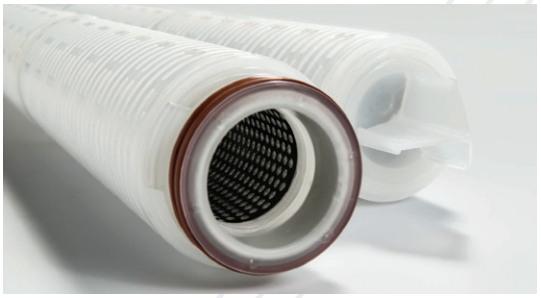
Fermentation Air Filters

FOR INDUSTRIAL BIOPROCESSING



Energy Cost-Down Project:
Reduction of Energy Usage
at a Fermentation Plant

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Reduction of Energy Usage at a Fermentation Plant

OBJECTIVE

To lower energy usage in a fermentation plant.

SUMMARY

A cost-down project was completed in a fermentation plant. This project evaluated the effect of switching to new, lower-pressure-drop filters in the compressed air system that feeds their fermentation vessels.

DETAILS

A set of 20" GORE® Fermentation Air Filters, which have lower pressure-drop, were substituted for the existing filtration products. The new drop-in replacement filters from Gore offered a 50% reduction in pressure drop, without requiring equipment changes or capital expenditures.

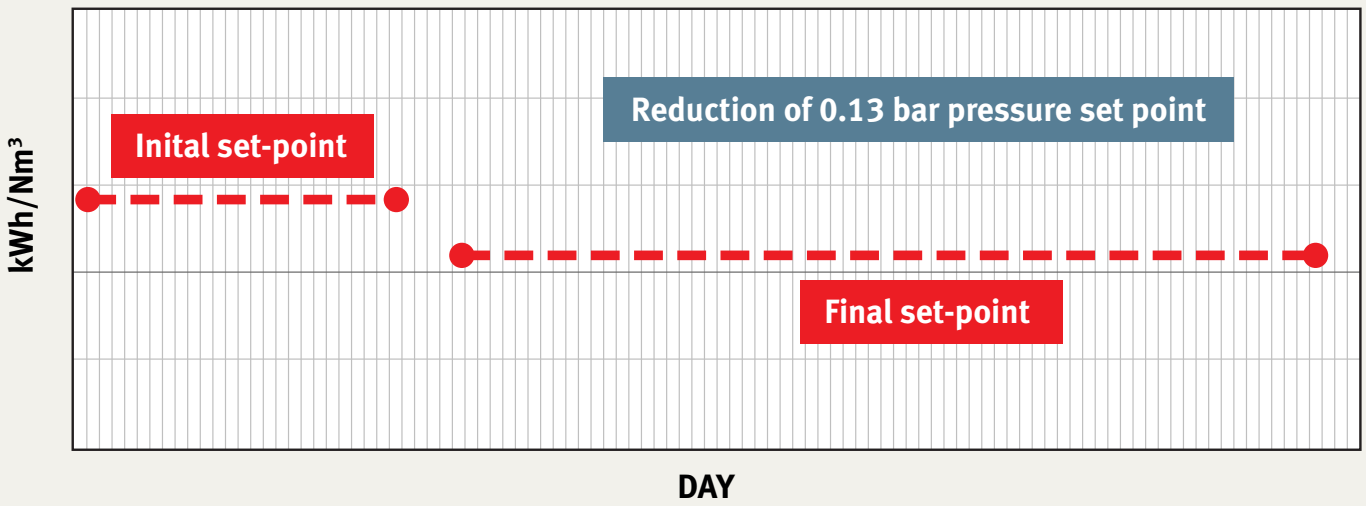
The lower pressure-drop enabled a reduction in the air compressor outlet set point by 0.13 bar (see chart on next page), leading to significant energy savings. Compared to the existing filtration products, the replacement GORE Filters have comparable filter life of one year, and offer equivalent filter efficiency.

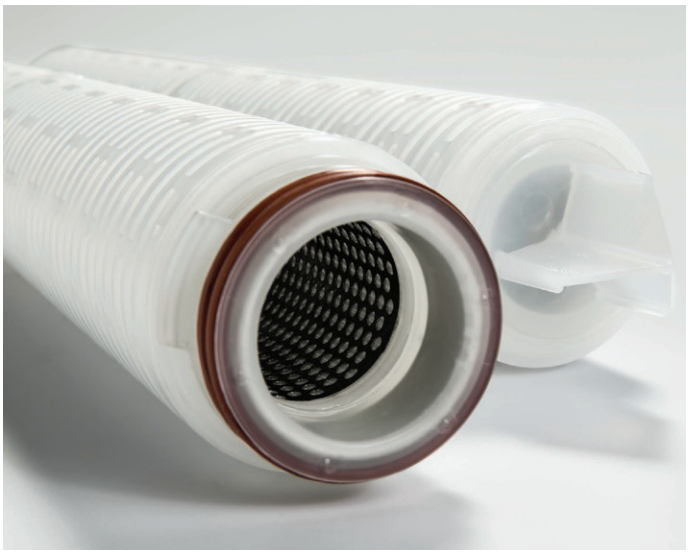
A simple drop-in filter replacement led to a 50% reduction in pressure-drop, with no capital costs.

The new drop-in replacement filters from Gore offered a 50% reduction in pressure drop, without requiring equipment changes or capital expenditures.

A savings of 5% was realized by reducing the compressor pressure set-point by 0.13 bar.

Average kWh/Nm³ vs Day





GORE® Fermentation Air Filters for Industrial Bioprocessing

RESULTS

By switching to the lower-pressure-drop GORE Filters, the plant realized:

- a 5% reduction in electric energy use for air compressors,
- for an estimated savings of US$60,000 per year.

In conclusion, this plant achieved energy savings that more than paid for the increased annual investment in this new filtration technology.

Fermentation Air Filters

FOR INDUSTRIAL BIOPROCESSING

About GORE® Fermentation Air Filters

GORE® Fermentation Air Filters provide lower resistance to air flow which can help reduce the cost of energy related to compressed air generation. A specially-engineered GORE™ ePTFE Membrane is what gives these filters their unique performance advantage. The membrane micro-structure has the critical geometries necessary for high retention, high flow, and excellent service life. To learn more, please visit https://www.gore.com/products/gore-fermentation-air-filters.

To see other Gore solutions for life sciences, please visit gore.com/pharmbio, or contact your local Gore representative to discuss your interests and needs.

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Gore PharmBIO Products

Our technologies, capabilities and competencies in fluoropolymer science are focused on satisfying the evolving product, regulatory and quality needs of pharmaceutical and bioprocessing customers, and medical device manufacturers.

GORE® Fermentation Air Filters for Industrial Bioprocessing, like all products in the Gore PharmBIO portfolio, are tested and manufactured under stringent quality systems. These high-performance products provide creative solutions to our customers' design, manufacturing and performance-in-use needs.

GORE
Creative Technologies Worldwide

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