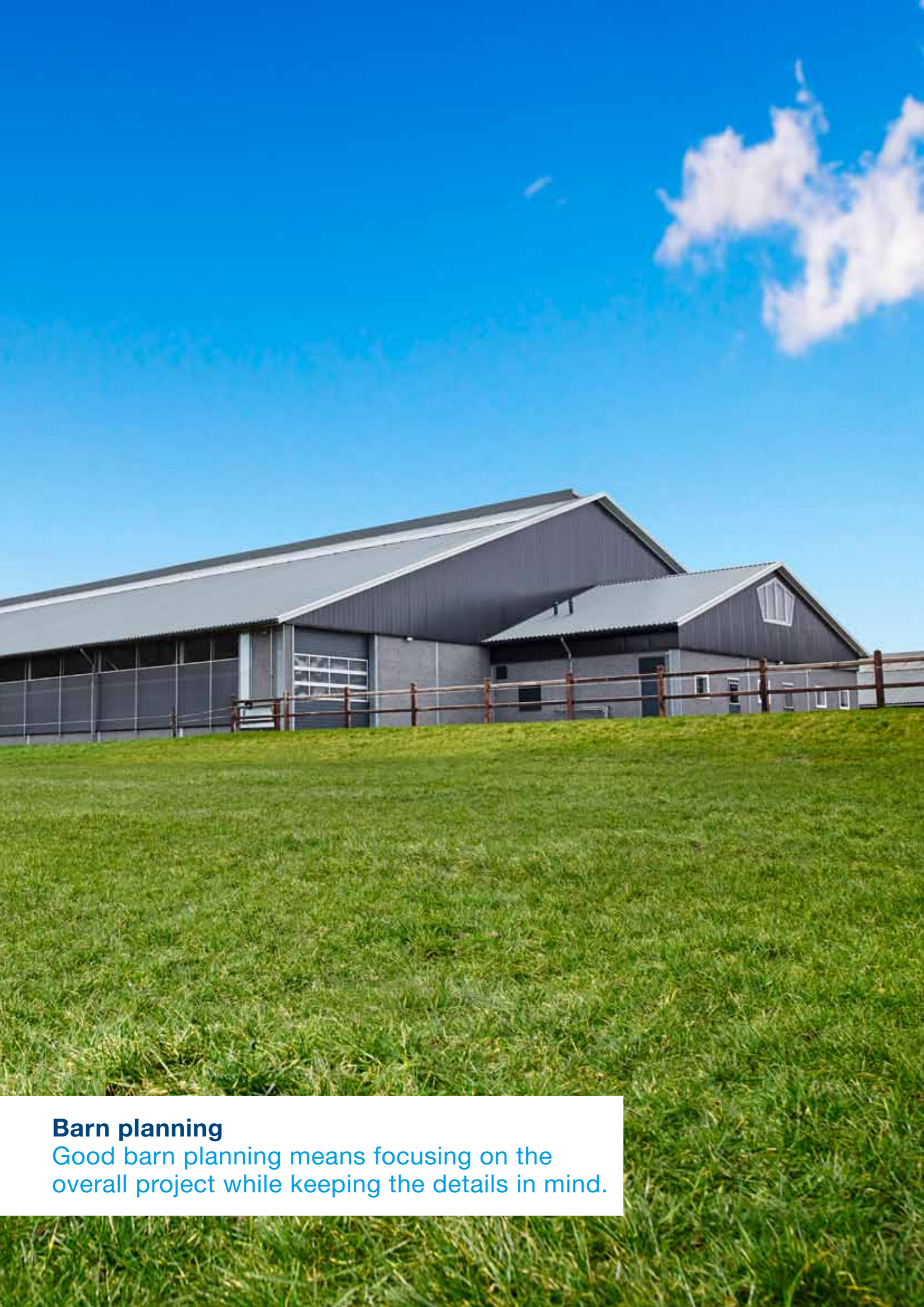


1 DeLaval VMS™ best practices Choosing your barn layout



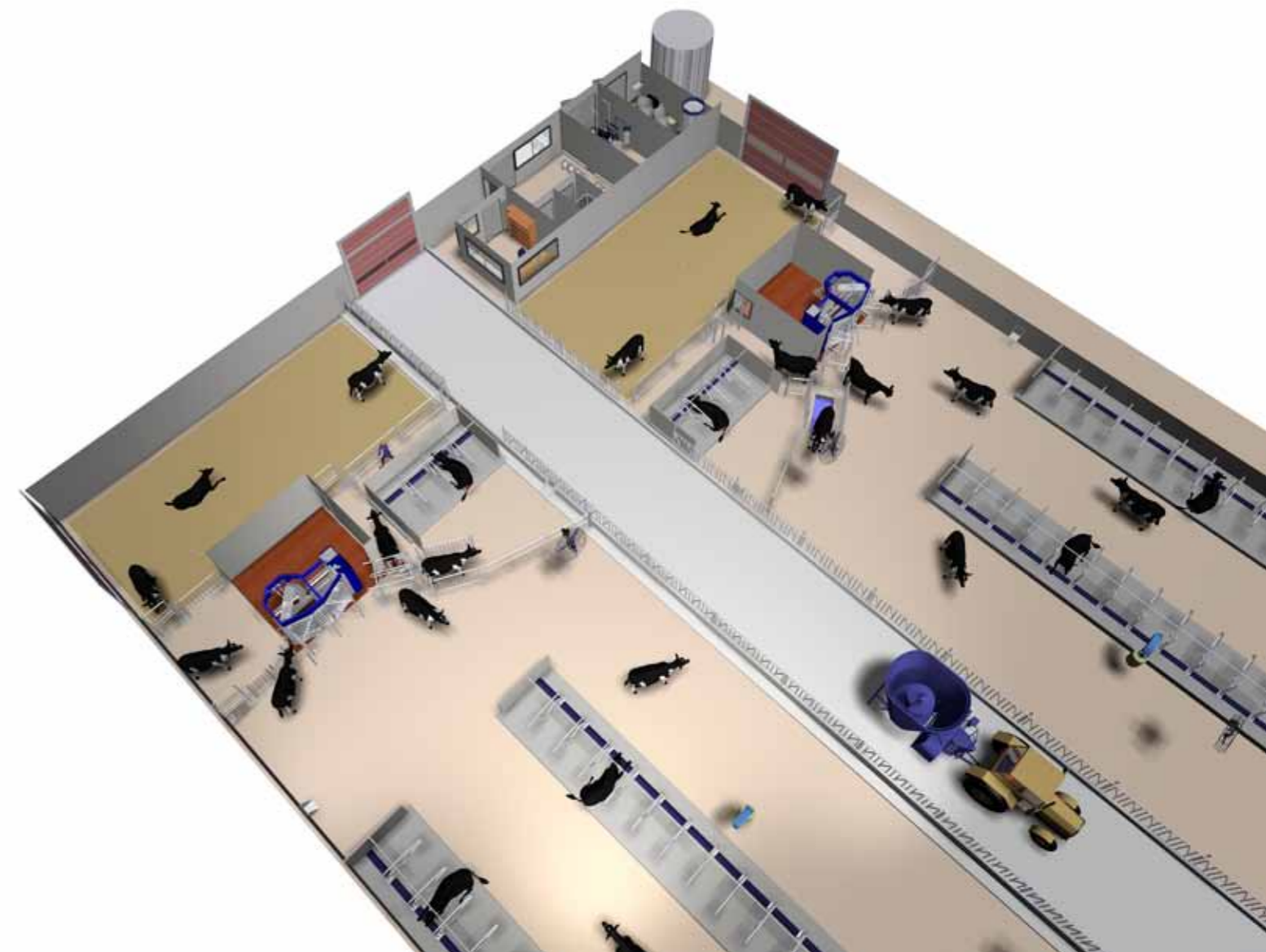


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Barn planning

Good barn planning means focusing on the overall project while keeping the details in mind.



Good barn planning

Focus on the overall project while keeping the details in mind. Take time to make a plan – it is easier to move a wall on a drawing now than later on in real life.

- **Cow traffic:**
 - forms of cow traffic
 - alleys
 - gates and selection
 - location of the milking station
 - waiting area
 - separation area
- **Eating/drinking:**
 - feeding table
 - feeding stations
 - drinking stations
 - in a 4-row layout all cows cannot eat at the same time. This layout demands for 'continuous feeding'

- **Welfare/health:**
 - loose housing
 - foot bath
 - cow brush
 - ventilation
- **Room concept:**
 - machine room
 - milk tank room
 - office
- **Manure equipment**
- **Light**

Free cow traffic

Advantages

- Gives your cows the option to reach the feed whenever they like
- Less risks of cows blocking passages or gates
- Easy for the cows to get used to the system
- No additional investment in smart gates needed
- Simple and easy access for the farmer
- Total freedom for the cows to choose their own routine

Disadvantages

- Higher need for labour input to fetch cows for regular milking interval – especially if more than 60 cows are being milked by the VMS
- Cows may visit the milking system without being milked which may decrease capacity
- More concentrate is needed to motivate your cows to visit the milking station (especially at the end of lactation)
- Low grain at the feed fence should be used to motivate cows to visit the VMS



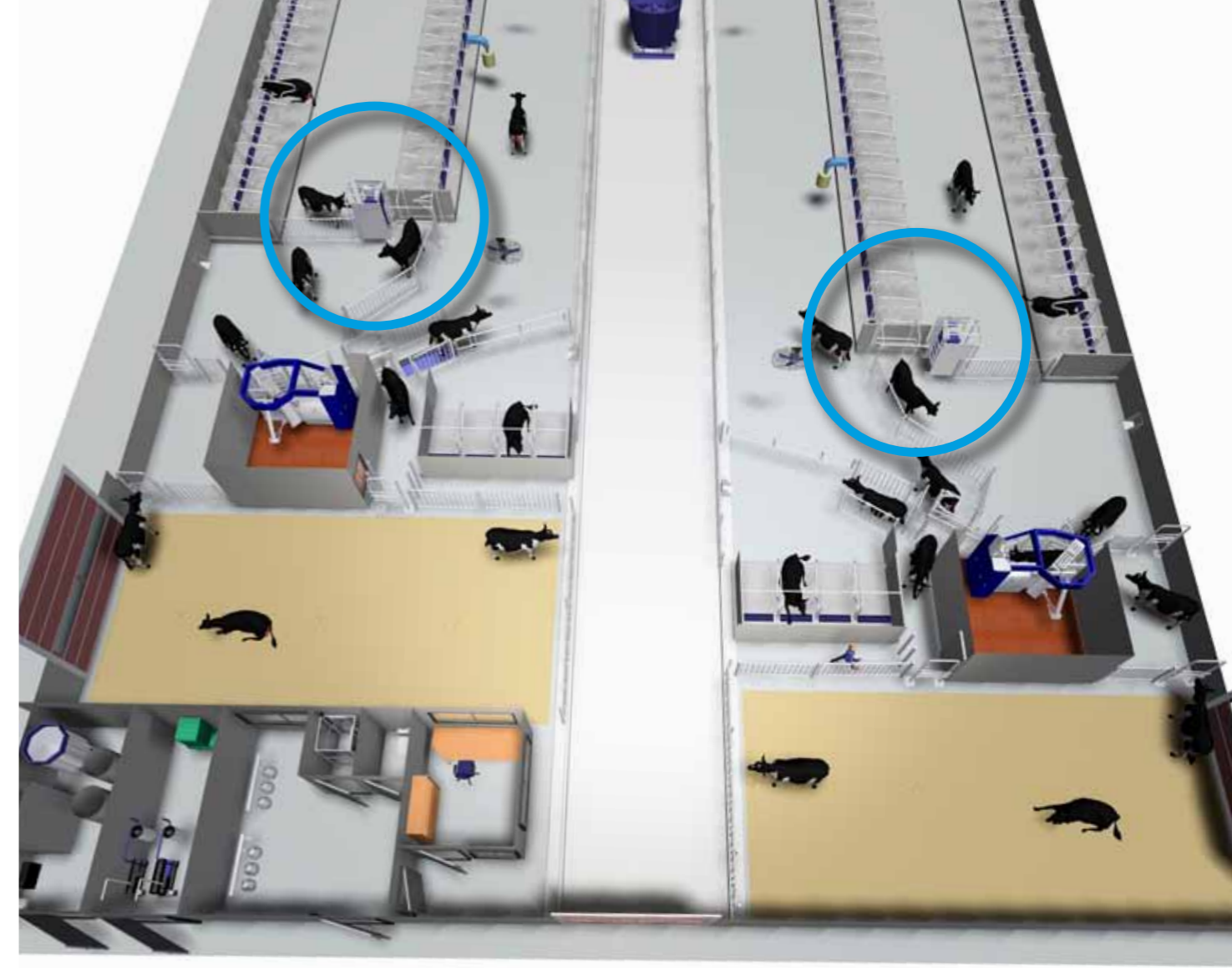
Feed First™ cow traffic

Advantages

- No restrictions on roughage intake
- No cows without milking permission in the milking station which might increase capacity
- Cows pass through the selection gate up to 15 times per day resulting in:
 - regular milking which is good for udder health
 - less cow fetching required
 - less labour
- Low concentrate dispensing in VMS station possible

Disadvantages

- Additional costs for selection gates
- Works best when the resting area can be separated from the feeding area
- Submissive cows may have to stay longer in the waiting area which would mean fewer milkings
- Extra smart gate passage is recommended in the cubicle row between feeding and resting area if there is more than one VMS per cow group



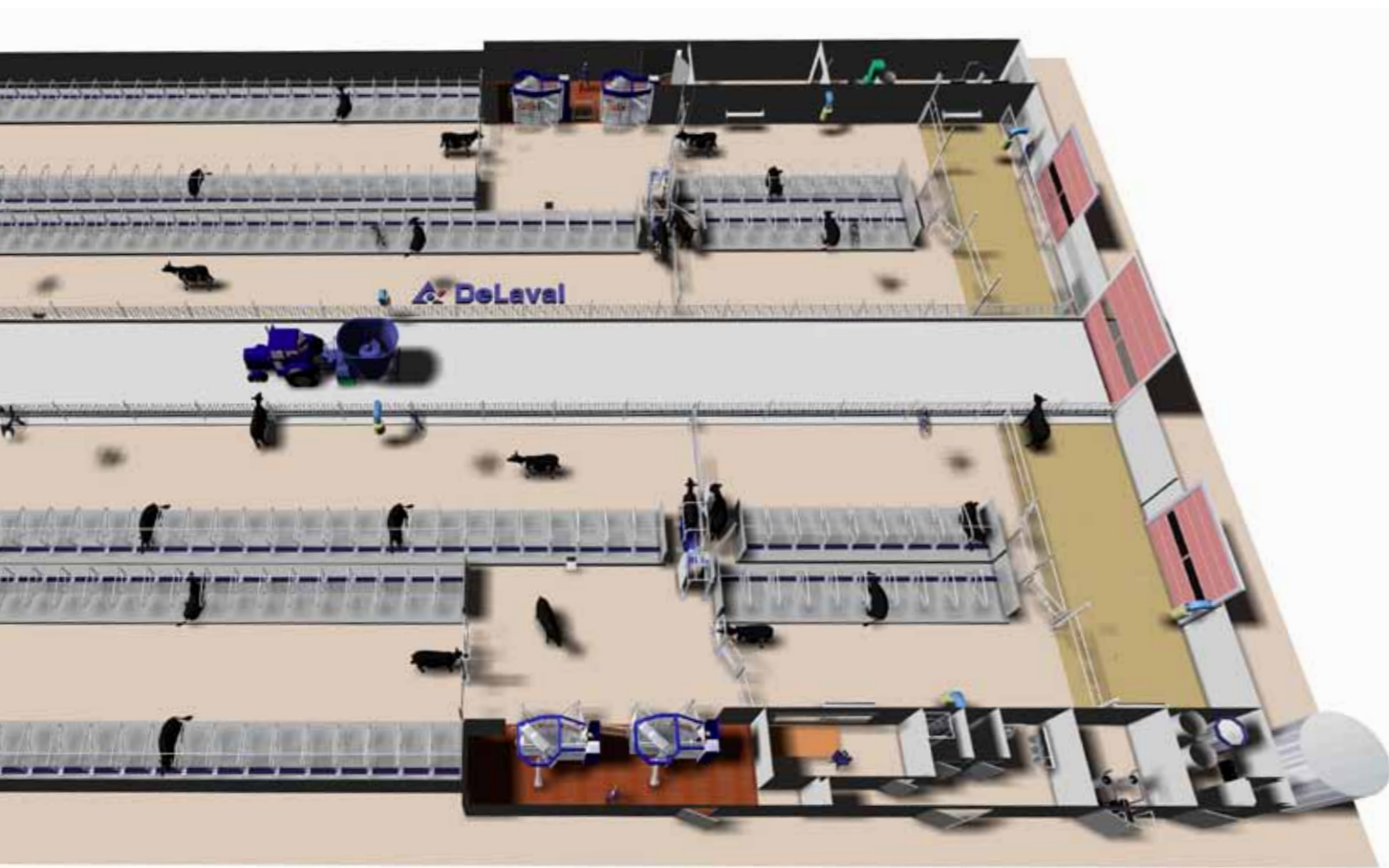
Milk First™ cow traffic

Advantages

- No capacity loss due to refusals
- Cows without milk permission can go straight to the feeding area
- Lower concentrate dispensing in VMS possible
- High yielding cows become triggered to visit the feed lane more often, which increases the number of milkings
- Less cows that stay in the feeding area without milking

Disadvantages

- Additional costs for selection gates
- Submissive cows possibly have to stay longer in the waiting area which would mean fewer milkings



Free cow traffic with post selection

Advantages

- You can have two production groups milking at the same robot(s)
- Free cow traffic in the rest of the barn, so cows can go to the feed rack as much as they like
- Fewer cows to fetch

Disadvantages

- Additional costs for smart selection gates
- Cows without milking permission may occupy station unnecessarily, thus lowering system capacity

Choose your way

Cow traffic	Free traffic	Milk First	Feed First
Milking regularity	+/-	++	++
Milking frequency	+/-	+	+
Cow fetching necessity	-	++	++
VMS visits without milking	--	++	++
Queues in front of robot	++	++	+
Roughage intake frequency	+++	+	++
Cost	++	-	-
Concentrate need in robot	-	+++	++
System capacity	+	+++	++

+++ = extremely positive

++ = very positive

+ = positive

- = negative

-- = very negative



Alleys

- Your cows need space
- Wide alleys and fewer (or no) blind alleys will help your cows:
 - move without stress (especially submissive and lame cows)
 - visit the feeding area frequently, up to 12 times per day
 - feel well

Pay attention to the additional space required for water.

Alley	Width (m)
Large breed	
Cubicles – wall	3.0
Cubicles – cubicles	3.0-3.5
Feed alley – wall	4.0
Feed alley	4.0-4.5
Crossover	3.0
Crossover with a drinking station or brush	4.0
Crossover with drinking station and brush	5.0
Small breed	
Cubicles – wall	2.6
Cubicles – cubicles	3.0
Feed alley – wall	3.5
Feed alley	3.7
Crossover	2.3
Crossover with water or brush	3.7
Crossover with water and brush	4.7

Gates and selection

Use your possibilities

Smart gates with selection

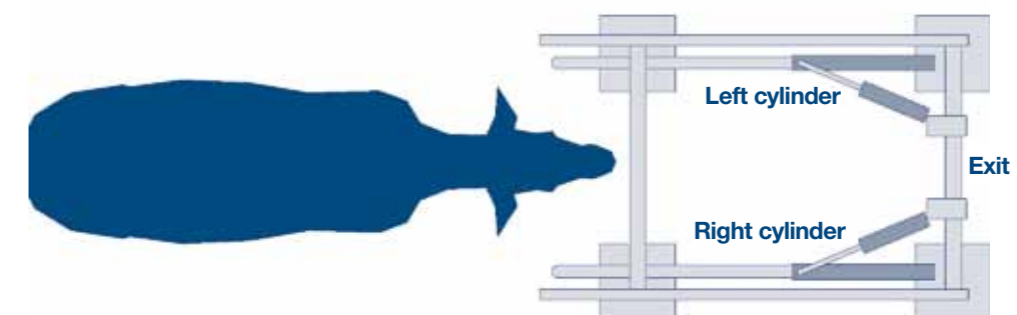
- Feed First™
- Milk First™
- Access to pasture

Separation gates

- Feed First™ and Milk First™ cow traffic
- Filtering into selection area
- Separation into feeding groups after milking
- Filtering back into waiting or resting area after an unsuccessful milking



Three-way separation gate – top view





Separation gates

General information

- Two or three-way gates can be used for different purposes like Milk First™, Feed First™, grazing, drafting (separation) and individual foot bath usage.
- Needs a unit to identify the cow:
 - VMS milking robot, or
 - Smart gate
- Must be located maximum one cow length after identifier unit (milking station or smart gate)



Keep the details in mind

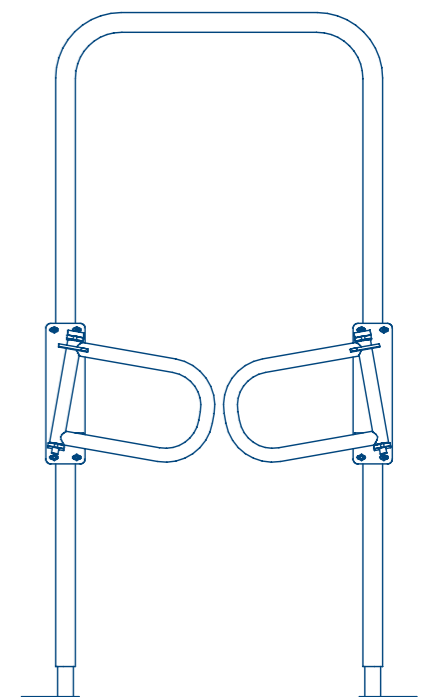
Try to put yourself in the position of your (weakest) cows

- The exit should not be in a corner as it can easily be blocked by a dominant cow
- Pay attention to the design of the exit gates (see 'Where to position one-way gates')

- 3-row barn or Feed First™ cow traffic:
 - cows that do not like to be milked or are low ranked, or a herd with wrong feeding strategies, will stay in the feeding area
- Cows pass through a smart gate in the barn more often if it is positioned further from the VMS

One-way gate

- Portal one-way gate. The saloon-like gate makes it very difficult for the cows to pass through in the wrong direction.
- Wall mounted one-way gate.





Choosing the location for the milking station



General information

- Separated from machine room
- Should be placed in a three-wall room with ceiling and easy to clean floor:
 - easy-to-clean milking side
 - the room can be easily closed off with plastic strips during winter
- Clean and easy access for you:
 - VMS room stays clean
 - comfortable for employees
- Easy entry and exit for your cows:
 - entry side clearly visible
 - straight line entry
 - exit at 0 to maximum 60 degree turn
 - no attractions close to the entry or exit (eg water trough, concentrate feeder, cow brush)
 - exit lane with a one-way gate, 3 metres or more from the station
 - with free cow traffic, space between VMS and first cubicle should be minimum 6 metres



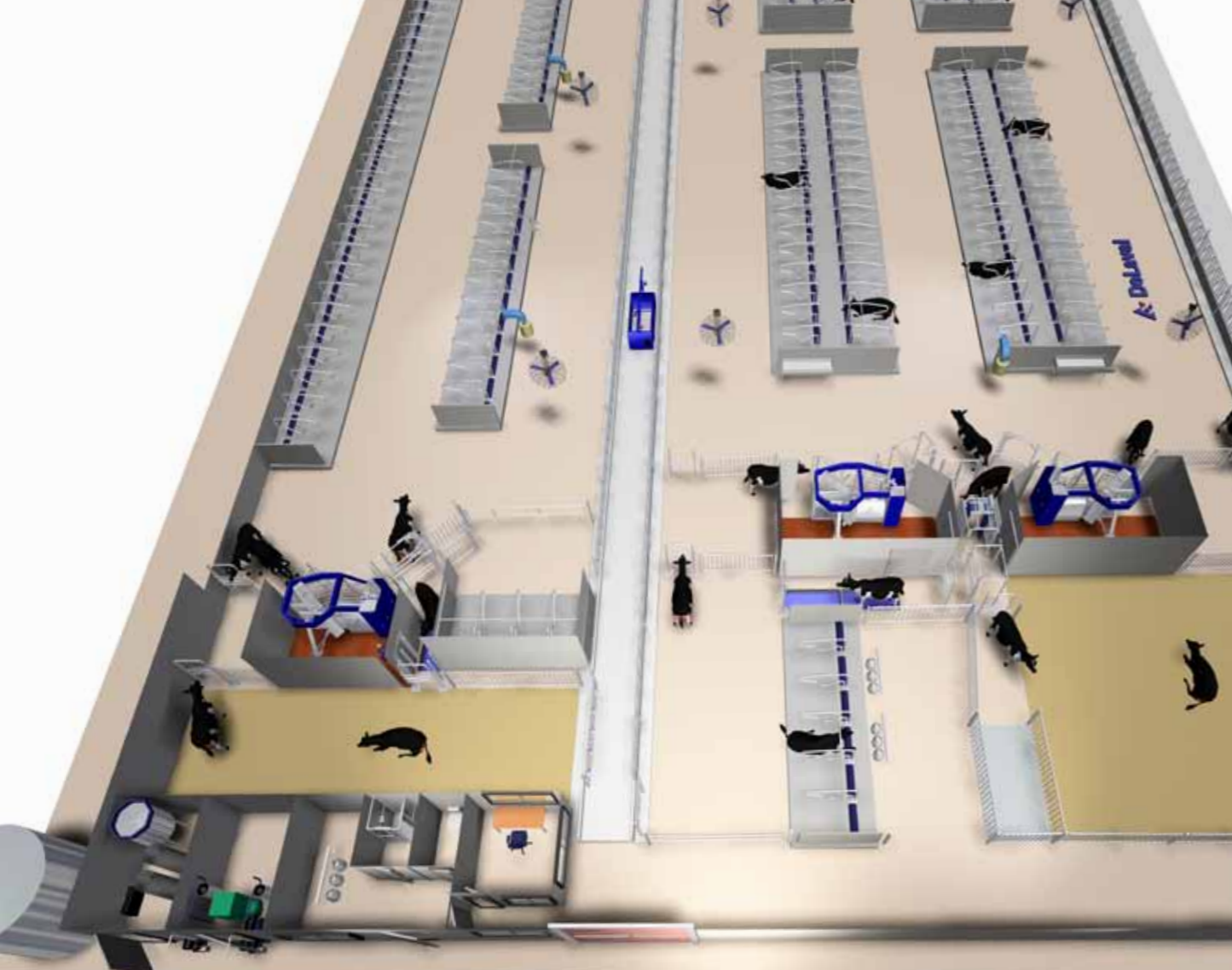
If possible

- Close to tank room:
 - short milk lines
- Slatted floor at entrance to VMS:
 - clean access for your cows
 - keeps the milking station clean
 - less cleaning to do
- Short distances for the employees:
 - office preferably nearby
 - comfortable for you

To think about:

- Possibility of building a pit in the VMS room for easier udder access
- Remember that one day you may want to expand your barn. Plan for the next VMS





Placement of the milking stations

Single VMS at the end of the building:

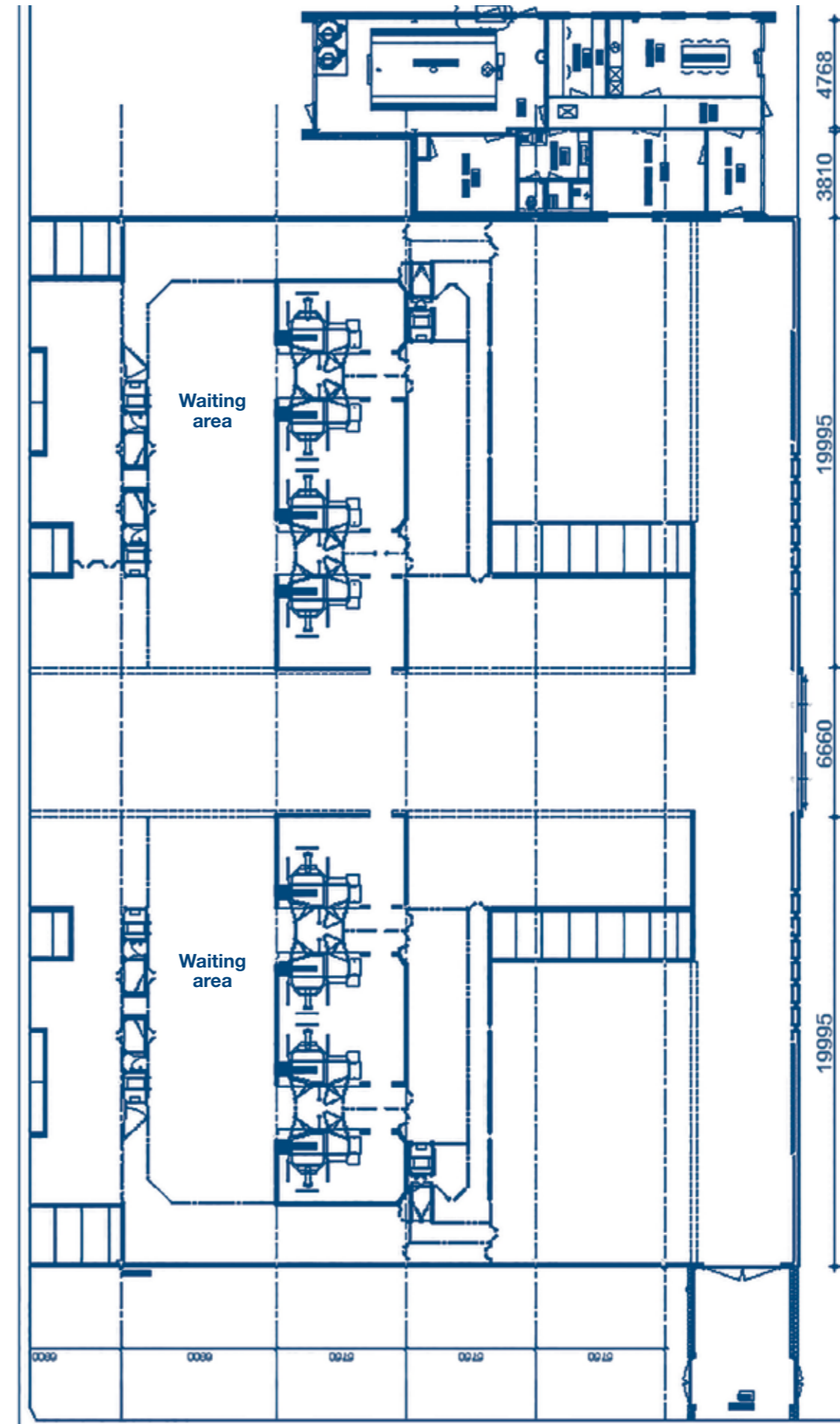
- excellent cleanliness and short way to the station
- no obstruction for cross ventilation
- works well with all cow traffic solutions

Two VMSs at the end of the building (tandem):

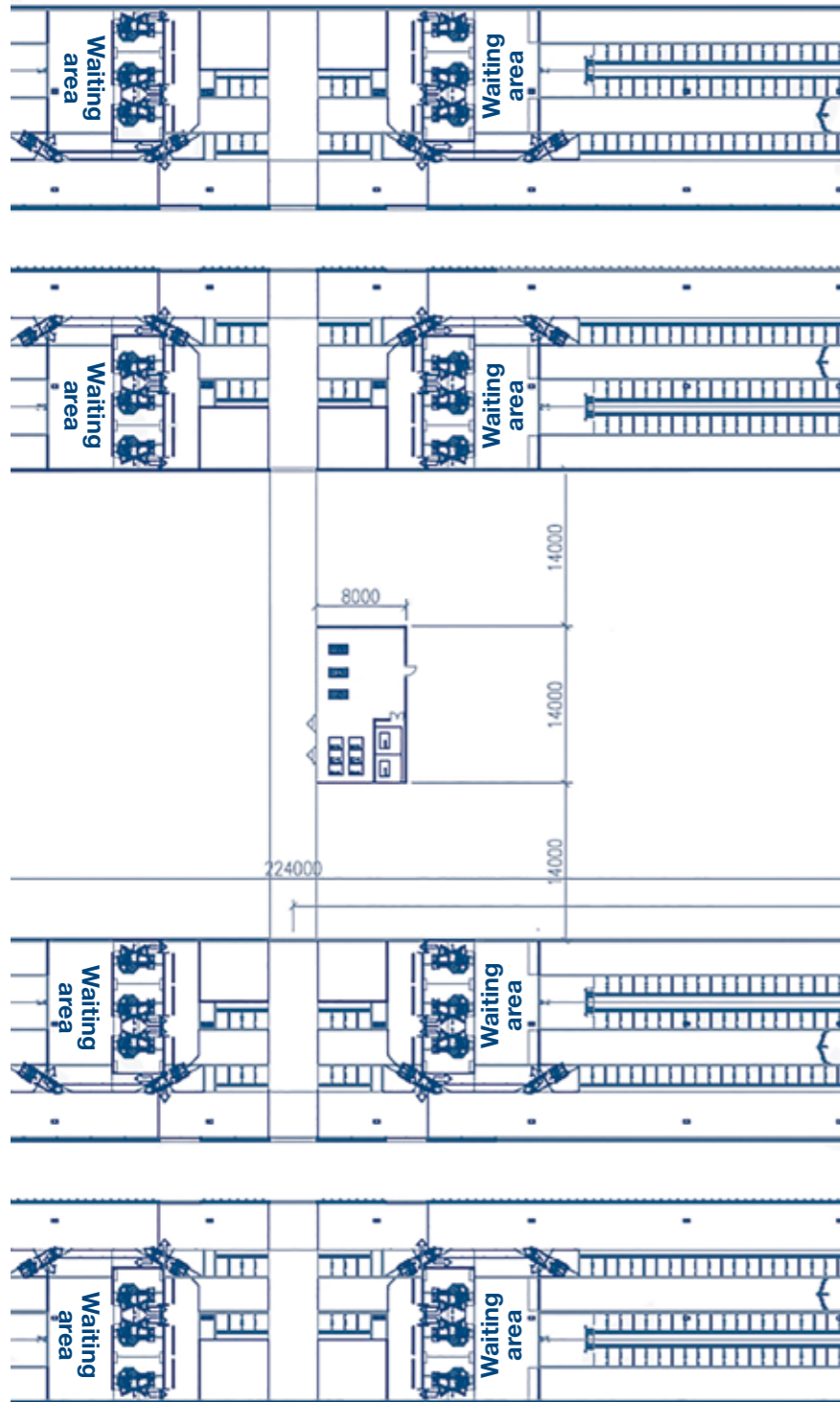
- excellent cleanliness and short way to (all) station(s)
- no obstruction for cross ventilation
- works well with all cow traffic solutions
- automatic milking of separated cows
- cows that are milked might try to visit the 2nd VMS looking for concentrate residues

Toll gate/parallel installation

- no mixture of milked and non milked cows in front of the VMS entrance
- works with all cow traffic solutions
- involves crossings of people and cows, but this can be solved easily with step stones



Placement of the milking stations for bigger farms



- Solution suitable for larger farms
- The bigger the operation the more important ergonomics become – all stations, tank room and office should be close to each other
- Good cow entry and exit
- Clean access via a bridge
- You can use stepping stones to create clean access to next VMS room
- Smart gate + 2-way gate can separate any cow coming from one of two grouped stations



Waiting area – make it as pleasant as possible

Size

- For a minimum of 7 cows
- Minimum 4m² per cow
- 6 metres between VMS and cubicles
- At least 3 metres wide, so cows can turn easily when needed

Floor

- Preferably slatted floor for easy cleaning: clean hooves = clean VMS
- Rubber floor coverage is recommended
- Manual cleaning is recommended to avoid extra stress from scrapers

Wellness

- Adding a small water bowl to the waiting area might look like a good way to improve cow comfort but

we don't recommend it. Cows shouldn't stay in the waiting area over 30 minutes and making water available just after VMS station is a good motivator for cows to go get milked fast

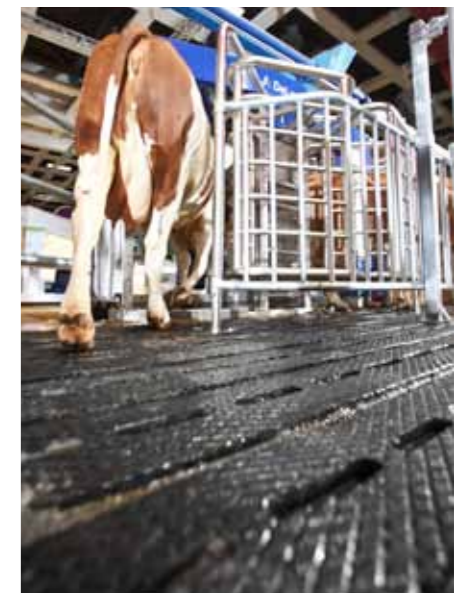
- Ensure good ventilation and lighting
- Ensure the cow brush is not installed too close to the entrance of milking station

- No free stalls in waiting area

Access

- Cows do not like being disturbed while waiting:
 - arriving cows should enter the area behind the waiting cows
 - if your entrance to the barn is via the waiting area, it should be behind the waiting cows

- Cows like being protected at the entrance of the milking station:
 - barrier should be half the length of a cow
- Avoid having a narrow entrance to the waiting area:
 - low-ranked cows will have less fear of entering



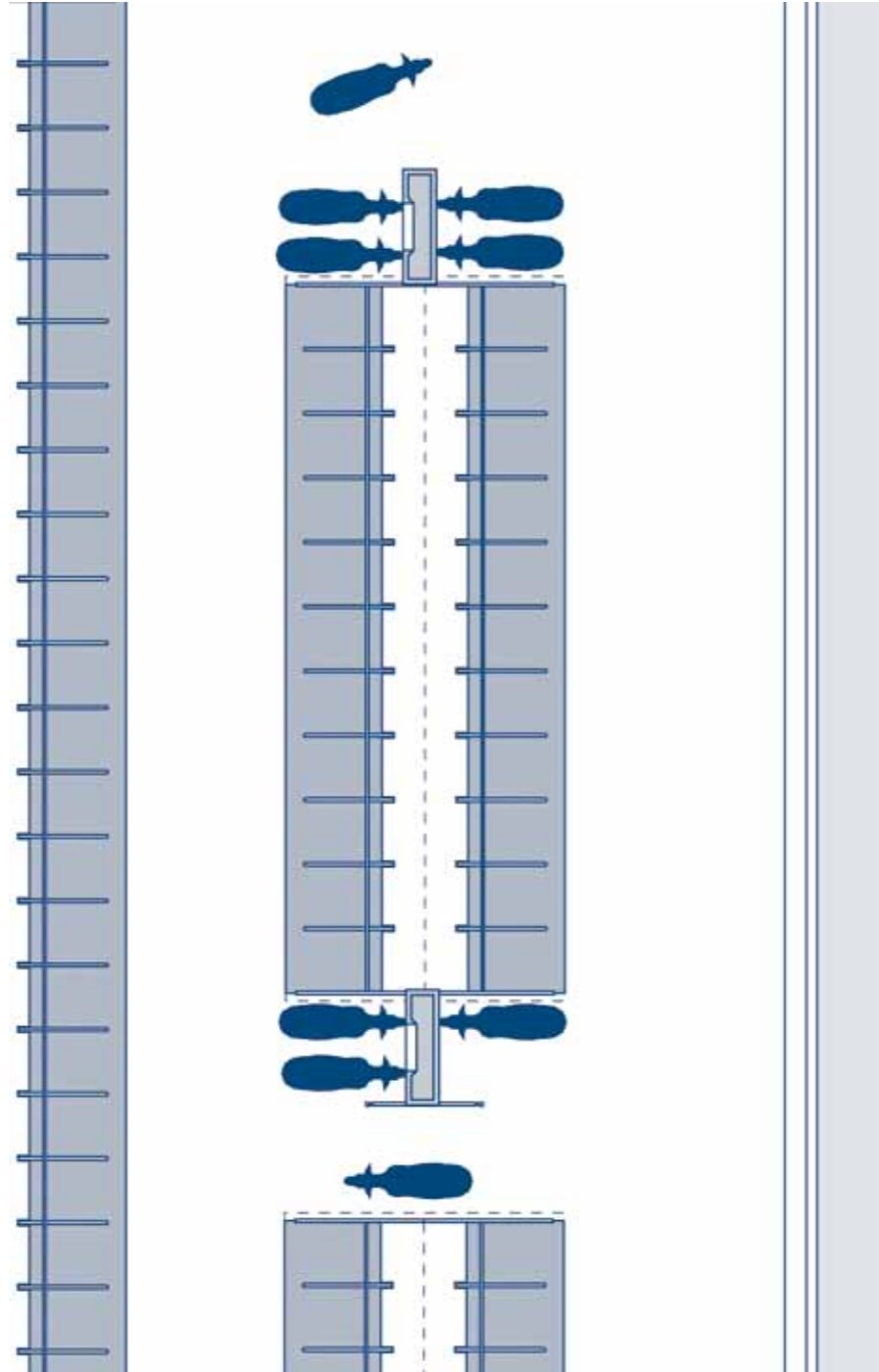
Crossovers

General information

- 25 cubicles in a row between cross alleys
- Crossover of 2-3 cubicle widths
- When automatic scrapers are used:
 - elevated cross alleys
 - elevation 10-20 cm
- Cross alleys must be crowned:
 - auto runoff of fluids

If possible

- No dead ends
- With Feed First™ and Milk First™ cow traffic, the crossover should be opposite to the one-way gate for straight easy access to the feeding table for any cow, coming from any direction
- Have crossovers without elevation if you use a robot manure scraper
- Turn water troughs 90 degrees to improve access for the cows and to have fewer blockages



Feeding table

One feed table place for each cow is the best

General information

- All feed areas should be shaded:
 - to protect cows from the sun, rain or snow
 - to increase the bunk life of your roughage

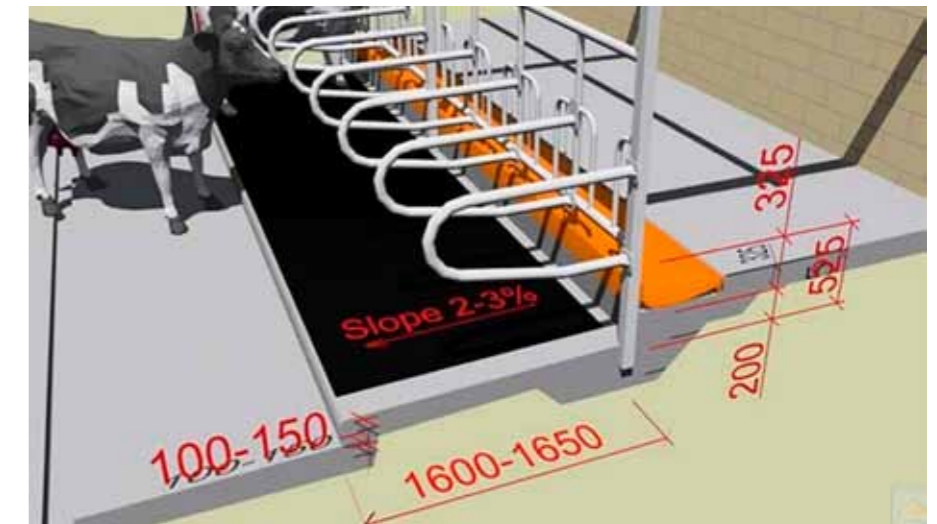
- DeLaval FTC is easy to clean and maintain and facilitates feed adjusting

- Head locks:
 - eased cow treatment
 - not needed for all places

- Leaning feed fence:
 - reduces pressure on cow
 - less pain
 - increased cow comfort

To think about

- Rubber alley coverage in the standing area:
 - allows cows to stand comfortably for longer periods of time
- Feeding cubicles:
 - prevent pushing away submissive cows
- Feeding table coverage
 - helps to avoid the growth of undesired bacteria on the feed table





Feeding stations

General information

- The number of feeding stations is related to the quantity of feed that you want to distribute (more when mealy feed is used)
- Avoid installing feeding stations next to a VMS exit corridor as cows waiting in the feeding station block those that exit the VMS
- In Feed First™ setup the feeding station area should not be too small, use all the space available up to the next crossover
- Do not feed more than 7kg of concentrates in the VMS per cow per day – this will vary depending on their production (max 1,5–2 kg per visit)

- Feeding station back gates might decrease competition and consequently increase lying time



Drinking water – where to install water troughs

- Cows like to drink after milking:
 - if the exit lane from the robot is long enough, you can install additional water troughs here
- Avoid installing water troughs next to the exit of the milking station as drinking cows will block the exit
- Cows like to drink when they eat
 - Water should be:
 - easily accessible
 - within 15 meters of the feeding table
 - not restricted by any gates
- Cows should always have easy access to water:
 - do not try to force your cows to go for milking by withholding water in certain areas

- If water troughs are installed close to cubicles, prevent water from being squirted into the cubicles in order to reduce the incidence of mastitis and other diseases
- Cows prefer luke warm water from the pre-cooler and therefore drink more of it

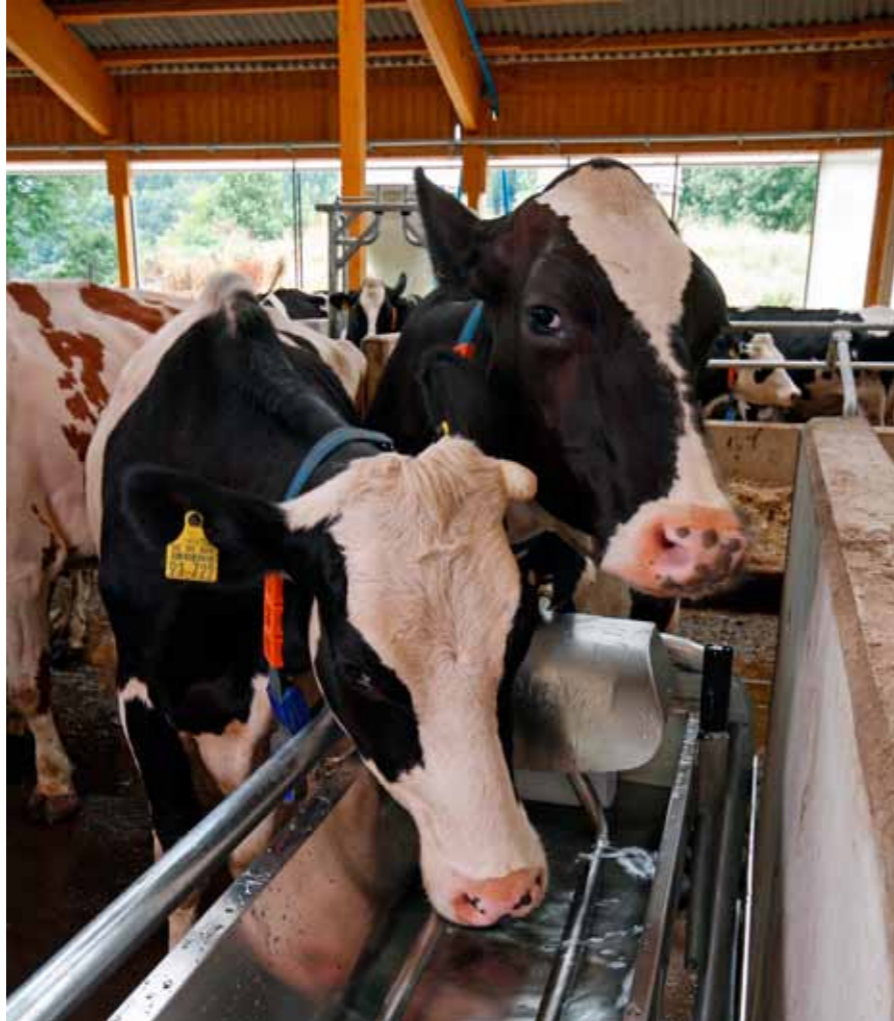


Drinking water Requirements for installation

- Do not install water troughs or bowls too low:
 - 60-80 cm above floor level
 - reduced risk of manure pollution
- Cows prefer a large, calm drinking surface from which they can drink quickly and without stress
- If you install bowls, they should offer at least 20 litres of water per minute
- The optimal water temperature for increased milk yield is 15 to 17°C
- Calculate with 10–12 cm of water trough length per cow:
 - 65 cows x 10 cm = 650 cm
 - 3 troughs with a length of 215 cm or 1 water bowl for 5 cows

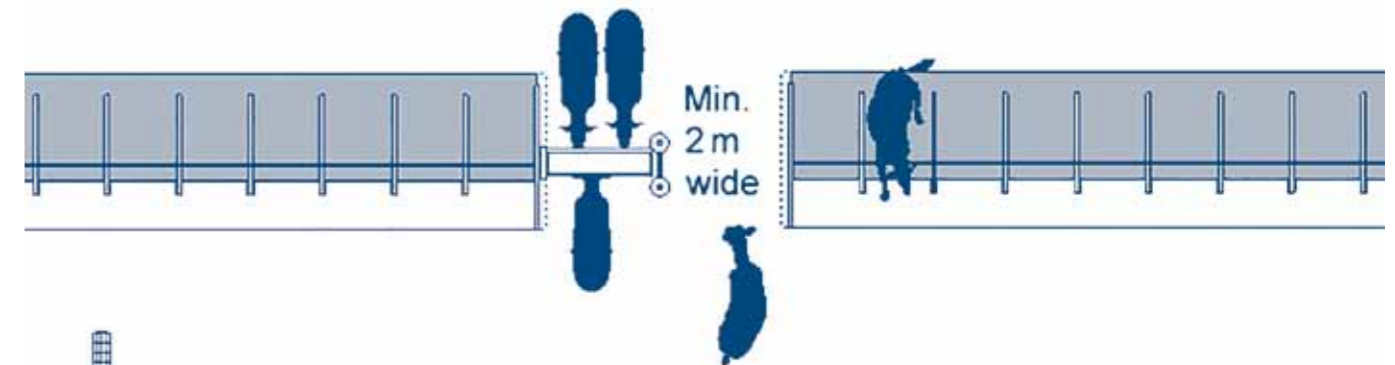
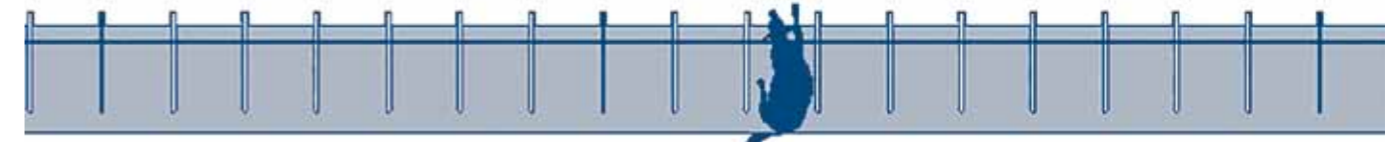
Did you know?

High-yielding cows need more than 150 liters of fresh water every day



Drinking water Your cows need space

- Crossover with a water trough must be 3–5 m wide. This prevents dominant cows from blocking the passage
- Install at least 2 water troughs and plan 3-4 m space around them to reduce pushing and shoving – this is important to enable submissive cows to drink without stress
- Alternatively turn the water troughs on a 90 degree angle (see illustration)
- Water quality can have a high impact on the milk production. Therefore test your water quality at least once per year in an external laboratory.





Loose housing As comfortable as possible

General information

- Your cows need a soft, non-slippery surface and enough space to lie down and rise up in a natural way
- The divider should only guide the cow and not disturb her
- Cows should not stand in the stalls
- Cows should lie straight and not diagonally
- Stalls must be kept clean and dry
- Many farmers mix lime with saw dust or chopped straw
- Partition wall at the end of each row next to a crossover to protect cows (eg against manure splashes)
Note: this can affect airflow across a building

Did you know?

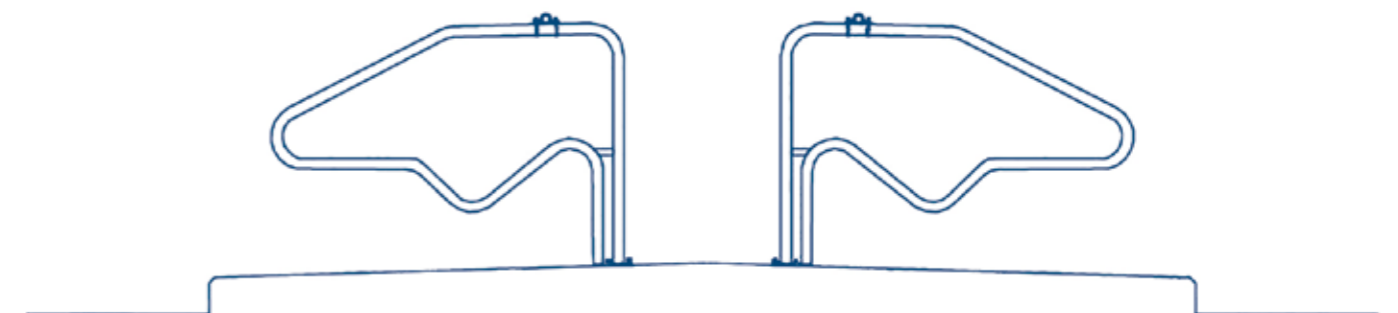
A cow lies down to rest ~8-10 times per day



Free stall dimensions

Length	Cows <650 Kg	Cows >650 Kg
- Towards wall	2.8 m	3 m
- Head to head	2 x 2.5 = 5 m	2 x 2.7 = 5.4 m
- No front wall	2.5 m	2.7 m
Width (center to center)	1.10-1.25 m	
Brisket board from rear curb	1.80-1.85 m	
Neck rail from rear curb (measured horizontally) Measure the cow	1.65-1.75 m	
Height of neck rail	1.25-1.33 m	
Cubicle slope	Max. 4%	
Curb height	0.20-0.25 m	

CC1800 XL Double row for cows over 650 kg



Free stalls

Troubleshooting



Your cows:	Cubicle is too:			
	Short	Long	Tight	Wide
Do not enter	X		X	
Lie in the alley	X		X	
Stand longways in cubicle	X		X	
Stand halfway in cubicle	X		X	
Have difficulty lying down	X			
Have difficulty rising	X		X	
Rise with front legs first	X		X	
Lie too far inside		X		
Lie only part-way inside	X		X	
Lie diagonally	X			X

Your cows:	Partition is too:			
	High	Low	Long	Short
Do not enter	X			
Lie in the alley	X			
Lie too far inside		X		
Lie only part-way inside	X			
Lie diagonally		X		X

Your cows:	Brisket board is too:	
	Backward / high	Forward / low
Do not enter	X	
Lie in the alley	X	
Stand halfway in the cubicle	X	
Have difficulty lying down	X	
Have difficulty rising	X	
Lie too far inside		X
Lie only part-way inside	X	
Lie diagonally	X	

Your cows:	Neck rail is too:	
	Backward / low	Forward / high
Do not enter	X	
Lie in the alley	X	
Stand longways in cubicle	X	
Stand halfway in cubicle	X	
Have difficulty lying down	X	
Have difficulty rising	X	
Lie too far inside		X
Lie only part-way inside	X	
Lie diagonally	X	

Straw bedding



- Straw bedding is comfortable and good for feet, but requires more work to maintain optimal hygiene levels
- If you have to move animals from the straw bedding area to cubicles, teach your cows how to use them

Sand bedding

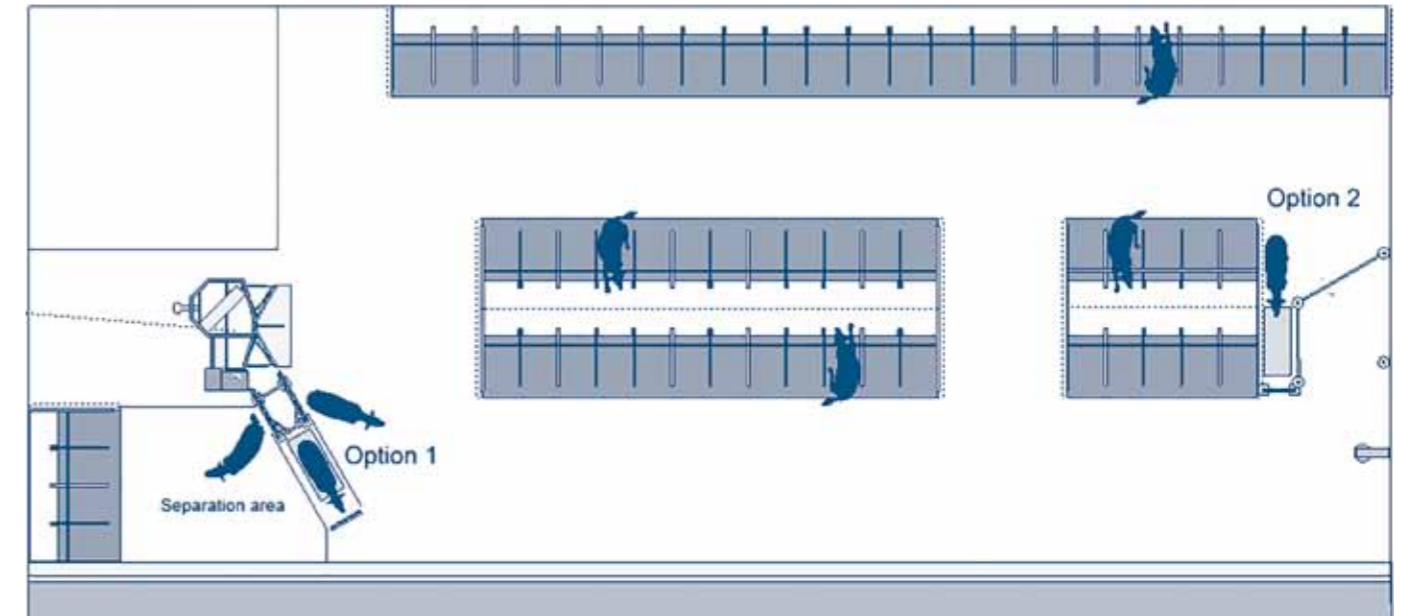


Sand will be good for the cows, but you need to calculate extra costs for wear-and-tear on parts – not just for the robot.

Also consider the hard work to bring enough sand into the barn and to dig out the separated sand from manure storage.

- Use the special stainless steel robot arm gripper and the sapphire glass in front of the camera
- Consider adding additional sprayers at camera cleaning position to remove sand from robot end-effector

Foot bath Where to locate?



Positioning

Option 1: You can route cows to walk through the foot bath after a 2 or 3 way selection gate (VMS setting). Never put the foot bath before the entrance of the VMS as this has a negative influence on the number of milkings.

- Change the bath's content after every 120 cow passages

Option 2: If possible, put the foot bath away from the VMS. This gives you the possibility to use the foot bath without any negative influence on the number of milkings. By opening or closing the gates all cows need to take the foot bath that day.

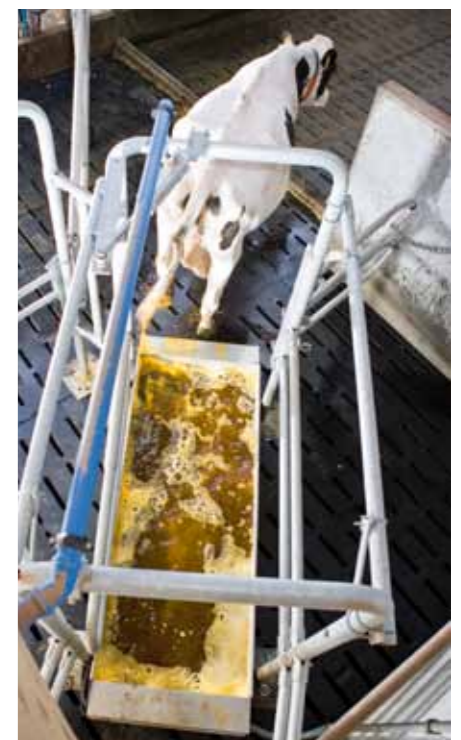
How often?

- We recommend using the foot bath three times per week in normal situations and five times in case of heavy infections
- In a Feed First™/Milk First™ setup with no cubicles towards feed lane, a footbath can be permanently installed in an 'extra' crossover between feed/resting, preferably next to the one at the far end of the barn. During use, the alternative crossovers will be temporarily blocked and thus all cows will have to pass through the footbath.

Pros: less risk of permanently reducing traffic flow around milking station.

Cons: some disturbance in traffic during use.

Always ask your veterinarian or hoof trimmer when (how often) to use the foot bath in your specific herd.



Cow brush Why and where?



Remember you can also install the rotating brush for young stock on your farm



- Swinging cow brushes help to decrease mastitis. In addition, they can help increase milk yield by 1 kg/day. To boost the effect, you should locate your cow brush strategically. For example: you can install a cow brush on cow's way from VMS to resting area. This way cows will lie down later after milking which decreases the likelihood of becoming infected with mastitis.
- Remember that a cow brush removes a lot of dirt from the cow that will fall in the vicinity – don't position too close to water, feed or office.
- Best location is feed alley or cross alleys, but only if wide enough to allow:
 - one cow eating or drinking,
 - one brushing, and
 - one passing
- Preferably install one DeLaval swinging cow brush SCB per 60 cows



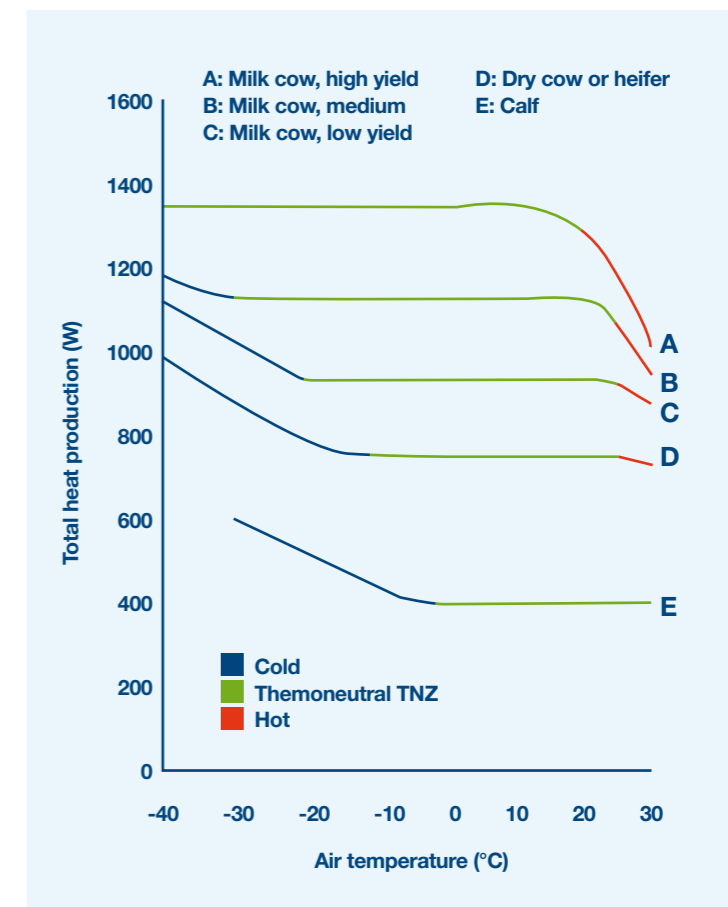
Ventilation

Good barn climate:

- creates a healthier environment
- helps to keep the cows cooler
- helps avoid heat stress
- helps to keep flies away
- gives the barn structure a longer service life
- good ventilation is very important for high-producing cows who produce a lot of heat and exhale lots of humid air

The temperature needs of your cows

- For lactating cows, the comfortable temperature begins at -20 °C or even lower and ends at +20 to +25 °C (see graph)
- Remember suitable temperature range for cows when planning the climate of your barn





Ventilation

Options to modify your barn climate



Sun shade: reduces heat load

Roof: protects from sun, rain, snow, and from thermal radiation (if insulated)

Wind screens: create gap helps avoid draught while enabling light and fresh air to enter

Misting or spraying: cools by evaporation

Natural ventilation: takes advantage of natural forces

Insulated ventilated enclosure: warmer indoor climate during winter

Tunnel ventilation: increases convective cooling using artificial wind



Cool and fresh

Feeding area

Cows with heat stress will reduce their feed intake.

- Providing fresh air in the feeding area is very important
- Less feed intake will lead to a decrease in milk production and increase risk of illness

Resting area

Cows that have inadequate fresh air will not lie down readily.

- Ensure good ventilation in front of the cubicles

Milking station

- Position your ventilation so that there is no air draft on the cows in the VMS, but try to have a little airflow to displace flies from the VMS

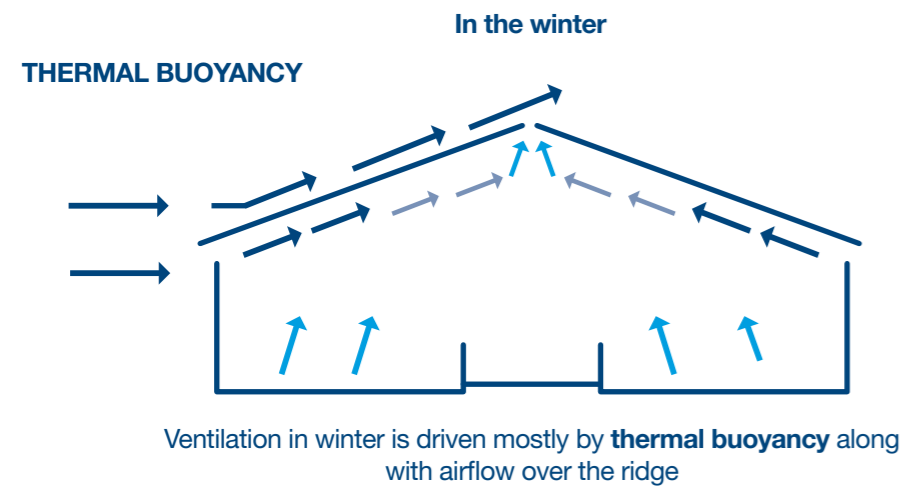
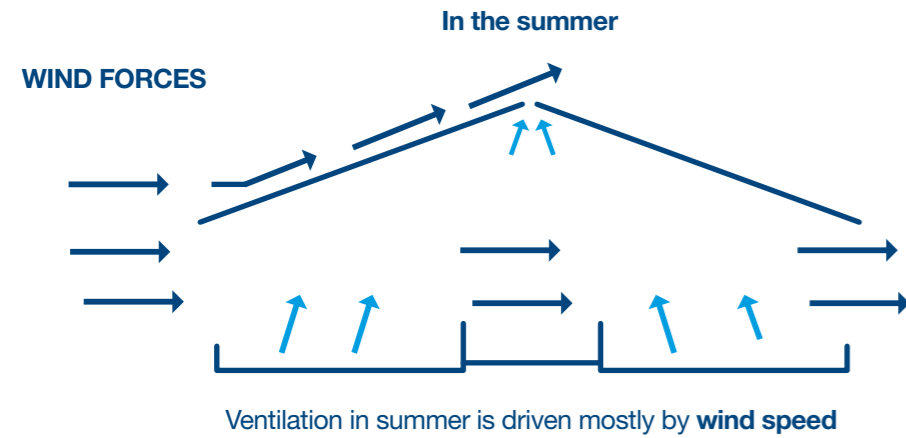


Signs of poor ventilation:

- condensation
- cobwebs
- smell of ammonia
- coughing cows
- cows breathing with their mouths open

Ventilation

Natural ventilation

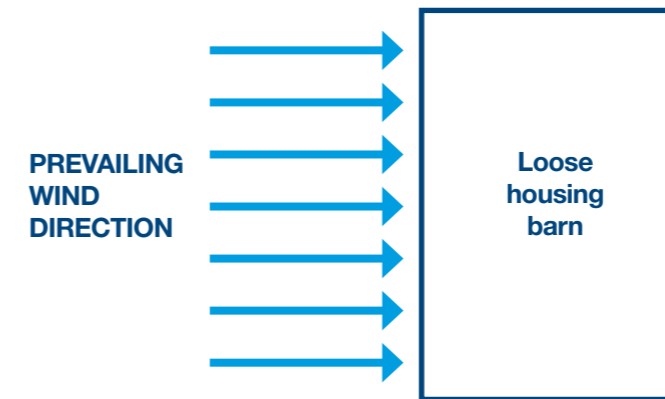


General information

- Wind is the main factor that affects ventilation
- The 'chimney effect' is the second biggest factor
- DeLaval barn system controller BSC can easily help to improve the barn climate automatically

Positioning of the barn

- At right angles to the prevailing wind direction in summer
- Keep enough distance to other buildings (see table)



Minimum distance between buildings when naturally ventilated (m)

Height (m)	Length of windward building (m)				
	15	30	45	60	75
3	15	15	15	15	20
5	15	20	25	25	30
7	20	30	35	40	45
9	25	35	45	50	55



Automatic control of air inlet in insulated buildings



Ventilation in the machine room



General information

- Close to VMS, enough light, easy (safe) access and enough space around the machines to do a proper service
- Doors big enough to change machines if needed
- Access to fresh air for better cooling:
 - less soiling
 - less energy consumption
- longer machine life time
- Maximum 25°C
- Use a ventilator to cool the room during summer
- In winter you can use the heat to warm up the VMS room
- Don't forget water drains



Room concept – milk tank room

Hygiene ranks first

General information

- Milk tank room should not be a walk through room
- Easy access for milk tank truck
- Easy to clean, with enough good drains

If possible

- Place the milk tank room in the coldest side of your farm (with shade)



Room concept – office

Comfortable and easy to reach

General information

- The office is for:
 - management
 - record keeping
 - NOT for storage
- Office should be heated and insulated
- Reachable without needing to wear farm boots

If possible

- Look into barn, not into robot room
- Near to VMS room:
 - for all management tasks
- No direct access to the barn
 - better air quality for you and your computer



To think about

- Do yourself a favour by investing in a comfortable office chair and desk
- Consider the correct working position behind your computer
- Easy to clean



Room concept – VMS room

Comfortable and easy to reach



General information

- Easy to clean:
 - your cows are milked here!
 - properly sloped and drained
- In a three-wall room with ceiling:
 - easy to clean on milking side
 - cows should have full view from VMS to the rest of the herd
 - can be closed easily with plastic strips during winter
- Separated from machine room
- Comfortable and easy to reach
- Clean access to VMS room

For details, see the VMS Planning documentation

For winter periods in cold countries:

- Full plastic strip wall along the cow entry/exit side of the VMS room
- Helps in very cold periods to continue camera cleaning and prevent freezing problems
- Put a heater next to each VMS station to prevent freezing in very cold periods
- Make sure the walking lanes are not slippery because of freezing. Put salt on the floors when needed.
- Let scrapers run more often
- Keep all doors closed



Manure equipment

The benefits of clean walking alleys

- Better air quality:
 - less evaporation of ammonia
 - fewer flies
- Hooves will stay dryer:
 - less risk of various hoof diseases
 - more milk
 - more milkings
 - better heat detection
- Less manure dragged into the cubicles:
 - cleaner udders and teats
 - better udder health conditions
 - lower SCC and more milk

How to achieve this

- Scraping should be done regularly throughout the day
- Adjust your scraper at regular intervals

To think about

- Investing in slatted floor and scraper for it as research shows good results in cleanliness of such floor and hooves



Note: the robot scraper should never enter the closed waiting area



Light

How much and for how long?

During the day

- You need at least 180 lux during the light period (general rule):
 - use lamps, windows or roof plates to ensure there is sufficient light for the cows
- Illuminate the cubicles as well – not just the feeding table
- Light inlet via roof or side walls:
 - positive but be aware of risk for increased ‘warming-up’

At night

- Eight hours of darkness are needed in a loose housing barn at night
- The only lights needed during the night is in the VMS room and 1 or 2 ‘night’ lamps in the barn so that cows can find food and water and their way to the VMS. And some light that can be switched on on demand for the farmer to do barn checks during the night

Profit from more light

- Introducing proper light management in your barn helps to maintain and increase your herd’s milk production. That improves your farm’s profitability. Especially in the predominantly darker autumn and winter months
- To gain full benefit from proper light management, all aspects of cow comfort have to be maintained at optimum levels too

How does it work?

- The pineal gland is controlled by the amount of light and colour hitting the eyes each day and by the intensity and the duration of this light period
- Increased light exposure reduces the amount of melatonin synthesis. Reducing melatonin by increasing light intensity to an average of 180 lux increases cow activity and stimulates the liver to increase the production of IGF-1 (insulin-like growth factor-1)

- More IGF-1 boosts milk production

Other benefits of proper light management

- More light encourages faster growth of your young stock
- Fertility cycles are stimulated by daylight
- Active cows stimulated by light are likely to show heat faster
- Better lighting improves the work environment, improving labour productivity and motivation

Installation

General information

- The stronger the lamp the higher it has to be installed
- The whole barn must be illuminated with the same intensity
- It is possible to use halogen, HID (high intensity discharge lamps) and LED lamps. With high pressure sodium lamps, you need to plan higher illumination intensities because of the light color they give
- Incandescent lamps are not suitable because they lose more than 20% of their strength within a short time

Light installation

How to reach 200 lux

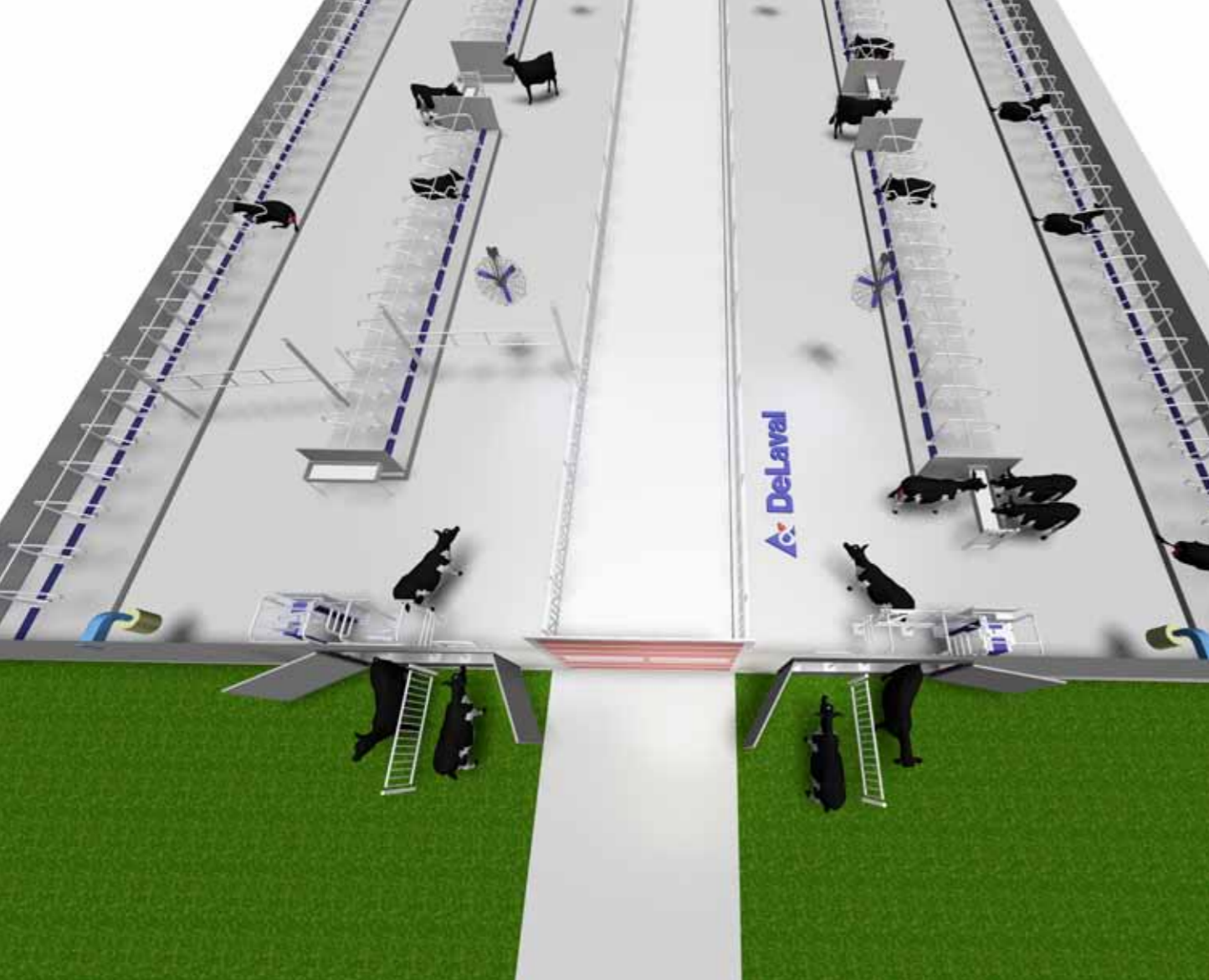
- High pressure FL250 metal halide lamp:
 - covers 64m² of floor area
 - 4-6 metre mounting height



Light (lux)	Working	Orientation	Night
Feed alleys	180	25	5
Resting area	180	25	5
Waiting area	180	-	-
Milking station	200		
Treatment area and calving pens	400	25	5
Service room	200	-	-

To think about:

Light sensors save energy. As soon as nature allows, the lights are switched off.



VMS and grazing

In several countries, grazing and automatic milking has proven to function successfully

Advantages

- Low feed cost
- Easy to maintain
- Good for hoof health
- Less cost for manure handling
- Good for dairy production image among consumers

Disadvantages

- Higher cost for gates
- More work to change the temporary fences in strip grazing
- Sometimes lower number of milkings or increased milking interval

What to bear in mind when planning your barn

Take your time for planning.

- Avoid dead ends in alleys, especially in narrow alleys
- There should be place for a minimum of 7 cows and min. 4 m² per cow in the waiting area
- Avoid a narrow entrance to the waiting area
- Avoid having a scraper in waiting area – it might create stress
- Don't plan your cubicles to be too short. Your cows will grow due to breeding, your cubicles will not
- Try to implement short routes for your cows, but remember that you also have to reach the VMS
- Avoid steps at the entrance or the exit. If this is not possible, try to make them the length of a cow and align at right angles with the walking direction

What to bear in mind when planning your barn

Do not forget the details.

- Position your ventilation so that there is no air draft on the cows in the VMS as they might dislike coming in there. However, try to have a little airflow to displace flies from the VMS

- If cows chase each other away at the entrance of the VMS, try to protect the waiting cows with a barrier which should be half the length of a cow
- Avoid "attractions" at the exit of the VMS (brush, water bowls, concentrate feeders)





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