



*A revolution in water purification*

**SCALE BLASTER<sup>®</sup>**

*The healthy alternative to water softeners*

***Industrial Electronic Descaler  
Model # SB-4000***



***Premium Model — up to 16" - 40" Pipe***

# Scale Blaster® - the electronic descaler

## Scaling... a major problem for industry

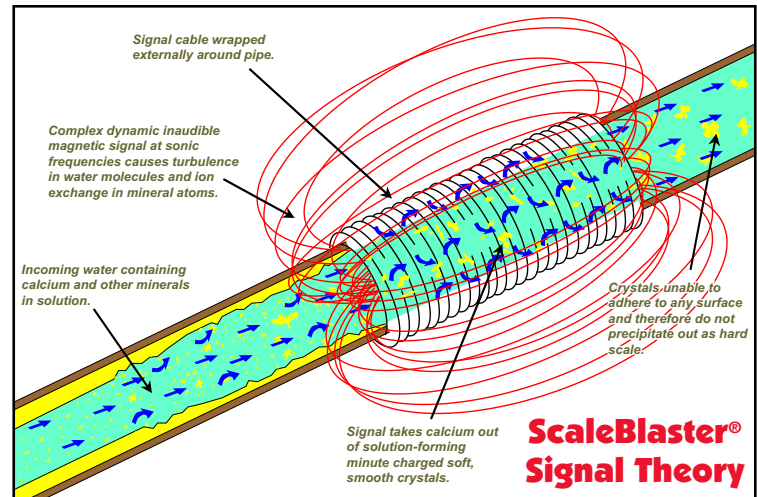
Scale is a coating or precipitate deposited on surfaces that are in contact with hard water. When this hard water is heated or when evaporation takes place, calcium carbonate will form. Practically all equipment coming in contact with hard water will be affected by scale. This scale build-up will clog up pipes, tubes; block jets and form a layer of mineral scale deposits in heat transfer surfaces. The result are billion-dollar problems for industry. Higher energy costs, serious maintenance problems and prolong damage to expensive capital equipment are all symptoms of scale build-up. Up until now, the only reliable solution is expensive chemical scale inhibitors, acid washes or water softening equipment.

## Significant Advantages

The benefits from using ScaleBlaster® are significant:

- **Eliminate limescale deposits from forming** - on sinks, faucets, appliances and heat transfer surfaces that come in contact with hard water.
- **Removes existing scale in pipes, tubes, jets, and heat transfer equipment** - continued scale accumulation cuts down on the flow rate of water in the building. Commercial & industrial equipment will no longer be subject to performance degradation.
- **Lower Energy Consumption** - scale build-up reduces the efficiency of heating systems and increases the time taken for them to achieve their required temperature. Just 1/4" of scale build-up can increase heating costs by 40% or more. Additional energy costs are incurred when pumping water through narrowed pipes and heating scaled-up boilers. ScaleBlaster® maintains the water through heat transfer coefficient of your system, which means you need less energy to run your process at peak performance.
- **Reduced Maintenance & Downtime** - maintenance is costly, time consuming and inconvenient. Equipment downtime and labor costs for routine cleanings will be eliminated. Systems must usually be drained with essential equipment taken out of service for descaling- a costly adventure. Scale inhibitor chemicals, acid washings and water-softening equipment will no longer be required.
- **Extends Life of Capital Equipment** - water systems and pipework represent a major investment. By reducing or eliminating acids, chemicals and water softening, capital equipment will have a longer life span, maximizing the return capital.
- **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 wafer, thus simplifying your compliance measures.
- **Easy Installation & Operation** - the electronic descaler system often takes only minutes to install and requires no plumbing\*. Compare this to chemicals that often require drum storage and disposal, spill containment areas, feed pumps, tubing, injection quills, delivery access, handling equipment and more. An equivalent chemical program and its related equipment require significantly more attention and maintenance.

\* Steel or galvanized pipe may need to be replaced with PVC pipe



## SB-4000 Electronic Descaler Specification Sheet

**Input Voltage:** 90-264 VAC at 47-63 Hz  
**Input Current:** 6A rush @ 115 VAC, 3A rush @ 230  
**Number of Output Channels:** Four

**Output Voltage:** 20VDC  
**Output Current:** 10 Amps Peak Min. @ 1KHz on all 4 channels\*\*  
**Output Signal:** AC Square wave, Frequency user selectable:

Swept frequency from 1KHz to 5KHz  
Swept frequency from 1KHz to 10KHz  
Swept frequency from 1KHz to 15KHz  
Swept frequency from 1KHz to 20KHz  
Swept frequency from 1KHz to 2KHz  
Swept frequency from 2KHz to 4KHz

### Circuit Protection:

Thermal overload protection on Switch-Mode Power Supply (SMPS)  
Over voltage protection on SMPS  
Over current protection on SMPS  
Micro-controller monitoring of enclosure/heatsink over temperature shutdown  
Micro-controller monitoring of internal over temperature shutdown  
Output sensing circuit for over current immediate shutdown protection  
Mains input noise filtering

**Enclosure:** Wall mount, beige powder coated 14 gauge steel. Nema 4 and 12 rated. With Gland Plate and polycarbonate window.

**Operating Temperature:** 10° F to 130° F (12° C to 54° C)

**Storage Temperature:** 2° F to 150° F (17° C to 66° C)

**Warranty:** 3 Years parts and labor

### Physical Properties:

**SB-4000 Unit Dimensions:** 30"x24"x8" (76.2cm x 61cm x 20.3cm)

**SB-4000 Unit Weight:** 96 LBS (43.5 Kg)

**SB-4000 Shipping Crate Dimensions:** 42"x36"x20" (106.7cm x 91.4cm x 50.8cm)

**SB-4000 Shipping Weight:** 160 LBS\* (72.6 Kg)\*

\* shipping weight is estimated do to the unknown amount of wire.

\*\* max coil inductance 200uH, see coil chart

## Partial list of Applications

- ◆ Agriculture
- ◆ Boilers
- ◆ Breweries
- ◆ Car Washing Equipment
- ◆ Coffee Makers
- ◆ Cooling Towers
- ◆ Dairy Farms
- ◆ Decorative Fountains
- ◆ Dish Washers
- ◆ Distillers
- ◆ Drip Irrigation
- ◆ Evaporative Coolers
- ◆ Evaporators
- ◆ Filtration Equipment
- ◆ Fitness Centers/Spas
- ◆ Heat Exchangers
- ◆ Hospitals
- ◆ Hotels
- ◆ Ice-making Machinery
- ◆ Laundry
- ◆ Manufacturing Facilities
- ◆ Nursing Homes
- ◆ Oil Wells
- ◆ Paper Pulp Mills
- ◆ Poultry Farms
- ◆ Processing Equipment
- ◆ Residential Homes
- ◆ Restaurants
- ◆ Schools
- ◆ Soft Drink Manufacturing
- ◆ Swimming Pools & Hot Tubs