# **Superior Water Conditioner**

## Reducing Lime/Scale & Corrosion – No need for chemicals.







Non-Chemical
Anti-Scale & Corrosion

Superior is the performance leader for reducing scale and corrosion in industrial, commercial and residential applications, worldwide. Our systems consume no energy and produce no chemical waste and therefore produce no negative environmental impact and they require no hazardous material reports



Industrial Water Conditioners by Superior Water Conditioners to control scale and corrosion and reduce operational costs.

Just 1/16 inch of scale on a heat transfer surface requires 15% more energy and 1/2 inch of scale demands 70% more energy.

Maintaining scale-free surfaces assures optimum heat transfer coefficients, enabling maximum benefits from your equipment and reduced energy required.

By passing water through the proprietary multi-field magnetic technology, the minerals are altered to a state where they cannot form scale. Instead, the minerals form a light aragonite talc on the inside of pipes and the wetted surfaces of equipment which prevents free oxygen in the water (one of the most common causes of corrosion) from attacking the metal surfaces. Excessive solids settle to the bottom of the system in a soft, purgeable form that is easily removed through manual or automatic bleed-offs. Systems can range from the smallest to largest industrial applications, ranging from 4 GPM to 8,000 GPM and up.





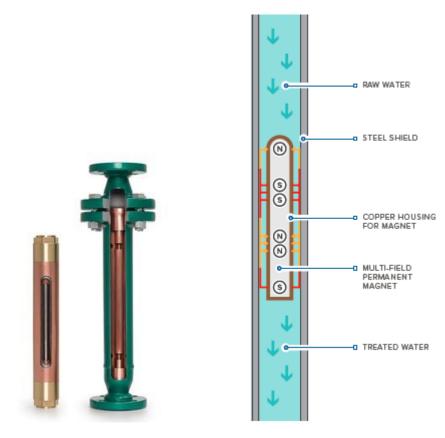
Scale build-up without a Superior Water Conditioner

### **Superior Products Structure**

A closer look at the internals of a Superior Water Conditioner reveals why ours outperforms all other types of systems:

- Design—high-grade, precision-manufactured and with an exceptionally high-quality finish
- Application Sized—to an exact formula for flow rate and pipe size to match each application, up to and including the largest industrial applications in the world
- Inlet/Outlet Connections—facilitate integration into any water system, open- or closed-loop
- Copper Magnet Housing—protects magnet without interfering with magnetic field
- Steel Shield—Focuses the magnetic field within the treatment chamber to concentrate its effect on the minerals in the water for maximum performance

#### **Superior Products: How It Works**



Multi-field Permanent Magnet—Exclusive, proprietary technology and the heart of Superior performance—a magnet like no other on earth— prevents minerals in water from forming scale and corrosion

Superior Water Conditioner contains a permanent magnetic core that has a unique and proprietary multiple-pole, multiple-field orientation along the length. As water passes through the treatment chamber, the dissolved minerals are exposed to a series of reversing polarity alternating magnetic fields, which alter their natural tendency to be attracted to one another and bond tightly together, forming a hard and brittle calcite scale buildup on heat transfer of equipment and piping. Instead, the minerals push away and repel one another, at the molecular level, and precipitate out of solution in a softer suspended state commonly called <u>Aragonite</u>, which will either flow right on through the plumbing system, or drop to a low point in water-using equipment where they can easily be purged through blow-down (draining).

#### **Products functions**

- Prevents scale formation
- Softens & loosens existing scale (descaling)
- Corrosion controls
- Reduces White rust (for Galvanized material)
- Minimizes maintenance
- Eliminates the need for chemicals
- No environmental impact

#### **Products benefits**

- Cost-Effective Water treatment
- Energy Savings
- Water Conservation
- Pollution prevention

## Fields of Applications

- Boilers
- Heat Exchangers
- Cooling Towers
- Chillers
- Evaporative Condensers
- Injection Molding Machines
- Annealing Furnaces
- Reverse Osmosis Systems







**Cooling Towers** 





**Evaporative Condensers** 

## Model Specification for HVAC & Industrial process applications

Model No.	Application	Capacity	Inlet-Outlet Connections	Diameter	Length	Weight
RT-750	Small Boiler	30 L/M	3/4" FNPT	1 3/4"	13"	2.3 kgs
RT-1000	Small Boiler	60 L/M	1" FNPT	2 1/4"	13 1/2"	3.2 kgs
SF-1250	Boiler	110 L/M	1 1/4" Flange	6"	19 3/8"	12 kgs
SF-1500	Boiler	190 L/M	1 1/2" Flange	7 1/2"	23 3/4"	23 kgs
SF-2000	Boiler	280 L/M	2" Flange	8 1/2"	28"	31 kgs

### Model Specification for HVAC & Industrial process applications

Model No.	Application	Capacity	Inlet-Outlet Connections	Diameter	Length	Weight
SF-2500	Boiler	420 L/M	2 1/2" Flange	9"	31"	37 kgs
SF-3000	Boiler	660 L/M	3" Flange	10"	35 5/8"	53 kgs
SF-4000	Boiler	950 L/M	4" Flange	11"	39 3/4"	77 kgs
SF-5000	Boiler	1330 L/M	5" Flange	13 1/2"	37 5/8"	140 kgs
SF-6000	Boiler	1900 L/M	6" Flange	16"	40"	220 kgs
SF-8000	Boiler	2650 L/M	8″ Flange	19"	42"	320 kgs
SF-10000	Boiler	3200 L/M	10" Flange	21"	52"	395 kgs
SF-12000	Boiler	4100 L/M	12" Flange	23 1/2"	54"	540 kgs
SF-14000	Boiler	5300 L/M	14" Flange	25"	56"	670 kgs
SF-16000	Boiler	6800 L/M	16" Flange	27 1/1"	66"	830 kgs
SF-18000	Boiler	2600 L/M	18" Flange	32"	66"	1180 kgs
SF-20000	Boiler	11800 L/M	20" Flange	34 1/4"	74"	1340 kgs
SF-24000	Boiler	15000 L/M	24" Flange	38 3/4"	74"	1837 kgs
ACV-2	Cooling Tower	300 L/M	2" Flange	5 3/4"	14 1/4"	11 kgs
ACV-2.5	Cooling Tower	450 L/M	2 1/2" Flange	6"	16 1/4"	13 kgs
ACV-3	Cooling Tower	680 L/M	3" Flange	10"	26 3/8″∙	41 kgs
ACV-4	Cooling Tower	1100 L/M	4" Flange	11"	29 1/2"	58 kgs
ACV-5	Cooling Tower	1900 L/M	5" Flange	13 1/2"	37 5/8"	122 kgs
ACV-6	Cooling Tower	2450 L/M	6" Flange	16"	40"	186 kgs
ACV-8	Cooling Tower	3400 L/M	8" Flange	19"	42"	270 kgs
ACV-10	Cooling Tower	4500 L/M	10" Flange	21"	52"	338 kgs
ACV-12	Cooling Tower	7500 L/M	12" Flange	23 1/2"	54"	463 kgs
ACV-14	Cooling Tower	11300 L/M	14" Flange	25"	56"	565 kgs
ACV-16	Cooling Tower	14500 L/M	16" Flange	27 1/2"	66"	717 kgs
ACV-18	Cooling Tower	18900 L/M	18" Flange	32"	66"	980 kgs
ACV-20	Cooling Tower	24200 L/M	20" Flange	34 1/4"	74"	1130 kgs

### Pretreatment of Reverse Osmosis Systems (R.O. Systems)

Controls scale formation, which inhibits membrane flow, increases system efficiency, extends membrane life and eliminates the need for soft water supply.



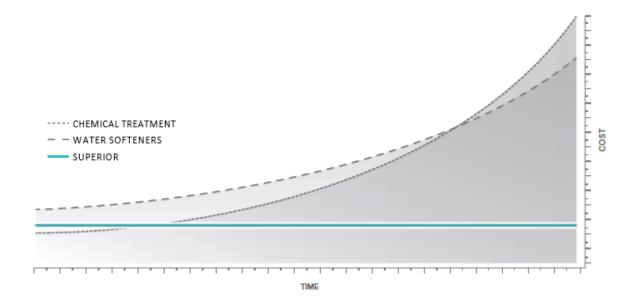
### Model Specification for Pre-Treatment of R.O. Systems

MODEL#	CAPACITY	CONNECTIONS	O.D.	LENGTH
CE-R.50-2	8 L/M	1/2" MNPT	0.84"	10"
CE-R.75-4	15 L/M	3/4" MNPT	1.05"	10"
CE-R1-8	30 L/M	1" MNPT	1.32"	10"
CE-R1.25-15	57 L/M	1 1/4" MNPT	1.66"	10"
CE-R1.50-20	75 L/M	1 1/2" MNPT	1.90"	12"
CE-R2-30	115 L/M	2" MNPT	2.38"	15"
CE-R3-50	190 L/M	3" MNPT	3.50"	18"
CE-R3.5-75	285 L/M	3 1/2" MNPT	4.00"	18"

### **SUPERIOR SAVINGS**

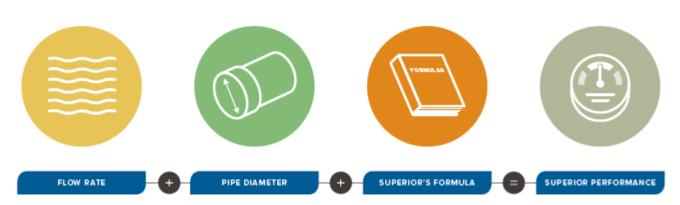
Unlike chemical water treatment and conventional water softeners, Superior Water Conditioners do not add harmful contaminates to water supplies, or discharge hazardous chemicals into our ecosystem, a growing environmental concern. And, unlike all other magnetic water treatment systems, only Superior offers its proprietary multi-field magnetic technology and 50-plus years of proven results to back it up.

		Superior Water Conditioners	Other permanent magnetic devices	Electro-magnetic devices	Chemical water treatment	Conventional water softeners
Softens water		<del></del>	$ \bigcirc$		<del></del>	$-\!\!\!-\!\!\!\!\!-\!$
Requires no energy	0	<u> </u>	$\!$	<del></del>	<del></del>	$\longrightarrow$
Requires no chemicals	D	<u> </u>	$\otimes$	$\!$	<del></del>	$\longrightarrow$
Produces no chemical discharge/non-polluting		<u> </u>	<b>─</b>	<b>─</b>	<u> </u>	————
Multi-field magnetic technology		<u></u>	<del></del>		<u> </u>	————
Most effective scale and corrosion control	0	<u> </u>	<del></del> 0-	<del></del>	<u> </u>	$\longrightarrow$



### **ASUPERIOR FORMULA**

More than simply applying a magnetic field to a water source like some competitors, Superior follows a precise formula based on water flow rate and pipe diameter.



By maintaining a stringent, optimized formula based onflow rate and pipe diameter, Superior Water Conditioners can be correctly sized and integrated precisely into any water system.

Adhering to this formula ensures that the exact amount ofwater flows through the magnetic fields, producing the desired effect— a proven formula of system integration.

Magnetic treatment of water is an effective method for preventing or reducing the formation of scale or corrosion without the use of chemicals.