

## Water Treatment / Conditioning Devices

<i>Device</i>	<i>Primary Use</i>	<i>Limitations</i>
<b>Sialex™ Ring</b>	<p>Inhibits lime scale formation</p> <p>Prevents / reduces scale deposits in pipes, equipment</p>	<p>Adds no chemicals to water.</p> <p>Does not disinfect water.</p> <p>Does not remove minerals from water.</p>
<b>Mechanical Filter</b>	<p>Removes sand, soil, and other causes of turbidity</p>	<p>Filter cartridge requires replacing or may employ “back flush” facility (manual or automatic) replacement or backwashing</p>
<b>Ion exchange unit</b> <i>(water Softener)</i>	<p>Most common units replace minerals (calcium, magnesium) with sodium</p> <p>Improves cleaning action of soaps, detergent</p> <p>Prevents scale deposits in pipes, equipment</p>	<p>Removes calcium and magnesium, replacing with sodium (calcium and magnesium form part of healthy diet, in some cases employing ion exchange systems may not be ideal where those consuming treated water may suffer from certain cardio vascular conditions). Softened water can be more corrosive than “un- softened” water. Regeneration (beads) requires “back flushing” brine and calcium into drains. Check such devices can be used in your area (legislation controls on use).</p>
<b>Iron Filter</b>	<p>Removes iron and manganese that can cause staining of clothes and plumbing fixtures</p> <p>Prevents odor caused by iron, manganese</p>	<p>Periodic backwashing, addition of potassium permanganate required (frequency dependent on water usage, iron content)</p>
<b>Reverse Osmosis</b> <i>(RO)</i>	<p>Removes most dissolved and suspended impurities from water.</p>	<p>Reverse osmosis tends to be an inefficient method of producing potable water (up to 50% of water required by the system is not available for use). Requires considerable energy consumption.</p> <p>Salts present in “Hard” water can clog membrane. An ion exchange system may be required to ensure trouble free operation. Carbon and mechanical filters may be required to pre-treat water.</p>