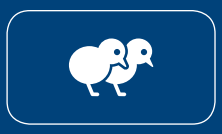
Heating

Optimised climate solution focusing on heating






SKOV

Climate for Growth

The way to an optimum house climate

SKOV provides ventilation solutions in which heating is an integrated part of the overall solution.

A good house climate is important for the animal well-being, health and productivity. Heating is a part of the total climate solution in line with cooling and ventilation and a crucial parameter to create an optimum house climate which contributes to a high productivity.

The climate in the livestock house, where temperature and relative air humidity are the most important factors, is of major importance for the feed conversion, gain, stress, infection risk, etc.

It is necessary to ventilate and to supply heat to the livestock house in order to control the climate including temperature, humidity and CO_2.

Effective forced air heating

Spiraflex finned tubes provide an efficient and economical heating of the air in the house. The emission of heat from a Spiraflex tube is per metre far better than if the surface of the tube had been smooth.

The tubes are mounted below the wall inlets. The finned tubes emit heat (convection) to the surrounding air. The air gets lighter, rises and carries the cold air from the inlets further into the house ensuring circulation of the air. The positioning of the Spiraflex tube helps provide the correct ventilation with optimum mixing of cold air from the outside and heated housing air so that the broilers are not exposed to cold air down draughts.

Heating - a prerequisite for good litter

In order to give the broilers and the litter the best possible start, it is important to heat the livestock house for a prolonged period of time prior to the stocking of the broilers. This is essential in climate areas where it is cool/cold. The air temperature can be raised within a few hours; however, it may take a long time for the walls and floor to be heated. For the same reason, it is a good idea not to let the heat out of the house between the batches.

The small broilers are completely dependent on the ambient air temperature and the solid base for good production results that are formed during the first week after stocking. Therefore, it is a good investment to ensure optimum climatic conditions from the point of stocking.
Floor heating is well suited for heating of the house prior to broilers being stocked, but floor heating is not recommended as the only heat source in the livestock house. It takes a relatively long time to adjust the temperature in the house either up or down by means of floor heating and it can be difficult to reach the set point temperature in the livestock house shortly afterwards. With Spiraflex finned tubes, it is possible to raise the temperature rather quickly in order to improve the distribution of the birds throughout the house.

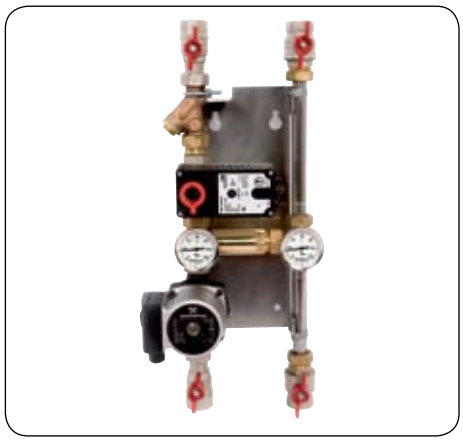
Direct heating

Today, direct heating through e.g. gas or oil blowers inside the livestock house is often used due to the relatively low initial costs. This is done despite the fact that it results in a number of operating and technical drawbacks in relation to the climate. One of the essential negative consequences of direct heating is an increase of the CO_2 concentration inside the livestock house.

In 2010, requirements concerning air quality in broiler houses are standard in the EU countries. For instance, there will be a limit for the permissible level of CO_2 in the livestock house. The new code of practice means that the permissible stocking rate is lower if the requirement concerning max. 3000 ppm CO_2 in the house cannot be met. (Measurement is taken at eye level of the broilers).

SKOV heating system

Heating systems from SKOV are based on supply and circulation of hot water. SKOV heating components are of a very high quality and they are well suited for a harsh house environment.



Heating

With Spiraflex finned tubes for heating of the livestock houses, you get an efficient and quickly responding heating system ensuring the animals a perfect climate.

Spiraflex finned tubes are available in two standard dimensions (1" and 1½") of the lengths 1, 3 and 6 metres.

Finned tubes

- All-welded finned tubes ensuring a documented high heat output
- Made of steel - boiler tube quality (DIN 17175)
- The finned tube is hot-galvanized
- Threaded finned tube is supplied as a standard
- Plumbing fittings
- Mounted by means of stainless fittings

Shunts

In addition, we supply complete shunts for regulation of forced air heating and floor heating respectively. The shunts ensure an optimum regulation of temperature through the SKOV climate computers in relation to power consumption under all conditions. This way, the best production environment is created in the livestock house.

Shunt - forced air heating

- Ready-assembled shunt is supplied on a stainless mounting plate
- The shunt is service-optimized with dirt trap and stop valves
- Special nonreturn valve for optimum mixing under all conditions
- Easy-readable thermometer face on the supply and return flow
- Available in standard sizes from Cv 0.63-16
- Motor classification IP66

This shunt is available in two variants. Modulating shunt well suited for small amounts of water and 0-10 V shunt well suited for great amounts of water.

Shunt - floor heating

- Ready-assembled shunt is supplied on a stainless mounting plate
- The shunt is service-optimized with stop valves
- Powerful three-step pump ensuring optimum heat distribution and cooling
- Special nonreturn valve for optimum mixing under all conditions
- Easy-readable thermometer face on the supply and return flow
- Stands differential pressure up to 6 bar (60 mWC)
- Can easily be inverted

SKOV supply climate and production management systems for animal production the world over. Our solutions are technologically advanced, user friendly and individually adapted to meet the needs of our customers.

SKOV A/S • Hedelund 4 • DK-7870 Roslev
Tel. +45 72 17 55 55 • info@skov.com • www.skov.com

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