



Climate Control

For the welfare of the cow





Product Categories

Our products are grouped into three categories based on the structure of the product, its design and the customer's requirements:

STANDARD 	<ul style="list-style-type: none"> • Meets the minimum cow welfare requirements • Price/quality relationship for every budget • Basic needs with respect to automation are met
ADVANCED 	<ul style="list-style-type: none"> • Improving cow welfare • Advanced for a better future • High adaptability to your wishes • Automation designed for convenience
PREMIUM 	<ul style="list-style-type: none"> • Cow welfare is the priority • Designed for maximum capacity and sustainability • Far-reaching automation designed for convenience and management

The products are shown along with the pictograms of the product categories on the relevant page. There are product groups with no **“Standard”** level, as these groups are available only at **“Advanced”** or **“Premium”** level.

ADDED VALUE

We have opted for this classification with the aim of supporting you in making a selection. For example, by making the **“Standard”** product the starting point, you will be able to experience the added value of the **“Advanced”** and **“Premium”** products step by step and assess whether the additional functionality provides you with added value as well.



Stop cooling your barn!

You have read it correctly! We at Royal de Boer are convinced that you should stop cooling your barn immediately! Focused ventilation, no heat stress and above all: no wasted expenditure! How do we believe you should do this? Start by cooling your cow! Using complete and efficient barn design suited to your barn. In this brochure, we will take you through our modular ventilation portfolio. If you would like to know more about the complete barn designs, please contact one of our specialists.

Cool your cow!

Overview of the fans

STANDARD



Basket Fan & Ceiling Fan

These smaller fans are suitable for cooling restricted spaces or people. They also chase away flies extremely effectively. The Basket Fan is a powerful and energy-efficient fan. The Ceiling Fan is an extremely efficient fan generating a cooling airflow at a high speed.

STANDARD



Belt Drive Blast Fan (50")

The Blast Fan is a design that is frequently used on account of its versatile nature. The carefully designed housing ensures a more consistent airflow. The Blast Fan can be installed in a number of ways, both on the ceiling and on wooden or steel posts.

ADVANCED



Direct Drive Blast Fan (36")

The Direct Drive Blast Fan has the same functionalities as the Belt Drive Blast Fan. The most important difference is the drive. The Direct Drive is powered by an energy-efficient EC motor.

ADVANCED



HVLS Fan

The HVLS Fan is an exceptionally silent, slow-turning fan that displaces a large volume of air with its diameter of up to 7 metres. This model is manufactured with a direct-drive EC motor. This ensures that the fan is extremely energy-efficient and low-maintenance.

ADVANCED



EC Stall Fan

The EC Stall Fan is manufactured with an extremely energy-efficient EC motor. The fan has a plastic frame and fan blades.

ADVANCED



Positive Pressure Fan (PPF)

The Positive Pressure Fan is installed in the front or side outer wall and is intended for introducing additional fresh air in barns where natural ventilation is inadequate. The PPF is essential in low, wide or long barns.

ADVANCED



Belt Drive ECV Fan

The Belt Drive ECV Fan is specially made to cool the cows directly. The fans are fitted with louvres that can be rotated manually to direct the airflow. The Belt Drive model is powered by a V-belt.

PREMIUM



Direct Drive ECV Fan

The Direct Drive ECV Fan has the same functionalities as the Belt Drive ECV Fan. The most important difference is the drive. The Direct Drive model is powered by an energy-efficient and low-maintenance EC motor instead of a V-belt. The fan blade is directly coupled to the electromotor.



Basket Fan & Ceiling Fan

The Basket Fan and the Ceiling Fan are smaller fans suitable for cooling restricted spaces and people. They also chase away flies extremely effectively. This makes these fans a truly useful addition to your barn ventilation.

The Basket Fan

This fan is powerful and energy-efficient. This fan has been designed for the agricultural environment and offers top performance. The fan can be attached to the wall or ceiling using the support supplied. The surrounding guard means that there is no restriction on installation height. Fitted with a completely enclosed low-maintenance motor that can be controlled by an on/off switch or an automatic, temperature-regulated control.



Technical Data

Diameter (in cm)	Capacity (m ³ /h)	Absorbed power (kW)	Amp	Power Supply	Motor Type	Drive Type	Motor Efficiency
60 (24")	8,950	0.36 kW	2.7	230V	AC	Direct Drive	IE2
91 (36")	19,080	0.36 kW	3	230V	AC	Direct Drive	IE2

Ceiling Fan

The ceiling fan is an extremely efficient industrial fan with plastic blades. The fan will generate a cooling airflow at high speed. The fan can be used at a lower speed to achieve a constant room temperature. The minimum installation height is 3.5 metres. The fan covers its maximum operating area at the maximum installation height of 6 metres. This fan is suitable for pens with straw bedding, calf pens and milking parlours.



Technical Data

Diameter (in cm)	Capacity (m ³ /h)	Revolutions per minute	Max. intervening distance (m)	Absorbed power (kW)	Power Supply (V)	Min. installation height (m)
152 (90")	11,250	270	4.5	0.075	240	3.5



Blast Fan

The Blast Fan is a multi-purpose energy-efficient fan. It can also be installed in different ways.

This fan with its V-belt drive has an ingeniously designed housing. The bell-shaped housing ensures a more consistent airflow by comparison with fans in a flat panel design. The fans can be attached to wooden/steel posts or suspended from the ceiling.

The 36" model can be mounted low down and is fitted with a safety guard for that reason.

Highlights



- Suited to a number of purposes
- Different installation options
- Cleverly designed frame for consistent airflow

Technical data

Model	Diameter (cm)	Capacity (m ³ /h)	Motor	Motor Type	Drive Type	Motor Efficiency
BLT36 230V	114 x 112	24,489	0.55 kW 230V CE	EC	Direct Drive	IE5
BLT50 400V	127 (50")	55,000	0.92 kW 400V CE	AC	Belt Drive	IE3
BLT50 230V	127 (50")	55,000	1.8 kW 230V CE	AC	Belt Drive	IE2



Blast Fan BLT36

STANDARD



Belt Drive Blast Fan

The Belt Drive Blast Fan is fitted with an AC motor and is available in 50" (127 cm) and as 230V or 400V.

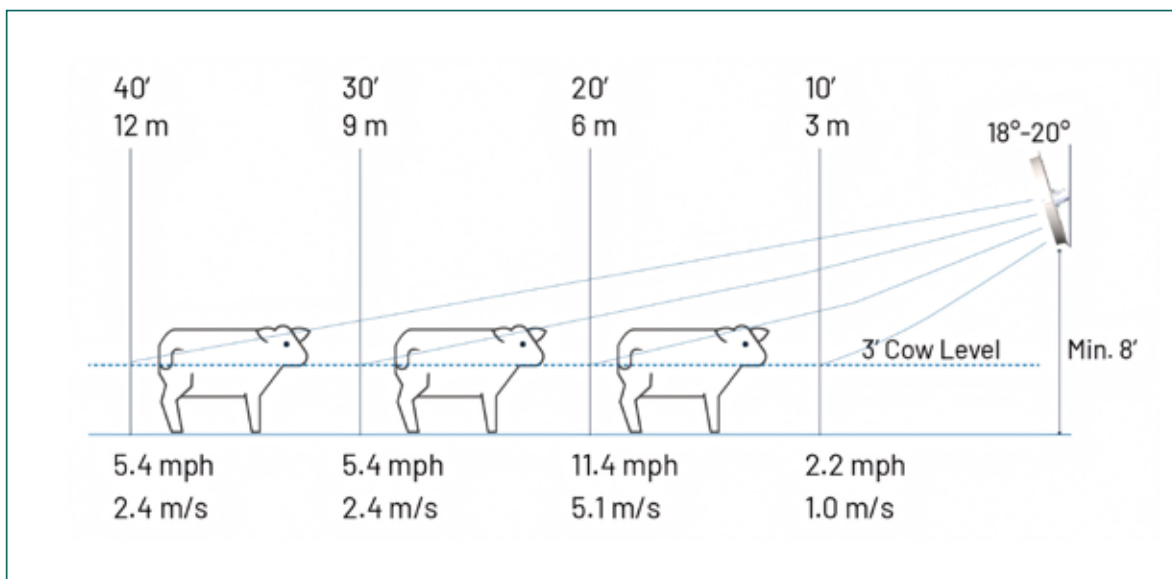
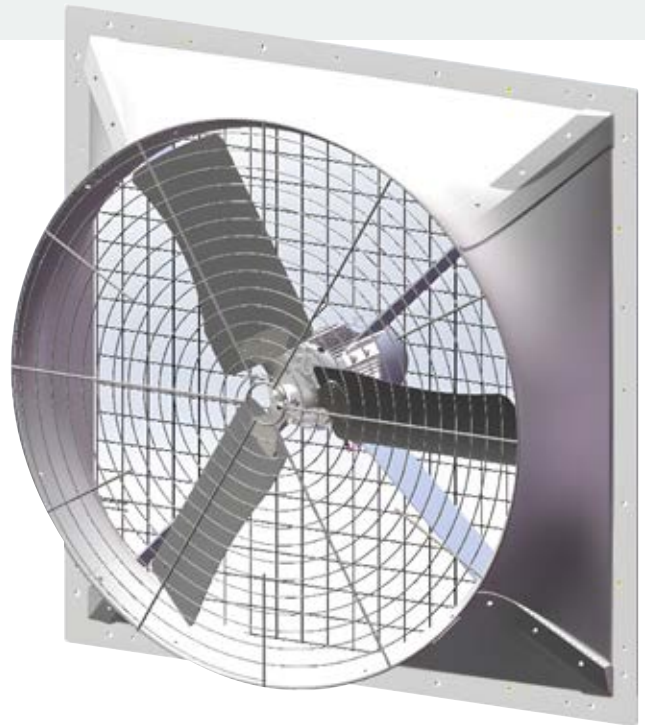


ADVANCED



Direct Drive Blast Fan

The Direct Drive Blast Fan is fitted with an EC motor and is available in 36" (90 cm) and as 240V.



ADVANCED



HVLS Fan

The HVLS Fan is an exceptionally silent and slow-turning fan, with a diameter up to 7 metres. This fan has large capacity at low airflow. The fan generates a gentle breeze in your barn.

The HVLS is mounted horizontally and pushes air downwards towards the animals. The HVLS covers large surfaces and is thus extremely well-suited to cooling pens with straw bedding and handling rooms. The smaller 3-metre version is often used in waiting areas for the milking robot.

The HVLS is manufactured with a direct-drive EC motor. This ensures that the fan is extremely energy-efficient and low-maintenance.

Highlights



- Extremely low energy consumption
- Large air displacement
- Low-noise
- The central control is able to operate up to 20 fans.

Technical data

Diameter (m)	Capacity (m ³ /h)	Max. revolutions per minute	Max. intervening distance (m)	Absorbed power (kW)	Power Supply	Noise level (DBA)	Motor Type	Energy Efficiency m ³ /h per Watt
3	310,000	160	9	0.60	220-400V 50/60 Hz	< 60	IE4	516
4	370,000	100	12	0.65		< 55		596
5	530,000	80	15	0.85		< 45		620
6	670,000	70	18	0.76		< 45		880
7	850,000	50	21	0.66		< 45		1290



EC Stall Fan

The EC Stall Fan has an average yield with a high airflow. The relatively small operational width, combined with an extended reach, means that this fan is extremely well-suited to cooling stall islands and circulation and feeding areas.

The EC Stall Fan is made up of a plastic frame and fan blades and is manufactured with an extremely energy-efficient EC motor. There are various options for suspending the fan.

Where the fan has to be installed low down, it can be fitted with an optional safety guard.

Highlights



- Extremely low energy consumption
- Minimum maintenance
- Extended fan reach
- The central control is able to operate up to 20 fans.

Technical data (fan without guard)

Diameter (m)	Capacity (m ³ /h)	Max. revolutions per minute	Max. intervening distance (m)	Absorbed power (kW)	Power Supply	Noise level (DBA)	Motor Type	Energy Efficiency m ³ /h per Watt
1.4 (55")	41,000	330	20	0.85	400V 50/60 Hz	< 83	IE4	48



ADVANCED



Positive Pressure Fan (PPF)

The PPF helps to push a constant flow of fresh air through your barn. The fresh airflow can be directed to where the cows are, in combination with the other fans in the portfolio.

Proper ventilation is more difficult in low, wide or long barns. The PPF offers a solution to this problem! Intelligent positioning of the PPF in the barn allows fresh air to be added to the airflow constantly. The PPF is indispensable especially in barns where the natural ventilation is inadequate.

Whenever the PPF is not in operation, the shutter system ensures that the weather is kept out. The Inside Deflector Kit (IDK) is an option - these louvres on the inside are used to direct the air more accurately.

Highlights



- Assists the natural ventilation
- Consistent climate in the barn
- Indispensable in long, wide or low barns

Technical data

Model	Diameter (cm)	Frame	Capacity (m ³ /h)	Motor	Motor Type	Motor Efficiency
Direct Drive						
PPF36	91 (36")	114 x 112	24,489	0.55 kW 220V CE	EC	IE5
PPF55	142 (55")	160 x 160	55,000	0.92 kW 400V CE	EC	IE4



ECV Fan

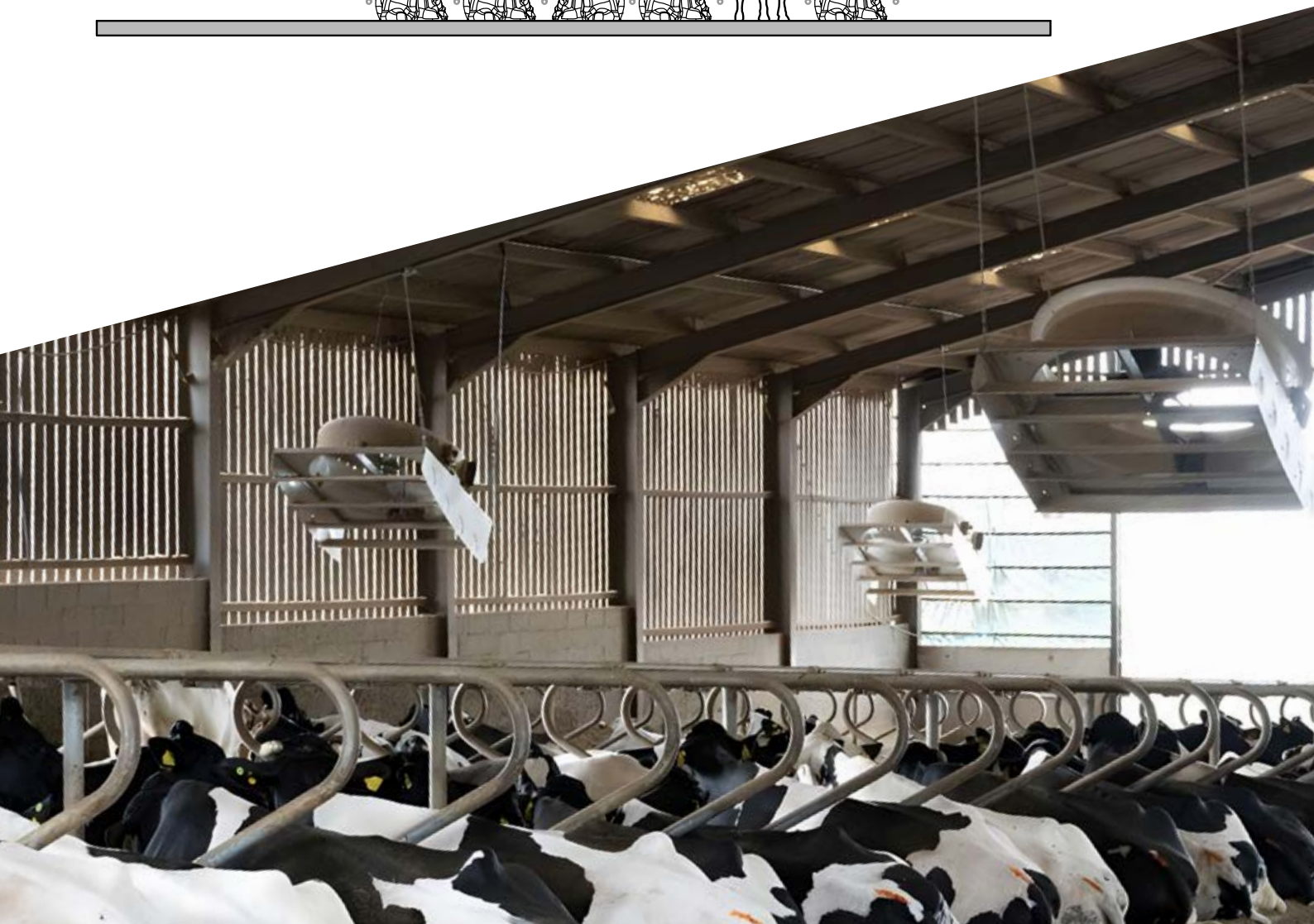
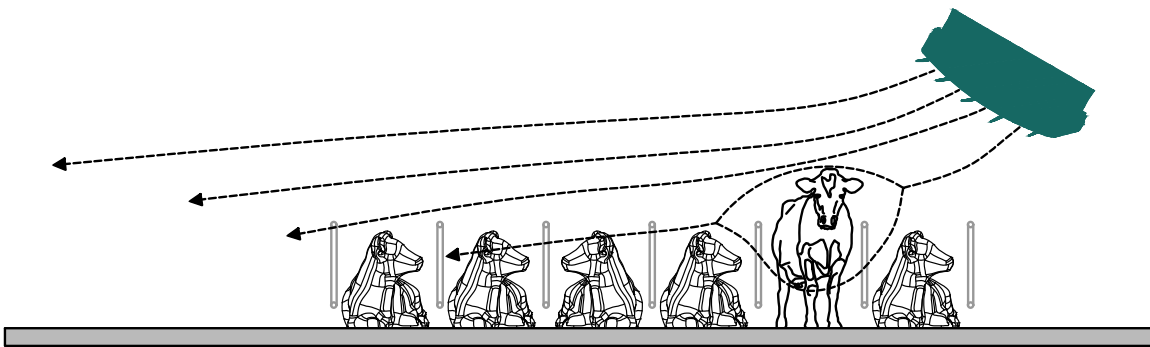
The Effective Cooling Velocity Fan has been especially constructed to direct the air onto the animals immediately under the fan, along with those a little further away.

The ECV Fan is fitted with louvres that can be rotated by hand. These louvres, which are fitted to the front, direct the airflow in the way required for the ideal cooling of your cows. The animals are cooled more effectively in this way, and heat stress is prevented! These characteristics mean that the ECV Fan is extremely well-suited to stall islands and circulation and feeding areas. The fan's speed is adjusted with a frequency regulator. The ECV Fan is available in a Belt Drive or Direct Drive model.

Highlights



- Cools in the required direction
- Plastic frame with a durable UV coating
- Robust fan blades
- V-belt Drive and Direct Drive



ADVANCED



Belt Drive ECV Fan

The Belt Drive ECV Fan is powered by a V-belt. These fans are available in the following sizes: 55" (142 cm) and 72" (186 cm).

PREMIUM

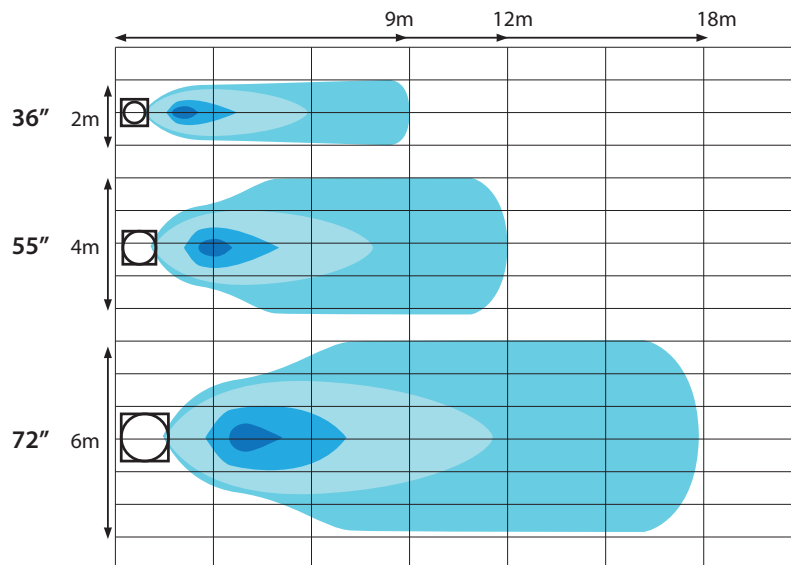


Direct Drive ECV Fan

The Direct Drive ECV Fan is available in the following sizes: 36" (91 cm), 55" (142 cm) and 72" (186 cm).

Technical data

Model	Diameter (cm)	Frame (cm)	Capacity (m³/h)	Coverage (m)	Motor	Motor Type	Motor Efficiency	Energy Efficiency (m³/h per Watt)	Number of Louvres
Belt Drive									
ECV-BD-Fan 55" excl. VFD	142 (55")	160 x 160	45,023	12 x 4	1.1 kW 230/400V CE	AC	IE3	40	4
ECV-BD-Fan 72" excl. VFD	186 (71")	200 x 200	82,990	18 x 6	2.2 kW 230/400V CE	AC	IE3	39	5
Direct Drive									
ECV-DD-Fan 36" incl. VFD	91 (36")	114 x 112	24,489	9 x 2	0.55 kW 230V CE	EC	IE5	44	3
ECV-DD-Fan 55" incl. VFD	142 (55")	160 x 160	42,000	12 x 4	0.92 kW 400V CE	EC	IE4	44	4
ECV-DD-Fan 72" incl. VFD	186 (72")	200 x 200	75,800	18 x 6	1.8 kW 400V CE	AC	IE5	42	5



Controls Overview

STANDARD



FC-1T-1F

The FC-1T-1F is the simplest control for operating the fans. The fans start up whenever the pre-set temperature is reached. The number of fans that can be connected to it depends on the fan type.

STANDARD



T-Control (0-10V)

The T-Control is a temperature-controlled control cabinet. The speed of the fans is adjusted based on the pre-set temperature. A single fan group can be connected up to this control cabinet. The speed of the fans will increase with a rise in temperature.

ADVANCED



Plus Touch

The Plus Touch is suitable for barns in which control of several fan types or soaking groups is required. The touchscreen is logically subdivided, making it truly user-friendly. If you need to extend your ventilation system in the future, the extensions can easily be linked up to the Plus Touch.

PREMIUM



Autoflex Connect:

Operate all the barn ventilation and more with the Autoflex Connect! This communicative control cabinet can be put together based on your requirements and needs. Soaking and lighting can be connected up to it, and not only the fans. The Autoflex Connect also conducts analyses and can print out reports. Irrespective of where you are, you can link up to the control cabinet via the internet.

Operation

STANDARD



FC-1T-1F

The simplest control for operating the fans. The fans start up whenever the pre-set temperature is reached. The number of fans that can be connected to it depends on the fan type.

Characteristics



- Adjustable temperature | range 0° to 37° C
- Causes the fans to rotate at maximum speed from a pre-set temperature
- Easy to adjust
- Supplied with temperature sensor

STANDARD



T-Control (0-10V)

The T-Control is a temperature-controlled control cabinet. The speed of the fans increases with rising temperature.

How does this control work?

The speed needed for the fans depends on the barn temperature. The T-control starts up at minimum speed (from a pre-set temperature), which increases as the temperature rises.

Characteristics



- Automatic adjustment based on temperature | range 0° to 37° C
- Can be adjusted easily using the knob
- Supplied with temperature sensor
- Modular speed based on pre-set temperature



Plus Touch

The Plus Touch is suitable for barns in which control of several fan types or soaking groups is required.

The smart Plus Touch control measures the humidity as well as the temperature in the barn. The control is able to activate the fans and soaking groups based on these factors.

You can run through the control easily using the menu with its logical groups. The settings can be adjusted to your own requirements, and it is easy to search for the various data.

The Plus Touch is available in 5 options, with each option offering the user a different range of ventilation and soaking choices. The table below shows the different options.



Characteristics ✓

- Automatic THI or temperature control, range: -25° to 51° C
- Operate more than one fan type or soaking group
- Different climate data available
- Logically grouped menu

Option	Variable Groups (0-10V)	On/off	Soaking	Variable AC Fan Groups	Temperature + Humidity Sensor	TEMP SENSOR (additional 3 optional)
1	4	6	0	2	1	1
2	4	0	6	2	1	1
3	4	3	3	2	1	1
4	4	2	4	2	1	1
5	4	4	2	2	1	1

PREMIUM



Autoflex Connect:

Operate all the barn ventilation from a single control! This communicative control is put together on a project-by-project basis and has a wide range of options.

The Autoflex Connect can be used to operate several fan and soaking groups. Now even easier, from a single touchscreen display! The modules in the control have been designed to carry out different tasks and are fully adjustable to your needs. Tell us your requirements and needs, and we will be able to set up the control entirely on this basis. Our internal team is specialised in setting up this control to be as efficient as possible.

- **Ventilation**

Adjustable so as to ensure optimal conditions in the environment

- **Soaking**

Prevent heat stress with additional cooling and maintain exceptional milk production

- **Lighting**

Plan lighting for long days with light

- **Analysis**

Draw up graphs and reports for understanding and managing your farm even better

- **Alarms and notifications**

Set alarms and notifications that can be sent to your phone and email

- **Connectivity**

Link up at any time, whether you have one or more than one control



- **Control and Manage**

- Temperature
- Humidity
- Carbon Dioxide (CO₂)
- Ammonia (NH₃)
- Static Pressure
- THI
- And much more

Characteristics



- Smart Modules available for monitoring conditions and regulating equipment
- Two formats available: 6 or 14 modules
- Extension options: add 6 or 14 additional modules
- Remote configuration and monitoring from any internet connection

Feature sheet

Features / Capabilities	Explanation	Autoflex Connect	Plus Touch	T Control	FC-IT-1F
Remote Monitoring	Online Access				
0-10V Fan Control	Variable Speed Fans (VFD OR MOTOR)				
On/ off Fan Control	On/ off Fan Groups				
Manual Override	Ability to control fans manually				
Timed Events					
Soaking					

Number of Control zones/groups					
Number of Control zones	Individually controlled zones	16	2	1	1
Variable Groups (AC)	Variable AC Groups	+	2	-	-
Fixed Stages (On/Off)	On/ off Groups	+	6	-	1
Variable Stages (0-10v)	Variable 0-10v Groups	+	4	1	-

Sensors					
Tempature					
Tempature (Outdoor)					
Humidity					
THI					
Carbon Dioxide					
Ammonia					
Static Pressure					
Wind					
Light					



RdB Soaker Line

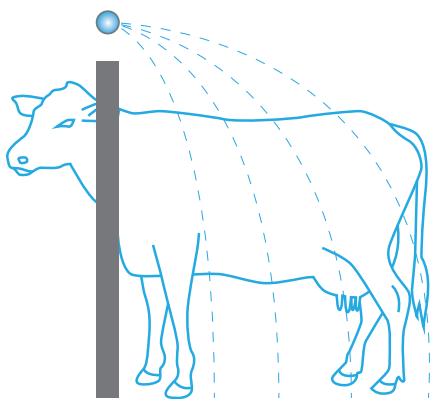
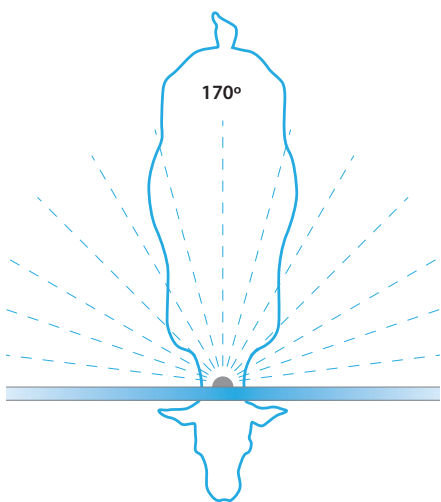
Once the temperature rises above 25° C, ventilation on its own is insufficient for cooling your animals. This is when the RdB Soaker Line comes into its own.

The Soaker Line not only cools your animals, but also causes the air temperature in the barn to fall.

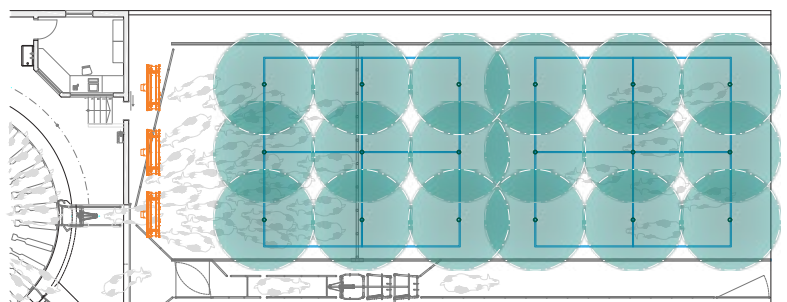
The sprinkler sprays fairly large droplets to achieve the greatest cooling effect.

The Soaker Line is activated by a control that adjusts it on the basis of changes in temperature or relative humidity.

The soaking system is available for both the feed fence line and the waiting area.



Example of a feed fence line soaking system



Example of a waiting area soaking system

Side Wall Ventilation: protection from the elements

Cows perform best in an optimal and consistent climate. Royal de Boer offers a complete line of door and side wall ventilation systems to keep extreme weather effects out of the barn. This allows the climate in the barn to be regulated more effectively.

We offer the option of ensuring this optimal climate in combination with the fans. For your cows, and also for you as livestock farmer!

If you would like to know how best to cool your cows, we would be happy to discuss with you how to find the best options to match your situation!



Your Royal de Boer dealer:

Royal de Boer Stalinrichtingen B.V.
Vestaweg 5
8938 AV Leeuwarden
The Netherlands

+31 (0) 58 284 33 00
info@royaldeboer.com
www.royaldeboer.com

 **Royal de Boer**
since 1869

Where cows feel at home