

OCTO 250 ALUMINIUM TOWER 3T

METHOD ASSEMBLY GUIDE



INTRODUCTION

This instruction manual contains all the information required to correctly assemble the OCTO 250 shallow brace mobile access tower.

This Manual should be used in conjunction with a suitable Risk Assessment and Method Statement (by user) relative to the project to be undertaken, **Work at Height Regulations 2005**, Regulation 6(1). It must be noted that all employers have a responsibility to ensure that work methods (practices) and adequate facilities/ resources (including work equipment) are provided to eliminate or minimise risks, **Work at Height Regulations 2005**, Regulations 6, 7, 8 and Schedule 3 Part 2.

Please ensure you read and fully understand the manual. Follow the content during assembly and ensure that the tower is complete prior to use.

This manual must be made available to the user/ assembler at all times.

Sufficient training, combined with necessary experience, must also be considered and be appropriate to achieve competency to undertake basic mobile access tower assembly.

Only competent (and qualified) personnel should undertake erection, dismantling and alteration (and organisation, planning and supervision) of basic mobile access towers, Regulation 5, **the Work at Height Regulations 2005** and consideration should be given to providing additional (minimum) training beforehand, if required (Regulation 6 (5)(b)).

GENERAL SAFETY NOTES

1. Ensure that all necessary components and safety equipment are available and operational.
2. Inspect the tower components for signs of damage or incorrect functioning prior to use. Damaged or incorrect components **must not be used**. Castors and adjustable legs should be periodically lubricated to keep them free running.
3. Erect Exclusion zone and fit Warning Signs to comply with Schedule 3 Part 2 (11), **Work at Height Regulations 2005**.

4. Ensure the scaffolding is to be erected on suitable foundations capable of withstanding the loads imposed by the scaffolding (Schedule 3 Part 1(2) of **Work at Height Regulations 2005**) and, where appropriate, adequate sole boards to be provided.
5. It is recommended that at least two people assemble the tower.
6. OCTO 250 towers **MUST ALWAYS** be climbed from the inside, climbing the frames only.
7. When lifting components or materials, always use reliable lifting equipment and tying methods to ensure there is no possibility of the tower overturning. Always lift from within the tower base.
8. Mobile access towers must only be moved manually, by pushing at the base.

Ensure that the platforms are free of persons and equipment and that brake locks are off prior to movement. Beware of soft or uneven ground and overhead obstructions.

The tower height must be reduced to 4m high and stabilisers raised approx 25mm clear of the ground. On completing the move apply all brakes and check adjustment and stability prior to completion of tower to full assembled height. **Note** Tower height must be reduced to 2m high prior to any moves if less than 4 stabilisers are used.

9. Always inspect the tower after moving and before use.
10. Always beware of live electrical apparatus, cables or moving parts of machinery.
11. Care should be taken when using power tools, wash jets or other tools that cause lateral force.
The maximum lateral force on a freestanding tower at platform level is 20kg.
12. DO NOT use boxes, ladders or other such means to gain additional height.
13. Never bridge between a tower and a building unless specification and approved.
14. Never jump onto platforms.
15. Do not use hoisting arrangements on a mobile access tower.
16. Fit side guardrails at all platforms.
17. Fit toeboards on all working platforms.
18. Fit intermediate rest platforms at 4m intervals (maximum).
19. Mobile access towers are not designed to allow them to be lifted or suspended.
20. In accordance with regulations any tower that has been erected must be inspected every 7 days (minimum) to ensure that the tower continues to comply with the regulations.

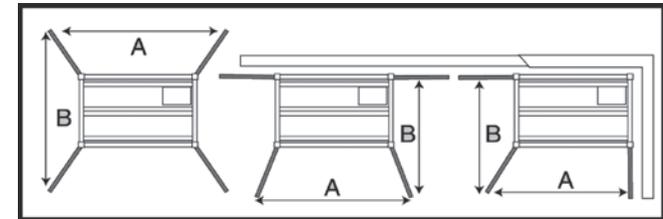
WIND SPEED SAFETY RULES

Where possible, tie in the tower to a rigid structure when working outdoors or in exposed conditions. Beware of the funnelling effect of open ended and uncladded buildings.

Beaufort Scale	Description	Air Speed	Action
0-4	Moderate Breeze Small branches move	13-18 mph	No action required
5-6	Strong Breeze Large branches bend	25-31 mph	Tie tower to a rigid structure
>6	Walking progress impeded	34-40 mph	Dismantle tower if such conditions are expected

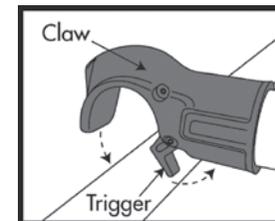
STABILISERS

Stabilisers should be attached at about 45° as shown, so that A is roughly equal to B, and forms the largest possible square. If this is not possible, e.g. façade work, use the alternative methods illustrated.



MAXIMUM LOAD

The maximum load is 225 Kg per platform evenly distributed. A maximum of 3 platforms may be loaded. Maximum load, however, is 625 Kg for total tower.



BRACES

All braces are fitted with self-priming triggers that automatically lock when attached to the tower.

Attach braces square to the tower and remove by releasing the trigger.

When attaching diagonal braces and handrails the braces face down.

THE 3T METHOD OF ASSEMBLY

Whilst our recommended method of assembly to fully comply with the Work at Height Regulations 2005, is by using Advance Guardrails, a secondary method has also been approved and endorsed by both PASMA and the HSE. This method is known as the 3T method (Through The Trap).

NARROW WIDTH TOWERS

Narrow width towers are assembled following the same steps as explained for span towers, except that all platforms are trapdoor platforms ensuring that successive trapdoors are at opposing ends of tower.

COMPONENT BREAKDOWN CHARTS (3T Method - Span)

COMPONENTS	PLATFORM HEIGHT IN METRES											
	2	3	4	5	6	7	8	9	10	11	12	
OCTO 250 SPAN	2	4	4	6	6	8	8	10	10	12	12	
8R Span Frame	2	4	4	6	6	8	8	10	10	12	12	
4R Span Frame	2	0	2	0	2	0	2	0	2	0	2	
Horizontal Brace	6	6	6	10	10	10	10	14	14	14	14	
Diagonal Brace	4	6	8	10	12	14	16	18	20	22	24	
Toeboard (End)* ^c	2	2	2	2	2	2	2	2	2	2	2	
Toeboard (Side)* ^c	2	2	2	2	2	2	2	2	2	2	2	
Adjustable Leg	4	4	4	4	4	4	4	4	4	4	4	
Castor	4	4	4	4	4	4	4	4	4	4	4	
Fixed Platform	1	1	1	1	1	1	1	1	1	1	1	
Trapdoor Platform	1	1	1	2	2	2	2	3	3	3	3	
Stabiliser Std. (Indoor use)	4	4	4	4	4	4	4	0	0	0	0	
Stabiliser Std. (Outdoor use)	4	4	4	4	4	0	0	•	•	•	•	
Stabiliser Large (Indoor use)	0	0	0	0	0	0	0	4	4	4	4	
Stabiliser Large (Outdoor use)	0	0	0	0	0	4	4	•	•	•	•	
Total tower self weight (Kg) - 1.5m	124	136	159	189	211	223	245	286	308	320	342	
Total tower self weight (Kg) - 2.5m	148	162	186	226	250	264	288	339	363	377	400	
Total tower self weight (Kg) - 3.2m	165	179	204	253	277	292	316	376	400	415	439	

• Do not use tower unless tied in

* For one working platform only (additional platforms to be factored accordingly)

c For folding toeboards: 1 per working platform

Additional kit required during Assembly and Dismantle operations (Span)

COMPONENTS	PLATFORM HEIGHT IN METRES											
	2	3	4	5	6	7	8	9	10	11	12	
OCTO 250 SPAN	0	4	4	0	0	4	4	4	4	8	8	
Horizontal Brace	0	4	4	0	0	4	4	4	4	8	8	
Trapdoor Platform	0	1	1	0	0	1	1	1	1	2	2	
Weight of Additional kit (Kg) - 1.5m	0	19	19	0	0	19	19	19	19	37	37	
Weight of Additional kit (Kg) - 2.5m	0	27	27	0	0	27	27	27	27	54	54	
Weight of Additional kit (Kg) - 3.2m	0	35	35	0	0	35	35	35	35	69	69	

Note Weight of Additional kit required during assembly and dismantle operations has not been factored into total tower self weight calculations.

COMPONENT BREAKDOWN CHARTS (3T Method – Narrow Width)

COMPONENTS	PLATFORM HEIGHT IN METRES											
	2	3	4	5	6	7	8	9	10	11	12	
OCTO 250 N/W	2	4	4	6	6	8	8	10	10	12	12	
8R N/W Frame	2	4	4	6	6	8	8	10	10	12	12	
4R N/W Frame	2	0	2	0	2	0	2	0	2	0	2	
Horizontal Brace	6	6	6	10	10	10	10	14	14	14	14	
Diagonal Brace	4	6	8	10	12	14	16	18	20	22	24	
Toeboard (End)* ^c	2	2	2	2	2	2	2	2	2	2	2	
Toeboard (Side)* ^c	2	2	2	2	2	2	2	2	2	2	2	
Adjustable Leg	4	4	4	4	4	4	4	4	4	4	4	
Castor	4	4	4	4	4	4	4	4	4	4	4	
Trapdoor Platform	1	1	1	2	2	2	2	3	3	3	3	
Stabiliser Std. (Indoor use)	4	4	4	4	4	4	4	0	0	0	0	
Stabiliser Std. (Outdoor use)	4	4	4	4	4	0	0	•	•	•	•	
Stabiliser Large (Indoor use)	0	0	0	0	0	0	0	4	4	4	4	
Stabiliser Large (Outdoor use)	0	0	0	0	0	4	4	•	•	•	•	
Total tower self weight (Kg) - 1.5m	101	111	128	156	174	184	201	240	257	267	285	
Total tower self weight (Kg) - 2.5m	118	130	149	187	206	218	237	286	305	317	336	
Total tower self weight (Kg) - 3.2m	131	143	163	210	230	242	262	320	339	352	371	

• Do not use tower unless tied in

* For one working platform only (additional platforms to be factored accordingly)

c For folding toeboards: 1 per working platform

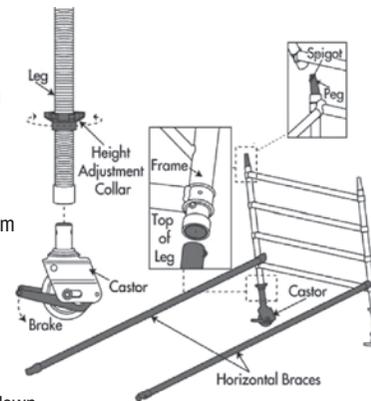
Additional kit required during Assembly and Dismantle operations (N/W)

COMPONENTS	PLATFORM HEIGHT IN METRES											
	2	3	4	5	6	7	8	9	10	11	12	
OCTO 250 N/W	0	4	4	0	0	4	4	4	4	8	8	
Horizontal Brace	0	4	4	0	0	4	4	4	4	8	8	
Trapdoor Platform	0	1	1	0	0	1	1	1	1	2	2	
Weight of Additional kit (Kg) - 1.5m	0	19	19	0	0	19	19	19	19	37	37	
Weight of Additional kit (Kg) - 2.5m	0	27	27	0	0	27	27	27	27	54	54	
Weight of Additional kit (Kg) - 3.2m	0	35	35	0	0	35	35	35	35	69	69	

Note Weight of Additional kit required during assembly and dismantle operations has not been factored into total tower self weight calculations.

THE BASE SECTION

- Fit four legs and castors (or base plates) to two 4 rung span frames (see illustration). Turn the height adjustment collar on each leg until approximately 100mm from the lower end. Insert each leg until the collar is in contact with the frame's tubing.



- Set each castor brake on by moving the brake lever fully down.
- With each frame's spigot facing inward, attach two horizontals to the upright of each frame, above the first rung and square the two frames to each other. Note It may be advantageous to place a platform at low level to assist in "squaring" tower.

- With the aid of a spirit level, you should now make any necessary adjustments to level the tower by turning the adjustment collar.

- Attach two temporary horizontal braces to 3rd rung of frame (at least 100mm from outer edge).



- Add two 2m frames on top of base (1m) frames.

- Attach two diagonal braces to the bottom rung of each base frame, with one brace being placed as far to the outer edge as possible, the other brace being placed at least 50mm (one tube width) from outer edge. Then attach the other end of both braces to the bottom rung on the opposing 2m frame.



- Attach two more diagonal braces (in accordance with brace pattern) from 1st rung to 5th rung of upper frame.

- Remove temporary horizontal braces.

The base is complete

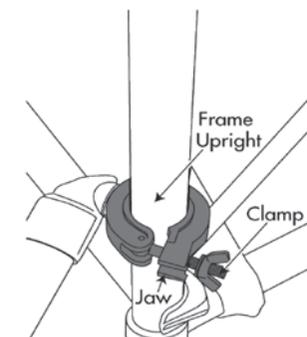
STABILISERS

When specified, the correct stabilisers or outriggers must always be used.

When using standard stabilisers, fit them now.

To attach the stabiliser, fit the upper screw clamp to frame upright, approx.50mm above the seventh rung (from ground) as shown above, then fit the lower screw clamp as low as possible to the frame upright.

Set each stabiliser at 45° creating as large a footprint as possible and ensure that they are in firm contact with the ground.



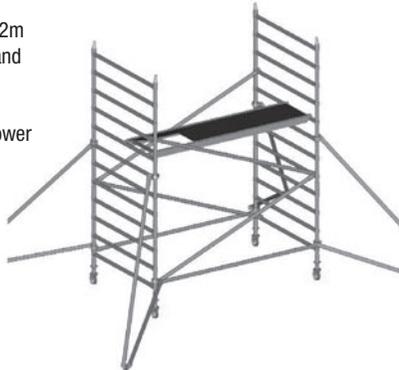
Note It may be advantageous to ensure that stabilisers are fitted from frame side as shown.

Large Stabilisers can only be fitted after upper frame has been placed.

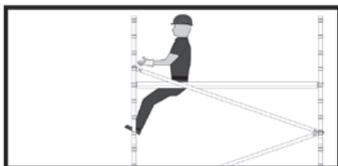
If repositioning stabilisers when in position then screw clamps MUST be loosened prior to movement then re-fixed.

- Place a trapdoor platform at 2m level (8 rungs from ground) and set to one side of tower.

Note The trapdoor platform hinge to be set to inside of tower (temporary only to assist in assembling tower).



- Operative should then climb through the trap and rest against the platform (just below base of back) with feet firmly placed on frame rungs (as shown).



- Fit horizontal braces to both sides of platform at 2nd and 4th rungs above platform level to form guardrail protection to single platform only.

It is safe to use the platform when horizontal braces have been locked and secured in place.

- Add two more 8 rung frames on top of the existing frames.

- Attach two diagonal braces from lower frame to upper frame in accordance with bracing pattern.

- Attach two more diagonal braces from 1st rung to 5th rung of upper frames.

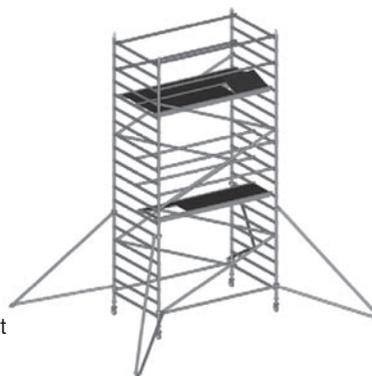
- Place fixed platform initially at 4m level and slide across to opposite side of tower (as shown) from where operative is standing below then place trapdoor platform ensuring that trap is placed at opposing side to trap on platform below.

Note Ensure that the trapdoor hinge is to the outside edge.

- Repeat step 11 above and climb through the trap.

- Fit horizontal braces to both sides of platform at 2nd and 4th rungs above platform level to form permanent handrail. *It is safe to use the platform once horizontal braces are locked and secured in place.*

Repeat steps 10 to 18 until desired height has been reached (max. height 8m outdoors and 12 m indoors).



DISMANTLING THE TOWER

The following instructions describe the steps necessary to dismantle the OCTO 250 tower utilising the 3T method.

For your safety and that of others, take particular care not to allow components to fall to the ground since this will not only result in damage but may cause serious injury.

- At top platform level unlock horizontal braces and diagonal brace at furthest positions from the trap before descending through the trap. As before, rest against the platform (just below base of back) with feet firmly placed on frame rungs.

- Remove horizontal braces and pass down to operatives below.

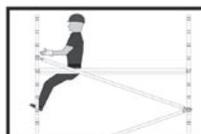
- Unlock diagonal brace at top platform level.

- Descend to platform level below and remove top platform.

- Standing on platform, unlock diagonal braces fixed at upper frames then remove diagonal braces completely.

- Remove upper frames.

Repeat steps 1 to 6 until dismantle process is complete.



ODD HEIGHT TOWERS – 3T Method

- Fit four legs and castors (or base plates) to two 8 rung span frames (see illustration). Turn the height adjustment collar on each leg until approximately 100mm from the lower end. Insert each leg until the collar is in contact with the frame's tubing.

- Set each castor brake on by moving the brake lever fully down.

- With each frame's spigot facing inward, attach two horizontals to the upright of each frame, above the first rung and square the two frames to each other.

Note It may be advantageous to place a platform at low level to assist in "squaring" tower.

- With the aid of a spirit level, you should now make any necessary adjustments to level the tower by turning the adjustment collar.

- Attach two diagonal braces to the bottom rung of each base frame, with one brace being placed so the brace hook is as far to the outer edge as possible, the other brace hook should be placed at least 50mm (one tube width) from outer edge.

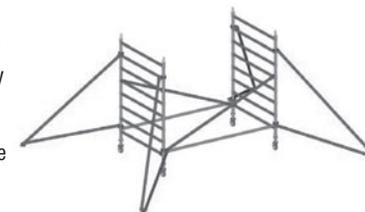
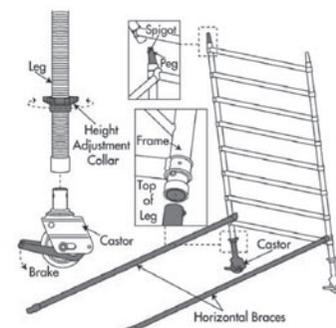
- Then attach the other end of both braces to the fifth rung on the opposing 2m frame.

- Fit stabilisers

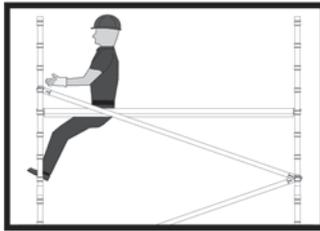
- Place a trapdoor platform at 1m level (4 rungs from ground) and set to one side of tower.

Note The trapdoor platform hinge to be set to inside of tower (temporary only to assist in assembling tower).

This platform may be used temporarily to assist in the erection of the tower.



9. Operative should then climb through the trap and rest against the platform (just below base of back) with feet firmly placed on frame rungs (as shown).



10. Fit horizontal braces to both sides of platform at 2nd and 4th rungs above platform level to form guardrail protection to single platform only.

It is safe to use the platform when horizontal braces have been locked and secured in place.

11. Add two more 8 rung frames on top of the existing frames.

12. Attach two diagonal braces from lower frame to upper frame in accordance with bracing pattern.

13. Attach two more diagonal braces from 1st rung to 5th rung of upper frames.

14. Place fixed platform initially at 3m level and slide across to opposite side of tower (as shown) from where operative is standing below then place trapdoor platform ensuring that trap is placed at opposing side to trap on platform below.

Note Ensure that the trapdoor hinge is to the outside edge.

15. Repeat step 9 above and climb through the trap.

16. Fit horizontal braces to both sides of platform at 2nd and 4th rungs above platform level to form permanent handrail.

It is safe to use the platform once horizontal braces are locked and secured in place.

Repeat steps 11 to 16 until desired height has been reached (max. height 8m outdoors and 12 m indoors).

DISMANTLING THE TOWER



1. At top platform level unlock horizontal braces and diagonal brace at furthest positions from the trap before descending through the trap. As before, rest against the platform (just below base of back) with feet firmly placed on frame rungs.
2. Remove horizontal braces and pass down to operatives below.
3. Descend to platform level below and remove top platform

4. Remove diagonal braces fixed to upper frames.

5. Remove upper frames.

Repeat steps 1 to 5 until dismantle process is complete.

TRAINING

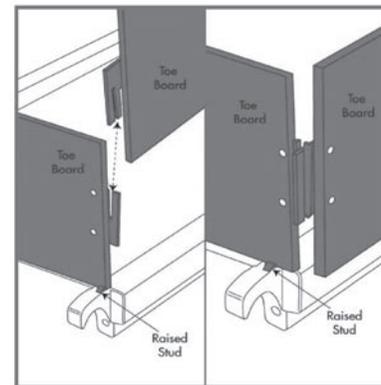
These instructions do not take the place of proper training. Consult your supplier for details of specific training courses for users of mobile access towers.

TOEBOARDS

Whichever position the working platform is assembled toeboards must be fitted.

Slot the toeboard set together and position on the outer edge of the platform.

The toeboards are designed so that the side boards overhang the platform and the end boards are retained by raised studs on the platform hooks (see illustration).



Note If using one piece folding toeboards then select correct toeboard for the desired tower, unfold and fit in place, retained by raised studs on the platform hooks (as above).



OCTO 250 ALUMINIUM TOWER 3T METHOD ASSEMBLY GUIDE



Tel: **0113 279 9000**
 info@zigzagaccess.co.uk www.zigzagaccess.co.uk

174A Gelderd Rd, Leeds LS12 6LZ
 Tel: 0113 279 9000 Fax: 0113 279 9005