



DEEP CYCLE SYSTEMS

DCS 12V 180Ah Auxiliary LiFePO4 Battery

Lead-Acid, AGM & Gel Battery Replacement Guide

Complete Cross-Reference of All Compatible 12V Batteries on the Australian Market — Up
to 360Ah

For Leisure, Marine, Yacht, Caravan, 4WD, Solar & Off-Grid Auxiliary Deep Cycle
Applications

April 2026

1. Executive Summary

This report provides a comprehensive cross-reference guide for consumers and trade professionals seeking to replace existing 12V lead-acid, AGM, and gel deep cycle batteries with the **DCS 12V 180Ah Auxiliary LiFePO4 lithium battery** — a dedicated deep cycle house battery built with **CALB (China Aviation Lithium Battery) prismatic cells** and delivering true 1C continuous discharge performance at a highly competitive price point.

CALB (China Aviation Lithium Battery Technology Co., Ltd) is one of the oldest and most respected lithium cell manufacturers in China. Partially state-owned and headquartered in Changzhou, Jiangsu province, CALB has been manufacturing lithium iron phosphate cells since the early 2000s and was ranked the 7th largest global EV battery supplier in 2022. Their prismatic LFP cells are the go-to choice among the global yachting and marine community, renowned for exceptional cycle life consistency, thermal stability, and proven reliability across millions of cells deployed worldwide in marine, energy storage, and electric vehicle applications.

The DCS 12V 180Ah Auxiliary delivers its full **180Ah at 100% depth of discharge**, which means it provides the same usable energy as a **360Ah lead-acid battery** (limited to 50% DoD). Combined with **2,000+ cycle performance, 180A (1C) continuous discharge capability**, and a **2,000W inverter-rated output** — all packed into the world's most compact 180Ah form factor at just **18.0 kg** — it is engineered for demanding auxiliary, marine, caravan, 4WD, and off-grid applications.

Key Finding: The DCS 12V 180Ah Auxiliary is a direct replacement for approximately **120+ lead-acid, AGM, and gel battery models** across 20+ manufacturers — covering all standard 12V deep cycle batteries from 100Ah to 360Ah rated capacity currently available on the Australian market. A single 18.0 kg DCS battery replaces lead-acid units weighing up to 110 kg.

2. DCS 12V 180Ah Auxiliary Specifications

Product	DCS 12V 180Ah Auxiliary (SKU: DCS-12V-180Ah)
Case Dimensions (L × W × H)	328mm × 171mm × 215mm
Weight	18.0 kg
Nominal Voltage	12.8V (4S LiFePO4)
Nominal Capacity	180Ah (C1 rate)
Nominal Energy	2,304Wh (2.30 kWh)
Usable Capacity	180Ah (100% DoD — no derating required)
Cell Manufacturer	CALB (China Aviation Lithium Battery)
Cell Type	CALB Prismatic LFP (LiFePO4)

Maximum Continuous Discharge	180A (1C)
Inverter Support	Up to 2,000W continuous
Maximum Charge Current	60A
Charge Voltage	14.0–14.2V
Float Voltage	13.5–13.7V
Cranking Amps	0 LCA (Auxiliary only — not for engine starting)
Cycle Performance	2,000 cycles @ 100% DoD (≥80% capacity retention @ 25°C)
Self-Discharge	<3% per month
Operating Temperature	-25°C to +65°C
IP Rating	IP54
Case Material	ABS (flame retardant plastic)
Case Form Factor	Standard N70Z / 330mm deep cycle case
BMS	DCS internal active cell management system
Bluetooth Monitoring	BLE 4.0 via DCS LFP App (SOC, voltage, current, cell status, temperature)
Terminals	Top Mount M8 Stainless Steel / Copper
Parallel Connections	Up to 10
Series Connections	No
Certifications	UN 38.3, UL 1642, IEC 62133 & 62619, CE
RRP	\$1,899.00 AUD

Why CALB Prismatic Cells? CALB (China Aviation Lithium Battery) has manufactured LFP cells for over two decades. Their prismatic cells are the overwhelming choice among serious yacht owners and circumnavigators worldwide, where proven reliability is non-negotiable. Large-format prismatic cells provide superior thermal management for sustained high-current deep cycle applications, enabling the DCS 180Ah to achieve a true 1C continuous discharge (180A). CALB's scale and maturity allow DCS to offer 180Ah of usable lithium capacity at an RRP of \$1,899 — the best value-per-usable-Ah auxiliary battery on the Australian market.

Auxiliary-Only Design: The DCS 180Ah Auxiliary is a dedicated deep cycle / house battery with **zero cranking amps**. It is not designed for engine starting or installation in engine bays. This pure deep cycle focus allows the entire cell and BMS architecture to be optimised for sustained discharge performance, maximising cycle performance and energy density.

3. Replacement Criteria

A lead-acid battery qualifies as replaceable by the DCS 12V 180Ah Auxiliary when:

- **Voltage:** 12V nominal system
- **Usable capacity required:** ≤180Ah. Since lead-acid is limited to 50% DoD, this covers lead-acid batteries rated up to **360Ah**
- **Current:** Maximum continuous discharge ≤180A
- **Terminals:** M8 bolt terminals (standard across most batteries; adapters available for other terminal types)
- **Charging Compatibility:** Existing chargers can be used provided they can be configured to operate within the recommended voltage windows: **Bulk/Absorb: 14.0–14.2V** and **Float: 13.5–13.7V**. If the charger offers a lithium-specific (LiFePO4) profile, selecting that is best practice.

Form Factor Advantage: The DCS 180Ah Auxiliary uses a standard N70Z / 330mm deep cycle case (328mm × 171mm × 215mm) — the same physical footprint as most 100–120Ah lead-acid batteries. It fits directly into standard portable battery boxes, drawer systems, caravan compartments, and battery trays. At just 18.0 kg, it is lighter than most 100Ah AGM batteries (typically 29–33 kg), while delivering 180Ah of fully usable capacity.

4. Cross-Reference — Lead-Acid Batteries (100–200Ah Rated)

The following batteries are rated 100–200Ah and deliver ≤100Ah usable energy at 50% DoD. The DCS 180Ah at 180Ah usable provides **1.8x to 3.6x** the usable energy of every battery listed.

4.1 Leisure / 4WD / Marine / Caravan — Deep Cycle

Brand	Model	Type	Rated	Usable @50%	Dimensions (L×W×H mm)	Weight	DCS Replaces?
Century	C12-105XDA	AGM	105Ah	52Ah	307×169×210	29 kg	✓
Century	C12-120XDA	AGM	120Ah	60Ah	330×173×212	33 kg	✓
Century	C12-140XDA	AGM	140Ah	70Ah	345×173×277	40 kg	✓
Century	C12-165XDA	AGM	165Ah	82Ah	485×172×240	48 kg	✓
Century	C12-200XDA	AGM	200Ah	100Ah	522×240×224	60 kg	✓
Supercharge	AT121000D	AGM	105Ah	52Ah	307×169×210	29 kg	✓
Supercharge	AT121000DSP	AGM	120Ah	60Ah	330×173×212	31 kg	✓
Deltec	DEL-12V100D	AGM	100Ah	50Ah	330×171×216	30 kg	✓
Deltec	DEL-12V120D	AGM	120Ah	60Ah	330×171×216	33 kg	✓
Deltec	DEL-12V150D	AGM	150Ah	75Ah	485×172×240	43 kg	✓

Deltec	DEL-12V200D	AGM	200Ah	100Ah	522×240×224	60 kg	✓
Giant Power	GP12-100 / 120 / 200	AGM	100–200Ah	50–100Ah	330–522mm cases	29–58 kg	✓
Projecta	AGM100 / AGM120	AGM	100–120Ah	50–60Ah	330×173×220	29–33 kg	✓
Fullriver	DC105-12 / DC120-12	AGM	105–120Ah	52–60Ah	307–330mm cases	31–36 kg	✓
Fullriver	DC150-12 / DC200-12	AGM	150–200Ah	75–100Ah	484–522mm cases	46–62 kg	✓
Optima	D27M / D31M (BlueTop)	AGM	66–75Ah	33–37Ah	306–328×173×238	24–28 kg	✓
Trojan	SCS225 / 27TMX	Flooded	105–130Ah	52–65Ah	306–354×171×238	25–30 kg	✓
Victron	BAT412101104 / BAT412121104	AGM	110–130Ah	55–65Ah	330–410mm cases	33–39 kg	✓
Victron	BAT412151104	AGM	165Ah	82Ah	485×172×240	48 kg	✓
Remco	RM12-100DC / 120 / 150 / 200	AGM	100–200Ah	50–100Ah	330–522mm cases	29–60 kg	✓
Giantz	GZ-BATT-12V200	AGM	200Ah	100Ah	522×240×224	56 kg	✓
iTechworld	iT12180	AGM	180Ah	90Ah	522×240×220	55 kg	✓
Leoch	DJM12-200	AGM	200Ah	100Ah	522×240×224	60 kg	✓

4.2 Industrial / Standby / UPS / Telecom (100–200Ah Rated)

Brand	Model(s)	Type	Rated	Usable @50%	Typical Dimensions	Weight	DCS Replaces?
Ritar	RA12-100/S/H, DC12-100/S, RA12-120, RA12-134, RA12-150, RA12-200	AGM	100–200Ah	50–100Ah	328–522mm cases	30–60 kg	✓ All
Yuasa	NP100-12, NPL100-12, NPL130-12, NP150-12, NP200-12, RE100-12	AGM	100–200Ah	50–100Ah	330–522mm cases	32–62 kg	✓ All
CSB	GP121000, GPL121000, EVX12200, TPL121500A	AGM	100–200Ah	50–100Ah	330–522mm cases	32–60 kg	✓ All
Haze	HZS12-100, HZB12-150, HZS12-200	AGM/ Gel	100–200Ah	50–100Ah	330–522mm cases	30–60 kg	✓ All
Sacred Sun	SP12-100, SP12-150, SP12-200	AGM	100–200Ah	50–100Ah	330–522mm cases	30–60 kg	✓ All

Narada	6-GFM-100F, 6-GFM-150, 6-GFM-200	AGM	100– 200Ah	50– 100Ah	330–522mm cases	32–62 kg	✓ All
Vision	6FM100, 6FM150, 6FM200	AGM	100– 200Ah	50– 100Ah	330–522mm cases	30–60 kg	✓ All
B.B. Battery	BP100-12, BP160-12, BP200-12	AGM	100– 200Ah	50– 100Ah	330–522mm cases	32–62 kg	✓ All

5. Cross-Reference — Larger Lead-Acid Batteries (200–360Ah Rated)

These batteries are rated 200–360Ah but deliver ≤180Ah usable at 50% DoD. A single DCS 180Ah Auxiliary matches or exceeds the usable capacity of every battery listed, at a fraction of the size and weight.

5.1 Leisure / 4WD / Marine / Caravan — Large Format Deep Cycle

Brand	Model	Type	Rated	Usable @50%	Dimensions (L×W×H mm)	Weight	DCS Replaces?
Century	C12-225DA	AGM	225Ah	112Ah	522×268×220	65 kg	✓
Century	C12-270XDA	AGM	270Ah	135Ah	540×280×260	75 kg	✓
Fullriver	DC224-6 (×2 in series)	AGM	224Ah	112Ah	2×(260×181×275)	66 kg total	✓
Fullriver	DC260-12	AGM	260Ah	130Ah	522×268×224	78 kg	✓
Trojan	T-105 (×2 in series)	Flooded	225Ah	112Ah	2×(262×181×276)	56 kg total	✓
Trojan	T-125 (×2 in series)	Flooded	240Ah	120Ah	2×(262×181×276)	58 kg total	✓
Trojan	J185E-AC (×2 series)	Flooded	225Ah	112Ah	2×(302×181×354)	78 kg total	✓
Victron	BAT412201084	AGM	220Ah	110Ah	522×238×240	65 kg	✓
Ritar	RA12-260D	AGM	260Ah	130Ah	520×268×220	74 kg	✓
Remco	RM12-200DC	AGM	214Ah	107Ah	522×240×224	60 kg	✓
Giant Power	GP12-260	AGM	260Ah	130Ah	522×268×224	72 kg	✓
Deltec	DEL-12V250D	AGM	250Ah	125Ah	522×268×224	72 kg	✓
Giantz	GZ- BATT-12V250	AGM	250Ah	125Ah	522×268×224	68 kg	✓

5.2 Gel Deep Cycle — Solar / Standby / Marine

Brand	Model	Type	Rated	Usable @50%	Dimensions (L×W×H mm)	Weight	DCS Replaces?
Ritar	DG12-200	Gel	200Ah	100Ah	522×240×224	62 kg	✓
Ritar	DG12-250	Gel	250Ah	125Ah	520×268×220	74 kg	✓
Victron	GEL BAT412201100	Gel	220Ah	110Ah	522×238×240	65 kg	✓
Haze	HZY12-230	Gel	230Ah	115Ah	522×240×224	66 kg	✓
BAE	OGiV 12V 200Ah	Gel	200Ah	100Ah	522×240×224	64 kg	✓
Sonnenschein	A512/200A / A512/230A	Gel	200– 230Ah	100– 115Ah	518×274×238	68–72 kg	✓
Vision	6GFM-200G	Gel	200Ah	100Ah	522×240×224	62 kg	✓
Sacred Sun	GFMJ-200	Gel	200Ah	100Ah	522×240×224	63 kg	✓
Narada	GFM-200G	Gel	200Ah	100Ah	522×240×224	62 kg	✓
CSB	EVX12260	Gel	260Ah	130Ah	522×268×224	76 kg	✓

5.3 Industrial / Standby / Telecom (200–360Ah Rated)

Brand	Model(s)	Type	Rated	Usable @50%	Typical Dimensions	Weight	DCS Replaces?
Ritar	RA12-200S, RA12-260D, FT12-200, RA12-300	AGM	200– 300Ah	100– 150Ah	522–580mm cases	60–90 kg	✓ All
Yuasa	NP200-12, NPL200-12, SWL4250, RE200-12	AGM	200– 260Ah	100– 130Ah	522–580mm cases	60–78 kg	✓ All
CSB	GPL122000, EVX12260, GPL123000	AGM	200– 300Ah	100– 150Ah	522–580mm cases	60–90 kg	✓ All
Haze	HZB12-200, HZS12-260	AGM	200– 260Ah	100– 130Ah	522–580mm cases	60–78 kg	✓ All
Narada	6-GFM-200, 6-GFM-250	AGM	200– 250Ah	100– 125Ah	522–560mm cases	60–74 kg	✓ All
B.B. Battery	BP200-12, BP230-12, BP300-12	AGM	200– 300Ah	100– 150Ah	522–580mm cases	60–90 kg	✓ All

6. Weight & Space Savings Summary

Weight Saved

Lead-Acid Battery Replaced	Typical Weight	DCS 180Ah Weight		Usable Capacity Gain
100Ah AGM	29–33 kg	18.0 kg	11–15 kg (38–45%)	+128Ah (+246%)
120Ah AGM	33–36 kg	18.0 kg	15–18 kg (45–50%)	+120Ah (+200%)
150Ah AGM	43–48 kg	18.0 kg	25–30 kg (58–63%)	+105Ah (+140%)
200Ah AGM	58–65 kg	18.0 kg	40–47 kg (69–72%)	+80Ah (+80%)
250Ah AGM	68–76 kg	18.0 kg	50–58 kg (74–76%)	+55Ah (+44%)
270Ah AGM	72–78 kg	18.0 kg	54–60 kg (75–77%)	+45Ah (+33%)
300Ah AGM	82–92 kg	18.0 kg	64–74 kg (78–80%)	+30Ah (+20%)
360Ah AGM	95–110 kg	18.0 kg	77–92 kg (81–84%)	0Ah (equal usable)

7. Cycle Performance & Total Cost of Ownership

Metric	DCS 180Ah (CALB LFP)	Typical AGM	Typical Gel	Typical Flooded
Rated Cycles @100% DoD	2,000	300–500	500–700	400–600
Recommended DoD	100%	50%	50%	50%
Usable Capacity	180Ah (100%)	50% of rated	50% of rated	50% of rated
Est. Service Life (@ 200 cycles/yr)	~10 years	1.5–2.5 years	2.5–3.5 years	2–3 years
Cost per kWh over lifetime	~\$0.50/kWh	\$1.80–\$3.50/kWh	\$1.50–\$2.80/kWh	\$1.20–\$2.50/kWh

Even at its \$1,899 RRP, the DCS 180Ah Auxiliary delivers a **60–80% lower lifetime cost per kWh** compared to lead-acid, AGM, and gel alternatives — before factoring in the value of weight savings, zero maintenance, and superior performance.

8. Charging Compatibility

Bulk / Absorb Voltage	14.0–14.2V
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Float Voltage	13.5–13.7V
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Maximum Charge Current	60A
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Compatible Chargers & DC-DC Units (no replacement required):

- Any charger with a programmable LiFePO4 profile
- Enerdrive DC-DC chargers (EN3DC40+, ePRO series)
- Victron Smart DC-DC, Orion-Tr series
- REDARC BCDC series (select LiFePO4 profile)
- Renogy DCC series
- Any solar MPPT regulator with adjustable voltage (set absorb to 14.2V, float to 13.6V)

Important: Do NOT charge above 14.6V. Do NOT use fixed-profile "wet" or "calcium" charger settings that may push above 14.6V absorb.

9. Installation Notes

- **Auxiliary Only** — This battery has 0 cranking amps. It is not designed for engine starting or installation in engine bays.
- **Orientation** — Must be installed upright in a ventilated area.
- **Parallel** — Up to 10 batteries in parallel for banks up to 1,800Ah.
- **Series** — Not supported. Do not connect in series.
- **Temperature** — Operates from -25°C to +65°C. Built-in heating system available for cold climate operation.
- **Bluetooth Monitoring** — DCS LFP App (iOS/Android) provides real-time SOC%, voltage, current, power, cell status, BMS temperature, and time remaining estimates via BLE 4.0.

This guide is intended for informational purposes. All specifications sourced from publicly available manufacturer data. Battery dimensions and weights may vary slightly between production runs. Always verify physical fitment before installation. Lead-acid usable capacity calculated at industry-standard 50% depth of discharge.

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