

# Boss Alloy Access Towers

Designed to the European Standard EN1004, the BOSS Alloy Tower provides the ideal platform for light work. Two versions are available: 1450 mm & 850 mm wide, each with either 1.8 m or 2.5 m deck lengths.

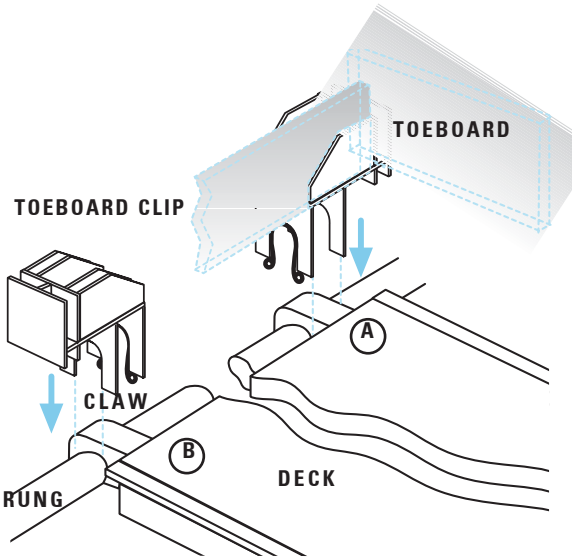


## CHECKLIST

- INSPECT COMPONENTS PRIOR TO ERECTION
- INSPECT TOWER PRIOR TO USE
- TOWER UPRIGHT AND LEVEL
- CASTORS LOCKED/LEGS CORRECTLY ADJUSTED
- GUARDRAILS FITTED
- DIAGONAL BRACES FITTED
- STABILISERS/OUTRIGGERS FITTED AS SPECIFIED
- PLATFORMS LOCATED & WINDLOCKS ON
- TOEBOARDS LOCATED
- REFER TO THIS CHECKLIST BEFORE USING EACH TIME

### FITTING TOEBOARDS

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.



## STABILITY: STABILISERS & OUTRIGGERS

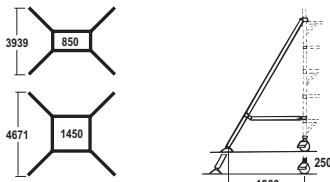
Stabilisers are used when the tower is to be used occasionally, frequent movement will require Outriggers.

Attach one stabiliser to each corner of the tower at approx. 45 degrees. Secure top clamp below castings, bottom clamp as low as possible. If Clamp is obstructed, release and move. Ensure clamps are rigidly fixed to limit movement.

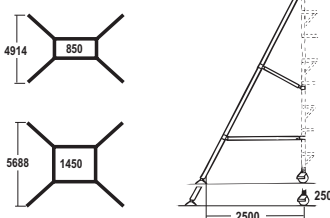
With SP10 and SP15 Stabilisers, extend telescopic leg until in contact with ground.

When moving, check for obstructions and lock feet about 25mm off the ground, unlock castors, and move. After moving, check all castors are in ground contact and lock Stabiliser feet.

#### SP10



#### SP15



### ...have you been trained?

The law requires that personnel erecting towers must be competent and qualified to do so. PASMA accredited Mobile Access Tower training 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](mailto:safety@hss.com)**

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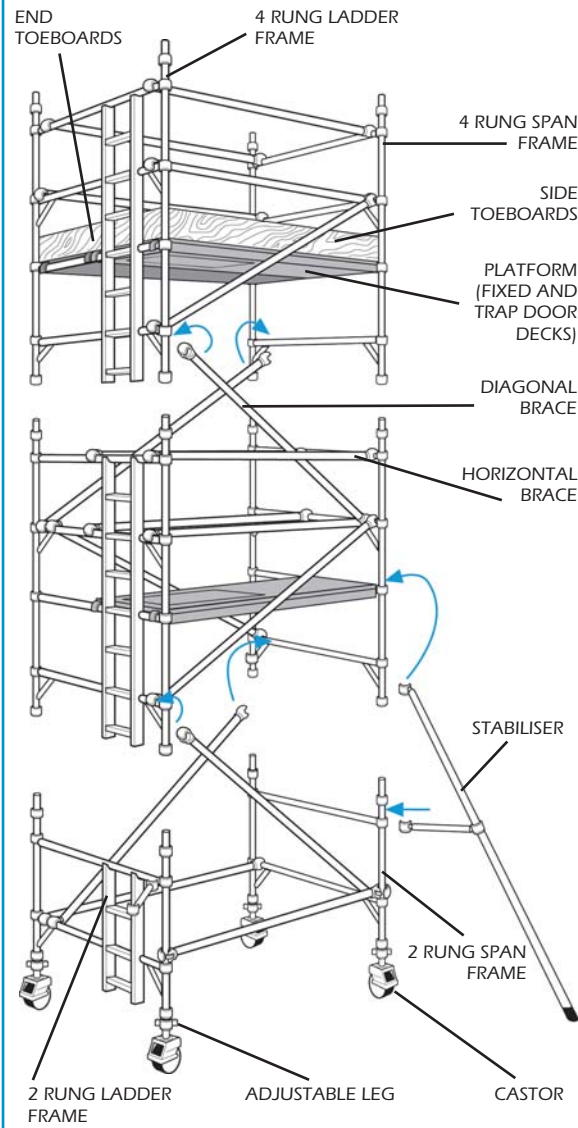
## INTRODUCTION

This BOSS 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 Safety Notes 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 Guide or EN 1298.

## TOWER COMPONENTS



### QUANTITY SCHEDULE BOSS 1450 LADDERSPAN TO EN1004

1.45 m X 1.8 m		INTERNAL/EXTERNAL USE								INTERNAL USE ONLY		
BOSS 1450 WIDE LADDERSPAN	WORKING HEIGHT PLATFORM HEIGHT	4.2 m 2.2 m	5.2 m 3.2 m	6.2 m 4.2 m	7.2 m 5.2 m	8.2 m 6.2 m	9.2 m 7.2 m	10.2 m 8.2 m	11.2 m 9.2 m	12.2 m 10.2 m	Additional Lift 1.0 m	
1.8 m SIDE TOEBOARD		2	2	2	2	2	2	2	2	2		
1.2 m END TOEBOARD		2	2	2	2	2	2	2	2	2		
TOEBOARD HOLDER		4	4	4	4	4	4	4	4	4		
1.8 m FIXED DECK		1	1	1	1	1	1	1	1	1		
1.8 m TRAPDOOR DECK		1	2	2	3	3	4	4	5	5	1	
1.8 m HORIZONTAL BRACE (RED)		6	10	10	14	14	18	18	22	22	4	
2.1 m DIAGONAL BRACE (BLUE)		3	5	7	9	11	13	15	17	19	2	
1.45 m 2-RUNG LADDER FRAME		1		1		1		1			1	1
1.45 m 2-RUNG SPAN FRAME		1		1		1		1			1	1
1.45 m 4-RUNG LADDER FRAME		1	2	2	3	3	4	4	5	5		
1.45 m 4-RUNG SPAN FRAME		1	2	2	3	3	4	4	5	5		
150 mm CASTOR WHEEL		4	4	4	4	4	4	4	4	4		
ADJUSTABLE LEG		4	4	4	4	4	4	4	4	4		
SP10 TELESCOPIC STABILISER			4	4	4	4	4	4	4	4		
TOWER (SELF-WEIGHT) kg		103	174	188	223	237	272	286	320	334	34	

1.45 m X 2.5 m		INTERNAL/EXTERNAL USE								INTERNAL USE ONLY		
BOSS 1450 WIDE LADDERSPAN	WORKING HEIGHT PLATFORM HEIGHT	4.2 m 2.2 m	5.2 m 3.2 m	6.2 m 4.2 m	7.2 m 5.2 m	8.2 m 6.2 m	9.2 m 7.2 m	10.2 m 8.2 m	11.2 m 9.2 m	12.2 m 10.2 m	Additional Lift 1.0 m	
2.5 m SIDE TOEBOARD		2	2	2	2	2	2	2	2	2		
1.2 m END TOEBOARD		2	2	2	2	2	2	2	2	2		
TOEBOARD HOLDER		4	4	4	4	4	4	4	4	4		
2.5 m FIXED DECK		1	1	1	1	1	1	1	1	1		
2.5 m TRAPDOOR DECK		1	2	2	3	3	4	4	5	5	1	
2.5 m HORIZONTAL BRACE (RED)		6	10	10	14	14	18	18	22	22	4	
2.7 m DIAGONAL BRACE (BLUE)		3	5	7	9	11	13	15	17	19	2	
1.45 m 2-RUNG LADDER FRAME		1		1		1		1			1	1
1.45 m 2-RUNG SPAN FRAME		1		1		1		1			1	1
1.45 m 4-RUNG LADDER FRAME		1	2	2	3	3	4	4	5	5		
1.45 m 4-RUNG SPAN FRAME		1	2	2	3	3	4	4	5	5		
150 mm CASTOR WHEEL		4	4	4	4	4	4	4	4	4		
ADJUSTABLE LEG		4	4	4	4	4	4	4	4	4		
SP10 TELESCOPIC STABILISER			4	4	4	4	4	4	4	4		
TOWER (SELF-WEIGHT) kg		156	199	214	256	271	313	328	370	385	42	

### QUANTITY SCHEDULE BOSS 850 LADDERSPAN TO EN1004

0.85 m X 1.8 m		INTERNAL/EXTERNAL USE								INTERNAL USE ONLY		
BOSS 850 WIDE LADDERSPAN	WORKING HEIGHT PLATFORM HEIGHT	4.2 m 2.2 m	5.2 m 3.2 m	6.2 m 4.2 m	7.2 m 5.2 m	8.2 m 6.2 m	9.2 m 7.2 m	10.2 m 8.2 m	11.2 m 9.2 m	12.2 m 10.2 m	Additional Lift 1.0 m	
1.8 m SIDE TOEBOARD		2	2	2	2	2	2	2	2	2		
0.6 m END TOEBOARD		2	2	2	2	2	2	2	2	2		
TOEBOARD HOLDER		4	4	4	4	4	4	4	4	4		
1.8 m TRAPDOOR DECK		1	2	2	3	3	4	4	5	5	1	
1.8 m HORIZONTAL BRACE (RED)		6	10	10	14	14	18	18	22	22	4	
2.1 m DIAGONAL BRACE (BLUE)		3	5	7	9	11	13	15	17	19	2	
0.85 m 2-RUNG LADDER FRAME		1		1		1		1			1	1
0.85 m 2-RUNG SPAN FRAME		1		1		1		1			1	1
0.85 m 4-RUNG LADDER FRAME		1	2	2	3	3	4	4	5	5		
0.85 m 4-RUNG SPAN FRAME		1	2	2	3	3	4	4	5	5		
150 mm CASTOR WHEEL		4	4	4	4	4	4	4	4	4		
ADJUSTABLE LEG		4	4	4	4	4	4	4	4	4		
SP10 TELESCOPIC STABILISER		4	4	4	4	4						
SP15 STABILISER							4	4	4	4		
TOWER (SELF-WEIGHT) kg		113	139	151	198	210	258	270	289	316	19	

0.85 m X 2.5 m		INTERNAL/EXTERNAL USE								INTERNAL USE ONLY		
BOSS 850 WIDE LADDERSPAN	WORKING HEIGHT PLATFORM HEIGHT	4.2 m 2.2 m	5.2 m 3.2 m	6.2 m 4.2 m	7.2 m 5.2 m	8.2 m 6.2 m	9.2 m 7.2 m	10.2 m 8.2 m	11.2 m 9.2 m	12.2 m 10.2 m	Additional Lift 1.0 m	
2.5 m SIDE TOEBOARD		2	2	2	2	2	2	2	2	2		
0.6 m END TOEBOARD		2	2	2	2	2	2	2	2	2		
TOEBOARD HOLDER		4	4	4	4	4	4	4	4	4		
2.5 m TRAPDOOR DECK		1	2	2	3	3	4	4	5	5	1	
2.5 m HORIZONTAL BRACE (RED)		6	10	10	14	14	18	18	22	22	4	
2.7 m DIAGONAL BRACE (BLUE)		3	5	7	9	11	13	15	17	19	2	
0.85 m 2-RUNG LADDER FRAME		1		1		1		1			1	1
0.85 m 2-RUNG SPAN FRAME		1		1		1		1			1	1
0.85 m 4-RUNG LADDER FRAME		1	2	2	3	3	4	4	5	5		
0.85 m 4-RUNG SPAN FRAME		1	2	2	3	3	4	4	5	5		
150 mm CASTOR WHEEL		4	4	4	4	4	4	4	4	4		
ADJUSTABLE LEG		4	4	4	4	4	4	4	4	4		
SP10 TELESCOPIC STABILISER		4	4	4	4	4						
SP15 STABILISER							4	4	4	4		
TOWER (SELF-WEIGHT) kg		130	158	172	226	239	319	382	334	362	27	

### NUMBER OF WORKING PLATFORMS ALLOWED

The number of working levels is based on fully loading each single deck to the maximum of 275 kg. A deck is defined as a single unit, but a working platform can be either one or two decks. The 275 kg limit applies to each such working level, regardless of the number of decks.

Under normal circumstances only two such working levels are permissible, as with the taller structures/lengths self-weight will be a limiting factor. Maximum Safe Working Load for the tower structure is 950 kg.

Should heavier loads than these be required for particular applications, your local Branch will be able to provide guidance.

The quantities in the schedule will enable 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 / or for storage of materials. BS1139 requires platforms at least every 4m, and these measures will exceed that requirement.

### BALLAST: 1450 LADDERSPAN

Internal/External use - There is no requirement for ballast on 1450 towers if using stabilisers as detailed in the QUANTITY SCHEDULE and the stabilisers have been fully deployed in accordance with the user guide.

### STABILISERS

For Internal use only, SP10 stabilisers may be fitted on 1.45 m x 1.8 m towers up to 10.2 m platform height or 12.2 m platform height for 1.45 m x 2.5 m towers. To improve rigidity, larger stabilisers can be used at a lower level than shown in the table.

### NUMBER OF WORKING PLATFORMS ALLOWED

The number of working levels is based on fully loading each single deck to the maximum of 275 kg. The number of working levels will be limited by the total Safe Working Load of the tower.

The Maximum Safe Working Load for the tower structures shown is 950 kg. For heights in excess of these, and for heavier loads, consult your local HSS Hire for guidance.

The quantities in the schedule will enable 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 / or for storage of materials. BS1139 requires platforms at least every 4m, and these measures will exceed that requirement.

**BALLAST 850 LADDERSPAN:** - Internal/External use. Stabiliser requirements are based on calculations from BS1139:

Above 8.2 m, the schedule is for internal use only. For Internal use only, towers may be erected up to 12.2 m platform height without ballast. For External use, towers fitted with a 2.5 m length platform must have ballast fitted as follows:

- 7.2 m platform height = 25 kg ballast
- 8.2 m platform height = 75 kg ballast

Ballast is used at the base to stabilise towers against overturning. 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, and be supported on the lowest rung of the bottom frame.

### STABILISERS

The QUANTITY SCHEDULE shows the recommended stabilisation. In circumstances where there is restricted ground clearance for stabilisers / outriggers, contact your local HSS Hire for advice. SP10 stabilisers may be fitted up to 6.2 m platform height Externally and 9.2 m Internally. Fitting SP15 stabilisers at heights lower than these will increase rigidity and provide additional stability.



ASSEMBLY PRINCIPLES

WHEN BUILDING A BOSS TOWER:

To comply with the Work at Height Regulations, we show procedures with additional platforms and the locating of Guardrails when building in advance of climbing onto a platform to reduce the risk of a fall. This involves moving components, but is an important procedure for your safety.

Always stand on a Boss Platform, never on the rungs of a Frame.

All platforms feature double Guardrails on both faces of either individual platforms or fully decked levels.

Install Guardrails prior to climbing onto the platform, from the protected position within the trapdoor. Working platforms and rest platforms (every 4 metres) must have Guardrails installed 0.5 m and 1.0 m (1 and 2 rungs above the platform in ALL cases. All working levels require toeboards.

DISMANTLING PRINCIPLES

TO DISMANTLE A BOSS TOWER:

Remove toeboards, and pass down the tower.

**1450 TOWER**

Unclip farthest end of braces and immediately go to protected Trapdoor position on ladder to complete removal.

Platforms used whilst dismantling should be Double-Guardrailed on both faces.

Remove upper platforms from protected platform levels below.

Pass removed components out of the Tower to a colleague.

**850 TOWER**

Follow same procedure.

1450 ASSEMBLY

We recommend a minimum of two people to build Boss Towers. Always start building with the smallest height frames at the base of the tower:

Tower Platform Height in Metres	Frame of Base
2.2 4.2 6.2 8.2 10.2	2 Rung
3.2 5.2 7.2 9.2	4 Rung

The procedure illustrated shows a tower starting with a 2-Rung Frame'

1

Push Castor onto Adjustable Leg. Insert Adjustable Leg / Castor assemblies into Frame and lock castors.  
(Alternatively use static Base Plates).

2

Clip Horizontal Brace (Red) onto the vertical of the Span Frame, facing claws outwards.  
  
Frame will now be self-supporting. Locking claws should be primed before use, and released for dismantling or relocation.

3

Position the Ladder Frame as shown.  
Clip the other end of the Horizontal Brace onto the Ladder Frame. Fit another Horizontal Brace (Red) onto the lowest horizontal rung of the Frames to square the tower.

4

Fit an additional Ladder Frame and Span Frame. Ensure the Interlock Clips are engaged.  
  
Fit 2 Diagonal Braces (Blue) 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.

5

Add Stabilisers.  
**See note on Stabilisers.**

6

Fit a Fixed Deck on the lowest rung. Fit a Trapdoor Deck on the 4th Rung (2.0 m) with the Trapdoor next to the Ladder.  
  
Climb Ladder, and from a protected Trapdoor position, fit the Guardrails on 5th and 6th Rungs, in that order, on both sides of the Platform.

7

Fit the next pair of Diagonal Braces in opposing directions between the 3rd and 5th Rungs.  
  
Fit an additional Span Frame and Ladder Frame. Ensure the Interlock Clips are engaged.

8

Fit the next pair of Diagonal Braces between the 5th and 7th Rungs.

9

If finishing at this height (4.2 m Platform), the Fixed Deck should first be repositioned to the 8th Rung of the Tower. Fit a Trapdoor alongside it, with the Trapdoor next to the Ladder.

10

Climb the Ladder and, from a protected Trapdoor position, fix Guardrails on the 9th and 10th Rungs, in that order, on both sides of the Tower. Add a Diagonal Brace between the 7th and 9th Rung.

11

When building beyond a 4.2 m platform height Tower - Continue to add Span and Ladder Frames, Diagonal Braces and Trapdoor Platforms as shown in the previous steps.

12

Fit the Toeboards (see instructions 'Fitting Toeboards')  
The Tower is now complete.

850 ASSEMBLY

We recommend two persons are used to build Boss Towers. Always start building with the smallest height frames at the base of the tower:

Tower Platform Height in Metres	Frame of Base
2.2 4.2 6.2 8.2 10.2	2 Rung
3.2 5.2 7.2 9.2	4 Rung

The procedure illustrated shows a tower starting with a 4-Rung Frame'

1

Push Castor onto Adjustable Leg. Insert Adjustable Leg / Castor assemblies into Frame and lock castors.  
(Alternatively use static Base Plates).

2

Clip Horizontal Brace (Red) onto the vertical of the Span Frame, facing claws outwards.  
  
Frame will now be self-supporting. Locking claws should be primed before use, and released for dismantling or relocation.

3

Position the Ladder Frame as shown.  
Clip the other end of the Horizontal Brace (Red) onto the Ladder Frame. Fit another Horizontal Brace onto the lowest horizontal rung of the Frames to square the tower. Ensure the Frames are vertical and level by checking with a spirit level and setting the Adjustable Legs as required.

4

Fix a 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.

5

Fit 2 Diagonal Braces (Blue) in opposing directions between the 1st and 3rd Rungs.  
  
Fit an additional Ladder Frame and Span Frame. Ensure the Frame Interlock Clips are engaged.

6

Add Stabilisers.  
**See note on Stabilisers.**

7

Fit 4 Diagonal Braces (Blue) 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.

8

Climb the Ladder 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.

9

When building beyond a 3.2 m platform height Tower - Continue to add Span and Ladder Frames, Diagonal Braces and Trapdoor Platforms as shown in the previous steps. Always add Horizontal Guardrails from the protected position within the Trapdoor.

10

Fit the Toeboards (see instructions 'Fitting Toeboards')  
The Tower is now complete.

GENERAL NOTES

The assembly procedure should be based on:

- Always stand on a BOSS platform, never on the rungs of a frame.
- Install platforms at 2 metre vertical intervals, to give a manageable reach height.
- Locate double Guardrails (Horizontal Braces) in advance of climbing onto any platform.
- Working Platforms require Toeboards.
- Always position Trapdoors over Ladder side, and Fixed Platforms on opposite side.

TIES

- Ties should be used when the tower goes beyond its safe height - beyond the limits of the stabilisers/outriggers or where 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 50.8 mm diameter tube of the tower should be used. Ideally ties should secure to either face of a solid structure or by means of anchorages.
- The tie frequency may vary depending on the application, but they should, at a minimum, be at every 4 metres height.

USAGE ADVICE

ERECTION

- Check that all components are on site and that they are functioning correctly – See Quantity Schedule.
- Ensure the ground on which the mobile access tower is to be erected and moved, is capable of supporting the tower.
- The MAXIMUM Safe Working Load (the combined weight of the user/s, tools and materials) that may be placed on the Tower is the Total Weight less the Self Weight of the Tower.  
**EXAMPLE**  
A 1.45 m x 2.5 m Tower with a Platform Height of 4.2 m has a Self Weight of 201 kg, 950 kg - 214 kg = 739 kg MAXIMUM Safe Working Load
- The MAXIMUM Safe Working Load that may be placed on ANY Working Platform is 275 kg - This must be evenly distributed over either one Trapdoor Platform (850), or a Fixed Platform and Trapdoor Platform (1450) placed side by side.
- Towers must always be climbed from the inside during assembly and using the built-in ladder provided during use.
- Adjustable Legs should only be used for levelling.
- Do not use boxes or step ladders on the platform to gain additional height.

LIFTING OF EQUIPMENT

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

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.

MAINTENANCE

- All components and their parts should be regularly inspected to identify damage, particularly to welds. Lost or broken parts should be replaced, and any tubing with indentations greater than 5mm should be put to one side for manufacturer repair. Adjustable leg threads should be cleaned and lightly lubricated to keep them free running.

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.	6	25-31	11-14
Gale Force	Walking is difficult.	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 (eg power tools) which could generate instability. Maximum horizontal force 20 kg.
- 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.