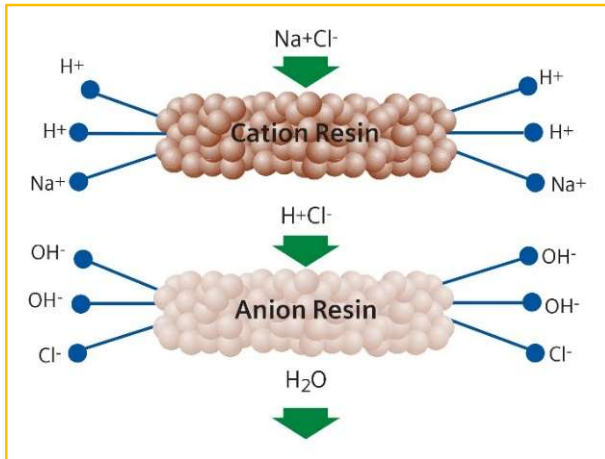


## Deionisation Systems – Resin Exchange



### Features

- High flow rates - Minimal storage requirements; most systems are used on-line.
- Flexibility - Systems can be reconfigured to suit your changing needs.
- Performance - We guarantee the performance of equipment and treatment processes.
- High Purity of the final water product to meet all applications
- Economical - No wastewater or electrical costs associated with the system.
- Versatile - The ExDI is ideal for variable demand applications

Exchange deionisation systems provide a simple, flexible and low capital cost means of producing low conductivity water either directly from a mains feedwater supply or as polishers for reverse osmosis systems. A typical exchange mixed bed deionisation system includes pre-filtration, de-chlorination, two resin beds, a water quality monitor, and a final cartridge filter.

System capacity will vary according to feedwater conductivity and the amount of ion-exchange resin in the system. Ion-exchange resin beds are available with 12 to 60 litres of deionisation resin, capable of processing between 3,200 to 18,000 litres of 50ppm TDS (75µS/cm conductivity) feedwater. System flow rate vary according to system configuration between 2 and 35 litres/minute. Minimum water quality exiting the systems is 1.0 MΩ/cm resistivity (1.0 µS/cm conductivity) with all suspended solids above a nominal 1 micron removed. Optional UV sanitation lamps and pre-treatment stages are also available to tailor each system to your specific requirements.

### System Description

If the system is fed from mains water, the deionisation process begins with sediment removal (pleated cartridge filter cartridge and activated carbon-based de-chlorination. This water passes through a two mixed-bed ion exchange resin beds (worker and polisher) to achieve the required minimum resistivity of 1.0 MΩ/cm.

For applications where the feedwater is supplied from an existing reverse osmosis system or distillation unit, the ExDI systems can be configured as polishers only with no pre-treatment stage for de-chlorination or sediment removal. In such cases, the standard monitor lamp is replaced with a digital resistivity monitor with readout of measured deionised water resistivity (conductivity and TDS monitors are also available by request). Water quality exiting these polisher configurations will meet ASTM Type 2 or 3 standards if required.

The ExDI systems are provided as an outright purchase with an exchange service for DI media tanks and on-site filter changes as required. Installation and maintenance arrangements are available to best suit each site. At each service, the worker DI tank is exchanged with the polisher tank. A freshly filled resin tank is installed as the polisher and both pre-and post-filters changed. The equipment ownership remains with you and we simply provide you with the water to suit your quality, flow rate and volume requirements.

## Deionisation Systems – Resin Exchange

### Applications

Where water of  $>1.0\text{M}\Omega/\text{cm}$  resistivity ( $<1.0\mu\text{S}/\text{cm}$  conductivity) is required directly from potable source water, or as a polisher for reverse osmosis water where ASTM Type 2 or 3 standards are specified. These systems are ideally suited for applications where use is intermittent or where fixed-interval rental arrangements are not appropriate. Service exchange is available on an as-required basis.



#### Installation (mains feedwater supply)

Installation requires a pressurised (140-350kPa) potable water supply through a suitable ball or gate valve and 240VAC power within 2 meters of the site. Appropriate access and footprint space together with mounting space for the pre and post filter housings. Skid mount installations are also available by request.

#### Installation (pre-treated feedwater supply from RO or still)

Installation requires a pressurised (100-250kPa) pre-treated feedwater supply with conductivity  $<5\mu\text{S}/\text{cm}$  through a suitable ball or gate valve and 240 VAC power within 2 meters of the site. Appropriate access and footprint space together with mounting space for the post filter housing. Skid mount installations are also available by request.

### Typical Mains Water Fed Mixed-Bed Deionisation System Configuration

