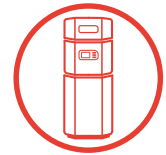# The Smart Hybrid System

redback technologies

The Smart Hybrid System is your easy to install, all-in-one solution for single phase homes. It combines a 5kVA solar inverter with expandable battery storage of up to 14.2kWh (or 28.4kWh with optional expansion cabinet) and includes integrated isolators and pre-wired BoS for your convenience.

4.8kWh - 28.4kWh Battery Storage Capacity

Backup Supply in a Power Outage*

Streamlined All-In-One Design

Indoor or Outdoor Installation

Easy Monitoring App and Portal
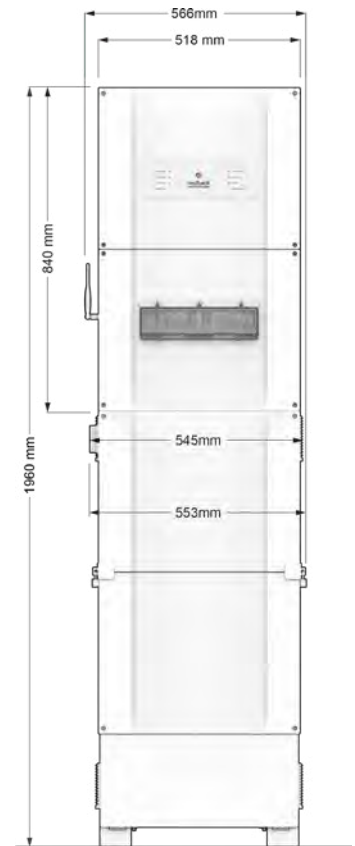
Australian-supported 10-Year Warranty

When backup circuit is connected, and battery energy is available. Appliances selected at the time of install.

Product Model	SH5000
PV Port	
Number of MPPTs	2
Strings per MPPT Input	1/1
MPPT Operating Voltage (range)	DC 125 - 550V
Maximum Input Voltage (Vmax)	DC 580V
Maximum Current (Imp)	DC 11/11A
Short Circuit Current (Isc)	DC 13.8/13.8A
Grid Interactive Port	
Nominal Output Voltage	AC 230V
Nominal Output Frequency	50 Hz
Max. Output Current	AC 24.5A
Rated Output Apparent Power	5000VA
Rated Input Current	AC 40A
Rated Input Apparent Power	9200VA
Power Factor (range)	0.8 lagging to 0.8 leading
Output Voltage THD	<4.5%
Backup Port	
Nominal Output Voltage	AC 230V
Nominal Output Frequency	50 Hz
Rated Current	AC 20A
Rated Active Power	AC 4600W
Rated Apparent Power	4600VA
Peak Apparent Power	6900VA (10 sec max)
Output Voltage THD	<4.5%
Battery Port	
Voltage (nominal)	DC 40 - 60V
Max. Current (charge)	DC 90 A
Max. Power (charge)	DC 4600W
Max. Current (discharge)	DC 100A
Max. Power (charge)	DC 4600W
Battery Type	Li-ion
Battery Depth of Discharge	90%
General Information	
Operating Temperature	-25°C to 60°C
Operating Temperature Derated Output	Below 10°C and over 45°C
Operating Relative Humidity	0 - 95%
Operating Altitude	0 - 3000m
Protective Class	I
Ingress Protection Rating	IP65
AC Overvoltage Category	OVC III
DC Overvoltage Category	OVC II
Active Anti-islanding Method	Active Frequency Drift
Inverter Topology	Non-isolated
Country of Origin	China
Demand Response Modes	DRM 0
Standby Self-Consumption	<13W
Noise Emissions	<30 dBA
Warranty	10 Years
Efficiency	
Maximum Efficiency	97.60%
Maximum Battery to Load Efficiency	94.00%
European Efficiency	97.00%
Physical Data	
Installed Weight	132-203kg
Material	Aluminium
Finish	Sealed and powder coated
Battery Enclosure Data	
Enclosure Model	BE14000
Name	Smart Hybrid Battery Enclosure
Number of Battery Units	2 - 4 (up to 8 with expansion cabinet)
Storage Capacity	4 x 2.4kWh 4 x 3.55kWh
Battery System Model	US2000 US3000
Maximum Capacity	28.4kWh*
Nominal Voltage	DC 48V
Rated Current	DC 100A
Fan Specification	DC 48V / 0.13A x2
Protective Class	I
Ingress Protection Rating	IP54
Dimensions (W x D x H)	518x352x1123 mm
Material	Steel
Finish	Sealed and powder coated
Isolation Devices	
PV Port Isolator Utilisation Category	DC-PV2
Grid Interactive Port Isolator Rated Operational Current	32A
Backup Port Isolator Rated Operational Current	25A
Battery Port Isolator Rated Operational Current	125A
Battery Cabinet Isolator Rated Operational Current	125A
Communications Ports and Protocols	
Relays	RJ45; 4x Digital I/O; +DC5V & GND
User Interface	
Front Panel Display	Coloured LEDs
Communications	Bluetooth for commissioning; Wi-Fi or ethernet for remote access
Remote Access	Web Portal; MyRedback App; Redback Install app
Remote Firmware Updates	Supported
Power/Energy Monitoring	Includes 1 x utility grade energy meter (class 1)
Certifications and Approvals	AS/NZS 4777.2:2020 IEC 62109-1:2010 IEC62109-2:2011 IEC 62116:2014 IEC 62040-1:2017 IEC 62477-1:2012 IEC 60529 EN 61000 RCM CE
Designed with Installation Standards Considered	AS/NZS 3000:2018 AS/NZS 5033:2014 (inc. Amd 1 & 2) AS/NZS 5139:2019

*Maximum capacity 14.2kWh with single cabinet, or 28.4kWh with optional expansion cabinet.