SAFETY CHECKLIST

ENSURE ALL BRACE CLAWS OPERATE CORRECTLY
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 GUARDRAIL BRACES ARE FITTED CORRECTLY (SEE ILLUSTRATION BELOW



CHECK FRAME INTERLOCK CLIPS ARE LOCKED (SEE ILLUSTRATION BELOW)



ENSURE HORIZONTAL BRACES AND GUARDRAILS ARE FITTED CORRECTLY

REFER TO THIS CHECKLIST BEFORE USING EACH TIME

WIND DESCRIPTION

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

INTRODUCTION

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 Advance Guardrail User Guide is designed to provide you with step by step instructions to ensure your system is erected easily and safely using the 3T (Through the Trapdoor) method. Before assembly, please read the guide carefully.

The law requires that operatives must be competent and qualified to erect the tower. If another person is involved, please pass on these instructions.

For further information on the safe use of Mobile Access Towers consult the PASMA.

If you need further information, design advice, additional guides or any other help with this product, please contact your local HSS Hire.

GENERAL SAFETY

For advice on the safety and suitability of this equipment contact your local HSS Hire.

There is a serious risk of personal injury if you do not follow all instructions laid down in this guide.

The hirer has a responsibility to ensure that all necessary risk assessments have been completed prior to the use s equipment.

EQUIPMENT CARE

Keep the equipment clean, you will find this less of a chore if you clean it regularly, rather than wait until the end of the hire period.

Components should be stored with due care to prevent damage. Frames and decks should be stored in the vertical position.

When not in use, store the equipment somewhere clean, dry and safe from thieves and unauthorised users.



... have you been trained

The law requires that personnel using this type of equipment must be competent and qualified to do so. Training is available at **HSS Training Solutions** 0845 766 7799

...any comments?

If you have any suggestions to enable us to improve the information within this guide please e-mail your comments or write to the Safety Guide Manager at the address below e-mail: safety@hss.com

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uniformly distributed up to a maximum of 950kgs (2100lbs) per tower (including self weight).

SAFETY WARNING

Do not use boxes or stepladders or other objects on the platform to gain extra height.

The assembled tower is a working platform and should not be used as a means of access or egress to other structures.

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.

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.

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 ock castors. If stabilisers are fitted, they should only be lifte a maximum of 25mm above the ground to clear ground obstructions

Operating & Safety Guide 971



971/02



Advance Guardrail

Aluminium guardrail to aid the assembly and dismantling of BoSS Ladderspan or Clima towers.

IDENTIFIER



This equipment should only be used by an operator who has been deemed competent to do so by his/her employer.

This equipment is designed to be used by an able bodied, competent adult who has read and understood these instructions. Anyone with either a temporary or permanent disability should seek expert advice before using it.

Keep children, animals and bystanders away from the work area. Cordon off a NO GO area using cones and either barriers or tape, available for hire from your local HSS Hire.

Never use this equipment if you are ill, feeling tired, or under the influence of alcohol or drugs. $\overline{/}$ Wear practical, protective clothing, gloves, footwear and a protective hard hat. Avoid loose garments and jewellery that could catch in moving parts, tie back long hair.

Make sure that anyone in the immediate work area is warned of what you are doing.

Check the condition of the equipment before use. If it shows signs of damage or excessive wear, return it to your local HSS Hire.

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 275 kgs (606lbs) per platform level,

The overall height of the tower when being moved, **should** not exceed 2.5 times the minimum base dimensions, or 4 metres overall height.

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.

Beware of high winds in exposed, gusty or medium breeze conditions. We recommend that in wind speeds over 7.7 metres per second (17 mph), 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 mph), tie the tower to a rigid structure. If the wind is likely to reach gale force, over 18 metres per second (40 mph), the tower should be dismantled. (see Wind Description). Beware of open ended buildings, which can cause funnelling effect.

Mobile towers are not designed to be suspended. For more information contact your local HSS Hire.

Stabilisers and ballast weights shall always be fitted when specified.

Assemble only as instructed.

SAFETY WARNING

Beware of horizontal forces (e.g. power tools) which could generate instability. Maximum horizontal force 20kg.





Lock yellow plastic toeboard clips over rung and deck claw as shown. Position as (A) on right hand deck claw. On other side of the working platform position the clip as (B). Place 25mm thick toeboards into slots in toeboard clips as shown.

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

SP10 and SP15 telescopic stabilisers must always be fully extended. Position the lower clamp so that the lower arm is as close to the horizontal as possible. Adjust the position of the top clamp to ensure the stabiliser foot is in firm contact with the ground. Ensure clamps are secure.

Stabilisers are used when the tower is to be moved occasionally.

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

Туре SP7 1227 **SP10** 2241 **SP15** 2757

- Stabilisers and ballast weights shall always be fitted when specified.
- The Ouantity Schedules show the stabilisation. recommended In circumstances where there is restricted ground clearance for stabilisers, contact HSS Hire 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 rung of the bottom frame.

DISMANTLING



To take down the tower reverse the building sequence.

- Remove toeboards and pass down the tower.
- When dismantling Advance Guardrail, remove both fixed and trapdoor decks, then undo camlocks on both Advance Guardrail frames and pass down the tower.
- Remove upper platforms from protected platform levels below.
- Pass removed components to a colleague.

SAFETY WARNING ONLY I

QUANTITY SCHEDULE 1450 WIDTH TOWERS

ADVANCE GUARDRAIL BUILD	INTERNAL OR EXTERNAL USE					INTERNAL USE ONLY											
	WORKING HEIGHT (m)	4.2	4.7	5.7	6.2	6.7	7.7	8.2	8.7	9.7	10.2	10.7	11.7	12.2	12.7	13.7	14.2
	PLATFORM HEIGHT (m)	2.2	2.7	3.7	4.2	4.7	5.7	6.2	6.7	7.7	8.2	8.7	9.7	10.2	10.7	11.7	12.2
Ø125MM/150MM/200MM CASTOR		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
ADJUSTABLE LEG		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2 RUNG LADDER FRAME (1.0M HIGH X 1.45M WIDE)		1		1	1		1	1		1	1		1	1		1	1
2 RUNG SPAN FRAME (1.0M HIGH X 1.45M WIDE)		1		1	1		1	1		1	1		1	1		1	1
3 RUNG LADDER FRAME (1.5M HIGH X 1.45M WIDE)			1	1		1	1		1	1		1	1		1	1	
3 RUNG SPAN FRAME (1.5M HIGH X 1.45M WIDE)			1	1		1	1		1	1		1	1		1	1	
4 RUNG LADDER FRAME (2.0M HIGH X 1.45M WIDE)		1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6
4 RUNG SPAN FRAME (2.0M HIGH X 1.45M WIDE)		1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6
1.8M / 2.5M TRAP DOOR DECK		1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6
1.8M / 2.5M FIXED DECK		1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6
1.8M / 2.5M HORIZONTAL BRACE		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2.1M / 2.7M DIAGONAL BRACE		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1.8M / 2.5M SIDE TOE BOARD		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
0.6M END TOE BOARD		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
TOE BOARD HOLDER		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1.8M / 2.5M CAM LOCK ADVANCE GUARDRAIL		2	2	4	4	4	6	6	6	8	8	8	10	10	10	12	12
SP7			4	4	4	4											
SP10							4	4	4	4	4	4	4	4	4	4	4
SP15																	
TOTAL SELF WEIGHT OF TOWER (KG) 1.8M		133	151	192	196	214	254	271	289	329	334	351	392	396	414	454	459
TOTAL SELF WEIGHT OF TOWER (KG) 2.5M		150	173	221	226	248	296	313	336	384	389	411	459	464	487	534	539

NUMBER OF WORKING PLATFORMS ALLOWED Noniber Of Working FLATFORMS 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 ladderspan tower built using the Advance Guardrail method with a 4.2m platform height and a platform length of 1.8m has a self weight of 196kg. 950kg - 196kg =754kg maximum safe working load total weight self weight (users, tools and

Example 2: A 1450 Ladderspan tower built using the Advance Guardrail method with a 11.7m platform height and a platform length of 2.5m has a self weight of 534kg. 950kg - 534kg = 416kg maximum safe working load total weight self weight (users, tools and materials). For greater heights and loads, consult HSS Hire.

PLATFORM LOADING On a 1450 Advance Guardrail tower a platform comprises of two decks side by side. The maximum safe working load (the combined weight of the users, tools and materials) that

BALLAST: Internal/External Use There is no requirement for ballast on 1450 towers if using stabilisers as detailed in the table.

may be placed on a platform is 275kg. This must be evenly distributed over both decks.

must be evenly distributed over both decks. The quantities will enable 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 4.2m, and these measures will exceed that requirement.

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



Double width 1450 Towers Dimension X

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

TOWER AND NOT GAIN EXTRA HEIGHT.

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

Above 4m height, it is essential that at least two persons are used to build BoSS Towers.

GENERAL NOTES

• 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.
- Brace claws, frame interlock clips, trapdoor catches and platform windlocks should be regularly checked to ensure they lock correctly.
- Check the condition of the components before erecting tower. Damaged or incorrect components should not be used

QUANTITY SCHEDULE 850 WIDTH TOWERS

ADVANCE GUARDRAIL BUILD	INTERNAL OR EXTERNAL USE INTERNAL USE ONLY															
WORKING HEIGHT	(m) 4.2	4.7	5.7	6.2	6.7	7.7	8.2	8.7	9.7	10.2	10.7	11.7	12.2	12.7	13.7	14.2
PLATFORM HEIGHT	(m) 2.2	2.7	3.7	4.2	4.7	5.7	6.2	6.7	7.7	8.2	8.7	9.7	10.2	10.7	11.7	12.2
Ø125MM/150MM/200MM CASTOR	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
ADJUSTABLE LEG	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2 RUNG LADDER FRAME (1.0M HIGH X 0.85M WIDE)	1		1	1		1	1		1	1		1	1		1	1
2 RUNG SPAN FRAME (1.0M HIGH X 0.85M WIDE)	1		1	1		1	1		1	1		1	1		1	1
3 RUNG LADDER FRAME (1.5M HIGH X 0.85M WIDE)		1	1		1	1		1	1		1	1		1	1	
3 RUNG SPAN FRAME (1.5M HIGH X 0.85M WIDE)		1	1		1	1		1	1		1	1		1	1	
4 RUNG LADDER FRAME (2.0M HIGH X 0.85M WIDE)	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6
4 RUNG SPAN FRAME (2.0M HIGH X 0.85M WIDE)	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6
1.8M / 2.5M TRAP DOOR DECK	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6
1.8M / 2.5M HORIZONTAL BRACE	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2.1M / 2.7M DIAGONAL BRACE	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1.8M / 2.5M SIDE TOE BOARD	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
0.6M END TOE BOARD	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
TOE BOARD HOLDER	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1.8M / 2.5M CAM LOCK ADVANCE GUARDRAIL	2	2	4	4	4	6	6	6	8	8	8	10	10	10	12	12
SP7	4	4	4	4	4											
SP10						4	4	4	4		4	4	4	4	4	4
SP15										4						
TOTAL SELF WEIGHT OF TOWER (KG) 1.8M	113	131	155	159	177	213	217	235	259	278	281	305	309	327	351	355
TOTAL SELF WEIGHT OF TOWER (KG) 2.5M	124	147	174	178	200	240	244	266	293	311	320	347	350	373	400	404
NUMBER OF WORKING PLATEORINS ALLOWED Example 2: platform is 275kg evenly distributed over the STABILISERS																

NUMBER OF WORKING PLATFORMS ALLOWED

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 Ladderspan tower built using the Advance Guardrail method with a 4.2m platform height and a platform length of 1.8m has a self weight of 159kg. 950kg - 159kg = 791kg maximum safe working load total weight self weight (users, tools and

Example 2: An 850 Ladderspan tower built using the Advance Guardrail method with a 10.2m platform height and a platform length of 2.5m has a self weight of 350kg. 950kg - 350kg = 600kg maximum safe working load total weight self weight (users, tools and materials). For greater heights and loads, consult HSS Hire.

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 275kg, evenly distributed over the deck.

These quantities, will enable BoSS 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 4.2m, and these measures will even at heast new remulting the second these measures will even at heast new remulting the second these measures will even at heast new remulting the second these measures will even at heast new remulting the second these measures will even at heast new remulting the second these measures will even at heast new remulting the second these measures will even at heast new remulting the second these measures will even at heast new remulting the second these measures will even the total second the total second these measures will even the total second these measures will even the total second total second the total second the total second total second the total second the total second the total second total sec se measures will exceed that re

BALLAST: Internal/External Use There is no requirement for ballast on 850 towers if using stabilisers as detailed in the table.

STABILISERS

To improve rig stabilisers can i lower level than table.



Double width 850 Towers Dimension X

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