Technical Data Sheet

ScaleArmor™ verses Ion Exchange Water Softening Explained

Ion Exchange (Water Softening) is a treatment process that removes hardness ions, primarily calcium (Ca^{2+}) and magnesium (Mg^{2+}), by replacing them with sodium ions using a resin media.

Hardness results in scale build-up, leading to reduced efficiency, equipment wear, and potential system failure. The resulting deposits can erode metal surfaces and damage critical components.

As water passes through the resin, calcium and magnesium are captured, and an equivalent amount of sodium is released. This increases the sodium content of the treated water.

Effects of Elevated Sodium

- Lower ice freezing point, resulting in soft or melting ice
- Potential health concerns at high levels
- Taste impact on water and beverages
- Increased corrosion risk in the presence of other contaminants

Key Challenges

- Regular salt replenishment required
- Fixed system capacity may allow hardness breakthrough
- Heavy salt handling (up to 40 lbs per bag)
- Insufficient salt can lead to system failure

ScaleArmor™ Explained

ScaleArmor™ is a certified scale-reduction media. It works by interfering with the formation of scale and helping reduce corrosion without removing minerals like a softener does.

Instead of exchanging ions, ScaleArmor™ uses a controlled release process to bind to hardness minerals like calcium and magnesium, which keeps them dissolved in water rather than forming solid scale. The result is that the minerals stay in solution and pass through the system. An additional benefit is that is reduces corrosion by forming a thin protective layer on metal surfaces.

The media is approved by IAPMO – International Association of Plumber and Mechanical under the standard Z601. Other scale reduction medias don't have this type of certification.

Benefits of ScaleArmor™

- Leave minerals in the water that provide a better beverage flavor profile
- Certified for scale reduction under Z601 standard
- NSF 61 certified for food safety
- Controlled release that lasts 12 months
- Lower cost of maintenance
- Continuous and effective process during changing water conditions
- No presentation change to the water as only 1 to 3 PPM is released