

# Extended Life of Durable VariCel® VXL Boosts Filter Performance for Global Technology Park in Desert

## CASE STUDY – DATA CENTERS

### Customer Profile

- Located in Sparks, Nevada
- World leader in personal technology innovation
- Breakthrough services and products

### The Filtration Situation

About four hours east of Silicon Valley, this global technology company's Park is the company's fourth major U.S. server installation. The large-scale server buildings here are designed to support users of the company's cloud services, with high-tech equipment pioneering some of the world's most advanced signaling technologies, including Dense Wavelength Division Multiplexing (DWDM).

Addressing air filter performance is a crucial component to keeping HVAC systems operating effectively and efficiently in server environments. Ensuring data center equipment is running at peak performance while avoiding serious system issues and significant downtime is a top priority.

The Park's server buildings are set in the desert terrain of Nevada, so filters installed there must be durable and have a high dust holding capacity for this demanding environment. With the F7 efficiency rating (EN779:2012) filters that this company was using, filters sometimes had to be replaced immediately after a storm. A more durable type of filter would deliver cost savings, decrease labor time, and reduce the risk involved with the difficult operating conditions.

### The AAF Solution

AAF suggested that this technology company try our VariCel VXL filters in their data centers, since these filters provide superior operating efficiency and performance in high dust load environments. The VariCel VXL filters are manufactured with two layers of glass fibers, coarse fibers on the air-entering side and finer fibers on the air-leaving side. This dual-density design allows dirt particles to be collected



A DWDM system

throughout the entire depth of the media pack, utilizing the full filtering potential of the media and maximizing dust holding. Maximum dust holding capacity extends the life of the filter, minimizing operating costs and risk.

In addition, AAF's VariCel VXL F7 filters were the same price as the current filters that the company was using. The higher efficiency rating would provide greater efficiency and lower energy costs with the necessary durability. For these reasons, the company agreed to try the VariCel VXL filters.

### The Results:

The VariCel VXL filters performed so well that they were installed in four buildings, for a total of 14,480 filters. This company is currently constructing more server buildings in the 345 acre Park, and the VariCel VXL filters will be installed in these buildings as well.

Additionally, 600 MEGApleat® filters to utilize as prefilters have also recently been ordered. This was decided due to MEGApleat's durability, since these filters have a heavy-duty galvanized expanded metal support grid, as well as pleat stability and low resistance. The MEGApleat filters, combined with the VariCel VXL filters, will provide peak operating efficiency and performance with a lower total cost of ownership. Once these filters have proven their performance value, they will be ordered for all server buildings as well.



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ISO Certified Firm CASE\_110\_EN\_052017