



P A L L E T   R A C K I N G  
**INSTALLATION**  
**GUIDE**

The purpose of this installation guide is to ensure all Unirack Customers are educated in the safe installation of pallet racking













**WARNING**

The installation of pallet racking is a high risk activity and as such would strongly recommend it be only done by a trained person. Also, note that in a number of states the installation of Pallet Racking, by law must be installed by a licensed person.

## STEP 1

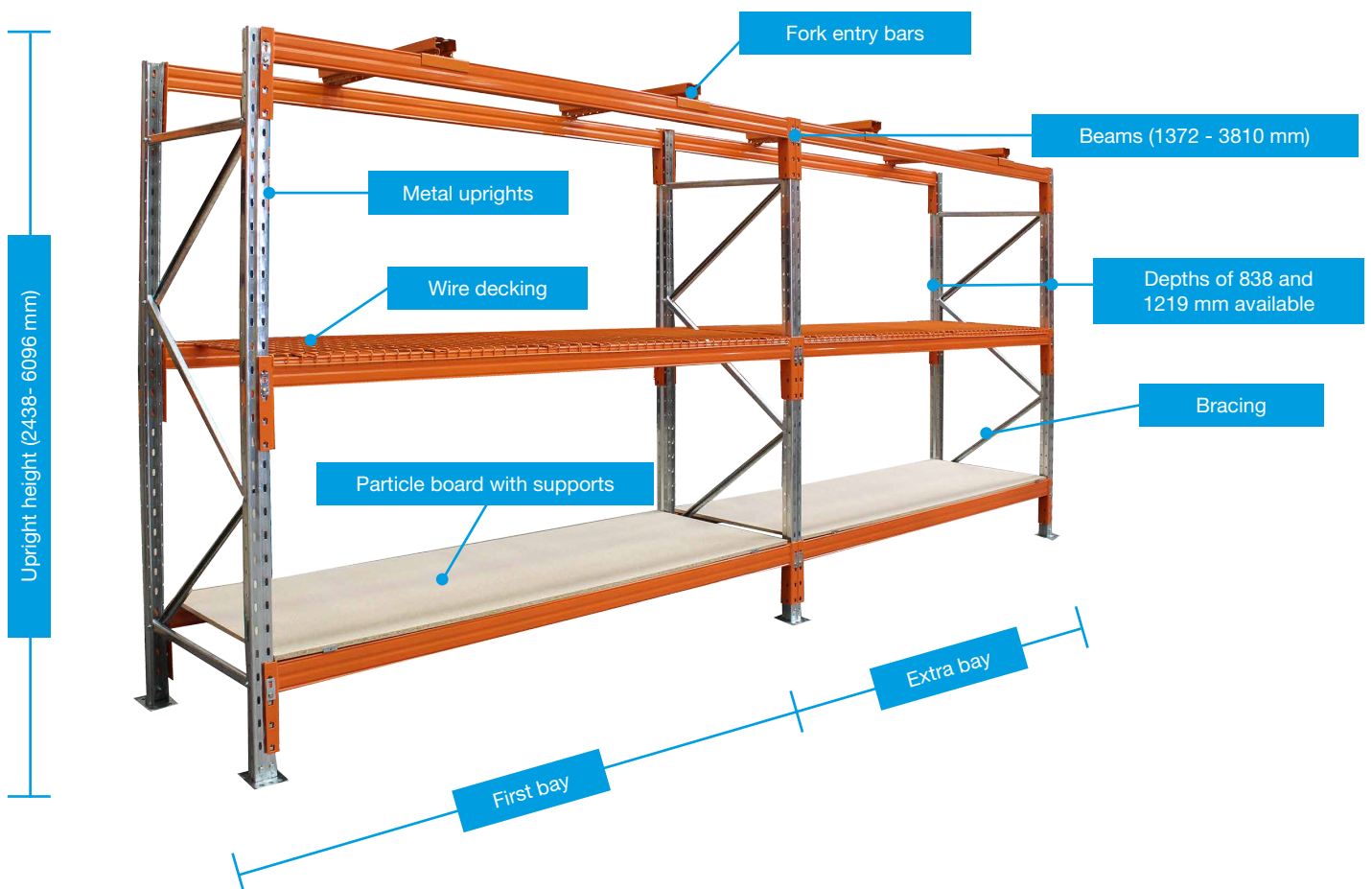
## GET YOURSELF READY

Ensure you have the following items prior to starting your installation

-  **Impact drill, and appropriate drill bits**
-  **Rattle gun**
-  **Assorted spanners and other tools**
  - 2 x 16 and 17mm open end spanners
  - 2 x 16mm impact sockets
  - 2 x 8mm hex head
-  **Full spanner and screwdriver sets**
-  **Chalk line**
-  **String line**
-  **Measuring**
-  **Rotary impact drill**
-  **Dust extractor vacuum**
-  **Extension leads**
-  **Level**
-  **PPE as required** - minimum hard hat, ear protection and eye protection, and safety boots

## STEP 2

## UNDERSTAND THE PARTS

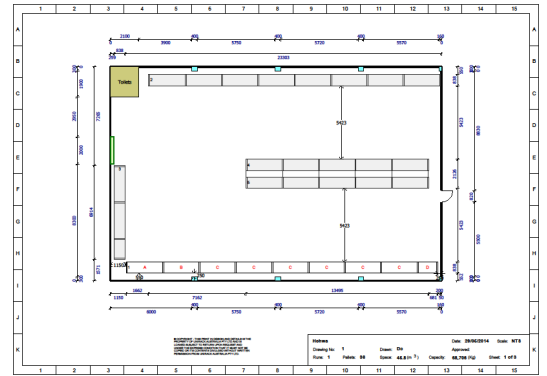


## STEP 3

## PREPARATION

Ensure area is clean and clear to ensure accurate marking out. Have a good look around the area once clear and make sure there is nothing that could obstruct the racking.

Check over plans and position provided by Unirack to ensure you have the correct copy and that the measurements on the drawing match the areas. Any changes to plans must be noted and returned to Unirack so changes can be made. Finally check for any obstructions (eg. posts, aircon units, doors) etc that may have been missed and could interfere with the racking.



## STEP 4

## MARKING OUT

Mark out first row as per the plan using a chalk string line. Once the first line is marked, you should be able to use plan dimensions to mark the other rows.

**NOTE:** Never assume walls are straight.

**TIP:** The general rule is the rear upright should be 250mm from the wall, which allows the required flu space as required by AS4084-2012. If you have extrusions IE Pillars and or Conduits/Pipes, the 250mm should be taken from these fixtures unless other-wise stated on the plans, this will avoid contact from pallets once the racking system is loaded.

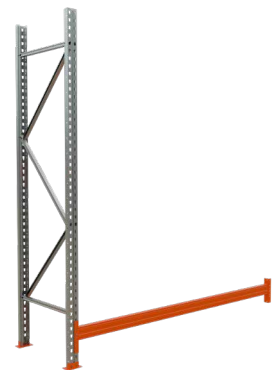


## STEP 5

## SETUP OF INITIAL BAY/ROW

Stand frames by using one person to place their foot on the bottom of the frame which stops it slipping whilst the other person lifts and walks the frame up. Standing frames should never be done by one person.

Then install a beam at the first level, whilst a second person keeps the first frame stable and upright. Once the first beam is installed then carefully check the safety clip is seated correctly and lower the un-attached end to the ground. This will be enough to hold the frame, whilst you stand the next frame.



## STEP 6

## SECURING THE NEXT UPRIGHT

Stand the next upright and lock it into place by securing it to the beam again at the lowest point.



## STEP 7

## ASSEMBLE THE UPRIGHTS AND BEAMS

Add the other lower beam to the other side of the upright therefore ending up with two uprights and two beams.



## STEP 8

## LEVELLING FIRST BAY/ROW

It is extremely important to ensure the upright is level horizontally both front to back and side to side as a small difference on the ground can mean a huge difference up high.

Note : As a rule, in a loaded capacity the upright cannot have an out of plumb distance of greater than 2mm over a 1m span.

Also place a spirit level horizontally on the beam to ensure it's level left to right and also on the front and back beam to ensure it's not leaning back or forwards. If you find it to be un-level place "Shim Plates" under the upright foot and check again.

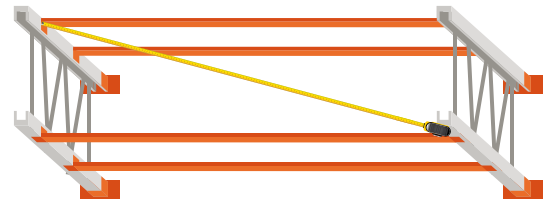


## STEP 9

## SQUARING BAY UP

Now we are ready to ensure the bay is square. Double check the two rear posts are on the markout line. You need to measure the two diagonals ie front left to right rear and right front to left rear post. Both these measurements should be the same. If not you need to manoeuvre the rack so they are.

As a guide a 2591mm bay will have a diagonal measurement of about ~ 2785mm when measured from the locations shown in the pictures here. If the second measurement is lower than the first, you need to move the front post of the second bay away from the front post of the first frame measured. If the measurement is bigger then you need to move the second measured front post towards the first post.



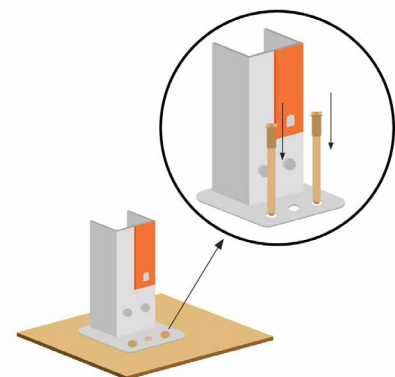
## STEP 10

## FIXING OF FIRST BAY AFTER LEVELLING AND SQUARING

Using the drill and dust extractor drill the hole to about the full length of the dynabolt plus 5-10mm. The extra length will give room for any dust that falls back to go and not block up the hole causing incorrect installation of dynabolts.

Use the rattle gun with the appropriate impact socket to tighten the dynabolts. Be aware the mid range hitachi, bosch drivers do not have enough torque to correctly tension a dynabolt.

Repeat this for all four posts in the first bay. This bay is now square and all other bays can be installed by locating the rear post on the marked line and will remain square.



## STEP 11

## ADD BEAMS AND UPRIGHTS (FOR MULTIPLE BAYS)

If more than 1 Bay, add another two beams to the right of the upright again on the lowest level. Then safely stand another upright and attach to the beams, as per Step 6 & 7. This can be continued until the run is complete.



## STEP 12

## INSTALLING BEAMS

Once the frames are stood and first bay is levelled, squared and fixed into position you can commence beaming out. This needs to be done by two people with one at each end. The beams will lock into place with the locking pins ensuring they line up correctly.

For the upper beams please DON'T climb on the racking. If they need to be fitted above standing height, it is highly recommended that you use a scissor lift or forklift cage. These are only to be operated by a trained professional.



## STEP 13

## INSTALLATION OF FRAME PROTECTION AND SIGNAGE

Post framework installation, given frame protection and signage should be installed as per AS4084-2023 requirements.

Frame protection needs to be installed at minimum all exposed corners for us to certify as AS4084-2023 compliant. These can be in the form of our U or L Shape protectors, Heavy Duty end of aisle protection and or Rack Armour protection.

For racking to comply with Australian standards and maintain warranty it must be checked by a competent person every 12 months

