

TAB TOPzS BATTERIES



LOW MAINTENANCE TAB TOPzS VENTED STATIONARY BATTERIES



The batteries are distinguished for:

- » HIGH CAPACITY
- » LONG LIFE TIME
- » REDUCED MAINTENANCE
- » LOW SELF-DISCHARGING
- » QUICK AND SIMPLE ACID LEVEL CONTROL
- » ECONOMICAL WATER CONSUMPTION
- » APPROPRIATE DIMENSIONS AND WEIGHT
- » THE LOWEST AND CONSTANT MAINTENANCE CURRENT.

The stationary batteries of the type TOPzS are manufactured according to the DIN 40736, EN 60896 and IEC 896-1 regulations. Individual cells (2V) are made from translucent PP containers. The stationary batteries of the type OPzS are manufactured according to the DIN 40736, EN 60896 and IEC 896-1 regulations.

APPLICATION

Stationary batteries of the TOPzS type are specially designed for solar systems. Due to their extremely low self-discharging and tubular positive plates they are suitable for off-grid solar systems.

CONSTRUCTION

The positive armored plate is of a tubular type, which means that the active substance (PbO_2) is contained in special gauntlet made of polyester fibres and hardened by an impregnation compound. Such construction prevents escaping of an active substance during the operation and ensures a long life time. The grids of a positive and a negative plate are made of special low percentage (less than 2 %) antimony alloy with addition agents for improvement of crystalline structure of casting. Negative plates are pasted-type plates with special alloys maintaining porosity of an active substance during the operation. As an electrolyte, a diluted sulphuric acid (H_2SO_4) with a density of $1.24 \pm 0.01 \text{ kg/l}$ at 20 degrees C, and at a maximum permitted level is used. Separators separating the positive plates from the negative ones are made of microporous plastic material with a low electric resistance. In a special process, the lids are tightly sealed with thermo welding to the container. The terminal plugs are sealed with rubber seals. This prevents any escape of electrolyte from the cells.

Due to the transparent containers the electrolyte level is clearly visible, the maximum and minimum levels are marked on a self-adhesive acid-proof label on a container side.

Two versions of batteries are being manufactured:

- » **DRY-CHARGE VERSION:**
a battery has to be filled up with an electrolyte and supplementary charged before use. The plates are already formed and in a special process protected against oxidation. They can be stored without problems.
- » **ELECTROLYTE-CHARGE:**
battery can be installed immediately, because it is already filled up with electrolyte and electrically charged as well. The capacity test has already been performed by the producer.

DESIGN

POSITIVE ELECTRODE

- » Tubular positive plate with low antimony alloy (<2 %)

NEGATIVE ELECTRODE

- » Flat plate with long life expander

SEPARATION

- » Microporous separator

ELECTROLYTE

- » Sulphuric acid of 1,24 kg/l

CONTAINER

- » Transparent PP

LID

- » PP in green colour

POLE SEALING

- » 100 % gas-and electrolyte-tight, rubber seal

POLE

- » M10, brass insert

CONNECTOR

- » flexible insulated copper cable, with cross-section of 35, 50, or 70 mm²

POLE SCREW

- » M10, steel, insulated

CHARGING

IU - CHARACTERISTIC

- » I_{max} without limitation

FLOAT VOLTAGE

- » U = 2,23 V/cell ± 1 %

BOOST CHARGE

- » U = 2,35 to 2,40 V/cell

DISCHARGE CHARACTERISTICS

REFERENCE TEMPERATURE

- » 20 °C at C10 (1,80 V/cell) and 25 °C at C100 (1,85 V/cell)

INITIAL CAPACITY

- » 100 %

DEPTH OF DISCHARGE

- » Normally up to 80 %
- » More than 80 % DOD or discharges beyond final discharge voltages (dependent on discharge current) have to be avoided

MAINTENANCE

EVERY 6 MONTH

- » Check battery voltage
pilot block voltage, temperature

EVERY 12 MONTH

- » Take down battery voltage
block voltage, temperature

OPERATIONAL DATA

OPERATIONAL LIFE

- » Up to 15 years

IEC 896-1 CYCLES

- » 1200

SELF-DISCHARGE

- » Approx. 3 % per month at 20 °C

OPERATIONAL TEMPERATURE

- » -20 °C to 55 °C,
recommended 10 °C to 30 °C

TESTS ACCORDING

- » IEC 896-1, EN 60896-1, EN 61427

SAFETY STANDARD, VENTILATION

- » EN 50272-2

CELL TYPE	Dimensions (mm)			Weight (kg)		C10	C100
	L	W	H	Dry	Wet	Ah	Ah
3 TOPzS 265	198	83	472	12,4	18,4	265	345
4 TOPzS 353	198	101	472	16,0	23,3	353	458
5 TOPzS 442	198	119	472	20,2	29,0	442	575
4 TOPzS 500	198	101	720	24,3	35,2	500	650
5 TOPzS 625	198	119	720	30,3	43,2	625	812
6 TOPzS 750	198	137	720	38,0	53,5	750	975
7 TOPzS 875	198	173	720	44,0	64,2	875	1137
8 TOPzS 1000	198	191	720	50,2	72,5	1000	1300

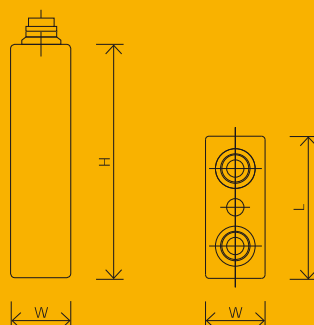
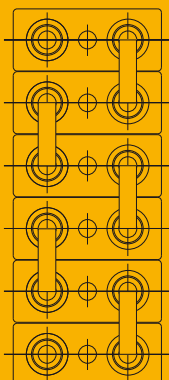
Electrolyte density: 1,24 ± 0,01kg/l at 20 °C.

OPERATION-MAINTENANCE

For more detail information please check our operation manual.

TRANSPORT

Batteries are not subject to ADR (road transport).



connections

dimensions