



RB Yacht Cradle Assembly Iss 1

Instructions

Contact

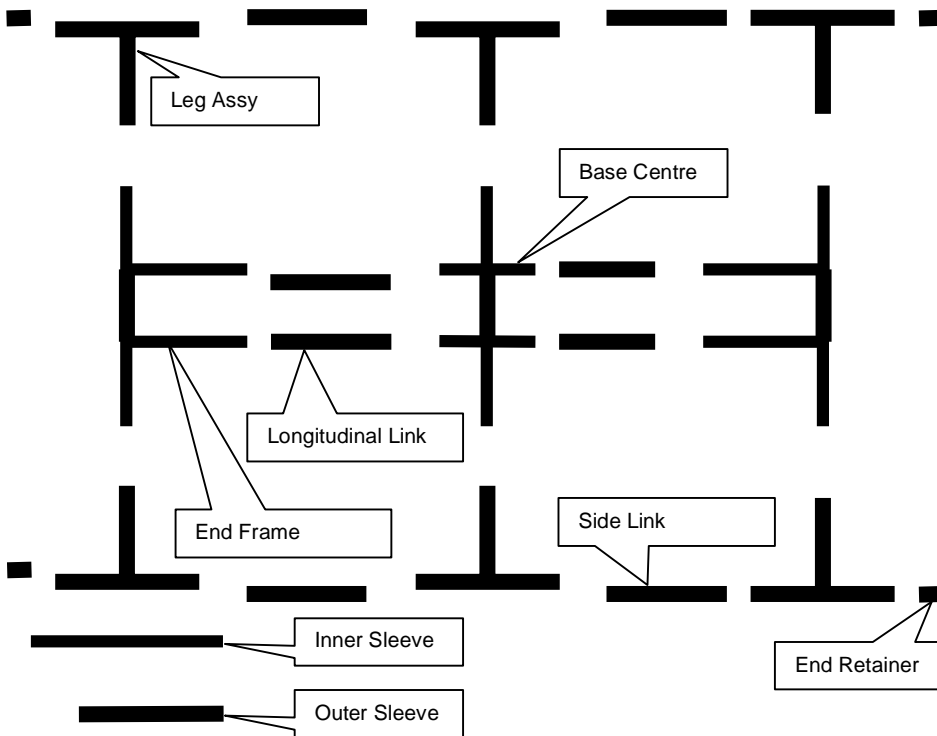
Phone 01394 420541

E mail Info@atlas-yachtcradles.co.uk

These instructions are based on the Atlas cradle design principle, some cradles vary in small respects, but the assembly principles remain the same. Two people should be able to assemble a four leg cradle in about 1/2 hour. Assembly by one person is possible.

Tools / Facilities required

- Piece of reasonably flat ground of sufficient size
- Large Hammer
- Bulk of timber
- 24 mm A/F Socket and wrench or Spanner
- Good quality grease



Stage 1

Check that you have all the parts. Layout the base components on the ground as shown.

The illustration is for a 6 leg cradle. 4 leg cradles have a base joiner instead of centre base.

The number of each of the components shown varies according to the cradle specification required.

Note Side links are shorter than Longitudinal links.



Stage 2

Build 2 end frames and the required number of centre frames by fitting leg assemblies (picture shows only leg bottom, however legs will arrive fully assembled) over the traverse members of centre or end frames.

Placing a chock (axe handle in picture) under the transverse link will assist.

The weld nut needs to be precisely located over the appropriate (see table below) locating hole in the transverse link.

IMPORTANT the same hole each side of the cradle must be used.

Were needed to fit a particular yacht, additional 15mm holes maybe drilled at equal distance from the centre – each side.

Hole Location	Cradle Width	Note
Outer	4.5 M	BMIF recommends that for yachts laid up with mast removed that the cradle width should be a least equal to the maximum vessel beam. For yachts laid up with mast stepped the cradle width should at least 1.25 times the vessels maximum beam. Base extensions can be supplied to enable use by yachts up to 4.5 M (14'6") beam to be laid up with mast stepped.
Middle	3.8 M	
Inner	3.0 M	



Once fully aligned insert and screw down a greased short M16 screw, the holes are purposely made tight so some resistance is to be expected.

Stage 3

Starting with one end frame, fit longitudinal links over spigots on end frame on both sides.



Stage 4

Slide inner sleeve through centre of end frame base. If excess zinc from galvanising is present use of firm hammer blows might be needed (protect inner sleeve with bulk of timber). The inner sleeve must enter the side link (shown) so that the weld nut in the side link lines up with the hole in the inner sleeve.



Stage 5

Ensure that the weld nuts (arrowed) line up with the holes in the frame spigot and inner sleeve (arrowed above and left).



Stage 6

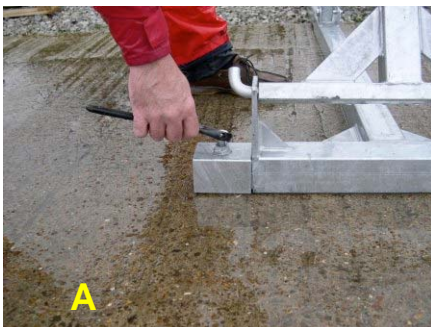
Apply grease to the short M16 screws supplied and fit them to the weld nuts shown and tighten until the screw head reaches the weld nut.

Note the locating hole in the spigot / or inner sleeve is designed to be a tight fit to the nut so some resistance is to be expected.



The inner sleeve can be fitted so that hole is on top (A) or on the inside (B) the latter is neater.

Note – When fitting the end retainer (A) the weld nut is slightly offset so optimum clearance can be achieved by reversing the retainer.





Stage 7

Having built 1 end frame, repeat stages 3 to 6 building as many centre frames as required – building onto the side and longitudinal links that you have fitted to the end.

For centre bases there are minor differences

- There are spigots for longitudinal links both sides of a centre frame.
- Side links are used both sides of centre legs i.e. no end retainers are needed.



Where base joiners are used instead of centre frames an outer sleeve is used over the inner sleeve to join the two side links.

Stage 8

Picture shows “Tie Bar” leg this combined with the screw jack type pad assembly provides the benefit of not inducing bending forces in the leg.

The tie bar is simply fitted using the fastenings supplied at each end. Coarse adjustment is achieved by fitting the pin adjuster in the appropriate hole.

Fine adjustment is achieved using the screw jack – see below.



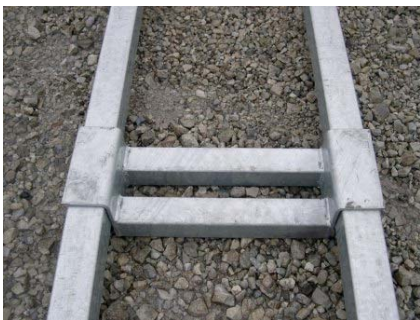
Stage 8

- Insert upper leg (square section) into outer leg with round tube section uppermost.
- Set desired height using a small pin and “R” clip.
- Then apply good quality waterproof grease too the pad assy thread and insert pad assembly thread into the tube as shown. Note position of washer below “T” handle nut.



Stage 9

- Place each Keel Support between the frame rails as shown. (The keel support shown is a heavy duty duplex support).



IMPORTANT – If your yacht is being placed on the cradle by a boat yard or other party these instructions must be made available to the people concerned. In all cases the individuals undertaking the work must be competent in the required skills.

The following requirements are not specific to Atlas Cradles they should be followed for all types of cradle.

Stage 8 – Setting up cradle and laying up yacht.

1. The cradle must be free from physical damage that may impair strength, must be free of structural corrosion and be complete as supplied.
2. The cradle should be positioned on firm reasonably level ground.
3. The position should be as sheltered as possible.
4. Again where possible the boat should be pointing into the prevailing wind.
5. The cradle base transverse sections must be adequately supported by the ground, any areas where there is a significant gap between the base and the ground must be packed with good quality supporting material. With the cradle empty there should be no perceptible movement if this section is stood upon.
6. Prior to placing the yacht in the cradle it is a good idea to approximately set up the legs, to do this :-
 - a. Set the base width according to the table in stage 4.
 - b. Estimate the beam at waterline level of the yacht at each leg position.
 - c. Set the angle of and the extension of each leg to the approximate beam + 200 mm and the top of the pad to be level with the turn of the bilge.
7. The keel supports must be located close to the leading edge, and close to the trailing edge of the keel but at a position that is secure if minor movement occurs. **Note keel supports are designed to have a small gap < 10mm between the bottom of the support and the ground, this gap closes when the yacht is placed in the cradle. If due to hollows in the ground the gap is greater than 10mm suitable packing must be placed under the keel support.**
8. The yacht should be placed centrally in the cradle.
9. The keel supports must transfer all the displacement of the yacht to the base rails. The legs purely provide resistance to rolling, pitching and wind forces.
10. For boats with wing keels or other types that do not fit within the base rails suitable chocking must be provided.
11. For normal fin keels chocking must be provided to eliminate the possibility of sideways movement of the keel during high side winds.
12. Setting up cradle legs is critical. The leg is far stronger in compression than in bending.
 - a. Legs should never be set at an angle to horizontal of greater than 60 degrees.
 - b. The screw jack at each pad assembly should be tightened sufficiently to prevent movement of the yacht.
13. Yachts with a high draught to keel ratio (Racing Type Yachts) are particularly vulnerable to high winds, for such yachts additional fore and aft centre line support should be considered (See atlas accessories).
14. Where possible yachts should be laid up with masts un-stepped, however if this is not possible windage should be reduced as far as possible by removing sails, covers, spray hoods and other high windage items.
15. Further precautions should be taken for yachts laid up in known exposed positions.
 - a. Cradle leg storm chains should be used (See atlas accessories).
 - b. The yacht can be strapped into the cradle using strong tensionable webbing straps over the superstructure (See atlas accessories).
 - c. A more secure alternative that must be used in very exposed locations is to secure the above straps to 4 strong permanent ground anchor points fore and aft each side.