

# BOSS 1450/850 Ladderspan User Guide

## Introduction

### Please read this guide carefully.

BOSS 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 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 or the BOSS Advanced Guardrail System.

The law requires that personnel erecting towers must be competent and qualified to do so. Any person erecting on the BOSS mobile tower should have a copy of this guide. For full information on the use of mobile access and working towers consult the PASMA guide or EN1298.

If you need further information, design advice, additional guides or any other help with this product, please contact

**Martin Scaffolding on 021 4859032**

## Compliances

The BOSS aluminium system has been tested and certified to BS 1139: Part 3: 1994 (HD1004) and DIN 4422 8/92, as well as receiving national approvals in Switzerland, Sweden, Norway and the Czech Republic. It also confirms to US standard ANSI 1988.

## Preparation and Inspection

Inspect the equipment before use to ensure that it is not damaged and that it functions properly.

## Safety

Refer to Usage Advice.



## 1450 3T Method

### 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 950kg.

#### 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 175kg.

950kg — 175kg = **775kg 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 436kg.

950kg — 436kg = **514kg maximum safe working load**  
total weight self weight (users, tools and materials)

For greater heights and loads, consult Youngman for guidance.

### Platform Loading

On a 1450 tower a platform may comprise of a single deck or 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 275kg. This must be evenly distributed over either one deck, or two decks placed side by side.

The quantities on page 3 will enable BOSS 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. BS1139 requires platforms at least every 4m, and these measures will exceed that requirement.

### Ballast: Internal/External use

There is no requirement for ballast on 1450 towers if using stabilisers as detailed in the table on page 3.

### Mobile Outriggers

MP7 mobile outriggers can be used instead of SP7 and SP10 stabilisers, as detailed below. MP7 mobile outrigger kits comprise:

MP7 MOBILE OUTRIGGER	4
125/150/200mm CASTOR (Use same diameter castors as on tower)	4
250mm ADJUSTABLE LEG	4
PLAN BRACES	4

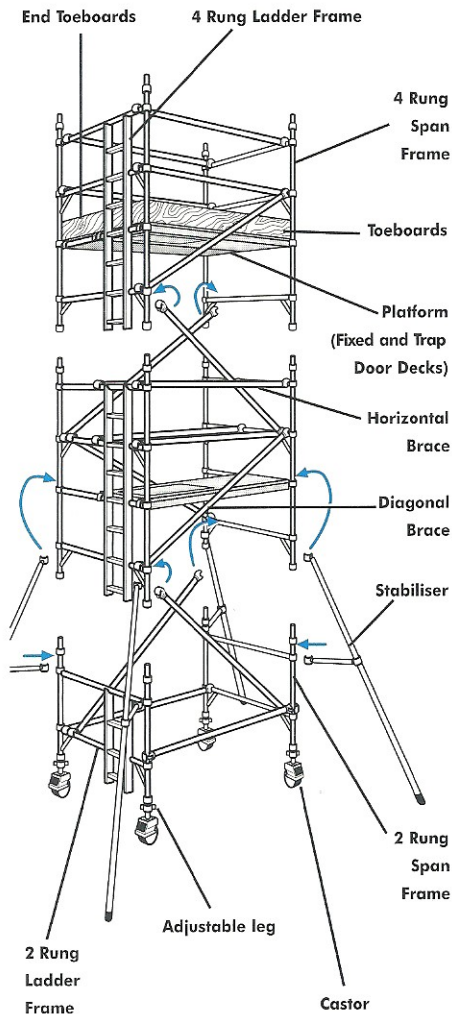
The above components replace:

SP7/SP10 STABILISER	4
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### Stabilisers

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

## Components - 3T Method



MP7 MOBILE OUTRIGGER	4
125/150/200mm CASTOR (Use same diameter castors as on tower)	4
250mm ADJUSTABLE LEG	4
PLAN BRACES	4

The above components replace:

SP10/SP15 STABILISER	4
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## Usage Advice

### Erection

- Check that all components are on site and that they are functioning correctly - See Quantity Schedule.
- Check if 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 275kgs (606lbs), per platform unit, uniformly distributed up to a maximum of 950kgs (2100lbs) per tower (including self weight).
- Towers must always be climbed from the inside during assembly using the built-in ladder provided. Adjustable legs should only be used for levelling.

### Lifting of equipment

- Tower components should be firmly secured by a reliable lifting material (e.g. rope), employing a reliable knot (e.g. clove hitch), to ensure safe fastening.



### Stabilisers/Ballast

- Stabilisers or outriggers and ballast weights should always be fitted when specified. Ballast is used at the base to stabilise towers against overturning. The Quantity Schedule shows the recommended stabilisation. In circumstances where there is restricted ground clearance for stabilisers/outriggers, contact your supplier for advice. It 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 rung of the bottom frame.

### 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 personnel 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 sufficiently above the ground to clear ground obstructions.
- The height of the tower, when being moved, should not exceed 2.5 times the minimum base dimensions, or 6 metres overall height.

### 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. 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. Walking is difficult.	6	25-31	11-14
Gale Force		8	39-46	17-21

Beware of open ended buildings which can cause funneling effect.

- Do not abuse equipment. Damaged or incorrect components should never be used.
- 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.
- The assembled tower is a working platform and should not be used as a means of access to other structures.
- Beware of horizontal forces (e.g. power tools) which could generate instability. Maximum horizontal force 20kg.
- The stairway towers featuring an inclined staircase access are for use with personnel frequently carrying tools and/or materials.
- Mobile towers are not designed to be suspended - please refer to your supplier for advice.

### Ties

- Ties should be used when the tower goes beyond its safe height beyond the limits of the stabilisers/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.

## 850 3T Method

### 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 950kg.

#### 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 151kg.

950kg — 151kg = **799kg 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 410kg.

950kg — 410kg = **540kg 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 a single deck. 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 5 will enable BOSS 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. BS1139 requires platforms at least every 4m, and these measures will exceed that requirement.

### Ballast: Internal/External use

Stabiliser requirements are based on calculations from BS1139:

1. Up to 8.2m (platform height) the stabilisers and ballast are shown for external use. 2. Above 8.2m the schedule is for internal use only.

For internal use only towers may be erected up to 12.2m without ballast. SP10 stabilisers may be fitted up to 9.7m platform height. For greater rigidity, fit SP15 stabilisers at lower height.

### Mobile Outriggers

MP7 and MP16 mobile outriggers can be used instead of SP10 and SP15 telescopic stabilisers respectively, as detailed below. MP7 mobile outrigger kits comprise: