

BMW Achieves 1.34 GWh in Energy Savings by Installing AAF's DriPak NX Filters

CASE STUDY – SURFACE TREATMENT, AUTOMOTIVE

Customer and Project profile

Customer:

BMW, Leipzig Plant The BMW Leipzig plant employs around 5,300 people and is one of the most modern and sustainable car plants in the world. BMW cars for customers all over the world have been produced here since 2005. More than 960 vehicles per day roll off the production lines.

Up to 860 cars of the BMW 1 and 2 Series are manufactured in the classic production area every day. In addition, two types of trendsetting vehicles with alternative drive systems and innovative lightweight carbon bodies are produced: the BMW i3 (since September 2013), and the BMW i8 (since May 2014).

Project:

Implementation of an energy cost-saving high quality filtration solution.



The Filtration Situation

Since the plant in Leipzig started production in 2005, AAF has been the supplier of choice for air filters. In contrast to many other automotive production sites, the BMW Leipzig Plant does not rely on an external facility management company to take care of their air quality needs. Filter management and purchasing are completely covered by internal teams. As filters have been considered commodities, purchasing decisions were more and more based on price only. That was the time when AAF added value by implementing the Total Cost of Ownership approach for this customer.

The AAF Solution

Over the total lifetime of a filter, the price per filter is not the only decisive criterion. In terms of total cost of ownership, the most important criterion is energy efficiency.

After two years of negotiation, consulting, and testing, BMW finally agreed to install DriPak NX filters in the air handling units of the paint shop in Leipzig. The paint shop is one of the most critical parts of vehicle manufacturing when it comes to air quality. Tiny defects due to particles and dust in badly filtered air can have a big impact, resulting in costly rework.

Besides air quality, the amount of energy needed to move the air in the paint and oven section of the production is huge. At the site in Leipzig 2.7 million cubic meters of air are ventilated every hour – in the paint shop only. AAF's energy efficient filter DriPak NX with an energy consumption of only 850 KWh/annum according to Eurovent seemed to be the ideal solution to meet the air quality and energy saving requirements of this plant.

BMW manufacturing site in Leipzig, Germany



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The Results

After one year of installation, BMW achieved remarkable results that exceeded expectations.

Energy Savings

1.34 GWh

Cost Savings

>100,000 EUR

CO₂ Savings

706 tonnes

Based on this convincing result, BMW decided to equip every air handling unit at the site with DriPak NX filters within the next two years – which means another 10 million cubic meters of air filtered by DriPak NX filters every hour.

The expected cost savings after the complete switch to DriPak NX filters add up to significantly more than 500.000 EUR per year. This means an avoidance of more than 3.500 to CO₂ per year.



Body shop manufacturing BMW plant Leipzig. www.bmwgroup-werke.com/leipzig/en.html



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