

# COWSIGNALS TRAINING COMPANY



## CowSignals and Cubicle/ free stall design

### The 6 freedoms of the cubicle / resting place:

It is like your own bed...

Clean, dry, soft and enough space to easily lay down and stand up.

Cows want 14 hours laying without stress.

The pasture (out in the fields) is the best option. The free walking straw barn (or sand/ sawdust) is the best option in wintertime.

Cows around calving ( 3 weeks before till 3 weeks after) need these extra freedoms of a free straw pack. (stress free calving line)

If you have your cows in cubicle systems (stalls, cow beds) take care of the next 6 points in order of importance. Based on a average Holstein Frisian cow of 700 kilogram.

### 1 soft and grippy bed floor

Soft floor of free stall with good grip. Sand, deep straw or deep saw dust (15-30 cm) is best. A very soft rubber mattress with minimum of 5-10 cm foam under layer is a reasonable alternative.

Softness prevents front knee and hock damage. Good grip prevents slipping and sliding and backbone and hock damage.

Good ventilation and 2-3 times a day cleaning and/or once a day filling with fresh material will prevent manure and milk remnants to cause high cell count and mastitis.

### 2 free head swing space

Free head swing space up to 3,25-3,50 m from back end of laying surface and at least 1 meter high free space from laying surface. This is essential to move and stand up and lay down easy. To prevent cows from walking through we advice a flexible band at 1 – 1.15 meter high. The cow can now lay down with her head straight forward and up. She can use her head as contra weight for her back side. So she will have a softer landing and an easy stand up. The cow will lay down straight and you will see less backbone damage and less manure in the corners of the cubicle. (Head space on the sides of the cubicles are a VERY BAD alternative. They cause many hock, back and teat damage)

### 3 neck rail out of the way

A flexible neck band or chain with rubber cover is ideal. The hard neck rail is only needed for stability. In 95% of the western European dairies the neck rail position is very bad.

Best position of neckband: minimal 125 cm above laying surface and minimum 180 cm from back side of the cubicle( horizontal measuring)

With a flexible neck band or chain with a spring on the end (available at Zimmermann stalleinrichtung) cows walk in the cubicle more straight. They don't hurt themselves while standing up and laying down. Less fear will make less cows shit in their beds. Start with the maximum size, based on the biggest cows. A flexible system is easy to adjust.

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Heifer groups can do with slightly less space than cow groups.

## 4 low brisket locator with enough laying surface behind

Brisket locator of 6-10 cm is ok. Make the top part rounded. Length behind it should be at least 185. We also see 195 cm. Cows like space! How long is your own bed?

Cows need a brisket locator to tell her where to lay down. Now she can stand up without hitting the neck rail very badly. She likes only a low, rounded brisket locator because then she can stretch her legs over it and it makes it easy to step over it while standing up. This is an essential move. Less cows will shit in the beds because of less stress.

So rounded wood or plastic pipes do an excellent job. Iron is too hard and too cold.

With deep straw 25 cm x 6 cm wooden planks are used with rounded top.

## 5 width of the free stall/cubicle

Minimum width is 122 cm measured from the middle of the dividers in deep bedding system.

Cubicles with a mattress we advise 125 cm width. Dry cows need 135 cm. Heifers can do with 120 cm. In a spacey cubicle we find less hock, backbone and teat trauma. Also cows have more resting time, more feed intake and more milk.

## 6 shape of the divider

If point 1 to 5 is ok, this doesn't really matter.

High enough to not bother the legs, low enough to not bother the backbone. Some systems use a round wood of 8 cm high and wide on the last meter under the backside of the divider. This keeps the deep straw bedding in place, gives grip and makes the cow lay down more straight. Low top end of divider might bend down for more space for the cow to walk out, especially in narrow paths.

## Do this first in your barn:

Please adapt 10 cubicles in your current barn to the drawing below and let your cows convince you. Drawing is based on 700 kilogram Holstein Frisians, 2-3 times daily cleaning and good ventilation. Measure your biggest cows and check dimensions on websites below.

Very good example from Switzerland: 195 cm long bed and 125 cm wide between the pipes:



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What does the cow want?

Health and welfare check points

stress free healthy Cow comfort

3 → 5 productive years  
30.000 → 50.000 liter

Keep it simple

www.cowsignals.com

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learn & earn

For more information:

Ontario Ministry of Agriculture and Forestry (by Neil Anderson).

Free stall behaviour

[http://www.gov.on.ca/OMAFRA/english/livestock/dairy/facts/info\\_cowbehave.htm](http://www.gov.on.ca/OMAFRA/english/livestock/dairy/facts/info_cowbehave.htm)

Free stall (cubicle) sizes

[http://www.gov.on.ca/OMAFRA/english/livestock/dairy/facts/info\\_fsdimen.htm](http://www.gov.on.ca/OMAFRA/english/livestock/dairy/facts/info_fsdimen.htm)

Tie stalls:

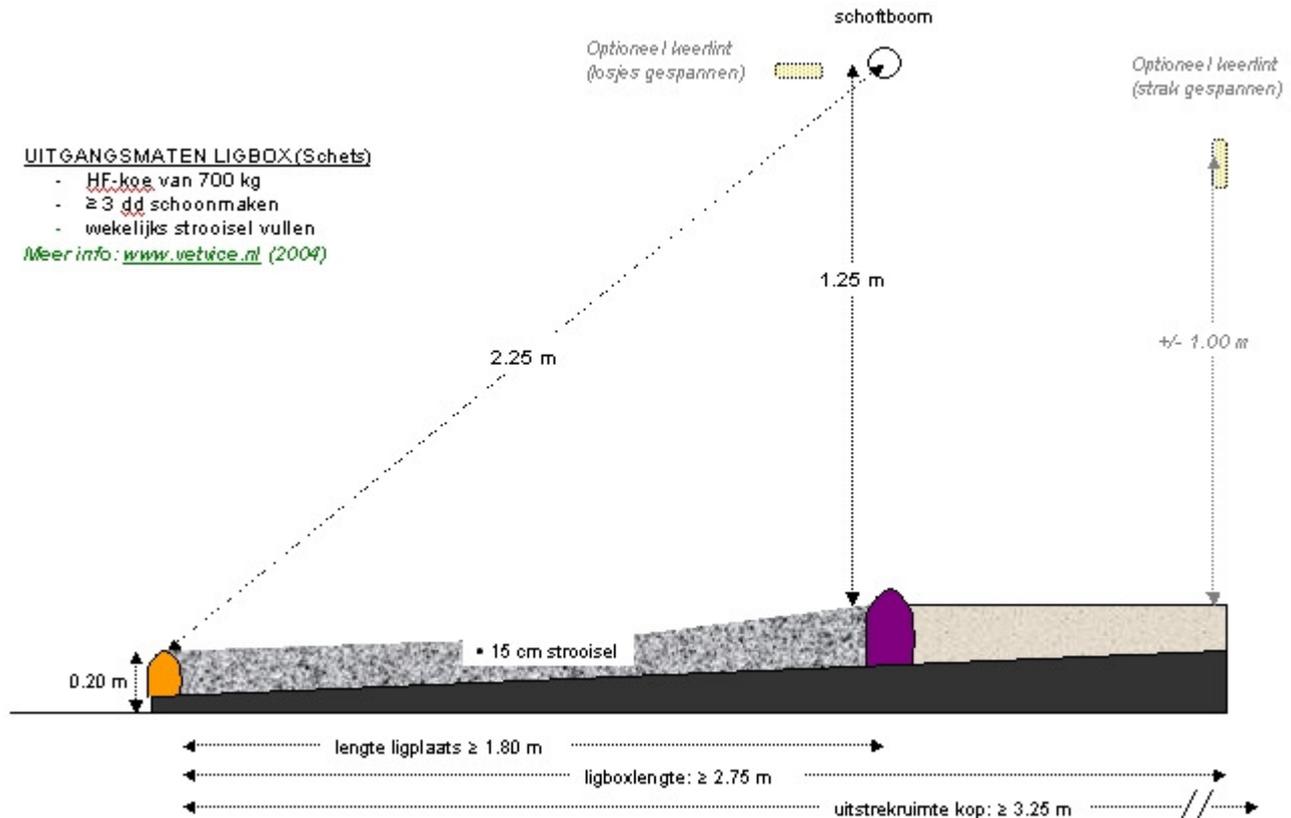
<http://www.gov.on.ca/OMAFRA/english/engineer/facts/99-003.htm>

Or check for sand cubicles: Nigel Cook, Wisconsin

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## CowSignals best free stall/ cubicle:



## Foto's examples:



Free head space. Double rows are 5.40 meter size.



Open sides with overhanging roof.

Excellent open cubicle: light, air, headspace, no stress because cow can see you and you can see the cow.

Fine rounded bricket locator

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Low pipes still bothering the cow to stand up and to stretch a leg



1 m high flex band is an option. Many farms don't have any band.

Quiet cow handling makes less cows walk through



Deep sand bedding is the best for cows



Deep straw is excellent. Cows love it.



Deep saw dust is very nice.

Make sure you give them enough space. Here space is to tide.



More space is needed.

190 cm is better than 180 cm.... many places are less than 175 cm.

Or you have to fill the cubicles till the edge every day.

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Good grip is a must. If you decide to buy a mattress please buy one with excellent grip (rubber with foam layer underneath)

Drs. Joep Driessen DVM  
Cow signals trainer Marketeer Communicator  
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[www.vetvice.com](http://www.vetvice.com) happy cows happy farmers