

"Is something wrong with my water?"



Most water contains more than water.

Almost all of the water found in the U.S. is hard water. Hard water is water that is contaminated with dissolved minerals – like calcium, magnesium, sulfur, iron, lead and limestone – that can have a negative impact on you, your household and your pocketbook. Depending on where you live, contaminants from sewage, industrial waste and agricultural run-off can also seep into your water supply.

Hard water produces scale.

If there are stains or buildup on your sinks and bathtubs ... if you have to use large amounts of soap to clean dishes or



Hard water produces a scaly buildup which can clog pipes and appliances.

wash your hair ... or if your water tastes or smells odd, you probably have hard water. If left untreated, the minerals in hard water will cause yellow stains on plumbing fixtures and be deposited as scale, eventually clogging plumbing and shortening the life of appliances like washing machines, water heaters and dishwashers. Scale deposits not only cut down on the efficiency of these appliances, they cost you money, increasing both energy and maintenance bills.

Water softeners eliminate the effects of hard water.

They "soften" the water by removing the calcium and magnesium found there, extending the useful life of water heaters, washing machines, dishwashers, coffeemakers, humidifiers and household plumbing systems *by as much as 30*%.



Hard water can cause yellowish stains on toilets, bathroom fixtures and clothing making them much harder to clean. Hard water can also cause skin irritation.



Evaporation

Chemicals

detergents, waste water

Lakes

Air pollution Rain

Underground aquife

Calcium, magnesium, iron, and other hardness minerals

Dust, particles smog

Animal waste,

Evaporation

In the air, water vapor can mix with sulfur from smokestacks, forming an acid which will eventually fall back to earth as rain, sleet, hail or snow.

As water passes through the surface of the earth to the water tables below, it dissolves minerals and other substances it may encounter, including PCBs, bacteria, fertilizers and insecticides.

Even after reaching a home, water can continue to dissolve such things as lead from the solder in plumbing pipes.



A water softener in your home will make you feel better bathing, improve the taste of water, and allow soaps and detergents to clean better.

"Can I actually feel a difference between hard and soft water?"

With softened water, soaps lather better and clean more completely.





Soft water makes a difference you can feel and see, all over the house.

In the Bathroom: Your soap and shampoo will *lather better*. Your hair and skin will feel noticeably cleaner, softer, and not as dry. And there will be *no soap scum or mineral deposits to clean* off sinks, showers, tubs and toilets.

In the Laundry: Clothes will be softer, cleaner, whiter and brighter. Plus they will last longer. Using soft water and pure soap products *increases the life* of clothing, towels and linens *up to 33%*. Without hard water service issues, *washing machines last longer, too*.

In the Kitchen: Dishes will clean up more easily, and be *spot free*, without the gray film glasses get when etched by mineral-laden water. Plus *hands will feel softer* and look better.

Throughout the House: Water-using appliances will *last longer* and run better. Why? Because hot water heaters, washing machines and dishwashers used with hard water can *wear* out 30% faster.

Over time, soft water savings can really add up. For instance, conditioned water not only delivers greater washing power, it reduces the amount of soap you need to use by up to 70%. In fact, the Bureau of Statistics found that between 17 and 20.8 cents of every dollar are spent on cleaning products. Soft water can reduce that bill by up to 65%. It can also eliminate extra rinse cycles and hot water. Plus using less detergent, household cleaners and chemicals is better for the environment.

The bottom line? Soft water can save you thousands of dollars.



The most durable and best performing water softeners are those built with Fleck valves and Structural tanks.

"How does a water softener work?"



Water softener





Softening water is a 4-step process.

1) The body of a water softener is a tank filled with resin beads. These beads are covered with sodium ions. As hard water passes through, the resin beads act like a magnet, attracting the calcium and magnesium ions (hardness) in exchange for the sodium ions.

2)Eventually the resin beads become saturated with mineral ions and have to be "re-charged." This process is called regeneration, and is conducted by the control valve on the top of the tank. The control valve is the brain of the system.

3) During regeneration, a strong brine solution is flushed through the resin tank, bathing the resin beads in a stream of sodium ions which replace the accumulated calcium and magnesium ions (hardness).

4) The brine solution, carrying the displaced calcium and magnesium ions, is then flushed down the drain by fresh water. The regenerated resin beads can be used again and again.

FYI: Hard water measures from 1 gpg to well in excess of 100 gpg. The Environmental Protection Agency recommends using water not exceeding 7 gpg.

Capacity is one of the first things you should look for in a water softener. The average family uses 80 to 100 gallons of water per person per day. That means a household of five requires 400 gallons of softened water daily. If your water has a hardness rating of 15 grains per gallon (gpg), for example, you would need to remove 6,000 grains per day (400 gallons x 15 grains). With a water softener that regenerates every 3 days, your minimum softener capacity would be 18,000 grains (6,000 grains x 3 days).



Fleck control valves are designed to meet rigorous fatigue standards, passing 250,000 pressure cycles at up to 190 psi, as well as 10,000 complete regeneration cycles. Structural fiberglass tanks offer a 10-year manufacturer's warranty, the best in the business. Plus, only Structural fiberglass tanks feature an injection-molded inlet for leak-free seals.

"Who makes the best water softener components?"

Fleck valves and Structural tanks are the brands you can trust.

The best components make the best softeners. The valve and tank used in your softener are key to its durability and performance. Fleck valves and Structural tanks have been leaders in the water industry for over 50 years. Both have been designed to provide you with the latest technology and highest quality standards possible.

The Fleck and Structural brands are part of Pentair Water Treatment, a subsidiary of Pentair, Inc., a multi-billion dollar diversified manufacturer headquartered in Minnesota. Global in scope, Pentair Water Treatment has additional facilities in Wisconsin, Ohio, Belgium, France, Italy, India, Taiwan and China.

> Key to the exceptional quality and performance of all our products is our patented piston-seal-spacer technology. This technology has proven so long lasting, we found it still working in a 38-year-old valve in Waveland, Indiana.

