



ENERPOWER

BATTERY CABINETS CATALOGUE



Energy from batteries



BATTERY CABINETS

GENERALITY

The cabinets covered by the technical specification have been designed to contain the hermetic lead-acid electric accumulator batteries. The construction characteristics of the recombination type lead-acid electric accumulators (valve-regulated hermetic accumulators); the absence of acid fumes and the virtual absence of gaseous development allows it to be installed in suitable containment cabinets.

ENERPOWER has developed a project that adapts to the safety criteria referred to by the current legislation CEI 21-6 / December 1990 for the installation of lead accumulators.

Being a real battery room, the cabinet has:

- 1) Adequate natural ventilation (in the charging conditions indicated by ENERPOWER).
- 2) Possible forced ventilation with fans in case of operation in particular environmental conditions.
- 3) Division into two compartments, one containing the batteries, the other the sectioning, protection and control equipment.
- 4) Access door equipped with a lock that can be operated using a special tool to be left with the user's qualified personnel.
- 5) Second access protection by means of steel plates to be removed to access live parts.
- 6) Possibility of choking the electrical circuit in blocks at 50 or 75V to limit any accidental contact to that maximum voltage (Standards CEI 21-6 / December 1990).
- 7) Electrical protection of the battery circuit by means of an automatic switch with command sent to the door.
- 8) The monoblocks making up the battery are made of flame retardant material according to UL 94 class HB or V0 standards, this type of construction makes them particularly suitable for installation in battery cabinets, where the fire safety aspect is essential.

ELECTRICAL CHARACTERISTICS

Designed to comply with safety standards (EN50272 and EN62040-1)

Italian reference standards (CEI 21.6 ED. DECEMBER 1990)

IEC international standards

Degrees of protection standard IP20, and required IP32

Operating temperature 0-40°C (recommended 25°C for long battery life)

Non-condensing relative humidity up to 95%

CE product declaration

TYPES OF STANDARD CABINETS

600 x 600 x 1.100h mm

610 x 680 x 1.400h mm

610 x 880 x 1.500h mm

810 x 880 x 1.400h mm

810 x 980 x 1.900h mm

1.210 x 980 x 1.900h mm

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CONSTRUCTION FEATURES

Each section is built with self-supporting (demountable) modular elements.

On the front there is a hinged door, closure is provided by means of a lock with a triangular key.

Inside the door there is a document pocket containing the instruction manual for the batteries.

The sections can be fixed together to form a single cabinet.

COMPARTMENT 1 SWITCH CUBE

Where required, the cabinet is completed by a special compartment or switch/disconnector cubicle containing the protection equipment.

The protection is done with the use of an automatic switch with magnetic protection with auxiliary changeover contact and only external operation.

battery circuit trimming devices can be provided .

These interruptions are obtained by means of manual three-pole or four-pole switching switches to be operated in open circuit after the protection switch has opened.

VENTILATION

Each compartment has a plinth in the lower part with slots that allow natural ventilation with the openings provided in the roof.

A hole is foreseen in the roof for the possible fixing of an aspirator which can be equipped with a duct for the expulsion of air towards the outside.

PAINTING

The cabinets are painted with epoxy paint with a total thickness of no less than 50 microns with colors to be defined in the RAL series.

The ENERPOWER painting standard is RAL 7016 (OTHERS ON REQUEST).

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ASSEMBLY AND SHIPPING

There are two types of shipment depending on the installation, the total weight or specific customer needs:

- A) Cabinets and drum elements shipped loose packed and to be assembled on site.
- B) Cabinets with the monoblocks assembled and connected to each other, but with the connections interrupted on each floor.
Each monoblock is fixed to the shelves by means of plastic straps.

INSTALLATION OF BATTERY CABINETS

The cabinets must be installed in rooms as close as possible to the UPS, dry and with good ventilation, they do not require floors with fireproof coatings.

The kg/m² capacity of the floor where the equipment is installed must be considered, in view of the high weight of the cabinets.

The operating temperature must be between +5°C and 40°C, even though the coil characteristics refer to 25°C. In particular, temperatures above 25°C have a negative effect on the life of the batteries, while temperatures below 25°C reduce the efficiency of the batteries.

The cabinets containing the batteries are moved by motorized lift trucks or transpallets, taking care to superimpose wooden or iron strips perpendicularly to the blades, so that the lifting effort is exerted on the entire support of the cabinet.

The entry of the connection cables is normally foreseen from the bottom; however, it can also be set up from above.

The cables must be sized according to two basic criteria:

- from the point of view of heating (see cable manufacturer's data)
- from the point of view of the voltage drop, as a function of the discharge current, the minimum voltage allowed and the UPS-battery distance.

COMMISSIONING BATTERY CABINETS

Once the battery cabinets have been installed, commissioning is very simple.

In any case, to avoid errors or disservices, read the installation manual or, if in doubt, contact the Enerpower Technical Service.

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ENERPOWER srl

Via Boccioni, 7 – 20090 MONZA (MB) – ITALY
Tel. ++39 039.833172 / 832152 Fax. ++39 039.2230441
e-mail: info@enerpowersrl.com www.enerpowersrl.com