

# SCALEBLASTER<sup>®</sup>

WATER CONDITIONER

*Sustainable Solutions to Hard Water Problems*



**Residential**



**Commercial**



**Industrial**

## ***INFORMATION GUIDE***

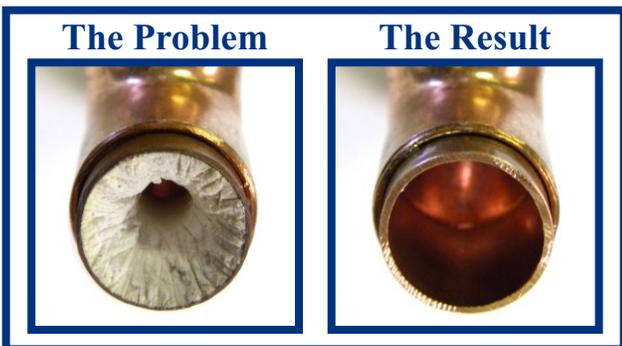
# SCALEBLASTER®

## WATER CONDITIONER

*Sustainable Solutions to Hard Water Problems*

### Over 30 Years of Unparalleled Success

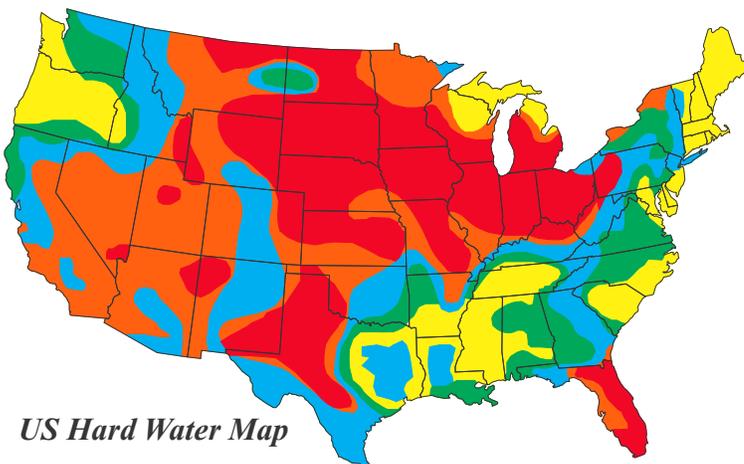
After several years of testing and development in the early 90s, the first **ScaleBlaster** units were released in 1995. From the initial installations **ScaleBlaster** was an immediate success. Despite entering an industry with a dubious, “snake-oil” reputation, **ScaleBlaster** was able to overcome those obstacles by building a worldwide network of dealers, wholesale suppliers, and major retail stores that believed in our product.



**ScaleBlaster** became the first and only electronic descaler to be successful in the residential, commercial and industrial markets. Today, there are hundreds of applications that **ScaleBlaster** can be applied to. Many of the world's largest companies use **ScaleBlaster** to solve their hard water problems without the need of salt, chemicals or maintenance.

### Solving Hard Water Problems

With over 89% of the US and the world experiencing hard water, **ScaleBlaster** is the healthy & environmental way to solve hard water problems in the residential, commercial and industrial fields.



*US Hard Water Map*

Extremely Hard	Red	over 14 gpg or over 240 ppm
Very Hard	Orange	10-14 gpg or 171-239 ppm
Hard	Blue	7-10 gpg or 120-170 ppm
Moderately Hard	Green	3-7 gpg or 51-119 ppm
Slightly Hard	Yellow	under 3 gpg or under 50 ppm

*gpg = grains per gallon / ppm = part per million*

- No Salt**
- No Chemicals**
- No Filters**
- No Maintenance**

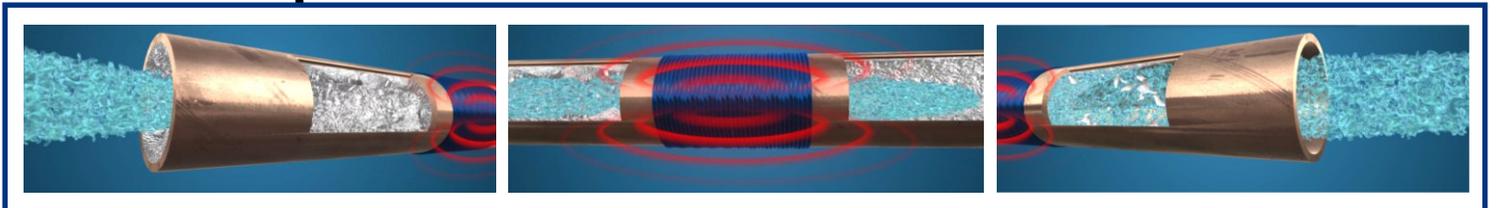
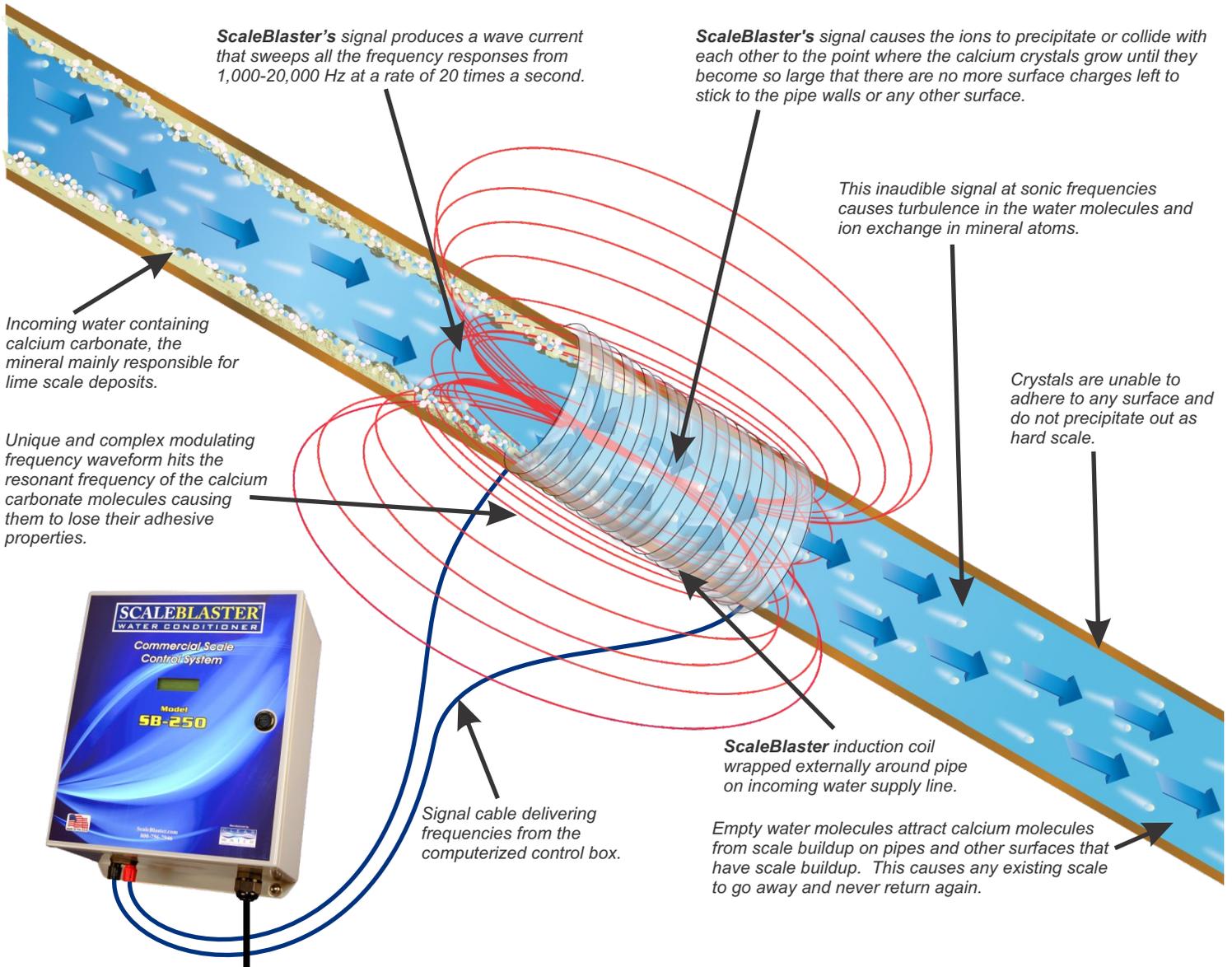


# What is ScaleBlaster?



**ScaleBlaster** is an innovative & compact state-of-the-art computerized water conditioner that is installed on the incoming waterline entering the home, building or your equipment. A signal cable is wrapped around the outside of the pipe and is non-intrusive. No cutting into the pipe or special tools are necessary. From residential homes to commercial & industrial applications, **ScaleBlaster** is the world leader and innovator in solving hard water issues without using salt or chemicals.

## How ScaleBlaster Works



# Residential Model



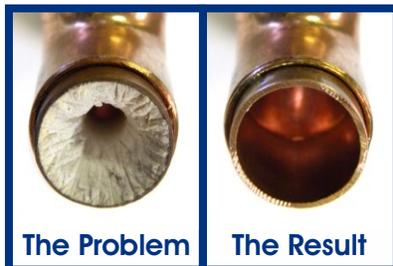
## SB-MAX Pro Series Pro Grade Series

- Indoor or outdoor installations
- Homes up to 5,000 square feet
- Water hardness levels up to 40 gpg (684 ppm)
- Up to 1½" incoming pipe
- Heavy-duty metal enclosure

## ScaleBlaster Benefits

ScaleBlaster will remove limescale deposits while prolonging the life of...

- |                   |                    |
|-------------------|--------------------|
| • Piping system   | • Water heaters    |
| • Dishwasher      | • Tankless heaters |
| • Washing machine | • Toilets          |
| • Faucets         | • Showerheads      |
| • Sinks           | • Coffee makers    |
| • Humidifiers     | • Radiant heating  |



## Beneficial for Your Home, Health & Environment

ScaleBlaster is the eco-friendly, economical & healthy alternative to your hard water problems.



Water Softeners replace calcium with salt. They waste water and discharge hazardous brine into our water systems. With ScaleBlaster, calcium remains in the water, which is beneficial for the human body. *Why remove it?*

**Untreated hard water will cause damage to anything it comes in contact with.**

**“Preventive Maintenance - in a Box”**

- ✓ **No Salt**
- ✓ **No Chemicals**
- ✓ **No Filters**
- ✓ **No Maintenance**

## The Choice is Clear

For nearly 100 years, water softeners & chemicals have been perceived as the only way to treat hard water. Yet these methods have their obvious drawbacks.

## Water Softener Bans

Due to environmental concerns, cities like Santa Clarita & Fillmore, California have banned water softener discharges into the water stream.

Water Softeners	vs.	SCALEBLASTER® WATER CONDITIONER
Expensive to purchase & maintain 5-10 year lifespan		Affordable, one-time investment Up to 20 year life span
Requires continuous maintenance		Never requires maintenance
Takes up lots of floor space		Mounts on a wall
Requires continuous purchasing of salt		Requires no salt or chemicals
Harmful for people on salt restricted diets		Safe for people on salt restricted diets
Intrusive to the water		Non-intrusive to the water
Increases water & sewer bills greatly		Does not require any additional water usage
Discharges chlorides into waste stream		Environmentally "green" product
Makes Skin feel dry		Makes skin feel softer
Makes water feel slippery		Makes water feel "Silkier"
Soap suds difficult to remove		Soap suds wash away easily
Will not remove existing limescale deposits		Removes existing limescale deposits

## A Costly Nuisance



Water Heater

Shower Head

Sink Drain

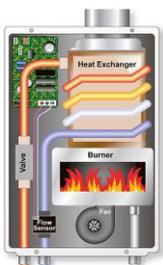
Limescale deposits & soap scum formation are costly nuisances that can be eliminated with **ScaleBlaster** and never to return again.

## Added Benefits



- Soap may lather up more & rinse off easier
- Skin may feel smoother & hair more manageable
- Brighter, whiter & longer lasting clothes, towels & sheets

## Tankless Water Heater Solution



The heat exchanger in tankless water heaters will foul up with scale deposits rapidly & require regular service calls to flush out the lines with CLR or vinegar. **ScaleBlaster** will eliminate that.

## Sizing the Proper Model



The best feature about the new **SB-MAX PRO** is that this is the most advanced and powerful residential model possible and is able to handle virtually any size house and water hardness. No more guessing what

model to size – as one size fits all!

## Protect Your Appliances



Your appliances & fixtures that come in contact with hard water will operate much more efficiently and will have a prolonged life expectancy with **ScaleBlaster** installed.



# Commercial Models

**SB-250**



- Up to 2" non-magnetic pipe
- Up to 1" magnetic pipe on recirculating water
- Heavy metal enclosure
- UL/CUL listed - works on 110 or 220 VAC

**SB-350**



- Up to 3" non-magnetic pipe
- Up to 1½" magnetic pipe on recirculating water
- Up to 1" pipe on one shot magnetic pipe
- Heavy metal enclosure
- UL/CUL listed - works on 110 or 220 VAC

**SB-450**



- Up to 4" non-magnetic pipe
- Up to 2" magnetic pipe on recirculating water
- Up to 1½" pipe on one-shot magnetic pipe
- Heavy metal enclosure
- UL/CUL listed - works on 110 or 220 VAC

**SB-650**



- Up to 8" non-magnetic pipe
- Handles up to 4" magnetic pipe on recirculating water
- Up to 2½" pipe on one-shot magnetic pipe
- Heavy metal enclosure
- UL/CUL listed - works on 110 or 220 VAC

**SB-ICE50**



**Commercial Ice Maker use only**

- For use on commercial ice makers
- Complete ice maker package
- Includes pre-wrapped pipe & coil
- Includes filter to reduce chlorine taste & odor



## Applications

- Aquariums • Bakeries
- Beverage Bottling & Canning
- Bottleless Water Coolers • Car Washes
- Coffee, Tea, Hot Chocolate Dispensers
- Educational Institutions • Espresso Machines
- Hair Salons • Health Care Facilities
- Home, Office, Apartments & Condos
- Hospitals • Hotels / Motels
- HVAC • Ice Making Machines
- Injection Molding
- Laundry & Dry Cleaning • Passenger Ships
- Printing / Corrugated Boxes Industry
- Restaurants • Rubber & Tire Industry
- Soda Dispensing Equipment
- Soup Vending Machines • Supermarkets
- Swimming Pools & Spas
- Water Treatment Plants



## The Choice is Clear

Until now, you had two basic options to control hard water issues – continuously using hazardous chemicals, or investing in a water softener.

Water Softeners vs. <b>SCALEBLASTER</b> <sup>®</sup> WATER CONDITIONER	
Expensive to purchase & maintain	Affordable, one-time investment
Requires continuous maintenance	Never requires maintenance
Takes up lots of floor space	Mounts on a wall
Requires continuous purchasing of salt	Requires no salt or chemicals
Intrusive to the water	Non-intrusive to the water
Increases water & sewer bills greatly	Does not require any additional water usage
Discharges chlorides into waste stream	Environmentally "green" product

# Significant Benefits



## Cooling Towers

You will observe huge savings in maintenance, biocide chemicals, labor & water usage. **ScaleBlaster** reduces scale build-up, bacteria, biofilm, corrosion & algae blooms. It will reduce makeup water/blow downs substantially, resulting in huge water savings. It will increase the life of the equipment & lower energy costs.

## Chillers / Condensers / Air Handlers

Controls lime scale deposits on heat exchanger tubes & surfaces resulting in substantial energy savings.

## Boilers

You will see huge savings in chemicals & maintenance costs. **ScaleBlaster** reduces scale formation on boiler fire tubes, condensation tanks, pumps, pipes & valves. Our product lowers energy costs dramatically & extends equipment life.

## Water Heater Tanks

Water heaters work more efficiently resulting in huge energy savings. Scale is controlled on heating coil and tank.

## Dishwashers

Lime scale build-up in the dishwasher lines & on the heating elements will be reduced.

## Steamers

Your steamers will require little or no maintenance for scale build-up.

## Ice Machines

Scale deposits can cause cubes to be cloudy as well as clogs in the water flow. **ScaleBlaster** reduces filter clogs, biofilm & contaminants. Maintenance & downtime are also reduced & equipment lasts longer.

## Laundry

**ScaleBlaster** controls scale deposits in steam ironing machines & washing machines. You may be able to reduce detergent use. Clothes & towels will feel softer, look brighter & last longer, making your clients feel more pampered. Greatly reduces lint formation in laundry room, a serious fire hazard.

## Drinking Water, Coffee Machines, Soda Dispensers

The water will taste much better because the breeding ground of bacteria (scale in water pipes) is gone. By keeping calcium in the water, coffee & cappuccino will taste better.

## Housekeeping / General Cleaning

Huge savings are realized in all phases of cleaning, including the bathrooms & kitchen areas, because there is less scale build-up in toilets, showers, nozzles & faucets. Reduced labor & savings in cleaning chemicals benefit your bottom line.

## Aerators

Aerators will no longer clog up with scale formation, resulting in the elimination of nuisance cleaning & replacement.

## Plumbing System

Your entire building's plumbing system will be de-scaled without any chemicals or replumbing. This results in huge savings in heating costs. If the plumbing ever needed to be replaced in the building the cost would be astronomical.

## Swimming Pools and Hot Tubs

Removes lime scale deposits & formation forever. Water flow will be increased.

## Sizing the Proper Model



Before ordering any commercial **ScaleBlaster** unit, you will need to talk to your dealer for the properly sized model required and the location of the installation. Factors we need to know include:

- A. Pipe size in diameter
- B. Type of pipe – PVC, copper, galvanized, steel, ductile iron
- C. Water hardness in gpg or ppm
- D. Flow rate of the water
- E. Application **ScaleBlaster** is going on
- F. Is the water one-shot or recycled water?

# Industrial Models

All industrial units work on 110 or 220 VAC and come in a heavy duty metal enclosure

**SB-1200**



- Up to 12" non-magnetic pipe
- Up to 6" magnetic pipe on recirculating water
- Up to 3" pipe on one-shot magnetic pipe.

**SB-2000**



- Up to 20" non-magnetic pipe
- Up to 14" magnetic pipe on recirculating water
- Up to 8" pipe on one-shot magnetic pipe.

**SB-2800**



- Up to 28" non-magnetic pipe
- Up to 20" magnetic pipe on recirculating water
- Up to 10" on one-shot magnetic pipe.

**SB-3600**



- Up to 36" non-magnetic pipe
- Up to 24" magnetic pipe on recirculating water
- Up to 12" on one-shot magnetic pipe

**SB-4000**



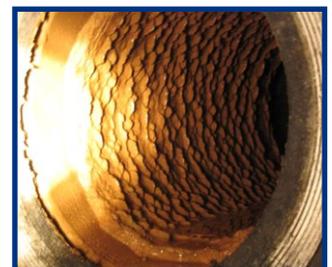
- Up to 40" non-magnetic pipe
- Up to 26" magnetic pipe on recirculating water
- Up to 16" on one-shot magnetic pipe.



Hundreds of power plants in China & the USA use **ScaleBlaster** for numerous applications.

## Applications

- Aluminum Industry • Automotive Industry
- Beer & Wine Manufacturing • Beverages
- Boilers • Chemical Manufacturing
- Chillers • Cooling Towers • Dye Manufacturing
- Environmental / Pollution Remediation
- Food Canning • Glass Finishing
- Heat Exchangers • Injection Molding
- Lumber Industry • Maritime Cargo Industry
- Metal Casting & Milling • Military Bases
- Mining, Oil Wells
- Naval & Cruise Ships • Optical Industry
- Paint Manufacturing
- Petrochemical Manufacturing Industry
- Pharmaceutical Manufacturing
- Power Generation • Pulp & Paper Manufacturing
- Steel Industries
- Textile Manufacturing • Trucking Industry
- Waste Water Treatment



# Significant Benefits



## Chemical Reduction

**ScaleBlaster** can significantly reduce the need to use chemicals for the prevention of corrosion and scale. No more handling & storage of hazardous chemicals.

## Reduces Corrosion

**ScaleBlaster** allows for increased cycles of concentration which naturally and gently elevates the pH of the recirculating water, thereby rendering the water less corrosive. **ScaleBlaster** controls scaling potentials, which lessens troublesome corrosive cell formations of calcium/iron deposits on the metal surfaces. **ScaleBlaster** helps control biofilm formation where bacteria can actively attack all metal surfaces.

## Increases Cycles of Concentration = Water Savings

By allowing the conductivity levels to go higher, you may be able to raise the cycles of concentration - which will result in huge water savings.

## Improves Efficiency

**ScaleBlaster** keeps heat transfer surfaces free from scale allowing systems to operate under optimal design conditions.

## Prevents Scale Accumulation

**ScaleBlaster** will modify the scale-forming ions so they do not adhere to each other, the pipe walls, tubes, jets and heat transfer surfaces.

## Reduces Maintenance & Downtime

**ScaleBlaster** will significantly reduce overall maintenance & downtime. Adding chemicals, balancing water chemistry and cleaning shutdowns will be greatly reduced.



## Controls Algae & Bacteria

**ScaleBlaster** helps control algae and bacteria by eliminating their breeding ground – limescale deposits. The modified calcium crystals and higher cycles of concentration help to retard algae and biofilm formations.

## Huge Energy Savings

The primary energy savings are a result of a decrease in energy consumption in heating or cooling applications. These savings are associated with the removal of scale formation. Just a 1/4" of scale buildup can increase energy consumption 40%.

## Removes Existing Scale

Any existing scale within the system is removed within weeks and never returns. Contact us for more information on how we can prove this to you when **ScaleBlaster** is installed.

## Extends Life of Capital Equipment

**ScaleBlaster** will extend equipment life dramatically, maximizing the return on capital investment.

## Decrease Operating Costs

**ScaleBlaster** allows you to significantly lower your cost of operation by using less chemicals and less water, as well as reducing labor costs.

## Environmentally Friendly

Discharge water regulations have made the disposal of chemically treated water a regulatory concern. **ScaleBlaster** is non-invasive and adds nothing to the water, simplifying your compliance measures.

## Sizing the Proper Model



Before ordering any industrial **ScaleBlaster** unit, you will need to talk to your dealer for the properly sized model required and the location of the installation. Factors we need to know include:

- Pipe size in diameter
- Type of pipe – PVC, copper, galvanized, steel, ductile iron
- Water hardness in gpg or ppm
- Flow rate of the water
- Application **ScaleBlaster** is going on
- Is the water one-shot or recycled water?

# Wastewater Treatment Applications

Wastewater treatment plants can experience numerous benefits by using **ScaleBlaster**. In addition, tremendous savings in chemical use and in labor can be realized. There are several applications within the industry that **ScaleBlaster** will be effective in.



All commercial and industrial models will work on any wastewater treatment plant.

## Lime or Soda Ash Treatment

Soda ash is the most commonly used treatment for a low pH reading in a wastewater stream. It is inexpensive, safe and able to be released without EPA concern. Soda ash is raw, uninhibited scale, by nature. Slurry pumps used to push the lime slurry into the water stream are subject to lime scale buildup. The **ScaleBlaster System** placed on the suction side of the pumps will prevent scale deposition on the pumps.

## Chlorine Injection Pumps / Pump Deposits

The chlorine lines and pumps that are used to feed chlorine into the treatment stream become full of lime scale deposits and must be cleaned. The **ScaleBlaster System** will keep scale particles suspended in solution and off of the pump surfaces.



The **City of Stuart (FL) Water Reclamation Facility** uses **ScaleBlaster** to clean out the chlorine lines & electronic valves which results in huge labor savings & downtime.

## ScaleBlaster Benefits



Impellers will scale up, requiring hundreds of man-hours to clean it. Costly downtime can last days. **ScaleBlaster** will considerably reduce scale formation and downtime.

## Resin Bed Calcification

The **ScaleBlaster System** will keep the calcium carbonate ions in solution, preventing the calcification of the resin bed and the formation of channels in the bed that lead to ineffective treatment.

## Polymer Systems

Potential reduction of polymer usage and increased dewatering capabilities.

## Effluent System

The **ScaleBlaster System** will protect the discharge line, keeping it free of lime scale caused by heavy concentrations of the calcium carbonate.



**City of Henderson, Nevada Water Reclamation Facility** had **ScaleBlaster** installed in 2002

## Sensors & Instrumentation

The **ScaleBlaster System** benefits sensors, probes and control valves. Calcium particles remain suspended in solution and will not leave deposits on vital measuring equipment.



*Actual Test Coupons from the PChem Wastewater Treatment Facility in Illinois*

## Mixing Tank

Using lime to treat high pH water or soda ash to treat low pH water can present some of the greatest scale control challenges in the industry. The lime or soda ash is mixed with water to form a slurry and then is pumped into the water to be treated. The mixing tank is prone to scale deposition on the sides and the mixing propeller gets scale buildup, too. The **ScaleBlaster System** can treat the water to be mixed and will keep the tank sides and propeller clear of lime scale buildup.



*ScaleBlaster was installed on the City of Las Vegas Durango Hills Water Resource Center in June 2003 and removed all limescale deposits in their sodium hypochlorite lines.*

## Sodium Bisulfite Line

**ScaleBlaster** will prevent calcium coming out of solution and plugging up the sodium bisulfite lines used to remove chlorine and control pH levels.

## Clarifiers

**ScaleBlaster** forms soft sludge instead of hard lime scale for decreased cleaning frequency and easier removal.

## Sodium Hypochlorite Line

**ScaleBlaster** will remove limescale formation in the chemical feed lines and allow for optimal flow rates throughout the disinfection system from the injector to the contact basin.



*American Bottoms Wastewater Treatment Facility in Sauget, Illinois has dramatically decreased the time needed to clean their clarifiers*

## Environmental Issues

Environmental issues and the “going green” movement in the World today is a more important issue than ever before. **ScaleBlaster** is the ideal environmental product.

## Sizing the Proper Model



**Signal cables wrapped externally around the pipe.**

*There are several factors in determining the proper model. See page 7 or 9 for more details.*

# Agricultural Applications

## Poultry Farms

- **Combat limescale buildup on bell waterers and nipple drinkers**
- **Keeps spray nozzles clear of any blockages**
- **Remove limescale and sludge from waterlines**
- **Enhance the performance of medicators and enable them to work at designed levels of accuracy**
- **Save on water usage**
- **Reduce the need for cleaning materials**
- **Reduce cleaning time on equipment between flocks**
- **Reduce maintenance costs**
- **Help egg machines stay cleaner**
- **Improve the performance of water heaters and boilers**
- **Improve the performance of water cooled refrigeration equipment in poultry**
- **Keep incubators clean and enable their humidification systems to operate perfectly**
- **Eliminate scale stains from stainless steel and other surfaces**
- **Improve the efficacy of disinfectants**
- **Provide a return on investment within months**



Eagle Ridge Farm & Liberty Farm (Iowa) of West Liberty Foods has over 1,700 drinkers that no longer need to be individually cleaned with muriatic acid. This allows for more flocks to be produced yearly.



Before *ScaleBlaster* installed



Twelve weeks after *ScaleBlaster* installed



Before *ScaleBlaster* installed



Six weeks after *ScaleBlaster* installed



## Dairy Farms

- Reduces milk stone deposits in lines, ducts & on sensors
- May reduce bacteria by removing scale deposits that act as a breeding ground
- Better tasting water will result in cows drinking more water = more milk production
- Flow meters operate more accurately
- Scale control in cooling tower, condensers, brine tanks, pumps, valves, pipes, extruders, tanks & pumps.



## Crop Farms (also see irrigation)

- Limescale deposit control in the irrigation system including spray nozzles, pipes, pumps & valves
- Greater moisture penetration into the soil allowing for reduced wetting agents or surfactants
- Improves crop and plant growth with better wetting action - allowing for greater yields



## Irrigation (also see crop farms)

- Stops limescale & corrosion in the water systems including irrigation piping & emitters.
- Nozzles require little or no more acid cleaning
- Water penetrates the soil better allowing for greater and healthier yields
- Inhibits algae and bacterial growth while reducing chemical additives
- Reduces water usage considerably & lowers salt levels in soil & controls salt encrustation



## Hog Raising Farms

- Limescale deposits in water valves & nozzles will be greatly reduced allowing for better control of water flow
- Limescale deposits in the water nozzles in the cooling misters will be controlled for proper misting
- Prevents scale formation in heating nozzles of the water wall curtain system in cooling applications



## Hydroponics

- Controls limescale formation on all water equipment
- Helps control bacteria
- Roots & tubes absorb nutrients & water better while the limescale will be controlled



# Select ScaleBlaster Installations 1995-Present



Monterey Wine Company - King City, California



Shizuishan Power Plant - Yinchuan, China



Liaoning Power Plant - Jilin Province, China



Wet 'n' Wild - Kapolei, Hawaii & Las Vegas, Nevada



Phoenix Postal Distribution Center - Phoenix, Arizona



Fuxin Power Plant - Shenyang City, China



Amalie Arena - Tampa, Florida



Candlewood Suites - various locations in USA



City of Stuart Water Facility - Stuart, FL



City of Stuart Water Facility - Stuart, FL



Las Vegas Cogeneration Plant - Las Vegas, Nevada



American Bottoms- Sauget, Illinois



Geothermal Steam Wells - Mexico



City of Clearwater - Multiple locations



National Gallery of Art - Washington, DC

# Select ScaleBlaster Installations 1995-Present



Cirque du Soleil - all locations worldwide



University of California (hundreds of units installed campus wide) - Davis, CA



HOK, the largest US based architecture engineering firm, specs ScaleBlaster into many of their projects.



Bayer Corporation - Kansas City, Missouri



Dow Chemical - Various locations worldwide



Tinker Air Force Base - Midwest City, Oklahoma



Washington DC Metro Transit Authority - Washington, DC



Tupperware - Mexico City, Mexico



Aberdeen Proving Grounds - Aberdeen, Maryland



Various Cruise Ships - World Wide



Krusovice Beer - Krusovice, Czech Republic



Schlafly Brewery - St. Louis, MO



Cellynne Paper Corp. - Haines City, Florida



Auvil Fruit Company - Orondo, Washington

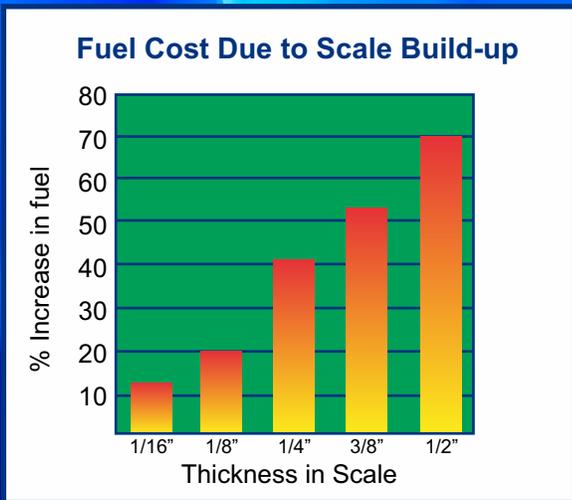


West Liberty Foods - Ellsworth & Liberty, Iowa

# SCALEBLASTER<sup>®</sup>

## WATER CONDITIONER

*Sustainable Solutions to Hard Water Problems*



**ScaleBlaster.com**

**1-800-756-7946**

Authorized Dealer

- No Salt**
- No Chemicals**
- No Filters**
- No Maintenance**

