

Air Filtration & Energy Savings

Technology Company Sees for Themselves that the Right Filter Combination Can Save Them Money in the Long Run

Company Profile:

A Dallas-based Fortune 500 company, renowned for developing and commercializing semiconductor and computer technology.

The Situation:

The Dallas company was buying filters as commodity items from AAF® for decades. Every couple of years, the technology company would ask for better pricing and every year AAF obliged. Camfil Farr approached the largest of four FAB's at the corporate campus, with a two-fold value approach. The first approach demonstrated the difference between "fine fiber" media versus "coarse fiber" media and then peaked the company's interest in potential energy savings through the "you get what you pay for approach."

The Action:

A Life Cycle Cost (LCC) analysis was conducted on the facilities system which convinced the technology company of the substantial savings potential in their energy budget. The analysis demonstrated that they could save money by spending more money on quality filter products that offer longer life and lower pressure drops than the commodity type products they had been buying for years.

The end user wanted to see for themselves; thus In-Situ tests were set up to compare the 85% DriPak® 2000 coarse fiber bag filters the company had been using against the Fine Fiber Durafil® 85% 4V. In addition, AAF's Fine Fiber 85% VariCel® V was tested. All three air handling units were challenged by the same conditioned air, at the same amount of airflow, and over the same timeframe. The two AAF filter banks were prefiltered by the PerfectPleat® HC and had AstroCel® HCX HEPA filters as their final filter. The Camfil Farr bank was prefiltered by the 30/30® and had the 431 square foot Filtra 2000® as the final filter.



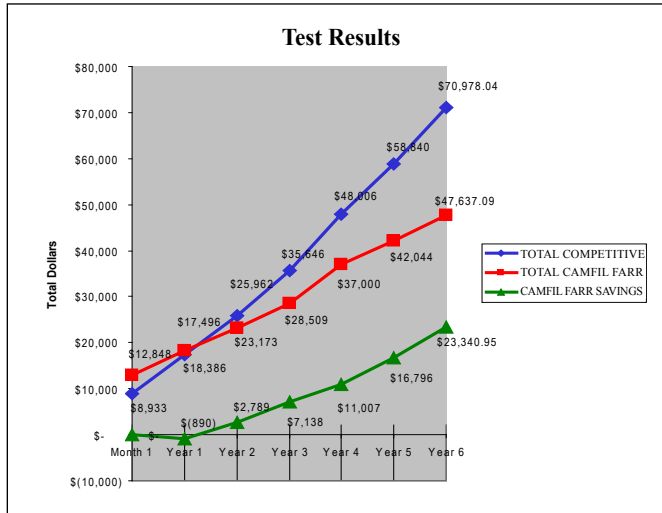
The Result:

The superior performance of the Camfil Farr fine fiber media proved itself on day two when the two year bag filter performance and newly installed AAF bag filter performance were compared to the Durafil 4V and Varicel V. Prior to the In-Situ testing, LCC calculations projected total savings of 37% over five years. At the end of the testing, the LCC calculations aligned almost exactly with the actual field performance. Three years after the start of the testing, the calculations are still aligned between LCC projections and the real life pressure drop of the 30/30's, Durafil, and the Filtra 2000.



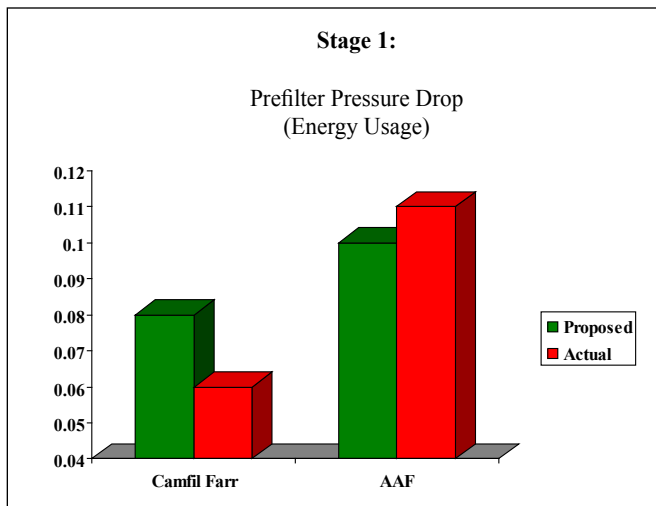
“Side-by-side testing shows overall savings with higher-priced, quality filter products that offer longer life and lower pressure drop.”

The Proof:

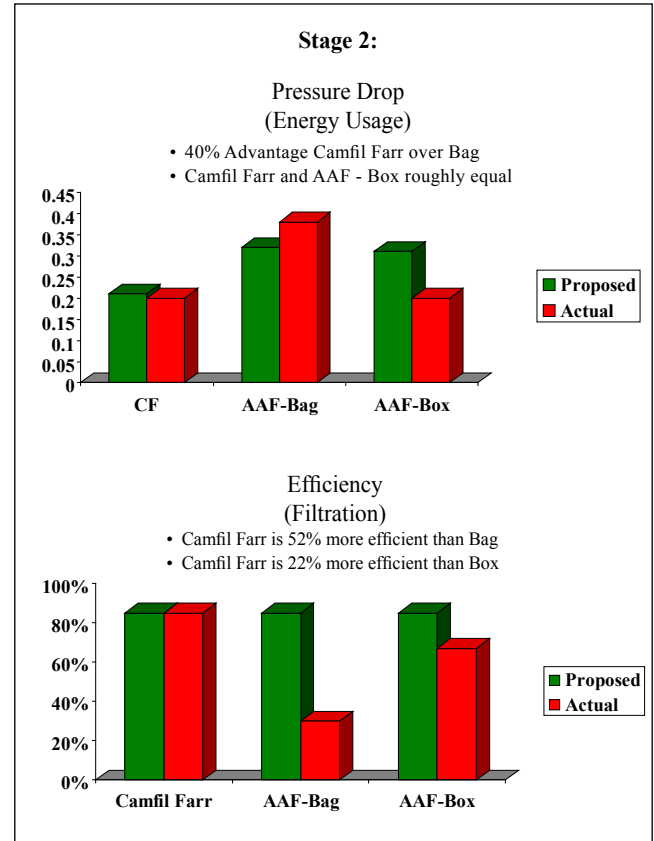


The capital investments corporate policy for the technology company was a return on investment (ROI) of 18 months or less. The LCC calculations projected an ROI of approximately 12 months, leading to the start of an In-Situ test.

The In-Situ test results for Stage 1 filters demonstrated a better pressure drop performance with the 30/30® and a worse performance for the AAF® PerfectPleat® than the LCC calculations predicted. The Stage 2 filters got more complicated during the In-Situ test. While the MV13 Durafil® 4V's and AAF Synthetic Bag filter pressure drop performed as predicted, the VariCel® V MV13 filter, a fine fiber product, over performed with a lower than predicted pressure drop. The reason for this became apparent when the efficiencies of the three MV13 filters were revealed.



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The Durafil performed as specified, while the synthetic bag filter dropped to MERV 9 levels. The surprise was the efficiency under performance of the Varicel V, which performed at low MERV 12 levels, accounting for the lower pressure drop performance of the Varicel V product.

The largest pressure drop/energy savings came from the HEPA filter (Stage 3) section when comparing the Filtra 2000® to the AstroCel® HCX product, with the Filtra 2000 saving nearly .50" w.g.

