

Economic Reality



Sales revenues are declining. Survival by reducing costs is a way of life. Companies are decreasing staff and delaying capital equipment purchases. The result? Greater burdens on facility managers, who still need to keep their building systems running at peak efficiency. As expenses are scrutinized, HVACR systems represent a significant percentage of capital costs and operating expenses. Large energy-using systems, such as chillers and cooling towers, can translate into significant annual savings or losses depending on how well they are maintained. Ultimately, HVACR systems generate an estimated 25 percent of the total energy use in commercial and institutional buildings and play a critical roll in keeping occupants comfortable and productive and production processes efficient.

In addition to economic cuts, facility managers are challenged by increased "green" building trends including energy conservation incentives, Leadership in Energy and Environmental Design (LEED) programs, and corporate environmental goals. Federal energy regulations mandate reducing the amount of carbon dioxide ("carbon footprint") and greenhouse gases generated by power plants. The electricity needed to run HVACR systems is generated by the fossil fuel being burned by power plants. For every kWh used, more greenhouse gas emissions are generated. Dirty, clogged coils and other poorly maintained system components have a direct link to the efficiency of cooling equipment and, consequently, greenhouse gas emissions.



Equipment air intakes pull in any airborne debris that mixes with outside air.

A simple way to help achieve both objectives is encouraging preventative maintenance products, like air intake filters, as a way to reduce energy consumption. With EPA research showing that as little as 0.042 inches of dirt on an air conditioning coil can reduce its efficiency by 21%, the installation of an air intake filter is a smart business decision for energy efficiency reasons alone. Escalating energy use by a dirty, airflow blocked system can be invisible because energy bill increases occur slowly over time. For each 1 degree Celsius rise in discharge temp there is an increase in power consumption of 1.75% and a decrease in cooling capacity of 1.1%. A dirty system runs 80% of the time fighting dirt when it should be operating at 30% during mild weather. The additional costs associated with labor intensive chemical cleaning and scrubbing, potential breakdowns and replacement costs of burned out motors or compressors simply exacerbate an already expensive set of problems.

Permatron's PreVent® Equipment Protection Filters are air intake filters designed to stop airborne debris at the point of entry, allowing an air handling system to perform optimally. Every filter is custom made to fit the air intake opening, with a variety of design features like flexible vinyl edging or rigid steel frames which allow the filter to be attached easily and securely. Independent testing (done by UL Laboratories) shows PreVent®, with its low 0.02 in. w.g. initial resistance to air flow, had little impact on system pressure drop. During testing, the filter caused less than 1% change in compressor discharge pressure.



PreVent® filter easily brushes clean with a broom.

The bottom line is that business operations disrupted by equipment malfunction or failure means a loss of revenue and a reduction in work productivity. You can keep equipment running clean and green between required maintenance with the help of air intake filtration. PreVent® the damage before it's too late!

For more information on your custom air filtration needs, contact sales@permatron.com

Debris like cottonwood gets embedded in fins and coils totally blocking air flow.



Dirty fins and coils require hand cleaning and chemicals to unblock the air flow.



PERMATRON®

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