

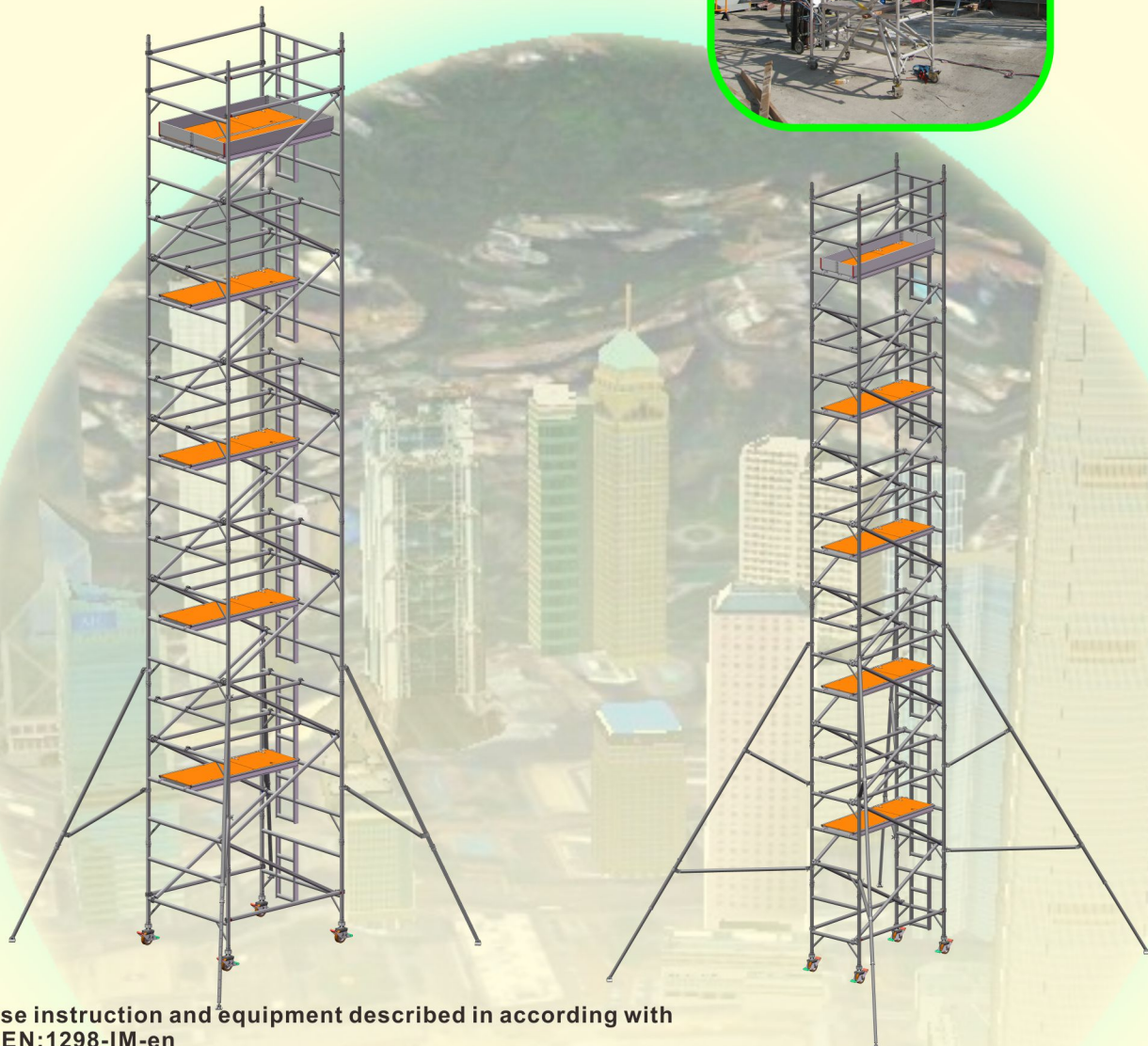


1450, 850

Aluminium Scaffold Tower
Tested & Certified to BS EN1004



Instruction Manual



These instruction and equipment described in according with
BS:EN:1298-IM-en
BS:EN:1004:2004 (Class 3),(8 metres outdoor / 12 metres indoor)

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Mobile Tower – 3T Method (Through The Trapdoor)

INTRODUCTION

Please read this guide carefully.

Please note that diagrams are for illustrative purposes only.

LOYAL mobile aluminium towers are light-weight scaffold towers used throughout the building and construction industry for both 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 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 and qualified to do so. Any person erecting a **LOYAL** mobile tower should have a copy of this guide. For further information on the use of mobile access and working towers consult the PASMA operator's code of practice.

If you need further information, or any other help with this products, please contact:
Loyal Scaffolding Ltd. on +852 3488 3860 or email to loyalscaffold007@yahoo.com

COMPLIANCES

These instructions and the equipment described in accordance with:

BS:EN:1298-IM-en

BS:EN:1004:2004 Class 3 (8 metres outdoor / 12 metres indoor)

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.

Safety First

A. SAFETY NOTES





1. Check that all components are on site, undamaged and that they are functioning correctly – (refer to Checklist & Quantity Schedule). Damaged or incorrect components shall not be used.
2. Before erecting the tower, check that the location for the mobile access tower does not present any hazards during erecting, dismantling, moving and safe working with respect to :-

Ground conditions, and must be capable of supporting the weight of the structure.
Level and slope
Obstructions (ground and overhead)
Wind conditions (current and potential).
3. Check if the ground on which the mobile access tower is to be erected and moved is capable of supporting the tower.
4. **The minimum of two competent persons are required to assemble and dismantle this mobile access tower.**
5. The safe working load is 275 kg (606 lbs), per platform level, uniformly distributed up to a maximum of 950 kg (2100 lbs), per tower (including self weight).
6. Tower **must** always be climbed from the inside using the built in ladder during assembly and use.
7. It is recommended that towers should be tied to a solid structure when left unattended.
8. Adjustable legs should only be used for leveling.
9. **DO NOT** use boxes or ladders or others object on the platform to gain additional height.
10. Never bridge between a tower and a building unless specification and approved.
11. Never jump onto platforms.
12. When possible, tie in the tower to a rigid structure when working outdoors or in exposed conditions.
13. Beware of the funneling effect of open ended and unclad building.
14. Debris netting or plastic sheeting should not be fixed to the tower without consulting your local supplier.
15. Raising and lowering components, tools, and/or materials by rope should be conducted within the tower base. Ensure that the safe working load of the supporting decks and the tower structure is not exceeded.
16. The assembled tower is a working platform and should not be used as a means of access to other structures.
17. The maximum wind condition for moving the tower are Beaufort Scale 0-4 as described table (Page 4 Wind Speed Safety Rules)
18. Beware of horizontal forces (lateral force) when using power tools, wash jet or other tools which could generate instability.
The Maximum horizontal force (lateral force) on a freestanding tower at platform level is 20kg.
19. Mobile towers are not designed to be suspended-please refer to your local supplier for advice.
20. Do not extend the platform height of the tower by the use of ladders, boxes or other devices..
21. Always beware of live electrical apparatus, cables or moving parts of machine
22. Before each use or re-use of the mobile tower check the tower is vertical. Check with spirit level and adjust legs as needed, ensure the structure is still assembled correctly, and is complete. Also ensure no environmental change has affected the tower (snow, wind, ice etc.); if so, correct as necessary before use.

Safety First

B. WIND SPEED SAFETY RULES

1. Beware of high winds in exposed, gusty or medium breeze conditions. We recommend that in wind speeds over 20.0 km/h, cease working on the tower and do not attempt to move it. If the wind becomes a strong breeze, expected to reach 31.0 km/h, tie the tower to a rigid structure. If the wind is likely to reach gale force, over 52.0 km/h, the tower should be dismantled.
2. Wind force can be magnified by the tunneling effect of open ended and unclad building

Beaufort Scale	WIND DESCRIPTION	SPEED In km/h.	SPEED In m/s.	GENERAL EFFECT		ACTION
0-3	Light Breeze	< 2-19`	< 0.6-5.3`	Raises Dust		No action required
4	Moderate Breeze	20-30	5.6-8.3	Loose paper, Twigs snap off		Cease working on tower and do not attempt to move it
5-6	Strong Breeze	31-51	8.6-14.2	Large branches in motion move. Telephone wires whistle.		Tie the tower to a rigid structure
> 6-8	Gale Force	52-75	14.4-20.8	Walking progress impeded		Dismantle tower if such conditions are expected

C. LIFTING OF EQUIPMENT

1. 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.
2. Assembled mobile towers should not be lifted with a crane or other lifting device.

D. OUTRIGGERS / BALLAST

1. Outriggers and ballast weights shall always be fitted when specified.
2. The Quantity Schedules show the recommended outrigger footprint. In circumstances where there is restricted ground clearance for outriggers, contact your supplier for advice.

E. MOVEMENT

1. The tower should only be moved by manual effort, and only from the base.
2. When moving the tower, always beware of any live electrical apparatus, overhead cables or moving parts of machinery.
3. Ensure that the platforms are free of persons and equipment and that brake locks are off prior to movement.
4. Caution should be exercised when moving a tower over rough, uneven or sloping ground, taking care to unlock and lock the wheels. If outriggers are fitted, they should only be lifted sufficiently above the ground to clear ground obstructions.
5. The overall height of the tower when being moved, should not exceed 2.5 times the minimum base dimensions, or 4 metres overall height.
6. Before use, check the tower is still correct and complete.
7. 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.
8. Do not move the tower in wind speeds over 20 km/hour .

Safety First

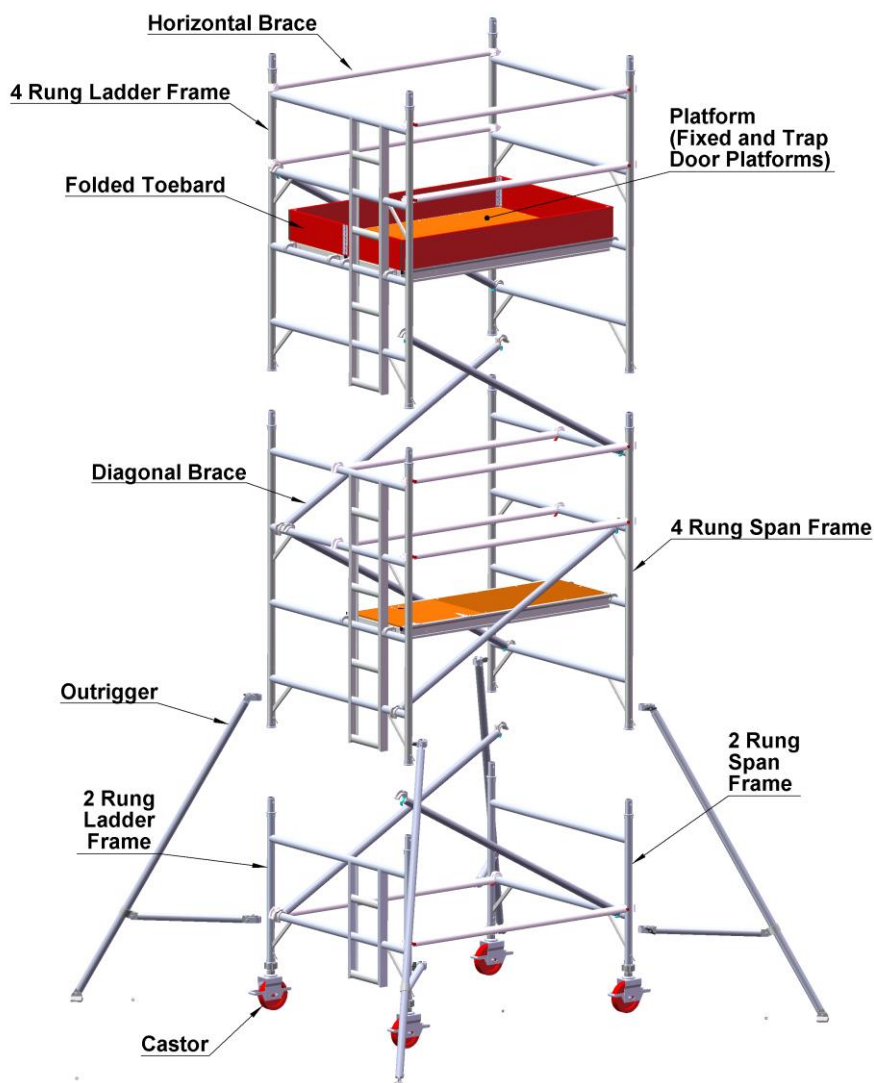
F. TIES

1. Ties should be used when the tower goes beyond its safe height or beyond the limits of the outriggers 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 dia. tube of the tower should be used. Ideally ties should secure to both faces of a solid structure or by means of anchorages.
2. The tie frequency may vary depending on the application, but they should, as a minimum, be at every 4 metres height.
3. For further information on tying-in a tower please contact your supplier.

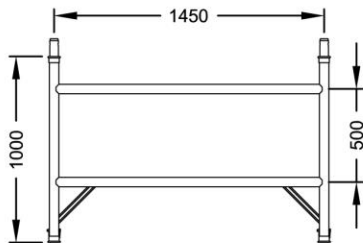
G. MAINTENANCE – STORAGE - TRANSPORT

1. All components and their parts should be regularly inspected to identify damage, particularly to joints. Lost or broken parts should be replaced, and any tubing with indentations greater than 5mm should be put to one side for manufacturers repair. Adjustable leg threads should be cleaned and lightly lubricated to keep them free running.
2. Brace claws, frame interlock clips, trapdoor latches and platform locks should be regularly checked to ensure they lock correctly
3. Components should be stored with due care to prevent damage.
4. Ensure components are not damaged by excessive force when transported.

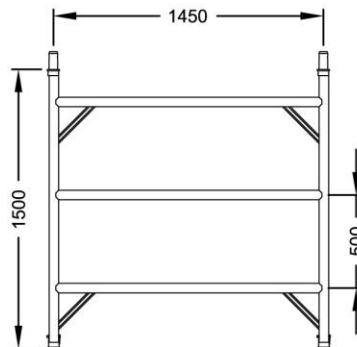
Components



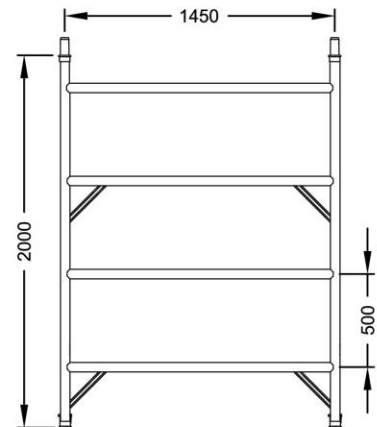
LOYAL Scaffold Tower Components (1)



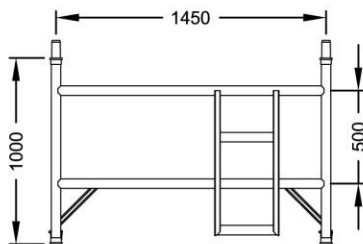
1450 2 Rung Span Frame
145-2-A
Weight : 4.57 kg



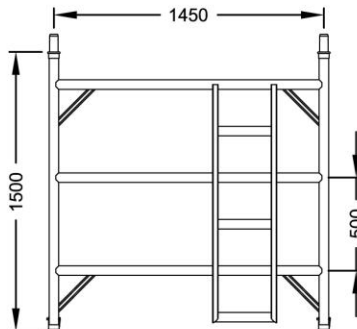
1450 3 Rung Span Frame
145-3-A
Weight : 6.91 kg



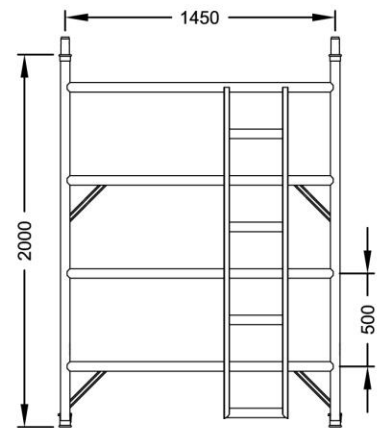
1450 4 Rung Span Frame
145-4-A
Weight : 8.68 kg



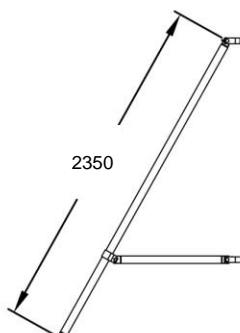
1450 2 Rung Ladder Frame
145-2-B
Weight : 6.37 kg



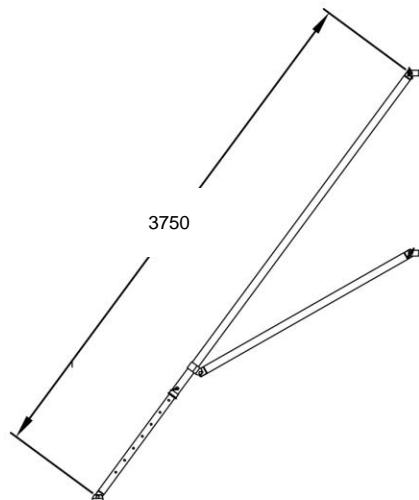
1450 3 Rung Ladder Frame
145-3-B
Weight : 8.7 kg



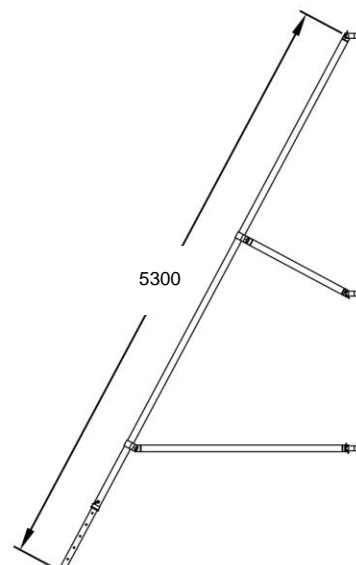
1450 4 Rung Ladder Frame
145-4-B
Weight : 11.4 kg



Fixed Outrigger-Small
SP 7
Weight : 5.8kg

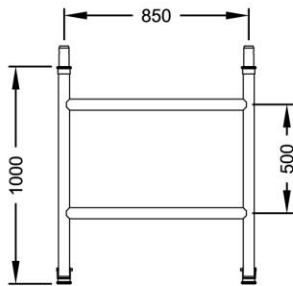


Telescopic Outrigger-Medium
SP 10
Weight : 9.1 kg

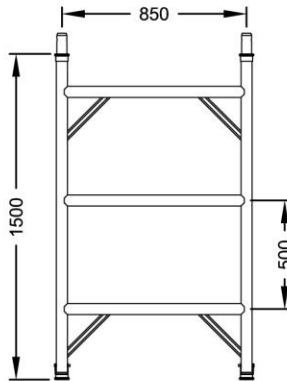


Telescopic Outrigger-Large
SP 15
Weight : 15.2kg

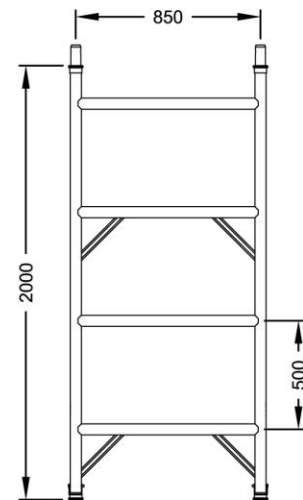
LOYAL Scaffold Tower Components (2)



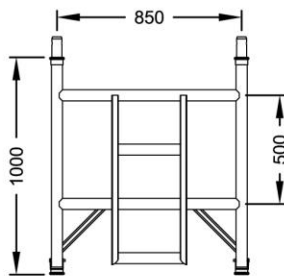
850 2 Rung Span Frame
085-2-A
Weight : 3.85 kg



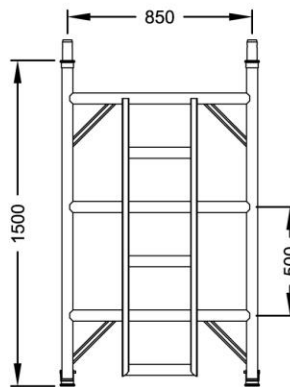
850 3 Rung Span Frame
085-3-A
Weight : 5.26 kg



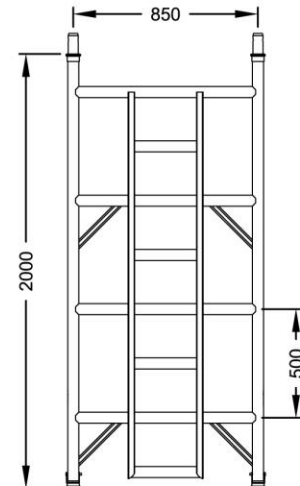
850 4 Rung Span Frame
085-4-A
Weight : 6.76 kg



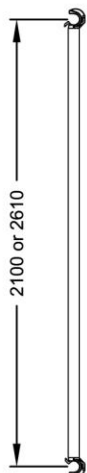
850 2 Rung Ladder Frame
085-2-B
Weight : 5 kg



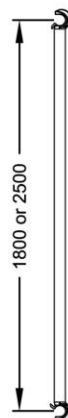
850 3 Rung Ladder Frame
085-3-B
Weight : 7.45 kg



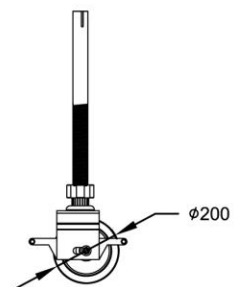
850 4 Rung Ladder Frame
085-4-B
Weight : 9.5 kg



Diagonal Brace (Blue)
2100-D-B 2610-D-B
Weight : 2 kg Weight : 2.35 kg

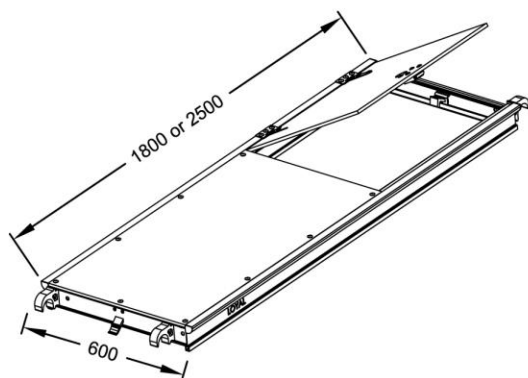


Horizontal Brace (RED)
1800-H-B 2500-H-B
Weight : 1.8 kg Weight : 2.25 kg

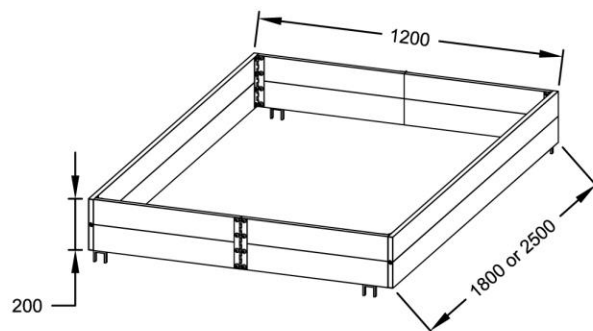


Castor Wheel 200 dia w/Adj. Jack
600-F-200
Weight : 5.65 kg

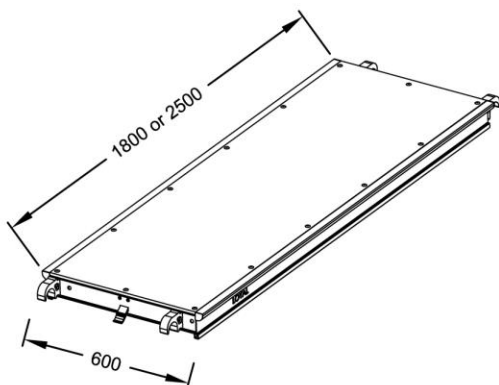
LOYAL Scaffold Tower Components (3)



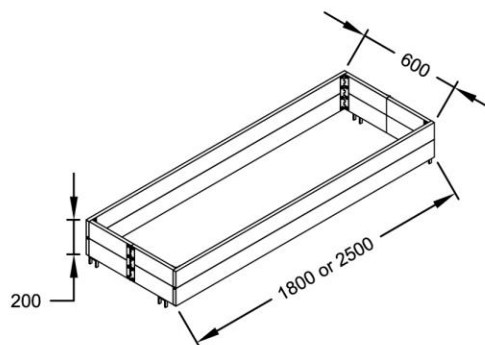
Trapdoor Platform
 1800-T-D 2500-T-D
 Weight : 13.6 kg Weight : 18.7kg



Folding Toeboard
 FTB-12-18 FTB-12-25
 Weight : 13.62 kg Weight : 16.05 kg



Fixed Platform
 1800-F-D 2500-F-D
 Weight : 12.7 kg Weight : 17.6 kg



Folding Toeboard
 FTB-06-18 FTB-06-25
 Weight : 11.05 kg Weight : 13.3 kg

Quantity Schedule

1450 Double Width Towers

LOYAL 1450 Double Width *Ladderspan* to EN 1004: Available in 2 lengths – 1.8m and 2.5m

Internal / External Use

Description	Working Height	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
	Platform Height	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
200mm Castor Wheel w/Adj. Leg		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1450 2 Rung Ladder Frame			1	1			1	1			1	1			1	1
1450 2 Rung Span Frame			1	1			1	1			1	1			1	1
1450 3 Rung Ladder Frame			1		1		1		1		1		1		1	
1450 3 Rung Span Frame			1		1		1		1		1		1		1	
1450 4 Rung Ladder Frame	1			1	1	2	1	2	2	3	2	3	3	4	3	4
1450 4 Rung Span Frame	1			1	1	2	1	2	2	3	2	3	3	4	3	4
1.8m and 2.5m Fixed Deck	1	1	1*	2	1	1	1	2	1	1	1	1	2	1	1	1
1.8m and 2.5m Trap Door Deck	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4
1.8m & 2.5m Horizontal Brace(Red)	6	6	6	6	10	10	10	10	14	14	14	14	14	18	18	18
2.1m & 2.7m Diagonal Brace(Blue)	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	15
Alu Folding Toeboard	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SP7 Fixed Outtrigger				4	4	4	4	4	4	4	4	4				
SP10 Adj. Outtrigger													4	4	4	4
SP15 Adj. Outtrigger													4	4	4	4
1.8m Tower Total Self-Weight (kgs)		97.4	105.8	110.3	152.9	167.5	176.0	182.4	201.8	216.4	238.0	244.5	264.0	278.4	287.0	293.4
2.5m Tower Total Self-Weight (kgs)		113.2	122.1	126.5	174.3	191.3	200.0	207.0	231.5	248.4	270.5	277.3	302.0	318.8	327.6	334.5

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

Internal Use Only

Description	Working Height	10.7m	11.2m	11.7m	12.1m	12.7m	13.2m	13.7m	14.2m
	Platform Height	8.7m	9.2m	9.7m	10.2m	10.7m	11.2m	11.7m	12.2m
200mm Castor Wheel w/Adj. Leg		4	4	4	4	4	4	4	4
1450 2 Rung Ladder Frame				1	1			1	1
1450 2 Rung Span Frame				1	1			1	1
1450 3 Rung Ladder Frame	1			1		1		1	
1450 3 Rung Span Frame	1			1		1		1	
1450 4 Rung Ladder Frame	4	5	4	5	5	6	5	6	
1450 4 Rung Span Frame	4	5	4	5	5	6	5	6	
1.8m and 2.5m Fixed Deck	2	1	1	1	2	2	1	1	1
1.8m and 2.5m Trap Door Deck	4	5	5	5	5	6	6	6	
1.8m & 2.5m Horizontal Brace(Red)	18	22	22	22	22	26	26	26	
2.1m & 2.7m Diagonal Brace(Blue)	15	17	18	19	20	21	22	23	
Alu Folding Toeboard	1	1	1	1	1	1	1	1	
SP7 Adj. Outtrigger									
SP10 Adj. Outtrigger	4	4	4	4	4	4	4	4	
SP15 Adj. Outtrigger									
1.8m Tower Total Self-Weight (kgs)		312.8	327.3	335.8	342.3	361.6	375.2	384.7	391.1
2.5m Tower Total Self-Weight (kgs)		359.0	376.0	384.8	391.6	416.3	433.2	442.0	448.8

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 in the schedule is 950kg.

Example 1:

A 1450 tower built using 3T method with a 4.2m platform height and a platform length of 1.8m has a self weight of 180kg.

$$950.4\text{kg} - 182.4\text{kg} = \mathbf{767.6\text{kg maximum safe working load}}$$

total weight self weight (**user, tools and materials**)

Example 2:

A 1450 tower built using 3T method with a 11.7m platform height and a platform length of 2.5m has a self weight of 436kg.

$$950.0\text{kg} - 442.0\text{kg} = \mathbf{508\text{kg maximum safe working load}}$$

total weight self weight (**user, tools and materials**)

For greater heights and loads, consult **Loyal Scaffolding Limited** for guidance.

Quantity Schedule

1450 Double Width Towers

PLATFORMS LOADING

On 1450 tower a platform may comprise of a single platform or two platforms placed side by side. The maximum safe working load (the combined weight of the users, tools and materials) that may be placed a platform is 275kg. This must be evenly distributed over either one deck or two decks placed side by side.

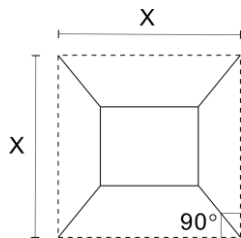
The quantities on page 5 will enable LOYAL towers to be built safely and therefore comply with the requirements of the Work at Height Regulations 2005. They include double guardrails to all platforms, and folding toeboard will need to be added if any levels are used as working platform and for storage of materials. EN 1004 requires platforms at least every 4.2m, and these measures will exceed that requirement

BALLAST : Internal/External use

There is no requirement for ballast on 1450 tower if using outriggers as detailed in the table on **page 9**.

OUTRIGGERS

To improve rigidity, large outriggers can be used at lower level than shown in the table on **page 9**.



Double width 1450 Tower Dimension X

	Platform Length 1.8m	Platform Length 2.5m
SP7	X=3351	X=3629
SP10	X=4789	X=5100
SP15	X=5520	X=5838

Outrigger **feet** should form a square as shown in diagram and table above.

Quantity Schedule

850 Single Width Towers

LOYAL 850 Single Width *Ladderspan* to EN 1004: Available in 2 lengths – 1.8m and 2.5m

Internal / External Use

Description	Working Height	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
	Platform Height	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
200mm Castor Wheel w/Adj. Leg		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
850 2 Rung Ladder Frame			1	1			1	1			1	1			1	1
850 2 Rung Span Frame			1	1			1	1			1	1			1	1
850 3 Rung Ladder Frame			1		1		1		1		1		1		1	
850 3 Rung Span Frame			1		1		1		1		1		1		1	
850 4 Rung Ladder Frame	1			1	1	2	1	2	2	3	2	3	3	4	3	4
850 4 Rung Span Frame	1			1	1	2	1	2	2	3	2	3	3	4	3	4
1.8m and 2.5m Trap Door Deck	1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4
1.8m & 2.5m Horizontal Brace (Red)	6	6	6	6	10	10	10	10	14	14	14	14	14	18	18	18
2.1m & 2.7m Diagonal Brace (Blue)	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	15
Alu Folding Toeboard	1	1	1*	1	1	1	1	1	1	1	1	1	1	1	1	1
SP7 Fixed Outtrigger				4	4	4	4									
SP10 Adj. Outtrigger								4	4	4	4					
SP15 Adj. Outtrigger													4	4	4	4
1.8m Tower Total Self-Weight (kgs)		78.3	85.6	112.4	131.8	144.6	152.0	157.4	177.0	190.0	210.1	215.7	235.1	248.0	255.2	260.7
2.5m Tower Total Self-Weight (kgs)		89.1	96.7	123.5	148.4	163.3	171.0	177.0	201.7	216.6	237.5	243.4	268.3	283.2	291.0	296.7

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

Internal Use Only

Description	Working Height	10.7m	11.2m	11.7m	12.1m	12.7m	13.2m	13.7m	14.2m
	Platform Height	8.7m	9.2m	9.7m	10.2m	10.7m	11.2m	11.7m	12.2m
200mm Castor Wheel w/Adj. Leg		4	4	4	4	4	4	4	4
850 2 Rung Ladder Frame				1	1			1	1
850 2 Rung Span Frame				1	1			1	1
850 3 Rung Ladder Frame	1			1		1		1	
850 3 Rung Span Frame	1			1		1		1	
850 4 Rung Ladder Frame	4	5	4	5	5	6	5	6	6
850 4 Rung Span Frame	4	5	4	5	5	6	5	6	6
1.8m and 2.5m Trap Door Deck	5	5	5	5	6	6	6	6	6
1.8m & 2.5m Horizontal Brace (Red)	18	22	22	22	22	26	26	26	26
2.1m & 2.7m Diagonal Brace (Blue)	16	17	18	19	20	21	22	23	23
Alu Folding Toeboard	1	1	1	1	1	1	1	1	1
SP7 Adj. Outtrigger									
SP10 Adj. Outtrigger									
SP15 Adj. Outtrigger	4	4	4	4	4	4	4	4	4
1.8m Tower Total Self-Weight (kgs)		280.2	293.0	300.3	330.2	349.7	362.4	370.0	375.3
2.5m Tower Total Self-Weight (kgs)		321.7	336.5	344.2	374.5	400.0	414.3	422.0	428.0

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 in the schedule is 950kg.

Example 1:

A 850 tower built using 3T method with a 4.2m platform height and a platform length of 1.8m has a self weight of 151kg.

$$950.0\text{kg} - 157.4\text{kg} = \mathbf{792.6\text{kg maximum safe working load}}$$

total weight self weight (user, tools and materials)

Example 2:

A 850 tower built using 3T method with a 11.7m platform height and a platform length of 2.5m has a self weight of 410kg.

$$950.0\text{kg} - 422.0\text{kg} = \mathbf{528.0\text{kg maximum safe working load}}$$

total weight self weight (user, tools and materials)

For greater heights and loads, consult **Loyal Scaffolding Limited** for guidance.

Quantity Schedule

850 Single Width Towers

PLATFORMS LOADING

On an 850 tower a platform comprise 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 275kg, evenly distributed over the deck.

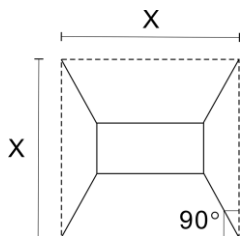
The quantities on page 7 will enable LOYAL towers to be built safely and therefore comply with the requirements of the Work at Height Regulations 2005. They include double guardrails to all platforms, and folding toeboard will need to be added if any levels are used as working platform and for storage of materials. EN 1004 requires platforms at least every 4.2m, and these measures will exceed that requirement

BALLAST : Internal/External use

There is no requirement for ballast on 850 tower if using outriggers as detailed in the table on **page 11**.

OUTRIGGERS

To improve rigidity, large outriggers can be used at lower level than shown in the table on **page 11**.



Single width 850 Tower Dimension X

	Platform Length 1.8m	Platform Length 2.5m
SP7	X=2994	X=3201
SP10	X=4458	X=4734
SP15	X=5195	X=5485

Outrigger **feet** should form a square as shown in diagram and table above.

Assembly Procedure

Mobile Towers - 3T Method

ASSEMBLY AND DISMANTLING PROCEDURES

When building a **LOYAL** LadderspanTower

- ◆ 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 either individual platforms or fully decked levels.
- ◆ 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 necessary, you may also need to guardrail platform 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

TO DISMANTLING A **LOYAL** LADDERSPAN TOWER

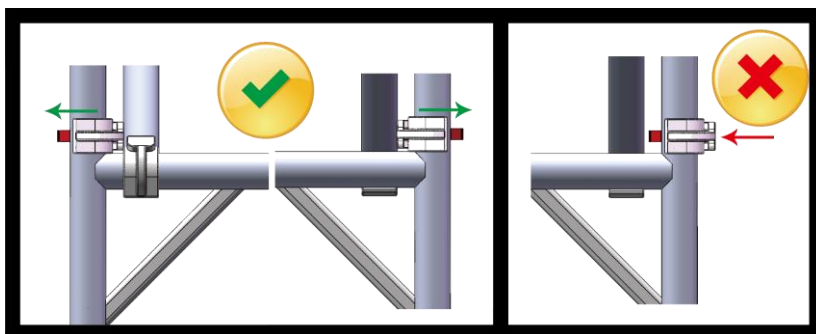
- ◆ Remove folding toeboard, and pass down the tower.
- ◆ Unclip farthest end of braces and immediately go to protected trapdoor position on ladder to complete removal.
- ◆ Remove upper platforms from protected levels below.
- ◆ Pass removed components out of the tower to a colleague.

Safety Checklist

Mobile Towers - 3T Method

CHECKLIST

1. Ensure all brace claws operate and lock correctly prior to erection ☐
2. Inspect components prior to erection ☐
3. Inspection tower prior to use ☐
4. Tower upright and level ☐
5. Wheels locked and legs correctly adjusted ☐
6. Diagonal braces fitted ☐
7. Outriggers fitted as specified ☐
8. Platforms located and locks on ☐
9. Folding Toeboard located ☐
10. Check guardrails are fitted correctly, 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

Mobile Towers – 3T Method

ASSEMBLY FOR 1450 DOUBLE WIDTH 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 3 frame heights are used in a tower, start with 2 rung frames at the base, with the 4 rung frames next and the 3 rung frames on the top. Refer to the Quantity Schedules for detail.

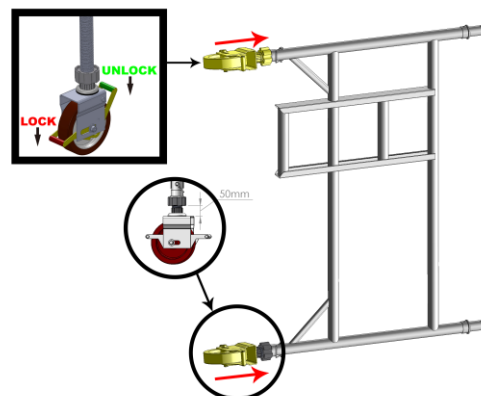
The procedure illustrated shows 4.2m platform height tower starting with a 2 rung frame.

It is recommended two persons are used to build LOYAL Towers. Above 4m height, it is essential that at least two persons are used. Only climb the tower from the inside.

- 1 Push wheel into adjustable wheel shaft (this may have been done prior to your tower being delivered). Push wheel / adjustable wheel shaft assembly into the base on the 2 lower frame sections (size of lower frame sections will vary depending on size of tower being built – please see table above). Lock all 4 wheels as shown in diagram A below.

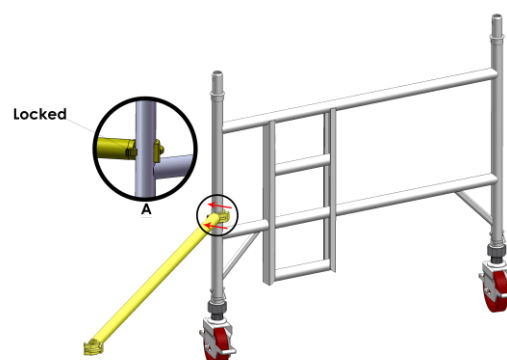
We recommend that, for ease of levelling, a gap of 50mm is left between the bottom of the adjustable leg and the adjustment nut. The adjustable legs are to be used for levelling purposes only and must not be used to gain extra height on the tower.

N.B. Base plates can be fitted to adjustable legs instead of wheels if required.



- 2 Fit one horizontal brace (RED) onto the vertical of the span frame and just above the bottom rung. Ensure that the claw of this horizontal brace is facing outwards and the frame will now be self supporting.

Please note – all locking claws must be opened before fitting.

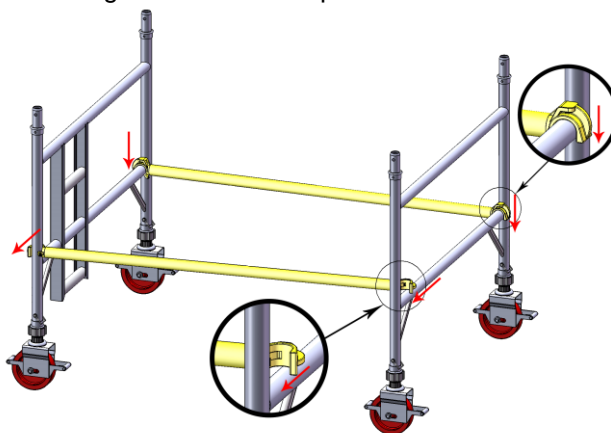


Assembly Procedure

Mobile Towers – 3T Method

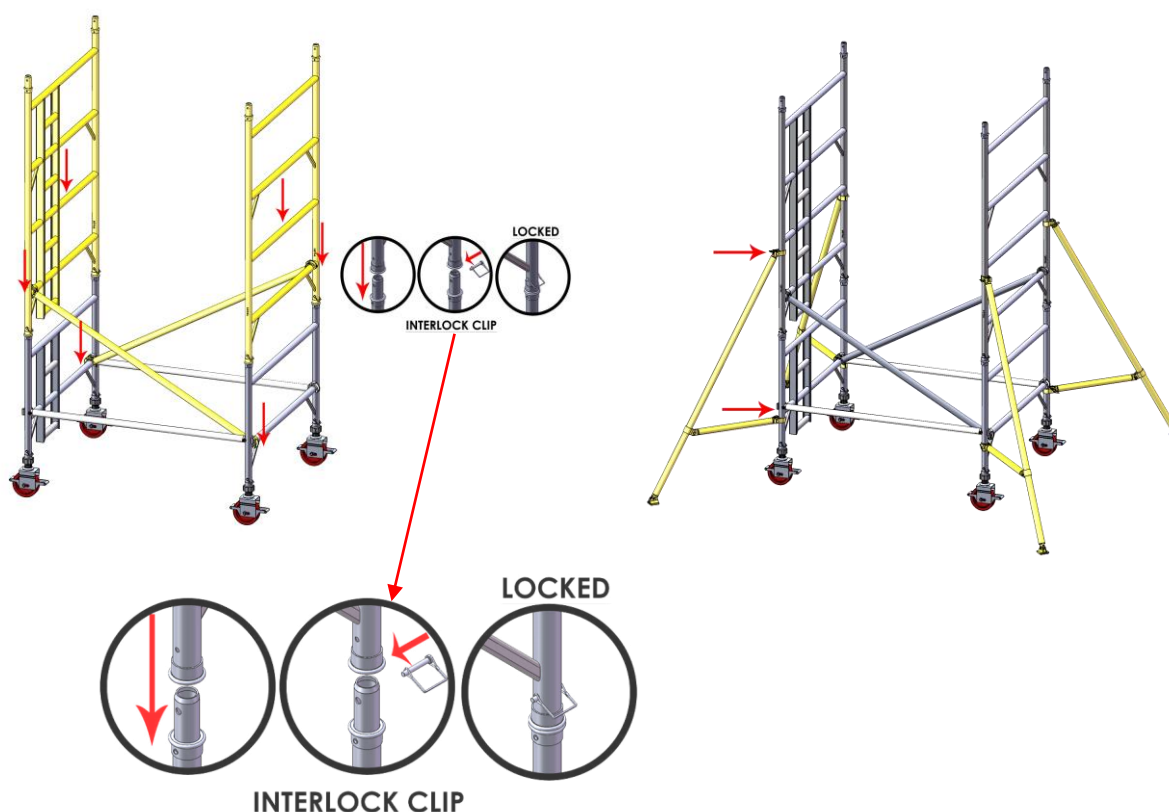
ASSEMBLY FOR 1450 DOUBLE WIDTH TOWERS

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



- 4 Fit 2 additional frames (span and ladder) and ensure that the interlock clips are engaged on all 4 joins (see below). Fit 2 diagonal braces (blue) in opposing directions, between the 1st and 3rd rungs of the tower assembly. Ensure that the frames are vertical and level by checking with a spirit level and setting the adjustable legs as required. Fit outriggers (see notes on page 24).

IMPORTANT – Only use the adjustable legs to level the tower and not to gain additional height



Assembly Procedure

Mobile Towers – 3T Method

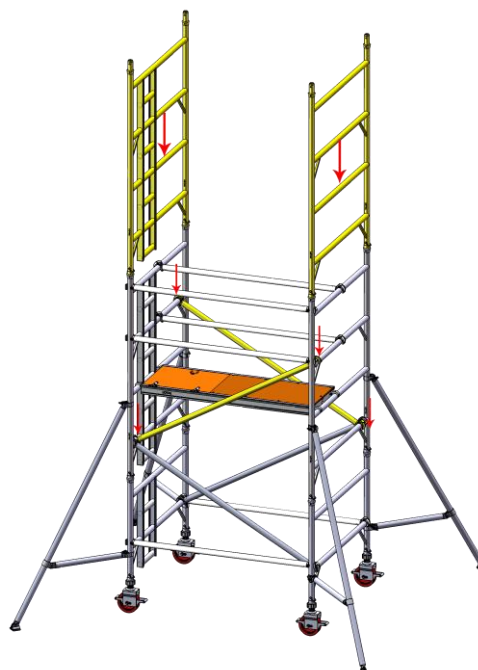
ASSEMBLY FOR 1450 DOUBLE WIDTH TOWERS

- 5 Fit a temporary fixed platform onto the lowest rungs of the ladder and span frames. Fit a trapdoor platform on the 4th rungs with the trapdoor next to the ladder frame. Ensure that the trapdoor is positioned with the hinges towards the outside of the tower. Climb the ladder, through the open trapdoor in the platform and, whilst seated in the trapdoor opening, fit horizontal braces to the 5th and 6th rungs in that order. The horizontal braces on the outside of the tower should be positioned with the claws facing outwards. The horizontal braces in the centre of the tower should be positioned with the claws facing downwards and directly above the edge of the trapdoor platform. Remove the temporary fixed platform fitted earlier.

Do not stand on the platform until it is fully guarded with 4 horizontal braces



- 6 Fit the next pair of diagonal braces in opposing directions between the 3rd and 5th rungs of the tower assembly. Add 2 additional frames (ladder and span), and ensure that the interlocking clips are engaged.

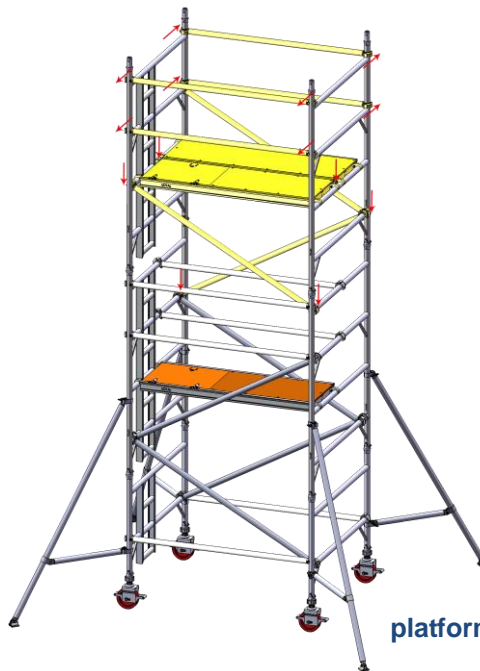


Assembly Procedure

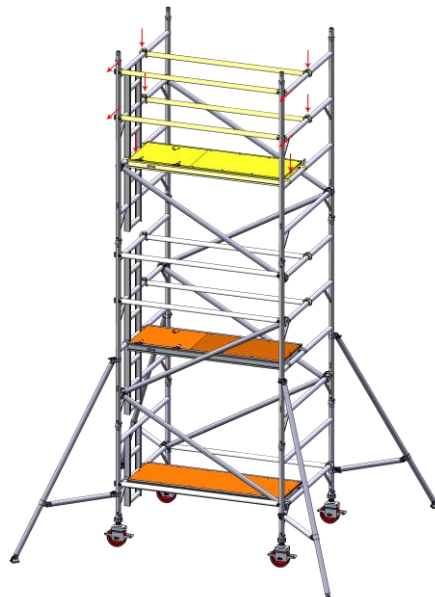
Mobile Towers – 3T Method

ASSEMBLY FOR 1450 DOUBLE WIDTH TOWERS

- 7 Add 2 more diagonal braces, in opposing directions, between the 5th and 7th rungs of the tower assembly. If finishing at this height (4.2m platform height), position the fixed platform to the 8th rungs of the tower. Position a trapdoor platform next to this, and directly above the existing trapdoor platform. Ensure that the trapdoor is next to the ladder frame with the hinges towards the outside of the tower. Add a single diagonal brace between the 7th and 9th rungs of the tower assembly as shown below. Climb the ladder through the open trapdoor in the platform, and whilst seated in the trapdoor opening, fit horizontal braces to the 9th and 10th rungs in that order. All horizontal braces should be positioned with the claws facing outwards..



- 8 Continue to add additional frames (ladder and span), interlock clips, diagonal braces, trapdoor platforms and horizontal braces in the sequence detailed above. When the required height is reached, position the fixed platform followed by the trapdoor platform alongside. Fit a single diagonal brace as shown in step 7 and the horizontal braces as before.

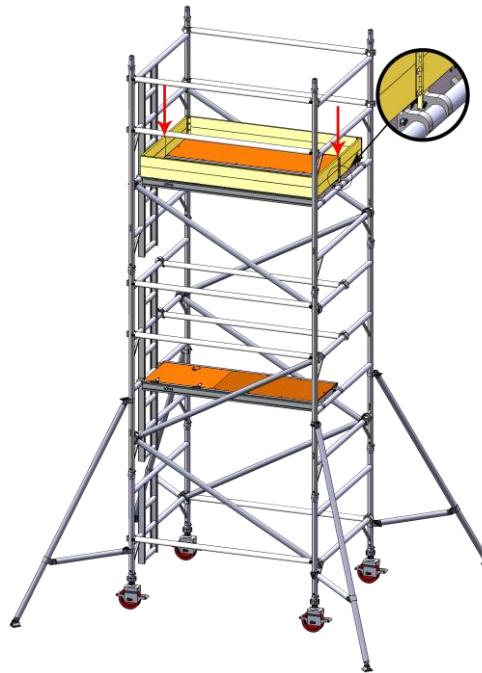


Assembly Procedure

Mobile Towers – 3T Method

ASSEMBLY FOR 1450 DOUBLE WIDTH TOWERS

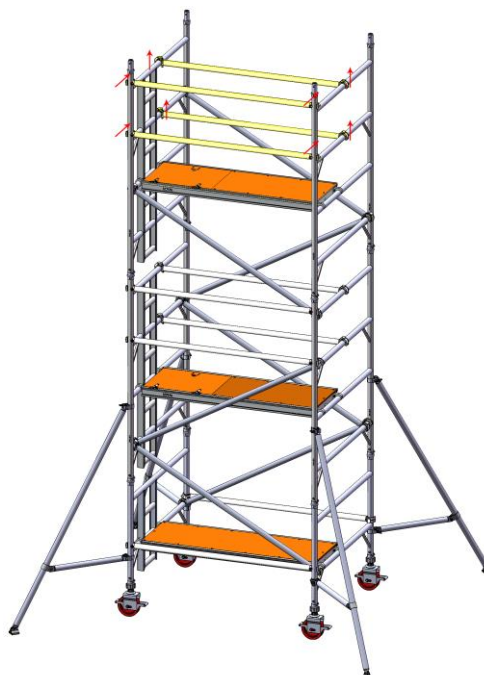
- 9 Fit the folding toeboard (see instructions on page 24)



THE TOWER IS NOW COMPLETE

Dismantling Procedure

- 10 To dismantle the tower, reverse the building sequence. When removing the horizontal braces, unlock the 4 claws furthest from the trapdoor and then immediately return to the protected position seated in the trapdoor. You may then unlock the 4 claws closest to the trapdoor and remove them



Assembly Procedure

Mobile Towers – 3T Method

ASSEMBLY FOR 850 SINGLE WIDTH 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 3 frame heights are used in a tower, start with 2 rung frames at the base, with the 4 rung frames next and the 3 rung frames on the top. Refer to the Quantity Schedules for detail.

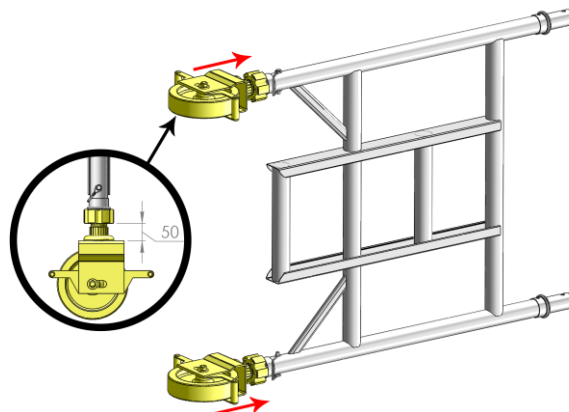
The procedure illustrated shows 4.2m platform height tower starting with a 2 rung frame.

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

- 1 Push wheel into adjustable wheel shaft (this may have been done prior to your tower being delivered). Push wheel / adjustable wheel shaft assembly into the base on the 2 lower frame sections (size of lower frame sections will vary depending on size of tower being built – please see table above). Lock all 4 wheels as shown in diagram A below.

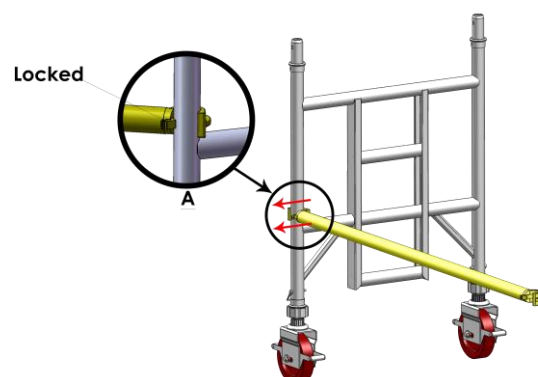
We recommend that, for ease of levelling, a gap of 50mm is left between the bottom of the adjustable leg and the adjustment nut. The adjustable legs are to be used for levelling purposes only and must not be used to gain extra height on the tower.

N.B. Base plates can be fitted to adjustable legs instead of wheels if required.



- 2 Fit one horizontal brace (RED) onto the vertical of the span frame and just above the bottom rung. Ensure that the claw of this horizontal brace is facing outwards and the frame will now be self supporting.

Please note – all locking claws must be opened before fitting

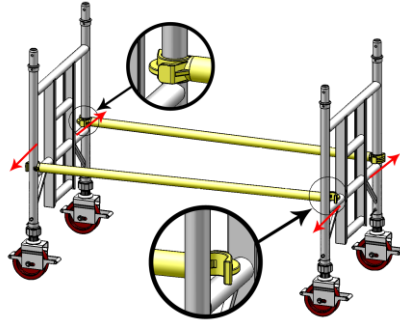


Assembly Procedure

Mobile Towers – 850 3T Method

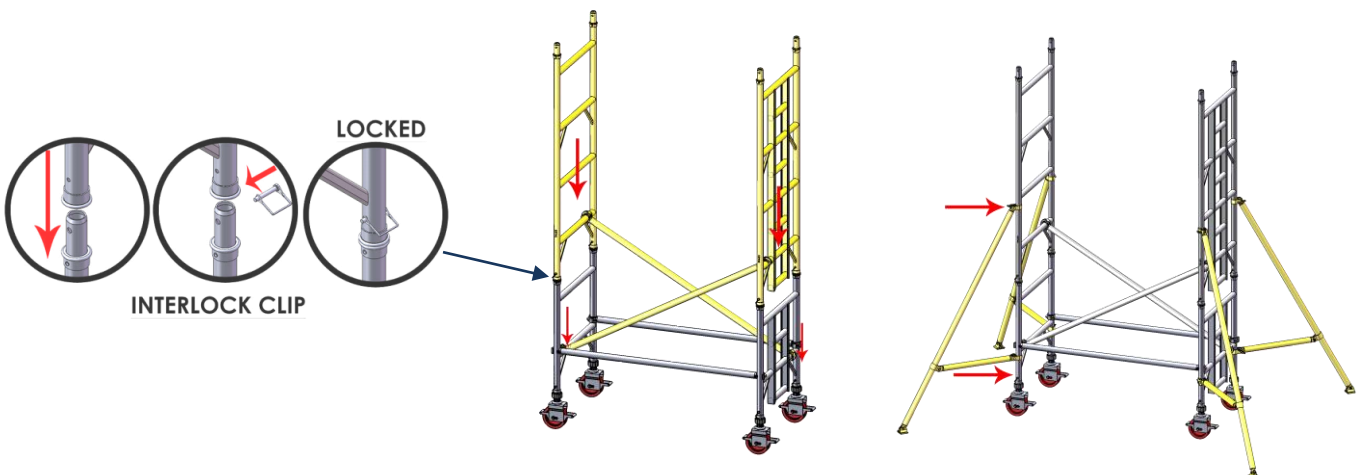
ASSEMBLY FOR 850 TOWERS

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



- 4 Fit 2 additional frames (span and ladder) and ensure that the interlock clips are engaged on all 4 joins (see below). Fit 2 diagonal braces (blue) on opposing directions, between the 1st and 3rd rungs of the tower assembly. Ensure that the frames are vertical and level by checking with a spirit level and setting the adjustable legs as required. Fit outriggers (see notes on page 22).

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



- 5 Fit a trapdoor platform on the 4th rungs with the trapdoor next to the ladder frame. Ensure that the trapdoor is positioned with the hinges towards the outside of the tower. Climb the ladder, through the open trapdoor in the platform, and whilst seated in the trapdoor opening, fit horizontal braces to the 5th and 6th rungs in that order. The horizontal braces should be positioned with the claws facing outwards.

Do not stand on the platform until it is fully guarded with 4 horizontal braces



Assembly Procedure

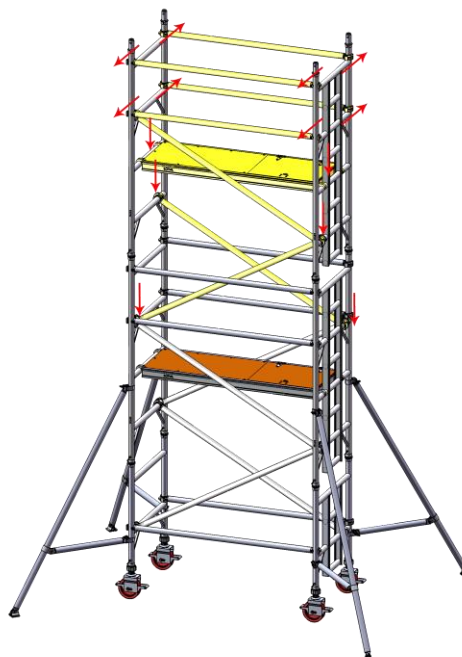
Mobile Towers – 3T Method

ASSEMBLY FOR 850 SINGLE WIDTH TOWERS

- 6 Fit the next pair of diagonal braces in opposing directions between the 3rd and 5th rungs of the tower assembly. Add 2 additional frames (ladder and span), and ensure that the interlocking clips are engaged



- 7 Add 2 more diagonal braces, in opposing directions, between the 5th and 7th rungs of the tower assembly. Position a trapdoor platform on the 8th rungs ensuring that the trapdoor is next to the ladder frame with the hinges towards the outside of the tower. Add a single diagonal brace between the 7th and 9th rungs of the tower assembly as shown below. Climb the ladder through the open trapdoor in the platform, and whilst seated in the trapdoor opening, fit horizontal braces to the 9th and 10th rungs in that order. The horizontal braces should be positioned with the claws facing outwards.



When building above a 4.2m platform height.

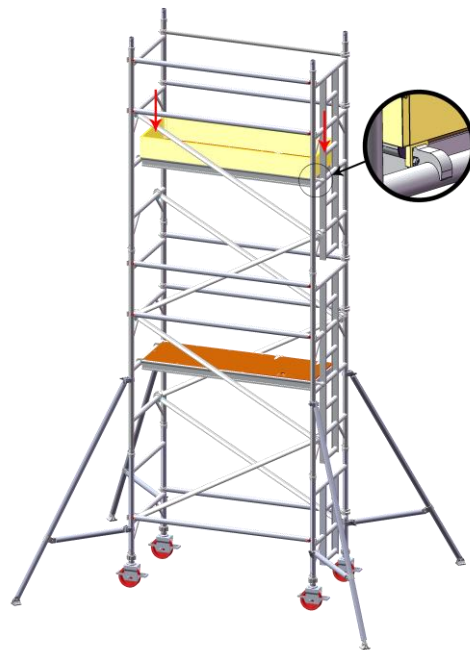
Assembly Procedure

Mobile Towers – 3T Method

ASSEMBLY FOR 850 SINGLE WIDTH TOWERS

- 8 Continue to add additional frames (ladder and span), interlock clips, diagonal braces, trapdoor platforms and horizontal braces in the sequence detailed above. When the required height is reached, position the trapdoor platform and fit a single diagonal brace as shown in step 7 and the horizontal braces as before.

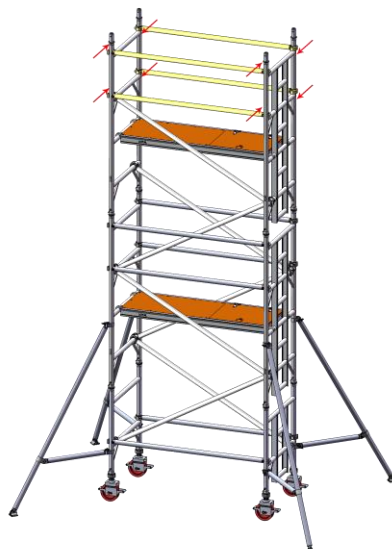
- 9 Fit the folding toeboard (see instructions on page 24)



THE TOWER IS NOW COMPLETE

Dismantling Procedure

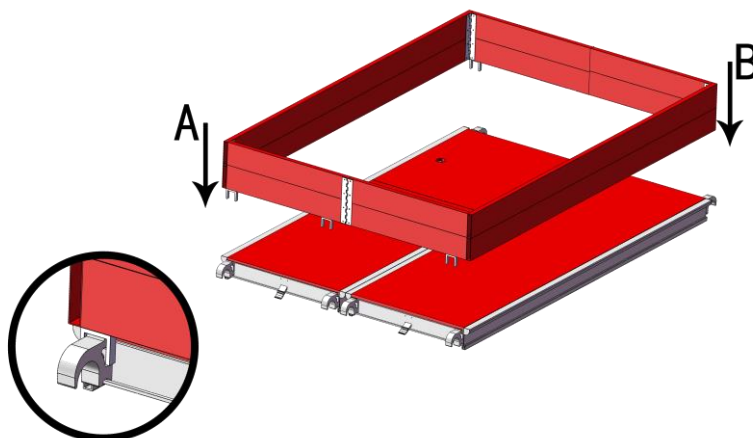
- 10 To dismantle the tower, reverse the building sequence. When removing the horizontal braces, unlock the 4 claws furthest from the trapdoor and then immediately return to the protected position seated in the trapdoor. You may then unlock the 4 claws closest to the trapdoor and remove them.



Mobile Towers – 3T Method

FITTING FOLDING TOEBOARDS

Fit folding toeboard over the deck each corner claw as shown. Position as (A) and (B) on each corner claw.



Outriggers

Mobile Towers – 3T Method

OUTRIGGERS

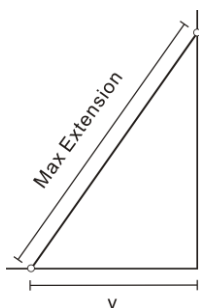
Attach one outrigger to each corner of the tower as shown. Ensure outrigger feet are equally spaced to form a square.

SP10 and SP15 telescopic outriggers must always be fully extended.

Position the lower clamp so that the lower arm is as closed to the horizontal as possible. Adjust the position of the top clamp to ensure the outrigger foot is in firm contact with the ground. Ensure clamps are secure.

When moving the tower, adjust the top clamps to lift the four outrigger feet a maximum of 25mm off the ground and then unlock the castor brakes. After moving ensure all four outrigger feet are repositioned in firm contact with the ground.

OUTRIGGER DIMENSIONS



	y
SP7	1227
SP10	2241
SP15	2757

Notes :

Authorized Agency