

## PIG HOUSE AUTOMATION for optimum results

Achieving the highest possible result against the lowest possible cost. That is only possible if you can rely on proven technology that ensures optimum conditions in pig houses day in, day out. Technology that lets you see exactly what is happening and lets you take action immediately, if necessary, wherever you are and at any time. This enables you to work efficiently and manage your employees properly. Ensuring you of the highest possible results for your farm. Stienen BE is the right partner to enable you to fully automate your pig houses.



## THE QUALITIES of a family company

Stienen BE is a leading family company (1977) which has its roots in livestock farming. It is in our nature to be very close to our end users. Stienen BE is a global supplier of innovative automation solutions for poultry and pig houses. Our climate solutions, automation systems, management software, and the accompanying peripheral equipment are all developed and produced in-house.

## CLIMATE SOLUTION

Farm management using the extended KL-6400 climate and management computer. Or with Stienen's Mitch climate concept. The KLC-100, KLD-100 and KL-6500 together form the very strong trio that makes up this climate concept. The overview below shows the most important advantages of both climate solutions.

### KL-6400 CLIMATE AND MANAGEMENT COMPUTER



An extended climate and management computer, the all-rounder among climate controllers for modern pig farming.

- Direct exhaust
- Eco-Vent
- Central exhaust, optionally with an air scrubber
- Ventilation based on temperature
- Minimum and maximum compensation of ventilation based on outside temperature
- Compensation based on CO2 or RV, adjusted bandwidth compensation or automatic temperature increase during the night.

KL-64, optional local station for readout at the room. This info station is installed at every room and enables you to read out the current room temperature, ventilation, heating status and alarm status at a glance.

### Mitch CLIMATE CONCEPT



With Mitch you consciously choose for:

- simplicity and central overview
- a language-independent system which every employee can use
- a commercial-technical solution which lets you save up to thousands of meters of cable

You can choose from operation and read-out at different levels: management, pig house and room level.

No matter which language you speak, everyone quickly learns how to use the icon-driven control computers from Mitch.

The KL-6500 control functions in combination with the KLD-100 room controller and the KLC-100 control for the central functions. Together they form the very strong trio that makes up Stienen's Mitch climate concept.

## PERSONAL ADVICE from our climate specialists and partners

Our climate specialists and local partners will be happy to help you find the best solution for your pig problem. If you would like more information, please contact our Sales Department:

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# VENTILATION TYPES

## How does the air enter the pig house?

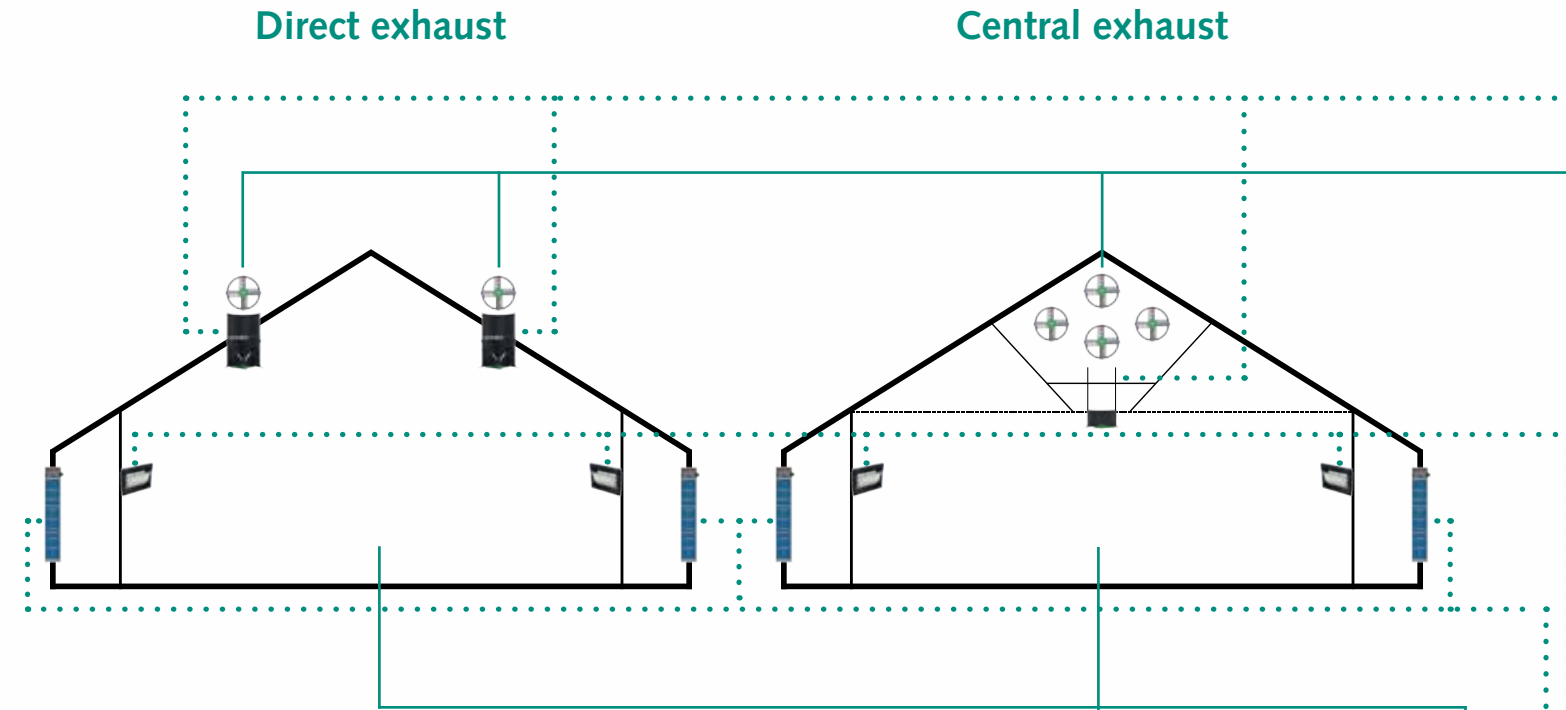
The climate control in a pig house is based on the type of ventilation. Depending on how the air enters the pig house, we distinguish the following types of ventilation:

1. Ground channel ventilation
2. Roof ventilation
  - a. Roof ventilation with AeroRoof inlet valves
  - b. Roof ventilation (Combi roof)
3. Combi and tube ventilation / Fresh nose system
4. Feed alley ventilation or door ventilation (Oolman)
5. Air inlet valves

Some ventilation types are eminently suitable for preconditioning the incoming air. This is referred to as a conditioned air inlet. Heat exchangers or cooling pads are used to heat up the inlet air in the winter and to cool down in the summer.

## How does the air leave the pig house?

The air can be extracted from the pig house in two different ways: via direct exhaust or central exhaust. With direct exhaust the air is extracted via an exhaust chimney in each room. We often see that the outgoing air is extracted centrally. The air from all sections is collected in a central air channel before it leaves the pig house. The major advantage of this system is that the emission point can be replaced and the air can be cleaned using air scrubbers before it leaves the building.



### Pig house management

The graphic display of parameters such as temperature, water, feed, weight, production, relative humidity (RH), carbon dioxide (CO2) and ammonia (NH3) shows you the main management information at a glance. This enables you to easily and transparently monitor, control and adjust all the vital processes in the pig house.



### Dry feed system

**KFM-6400:** a universal controller for the automatic filling of dispensers or feed troughs in single and/or multiple feed circuits. This dry feed system is suitable for single-phase and multi-phase feeding.

**KFV-6400:** an extended dry feed computer for highly accurate weighing, mixing and dosing out of pre-programmed feed rations per valve/animal group.



### Frequency controller

The FC-102 frequency controller pre-programmed by Stienen BE enables optimum climate control in the pig house. The FC-102 continuously adjusts the fan speed to the need of the animals. This is done via a stepless control. Large temperature fluctuations are prevented and operational reliability is increased.

### Energy efficient ventilation

Energy-efficient, low-noise and easily controllable high-pressure fans are a crucial factor in central exhaust systems. The energy-efficient SGS fans from Stienen BE distinguish themselves by performing even more favourably in the usual control range - up to 35% of the ventilation capacity. The SGS fans are ideally suited for use in central exhaust systems, optionally combined with an air scrubber or manure drying installation.



### Ventilation chimneys with click system

Stienen BE supplies smart, compact single- and double-walled ventilation chimneys for air intake and exhaust. The ventilation chimneys seamlessly fit the AQC measuring and control units and SGS fans. As one system they are solid and quick to assemble (click system).



### Controlled ventilation

A good minimum ventilation level is important in order to reduce humidity, CO2, NH3 and dust in your pig house. When the management computer has calculated the current climate requirements for your farm, the AQC measuring and control unit will ensure that the (controlled) fans will ventilate the correct amount of air, independently of weather influences and pressure differences.



### Air inlet

Providing your animals with the right volume of fresh air at the right speed in the right place. This is an important condition for a healthy climate. Controls that minimise any temperature differences in your pig house are a standard feature of our management computers. Together with our AeroWing inlet valves, controlled by our robust EGM winch motors, they give you the assurance of proper ventilation.



### AeroX, air-to-water heat exchanger

AeroX air-to-water heat exchangers are ideally suited for preconditioning air. In areas with suitable soil layers it is possible to make use of the heat storage in the soil. The air-to-water heat exchanger is mounted at the level of the air inlet in the pig house as close as possible to the animals. The water in the plastic hoses is warmer than the incoming air in winter, causing it to heat up. In the summer this is the other way around.



### FarmConnect

The FarmConnect farm software enables you to convert data from our management computers into management information. FarmConnect collects all the current and historical data of all the computers on your farm and presents it in clear overviews, graphs and tables. This professional software gives you central access to your farm data. Wherever you are, you are always connected to your company so that you can intervene immediately if necessary.



### FarmRemote

The remote control option enables you to safely connect to our management computers by smartphone, tablet or PC. This means that you can safely monitor your farm, even from a long distance, and intervene if necessary.