



# Big Dutchman®



**Cooling Systems**  
for ideal temperatures in your pig house

# Cooling systems – for the ideal climate in your barn

In addition to feed and water supply, ideal climate conditions play an increasingly important role in achieving economic success in modern pig production. A computer-controlled climate system is

more than just controlling fresh and exhaust air, however. Maintaining ideal temperatures even on hot summer days is also very important. Big Dutchman has several cooling system available to

achieve this:

- ✓ CoolBox
- ✓ CombiCool
- ✓ RainMaker

## CoolBox

The local cooling system made of high-quality plastic mesh

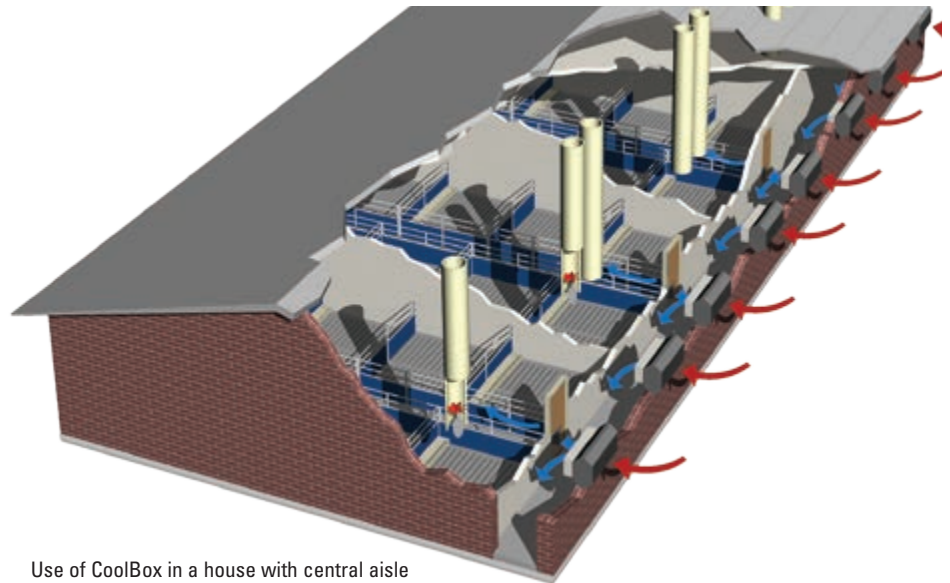


CoolBox is a cooling system especially well suited for pig houses with a central aisle. In locations where the water quality is not as high, CoolBox is also the better alternative to traditional cellulose pad cooling systems because it consists of a high-quality plastic pad. The frame is made of glass-reinforced plastic (GRP). CoolBox is available in different sizes and with different air capacities of 5,000, 10,000 and 20,000 m<sup>3</sup>/h. Pre-assembled upon delivery, CoolBox is easy and quickly installed on site.



## How it works

The plastic mesh (pad) of CoolBox is sprayed with water from above. When hot outside air is drawn into the house through CoolBox, the air comes into contact with the large, wet surface of the pad, absorbing the humidity. This makes for a very good cooling effect and lowers the temperature in the house. The 307 pro climate computer controls the system.



Use of CoolBox in a house with central aisle



Use of a submersible pump to supply water to CoolBox

## Advantages

- ✓ the plastic pad is resistant to a lower water quality (salts, iron, algae) but still very efficient;
- ✓ significantly longer service life compared to cellulose pad systems;
- ✓ the large surface area of the plastic pad guarantees a high cooling efficiency;
- ✓ CoolBox is delivered ready to install, reducing the time required for assembly;
- ✓ easy installation and maintenance.

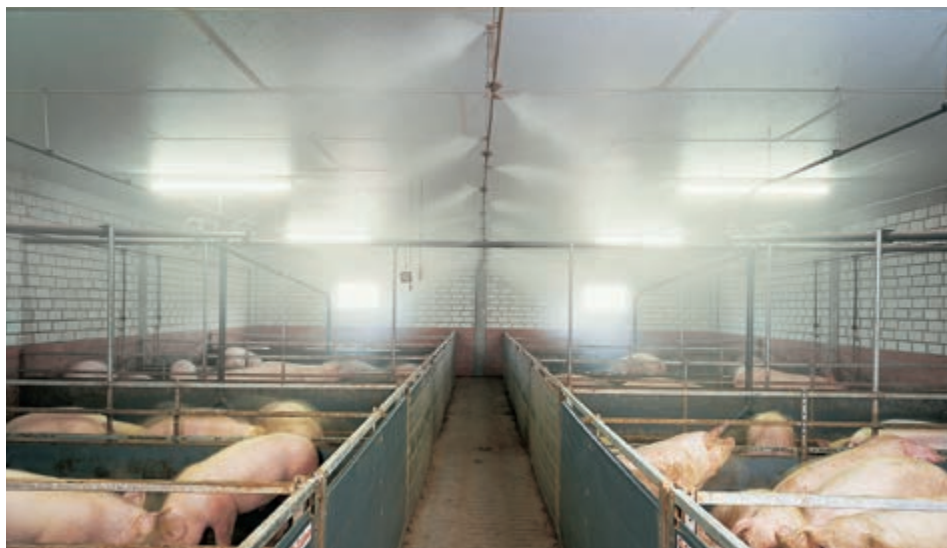
# CombiCool

## The efficient high-pressure fogging system

CombiCool is a system designed to cool, humidify and wet pigs, especially in compartmentalised houses. The special high-pressure nozzles made of stainless steel have very low flow rates, but

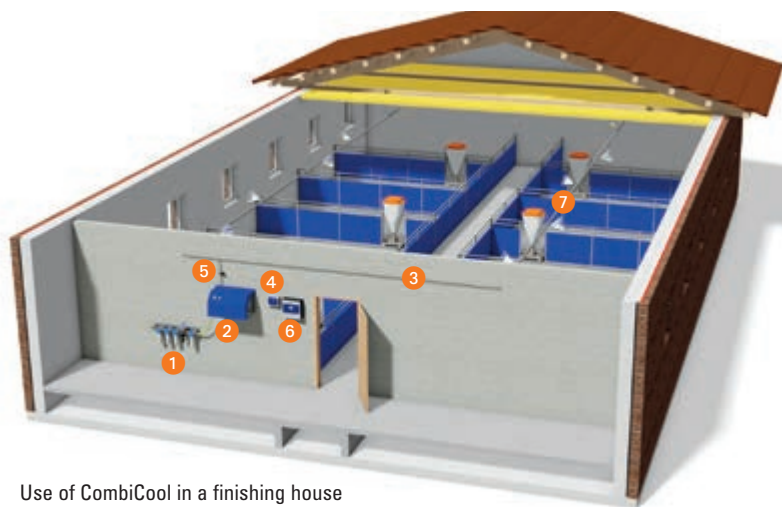
extremely high passage speeds. They thus create a very fine aerosol fog that is distributed evenly all over the compartment. The warm air in the compartment immediately absorbs the humidity, thus

creating a comfortable temperature. Furthermore, CombiCool can be used to humidify the air throughout the whole year to provide optimum humidity levels.



## Advantages

- ✓ efficient in-house cooling, especially on hot summer days, to maintain the comfort temperature;
- ✓ humidification of the house air throughout the whole year to provide ideal humidity levels at all times;
- ✓ dust binding increases the pigs' well-being and has a positive influence on their respiratory tract;
- ✓ aerosols, e.g. aromatics, can be applied and evenly distributed;
- ✓ all components inside the barn are made of stainless steel for a long service life.



Use of CombiCool in a finishing house

## Key

- 1 Filter unit – either with two or four filters
- 2 Central pump unit for up to 350 nozzles
- 3 High-pressure duct made of stainless steel
- 4 Pump unit control box
- 5 High-pressure valve ½" 70 bar for max. 150 nozzles
- 6 307pro climate computer
- 7 Nozzle line made of stainless steel

## How it works

The 307pro climate computer activates the cooling system as soon as the temperature rises above a pre-set level. The pump switches on and the main duct is loaded with a pressure of approx. 70 bar. A high-pressure valve installed in front of each compartment opens and the nozzles spray a fine aerosol fog into the room. A multi-stage filter unit in front of the pump prevents foreign matter from clogging the nozzles.



307proclimate computer



Central pump unit with four filters

# RainMaker

## The centralised cooling system consisting of top profile, pad retainer and water reservoir

RainMaker is a cooling system which is mainly used in climatic regions with hot and dry summers. It is based on the principle of evaporation. The higher the

temperature and the lower the relative humidity, the higher the cooling effect. Apart from traditional cellulose pads, we also recommend using plastic pads.

Plastic pads can be cleaned with a high-pressure cleaner and have a much longer service life.

### How it works

The pads are soaked with water from above. Due to the negative pressure ventilation in the barn, the warm fresh air is drawn inside, flowing through the moist pads. The air absorbs the humidity and cools down.

Excess water is collected at the bottom part of the frame in a water reservoir. Together with a certain amount of fresh water, the centrifugal pump returns this water to the cycle. The cover supporting the pads is simply mounted onto the water reservoir and can easily be removed for

maintenance purposes. A special perforation of the cover ensures that the excess water flows back while also preventing small animals from entering the system. As an optional feature, we offer a supply unit which facilitates maintenance because it makes access to the float valve easier.



Water reservoir and supply unit

The core part of the frame system is the new top profile. The top profile is the entire upper part of the frame. Water flows through the top profile onto the pads below.

- ✓ A special deflector ensures that the water is distributed evenly for an ideal wetting of the pads.
- ✓ Individual snap-on retainers make replacing the pads easy.
- ✓ An integrated cover prevents dirt from the roof from entering the pads, and also stops birds from nesting in the top profile.
- ✓ Assembly is quick and easy.



Top profile and practical snap-on retainers allow for a simple and quick replacement of the pads

### Advantages

- ✓ efficient in-house cooling system based on the principle of evaporation;
- ✓ the new top profile is designed as an open system so that the water supply is visible and no rodents or other animals can use the profile as nesting place;
- ✓ significantly longer service life when using plastic pads;
- ✓ the water reservoir is integrated into the frame system, making an additional water tank superfluous.



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