AAF MEGAcel™ I Filters Save Energy - Lower Costs at Engine Manufacturing Plant

**Customer Profile**
- Global manufacturer of large diesel engines and parts
- Employs approximately 40,000 people worldwide
- 2009 Revenue = $10.8 billion

**Current Filtration Situation**
The customer has been supplied standard capacity Airguard® HEPA filters by an indirect partner for several years. The indirect partner approached the customer with an energy savings solution using AAF MEGAcel™ I filters. The customer welcomed a joint call from the indirect partner and AAF sales representative to explain the energy savings benefits of using MEGAcel I filters, as well as show the potential cost savings through AAF’s exclusive Life Cycle Valuation (LCV) program.

**Technical Situation**
All of the air handling units (AHUs) at the customer’s plant are equipped with variable frequency drives (VFD). To receive the required airflow, most units run at 100% of the supply VFD. Competitive HEPA filters currently being used have very high initial resistance values. Based on AHU.R.09 system readings, the supply kW was 44.8. This equates to $23,547 per year in energy cost, based on $0.06 kW/h. Additionally, because of the higher resistance, the HEPA filters were physically bulging under the stress of the airflow.

**The AAF Solution**
AAF and the indirect partner recommended replacing the current Airguard HEPA filter with the MEGAcel I filter. MEGAcel I filters incorporate AAF’s unique Helior™ media, a proprietary, durable ePTFE media, combining ultra-high efficiency with extremely low pressure drop. Lower initial resistance significantly reduces energy consumption resulting in substantial energy savings and cost benefits. The customer agreed to install the MEGAcel I filter in AHU.R.09 on a trial basis.

**Energy Saving Benefits**
The advantages of switching to AAF’s MEGAcel I filters was astounding. The energy being used to supply AHU.R.09 reduced to 22.6 kW. This was a 50% decrease in energy consumption. In addition, AHU.R.09’s variable frequency drive reduced from 100% to 74%, meaning the same air volume was going through the unit while the motor was running at a lesser rate—consuming less energy. The 50% decrease in energy consumption should reduce energy costs to $11,879 per year. This equates to a savings of $11,668 per year!
The MEGAcel I was the clear choice for the customer. The initial savings expected using our exclusive LCV program were substantial at $11,668 per year for one AHU. As a result, the customer immediately installed MEGAcel I filters in two AHUs. As the remaining 14 units come up for scheduled maintenance, the competitor filters will be replaced with the MEGAcel I filter.