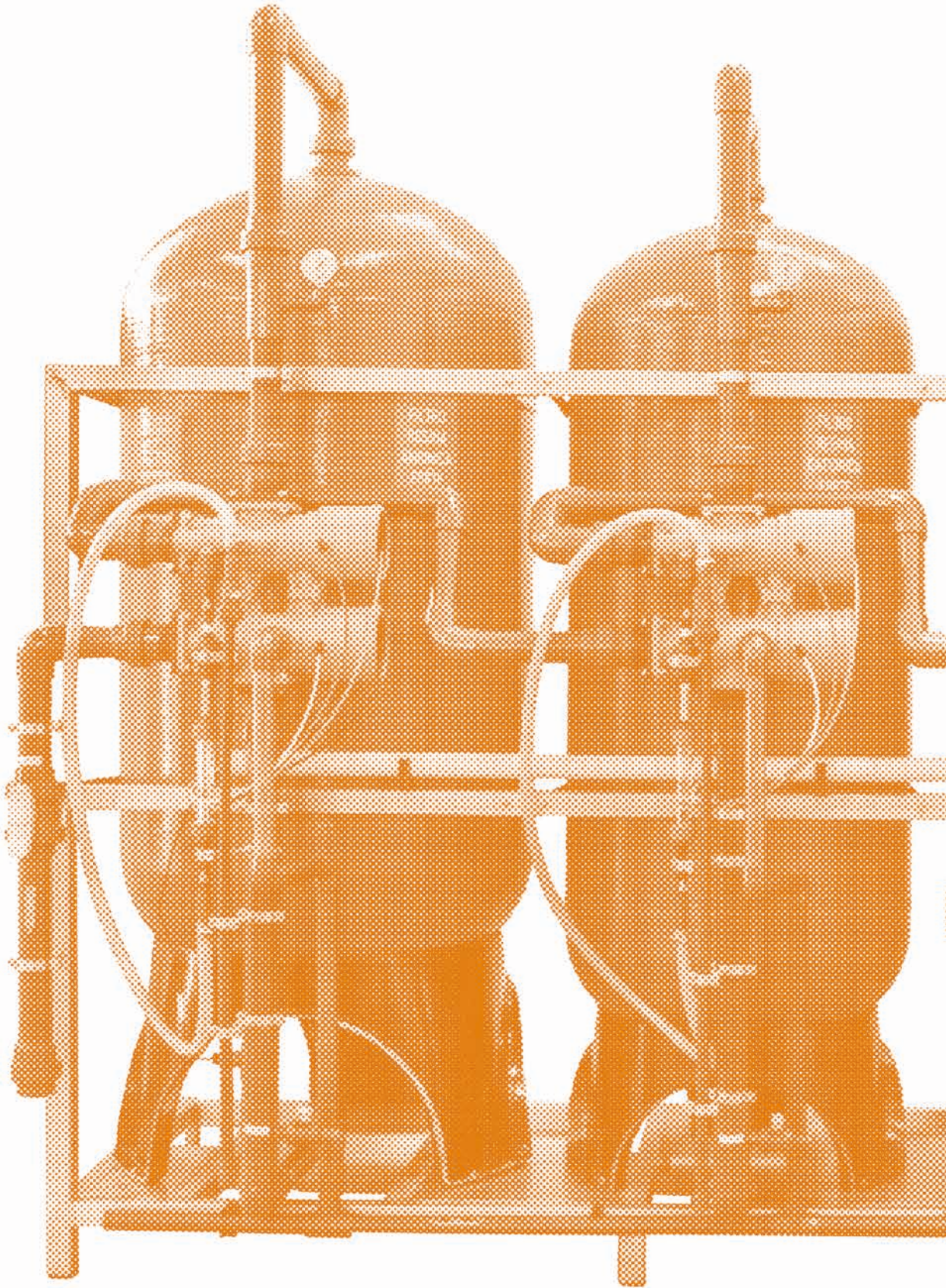


DEMINERALIZERS

PRODUCTION AND RECYCLING OF DEIONIZED WATER



ION EXCHANGE RESINS

Demineralizer systems with ion exchange resins are mainly used to produce deionized water or in the closed-loop filtration of industrial cleaning water. Indeed, in addition to producing pure deionized water, demineralization plants drastically reduce water consumption in cleaning processes while ensuring optimal quality of reused water. The ion exchange action of the resins removes ions present in the water to achieve an output conductivity of less than **20 µS/cm**.

Ion exchange resins are composed of a polymer matrix in which free ions available for exchange are trapped or incorporated. The resins can retain an amount of ions equal to their exchange capacity; once this limit has been reached, they have to be **regenerated**.

SAITA has been producing demineralization systems used in multiple industrial applications for more than 40 years.

Applications

Recycling demineralizers

Closed-loop filtration with ion exchange resins in the cleaning stages drastically reduces water consumption and improves cleaning quality.

Demineralized water production

Demineralization systems with ion-exchange resins to produce pure deionized water from city or well water.

Selective ion removal

Special selective resins for specific types of ions. Typical uses are on the output of water treatment plants to remove dissolved metals traces before sewer drain.

Special applications

Food grade ion exchange resins for the decolorization and demineralization of fruit juices and liquid solutions for the Food and Beverage industry.



Specifications

SAITA demineralization systems are modular and installed on a tubular stainless steel skid. Featuring a feed pump, an activated carbon filter, a cationic resin filter and an anionic resin filter.

Filters are fibreglass vessels with inner PE liner complete with upper diffuser and lower drainage.

Hydropneumatic valves (multi-way or single) are installed on each filter for **washing**, backwashing and **regeneration**.

The operating logic and management of the washing

and regeneration stages is automated and controlled by an **electronic programmer**.

The dosing and dilution of **acid and alkaline** solutions, for resin's regeneration, are flushed through the filters by a **venturi ejector**. Suction flows are regulated by manual or automatic valves and variable area flow meters.

The **electrical conductivity** of the deionized water produced is monitored by digital instrument with a detection cell.



Sectors

- Electroplating
- Powder coating
- Aluminium anodizing
- Cataphoresis and electrophoresis
- Ultrasonic cleaning and PVD
- Pharmaceutical
- Chemical industry
- Steam generators
- Electronics and semiconductors
- Food & Beverage

Advantages

- Recirculation of rinse water
- Water savings
- High pure deionized water
- Resins regeneration
- Resin durability > 5 years
- Selective ion removal

CD Series

Standard three-column filter demineralizers consisting of: recirculation pump, activated carbon filter, strong cationic resin filter, and strong anionic resin filter.

LM Series

Demineralizers for producing ultra-pure demineralized water <math><0.5 \mu\text{S}/\text{cm}</math> with regenerable and non-regenerable mixed-bed resins.

CK Series

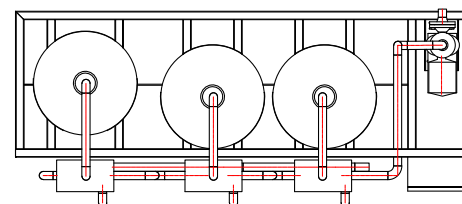
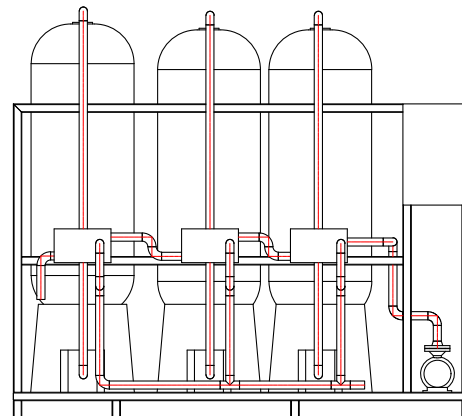
Decationizers to recirculate mildly **alkaline** rinse water using weak cationic resin and complete with quartz sand or activated carbon pre-filtration.

CDD Series

Filtration of mildly **acidic** rinse water, demineralizers with four filtration columns and double columns of anionic resins: strong and weak.

Duplex Series

Double line demineralizers used to ensure continuous 24H production and recirculation of demineralized water.



MODELS	FLOW RATE (Lt/h)
CD50/A	1000
CD75/A	1500
CD100/125/A	2000
CD175/200/A	4000
CD325/450/A	6000
CD500/650/A	10000
CD650/900/A	12000
CD900/1200/A	18000

Optionals

- Automation with industrial PLC
- Remote control on PC, tablet or mobile
- Pumps with inverter
- Microfiltration
- Analogic flow meters
- UV sterilization
- Storage tanks
- Industry 4.0 Ready

