

DORSET **F S**

F A R M S Y S T E M S



BIOLOGICAL AIR CLEANING SYSTEMS

**FOR A FARM
IN HARMONY WITH
THE ENVIRONMENT**

- ✓ Ammonia
- ✓ Smell
- ✓ Dust

LICENCE TO PRODUCE

FARM IN HARMONY WITH THE ENVIRONMENT



LOCAL ACCEPTANCE

Just like other industries, animal husbandry must take into account the surroundings and the environment. Cleaning of animal house air is an essential part of this. Dust and odor removal provides the company acceptance by the local community.



KEEP PRODUCING

This makes it possible to situate farms near villages and cities. Farms that are surrounded by urban expansion can also continue to produce at the same location without coming into conflict with their new neighbors.



EASIEST WAY

A biological process is the easiest way to remove both odor and dust as well as ammonia from farm house air.

SINCE 1994

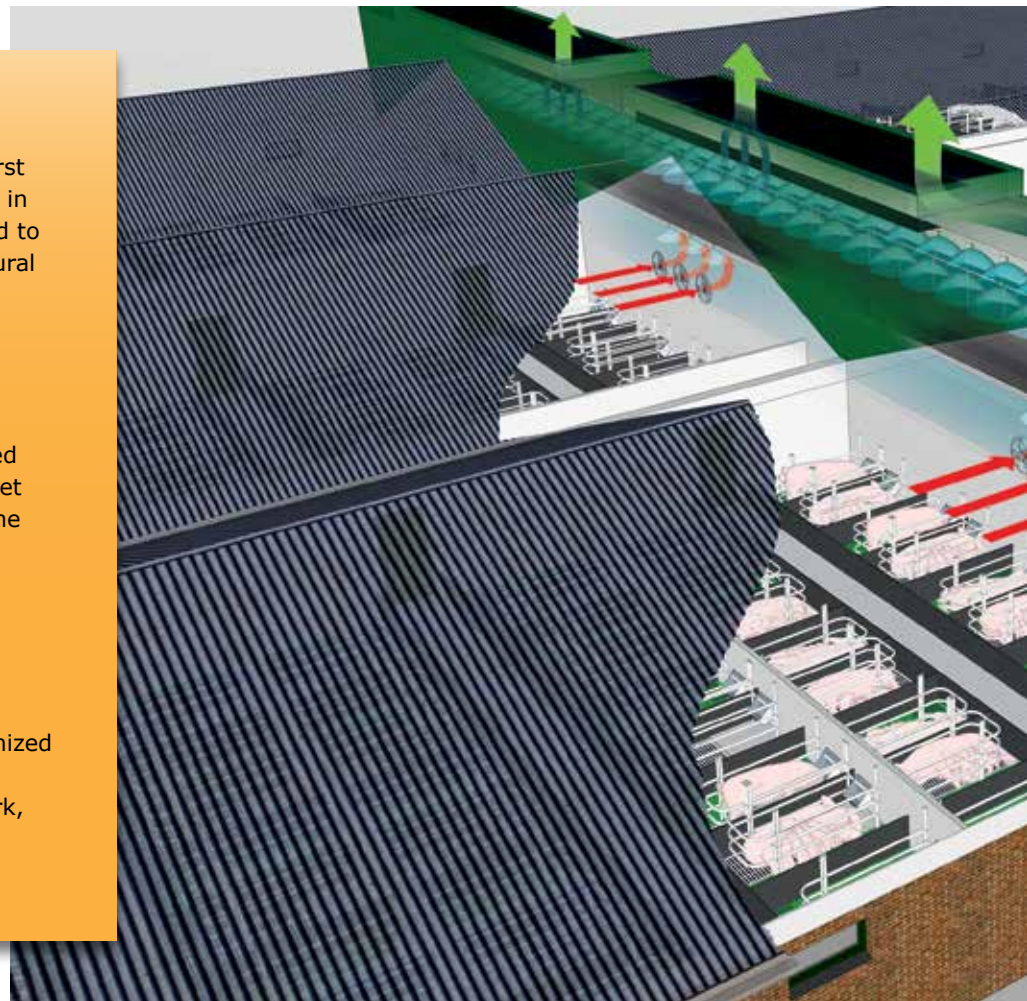
'Dorset was already building the first biological air cleaners on pig farms in 1994. Since then, Dorset has proved to be a reliable partner in the agricultural sector and beyond.

THOUGHTFUL DETAILS

Long-lasting experience is reflected in many thoughtful details. A Dorset air cleaner becomes essential to the company without being an extra burden for business operations.

CERTIFIED

The air cleaners are certified / recognized in many countries including the Netherlands, Belgium, Denmark, Switzerland and Germany.



PRINCIPLE

DISSOLVE IN WATER

The basis is always the direct contact between farm house air and washing water in the filter package. Dust, odor components and ammonia dissolve in the water. It then becomes food for the bacteria that grow on the filter surface.

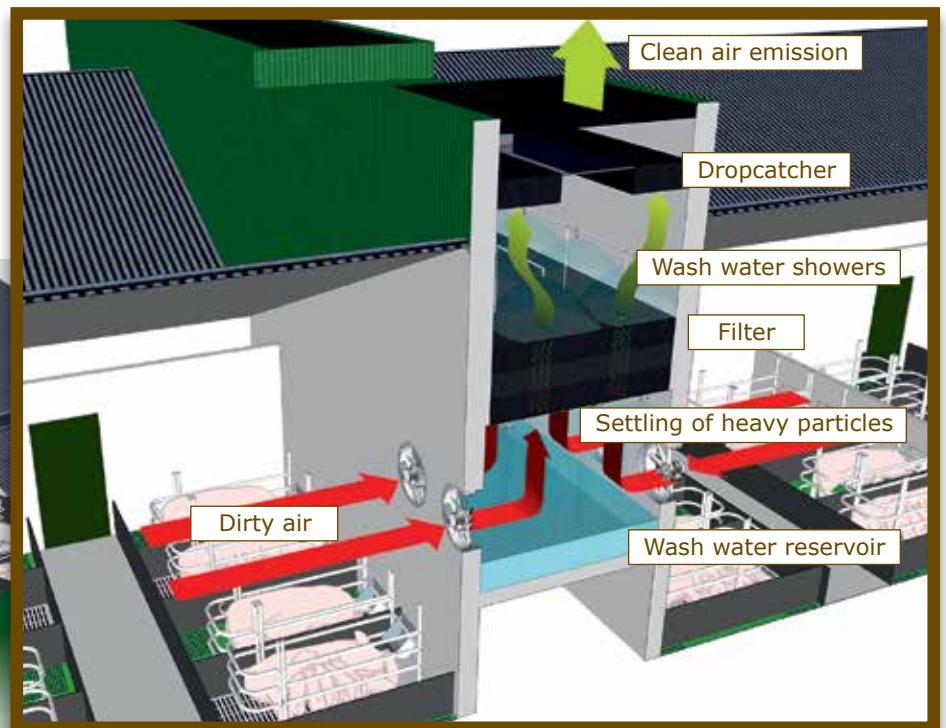
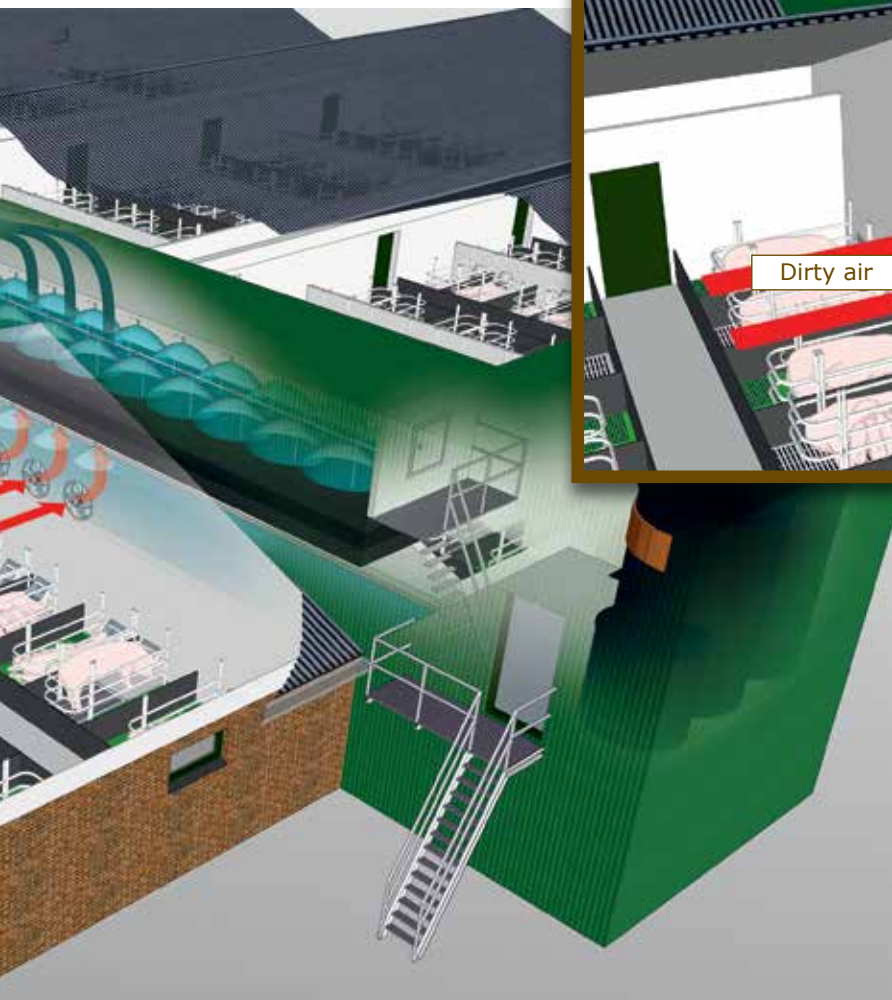
These bacteria convert the substances into other water-soluble substances. Thus ammonia becomes nitrite and nitrate. These substances leave the filter via the washing water. They then leave the air cleaner via the discharged drain water when the washing water is being replaced.

SELF-CLEANING FILTER

The filter consists of a honeycomb-like plastic package. The filter package is designed to make it self-cleaning and therefore normally no manually cleaning will be required.

SATURATED WASHING WATER

Because the washing water becomes saturated with nitrate and nitrite, the water needs to be refreshed. The discharged drain water can be used for irrigation or processed in a denitrification unit. The washing water is poisonous



DENITRIFICATION UNIT

The denitrification unit processes drain water. Through a biological process, the nitrite and nitrate in the water is converted into neutral nitrogen gas, which is absorbed into the atmosphere. The process is similar to the biological functioning of a sewage treatment plant.



PRACTISE

LOW VARIABLE COSTS

A biological aircleaner requires a significant investment, but the variable costs are then extremely low.

The air resistance is very low, therefore the fans hardly have to supply more pressure and thus use hardly more power than before.

Maintenance requirements are limited to inspection of the nozzles and of the values on the control panel. The filter is designed to be self-cleaning and normally will not require any manual cleaning.



MEASUREMENTS

Typical dimensions for an air cleaner for 100,000 m³/h farm house air: package height 90 cm and 50 m² filter surface



POSSIBILITIES

The aircleaner can be supplied as a ready-to-use unit and as an assembly kit.

Larger scrubbers can be built-in on location as an integrated part of the farmhouse.



POULTRY FARM

DUST SCRUBBER FOR THE POULTRY FARM

DUST SCRUBBER FOR THE POULTRY FARM



Switzerland

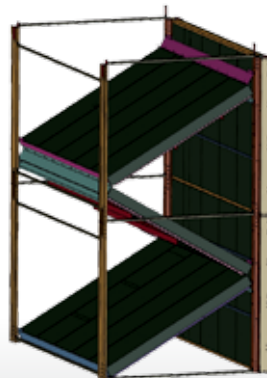


The Netherlands

DUST SCRUBBER

Dealing with dust is a problem when washing air from the poultry farm.

The dust scrubber by Dorset can be used independently to reduce dust emissions. Or it is combined with a biological aircleaning to reduce ammonia and odor emissions as well.



DUST WATER TREATMENT

Dorset has been able to develop a dust water treatment, based on its expertise with waste streams, which separates the dust from the water as a solid fraction.

This fraction is suitable to be added to the manure. The water is reused in the washer.



The only dust scrubber with reuse of dust water!

HEAT RECOVERY

LOWER ENERGY CONSUMPTION WITH SMART TECHNOLOGY

Dorset has several techniques available around the air scrubber:

- Air to air heat exchanger
- Tube changer
- Heat pump

Ask about the possibilities!



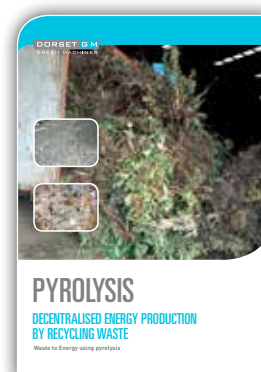
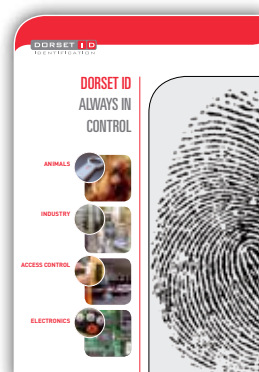
Heat exchanger



Tube exchanger



Information about Dorset systems: www.dorset.nu



Dorset Farm Systems

Weverij 26
7122 MS Aalten
The Netherlands
Tel. +31 (0) 543 47 55 96
Fax. +31 (0) 543 47 53 55
E-mail fs@dorset.nu
Website www.dorset.nu

DORSET GP
DORSET GROUP

DORSET ID
IDENTIFICATION

DORSET GM
GREEN MACHINES

DORSET FS
FARM SYSTEMS

INNOVATION
PRODUCTION
INSTALLATION