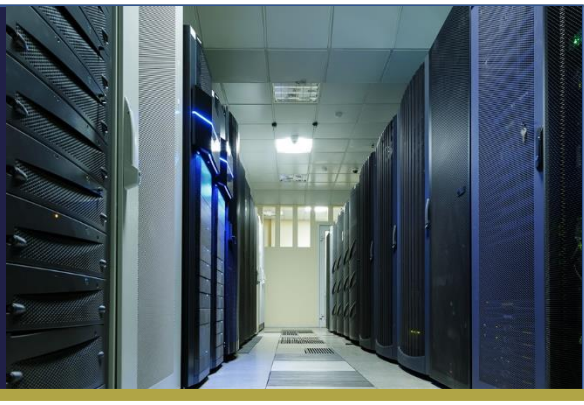
TOTAL FILTRATION SERVICES

Resolving Filter Failure and Preventing Downtime for Data Centers

Customer Case Study



PROFILE

A privately-owned data center in the Ashburn, VA area was experiencing issues with collapsing filters in their rooftop air handling units and required a new filtration solution to extend filter life and protect cooling coils.

CHALLENGE

The customer in this case study owns and operates multiple data center facilities throughout the United States. During a visit to the Ashburn, Virginia facility, a TFS filter expert met with the director of engineering to investigate recent orders that included twice the number of pleated filters than what would be considered normal (for the size of the facility).

TFS learned the customer's maintenance team was replacing their pleated filters more frequently due to them collapsing from excessive moisture exposure. With each rainfall, the rooftop air handling units were pulling in moisture, which collected onto the beverage board frame of the filters. This caused the frames to break down and leave the cooling coils unprotected, as this was only a 1-stage filtration system.

Data centers operate 24/7 with zero downtime for maintenance, so they depend heavily on an energy-efficient cooling system to prevent servers from overheating. In the event one or more of the cooling units goes down, the customer would be forced to rent a temporary unit to maintain the ideal operating temperature as the damaged unit is repaired or replaced.

THE TFS SOLUTION

Upon learning of the pleated filters collapsing, TFS recommended a MERV 8 rated polyester ring panel filter from one of their trusted manufacturers, Viskon-Aire. The ring panel filter offered the same form, fit, and function as the pleated filter, but with increased durability due to the metal frame over beverage board.

The customer was comfortable with the recommended replacement and ordered just under 300 filters (enough for one complete change-out) for their rooftop units.

RESULTS

By switching to a ring-panel design, the customer doubled the life of their rooftop filters, thanks to the increased durability provided by the metal frame. In addition to saving nearly 50% in product costs, the customer was able to re-allocate the efforts of their maintenance crew towards more energy efficiency improvements, which is a key objective for any data center.

With the new filters staying firmly in place for as long as 4 months, coil cleaning services are kept at the regularly scheduled intervals (1-2 times per year), and the units are not at risk of being shut down for repair or replacement.