



Big Dutchman®



Porcus Air Scrubber Modules

for cleaning the air from pig houses

Prefabricated Porcus air scrubber modules

How to expand your farm as a pig farmer without causing a nuisance to the surroundings and the environment?

Our Air Scrubber technology is already the best in the world. We achieve fantastic results in large and smaller stables. But our goal is to help livestock farmers and integrations worldwide to significantly reduce emissions and create optimal air conditions in your stables. That's why we developed a plug-and-play Air Scrubber especially for pig houses!

The Porcus Air Scrubber is a complete, prefabricated module designed to clean the air from pig houses. These Air Scrubbers remove ammonia, odour and particulate matter (fine dust) from the air. The module is fitted with a room, in which all the technical parts are mounted. This makes on-site installation as quick and easy as possible.

The Air Scrubber is built up with sections of 2,4m width x 2,1m depth. A range of 1 to 13 sections is available. The module is designed to fit into a 40FT HighCube container. This allows it to be transported all over the world by ship, truck or train.

Available in both biological and chemical version.



- ✓ wide range of sizes
- ✓ built in a plastic housing
- ✓ designed to fit in a highcube 40 foot container
- ✓ prefabricated and preinstalled

General working of the Air Scrubber

The Air Scrubber is connected to the pig house via a pressure chamber. The air enters into the front of the scrubber and moves up through the horizontal washing bed and gets intensively rinsed from above, using a sprinkler system.

The process water is recirculated until it reaches a certain pollution level. Part of the water is then pumped to the waste water tank and clean water is added back into the process.

All the measurements, valves and controls are fully automated for ease of operation and to achieve optimal performance.



Biological Air Scrubber

Naturally occurring bacteria grow on the package material and these convert the ammonia into nitrite and nitrate.

This results in the formation of ammonium nitrate, a stable salt. Different species of bacteria convert some of the odour molecules, reducing the odour concentrations in the air.

Reductions biological

- ✓ Ammonia 70%
- ✓ Odour 45 - 70%
- ✓ Fine dust 60%



Chemical Air Scrubber

In a chemical Air Scrubber sulphuric acid is used, to first lower the pH and then bind the ammonium to create a stable salt called ammonium sulphate.

Some of the odour molecules and fine dust are dissolved in the process water, reducing concentrations in the air.

Reductions chemical

- ✓ Ammonia 70 - 90%
- ✓ Odour 30%
- ✓ Fine dust 35%



Technical room

Technical room

Completely outfitted with high quality technical parts. The installation is fully tested before it leaves the factory.

Data Logging

Optionally the Air Scrubbers can be outfitted with a data logging system through the internet. This system logs the vital parameters of the air scrubber and can show it real-time on a PC or mobile device. It also stores the data in the cloud to show performance in graphs or data files.



Are you looking to achieve optimum, stable air conditions in your barns?

Big Dutchman is the global market leader when it comes to sustainable climate technology in stables for intensive livestock farming. We offer a custom solution for reduction of ammonia, odour, and fine particulates for every climate control and air conditioning need.

We are happy to put our experience to work for you.



Big Dutchman.

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