OMICRON	**PRODUCT DATA SHEET** **MG/1000B Demineralizer - code 3000.3**	Technical Department

Production of demineralized water for industrial battery maintenance

Our demineralizers are designed to provide high-purity demineralized water, essential for the correct operation and long service life of batteries. Thanks to ion-exchange technology, they remove salts and impurities from mains water, ensuring conductivity values below 30 µS/cm.
Available in several models, the devices stand out for:

- **Ease of use**
- **Low operating costs**
- **Compact and robust structure**
- **Fixed and mobile versions for every operational requirement**

The MG/1000B demineralizer is a device for producing pure water for battery topping-up.

It is a rationally designed, easy-to-install and compact system that will serve you over time, providing the amount of water required for daily battery topping-up.
It contains an ion-exchange resin that demineralizes tap water. Simply mount it on the wall and connect it to the water supply using a flexible hose. As mains water passes through the resins, it is demineralized and ready for use.
When the resin contained in the cartridge turns orange, it must be replaced.

The amount of resin contained in the MG/1000 demineralizer column can produce approximately 800/1000 liters of water at 15°f.

The demineralizer is supplied complete with resin and ready for installation.

EQUIPMENT DESCRIPTION

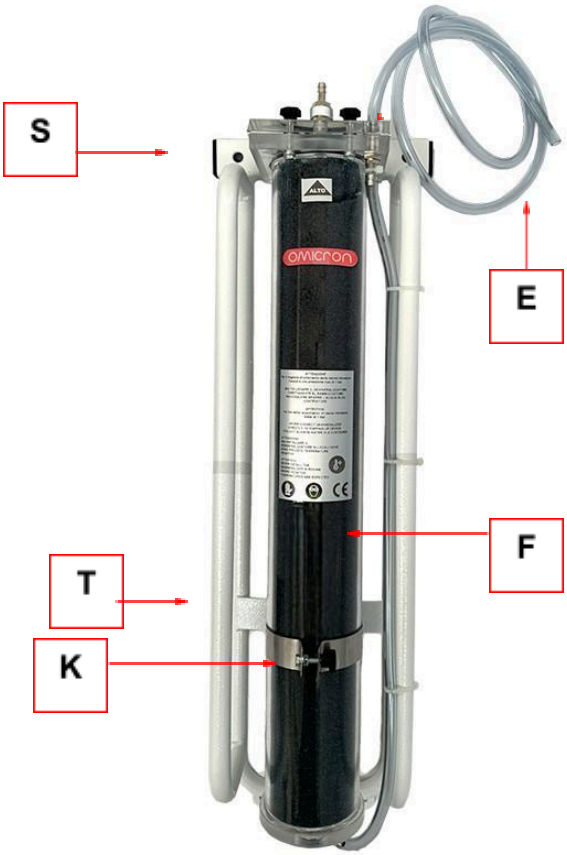
The equipment essentially consists of:

- A transparent Plexiglas column mounted on a painted steel support for wall installation
- An inlet tap located on the upper part of the column to receive mains water.
- A Vipla tube for the demineralized water outlet.
- Mixed-bed anionic and cationic ion-exchange resin.

Feed pressure	Max. 1 bar	
Feed temperature	Min. 5°C - Max. 60°C	
Treated water production	*Hardness*	*Approx. liters*
	10° f	1000
	20° f	800

	30° f	550
	40° f	300

TECHNICAL SPECIFICATIONS



Ref.	Description	Code
T	Support frame	MG/1000-T
K	Plexiglas columns	MG/1000-K
J	Water inlet	MG/1000 -J
E	Treated water outlet	MG/1000 -E
S	Sliding supports	MG/1000 -S
F	Clamp	MG/1000 –F
G	Locking handwheels	MG/1000 –G
V	Air vent	MG/1000 – V
R	Replacement resin	3000.8

BASIC REQUIREMENTS SHEET

REQUIREMENTS AND SPECIFICATIONS	NOTES
Weight	10 kg
Dimensions	800 mm x 240 mm x 170 mm
Column	1 Plexiglas
Portability (manual, cart)	Wall-mounted support
Feed water	Mains water supply
Inlet	8x12
Outlet	8x12
Operating pressure	Max. 1 bar
Operating environment	Battery charging room
Resin specification	Mixed-bed ion-exchange resin
Outlet water conductivity	0.1 µS/cm

Replacement resin code	Code 3000.8

USE

☞ ***The system must be used only to filter mains water. It must not be used to purify polluted water or process wastewater.***

Warning!

Installation and operation are very simple: fix the demineralizer to the wall and connect it to the water supply with a flexible hose. As mains water passes through the resins, it is demineralized and ready for use. Collect the water in the topping-up system containers. Do not connect the demineralizer directly to the battery to be topped up. Several topping-up systems are available for different application requirements. At 1 BAR, it produces about 3 liters of demineralized water per minute.

During use, the resin in the column slowly loses its exchange capacity and becomes exhausted: the color changes progressively from top to bottom until the demineralizing power is depleted. When the resin has turned orange, it must be replaced. Replacement is very easy: the simple construction of the unit allows the column to be removed and the new resin to be installed quickly.

The demineralizers are static devices, not subject to deterioration and designed to last over time without maintenance. They must not be exposed to temperatures below 0°C.

The resin is exhausted when it has changed color along the entire length of the column and has turned orange.

ION-EXCHANGE RESIN CHARACTERISTICS

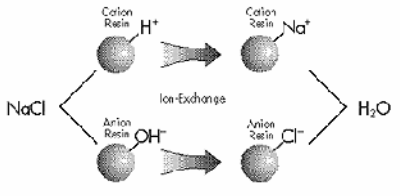
The product contained inside the demineralizers and their replacement cartridges is a mixed-bed ion-exchange resin: a strong-acid cationic resin in hydrogen ion form and a strong-base anionic resin in hydroxide ion form.

The resin is in the form of very small blue-green beads.

In the ion-exchange process, the water passing through a mixed bed of ion-exchange resin exchanges the ions in the water with other ions fixed on the resins. Deionization is the most common ion-exchange method. A mixed-bed cartridge makes it possible to obtain the highest obtainable ionic purity, with a conductivity of 0.1 µS/cm.

Conductivity	0.1 µS/cm (µS/cm 1 > 1 < 1)
Hardness	Absent
Foreign minerals	Absent

Mixed-bed ion-exchange technology



Deionization resins exchange hydrogen ions with cations and hydroxyl ions with anions. Cation-exchange resins, made of styrene and divinylbenzene containing sulfonic groups, will exchange one hydrogen ion with any cation they come into contact with (e.g. Na+, Ca++, Al+++, charged soluble organics). Similarly, anion-exchange resins, made of styrene and divinylbenzene containing quaternary amine groups, will exchange one hydroxyl ion with any anion (e.g. Cl-). The hydrogen ions from the cation resins and the hydroxyl ions from the anion resins combine to form water. These resins are placed in mixed-bed exchangers (anion and cation resins mixed together). Once the resins have exchanged all their hydrogen and/or hydroxyl ions with the ionic contaminants present in the water, they must be replaced.