



# Fitting Instructions

(Also Applicable to the Mayo Original) **Call 01704 821717 with any questions**

## **Before you start:**

The quality & finish of your concrete will largely determine the longevity of your Mattresses with the majority of farmers enjoying up-to and in-excess of 20 years “normal use” from them (half the year in and half the year out). The key to this statistic: **Your concrete bed should be uniformly sloped to the edge of the heel stone with a smooth finish and a slight round/chamfer on the heel stone edge. There should be a minimum of 3” in depth of concrete to secure the fixings.**

Time taken to smooth and properly slope your beds is time well spent – to reiterate – these mattresses have a proven 20+ years of service (originals 30 +) with unparalleled comfort & hygiene rating in the correct conditions.

Do not tamp/pat your beds to give a “textured finish” for grip – no cow’s feet like this finish and no mattress system either as the needle like points often created with this method can puncture your system.

**Undulating, rough, crumbling, insufficiently cured (new build relevant) or pitted concrete bases will void your warranty.**

**A flat section of the bed (most often seen at the heel stone) will also void the warranty** and should be rectified not only from a system longevity perspective but also from a hygiene perspective.

If you are in doubt about any section of your beds – just get in touch and we will advise accordingly. We always endeavour to work with you – there’s always a solution!

## **Mattresses Arrive on Site:**

Note: If you receive your mattresses during summer months, and are not planning to fit relatively soon after arrival, store them out of direct sunlight as this could cause some curling of the beds making them harder to fit.

Open your pallet taking care to **cut the packaging away from the beds** as any nicks in the sides of the mattresses could graduate to a tear in use.

If you are installing Joining Strips, they will be underneath your mattresses on the pallet with all fixings on top in bags & boxes.

These are the different fixings you will be sent (some or all of them depending on your bricket board choices)

## Pictures of Fixings:



## NOTE FRAME FIXINGS IN A BLUE PLUG NOW

### Tools Required:

SDS Drill (drills the holes and tightens – cover all)

Stanley Knife (to trim mattresses if needed)

### Joining Strip Fixing & Brisket Thunder Bolt Tools:

Impact Drill (to tighten frame fixings in joining strips if no SDS drill)

10mm Drill Bit (for frame fixings for joining strips)

T40 Star Head Bit to tighten the 10mm frame fixings for the joining strips

Hammer (to get plastic sleeve down optimally)

Grinder (only required if strips need modification for legs in the bed / some kennel cubicles)

### Recommended if not putting a brisket board fixing through the mattress:

8mm Drill Bit (for hammer fixings for the front of the mats)

Hammer (to hammer in hammer fixings)

### Required to fix a 3" X 3" or 3" X 4" Chamfered Timber Brisket Board with Sleeve Anchor Bolt or Thunder Bolt & Washer

38mm Flat Bit (to counter sink hole in brisket board for fixing)

16mm Wood / Augur Bit (to make the hole for the masonry bit)

16mm Drill Bit (for sleeve anchor bolts for brisket board)

12mm Drill Bit (for thunder bolts for brisket board)

12mm socket to tighten thunder bolts

### Step 1: Bed Layout:

Probably the most important element of the fit to get right is the layout. If you have not submitted your centres, its best to first measure your cubicle centres to know how many of each width of mattress you need.

To measure your centres, go from the middle of one cubicle 'loop' to the middle of the next where the cubicle is most true. Often this at the front of the bed and not at the heel stone where the loops can be knocked out of line slightly. Squaring up the cubicles before fitting your mattresses is always a good exercise as your strips are to be fitted under the loops. If your centres are 45" (1143mm), you need 43" (1,093mm) mattresses to fit. If your beds are 48" (1,220mm) centres you need 46" (1,170mm) mattresses and so on....

### **Step 1A): Trim beds if necessary:**

Most farmers submit their cubicle centres and so the mattresses sent should fit the beds. You may find that there are some that need to be trimmed once you've laid the beds out due to variations in the actual cubicle centres.

A good sharp Stanley knife and a straight edge is all you need to trim the required amount off to fit. Mayo beds are very easy to cut but virtually impossible to wear.

**Lay out all of your beds ensuring there is a 60mm/2.5" space left at the heel stone and 50mm/2" in between each mattress.**

These spacings are required to allow the beds to settle into final position without encroaching into the passage, slipping out from under the strip or humping up in the middle as they try and settle. (There is a 15mm max tolerance up or down)

Example:



If you have legs in the bed (Mushroom / Newton Rigg style cubicles) Then the mats are right-sized **fitting in between the legs**. There is no need to cut notches for the legs  
See below:



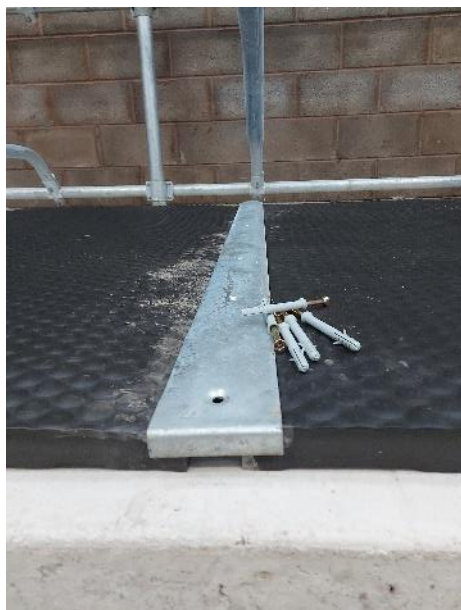
If you have Kennel cubicles, you will need to cut a notch out of each mattress to keep 2"/50mm in between each one behind the front leg See below:



**Method detail:** Simply cut a notch for the mattress to sit around the leg of the kennel leaving 5mm (to allow the joining strip to fit at the back of the leg)

**Step 2: Lay the Joining Strips over the 50mm gap underneath the cubicle & Drill 10mm Holes:**

**Place your strips over the 50mm gap** with the curved end closest to the heel stone sitting snugly over the back corner of the mattress either side.



**It is of CRITICAL IMPORTANCE that you drill the hole deep enough for the fixing to tighten into the Mattress leaving no protrusions.**

The fixings are industrial grade designed to anchor absolutely – they are not designed to come out easily.

If you put in the fixing and the hole isn't deep enough, you will have an unnecessarily difficult job to rectify that as you cannot leave any protrusions in the bed of course!

Using a 10mm drill bit, drill a hole into the concrete (go a minimum of 80mm into the concrete) using the strip as the template and push the blue sleeve into the hole, hammer it down and push the fixing into it before proceeding to drill the next one. Alternatively, you can push the whole fixing (in the sleeve) into the hole and then tighten it up but if the plastic isn't down far enough, you will have to go back and trim the excess so there is nothing protruding in the bed.

**Marking the drill bit at 110mm will let you know when it is far enough down as you won't be able to see 80mm due to the strip.**



Make sure that the sleeve of the frame fixing is in contact with the strip and the head of the screw as this helps to prevent corrosion

**Tighten up your screws using the T40 Star Head Drill Bit.** Tighten the fixings so that the edge is 2-3mm sunk into the mattress. 3mm is max.



**NOTE: The time of year you are fitting can impact on the tightening step of the process.** If it is cold, then tightening to the 2-3mm recommended is pretty straight forward.

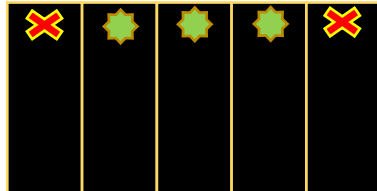
**If it is hot,** a little care is needed to ensure you don't over tighten the strips as the mattresses are in a more malleable state which could lead to the strips going in too far. This could prevent the mattress from settling to fill the gap under the strip & may lead to the mattress humping up instead.

**Methodology detail:** It is important to ensure that the depth of the hole is sufficient to cover the full depth of the frame fixing plus any dust that may accumulate in the bottom of the hole. Allowing adequate depth will prevent overtightening of the screw which can result in the screw snapping.

### Step 3: Fitting the Brisket Board with Sleeve Anchor Bolts:

Place the brisket board end-to-end in front of the heel stone the full length of the cubicle run

Ideally, each bed will have 1 bolt in the middle of the bed. The brisket board lengths will invariably meet in the bed from time to time. Where they meet in the inner 3/5ths of the bed a bolt is needed in both lengths of timber. If they meet in either of the outer fifths of the bed you do not need an additional fixing.

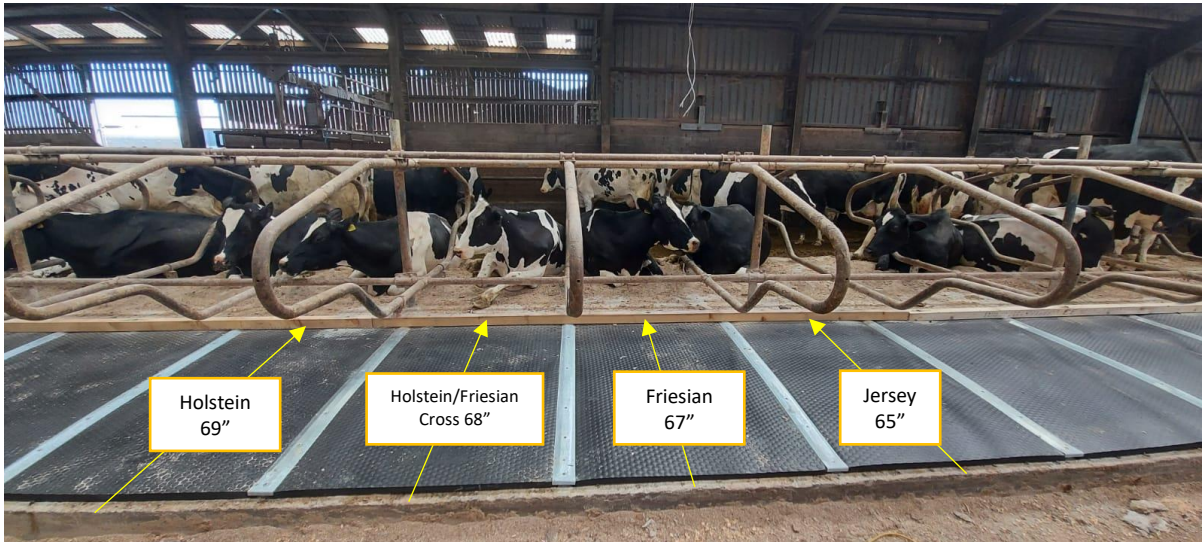


Mark the timber where you are going to put a fixing. Using your 38mm wood bit, drill a hole in the centre of the brisket board to a depth of 1" (to countersink the head of the fixing)



Put in 16mm Augur/Wood bit and drill through to the ground. If using Thunder bolts & Washers, use 12mm bit.

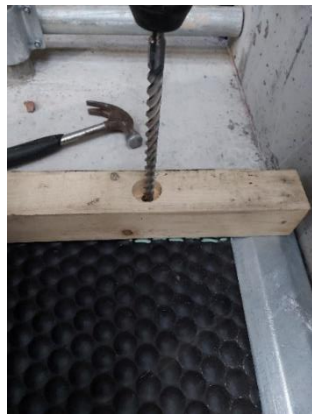
Mark the position for the **heel stone face of the brisket board** on the mattress with a piece of chalk and place the brisket board on the mattresses in position (Guidelines below – measurements are from the heel stone to the heel stone facing side of the brisket board)



To place the brisket board **precisely to your herd**, take a large stick and mark off where your representative cow's brisket and back of hock are when lying down. Add 3" to that measurement to give you a distance from the heel stone to the face of the brisket board. If your herd is mixed, suit the bed to the larger animals unless they are in the vast minority in which case suit the majority.

Using the 16mm masonry bit (12mm for thunder bolts), mark it at 195mm and drill through the pre-drilled 16mm (12mm for thunder bolts) hole into the concrete until the mark reaches the top of the board and place your 16mm sleeve anchor bolt into the hole **(Or your thunder bolt with washer – Simply tighten up then with 12mm socket and the thunder bolts would be complete)**

Below = final steps for sleeve anchor bolt fixing:

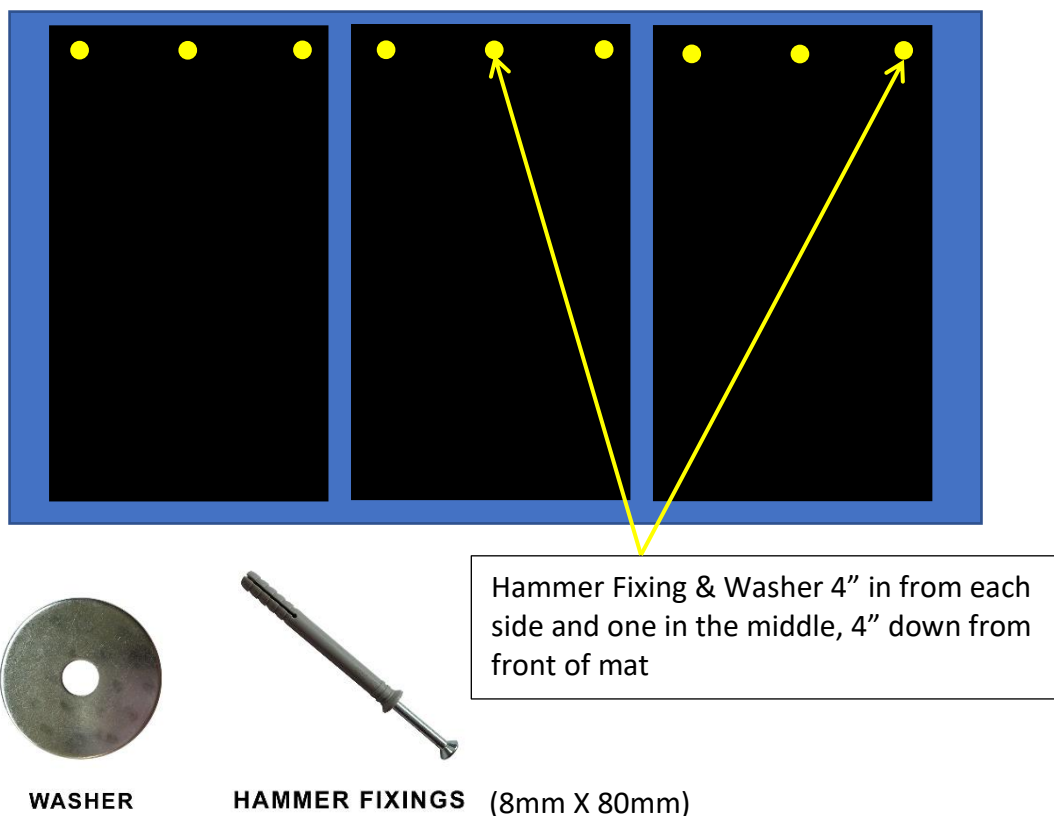


**TIP:** Screw the excess of thread so the nut has just tensioned the sleeve bolt and **no more for sleeve anchor bolt.**

Hammer it down until the head of the fixing is sitting at the bottom of the countersink. **DO NOT HIT THE THREAD** of the nut. (Put a socket over the nut to protect it)

Repeat this process at the opposite end of the length of brisket board. Once both ends are in position, tighten down both bolts to approx. 25NM (until roughly 2 or 3 threads are visible above the bolt) Fix one bolt into each bed using this method when the first and last bolt is in place per length of timber.

**Step 4 - If you are not installing a brisket board that will fit through the mattress – use the hammer fixings and washers to secure the front.**



You will be sent 3 fixings per bed.

Put the fixing through the washer. Mark out the position for the fixings with a piece of chalk. (See diagram above)

Using your 8mm Drill Bit, drill down through the mattress into the concrete (Mark 95mm on your bit). Put fixing with the washer into the hole and hammer down until there is no edge protruding. Repeat for all 3 fixings.

If you are fixing a brisket board through the mattress, hammer fixings are not required at the front.

**Kennel and Mushroom/Newton Rigg/P Cubicle specific instructions** will be online soon. **Contact the office on 01704 821717** for guidance in the meantime.

There are some videos available on our website (more coming!)  
[www.mayofarmsystems.co.uk](http://www.mayofarmsystems.co.uk)

If in doubt about anything at all – just call!

**Thanks for your order! Team Mayo.**