

Air Filtration - Total Cost of Ownership

Prestigious Children's Critical Care Facility Achieves Significant Savings...and Cleaner Air

Company Profile:

Midwest medical center recognized as a leader in pediatric healthcare, research and medical education. Hospital performs 28,000 surgeries per year and has an active medical staff of 1,100 serving 475 licensed beds. It is ranked in the top five children's hospitals by *Child* magazine, and named among the top ten pediatric hospitals by *U.S. News & World Report*.

The Situation:

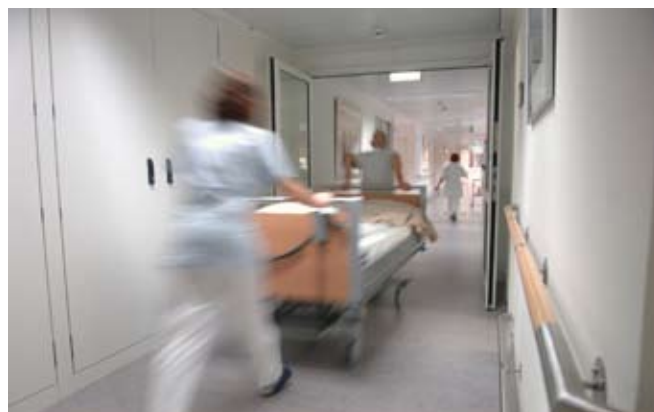
The complex has approximately 30 air handling units supplying 2.5 million cfm of treated air. Filters were being purchased through a hospital buying group that supplied the hospital many other products. While the per unit filter cost was low, the cost of ownership was very high as proper filters were not being used, filters were being changed too infrequently causing high energy cost, and pre-filters were being used when not necessary.

The Action:

The Camfil Farr distributor completed a Life Cycle Costing (LCC) analysis using the proprietary Camfil Farr software that has been in use for over 15 years. It calculated Total Cost of Ownership (TCO) of the existing product (AAF® PerfectPleat® and VariCel® VXL) with the proposed Camfil Farr solution. The LCC software assessed cost of product, cost of filter changeout, cost of energy, and cost of filter disposal. In addition, the software identified the optimized pressure drop filter change point to minimize energy usage and ensure continued proper airflow supply to the facility.

The Result:

Camfil Farr proposed eliminating the existing pre-filters due to their low efficiency and replacing all final filters with a Hi-Flo® fine fiber



bag filter (24" x 24" x 22", 10-pocket, MERV 14). The Hi-Flo fine fiber media ensures there is no drop in efficiency as experienced with electrostatically charged, coarse fiber synthetic media. The controlled media spacing, or tapered pocket design, ensures much lower pressure drop and energy consumption, longest filter life, and highest dust holding capacity than any other bag filter. LCC was also used to model the HEPA filters being used in critical areas, such as surgical suites, and it was determined that filter change was too frequent. Now the facility will save money on those products as well due to their extended life.



“Life Cycle Costing analysis led to elimination of costly, inefficient pre-filters.”

The Proof:

Over 15,000 pre-filters were eliminated per year with the fine fiber high efficiency Hi-Flo® final filter solution based on LCC analysis. This results in \$49,000 in annual savings.

HEPA filter savings resulting from optimizing lifetime and changing when necessary versus on a set maintenance schedule equal \$21,700.

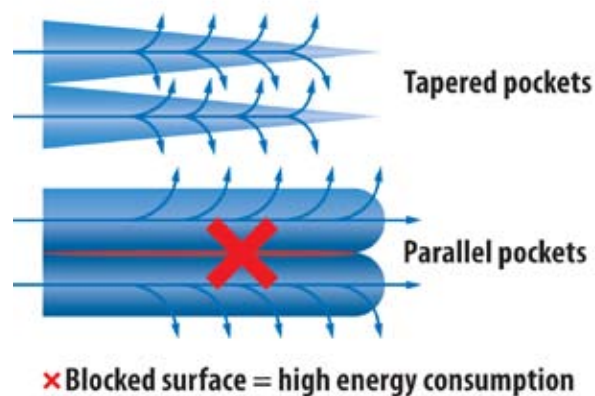
Total annual savings with the Camfil Farr Total Cost of Ownership solution is \$70,960, not including additional energy savings and the fact that cleaner air will be supplied to all areas of this critical children's care facility.

HOSPITAL AIR FILTRATION LIFE CYCLE COST SAVINGS

Building-A Annual Pre-filter Savings:	\$11,111
Building-A Annual HEPA Savings:	\$5,574
Building-B Annual Pre-filter Savings:	\$4,302
Building-B Annual HEPA Savings:	\$2,071
Building-C Annual Pre-filter Savings:	\$6,480
Nra Annual Pre-filter Savings:	\$11,531
Building-R Est. Annual Pre-filter Savings:	\$15,840
Building-R Est. Annual HEPA Savings:	\$14,051
Total Annual LCC Savings:	\$70,960



Tapered Pockets vs. Parallel Pockets



Camfil Farr Hi-Flo pocket filters operate more efficiently and last longer because of their tapered pocket stitching. Incorporating the same amount of media relative to competitive bag filters, minimizing configuration losses and product engineering make the difference.