case STUDY

FOOD & BEVERAGE

Air Filtration - Total Cost of Ownership

Poultry Processor Realizes the Right Filter Combination Leads to Substantial Savings in Energy, Labor, and Total Filter Cost

Company Profile:

Poultry processing and supply company with 37 processing plants and 12 prepared food facilities.

The Situation:

The company processes 44 million birds per week in the 37 plants or 62 million birds per plant per year, equivalent to 1.2 billion pounds per manufacturing plant. The process environment is highly humid from steam and high pressure water used during wash downs and particulate loading is very heavy from a process using flour during chicken preparation for various types of prepared meals.

The Action:

The company was using a low cost pleated panel filter (AAF® HC PerfectPleat®) because the air handling unit filters required change out every two days on average with the severe environmental conditions. The processing company was also using the AAF RigiFil® 95% final filter and changing out every 60 days due to high pressure drop caused by severe loading conditions. With the performance guarantee programs offered and because of the excessive labor costs related to the frequent filter changes, the company decided to test the Camfil Farr 30/30® panel filters and a combination of Durafil® 4V and Riga-Flo® 95% in their HVAC system.

The Result:

The Camfil Farr 30/30 filters lasted 14 days or seven times longer than the less expensive PerfectPleat. Camfil Farr confirmed that the Riga-Flo filter performs better in high moisture/high dirt load conditions than the Durafil 4V. The Riga-Flo lasted 120 days while maintaining its structural integrity and delivering 95% efficiency during its entire use cycle.

The number of panel filters required annually at the test plant was reduced from approximately 20,000 pleated filters to approximately 3,000 through the use of LCC, test banks and the 30/30 guarantee. The Riga-Flo final filters were also twice the cost of the RigiFil product but did not yield any additional total spending by the customer because of less frequent change outs, which were reduced from approximately 2,000 pieces to 1,000 pieces.

While the 30/30 was twice the cost of the competitor product, labor savings alone were estimated to be $34,000 annually plus $5,000 in labor savings due to less frequent final filter changes.

"The panel filters required annually at the test plant were reduced from approximately 20,000 pleated filters to about 3,000."

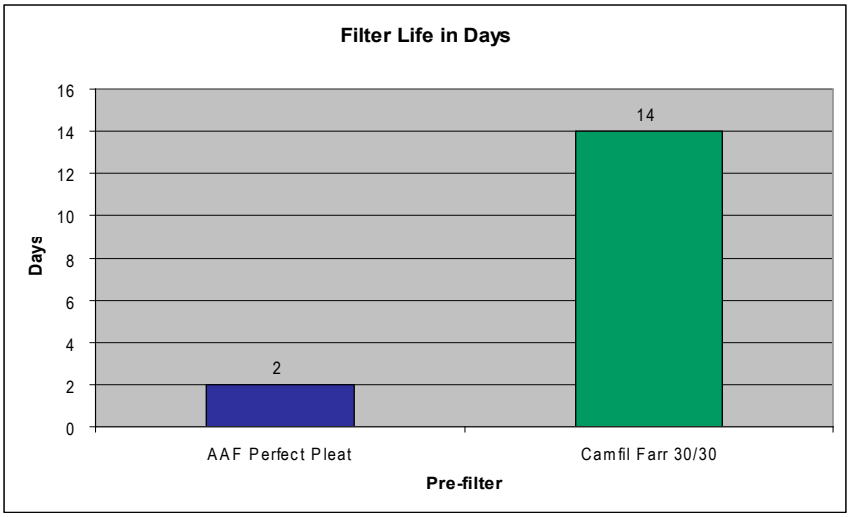
The Proof:

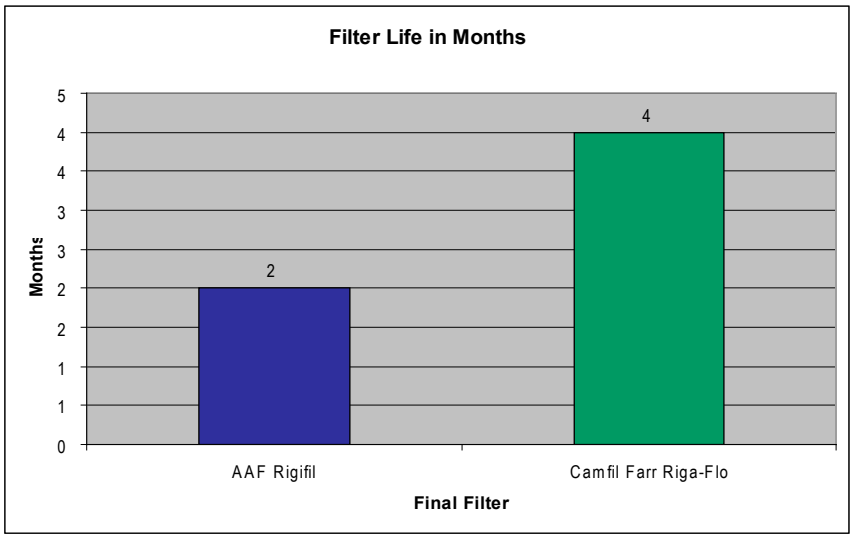
Why did the 30/30® panel filter have seven times the filter life?

- Using a mechanical particle capture principle, the 30/30 does not drop in efficiency while in service as will other pleated panel filters that incorporate an electrostatic charge to obtain their stated MERV rating.
- Its radial pleat design extends filter life and lowers average pressure drop reducing the number of filter changes and requiring less fan power to move air through the filter.
- The high wet-strength beverage frame and welded wire media backing provides structural integrity in any type of HVAC application virtually eliminating the additional costs associated with filter bypass or filter failure.
- Its high media weight and uniform lofting ensures that it will outlast any other pleated filter.

Why did the Riga-Flo® final filter have twice the filter life?

- The Riga-Flo is constructed of high-lofted, depth-loading, microfine glass media for longer service life and uniform low resistance to airflow.
- Its unique laminated media backing maintains fiber blanket uniformity and precludes media migration. The backing is bonded to the media to support and maintain tapered radial pleats and prevent media oscillation during varying system airfl ows.
- Expanded metal or wire backing are eliminated to prevent rusting component system contamination.
- Includes an enclosing frame of corrosion resistant galvanized steel.
- Includes all-metal contour stabilizers on the air entering and air exiting sides to provide pleat support through turbulent or varying airflows.
- The all-metal diagonal support braces provide filter rigidity and media pack protection. The braces are mechanically attached to the contour stabilizers to assist in maintaining a rigid and durable filter pack.





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