



MARQUEE INSTALLATION HANDBOOK

Cruciform Structures



9m Cruciform Installation instructions



9m Cruciform Connection

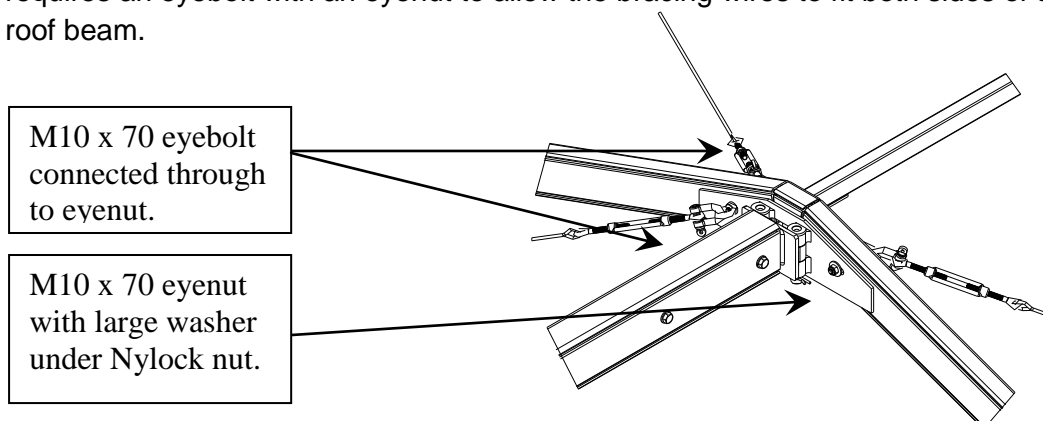
Tools needed

- ❑ 2 x mega ladders
- ❑ 17 & 19mm diameter spanners
- ❑ 3 x Throw over ropes
- ❑ Gloves

Process

Frame

- ❑ Layout the components, referring to Drawing. Reference to the 'outside of the cruciform refers to the side of the structure making up the 'top of the T'.
- ❑ Care must be taken to fit appropriate size eyebolts to various wires when not standard. This allows for the beams, plates and large washers where needed.
- ❑ Assemble the three starter bay frames that will sit adjacent to the cruciform. NOTE: The 45x30mm ridge purlin on these three starter bays should be replaced by a 67 x 45mm eave purlin.
- ❑ Fit the 9m ridge plate to each of the three starter bay frames. NOTE: The eyebolts need to be used in the bracing bays. In particular the extra set of half bracing wires requires an eyebolt with an eyenut to allow the bracing wires to fit both sides of the roof beam.

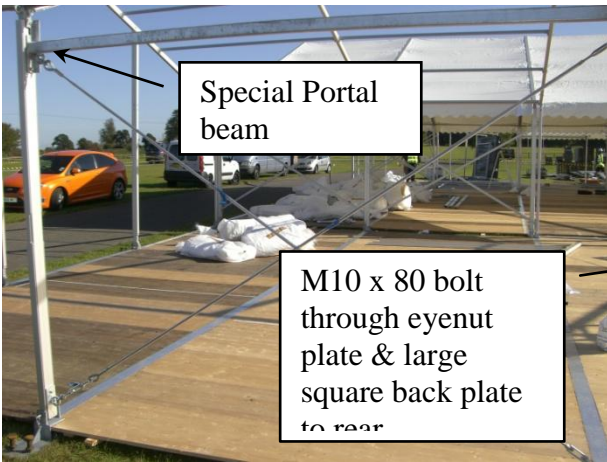


- ❑ Fit the eave spacer plates to fix the relative position of the three starter bays

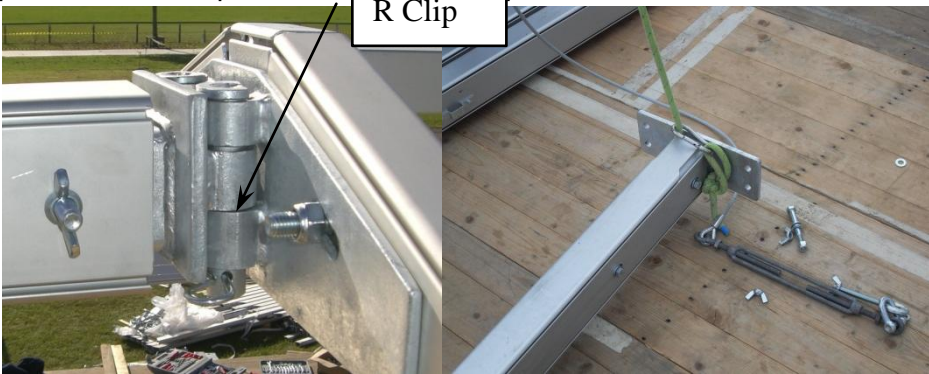


M10 x 80 bolts must connect spreader plate and portal beam. Use Nylock nut to secure.

- ❑ Fit the special portal beams in the starter bays and the special eyenut plates at the base of the two legs. A large square back plate is fitted behind the special eyebolt. See drawing. Bolt all tight



- ❑ Assemble the two ridge beams. The main 9m beam consists of three sections: the two end beams (mirror images of each other) and the central beam (the one with cut out ends).
- ❑ Lift the 9m ridge by using a mega ladder each end and lock into position with the pins. Secure with R clips. NOTE: Allow the beam load to be taken from the ground by the ropes, looped over the ridge beams. This will ease positioning of pins. Lock into position with the pins. Secure with R clips.



- ❑ Move the ladders to the two roof beam stubs on the 9m ridge beam and fit a 9m roof beam to each. NOTE: Install M10 x 60 eyebolts to the roof beams facing away from the centre of the cruciform to take the half bay bracing. Fit the top end of the bracing wires to these.
- ❑ Fit the lower end of the 9m roof beams to an eave knuckle and leg and pin to base plate in the usual manner.

- Move the mega ladder to each end of the 4.5m cruciform ridge beam and lift into position. See below. Secure the bolted end first then slide the pinned end into place and pin. Fit the R clips for security.



- Install M12 x 100 eyebolt and eyenut and bracing wires to bolted end as shown below.



- Fit Purlins in three outside bays.
- Fit bracing wires in place and tension. These consist of the following;
 - Starter bay bracing sets on each of the three adjacent bays
 - Two half bracing sets at the outside of the cruciform
 - Two wire scissor sets at front in the adjacent bracing bay
 - Two valley wires

M12 x 100
eyenut.
Secure with
Nylock nut.



PVC

- ❑ Layout roof at outside edge and fit three throw over ropes. Offer up roof to kader and pull over frame. Keeping the roof square will stop the roof from jamming in the track during the pull.
- ❑ Once the roof is fully pulled over, the pocket on the leading edge is locked into the roof beam by use of a fibreglass batten (see below). Push the pocket into the kader groove and then push the batten into the pocket and slide up to the centre. NOTE: The batten can give off small splinters and gloves are recommended. A small amount of talcum powder will aid the installation of the batten.



- ❑ Finally tie the roof PVC to the ridge beam and lace the valley flange to the valley wire. Secure the bungee flange to the eave rail.



- ❑ Install PVC infill walls as required

Removal

- ❑ Loosen the ties around the valley wires
- ❑ Remove the fibreglass batten. This frees the roof allowing it to be pulled back over the structure.
- ❑ Once the PVC has been removed the frame can be dismantled.
- ❑ Remove the valley Wire and purlins.
- ❑ Remove the 4.5m ridge beam then remove the two half roof beams.
- ❑ The 9m ridge beam can then be removed.
- ❑ Finally remove the eave connector and additional bracing bay wires.

12m to 9m Cruciform Installation instructions

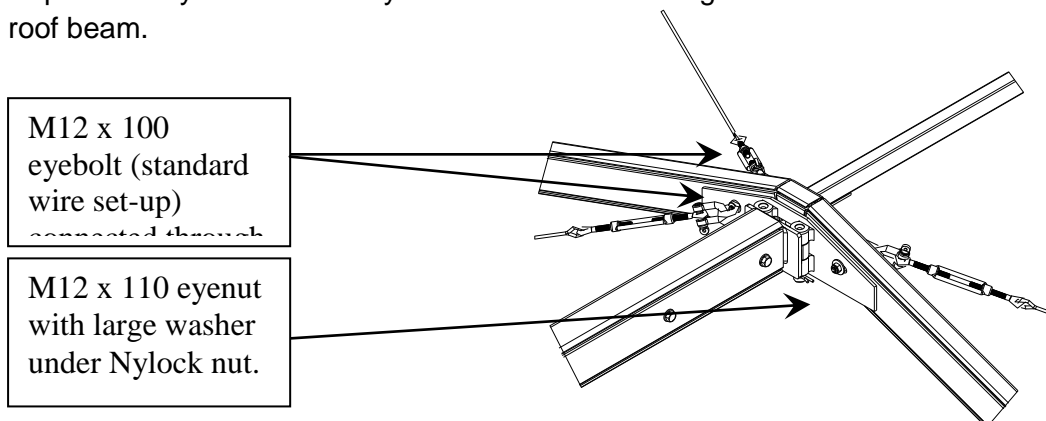
Tools needed

- ❑ 2 x mega ladders
- ❑ 17 & 19mm diameter spanners
- ❑ 3 x Throw over ropes
- ❑ Gloves

Process

Frame

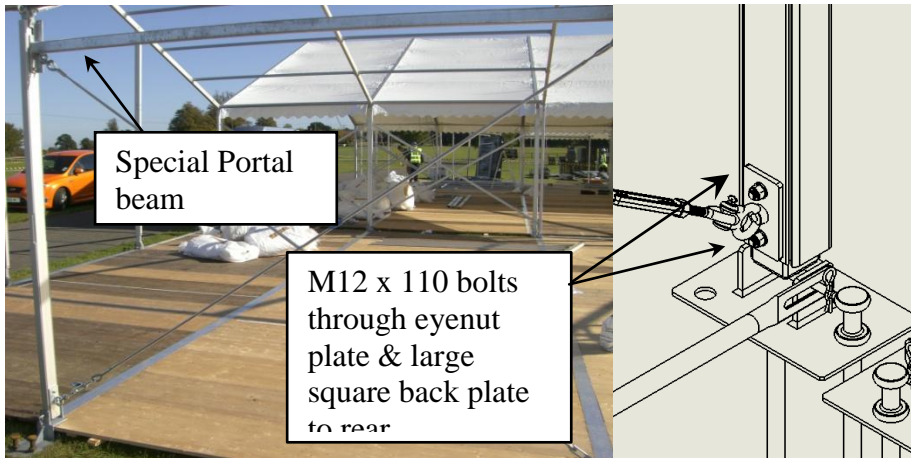
- ❑ Layout the components, referring to Drawing. Reference to the 'outside' of the cruciform refers to the side of the structure making up the 'top of the T'.
- ❑ Care must be taken to fit appropriate size eyebolts to various wires. This will allow for the beams, plates and large washers needed.
- ❑ Assemble the three starter bay frames that will sit adjacent to the cruciform. NOTE: The 45x30mm ridge purlin on these three starter bays should be replaced by a 67 x 45mm eave purlin.
- ❑ Fit the 12m ridge plate to each of the three starter bay frames. NOTE: The eyebolts need to be used in the bracing bays. In particular the extra set of half bracing wires requires an eyebolt with an eyenut to allow the bracing wires to fit both sides of the roof beam.



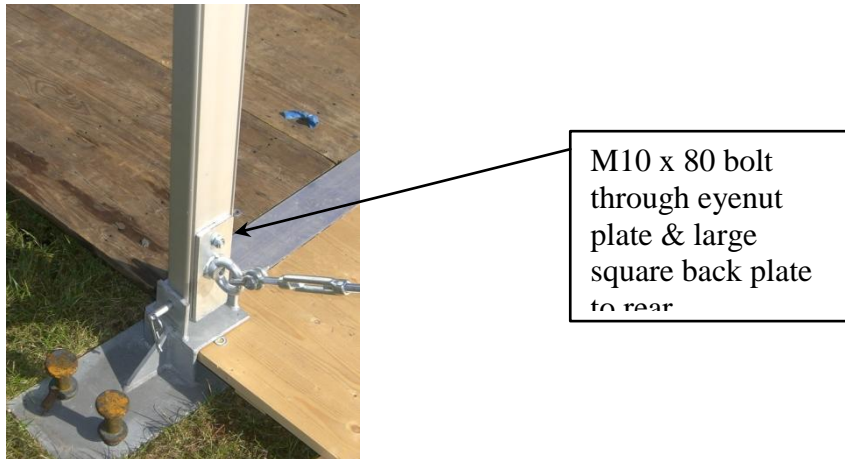
- ❑ Fit the eave spacer plates to fix the relative position of the three starter bays



- For the 12m starter bays, fit the special portal beams and the special eyenut plates at the base of the two legs. A large square back plate is fitted behind the special eyebolt. See drawing. Bolt all tight.



- For the 9m starter bays, fit the special eyenut plates and bolt tight. Fit the bracing wires in these bays and tighten.



- Assemble the two ridge beams. The main 12m beam consists of three sections: the two end beams (mirror images of each other) and the central beam (the one with cut out ends).
- Lift the 12m ridge by using throw ropes and a mega ladder at each end. NOTE: Allow the beam load to be taken from the ground by the ropes, looped over the ridge beams. This will ease positioning of pins. Lock into position with the pins. Secure with R clips.



- ❑ Move the ladders to the two roof beam stubs on the 12m ridge beam and fit a 12m roof beam to each. NOTE: Install M12 x 100 eyebolts to the roof beams facing away from the centre of the cruciform to take the half bay bracing. Fit the top end of the bracing wires to these.
- ❑ Fit the lower end of the 12m roof beams to an eave knuckle and leg and pin to base plate in the usual manner.
- ❑ Move the mega ladder to each end of the 6m cruciform ridge beam and lift into position. Secure the bolted end first then slide the pinned end into place and pin. Fit the R clips for security.
- ❑ Install M12 x 100 eyebolt and eyenut and bracing wires to bolted end as shown below.



- ❑ Fit Purlins in three outside bays.
- ❑ Fit bracing wires in place and tension. These consist of the following;
 - Starter bay bracing sets on each of the 12m adjacent bays
 - Starter bay bracing on each of the 9m adjacent bays (already fitted)
 - Two half bracing sets at the outside of the cruciform
 - Two wire scissor sets at front in the adjacent bracing bay
 - Two valley wires



PVC

- ❑ Layout roof at outside edge and fit three throw over ropes. Offer up roof to kadeer and pull over frame. Keeping the roof square will stop the roof from jamming in the track during the pull.
- ❑ Once the roof is fully pulled over, the pocket on the leading edge is locked into the roof beam by use of a fibreglass batten (see below). Push the pocket into the kadeer groove and then push the batten into the pocket and slide up to the centre. NOTE: The batten can give off small splinters and gloves are recommended. A small amount of talcum powder will aid the installation of the batten.



- ❑ Finally tie the roof PVC to the ridge beam and lace the valley flange to the valley wire. Secure the bungee flange to the eave rail.



- ❑ Install PVC infill walls as required

Removal

- ❑ Loosen the ties around the valley wires
- ❑ Remove the fibreglass batten. This frees the roof allowing it to be pulled back over the structure.
- ❑ Once the PVC has been removed the frame can be dismantled.
- ❑ Remove the valley Wire and purlins.
- ❑ Remove the 6m ridge beam then remove the two half roof beams.
- ❑ The 12m ridge beam can then be removed.
- ❑ Finally remove the eave connector and additional bracing bay wires.