

# Moving Floor Concept

– a cornerstone in the modern barn

Your guide to  
optimum calf care



[www.movingfloor.se](http://www.movingfloor.se)



## We are committed to improving the animal hygiene

We are automating an area within the barn that has not until now been automated - the area where the animals lay down. Many other areas have already been automated.

*"Automatically cleaning the laying areas for animals is the cornerstone that has been missing in the completely automatized barn."*

Look at what the robot has done to milking or what the scrapers have done to manure removal. Automatically cleaning the laying areas for animals is the cornerstone that has been missing in the completely automatized barn.

We are convinced that automation is the best way to get the best results, nevertheless the most cost-effective solution. We will keep on working with unique and patented products to improve the animal hygiene.

*"We are convinced that automation is the best way to get the best results."*

**Peg Söderberg,**  
Managing Director Moving Floor AB



## Gnues on the savannas

*What does Moving Floor and gnues have in common? Gnues in the wild live in big herds of thousands of animals, still diseases are quite rare.*

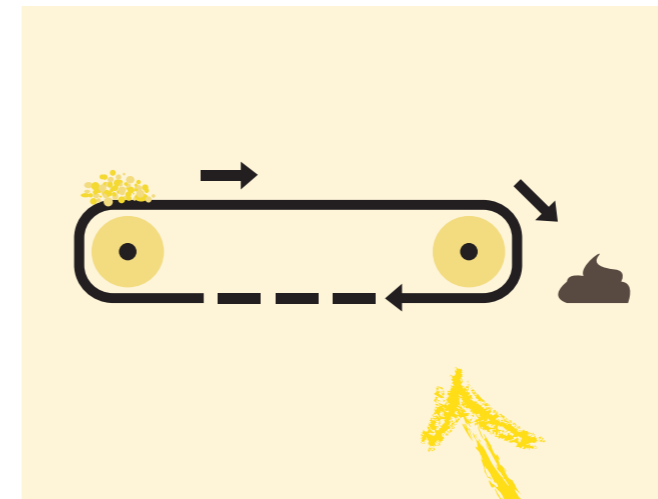
When we bring thousands of animals together in barns diseases are a recurring problem. Why is that? The gnues continuously move away from their manure as they graze the vast savannas.

### The answer is movement

As we bring thousands of animals together in today's modern barns we cannot overlook nature and natural behaviours without having consequences. Animals in the wild move away from their manure. With Moving Floor we can recreate that movement within the barn.

### Less use of antibiotics

We think that everyone can agree on that the use of antibiotics should be as low as possible. Preventive measures are key factors in keeping animals healthy. Moving Floor is committed to providing a high level of hygiene and decreasing the use of antibiotics.



*What area in the barn has not until now been mechanized?*



## What is Moving Floor?

Moving Floor is an endless conveyor which rotates, is scraped off in one end and refilled with bedding in the opposite end. A simple idea of keeping animals on moving surfaces for;

- Clean and healthy animals
- Reduction of labor
- Increased profitability

Either the animals clean by themselves or we make sure the cleaning is done automatically. The idea is to remove the manure from the barn within two hours, in order to minimize ammonia emissions within the building.

## A new industry standard!

### Profitable

What would it cost you to clean out for your animals 12-15 times per day? All Moving Floor products provide a high value function to a low price. The Moving Floor products are far from just laying areas and fences - the products mean labour reduction while at the same time providing a constantly clean area for the animals. By calculating your operational costs you will most likely find Moving Floor to be a profitable choice.

### For all farm sizes

Each and every Moving Floor product is a stand-alone unit that is quickly and easily installed in either old or new barns. The units are engineered to fit all farms, from the smallest to the very big ones because of the module system. No matter size of farm big economical savings can be made.

### Durable

As maintenance-free as possible. This is one of our mottos. That is why the Moving Floor products are made by standard components. Should you need a spare part your reseller will be of service or you will receive an express shipment to your farm. No expensive service routines have to be paid every year.



# Moving Floor Concept for calves

## Product overview



### First weeks

Moving Floor Singlebox is easily cleaned by pulling the handle. The cleaning is done effectively without having to move the calf. Read more on page 14.



### The important growth period

Moving Floor Groupbox is a complete solution with automatic cleaning and bedding distribution in programmed intervals. Read more on page 20.



### Automatic feeder for small groups

Moving Floor Calf Feeder automates the feeding of milk and concentrate to small groups of calves in an effective and hygienic way. Read more on page 26.

This is how we recommend you to use Moving Floor.

Calf age	Singlebox	Groupbox + Calf Feeder	Groupbox
1-2 weeks	✗		
0,5-2 months		✗	
2-4 months			✗



**A new industry standard increases profitability**

## Meet our satisfied customers



**"The calves grow quicker on Moving Floor"**

Family Karlsson on Åland, Finland



**"We have clean and healthy calves and we save a lot of working hours"**

Karin and Trond Arne Reierstad Lörenskog, Norway



**"I believe the calves grow better. I will buy more Moving Floors."**

Fred Jonsen, milk producer in Tana, Norway

# What can Moving Floor Concept contribute with?

## Less labor

The Moving Floor products provide, just like the milking robot, a different way of everyday life. The farmer decides him-/herself the number of cleaning intervals without it affecting his/her working hours.

## Less bedding

Research has shown that the bedding consumption may be reduced with up to 70% compared to deep straw beddings. The reason is that the floor is continuously cleaned and dried before any bedding is brought onto it.

## Clean animals

Unlimited amount of cleanings results in clean animals - a basis for keeping them healthy. The cleaning intervals should be adapted to the condition of the animals, e.g if they get sick the number of cleanings can be increased.

## Ammonia

Emissions of ammonia from the manure handling is quite significant, affecting the animals, the humans and the environment in total. Research made on Moving Floor for pigs have proved the Moving Floor Concept to be very efficient when it comes to lowering the ammonia emissions within the barn. Reductions up to 90% were made, averaging a level of 1 ppm ammonia. These results state the importance of a quick manure removal from the barn.

## Energy consumption

Since the Moving Floor products are driven by compressed air the energy consumption is low. The energy providing a calf with cleaning, bedding and feeding equals the amount of energy a light bulb consumes per year!

**General pay back on Moving Floor products are 2-3 years, counted labor and bedding reduction not counted animal health benefits**

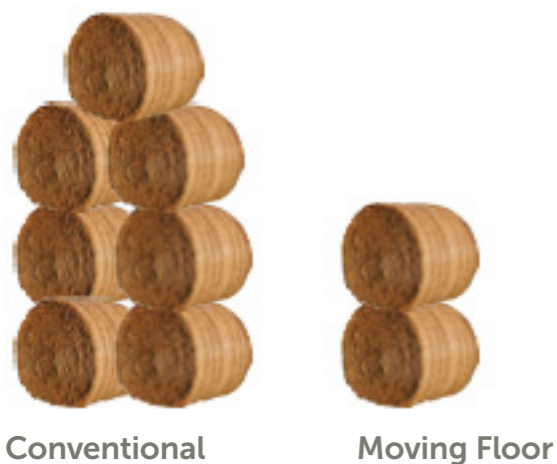
## Small groups

It is commonly agreed that a high level of hygiene for the animals must be maintained in order to have healthy animals. When it comes to calves the recommendations are often to keep them in small groups of approximately 5-6 animals to avoid spread of diseases. The task to combine animal health with growing herd sizes is a challenge. Moving Floor Concept allows affordable mechanization even for small groups of animals.

## Less antibiotics

The cleaner the healthier. Yes, so it seems. Farmers with Moving Floor Concept talk about not having to treat their animals the way they used to without Moving Floor.

## Yearly consumption per calf



## Moving Floor - more than a fence

	Conventional calf hutch/box	Moving Floor
Automatic bedding		×
Automatic cleaning		×
Enclosure	×	×

# He knows that hygiene pays off

- I just built a new barn. The calf has a better environment, says Alf Håvar Bro in Skiptvet, 100 km outside Oslo, Norway. When building the new barn, almost two years ago, he chose the calf boxes from Moving Floor. Each calf box has room for five calves and this is where the calves spend their first three to four months. Since the animals were moved to the new barn, Alf Håvar Bro has seen a large increase in growth.

- Normally, I inseminated from 16-18 months of age. Before that the heifers were not big enough.

- Now I've actually been down to 12.5 months. There is a huge difference if they can calve already when they are about 22 months old.

**What does that mean to you economically?**

- The breeding of a dairy cow involves expenditure

of around 15 000 NOK (approx 1750 €). If I can cut spending by 25 per cent every fourth or every fifth heifer is free.

**Does it even work for slaughtering animals?**

- Yes it does. 60-70 percent of my calves have been bulls, and I have a much greater growth even on them. I have a daily growth of 1300-1400 grams of plain NRF (Norwegian Red) and normal growth in intensive rearing is 1100 grams.

## Several factors

He believes that many factors in the modern barn contribute to the change, ranging from the general environment, air quality and feeding.

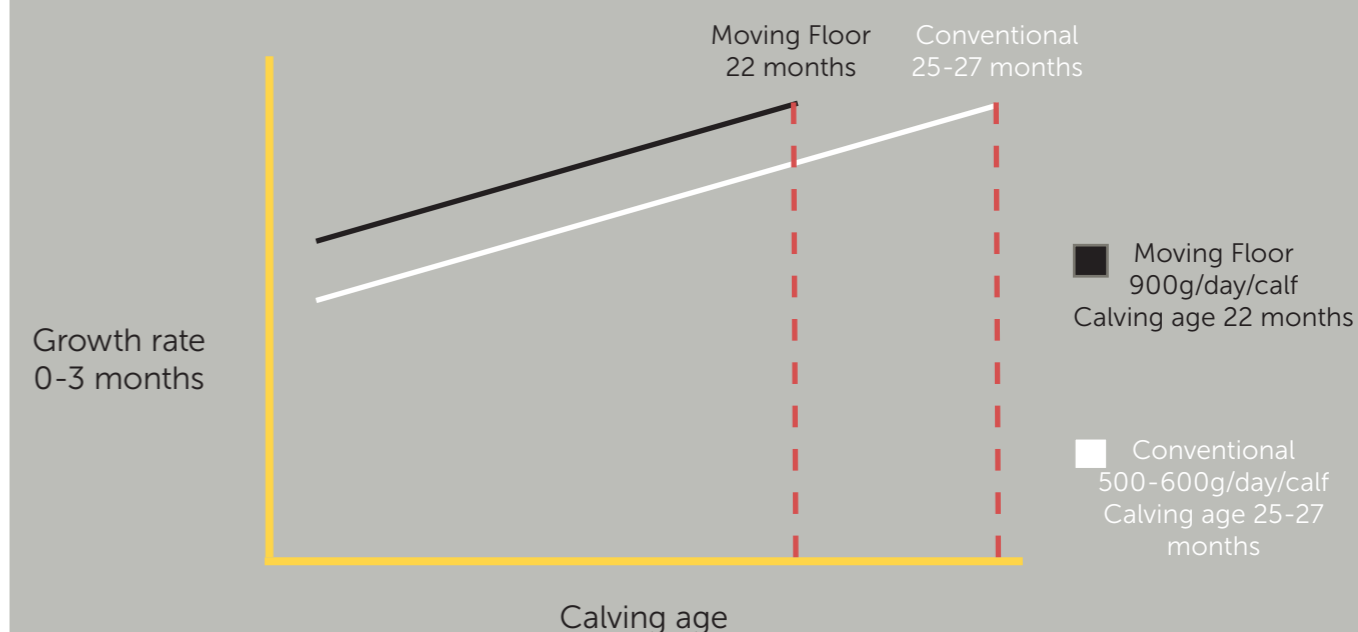
- But without a doubt, Moving Floor is a part of the improvement, he says.



Alf Håvar Bro

**"20-30% increased growth of calves generates a lowered insemination age and saves recruitment costs."**

## Increased growth may lower calving age





# To provide optimum calf environment

## The research speaks clearly

The Moving Floor Calfbboxes have gone through tests at the Swedish university of Agriculture in Uppsala, Wageningen in Holland, Raumberg Gumpenstein in Austria and the HINT in Norway. Our own experience together with general research on calves have led us to draw following conclusion on what is optimum environment for calves;

**WIND DRAFT**  
It is important that the calf is not exposed to draft. The definition of draughty is 0.3 m/s, which is barely perceptible to us. Smoke rises straight up at about 0-0.2 m/s and is a good way to check air movement.

**DRAFT-FREE**  
Moving Floor's calf boxes have closed walls that tests show gives a draft-free environment. (HINT 2013)

**UNCHANGED BEHAVIOUR**  
The calves are not affected by the floor moving. (Wageningen 2012)

**INCREASED GROWTH**  
By optimizing the calf's environment, we now see how calves on Moving Floor grow 20-30% faster than calves in conventional systems. The calves are also healthier and antibiotic use decreases significantly with Moving Floor. (HINT 2013, MF Farm observations)

**INFECTION PRES-SURE**  
At health disorders like diarrhea calf medicine cannot replace hygiene. Among the recommendations are: keep the calves in small groups, keep them dry and clean. (SLU, Silverlås, 2013)

**GROWTH PHASE**  
The calf's main growth phase is 0-3 months, after 3 months of age it reaches puberty and the calf must then grow at a slower pace to let the udder develop well. Since weight and body condition largely determines sexual maturity the calf's growth in the first three months of life most significantly affect insemination age \*\*.

**TEMPERATURE**  
During the calf's first month of life, it has a thermo neutral zone at 10-26 degrees C. After a month this changes to 0-23 degrees C \*.

**INSULATED BARN**  
In colder climates we recommend an insulated barn with controlled ventilation and where the relative humidity can be closely monitored. By creating an environment according to the calf conditions a feed optimization can be made. Not all climates require insulated barns - it is also possible to use Moving Floor outdoors with good results.

**RELATIVE HUMIDITY**  
Appropriate relative humidity for a calf is around 50% \*.

**ENERGY NEEDS**  
If the calf experiences temperatures outside the thermo-neutral zone it will have an increased energy need. At minus degrees the energy need increases up to 40%\*\*\*.

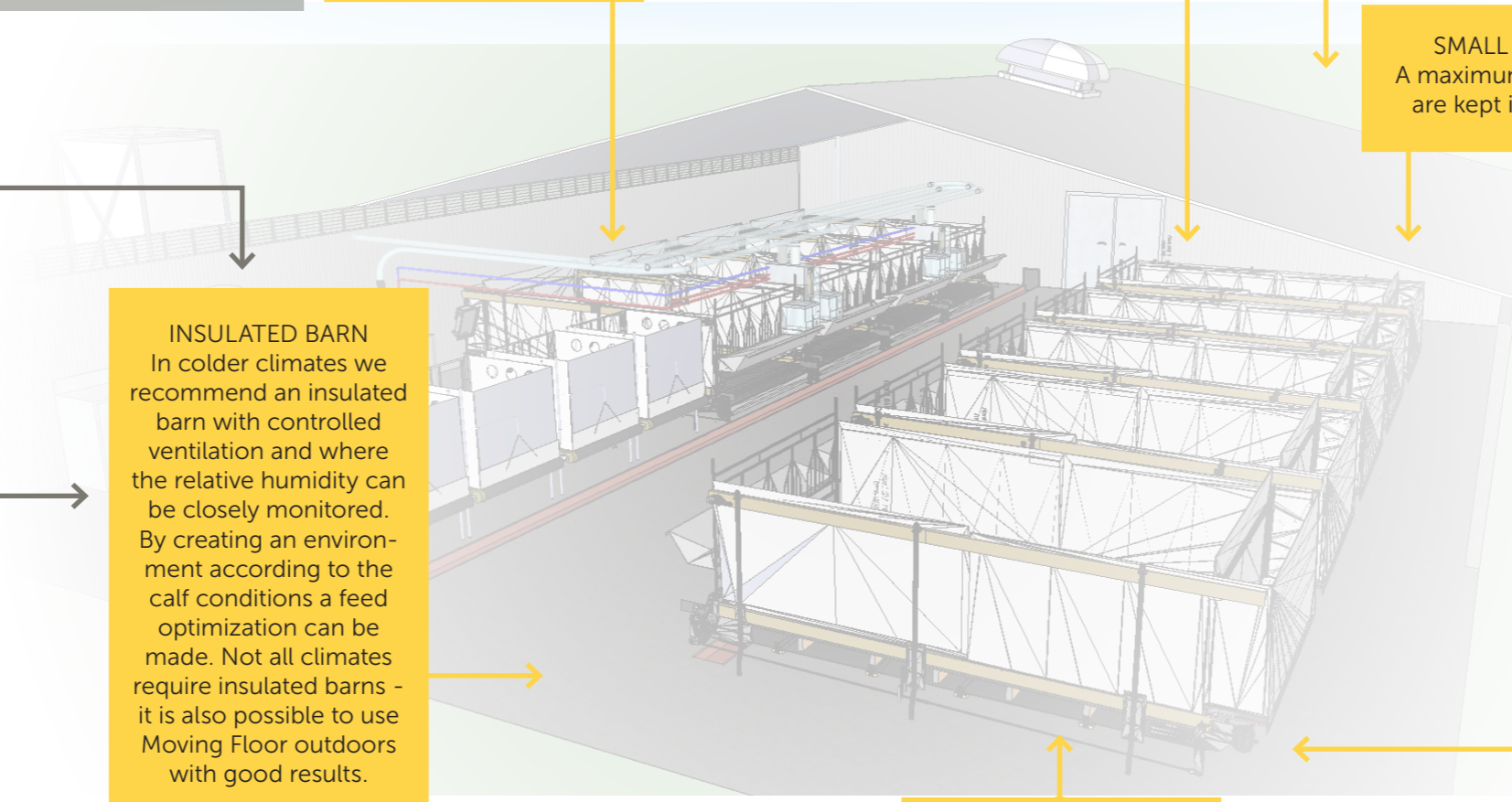
**SMALL GROUPS**  
A maximum of 5 calves are kept in each box

**BACTERIA**  
Bacterial growth occurs exponentially over time. New bedding on top of old bedding provides just a cleanly impression. A deep straw bedding can contain 10 billion bacteria \*\*\*.

**HEALTHY CALVES**  
Continuous cleaning 10-15 times/day drastically reduces bacterial growth and reduce the infection pressure. Because the manure is transported out of the barns within two hours, the ammonia content in the air is reduced by up to 90%. The automatic cleaning can ensure clean and dry animals, which are also generally healthy animals. (SLU 2006, Lövsta 2002)

**AMMONIA**  
A deep straw bedding absorbs urine and manure. When the calf is protected from wind drafts with e.g. a hutch, a micro-climate forms in the hutch with a substantial ammonia emission that may potentially affect the calf's airways \*.

**REDUCED WORK**  
The only work that remains, in addition to the supervision of the calf, is to refill bedding. (Raumberg Gumpenstein 2013)



Sources: \*Ken Nordlund, Wisconsin university, \*\*Renée Båge, SLU, \*\*\*Holm&Laue Calf Manual 2014



# Big difference between the systems

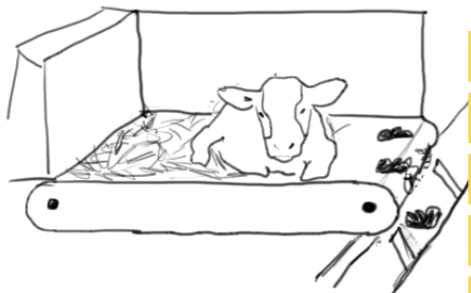
To provide optimum calf environment

## Deep straw bedding



- Often visibly clean but actually damp and unclean environment
- Bed stuffed with bacteria
- Labor intensive system
- Fresh air, but in the hutch forms a microclimate with ammonia

## Moving Floor



- + Clean and dry environment
- + Reduction of bacteria because conveyor dries
- + Ammonia decrease by 90%
- + Substantial labor savings
- + Increased growth rate on calf

Did you know?

96%

of calves with diarrhea also get respiratory problems.  
(Svensson, 2003, SLU)

200€

costs a diarrhea in direct costs

... and gives as a cow a reduced milk production due to illness during childhood up to

500€

(Lührmann, 2009, Chamber of Agriculture Lower Saxony)



# Different way of building barns

*The products consist mainly of standard components and are delivered flat-packed to minimize shipping costs.*

The fact that the products are more or less "furniture" changes the way to build a barn. In most cases, a simplification of the construction process can be made, for example only a flat floor is needed.

Moving Floor's products are delivered either semi-mounted or flat-packed ready to be assembled on site. The products consist mainly of standard components and delivered flat-packed to minimize shipping costs. In this way we can offer products of high value at a low price.

## Simple and easy installation

*Moving Floor is installed quickly and easily in most barns, thanks to its modular concept and adjustable legs that can be adapted to the floor.*



The floors are mounted on spot with a detailed installation instruction.



*"We have used Moving Floor since 2009, and it just works. One would think that moving parts would mean trouble but the Moving Floor is extremely reliable."*

Jonna Silvin, milk producer, Gotland, Sweden.

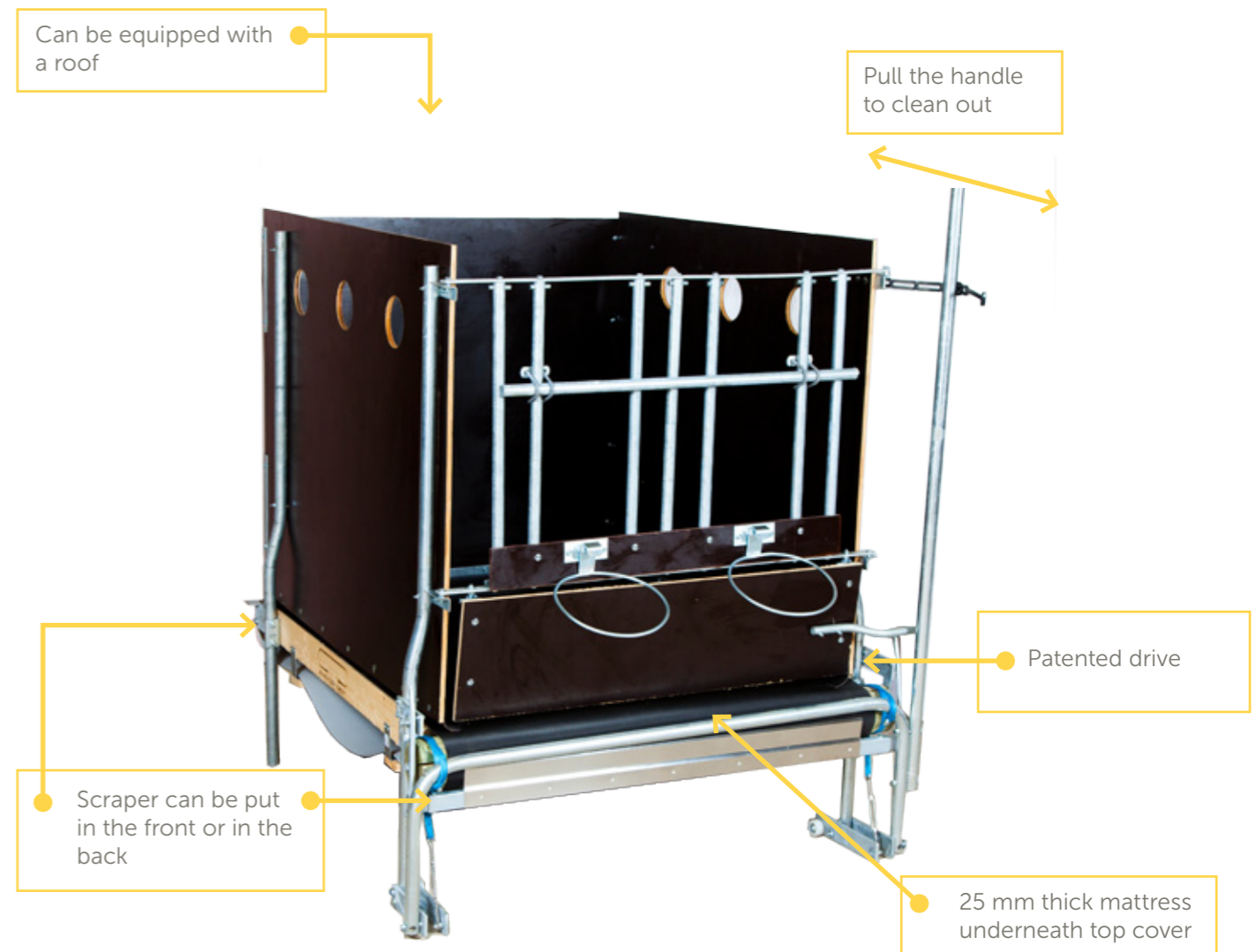
# Moving Floor Singlebox

The Moving Floor Singlebox transforms the conventional singlebox or hutch into a practical tool decreasing labour and bedding. The Moving Floor Singlebox has a bottom structure with a 25 mm thick mattress surrounded by a top cover. As the top cover is rotated the manure is scraped off from one side of the box. The top cover is easily moved by pulling the handle activating a few mechanical movements.

The Singlebox has adjustable legs and needs only a fairly flat ground to stand on. The Moving Floor Singlebox needs not to be moved around to prevent from bacteria- and parasite growth.

Moving Floor Singlebox will ease your daily work load and offer a significant labour reduction.

*Clean without moving the calf*  
*Soft mattress enables bedding reduction*  
*Less flies*



## Quick facts

### Two sizes

Large Singlebox  
 Inner: 1400x1100 mm  
 Outer length: 1640 mm  
 Outer width: 1310 mm  
 Height: 1600 mm

Small Singlebox  
 Inner: 1200x1000 mm  
 Outer length: 1440 mm  
 Outer width: 1210 mm  
 Height: 1600 mm

### Installation

To be placed on a flat surface in new or existing barns.

### Drive

Manual drive by mechanical movements.

### Top cover

Thickness: 2 mm  
 Material: PVC

### Mattress:

Thickness: 25 mm  
 Material: Latex



# Installing Moving Floor Singlebox

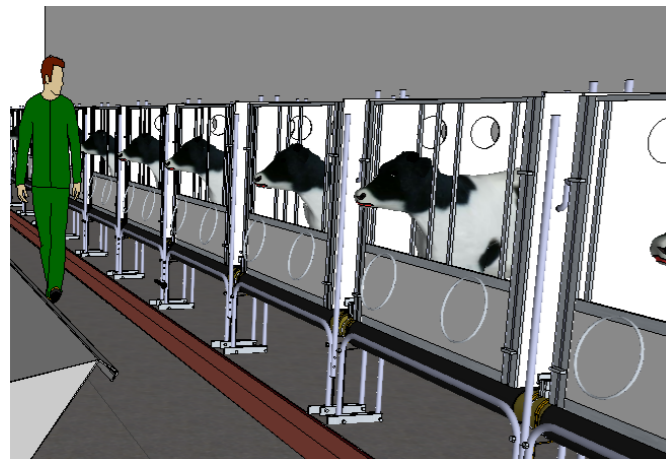
A tent roof can be put on to prevent draft



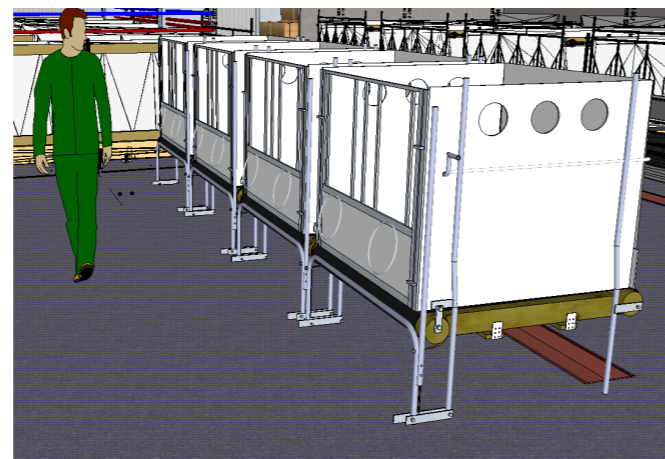
The legs can be adjusted in height to adapt Singlebox to the existing floor

The scraper can be placed in the front or rear end

Easy installation in new or existing barn



Preferably place the Singleboxes by a gutter with automatic scrapers.



The scraper can be placed in the front or rear of the Singlebox, hence you can choose where the manure falls down.

# Step by step

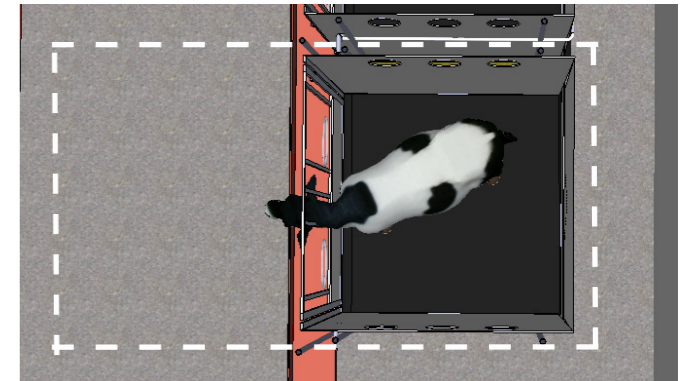
When you plan a calf barn, we recommend that you review the following basic points. We are happy to help you sketch the layout of your barn, contact Moving Floor for more information. See suggested layouts later in the catalog.

## 1. Surface

Moving Floor Singlebox comes in two sizes;  
1400 x 1100 mm, Total surface for calf: 1,54 sqm  
1200 x 1000 mm, Total surface for calf: 1,2 sqm

Generally 1.5 meters walking area is required in front of the Singlebox for bringing calves in and out, feeding, etc. If the manure is taken out of the box's rear end space is needed for cleaning / gutter.

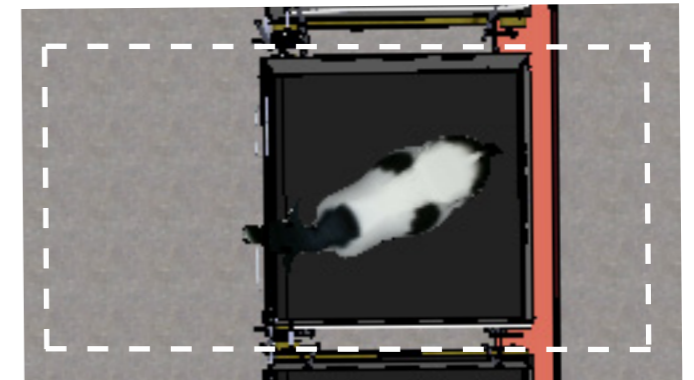
The calves are taken in and out of the box by the front gate swung in or out.



Calculate an approximate total area of 2.5 to 3.5 square meters per calf place depending on walk ways and gutters.

## 2. Manure handling

A scraper is attached to the front or rear end of the Moving Floor Singlebox. As the top cover rotates the manure is scraped off and falls down, preferably into a gutter. The legs of the Singlebox facing the gutter should be placed as close to the gutter as possible, so that the manure falls into the gutter and not beside the gutter.



An important part of the planning is the exit of manure.

## 3. Feeding

We generally recommend to keep the calf in the Singlebox during the calf's first one to two weeks to ensure feeding of raw milk and that the calf gets a good start in life. Moving Floor Singlebox is provided with two bucket holders for feeding, but may be combined with other types of feeding.



Moving Floor Singlebox has two bucket holders.



# Experiences of Moving Floor Singlebox



Singleboxes lined up on an old row of cubicles.



The old manure scraper is used.



Jonna Silvin, third generation at the farm located in Gothem, Sweden.

## Saves time

Jonna Silvin and her family runs a dairy farm on Gotland. 60 cows are milked in a robot since a few years back when the old barn was expanded with a freestall section. The family wanted to continue using the old barn for the calves and that is when the choice fell on Moving Floor. No concrete work needed to be done and the old manure gutters are still in use. An easy renovation in other words. It is primarily Jonna and her grandmother that take care of the calves. The calves are fed two times per day in buckets. At the same time they pull the handles to clean out the Singleboxes. A wheelbarrow with bedding is used to manually fill the Singleboxes after each cleaning.

*Previously, we allocated Friday mornings to take out the calves one by one to clean the boxes. Now we simply clean twice a day and still save a lot of time and effort. A big plus is that we do not have a lot of flies anymore.*



Jörgen Karlsson, Norra Härene farm outside Lidköping, Sweden.

## Healthy animals

Jörgen Karlsson at Norra Härene farm just south of Lidköping is possibly one of the most interested dairy farmers in Sweden. Over 300 cows are milked in the newly built robotic barns and nutrients are extracted from the manure in a new innovative system. Now, Jorgen plans to build a new calf barn and has chosen to try out all the equipment that the market can offer - hutches outdoors, hutches in uninsulated barn, deep straw boxes in insulated house, peat bed in insulated house as well as Moving Floor Singelbox and Groupbox. Jörgen's tests show that moisture and humidity is perhaps the most important factors for successful calf care. The large-scale construction plans will be an insulated barn with Moving Floor with an indoor temperature of about 15 degrees and a relative humidity of 50-60%.

*I have tested all the systems available on the market and Moving Floor installed in insulated barn is the best for the calves. They stay healthy and have good growth rate. If a calf gets diarrhea she recovers by herself within a day. Moisture and humidity are harmful to calves, and to keep the calves indoors requires a continuous cleaning.*



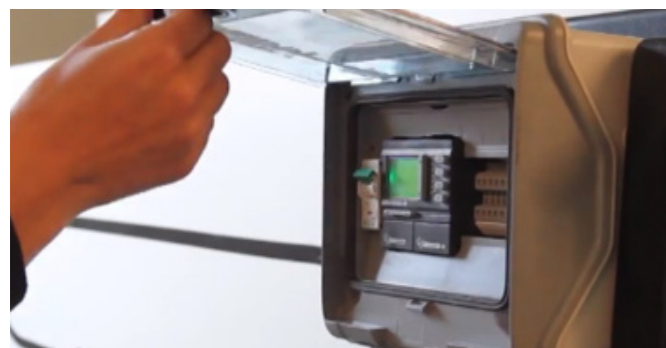
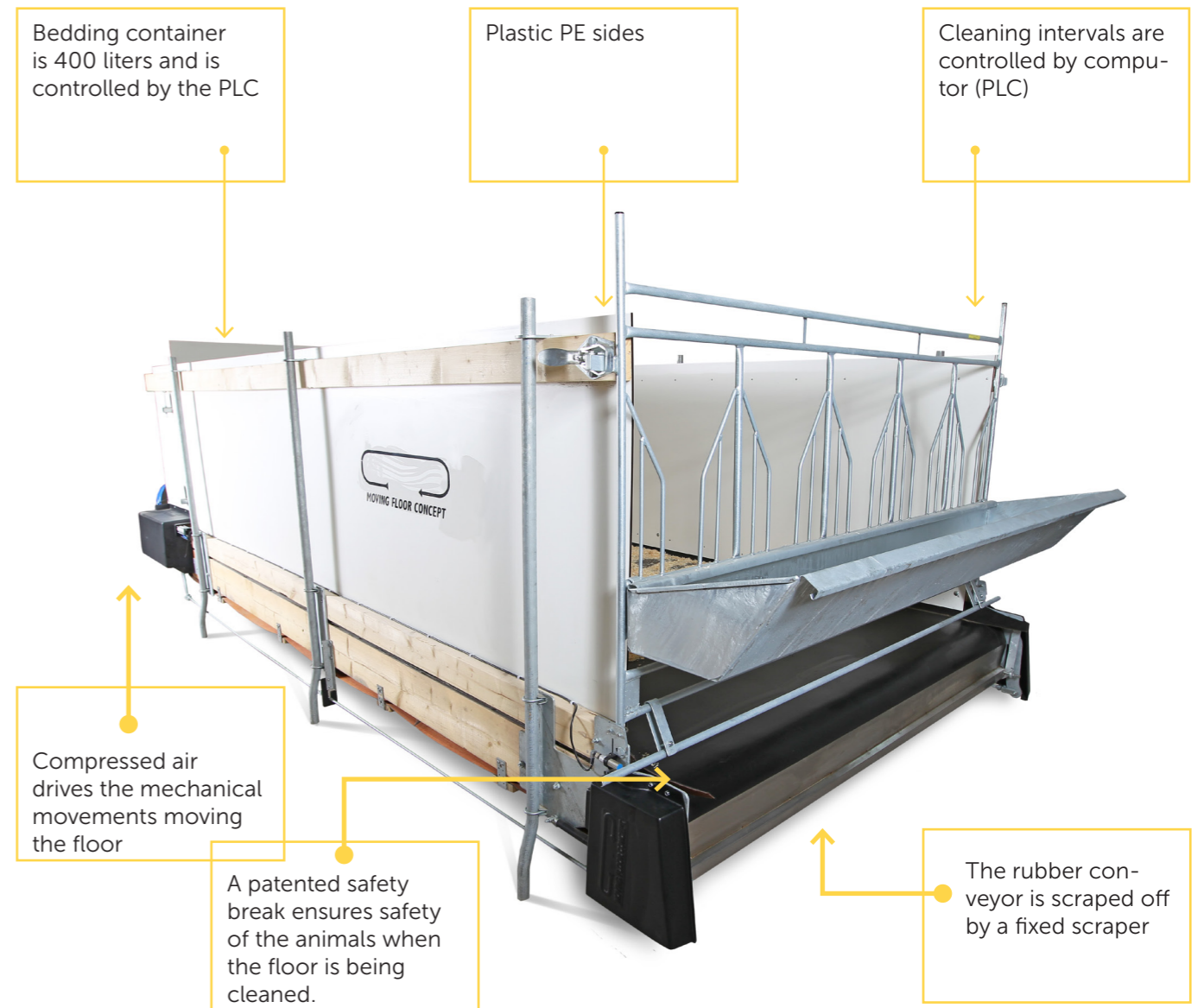
# Moving Floor Groupbox

Moving Floor Groupbox is a comfortable self-cleaning floor for calves that is automatically cleaned and refilled with bedding. The cleaning intervals are controlled by a computer and the keeper sets the intervals simply by pushing a few buttons. The soft rubber surface creates a pleasant surface and spares hooves.

The unit is driven by compressed air only. A safety function will stop the movement of the floor if an animal gets too close to the clean out zone, it will restart as soon as the animal leaves. The unit measures 7.5 m<sup>2</sup>. The self-cleaning unit has adjustable legs and can be placed on a fairly flat ground - inside or outside, in old as well as new buildings. For outdoor usage the floor is equipped with a roof.

With significantly reduced labour and 70% reduced bedding consumption the Moving Floor Groupbox is without doubt a profitable alternative. Thousands of calves have already been brought up on Moving Floor Groupbox and they prove to be healthier and grow faster than in conventional systems.

Combine Moving Floor Groupbox with the Moving Floor Calf Feeders for a completely automatic and hygienic calf rearing.



The cleaning intervals are controlled by the computer (PLC).



A patented safety break ensures safety of the animals when the floor is being cleaned.

## Quick facts

### Measurements

Length: 4630 mm  
Width: 2450 mm  
Height: 1500 mm  
Weight: 600 kg  
Volume bedding dispenser: 400 l

### Installation

Indoors or outdoors on a fairly flat ground.

### Drive

Electricity: 24V DC  
Drive: Brake bell  
Compressed air: 8 Bars  
Air consumption: 2 l/blast

### Conveyor

Length: 8200 mm  
Width: 2100 mm  
Thickness: 4 mm  
Material: Rubber

# Installing Moving Floor Groupbox

A tent roof can be attached to prevent draft on calves.



The legs can be adjusted in height to adapt the Groupbox to the existing floor.

Scraper in stainless steel. Here is where the manure drops down.

*Easy installation in new or existing building*

## This is how you install

### Placing

Indoors or outdoors on a fairly flat surface. Adjustable legs adapt the box to the existing ground. The slope of the box you set yourself, we recommend 2-5% slope.

### Water

Water cup holder is included with the Groupbox and attached to the box's front leg. Water cup is placed next to the feed tray.

### Compressed air

Compressed air: 8 Bar  
Consumption: 2 l/movement  
Compressor is not included. If the air supply to several boxes is to be linked together in a pipe this must be designed so that each box gets enough pressure. Talk to your supplier of compressor. If there is a risk of freezing temperatures, the compressor must have a dryer.

### Computer

Electricity: 24V DC  
Each Groupbox comes with a controller. This requires a transformer (not included) and the installation is done by an electrician.  
On delivery, the computer is programmed in a standard setting for cleaning intervals. It's easy for you to change all intervals so that it suits you.

### Maintenance

Moving Floor Groupbox has lubricant-free bearings and requires no specific maintenance other than overseeing the functions regularly. The scraper should be loosened and cleaned to ensure that the daily cleaning is as efficient as possible. The Groupbox's rubber mat must be washed with high pressure washer, 60 degree water and degreasing detergent.

# Step by step

When you plan a calf barn, we recommend that you review the following basic points. We are happy to help you sketch the layout of your barn, contact Moving Floor for more information. See suggested layouts later in the catalog

## 1. Surface

Moving Floor Groupbox comes in one size; 4630 x 2450 mm, Total area for calves: 7,5 kvm

Generally 1.5 meters walking area is required in front of the Singlebox for bringing calves in and out, feeding, etc.

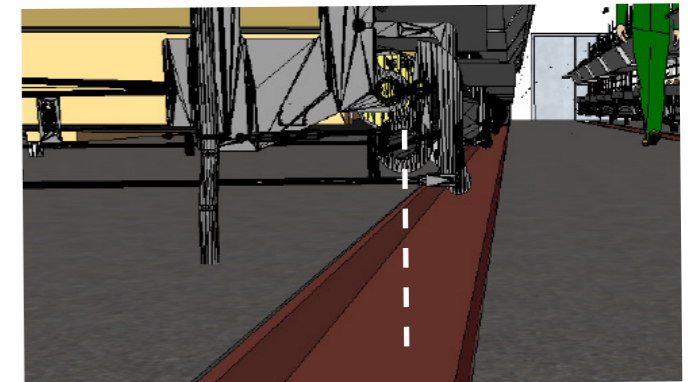
The calves are taken in and out of the box by the front gate swung in or out. A ramp is available as an option for easier entry and exit of calves.



Calculate an approximate total area of 3 to 3.5 square meters per calf place depending on walk ways and gutters.

## 2. Manure handling

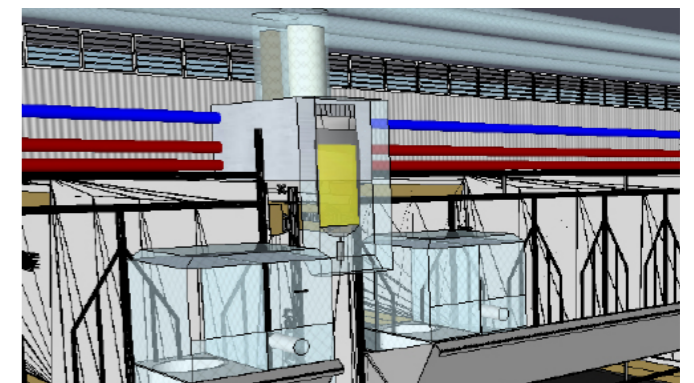
A scraper is attached to the front of the Moving Floor Groupbox. As the top cover rotates the manure is scraped off and falls down, preferably into a gutter. The Groupbox should be positioned so that the scraper is centered above the gutter, to ensure that the manure ends up in the gutter and not beside it.



Center the scraper over the manure gutter.

## 3. Feeding

The Groupbox has a standard front gate with five eating places and a feed tray. Moving Floor Calf Feeder is a module system made to efficiently automate feeding of milk and concentrate to small groups of calves. Moving Floor Calf Feeder is an option and is not included in the standard Moving Floor Groupbox.



Moving Floor Calf Feeder can complete the Groupbox.



# Experiences of Moving Floor Groupbox



Moving Floor Groupbox installed with wind protection.

In Austria there are several installations of Moving Floor Groupbox outdoors with wind protection. Ewald Gronicker in Irnding has used the Groupbox since 2010.

*“We have Moving Floor Groupbox installed outdoors. In the winter we get down to minus 23 degrees, and it still functions fine.”*

Karl-Åke Karlsson in Njurunda close to Sundsvall built a new barn for 150 milking cows in 2010. He keeps the calves in a separate section with separate ventilation. There is a gutter in concrete in front of the boxes. The doors are swung open when the loader fills up the bedding dispensers at the back of the Groupboxes.



Manure gutter in front of the boxes.

*“We save a lot of working hours by having an automatic cleaning and bedding distribution for the calves.”*



Family Karlsson on Åland.

Since 2009, the Karlsson family in Åland have used Moving Floor to approximately half of their calves. Right from the start the family noticed that the calves on Moving Floor grew faster than the calves they had in conventional boxes. Now they choose to buy more Moving Floors in order to have all calves on self-cleaning floors.

*“We measure the growth rate of the calves and in Moving Floor the calves grow 20-30% quicker than calves in standard boxes. Since 2009 I have changed a spare part once. I must say that the system is reliable.”*



## Lowered calving age

In 2013 Alf Håvar Bro opened up his new freestall barn with milking robot. His calves are fed raw milk in singleboxes and after a few weeks they are moved in to Moving Floor Groupbox. Alf Håvar runs an organic farm and the calves are given 5 liters of whole milk until weaned at 3 months. At weaning they reach the quantity of two kilos of concentrate per day. Alf Håvar's calves gain approx 800-1000 grams per day. Getting a good growth during the first three months, before the pubertal phase, makes the heifer go in to sexual maturation earlier. Alf Håvar has now inseminated at 12,5 months of age (approx 400 kgs) compared to earlier 16-18 months. Alf Håvar is now looking to feed optimize his heifers.

*“I have 20-30% increased daily growth of calves. This leads to that the insemination age can be achieved within the specified time, or in some cases lowered. I make an individual assessment of each heifer and has been down to 12.5 months at youngest. Earlier 16-18 months was normal. I roughly calculate 25% saving in recruitment costs.”*



# Moving Floor Calf Feeder

Moving Floor Calf Feeder is unique in the way that we bring affordable mechanization even to small groups of calves. The calves are kept on a self-cleaning floor which is automatically refilled with bedding. In addition to the automatic cleanings the feeding can be automated by Moving Floor Calf Feeder, which includes two automatic feeders - one for milk and one for concentrate.

The Moving Floor Calf Feeder is a module system where each unit can serve two self-cleaning floors, keeping 8-12 calves in total. Small groups of 4-6 calves on each teat makes for lower infection pressure.

The calves are identified by RFID and individually fed. The milk is prepared by mixing powder and water very efficiently with compressed air. The container for mixing the milk is in fact a disposable bag which is changed as often as desired, meaning that you can provide your calves with milk with a high level of hygiene without having to do the washing yourself.

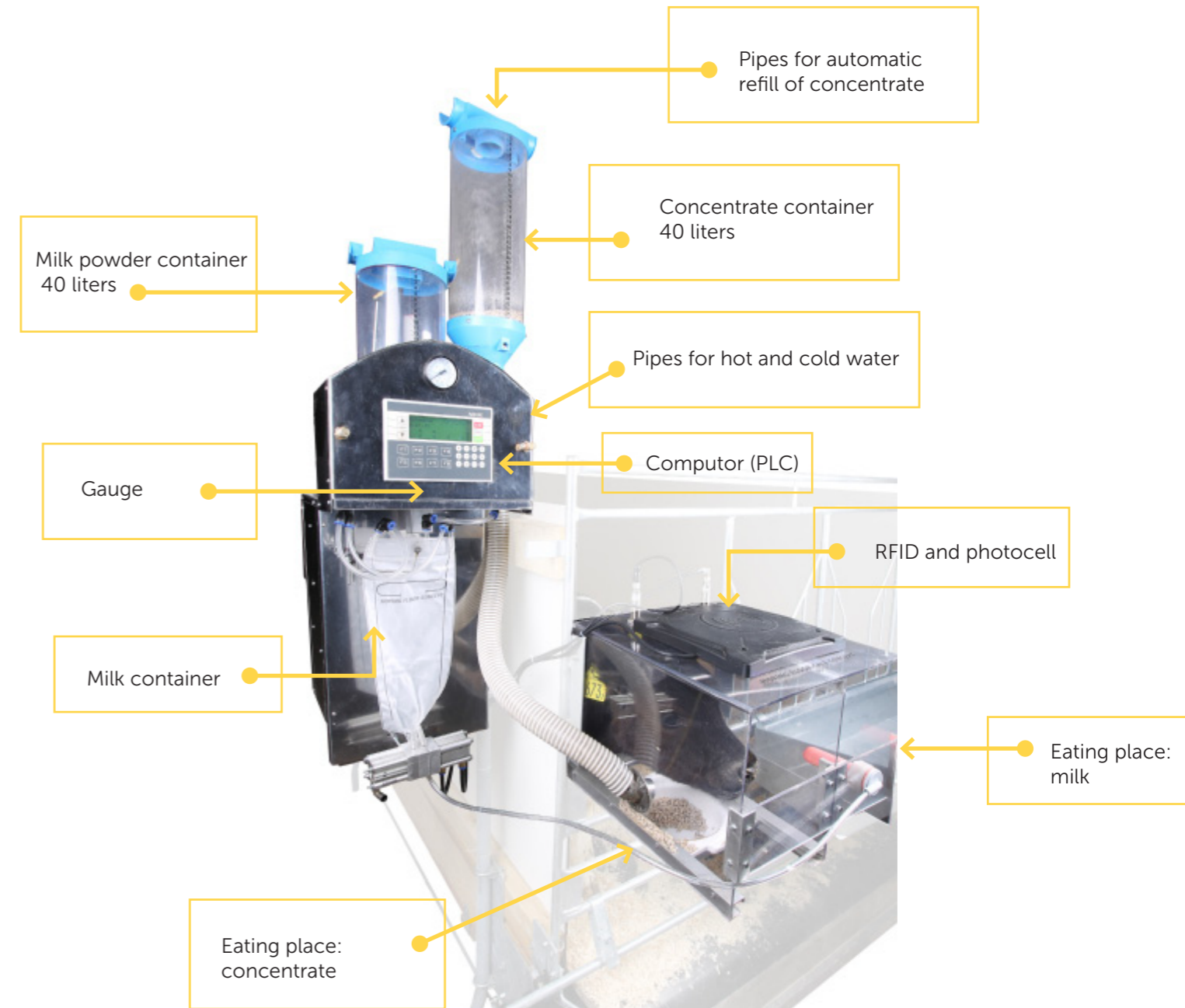
The concentrate feed is also controlled by RFID and individually distributed in consideration to the development of the digestive organs. The calves are weaned by gradually reducing the amount of milk and increasing the amount of concentrate according to programmed interval.

Moving Floor Concept leaves you with the only but ever so important task of monitoring your calves. The concept is suitable for all farm sizes.

**Affordable mechanization  
even for small groups of calves**



Moving Floor Calf Feeder gives the calves both milk and concentrate.



## Quick facts

### Measurements

Three components à  
Length: 300 mm  
Width: 250 mm  
Height: 150 mm  
Weight: 8 kgs  
Container: 40 liters

### Installation

Frost-free installation.  
Module system where the Calf Feeder is hinged on the Groupbox's front leg and the eating place is attached to the front gate.

### Drive

Electricity: 12-24V DC  
Scanning: Ear tag with RFID  
Compressed air: 2 Bar  
Computer: PLC

### Feeding

The Calf Feeder comes with preprogrammed feed curves, which can be varied for individual feeding and weaning.



# Installing Moving Floor Calf Feeder



## This is how you install

### Placing

Moving Floor Calf Feeder is a modular system. A Calf Feeder serves two Groupboxes (about 10 calves) and each Groupbox has an eating station. To be installed without the risk of freezing temperatures.

### Water

The Calf Feeder has no built-in heating. A separate water heater (not included) supplies the Calf Feeder with circulating hot water.

### Compressed air

Compressed air: 2 Bar  
The Calf Feeder has a reducing valve which ensures that the 8 bar pressure is reduced to 2 bar pressure, allowing the compressed air to be led from the Groupbox to the Calf Feeder. All movements are generated by compressed air.

### Computer

Electricity: 12-24V DC  
Each calf feeder comes with a controller (PLC)  
On delivery, the computer is programmed in a standard setting for feeding curves. It is easy for you to change the intervals so that it suits you.

### Maintenance

The Calf Feeder requires no specific maintenance. Oversight of functions should be done daily along with the supervision of calves. The hygienic bag is changed every other day.



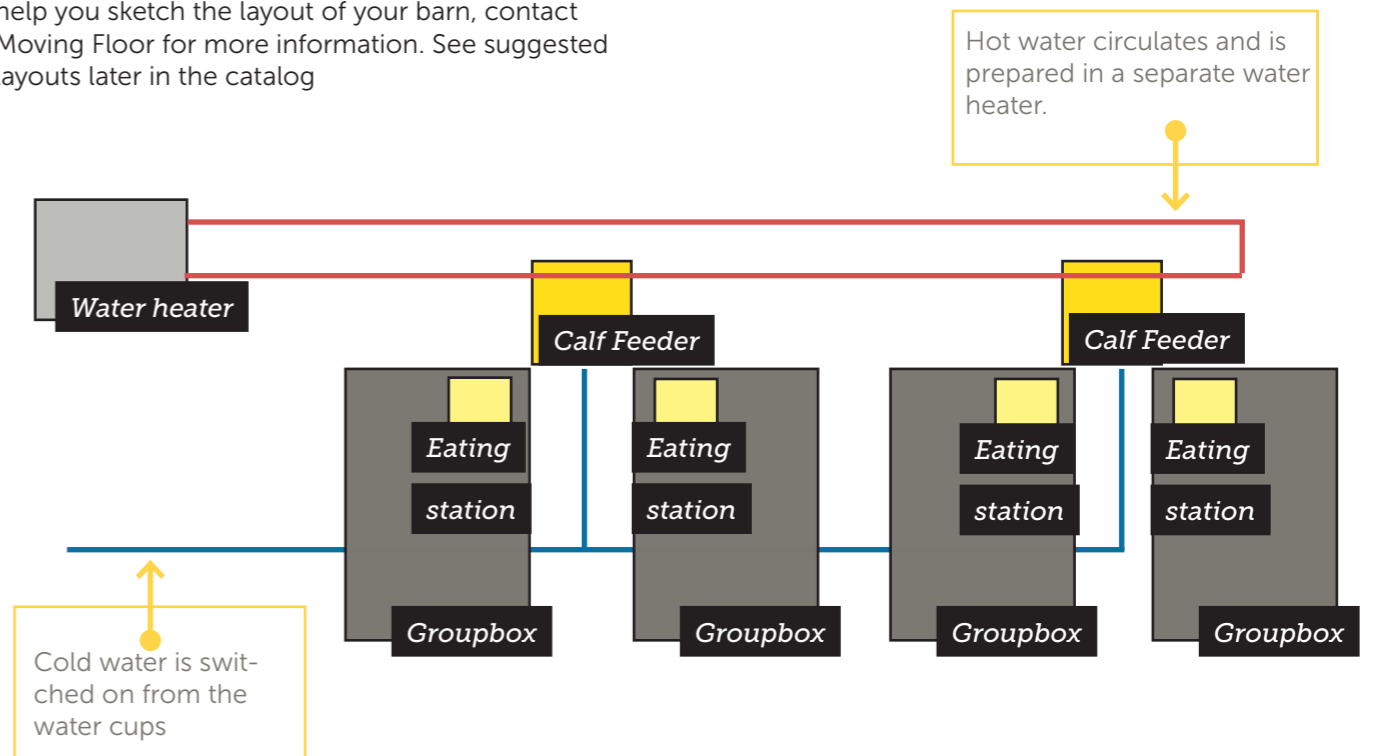
Installation of automatic feeding of milk and concentrate.



Installation of automatic concentrate feeding.

# Step by step

When you plan a calf barn, we recommend that you review the following basic points. We are happy to help you sketch the layout of your barn, contact Moving Floor for more information. See suggested layouts later in the catalog



## 1. Module system

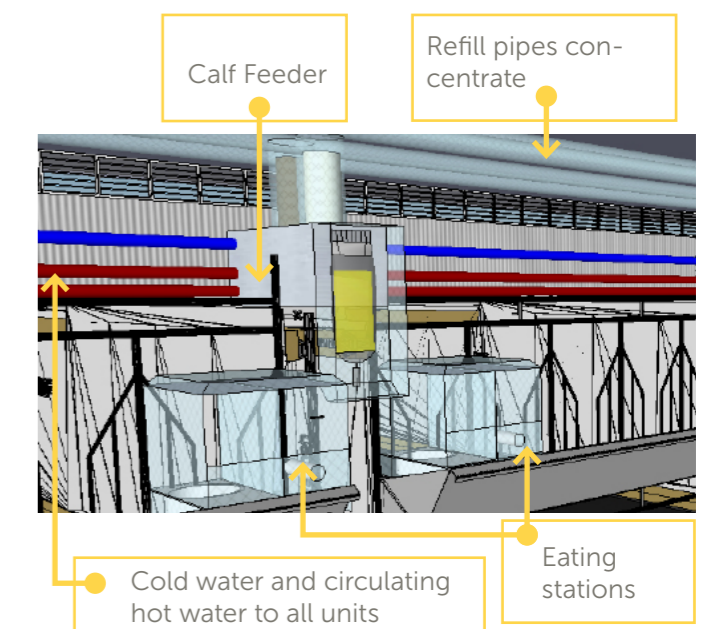
Moving Floor Calf Feeder is installed between two Groupboxes by hanging on one Groupbox's front leg. Each Groupbox needs an eating place (contains both milk and concentrate) that detects the calves with RFID ear tag. The Calf Feeder and the eating stations are complete units which makes it a smart modular system that can automate feeding for small groups of calves.

## 2. Water

To make a smart modular system no heating is put inside each Calf Feeder. A separate water heater is installed and circulating hot water led into each Calf Feeder. Cold water is also led into each Calf Feeder. In each Calf Feeder there is a water faucet which ensures that the water reaches a temperature of 40-41 degrees at mixing.

## 3. Feed

Milk powder is refilled manually in the container. Concentrate can be refilled automatically in pipes.



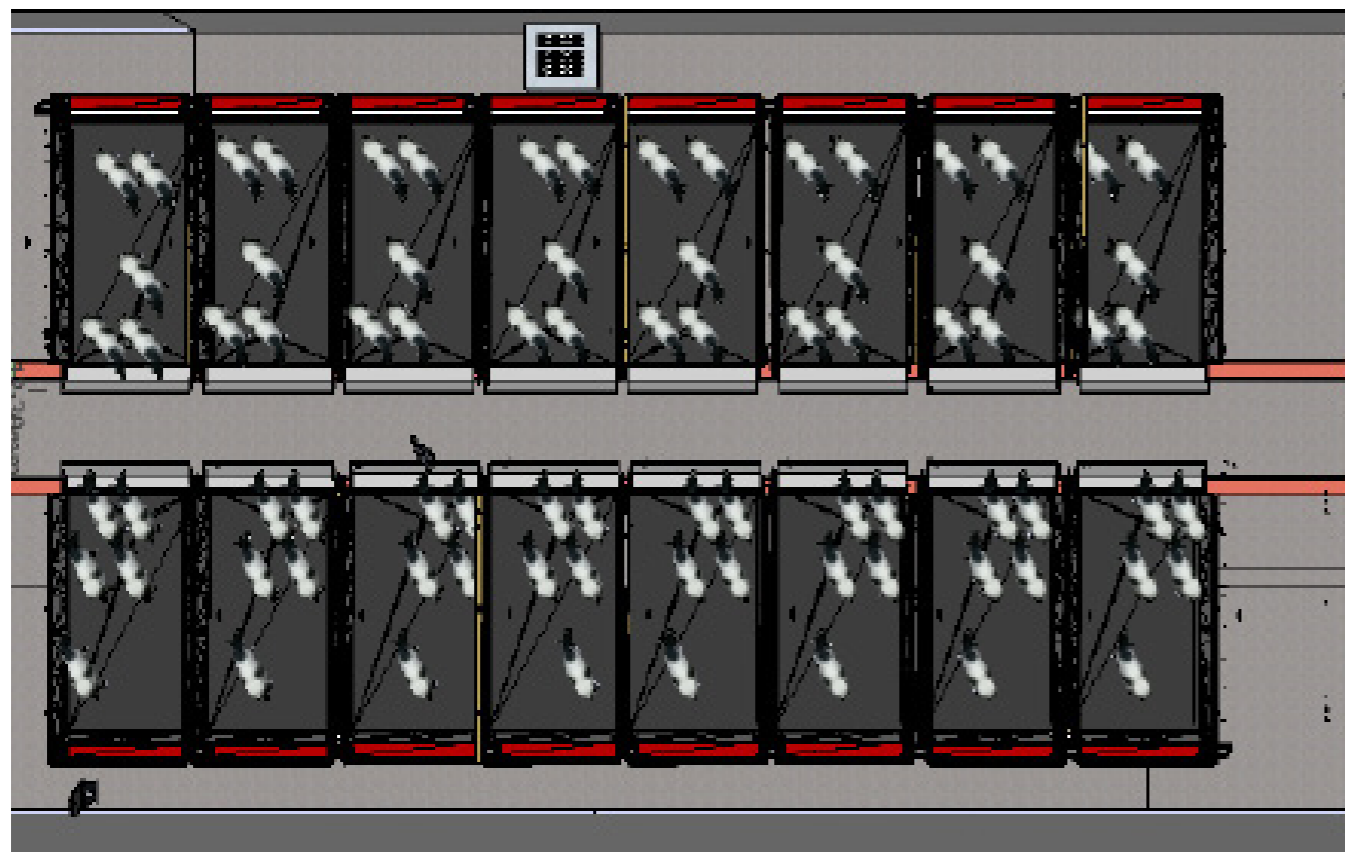


# Layouts

## Suggestions on calf sections



Calf section with 13 Singleboxes and 8 Groupboxes. The area is 21 x 10 meters with 53 calf places.



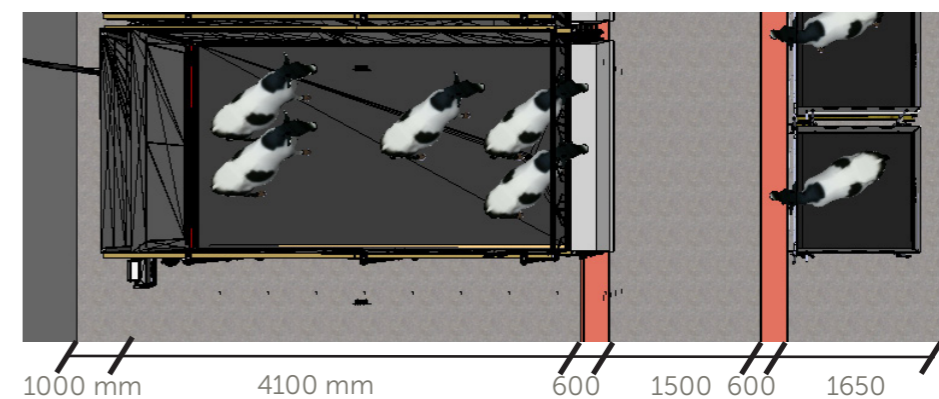
Calf section with 16 groupboxes. Total area is 21 x 13 meters with 80 calf places.

## Suggestion on calf barn



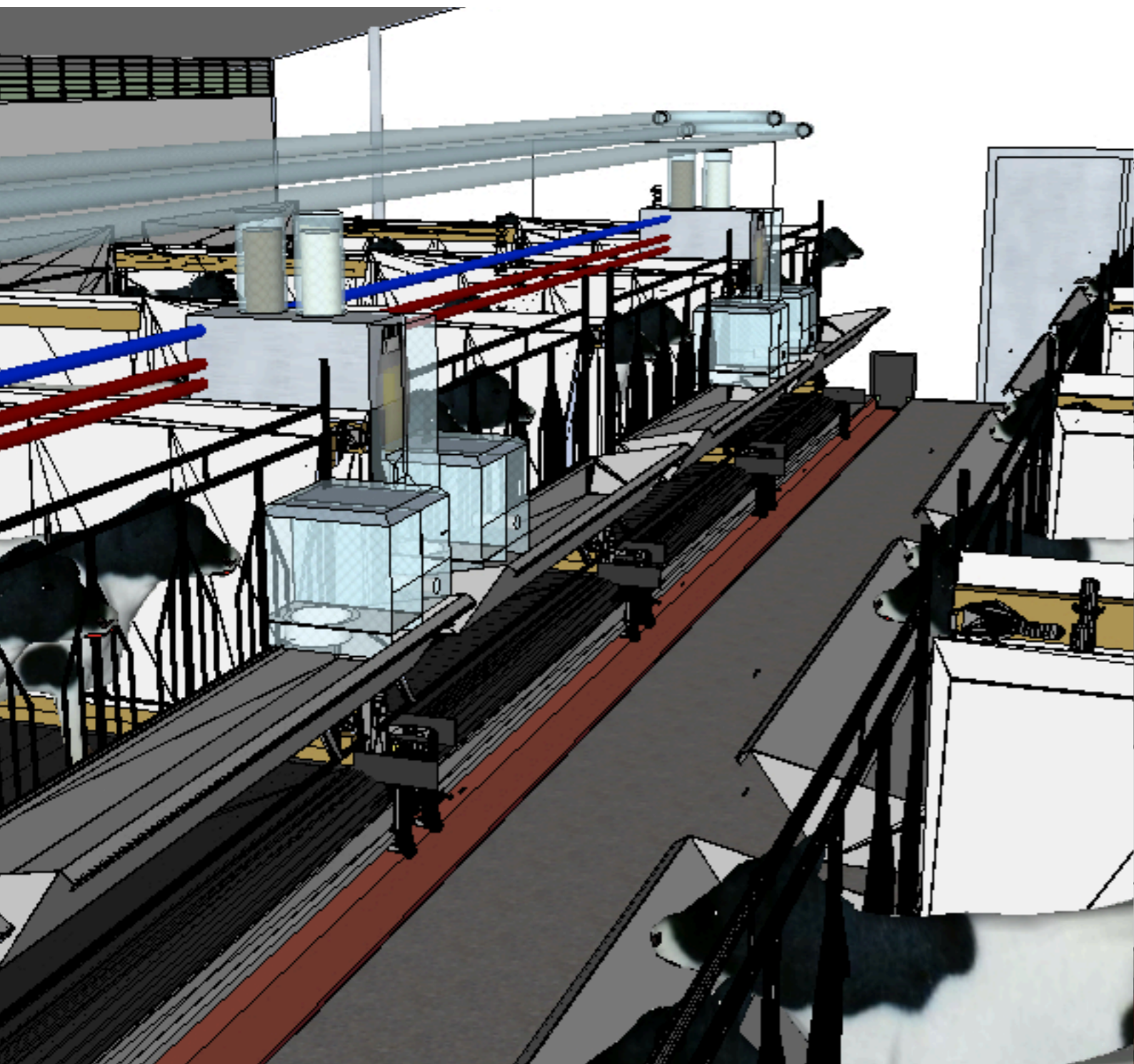
Calf barn with 4 Singleboxes, 4 Groupboxes with Calf Feeder and 5 Groupboxes for weaned calves up to 4-5 months of age. Spacious areas for feeding and bedding material storage. Total area 14 x 18 meters with 49 calf places.

## Combining with manure gutter

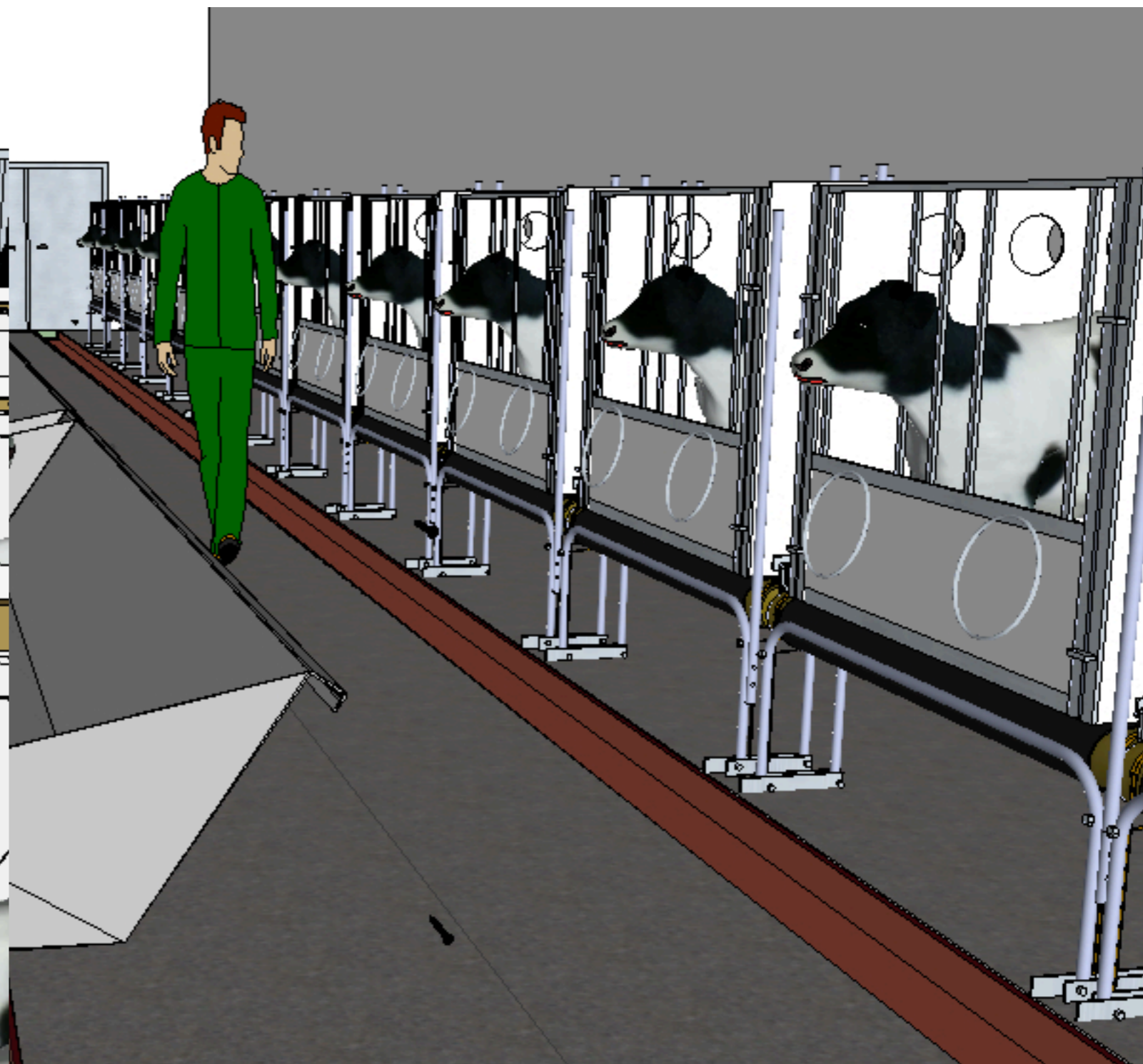


Recommended measurements for installation of Groupbox respective Singlebox. Observe that if the manure gutter is placed behind the Singleboxes more space is needed than the picture above shows. See more information on page 17.





Sketch on calf section with Groupboxes and Calf Feeders



Sketch on calf section with Groupboxes and Singleboxes.



# Different types of installations



Moving Floor Groupbox installed outdoors with wind protection or tent roof.



A ramp can facilitate move of calves.



A manure gutter in front of the Groupboxes.



Manure drops down in channels and is later pumped out of the barn.



Groupboxes installed on a storey. Manure conveyor underneath the wooden walkway transports the manure out of the barn.



A wooden bridge is put across the scraper alley for accessibility and feeding with loader.





# Moving Floor Concept

*A new industry standard that increases  
the profitability of milk production*



**MOVING FLOOR CONCEPT**

[www.movingfloor.se](http://www.movingfloor.se)