



BoSS Zone 1

Mobile GRP (Fibreglass) Tower
1450/850 Ladderspan

3T - Through The Trapdoor Method

Safety First

INTRODUCTION

Please read this guide carefully.

Please note that diagrams are for illustrative purposes only.
User guides are also available to download from our website at youngmangroup.com

BoSS mobile GRP (fibreglass) towers are light-weight scaffold towers for use in Zone 1 applications where aluminium or steel systems are either unsafe or unsuitable. They provide indoor and outdoor access solutions where a stable and secure platform is required. Ideal for maintenance and installation work or short-term access, the highly versatile towers provide a strong working platform for a variety of heights.

This User Guide provides you with step by step instructions to ensure your system is erected easily and safely, using the 3T (Through The Trapdoor) method.

The law requires that personnel erecting towers must be competent. Any person erecting, dismantling or altering a Youngman BoSS mobile tower must have a copy of this guide. For further information on the use of mobile access and working towers consult the PASMA code of practice.

If you need further information, design advice, additional guides or any other help with this product, please contact Youngman on +44 (0)1621 745900 or email sales@youngmangroup.com

COMPLIANCES

The BoSS GRP (fibreglass) tower has been tested and certified to EN 1004: 2004 Class 3.



Instruction Manual EN1298-IM-EN

PREPARATION AND INSPECTION

Inspect the equipment before use to ensure that it is not damaged and that it functions properly. Damaged or incorrect components shall not be used.

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SAFE USE

- Check that all components are on site, undamaged and are functioning correctly – (refer to Checklist and Quantity Schedules). Damaged or incorrect components shall not be used.
- Check the ground on which the mobile access tower is to be erected and moved is capable of supporting the tower.
- The safe working load is 225 kgs (500lbs) per platform level, uniformly distributed up to a maximum of 720kgs (1580lbs) per tower (including self weight).
- Towers **must** always be climbed from the inside using the built in ladder during assembly and use.
- It is recommended that towers should be tied to a solid structure when left unattended.
- Adjustable legs should only be used for levelling and not for gaining extra height.

LIFTING OF EQUIPMENT

- Tower components should be lifted using a reliable lifting material (e.g. strong rope), employing a reliable knot (e.g. clove hitch), to ensure safe fastening and always lift within the footprint of the tower.
- Assembled mobile towers should not be lifted with a crane or other lifting device.

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STABILISERS / BALLAST

- Stabilisers and ballast weights shall always be fitted when specified.
- The Quantity Schedules show the recommended stabilisation. In circumstances where there is restricted ground clearance for stabilisers contact your supplier for advice. Ballast must be of solid materials (i.e. not water or loose sand) and should not be positioned to overload individual legs. Ballast should be secured against accidental removal where practicable, and be supported on the lowest rungs of the bottom frames.

MOVEMENT

- The tower should only be moved by manual effort, and only from the base.
- When moving the tower, beware of live electrical apparatus, particularly overhead, plus wires or moving parts of machinery.
- No person or materials should be on the tower during movement.
- Caution should be exercised when wheeling a tower over rough, uneven or sloping ground, taking care to unlock and lock castors. If stabilisers are fitted, they should only be lifted a maximum of 25mm above the ground to clear ground obstructions.
- The overall height of the tower when being moved, should not exceed 2.5 times the minimum base dimensions, or 4 metres overall height.
- Before use, check the tower is still correct and complete.
- After every movement of the tower use a spirit level to check that it is vertical and level and set the adjustable legs as required.
- Do not move the tower in wind speeds over 7.7 metres per second (17mph).

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DURING USE

- Beware of high winds in exposed, gusty or medium breeze conditions. We recommend that in wind speeds over 7.7 metres per second (17 m.p.h.), cease working on the tower and do not attempt to move it. If the wind becomes a strong breeze, expected to reach 11.3 metres per second (25 m.p.h.), tie the tower to a rigid structure. If the wind is likely to reach gale force, over 18 metres per second (40 m.p.h.), the tower should be dismantled.

Wind Description	Beaufort Scale	Beaufort No.	Speed in m.p.h	Speed in m/sec
Medium Breeze	Raises dust and loose paper, twigs snap off	4	8-12	4-6
Strong Breeze	Large branches in motion, telegraph wires whistle	6	25-31	11-14
Gale Force	Walking is difficult	8	39-46	17-21

- Beware of open ended buildings, which can cause funnelling effect.
- Do not abuse equipment. Damaged or incorrect components shall not be used.
- Raising and lowering components, tools and/or materials by rope should be conducted within the lower base. Ensure that the safe working load of the supporting decks and the tower structure is not exceeded.
- The assembled tower is a working platform and should not be used as a means of access or egress to other structures.
- Beware of horizontal forces (e.g. power tools) which could generate instability. **Maximum horizontal force 20 kg.**
- Mobile towers are not designed to be suspended - please refer to your supplier for advice.
- Do not use boxes or stepladders or other objects on the platform to gain extra height.

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TIES

- Ties should be used when the tower goes beyond its safe height, beyond the limits of the stabilisers, or if there is a danger of instability. They should be rigid, two way ties fastened to both uprights of the frame with load-bearing right angled or swivel couplers. Only couplers suitable for the 50.8mm diameter tube of the tower should be used. Ideally, ties should be secured to both faces of a solid structure by means of anchorages.
- The tie frequency may vary depending on the application, but they should, at a minimum, be every 4 metres height.
- For further information on tying-in a tower please contact your supplier or Youngman.

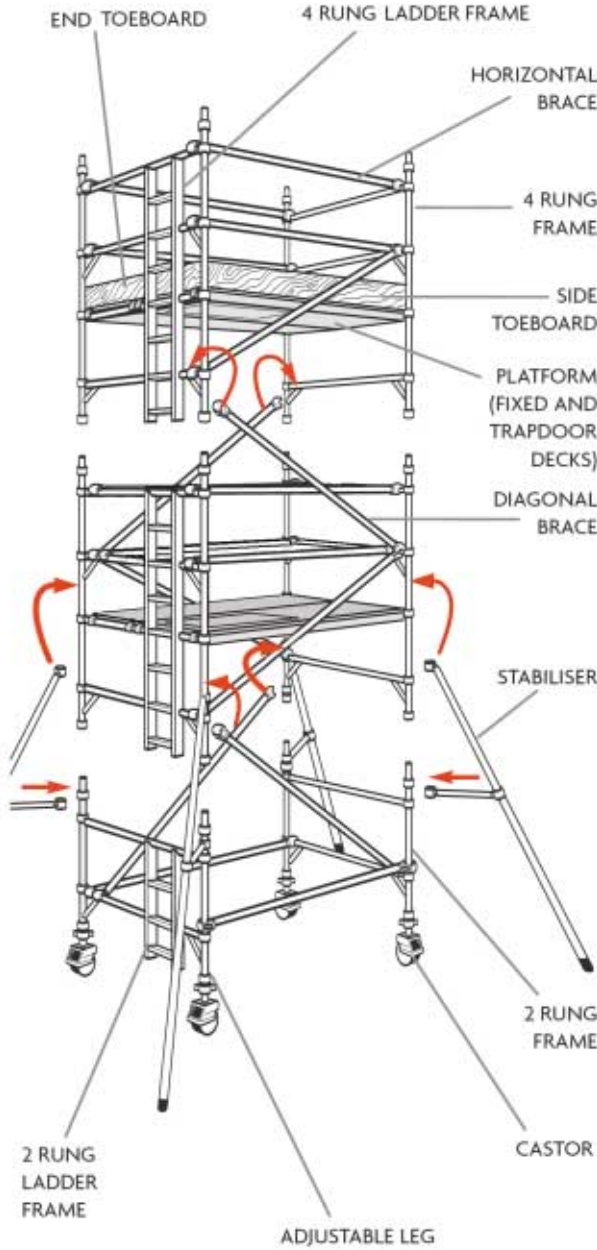
MAINTENANCE - STORAGE - TRANSPORT

- All components and their parts should be regularly inspected to identify damage, particularly joints. Lost or broken parts should be replaced and any tubing with cracks should not be used. Adjustable leg threads should be cleaned and lightly lubricated to keep them free running.
- Brace claws, frame interlock clips, trapdoor catches and platform windlocks should be regularly checked to ensure they lock correctly.
- Components should be stored with due care to prevent damage. Frames and decks should be stored in the vertical position.
- Ensure components are not damaged by excessive strapping forces when transported.

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Quantity Schedule 1450 Width Towers

Quantity Schedule 1450 Width Towers



BoSS ZONE 1 to EN 1004: Available in 2 lengths - 1.8m and 2.5m

Internal/External Use - Towers under 2.5m are outside of the scope of EN1004

COMPONENT	Weight										Internal/External Platform Height										Internal Use Platform Height									
	1.8	2.5	1.2m	1.7m	2.2m	2.7m	3.2m	3.7m	4.2m	4.7m	5.2m	5.7m	6.2m	6.7m	7.2m	7.7m	8.2m	8.7m	9.2m	9.7m	10.2m	10.7m	11.2m	11.7m	12.2m					
125/150/200mm Castor	3.25	3.25	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4					
Adjustable leg assembly	1.1	1.1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4					
1450 2 Rung Ladder Frame	12.63	12.63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
1450 2 Rung Span Frame	6.71	6.71	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
1450 3 Rung Ladder Frame	15.1	15.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
1450 3 Rung Span Frame	9.48	9.48	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
1450 4 Rung Ladder Frame	17.57	17.57	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
1450 4 Rung Span Frame	12.24	12.24	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
1.8m and 2.5m Fixed Deck	17	23	1	1	1*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
1.8m and 2.5m Trap Deck	19	25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
1.8m and 2.5m Horizontal Brace (red)	2	2.49	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6					
2.1m and 2.7m Diagonal Brace	2.3	2.61	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					

NOTE: Above 8.2m it is necessary to reposition platforms during the assembly and dismantling process to reduce the self weight of the tower and optimise the maximum safe working load.

* If you are unable to position the working platform easily from the ground, you may require an additional fixed platform for this tower height.

IMPORTANT: Please ensure you also read the quantity schedule on page 8

BoSS ZONE 1 to EN 1004: Available in 2 lengths - 1.8m and 2.5m

Internal/External Use - Towers under 2.5m are outside of the scope of EN1004

COMPONENT	Weight										Internal/External Platform Height										Internal Use Platform Height									
	1.8	2.5	1.2m	1.7m	2.2m	2.7m	3.2m	3.7m	4.2m	4.7m	5.2m	5.7m	6.2m	6.7m	7.2m	7.7m	8.2m	8.7m	9.2m	9.7m	10.2m	10.7m	11.2m	11.7m	12.2m					
1.8m/2.5m Side Toeboard	3.18	4.42	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
1.2m End Toeboard	2.11	2.11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
Small Stabiliser	4.7	4.7			4	4	4	4	4	4	4																			
Large Stabiliser	5.5	5.5										4	4	4	4	4	4	4	4	4	4	4	4	4	4					
Total Tower self weight (kgs) 1.8m	1.8		112	128	133	177	211	228	235	260	294	311	321	346	380	397	404	376	391	408	415	440	474	491	498					
Total Tower self weight (kgs) 2.5m	2.5		130	146	152	201	244	261	269	300	342	359	370	401	444	460	468	428	446	463	471	501	544	561	569					
Max Tower Load			720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720					
Max Safe Load			610	583	588	545	510	494	486	462	427	411	400	375	341	324	317	345	330	313	306	281	247	230	223					
Max Safe Load			2.5	592	575	570	520	477	460	453	422	379	362	351	320	278	261	253	293	275	259	251	220	177	160	153				

NOTE: Above 8.2m it is necessary to reposition platforms during the assembly and dismantling process to reduce the self weight of the tower and optimise the maximum safe working load.

Quantity Schedule

1450 Width Towers

NUMBER OF WORKING PLATFORMS ALLOWED

The MAXIMUM SAFE WORKING LOAD (the combined weight of the users, tools and materials) that may be placed on the tower is the total weight less the self weight of the tower. The total weight for the towers shown in the schedule is 720kg.

Example 1:

A 1450 tower built using the 3T method with a 4.2m platform height and a platform length of 1.8m has a self weight of 234kg.

$$720\text{kg} - 234\text{kg} = 486\text{kg maximum safe working load}$$

total weight self weight (users, tools and materials)

Example 2:

A 1450 tower built using the 3T method with a 11.7m platform height and a platform length of 2.5m has a self weight of 560kg.

$$720\text{kg} - 560\text{kg} = 160\text{kg maximum safe working load}$$

total weight self weight (users, tools and materials)

Above 8.2m it is necessary to reposition platforms during the assembly and dismantling process. This reduces the number of components and self weight of the tower to optimise the maximum safe working load.

For greater heights and loads, consult Youngman for guidance.

PLATFORM LOADING

On a 1450 tower a platform comprises of two decks placed side by side. The maximum safe working load (the combined weight of the users, tools and materials) that may be placed on a platform is 225kg. This must be evenly distributed over both.

The quantities on pages 7 and 8, will enable BoSS Zone 1 towers to be built safely and therefore comply with the requirements of the Work at Height Regulations. They include double guardrails to all platforms, and toeboards will need to be added if any levels are used as working platforms and for storage of materials. EN 1004 requires platforms at least every 4m, and these measures will exceed that requirement.

Quantity Schedule

1450 Width Towers

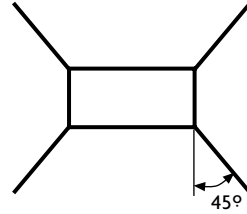
BALLAST: Internal/External Use

There is no requirement for ballast on 1450 towers if using stabilisers as detailed in the table on page 8.

STABILISERS

To improve rigidity, large stabilisers can be used at a lower level than shown in the table on page 8.

Angle of Stabiliser



Quantity Schedule

850 Width Towers

COMPONENT	Internal/External Use - Towers under 2.5m are outside of the scope of EN1004										Internal Use															
	1.8	2.5	1.2m	1.7m	2.2m	2.7m	3.2m	3.7m	4.2m	4.7m	5.2m	5.7m	6.2m	6.7m	7.2m	7.7m	8.2m	8.7m	9.2m	9.7m	10.2m	10.7m	11.2m	11.7m	12.2m	
125/150/200mm Castor	3.25	3.25	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Adjustable leg assembly	1.1	1.1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
850 2 Rung Ladder Frame	9.1	9.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
850 2 Rung Span Frame	3.52	3.52	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
850 3 Rung Ladder Frame	10.4	10.4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
850 3 Rung Span Frame	4.99	4.99	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
850 4 Rung Ladder Frame	11.7	11.7	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
850 4 Rung Span Frame	6.58	6.58	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1.8m and 2.5m Fixed Deck	17	23																								
1.8m and 2.5m Trap Deck	19	25	1	1	1*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1.8m and 2.5m Horizontal Brace (red)	2	2.49	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
2.1m and 2.7m Diagonal Brace	2.3	2.61	2	3	3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

BoSS ZONE Ladderspan to EN 1004: Available in 2 lengths - 1.8m and 2.5m
Internal/External Use - Towers under 2.5m are outside of the scope of EN1004

* If you are unable to position the working platform easily from the ground, you may require an additional fixed platform for this tower height.

Quantity Schedule

850 Width Towers

BoSS ZONE Ladderspan to EN 1004: Available in 2 lengths - 1.8m and 2.5m
Internal/External Use - Towers under 2.5m are outside of the scope of EN1004

COMPONENT	Weight		Internal/External												Internal Use											
	1.8	2.5	1.2m	1.7m	2.2m	2.7m	3.2m	3.7m	4.2m	4.7m	5.2m	5.7m	6.2m	6.7m	7.2m	7.7m	8.2m	8.7m	9.2m	9.7m	10.2m	10.7m	11.2m	11.7m	12.2m	
1.8m/2.5m Side Toeboard	3.18	4.42	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
0.6m End Toeboard	1.04	1.04	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Small Stabiliser	4.7	4.7			4	4	4	4	4																	
Large Stabiliser	5.5	5.5							4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Ballast Required (External) 1.8m	1																									
Ballast Required (External) 2.5m		1													25	50	75									
Total Tower self weight (kgs) 1.8m	1.8		80	92	113	138	151	163	168	188	195	208	220	226	250	263	275	280	304	317	329	335	359	372	384	
Total Tower self weight (kgs) 2.5m		2.5	92	104	126	156	172	184	189	223	239	251	256	287	327	365	395	395	350	366	378	384	414	430	442	
Max Tower Load			720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	
Max Safe Load	1.8		640	628	607	582	569	557	552	525	512	500	494	470	457	445	440	416	403	391	385	361	348	336	331	
Max Safe Load		2.5	628	616	594	564	548	536	531	497	481	469	464	433	393	355	325	370	354	342	336	306	290	278	273	

NOTE: Above 8.2m it is necessary to reposition platforms during the assembly and dismantling process to reduce the self weight of the tower and optimise the maximum safe working load.

Quantity Schedule

850 Width Towers

NUMBER OF WORKING PLATFORMS ALLOWED

The MAXIMUM SAFE WORKING LOAD (the combined weight of the users, tools and materials) that may be placed on the tower is the total weight less the self weight of the tower. The total weight for the towers shown in the schedule is 720kg.

Example 1:

An 850 tower built using the 3T method with a 4.2m platform height and a platform length of 1.8m has a self weight of 168kg.

720kg — 168kg = **552kg maximum safe working load**
total weight self weight (users, tools and materials)

Example 2:

An 850 tower built using the 3T method with a 11.7m platform height and a platform length of 2.5m has a self weight of 442kg.

720kg — 442kg = **278kg maximum safe working load**
total weight self weight (users, tools and materials)

For greater heights and loads, consult Youngman for guidance.

PLATFORM LOADING

On an 850 tower a platform comprises of a single deck only. The maximum safe working load (the combined weight of the users, tools and materials) that may be placed on a platform is 225kg, evenly distributed over the deck.

The quantities on **pages 11 and 12**, will enable BoSS Zone 1 towers to be built safely and therefore comply with the requirements of the Work at Height Regulations 2005. They include double guardrails to all platforms, and toeboards will need to be added if any levels are used as working platforms and for storage of materials. EN 1004 requires platforms at least every 4m, and these measures will exceed that requirement.

Quantity Schedule

850 Width Towers

BALLAST: Internal/External Use

Stabiliser requirements are based on calculations from EN 1004:

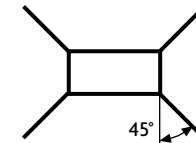
- up to 8.2m (platform height) the stabilisers and ballast are shown for external use.
- Above 8.2m the schedule is for internal use only.

For internal use only towers may be erected up to 12.2m without ballast. For greater rigidity, fit large stabilisers at a lower height.

STABILISERS

To improve rigidity, larger stabilisers can be used at a lower level than shown in the table on **page 12**.

Angle of Stabiliser



Assembly Procedure

ASSEMBLY AND DISMANTLING PROCEDURES

When building a BoSS ZONE 1 Tower:

- To comply with the Work at Height Regulations we show assembly procedures with platforms every 2 metres in height, and, the locating of guardrails in advance of climbing onto a platform to reduce the risk of a fall.
- All platforms feature double guardrails on both faces of the tower.
- All guardrails should be 1 and 2 rungs (0.5m and 1.0m) above platforms.
- Never stand on an unguarded platform positioned above the first rung of a tower. If your risk assessment shows it is necessary, you may also need to guardrail platforms at this level.
- Always start building with the smallest height frames at the base of the tower:**

Platform Heights in Metres	Frame at base
1.7, 2.2, 3.7, 4.2, 5.7, 6.2, 7.7, 8.2, 9.7, 10.2, 11.7, 12.2	2 rung
2.7, 4.7, 6.7, 8.7, 10.7	3 rung
1.2, 3.2, 5.2, 7.2, 9.2, 11.2	4 rung

Where all 3 frame heights are used in a tower, start with 2 rung frames at the base, with the 3 rung frames next and the 4 rung frames on the top. Refer to the quantity schedules for detail.

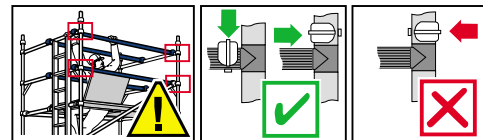
TO DISMANTLE A BoSS ZONE 1 TOWER

- Remove toeboards and pass down the tower.
- Unclip farthest end of braces and immediately go to protected trapdoor position on ladder to complete removal.
- Remove upper platforms from protected platform levels below.
- Pass removed components to a colleague.

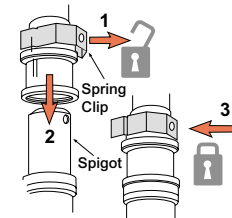
Safety Checklist

CHECKLIST

- Ensure all brace claws operate and lock correctly prior to erection ✓
- Inspect components prior to erection ✓
- Inspect tower prior to use and after movement ✓
- Tower upright and level ✓
- Castors locked and legs correctly adjusted ✓
- Diagonal braces fitted ✓
- Stabilisers fitted as specified ✓
- Platforms located correctly ✓
- Toeboards located ✓
- Check guardrails are fitted correctly. See illustration below. ✓



- Check frame interlock clips are locked. See illustration below ✓



- Ensure horizontal braces and guardrails are fitted correctly. Always fit as shown.

Refer to this checklist before using each time

Assembly Procedure

ASSEMBLY FOR 1450 TOWERS

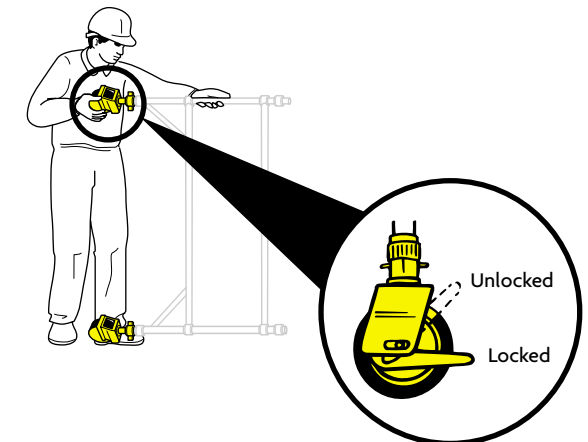
Always start building with the smallest height frames at the base of the tower:

Platform Heights in Metres	Frame at base
1.7, 2.2, 3.7, 4.2, 5.7, 6.2, 7.7, 8.2, 9.7, 10.2, 11.7, 12.2	2 rung
2.7, 4.7, 6.7, 8.7, 10.7	3 rung
1.2, 3.2, 5.2, 7.2, 9.2, 11.2	4 rung

Where all 3 frame heights are used in a tower, start with 2 rung frames at the base, with the 3 rung frames next and the 4 rung frames on the top. Refer to the Quantity Schedules for detail. **The procedure illustrated shows a 4.2m platform height tower starting with a 2 rung frame.**

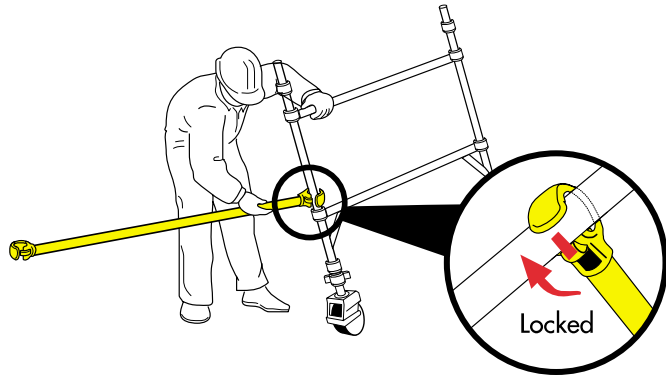
Youngman recommend two persons are used to build BoSS Towers. **Above 4m height, it is essential that at least two persons are used. Only climb the tower from the inside.**

- Push castor onto adjustable leg to secure. Insert 2 adjustable leg/castor assemblies into span frame. Base plates can be fitted to adjustable legs if it is not necessary to move the tower.

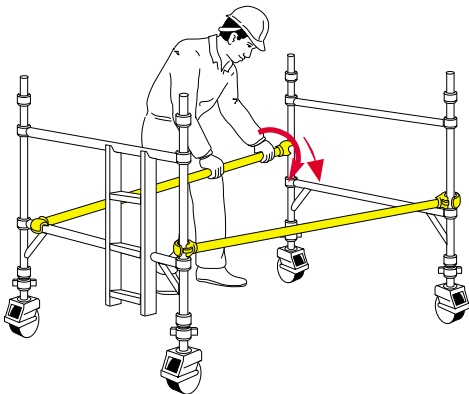


Assembly Procedure

- 2** Fit one horizontal brace (red) onto the vertical of the span frame, just above the bottom rung, with the claw facing outwards. The frame will now be self supporting.



- 3** Position the ladder frame as shown and fit the other end of the horizontal brace onto the vertical, just above the bottom rung. Fit a second horizontal brace between the bottom rungs on the other side of the frames to square the tower.



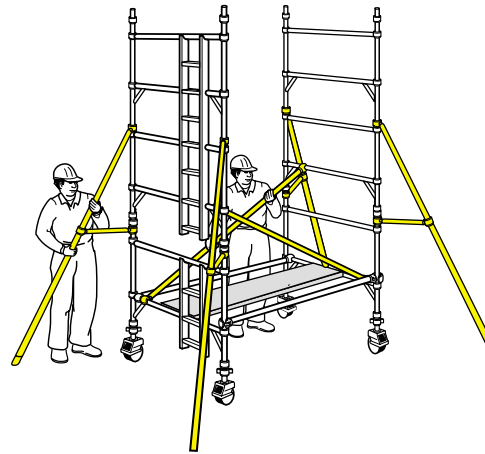
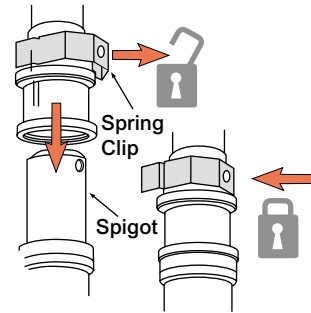
Assembly Procedure

- 4** Fit 2 additional end frames and check the frame interlock clips are engaged. Fit 2 diagonal braces in opposing directions between the 1st and 3rd rungs. Ensure the frames are vertical and level by checking with a spirit level and setting the adjustable legs as required.

IMPORTANT. Only use the adjustable legs to level the tower and not to gain extra height.

Fit a temporary fixed deck on the lowest rungs of the tower.

Fit the stabilisers.



Assembly Procedure

- 5** Fit 2 more diagonals in opposite directions between the 3rd and 5th rungs of the tower.

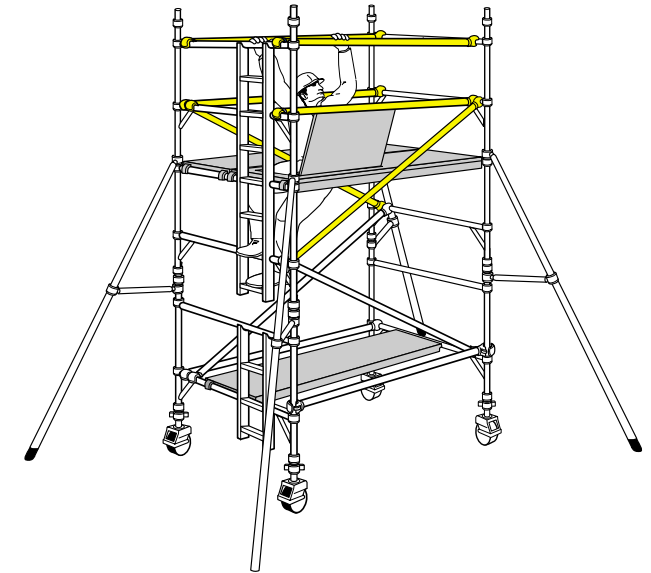
Fit a trapdoor deck on the 4th rungs of the tower with the trapdoor next to the ladder and opening towards the outside of the tower.

Fit a fixed deck alongside it. Climb the ladder and, from the protected trapdoor position, fit horizontal braces as guardrails on the 5th and 6th rungs, on both sides of the tower.

NEVER climb on to the platform until it is fully guard railed.

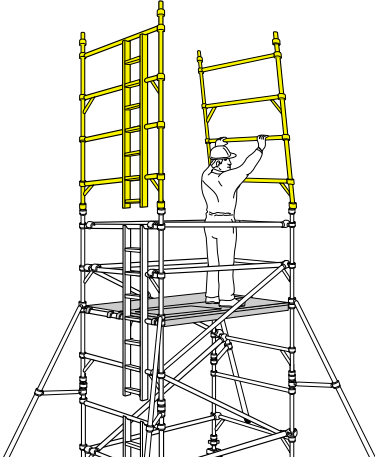
Guardrails should be 0.5m and 1.0m (1 and 2 rungs) above the platform in all cases.

Remove the temporary deck from the lowest rungs of the tower.

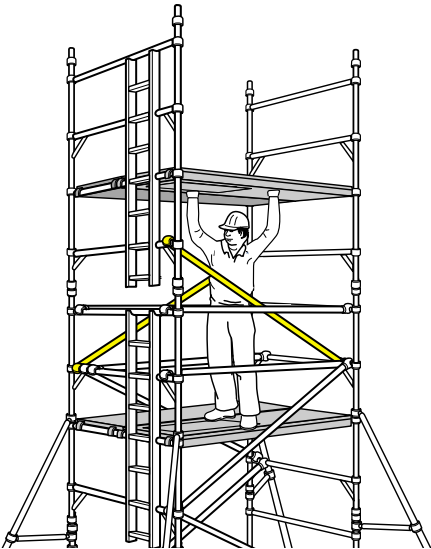


Assembly Procedure

- 6** Add 2 more frames.
Ensure ladders are always positioned one above the other.

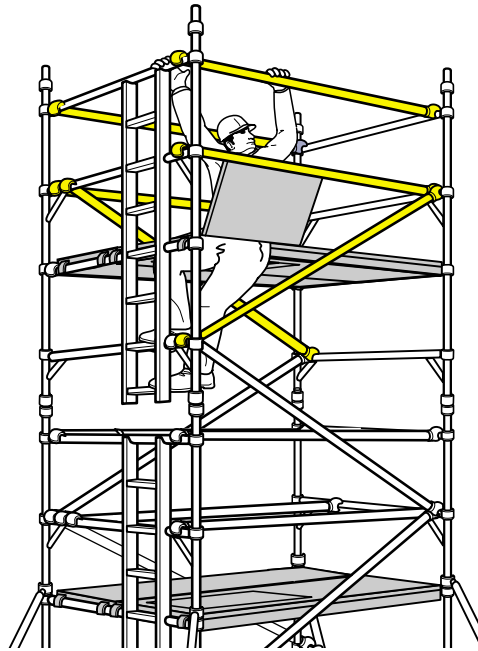


- 7** Fit 2 more diagonals between the 5th and 7th rungs.
Fit a trapdoor deck on the 8th rungs of the tower.
Fit a fixed deck next to it.



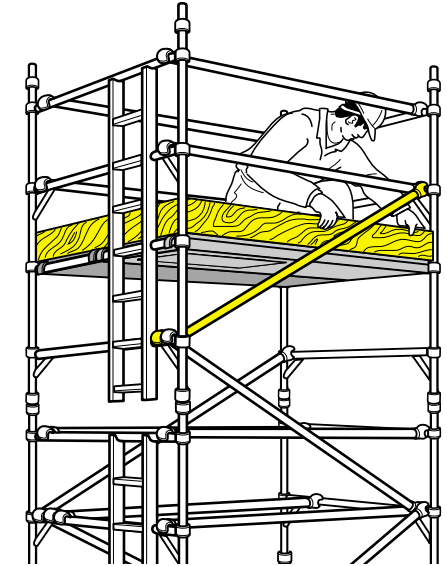
Assembly Procedure

- 8** Fit 2 more diagonals between the 7th and 9th rungs. Climb the ladder and from the protected trapdoor position, fit 4 more guardrails on the 9th and 10th rungs.



Assembly Procedure

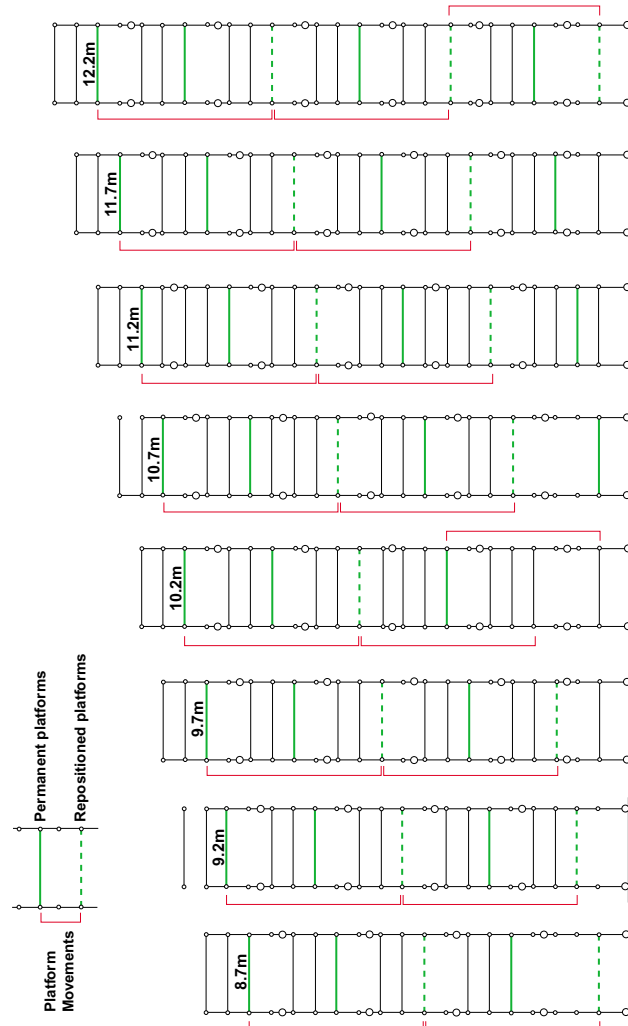
- 9** Repeat the previous steps until the required height of tower is reached. Fit a single diagonal at the top of the tower as shown.
Fit the toeboards.
The tower is now complete.



Assembly Procedure

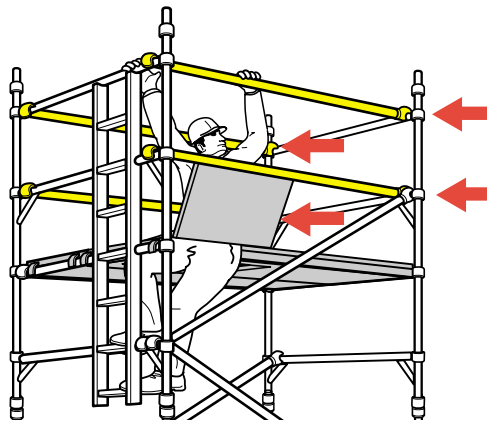
10 For 1450 width towers over 8.2m it is necessary to reposition platforms during the assembly and dismantling process to reduce the number of components and optimise the safe working load of the tower.

IMPORTANT: It is not necessary to reposition guardrails. Diagonals and stabilisers are omitted in this diagram for clarity.



Dismantling Procedure

11 To take down the tower reverse the building sequence. When removing guardrail braces, unlock the 4 claws furthest from the trapdoor and then return immediately to the protected position within the trapdoor. You may then unlock the claws at the other ends of the guardrails to remove them from the tower.



Assembly Procedure

ASSEMBLY FOR 850 TOWERS

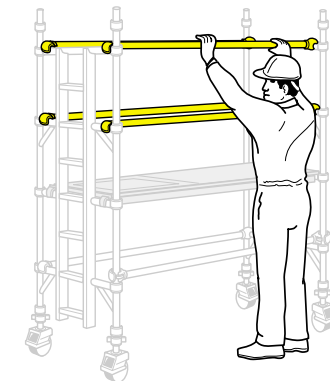
Always start building with the smallest height frames at the base of the tower:

Platform Heights in Metres	Frame at base
1.7, 2.2, 3.7, 4.2, 5.7, 6.2, 7.7, 8.2, 9.7, 10.2, 11.7, 12.2	2 rung
2.7, 4.7, 6.7, 8.7, 10.7	3 rung
1.2, 3.2, 5.2, 7.2, 9.2, 11.2	4 rung

Where all 3 frame heights are used in a tower, start with 2 rung frames at the base, with the 3 rung frames next and the 4 rung frames on the top. Refer to the quantity schedules for detail. **The procedure illustrated shows a 3.2m platform height tower starting with a 4 rung frame.**

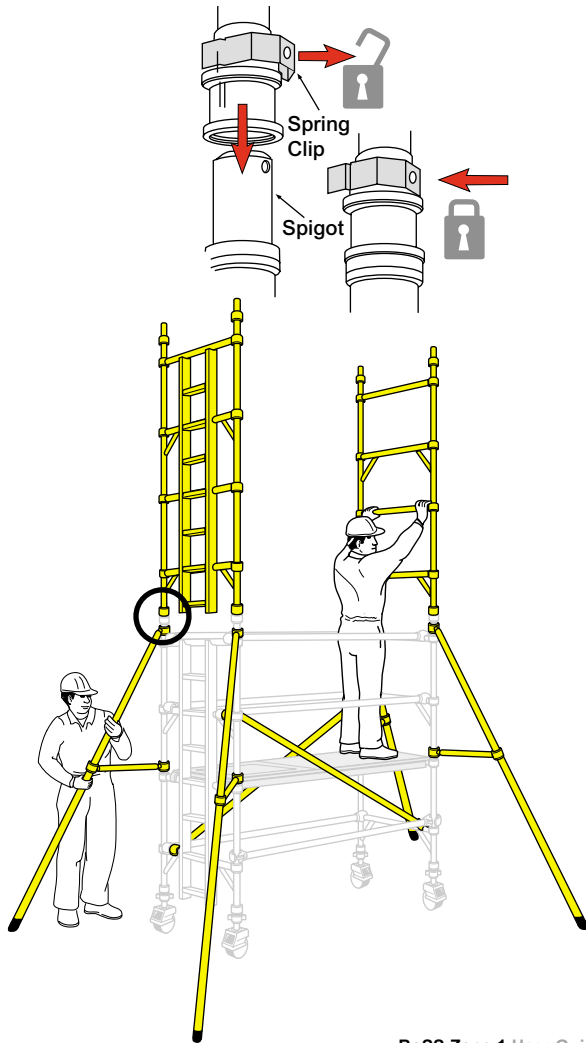
1 Insert adjustable leg/castor assemblies into end frames and lock the castors, see diagram **step 1** (page 17). Base plates can be fitted to the adjustable legs if it is not necessary to move the tower. Fit 2 horizontal braces to the 850 end frames as shown in **steps 2 and 3** for the 1450 tower procedure (page 18).

2 Fit a trap door deck on the 2nd rung with the trapdoor next to the ladder. Fix guardrails on the 3rd and 4th rungs on both sides of the tower.



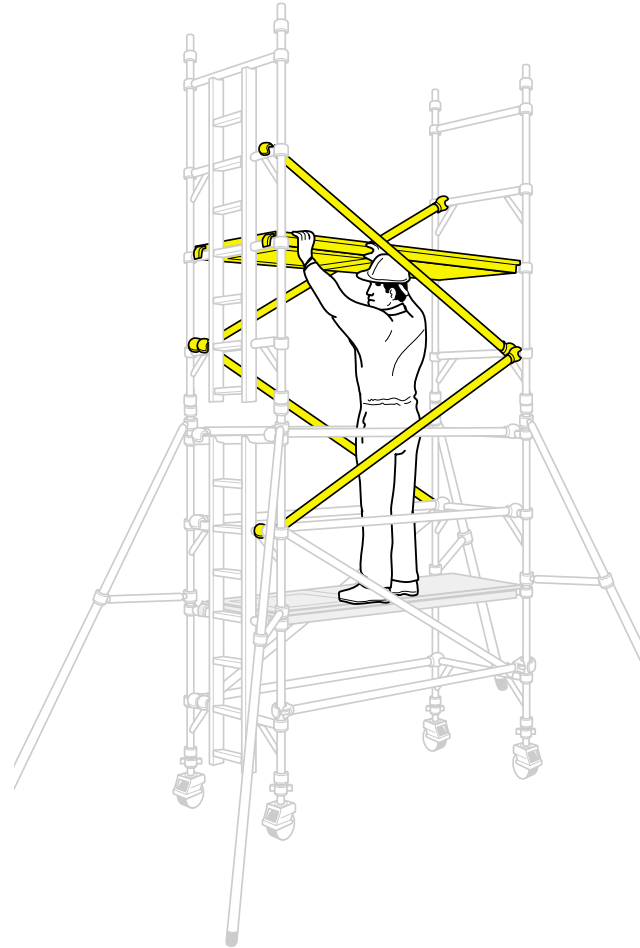
Assembly Procedure

- 3** Fit 2 diagonal braces in opposing directions between the 1st and 3rd rungs. Ensure the frames are vertical and level by checking with a spirit level and setting the adjustable legs as necessary. Fit stabilisers (see notes on **page 30**). Fit the next pair of end frames and check the frame interlock clips are engaged. **IMPORTANT.** Only use the adjustment on the legs to level the tower and not to gain extra height.



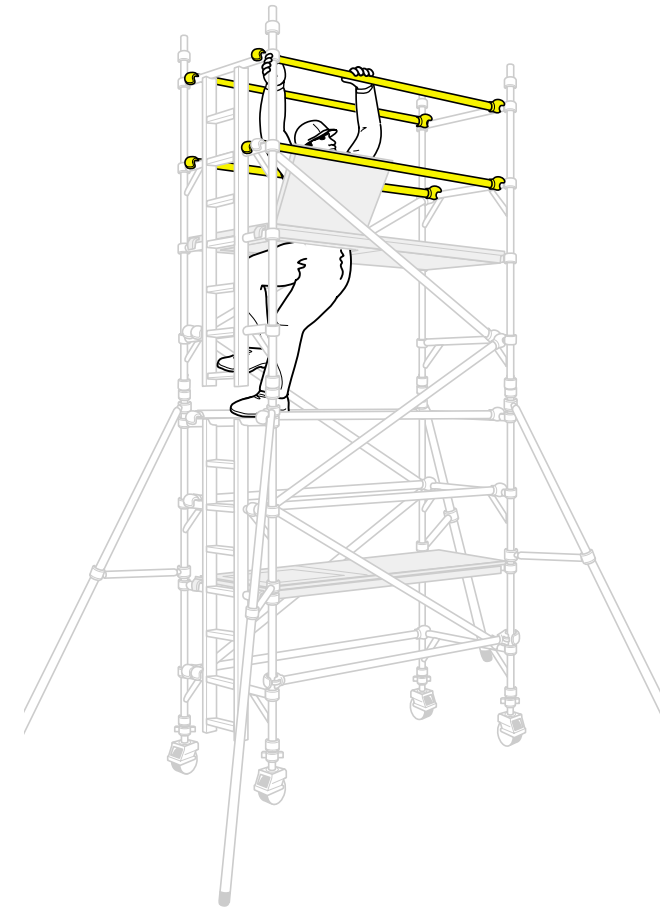
Assembly Procedure

- 4** Fit 2 pairs of diagonal braces in opposing directions between the 3rd and 5th rungs and the 5th and 7th rungs. Locate a trapdoor deck on the 6th rung, with the trapdoor next to the ladder.



Assembly Procedure

- 5** Climb up the inside of the tower and from the protected position of the trapdoor, fit guardrails to the 7th and 8th rungs (in that order) on both sides of the tower.



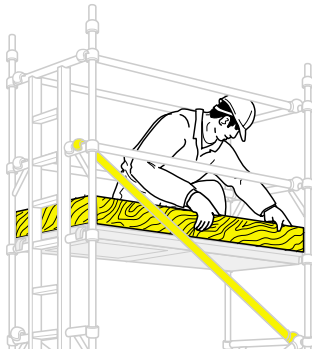
Assembly Procedure

- 6** Continue the procedure until the required working height is reached, adding additional pairs of end frames, diagonal braces and fitting trapdoor platforms, as shown on previous steps. At every platform level, add horizontal braces as guardrails from the protected position within the trapdoor, (as shown in **step 5**).

Fit a single diagonal at the top of the tower as shown.

Fit the toeboards

The tower is now complete.



Dismantling Procedure

- 7** To take down the tower reverse the building sequence. When removing guardrail braces, unlock the 4 claws furthest from the trapdoor and then return immediately to the protected position within the trapdoor. You may then unlock the claws at the other ends of the guardrails to remove them from the tower.

Stabilisers

Attach one stabiliser to each corner of the tower and fully extend telescopic sections. Secure top and bottom clamps. Ensure clamps are rigidly fixed to prevent movement.

When moving tower, check for obstructions and lock feet a maximum of 25mm off the ground. Unlock the castors, and move tower. After moving check all castors are locked and stabilisers are repositioned and in good contact with the ground.

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