

# MI TOWER STAIRS

MI TOWER STAIRS ASSEMBLY GUIDE (Rev.B 01-04-2019)



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# ASSEMBLY GUIDE FOR MI TOWER STAIRS

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## INTRODUCTION

MI TOWER STAIRS is an access tower system complying with BS 1139 Part 6, EN 1004:2004 and Work at Height Regulations, with vertical ladder access, designed for a maximum platform loading of 150kg. Platform heights are 2.2m to 4.7m internal and external.

Tower designation - EN1004-3-4.7/4.7-D

Our priority is to help ensure the safe operation of our products, so please pay particular attention to the safety tips on pages 9 and 10.

We want you to enjoy the safe and responsible use of your MI TOWER STAIRS with the minimum of fuss and this guide is designed to get you up and running as quickly and as safely as possible.

We recommend that you read this guide prior to assembling and using MI TOWER STAIRS.

Scan this QR code to view the MI TOWER STAIRS on our website.

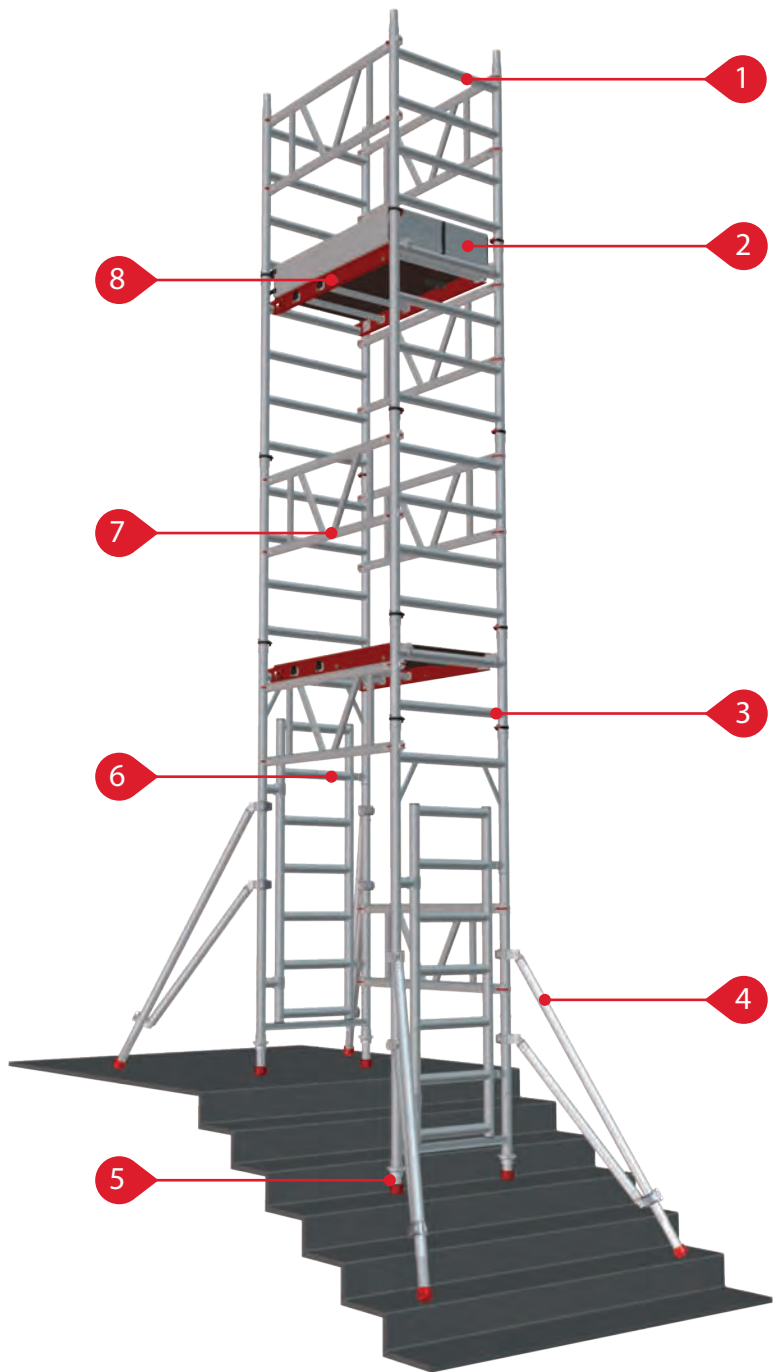


[www.popupproducts.co.uk](http://www.popupproducts.co.uk)

**Visit** PASMA for further reference.

[www.pasma.co.uk/training/towers-on-stairs-course](http://www.pasma.co.uk/training/towers-on-stairs-course)

# KNOW YOUR MI TOWER STAIRS



## PARTS LISTING

1	4 RUNG FRAME	5	ADJUSTABLE LEG WITH RUBBER FOOT
2	TOE BOARD SET	6	WALK-THROUGH GATE FRAME
3	2 RUNG FRAME	7	GUARDRAIL BRACE PANEL
4	EASY-LOCK STABILISER	8	HATCH PLATFORM

# KNOW YOUR MI TOWER STAIRS'S COMPONENTS

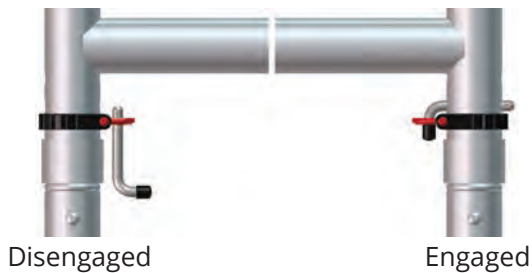


## 1 GUARDRAIL BRACE PANEL

Claws are fitted to the guardrail brace panels and each has an automatic locking jaw which is released by simply moving the jaw's trigger. The claw must only be attached to the frame with the opening facing outward. Attachment with the jaw's opening facing inward will not fully protect the user if lent upon and may cause serious injury or death. Always ensure that each claw is positively locked in position before using your tower.

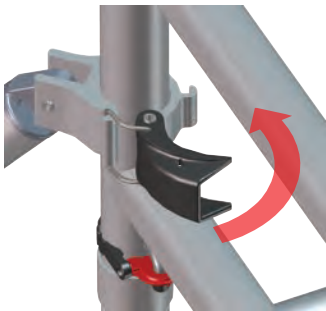
## 2 FRAME CLIPS

The frame clip's pin locates into a retaining hole in the frames to lock tower sections together when placed one on top of the other. The pin is locked in place by a red tab to ensure that it remains in place. From the disengaged position, pivot the pin / tab to bring the pin horizontal. Insert the pin fully through the retaining hole with its tail pointing down. Next flip the tab vertically to lock the pin in place. Removal is simply a reversal of the fitting sequence.



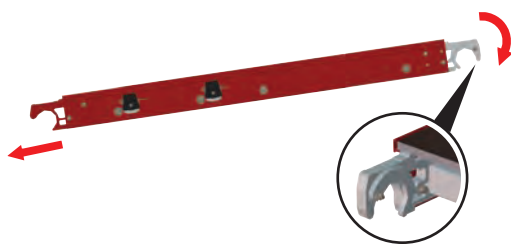
## 3 STABILISER COUPLER CLAMP

The coupler clamps are used to secure the stabilisers to the tower's vertical tubing. With the clamp jaw open, offer it to the tube. Bring the jaw around the tube and set the buckle on to the hook, then close the clamp arm to lock the stabiliser in position. A similar clamp is fitted to the stabiliser extension leg.



## 4 WIND-LOCK CATCH

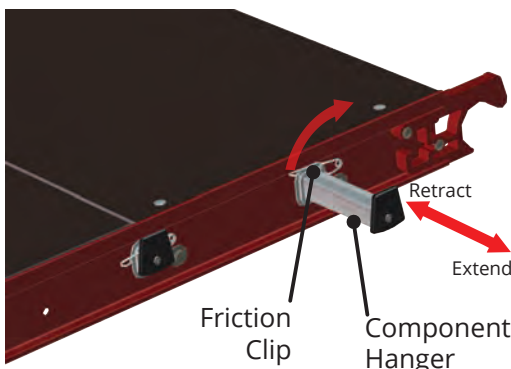
The wind lock catches comprise of a set of auto-engaging hooks at one end of the platform and a single gravity type catch at the other. The purpose of these devices is to prevent up-lift of the platforms in windy conditions. To engage the auto wind lock (AWL) simply tilt the platform at the angle shown before placing the hooks onto the rung of the end frame. Lower the opposite end of the platform onto the opposite end frame rung and the gravity type lock will automatically engage. Simply lift and hold the gravity lock before tilting the platform to dis-engage the opposite AWL hooks when removing the platform on tower disassembly.



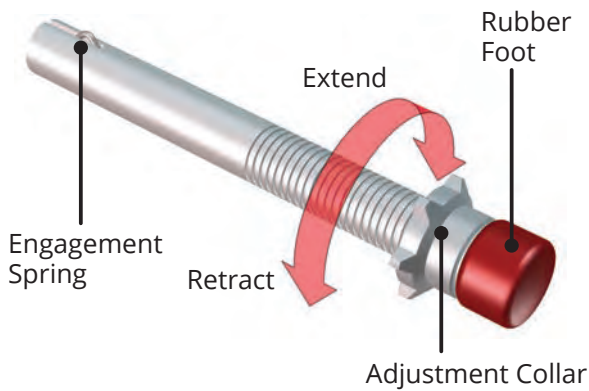
## 5 PLATFORM WITH BUILT IN COMPONENT HANGERS

To enable one man to erect the MI TOWER family of products, each hatch is fitted with four component hangers which are stowed (two either side) within the platform's frame. The hangers can be extended when needed and retracted when not.

To extend a hanger simply pull up the friction clip and pull the component hanger until it stops. To retract the hanger, simply reverse the procedure.

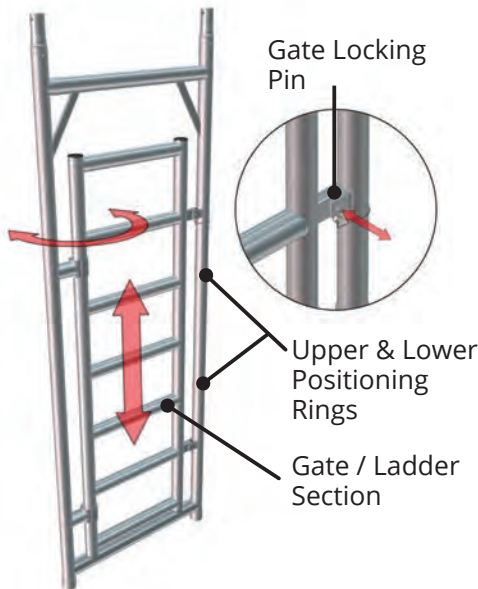


# KNOW YOUR MI TOWER STAIRS' COMPONENTS



## 8 ADJUSTABLE LEG WITH RUBBER FOOT

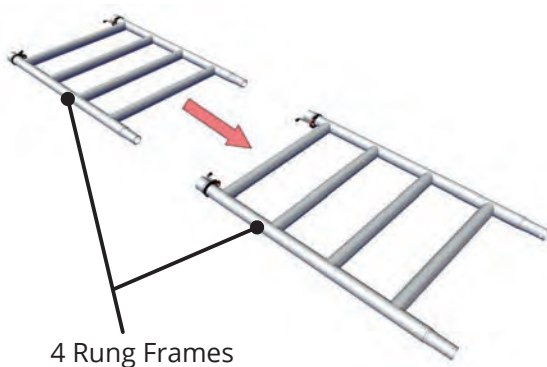
The adjustable leg with rubber foot allows for secure positioning of your Mi TOWER STAIRS in relation to your workplace. The leg can be extended or retracted to allow for levelling and the rubber foot prevents slipping.



## 9 WALK-THROUGH GATE FRAME

The walk-through gate frame includes a gate/ladder which is used to access the upper levels of the Mi TOWER STAIRS and once unlocked and opened, allows access into and through the base of the MI TOWER STAIRS. To open the gate/ladder remove the clip and lift the gate/ladder upwards. It can now be swung inwards or outwards to allow access.

The vertical tubes also feature positioning rings that will be used when building the Mi TOWER STAIRS and allow the guardrail brace panel hooks to be correctly positioned.



## 10 CONJOINED FRAMES

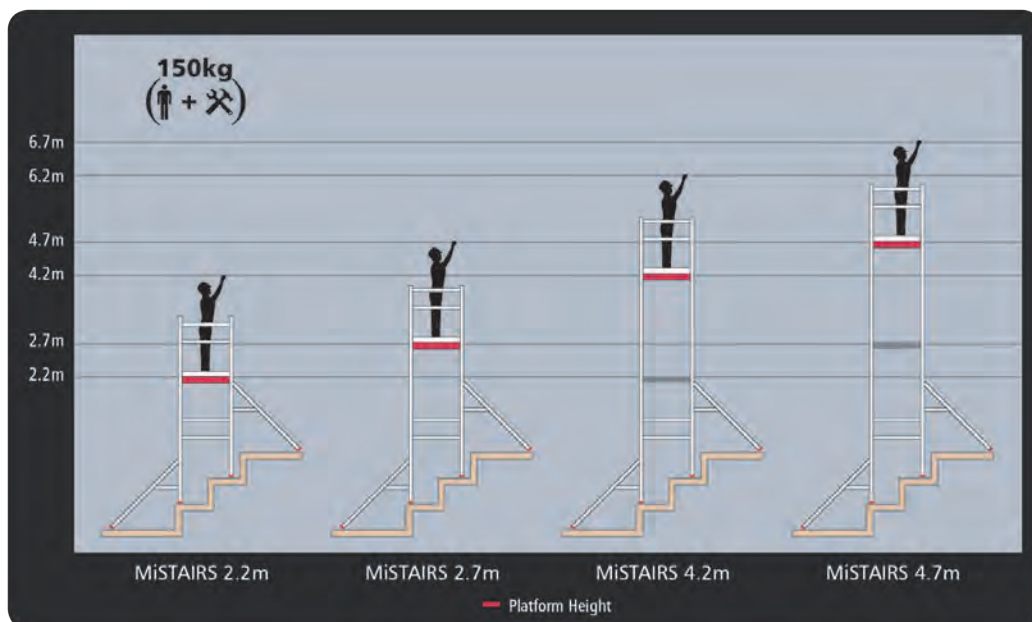
A set of conjoined frames can be created by disengaging the frame clips on one four rung frame and fitting it to a second four rung frame. Engage and apply the Easy-Clip frame clips to lock the two frames together.

# KNOW YOUR KIT LIST AND SPECIFICATIONS

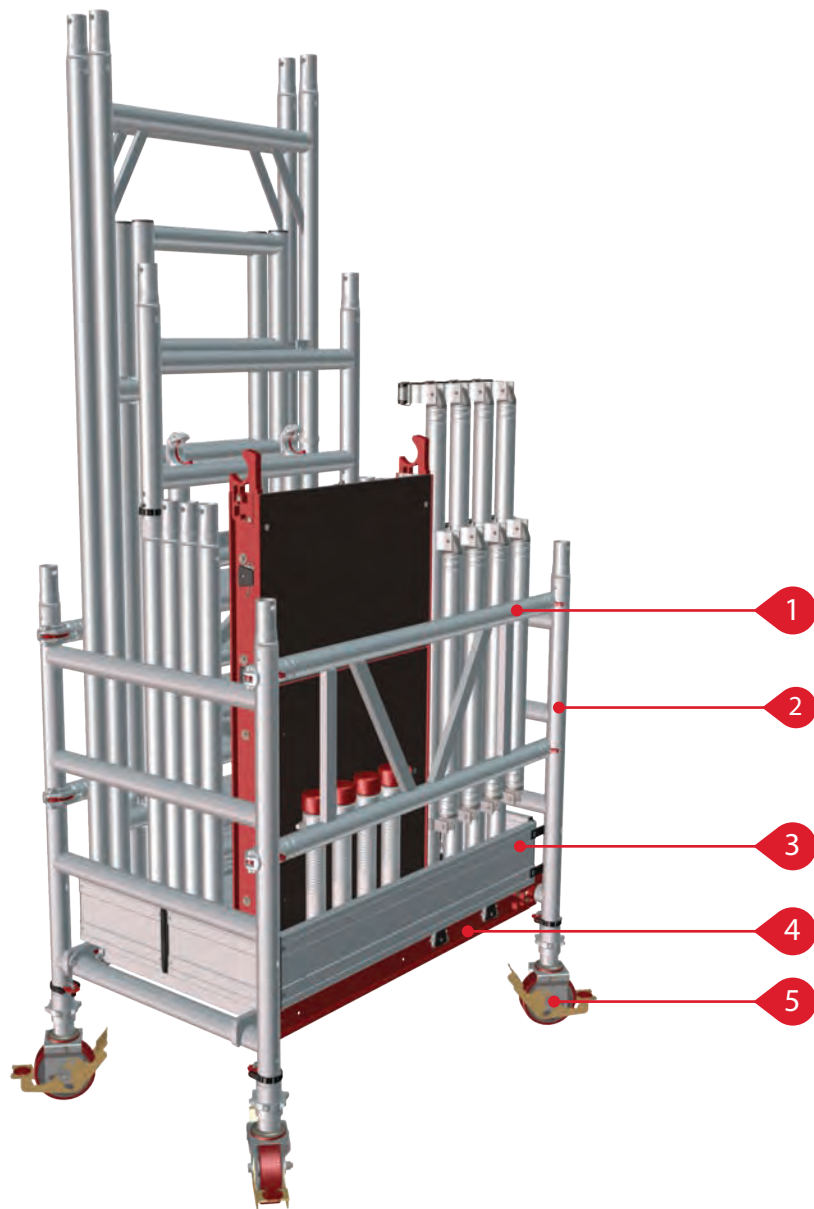
## COMPONENT MATRIX AND WEIGHTS

COMPONENT DESCRIPTION	Weight (Unit) kg	2.2m qty	2.7m qty	4.2m qty	4.7m qty
4 RUNG FRAME	3.55	3	2	7	6
EASY-LOCK STABILISER	3.65	4	4	4	4
HATCH PLATFORM	9.35	1	1	2	2
GUARDRAIL BRACE PANEL	3.25	4	4	7	7
220MM ADJUSTABLE LEG WITH RUBBER FOOT	0.91	4	4	4	4
WALK-THROUGH GATE FRAME	9.29	1	2	1	2
2 RUNG FRAME	2.01	1	1	1	1
TOE BOARD SET	5.15	1	1	1	1
MI STAIRS WEIGHT (KG)		67.69	73.43	100.99	106.73
PLATFORM SAFE WORKING LOAD (KG)		150kg	150kg	150kg	150kg
MAXIMUM LEG LOAD		108kg	111 kg	125kg	128kg

See page 11 (Tying in) for MI TOWER STAIRS heights outside the scope of this instruction guide or instances where the standard stabilisers cannot be deployed as instructed.



# KNOW YOUR STORAGE AND TRANSPORT PACK



## TRANSPORT AND STORAGE

For ease of storage and of transportation, MI TOWER STAIRS has been designed so that all components can be safely stored within the MI TOWER STAIRS trolley assembly. See illustration.

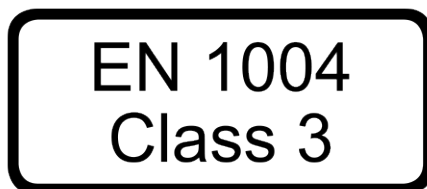
Product shown is MI TOWER STAIRS 2.7m

## TROLLEY COMPONENTS

- 1 GUARDRAIL BRACE PANEL X2**
- 2 4 RUNG FRAME X2**
- 3 TOE BOARD SET**
- 4 HATCH PLATFORM**
- 5 ADJUSTABLE LEG AND CASTOR X4**



# REGISTRATIONS



## **SAFETY DOS AND DON'TS - ALWAYS**

- ALWAYS** Read and understand this guide before you begin assembly.
- ALWAYS** Ensure that all safety requirements are met and that MI TOWER STAIRS is the correct access solution for the task you wish to perform.
- ALWAYS** Ensure that MI TOWER STAIRS is assembled and dismantled by a qualified, competent person.
- ALWAYS** Cordon off both the uppermost and lowermost access points of the staircase on which the MI TOWER STAIRS tower is to be used on.
- ALWAYS** Wear the correct Personal Protective Equipment for the task being performed. Gloves, steel toecap boots, a hard hat and suitable clothing must be worn by all persons.
- ALWAYS** Tie back long hair and remove items of loose jewellery.
- ALWAYS** Perform a full risk assessment prior to assembling or using MI TOWER STAIRS and abide by your findings.
- ALWAYS** Prevent access to unauthorised persons if you have no other option but to leave MI TOWER STAIRS unattended and if this is not possible then MI TOWER STAIRS must be dismantled.
- ALWAYS** Carry tools and materials safely retained in a tool belt that allows freedom of movement.
- ALWAYS** Ensure you properly assess the risk / method if tools or materials are hoisted to the platform via a rope.
- ALWAYS** Access platforms from within MI TOWER STAIRS and via the walk-through gate frame and 2 rung frame positioned at the platform's trap door end. Keep your feet in the middle of the rungs and grip the upper rungs with your hands.
- ALWAYS** Erect MI TOWER STAIRS on the steps of a staircase that is capable of supporting its own weight, the user and any tools or materials without flex or movement.

## SAFETY DOS AND DON'TS - NEVER

- NEVER** Use MI TOWER STAIRS if you don't understand something in this guide; please contact the supplier for advice.
- NEVER** Assemble, use, move or dismantle MI TOWER STAIRS if you are tired or unwell or if you are under the influence of alcohol or drugs.
- NEVER** Use MI TOWER STAIRS in adverse weather conditions which may endanger the user.
- NEVER** Use in wind conditions of Beaufort Force 5 and above. Please be aware of the tunnel effect caused by buildings close to each other.
- NEVER** Assemble or use MI TOWER STAIRS near overhead hazards such as power lines that are within reach of MI TOWER STAIRS or the user.
- NEVER** Ascend or descend your MI TOWER STAIRS if both hands are not free.
- NEVER** Add banners, notice boards etc to MI TOWER STAIRS.
- NEVER** Use MI TOWER STAIRS if contaminated by paint, chemicals etc.
- NEVER** Overload the platforms (see component matrix page 6).
- NEVER** Suspend MI TOWER STAIRS from another structure.
- NEVER** Lean from MI TOWER STAIRS and never apply undue side force.
- NEVER** Stand on the guardrails, toe boards, boxes (or similar) to gain extra height. If the working height is insufficient either construct MI TOWER STAIRS to the required height or use an alternative method.
- NEVER** Use damaged components in your MI TOWER STAIRS assembly.

# BEFORE YOU START

## PREPARATION

The staircase must be clear of any obstructions including materials and debris. Check that you have All the components necessary to construct the tower height you require. Check also each component for condition and correct function. If any part is missing or damaged/not working correctly it must be replaced before assembling the tower.

## 3T (THROUGH THE TRAPDOOR) SYSTEM

The 3T method of construction has been developed to reduce the risk of the erector falling from a tower during construction. To ensure the erector is always protected by a set of guardrails, they will be attached to the frames whilst the erector sits on the platform with legs through the hatch.

Platforms must be installed with vertical distances between them not exceeding 2.1 m when assembling and dismantling. The maximum number of people on a working platform level permitted to simultaneously exert a horizontal load of 30 kg is:

- 1 person per bay for bays less than 4 m in length and;
- 2 persons per bay for bays greater than 4 m in length. The weather forecast must be taken into account before use.

## TYING IN

MI TOWER STAIRS heights outside the scope of this instruction guide or instances where the standard stabilisers cannot be deployed as instructed, such as in narrow stairwells or outdoors, can be built using special components and tying in the MI TOWER STAIRS structure to add stability. In these instances contact the manufacturer for further information and guidance.

When used, select and install anchors in concrete and masonry must be selected and installed in accordance with BS 8539. 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.

## BALLAST

Where shown in the component list, ballast must be used to stabilise against overturning. Only use solid materials as ballast (i.e. no loose materials) and position to avoid overloading individual components. Ballast should be supported by the base of your MI TOWER STAIRS and securely fastened to prevent removal.

## ASSEMBLY GUIDE

These instructions must always be made available to the user. If replacement copies are required, please contact your supplier.

## DAMAGED COMPONENTS

Regularly inspect all components for damage. Damaged components must be quarantined so that they cannot be used. Where safe to do so, the component can be repaired but only by a qualified repairer. If in doubt contact your supplier for advice.

## DISMANTLING YOUR MI TOWER STAIRS

MI TOWER STAIRS is easily dismantled by simply reversing the erection procedure. You must, however, be protected by guardrail brace panels when standing on any platform and ensure that you use the 3T method when removing guardrail brace panels.

# GETTING STARTED

## GETTING STARTED

MI TOWER STAIRS requires only one person to assemble and dismantle it. Your MI TOWER STAIRS is supplied with uniform 1m high rung frames which can be used at any stage of the assembly. During erection, the frames may be connected together to create 2m high frames which makes assembly both quicker and easier.

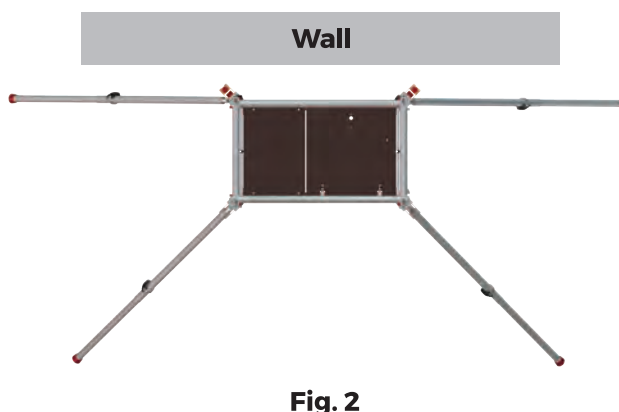
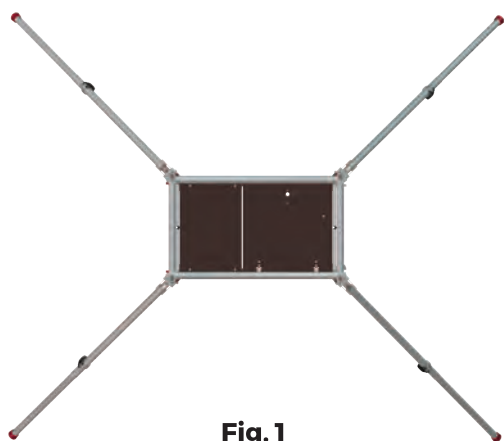
## STABILISERS POSITIONING

Stabilisers are supplied and must be used for all MI TOWER STAIRS heights. Please refer to the notes regarding tying in the tower, for situations where the standard stabiliser patterns shown below cannot be obtained.

For maximum effect arrange the stabilisers by positioning at an angle of 45 degrees to give a footprint as close to square as possible, as shown in fig. 1.

If the tower is to be positioned against a wall, the stabiliser footprint can be altered as shown in fig. 2 but only where the heights of the wall is a minimum of two thirds the height of the top working platform.

Ensure that all four stabilisers' feet are in contact with the ground and that the ground can support the weight of the tower and stabilisers.



## MOVING YOUR MI TOWER STAIRS

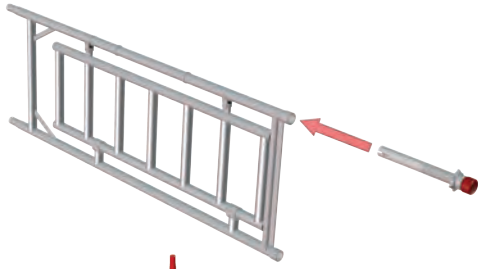
When your MI TOWER STAIRS needs to be moved a small distance to enable you to continue your task, this can be achieved provided the stabilisers can remain in pattern and all tools, materials and personnel are removed from the tower.

You will need to raise the stabilisers so that they are no more than 25mm above the floor and properly locked. However, if the stabilisers have to be repositioned and this reduces the footprint, your MI TOWER STAIRS must be reduced in height to 2m.

You must only move MI TOWER STAIRS by manual effort, at a slow pace and only after fully assessing the risk. Once moved, always check MI TOWER STAIRS before using.

If MI TOWER STAIRS is to be moved to a new location, a new level or over rough terrain, it must be fully dismantled and rebuilt at the new location.

# MI TOWER STAIRS 2.2M & 4.2M - ASSEMBLY



## STEP 1

Take four adjustable legs with rubber feet and insert two into the walk-through gate frame. Then insert the remaining two adjustable legs with rubber feet into the two rung frame. Adjust all leg height adjustment collars to bring all four legs to the lowest position.



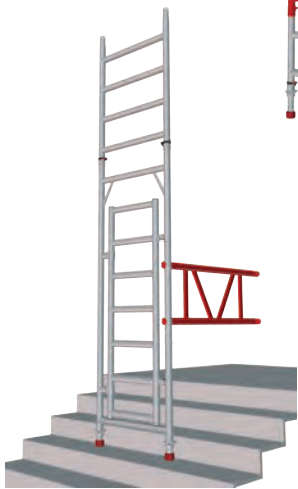
## STEP 2

Construct the lowermost frame assembly. Release the Easy-Clip frame clips on one four rung frame. Take the lowermost walk-through gate frame and fit the four rung frame on top. Apply the Easy-Clip frame clips and ensure they are correctly locked.



## STEP 3

Construct the uppermost frame assembly. Release the Easy-Clip frame clips on the two rung and two four rung frames. Take one four rung frame and fit it on top of the two rung frame. Take the second four rung frame and fit it on top of the first four rung frame. Apply all of the Easy-Clip frame clips and ensure they are correctly locked.



## STEP 4

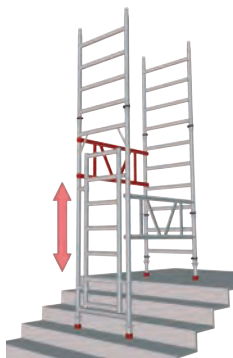
Place the walk-through frame assembly at the lowermost position of the staircase and attach the guardrail brace panel on the gate locking pin side of the frame ensuring its upper jaw is placed above the upper positioning ring. Ensure the two hooks are facing outwards and correctly locked on to the frame tube.

## STEP 5

With your assistant holding the lowermost frame assembly and guardrail brace panel, place the uppermost frame assembly at the uppermost position of the staircase. Attach the guardrail brace panel to the vertical tube of the uppermost frame assembly. Ensure the upper brace hook is positioned above the third rung of the uppermost frame assembly. Make sure the hooks are correctly locked on the frame tube of the uppermost frame assembly.



# MI TOWER STAIRS 2.2M & 4.2M - ASSEMBLY



## STEP 6

Attach another guardrail brace panel on the opposite side to the gate locking pin. Ensure the upper brace hook is positioned below the eighth rung of the lowermost frame assembly and sixth rung of the uppermost frame assembly. Using the lower guardrail brace panel and a spirit level as a guide, adjust the lowermost legs to bring the MI TOWER STAIRS square and level. Ensure all hooks are facing outwards and correctly locked on to the frame tubes.



## STEP 7

Stand inside the MI TOWER STAIRS and fit the platform on the sixth rung of the uppermost frame assembly, ensuring the trap door is positioned at the lowermost end of the MI TOWER STAIRS. Make sure that the Wind-Lock catch engages correctly.



## STEP 8

Fit an Easy-Lock stabiliser to each corner of the MI TOWER STAIRS. The position of the upper and lower couplers will depend on the pitch of the staircase and position of any landings or floors. Ensure the stabiliser footprint is a square as possible within the confines of the staircase sides. Adjust each stabilisers length so that each foot is in contact with the floor or step. Make sure all Easy-Lock clamps are correctly secured.



## STEP 9

Open the walk-through gate and once in the MI TOWER STAIRS close and secure it using the gate locking pin. Open the hatch door and using the rungs of the gate, climb until you are half way through the platform's trap door. Now manoeuvre yourself so that you are sitting on the platform, with your legs through the trap door and your feet resting on the rungs of the gate below the platform. From this position, you should take a guardrail brace panel, one at a time and attach so that the upper jaws are positioned above the tenth rung of the uppermost frame assembly. Ensure all hooks are facing outwards and correctly locked on to the frame tubes.

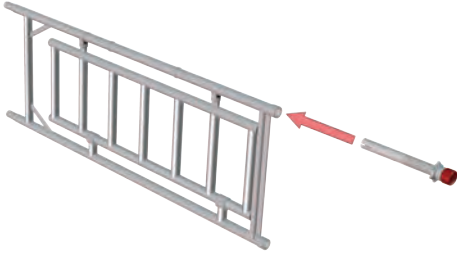
If building a 4.2m platform height MI TOWER STAIRS, follow step 10 onwards of the 4.7m platform height build. If building a 2.2m platform height MI TOWER STAIRS proceed to step 10 of this build.

## STEP 10

With both panels in position, you may access the platform. Unfold the toe board set and position the toe board sections so that they sit over the outer edges of the platform. The MI TOWER STAIRS is now complete and ready to use.



# MI TOWER STAIRS 2.7M & 4.7M - ASSEMBLY



## STEP 1

Fully insert the adjustable legs with rubber feet into two walk-through gate frames, turning the leg's height adjustment collar to bring all four legs to the lowest position.



## STEP 2

Construct the lowermost frame assembly. Release the easy-clip frame clips on the two rung and one four rung frame. Take the lowermost walk-through gate frame and fit the two rung frame on top followed by the four rung frame.

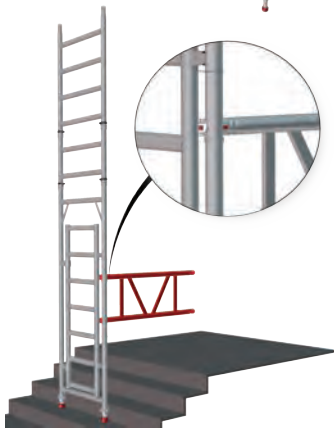
Apply the Easy-Clip frame clips and ensure they are correctly locked.



## STEP 3

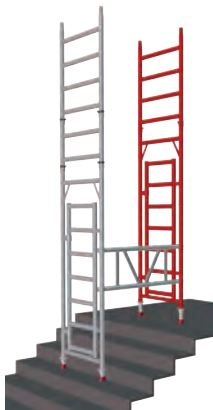
Construct the uppermost frame assembly. Release the easy-clip frame clips on one four rung frame. Take the uppermost walk-through gate frame and fit the four rung frame on top.

Apply the Easy-Clip frame clips and ensure they are correctly locked.



## STEP 4

Place the lowermost frame assembly at the lowermost position of the staircase and attach the guardrail brace panel on the gate locking pin side of the frame ensuring its upper hook is placed above the upper positioning ring. Ensure the two hooks are facing outwards and correctly locked on to the frame tube.



## STEP 5

With your assistant holding the lowermost frame assembly and guardrail brace panel, place the uppermost frame assembly at the uppermost position of the staircase.

Attach the guardrail brace panel to the vertical tube of the uppermost frame assembly ensuring the upper brace hook is above the lower positioning ring. Make sure the hooks are correctly locked on the frame tube of the uppermost frame assembly.



# MI TOWER STAIRS 2.7M & 4.7M - ASSEMBLY

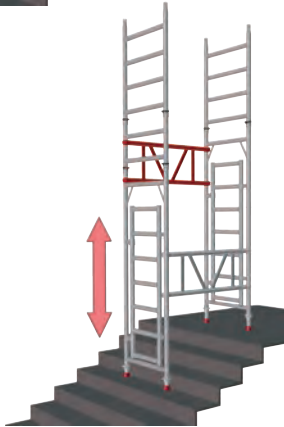
## STEP 6



Attach another guardrail brace panel on the opposite side to the gate locking pin. Ensure the upper brace hook is positioned below the tenth rung of the lowermost frame assembly and the eighth rung of the uppermost frame assembly.

It is easier to attach the guardrail brace panel by sliding it towards and then through the lowermost frame assembly before attaching the opposite hooks. Using the lower guardrail brace panel and a spirit level as a guide, adjust the lowermost legs to bring the MI TOWER STAIRS square and level. Ensure all hooks are facing outwards and correctly locked on to the frame tubes.

## STEP 7



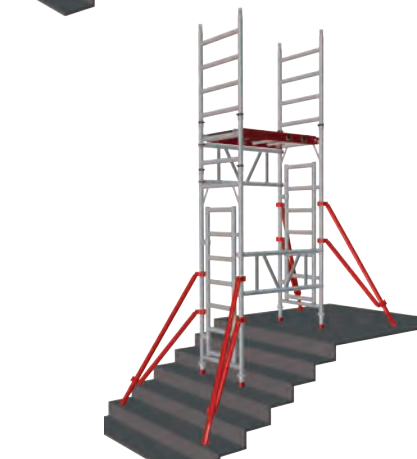
Stand inside the MI TOWER STAIRS and fit the first platform on the eighth rung of the uppermost frame assembly, ensuring the trap door is positioned at the lowermost end of the MI TOWER STAIRS. Make sure that the Wind-Lock catch engages correctly.

## STEP 8



Fit an easy-lock stabiliser to each corner of the MI TOWER STAIRS. The position of the upper and lower couplers will depend on the pitch of the staircase and position of any landings or floors. Ensure the stabiliser footprint is as square as possible within the confines of the staircase sides. Adjust each stabilisers length so that each foot is in contact with the floor or step. Make sure all Easy-Lock clamps are correctly secured.

## STEP 9



Open the lowermost walk-through gate and once in the MI TOWER STAIRS close and secure it using the gate locking pin. Open the hatch door and using the rungs of the gate, climb until you are half way through the platform's trap door. Now manoeuvre yourself so that you are sitting on the platform, with your legs through the trap door and your feet resting on the rungs of the gate below the platform. From this position, you should take a guardrail brace panel, one at a time and attach so that the upper jaws are positioned above the twelfth rung of the uppermost frame assembly. Ensure all hooks are facing outwards and correctly locked on to the frame tubes.

At this step if building a 2.7m platform height MI TOWER STAIRS, jump to step 13. Otherwise carry on from step 10.

# MI TOWER STAIRS 2.7M & 4.7M - ASSEMBLY



## STEP 10

Access the first platform and fit one set of conjoined frames to each end of the MI TOWER STAIRS and apply the easy-lock frame clips. Next, attach a guardrail brace panel to the MI TOWER STAIRS, with its lower jaw positioned above the fourteenth frame rung on the uppermost frame assembly. Ensure all claws are facing outward and correctly locked on to the frame tube.



## STEP 11

Carefully fit the second platform on the sixteenth rung on the uppermost frame assembly. Make sure that the Wind-Lock catch is engaged.



## STEP 12

Position yourself so that you are half way through the second platform's trap door. Now manoeuvre yourself so that you are sitting on the platform, with your legs through the trap door and your feet resting on the frame rungs. From this position, you should take each of the brace panels, one at a time and attach so that the upper jaws are positioned above the twentieth rung on the uppermost frame assembly. Ensure all claws are facing outward and correctly locked on to the frame tube.



## STEP 13

With both panels in position, you may access the platform. Unfold the toe board set and position the toe board sections so that they sit over the outer edges of the platform. The MI TOWER STAIRS is now complete and ready to use.

# 10 POINT PRE-USE SAFETY CHECKLIST

## 10 POINT PRE-USE CHECKLIST FOR USERS

<b>1</b>	<b>BEFORE USE</b>	Completed MI TOWER STAIRS must be checked by a competent person
<b>2</b>	<b>COMPONENTS</b>	Check all components are free from damage
<b>3</b>	<b>STAIRCASE</b>	Ensure staircase is cordoned off correctly
<b>4</b>	<b>ENVIRONMENT</b>	Check your MI TOWER STAIRS is level
<b>5</b>	<b>EASY-LOCK STABILISERS</b>	Check the clamps are correctly secured
<b>6</b>	<b>GUARDRAIL BRACE PANELS</b>	Check they are correctly positioned within the tower structure
<b>7</b>	<b>GUARDRAIL BRACE PANEL HOOKS</b>	Check they are facing outwards and correctly locked on to the frame tube
<b>8</b>	<b>WIND-LOCK CATCHES</b>	Make sure they are engaged correctly
<b>9</b>	<b>EASY-CLIP FRAME CLIPS</b>	Make sure they are correctly locked
<b>10</b>	<b>TOE BOARD SET</b>	Check it is correctly positioned on the platform



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