



# Heating

Optimised climate solution focusing on heating



# The way to an optimum house climate

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

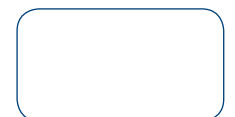
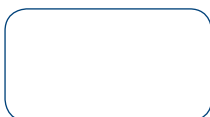
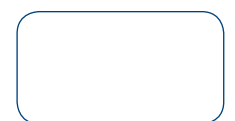
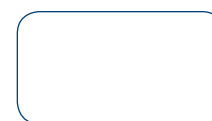
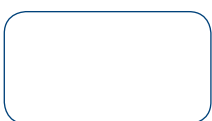
A good house climate is important for the animal well-being, health and productivity. Heating is a part of the total climate solution in line with cooling and ventila-

tion 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<sub>2</sub>.





## Floor heating and forced air heating

Floor heating should not be applied as heating as it may give rise to wallowing in the pens. Heating must be placed between the air intake and the animals. The most efficient way to supply heat to the livestock house is by means of Spiraflex finned tubes that have a large surface area, use little water and are effectively cooled. Heating is controlled by the SKOV climate computer which also controls the ventilation system.

It is not recommendable to use floor heating as heating, e.g. by establishing floor heating with a separate controller under the covering and another controller for the heating of the floor area between the covering and the slatted floor. The pigs will not lie in this area and it gives rise to wallowing.



## Clean and dry pen

The section should not only be clean. A dry section is just as important before the weaners are stocked in the newly cleaned section. 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 section. Of course, it is also preferable to supply heat for a period of time after stocking. It applies to both weaners and pigs of 30 kg.

## The first days

In Denmark, we have the greatest temperature fluctuations from October till May and this is when there is the greatest heat requirement. Therefore, the floor heating should be running at maximum capacity

when the weaners are stocked. After stocking, especially the first few days, it is important to observe the pigs, their lying behaviour and their state of health.

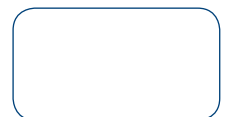
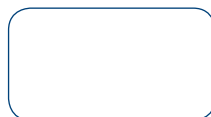
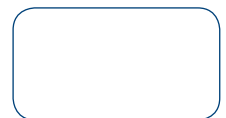
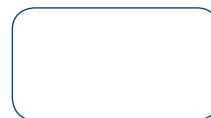
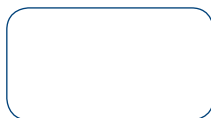
It varies a lot from house to house when the floor heating should be switched off. Most often, the floor heating is switched off after 12-14 days but it should be done after careful consideration. The floor heating is manually adjustable but it can also work automatically by means of SKOV climate computers. A number of days is entered and the temperature course is factored in so the temperature is continuously falling until the heating is switched off.

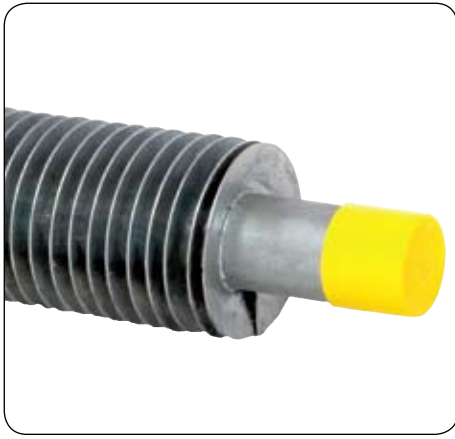
## Finishers and gestation sections

It may be a good idea to include heating in finisher sections so the good climate can be retained during the gain period of the pigs. Previously, heating was not integrated in gestation sections but in connection with group housing and lower stocking density, we recommend including heating in these sections. Floor heating is also applied in farrowing and weaner sections and it is obvious that heating should be integrated in quarantine and recovery sections so an optimum regulation of the climate is possible.

## 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.





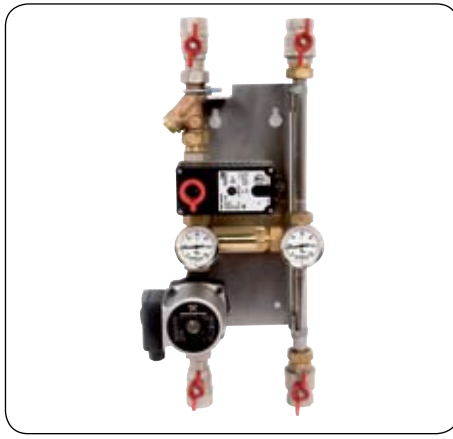
## Heating

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

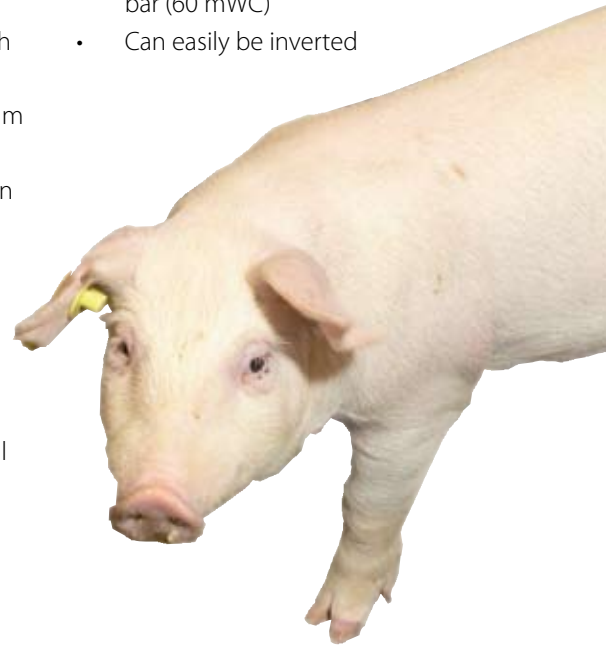
- Ready-assembled shunt is supplied on a stainless mounting plate
- The shunt is service-optimized with dirt trap and stop valves
- Special nonreturn valve for optimum mixing under all conditions
- Easy-readable thermometer face on the supply and return flow
- Available in standard sizes from Cv 0.63-16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

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