

# Ventilation Systems for Dairy Barns



*United by Dairy*

[skov-secco.com](http://skov-secco.com)



# About Us



## About Us

At SKOV-SECCO, we understand the critical role of optimal barn ventilation in enhancing dairy productivity and cow well-being. Our innovative, climate-adaptive ventilation solutions, backed by over 40 years of SKOV group's expertise, set us apart in ensuring high-quality milk production worldwide. With our specialized dealer network worldwide, we offer integrated, tailor-made systems for any dairy farm, proving our commitment to sustainability and excellence in dairy farm management.

Over the years, SKOV-SECCO has become one of the leaders in natural and mechanical ventilation systems intended for modern dairy barns. Through the constant development of new products, SKOV-SECCO can offer you a complete line of ventilation products designed for all types of breeding.

SKOV-SECCO joined the SKOV Group (SKOV A/S) on October 1, 2019. SKOV, headquartered in Glyngoere, Denmark, is a ventilation and farm management specialist for pig and poultry production.







# Natural



## Natural

Natural ventilation relies on the wind and temperature variations within the barn to create airflow. This system is suitable in most regions with a mild or temperate climate. Air exchange in the barn occurs by the natural ventilation principle, which involves creating sidewall openings that allow adequate air movement through your barn in spring, fall, and summer and making a ridge opening to facilitate proper minimum air exchange in winter conditions.

The Natural ventilation system is most suited for mid-sized to small-sized barns due to the physical restrictions of the ventilation principle. The recirculation fans assist in increasing airflow over cows in hot weather.







Big Air Püre ceiling fans



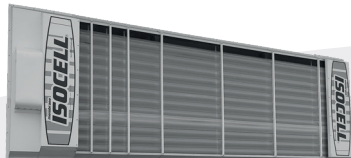
Square chimneys



BlueControl controller



DA 820 chimneys



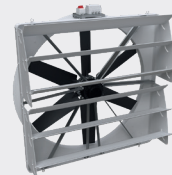
ISOCELL Z-wall



Roll-down curtain



BF 50 recirculation fans



VHV 55" and 72"



Boreal Flow fans



DOL 111 Rain detector



Radiation shield



DOL 104 Humidity sensor



DOL 58 Weather station



DOL 119 CO2 sensor



DOL 114 Temperature and humidity sensor



DOL 53 Ammonia sensor



# Tunnel



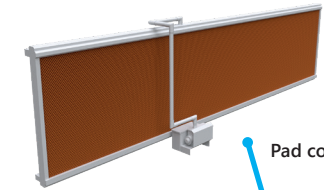
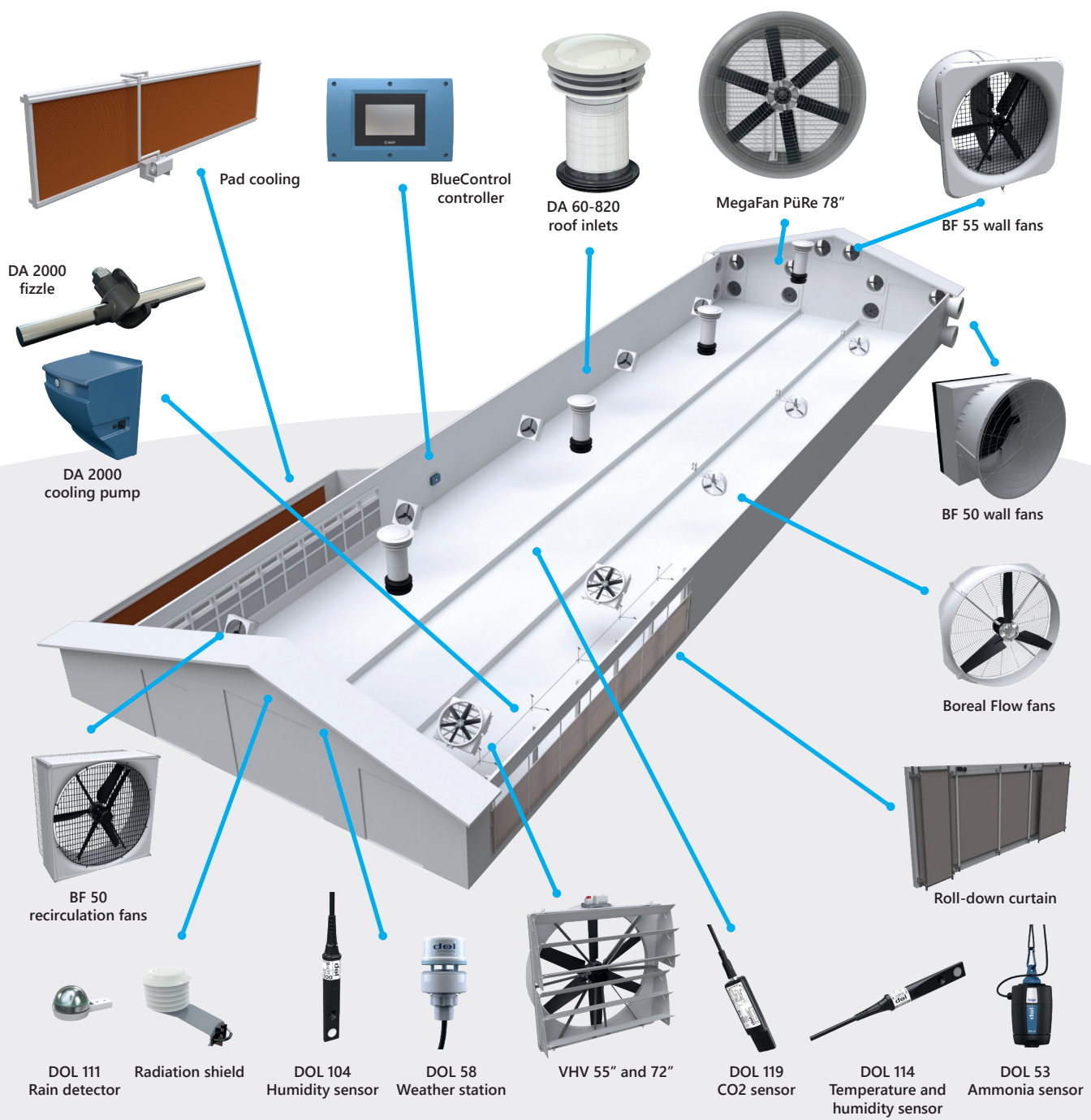
## Tunnel

Tunnel ventilation is the best system for cooling the cows during the hot weather by combining high air velocity and high air exchange rates over cows' bodies. We recommend this system where the barn's design is headed towards a longitudinal design. Fresh air is taken in through a Tunnel opening at one end of the building, and the air is led out at the other end of the building.

To equip a barn for Tunnel ventilation, install large exhaust fans along one end wall and large openings along the other.







Pad cooling



BlueControl controller



DA 60-820 roof inlets



MegaFan Püre 78"



BF 55 wall fans



DA 2000 fizzle



DA 2000 cooling pump



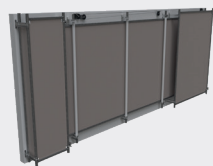
BF 50 wall fans



Boreal Flow fans



BF 50 recirculation fans



Roll-down curtain



DOL 111 Rain detector



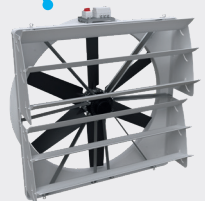
Radiation shield



DOL 104 Humidity sensor



DOL 58 Weather station



VHV 55" and 72"



DOL 119 CO2 sensor



DOL 114 Temperature and humidity sensor



DOL 53 Ammonia sensor



# Cross-tunnel



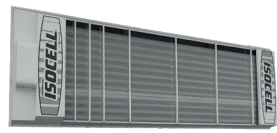
## Cross-tunnel

Cross-tunnel ventilation is the best Tunnel option in large-scale barns to ensure even climate conditions. Cross-tunnel systems have inlets along the entire length of the barn, which provides more evenly distributed air over a greater distance. The airflow in Cross-tunnel systems goes perpendicular to the feed lane, and the air travels parallel to the stalls, which is expected to provide better airflow. Cross-tunnel ventilation, when properly set up and operated, reduces cow temperature by increasing air velocity.

A baffle system can be installed to achieve a higher airspeed in the stalls without adding more ventilation capacity. Baffles installed above the stalls would increase the airspeed where the cows lie down.







ISOCELL Z-wall



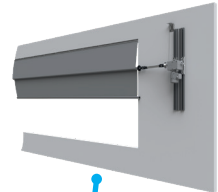
Boreal Flow fans



Roll-down curtain



BlueControl controller



Double roll-up curtain



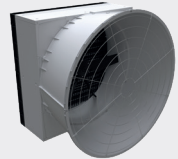
VHV 55" and 72"



DA 60-820 roof inlets



BF 50 recirculation fans



BF 50 wall fans



BF 55 wall fans



DOL 111 Rain detector



Radiation shield



DOL 104 Humidity sensor



DOL 58 Weather station



DOL 119 CO2 sensor



DOL 114 Temperature and humidity sensor



DOL 53 Ammonia sensor



MegaFan PüRe 78"



# Cross-tunnel with Cooling



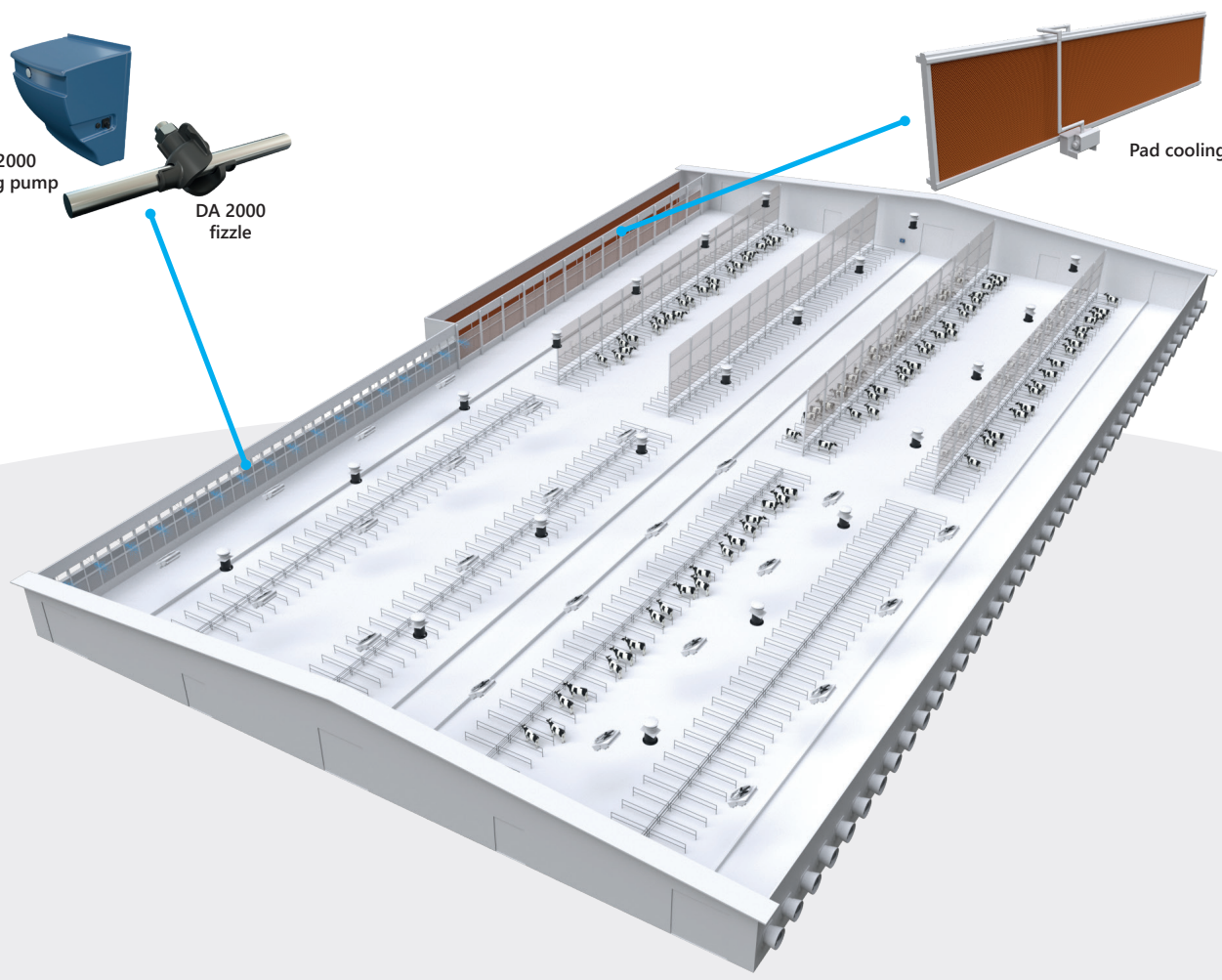
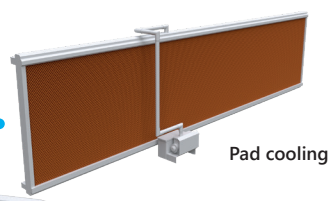
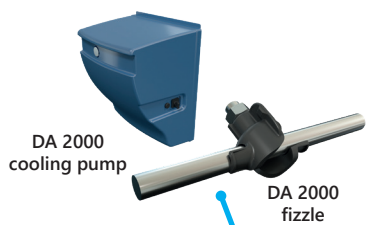
## Cross-tunnel with Cooling

Cross-tunnel ventilation is an excellent system for regions with very cold winters. Tunnel ventilation is a negative pressure system suited for all types of livestock production, including dairy.

A dedicated cooling system can be added to the ventilation system for additional cooling in hot regions. We recommend adding pad cooling or high-pressure cooling that reduces the incoming air temperature for better cooling, combined with airspeed.









# Equal Pressure



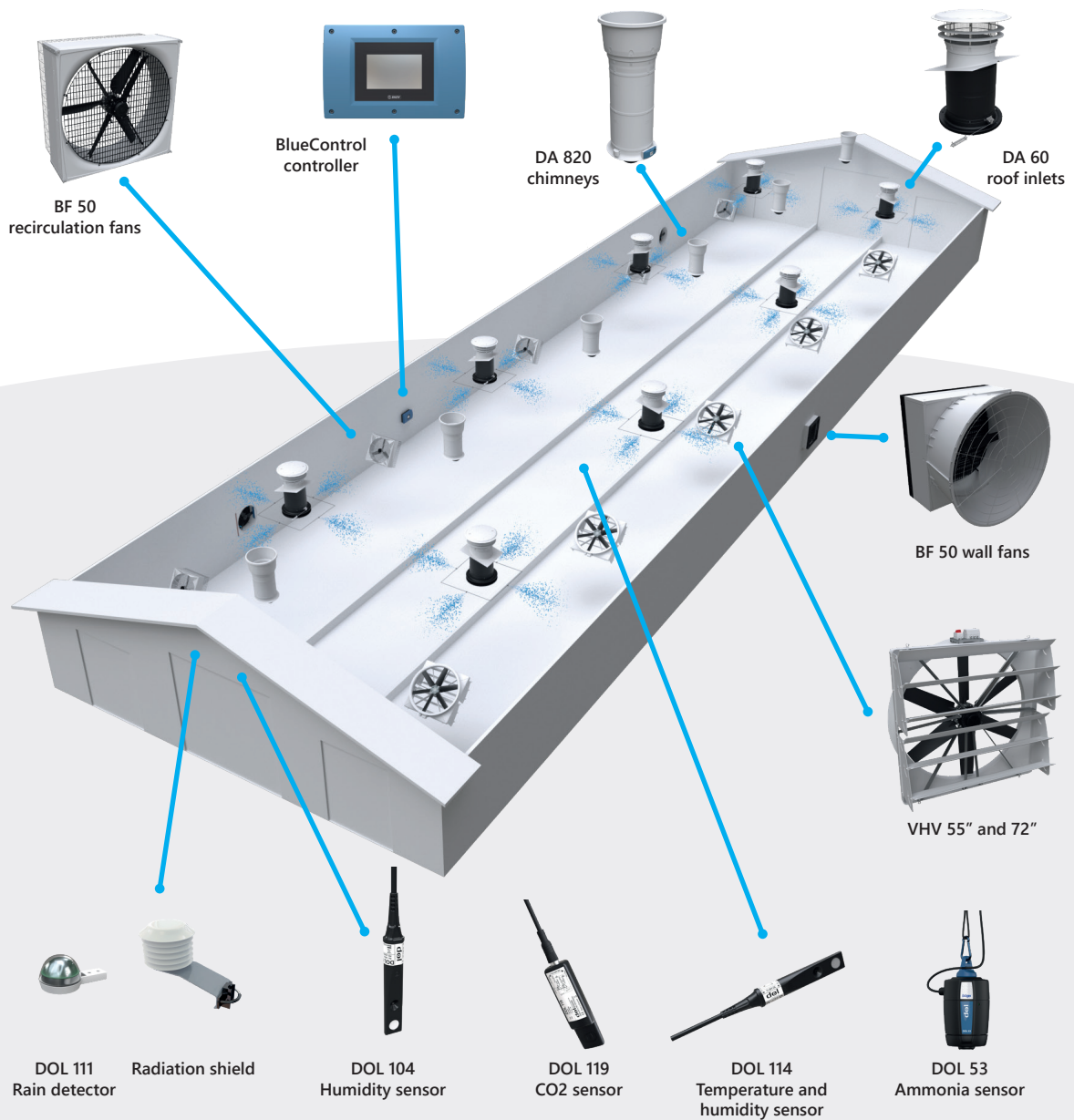
## Equal Pressure

Equal pressure ventilation ensures that air is distributed evenly and optimally. You can adapt the system to livestock houses that are extremely difficult to ventilate due to their location, air leakage, wind action, and so on. The barn receives fresh air through roof inlets, and fans in the inlets and outlets maintain neutral pressure (equal pressure).

The recirculation functions of the roof inlets also help to cut heating expenses in colder climates throughout the winter. Recirculation fans can be incorporated into the design of these intake chimneys to give benefits. The recirculation fans combine fresh air from outside with inside air. This would precondition the air before it is directed down to the cows.









# LPV System for Calf Barn



## LPV System for Calf Barn

This system is suitable for most houses in temperate climates. LPV ventilation is a negative pressure system developed for animal production. This ventilation system ensures accurate adjustment of temperature, air humidity, and air velocity.

In the LPV ventilation system, the wall, ceiling, or roof inlets supply fresh air. During warm periods, the air enters the same way but is sucked into the livestock house at a faster rate. It causes air circulation around the calves, which cools them without being perceived as a draft. During cold periods, fresh air is mixed with the house air before it reaches the area occupied by the calves.





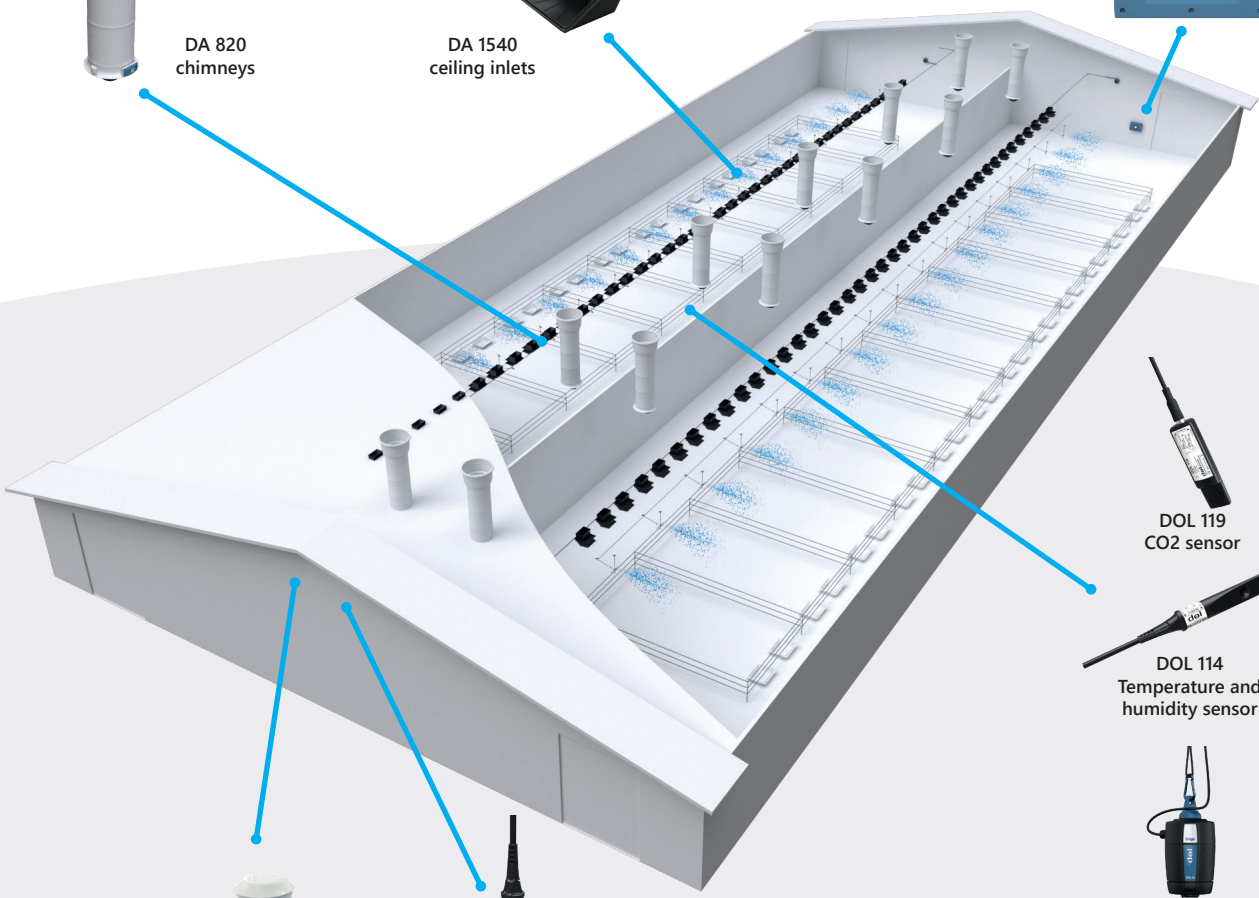


DA 820 chimneys



DA 1540 ceiling inlets

BlueControl controller



DOL 119 CO2 sensor



DOL 114 Temperature and humidity sensor



DOL 53 Ammonia sensor



DOL 111 Rain detector



Radiation shield



DOL 104 Humidity sensor



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