

Technology Corner

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Reliable Data Center Cooling

Data centers house sensitive computers that require a consistently high level of critical cooling. Many Fortune 500 corporations rely on outsourced facility space to help maximize their data center strategy and IT resources to ensure their data operations run efficiently. According to Ponemon Institute's 2013 Cost of Data Center Outages Survey, the cost of downtime incidents averages \$690,204 per incident, among organizations polled. Immediate availability of critical facility services, such as equipment cooling is considered vital within densely packed server rooms so that the computing equipment does not overheat. Cooling is also the biggest user of electrical power within a data center, so maintaining HVAC energy

efficiency is key to not breaking the operations budget. A leading data center provider, based out of California offers a full spectrum of data solutions, from move-in-ready to custom-built. With over 140 data centers across 32 global markets, this worldwide provider focuses on minimizing any chance of cooling disruption that can impact uptime, downtime incidents and costs associated with cooling.

One of 3 locations in the Chicago area, includes a facility that is 800,000 square feet and split up between 3 buildings. Vital cooling operations are equipped with 800 ton BAC cooling towers, 25 ton Trane and Greenheck RTUs. With the facility being located next to extensive Cook County Forest Preserves, local environmental conditions caused system problems. Cottonwood seeds were getting sucked into cooling tower strainers, rooftop unit air intakes and creating clogs. The facility Chief Engineer had heard of a prefilter to stop this type of problem and contacted their local filtration expert, Carolynn Gallmann, of DP Systems, based in Addison, Illinois.

The large cooling towers were fitted with custom sized PreVent® air intake filter Model BHA, containing high abrasion media. Each RTU was fitted with PreVent Model U, containing woven electrostatic polypropylene media to capture even more of the finer particles. These air intake filters act as a primary pre-filtration defense to help prevent air flow obstruction damage and extensive maintenance that large volumes of debris can cause. PreVent can be custom designed and manufactured to fit any air intake protection application.

Designed for strength and durability, PreVent air intake filters are UV protected and stand up to extreme outdoor exposure, with a variety of design features that allow them to be attached easily and securely. Before the air intake filters were installed, costly coil cleanings were required 3 to 4 times per year. Now that PreVent has been installed, coil cleanings are only required 1 time per year. The filter screens can be quickly brushed clean with a broom, as needed during peak cottonwood season.



Debris is quickly brushed off PreVent surface with a broom.



According to Gallmann of DP Systems, "The PreVent filters are working great so far - saving the engineering department on time, cleaning, and peace of mind!"

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