

# Air Scrubbers



Goed bedacht. Slim gemaakt.

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### Your manufacturer for a custom-made air scrubber

### Our air scrubber

An air scrubber, as the name suggests, is an installation that purifies air. An air scrubber is used to reduce one or more substances that harm the environment. For VBV, creating an air scrubber is nothing new; our first biological air scrubber was built in 1986, long before air scrubbers gained prominence in the agricultural sector. With over 30 years of experience in air scrubber construction, our company possesses extensive knowledge of plastics, electrical systems, and climate control. Over time, the design of the air scrubbers has been extensively optimized. One of the most important aspects is the customization that we provide. Each installation has a different design, and every customer has their own preferences. With the customization we provide supported by our knowledge, your wishes can be realized. And you will enjoy it every day.



*Customization* Every stable is different, and every client has different preferences. We provide matching customization to meet your specific needs.



Low maintenance By using the right components, maintenance is minimized. For example, we utilize pumps with built-in filters.



*Experience* We have over 30 years of experience in the production of air scrubbers.



By using the right and durable components, reliability is ensured.



*Ease of use* Our air scrubbers have an intuitive menu, making them easy to operate. With the help of an internet module, you have access to real-time information about the air scrubber from anywhere, anytime.



Low fixed costs Our air scrubbers are equipped with energy-efficient pumps to reduce energy costs. Additionally, we do not charge fixed monthly fees for our internet module.

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### Our air scrubber

### **Reduction of emissions**

In the agricultural sector, air scrubbers have been widely used to reduce the emissions of odor, particulate matter, and ammonia. With a growing global focus on the environment, the transition towards sustainability and emission reduction is of great importance, and regulations often make it mandatory. Efforts are being made to reduce and prevent the emission of harmful substances. Through continuous improvements and close collaboration with the government, we remain at the forefront of developments. Therefore, choosing an air scrubber from VBV is the right choice!

#### Construction of the air scrubber

The ventilation air passes through three sections before leaving the air scrubber: the prehumidification section, the filter package, and the droplet eliminators.

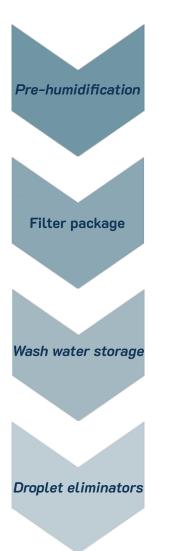


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## Functioning of the air scrubber



In the pre-humidification section, the ventilation air is humidified, which helps remove coarse pollutants such as dust from the air. The initial removal of dust and other contaminants is crucial because it reduces the risk of pollution and/or blockages in the filter package.

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The ventilation air is supplied from the bottom of the filter package. This means that the air flows upward through the filter material, from bottom to top. From the top of the filter package, it is constantly humidified with wash water. This is done using sprayers. The filter package is designed to increase the contact surface area between the wash water and the ventilation air. This increased contact surface area improves the efficiency of the process by providing more opportunity for substances such as ammonia and odor to dissolve in the water.

At the bottom of the scrubber, there is a wash water storage tank where bacteria thrive. The bacteria consume the captured substances and convert them into organic nutrients for plants. From the wash water storage, the wash water is recirculated over the filter package and the pre-humidification section to capture pollution once again. When the wash water reaches its saturation limit, it is discharged and fresh water is added.

The scrubbed ventilation air still contains water droplets. These are captured by means of droplet eliminators, which saves on water consumption. In addition, in the case of a chemical scrubber, droplet eliminators are of great importance because the chemicals in the water droplets are captured. This prevents damage to the environment and the ecosystem.

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