

AL340 14M TRIPOD LATTICE TOWER – SETUP GUIDE

DO NOT use this equipment unless you have been instructed in its safe use and operation and have been given permission.



Never operate equipment during storm activity. There is no safe location outdoors during a storm event. If you can hear thunder you are in danger of being struck.

Look up and live. You may be killed if the equipment comes in contact with powerlines. Always think ahead and plan your task in advance.

PERSONAL PROTECTIVE EQUIPMENT



Hardhat to be worn at all times.



Sturdy, enclosed footwear to be worn at all times.



Gloves required when handling guy wires.



Personal Fall Arrest System (PFAS) required for climbing. Qualified personnel only.

GENERAL SAFETY REQUIREMENTS

DO

-  Check workspaces and surrounding area to ensure no slip/trip hazards are present.
-  Check area above tower for obstructions and electrical cables.
-  Ensure ground is firm. If in doubt have an engineer inspect.
-  Visually inspect guy wires and bolts for tampering/vandalism.
-  Ensure correct ballast weight.

DON'T

-  Do not operate near powerlines.
-  Do not operate during a storm event.

RAISED POSITION



LOWERED POSITION



SETUP GUIDE

This procedure covers steps required to assemble the AL340 14 metre Tripod Lattice Tower and complete the raising procedure. Prior to shipment the AL340 tripod has been pre-built with each part being labelled for easy re-assembly.

Step 1.

Unload and check supplied materials. Package should include;

- 1x 1.0 m galvanised tripod base
- 3x galvanised outrigger triangular sections (labelled A, B, C)
- 3x 1400 mm galvanised outrigger extension sections (labelled A, B, C)
- 3x 1500 kg rated levelling jacks
- 1x AL340 aluminium lattice base module (labelled 1)
- 3x AL340 aluminium lattice modules (labelled 2, 3, 4)
- 1x Pulley Block
- 1x Winch Assembly
- 1x Guy wire kit, pre-assembled
- 1x Gin Pole Assembly
- 6x 145mm M14 Bolts with washers and nyloc nuts
- 6x 125mm M14 Bolts with washers and nyloc nuts
- 5x 75mm M12 Bolts with washers and nyloc nuts
- 27x 7/16 Bolts with washers and nyloc nuts

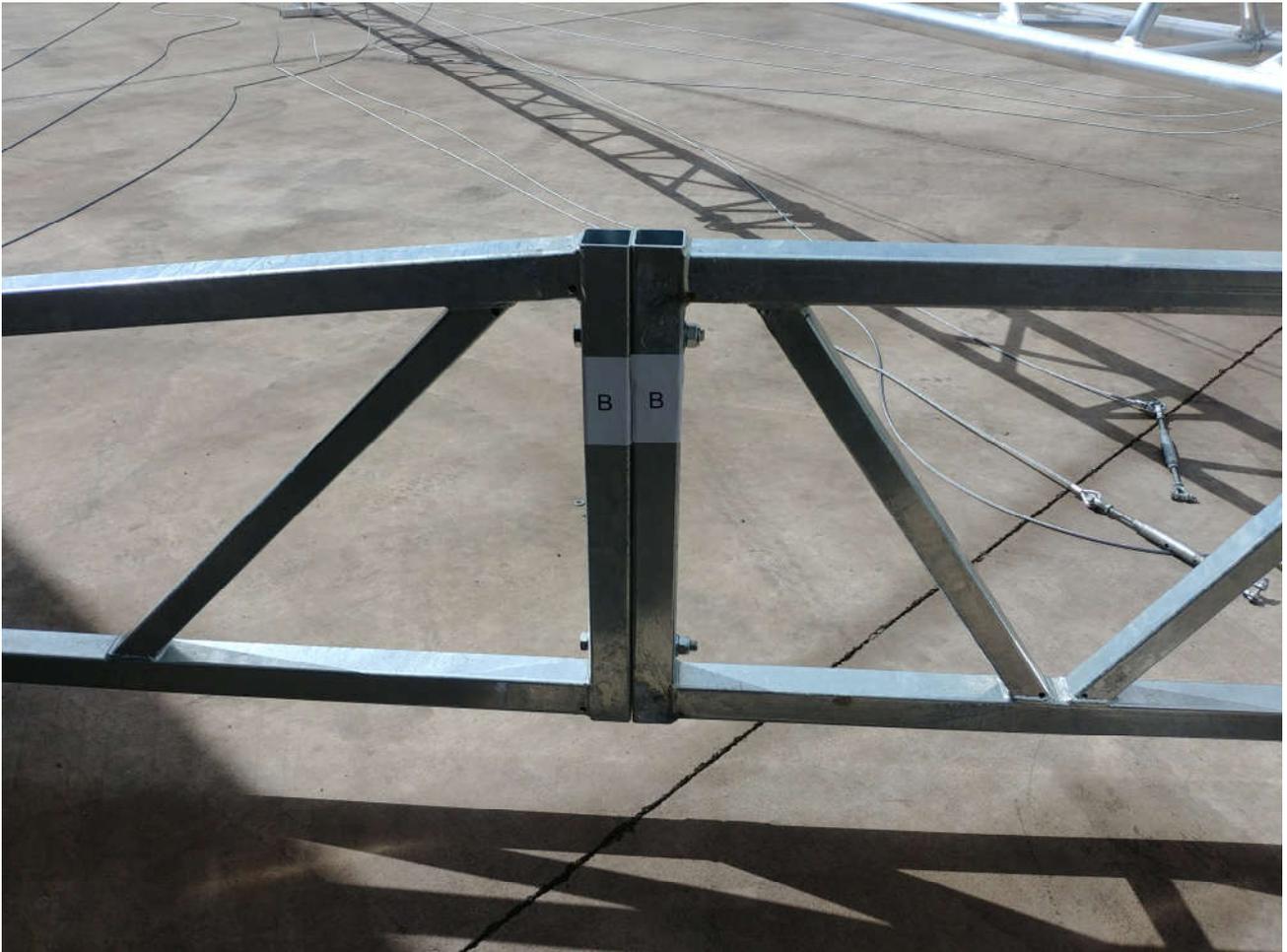
You will need:

- Spirit level
- 2x 18 mm spanners/socket (M12) For bolting tower to hinging points and bolting gin pole to outrigger leg
- 2x 22 mm spanners/socket (M14) For bolting base leg sections together
- 2x 5/8in spanners/socket (7/16 bolt) For bolting tower sections together
- Timber or something similar to support the tripod base during assembly, a vehicle jack could also be used

Step 2. – Assemble Outriggers

Locate each pair of outrigger triangular and extension sections. Each pair are labelled A, B, and C.

Bolt the triangular section to the extension section together using the supplied M14 145mm bolts.



Step 3. Attach Outrigger to Tripod Base

Each corner of the Tripod Base has been labelled A, B, C to correspond to its matching outrigger. Locate each pair and bolt together using the supplied 145mm M14 Bolts. You may wish to elevate or tilt the base temporarily to make assembly easier, blocks of timber or even a vehicle jack with a piece of timber to spread the load works well.



Step 4. Attach AL340 base module to tripod base.

Locate the AL340 module with machined billet feet. Align the feet parallel to outrigger "A", so that the tower will be lowered away from "A".

With the module correctly positioned in the tripod base, insert two XXX bolts through the "B" and "C" hinges and secure using the 2x 75mm M12 bolts, nyloc nuts and washers. Tighten firmly but not fully, so that the module may still hinge.



Step 5. Attach additional AL340 modules

Lower the AL340 base module onto the supplied support.

Each module has been numbered (2, 3, 4) and its orientation indicated by A, B, or C. Numbering is also on the top and bottom connection plates so that they can be matched up together, with the lower number on the bottom and higher on the top. Attach each additional module beginning with 2, 3, and lastly 4. There are nine 7/16 nuts and bolts per module.



Step 6. Attach Gin Pole

The gin pole is attached to outrigger "A", with the wheel located closest to the base (as pictured). There are two 75mm M12 bolts which are used to attach the gin pole to the outrigger as shown below. Tighten firmly.



Step 7. Attach guy wires

All guy wires have been preassembled and numbered A2-A4, B2-B4, and C2-C4, with the letter corresponding to the outrigger, and number corresponding to the matching lattice module. The guy wire attachment points are also labelled for easy matching.



Step 7. Attach guy wires (continued)

On each guy wire assembly, the Carabiner attaches to the lattice module and D-Shackle attaches to the outrigger leg.

Attach all Carabiners (A, B, and C) to their corresponding lattice sections. Attach only guy wires labelled "B" and "C" to their outriggers. Important: ensure all Carabiner gates have correctly snapped shut.



Step 8. Unspool and attach winch rope

The winch has been pre-attached to outrigger A. Unspool about 30 metres of rope from the winch and run it over the top of the gin pole and lengthways along the tower. Ensure winch rope is seated correctly on top of the gin pole wheel.

Lattice Module 4 has an additional guy wire tab located near the top for attachment of the Pulley Block. Attach using the supplied D-Shackle. Thread winch rope through Pulley Block and run back to the Gin Pole. Use D-Shackle to attach winch rope to top of gin pole below wheel.



Step 8. Raise tower using winch

Prior to beginning the raising process, depending on the equipment you have attached to the top of the tower you may need additional weight at each levelling jack. Ballast can be provided in the form of dead weight or uplift restraint / anchoring. The required weight is determined by operating Wind Zone and payload configuration. Consult your engineer or building professional for guidance. A 275 kg deadweight / anchor downforce per outrigger is a good starting point.

With the winch rope correctly seated, begin winding the winch to take up tension. Perform additional checks to ensure safe lifting.



Step 8. Raise tower using winch (continued)

Additional images provided for reference.



Step 8. Raise tower using winch (continued)

Additional images provided for reference.



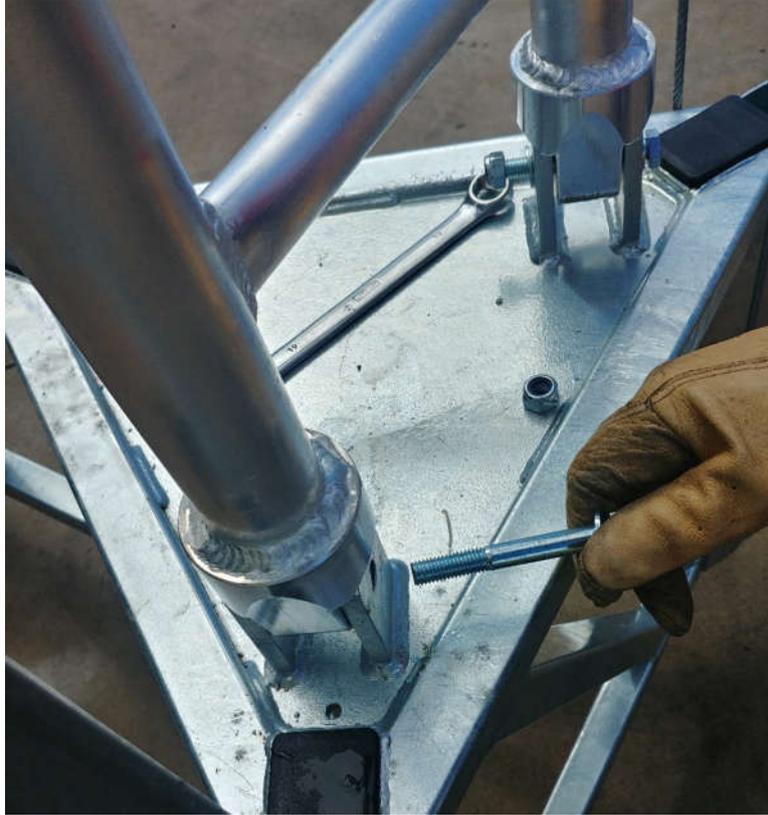
Step 9. Attach last guy wires

Now that the tower is fully raised into position, attach the three remaining guy wires (A2, A3, A4).



Step 10. Bolt Hinge "A"

Secure the remaining hinge (A) on Tripod Base using the XXX bolt and nylock nut. Firmly tighten all three hinges.



Step 11. Final tasks

Perform final tightening of guy wires turnbuckles. Tension adjustments may be necessary to ensure tower is perfectly straight.

When used temporarily the winch may remain in place, however if left for long durations or installed semi-permanently the winch should be removed and stored. The tower setup is now complete.





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