

# Cool cows produce more milk DeLaval barn ventilation systems





## Cool cows produce more milk

The equation is simple: the more cows eat, the more milk they produce. But when temperatures rise above 22°C (72°F), cows begin to experience heat stress and lose their appetite. Reduced feed intake means lower milk yield and also decreases pregnancy rates. An effective ventilation system should help to reduce heat stress, increase yield, and clear the air in your barn. But there's a lot more to effective ventilation than just fans.

**Increased yield must be balanced with the energy it costs to achieve it. DeLaval provides a range of integrated fan and control systems to let you cool your cows efficiently and economically.**

### Clear the air

Nature's answer to heat and humidity is a cool breeze. But in a barn environment, nature needs a helping hand. As every barn is different, DeLaval offers a range of purpose-built dairy fans in different sizes, blade configurations and power levels to suit different barn layouts. These range from small dairy fans for barns with low ceilings, to state-of-the-art high-capacity fans.

#### DeLaval dairy fan DDF1200

The unique frame design of the DeLaval dairy farm DDF1200 helps to push air-stream further, achieving a greater cooling effect with less energy than conventional fans. The highly efficient IE3 electrical motors, coupled with the ability to alter blade configurations to suit different airflow requirements, deliver the optimum balance between efficiency and performance. The durable, corrosion-resistant fan is both easy to install and easy to maintain.



DeLaval DDF1200 has a registered design (reg no. 002691741)

### Regulate your costs

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 recommends 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.

#### DeLaval inverter SFS0.75 with TKR-1 controller

For individual fans, DeLaval inverter SFS0.75 provides a simple and effective solution. It automatically activates the fan when a predetermined temperature is reached and increases its speed as the temperature rises. It can also be integrated with DeLaval barn system controller BSC.

**DeLaval variable speed drive NFO**  
To control multiple fans and achieve optimal effectiveness, DeLaval variable speed drive NFO uses the aid of the DeLaval BSC to adjust fan performance to suit real time conditions. This means it can reduce energy costs by up to 70%, quickly paying for itself. By incorporating Natural Field Orientation (NFO) technology, DeLaval NFO can deliver great results without the noise levels or electromagnetic interference associated with other drives. This also means it can be installed easily without expensive shielding cables and can be located wherever suits best.



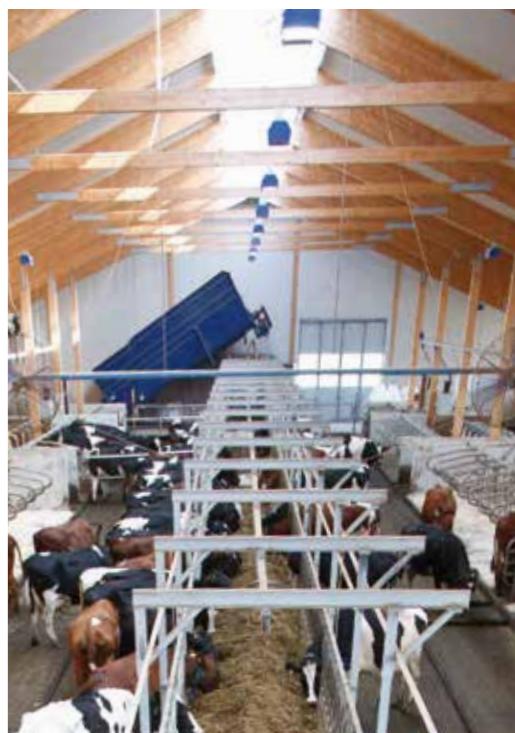
### Take control of your barn

For the best results, all your barn systems should work as one. DeLaval barn system controller BSC lets you manage your barn's environment automatically. By programming individual ventilation curtains or panels to open or close according to wind direction, velocity and temperature conditions; you can let the wind do the work. And when that's not enough DeLaval BSC activates your ventilation system to keep your cows comfortable and productive.

DeLaval BSC also lets you automate manure handling to maintain a hygienic environment, and lighting schedules to maximise milk production. Because it only activates systems when environmental conditions mean they will be effective, DeLaval BSC helps you to reduce your energy costs. And because it's automatic, it means you need to spend less time in the barn.



**The full-line supplier**  
Because we provide a complete range of solutions to the dairy industry, we are in the unique position to be able to offer a single controller for all your barn systems. We know that every part of our systems work together, because we designed them to work together.



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**Your DeLaval dealer**

## Find the right fans for your barn

**A cool and comfortable barn environment is important for both your cows and your staff. DeLaval supplies ventilation solutions that can operate standalone or that can be programmed to automatically control your barn environment 24 hours a day, 7 days a week, 365 days a year.**


**DeLaval dairy fan DF500**
**DeLaval dairy fan DF710**
**DeLaval dairy fan DF1250**
**DeLaval dairy fan DDF1200**

### Fan technical data

Fan model	Propeller diameter	Voltage/frequency	Amperage	Power consumption	Motor protection class	Noise level	Fan speed	Max capacity at 0 Pa	Specific efficiency	NFO / SFS0.75 compliant
DF500	500mm	Δ -230V / Y -400V / 50Hz	0,8A	0,3kW	IP 55	58dB at 7m	1400 RPM	7050 m³/h	41,1 W/1000m³/h	Y / Y
DF710	710mm	Δ -230V / Y -400V / 50Hz	1,4A	0,5kW	IP 55	59dB at 7m	915 RPM	13800 m³/h	30,5 W/1000m³/h	Y / Y
DF1250	1250mm	Δ -230V / Y -400V / 50Hz	2,0A	0,75kW	IP 55	68dB at 7m	439 RPM	34000 m³/h	39,1 W/1000m³/h	Y / Y
DDF1200 S	1108mm	Δ -230V / Y -400V / 50Hz	2,0A	0,8kW	IP 55	64dB at 7m	600 RPM	25200 m³/h	33,1 W/1000m³/h	Y / Y
DDF1200 P	1108mm	Δ -230V / Y -400V / 50Hz	3,0A	1,2kW	IP 55	65dB at 7m	600 RPM	31000 m³/h	45 W/1000m³/h	Y / Y

### Maximum number of fans per NFO

Fan model	NFO 2.2kW	NFO 3.0kW	NFO 4.0kW	NFO 5.5kW	NFO 7.5kW
DF500	7	10	13	16	18
DF710	4	5	7	9	10
DF1250	2	3	5	6	7
DDF1200 S	2	3	5	6	7
DDF1200 P	1	3	3	4	5

**Power supply network grid for NFO:**
**NFO 2.2kW; 4.0kW; 5.5kW; 7,5kW:** 3x380-440V AC +/- 10%; 50/60Hz +/-10%

**NFO 3.0kW:** 3x200-240V AC +/-10%; 50/60Hz +/-10%

Always refer to data on the motor plate for correct wiring

It is possible to combine different types of fans attached to one DeLaval NFO if:

- the motors have the same RPM
- as long as the cumulated amperage does not exceed the maximum rating of respective DeLaval NFO