

Water Softeners

Water Softeners From Global Water Solutions - these systems will soften your bore or spear water. Soft Water is achieved by passing hard water through a 'cation ion exchange' resin bed. Cation resin describes resin that removes 'Cations' from water. Cations are ions that possess a 'positive charge'. Ion exchange resins are blended synthetic polymers in spherical bead form.

To simplify the term, Cation ion exchange resins soften the water by exchanging calcium and magnesium salts for sodium salts. As the exchange ion is in carbonate form (not chloride) common salt, or Sodium chloride, levels do not increase during the softening process. Hard water salts, calcium and magnesium carbonate and bi-carbonate possess a positive charge. They are attracted to the negatively charged resin beads, by their opposite polarity.

Once they are 'Docked' against the resin bead, there is a transfer of ions with the calcium(carbonate/bi-carbonate) being exchanged for sodium(carbonate/bi-carbonate). The same also occurs with magnesium hard water salts. When the resin can no longer give up sodium, it is recharged using sodium chloride (common salt). As salt passes through the resin, sodium is taken up by the resin beads, with the chloride component combining with the calcium and magnesium salts that have been removed during the softening process.

These calcium magnesium chloride salts then wash to drain. Once re-charged, the resin can once again return to exchanging ions with the resulting production of soft water. Read more about the sizes of the available systems, by downloading the pdf below.