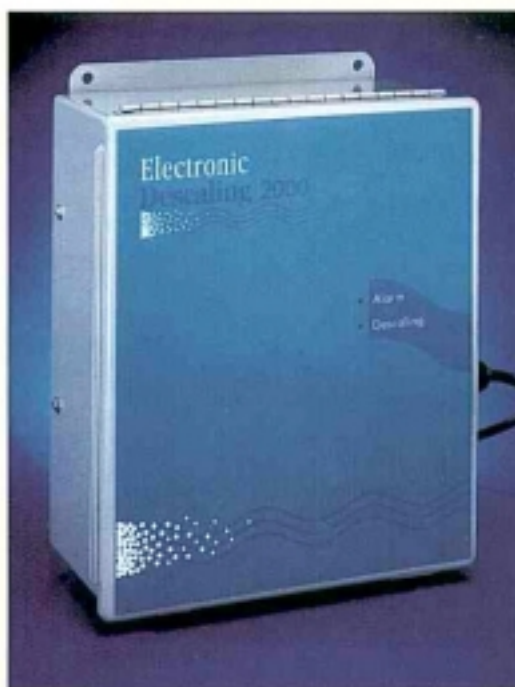




YORK[®] Enhancement Services

ED 2000 Electronic Anti-fouling System



Innovative solution to scaling problems

Scale build-up can foul a chiller's condenser tubes, increasing the thermal resistance of the heat exchanger, and subsequently increasing energy use and costs. Once scaling has occurred, traditional removal methods may shorten tube life, resulting in expensive, premature tube replacement.

That's why YORK offers the ED 2000 system. Its unique electronic process prevents scale fouling without caustic, abrasive cleaners. By eliminating even soft-scale accumulation, ED 2000 technology improves chiller performance, resulting in substantial energy savings and reduced maintenance costs.

Save energy by stopping scale

Chiller energy consumption is dependent on several factors: chiller efficiency, operating hours, cooling load, cost of electricity, and the amount of tube fouling. The chart on the left shows additional energy costs due to fouling. For example, when the fouling factor is 0.003 (0.036-inch scale thickness) the additional energy cost per year for a 500-ton chiller is \$25,300—money you'll save with an ED 2000 system.

Superior to traditional maintenance

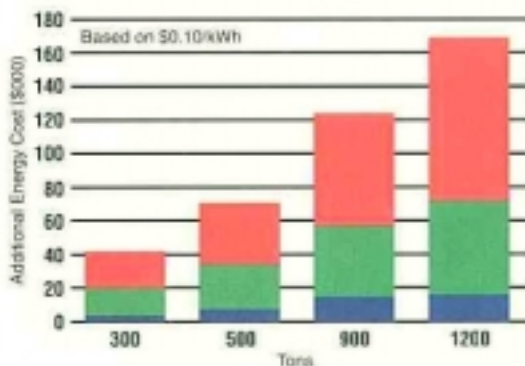
With ED 2000 water management, you eliminate the hassles of cleaning tubes with acid, steel brushes, and abrasives. You also save the wear and tear on tubes caused by these cleaning methods.

Easy to install and to keep running

ED 2000 technology is easily installed, because no invasive procedures are used. A solenoid coil is externally fitted to the condenser inlet pipe. This installation takes only 20 minutes. As a result, there is no downtime and no threat to system reliability. A three-year guarantee ensures years of trouble-free operation.

Fouling Factor (Thickness)

- 0.001 (0.012 inch)
- 0.003 (0.036 inch)
- 0.006 (0.060 inch)



Scale on Tube Bundle



After Installation of ED 2000

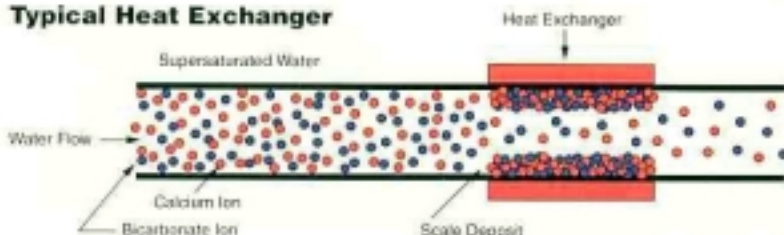
Enhancement Services

ED 2000 Electronic Anti-fouling System

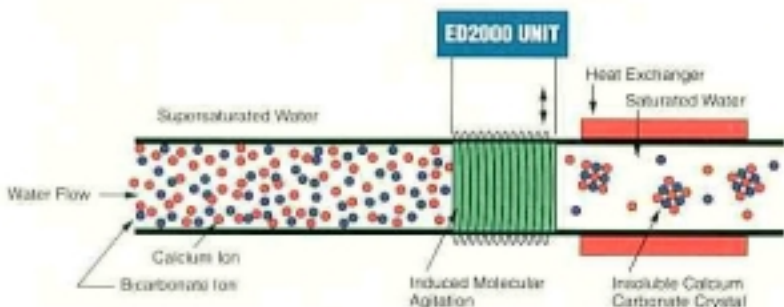
ED 2000 Operation

Without the ED 2000 system, as tower water is warmed in the chiller condenser, dissolved mineral ions precipitate out of the water and adhere to condenser tube walls. Over time, soft deposits form, and eventually, hard scale. This accumulation increases thermal resistance and can even restrict water flow.

Typical Heat Exchanger



Heat Exchanger with ED 2000



ED 2000 technology prevents scale fouling – by inducing dissolved mineral ions to precipitate into larger crystals, which pass through the condenser without adhering to the tube walls. The crystals are formed through solenoid-induced molecular agitation (SIMA™).

The ED 2000 control unit sends a square-wave pulse current through a solenoid coil, which is wrapped around the condenser inlet pipe. The pulse induces an oscillating electric field within the pipe.

The mineral ions passing through the solenoid coil are agitated by the continual change in the oscillating electric field and subsequently precipitate into insoluble crystals. The crystals pass through the condenser without fouling the tubes, and then settle at the bottom of the cooling tower sump. There, they are flushed from the system during blow-down.

Mechanical specifications

- Installation: Installation is completely non-invasive. The hardware includes an electronic control box and a pre-wrapped solenoid coil enclosed in a weather-resistant enclosure that attaches to the control box.
- Specifications – Control Box
 - Dimensions: 12"L x 10.5"W x 5"D
 - Weight: 16 pounds
 - Electrical: 110 or 220 VAC, 50-60Hz
 - Temperature: 0°-140°F
 - Enclosure: UL-rated, NEMA 12
- Specifications – Solenoid Coil
 - Weight: 1 pound
 - Temperature: 0°-210°F
 - Wire: #18 gauge lead wire
 - Enclosure: ABS-plastic weather-resistant coil enclosure, optional stainless steel coil enclosure
- Warranty: YORK will repair or replace any ED 2000 system found to be defective for a period of three years from the date of purchase.



P.O. Box 1592, York, Pennsylvania USA 17405-1592
Copyright © by York International Corporation 1999
Form 50 40-9529 (897)



Subject to change without notice. Printed in USA
ALL RIGHTS RESERVED
RPC 2.5M 199.30
Code: EP