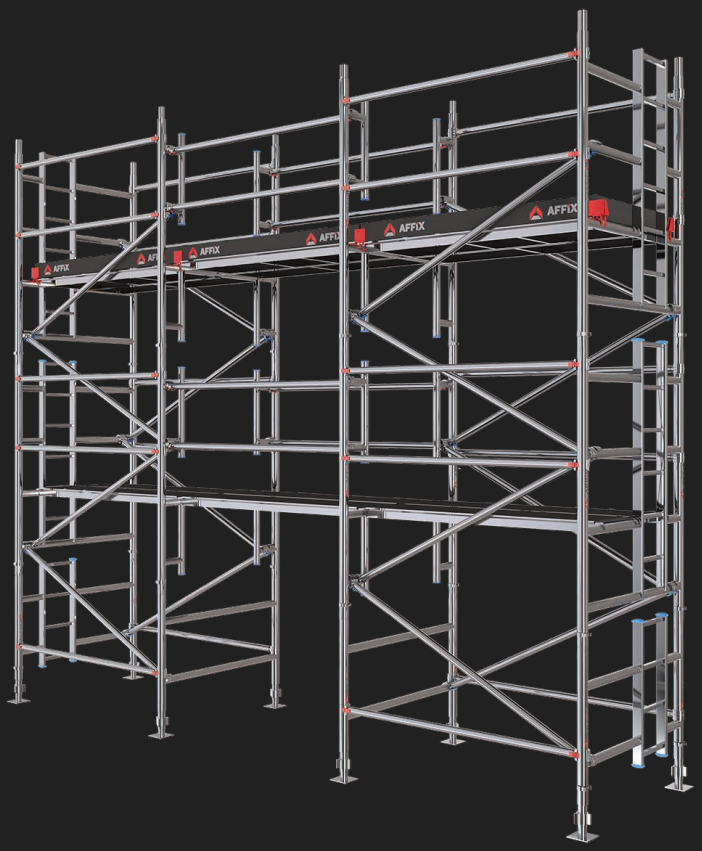
AFFIX



BS1139-6:2014

No: CE/21-22/046

TUV INDIA
TUV NORD GROUP

Assembly Manual

Linked Towers MALT Series

Aluminium LInked Towers

MALT

BS1139-6 3 7/9 XXXD

The **AFFIX Linked Tower** is a mobile access tower manufactured in our **ISO 9001** accredited facility.

This user guide provides you with step by step instructions to ensure your system is assembled easily and safely, using the **3T (Through the Trapdoor)** method.

DESCRIPTION:

The Affix **MALT** Series Aluminium Linked Tower offers customer the flexibility to work on the long span platform of **7.5 Mtrs Length** together by joining two **Double Width Towers** together through and additional platform at multiple levels. The **MALT Series** towers allow the user to work on longer platform with more workers to work simultaneously. This tower is ideal for use when work is required to be at multiple levels simultaneously.

The information and instructions included in this manual are provided to help get the best possible service from your **MALT** Series Aluminium Linked Tower. This user guide provides you with step by step instructions to ensure your system is assembled easily and safely, using the 3T (Through the Trapdoor) method.

Through The Trapdoor (3T) Method:

The **3T** method of construction is an approved method of assembly and it minimizes the risk of a fall from height. The erector can complete an 'assembly or access' platform level from which the 'next lift' of frames, braces and platform is added, until the final working height of the tower is achieved. By following the **3T** method, the erector sits through the hatch of the platform with their feet resting on the frame rungs. In this position the erector can attach the guardrail braces. Once guard-rails are secured in position the erector can climb onto the platform and continue constructing the next level.

Compliances:

The Affix **MALT Linked Tower** structure has been tested and certified to **BS1139-6: 2014** by **TUV, India**

Aluminium Linked Towers

Maximum Safe Working Loads

The safe working load of the tower is **1250 kgs** including its own weight. The maximum safe working load of any individual platform is **250 kgs** evenly distributed. If the tower is to be used for any specific loading contact your supplier or the manufacturer, Affix Scaffolding WLL.

Tel: +974 5529 9893 or Email: info@affixscaffolding.com.

RECOMMENDATIONS :

- Recommend a minimum of two people to assemble, dismantle and move the platform tower.
- Check that all components are on site and in good working order.
- Ensure that the assembly location is checked to prevent hazards during assembly or moving and while working on the tower. Particular attention should be given to the ground condition, whether level or sloping, obstructions and wind conditions. The ground condition must be capable of supporting the tower structure.
- Towers must always be climbed from the inside of the assembly using the ladder.
- Lifting of components must be done inside the effective base area of the tower.
- Beware of horizontal loads which can lead to instability of the tower. The Max. side force is 20kg.
- Outdoor or Indoor towers must be secured to a building or fixed structure.
  Linked towers must never be built as free-standing structures. Suitable tying-in must be used.
- Do Not use boxes or steps to gain additional height.
- Do Not lift or suspend an assembled mobile tower.
- Damaged components or components from other tower systems must never be used.
- Never build linked towers without correctly adopting the suggested stability solution.

Air speed and resultant action to be taken

Beufort Scale	Description	Air Speed	Action to be taken
0	Calm, smoke rises easily upwards	**1 mph**	No action needed
3	Moderate breeze, raises dust	**12 mph**	No action needed, keep a watch
4	Raises loose papers, leaves and small twigs move	**17 mph**	Cease work
5	Strong breeze, tree branches bend, unable to use umbrella	**25 mph**	If expected, tie tower to a rigid structure
6	Gale force, cannot even walk	**40 mph**	If expected, dismantle the tower

Safety Checklist :

Mobile towers - 3T Method Checklist

- Inspect components prior to use ☑
- Ensure all brace claws operate and lock correctly prior to erection ☑
- Tower upright and level ☑
- Tower properly tied in to a fixed structure ☑
- Diagonal braces fitted ☑
- Platforms located and wind-locks on ☑
- Toe boards located ☑
- Check that the guardrails are fitted correctly ☑

Aluminium Linked Towers

WARNING

NEVER STAND ON AN UNGUARDED PLATFORM

SAFE WORKING LOADS AND HEIGHTS

- Safe working load on the working platform is **250kgs** evenly distributed.
- The load on the tower should not exceed **1250 kgs.**
- The maximum recommended platform height is **9M.**

ASSEMBLY PROCESS :

PREPARATION

Locate the tower, ensuring ground is level.

Sort the braces into horizontal and diagonal braces, the diagonals are slightly longer. Also note that the braces are differently color coded.

Check the locking triggers in the bracing hooks such that they are working properly.

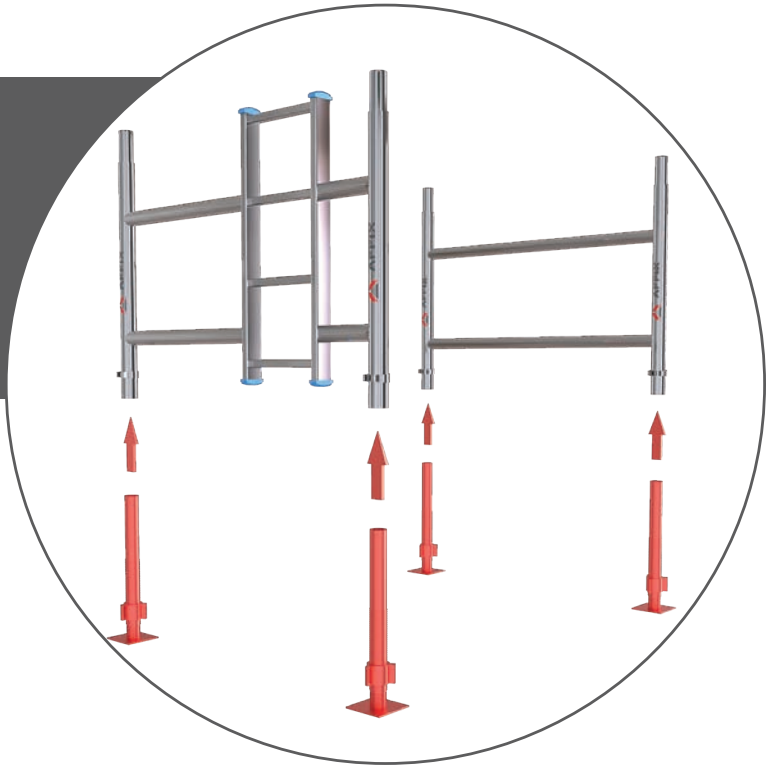
Make ready the tying in option.

FIRST LEVEL

Step 1

Insert the **Base Jack** with the jack pipe inside the bottom of the tubes of the 1st level **2 Rung Ladder Frame and 2 Rung Span Frame.**

DO NOT USE Hammer.



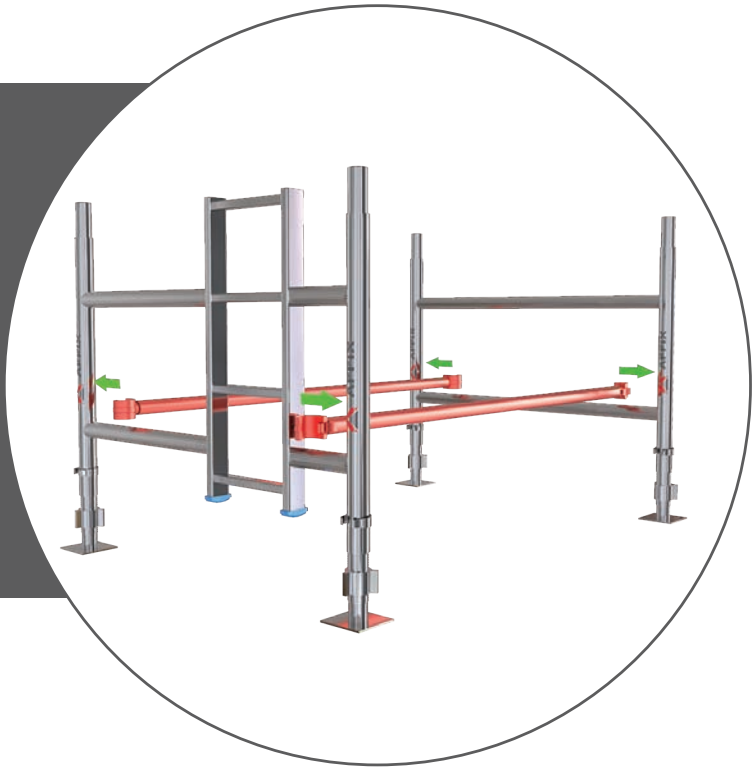
Step 2

Step 2.1

Hook both the bottom 2 Horizontal Braces horizontally to both the Span frame's vertical pipes, just above the 1st rung.

Step 2.2

One person should hold the frame in upright position during this step.

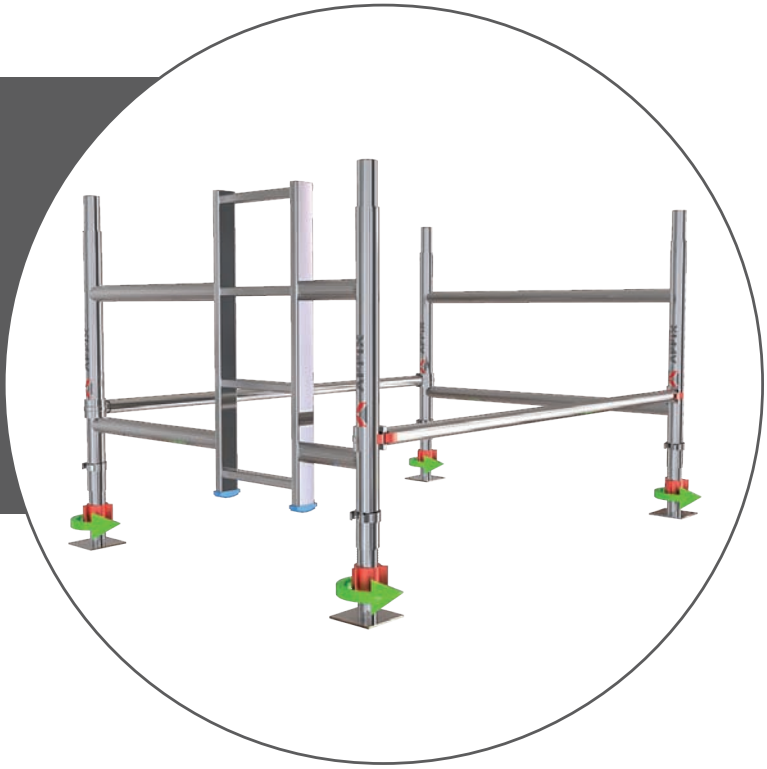


Step 3

Step 3.1

Level the structure using a Spirit Level on the Rungs and the braces.

If adjustment required, adjust using the adjustable jack.

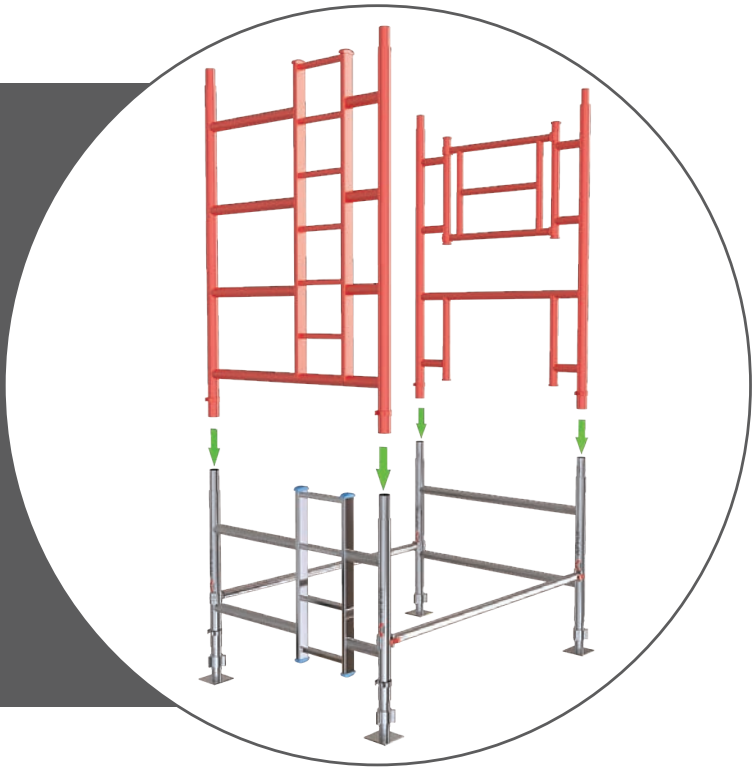


SECOND LEVEL

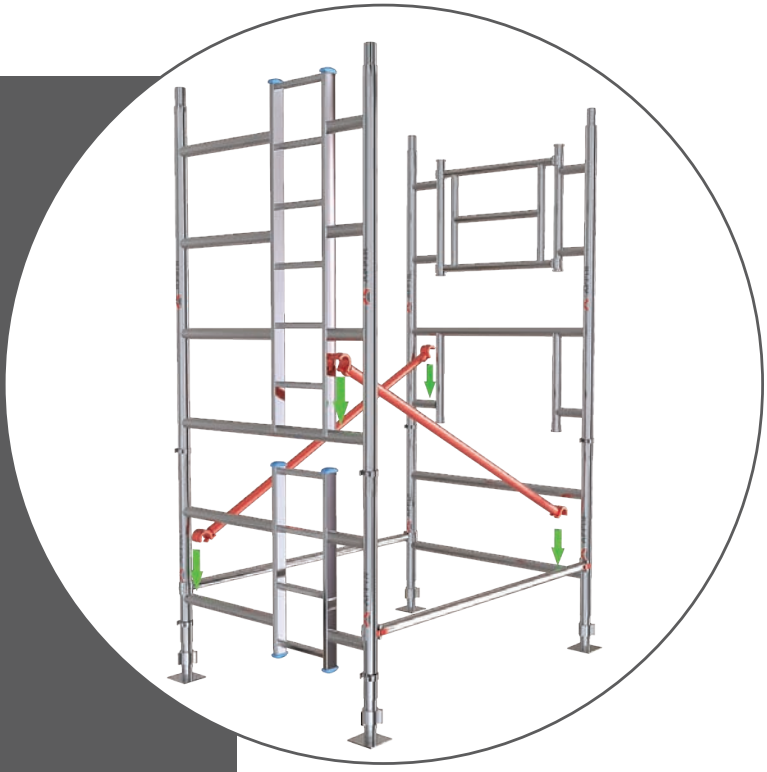
Step 4

Step 4.1

Insert the 2nd level **Walk-through Frame and Ladder Frame** into the corresponding spigots of 1st level **Span Frame** and **Ladder** Frame. For clamping instructions refer to the Clamping Instructions section on **Page 20.**



Step 5



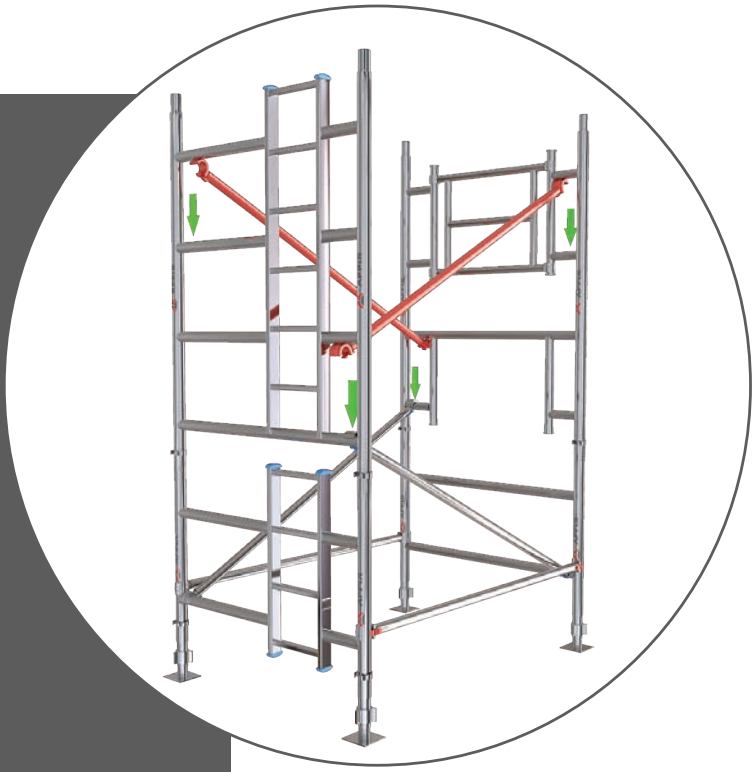
Step 5.1

Hook the Diagonal Brace to the **1st Rung** of the 1st level **Span frame** at one end and the other end should be hooked to the **1st Rung** of the 2nd level **Ladder frame**.

Step 5.2

Hook the **2nd** Diagonal Brace to the **1st Rung** of the 2nd level **Ladder frame** at one end and the other end should be hooked to the **1st Rung** of the 1st level **Span frame.**

Step 6



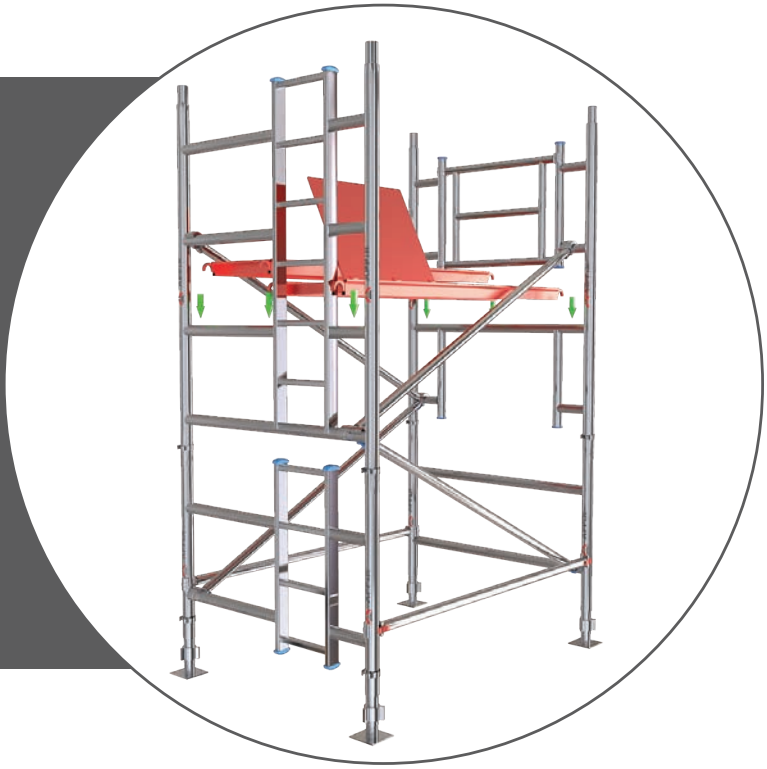
Step 6.1

Hook the Diagonal Brace to the **3rd Rung** of the 2nd level **Walk-through Frame** at one end and the other end should be hooked to the **1st Rung** of the 2nd level **Ladder Frame** on the other side.

Step 6.2

Hook the **2nd** Diagonal Brace to the **1st Rung** of the 2nd level **Walk-through Frame** at one end and the other end should be hooked to the **3rd Rung** of the 2nd level **Ladder Frame** on the other side.

Step 7



Step 7.1

Hook the Intermediate trapdoor platform on the **2nd Rung** of the 2nd level frames. Make sure the trapdoor is towards the ladder side.

Step 7.2

Also hook the Intermediate fixed platform on the **2nd Rung** of the 2nd level frames beside the trapdoor platform .

Step 8

Using the 3T method, standing on the ladder and leaning back against the edge of the trapdoor aperture, fit the horizontal braces as mid rails and guardrails.

Step 8.1

Hook the lower pair of **Horizontal Braces** to the **3rd Rung** of both the 2nd level frames.

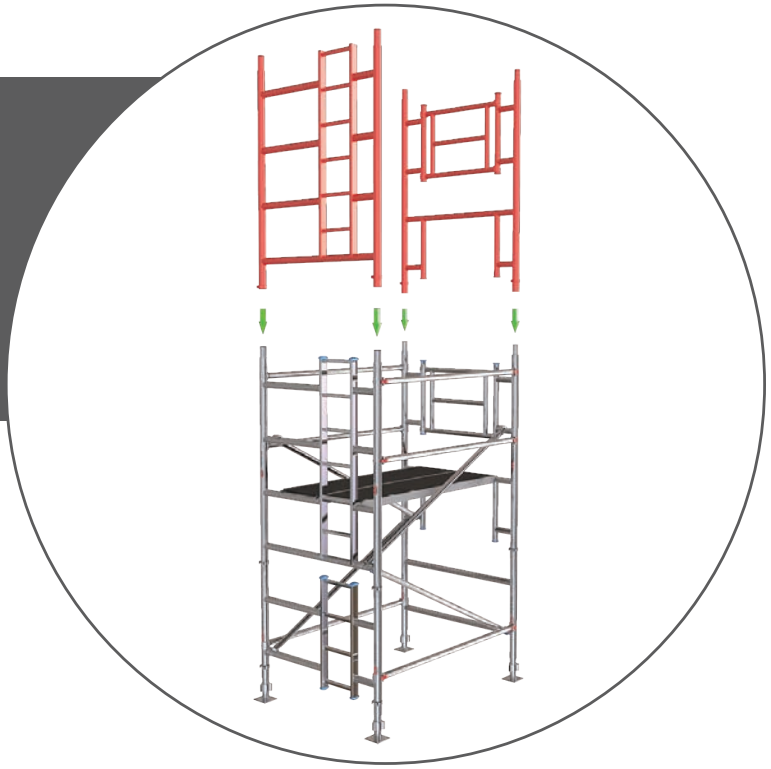
Step 8.2

Hook the upper pair of **Horizontal Braces** to the **4th Rung** of both the 2nd level frames.

THIRD LEVEL

Step 9

Insert the 3rd level **Walk-through Frame and Ladder Frame** into the corresponding spigots of 2nd level **Walk-through Frame** and **Ladder** Frame. For clamping instructions refer to the Clamping Instructions section on **Page 20.**



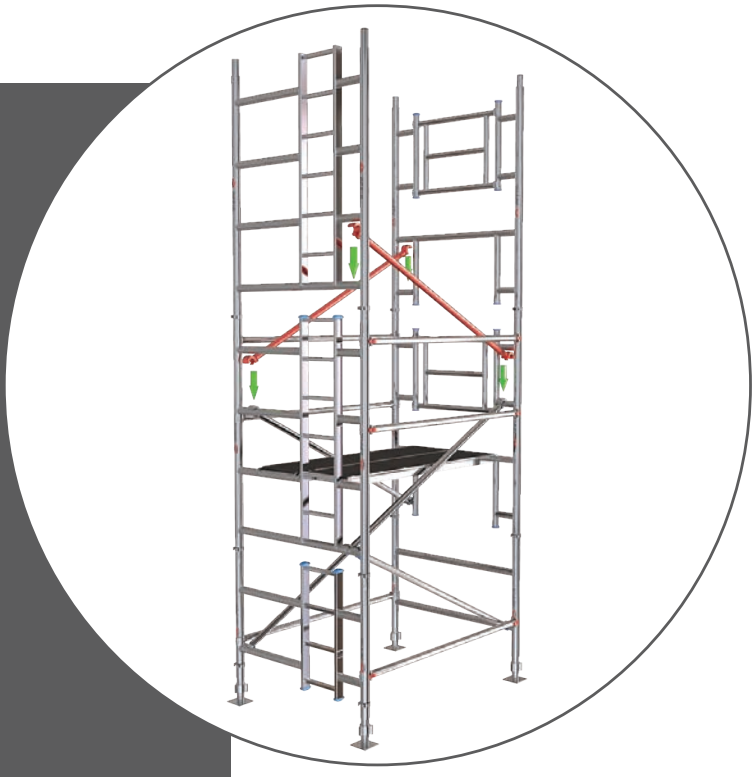
Step 10

Step 10.1

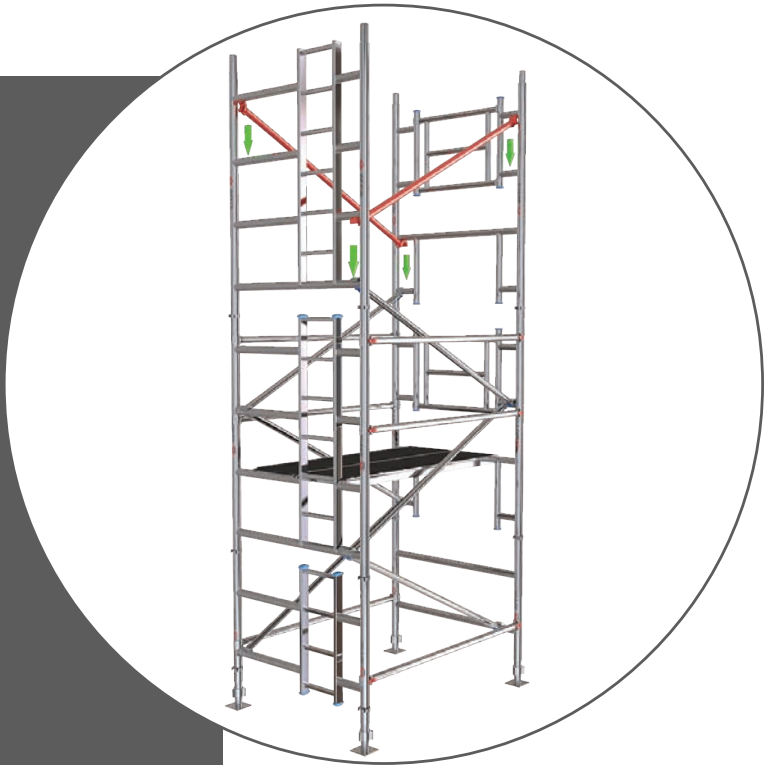
Hook the Diagonal Brace to the **3rd Rung** of the 2nd level **Walk-through Frame** at one end and the other end should be hooked to the **1st Rung** of the 3rd level **Ladder Frame** on the other side.

Step 10.2

Hook the 2nd Diagonal Brace to the **1st Rung** of the 3rd level **Walk-through Frame** at one end and the other end should be hooked to the **3rd Rung** of the 2nd level **Ladder Frame** on the other side.



Step 11



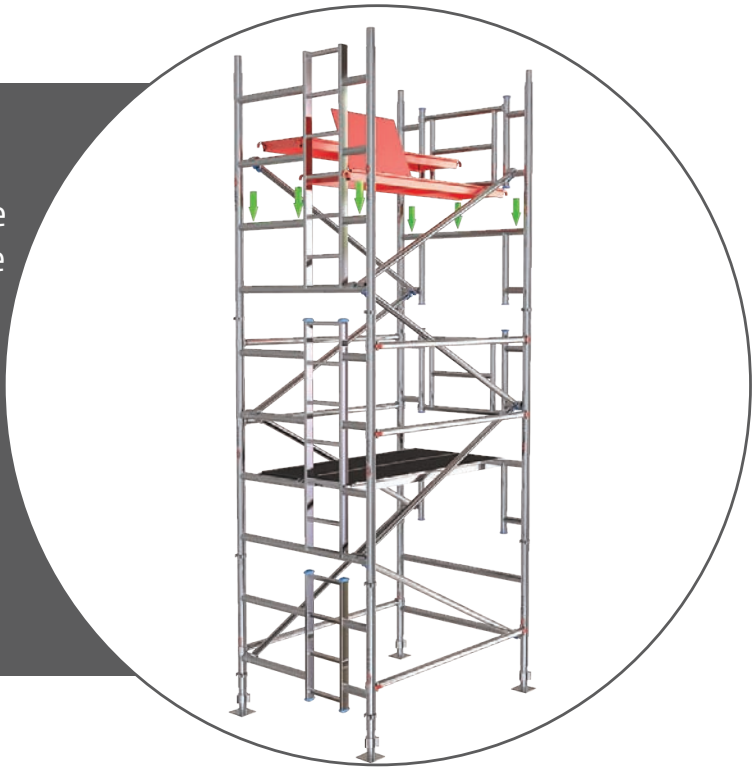
Step 11.1

Hook the **Diagonal Brace** to the **3rd Rung** of the 3rd level **Walk-through Frame** at one end and the other end should be hooked to the **1st Rung** of the 3rd level **Ladder Frame** on the other side.

Step 11.2

Hook the **2nd Diagonal Brace** to the **1st Rung** of the 3rd level **Walk-through Frame** at one end and the other end should be hooked to the **3rd Rung** of the 3rd level **Ladder Frame** on the other side.

Step 12



Step 12.1

Hook the working **Fixed Platform** on the **2nd Rung** of the 3rd level frames. Make sure the platform is not on the ladder side.

Step 12.2

Hook the working **Trapdoor Platform** on the **2nd Rung** of the 3rd level frames beside the Fixed Platform. Make sure the trapdoor is towards the ladder side.

Step 13

Using the 3T method, standing on the ladder and leaning back against the edge of the trapdoor aperture, fit the horizontal braces as mid rails and guardrails.

Step 13.1

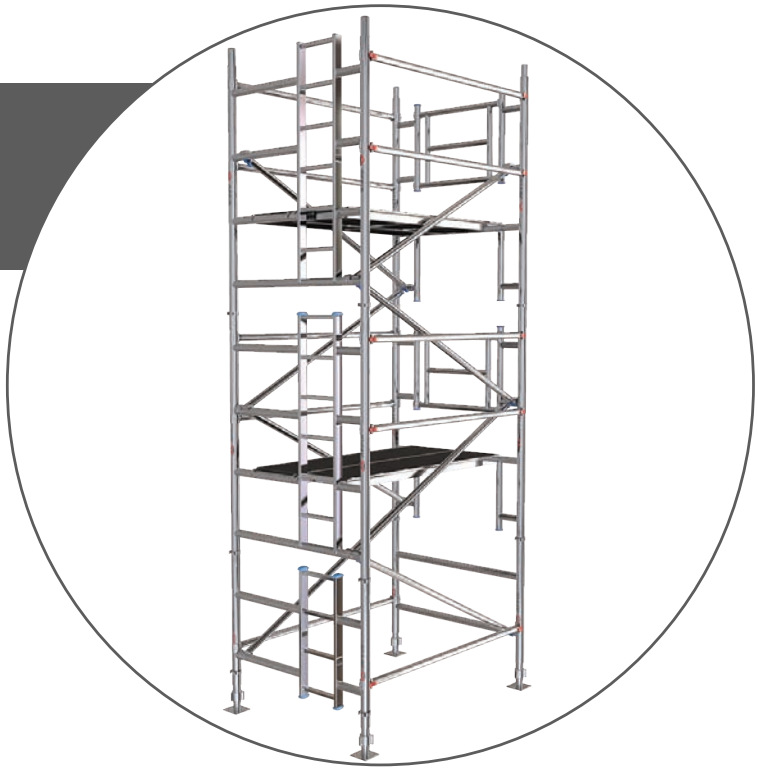
Hook the lower pair of **Horizontal Braces** to the **3rd Rung** of both the frames of 3rd level on both the sides.

Step 13.2

Hook upper pair of **Horizontal Braces** to the **4th Rung** of both the frames of 3rd level on both the sides.

Step 14

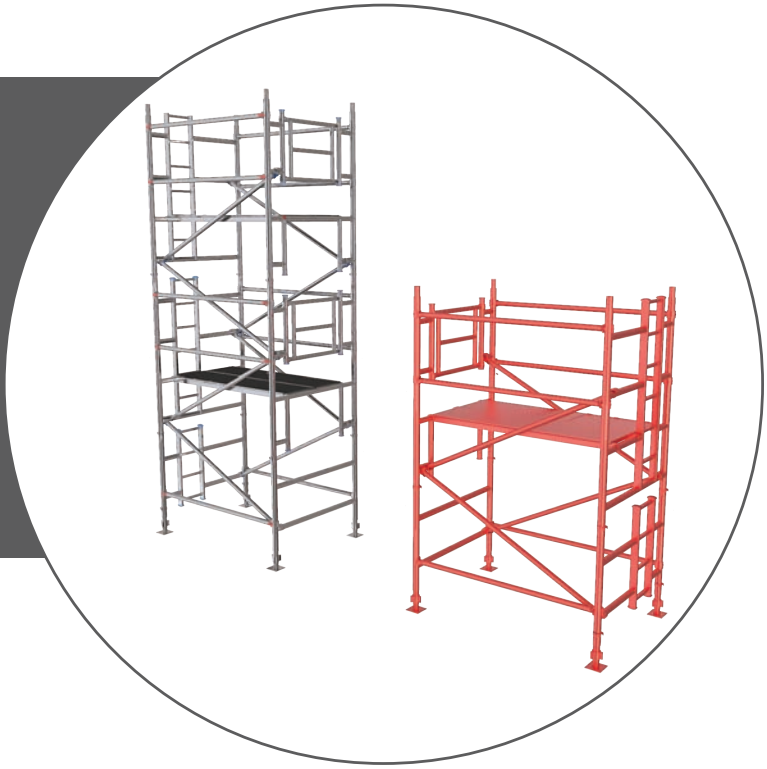
One Tower assembly is now complete



Step 15

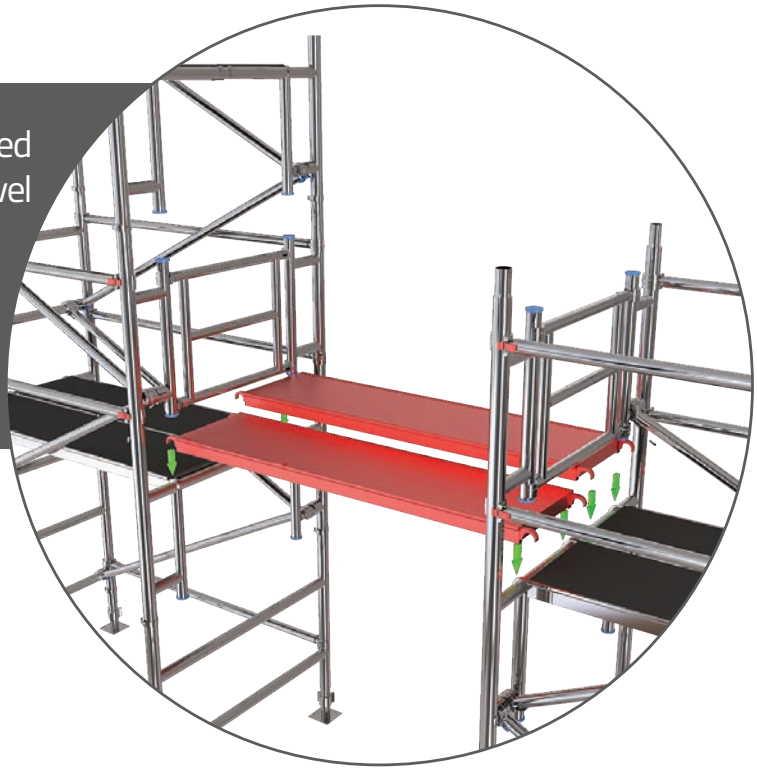
Start erecting another tower at a distance of **2.5 Mtrs** from the first tower. Ensure the **Walkthrough Frames** of both the towers face each other.

Repeat Steps 1 to 8 and prepare the other tower upto the intermediate platform level.



Step 16

Hook the lower set of 2 brdige decks (fixed platforms) to the 2nd rung of the 2nd level frames on either side



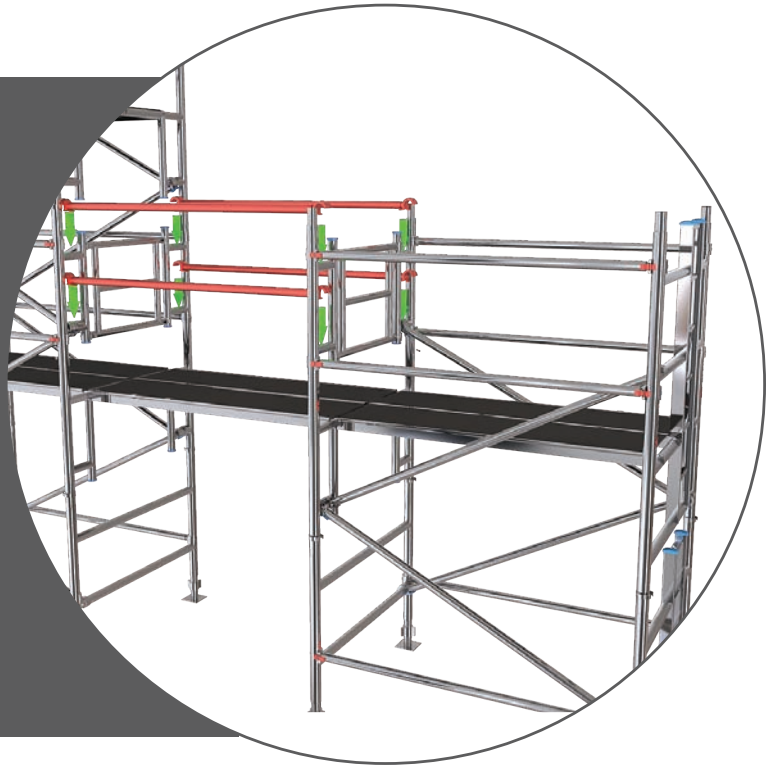
Step 17

Step 17.1

Hook the lower pair of **Horizontal Braces** to the **3rd Rung** of both the **Walkthrough frames** of both the towers, as Mid rail.

Step 17.2

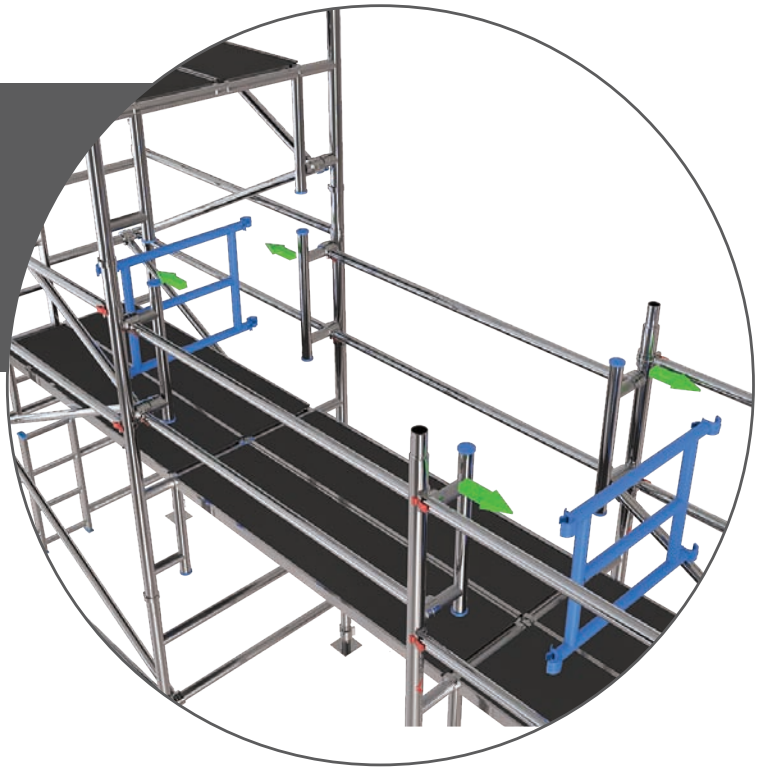
Hook the upper pair of **Horizontal Braces** to the **4th Rung** of both the **Walkthrough frames** of both the towers, as Guard rail.



Step 18

Step 18.1

It is safe to remove the safety gates now from both the sides.



Step 19

Insert the 3rd level **Walk-through Frame and Ladder Frame** into the corresponding spigots of 2nd level **Walk-through Frame** and **Ladder** Frame. For clamping instructions refer to the Clamping Instructions section on **Page 20.**

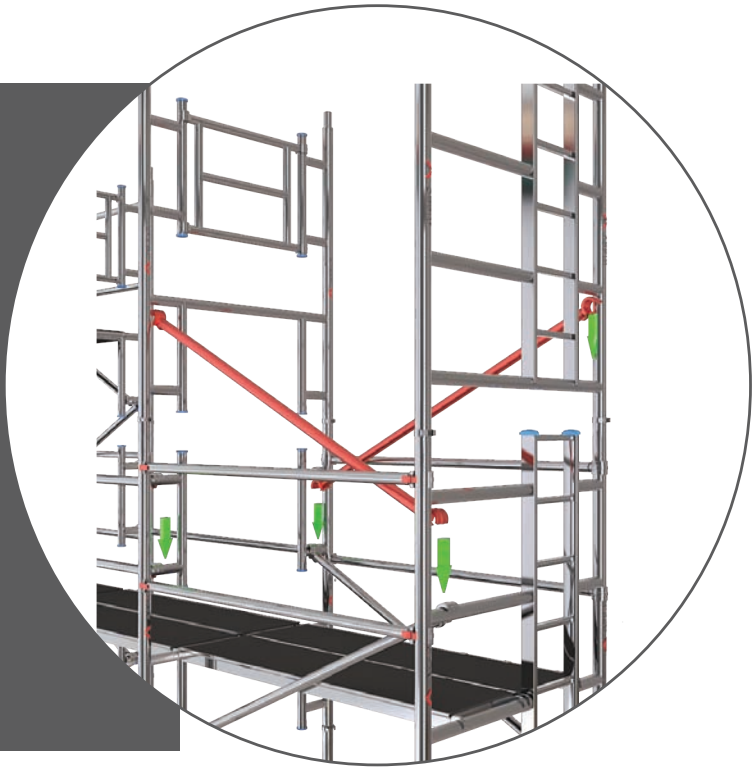
Step 20

Step 20.1

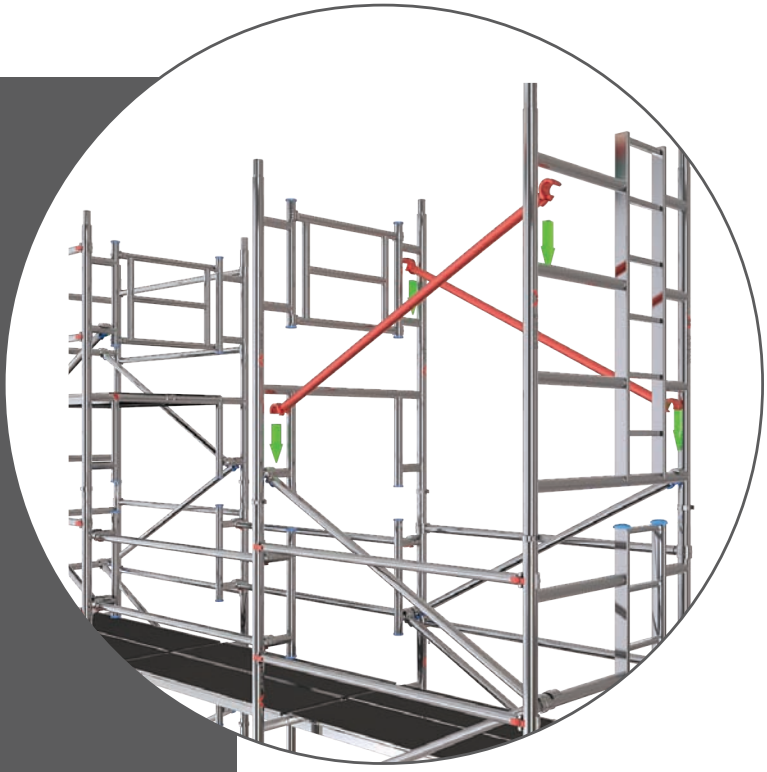
Hook the Diagonal Brace to the **3rd Rung** of the 2nd level **Walk-through Frame** at one end and the other end should be hooked to the **1st Rung** of the 3rd level **Ladder Frame** on the other side.

Step 20.2

Hook the 2nd Diagonal Brace to the **1st Rung** of the 3rd level **Walk-through Frame** at one end and the other end should be hooked to the **3rd Rung** of the 2nd level **Ladder Frame** on the other side.



Step 21



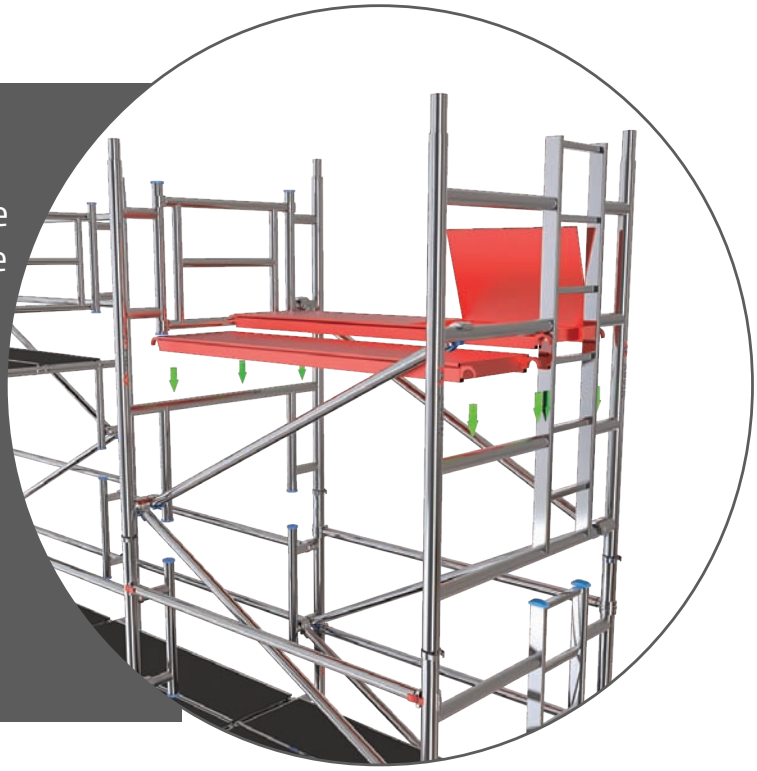
Step 21.1

Hook the **Diagonal Brace** to the **3rd Rung** of the 3rd level **Walk-through Frame** at one end and the other end should be hooked to the **1st Rung** of the 3rd level **Ladder Frame** on the other side.

Step 21.2

Hook the **2nd Diagonal Brace** to the **1st Rung** of the 3rd level **Walk-through Frame** at one end and the other end should be hooked to the **3rd Rung** of the 3rd level **Ladder Frame** on the other side.

Step 22



Step 22.1

Hook the working **Fixed Platform** on the **2nd Rung** of the 3rd level frames. Make sure the platform is not on the ladder side.

Step 22.2

Hook the working **Trapdoor Platform** on the **2nd Rung** of the 3rd level frames beside the Fixed Platform. Make sure the trapdoor is towards the ladder side.

Step 23

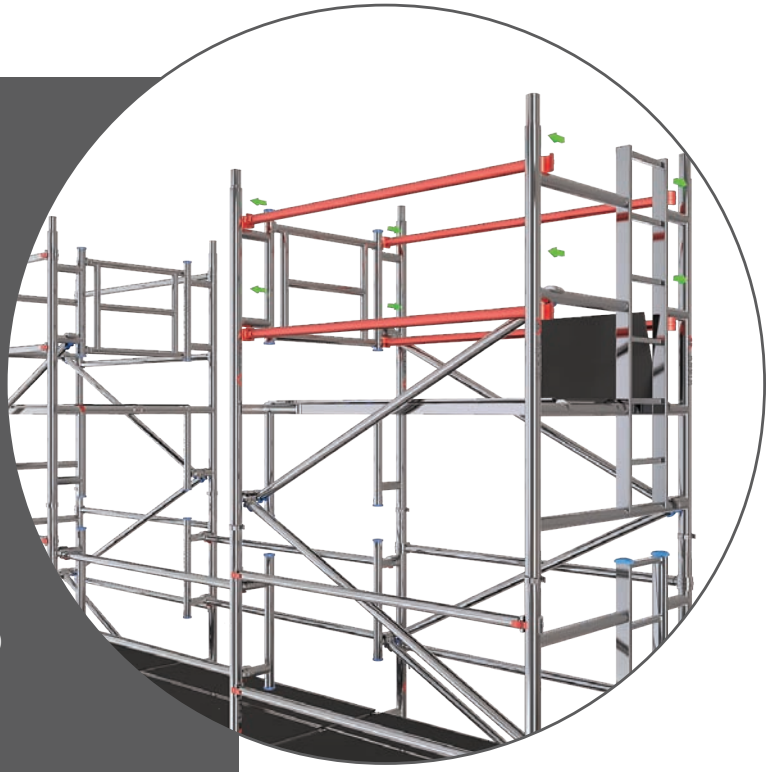
Using the 3T method, standing on the ladder and leaning back against the edge of the trapdoor aperture, fit the horizontal braces as mid rails and guardrails.

Step 23.1

Hook the lower pair of **Horizontal Braces** to the **3rd Rung** of both the frames of 3rd level on both the sides.

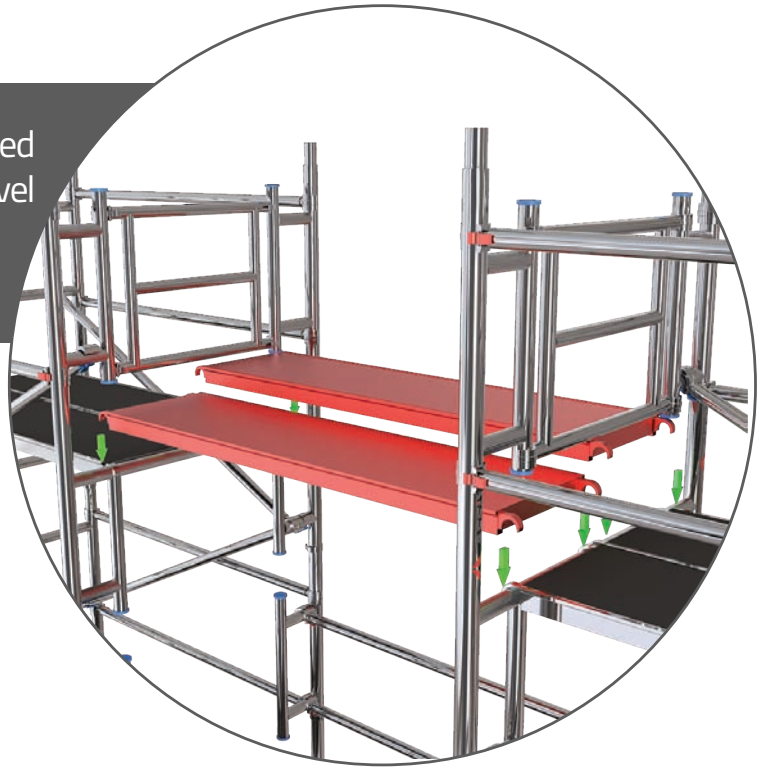
Step 23.2

Hook upper pair of **Horizontal Braces** to the **4th Rung** of both the frames of 3rd level on both the sides.



Step 24

Hook the upper set of 2 brdige decks (fixed platforms) to the 2nd rung of the 3rd level frames on either side



Step 25

Step 25.1

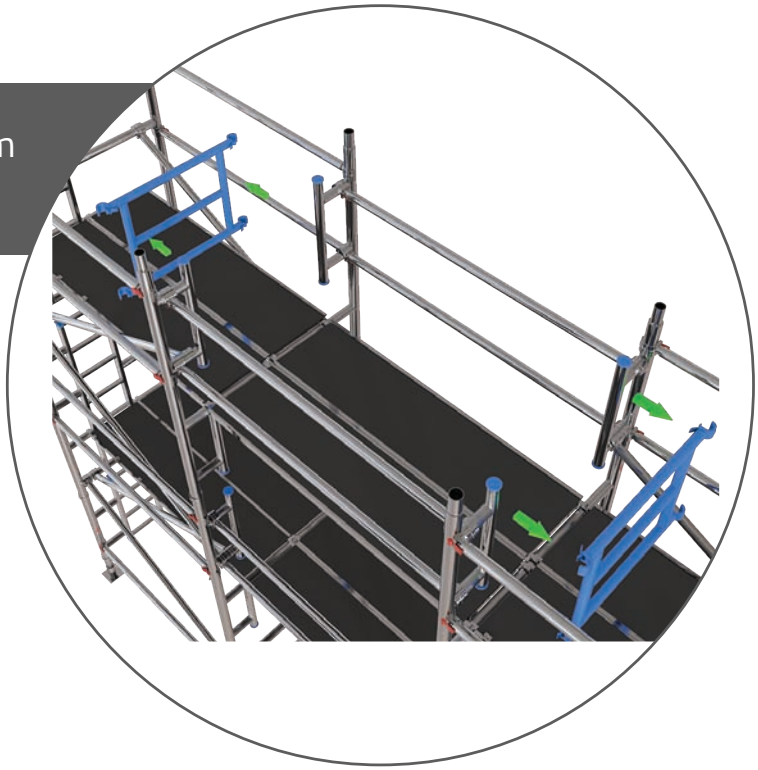
Hook the lower pair of **Horizontal Braces** to the **3rd Rung** of both the **Walkthrough frames** of both the towers, as Mid rail.

Step 25.2

Hook the upper pair of **Horizontal Braces** to the **4th Rung** of both the **Walkthrough frames** of both the towers, as Guard rail.

Step 26

Remove the **temporary safety** gate from both the Walkthrough frames.



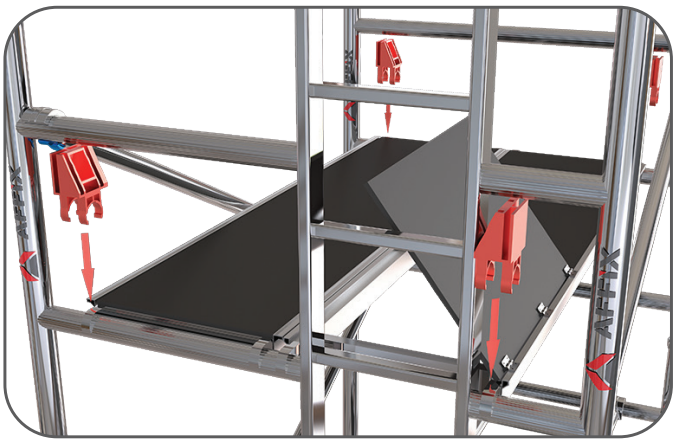
Step 27

Insert the wooden **toe-boards** in the toe-board holder slot on all the sides and insert the wooden toe-board

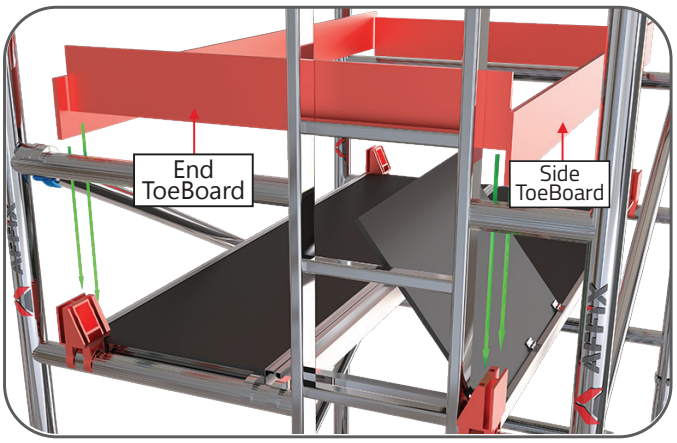
Step 28

Last, but not the least, follow the tying-in methodology and instructions provided on page 23 and tie the tower to a fixed rigid structure before start using it.

Toeboard Assembly Details



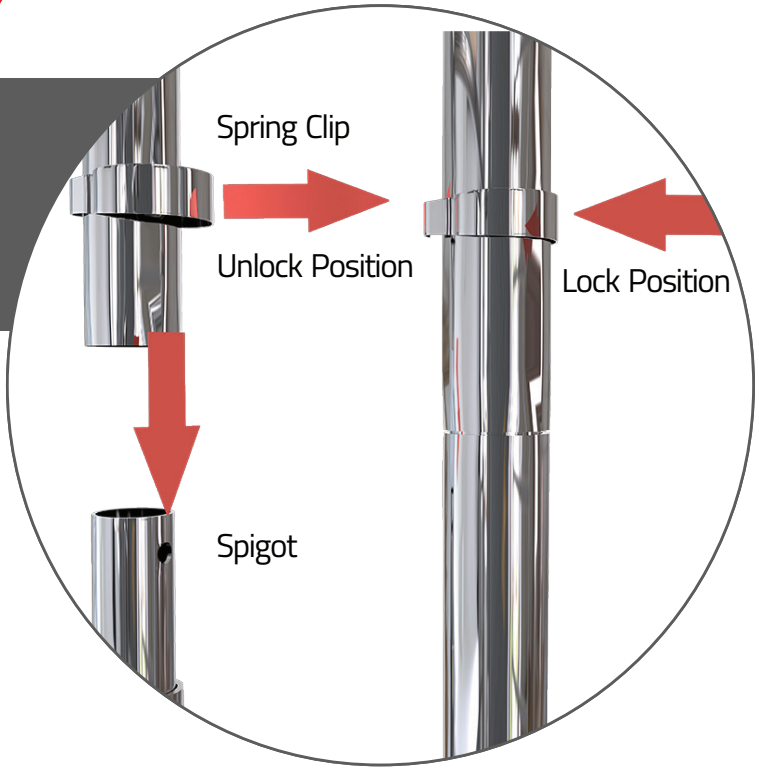
Fix the claw of the Toeboard **TB** on the **Rungs** facing each other as shown in the figure.

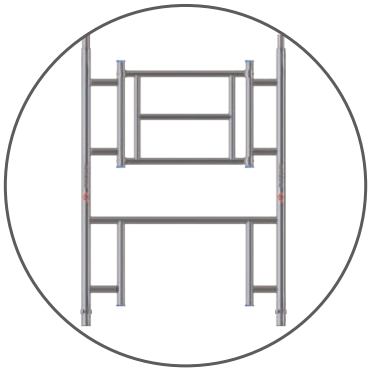


Then insert the **Side Toeboard** and the **End Toeboard** in the respective toeboard slots as shown in the figure.

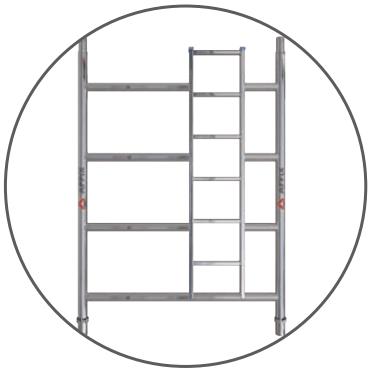
Clamping Instructions

Always ensure the **Spring Clips** are in the lock position after inserting the upper frame in the **Spigot**. To insert, unlock the **Spring Clip**.



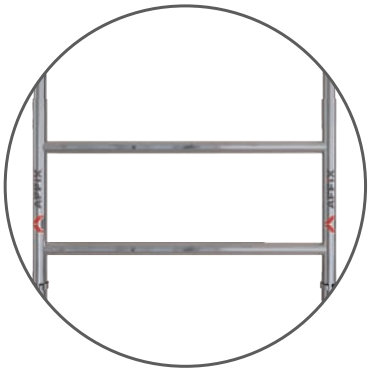


FW20135
Walkthrough Frame

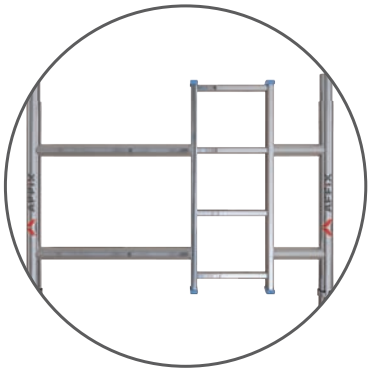


FL20135
Ladder Frame

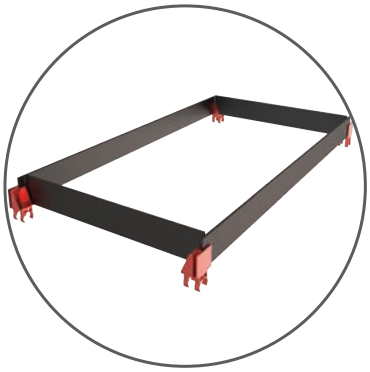
JA500
Adjustable Base Jack



FS10135
Span Frame



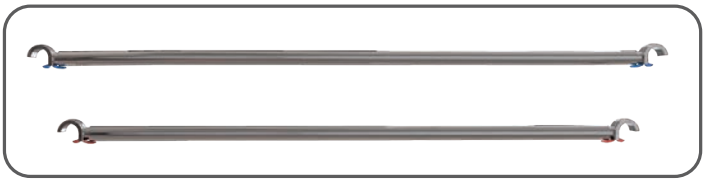
FL10135
Ladder Frame



BT200/250
ToeBoard Set

PT200/250
Trapdoor Platform

PF200/250
Fixed Platform



BD200/250, BH200/250
Diagonal Brace, Horizontal Brace

AFFIX MALT Series towers must never be built as free-standing structure. Follow the tying-in solution provided

The following points must be observed:

- Never build linked towers without adopting and correctly following the suggested tying-in solution.

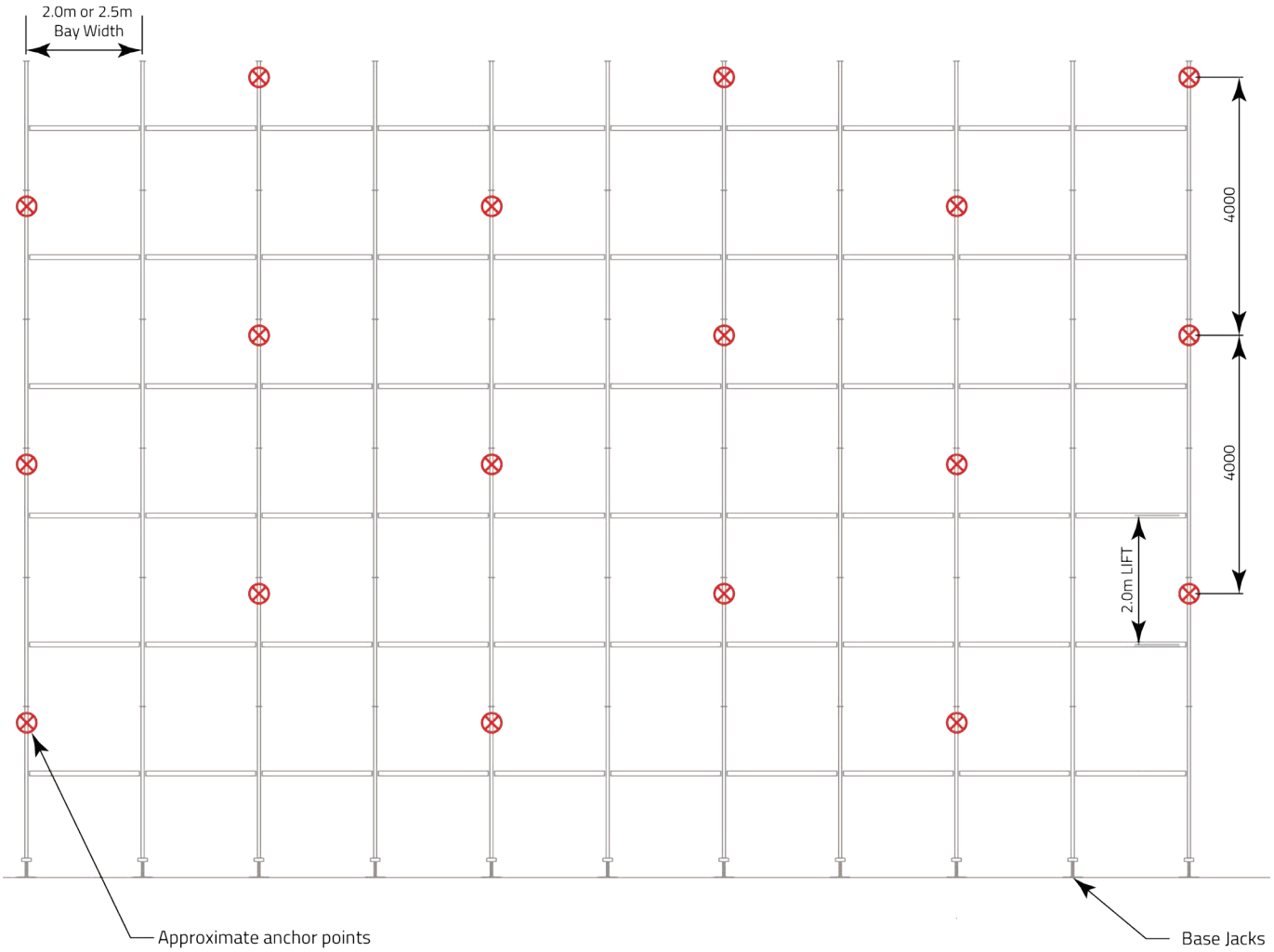
- Securely tie the linked tower into an adjacent rigid structure capable of withstanding the forces that will be imposed upon it by the attachment of the tower.

- The tying in pattern should ensure that the uprights of the tower are tied in a minimum of every 4 metres, both laterally and vertically in an alternating pattern. In practice this means that "every other frame and every other lift" is tied in. Additionally, both ends of the structure must be tied in at 4 metre intervals.

- In case if it is not possible to tie the tower to a suitable adjacent rigid structure, please contact the manufacturer **Affix Scaffolding WLL** for alternative solutions. Tel: +974 5529 9893 or Email: info@affixscaffolding.com.

- When tying-in to concrete structure, select and install anchors in concrete and masonry must be selected and installed in accordance with BS 8539.

- The MALT tower is designed to be properly secured to a suitable adjacent rigid structure which should withstand the forces that will be imposed upon it by the tying-in of the tower.



Moving the Tower

Moving this tower is not possible since this is fixed-type structure. In case a movement is required, the complete has tower has to be dismantled and re-erected at the required location.

Comply To

- Certified and independently tested for use.
- Compliant to 3T Assembly process.
- Safe working load on the platform is 250kgs/Sq Mtr, evenly distributed.
- Maximum permissible distributed load on the tower 1250 Kgs.

Type Approval

The scaffold towers referred to herein have been tested by

MALT SERIES TABLE Confirming to BS1139-6:2014

ALUMINIUM LINKED TOWER

	MABW	325	425	525	625	725	825	925	1025
Tower Height	in Mtrs	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
Working Height	in Mtrs	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
Platform Height	in Mtrs	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Weight	in Kgs	272	354	375	448	504	567	605	687
Components	**Code**	**Specs**							
Ladder Frame	FL20135	2.0 Mtrs	2	4	4	6	6	8	8	10
Walkthrough Frame	FW20135	2.0 Mtrs	2	4	4	6	6	8	8	10
Ladder Frame Mini	FL10135	1.0 Mtr	2	0	2	0	2	0	2	0
Span Frame Mini	FS10135	1.0 Mtr	2	0	2	0	2	0	2	0
Adjustable Base Jack	JA500	0.5 Mtrs	8	8	8	8	8	8	8	8
Horizontal Braces	BH250	2.5 Mtrs	16	28	28	40	40	52	52	64
Diagonal Braces	BD250	2.7 Mtrs	8	12	16	20	24	28	32	36
Platform Trapdoor	PT250	2.5 Mtrs	2	4	4	6	6	8	8	10
Platform Fixed	PF250	2.5 Mtrs	3	8	8	12	12	16	16	20
Bridge Deck	PT250	2.5Mtrs	3	4	4	6	6	8	8	10
Toe Board	BT250	Set	3	6	6	9	9	12	12	15

BS1139-6:2014 Certification by TUV India

TÜV INDIA
TÜV NORD Group

Statement of Confirmation

No.: CE/21-22/046

Client's Reference – EN-AS-BS-2122-000

Name & Address of the Manufacturer:
AFFIX SCAFFOLDING.
Hugo Building, Office No.13
Opp Old Fatihima Shopping Centre
Umm Dom Stree, Muaither, Doha , Qatar

Product Type:

- Cantilever Tower
- Bridgeway Tower
- Mobile Stair Tower
- Aluminium Linked Tower

Review Results/Observations:

The Technical File referenced above submitted by the manufacturer has been reviewed for its document contents – the above product/s, generally comply with the Safety requirements of the British Standards:

BS-1139-6:2014

Validity: 12 November 2024 (Subject to annual factory production control audits)

Technical Inspection Services TÜV India

Mahesh Gaur
General Manager - Product Certification & Product Testing Laboratory

(This Statement of Confirmation is valid under the conditions stated overleaf)

Job no: 8119218584

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