Creating SDI Solutions

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With more than 70 years of experience, Veolia Water Solutions & Technologies is the world leader in engineering, design, project management and execution of construction projects for turnkey facilities & water treatment plants. Thanks to an unequalled portfolio of technologies, Veolia Water Solutions & Technologies creates the most comprehensive water treatment solutions.

Today Veolia Water Solutions & Technologies is present in more than 57 countries and employs 8,900 people. With a strong local set-up in South East Asia and the access to international expertise, we provide water treatment solutions (Design/Build and Associated Services) for pure to ultra pure water, reclaim/reuse, desalination and wastewater.

Emergency Services & temporary solutions

Cost-effective services in case of emergency or increase of production without building additional plant requirement. SDI services can provide high grade of DI water without generation of wastewater.

Aquamove™ containerized RO mobile unit

Option to buy back your polishing mixed-bed resin.

– Free disposal service
– Maximize savings for new resin purchases

Buy back of polishing resin

With a strong local set-up in South East Asia and the access to international expertise, we provide water treatment solutions (Design/Build and Associated Services) for pure to ultra pure water, reclaim/reuse, desalination and wastewater.

Global Network - Local Expertise

Cost Effective services in case of emergency or increase of production without building additional plant requirement. SDI services can provide high grade of DI water without generation of wastewater.
Service Deionization (SDI)
Guarantee of constant supply of high quality water

Cation Deionizers
- Remove positively charged dissolved ionic contaminant
- Calcium
- Sodium
- Magnesium
- Iron
- Manganese

Anion Deionizers
- Remove negatively charged dissolved ionic contaminant
- Carbonate
- Bicarbonate
- Sulfate
- Chlorides
- Nitrates
- Organics
- Silica

Mixed bed Deionizers
- Provide higher water quality, enhance Silica, ion removal & TOC reduction.

Feed Water Requirements

<table>
<thead>
<tr>
<th>Specification</th>
<th>MB06 (White)</th>
<th>MB17 (Beige)</th>
<th>MB18 (Silver)</th>
<th>MBUP (Blue)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorides (ppm)</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Pressure (PSI)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Temperature (deg C)</td>
<td>&lt;40</td>
<td>&lt;40</td>
<td>&lt;40</td>
<td>&lt;40</td>
</tr>
<tr>
<td>Free Chlorine (ppm)</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
</tr>
<tr>
<td>Total Organic Carbon</td>
<td>&lt;500</td>
<td>&lt;500</td>
<td>&lt;500</td>
<td>&lt;500</td>
</tr>
<tr>
<td>TOC (ppb)</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

Activation Carbon
- Remove effectively
- Total Organic Carbon
- Chlorine
- Odour
- Colour
- Micropollutants
- Hydrocarbons

Benefits
- Reliability
- Minimal system installation
- Minimum capital investment
- Environmental friendly (chemical free)
- Easy maintenance
- Flexibility

Associated Services Range
- High velocity rinse of UPW resin
- Emergency Services (SDI Water)
- Installation of standard column system & loop distribution
- Standby equipment and DI supply to facilitate maintenance & eliminate loss of production time
- On-site resin re-bedding

SDI Classification

<table>
<thead>
<tr>
<th>Specification</th>
<th>MB06 (White)</th>
<th>MB17 (Beige)</th>
<th>MB18 (Silver)</th>
<th>MBUP (Blue)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicarbonate (ppm)</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Silica (ppb)</td>
<td>&lt;25</td>
<td>NA</td>
<td>NA</td>
<td>&lt;5</td>
</tr>
<tr>
<td>TOC (ppb)</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

Specifications are for reference only and subject to the feed water quality.

Ideal for microelectronics / photovoltaics and aerospace industries

Meet your water specifications instantly & improve your performance by using pre-rinsed resin while maintaining the production of your plant.

- Easy start-up
- Optimised operating costs
- Lower usage of DI rinsing water
- Avoid risks of manufacturing disruption
- Buy back resin option available

For long term cost effectiveness and continuous production of high water quality (up 18Ω), VWS offers new Standard SDI skid mounted systems designed for 3,10 or 20 gpm production requirements including integrated monitoring & control systems.

- Control of water parameters including performance data report
- Support of local team for maintenance & replacement of spare parts & consumables
- Quick return on investment & optimised life cycle of the system
- Modular technological solutions
- Monthly report

Access to added value services
Optimize your resources

- Reliability
- Minimal system installation
- Minimum capital investment
- Environmental friendly (chemical free)
- Easy maintenance
- Flexibility

VWS Columns - Technical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>VWS 14</th>
<th>VWS 22</th>
<th>VWS 94</th>
<th>Activated Carbon</th>
<th>Softener</th>
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</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>7x24</td>
<td>7x36</td>
<td>12x52</td>
<td>12x52</td>
<td>12x52</td>
</tr>
<tr>
<td>Diameter &amp; Height (INS)</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Inlet/Outlet (INS)</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Flow rates</td>
<td>350 (1.3)</td>
<td>555 (2.1)</td>
<td>2250 (8.3)</td>
<td>2250 (8.3)</td>
<td>2250 (8.3)</td>
</tr>
<tr>
<td>Pressure</td>
<td>60 (4.5)</td>
<td>60 (4.5)</td>
<td>90 (6.0)</td>
<td>90 (6.0)</td>
<td>90 (6.0)</td>
</tr>
</tbody>
</table>

Resin Pre-conditioning

Activated Carbon
- Remove effectively
- Total Organic Carbon
- Chlorine
- Odour
- Colour
- Micropollutants
- Hydrocarbons

Pre-conditioning
- Total Organic Carbon
- Chlorine
- Odour
- Colour
- Micropollutants
- Hydrocarbons