

Sustainability that pays off.

ESTA
EXTRACTION

New eco+ line lowers energy balance of extraction devices



In the center of the eco+ series is the new controller which, in connection with a sophisticated sensor technology allows more energy efficient suction. By measuring the actual volume flow and its adaptation to the respective operating parameters, this results in a power savings of up to 50% compared to a conventional differential pressure control. This significantly reduces the operating costs.

The manufacturer of extraction technology, ESTA, has designed the eco+ line to reduce the energy consumption of its small appliances segment and its stationary extraction through intelligent control and drive technology. So far, most of the products from the supplier based on the maximum air flow rate were operated at full drive power. However, the application does not require permanently the full power of the fan.

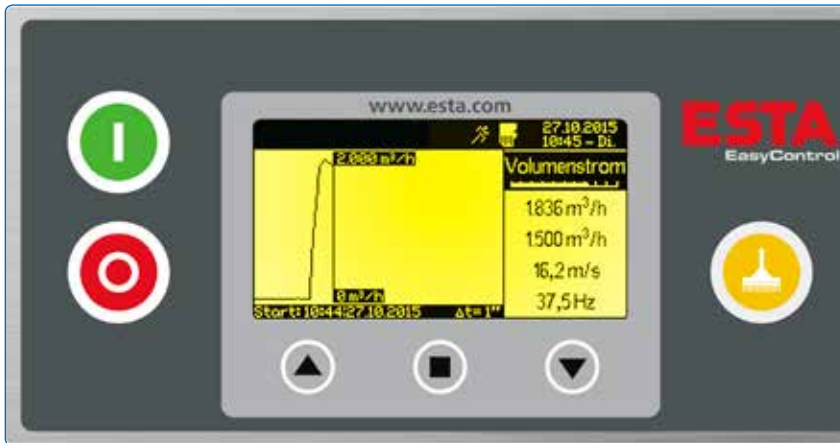
To control the air flow and determine the minimum flow rate, the development of a suitable measuring method was fundamental. Therefore, an additional pressure measuring point was integrated into the systems.

The volume flow-controlled drive ensures energy savings

Using the proprietary EASYControl, the measured flow rate can now be evaluated directly and supplied to the control electronics (frequency). This ensures that the defined minimum flow rate is always adhered to which (with W3 or H-marked) in view of the statutory provisions is crucial, especially in highly hazardous applications. Depending on the application, the systems also can be regulated demand-driven. Optional integrated dust sensors in the upstream and downstream region of the plants additionally provide important information to the controller. If the dust sensor reports a higher dust

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The proprietary EASYControl control is the heart of the eco+ series

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”The principle of the volume flow-controlled drive for mobile and stationary extraction takes into account the sustainable product policy of ESTA. The savings for the electricity and longer filter life allow a payback within months”.

Dr. Matthias Döppe, Head of Innovations and Advanced Developments, ESTA Apparatebau GmbH & Co. KG

concentration, the controller sends a corresponding signal to the frequency converter, which then increases the frequency of the drive and thus the air flow. In this way the eco+ extraction offers full performance when you need it and saves power when it is not needed. With its variable air volume flow also filter life is extended, because the dust particles do not permanently apply the maximum speed, the filter material, whereby the tissue is spared.

The aim of the eco+ series has been achieved: Compared to a conventional differential pressure control, the energy consumption of the systems and equipment in eco+ execution was reduced by means of intelligent control, the flow measuring device and the drive system by up to 50%.

Facts:

- Energy consumption of the extraction in eco+ execution could be reduced by up to 50%
- Volume flow-controlled drive with frequency converter for individual demand
- Reduction of the wear on the filter material by up to 50% for a longer service life
- Optimization of cleaning time point by volume flow measurement
- Optional dust sensors for fully automatic adjustment of the air