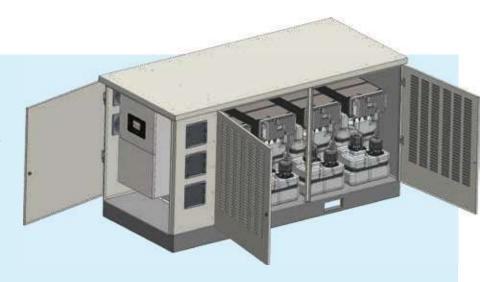


# QuadPod

The QuadPod is Redflow's small yet scalable energy storage solution. With the capability to deliver up to 40 kWh of energy from the 4 ZBM flow batteries housed and pre-wired in the custom designed enclosure.

The solution provides battery management, electrical protection and optional power conditioning, enabling safe and reliable energy delivery.



### **BUILT-IN HYBRID INVERTER**

Available as a nominal 12 kW/40 kWh at 48 Vdc base unit for customised use or with the option of a selected hybrid inverter built-in to simplify integrating an energy storage solution together with other generating sources such as PV solar, wind or backup generator.

### **BUILDING BLOCKS**

- + Compatible with selected battery/hybrid inverters for off-grid and on-grid applications
- + Compatible with AC or DC-coupled architecture
- + Integrated units can be coupled to existing PV systems (AC-coupled).

### HARDWARE PROTECTION

- + IP55 outdoor suitable enclosure
- + Fused isolators on individual batteries
- + Integrated inverter also individually isolated
- Protection inherent in the ZBM3 batteries included (Refer to the ZBM3 Datasheet)
- Fire suppression not required. Non-flammable electrolyte is not subject to thermal runaway (tested to UL9540a). Fire test reports available upon request

### **ELECTRICAL RATINGS**

- + Base unit: 12 kW/40 kWh at 48 Vdc (nominal)
- Integrated units: 12 kW/40 kWh 3-phase, 50 Hz, 230/400 Vac or 12 kW/40 kWh split-phase, 60 Hz, 120/240/208 Vac (US only)

### **ON-GRID CONNECTION**

- + Suitable AC connection required to QuadPod
- + Smart meter required at site
- + Grid-export capable (selected inverters comply to AS4777.2:2020)
- + Black start capable using PV or generator input

### OFF GRID CONNECTION

- + Can operate independent of grid network connection
- + Black start capable

### COMMUNICATION

- + **Remote monitoring:** Redflow cloud or local monitoring via a required internet connection
- + **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 and with WiFi or cellular monitoring

### SITE PREPARATION

- + **Foundation:** Level concrete plinth suitable for single or stacked weight loading, max foundation slope 0.5°
- + Access on 2 sides not against a wall or fence (for ventilation).

  Clearances outlined in technical specifications







## **Technical Specifications**

### **TECHNOLOGY**

- + Battery type: Zinc-bromine flow battery
- + Architecture: 4 parallel connected ZBM 10 kWh batteries
- + Battery management: incl. Battery Management System (BMS)

### **PERFORMANCE**

- Rated discharge power: 20 kW (peak) @ 48 Vdc or 12 kW (continuous) @ 230/400 Vac
- + Rated discharge energy: 40 kWh
- + **Duration:** 3.5 12 hours (incl. hibernation capability)
- + Depth of Discharge: 100%

### **ENVIRONMENTAL**

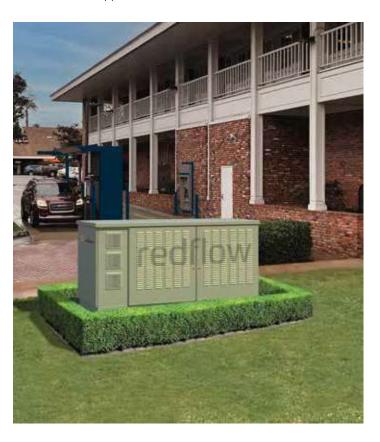
- + Ambient temperature: 10 45 °C (50 113 °F). Additional insulation and heating kit can be fitted for 0 45 °C
- + Enclosure: IP55/NEMA 3R
- + **Humidity:** 5 to 90 %RH (non-condensing)
- + Altitude: Up to 2000 m (6500 ft)

### **PHYSICAL**

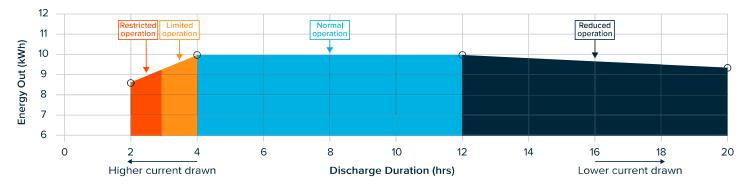
- + **Dimensions (L x W x H):** 2270 x 1150 x 1250 mm (89½" x 45¼" x 49¼")
- + Mass: 1500 kg (approximate) (3310 lb)
- + Clearances: Front and Rear 0.5 m (20"), Right Side – 0.5 m (20"), Left Side – 1.2 m (48")
- + Handling: Forklift, crane
- + **Transport:** Open truck/flatbed transport (or 17 per 40' High Cube container)
- + Mounting points: M16 (as per IBH and Energy Pod200)
- + Stackable: Max. 2 units

### **STANDARDS**

- + Certification to UL1973 and UL9540a in progress
- + Selected hybrid inverters comply to AS4777.2:2020 and are CEC approved



### ZBM STACK ENERGY OUTPUT VS DISCHARGE DURATION



## **About Redflow**

Redflow Limited, a publicly listed Australian company (ASX: RFX), produces zincbromine 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, selfprotecting 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.



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