	Product Data Sheet	TECHNICAL DEPARTMENT
OMICRON	TRILL150 DEMINERALIZER code 3000.61	

Our ion-exchange demineralizers are the ideal solution for ensuring pure, mineral-free water, essential for efficient industrial battery maintenance. Designed to extend battery service life and optimize performance, our devices remove impurities that may compromise system efficiency and safety. Available in fixed and portable versions, our demineralizers offer a practical and cost-effective alternative to purchasing demineralized water, reducing operating costs and environmental impact.

TRILL150 Demineralizer

TRILL/150 is a device designed to produce pure water for topping up batteries. 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 the mains water passes through the resin, it is demineralized and becomes ready for use.

When the resin contained in the cartridge has changed color, it must be replaced. Resin replacement is very simple: just remove the cartridge containing the exhausted resin and replace it with a new one.

The amount of resin contained in the demineralizer can produce approximately 100/150 liters of demineralized water.

The demineralizer is delivered ready for use.

Warning!	***The system must be used only and exclusively to filter mains water. It must not be used to purify polluted water or process wastewater.***

EQUIPMENT DESCRIPTION

The equipment essentially consists of:

- One transparent column mounted on a wall-mounting support
- A valve located on the upper part of the column to receive water from the mains supply
- A Vipla tube for the demineralized water outlet.
- Mixed-bed ion-exchange resin cartridge

Feed pressure	Max 1 bar	
Feed temperature	Min 5°C - Max 60°C	
Approx. liters of demineralized water per cartridge	*Hardness*	*TRILL/150*
	10°f	150
	20°f	100
	30°f	80
	40°f	50

Ref.	*Description*	*Code*
S	Support bracket	TRILL150 - T
K	Column for resin housing	TRILL 150 - K
R	Demineralizing resin cartridge	R- TRILL 150
J	Water inlet to the demineralizer	TRILL 150 - J
E	Treated water outlet from the demineralizer	TRILL 150 - E

BASIC REQUIREMENTS SHEET

REQUIREMENTS AND SPECIFICATIONS	*NOTES*
Weight	kg 2
Dimensions	mm 320 x mm 250 x 150
Portability (manual, cart)	Wall-mounted support
Feed water	Mains water
Inlet	10x14
Outlet	10x14

Operating pressure	Max 1 bar
Operating environment	Battery charging room
Resin specification	Mixed-bed ion-exchange resin
Outlet water conductivity	µS/cm 0.1
Replacement resin code	Code 3000.62

USE

Installation and operation of the demineralizer are extremely simple: mount the demineralizer on the wall and connect it to the water supply using a flexible hose. As the mains water passes through the resin, it is demineralized and ready for use.

As the demineralizer is used, the resin contained in the column gradually loses its exchange capacity and becomes exhausted. A slow and progressive color change of the resin will be visible from top to bottom, until the color has changed completely and the demineralizing capacity has been depleted. The resin will turn orange and must then be replaced. Resin replacement is extremely easy: the simple design of the equipment allows the column to be removed easily and the new resin to be restored quickly.

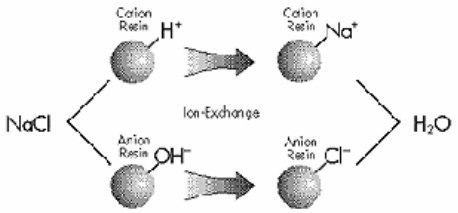
The demineralizers are static devices, not subject to deterioration and designed to last over time without any maintenance; simply avoid exposing them to temperatures below 0°C.

ION-EXCHANGE RESIN FEATURES

The product contained inside the demineralizers and the related replacement cartridges is a mixed-bed ion-exchange resin of cationic and anionic type. The resin consists of very small blue-green beads.
In the ion-exchange process, water passing through a mixed bed of ion-exchange resin exchanges the ions in the water with others fixed on the resins. Deionization is the most common ion-exchange method. A mixed-bed cartridge makes it possible to obtain the highest achievable ionic purity, with conductivity of 0.1 µS/cm.

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

ION-EXCHANGE RESIN TECHNOLOGY



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Deionization resins exchange both hydrogen ions with cations and hydroxyl ions with anions. Cation-exchange resins, made of styrene and divinylbenzene containing sulfonic groups, 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, exchange one hydroxyl ion with any anion (e.g. Cl-).

The hydrogen ions from the cationic resins and the hydroxyl ions from the anionic resins combine to form water. These resins are used in mixed-bed exchangers, where anionic and cationic resins are mixed together.

Once the resins have exchanged all their hydrogen ions and/or hydroxyl ions with the ionic contaminants present in the water, they must be replaced. A mixed-bed cartridge makes it possible to obtain the highest achievable ionic purity, with conductivity of 0.1 µS/cm.