



TECHNOLOGICAL ELEMENTS IN AGRICULTURE



**Technological elements  
by Haze contribute  
significantly to animal  
welfare**



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# About the Company

Dear customers,

I founded Haze in 2007 and since then, we have supplied our systems to several hundred stables, riding halls and other agricultural structures. We specialise in producing and installing stables equipment such as side and roof ventilation systems, roller gates, entrance systems or slurry tank roofing. Thanks to our in-house development and production, we are able to create tailor-made solutions for our customers in top quality and on time. We also provide consulting to our clients. We employ professionals with years of experience who can advise and assist our customers in the area of ventilation, lighting and micro-climate control in the stables. It is our common goal that the building fulfils all the requirements for animal welfare and in the end brings maximum profit to the owner.

We provide a comprehensive service – from consulting to a wide assortment of products, to their custom production and final installation and maintenance. We put great emphasis on developing and applying new processes and materials which allow our products to keep pace with technological advancement in the field. As far as future development is concerned, we would like to continue our work on improving the quality of our products hand in hand with developing new materials, and gradually improve our presence on the markets of neighbouring countries. We thank you for your patronage and look forward to future cooperation.

**Petr Hanousek**

Owner and managing director of Haze





## project 01

# PODMYČE



Agricultural farm Podmyče, which falls within Zemědělské družstvo Petřín (Agricultural Collective Petřín) of RHEA Holding, holds a number of our most cutting-edge solutions. Ideal conditions in the stables are provided by type D electric mobile rolling walls along with a double-leaf ridge vent. Rollin walls BVS „D“ can be used for openings up to 4.5 metres tall; in the case of Podmyče farm, the sides measure 3.9 metres in height. In this solution, the canvas is rolled onto a bottom-mounted shaft with an electric drive, while the upper mounting of the canvas is mobile and controlled by another motor. The advantage of this system is the ability to roll the canvas either upwards or downwards, providing you multiple positions to ensure ideal ventilation and shading. The ability to roll the canvas up top instead of at the bottom also prevents the canvas from getting dirty. We also installed welded wire mesh in front of the walls to prevent cattle from reaching and damaging the canvas. The ventilation system is complemented by a double-leaf ridge vent controlled by an electric motor. The leaves of the ridge vent are fitted with canvas. The side walls and the vent are connected to a Haze weather station and are thus controlled automatically. We also installed electric roller doors on the farm.

# THERMAL SHOCK SOLUTION IN TROPICAL CONDITIONS

## TWO-LEAF RIDGE VENT RECOMMENDED

width 1,200–1,800 mm

at least 1 m for sufficient ventilation  
(automatic connection/control via a weather station)

Two-sheath ventilated roof structure:

- + above-rafter roofing will degrade with time (without the need to replace the entire roof sheathing = under-rafter insulation remains intact)
- + under-rafter insulation is permanently protected against weather conditions (polymerisation process is slowed down and insulant does not degrade)

suspension Powerline Quattro system consisting of light (+/- 30 kg/m<sup>3</sup>), wide-span (length up to 15.6 m), sandwich-structured PIR panels (ventilated under-rafter gap 30–160 mm without thermal bridging)

air pocket (free insulant)

ventilation grill to protect against birds

white colour + protection of the truss structure

NH<sub>3</sub>, H<sub>2</sub>S, CO<sub>2</sub>, H<sub>2</sub>O

permanent transport of condensed humidity away from the bedding  
(protection against cloven foot diseases)

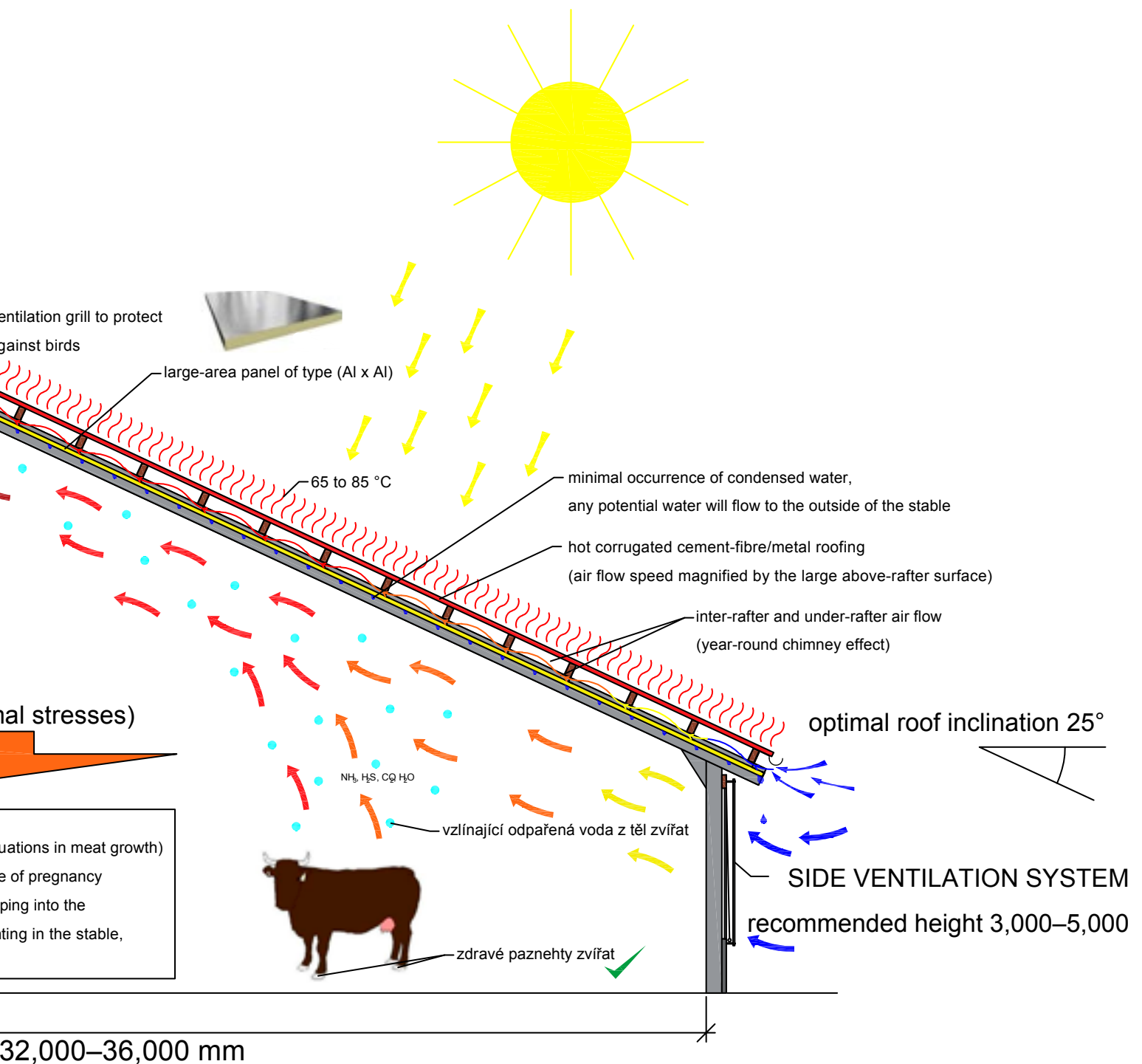
5–25 °C

(year-round balancing of therm  
**welfare**)

- + higher milk yield, unaffected by season
- + balanced appetite for food and water (minimal fluctu
- + improved willingness to procreate and better course
- + better sate of health (without condensed water drip bedding, without pigeons nesting inside, better light possibility of hygienic cleaning of the ceiling, ...)

Recommended width of cowhouses

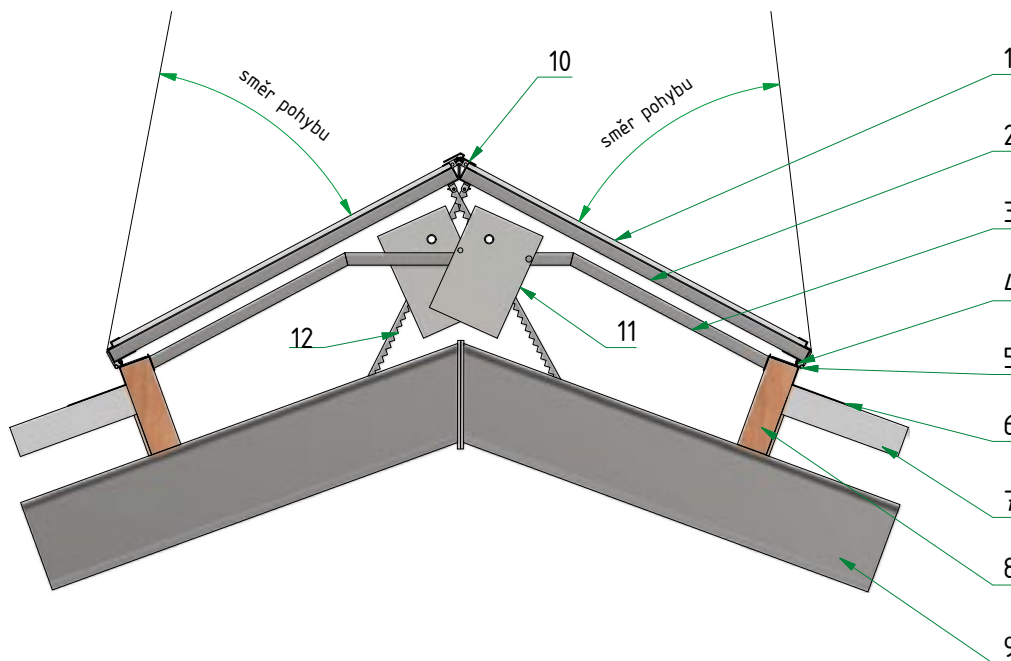




# Ridge Vents

Vent located on the ridge of the roof plays a key role in the ventilation system of the stable. Aside from bringing light into the building, it also provides air circulation in the stable. Thanks to its design, it amplifies the chimney effect and efficiently conducts heat, water vapour and gases from the stables to the outside of the building. All this without any power requirements, operating simply based on the laws of physics. Ventilation efficiency is dependent on the size of the vent and the inclination of the roof. Optimal width of the vent is approxi-

mately 1,000 mm along the full length of the stable. Minimum width of the construction opening for the vent is 500 mm. Optimal inclination of the roof is around 24°. Ridge vents can be fitted onto roofs with higher inclination after some modifications. If the roof inclination is low, on the other hand, it is necessary to install sheet metal guards around the vent to prevent water from flowing into the stable during extreme weather. This variant of ridge vent is practically maintenance-free.



**Diagram of double-leaf ridge vent controlled by an electric motor**

- |  |                                    |
|--|------------------------------------|
| 1. Flap filling (polycarbonate 16mm, pvc sheet) meets specifications D – s1 – d0 | 6. Flashing                        |
| 2. Flap frame (AL. profile)  | 7. Roof cladding                   |
| 3. Steel segment for winch (hot-dip galvanized)                                  | 8. Undercoat                       |
| 4. Brush seal  | 9. Roof framework                  |
| 5. Flaps storing (stainless gudgeon)   | 10. Covering panel with brush seal |
|  | 11. Engine                         |
|  | 12. Ridge mechanism                |

# 1 Ridge Vents without Air Flow Control

The standard and most widespread version of ridge vent is a laminated plastic vent without a damper. This variant can be installed onto openings with maximum width of 1,500 mm. Openings wider than 1,500 mm require a ridge vent with a self-supporting laminated plastic arch. These versions can be installed onto openings up to 4,500 mm wide. The vent is made of hot-dip galvanised steel and is fastened onto wooden or steel components. The top arch is most commonly made of laminated plastic or polycarbonate and the venthole is not closed off by a damper. This variant of ridge vent is installed onto stables for cattle, horses, sheep or goats, but also onto waiting halls in milking parlours, onto water treatment plants or warehouses.



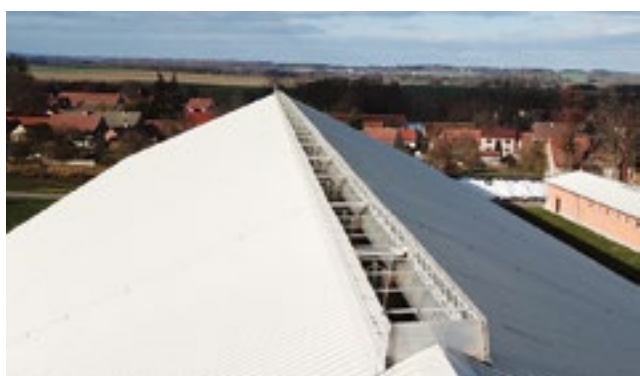
Vent with smooth flat laminated plastic  
(for sizes 400–1,500 mm)



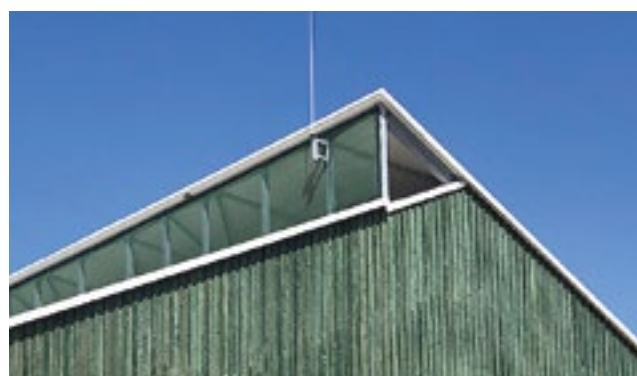
Vent with self-supporting arch  
(for sizes 1,500–4,500 mm)



Vent made of flat polycarbonate  
(for sizes 500–4,500 mm)



Vent without top arch  
(for sizes 400–800 mm)



Ridge vent on a skillion roof (can be covered  
by roll-up canvas or polycarbonate screen)

## 2 Ridge Vents with Air Flow Control

### 2.1 Ridge Vents with Damper

A double-leaf ridge vent is an innovated version of the previous vent without damper. Dampers can be used to completely or partially control the air flow. This solution is used, for instance, in stables, waiting halls and milking parlours. They also suitable for composting plants. The body of the vent is made of aluminium, with the dampers controlled by an electric motor. In order to achieve the best insu-

lation possible, we recommend choosing a ridge vent made of polycarbonate, which provides better thermal insulation. Stables in particular use leaved vents fitted with a canvas. We produce ridge vents with a pulley for openings 1,000–1,800 mm wide, with standard size being 560 mm. For openings wider than 900 mm, we recommend choosing a double-leaf ridge vent.



Ridge vent with damper



Electric damper control

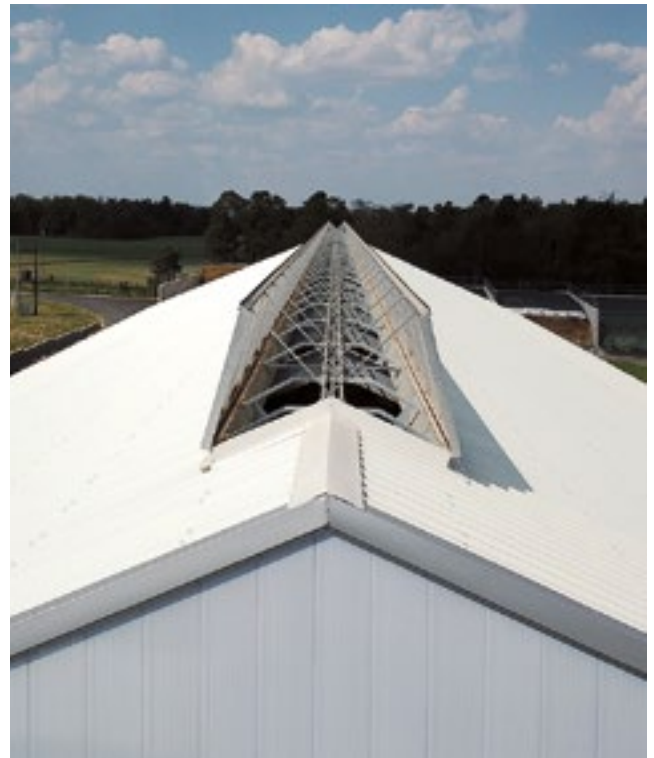


Mechanical damper control



## 2.2 Double-leaf Ridge Vents Controlled by an Electric Drive

Double-leaf ridge vents controlled by an electric drive have become an ever more popular choice in recent years among dairy cattle breeders. The electric drive of the vent can be controlled by a button, and the system can be interconnected with our Haze weather station along with back-up power supply. The double-leaf ridge vent consists of the vent itself, vent leaves, vent lifting mechanism and an electric drive. The vent leaves for stables are line with canvas, while polycarbonate panelling is a better choice for milking parlours and waiting halls. The width of the opening is usually between 1,000 and 1,800 mm.



### SHEET METAL PLATING OF VENTS AND BASES:

- With sealing profile
- In a selection of RAL colours
- Without sealing profile

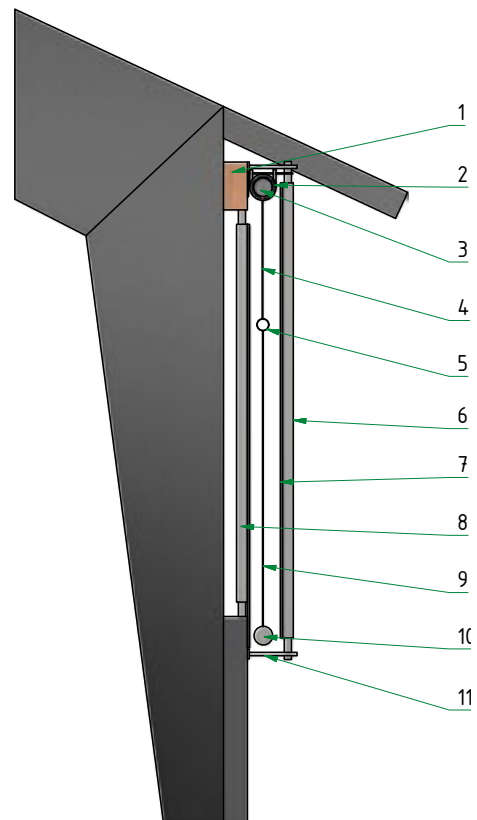
# Side Ventilation Systems

Side ventilation systems are an integral part of modern cattle stable solutions. Instead of small openings such as windows, stables have for many years now featured fully open perimeter walls. This solution enables fully opening or closing an entire side of the stable and allows full control of the air flow when combined with a ridge vent. Side ventilation elements are controlled either mechanically using a reel or by electricity. In the case of an electric drive, the entire ventilation system can be fitted

with a weather station (including rain, wind and temperature sensors) which controls the system fully automatically without the need for any additional input or regulation. The user still retains the ability to switch to manual mode. New systems operate with the principle of reeling the canvas onto a shaft which ensures the canvas is protected from outside influences. Haze side ventilation systems are suitable not only for cattle stables but also for waiting halls in milking parlours or riding halls.

## Description of side ventilation system D

1. Wooden prism
2. Top shaft storing
3. Shaft driven by motor
4. Nylon cord
5. Static shaft
6. Outer steel support
7. PVC protection
8. Inner support profile
9. PVC canvas
10. Shaft driven by motor
11. Support holder



## 1. Side Ventilation System Type A



Maximum height: 2,900 mm

Rolling wall type A is the most popular type of side ventilation system. Can be controlled either manually or by electricity.

## 2. Side Ventilation System Type B



Maximum height: 3,000 mm

The canvas in this type of rolling wall is rolled onto a bottom shaft. The system is driven either by a mechanical reel or an electric drive that can be linked to a weather station.

## 3. Side Ventilation System Type C



Maximum height: 4,000 mm

Electrically controlled system with the canvas fixated in the top section. The canvas is secured against wind by guides. This solution enables higher air flow rate

## 4. Side Ventilation System Type D



Maximum height: 4,500 mm

In this rolling system, the canvas is rolled onto a bottom-mounted shaft with an electric drive, while the upper mounting of the canvas is mobile and controlled by another motor. Type D solutions are used for both ventilation and shading.

## 5. Side Ventilation System Type E



Maximum height: 3,500 mm

These rolling walls with central shaft are made to order for e.g. cattle fattening houses or trough covers. It is twice as fast as conventional solutions.

## 6. Side Ventilation System Type F



Maximum height: 2,500 mm

Polycarbonate walls are used for structures with higher temperature insulation requirements, primarily waiting halls in front of milking parlours. The walls can be controlled by an electric drive or a manual reel.

# Accessories to Side Ventilation

## Welded Wire Meshes



Welded wire meshes are installed in front of the perimeter walls themselves and form a barrier in the stable between the animal and the canvas that is part of the side ventilation system. They prevent the cattle from reaching and damaging the canvas.

## Timbering for Side Ventilation System Types A, B, C, D, E, F



Timbering consists of planks or structural square timber and is used for mounting technological elements of side ventilation systems. The dimensional parameters of the timbering are dependent on the type of canvas used and the size of the opening. Planks and square timbers are planned and waterproofed. Planks can be substituted by steel components on customer request.



# Walls

## Canvas Endings for Side Ventilation Systems of All Types



This element prevents wind from getting under the canvas and protects motors and the travel system from outside weather conditions.

## Central Control with Weather Station



The weather station enables fully automated control of ventilation systems based on weather. It thus allows maintaining ideal conditions in the stable without the need for manual input. The latest weather station version AGP06 also includes a touch control panel which allows quick setting of control parameters and enables their monitoring in real time.

project 02

# HNĚVKOVICE







For the modern cattle stable located in the ZEMKO Kožlí compound in Hněvkovice, we installed a roller door and side ventilation systems connected to a weather station. The side walls are of type D: the canvas is rolled up onto a bottom shaft with electric drive and the top mounting of the canvas is also mobile. Both shafts can move up and down and the canvas can be unrolled even in the central section of the wall. This system thus offers the widest possible range of canvas positions. This is beneficial for this farm in particular, as the stable uses blown straw for bedding – therefore, the canvas can simply be rolled upward to avoid burying it in straw. Type D side ventilation systems are best installed up to a maximum length of 65 metres. If the stable is longer, we recommend installing two (or three) separate walls next to each other. The entrances to Hněvkovice stables are covered by our roller gates of both chain and electrical designs. The ventilation system is then operated by a Haze weather station.

# Haze Weather Station

Our weather station monitors the weather conditions and automatically adjusts ventilation systems in the stables – both side walls and any double-leaf ridge vents. The weather station includes two sensors for wind speed (one on each side of the stable), heated sensor for rain that is also capable of detecting snowfall, and one to three temperature sensors. The weather station reacts to changing wind, rain and temperature and adjusts the ventilation system based on pre-set values to maintain an optimal microclimate. It can pull the side walls to, or completely open or close them. The same goes for the ridge vent. The system's reaction to weath-

er also has pre-set inertia, meaning the weather station takes a short while before sending a signal to adjust the ventilation system, which conserves the drive units and reduces their wear.

The weather station can be linked to all variants of side ventilation systems in our company's assortment. We can also link additional elements to the system, such as evaporation cooling equipment or controls for the fans in the stable. The system is also equipped with programmes for summer and winter operation. You can keep track of all information on an easily-comprehensible screen. The latest version is also linked to a PC or smart mobile devices.





# Functional segments:

## 1. CONTROLS FOR RIDGE VENT

Controls for a double-leaf ridge vent with electric drive. The system controls the opening and closing of the vent based on the air flow rate and temperature in the stable. It also reacts to rain and snowfall thanks to interconnection with precipitation sensors.

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## 2. CONTROLS FOR SIDE SYSTEMS

Controls for side ventilation systems. Maintains an ideal microclimate in the stable by controlling the side walls. The system enables different setting of the side wall on the windward and leeward side of the stable and can optimise settings parameters based on the placement of the stable in the landscape.

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## 3. ADEQUATE LIGHTING

Ensuring adequate lighting in the stables. The weather station can be linked to artificial lighting to provide an adequate light level during the whole year.

## 4. FORCED VENTILATION

Forced ventilation to prevent cattle from suffering heat stress. The system's temperature sensors evaluate the current temperature in the stable and activate forced ventilation (fans) if needed. The activation system is independent of the human factor.

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## 5. ELIMINATION OF OVERHEATING OF STALL BEDS

Elimination of overheating of stall beds along the perimeter wall. The system can adjust the unfolding of the type D rolling walls in summer months to prevent stall beds located along the perimeter walls of the stable from overheating.

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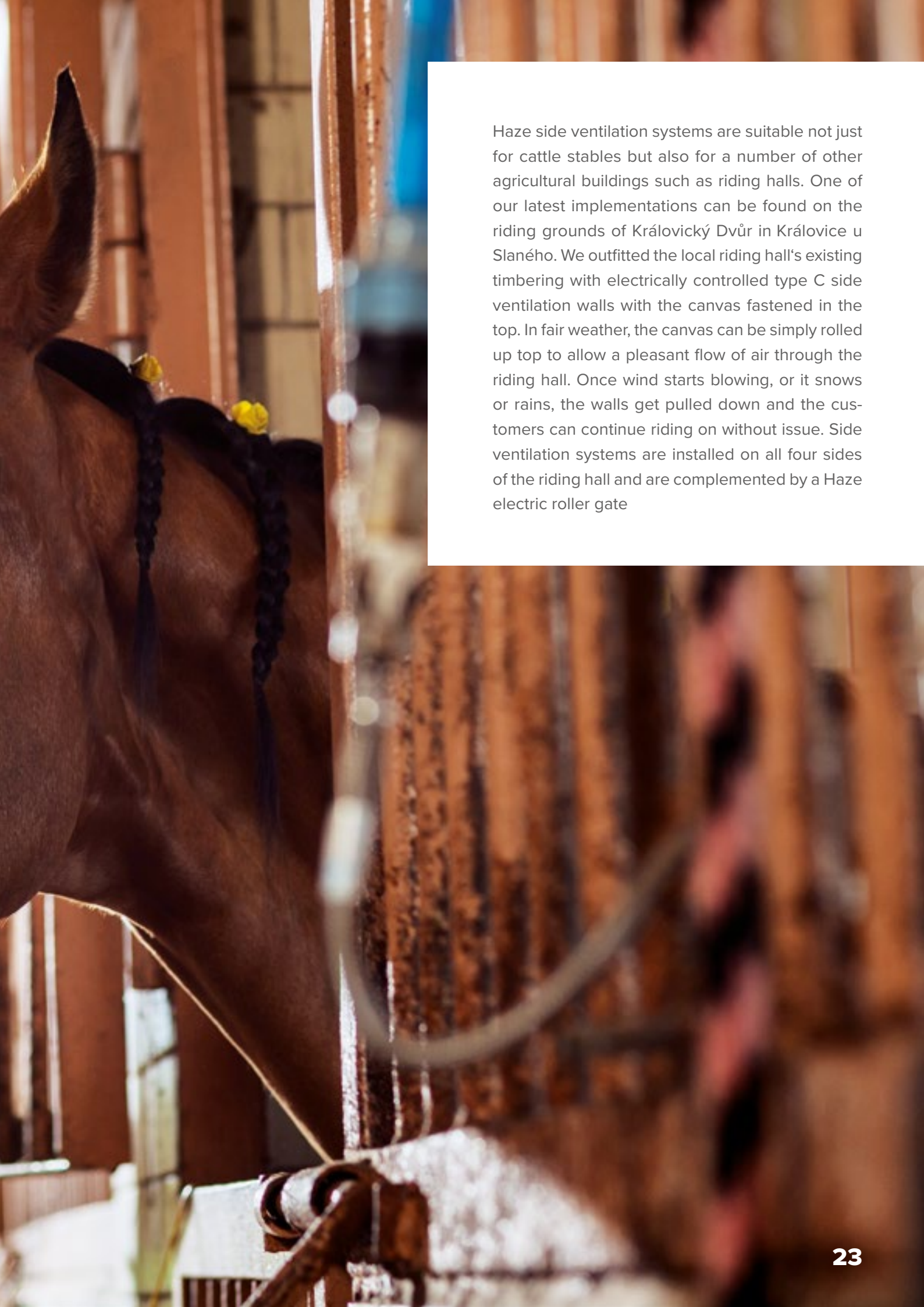
## 6. SUMMER AND WINTER OPERATION

Basic pre-setting for summer and winter operation. Our weather station has pre-set basic modes for controlling the microclimate in the stables during summer and winter months. These parameters can be optimised based on the particularities of the given farm, location, etc.

project 03

# KRÁLOVICE





Haze side ventilation systems are suitable not just for cattle stables but also for a number of other agricultural buildings such as riding halls. One of our latest implementations can be found on the riding grounds of Královický Dvůr in Královice u Slaného. We outfitted the local riding hall's existing timbering with electrically controlled type C side ventilation walls with the canvas fastened in the top. In fair weather, the canvas can be simply rolled up top to allow a pleasant flow of air through the riding hall. Once wind starts blowing, or it snows or rains, the walls get pulled down and the customers can continue riding on without issue. Side ventilation systems are installed on all four sides of the riding hall and are complemented by a Haze electric roller gate







# Roller Gates

Haze roller gates replace classic leaved or sliding gates. The gate body is hot-dip galvanised and the canvas cloth is rolled onto a shaft mounted above the entrance. This type of installation saves space and prevents the canvas from being damaged by gusts of wind when the gate is open. Colour-wise, the customer can choose which gate design they prefer; a wide range of colour variants (including colour combinations) allows the gate to serve as a brightening element. In addition, the gate can be customised by replacing the canvas cloth with a

draught-proof mesh. The gate controls are either electric or mechanical. The gate can be installed from the inside or the outside based on the dispositions of the building. To extend the service life of the gate, we recommend preventing cattle access to the canvas. Optionally, we can also install galvanised sheet metal roofing for the gate (in colours based on a RAL sampler) and the customers can choose from a variety of guide profiles. The gate can also be made in various atypical dimensions up to a maximum width of 6,000 mm or height of 6,900 mm.



## Mechanical Roller Gates



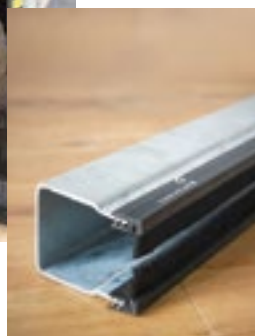
The default roller gate variant, controlled by a crank. Installed up to a maximum opening size of 3 x 3 metres.



## Chain Roller Gates



This variant features improved controls in the form of a maintenance-free chain transmission. Its advantage lies in its long service life. It can also be fitted with a fall brake on customer request. Installed up to a maximum opening size of 5 x 4 metres.



## Electric Roller Gates



These gates are suitable for areas where the gate will be used frequently, such as in feeding corridors. The electric drive can be controlled comfortably by a remote or by a back-up crank in the event of a power failure. They are built even for larger dimensions, with maximum size of 6 x 4 metres.

## Rolling Wall with Central Shaft



Rolling wall with central shaft can be fitted onto openings with width above 5,700 mm. It is therefore an ideal variant for areas where roller gates can no longer be installed.



# Gates, Entrances



## Lamellar Entrances

This variant partially replaces roll-up canvases or doors. Lamellar entrances prevent excessive outflow of heat, prevent dust ingress and eliminate draught. They are used primarily in entrances to enclosures, waiting halls or milking parlours. We offer a wide assortment of thicknesses and colour designs; you can also choose a variant with detachable curtains which increase the service life of the system. Recommended maximum entrance height is 2,500 mm.



## Milking Parlour Shutters

Thermally insulated aluminium shutters are used primarily for separating the waiting hall and the milking parlour. They are controlled via an expansion spring and can be locked.



## Double-leaf Sliding Gates

The double-leaf variant also consists of a galvanised steel body with strip panelling, and can be fitted with roofing as well.



## Single-leaf Sliding Gates

The gates consist of a galvanised steel body with strip panelling. Can also be complemented by roofing on request.



## Leaved Swing Gates

Once again, a galvanised steel body with strip panelling; comes in a single-leaf or double-leaf variant.

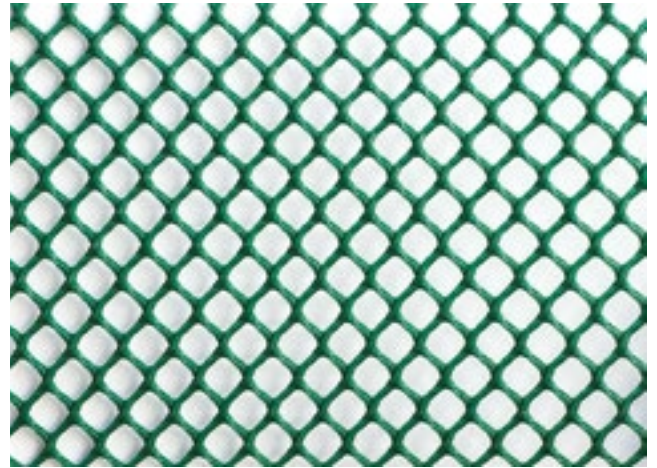


# Meshes and Nets



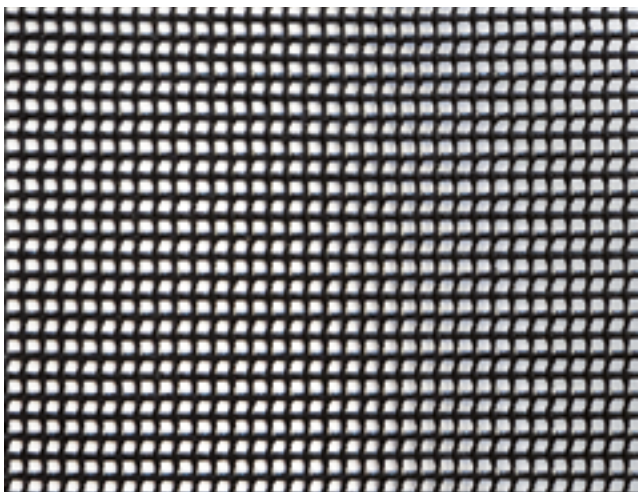
## H12 Mesh, Black

Netlon mesh with 80 % air permeability. It is used as a supporting mesh for type A side ventilation systems. Size: 2 x 35 m.



## H07 Mesh, Black/Green

Air permeability of this mesh is 50 %. It is used to cover smaller openings or windows in stables. Size: up to 2 x 30 m.



## Draught-proof Fabric, Green

Air permeability of this variant is 20 %. The green draught-proof fabric can be used on a roll-up canvas or to cover openings (such as in the gable wall of a building). Size: 2.5 (3) x 100 m.



## Integrid

Air permeability of the material is 80 %. Used as a supporting mesh for side ventilation systems without inter-connection. Size: 3.9 x 50 m.

## project 04

# JILEM

The cattle farm in Jilem features a number of our technological elements. The walls of the stable carry our latest type D side ventilation systems with two mobile shafts. This ventilation system is complemented by the most common ridge vent solution in the form of a laminate vent without damper. Entrances to the stable are fitted with roller gates with roofing (electric and chain variant) and a sliding, double-leaf steel gate. Waiting halls in front of milking parlours are fitted with type F polycarbonate walls. The system enables fully closing the walls in winter to prevent the waiting hall from freezing.







# Polycarbonate Walls

Hollow polycarbonate finds a wide variety of uses in agricultural buildings designed for cattle farming – it is used for roof sheathing, as well as for sheathing perimeter walls of stables and other accompanying structures. Its advantages lie in excellent thermal insulation properties as well as outstanding permeation of natural light and easy maintenance. Our company supplies polycarbonate boards in various sizes and structural designs. They are most frequently installed in waiting halls and milking parlours, i.e. places where better thermal insulation is required. Polycarbonate walls are controlled via a manual reel or an electric drive.







## project 05

# MLADOŇOVICE

We utilised a number of new, more modern elements in this realisation. since we strive to continue improving our products in pace with newly developed materials that enter the market. We fitted the cattle stables in Mladoňovice with type C side ventilation walls, but using new canvases from Austrian manufacturer Sattler. These canvases boast 30 % higher rigidity and better light permeation. The ventilation systems now features firmer sealing, more durable guides and new rubber that does not leave stains as easily. The stable is also equipped with a classic ridge vent without air flow control and roofed roller gate with new noise dampening bristles for windy weather, creating a more comfortable and quieter atmosphere in the stable.







# Slurry Tank Roofing

We provide roofing for slurry tanks with internal diameters between 15 to 35 m. Roofing using a special rigid canvas is the only tried and tested method of completing this task. This solution reduces leakage of ammonia and other odorous gases from the slurry tanks to the atmosphere. It also keeps the rainwater out of these slurry tanks. Our technicians will review your building personally. The statistic calculation will be prepared and they will provide the complete installation. The installation runs as follows - we install steel hoops along the circumference of the existing concrete tank to anchor the straps mounted in a ring in the centre of the tank. The ring is fitted onto a stainless or concrete pillar. During the installation we use entirely stainless steel, thus significantly extending the life of the roofing. After the straps are tensioned, a special rigid canvas (900 g/m<sup>2</sup>) is stretched onto the structure to provide roofing.

## WHY?

- Primarily due to its ability to reduce leakage of ammonia and other odorous gases from the tank into the atmosphere. Secondly, it also prevents rainwater from leaking into the tank.

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## How?

- We install steel hoops along the circumference of the existing concrete tank to anchor the straps mounted in a ring in the centre of the tank. The ring is fitted onto a stainless or concrete pillar. After the straps are tensioned, a special rigid canvas (900 g/m<sup>2</sup>) is stretched onto the structure to provide roofing. The entire solution is provided along with structural analysis and installation work. All the steel components are made of stainless steel to extend the system's service life as much as possible.









project 06  
**KOJČICE**







The ventilation system in the cattle stable in Kojčice consists of a ridge vent and type B side ventilation walls. The vent amplifies the chimney effect and efficiently transports heat, water vapours and gases from the stable to the outside, while the rolling walls enable controlling the microclimate in the stable by adjusting canvas position. Both ventilation systems are connected to a Haze weather station and are controlled automatically. The farm's milking parlour is outfitted with the latest double-leaf ridge vent with polycarbonate panelling to provide excellent thermal insulation. The vent is complemented by a type C ventilation system and a Haze roller gate.





# ANIMAL WELFARE

When renovating or designing a new stable for all cattle age categories, it is important to remember one crucial criterion: the issue of animal welfare. In 1993, the British Farm Animal Welfare Committee (FAWC) approved a codex of five basic freedoms that have been accepted worldwide, not excepting the Czech Republic. One of these is ensuring an adequate breeding environment and providing protection for the animals against adverse microclimate – removal of physical or thermal discomfort factors (Manteca et al., 2012). Quality ventilation systems of stables buildings play a key role in this respect. The biggest risk to animal welfare in cattle farming is keeping animals in a stable with inadequate air exchange – ventilation (air humidity ↑, concentration of gases in stables ↑, temperature ↑ but also ↓ = cold and heat stress etc.). Any shortcomings in the quality of the stables or the breed-

ing environment significantly increase the risk of animal disease (such as respiratory diseases) and have a negative effect on a number of physiological processes in the body which are closely related to yield and reproduction of the stock.

An organism experiences thermal comfort when the thermal condition of the body is optimal and the animal has to expend only a negligible amount of energy to maintain its physiological functions when within a certain temperature range and with other physical aspects being constant. This range of external temperatures is called the thermal neutral zone (Doležal et al., 2004). The thermal neutral zone for cows is between -6 °C and + 19 °C and for calves between +10 and +25 °C (Staněk, 2016). Considering the course of temperatures in the last few years, summer months tend to be a period of heat stress in cattle, especially among high-pro-

ducing cows. Cows are under heat stress when the temperature of the surrounding environment rises to a level where the animals can no longer efficiently conduct heat to the outside of the body. Heat stress in cows results in the activation of a number of thermoregulation mechanisms which aid them in releasing excessive heat from the body. Externally, heat stress most commonly manifests in the form of an increased respiratory rate, increased salivation, reduced feed consumption, increased fluid consumption, seeking of shaded places, reduced rest time with increased time spent standing (load on the limbs) and, in some cases, attempts to cool down by laying down in wet/cool walking corridors.

The threshold of heat stress in cows generally occurs approximately when air temperature exceeds mere 21 °C. However, it is important to note in this respect that heat stress is usually a combination of not just ambient temperature but relative humidity as well. As temperature and relative humidity increase, the risk of the onset of heat stress grows significantly. The immediate effect of heat stress is usually not just a decrease in milk production, but also noticeable changes in milk composition; breeders also often encounter issues with cow reproduction (decreased pregnancy rate, reduced signs of rutting, early embryonic mortality, etc.). The consequences of the effects of high ambient temperatures – heat stress – are long-term, in the

order of several weeks. In the case of cold stress, the situation is markedly simpler since it is easier for cows to produce metabolic heat in the rumen (feed intake ↑) than it is to release it. On the other hand, stables face the issue of water or technologies for slurry removal freezing up during frosty and arctic days. Stables with minimal air exchange may struggle with high relative air humidity, water condensation, etc.

Ensuring an adequate breeding environment is the primary task of every cattle breeder and must be taken into account already during the construction or renovation of the stable. The trend in recent years has been to build structurally simple stables which ensure an adequate environment for breeding by their design. Today, efficient air exchange in the stables is most commonly resolved by open side walls with rolling canvases combined with a high-quality ridge vent on the roof. It is also worthwhile for breeders to install a weather station to automatically control the microclimate in the stable. The station can be interconnected with not just the side ventilation walls and ridge vent, but also forced ventilation technology, evaporation cooling and the lighting system controls. Fully digitally controlled microclimate in the stable is a modern innovation trend that not only contributes to better breeding comfort for the animals, but also makes animal husbandry more economically efficient.

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# The Haze Team



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**Petr Věříš**  
Production director



**Bc. Denis Demidov**  
Production manager



**Roman Hátle**  
Warehouse manager



**Matěj Žalský**  
Supplier





**Ing. Ivo Novák**  
Project manager



**Zbyněk Hazuka**  
Project manager



**Ing. Filip Pavel**  
Logistics manager



**Jan Svoboda**  
Supplier



**David Starý**  
Supplier



**Eva Hladíková, Dis**  
Sales secretary



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