supported protocols:** JSON, TCP/IP, Modbus over TCP/IP or RS485, CAN
- + **EMS and third-party monitoring:** Ethernet, CAN, Serial (RS485)
- + **Inverter communication:** Ethernet, RS485, or CAN
- + **Remote monitoring:** cloud or local monitoring

SITE PREPARATION

- + **Foundation:** Level site
- + **Max foundation slope:** 0.5°



MODULAR



SCALABLE



COMPETITIVE CAPEX

Technical Specifications

TECHNOLOGY

- + **Battery type:** Zinc-bromine flow battery
- + **Architecture:** Individual ZBM2 (Gen 3) 10kWh batteries

PERFORMANCE

- + **Rated discharge power:** 50 kW DC
- + **Rated discharge energy:** 200 kWh
- + **Duration:** 2-12 hours (additional hibernation capability)
- + **Depth of Discharge:** 100%

ENVIRONMENTAL

- + **Ambient temperature:** 10°C up to 50°C (32°F up to 122°F)
- + **Enclosure:** IP54/NEMA 3R
- + **Seismic:** California building code seismic zone 4
- + **Humidity:** 5% to 90% (no condensation)
- + **Altitude:** Up to 2000 m (6500 ft)

PHYSICAL

- + **Dimensions (W x D x H):** 2895 x 2024 x 2225 mm
(9' 6" x 6' 8" x 7' 4")
- + **Clearances:** Front and Rear: 1000 mm (40 in)
Right Side: 1200 mm (40")
Left Side: 50 mm (2")
- + **Mass:** 6250kg (approximate) (13800 lb)
- + **Handling:** Forklift, crane
- + **Transport:** Standard ISO shipping container: 2 per 20', 4 per 40' container
- + **Mount points:** M16

STANDARDS

Certification to UL1973 and UL9540a in progress.

Battery Management System (BMS)

FEATURES

- + Measurements: voltage, current, power, temperature
- + Accurate SOC reporting
- + Available energy and charge/discharge power
- + Real-time data logging
- + DC-DC Converter command and control
- + Thermal management control and monitoring

REAL-TIME MONITORING AND CONTROL

- + Protection against overcharging or discharging
- + In-situ stack protection
- + Monitor leak sensors
- + Electrolyte over temperature
- + Authentication and access control validation
- + Automatic power management at the end of discharge, independent of the inverter command

About Redflow

Redflow Limited, a publicly listed Australian company (ASX: RFX), produces zinc-bromine flow batteries for stationary energy storage applications. Redflow batteries are designed for high cycle-rate, long time-base energy storage, and are scalable from small commercial systems through to grid-scale deployments. Redflow's smart, self-protecting batteries offer unique advantages including secure remote management, 100 per cent daily depth of discharge, tolerance of high ambient temperatures, a simple recycling path, no propensity for thermal runaway and sustained energy delivery throughout their operating life.



Sales contact:

P +61 7 3376 0008

E sales@redflow.com