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Stair Tower Erection Procedure

# Stair Tower Erection Procedure



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# 7.0 Metre Stair Tower



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

1. Measure height of work area to be accessed by stairs. Calculate the number of stairs required - there is 465mm between each transom and the stairs are available in 2 rung and 3 rung designs. If the measurements of the required height are accurate the number of stairs can therefore be calculated.

NB: It should be noted that the bottom stair starts at approximately 465mm from ground level.

2. One person holds an upright frame, the other attaches a horizontal brace to the standard of the upright frame, then attaches another one to the standard on the other side of the upright frame (do not attach horizontals to transoms).

Note: First horizontal brace above the bottom transom. Second horizontal brace goes below.

Photo 2A



3. Attach the other end of the horizontal brace to the standards on another upright frame.
4. Attach plan diagonally from near the bottom of the standard on one frame to the standard on the other frame.

Photo 4A



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

5. Attach diagonal braces across the back of the base. These diagonals are to be attached onto the transoms at each end. (Refer Photo No. 5A below).

Photo 5A



6. Attach hop-ups to side where stairs are to be accessed (the bottom of the tube should be level with the bottom of the cup nut).

Photo 6A

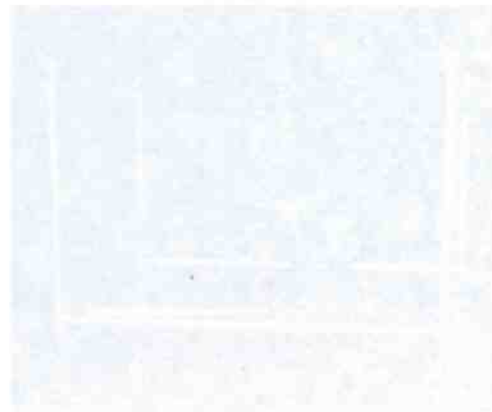
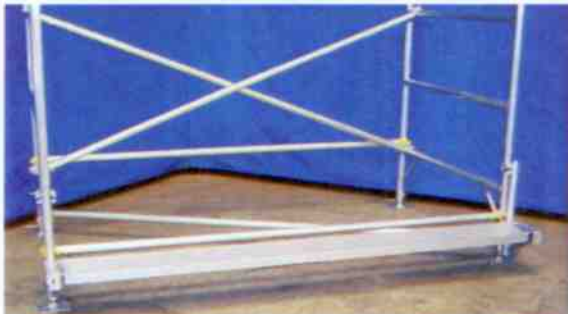


Photo 6B



7. Attach plank across hop-ups.

Photo 7A



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

- Two people carry 1st set of stairs and attach to appropriate transoms.

Photo 8A



- Attach second level upright frame on top of first level.

Photo 9A



- Repeat the above process for the other side. Access is gained via first set of stairs.

Photo 10A



Photo 10B



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

11. Attach three horizontal braces:

- across the back of the frame, one transom above the top of the first set of stairs
- across the front of the frame, two transoms above the top of the first set of stairs
- across the back of the frame directly above the first one.

Photo 11A



Photo 11B



Photo 11A & 11B



Photo 11C



12. Two people carry the second set of stairs and attach to appropriate transoms (the bottom of each set should be adjacent to the top of the previous set). The recommended technique for attaching the stairs is to attach them at each end to an easily accessible transom, then person with the top end of stairs climbs up the upright frame until in a secure position. The stairs are then lifted one transom at a time until they are in the correct position. (See Photos below).

Photo 12A



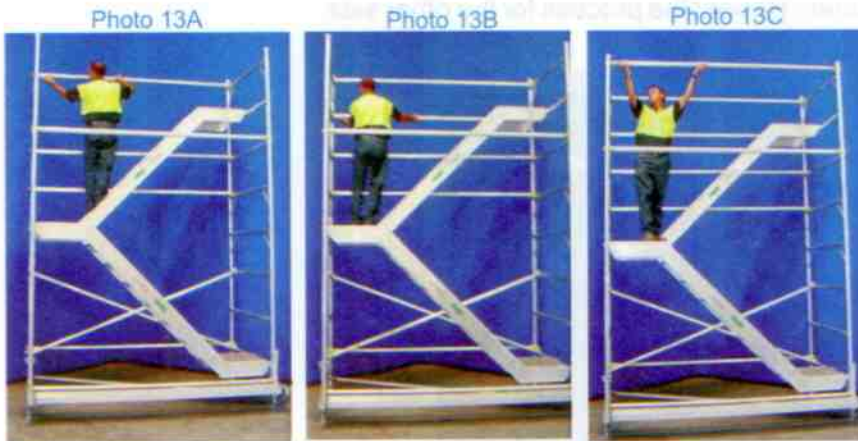
Photo 12B



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

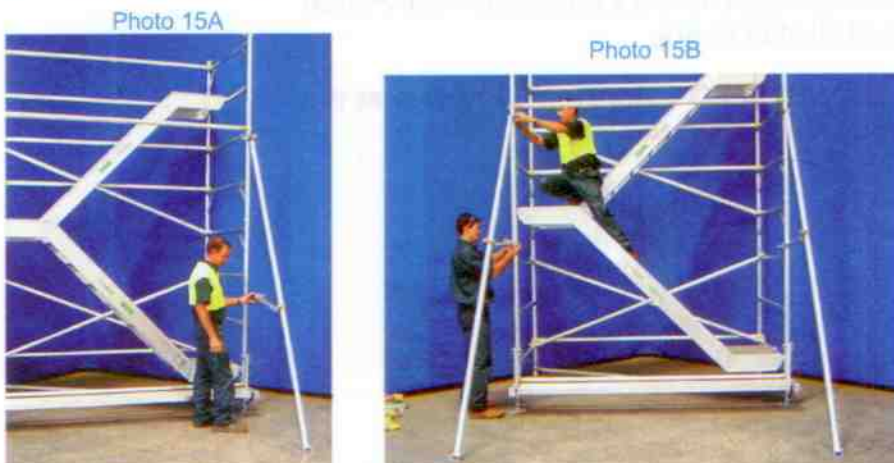
13. Attach horizontal braces as per photos below.



14. Attach diagonal brace for extra support. Diagonal brace must go in opposite direction to stairs.



15. If stairs are to be used as a free-standing system, outriggers must be attached at this stage. If the stairs are to be tied into a building this must be done once the scaffolding reaches 4 metres in height and every subsequent 4 metres.



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

16. The person on the ground passes up the upright frame to the person who is in a secure position on the frame (see Photos 16A 16B)) Attach upright frame. Repeat the process for the other side.

Photo 16A



Photo 16B



17. Attach the horizontal braces as per photos 17A, 17B, 17C.

Photo 17A



Photo 17B



Photo 17C



Horizontal braces are attached above every transom position on the exposed side of all stair risers.

**The only place you DON'T NEED a horizontal brace is at the bottom landing of your ascending stair.**





# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

18. Two people carry the next set of stairs and attach to the appropriate transoms. The recommended technique is to position the stairs parallel to the first set of stairs and attach them to an easily accessible transom. The persons on each end then climb into a secure position and lift the stairs together and attach them one transom at a time until the stairs are in the appropriate position.

Photo 18A



Photo 18B



Photo 18C



Photo 18D



Photo 18E



Photo 18F



19. Attach diagonal braces as per photo 19A.

Photo 19A



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

20. Attach horizontal braces as per photos 20A, 20B & 20C.

Photo 20A



Photo 20B



Photo 20C



21. Person on the ground attaches the rope using a clove hitch knot (Refer attached diagram) to the next upright frame. The person on the scaffolding attached the rope using a clove hitch knot to the appropriate transom. Person on the scaffolding then pulls the upright frame up using the rope. Once the person has a secure grip on the frame, remove the rope and attach the upright frame to the one below it. Repeat for the other side.

Photo 21A



Photo 21B



Photo 21C



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

22. Attach horizontal braces as per Photos 23A, 23B & 23C.

Photo 23A



Photo 23B



Photo 23C



23. Collect the next set of stairs. For the initial step, lift the stairs so they are vertical inside the frame (see Photo 23A below). The bottom person must ascend the first flight of stairs until the stairs can be attached to two accessible transoms, parallel to their final location. Once in this position the process of Steps 12 and 18 are repeated until the stairs are secured in the appropriate location.

Photo 23A



Photo 23B



Photo 23C



Photo 23D



Photo 23E



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

25. Insert diagonal brace as per Photo 25A below.

Photo 25A



Photo 25B



26. Lift upright frames as per Step 21 and attach to the frame below on each side.

Photo 26A



Photo 26B



Photo 26C



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

27. Attach 2 diagonal braces as per Photos 27A and 27B.

Photo 27A



Photo 27B



28. Collect final set of stairs and carry to appropriate position internally (using technique outlined in Steps 12, 18 and 23). Attach to appropriate transoms.

Photo 28A



Photo 28B



Photo 28C



Photo 28D

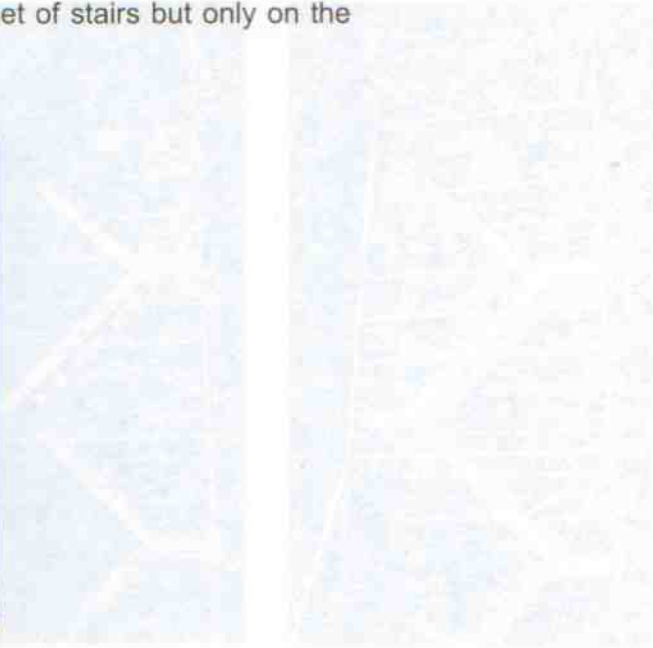


# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

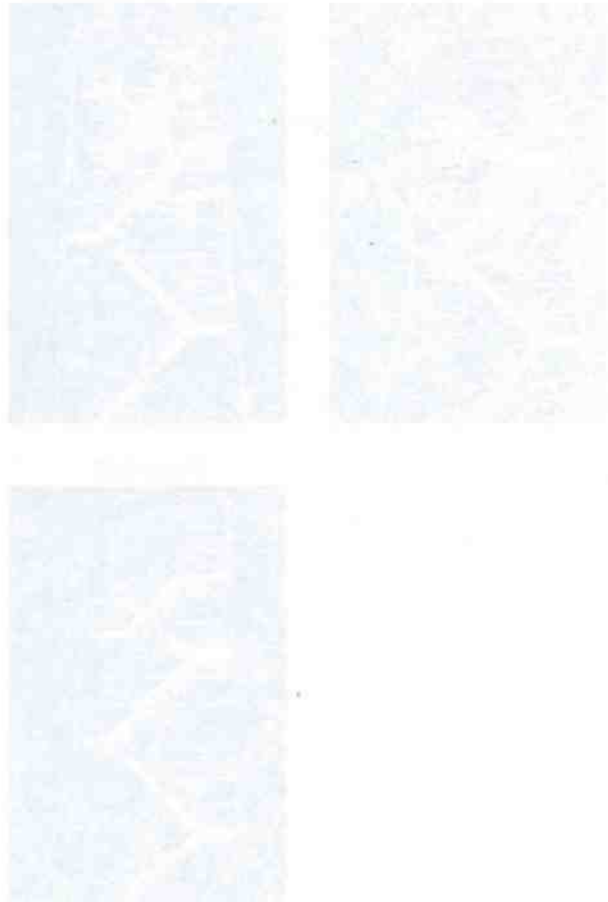
29. Start at the bottom of the staircase and attach the handrails. Handrails are attached to the inside stair stringer. There must be a handrail on each side of the bottom set of stairs but only on the inside of each other set of stairs.

Photo 29A



30. Attach adjustable handrail to mid-rail at top of first set of stairs.

Photo 30A



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

31. Continue to insert handrails.

Photo 31A



Photo 31B



32. At the top platform attach the adjustable handrail to mid and top rails on the side opposite where the stairs will be accessed and egressed.

Photo 32A



Photo 32B



# Erection Procedure

*Must be erected in 2.5metre long configuration only.*

33. Attach adjustable handrail to mid and top rails of bottom platform.

Photo 33A



Photo 34A



Photo 34B



Photo 34C



Photo 34D



Photo 35A



Photo 35B



Photo 35C



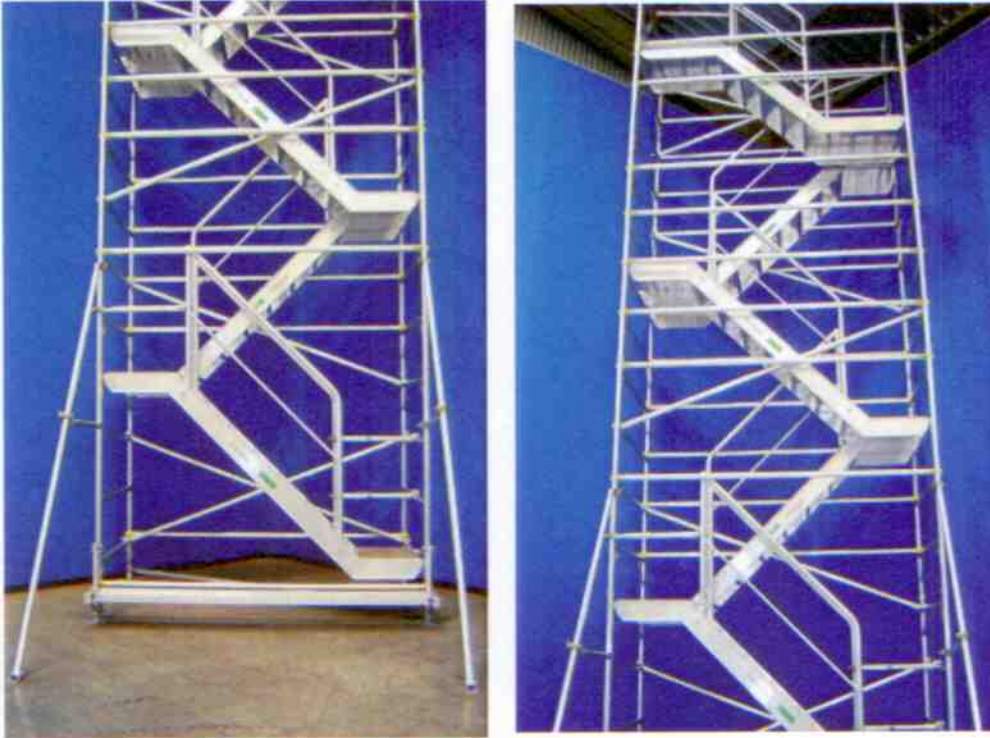
Photo 35D





# Erection Procedure

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