

## Air Filtration - Total Cost of Ownership

### Innovative Final Filter Product Not Requiring a Prefilter Saves Vaccine Research Firm \$24,000 Annually

#### Company Profile:

A global leader in contract vaccine research provides drug discovery, development and lifecycle management services. With offices in 44 countries and more than 11,000 employees, their partners and clients include leading pharmaceutical, biotechnology, medical device, academic and governmental organizations. The company works with virtually all of the top 50 pharmaceutical and biotechnology companies.

#### The Situation:

The R&D complex has approximately six main air handling units supplying 300,000 CFM of treated air. Filters were being supplied by a local Camfil Farr distributor, but the facility's maintenance department was under great pressure to reduce costs and purchase filters from corporate headquarters, which was buying filters on a "low bid" basis.

#### The Action:

The Camfil Farr distributor introduced the firm to the Hi-Flo ES (MERV 13) filter technology, and guaranteed an 18 month service life without the use of prefilters. During the test period, a new parking lot was installed generating a tremendous amount of airborne dust and debris. Despite this unexpected burden, the Hi-Flo ES increased only 0.5" w.g. during the first 15 months. The reading was a clear indicator that the Hi-Flo ES would outlast the 18 months.

The distributor applied LCC (Life Cycle Cost) software to the installation to precisely quantify four major cost factors: cost of the product, filter changeouts, energy, and filter disposal. In addition, the software identified the optimal pressure drop filter change point, so that energy usage could be minimized and proper airflow to the facility could be assured.

#### The Result:

Based on the LCC analysis, the Camfil Farr distributor proposed that the current prefilters be eliminated and that final filters be replaced with Hi-Flo ES



fine fiber bag filters (24"x24"x12", 10-pocket, MERV 13). The Hi-Flo ES fine fiber media ensured there was no drop in efficiency during its service life. This is in marked contrast to electrostatically charged coarse fiber synthetic medias where efficiency drops precipitously following installation. In addition, the controlled media spacing inherent in the design of the Hi-Flo ES pocket ensured a substantially lower pressure drop, and lower energy consumption than any other pocket filter.

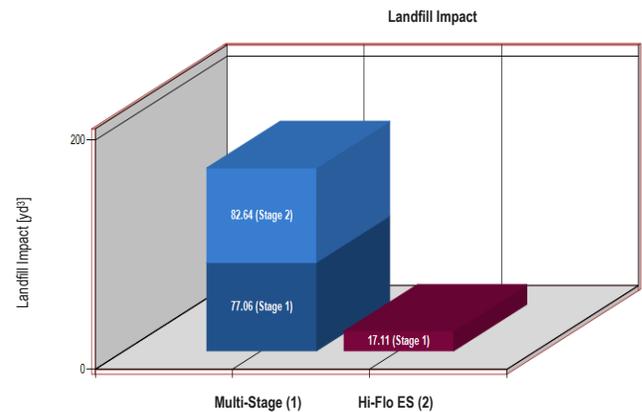
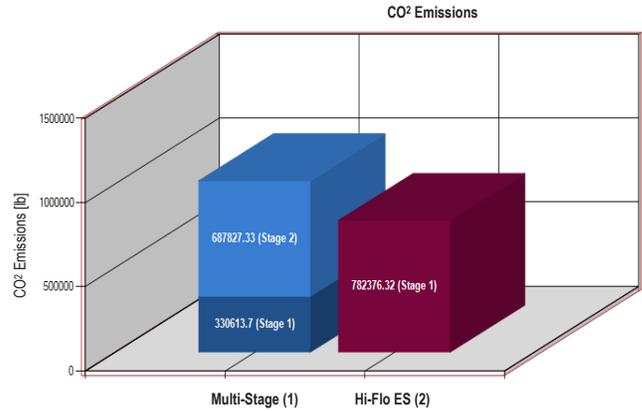
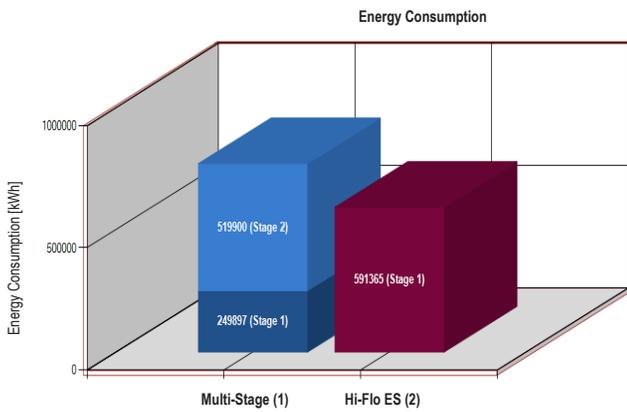
By eliminating the prefilters, the research firm saved more than \$24,000 annually in reduced filter, labor, waste disposal, and energy costs.



“The Hi-Flo ES significantly lowered total cost of ownership and maintained consistently high filtration efficiencies.”

### The Proof:

The LCC analysis uncovered substantial benefits for the bio-pharma research company to convert to the Hi-Flo ES, one-stage filtration solution. Not only does the company benefit initially from a cost standpoint, most importantly, the Hi-Flo ES would provide savings through out the entire lifecycle of the filter. The analysis proved the Hi-Flo ES would produce a 47% annual cost savings for the research company. In addition, from a sustainability perspective, the company would reduce energy consumption by 178,432 kWh (23% reduction), CO<sup>2</sup> emissions by 236,064.71 lb (23% reduction), and landfill by 142.59 yd<sup>3</sup> (89% reduction).



Cost Breakdown:		
TCO Elements	Multi-Stage (1)	Camfil Farr (2)
Energy Cost	69282 USD	53223 USD
Filter Cost	59366 USD	21904 USD
Labor Cost	19260 USD	4280 USD
Waste Cost	3210 USD	428 USD
CO <sup>2</sup> Impact	1018441.03 lb	782376.32 lb
Landfill Impact	159.70 yd <sup>3</sup>	17.11 yd <sup>3</sup>
Total Cost of Ownership (TCO)	151118 USD	79835 USD
Performance Satisfaction Terms		