

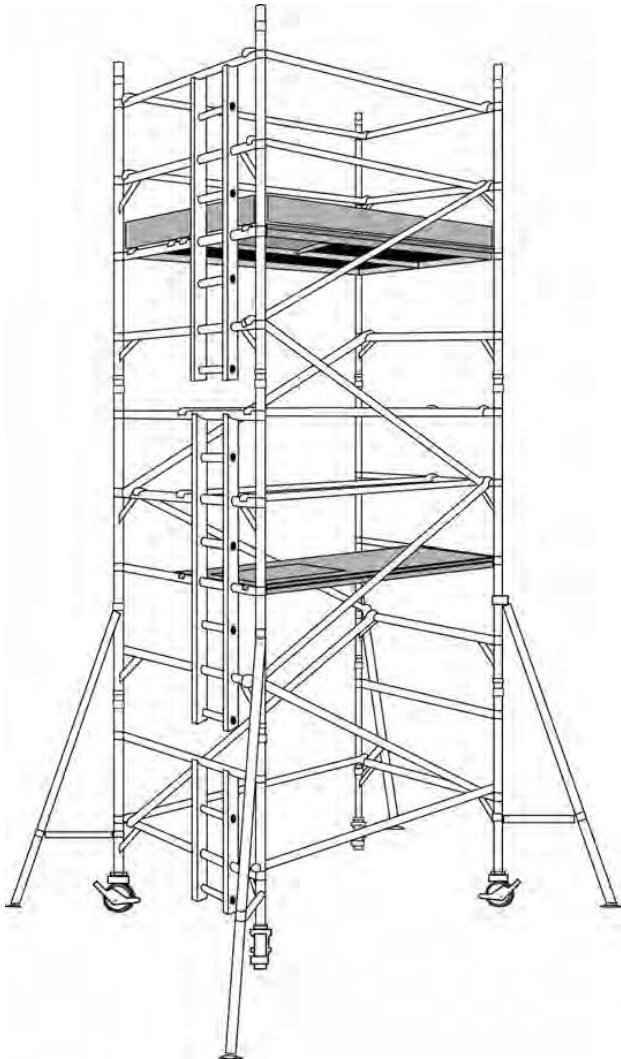
A SAFER WAY TO REACH NEW HEIGHTS

1450/850

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



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A SAFER WAY TO REACH NEW HEIGHTS

1450/850

Instruction Manual Mobile Access Tower

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Description, Safety Notes & Fittings

The 1450/850 tower is manufactured to BS EN 1004:2004 CLASS 3 8/12 and holds the British Kitemark. The Kitemark 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 1450/850 has a maximum platform height of 8 metres outdoors and 12 metres indoors.
- The maximum permissible load on the 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 should 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 the 'prefabricated access suppliers and manufacturers association' (PASMA) in co-operation with the health and safety executive (working at height regulations).

The method used for erecting and dismantling the 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 5)
- 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). Auxillary 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

Stabilisers or outriggers and ballast shall always be fitted when specified.

When using the MAT externally 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 15.

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 1 PIECE FOLDING TOE BOARD

Fold out over platform making sure location bracket fits securely over platform hooks.

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.

CHECKLIST, 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 on braces 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 where they could get 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. Before using the tower again **ALWAYS** check that the tower is vertical, undamaged and complete before ascending
- 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.

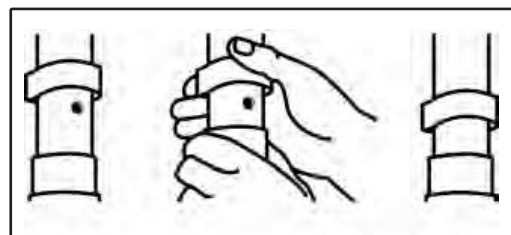
WIND EFFECTS

- 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

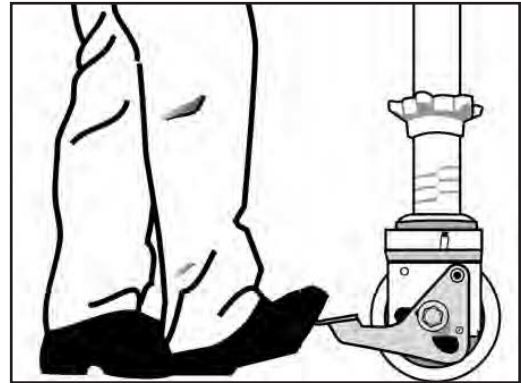
LOCKING CLIPS

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.



Press to engage — lift to disengage

FITTING STABILISERS

Attach a stabiliser to each corner of the tower at approximately 45 degrees for maximum stability and attach the clamps. Make sure that all stabilisers are firmly in contact with the ground before using the structure. Refer to page 15 for full details and illustrations on correct practice.

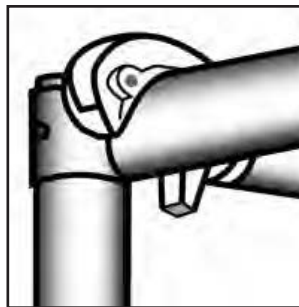
CORRECT FITTING OF HORIZONTAL BRACES

THE CORRECT FITTING OF HORIZONTAL BRACES IS IMPORTANT.

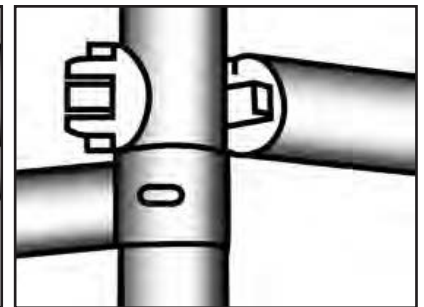
The diagrams opposite illustrate the CORRECT brace positions.

REMEMBER: Always fit braces DOWNWARDS or from the inside of the tower facing OUTWARDS. NEVER attach braces facing INWARDS.

Downwards



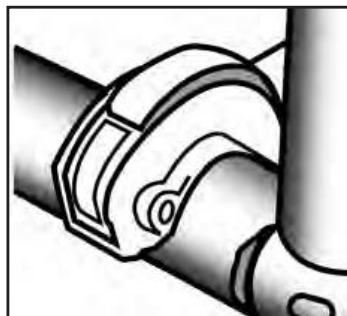
Outwards



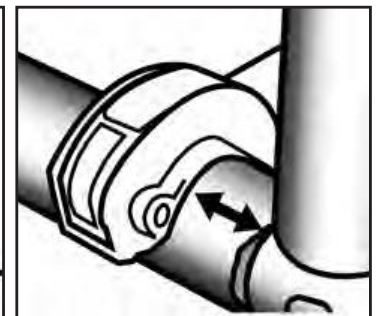
BRACE CLAMP LOCKING

Ensure that the brace clamp is locked as shown in diagrams opposite. Always make sure the brace is not clamped too close to the weld on the frame as indicated by the arrow shown.

Un-Locked

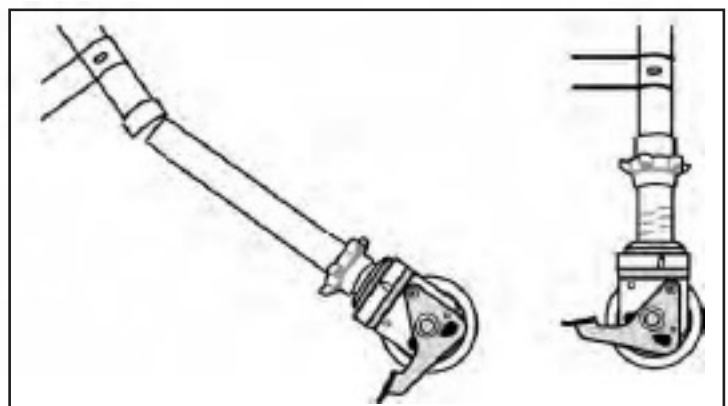


Locked



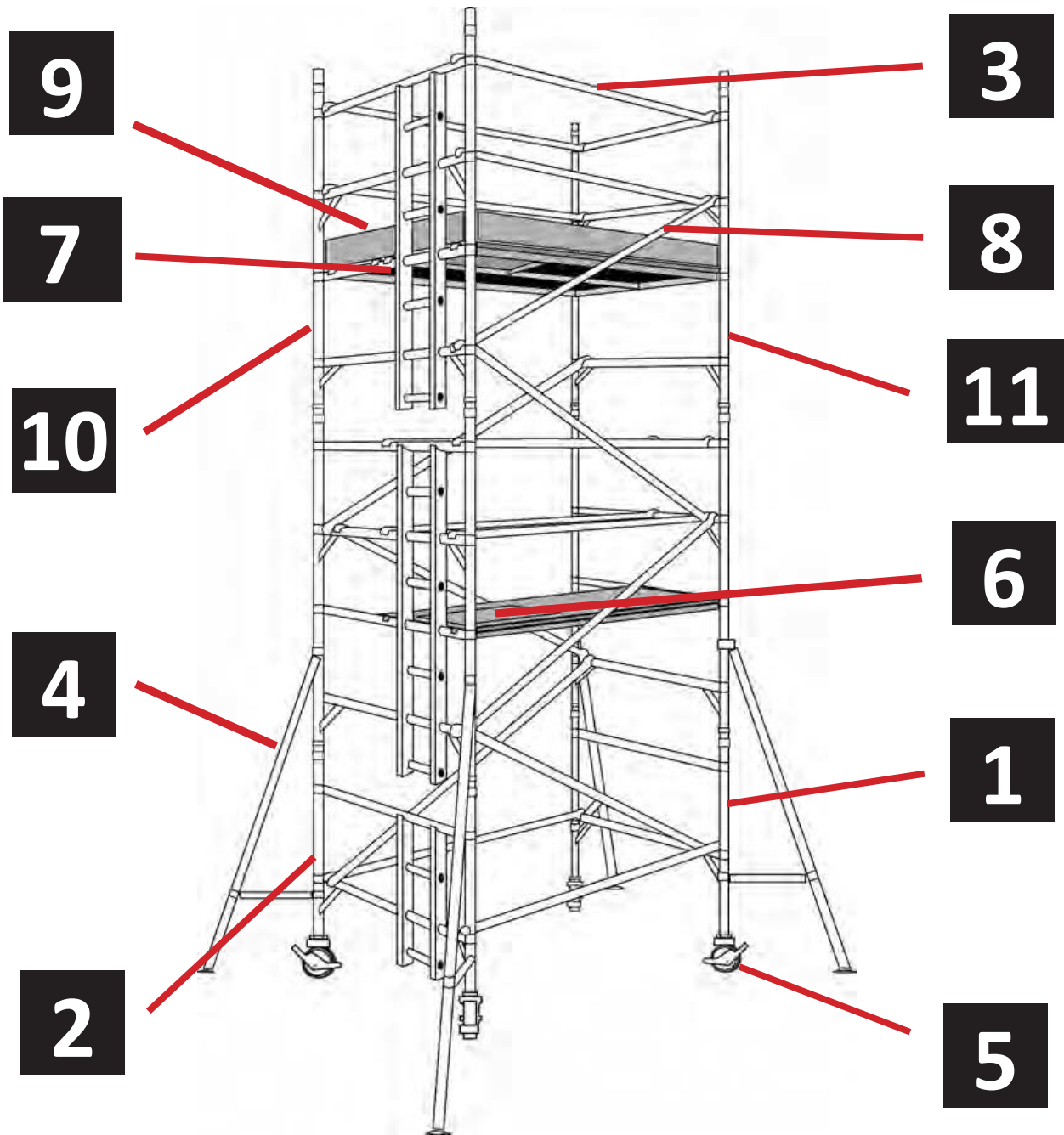
FITTING ADJUSTABLE LEGS

Ensure all adjusting nuts are wound down to the castor and slide them into the bottom of the tower frame. Turn the frame the right way up and with the aid of a spirit level placed on the tower use the adjusting nuts to level the structure. DO NOT use leg adjustment to gain additional height.



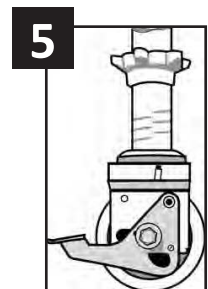
Identifying Components

Illustration below shows double width tower fully assembled. Single width towers have narrower frames (850mm wide) and do not use a fixed platform.



COMPONENTS AND APPROX WEIGHTS

1. 2 RUNG FRAME
2. 2 RUNG LADDER FRAME
3. HORIZONTAL BRACE
4. STABILISER S1/S2
5. ADJUSTABLE LEG ASSEMBLY
6. TRAPDOOR PLATFORM
7. FIXED PLATFORM
8. DIAGONAL BRACE
9. FOLDING TOE-BOARD
10. 4 RUNG LADDER FRAME
11. 4 RUNG FRAME



Assembly Procedure

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

Always start building with the smallest height frames at the base of the tower:
For even platform height towers (2.2m/4.2m/6.2m etc) ALWAYS start with a 2 RUNG FRAME.

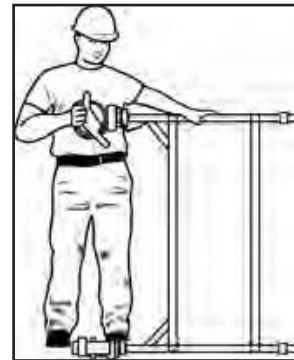
For odd platform height towers (3.2m/5.2m/7.2m etc) ALWAYS start with a 4 RUNG FRAME.

For even intermediate platform height towers (2.7m/4.7m/6.7m etc) ALWAYS start with a 3 RUNG FRAME.

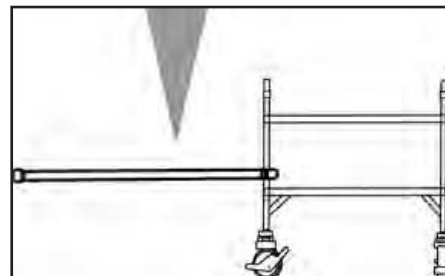
For odd intermediate platform height towers (3.7m/5.7m/7.7m etc) ALWAYS start with a 2 RUNG FRAME.

The example below shows how to assemble a 6.2m working height (4.2m platform height) tower:

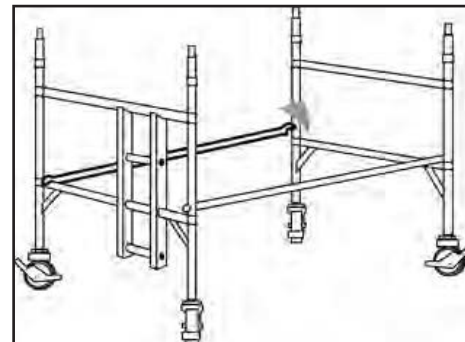
- 1** Insert adjustable leg assembly (with castors or base plates) into the base of the rung frame. Repeat for the rung ladder frame. Lock all castor wheels.



- 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 it downwards, this will square the tower. Check the tower is vertical by using a spirit level and adjust as necessary.



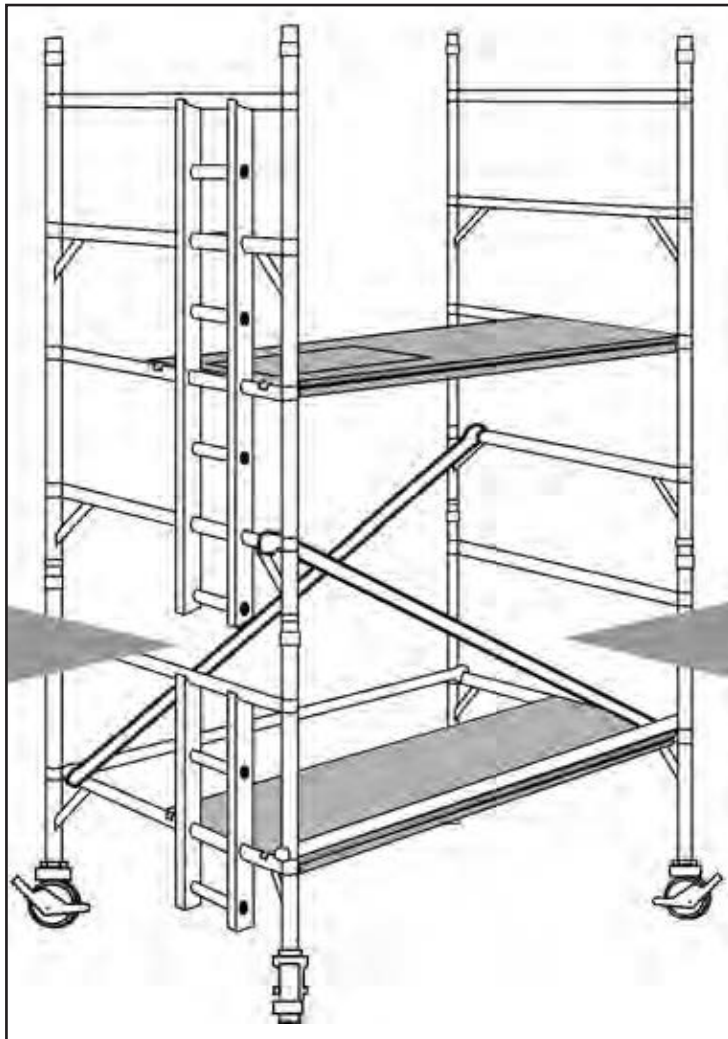
PLEASE TAKE NOTE

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

When working on the platform never overreach.

Assembly (cont'd)

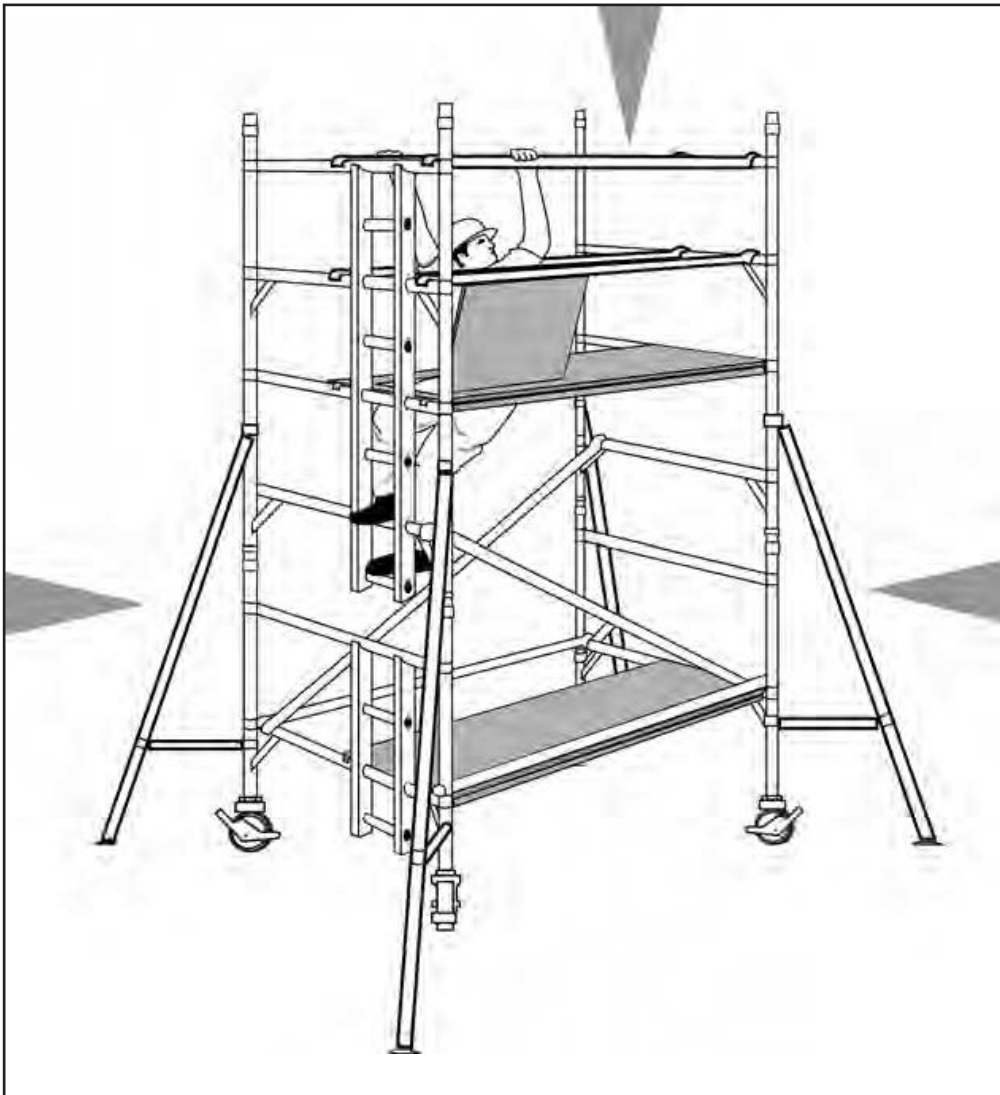
- 4** Insert 4 rung frames to correspond with the 2 rung frames (see below) and lock the locking clips (refer to page 5). Attach diagonal braces on both sides from the 1st rung to the 3rd rung of the structure, in opposite directions. Place a solid deck platform on the 1st rung* and a trap door platform on the 4th rung, both on the ladder side of the structure. Slide platform fixings (located underneath the platform) into the closed position.



*Platform can be placed at bottom of tower if required to fit platform above (as shown above).

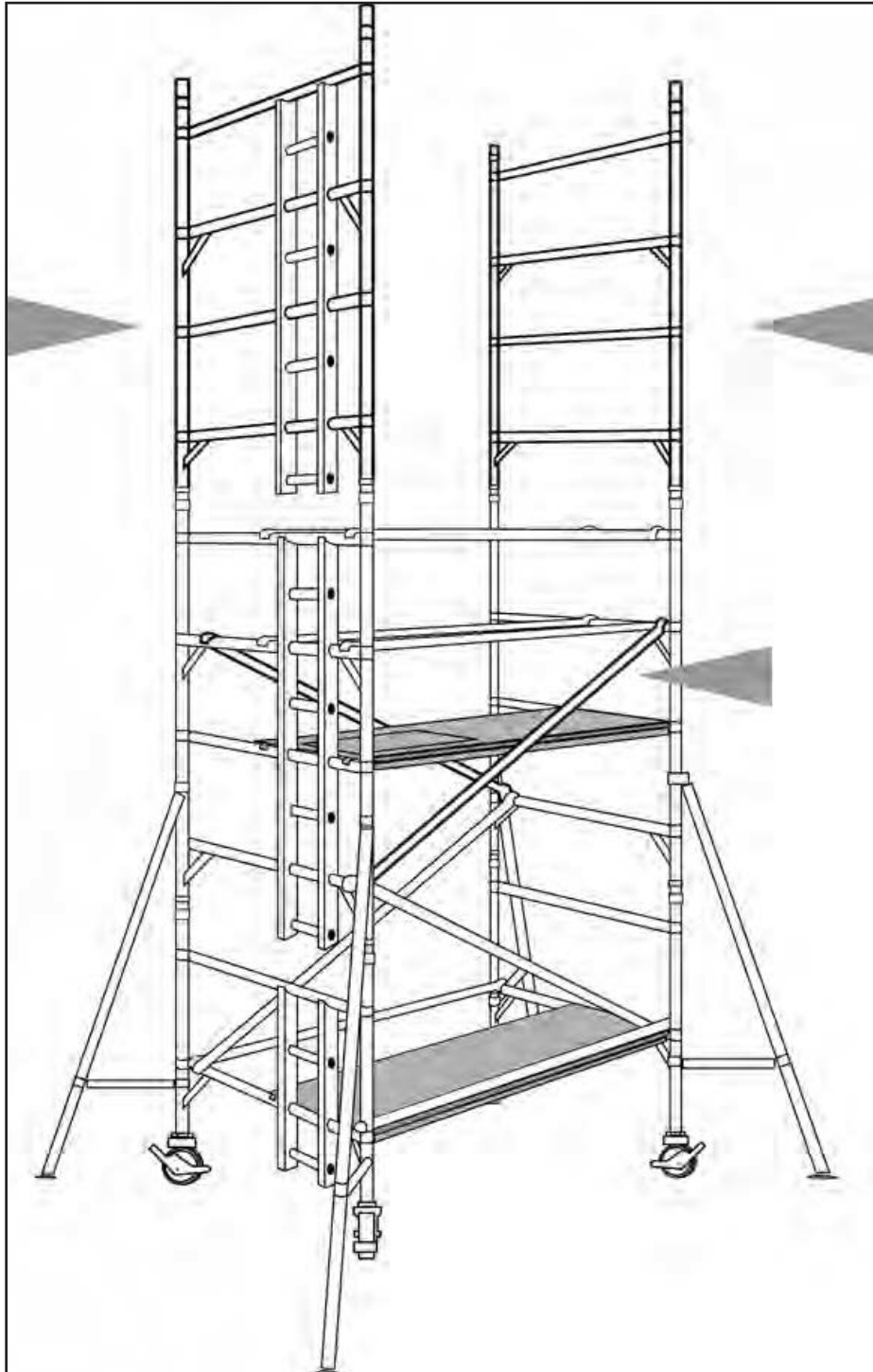
Assembly (cont'd)

- 5** Attach stabilisers as required for working height (see 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 those fitted in step 4. Attach the next 4 rung frames and lock clips (see below).

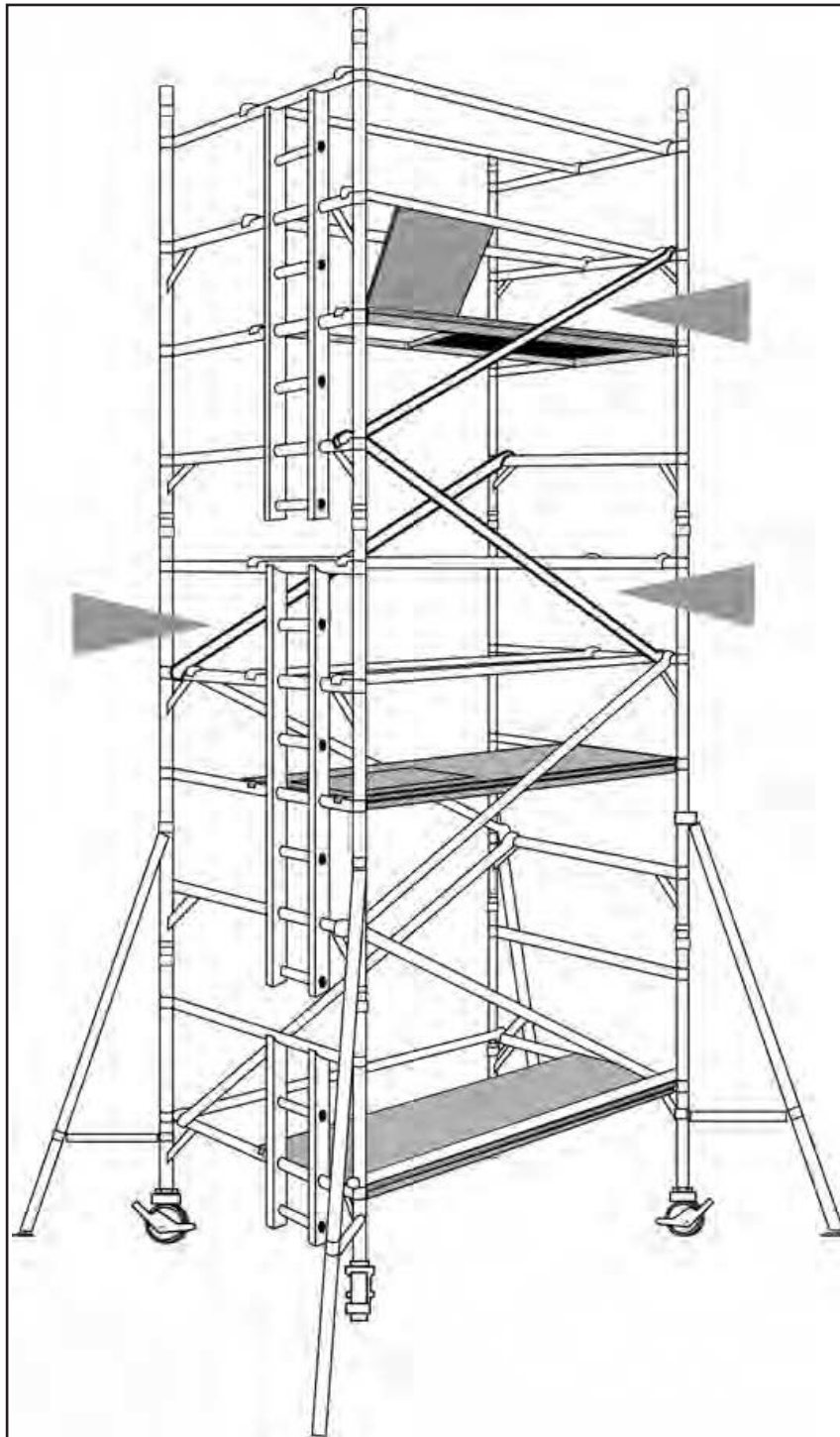


Assembly (cont'd)

- 7** If completing the tower at this height (4.2m platform height), 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.

When building the tower with a platform height of over 4.2 metres, remove the first platform and 4 horizontal braces that accompany it and use these to complete the structure.

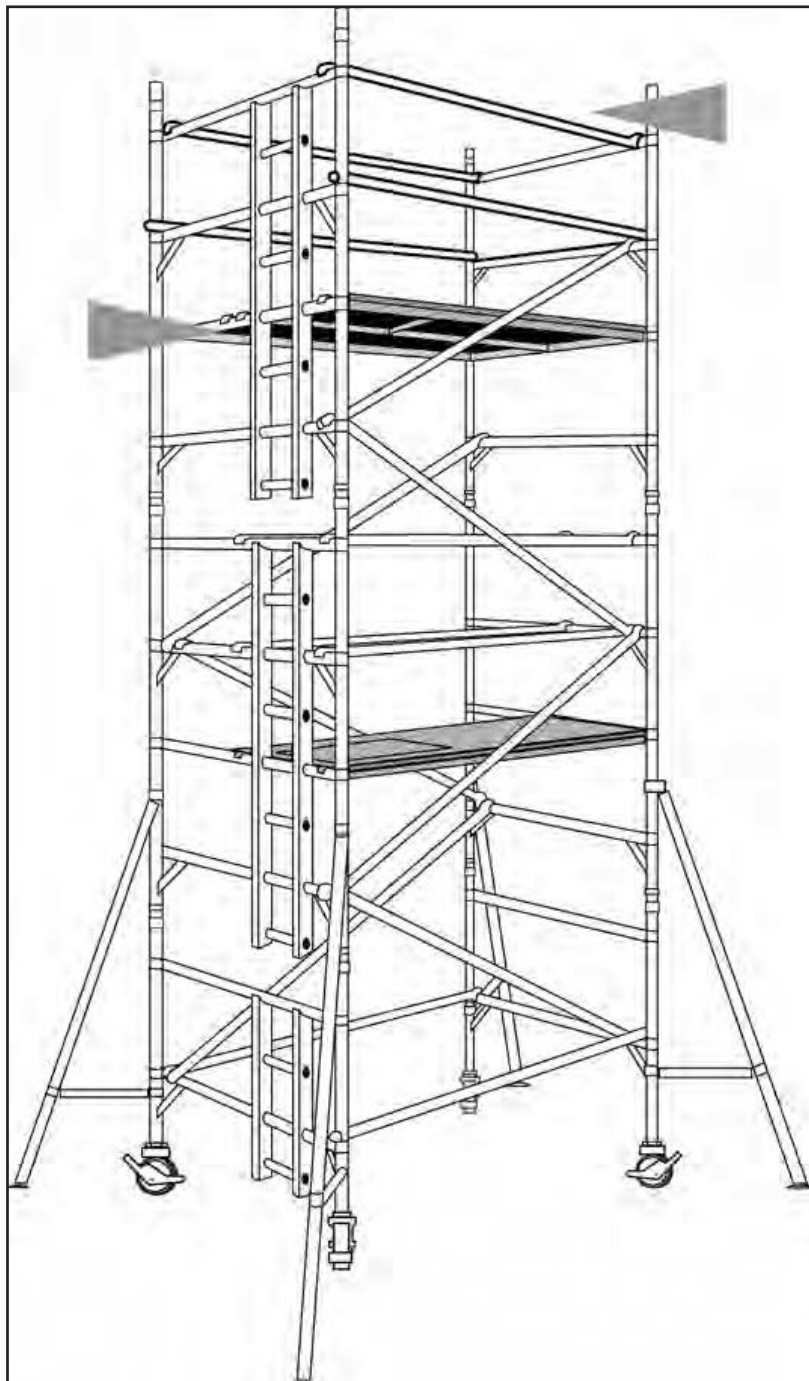
When building the tower with a platform height of over 8.2 metres, remove the first and third platform from the base, along with the accompanying horizontal braces and use these to complete structure.



Assembly (cont'd)

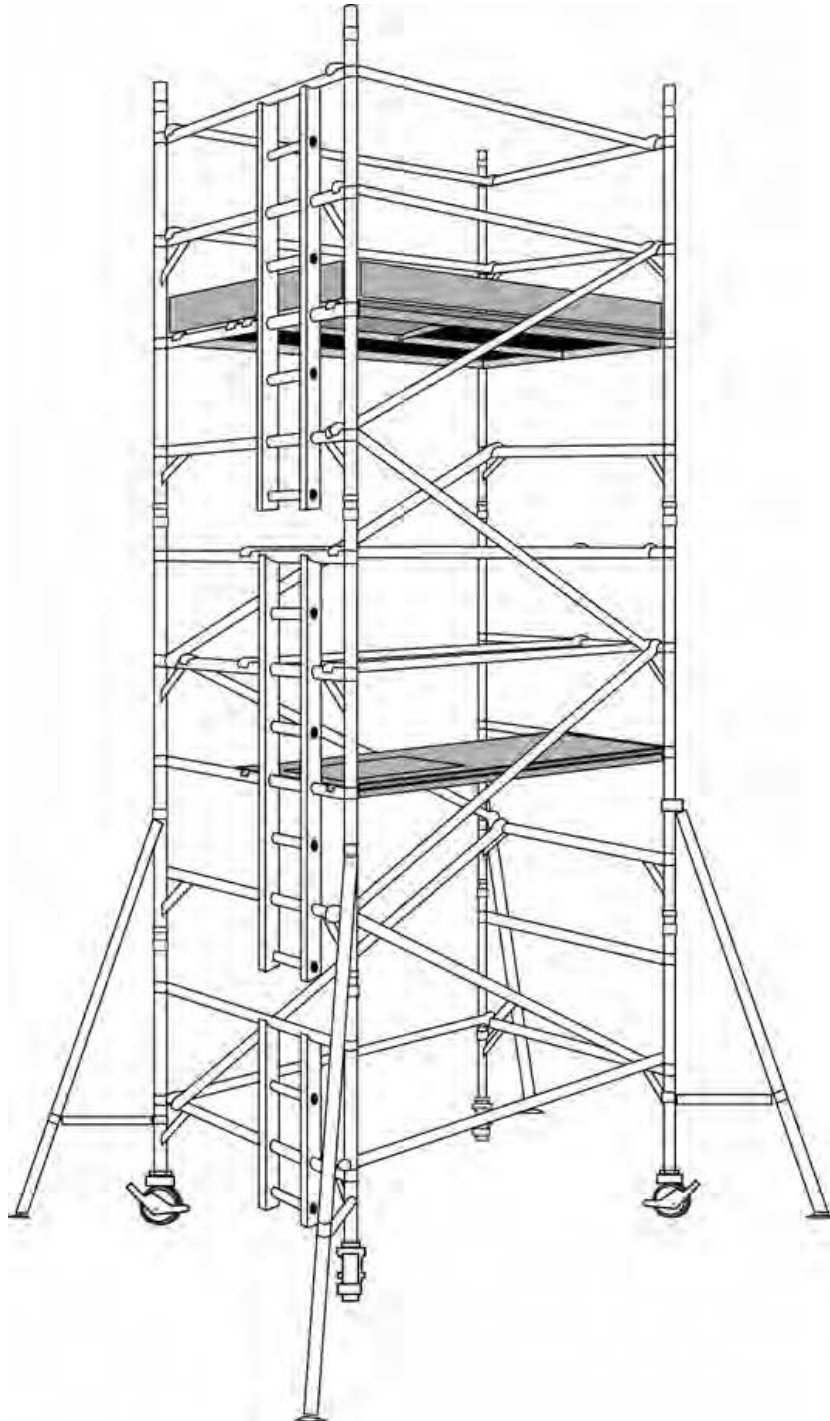
- 8** Fit the final diagonal braces as shown. This stage will provide a platform height of 4.2m. Attach diagonal braces (see below). The fixed platform should be moved up to the 8th rung and moved across to the far side of the structure, the trapdoor platform can now be fitted alongside it. **LOCK PLATFORM FIXINGS.**

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.



Assembly (cont'd)

- 9** Fit toe boards to all working platforms (see instructions on page 4).



When building the tower with a platform height of over 4.2 metres, remove the first platform and 4 horizontal braces that accompany it and use these to complete the structure.

When building the tower with a platform height of over 8.2 metres, remove the first and third platform from the base, along with the accompanying horizontal braces and use these to complete structure.

Dismantling

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

You should ensure that you are standing in a safe position and protected by guardrails at all times. **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 (3T) before descending to the lower level, from where the upper platform, diagonals and frames can be removed.

DO NOT OVERREACH

NEVER DROP COMPONENTS WHEN DISMANTLING - always lower them to the ground.

STABILISERS

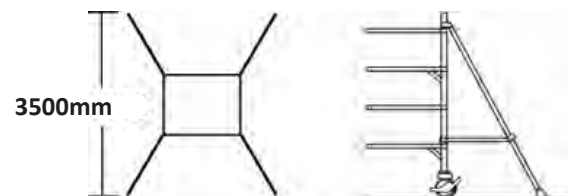
Attach one stabiliser to each corner of tower at approx. 45 degrees. Position the lower clamp so that the lower arm is as close to the horizontal as possible (see opposite). Adjust the position of the top clamp to ensure the stabiliser foot is in firm contact with the ground. Ensure clamps are secure.

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

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

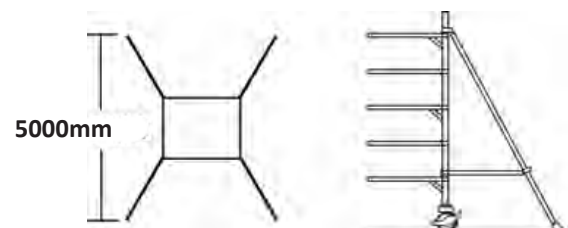
After moving check all castors are firmly on the ground and locked, and that the tower is vertical. Re-position stabilisers as explained above.

STABILISERS - S1



Static Stabiliser Maximum Platform Height:
Single Width 850 = 8.2m
Double Width 1450 = 8.2m

STABILISERS - S2



Telescopic Stabiliser Maximum Platform Height:
Single Width 850 = 8.7 - 12.2m
Double Width 1450 = 8.7 - 12.2m

850

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

Description	Working Height (M)																	
	Platform Height		4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2			
Castors			4	4	4	4	4	4	4	4	4	4	4	4	4			
300mm Threaded Adjustable Leg			4	4	4	4	4	4	4	4	4	4	4	4	4			
UTS 1450 2 Rung Ladder	1				1	1			1	1	1			1	1			
UTS 850 2 Rung Frame	1				1	1			1	1	1			1	1			
UTS 850 3 Rung Ladder		1			1	1	1	1	1	1	1	1	1	1	1			
UTS 850 3 Rung Frame		1			1	1	1	1	1	1	1	1	1	1	1			
UTS 850 4 Rung Ladder	1	1	1	1	2	2	2	3	3	3	3	4	4	3	4			
UTS 850 4 Rung Frame	1	1	1	1	2	2	2	3	3	3	3	4	4	3	4			
1.8m or 2.5m Trap Door Platform	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3			
1800 or 2500 Horizontal Brace	6	6	10	10	10	10	10	10	10	10	10	14	14	14	14			
2100 or 2700 Diagonal Brace	3	4	5	6	7	8	8	9	10	10	11	12	13	14	15			
Folding Toe Board	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

INTERNAL USE ONLY

	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2
	8.7	9.2	9.7	10.2	10.7	11.2	11.7	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
	1		1		1		1	
	4	5	4	5	5	6	5	6
	4	5	4	5	5	6	5	6
	3	3	3	3	4	4	4	4
	14	14	14	14	18	18	18	18
	16	17	18	19	20	21	22	23
	1	1	1	1	1	1	1	1

S1 Stabiliser	4	4	4	4	4	4	4	4	4	4
S2 Adjustable Stabiliser										

	4	4	4	4	4	4	4	4

Approx Tower Self-Weight (kgs) 1800	94.2	99.7	127	133	138	144	149.3	155	161	188	193	199	214.9
Approx Tower Self-Weight (kgs) 2500	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

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

Description	Working Height (M)		Available in two lengths; 1.8m & 2.5m																					
	Platform Height		4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2	
Castors		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
300mm Threaded Adjustable Leg		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
UTS 1450 2 Rung Ladder	1				1	1				1	1					1	1					1	1	1
UTS 1450 2 Rung Frame	1				1	1				1	1					1	1					1	1	1
UTS 1450 3 Rung Ladder			1		1	1				1	1					1	1					1	1	1
UTS 1450 3 Rung Frame				1		1				1	1					1	1					1	1	1
UTS 1450 4 Rung Ladder	1			1	2	1	2	2	3	2	3	3	4	3	4	3	4	3	4	5	5	6	5	6
UTS 1450 4 Rung Frame	1			1	2	1	2	2	3	2	3	4	3	4	4	3	4	5	5	6	6	5	6	6
1.8m or 2.5m Fixed Platform	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1.8m or 2.5m Trap Door Platform	1			1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4
1800 or 2500 Horizontal Brace	6		6	6	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18
2100 or 2700 Diagonal Brace	3		3	4	5	6	7	8	9	10	11	12	13	14	15	15	15	15	19	20	21	22	23	23
Folding Toe Board	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

INTERNAL USE ONLY

S1 Stabiliser																								
S2 Adjustable Stabiliser																								

Approx Tower Self-Weight (kgs) 1800	113	119	147	154	160	167	199	206	209	214	220	228	244
Approx Tower Self-Weight (kgs) 2500	128	135	169	177	184	191	197	205	212	247	253	261	278