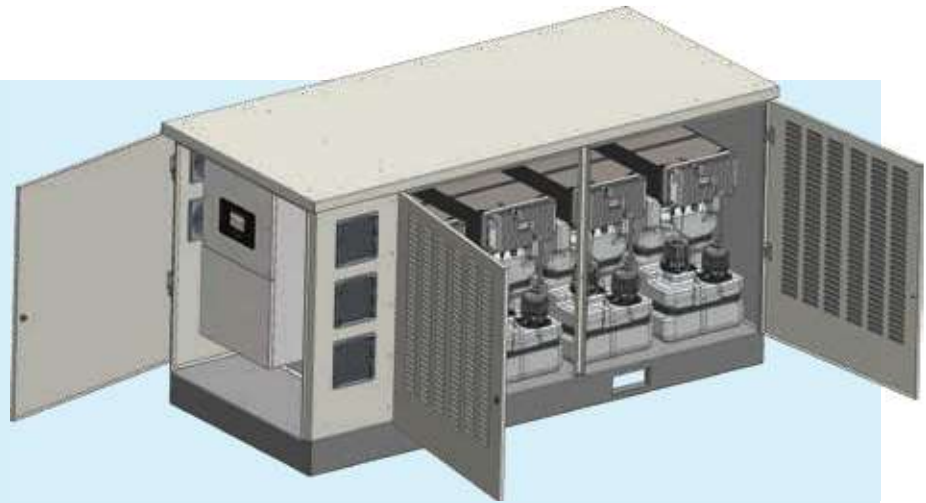


# QuadPod

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



MEDIUM TO LONG DURATION



CONSTANT POWER



NON-FLAMMABLE

# 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

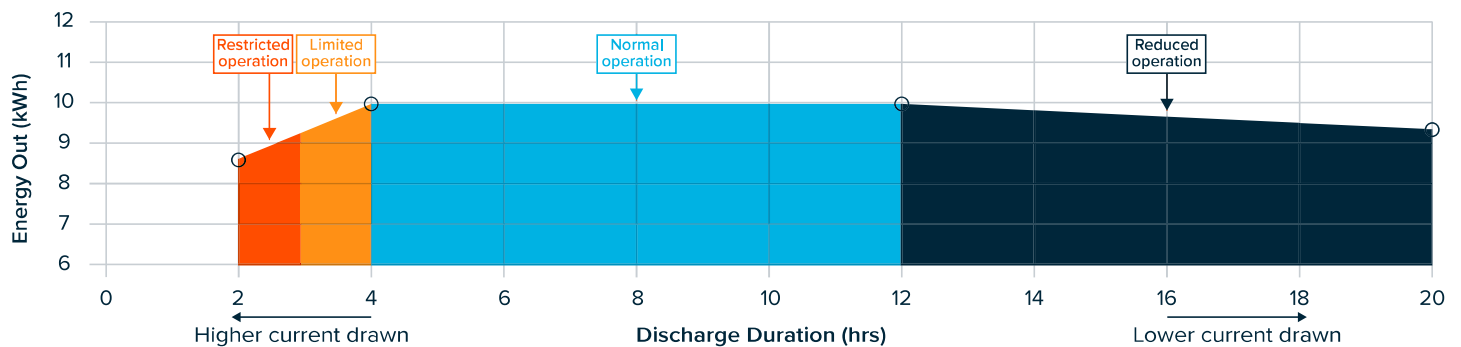
- + **Dimensions (L x W x H):** 2270 x 1150 x 1250 mm (89½" x 45¼" x 49¼")
- + **Mass:** 1500 kg (approximate) (3310 lb)
- + **Clearances:** Front and Rear – 0.5 m (20"), Right Side – 0.5 m (20"), Left Side – 1.2 m (48")
- + **Handling:** Forklift, crane
- + **Transport:** Open truck/flatbed transport (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 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.



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