

Case study  
Air filtration at a  
mail distribution  
center

# Case study: mail center

## Delivering energy savings and air flow

MANN+HUMMEL were called upon to help cut energy costs at a mail distribution center in London, UK.



### PROBLEM

High energy consumption of the HVAC system



### SITE

Mail distribution center, UK



### OUTCOME

Air flow maintained, energy demand reduced by 63%

Investigating the cause of the high energy consumption, our team examined the environment on-site and used our patented eco16 system to devise the best possible solution.

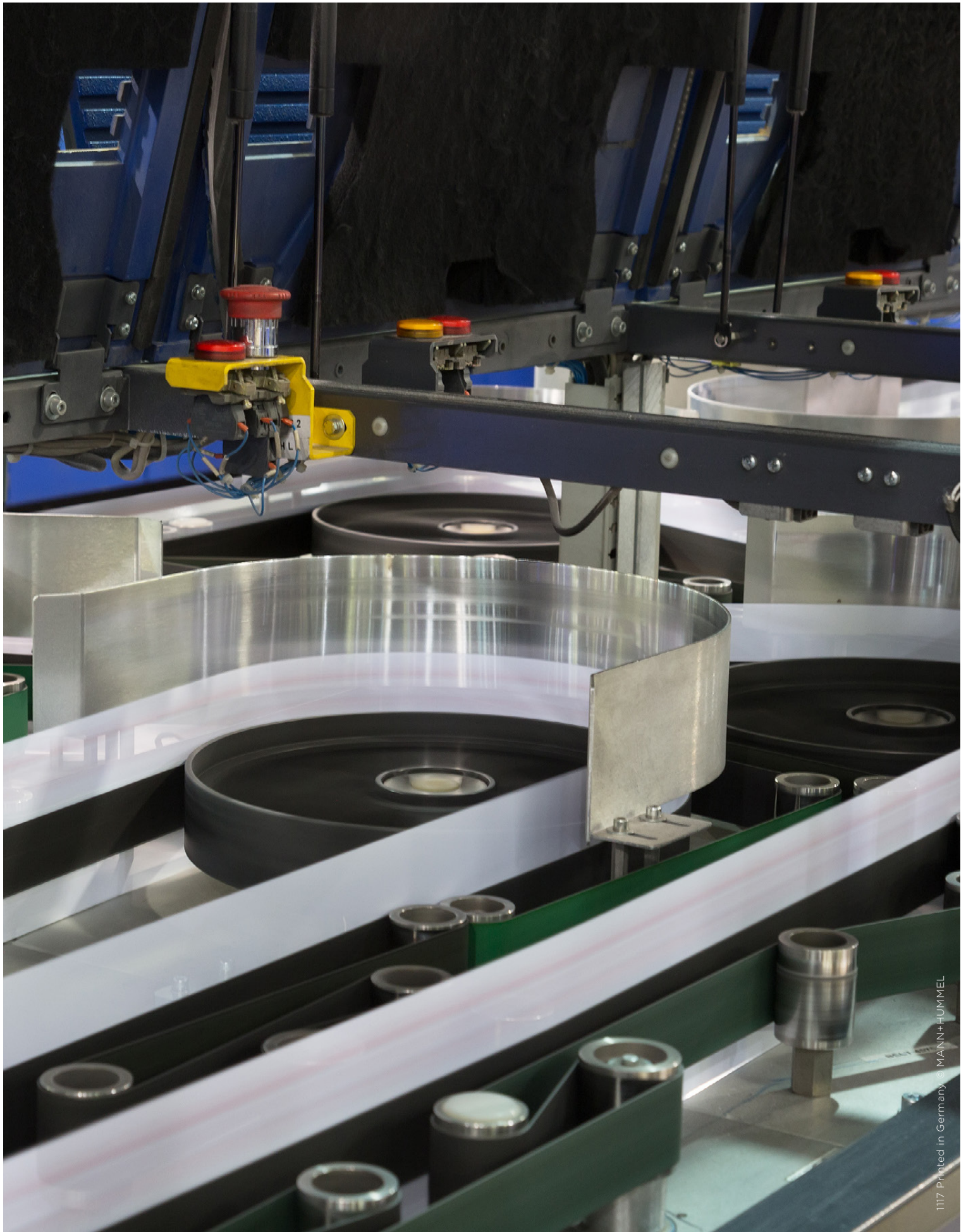
They selected F7 Revo II bag filters to replace the existing two-stage, panel and bag filter configuration.

As Revo II has a low pressure drop and is designed to be used without a prefilter, the impact on the air flow was dramatic. The previous system was operating at the recommended level of 14.9 m<sup>3</sup>/s. With Revo II fitted, this increased to 22.6 m<sup>3</sup>/s.

As the air handling unit (AHU) was fitted with a manually-controlled inverter drive, our team analyzed the air flow to determine the required input frequency to achieve the recommended level. With the inverter recalibrated, the air flow was reset to 15.1 m<sup>3</sup>/s.

The Hertz input frequency of the inverter was reduced by 32%, meaning the energy consumption of fan motor fell by 63%. Based on these figures, energy reductions were projected to be 52,560 kWh or £5,979 for one air handling unit per year.

In addition, the removal of the prefilter stage meant reduced purchasing, administration and stock. As well as less on-site workload and waste disposal.



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