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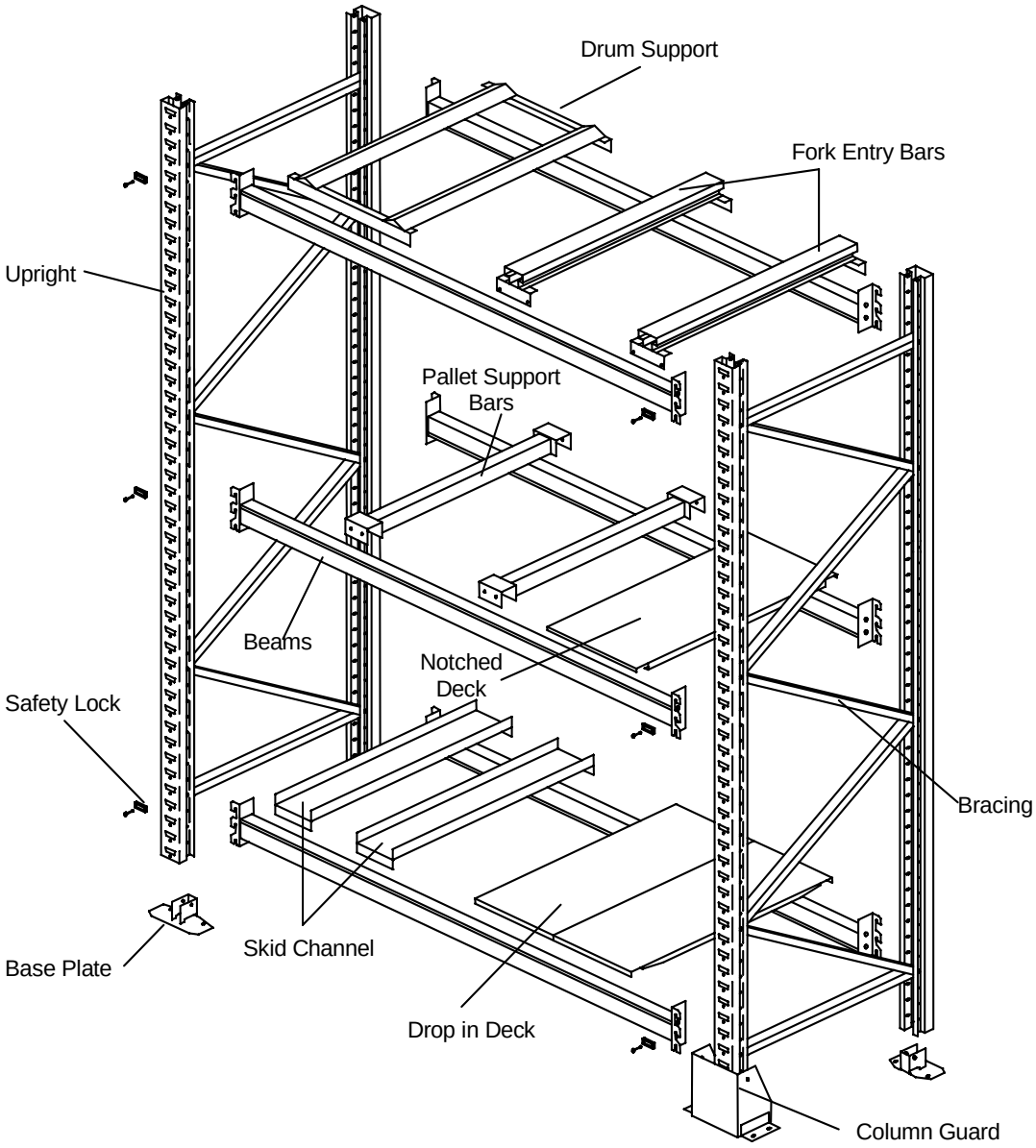
Assembly Instructions

APEX ADJUSTABLE PALLET RACKING

These instructions are designed to give an easy, step by step guide to assembling APEX adjustable pallet racking in a logical safe manner.
Please read thoroughly before starting work, as good planning will help to make assembly easier.

If there is any doubt concerning any aspect of the installation, please refer to your supplier before assembly or loading.



APEX Adjustable Pallet Racking

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APEX ADJUSTABLE PALLET RACKING

SITE REQUIREMENTS

The proposed site should be indoors and have a reasonably level floor.(Small local variations may be accommodated by the use of levelling shims).
The floor material must be a suitable solid concrete floor.

TOOLS REQUIRED

- Spirit level
- Plumb line
- Tape measure
- 2 x 17mm spanners
- Soft faced mallet (or hammer & block of wood)
- Hammer drill
- Suitable Eye protection
- 12mm masonry bit
- Suitable protective head gear
- 2 sets of steps for installing end frames and beams below 3m in height
- Suitable lifting platform, with safety cage for installing end frames and beams above 3m high

PLANNING

Sort out all the major components that are required for your bay of pallet racking i.e. uprights, bracing, baseplates, safety locks and beams. It is advisable to wear suitable protective head gear throughout the assembly procedure.

To have adequate rigidity and safety, installations must have a minimum of two bays (left to right) with two or more beam levels each.

STEP 1. Lay 2 upright sections down on a flat and even surface, or on a pair of trestles at a comfortable height at which to work. Ensure that both uprights are orientated in the same direction and that the top and bottom of the uprights are noted. Fig. 1 & 4

STEP 2. Select bracing pattern required dependent on height of racking, Fig. 2

STEP 3. Starting at the bottom of the uprights, bolt diagonal (long) and horizontal,(short) bracing in position. These are located inside the uprights with the open face of the bracing facing down at all times. Where two diagonals or a horizontal and a diagonal meet at a fixing point, location to the upright is by means of a single M10 x 55mm bolt and a M10 Nyloc nut. The bolt passes through the upright and then through the holes of the bracing sections which have been 'nested' together prior to connection. Fig 3
Where only one channel bracing member meets the upright (one end of both the top and bottom horizontal), the connection again is by means of a M10 x 55mm bolt and M10 Nyloc nut. PRACTICE GOOD MANUAL HANDLING TECHNIQUES AS FRAMES MAY BE HEAVY.(Please refer to HSE doc. L23)

STEP 4. Attach the baseplates. These are attached to the upright using a M10 x 55mm bolt and a Nyloc nut. The two floor fixing holes are located to the rear of the upright. Fig. 4

STEP 5. Assembled end frames will be raised into position with beams being fitted at appropriate levels. Generally smaller low rise installations (below 3m) can be raised manually, whilst taller installations (above 3m) will need the assistance of specialist lifting equipment. Stand end frames upright and hold in position, locate the beams in the upright slots, ensuring that the beams are level. There must be at least two beam levels per bay. The height from floor to first beam level MUST NOT EXCEED 1500mm.

STEP 6. The additional bays of racking consist of an end frame and beams, these are assembled as before and added on to the previous bay (Fig. 5). Beams adjacent to each other having a common upright will share the same safety lock. Fig. 6

STEP 7. Ensure that all beams are level and securely located in the upright slots. Having correctly positioned the beams, use a soft faced hammer or a block of wood and a hammer to knock down the beams until the hooks are fully engaged in the slots of the upright. The safety lock is located in the hole between the first and second hook of the beam end connector. With the lock in position by hand, push home the tapered retaining pin. TWO LOCKS PER BEAM MUST BE FITTED. Fig. 6

STEP 8. Where bays are placed back to back to create a double deep rack, ROW SPACERS MUST BE FITTED between the rear uprights. These are located in the slots of the upright and are retained in position by means of a 'J' bolt and an M8 Nyloc nut (Fig 7). There must be a spacer connecting the frames together,

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in the slot in the upright, just above the top and bottom bracing connections. Between these positions there must be a spacer or spacers not more than 2.4m apart. Fig 8

STEP 9. The installation must be checked with a spirit level in the horizontal plane. The uprights must be checked using a plumb line in the vertical plane, ensuring that the uprights are vertical to within a tolerance of 1 in 500 i.e. out of plumb by 1mm for every 500mm in height (Fig. 9). Additional levelling shims may be added under the baseplates to level the bay. On single entry and additional bays all baseplates must be anchored down. On double entry installations only the perimeter baseplates must be anchored down, to a suitable solid concrete floor, with one each 12mmØ x 90mm anchor bolts, supplied. The minimum floor penetration MUST NOT BE LESS THAN 55mm, It is recommended that suitable eye protection is used when any drilling is undertaken.

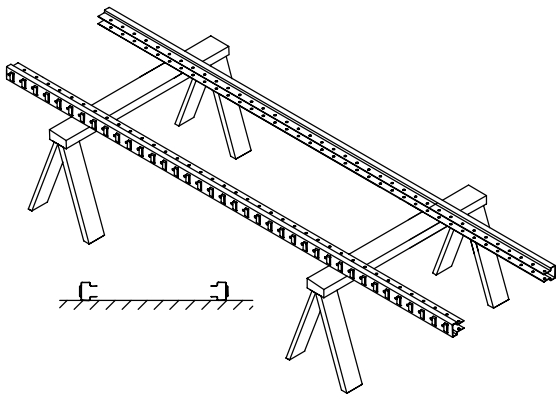
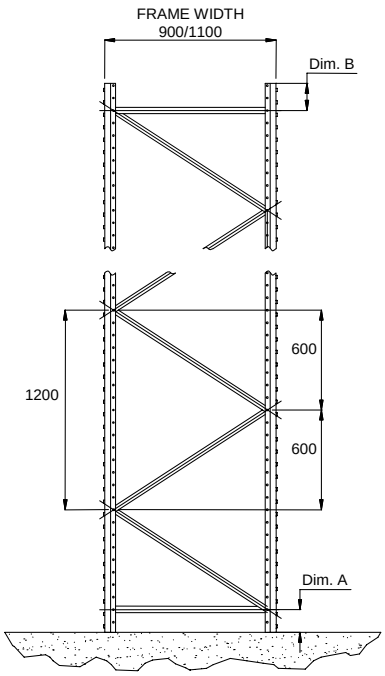


Fig. 1



Frame Height	Dim. A	Dim. B	No. off Diagonals	No. off Horizontals
3000	288	312	4	2
3900	138	162	6	2
4500	138	162	7	2
5400	288	312	8	2
6000	288	312	9	2
6600	288	312	10	2
7200	288	312	11	2
7800	288	312	12	2

Fig. 2

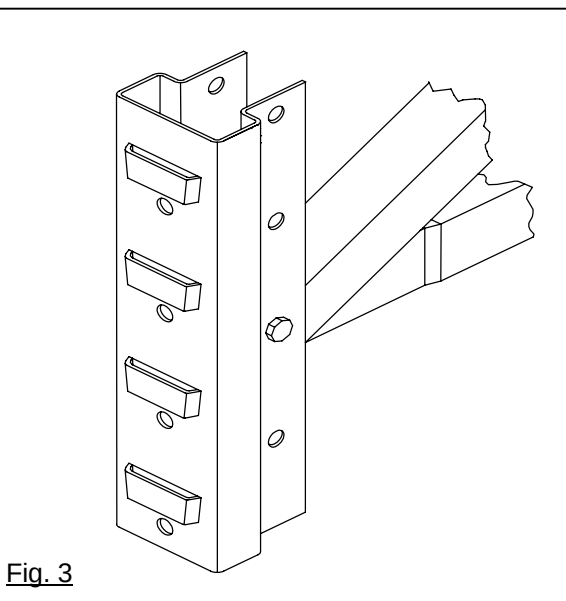


Fig. 3

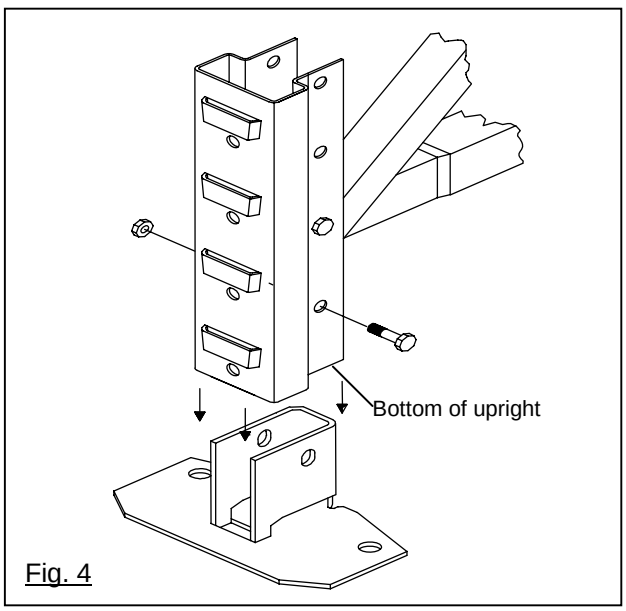


Fig. 4

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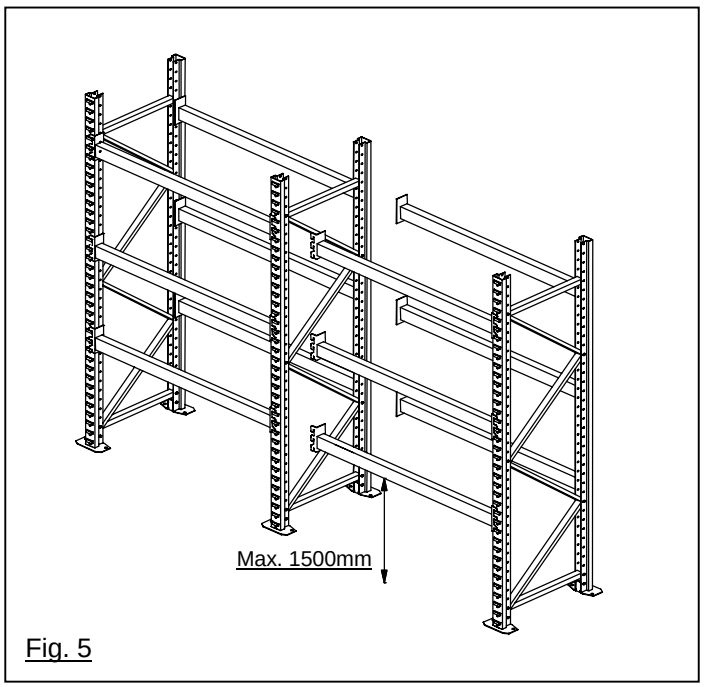

Fig. 5

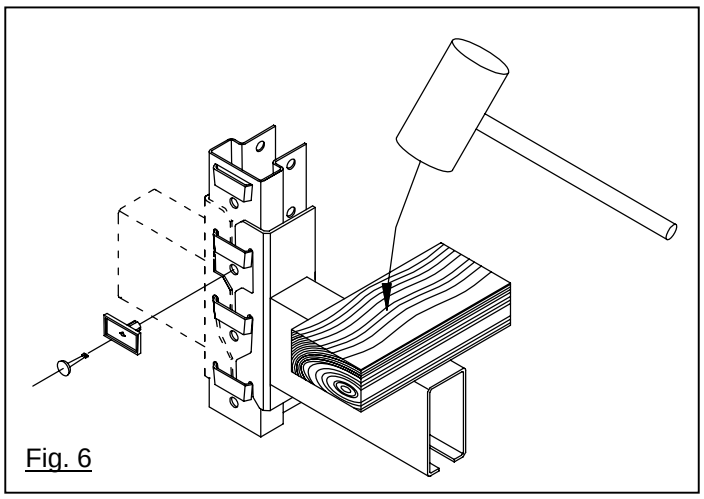
Fig. 6

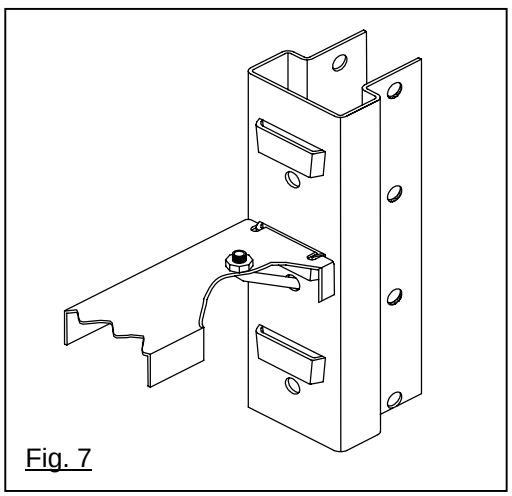
Fig. 7

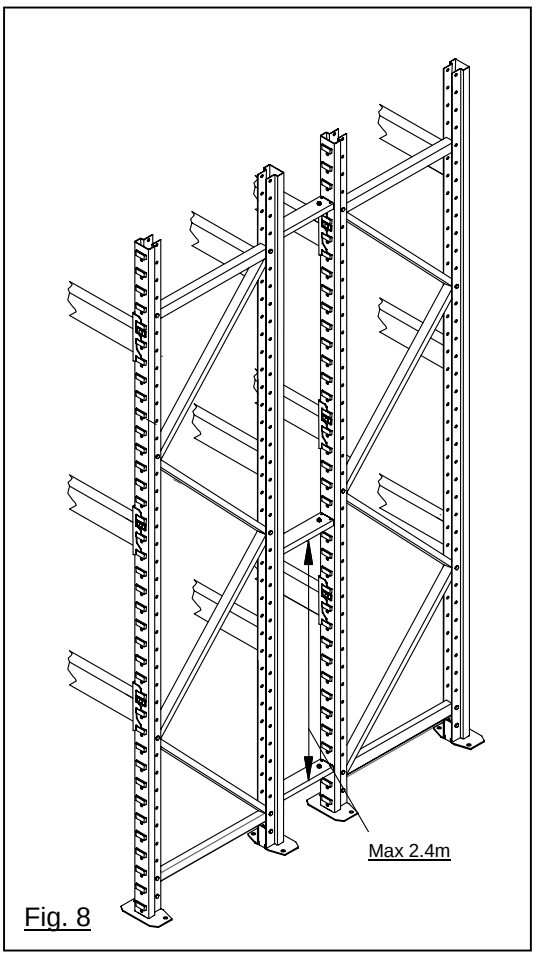

Fig. 8

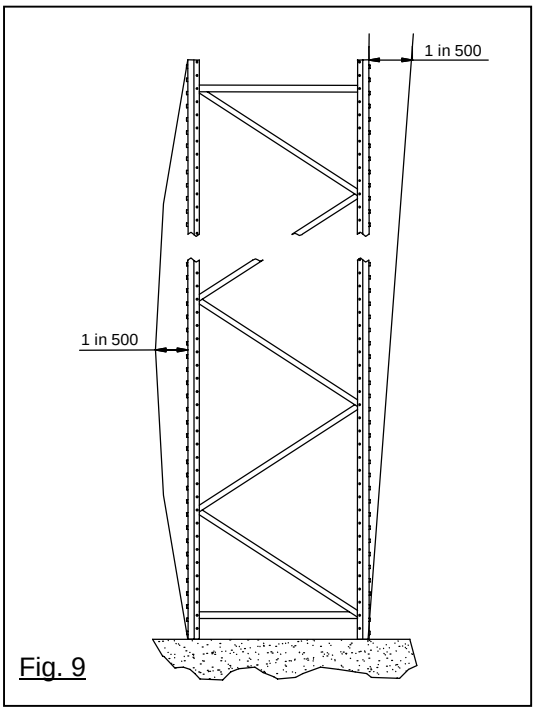

Fig. 9

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