

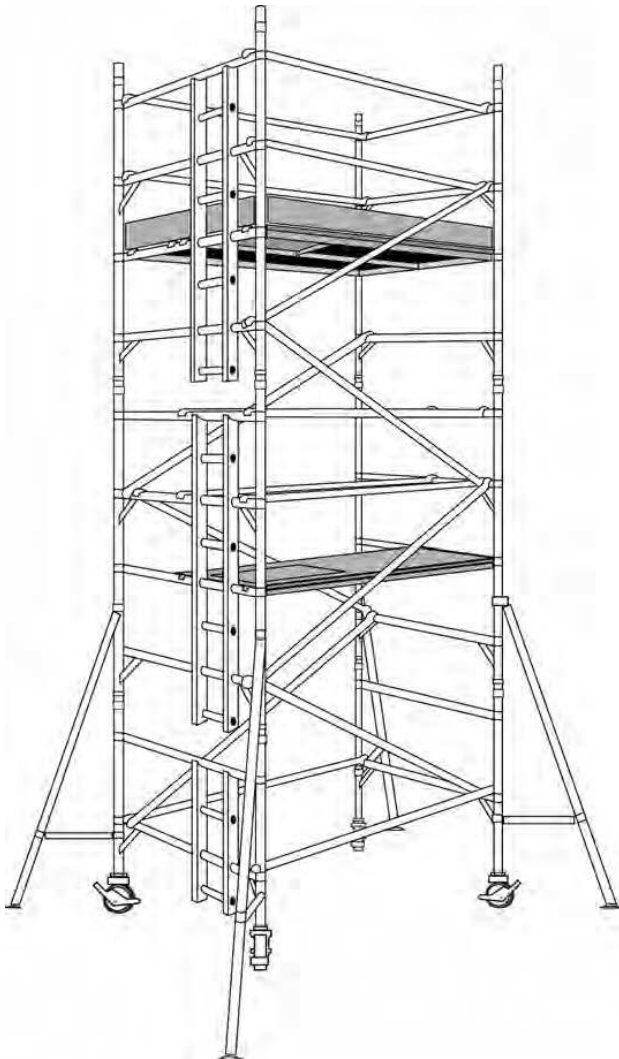
A SAFER WAY TO REACH NEW HEIGHTS

# UTS1450/850

## Instruction Manual

### Mobile Access Tower

*3T - Through the trap method*



## Introduction

This Assembly Guide is intended to provide you with step-by-step instructions on how to erect your Mobile Access Tower (MAT) with ease and safety, using the 3T (through the trap) method. You should read and understand all notes and diagrams, including the parts list for each height, before commencing assembly. Personnel should be qualified or competent to erect this tower. Please consult the PASMA Guide for full information on the use of Mobile Access Towers. Remember to do a risk Assessment of the area where the tower is to be used before commencing erection.



KM 617169

**UTS SALES & REPAIR LTD**

Manufactured to BS EN 1004:2004 Class 3 8/12 XXXD

Instruction Manual BS: EN: 1298-IM-EN

A SAFER WAY TO REACH NEW HEIGHTS

# UTS1450/850

## Instruction Manual

### Mobile Access Tower

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# Description, Safety Notes, Fittings & Compatibility

## UTS 1450/850 Compatibility

*The UTS 1450/850 tower is certified by BSI to meet the requirements of BS EN 1004 - the design standard for mobile access towers. Additionally, through vigorous testing and comparatives carried out by Lloyds British and which they consider confirm conformance with the PASMA Compatibility Protocol, the UTS tower can provide either a partial or dominant system when used in conjunction with the BoSS ladder span scaffold tower.*

*Copies of the BSI certification and the Lloyds British test report are available from UTS upon request*

The UTS 1450/850 tower is manufactured to BS EN 1004:2004 CLASS 3 8/12 XXXD and KITEMARK MARKED. The KITE MARK is the universal symbol that reassures the user that the product is certified to BSI stated standards.

- Instructions for erection and use to be followed carefully.
- A risk assessment should always be carried out before erecting your MAT (Mobile Access Tower).
- You will find a standard risk assessment form at the back of this instruction manual.
- The UTS 1450/850 has a maximum working height of 8 metres outdoors and 12 metres indoors.
- The maximum permissible load on the UTS 1450/850 tower is 950kgs and evenly distributed on each platform is 275kgs. This must not be exceeded over 2 work platforms, not including rest platform.
- Damaged or incorrect components shall not be used.

## Safety Notes

### ERECTION & DISMANTLING - THE 3T METHOD

Towers should be erected following a safe method of work, there are two approved methods recommended by 'prefabricated access suppliers and manufacturers' (PASMA) in co-operation with the health and safety executive (working at height regulations).

The method used for erecting and dismantling the UTS 1450/850 tower is the 3T METHOD (through the trap).

This method ensures the operators erecting the tower position themselves in the trapdoor of the platform to add or remove horizontal guardrail braces for the level above the platform.

## NEVER STAND ON AN UNGUARDED PLATFORM.

Before assembly or erection of this Mobile Access Tower (MAT) please ensure that...

- A risk assessment has been done and all safety equipment is on site.
- The ground conditions will take the working loads of MAT as specified.
- Always check that the MAT is vertical, (Level, slope, uneven ground etc.) if levelling is required make sure you Adjust Legs (Part No.1026312-A2), in line with instructions (use spirit level).
- Beware of (overhead) obstructions – live wires, electrical apparatus or moving parts of machinery or other.
- Wind conditions are within limits as specified. (Refer to page 4)
- Do not use boxes, ladders, or other devices on the platform to gain additional height.
- If in doubt DO NOT ERECT.
- Check that all components are on site and that they are in good working order before use (refer to the components and quantities shown at each stage). Auxiliary equipment and safety equipment. (ropes, etc)
- For your safety, during assembly and erection it is recommended that temporary horizontal guardrail braces be used. **All working platforms MUST have horizontal guardrails fitted.**
- The tower should always be accessed from the inside using the ladder frames provided.
- Never climb up the outside.
- Do not use the guardrail braces as a rung or step.
- It is recommended that 2 persons erect this tower.
- The assembled tower should not be used as a means of access to other structures unless suitably tied.
- Beware of horizontal forces (e.g., when using power tools on an adjacent structure), which could generate instability or overturning of the tower.
- Maximum horizontal force 20kgs.

## STABILISERS & BALLAST

Compatible stabilisers or outriggers and ballast shall always be fitted when specified. All stabilisers must be of the same manufacture when used on the scaffold tower. When using the MAT externally compatible stabilisers must be fitted.

Should ballast be required, a platform should be positioned on the lowest rung and the weights should be firmly attached to it and evenly distributed. For advice on ballast contact your supplier.

## LIFTING OF EQUIPMENT

Tools and other equipment should be hauled up by a person on the platform using rope or similar, through the trapdoor of the platform or within the tower footprint.

Please see footprint guide on page 14.

Safe working loads of platform and tower not to be exceeded.

## MOVING THE TOWER AND LEAVING IT UNATTENDED

- Adjust the stabilisers to provide ground clearance.
- Unlock the castor wheels.
- Move with manual force only, and only from the base.
- Beware of (overhead) obstructions – live wires, hanging apparatus or other objects.
- Do not move with people or material on the tower.
- Do not move the assembled MAT if wind speeds exceed a moderate breeze. Relock the castors and readjust the stabilisers once in the new position.
- When moving the tower over rough or uneven sloping ground remove all tools.
- Do not move the assembled tower if over 4 metres high.
- Recheck that the MAT is vertical or needs readjustment of legs before ascending.  
(Using spirit level)

It is recommended that towers should be tied to a solid structure, when left unattended.

## TIES

When ties are required, they should be in accordance with table 17 of BS 5973:1990 and table 24 of BS 5975:1982.

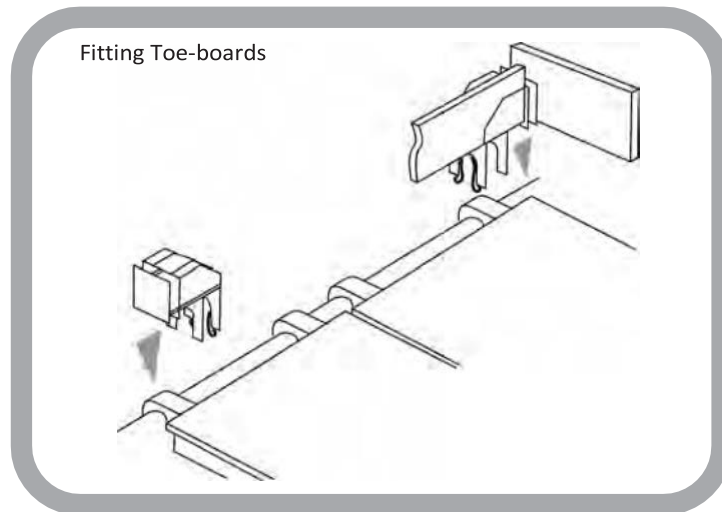
Always tie to a solid structure.

The tie frequency should be at 4 metre intervals or less vertically.

## FITTING TOE-BOARDS

**1 piece folding toe board**, fold out over platform making sure location angle rests fits securely on side of platform.

**4 piece folding toe board**, attach toe-board clips over the outer most deck claws and clipping onto the tube as illustrated. Insert toe-board into the slots as shown...



## **LIFTING OF INDIVIDUAL TOWER COMPONENTS**

Raising and lowering components, tools and/or materials by rope should be conducted within the tower base (i.e. within the area bounded by the stabilisers). Ensure that the safe working load of the supporting decks and the tower structure is not exceeded.

Check for environmental changes before every use. (ie: all weather conditions)  
Refer to next page for wind effects.

## CHECK LIST, INSPECTION CARE AND MAINTENANCE FOR MOBILE ACCESS TOWERS

- All components should be inspected before use to ensure that they are not damaged or broken, particularly the welds.
- ANY damage to ANY part particularly tubular members, castors, platform decking MUST be replaced.
- Adjustable leg threads should be cleaned and lightly oiled.
- All locking claws should be cleaned, and the locking mechanism checked for operation.
- When storing your MAT, please ensure that all components are neatly stored and not left lying around where they could be stood on or damaged.
- When transporting the MAT always tie the components down so that they do not move around and get damaged.
- Should the tower be left unattended it should be tied to a suitable structure and on reuse ALWAYS check that the tower is vertical and safe before ascending correct and complete structure.
- The MAT is not designed to be lifted or suspended as a complete structure.
- Always keep this instruction manual safe.
- Broken, damaged or incorrect components must never be used. The equipment shall be quarantined and assessed for replacement repair or destruction.

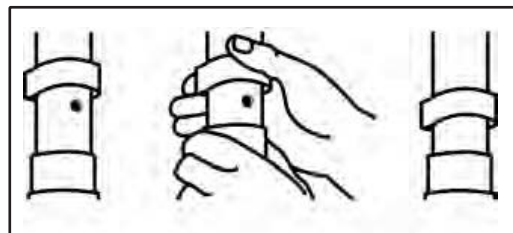
## WIND EFFECTS

- Beware of high, gusty, or moderate breeze conditions in exposed areas. It is recommended that in wind speeds over a Moderate Breeze (see Beaufort Scale below) that work on the tower is stopped and reassessed. If the wind becomes a Strong Breeze, (see Beaufort Scale below) the tower should be tied to a rigid structure. If the wind is likely to reach Gale Force (see Beaufort Scale below) or over, work should be stopped, and the tower should be dismantled.
- Beware of tunnelling effect caused by open ended buildings, uncladded buildings and building corners.

Wind	Beaufort Scale 10 Metres above ground	Force	Speed in m.p.h.	Speed in knots
Moderate Breeze	Raises dust and loose paper, small branches move.	4	13–18	11–16
Strong Breeze	Large branches in motion, telegraph wires whistle.	6	25–31	22–27
Gale Force	Walking is difficult, twigs break off trees.	8	39–46	34–40

## LOCKING CLIPS

Fit the locking clips as shown in the diagram opposite.



## LOCKING CASTORS

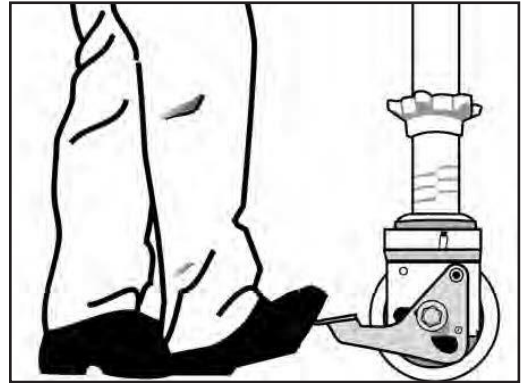
Castor wheels should be pointed outwards at approximately 45 degrees and locks engaged as shown opposite.

## FITTING STABILISERS

Attach a stabiliser to each corner of the tower at approximately 45 degrees for maximum stability (refer to relevant illustrations) and attach the clamps where indicated.

On the S2/SP10 stabiliser use the telescopic leg for adjustment on uneven ground.

Make sure that all stabilisers are firmly in contact with the ground when using the structure.



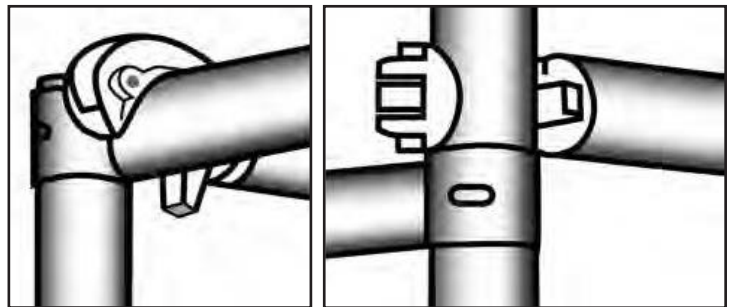
Press to engage — lift to disengage.

## CORRECT FITTING OF HORIZONTAL BRACING

THE CORRECT FITTING OF HORIZONTAL BRACING IS IMPORTANT.

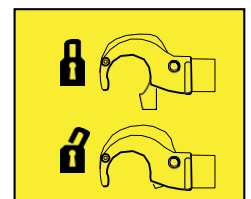
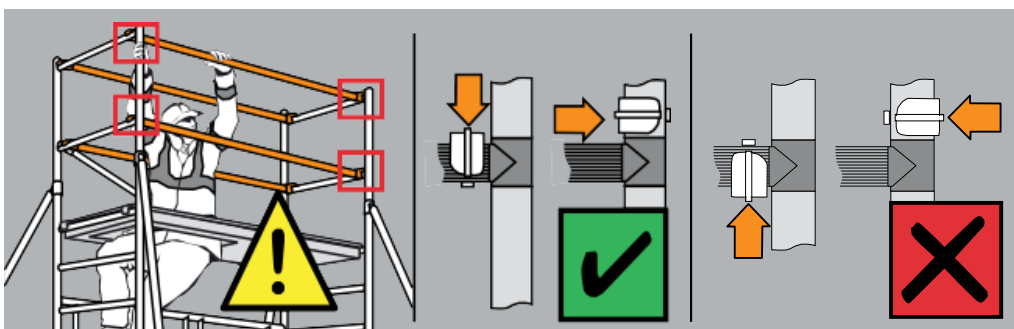
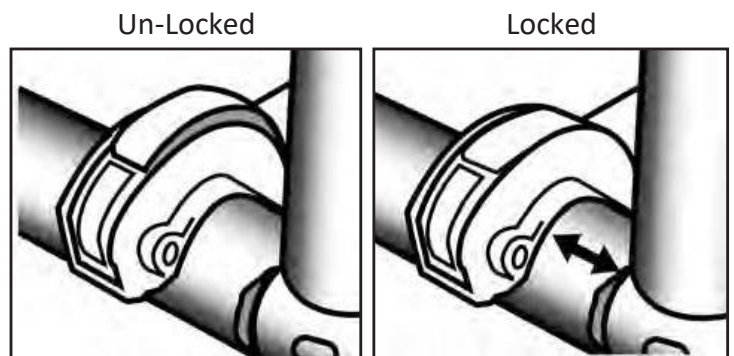
The diagrams opposite illustrate the CORRECT brace positions.

REMEMBER: Always fit braces DOWNWARD or from the inside facing OUTWARD – BUT NEVER INWARD



## BRACE CLAMP LOCKING

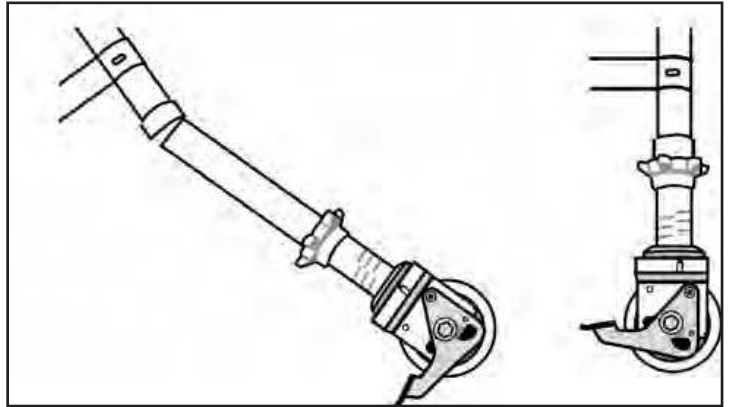
Ensure that the brace clamp is locked as shown. Always make sure the brace is not clamped too close to the weld as indicated by the arrow on the drawing on the right.



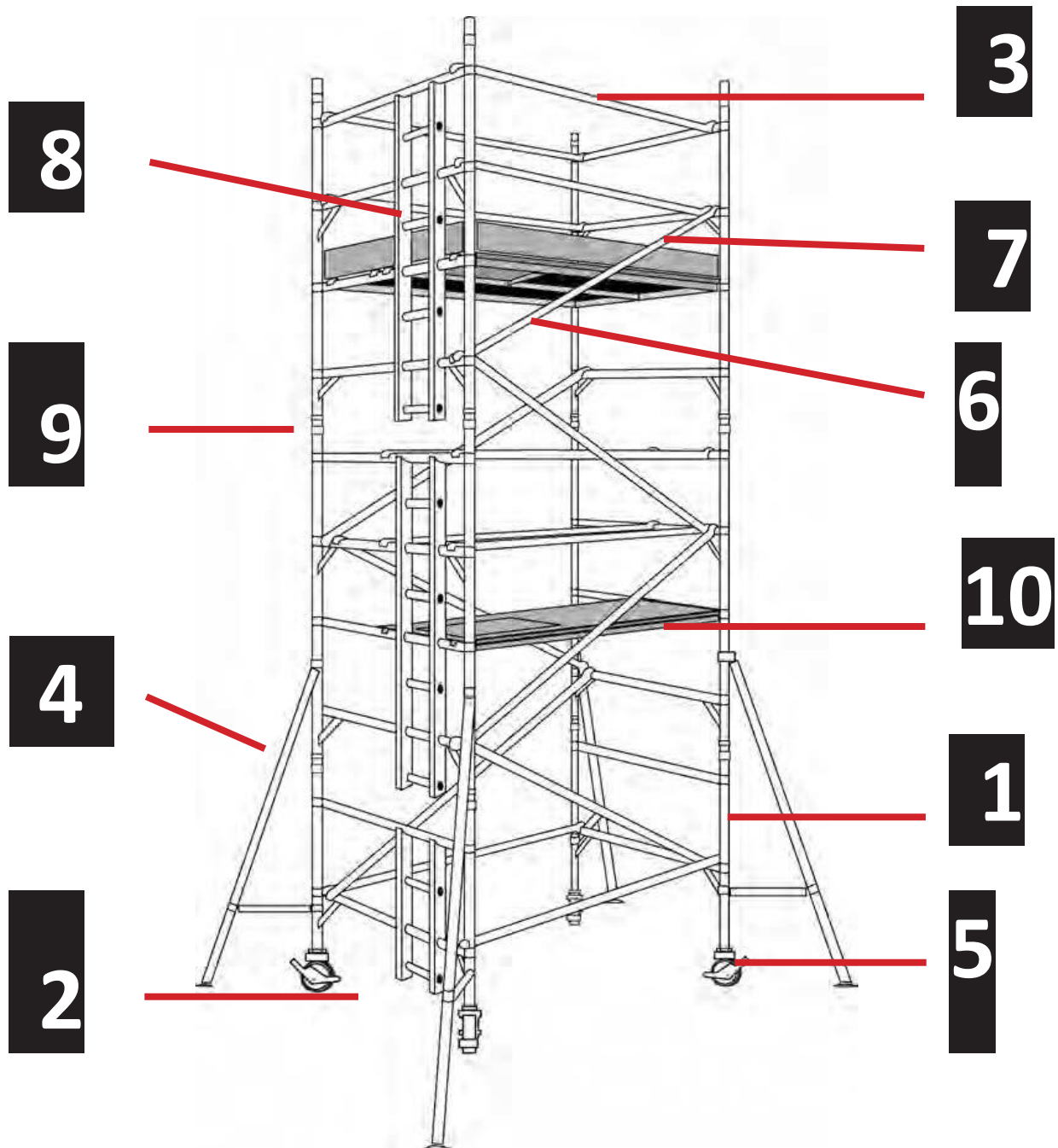


## FITTING ADJUSTABLE LEGS

Take the adjustable leg assembly complete with its castors, make sure that all the adjusting nuts are positioned down at castor and slide them into the vertical tube, turn the base unit the right way up and with the aid of a spirit level placed on the platform, the adjusting nuts can be used to level the structure. (and not to gain additional height). 50% maximum adjustment using the BoSS adjustable leg & 44% when using the UTS1450/850 adjustable leg units.



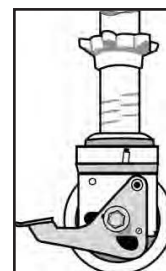
# Identifying Components And Their Weights



## COMPONENTS AND APPROX WEIGHTS

1. 2 RUNG FRAME Weight: 4.7 Kgs
2. 2 RUNG LADDER FRAME Weight: 8 Kgs
3. HORIZONTAL BRACE Weight: 1.9 Kgs
4. STABILISER S1/S2 Weight: 5.8/9.8 Kgs
5. ADJUSTABLE LEG ASSEMBLY Weight: 4.3 Kgs
6. TRAPDOOR PLATFORM Weight: 14.0 Kgs
7. DIAGONAL BRACE Weight: 2.0 Kgs
8. SIDE/END TOE-BOARD Weight: 3.2/1.0 Kgs
9. 4 RUNG LADDER FRAME Weight: 16 Kgs
10. 4 RUNG FRAME Weight: 9 Kgs

**5**



# Assembly Procedure

UTS recommends that a minimum of two people is required for the assembly of the UTS 850/1450 tower. Only climb the tower from the inside using the ladder section.

Access platform/working height;

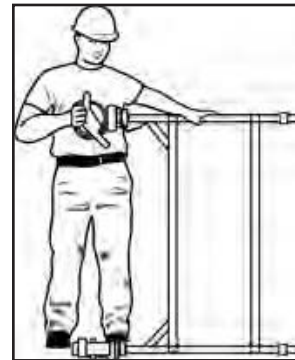
For even platform height towers (2m/4m/6m) you MUST start with a 2 RUNG FRAME.

For odd platform height towers (3m/5m/7m) ALWAYS start with a 4 RUNG FRAME.

For intermediate height platform towers (2.5m/3.5m/4.5m) ALWAYS start with a 3 RUNG FRAME.

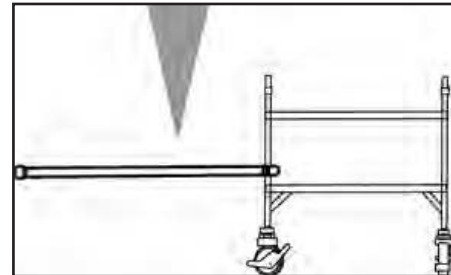
**1**

Insert adjustable leg assembly (with castors or base plates) into the base of a rung frame, repeat this with a rung ladder frame. Lock all castor wheels.



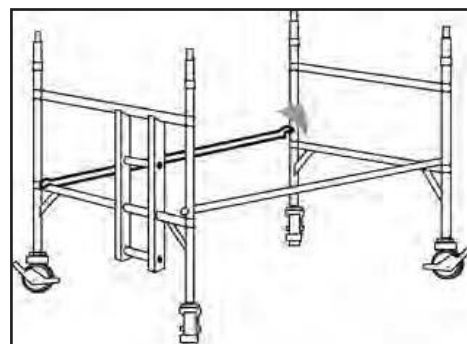
**2**

Attach one horizontal brace to the inside of the rung frame just above the bottom rung, claws facing outwards. This frame will now be self-supporting.



**3**

Position the ladder frame as shown. Connect the other end of the horizontal brace to the ladder frame. Now connect the frames using a second horizontal brace on the opposite side locking downwards, this will square the tower. Check tower is vertical (Using spirit level)



## PLEASE TAKE NOTE

**Never place the platform on the guardrail frame**

**Always climb from the inside of the frame – never the outside.**

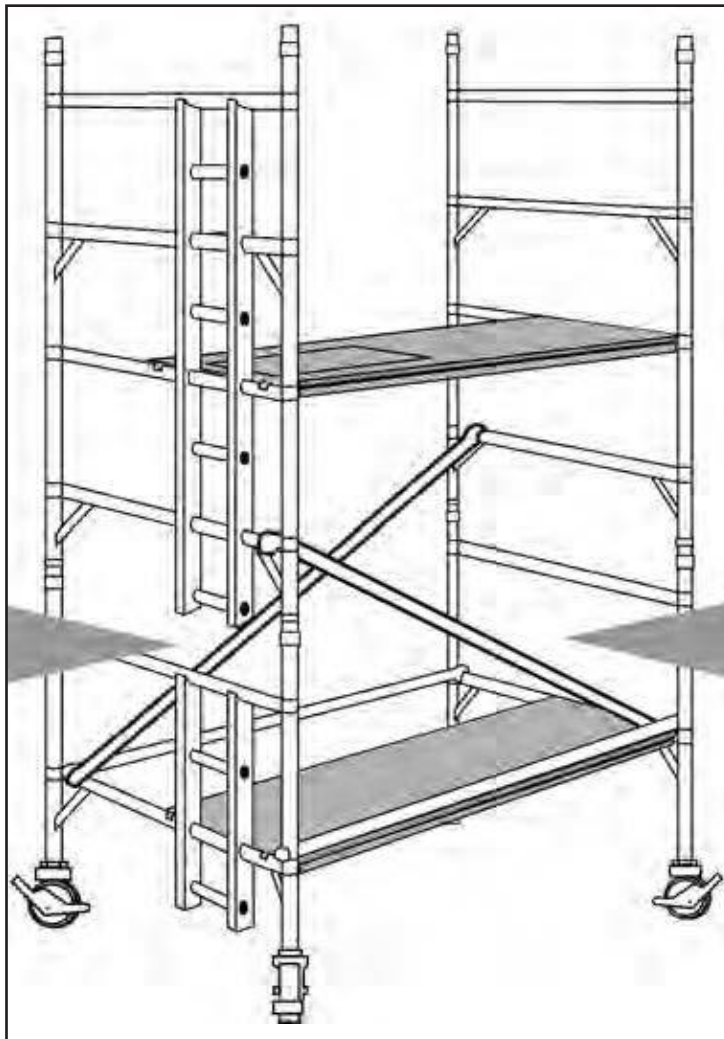
**When working on the platform never over reach**

**The end frames should provide a firm hand hold.**

## Assembly (cont'd)

Insert 4 rung frames to correspond with the 2 rung frames (fig. 3) and lock the locking clips (refer to page 4). Attach diagonal braces on both sides

- 4** From the 1st rung to the 3rd rung of the structure, in opposing directions. Place a solid deck platform on the 1st rung and a trap door platform on the 4th rung, both on the ladder side of the structure. Attach wind locks.



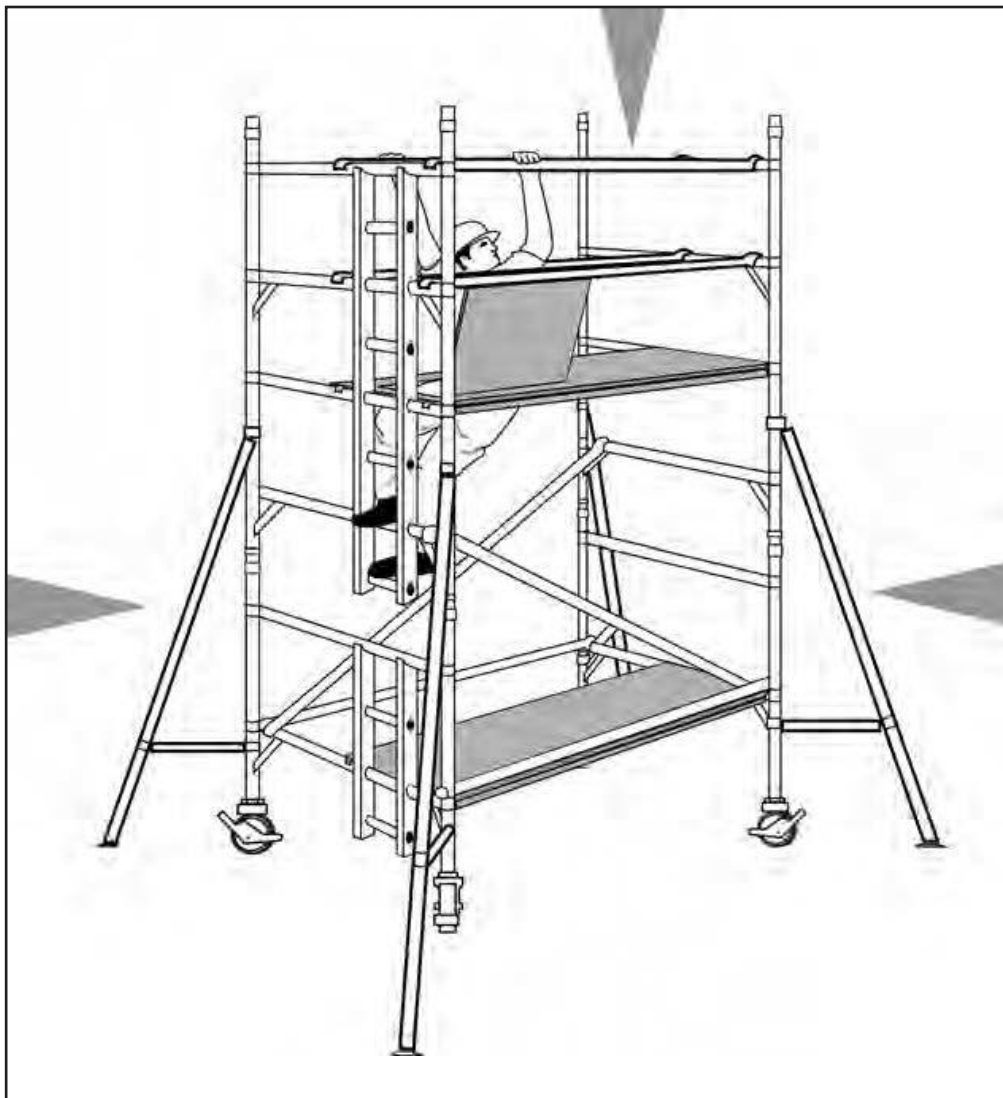
\*Platform can be placed at bottom of tower if required. As shown in diagram

## Assembly (cont'd)

**5**

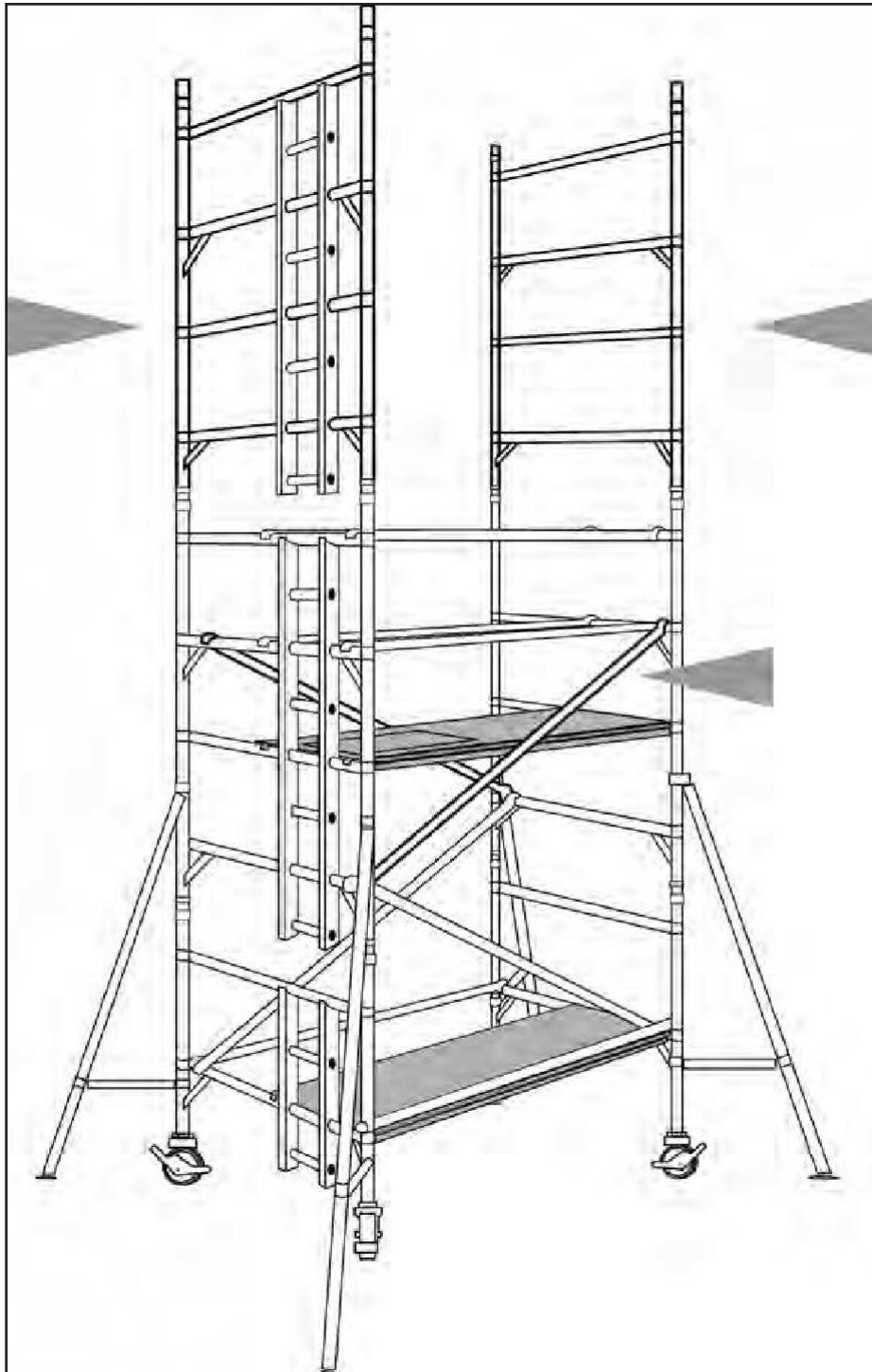
Attach stabilisers as required for working height (see table page 15). Climb the ladder and from a protected through the trapdoor position, attach horizontal guardrail braces to the 5th and then 6th rungs, on both sides of the platform.

Never climb onto a platform that is not fully guardrailed. Guardrails should be 1 and 2 rungs above platforms in all cases.



## Assembly (cont'd)

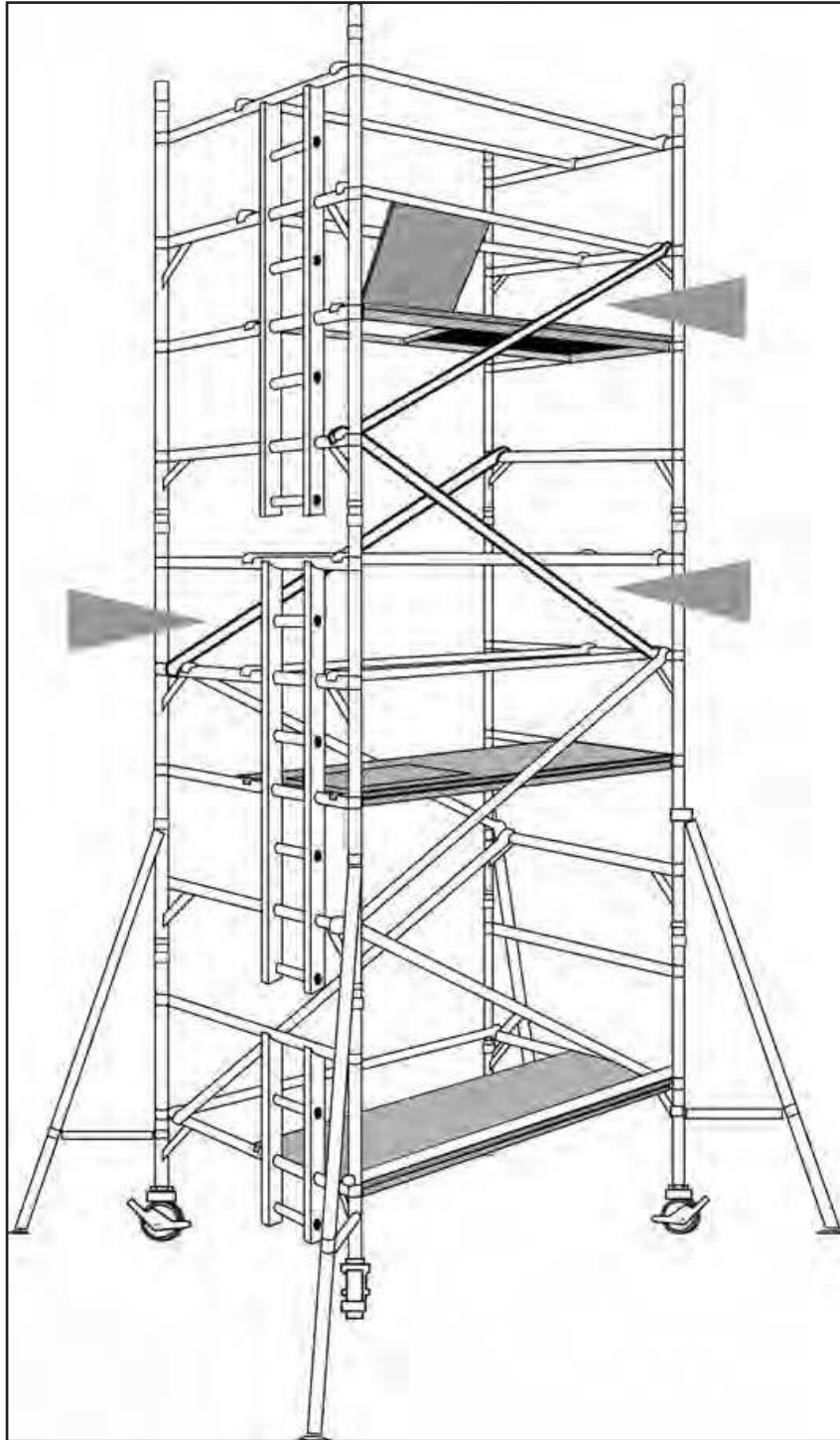
- 6** Attach 2nd pair of diagonal braces following on from the previous ones. Attach the next 4 rung frames and lock clips (as per fig. 6).





## Assembly (cont'd)

- 7** If completing the tower at this height (4m), continue with step 8. When building beyond this level, repeat steps 4, 5 and 6 until desired level is achieved, then complete the tower with steps 8 and 9.

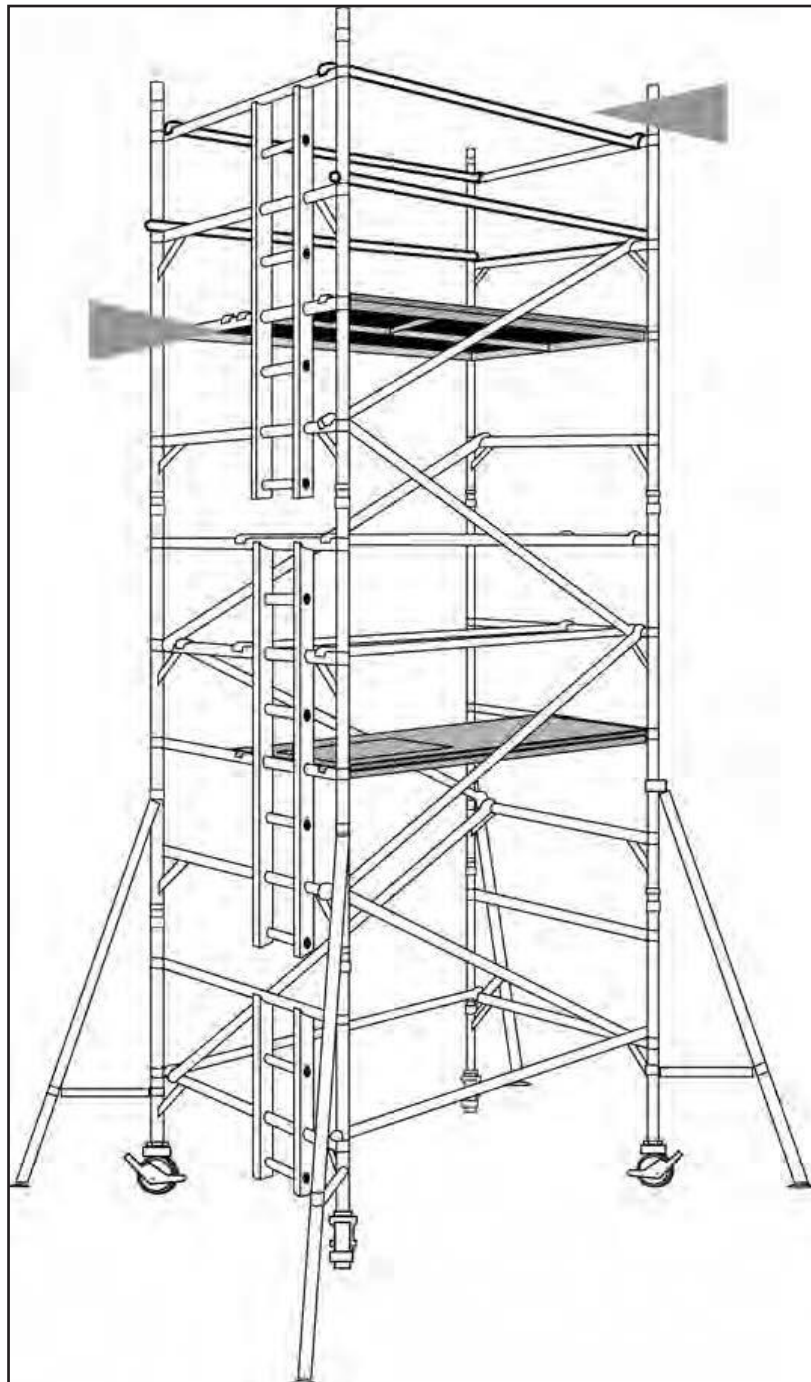


## Assembly (cont'd)

**8**

Fit the final diagonal braces as shown. This stage will provide a platform height of 4m. Attach diagonal braces as per fig. 7. The fixed platform should be moved up to the 8th rung and moved across to the far side of the structure, the trapdoor platform can now be fitted alongside it. LOCK WIND LOCKS.

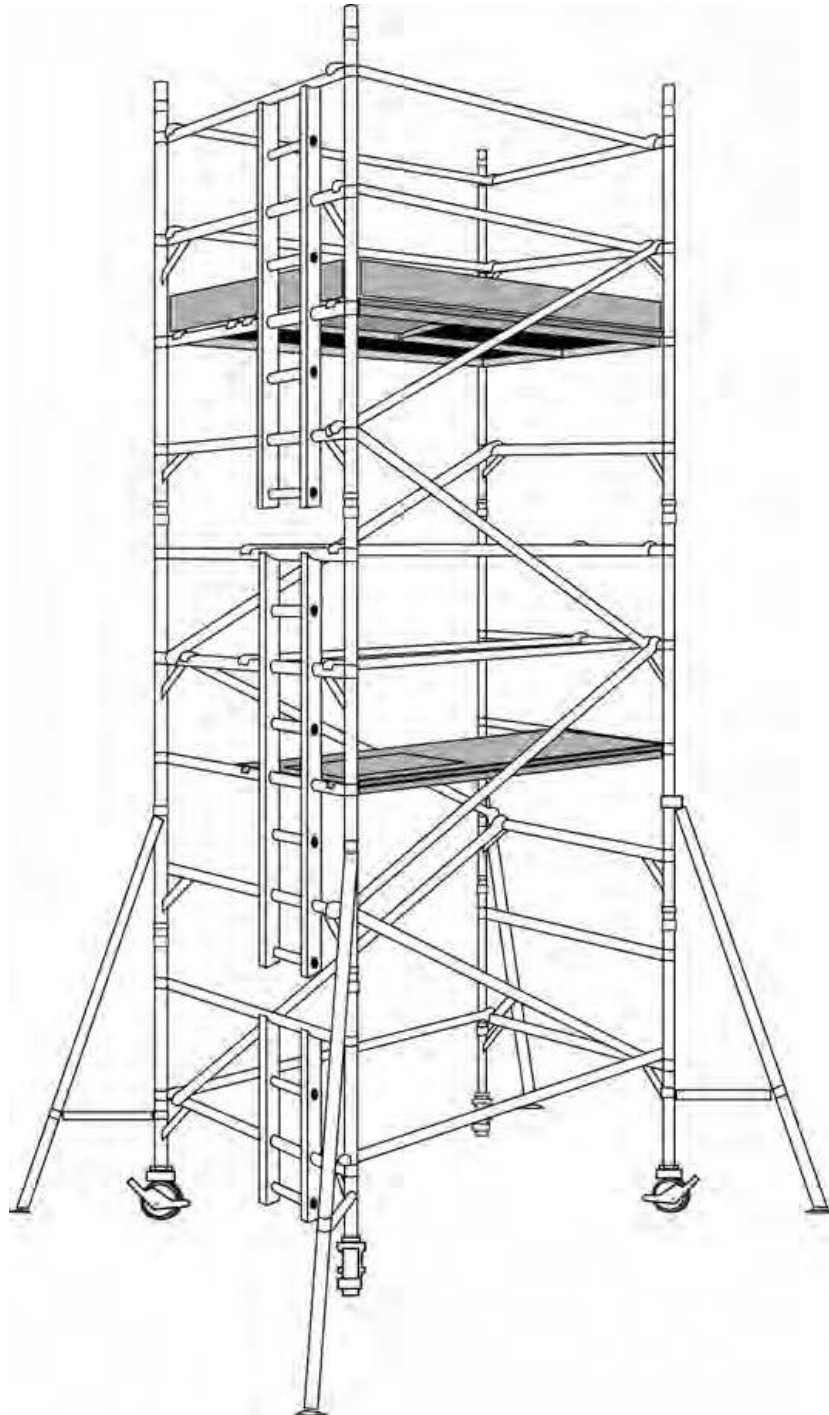
Climb up the ladder and from a protected 'through the trapdoor' position, fit horizontal guardrail braces to the 9th and then the 10th rungs on both sides of the tower. Complete the tower assembly by following step 9.





## Assembly (cont'd)

- 9 Fit toe boards to all working platforms. (see instructions on page 3)



**When building structures over 4.2 metres remove platform and 4 horizontal braces from platform height at 2.2 meters and use to complete structure.**

# Dismantling

The dismantling procedure should follow the assembly steps in reverse order, take particular attention about the removal of guardrails and platforms.

You should ensure that you are standing in a safe position and always protected by guardrails **NEVER** remove diagonal braces or stabilisers prematurely.

After removing the toe-boards the operator disengages the horizontal guardrail brace clamps furthest from the trap door, horizontal guardrail braces are then removed with the operator positioned through the trap door before descending to the lower level, from where the upper platform and extensions/guardrail frames can be removed.

## NOTES

**DO NOT OVER-REACH and NEVER DROP COMPONENTS when dismantling always lower them to the ground.**

## STABILISERS

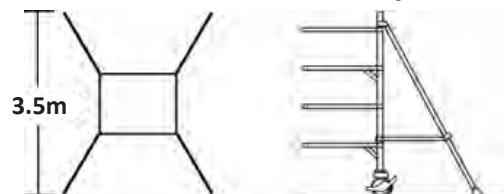
Attach one stabiliser to each corner of tower at approx. 45 degrees. The bottom clamp should be fitted as low as possible, refer to the diagram opposite. Ensure that all four rubber feet are in contact with the ground and that the clamps are secured. Position stabilisers as shown in the diagrams. **All stabilisers must be from the same manufacturer. Mixing & matching compatible stabilisers is not permitted.**

When using the S2/SP10 stabilisers, always extend the telescopic legs to their maximum position and lock into position with the interlock clip.

When moving the tower lock each telescopic leg just clear of the ground, unlock castors ensuring area is firm and clear of all obstructions both on the ground and above.

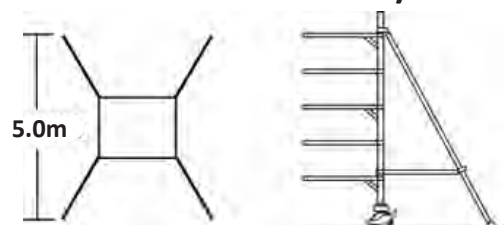
After moving check all castors are firmly on the ground and locked, and that the tower is vertical. Re-position stabilisers as above.

### STABILISERS - S1/SP7



Static Stabiliser maximum platform height  
Single Width 850  
Indoors 8.2  
Outdoors 8.2  
Double Width 1450  
Inside 9.2  
Outdoors 9.2

### STABILISERS - S2/SP10



Telescopic Stabiliser  
Single width 850  
Indoors 8.7 - 12.2  
Double Width 1450  
Indoors 8.7 - 12.2

## 850 Single Width

To BS EN 1004:2004 Available in two lengths; 1.8m & 2.5m

**INTERNAL USE ONLY**

Description	Working Height (M) Platform Height	4.2 2.2	4.7 2.7	5.2 3.2	5.7 3.7	6.2 4.2	6.7 4.7	7.2 5.2	7.7 5.7	8.2 6.2	8.7 6.7	9.2 7.2	9.7 7.7	10.2 8.2
Castors		4	4	4	4	4	4	4	4	4	4	4	4	4
Adjustable Leg Unit		4	4	4	4	4	4	4	4	4	4	4	4	4
850 x 2 Rung Ladder Frame		1			1	1			1	1			1	1
850 x 2 Rung Span Frame		1			1	1			1	1			1	1
850 x 3 Rung Ladder Frame			1		1		1		1		1		1	
850 x 3 Rung Span Frame			1		1		1		1		1		1	
850 x 4 Rung Ladder Frame		1	1	2	1	2	2	3	2	3	3	4	3	4
850 x 4 Rung Span Frame		1	1	2	1	2	2	3	2	3	3	4	3	4
1.8m or 2.5m Fixed Platform		0	1	0	0	0	0	0	0	0	0	0	0	0
1.8m or 2.5m Trap Door Platform		1	1	2	2	2	3	3	3	3	4	4	4	4
1.8m or 2.5m Horizontal Brace		6	6	10	10	10	10	14	14	14	14	18	18	18
2.1m or 2.7m Diagonal Brace		3	4	5	6	7	8	9	10	11	12	13	14	15
Toe Board Set (4 clips + 4 boards)		1	1	1	1	1	1	1	1	1	1	1	1	1
Folding Toe Board Set		1	1	1	1	1	1	1	1	1	1	1	1	1

10.7 8.7	11.2 9.2	11.7 9.7	12.2 10.2	12.7 10.7	13.2 11.2	13.7 11.7	14.2 12.2
4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
		1	1			1	1
		1	1			1	1
1		1		1		1	
1		1		1		1	
4	5	4	5	5	6	5	6
4	5	4	5	5	6	5	6
0	0	0	0	0	0	0	0
5	5	5	5	6	6	6	6
18	22	22	22	22	26	26	26
16	17	18	19	20	21	22	23
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1

S1/SP7 Stabiliser	4	4	4	4	4	4	4						
S2/SP10 Stabiliser								4	4	4	4	4	4

4	4	4	4	4	4	4	4

Approx Tower Self Weight (kgs) 1.8m	94.2	99.7	127	133	138	144	149.3	155	161	188	193	199	214.9
Approx Tower Self Weight (kgs) 2.5m	104	110	144	151	157	163	169	175	181	215	221	228	244

220.4	226	232	237.6	264.5	270.1	276.1	281.6
250	256	262	268	303	309	315	321

## 1450 Double Width

To BS EN 1004:2004 Available in two lengths; 1.8m & 2.5m

**INTERNAL USE ONLY**

Description	Working Height (M) Platform Height	4.2 2.2	4.7 2.7	5.2 3.2	5.7 3.7	6.2 4.2	6.7 4.7	7.2 5.2	7.7 5.7	8.2 6.2	8.7 6.7	9.2 7.2	9.7 7.7	10.2 8.2
Castors		4	4	4	4	4	4	4	4	4	4	4	4	4
Adjustable Leg Unit		4	4	4	4	4	4	4	4	4	4	4	4	4
1450 x 2 Rung Ladder Frame		1			1	1			1	1			1	1
1450 x 2 Rung Span Frame		1			1	1			1	1			1	1
1450 x 3 Rung Ladder Frame			1		1		1		1		1		1	
1450 x 3 Rung Span Frame			1		1		1		1		1		1	
1450 x 4 Rung Ladder Frame		1	1	2	1	2	2	3	2	3	3	4	3	4
1450 x 4 Rung Span Frame		1	1	2	1	2	2	3	2	3	3	4	3	4
1.8m or 2.5m Fixed Platform		1	2	1	1	1	2	1	1	1	2	1	1	1
1.8m or 2.5m Trap Door Platform		1	1	2	2	2	2	3	3	3	3	4	4	4
1.8m or 2.5m Horizontal Brace		6	6	10	10	10	10	14	14	14	14	18	18	18
2.1m or 2.7m Diagonal Brace		3	4	5	6	7	8	9	10	11	12	13	14	15
Toe Board Set (4 clips+4 boards)		1	1	1	1	1	1	1	1	1	1	1	1	1
Folding Toe Board Set		1	1	1	1	1	1	1	1	1	1	1	1	1

10.7 8.7	11.2 9.2	11.7 9.7	12.2 10.2	12.7 10.7	13.2 11.2	13.7 11.7	14.2 12.2
4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
		1	1			1	1
		1	1			1	1
1		1		1		1	
1		1		1		1	
4	5	4	5	5	6	5	6
4	5	4	5	5	6	5	6
2	1	1	1	2	1	1	1
4	5	5	5	5	6	6	6
18	22	22	22	22	26	26	26
16	17	18	19	20	21	22	23
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1

S1/SP7 Stabiliser	4	4	4	4	4	4	4							
S2/SP10 Stabiliser								4	4	4	4	4	4	4

4	4	4	4	4	4	4	4

Approx Tower Self Weight (kgs) 1.8m	113	119	147	154	160	167	199	206	209	214	220	228	244
Approx Tower Self Weight (kgs) 2.5m	128	135	169	177	184	191	197	205	212	247	253	261	278

250	256	264	270	298	304	311	317
285	291	300	306	341	347	355	362

### RISK ASSESSMENT COMPLETION FORM

NO	DATE	
Site & Location		
Assessment carried out by:		
Signed		
MAIN ACTIVITY/SITUATION		

A – Personnel at Risk	B – Severity	C – Probability
Employee    E	Negligible     1	Impossible      1
Contractor   C	Minor Injury    2	Improbable       2
Public          F	Serious Injury   3	Remote            3
	Major Injury     4	Occasional        4

No	Activity/Location Materials/Tools etc	Hazards Identified	A	B	C	Risk Rating (B x C)	Equipment to be used to minimise risk	B	C	Risk Rating (B x C)	Action By

Risk value key: 1 – 4 = Acceptable, 5 – 9 = Medium – Investigate and where practicable reduce the risk, 10 – 14 = High – Action must be taken to reduce the risk  
**15 – 24 = VERY HIGH – RISK IS TOO HIGH TO START WORK OR CONTINUE, WORK MUST BE STOPPED**

NO	DATE
Site & Location	
Assessment carried out by:	
Signed	
MAIN ACTIVITY/SITUATION	

NOTE					
A – Personnel at Risk		B – Severity		C – Probability	
Employee	E	Negligible	1	Impossible	1
Contractor	C	Minor Injury	2	Improbable	2
Public	F	Serious Injury	3	Remote	3
		Major Injury	4	Occasional	4
				Probable	5
				Frequent	6

[illegible]

Risk value key: 1 – 4 = Acceptable, 5 – 9 = Medium – Investigate and where practicable reduce the risk, 10 – 14 = High – Action must be taken to reduce the risk  
**15 – 24 = VERY HIGH – RISK IS TOO HIGH TO START WORK OR CONTINUE, WORK MUST BE STOPPED**

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