



# Rooftop Units Under Annual Cottonwood Attack!



**R**ooftop units across the country are getting clogged with cottonwood. This was especially true for Arvada, Colorado. Holbrook Service, specializing in commercial and industrial HVACR for the past forty years, was called in to take care of servicing the 35-50 ton Carrier units located on top of a 103,000 square foot office complex. Their annual invasion of airborne cottonwood seeds was

just around the corner. A particularly moist winter in the snowy Denver area had produced ideal weather conditions for their abundant blooming trees. Failure to provide adequate airflow to a building or HVACR systems and production/process equipment adds up to a costly loss of productivity in safe, efficient system operations. Costly demand service calls from building tenants complaining of diminished cooling capacity during the hot summer months can add up as well.

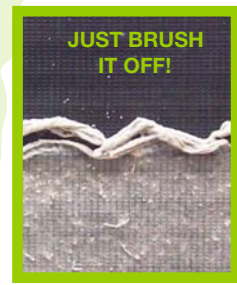
This is especially true of cooling application systems where heat transfer surfaces are dramatically impacted by buildup of dirt on the surface. In a cooling system, heat absorption and release take place on condensing surfaces (fins and coils) and are dependent on surface transfer and airflow to achieve an operational goal. As dirt insulates those surfaces or causes insufficient air flow through the coils, heat transfer from the refrigerant to the air is reduced. This causes the condensing temperature of the refrigerant to increase and forces the compressor to work harder.

Airflow obstructions, debris and dirt buildup will impact equipment ability to work efficiently. According to Mike Schmitt, part of Holbrook's sales team, "Prime cottonwood season, here in Colorado, can choke air intakes, reducing air flow by as much as 50% or more, and ultimately cause system failure." Under normal conditions, this particular building requires quarterly maintenance for the heating/cooling/ventilation equipment. During cottonwood season, the condenser coils become completely impacted in a very short period of time. They required frequent and labor intensive cleaning by onsite maintenance staff on a weekly basis. Cleaning consisted of brushing, chemical treatment, evacuation with compressed air and/or CO2. Chemical cleaning itself presented a high reoccurring consumable expense along with environmental drainage issues. Permatron's PreVent® air intake filter, recommended and installed by Holbrook Service, is made of permanent, washable black polypropylene, with UV protection. Custom made to the air intake perimeter and finished with either a flexible vinyl or rigid galvanized or stainless steel edge, PreVent® is easily mounted using a variety of unique attachments. Once installed, the air intake filter eliminated the need for deep cleaning, and cottonwood seeds can easily be removed with a broom.

Dirty equipment means energy efficiency decrease, heat buildup, higher discharge pressure, increased amp draw and motor strain. Forced to run for longer cycle times, at reduced capacity, operating costs escalate, breakdowns occur and equipment life expectancy decreases. Well maintained equipment costs less to operate, promotes optimal life expectancy and energy efficiencies. A proactive approach to equipment maintenance helps deliver consistent high level performance and minimizes equipment downtime. For more information, visit [www.permatron.com](http://www.permatron.com) or call 1-800-882-8012.



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