

Sustainability that pays off.



Networked and simultaneously energy saving: Filter tower 4.0



Hall and room air systems with network functions and eco+ control systems

Users can couple the Industry 4.0 variant of the Filtower hall ventilation system to their individual network infrastructure. External maintenance activities can be reduced and resource efficiency increased through remote maintenance. In doing so, the integrated eco+ modules with frequency converter and sensor-regulated controller simultaneously and significantly improve the energy balance of the filter tower.

The filter towers collect welding smoke, dust or oil mist and supplement extraction points in production halls. With the Industry 4.0 variant ESTA expands their control technology of the tower and provides a wider range of instruments for system monitoring. Users are now able to couple the hall ventilation systems to their individual network infrastructure via LAN or WLAN.

Important information, such as operating status, current air performance, operating hours or filter status, can be called up or monitored from any location, e.g. with mobile devices. In addition, throughout the complete operating time all data is logged on an SD card with full chronological

traceability and content traceability. This enables the user themselves to be able to carry out assessments quickly and easily with common calculation programs.

With the Industry 4.0 variant of the filter tower, external maintenance actions and the associated costs for the customer can be reduced and resource efficiency increased. If necessary, the ESTA service technicians are able to quickly and simply access the systems, identify faults and provide the customer with action recommendations by remote. This can reduce the risk of failures and guarantee more reliable operations. In addition, the integrated eco+ modules also ensure energy-saving operation.

BLUECOMPETENCE

Alliance Member



Remote maintenance, e.g. via mobile devices, increases resource efficiency

”Energy efficiency is an important constituent part of Industry 4.0. With the Filtover 4.0 we are able to combine both topics with one another for the first time. The further potential arising from this is huge - in order to be able to further increase our customers’ resource efficiency.“

Dr. Matthias Döppe, Head of Innovations and Advance Development, ESTA Apparatebau GmbH & Co. KG

The filter towers do not use the maximum possible output all the time, but align themselves to the currently required air quantity. The air performance is therefore continuously adapted and regulated to suit the application and customer requirements of the situation. It is possible that this will form a trio of components comprising air flow volume measurement technology, the EasyControl system developed by ESTA and the frequency converter that takes over the start-up and rotational speed regulation of the fan.

In comparison to extraction systems with conventional differential pressure controllers, the eco+ system controller is able to save up to 50% of the electrical power consumption. Additional energy saving effects: In comparison to air extraction operation, the towers save up to 70%

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of the heating costs in the winter months thanks to layer ventilation.

Facts:

- Coupling of the filter tower to company-specific network infrastructure via LAN/WLAN
- Remote access and monitoring of all operational data possible around the globe
- Reduction of the maintenance and service costs through remote monitoring and maintenance
- Remote maintenance function reduces on-site service tasks and so reduces CO2 emissions
- Controller, sensors and FC (eco+ modules) reduce energy consumption of the tower up to 50%