



TOTAL FILTRATION SERVICES

# Improving Air Quality and Protecting Equipment for a Power Transformer Manufacturer

## Customer Case Study



### PROFILE

This case study involves one of the largest manufacturers of high voltage power transformers in the world. Their products are used throughout North America by power generation plants and various industrial manufacturing facilities.

### CHALLENGE

Shortly after opening their new manufacturing plant in Tennessee, Total Filtration Services began partnering with the maintenance team to lower the total cost of ownership for their filtration.

During a site visit, a TFS Account Manager surveyed the facility to understand the customer's filtration needs and identify potential concerns. While walking near the boiler room, TFS observed a large set of louvers allowing fresh air into the building, but without any sort of filtration to block debris from getting inside. HVAC filters were being stored in this area (often with boxes left open), which means debris could collect on the media.

During the spring and summer months, cottonwood is a common type of debris that fills the air and collects on equipment. This is even more common in the South region, where this customer's plant was located.

If left un-addressed, the maintenance team would spend a significant amount of time keeping up with cottonwood collecting on shop floors, causing a slip hazard. Indoor air quality was also a concern, as employees could breathe-in the cottonwood

seed as its pulled through the louvers and into the facility.

### THE TFS SOLUTION

After surveying the facility, TFS met with maintenance to discuss the concerns with the cottonwood seed getting into the facility and introduced the PreVent® intake filter screen product from Permatron as the recommended solution.

The PreVent® screen is a washable filter that can be mounted to any air intake and be re-used by simply blowing-off dust and debris with compressed air or by washing with detergent if oils are present.



TFS attached a sample 20x20 PreVent® screen to the louvers outside of the office area using magnets. The maintenance manager was immediately impressed with its effectiveness and requested screens for the rest of the louvers for the main building where transformers are manufactured.



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An additional set of PreVent® screens were ordered to prevent debris from entering the cleanroom, located in a separate building where the transformers are filled with oil and prepared for shipping to the end user.

## RESULTS

While most case studies focus on responding to an existing issue, this is an example of how partnering with TFS prevented issues with air quality, safety, and equipment protection before they occurred.

The customer has been satisfied with the PreVent® screens and no longer has concerns with debris getting into their buildings or collecting on equipment.

Months after the initial set of PreVent® screens were installed, the customer ordered more of them to replace the polyester media used to protect their compressor intake.



*Compressor intakes protected by polyester media on the left-side and the PreVent® screens on the right.*

The new screens were sized to fit each compressor unit and prevent debris from getting clogged and breaking-down, which could cause production down-time and costly repairs.

Permatron PreVent® air intake filter screens were also installed on each of the customer's cooling towers to keep debris out of the water that circulates throughout the plant.



*Cooling tower with a PreVent® screen attached*

As a result, the maintenance team no longer exhausts valuable resources power-washing the cooling coils, as they can easily remove and clean the screens in minutes.