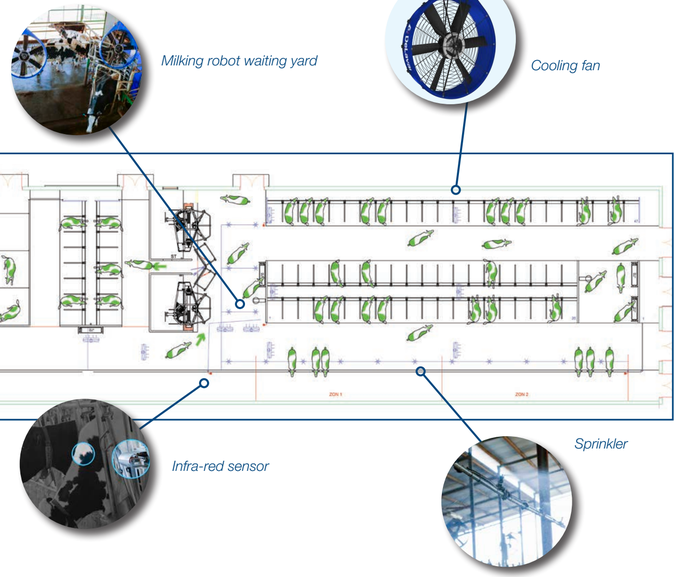
Planning your Cow Cooling System

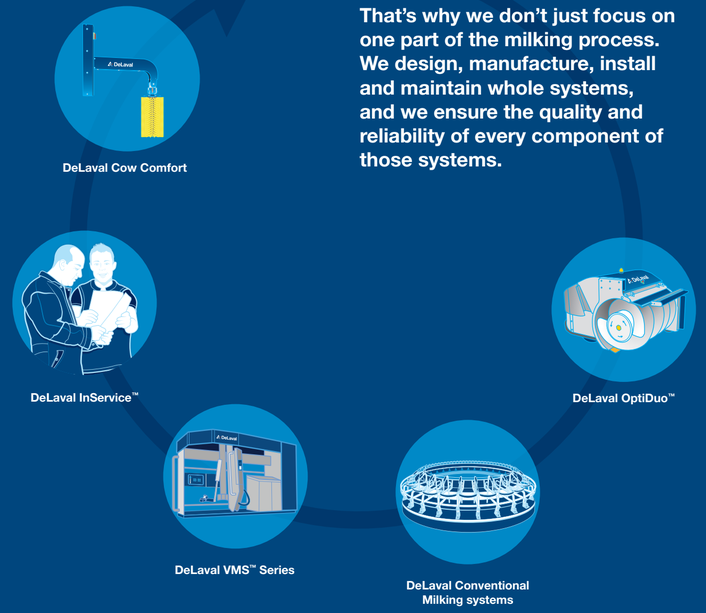
Basics of cooling cows
Highly efficient cooling fans create a fresh air flow speed on the surface of the animals, by which the heat stress problems can be solved. In addition the fans support the air circulation in the barn enabling a stable climate in the barn all year round. In some conditions forced ventilation with fans will not be enough. Then it can be combined with water sprinkling.

The droplets make the difference!
Wetting the cows by direct cooling is the best and most efficient way for Cow Cooling. It's a simple solution with low investment costs and the best results for your cows. The cow is wetted with a large droplet and in combination with the fans, the cow is cooled down by itself. Water sprinklers are installed at feed table and waiting yards or holding pens.

Keep your cows motivated
With our system of cooling we stimulate the cow traffic in the right direction. We keep the cows motivated to eat, milk and rest. When the cows have been laying down and start to get warm, they know they will be rewarded at the feed fence with cooling. And when they go milking we again reward the cows for behaviour they want to do anyway.



DeLaval Cow Cooling System works well with:



At DeLaval, we strive to help you deliver high quality milk, from healthy animals.

That's why we don't just focus on one part of the milking process. We design, manufacture, install and maintain whole systems, and we ensure the quality and reliability of every component of those systems.

Put DeLaval Cow Cooling System to work for you.

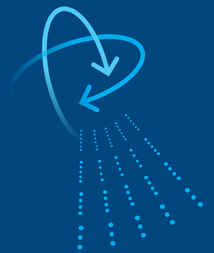
If you operate in a location where heat stress is a consideration, talk to your local DeLaval dealer to find out how a Cow Cooling System can improve your bottom line.
www.delaval.com

DeLaval

DeLaval Cow Cooling System

Creating the right climate for your cows

DeLaval



Cooling cows is one way you can increase your yield, **be kind to your cows, the environment and to your bottom line.**

DeLaval Cow Cooling System provides a cost effective way to reduce the impact of heat stress and keeps milk production and fertility rates up. We use high effective cooling fans and water sprinklers for direct cooling of the cows.

We have the solutions for you, independent of the size of your farm or where your farm is based in the world.

For Cow Cooling in barns with automated milking systems we have developed an advanced control system (patent application pending) for Cow Cooling, connected to sensors. Going to the feed fence is being stimulated by cooling and feeding. In the waiting area for the milking robot we have sensors which automatically trigger Cow Cooling, motivating the cows to go to the milking robot.

For Cow Cooling in barns with parlor or rotaries we control the cooling system with time schedules. For cooling of the holding yard or at the feed table.

The right fan for the right air throw

To cool and dry the cows properly we need a high wind speed (up to 3 m/s in hot climates). With our uniquely designed DeLaval dairy fans DDF with specially formed fan blades we ensure a high airflow and a long throw. This way you need less fans and use less energy for an excellent cooling result.
With several models in the DeLaval DDF cooling fan range, we can plan the right fan for your needs.

Variable speed drive

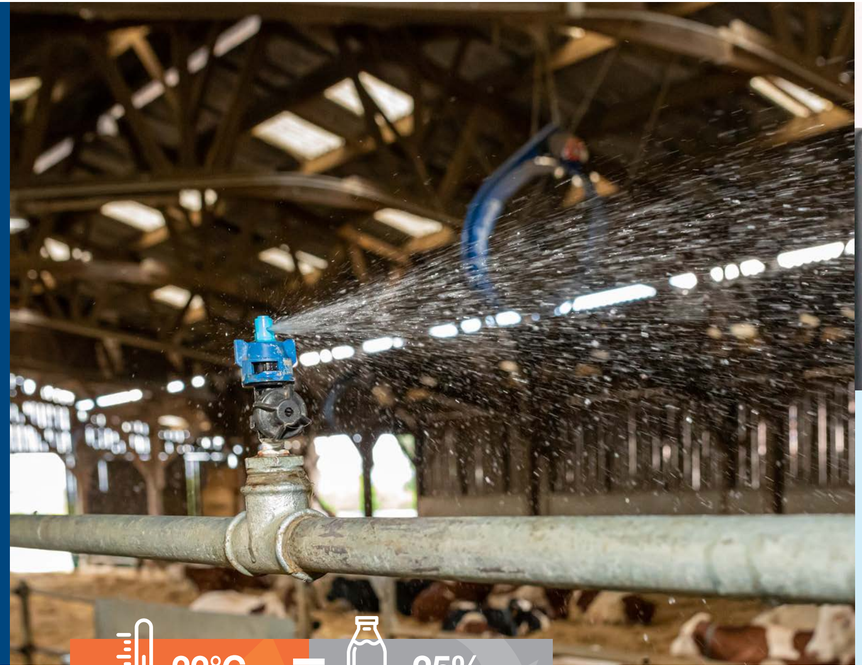
To keep energy costs down, fans should only be on when they need to be and run as fast as needed. That's why DeLaval is using a variable speed drive to turn your fans on and off and regulate their performance to suit conditions. Variable speed drives adjust the motor input frequency and voltage of electric engines to achieve the optimal speed to suit current temperature conditions.

Choose your level of automation with different controls

Basic
- Manual or automatic control of fans

Advanced
- Cow Cooling programs that control fan speed and sprinklers based on time or motion sensors for the different zones of the barn. The cow cooling system can be based on THI (Temperature or humidity index) or just temperature.

DeLaval dairy fans DDF



Taking a 360º view of your farm with DeLaval Cow Cooling System

Farm Profitability

Research shows that in hot climates, effective herd cooling helps cows to maintain a higher level of milk production throughout summer months. This equates to between 5% and 10% higher annual yield per cow. This means that on average, the system pays for itself within 6 to 18 months.

Work Efficiency

Fully automated cooling system. The control system allows you to select and to activate different cooling programs at different temperatures to achieve the same end result – cooler cows.This lets you get the most out of your Cow Cooling System without the unnecessary expense of running it when it has no effect.

Animal Welfare

When temperatures exceed 22°C, cows begin to experience heat stress. This causes them to eat less and produce up to 25% less milk. It also impacts reproduction with up to 30% in lower conception rate and reduced heat detection.

Food Safety

Guiding the cows with help from the cooling program to the feeding table directly after milking will support the closing of the teat canals before laying down in the bed. This helps to avoid bacteria to enter the teat and cause somatic cell count in the milk.

Get the most out of your Cow Cooling System

Save up to 25% in energy and water consumption.*

*When you activate the cooling system only when cows are present you can reduce significantly on the water you spend and on running costs of the fans.

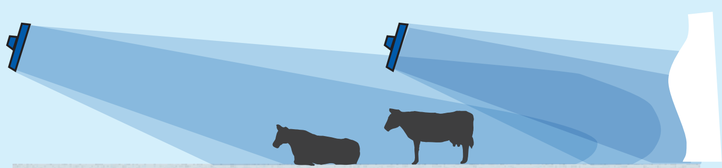
To get the most out of Cow Cooling; the DeLaval barn system controller lets you program your system to only activate in weather conditions when it will be effective. The barn system controller is an integrated control system that can be connected to temperature, wind and humidity sensors inside and outside your barn. **It can individually control up to eight different zones in the barn.**

Spraying cycles duration adjusts automatically, so more water is being sprayed if THI goes up. Simple, touch controls allow you to select and to activate different cooling programs at different temperatures to achieve the same end result – cooler cows. During night time if temperature drops the cooling systems adapt and deactivates the sprinklers The result is a fully automated system adapting to the climate all year round. Logging and registration of the operation data is possible.

This lets you get the most out of your Cow Cooling System without the unnecessary expense of running it when it has no effect.

Horizontal ventilation

The dairy fans from DeLaval work on the principle of horizontal ventilation. With our fans we initiate an airstream that cools the cows directly and also puts the still standing air into motion. Thus removing stale air from the barn and letting fresh air come in from the sides. The system supports the natural ventilation in the barn whilst keeping the draft on ground level, for which cows are sensitive, to a minimum.



Actual performance and improvement will depend on a number of factors, including prior milking practices, type of cows, farm and herd maintenance practices. Nothing herein constitutes a warranty or guaranty of service of performance.