

## Air Filtration - Total Cost of Ownership

### System-Wide Use of Camfil Farr Filtration Products Leads To Tremendous Savings for National Hospital System

#### Company Profile:

A nationally recognized hospital system with 28,000 employees and more than 21 medical centers, hospitals, and surgery centers serving a large geographical area in the western United States.

#### The Situation:

Historically, each of the hospitals within the system purchased air filtration products independently of one another. As a result, a staggeringly broad array of filter manufacturers, brands, filter types, and filter sizes were in service at any given time somewhere within the system. This approach led to unmanageable inconsistencies with regard to efficiency, service life, labor costs, and energy costs.

Faced with a mandate to reduce overall facility costs, hospital administrators decided to consider an option for single-source purchasing of all air filtration products. The hospitals adopted a Total Cost of Ownership (TCO) approach for their filter vendor selection process. Using both the Camfil Farr Life Cycle Cost (LCC) analysis modeling software and Camfil Farr's expertise with in-situ testing, the hospitals identified several representative facilities to measure the service lives of their most commonly used filter brands while comparing filter cost, labor cost, and, most significantly, energy cost.

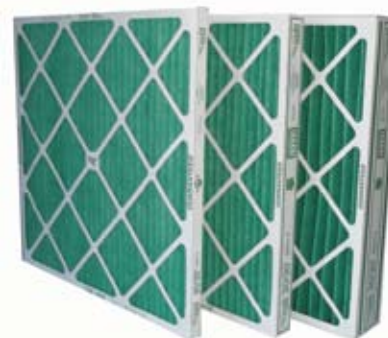
#### The Action:

Three facilities were chosen for testing four different filter brands side by side, in close-to-identical conditions. The filter banks at each test site had common intakes for supply air and very similar velocities and run times. Facility engineers were present for all of the testing. Filters were installed and baseline conditions were established by taking readings at each filter bank for face velocity (fpm) and static pressure loss (inches w.g.). Following the initial readings, measurements were retaken on a regular schedule for several months until a strong differentiation between the products became apparent.



#### The Result:

The Camfil Farr filters outperformed the other three brands by maintaining significantly lower static pressure loss values for the duration of the test. The fan motors were able to work less when moving a constant volume of air across the Camfil Farr filters because the resistance to air movement remained lower with these filters. Camfil Farr's LCC software was used before the testing to predict the test results and to quantify the estimated total cost savings. The values measured during the tests were remarkably close to those predicted by LCC and served to verify the efficacy of the LCC modeling software.



“Single-source purchasing from Camfil Farr generated consistent air quality improvement.”

### The Proof:

Providing optimal filtration within medical facilities is essential for the protection of the health and safety of patients, visitors and staff.

Camfil Farr's state-of-the-art filtration products will save the hospital system tens of thousands of dollars in annual filter and energy costs by enabling the air handlers within each facility to use less energy to deliver required airflow.

### In-Situ Test Results

The Camfil Farr 4" deep 30/30® outperformed the American Air Filter® PerfectPleat® by a factor of over two to one. Since this was a constant volume system that adjusts for changes in pressure drop, the energy saved by using the 30/30 in this application is significant.

The Camfil Farr 4" deep 30/30 outperformed the Air Guard® DP-40 over a three-month period with the same results as above. At 10 cents per kWh this system would save over \$20.00 per filter throughout the facility.

The Camfil Farr 2" deep 30/30 was evaluated at a third facility with similar results. While providing a true MERV 8 efficiency as required by hospital authorities, it demonstrated a long-loading curve indicating that it would have a significantly longer life than the competitor's filters tested. After six months of operation, the 30/30 resistance increased less than 15% indicating that it could easily last a year without taxing the system.

