WARRANTY

Terms and Conditions

Ridderkerk, NL

To whom it may concern:

CSB Energy Technology (EMEA) B.V. ("Supplier") conditionally grants the customer(s), for the delivered CSB brand VRLA batteries ("Product"), a limited **ONE YEAR (TWELVE MONTHS)** warranty from the invoice date of the product.

The warranty is subject to the following conditions:

1. The Product(s) must have been installed, charged, discharged, stored, used, and maintained in accordance with supplier's published latest specification sheets. For the latest specification sheet, please always refer to official product website: www.csb-battery.com. The warranty would be voided in the conditions, such as, over-charge, under-charge, over-discharge, long storage time without appropriated maintenance, etc. All these are regarded as the behavior against battery specification sheet.

2. The Product(s) must be used in applications in accordance with supplier's published latest battery specification and installation & operation instruction. Each battery must be the proper size, designing and capacity for its intended application at 25°C.

3. The design life [in years] stated on the latest published specification sheet is the reference data only based on the laboratory test in accordance with international standard. The service life span in the field may differ from the specification in relation to the application type, discharge rate, depth of discharge, discharge frequency, charging parameters [voltage, current and time], operating temperature, storage, etc. All these factors are beyond the span of control of Supplier. The warranty of the Product(s) is solely based on the premature failing due to a manufacturing or materials defect only.

4. The warranty period of Product(s) is subject to the operating temperature at 20-25°C. Operation of the supplied Product(s) at 25-30°C (excluding 25°C) will reduce the warranty period in half. The operating temperature shall not at any time peak above 30°C, otherwise will void the Warranty. Storage of the Product(s) for any length of time in an environment having a temperature above 30°C will void the Warranty.

5. The Product(s) would be maintained properly during operation in conjunction with a temperature compensation current limited, constant voltage charger according to the published instructions.

6. The Product(s) will not be considered as defect or non-conforming if it can deliver at least 60% (sixty percent) of its nominal capacity during the warranty period. This will be determined by a recharge of at least 72hours on Product(s), then discharge according to the published latest specification and measure the amount of discharged capacity [in Ah] against the rated capacity [in Ah].

7. The Product[s] is not designed for PSoC [Partial State of Charge] application. The warranty would be voided if PSoC is involved in the application.

8. The Product(s) has not been subjected to incorrect usage, abuse or physical damage.

9. The customer has promptly notified Supplier any defects or non-conformities and cooperated with Supplier by making the Product(s) available for assessment and/or repair by Supplier.

10. Upon request of Supplier, the customer shall have promptly returned to Supplier FOB shipping point-freight collect Product(s) considered as defective or non-conforming.

11. Maintenance and operation logs to be maintained as per operating instructions, such records are made available for inspection by Supplier.

12. Any claim must be accompanied by a reference number, such as PO, Invoice and/or warranty tracking number.

13. The customer must request and receive from Supplier a Return Material Authorization (RMA) for Product(s) considered as defective or non-conforming prior to returning such Product(s) back to Supplier. The customer[s] is responsible for any cost incurred in returning material and for secure packing.

14. The warranty shall be enforceable by the customer and/or any end user of Product(s).

15. The warranty shall be rendered void if the Product(s) is serviced by any party other than a representative from one of customer's authorized service centers or a party that customer's service department has pre-approved in writing or if Product(s) has not been serviced per customer's instructions.

16. Supplier makes no warranty and shall have no obligation for any damage to the Product(s) caused by or resulting from abuse, misuse, neglect or any unauthorized repairs, maintenance, alterations of the Product(s), fire, freezing or any act of God.

17. The warranty will be voided if battery is used in non-conforming application; battery shall be used based on official CSB battery specification sheets unless other conditions with written statement provided by Supplier.

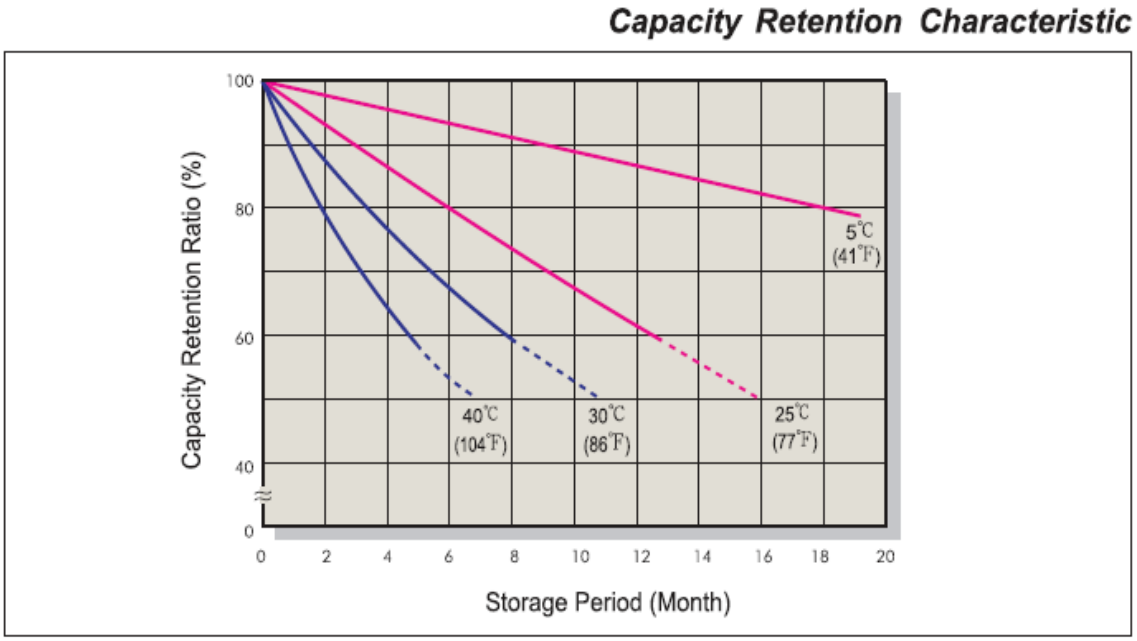
18. The warranty will be void if a standby application designed battery is used in a non-stand-by application with unstable main grid condition, for example, cyclic-stand-by combination, electric vehicles or solar or wind power applications.

19. Periodic service shall be performed on site per Supplier's battery usage guideline and an inspection report shall be complete with recorded floating voltage, battery internal resistance [or conductance], battery temperature, ambient temperature, connection resistance, torque. Inspection log must be presented at the time of any claim. Failure to keep said documents will void all warranties expressed or implied.

VP of Sales, EMEA
CSB Energy Technology (EMEA) B.V.

Appendix: Capacity retention characteristics and the supplementary charge and storage guidelines

1. Lead-acid batteries previously were affected by long term storage after charging. CSB brand VRLA batteries, because of its Pb-Ca alloy offers longer extended storage than conventional batteries. Please see following chart:



2. During storage, carry out supplementary charging according to the cycle shown in the following table. For supplementary charging after prolonged storage, either the constant voltage charge with 2.45V/cell or the constant current charge with 0.05CA is recommended. But sometimes, one supplementary charge may not be recovered to 100% capacity. In such a case, it should be repeated until the capacity is recovered before storage.

Storage temperature	Recommended supplementary charge interval	Supplementary charging methods
Lower than 25°C (77°F)	Each 6 months	16 to 24 hours with a constant voltage of 2.275 V/cell; 5 to 8 hours with a constant voltage of 2.45 V/cell; 5 to 8 hours with a constant current of 0.05CA.
25 - 30°C (77 - 86°F)	Each 3 months	
Over 30°C (86°F)	Storage to be avoided	