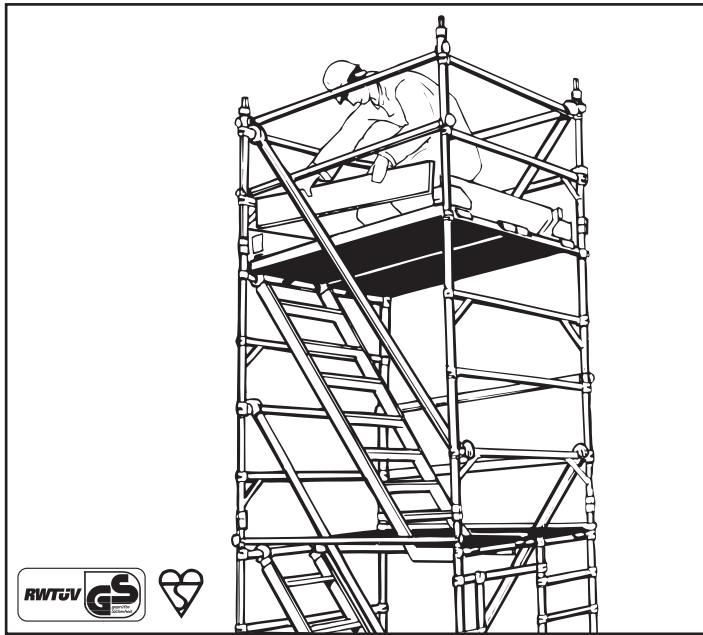


YOUNGMAN

INNOVATIVE WORK AT HEIGHT SOLUTIONS

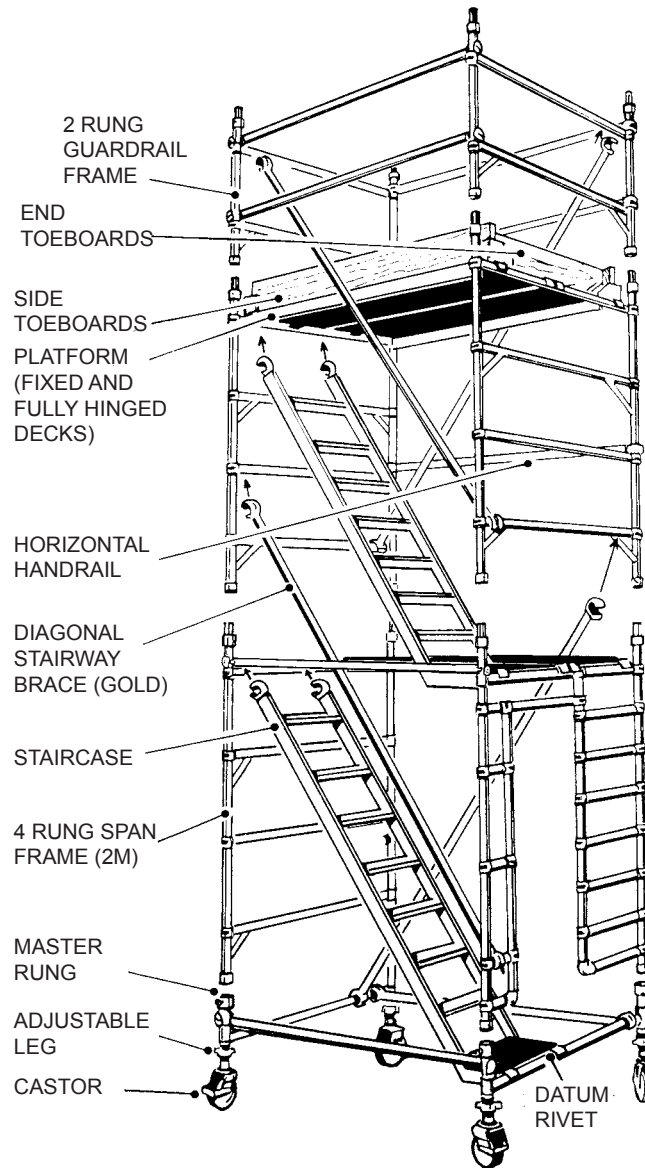


BoSS Staircase

Introduction

This BoSS Assembly Guide is designed to provide you with step by step instructions to ensure that your system is erected with the maximum of ease and safety. Before assembly, please read the safety notes carefully. Operatives must be qualified or competent to erect the tower. If the tower is passed on to another person they should also receive these instructions. Erect the tower in the position required. For full information on the application and use of a Mobile Access and Working Tower consult the PASMA Guide or prEN 1298.

Components



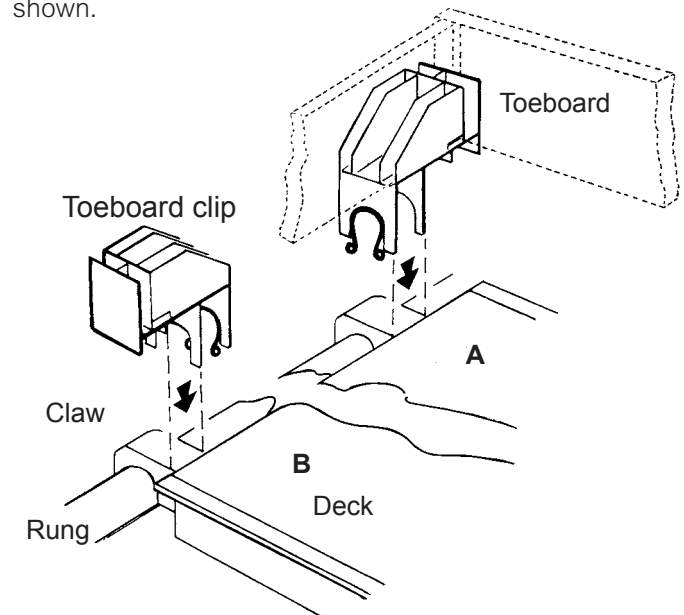
Checklist

- INSPECT COMPONENTS PRIOR TO ERECTION
- INSPECT TOWER PRIOR TO USE
- TOWER UPRIGHT
- CASTORS LOCKED/LEGS CORRECTLY ADJUSTED
- BRACES & PLATFORM LEVEL
- STABILISERS/OUTRIGGERS FITTED AS SPECIFIED
- PLATFORMS LOCATED & WINDLOCKS ON
- HANDRAILS IN PLACE
- TOEBOARDS LOCATED

REFER TO THIS CHECKLIST BEFORE USING EACH TIME

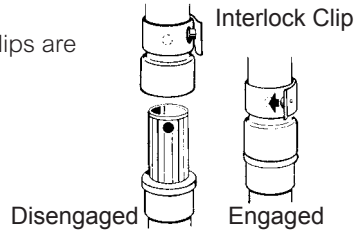
Fitting Toeboards

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

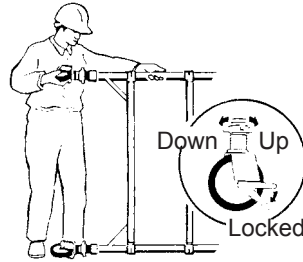


Assembly Instructions

1 Check that interlock clips are disengaged on all frames.

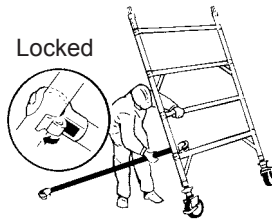


2 Fit master rung to 4 rung span frame (non spigoted end) but do not tighten thumbscrews at this stage. Push castor and leg together and insert into frame. Now tighten thumbscrews. Repeat with walk-through frame, but ensure that datum rivets on master rung are below walk-through part of frame.



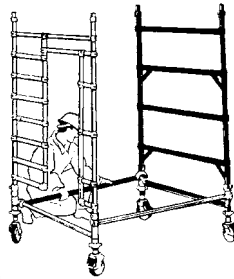
Base plates can be fitted to adjustable leg if tower is static.
NB: If you do not require direct access onto staircase use one 2.0m 4 rung frame in lieu of the walk-through frame.

3 Clip a 1.8m horizontal brace (Red) outwards onto side of one base frame assembly as shown. Frame will now be self supporting.
Note: All locking claws on braces and staircases should be primed before use by pulling back trigger.



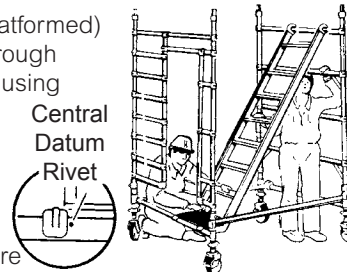
After dismantling - ensure locking mechanism is released. We recommend that two persons are required to ease the erection process.

4 Clip other end of 1.8m horizontal brace (red) onto 2nd base frame assembly. Clip 2nd 1.8m horizontal brace onto master rung on other side of base frame assemblies. Lock castors. Position walk-through frames so that the staircase is farther away from the face of the work. In Dog Leg situations, the same procedure is followed except where even platform heights (2m, 4m, etc.) apply, when staircase should be nearest to work face (see 13).



Assembly Instructions

5 Clip bottom of staircase (platformed) onto master rung below walk-through frame (to the outside of tower if using against a wall). Clip top of staircase onto top rung of frame ensuring staircase claw is positioned up against central datum rivets. (See insert). Adjust legs to ensure tower is vertical and square and that horizontal braces are level, using a spirit level.



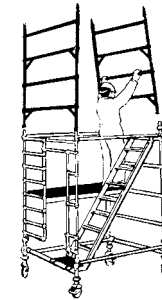
Note: Two men are recommended to handle staircase.

6 Position fixed deck on second of frames as shown. Engage windlock. Clip two 1.8m horizontal braces (red) outwards onto upright above 4th rung of frame as temporary handrail, ensuring claws are locked downwards or outwards.

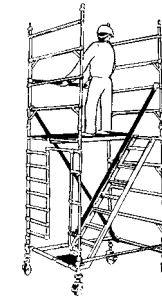


Never inwards.

7 Position next lift of frames. Engage interlock clips.
Note: Always climb inside the tower.



8 Clip on 3.08m stairway braces (gold) as shown. Reposition platform to top rung of first frame lift. Move up 1.8m horizontal brace (red) on platform side, to the upright above the 2nd rung of the next frame lift.

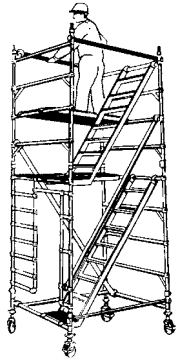


Assembly Instructions

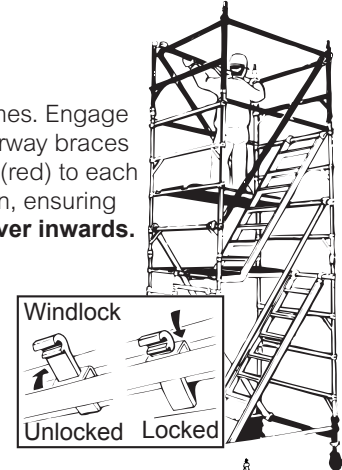
9 Clip in next staircase above staircase below. Clip bottom claws on top rung of frame below, top onto top rung of next lift. Position another fixed deck on 2nd rung of next lift of frames as shown. Engage windlocks. Clip two 1.8m horizontal braces (red) outwards above 4th rung of this second lift of frames as temporary handrail.

Never downwards or inwards.

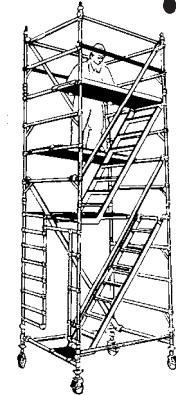
Note: if erecting 2 lifts or more, fit the appropriate outriggers **now**. (See special notes on stabilisers & outriggers). Erect further lifts as described (stages 7, 8, & 9) until desired height is reached, then proceed to stages 10, 11 & 12.
● See lifing notes.



10 Position 2 rung guardrail frames. Engage interlock clips. Clip on 3.08m stairway braces (gold). Add one horizontal brace (red) to each side of guardrail frames as shown, ensuring claws are locked downwards, **never inwards.**



10 Place a fully hinged deck over staircase ensuring trap is positioned to open outside of tower. Engage windlocks. Move two 1.8m horizontal braces (red), acting as temporary handrails, to either side of guardrail frame to form mid-rail ensuring claws are locked downwards or outwards **never inwards.**



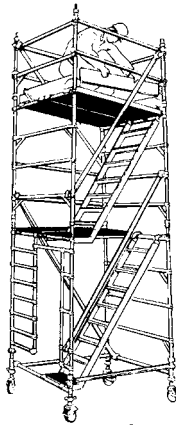
Assembly Instructions

12 Re-position fixed deck along side fully hinged deck. Engage windlocks. Fit toeboards now. (see instructions).

Re-position any other fixed decks level with top of stairway. (this does not apply for dog legged design).

Add 2nd handrail level guardrail. For working platform, a mid rail at 0.5m must be used and the platform area be fully toeboarded.

to dismantle the structure reverse steps 12 - 2

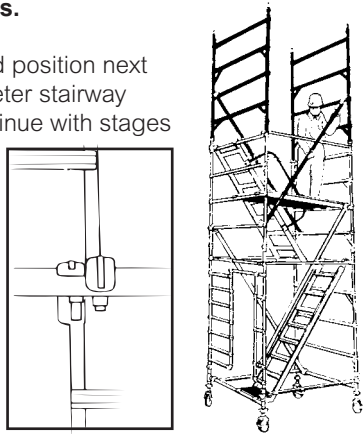
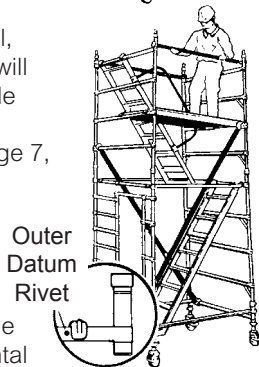


13 Dog-Leg Stairway Design

When using this alternative against a wall, always ensure position of first staircase will allow final staircase to finish to the outside of the tower, (see 14). If dog-legstairway tower is required after assembling to stage 7, clip two 3.0m stairway braces as shown. Position next staircase as shown (see also insert). Fit internal handrail.

disengage windlocks as re-position fixed deck to 2nd rung of next lift. engage windlocks. Move temporary 1.8m horizontal handrail at top of frame below and position outwards at top of frame as shown, **never inwards**.

14 If further height is required position next lift of frames. Clip on 3.08m meter stairway handrail (gold) as shown. Continue with stages 12 & 14 until desired height is reached, then continue to stages 10, 11, & 12.



Stabilisers

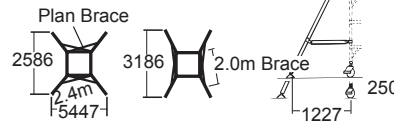
Attach one stabiliser to each corner of tower at approx. 45 degrees. If handle on clamp is obstructed from tightening, undo and place handle on other side of clamp.

Ensure top clamp is positioned immediately under rung casting and tighten using the handle just enough to hold clamp in position. The bottom clamp should be positioned as low down as possible (see diagram). With SP15 position mid clamp and lightly tighten.

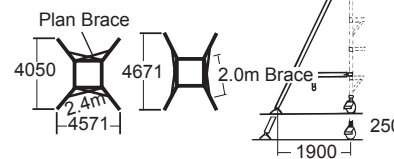
Extend telescopic legs until rubber foot is in contact with ground. Lock telescopic leg with interlock clip. If Plan Bracing is desired clip across braces (Green) from tower to stabilisers at each end of tower as shown. Ensure rubber feet are in firm contact with the ground by sliding lower clamp downwards and tighten securely. Securely tighten top clamp (and mid clamp on SP15's) to provide a rigid base structure.

When moving tower lock each telescopic leg just clear of the ground, unlock castors ensuring area is firm and clear of all obstructions both on the ground and above. After moving check all castors are firmly on the ground and locked, and that the tower is vertical. Re-position stabilisers as above.

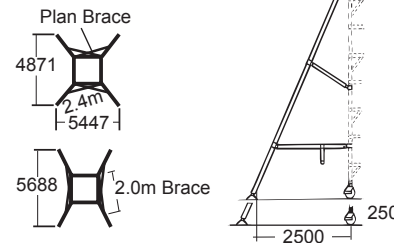
SP7 (Optional Plan Brace shown)



SP10 (Optional Plan Brace Shown)



SP15 (Optional Plan Brace Shown)



Mobile Outriggers

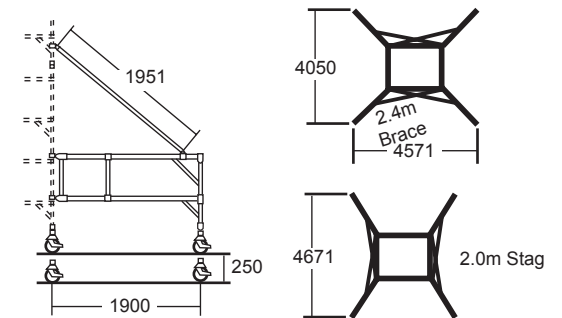
Insert adjustable leg/castor assemblies into leg of each outrigger, lock castors.

Attach one outrigger to each corner of the tower at approx. 45 degrees. If handle on clamp is obstructed from tightening, undo and place handle on other side of clamp. Ensure top clamp is positioned immediately under rung casting and tighten using handle just enough to hold clamp in position. After adjusting legs until castors are firmly on the ground, carry out this procedure on lower clamp.

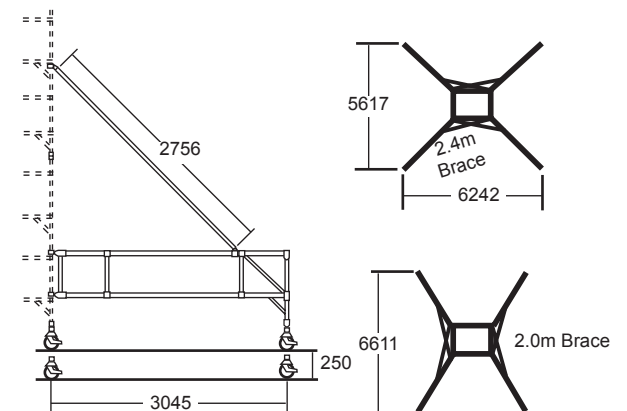
Clip in cross braces from tower to outriggers at each end of tower as shown. Securely tighten all clamps and double check that all castors are firmly in contact with the ground and are locked.

When moving tower unlock all castors, ensure area is firm and clear of all obstructions both on the ground and above the tower. After moving ensure tower is vertical and that all castors are firmly on the ground and locked.

MP7



MP16



Safety Note

- The stairway towers featuring an inclined staircase access are for use with personnel frequently carrying tools and/or materials.

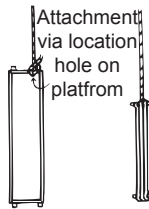
Erection

- 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.
- During the erection of a tower it is recommended that a temporary guardrail brace be employed.
- The safe working load is 275 kgs (606 lbs) uniformly distributed maximum concentrated load 150 kgs (330 lbs) per deck up to a maximum of 950 kgs (2100 lbs) per tower (including self weight). **This must not be exceeded.**

- Towers must always be climbed from the inside during assembly and using the built-in ladder provided during use.
- 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.



Stabilisers/Ballast

- Stabilisers or outriggers and ballast weights shall 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, 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.

Safety Note

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.
- Mobile towers are not designed to be suspended - please refer to your supplier.

Ties

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

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 manufacture repair. Adjustable leg threads should be cleaned and lightly lubricated to keep them free running.

QUANTITY SCHEDULE – BOSS 1450 STAIRWAY TOWER (1.8m)

INTERMEDIATE DECK DESIGN WITH STABILISERS

(Single Landing Deck every 2m, Walk-through Frame at Base)

INTERNAL/EXTERNAL USE

DESCRIPTION	WORKING HEIGHT PLATFORM HEIGHT		4.2m 2.2m		6.4m 4.4m		8.4m 6.4m		10.4m 8.4m		12.4m 10.4m		14.4m 12.4m	
	4	4	4	4	4	4	4	4	4	4	4	4	4	4
125/150/200mm CASTOR														
250mm ADJUSTABLE LEG														
1450 2 RUNG SPAN FRAME			2	2	2	2	2	2	2	2	2	2	2	2
1450 4 RUNG SPAN FRAME			1	3	5	7								
1450 WALK-THROUGH BASE FRAME			1	1	1	1	1	1	1	1	1	1	1	1
1.8m FIXED DECK			1	2	3	4								
1.8m FULLY HINGED DECK			1	1	1	1	1	1	1	1	1	1	1	1
1.8m HORIZONTAL BRACE (RED)			6	8	10	12								
3.08m STAIRWAY BRACE (GOLD)			2	4	6	8								
7 TREAD STAIRCASE (575mm WIDE)			1	2	3	4								
1450 MASTER RUNG			2	2	2	2	2	2	2	2	2	2	2	2
1.8m SIDE TOEBOARD			2	2	2	2	2	2	2	2	2	2	2	2
1.2m END TOEBOARD			2	2	2	2	2	2	2	2	2	2	2	2
TOEBOARD HOLDER			4	4	4	4	4	4	4	4	4	4	4	4
SP10 STABILISER														
SP7 STABILISER					4	4	4	4	4	4	4	4	4	4

INTERNAL USE ONLY

Where Walk-through Frames are not required, substitute one 4 rung Span Frame

TOEBOARDS

not included for intermediate decks; intermediate decks are for access only.

To convert an intermediate rest deck into a working platform add the following:

1.8m SIDE TOEBOARD	2
0.6m END TOEBOARD	2
TOEBOARD HOLDER	4

Intermediate Deck Design with Mobile Outriggers

(Single Landing Deck every 2m, Walk-through Frame at Base)

INTERNAL/EXTERNAL USE

DESCRIPTION	WORKING HEIGHT PLATFORM HEIGHT		INTERNAL USE ONLY			
	4.2m 2.2m	6.4m 4.4m	8.4m 6.4m	10.4m 8.4m	12.4m 10.4m	14.4m 12.4m
125/150/200mm CASTOR	4	4	4	4	4	4
250mm ADJUSTABLE LEG	4	4	4	4	4	4
1450 2 RUNG SPAN FRAME	2	2	2	2	2	2
1450 4 RUNG SPAN FRAME	1	3	5	7	9	11
1450 WALK-THROUGH BASE FRAME	1	1	1	1	1	1
1.8m FIXED DECK	1	2	3	4	5	6
1.8m FULLY HINGED DECK	1	1	1	1	1	1
1.8m HORIZONTAL BRACE (RED)	6	8	10	12	14	16
3.08m STAIRWAY BRACE (GOLD)	2	4	6	8	10	12
7 TREAD STAIRCASE (575mm WIDE)	1	2	3	4	5	6
1450 MASTER RUNG	2	2	2	2	2	2
1.8m SIDE TOEBOARD	2	2	2	2	2	2
1.2m END TOEBOARD	2	2	2	2	2	2
TOEBOARD HOLDER	4	4	4	4	4	4
MP7 MOBILE OUTRIGGER	4	4	4	4	4	4
2.4m SIDE PLAN BRACE	4	4	4	4	4	4
125/150/200mm CASTOR			4	4	4	4
250mm ADJUSTABLE LEG			4	4	4	4

13

DOG LEG DESIGN WITH STABILISERS

(Walk-through Frame at Base)

INTERNAL/EXTERNAL USE

DESCRIPTION WORKING PLATFORM HEIGHT	6.4m 4.4m		8.4m 6.4m		10.4m 8.4m		INTERNAL USE ONLY	
	4 <th>4 <th>4 <th>4 <th>4 <th>4 <th>12.4m 10.4m</th> <th>14.4m 12.4m</th> </th></th></th></th></th>	4 <th>4 <th>4 <th>4 <th>4 <th>12.4m 10.4m</th> <th>14.4m 12.4m</th> </th></th></th></th>	4 <th>4 <th>4 <th>4 <th>12.4m 10.4m</th> <th>14.4m 12.4m</th> </th></th></th>	4 <th>4 <th>4 <th>12.4m 10.4m</th> <th>14.4m 12.4m</th> </th></th>	4 <th>4 <th>12.4m 10.4m</th> <th>14.4m 12.4m</th> </th>	4 <th>12.4m 10.4m</th> <th>14.4m 12.4m</th>	12.4m 10.4m	14.4m 12.4m
125/150/200mm CASTOR	4	4	4	4	4	4	4	4
250mm ADJUSTABLE LEG	4	4	4	4	4	4	4	4
1450 2 RUNG SPAN FRAME	2	2	2	2	2	2	2	2
1450 4 RUNG SPAN FRAME	3	5	7	7	9	11	9	11
1450 WALK-THROUGH BASE FRAME	1	1	1	1	1	1	1	1
1.8m FIXED DECK	1	1	1	1	1	1	1	1
1.8m FULLY HINGED DECK	1	1	1	1	1	1	1	1
1.8m HORIZONTAL BRACE (RED)	8	10	12	12	14	16	14	16
3.08m STAIRWAY BRACE (GOLD)	4	6	8	8	10	12	10	12
7 TREAD STAIRCASE (575mm WIDE)	2	3	4	4	5	6	5	6
INTERNAL HANDRAIL FOR STAIRWAY	2	3	4	4	5	6	5	6
1450 MASTER RUNG	2	2	2	2	2	2	2	2
1.8m SIDE TOEBOARD	2	2	2	2	2	2	2	2
1.2m END TOEBOARD	2	2	2	2	2	2	2	2
TOEBOARD HOLDER	4	4	4	4	4	4	4	4
SP10 STABILISER			4	4	4	4	4	4
SP7 STABILISER			4	4				

14

DOG LEG DESIGN WITH MOBILE OUTRIGGERS

(Walk-through Frame at Base)

INTERNAL/EXTERNAL USE

DESCRIPTION WORKING PLATFORM HEIGHT	6.2m 4.2m		8.2m 6.2m		10.2m 8.2m		INTERNAL USE ONLY	
	4 <th>4 <th>4 <th>4 <th>4 <th>4 <th>12.2m 10.2m</th> <th>14.2m 12.2m</th> </th></th></th></th></th>	4 <th>4 <th>4 <th>4 <th>4 <th>12.2m 10.2m</th> <th>14.2m 12.2m</th> </th></th></th></th>	4 <th>4 <th>4 <th>4 <th>12.2m 10.2m</th> <th>14.2m 12.2m</th> </th></th></th>	4 <th>4 <th>4 <th>12.2m 10.2m</th> <th>14.2m 12.2m</th> </th></th>	4 <th>4 <th>12.2m 10.2m</th> <th>14.2m 12.2m</th> </th>	4 <th>12.2m 10.2m</th> <th>14.2m 12.2m</th>	12.2m 10.2m	14.2m 12.2m
125/150/200mm CASTOR	4	4	4	4	4	4	4	4
250mm ADJUSTABLE LEG	4	4	4	4	4	4	4	4
1450 2 RUNG SPAN FRAME	2	2	2	2	2	2	2	2
1450 4 RUNG SPAN FRAME	3	5	7	7	9	11	9	11
1450 WALK-THROUGH BASE FRAME	1	1	1	1	1	1	1	1
1.8m FIXED DECK	1	1	1	1	1	1	1	1
1.8m FULLY HINGED DECK	1	1	1	1	1	1	1	1
1.8m HORIZONTAL BRACE (RED)	8	10	12	12	14	16	14	16
3.08m STAIRWAY BRACE (GOLD)	4	6	8	8	10	12	10	12
7 TREAD STAIRCASE (575mm WIDE)	2	3	4	4	5	6	5	6
INTERNAL HANDRAIL FOR STAIRCASE	2	3	4	4	5	6	5	6
1450 MASTER RUNG	2	2	2	2	2	2	2	2
1.8m SIDE TOEBOARD	2	2	2	2	2	2	2	2
1.2m END TOEBOARD	2	2	2	2	2	2	2	2
TOEBOARD HOLDER	4	4	4	4	4	4	4	4
MP7 MOBILE OUTRIGGER	4	4	4	4	4	4	4	4
2.4m SIDE PLAN BRACE	4	4	4	4	4	4	4	4
125/150/200mm CASTOR			4	4	4	4	4	4
250mm ADJUSTABLE LEG			4	4	4	4	4	4

15

Stabilisers:

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

Where Walk-through Frames are not required, substitute one 4 rung Span Frame.

No. of Working Levels Allowed

The number of working levels is based on fully loading each single deck to the maximum of 175 kg. A deck is defined as a single unit, but a working platform can be either one or two deck units. The permissible number of working levels is based on a maximum of 275kg for each working platform level, whether it comprises one or two deck units.

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 provide guidance.

Should a fully decked rest platform be employed, full toeboarding will be required.



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INNOVATIVE **WORK AT HEIGHT** SOLUTIONS

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