CASE **STUDY**

Artificial Insemination (AI) Farming

Client:
Ornestation Mors

Location:
Denmark

Sector:
Artificial Insemination (AI) Farming

BIOSECURITY AT DANISH ARTIFICIAL INSEMINATION (AI) STUD

ORNESTATION MORS IS USING AIR FILTRATION SOLUTIONS FOCUSING ON CLEAN AIR IN THE STABLE FACILITIES TO PREVENT THE RISK OF INFECTION.

THE COMPANY

The company was founded in 1974 by Martin Markussen in Redsted on Mors. Today, the company is owned by the 3rd generation of the Markussen family, who are deeply involved in the day-to-day operations. Ornestation Mors today delivers approx. 36% of semen sales in Denmark. The semen is delivered from boars that origins from some of the world's best breeding companies, DanBred, Topigs Norsvin, and Danish Genetics.

THE SITUATION AND SOLUTION

Historically, there have not been many cases of infection in the Danish Artificial Insemination (AI) industry, but in recent years the focus on biosafety has been significantly sharpened due to swine flu, African swine fever, and PRRS virus, etc. Potentially, a case of infection in a boar stud could have serious consequences for customers. Therefore, strict requirements have been established by the breeding companies to avoid any incidents. **One of the requirements is that Artificial Insemination (AI) studs in Denmark must install filtration or UVC rays in the ventilation system that provides clean, fresh air at the AI facilities to prevent infections among the pigs.**

As there has been no precedent for this type of security at Artificial Insemination (AI) stations in Denmark, Michael Krog Markussen, who is part of the 3rd generation of the owner family at Ornestation Mors, had to find a solution to meet the breeding companies' requirements with easy maintenance in focus.

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He knew about Camfil's products in advance and had an idea of how it could be combined with fresh air ventilation in the stables. Therefore, he contacted Camfil together with a partner.

Michael, Camfil, and the partner brainstormed many ideas in the development phase to find the best solution for Ornestation Mors' boar stables, which could meet the new requirements. The breeding companies' requirements for MERV filter classes were converted to ISO 16890 filter classes, and **Camfil made Life Cycle Assessment (LCA) according to pressure loss, energy consumption, and efficiency so that the most efficient, energy-saving filters could be selected.**

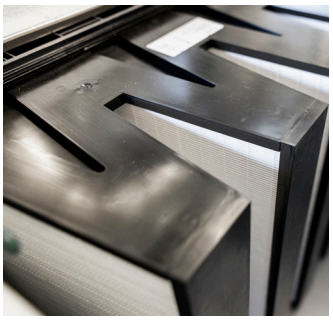
When the calculations were completed, **Absolute VGHF filters with E11 filter class (EPA) were selected for premium filtration.** The filters are mounted in the central ventilation systems located at each barn, as well as in **Camfil's CamCube HF filter cabinets, which are installed in the ventilation system cycle.**

Absolute VGHF is an efficient compact filter that is intended for final filtration in the ventilation systems and filter cabinets. The Absolute filters can be used in clean environments where protection and prevention are of utmost priority. Ornestation Mors wants to protect the animals and employees by removing harmful particles and dust down to ultrafine particle size from the indoor environment.

This project was very crucial since Ornestation Mors had to increase the biosafety procedure. The biggest benefit of having filters and/or UVC lights installed is that the Danish pig producers can feel more secure concerning the product they receive from Ornestation Mors.

"The result is exceptional and the project has been a rewarding collaboration with Camfil, who was very helpful in the development phase and found the best solution for Ornestation Mors air filtration requirements. In the outline, we had a strong focus on the systems being simple, standardized, energy-efficient and that maintenance should be easy and clear. We have fulfilled all our goals and more with Camfil. - Michael Krog Markussen"

ABOUT ABSOLUTE™ VGHF



Absolute™ VGHF is an extra-high efficiency final filtration for air conditioning systems, housings or diffusers.

Compact EPA/HEPA filter with header frame for air handling units that require a very high airflow and low pressure drop. Modern plastic frame with V-shaped pleat pack arrangement combines high capacity with low pressure drop and weight.

- High airflow (up to 2,3m/s)
- Compact HEPA filter with header frame
- Completely incinerable
- Easy Hepa upgrade of AHU

ABOUT CAMCUBE HF

Air filter housing for bag and compact filters with header frames. This air filter housing can be used for system upgrades to include additional air filtration elements.

- For bag filters and compact filters (header frame)
- Build-in thermal insulation
- Corrosivity class C4 for Aluzinc housing material
- Leakage class C acc. EN 15727
- Easy maintenance
- Optional rail for prefilter panels