



Heating for Pig Production



SKOV Livestock House Heating

The livestock house climate has a decisive influence on animal health, well-being and productivity. To ensure an optimum livestock house climate it is often necessary to add heating to the livestock house. Low temperatures and high relative humidity lead to insufficient feed consumption, lower gain, stress and infection risk. In addition to this, heating livestock houses makes it possible to increase the ventilation level and thus lower the carbon dioxide concentration.

SKOV heating system

There are two types of heating for livestock houses - underfloor heating and room heating, and SKOV offers both types of high-quality heating systems. Heating systems from SKOV are based on supply and circulation of hot water. The SKOV heating components are of very high quality and they are well suited for harsh house environments.

Floor heating

The main purpose of underfloor heating is to create a comfortable ambient environment in the pigs' lying areas. Under-

floor heating should be dimensioned so that the pigs' lying area has a uniform and sufficient heating for the pigs. Underfloor heating is primarily used in covered creep areas and in two-climate pens for weaners.

Room heating

The room heating should be placed under the air intake and be as far down towards the animals as feasible. The best distribution of heat in the livestock house is obtained by using Spiraflex finned tubes, which with the large surface of the fins provide a powerful air current upwards, helping with optimum distribution of the cold air from the air intake into the livestock house. The room heating is controlled through the ventilation system via the SKOV climate computer, which means that regulation is done with the same climate sensor as the rest of the ventilation system.

Spiraflex finned tubes

- Two standard dimensions (1" and 1½") in lengths of: 1, 3 and 6 metres
- Fully-welded finned tubes ensuring a high heat output
- Manufactured in steel of boiler pipe quality (DIN 17175)
- The finned tube is hot-dip galvanised





Dimensioning room heating

Room heating should be used in those house sections where the requirements for temperature, minimum ventilation and air humidity cannot be met. When SKOV offers a heating system, the dimensioning is based on the circumstances provided regarding outdoor climate, the insulation rate of the building, pig category and house equipment. A concrete calculation is necessary to determine how much heating capacity is needed for individual situations. The following guidelines can, however, be provided for well-insulated livestock houses:

- Room heating should be used for weaner units. The heating system capacity should be significantly greater in a controlled one-climate unit than a controlled two-climate unit.

- In farrowing houses with slatted floors it is usually also necessary to add room heating, while surplus heating from underfloor heating and heat lamps may suffice in houses with partly solid floors.

- In gestation units for group-housed sows there will be a need for heating to ensure good air quality during winter periods as the stocking rate will be much lower than for sows in gestation crates.

- In finisher units with slurry containers under the entire house there will be a need for heating, and the heating capacity should be increased for livestock houses with liquid/wet feeding compared to those with dry feeding.

- In houses with partly solid flooring it will be necessary with a concrete calculation based on the conditions under which the livestock house will be used.

Drying and heating

The livestock house should not only be clean. A dry section is just as important before the weaners are stocked in the newly cleaned livestock house. The most important reason for applying heating in the pig house is that a thorough drying of the section is rendered possible. It is thus important that there is sufficient heating capacity for drying of the livestock house. It is often required that drying and heating of the livestock house is done so quickly that it is necessary to supplement with an external heat source, as

for example a blow heater. This direct form of heating is a quick and powerful heat source, effective for room heating. The SKOV blow heater is manufactured in stainless steel and requires minimum maintenance.



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