

Safety and Installation Instructions – ATB VRLA Batteries (AGM and GEL)

Instructions and safety information accompanying the battery – Regulation (EU) 2023/1542, Article 38(1), point (a) · Read before installing or charging

Applies to all ATB valve-regulated lead-acid batteries: AGM ranges GP, DC, FT, HR, LC, 2V and SSL; GEL ranges 2VG and DCG. Sealed, maintenance-free, non-spillable batteries for standby, cyclic and (SSL) automotive service. The complete ATB VRLA Installation & Operation Manual and the safety data sheet are available at atbpower.com/resources. Where a battery label or datasheet states different values, those model-specific values take precedence.

1 Safety

DANGER – READ BEFORE HANDLING

Explosive gas. Under overcharge or fault the battery can vent hydrogen. Keep sparks, flames and cigarettes away; do not make or break live connections at the terminals. **Acid.** The immobilised electrolyte is dilute sulphuric acid; a cracked case exposes it. Wear eye protection and acid-resistant gloves if the case is damaged. **Short circuit.** The battery delivers very high short-circuit current. Remove rings and watches, use insulated tools, cover the terminals during installation. **Electric shock.** Series strings can reach hazardous d.c. voltage; treat a bank as live at all times. **Never** open, drill, crush, incinerate or disassemble the battery; never heat above 60 °C; never charge a frozen battery; never install or charge in a sealed, unventilated enclosure.

First aid. Eyes: flush with clean water for at least 15 minutes and seek medical attention. Skin: remove contaminated clothing, wash with soap and water. Inhalation: move to fresh air. Ingestion of acid: do not induce vomiting, drink water, seek medical attention. **Fire:** ABC dry powder or CO₂; never a direct water jet.

2 Receiving and storage

- Check for transport damage, cracks or leaks; report damage to the carrier. Batteries are shipped charged: rotate stock, oldest date code first.
- Store indoors, upright, clean, cool and dry (ideally 20–25 °C), away from heat and sunlight. Self-discharge is about 1–3 % per month at 25 °C.
- Recharge before the open-circuit voltage falls below 12.4 V (12 V battery; 6.2 V for 6 V; 2.07 V per cell) and at least every 6 months. Never store a discharged battery.

3 Installation

- Install in a clean, dry, ventilated location; keep away from heat sources. Upright or on its side; never continuously inverted. Secure against vibration without compressing the case. Large units are heavy: use correct lifting technique and equipment.
- Use cables sized for the maximum load current; in series or parallel banks keep interconnect cables of equal length and take the system connections from opposite ends of a parallel bank. Connect only batteries of the same type, capacity, age and state of charge; never mix AGM with GEL or new with old.
- Faston terminals (T1 = F1 4.8 mm, T2 = F2 6.35 mm): use the matching receptacle, push fully home, do not solder to the terminal. Threaded inserts: M5 3–4 N·m, M6 5–6 N·m, M8 9–11 N·m, M10 14–20 N·m; do not over-tighten; apply a thin film of anti-corrosion grease to finished connections. Automotive posts (SSL): clean, tighten the clamps firmly, negative last on and first off.
- Make the final positive connection last and break the negative connection first. Never connect a charger or load with reversed polarity.

4 Charging (per 12 V battery, at 25 °C)

MODE	AGM	GEL	NOTE
Float / standby	13.5–13.8 V	13.6–13.8 V	Continuous; the battery stays ready and fully charged
Cyclic / boost	14.4–14.7 V	14.1–14.4 V	Constant-voltage, current-limited; recharge promptly after every discharge
Maximum charge current	$\leq 0.30 \times C_{20}$ A	$\leq 0.20 \times C_{20}$ A	C_{20} = rated capacity at the 20-hour rate
Temperature compensation	–4 mV per cell per °C	–4 mV per cell per °C	–24 mV per °C for a 12 V battery above 25 °C; +24 mV per °C below
Equalisation	Not permitted	Not permitted	Unless specifically directed by ATB Power

For 6 V batteries use half these voltages; for 2 V cells use the per-cell values (AGM float 2.25–2.30 V, cyclic 2.40–2.45 V; GEL cyclic 2.35–2.40 V). Always select the charger profile that matches the battery (AGM or GEL). Give a full charge before first use. Overcharging dries out the electrolyte and permanently damages a sealed battery: do not exceed the voltages above and do not use flooded-battery or uncontrolled chargers. SSL start-stop batteries in vehicles are charged by the vehicle system; for bench charging use a charger with an AGM mode.

5 Operation and maintenance

- Rated capacity applies at 25 °C. Cycle life depends on depth of discharge: shallower average discharges extend it. Avoid discharging below 20 % state of charge and recharge promptly after every discharge. Disconnect parasitic loads during long idle periods.
- Inspect periodically: keep the top clean and dry (water only, no solvents), check for swelling, cracks or corrosion, re-torque connections, verify float voltage. A battery delivering less than 80 % of rated capacity is at end of life.
- **Stop and disconnect** if the battery is hot, swelling, leaking or venting; ventilate and remove it from service.

6 Transport, end of life and recycling

Non-spillable battery (UN 2800, Special Provision 238): not subject to dangerous goods regulations when terminals are protected against short circuit. Contains lead: never discard with household or unsorted waste, in fire or in water. Return the battery free of charge to your distributor, to the producer's take-back scheme in your country or to an authorised collection point – see the End-of-Life Information ATB-INF-2026-006 or write to info@atbpower.com.

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