

Cottonwood Air Intake Filter Screens

Changing the Dynamics of Chiller and Cooling Tower Maintenance

When you think of chiller and cooling tower maintenance the first thought is usually about how much of a hassle it is to perform this important but unpleasant task; power washers, cleaning solvents hoses, buckets and other cleaning accessories need to be assembled and moved from unit to unit, up and down off of rooftops, behind buildings and other out of the way locations; chillers and cooling towers need to be opened, housings need to be removed and internal components power washed (all the while getting the debris from the cleaning process all over you) then the equipment needs to be reassembled before moving to the next one – WOW, what a hassle!

As unpleasant this job is, ensuring that the cooling equipment which supports your production process stays clean and running efficiently is one of the most mission critical jobs there is because if your process cooling equipment fails due to system fouling, then production will fail – costing the business thousands of dollars in maintenance, repairs, downtime and lost productivity.

“It is important that companies find effective maintenance solutions that streamline HVAC maintenance activities and enable effective handling of work loads with fewer people and fewer budget dollars”

In most regions of North America, cottonwood seed is a major contributor of cooling equipment fouling. This naturally occurring airborne contaminant (generated by the Poplar Tree) usually effects operations from May thru early August, hence, companies that rely upon process cooling must clean their equipment frequently during this period or risk failure. Then comes the dog days of summer when insects, paper, construction debris, birds and just about everything that blows in the wind seems to find its way into your cooling equipment, then comes the final seasonal assault during the fall season when the trees drop their leaves, scattering them to the wind where they always seem to find their way to your condenser coils and cooling towers.

Keeping up with HVAC maintenance during the spring, summer and fall is nearly a full time job for most production operations and as the economic realities of business cause maintenance budgets and staffing to be reduced, it is increasingly important that companies find effective maintenance solutions that will streamline their day to day HVAC maintenance activities and enable them to more effectively handle work loads with fewer people and with fewer budget dollars.

Think about it, if you are in a lean maintenance staffing situation and you had five things to do on any given day and one of the tasks was cleaning condenser coils and cooling towers, how high on the “To Do List” would it rank? Given that it’s time consuming and hard, dirty work, most people would rank it pretty low; Unfortunately, if the equipment is in need of cleaning and maintenance continues to be delayed, no reason for delaying it will change that fact and the equipment will continue to operate at an increasing level of inefficiency until the equipment can no longer support the cooling requirements.

Now consider the same list of five things to do except this time cleaning cooling towers and chiller coils only took a few minutes per unit using a broom, now where would this task would fall on the “To Do List”? Well, there’s no real way of knowing, but the likelihood of it ranking high on the list is pretty good. Furthermore, if cleaning the equipment was as easy as using a broom or rinsing with a garden hose and it didn’t require opening or disassembly of the equipment, then nearly anyone could perform the maintenance and that would change the dynamics of the HVAC / Cooling tower maintenance process.

How to Change the Dynamics of the Maintenance Process.

Air Intake Filtration specifically engineered for use on condenser coils, cooling towers and other HVAC equipment is one of the best ways to prevent fouling of your equipment. Unlike window screen, bug screen, shade screen and conventional filters including roll media, pleated filters and electrostatic filters which are largely designed for internal use on air handling units and forced air heating systems, Air intake filters are specifically designed to mount to the outside of the equipment where it stops airborne debris before it enters your system and where it can be easily seen and quickly removed using

a broom, brush, shop vacuum or by simply rinsing with a garden hose - Even the rain has a cleansing effect on air intake filters and they never need to be removed for cleaning. Furthermore, because of the critical airflow requirements on cooling towers, and air cooled chillers, air intake filters are specifically engineered to be nearly invisible to the airflow on high volume / high velocity air flow systems (*static pressure drop is less than 1/10” w.g. at 600 fpm air velocity*).



Air Intake Filters Protecting a Process Cooling Tower



Air Intake Filters Protecting Chiller Coils from Cottonwood Seed

So What’s The Big Deal About Air Intake Filtration?

Air Intake Filters help eliminate the “hassle factor” by dramatically reducing HVAC maintenance time and effort - but the benefits don’t end there; here’s what else they will do to save budget dollars and change the dynamics of your maintenance process:

Condenser Coil Filter Screens -Benefits

- Prevents debris from getting into coils.
- Reduces / eliminates annual pressure washing
- Reduces / eliminates need for cleaning chemicals
- Helps reduce energy cost because coils stay clean all season long.
- Dramatically reduces maintenance, repairs, downtime and lost productivity.

Cooling Tower Filter Screens - Benefits

- Reduces / eliminates sludge build-up in the basin by significantly reducing bio-loading.
- Prevents fouling of fill.
- Prevents plugging of strainers, blow-down valves and heat exchangers.
- Helps reduce algae growth by diffusing sunlight, which supports photosynthesis.
- Reduces water treatment chemical consumption due to reduced bio-loading.
- Dramatically reduces maintenance and repair cost, downtime and lost productivity.

We’ve all heard of the old saying that “there’s more than one way to skin a cat”, so if your operation is looking for a better, more efficient way of skinning the HVAC and cooling tower maintenance cat then Air Intake Filter Screens just might be the solution you are looking for.

Randy Simmons, VP, Air Solution Company a manufacturer of Cottonwood Air Intake Filter Systems.

For more information and to locate a distributor nearest you, contact Air Solution Company at 513-860-9784 or visit their website at www.airsolutioncompany.com