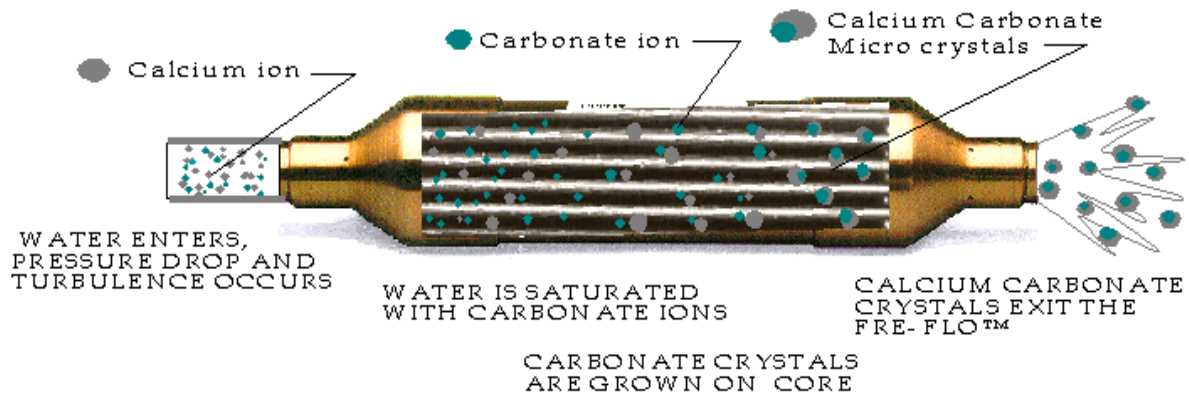


# GESI—Global Environmental Solutions Inc.

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## How FRE-FLO™ Works

Upon entering a FRE-FLO™, water undergoes a pressure drop and turbulent flow. This causes (among other things) dissolved carbon dioxide ( $\text{CO}_2$ ) to become a gas in the water (much like bubbles in carbonated water).

This changes the chemical characteristics of the water, producing a "saturated" condition with respect to calcium carbonate. This means the water in the FRE-FLO™ is ready to precipitate or grow calcium carbonate crystals. Calcium carbonate is commonly called "scale."

Saturated water travels over the core in the FRE-FLO™ housing. The core promotes the nucleation or growth of scale crystals. The force of the water passing through the FRE-FLO™ continually keeps the core free of scale. The crystals are then carried out of the unit suspended in water. This is FRE-FLO™ treated water.

The benefit comes as the FRE-FLO™ treated water passes through applications such as ice and coffee machines, humidifiers, misting systems, or evaporative coolers. At locations where scale would grow on equipment surfaces, it now grows on scale crystals grown within the FRE-FLO™ because the crystals that were generated within the FRE-FLO™ function as alternative growth surfaces.

In essence, FRE-FLO™ takes existing total dissolved solids (TDS) and through the processes of epitaxial nucleation and lattice matching converts a portion of the TDS to suspended solids. That

portion of the TDS that is converted to suspended solids protects the equipment from the growth of scale. The crystals stay suspended within the system and are discharged when the water exits the system.

The equipment stays clean and the scale goes down the drain. FRE-FLO™ works with nature to prevent scale from growing on your equipment.

**GESI**

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