



Instruction Manual BS EN 1004-2:2021
The ALTO HD Large Deck Tower is certified to BS 1139-6:2022

3T - Through The Trapdoor Method



Introduction

Please read these instructions carefully and ensure that you fully understand all of the information contained herein. All of the information in this document is vital for the safe utilisation of your Alto Heavy Duty Tower in Large Deck applications.

These instructions only cover the assembly of this configuration of equipment, which is designed primarily for construction and maintenance tasks in a fixed position over a large area at platform heights of between 4m and 12m. All Alto Access products are professional quality engineered equipment designed primarily with safety in mind and meet or exceed all standards, recommendations and guidelines. Used properly, Alto access equipment will keep you safe when working at height.

This manual contains all of the information necessary to correctly assemble your Alto Heavy Duty mobile access tower equipment for this application in accordance with BS 1139-6:2022 and incorporates all of the requirements of the PASMA 3T method of assembly as endorsed by the HSE.

This manual should be used in conjunction with your Risk Assessment and Method Statement and in line with the Work at Height Regulations 2005 which place an obligation on employers to eliminate or minimise risks. This manual must be made available to the user/assembler at all pertinent times.

A Risk Assessment and Method Statement must be undertaken before installation commences and should include the relevant stabilisation to be applied to the specific structure being built in line with the guidance contained in this manual.

Only competent and qualified personnel should undertake erection, dismantling or alteration, organisation, planning or supervision of mobile access towers. In the case of any doubt, sufficient relevant additional training must be given beforehand to ensure safe use. For further information on the use of mobile access towers consult PASMA (www.pasma.co.uk; Tel +44 (0) 345 2 30 4041).

For any additional technical information or specific advice please contact the manufacturer Lakeside Industries Limited Tel: +44 1527 500577 or Email: sales@altoaccess.com.

Certifications

The Alto Heavy Duty Tower is a mobile access tower certified to BS EN 1004-1:2020 Class 3. These instructions cover applications outside the scope of BS EN 1004-1:2020, within the scope of BS 1139-6:2022 to ensure that the configuration of the equipment meets the relevant requirements. This tower is manufactured in our ISO 9001 accredited facility. This manual complies with BS EN 1004-2:2021.

Maximum Safe Working Loads

The safe working load of each bay of the tower is 1,500 kg including its own weight as it is to be assembled on base jacks. The maximum leg load imposed by the tower on its supporting surface is 750 kg when loaded to its maximum safe working load. The tower is a Class 2 tower.

The maximum safe working load of any individual platform within the tower is 250 kg evenly distributed.

The maximum safe uniformly distributed working load which may be placed on the working platform of the tower is 2,000 kg.

The maximum number of working platforms allowed in this configuration is 1.

The maximum number of operatives permitted on the tower during use is 12.

The maximum number of operatives permitted on the tower during assembly and dismantling is 8.

The maximum number of operatives permitted on any one platform unit is 2.

The maximum number of people on a working platform level permitted to simultaneously exert a horizontal load of 0.3 kN is 1 per bay.

If higher loadings are required, contact your supplier or the manufacturer - Lakeside Industries Limited, for advice. Tel: +44 1527 500577 or Email: sales@altoaccess.com.

Inspection Care & Maintenance

Alto Access equipment is designed and manufactured to the highest standards in the industry and is stronger, more robust and safer than any comparable competitor product. Properly cared for, it will give a long and productive service life.

Inspection and maintenance guidance is published by the manufacturer for Alto HD equipment. This may be found here: www.altoaccess.com/assets/inspection_hd.pdf

ALTO HD Tower System equipment should not be modified in any way and should only be repaired by the manufacturer - Lakeside Industries Ltd - or by authorised agents. If it is suspected that equipment has been damaged, modified or repaired by any other provider, the equipment should be quarantined and returned to Lakeside Industries Ltd for free inspection. No liability will be accepted in relation to equipment that has been subjected to unauthorised modification or repair.

ALTO HD Tower System equipment is a robust product designed to operate in the construction industry environment. However, misuse or mishandling (including dropping or overloading or otherwise incorrectly using components) risks impairing the structural integrity of the components.

Components should be handled with care and stacked and secured safely whilst in transit.

Never use any equipment which is damaged, has parts missing or is improperly assembled.

Safety

- This information shall be available at the location of use of the prefabricated tower scaffold.
- This prefabricated tower scaffold shall only be used according to this information.
- A risk assessment and method statement must be prepared sufficient to ensure the safe assembly, use and dismantling of a large deck tower structure and the elimination or minimisation of all consequent risks.
- Check that all of the necessary components, tools and equipment for the particular tower configuration to be built are on site, undamaged and functioning correctly. Damaged/incorrect components must not be used.
- Large deck tower applications may only be used with 3T Alto towers. Linked tower applications may not be created using Advance Guard Rail (AGR) towers.
- This is a static tower. These instructions only cover the assembly of this specific structure on base jacks. If a mobile tower structure is required, contact the manufacturer Lakeside Industries Limited for advice Tel: +44 1527 500577 or Email: sales@altoaccess.com. This tower is not to be moved when built.
- Check that the surface on which the tower is to be located is capable of supporting the tower and its payload. Check that the level and slope of the ground do not render the location unsafe for the purposes of assembling, using and dismantling the tower.
- Beware obstructions when assembling, altering and dismantling the tower.
- When working outdoors, the weather forecast shall be taken into account before assembly, use and dismantling.
- Platforms must be installed with vertical distances between them not exceeding 2.1m when assembling and dismantling.
- Towers must always be climbed from the inside using the built in ladders (or Alto stair units if applicable). If the work carried out from the tower requires frequent carrying of equipment and materials up or down the tower, an Alto stair tower should be used in preference to a ladderspan tower.

- The tower must be levelled when erected using the adjustable jack legs.
- Four or more persons are required for the safe erection and dismantling of this tower.
- Always comply with the Work at Height Regulations 2005 when erecting, dismantling & using the tower.
- When lifting components, tools or materials, always use reliable lifting equipment and fastening methods and always lift from within the footprint of the tower structure to prevent risk of the tower overturning.
- Users must be aware of the effects of horizontal and vertical loads on the structure when using the tower which may impair the stability of the tower. Examples would be loads resulting from work on an adjacent structure or wind loads which may be increased by tunnelling effects around adjacent buildings.
- Beware live electrical installations, cables, moving machinery or other obstructions when erecting, dismantling or using the tower. The tower is a conductive metallic structure.
- Do not use boxes, ladders or other items to gain additional height.
- Do not stand on guard rails for any reason.
- If the tower is to be used in connection with hoisting arrangements, this requires specific advice from the manufacturer to ensure safety. Contact the manufacturer Lakeside Industries Limited for advice on loadings Tel: +44 1527 500577 or Email: sales@altoaccess.com.
- Prefabricated tower scaffolds in accordance with this standard are not designed to be lifted or suspended.
- When fitting platforms always engage wind latches.
- Fit guard rails to all Platforms.
- Fit toe boards to all Working Platforms.
- Every erected tower must be inspected at least every seven days and any tower which has been left unattended should be inspected before use to ensure that:
 1. No components have been removed or relocated incorrectly;
 2. The tower is still vertical; and
 3. No environmental or other factors have arisen which will influence safe use of the tower.
 4. the applied stabilisation methods and devices are still correctly positioned and operating effectively.
- Alto Access Products recommends the use of the PASMA TowerSure inspection system. For more information, please visit: pasma.co.uk/towersure.
- This tower is not to be sheeted.
- Alterations to the prefabricated tower are only permitted where they are shown in these instructions.

- User training courses cannot be a substitute for instruction manuals and assembly, use and dismantling plans but can only complement them.
- Only the components specified in this information shall be used.
- Damaged or incorrect components shall not be used.
- Prefabricated tower scaffolds designed in accordance with this standard are not anchor points for personal fall arrest equipment.
- Working is only permitted on a platform with a complete side protection including guardrails and toeboards.
- In the event that an alteration to the prefabricated tower scaffold design is required, approval from the supplier and/or designer shall be obtained and a revised instruction manual or assembly, user and dismantling plan created.
- When a prefabricated scaffold tower is used as a means of access to another place it shall:
 - » Be built on base plates
 - » Be tied in to the adjacent structure with ties of sufficient number and capacity to cope with a horizontal load of 10% of the maximum UDL of the working platform i.e. 2 kN.
 - » Be positioned so that any horizontal gap between the platform of the prefabricated scaffold tower and the place being accessed is no greater than 25 mm; and
 - » Be positioned so that the upper surface of the platform and surface which is being accessed are vertically aligned within a tolerance of ± 25 mm.
 - » Means of protection shall be removed only for the time and to the extent necessary to gain access or egress or for the performance of a particular task and shall be replaced as soon as practicable.
 - » Attention is drawn to the Work at Height Regulations 2005 Schedule 1, Schedule 2 Regulation 5 and Schedule 3 Part 1 Regulation 5.
 - » Provision shall be made to prevent falls – not only from the prefabricated tower scaffold, but also from the adjacent structure.
 - » The safety of persons once they have transferred to the adjacent place shall be taken into account as this now becomes a place of work at height.
 - » The strength of the adjacent place shall be assessed to verify that it is safe to step on to (e.g. not a fragile surface) and is a suitable and a safe place for work with adequate collective protection or other fall prevention measures.
 - » A prefabricated tower scaffold shall not be used as an anchor point for personal fall protection or work positioning equipment. They are not designed for this purpose even when tied to a supporting structure.

- » A prefabricated tower scaffold shall not be used as a means or element of edge protection. They are not designed or suitable for this purpose even when tied to a supporting structure. Edge protection shall be designed and installed in accordance with BS EN 13374.

Wind Speeds

The weather forecast must be taken into account before assembly, use and dismantling. Persons using or responsible for towers must beware of the effect of wind on the structure. Wherever possible, as a precaution, it is advisable to tie the tower in to a rigid structure if it is to be used where it is exposed to potential windy conditions. Users should beware the potential tunnelling effect of open ended or unclad buildings and narrow openings between buildings. We recommend that the use of the tower is discontinued in conditions where the wind speed is above 17mph (force 4).

WIND DESCRIPTION	BEAUFORT SCALE	AVERAGE SPEED	INFORMATION
Medium Breeze	4	13-17 mph	Safe to work on tower.
Strong Breeze	6	25-31 mph	Tie the tower to a solid structure. Do not work on tower.
Gale Force	8	39-46 mph	Towers must be dismantled. Towers must not be assembled.

Tying In

If the tower is to be tied in, the following information is relevant:

- This prefabricated tower scaffold has been designed to be properly secured to a suitable adjacent supporting structure capable of withstanding the forces that will be imposed upon it by the attachment of the tower. Devices for securing the tower must be simultaneously rigid in both tension and compression and capable of withstanding and transmitting the loads imposed by the tower to the supporting structure.
- When used, select and install anchors in concrete and masonry must be selected and installed in accordance with BS 8539.
- Scaffold couplers and tubes used for tying in must comply with BS EN 74-1:2005 and BS EN 12811-2:2004 respectively.
- For more information on stabilisation by tying in, see separate guidance documentation issued by the manufacturer.
- If ballast is necessary, it must be secured in position and made of rigid materials such as steel or concrete, but excluding liquids or granular materials.

- If users consider that ballast may be necessary, contact the manufacturer Lakeside Industries Limited for advice on quantities and locations. Tel: +44 1527 500577 or Email: sales@altoaccess.com.

Erecting & Dismantling the Tower

All BS 1139-6:2022 tower structures using Alto HD equipment must be built and dismantled in accordance with the step by step instructions set out below and having regard to the working at height regulations and Health & Safety legislation.

Frames

Almost all linked tower structures compromise alternating “tower” and “bridge” sections. In Alto structures “odd” number bays are generally tower sections.

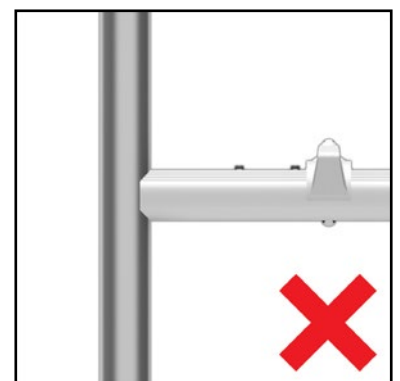
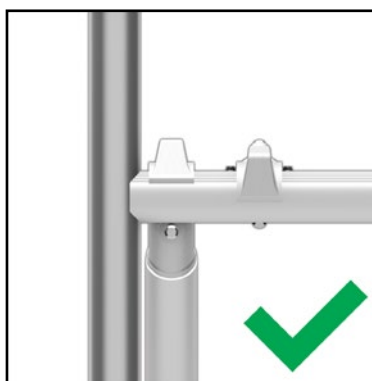
It is important to understand which bays are towers and which are bridges for the following reason.

Frames must always be assembled with the offset conical head pointing inwards on “tower” bays.

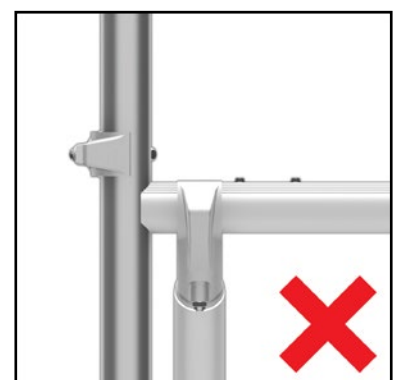
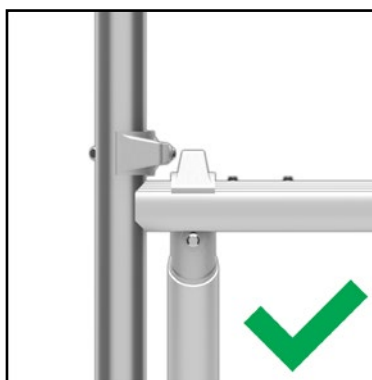


Braces

All braces are fitted with spring loaded pins that automatically lock the brace into position when attached to a tower. Brace hooks **must** be located either over the rung screw heads, between 2 screw heads or between the frame upright and a screw head to prevent lateral movement.



Diagonal braces **must** always be located with the claw opening facing down. Horizontal braces must be located with the claw facing either down (on the rung) or outwards (if on the upright).

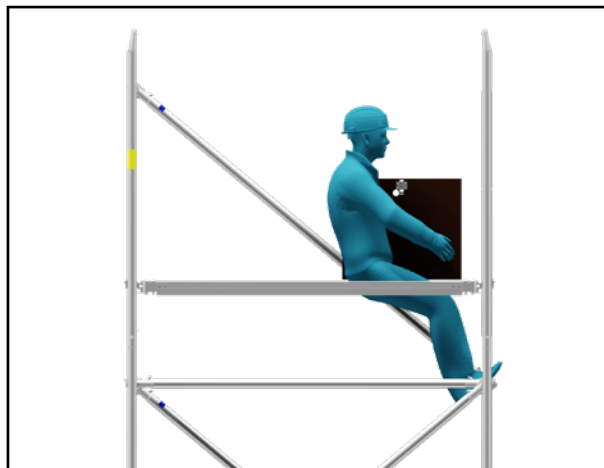


3T Method Explained

The “3T” or “through the trapdoor” method is one of the two permitted ways of assembling a tower without the assembler being at risk of falling. This tower is a 3T tower.

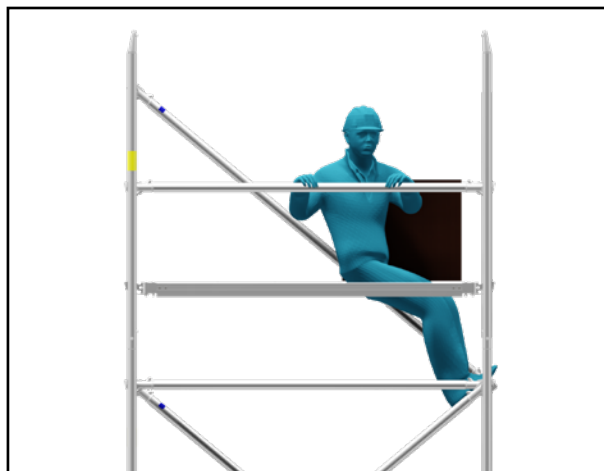
Step 1:

As each new level of platform is installed, the operative takes up a working position in the trap door of the platform, standing on the ladder and leaning back against the edge of the trapdoor aperture.



Step 2:

From this position the operative fits the horizontal braces 500mm and 1000 mm above the platform level (i.e. on the first and second available rungs). If the far end of the guardrail braces don't fully engage when they are put in place, the operative fully engages it when first climbing up onto the platform. This process ensures that operatives never have to stand on an unguarded platform.



Stabilisation

Stabilisers should always be attached to the linked tower structure where specified, so as to maximise the width of the tower structure. Set the stabilisers so they project out perpendicularly to the long side of the linked tower structure. The correct size stabilisers must always be used – see component schedule for details. Where the tower is to be stabilised by tying in, Users should consult the tying in guidance published by the manufacturer Lakeside Industries Limited.

Unattended Towers

To prevent use by unauthorised persons of complete or incomplete towers when unattended, steps should be taken to prevent unauthorised access. Appropriate steps may include some or all of the following:

- Use of scaffold alarms.

- Suitable physical means such as barriers or site fencing to prevent access to the area immediately around the tower.
- Warning signs identifying the areas where access is not permitted should be displayed at the access points to area occupied by the tower.
- Attaching a well designed and correctly fitted ladder guard to the lowest levels of the tower.
- Appropriate site security.
- Towers which have been left unattended should be inspected before use as outlined on page 5 above.

Signage

After assembly or alteration, the following minimum information shall be displayed on the prefabricated tower scaffold and be clearly visible from the ground (e.g. on a tag):

- The name and contact details of the responsible person.
- If the tower is ready for application or not.
- The load class and the uniformly distributed load.
- If the prefabricated tower scaffold is intended for indoors use only.
- The date of assembly.
- The maximum number of simultaneous working platforms permitted.
- The maximum number of persons permitted on the working platform(s) during use.
- The maximum number of persons permitted on the tower during assembly and dismantling.
- The maximum number of persons permitted on any one platform.
- The maximum safe working load on working platforms.
- The maximum safe working load on the prefabricated tower scaffold.
- The load class of the prefabricated tower scaffold.
- The maximum horizontal force permitted at the working platform(s).
- The maximum wind limits for working on the prefabricated tower scaffold.
- The maximum wind limits for the prefabricated tower scaffold.
- The maximum safe working load on any individual platform unit is reduced to 200kg when the components are used in this tower configuration.

COMPONENT SCHEDULE

CODE	PART DESCRIPTION	Wt (kg)	PLATFORM WORKING HEIGHT				
			INT. & EXT. USE			INTERNAL USE	
			4.4m	6.4m	8.4m	10.4m	12.4m
2233	HD Adj. Swivel Base Jack	2.2	16	16	16	16	16
2001	HD 1.4m Base Frame	12.9	4	4	4	4	4
2212	HD 1.4m 5 Rung Ladder Frame	15.5	4	4	4	4	4
2002	HD 1.4m Main Frame	10.9		4	8	12	16
2213	HD 1.4m 4 Rung Ladder Frame	13.8	4	8	12	16	20
2008	HD 1.4m 1/2 Frame	5.6	4	4	4	4	4
2215	HD 1.4m 2 Rung Ladder Frame	6.9	4	4	4	4	4
2009	HD 1.4m Walkthru' "H" Frame	10.7	4	4	4	4	4
2010	HD 1.4m Walkthru' Frame Gate	3.9	4	4	4	4	4
2040	HD 1.8m Brace	2.6	68	84	104	120	136
2041	HD 2.7m Brace	3.6	40	48	60	72	80
2092	HD 2.7m x 2.0m Bridge Tower Diagonal Brace	4.6	4	4	8	8	8
2043	HD 1.8m Plain Platform	14.4	8	8	10	12	14
2044	HD 2.7m Plain Platform	19.7	6	6	6	6	6
2047	HD 2.7m x 0.575m Narrow Plain Platform	19.6	3	3	3	3	3
2201	HD 1.8m Trap Platform	15.0	8	12	16	20	24
2098	HD 1.8m Platform Beam	9.4	6	6	6	6	6
2075	HD 1.8m Cantilever Infill Plate (Socket Version)	5.2	6	6	6	6	6
2074	HD Toeboard Corner Bracket	0.9	4	4	4	4	4
2079	HD Toeboard Inline Bracket	0.5	8	8	8	8	8
2069	HD 1.8m Timber Toeboard Side	5.0	2	2	2	2	2
2071	HD D/W Timber Toeboard End	3.6	4	4	4	4	4
2086	HD 1.8m Timber Toeboard Side - Linked Tower (Blue)	7.6	4	4	4	4	4
2089	HD 2.7m Timber Toeboard Side - Bridge Tower	7.7	2	2	2	2	2
2090	HD Platform Infill Plate Locator Pin	0.5	8	8	8	8	8
2056	HD Small Stabiliser	6.0	8	8			
2057	HD Large Stabiliser	7.8			8	8	8
TOTAL SELF WEIGHT OF TOWER (kg)			1281	1510	1826	2098	2356

ASSEMBLY INSTRUCTIONS

Step 1

Set all base jacks with a nominal 150mm thread visible below the collar to assist in levelling. Insert base jacks into the bottom of a 5 rung frame and a 5 rung ladder frame. Ensure the spring loaded pin is engaged into the hole in the side of the frame uprights. Ensure that the ladder frame is located at the correct starting position at the outer end of Bay 1 of the assembly.



Step 2

Connect 2 horizontal braces to the uprights of the ladder frame in the area just above the bottom rung. Make sure that the braces are connected from the inside of the tower facing outwards. Make sure that the frame head fittings are pointing inwards into the tower and the frames are correctly oriented for the intended position of the overall tower.



Step 3

Connect the plain frame to the horizontal braces. Ensure that the braces are at the lowest part of the upright - resting on the horizontal rungs for the frame. Make sure that the frame head fittings are pointing inwards into the tower. The ladder frame should be located in the required starting position to ensure correct positioning of the final structure.





Step 4

Connect two 2.7m diagonal braces to the frames as shown. Keep the diagonal braces as close to the frame uprights as possible. Ensure that they run in opposite directions to each other.



Step 5

Install a trap platform on the third rung up & four horizontal braces as guard rails. Engage the wind latches. Clip a fifth horizontal brace on the top rung of the frames, on the opposite side to the guard rails. Using a spirit level, ensure that the framework is completely level & vertical by adjusting the legs. Twist the serrated collar to adjust up & down. **Levelling is crucial for all advanced tower structures.**



Step 6

Connect a 5 rung plain frame & base jacks to the existing tower's plain frame using two horizontal braces. Ensure the new frame is orientated with the head fittings pointing away from the first tower. Clip the braces to the frame uprights, just above the bottom rung of the frames and ensure they are clipped on the inside of the frame - as shown. One person should hold the new frame upright until the next stage is in progress.

Step 7

Install two horizontal braces on the top of the frames. Clip the braces to the frame uprights, just above the top horizontal rungs of the frames. Ensure the braces are clipped on the inside of the frame - as shown. Now, clip another two horizontal braces on the bottom of the frames, to start to form Bay 3. Clip the braces to the frame uprights, just above the bottom horizontal rungs of the frames. Ensure the braces are clipped on the inside of the frame and underneath the braces installed in step 6 - as shown.



Step 8

Repeat steps 3-5 for the third bay - substituting the plain frame for a ladder frame as shown. Ensure that the diagonal braces run in the same direction as Bay 1 on each side of the tower and the platform wind latches are engaged. Using a spirit level, ensure that the framework is completely level & vertical by adjusting the legs. Twist the serrated collar to adjust up & down. **Levelling is crucial for all advanced tower structures.**



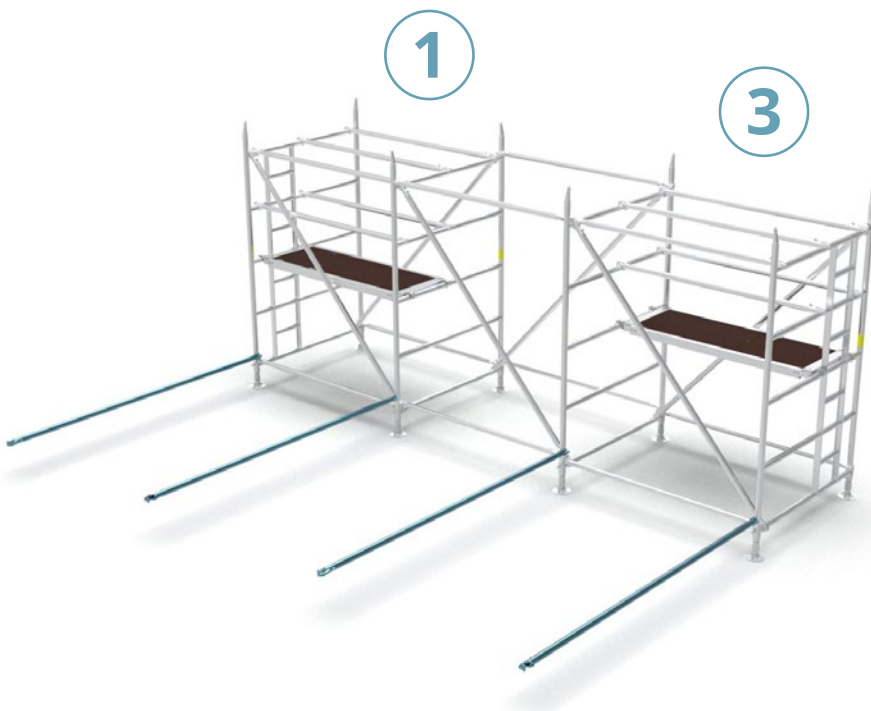
Step 9

In the middle bay, connect two 2.7m diagonal braces to the frames as shown. Keep the diagonal braces as close to the frame uprights as possible. Ensure that they run in opposite directions to each other and parallel to the braces in the end bays.



Step 10

On the side of the tower that faces the next run, install four 2.7m horizontal braces in the positions shown. Ensure that the braces are connected to the frame uprights.



Step 11

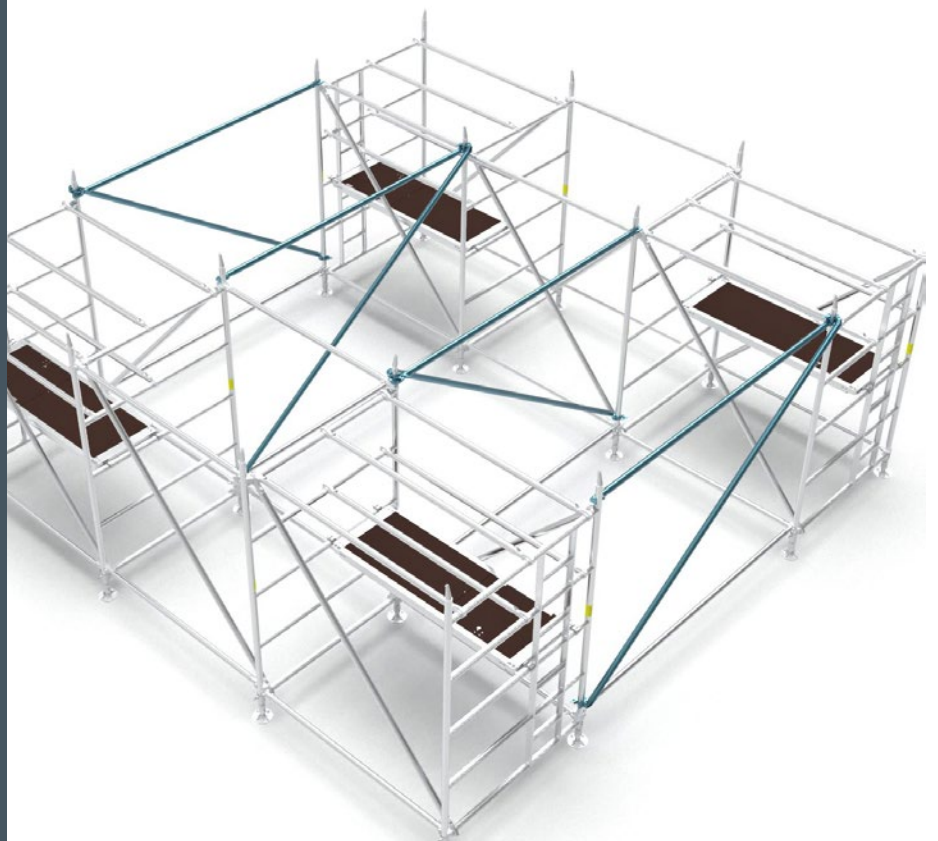
Repeat steps 1-9 to create the start of the second run. Ensure that the new structure is connected to the first run using the horizontal braces fitted in step 10. Make a final check to ensure that the tower is in the correct position for the build. Level the new run and square it to the first run. Make sure that the whole structure is consistently levelled and squared.

Note: The levelling and squaring in this step is critical to mitigate any issues in the build further up the tower.



Step 12

Connect the first run to the second run with four 2.7m horizontal braces at the top of the frames. These connect to the frame uprights just above the top rungs of the frames. Ensure each brace is clipped on from the inside out. Now fit four 2.7 x 2.0m diagonal coupler braces from the bottom of the one frame upright to the top of the opposite frame upright in the direction shown. Loosely connect the upper coupler of the brace to the frame upright in a position just above the upper horizontal brace. Then connect the bottom coupler to the frame upright wherever the two parts meet. Small vertical movements may be required to miss all the braces at the top and bottom. Fully tighten the couplers.

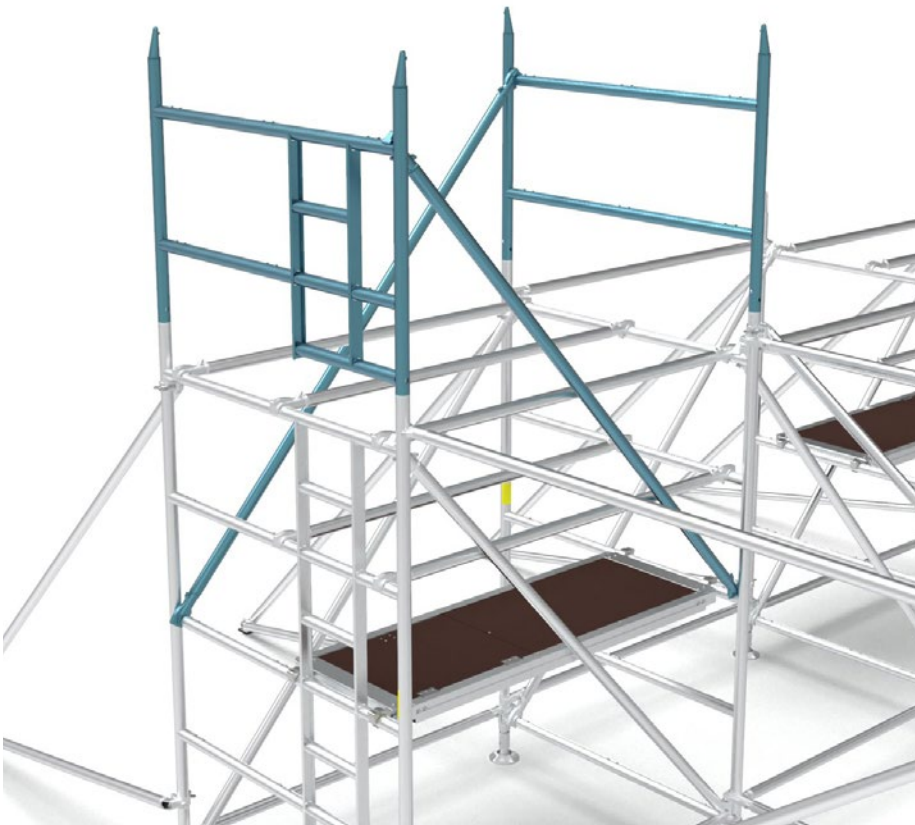




Step 13

Using a spirit level, ensure that the framework is completely level & vertical by adjusting the legs. Twist the serrated collar to adjust up & down to ensure that all feet are fully grounded. Levelling is crucial for all advanced tower structures.

Now connect eight correctly sized stabilisers - one connected to each frame in each run. Before tightening the couplers, orientate all the stabilisers so they are perpendicular to the long side of the tower, as shown.



Step 14

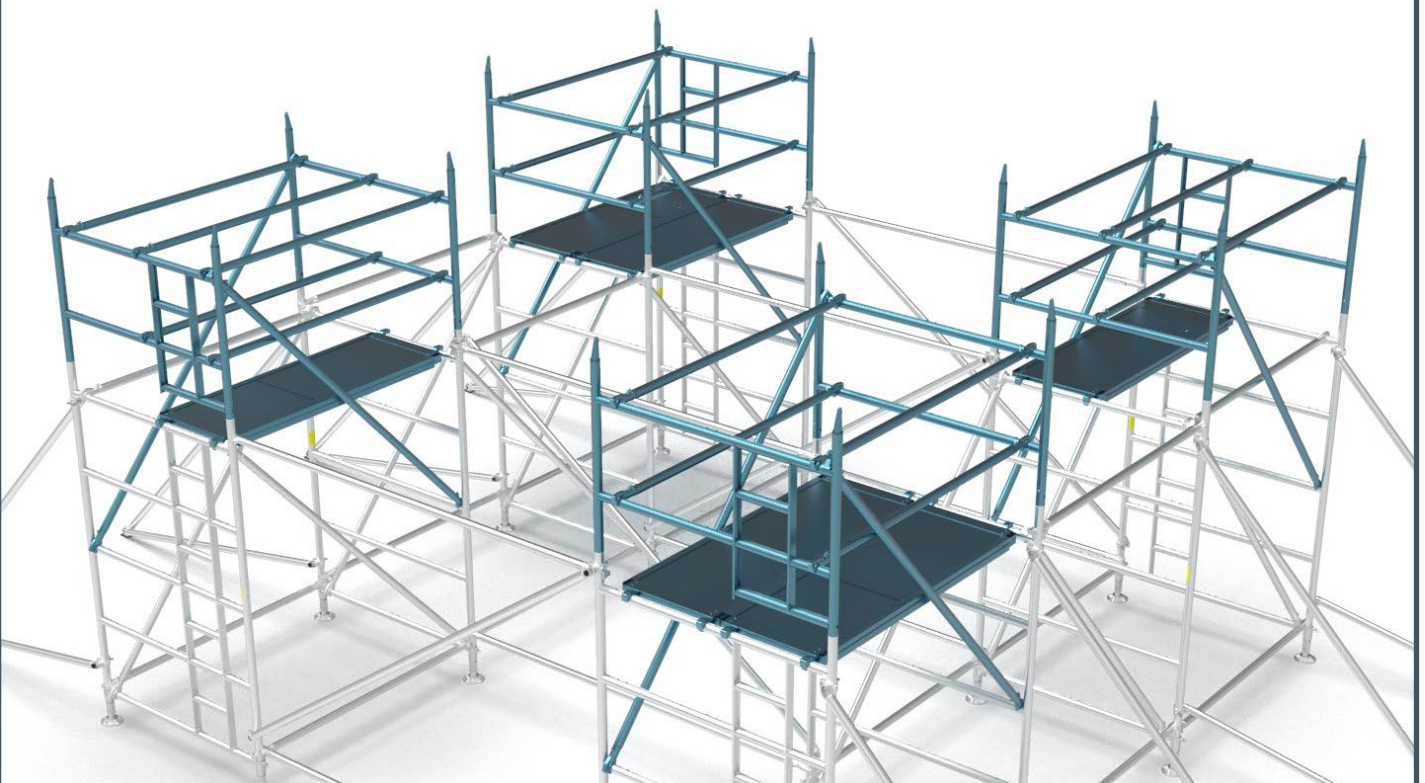
Starting from Bay 1, working from the temporary platform, install a 2 rung main frame & a 2 rung ladder frame onto the base frames. Then, clip onto the top rungs two 3 rung diagonal braces (blue). The other end connects to the rung 3 below on the opposite face. Diagonal braces always run parallel to the braces below. Check that the tower is still exactly level and vertical.

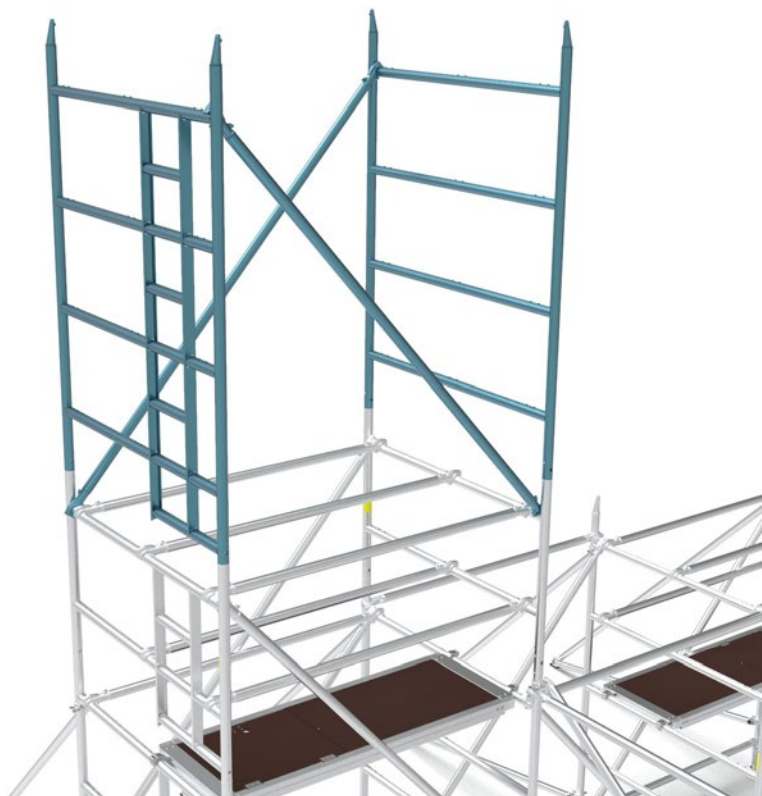
Step 15

Working from the ground or using the 3T method, remove the trap platform and four guardrails. Leave the 5th horizontal brace on the top rung of the base frames. Relocate the platform up to the fifth rung of the base frame. Engage the wind latches. Using the 3T method, add four guardrails. Finally add a 5th horizontal brace on the top rung - on the opposite side of the tower to the guardrails.



If assembling a 4.4m tower, repeat steps 14 & 15 in Bays 4. In Bays 3 & 6 add an additional plain platform alongside the trap platform. The plain platform can be installed before the trap platform, from the level below and slid over to the far side of the tower. Ensure the platform is located correctly and the hooks are not resting on the screws on top of the rungs. The 2 horizontal braces that are normally in the centre of the tower are now located close to the frame uprights. Proceed to Step 28.





Step 16

Working from the new platform, Install a 4 rung plain and 4 rung ladder frame. Then, clip onto the top rungs two 2.7m diagonal braces running in opposite directions to each other. Diagonal braces always run parallel to the braces below on the same side of the tower.

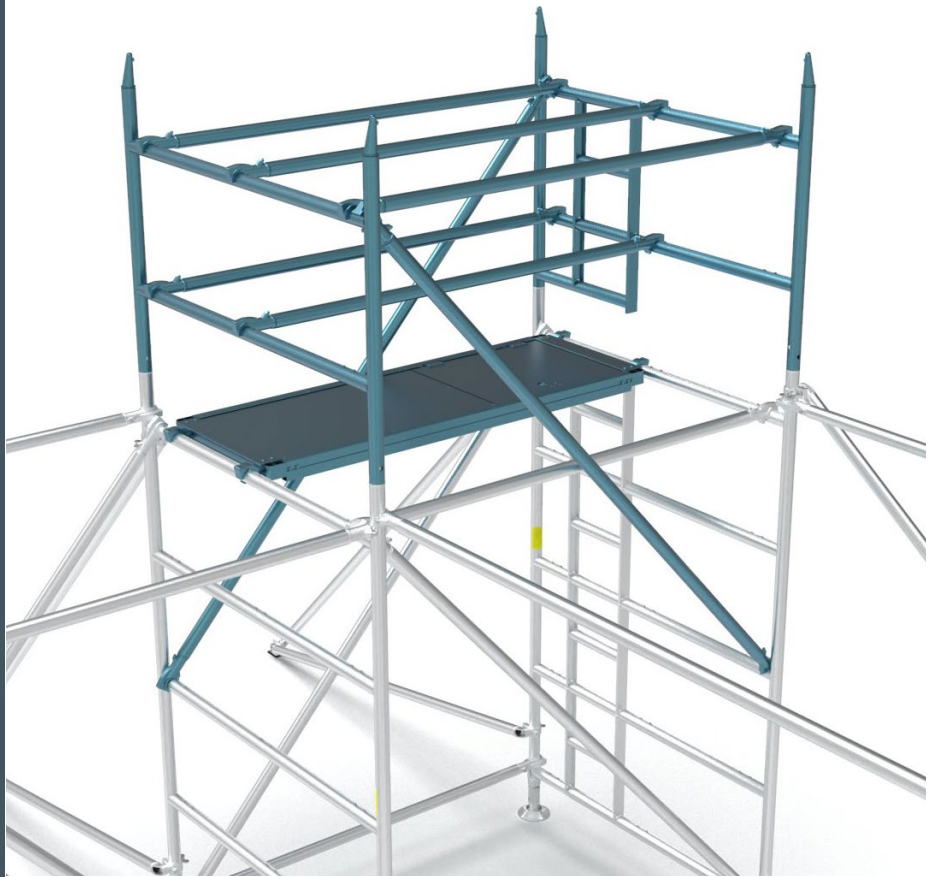


Step 17

Install a trap platform 4 rungs above the previous platform. Engage the wind latches. Using the 3T method, install four horizontal braces as guard rails in the positions shown.

Step 18

Repeat Steps 14 to 15 in bay 3.

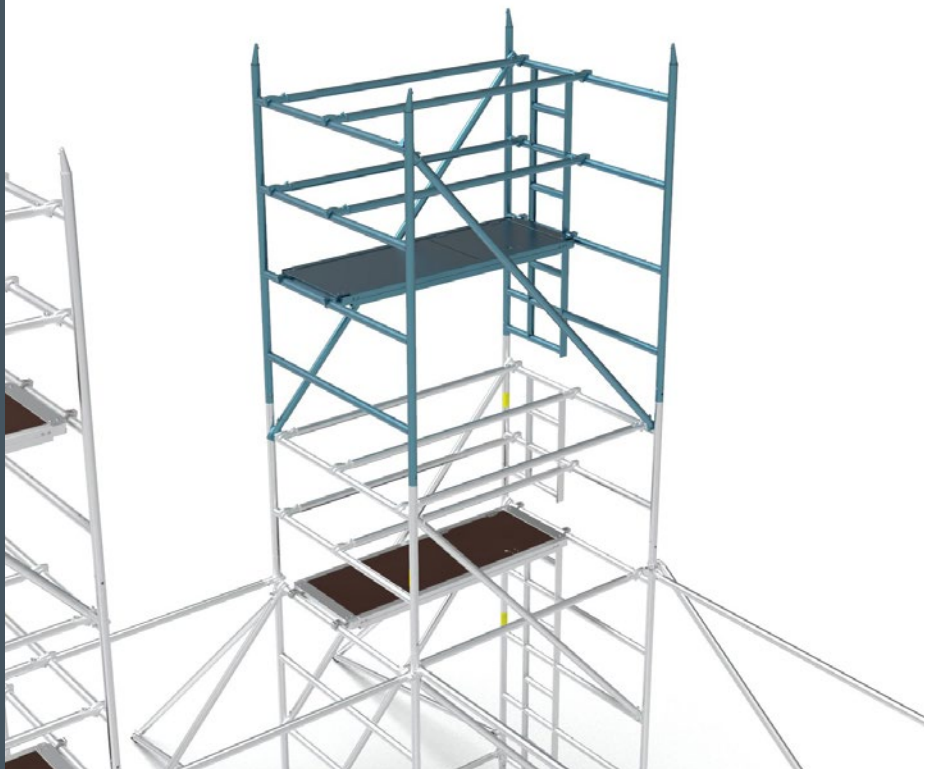


Step 19

Repeat steps 16 & 17 in bay 3.

If assembling a 6.4m tower, repeat steps 14 to 19 in the other half of the structure, but when installing the uppermost platform in Bays 3 & 6 add an additional plain platform along side the trap platform. To do this the plain platform can be installed first from the level below and slid over to the far side of the tower. Ensure the platform is located correctly and the hooks are not resting on the screws on top of the rungs. The 2 horizontal braces that are normally in the centre of the tower are now located close to the frame uprights.

Then go straight to Step 28.



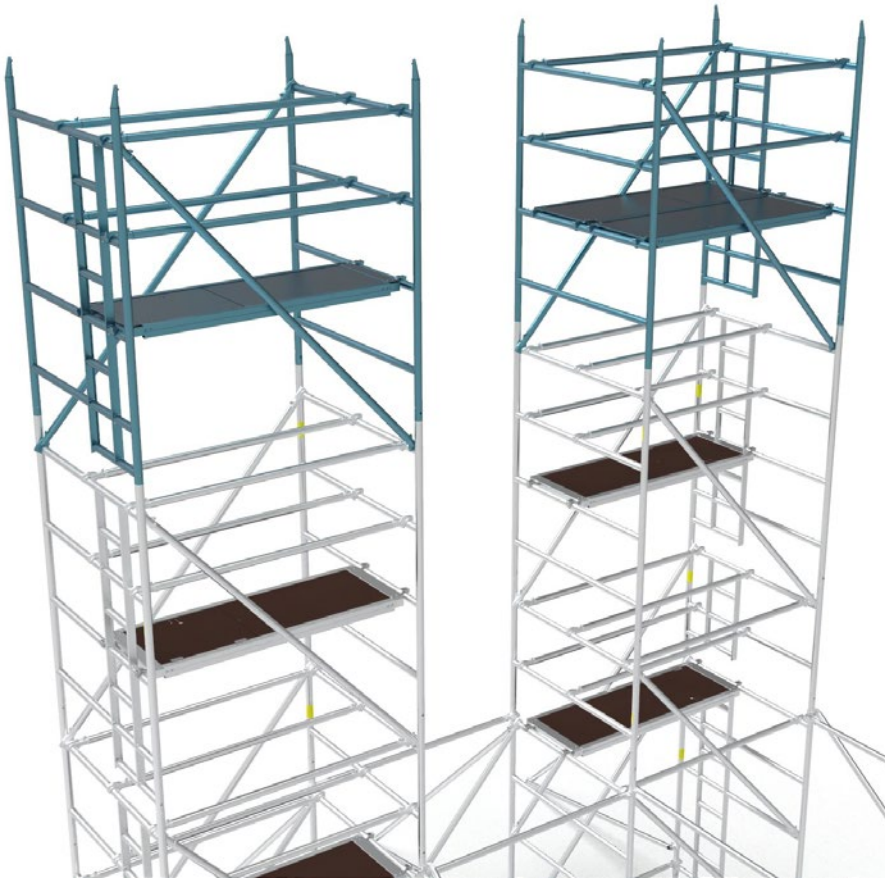
Step 20

Working in Bays 1 & 3, add another lift to each tower as done in Steps 16 & 17, but when installing the platform in Bay 3 add an additional plain platform along side the trap platform. To do this the plain platform can be installed first from the level below and slid over to the far side of the tower. Ensure the platform is located correctly and the hooks are not resting on the screws on top of the rungs. Ensure all the wind latches are engaged. The 2 horizontal braces that are normally in the centre of the tower are now located close to the frame uprights.

Step 21

Install two 1.8m horizontal braces into Bay 2 to connect the towers in Bay 1 & 3 together. Ensure the braces are connected to the frame uprights from the inside facing outwards, in the area just above the rung the platforms are on.

If assembling an 8.4m Tower repeat steps 14 to 21 in the other half of the structure. Then go straight to Step 28.



Step 22

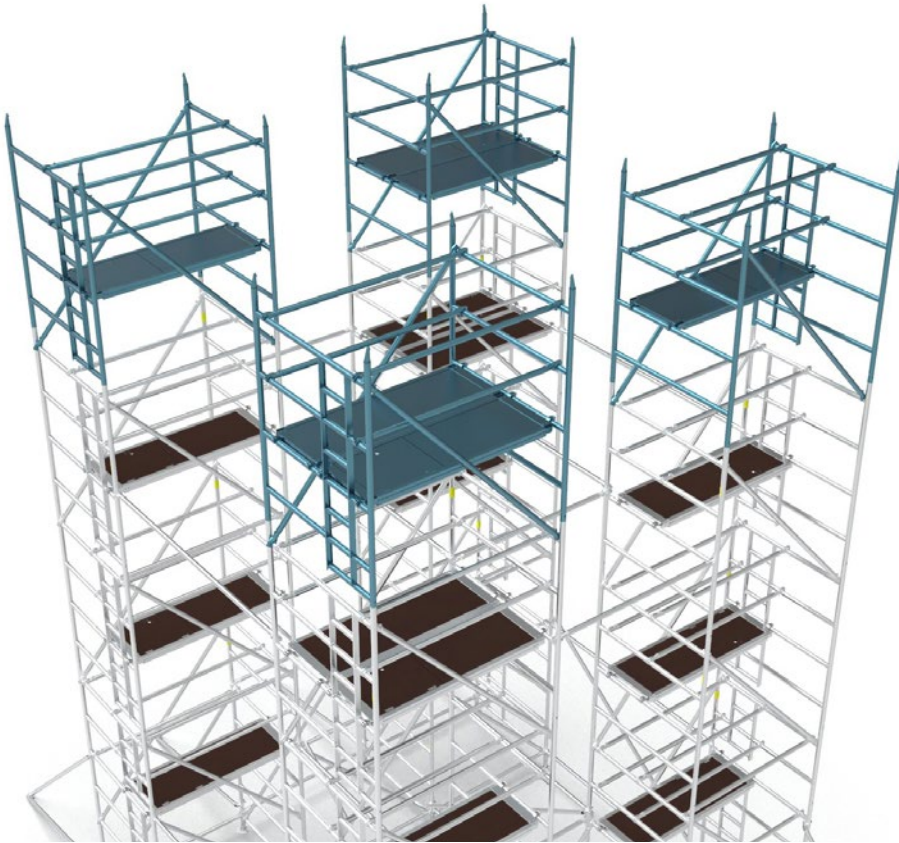
Working on the opposite run of towers in Bays 4, 5 & 6, repeat Steps 14 to 21.



Step 23

As done in Step 12, connect the first run of towers to the second run with four 2.7m horizontal braces. These connect to the frame uprights in the area just above the rung that the top platform is resting on. Ensure the brace is clipped on from the inside out.

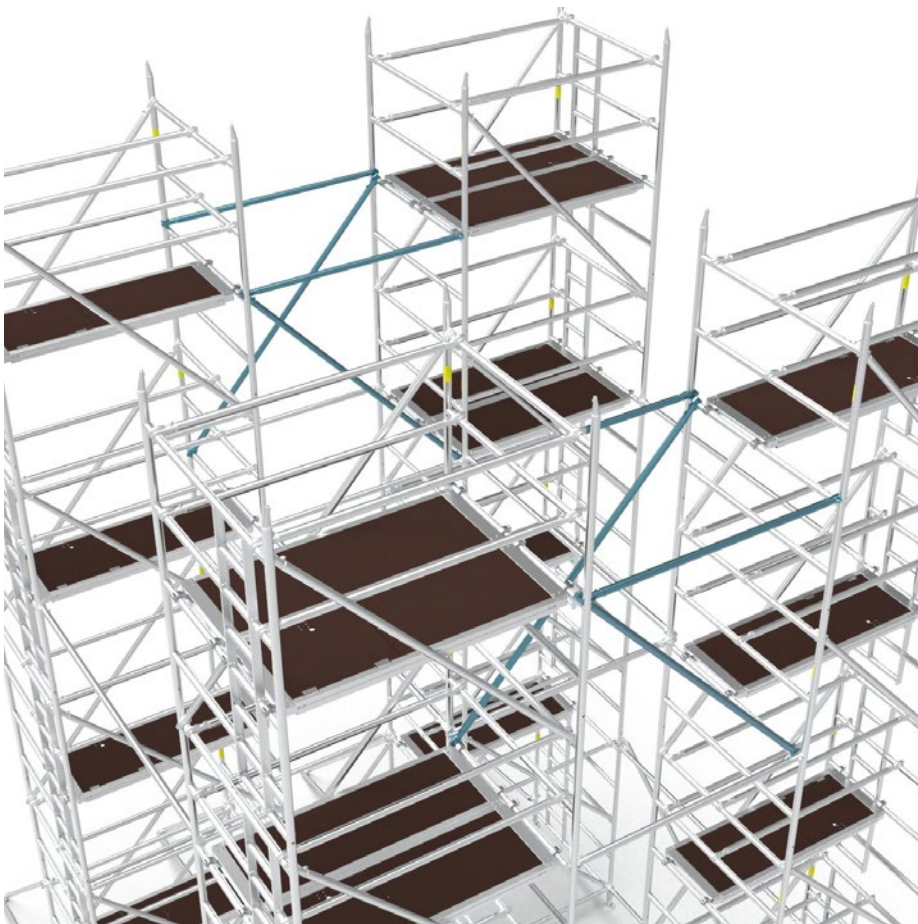




Step 24

Now, assemble the next level in all 4 bays by repeating Step 20 in both frame runs.

If assembling a 10.4m tower go straight to Step 28.

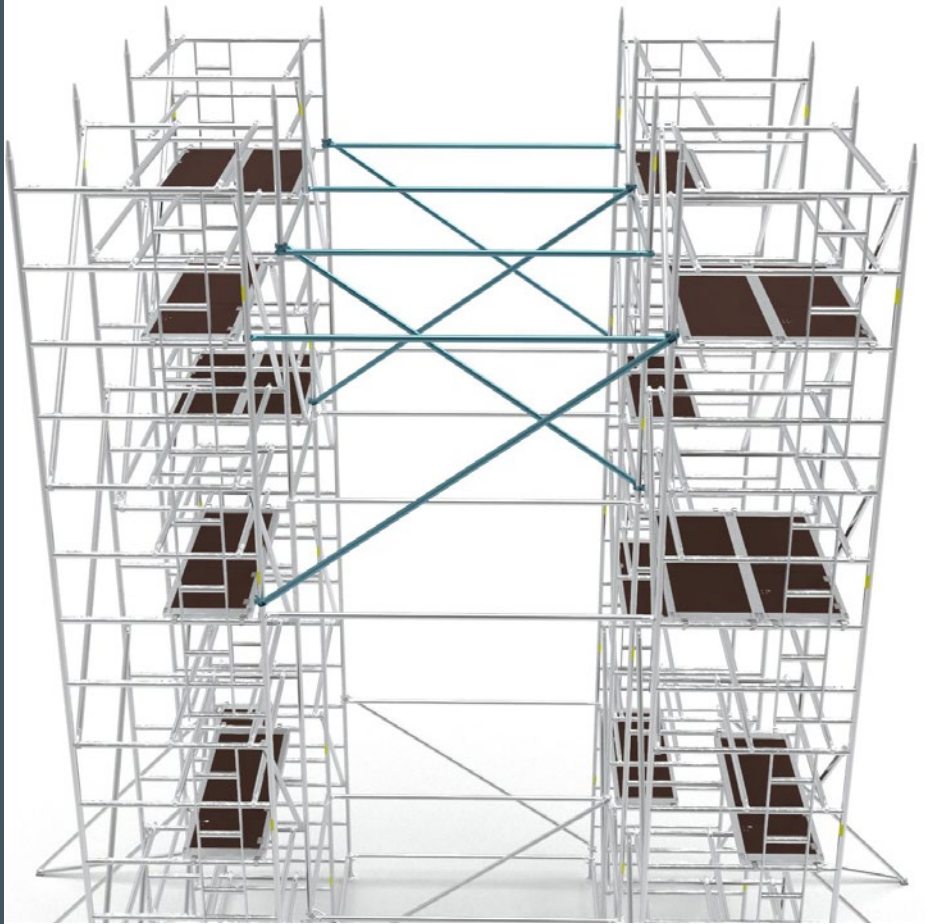


Step 25

Working from the top platforms, install another four 1.8m horizontal braces in the same position as the four installed in Step 21. Now, connect two 2.7m diagonal braces into each tower run. These connect to the rungs that the platforms are located on - as close to the frame uprights as possible.

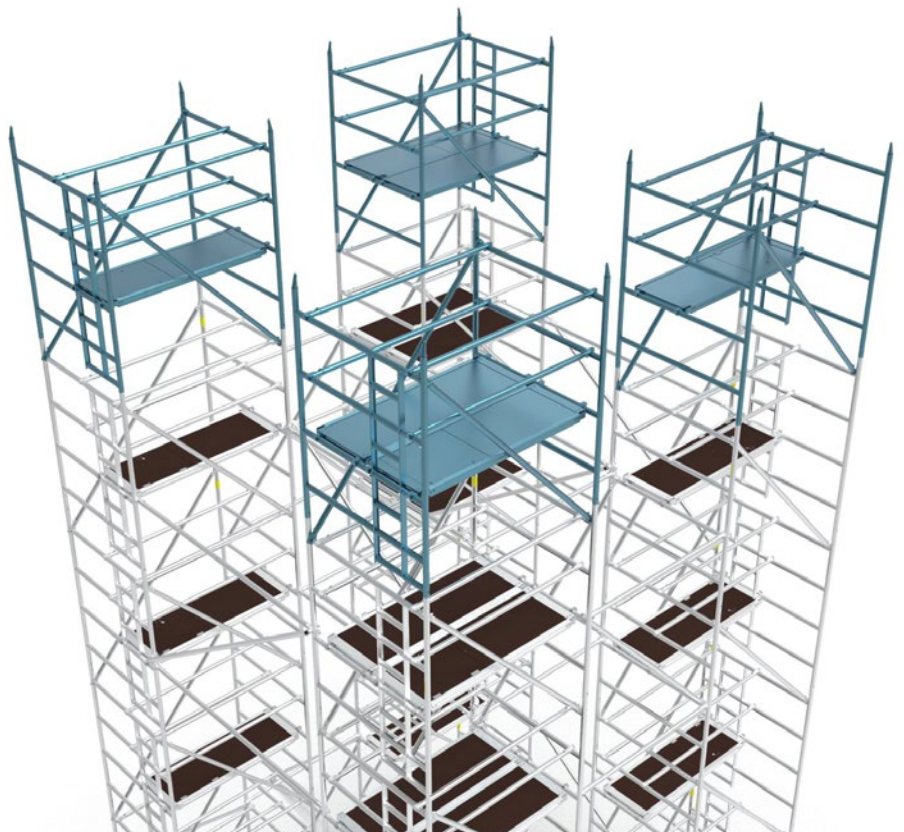
Step 26

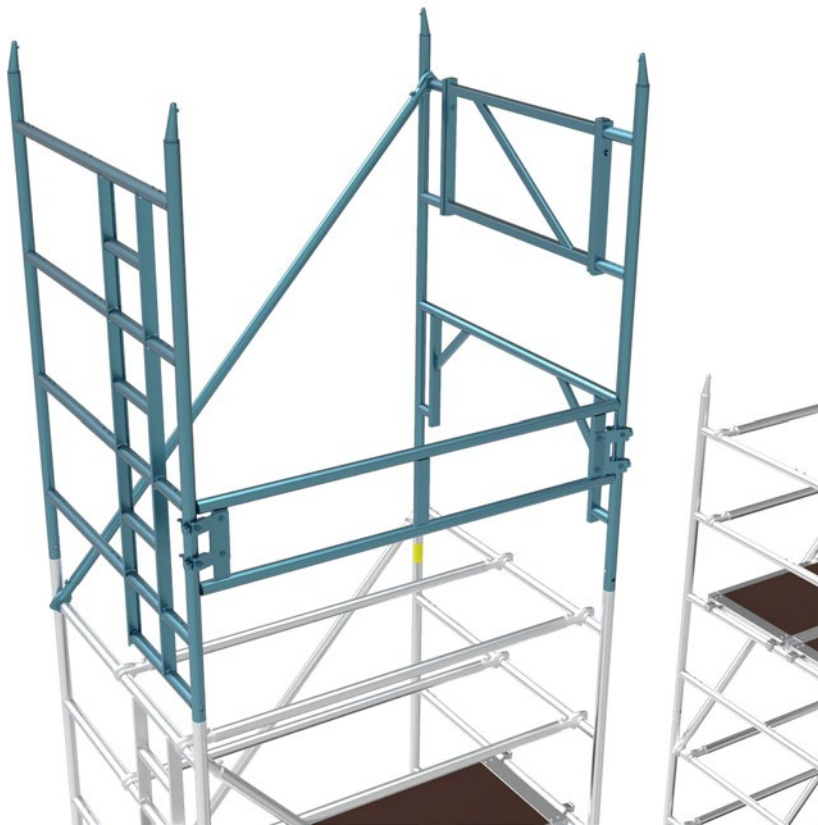
Connect the first run to the second run with four 2.7m horizontal braces at the top of the frames. These connect to the frame uprights just above the top rungs of the frames. Ensure the brace is clipped on from the inside out. Now fit four 2.7 x 2.0m diagonal coupler braces in the area between the two horizontal braces. Loosely connect the upper coupler of the brace to the frame upright in a position just above the upper horizontal brace. Then connect the bottom coupler to the frame upright wherever the two parts meet. Small vertical movements may be required to miss all the braces at the top and bottom. Fully tighten the couplers.



Step 27

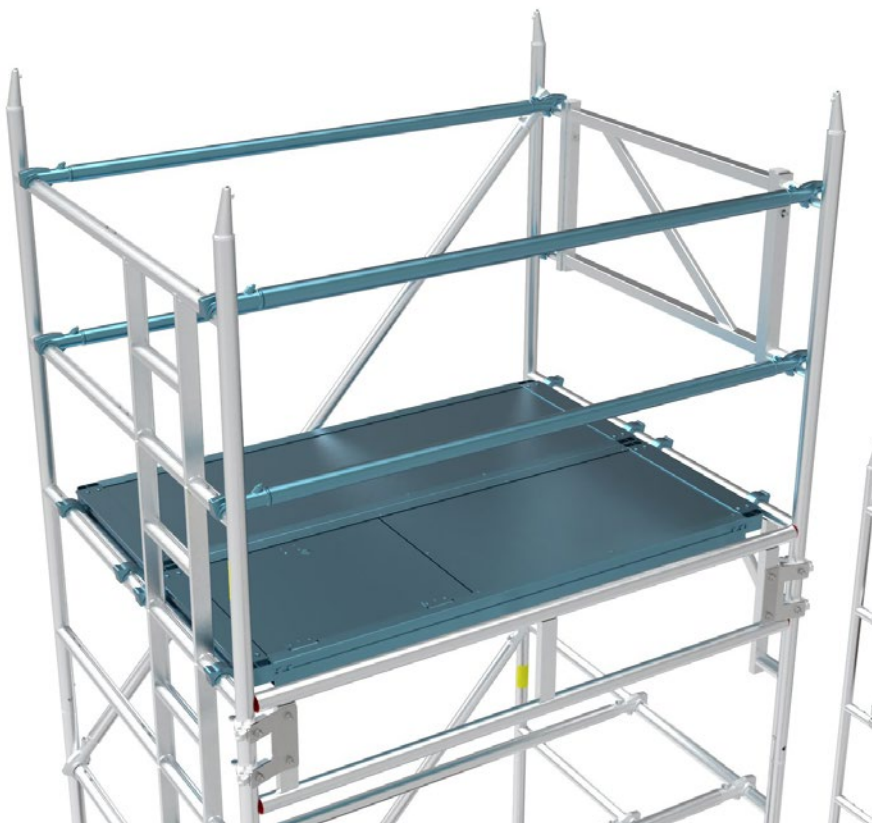
Assemble another level in Bays 1, 3, 4 and Bay 6 as done previously in Step 20.





Step 28

Starting in Bay 1 install a 4 rung ladder frame and 4 rung walkthrough frame onto the existing framework. Ensure the gate is fully installed in the walkthrough frame. Connect a 2.7m diagonal brace on the outside face of the tower - in the same parallel direction as the one below. On the opposite face of the tower connect a 1.8m platform beam. The beam connects to the frame uprights using 2 scaffold couplers at either end. Install it so the top of the upper tube on the beam is in-line with the top of the rungs on the frames (the 2nd rung up on the ladder frame and the only rung on the walkthrough frame). Ensure the couplers are fully tightened.

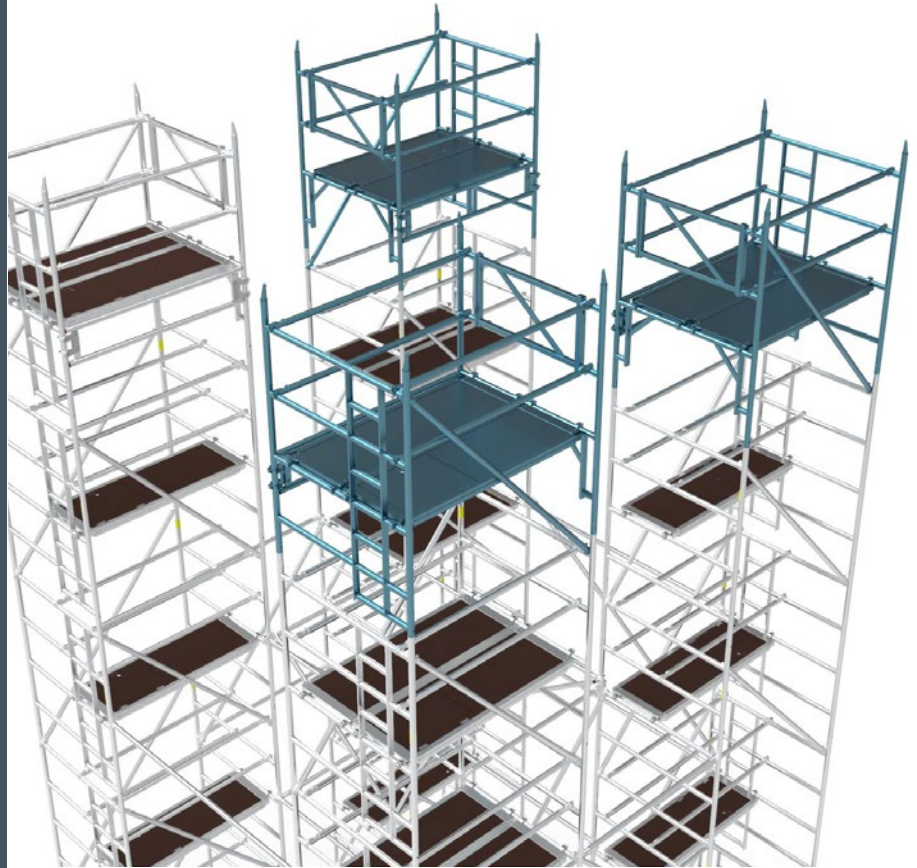


Step 29

Install a trap platform and plain platform 4 rungs above the previous platform. Ensure all the wind latches are engaged. Using the 3T method, install four horizontal braces as guard rails in the positions shown.

Step 30

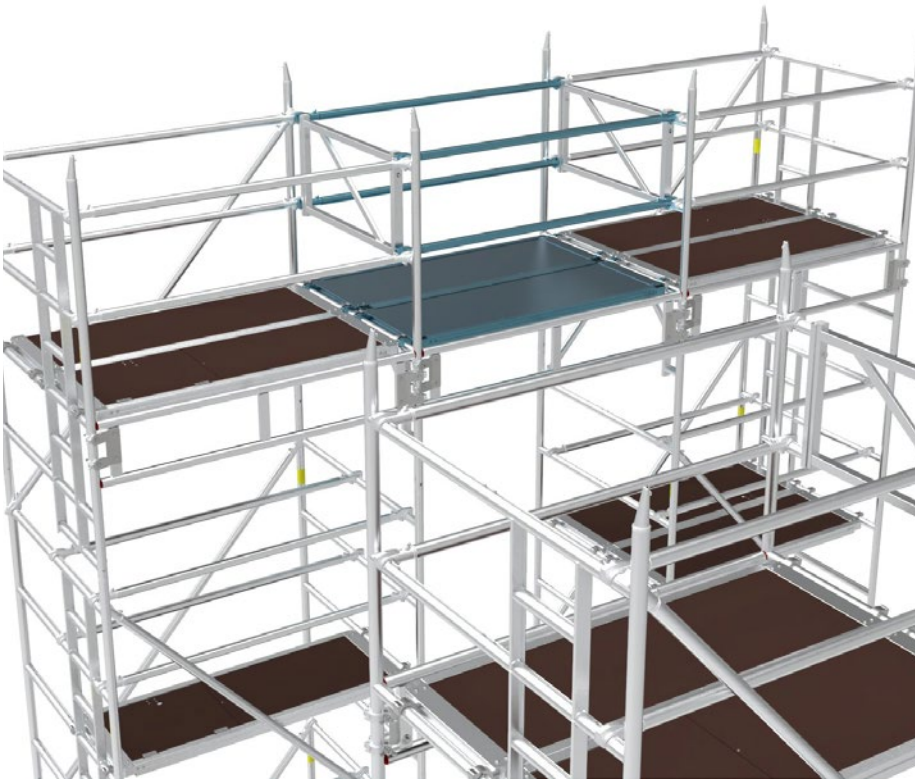
Repeat Steps 28 and 29 in Bays 3,4 & 6.



Step 31

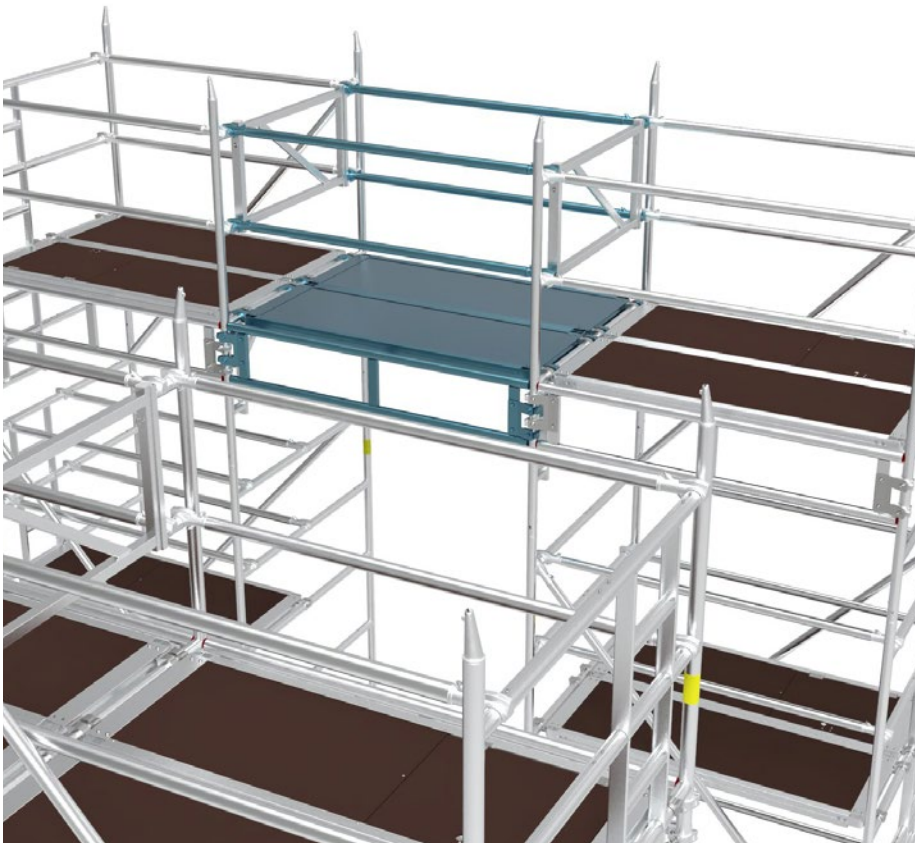
Working from the platforms below the top level, install a 1.8m Platform Beam in Bay 2, connecting Bays 1 and 3. This should be positioned in such a way that the top tubes of all 3 Platform Beams are level. Ensure the couplers are fully tightened.





Step 32

Working from Bays 1 and 3 install two plain platforms and 4 guard rails in Bay 2. Ensure all the wind latches are engaged.



Step 33

Repeat Steps 31 & 32 in Bays 4,5 & 6.

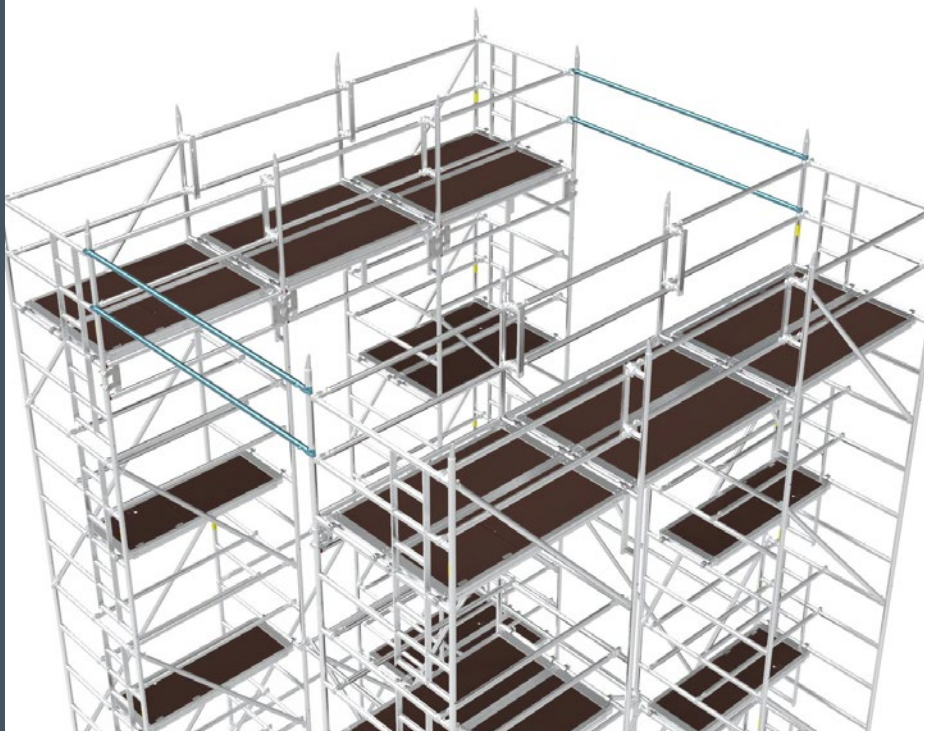
Step 34

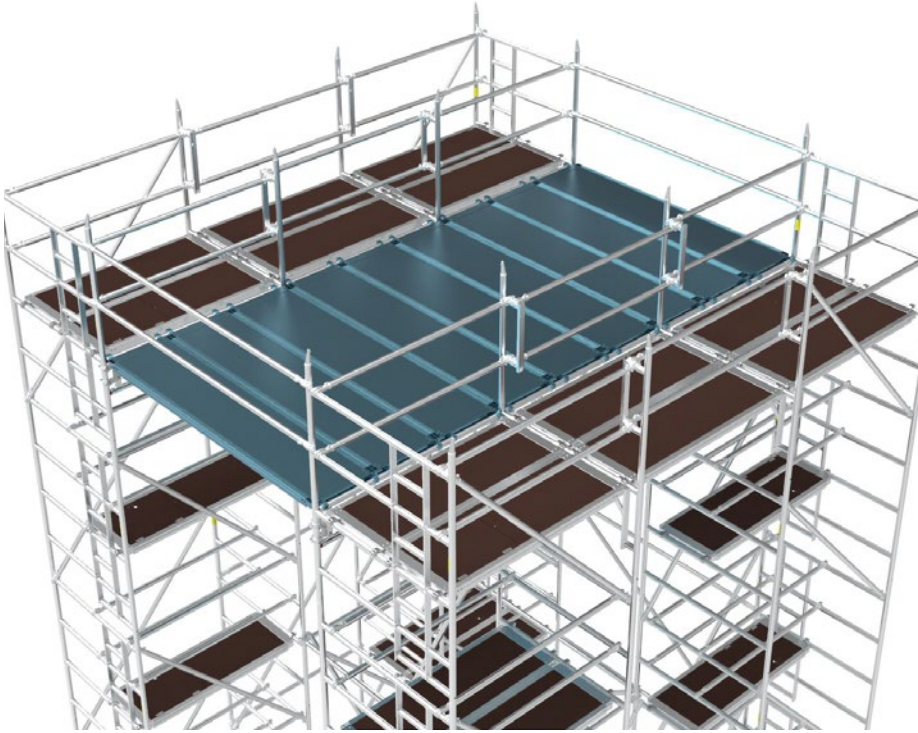
Once all guardrails are installed in each run, the walkthrough frame gates can now be removed and stored safely to be reused in the dismantling phase.



Step 35

Working from both tower runs, install two 2.7m horizontal braces at either end of the structure. These clip onto the frame uprights in the area just above the top rung and the 2nd rung down.



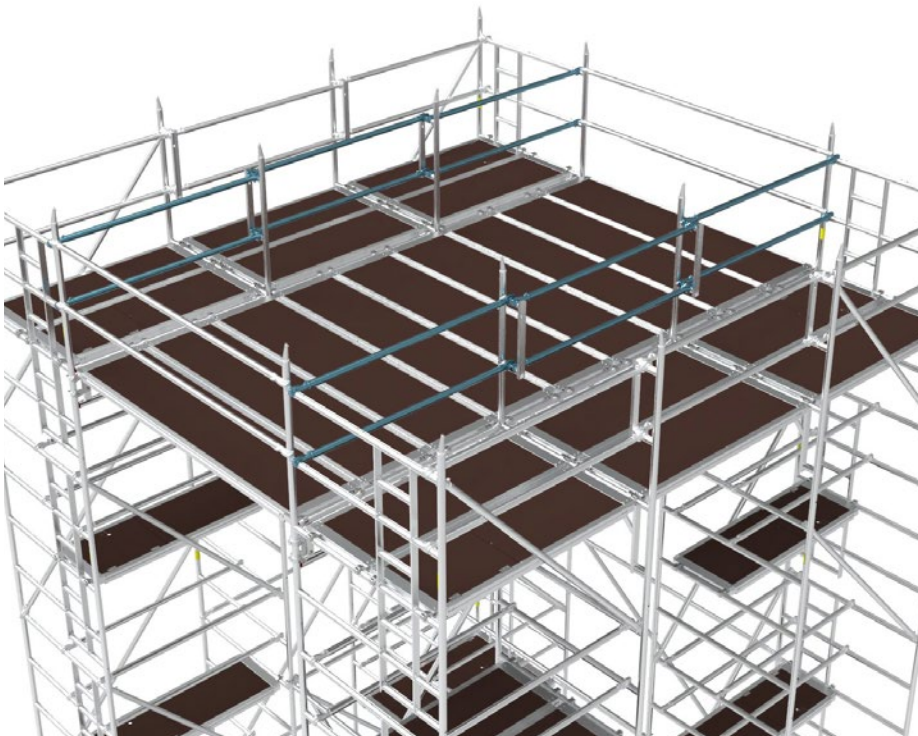


Step 36

In the first section between Bays 1 & 6, install two standard width 2.7m plain platforms and a special narrow 2.7m plain platform. Ensure all hooks are located on the top tube of the 1st pair of platform beams.

Repeat this setup with the next two bays, using two plain platforms and one special narrow platform in each bay.

Ensure all wind latches are engaged.

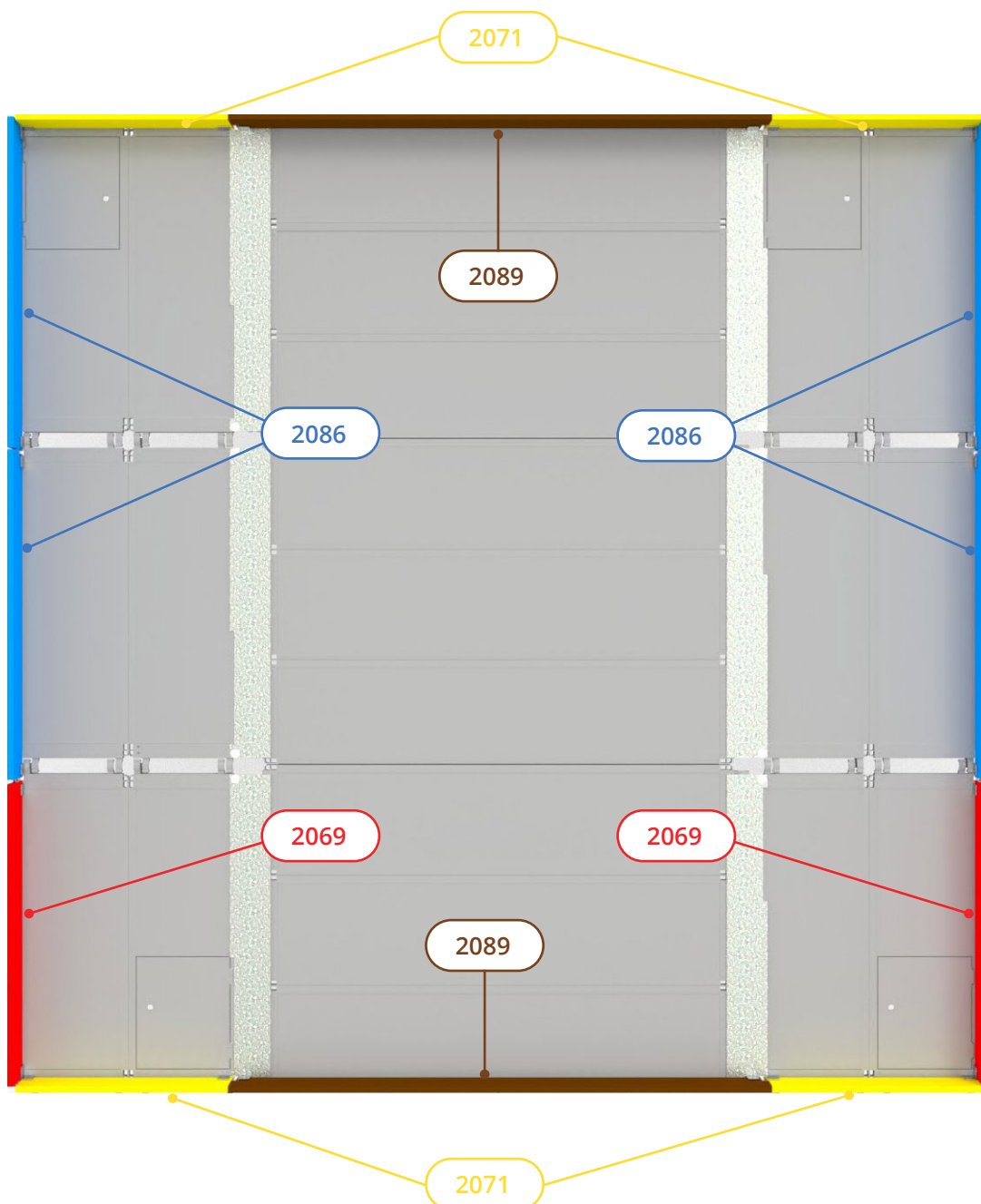
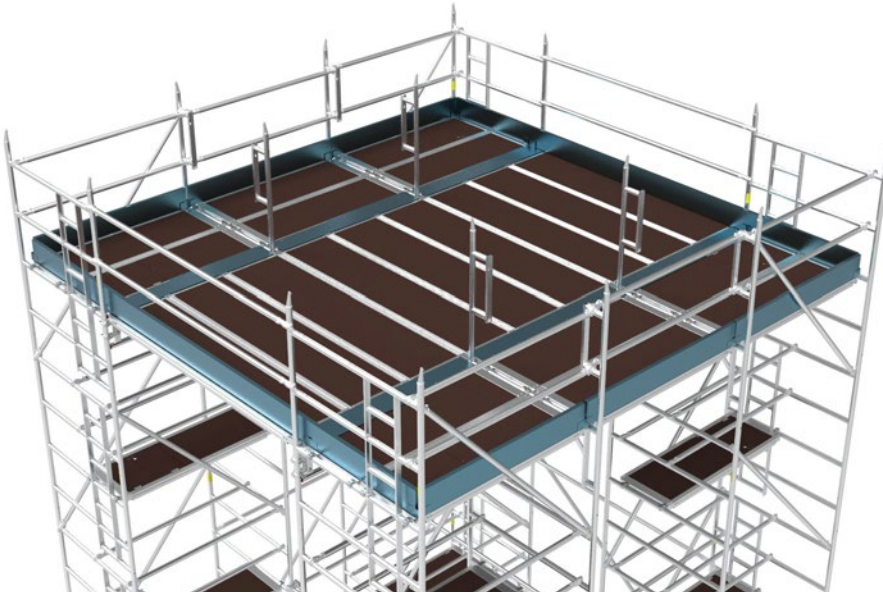


Step 37

Once all the platforms are in place and secure, the inner guard rails on the two tower runs can be removed.

Step 38

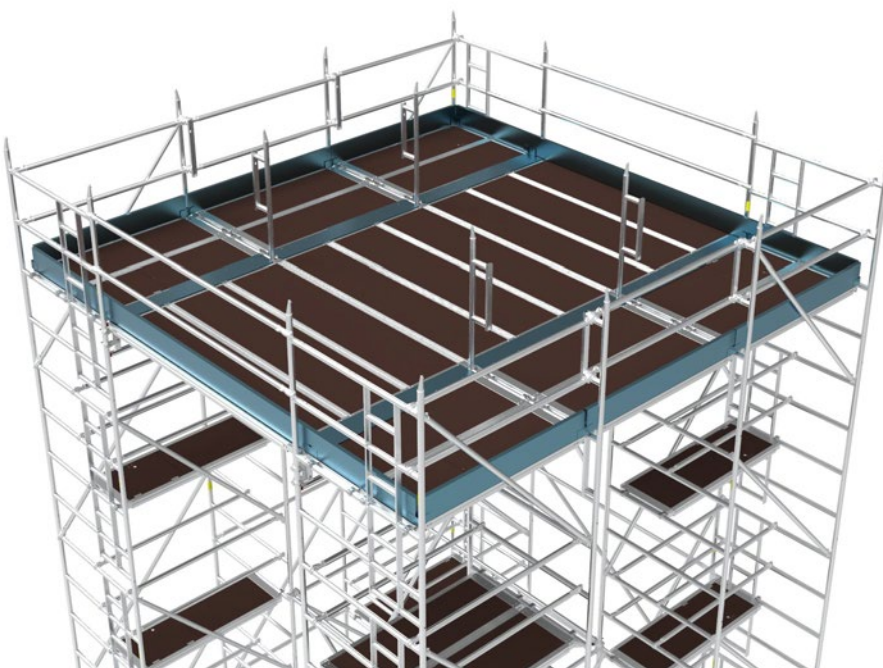
Finally, using the toeboard plan below, install sockets, toeboards and infill plates to the structure.



DISMANTLING INSTRUCTIONS

The dismantling procedure is the reverse of the assembly procedure and requires a minimum of 4 operatives to complete the task safely. Particular points which must be followed during the dismantling include the following:

- The disassembly essentially is the reverse of the assembly process.
- Do not remove stabilisers from the structure until the dismantling process has removed all frames above the base level.
- Remove the toeboard assembly from the top platform before removing any framework.
- On levels with walkthrough frames, re-insert the gates before commencing any removal of guardrails.
- Do not dismantle or detach the bracing between the tower runs until all higher levels have been dismantled.
- NEVER STAND ON AN UNGUARDED PLATFORM.



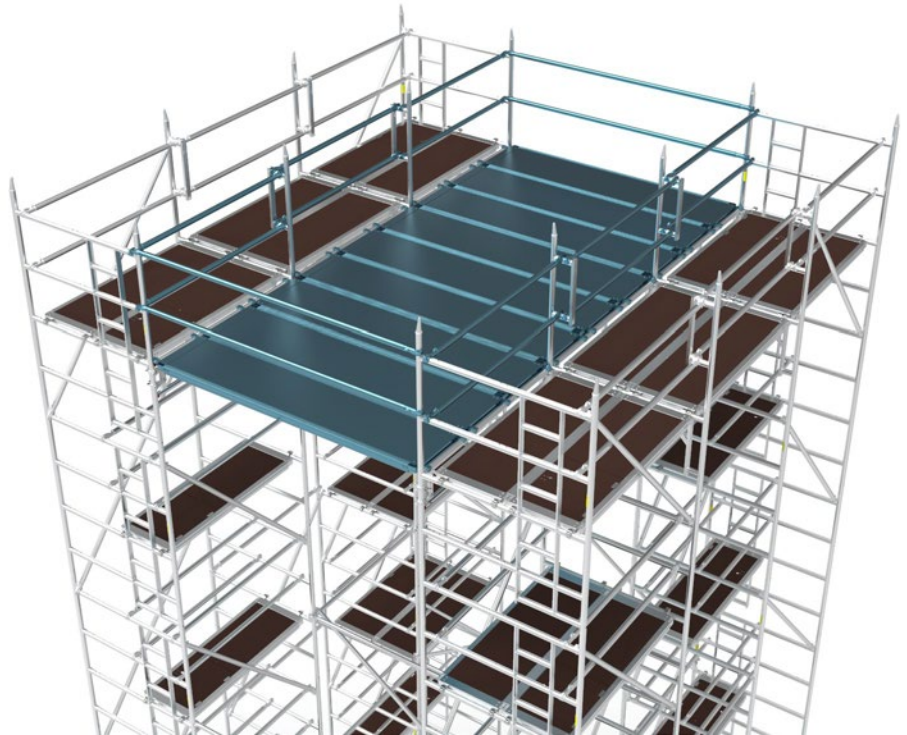
Step 1

The dismantling procedure requires a minimum of 4 operatives to complete the task safely. To start, first remove the toeboards, sockets and infill plates from the top platform.

Step 2

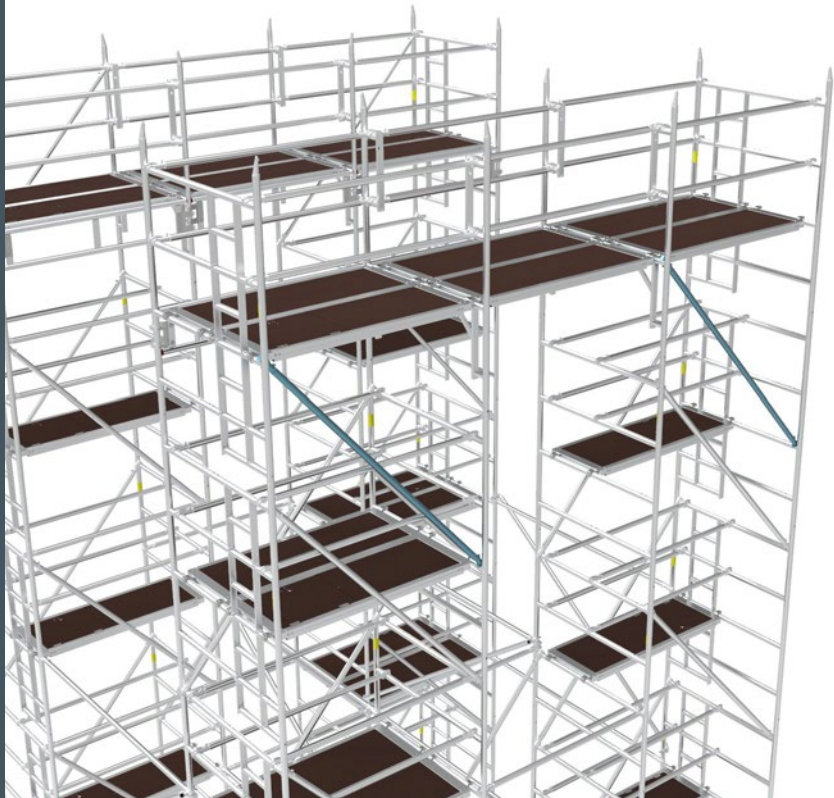
Reinstate the guard rails on the inner face of both runs of towers.

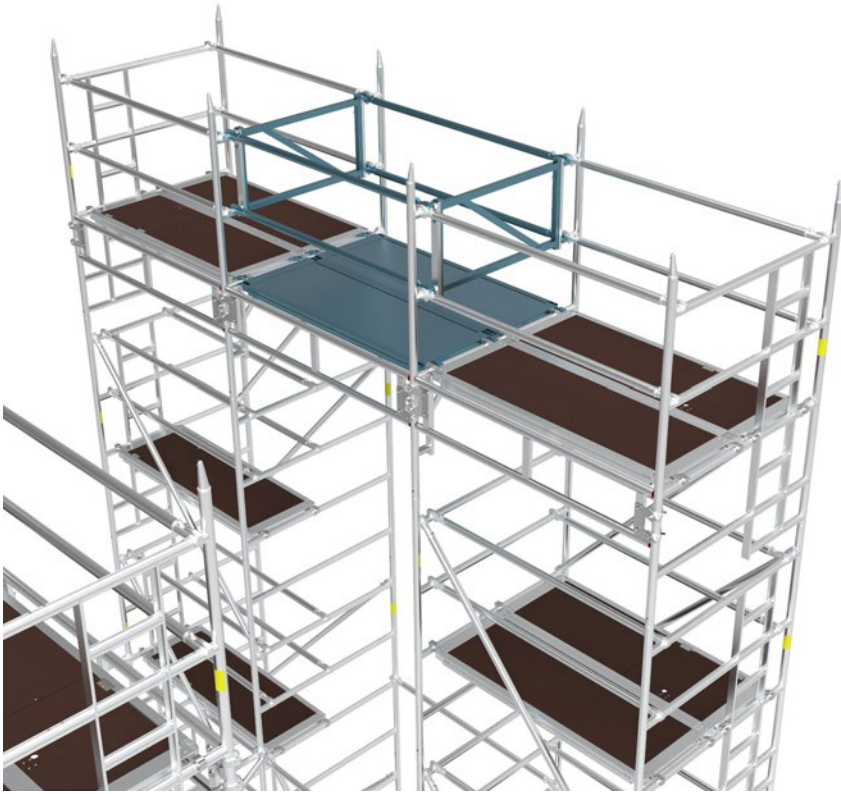
Working from both tower runs, now remove the bridge platforms and the 4 bridge guardrails.



Step 3

Now, working from the uppermost level of one run, relocate the uppermost diagonal brace(s) downwards so the top hook is located on the same rung as the uppermost platform. This can be done by either using one operative on the top platform and one operative on the platform underneath, or by disengaging the top hook then climbing down onto the platform below and disengaging the 2nd hook.





Step 4

Reinstall the gates in both walkthrough frames. Ensure that the pins are fully engaged. Next, working from the end bays remove the 4 guardrails from the middle bay. Now remove the plain platforms from the middle bay.



Step 5

Next, working in the end bays, remove the 4 guardrails using the 3T method. To remove braces or guardrails, first disconnect each brace at the end furthest away from the platform trap door. Then immediately take up the protected position detailed in the 3T method. Whilst standing through the trapdoor as per the 3T method, disconnect the braces completely.

Step 6

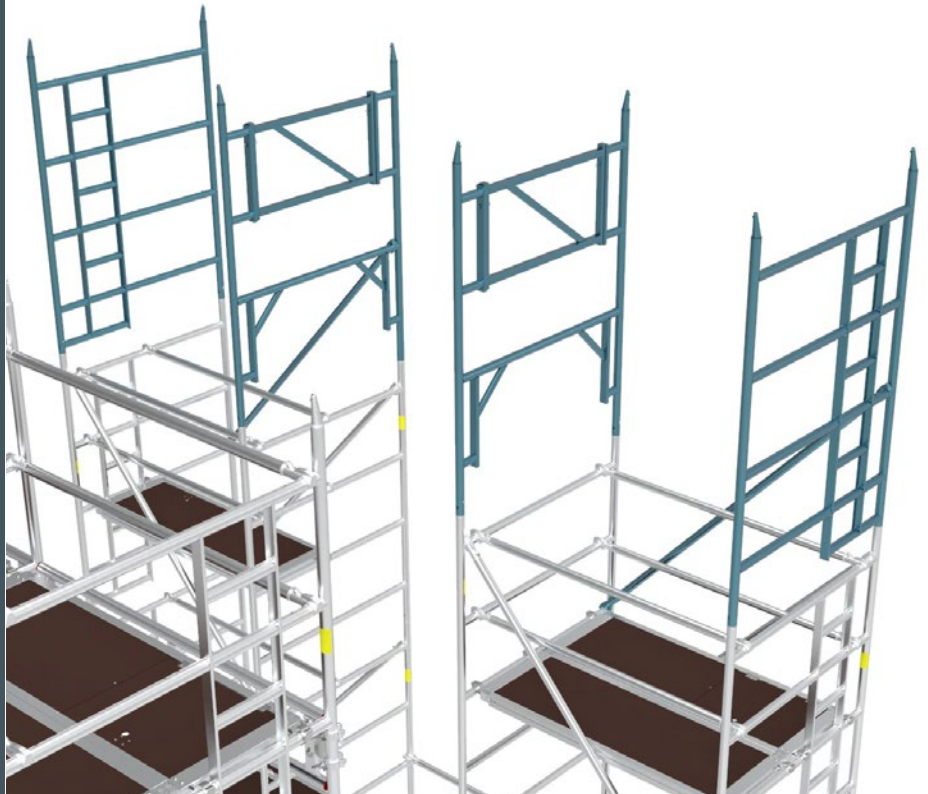
Working from the platforms below, the upper platforms and platform beams can now be taken off.



Step 7

Finally the recently relocated diagonal brace(s) and the 2 frames in each bay can be removed.

Repeat steps 3 to 7 working methodically down each run of towers removing bracing in bay 2 and to the other tower run only when required.



Components



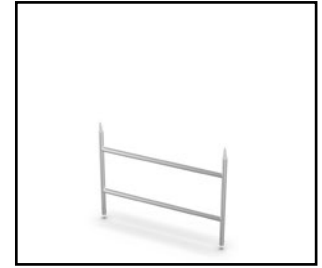
2233 - Swivel Base Jack



2001 - 1.4m Base Frame



2002 - 1.4m Main Frame



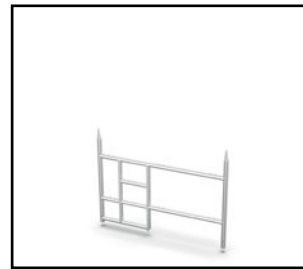
2008 - 1.4m 1/2 Frame



2212 1.4m 5 Rung Ladder Frame



2213 1.4m 4 Rung Ladder Frame



2215 1.4m 2 Rung Ladder Frame

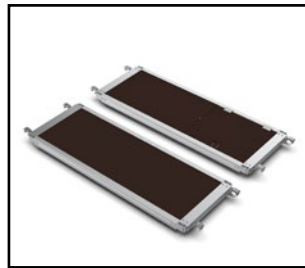


2009/2010 1.4m Walkthru' Frame & gate



2040 1.8m Brace

2041 2.7m Brace



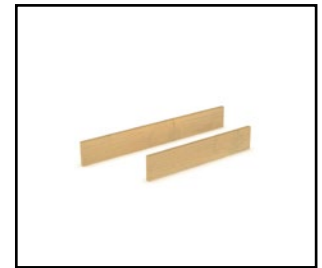
2201 1.8m Trap Platform

2043 1.8m Plain Platform



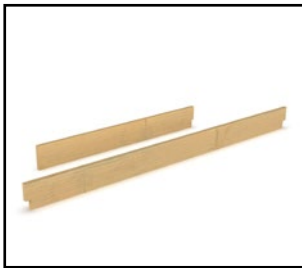
2044 2.7m Plain Platform

2047 2.7m Narrow Platf.



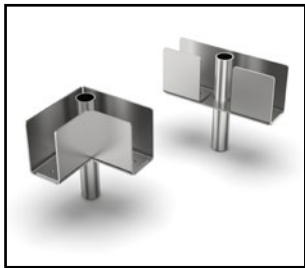
2069 1.8m T/B Side

2071 D/W T/B End



2086 1.8 T/B Side - Link

2089 2.7 T/B Side - Bridge



2074 T/B Corner Bracket

2079 T/B Inline Bracket



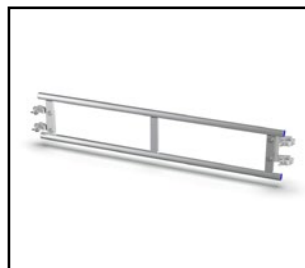
2075 1.8 Cantilever Infill Plate



2090 Platform Infill Plate Locator Pin



2092 2.7 x 2m Bridge Tower Diagonal Brace



2098 1.8m Platform Beam



2056 Small Stabiliser



2057 Large Stabiliser

THE HEIGHT OF SAFETY

For more information regarding our range of access products and services, please get in touch with us:

Lakeside Industries Ltd

Unit 19 Howard Road, Park Farm Industrial Estate
Redditch, Worcestershire. B98 7SE. UK

t: +44(0)1527 500 577

e: sales@altoaccess.com

w: www.altoaccess.com



@lakesideindust



@altotowers



[lakeside-industries-ltd](https://www.linkedin.com/company/lakeside-industries-ltd)



Manufacturing Member

Lakeside Industries Ltd

Unit 19 Howard Road, Park Farm Industrial Estate, Redditch, Worcestershire. B98 7SE
+44(0)1527 500577 | sales@altoaccess.com | www.altoaccess.com

