A Proven Way To Stop Corrosion And Dramatically Extend The Life Of Your Chiller - Heater HVAC Equipment

A VORTISAND PORTABLE COIL CLEANING SYSTEM CAN REDUCE THE LEVEL OF IRON IN YOUR CLOSED LOOP HVAC SYSTEMS TO AS LOW AS 2 PPM IN JUST 45 DAYS

The concept is simple - Once every couple of years hook up a portable **VORTISAND** filter to each closed loop system and in just 45-50 days the water can go from various contaminated shades of brown and yellow to crystal clear. There is no downtime because your closed loop system continues to run while it is being cleaned.

FOR CLOSED LOOP CHILLERS AND HEATING SYSTEMS & COOLING TOWERS

Theoretically, closed loop systems are supposed to remain very clean, but we often see a very different situation. Chilled and hot water systems can become contaminated with corrosion products such as suspended solids and micro-organisms. Traditional cartridge-type filters are usually not sufficient to keep the water clean. The **VORTISAND** filter pulls out all contaminants down to 1/2 micron in size making your water as clean as it can possibly get with affordable mechanical filtration methods. The crystal clear water produced by the **VORTISAND** filter allows most state-of-the-art chemical treatment systems to operate at substantially higher levels of efficiency giving you a much ***bigger bang for your chemical treatment buck!***

Very Impressive Results

BEFORE *(Day 1)*

AFTER *(Day 45)*

THE BEST INDICATION OF WHAT A VORTISAND FILTER CAN DO FOR YOU IS TO CONTACT A FEW OF OUR MANY USERS AND HEAR WHAT THEY SAY!

For additional information contact…

GREAT LAKES INDUSTRIAL CONTROLS

3560 Pine Grove Ave. - Unit #352
Port Huron, Michigan 48060

Phone: **1-800-546-0705**
Fax: 1-866-766-8658

1387 Confederation Street
Sarnia, Ontario N7S 5P1

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THE PORTABLE VORTISAND®

A 1/2 micron filter that can be used alternately on hot and cold water closed loop applications as well as on cooling towers.

The portable **VORTISAND** works in conjunction with the chemical treatment program. The two treatments, one mechanical and the other chemical, offer longer equipment life and maximum efficiency.

SIGNIFICANT BENEFITS:

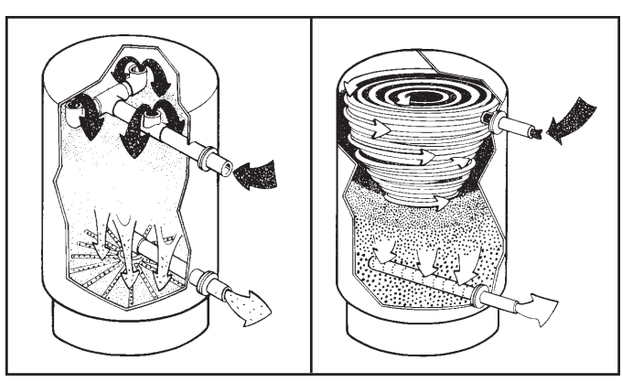
- **Can substantially enhance the performance of your chemical treatment program**
- **Typical payback is under 12 months**
- **Eliminates periodic maintenance required to clean fouled coils and tubes in most cases**
- **Lower energy costs due to improved heat transfer through cleaner coils and tubes**
- **Can eliminate unscheduled outages due to fouling**
- **Portable unit eliminates the need to buy and install individual filters**
- **Mechanical life of coils and exchangers is dramatically extended**

HOW IT WORKS

The dirty water from the closed loop is easily and quickly introduced into the filter (1). A pump (3) is then used to give the raw water a spin as it enters the cylindrical stainless steel tank (4) and to overcome the pressure drop and to overcome the pressure drop across the media. This creates a cyclonic swirl over the media be, thrusting heavier contaminants against the perimeter of the vessel and storing them in suspension over the filter medium (sand). The smaller and lighter contaminants are carried onto the sand which is compacted by the centrifugal action. The water is then released through this constricted media leaving particles behind, without disrupting the cooling water flow (2).

Backwash is started automatically when the differential pressure across the filter bed reaches the preset point. Clean water is then introduced (5) at a very low and regulated rate fro the bottom of the tank and released to drain (6) carrying with it the particles and cleaning the media. The control panel (7) includes a differential pressure switch, a 24 hour timer, a backwash counter and the pump starter. Electrical connection is quick and easy. Finally, a skid with wheels (9) allows you to move the filter from site to site.

VORTISAND Removes Particles Down to 1/2 Micron in Size v.s. Traditional Sand Filters That Cannot Remove Particles Under 10 Microns



Micro-organisms and particles under 10 microns in size produce fouling which can result in scale build-up and algae contamination. Because of their small size, they become food and support for bacteria that proliferate very rapidly creating algae and slime contamination. They may lead to the underdeposit corrosion of metal pipes.

Suspended solids, even at this microscopic size, cause several problems and cannot be removed by a traditional filter. Particles less than 10 microns in size will tend to agglomerate and settle in areas of the system where the velocity is low. These include elbows, cooling and heating coils, sumps, condensers, evaporator tubes and control valves. These particles come from various sources: sir-borne contamination, (the result of water in contact with the air surrounding the cooling tower), corrosion, oil residue, debris, and particles dispersed by chemical treatments.

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