

This Assembly 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 Trap) Safety Standard. Before assembly please read the safety notes carefully.

Span 500 is a mobile access tower system complying with EN 1004 and WAHR, with vertical ladder access, designed for Class 2 loading. EN1004-3/8/12-XXCD

ASSEMBLY PROCESS

1. Preparation

Locate the tower level adjusters on each leg at 10cm (4ins) from the bottom of the leg.

Unlock the interlock clips on all frames. When installed, always move the interlock clip to the "locked" position.

Sort the braces into horizontal and diagonal braces - the diagonals are slightly longer.

Unlock the brace locks.

2. Base

Push the four leg assemblies into a pair of 2-rung (1m) or 4-rung (2m) frames.

Follow the erection procedures as shown (Section 4). It is important to follow the bracing pattern precisely. The tower shown in the build procedure is a double width tower. For Single Width Towers, see notes section.

Note the locking and unlocking position for the castors as shown here.

3. Locking down the platform

A windlock clip is installed on the platform at the hook. This is locked as shown here.

Base

The choice of base frame for your SPAN 500 tower depends on the platform height required: See table 1 below:

Platform height (m)	Base Frame	Parts required
2, 4, 6, 8, 10, 12	1m (2 rung)	One frame and one ladder frame
3, 5, 7, 9, 11	2m (4 rung)	One frame and one ladder frame

Table 1

4. BUILD PROCESS



Insert castors and adjustable legs into the base frame (see table 1 on selecting the base frame). Position the ladder frame as shown and clip one horizontal brace onto the vertical member just above the 1st rung, with claw facing outwards. Clip the 2nd horizontal brace onto the cross tube (rung) on the opposite side facing down.



Insert one 4 rung standard frame and one 4 rung ladder frame into the base frames and lock. Clip diagonal braces in opposing directions from the 1st to 3rd to 5th rungs. Check base unit with a spirit level in both vertical and horizontal directions.



Fit stabiliser to tower - see separate section on stabilisers. Add a fixed platform to 1st rung in front of the ladder.



Fit trapdoor platform to 4th rung of tower in front of the ladder. Ensure trapdoor opens outwards.



Using the 3T method, position yourself in the hatch and attach horizontal braces to the 5th and 6th rung on both sides of the platform. Do not stand on the platform until it is fully guarded.



Attach the next set of frames and lock. Continue diagonal bracing in a zig-zag pattern as shown.



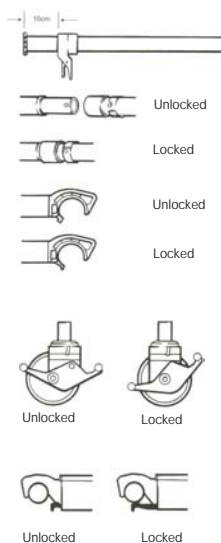
Install next platform at 4 rungs above the last one. Use the 3T method, install 2 braces on both sides of platform before climbing onto platform. Continue with steps 6 and 7 until working platform height is reached.



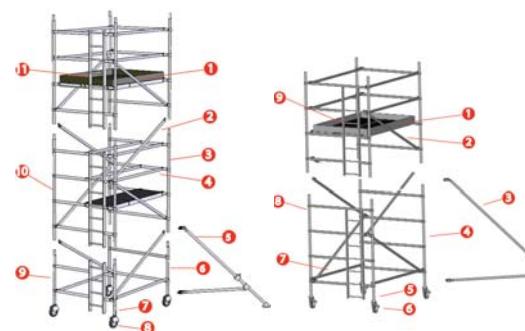
Once working height is reached, move fixed platform from 1st rung to working level, opposite to ladder. Fit trapdoor platform at ladder. Guard with horizontal braces using the 3T method.



Once guarded, climb onto the platform and fit toeboard set to complete the tower build.



ASSEMBLY COMPONENTS



4m Platform Height Tower Assembly

1. Toeboard Set
2. Diagonal Brace
3. 2m Standard Frame
4. Horizontal Brace
5. Stabiliser
6. 1m Standard Frame
7. Adjustable Leg
8. Castor
9. 1m Ladder Frame
10. 2m Ladder Frame
11. Fixed and Trapdoor Platform

3m Platform Height Tower Assembly

1. Toeboard Set
2. Diagonal Brace
3. Stabiliser
4. 2m Standard Frame
5. Adjustable Leg
6. Castor
7. Horizontal Brace
8. 2m Ladder Frame
9. Fixed and Trapdoor Platform

Safe Working Loads and Working Heights (WAHR)

The safe working load at each level of platform is 275 Kg evenly distributed, regardless of whether one or two platforms are installed. Therefore, even if two platforms are installed side by side, total cumulative load shall not exceed 275Kg distributed.

The total loading on the tower structure should not exceed 720kg. Normal maximum platform height for indoor use is 12m for Double Width, and 8m for Single Width. For outdoor use, the maximum height is 8m for Single and Double Widths.

3T Safety Standard - THROUGH THE TRAP

This is an approved method of tower construction which, if carried out by a competent person, complies with all current safety legislation.

Construction - basic principles

- Always install the trapdoor platform over the ladder (if one is fitted).
- Ensure the trapdoor hinges to the **OUTSIDE** of the tower (not the centre).
- Once the platform has been installed, climb, using the approved method and **SIT IN THE TRAPDOOR OPENING**.
- While seated, attach horizontal braces to the frames to form guardrails on **BOTH SIDES OF THE PLATFORM**.
- See assembly instructions for specific placement of guardrails.
- 2 braces are normally required each side - although bracing frames can be used on the outside if desired or specified in the instructions.
- Only when the platform is fully guarded is it safe to stand up.

Dismantling

- Unlock the brace ends furthest away from the trapdoor.
- **DO NOT REMOVE BRACES UNTIL SITTING IN THE TRAPDOOR.**

DISMANTLING / MOVING TOWERS

To **Dismantle**, follow the build process but in reverse order noting the following.

- To remove the guardrail frames or braces, first unlock the hook at the end away from the trapdoor.
- Sitting through the trapdoor, unlock the near end hook and remove the brace.

To **Move** the tower to a new position, first prepare the tower.

- Wind speed should not exceed 29 km/hr (force 4).
- Release the castor brakes.
- Raise the stabiliser feet only enough to clear obstructions.
- Ensure tower is empty (material and personnel). Move the tower manually by applying force at the base - do not use machinery to push or pull the tower. Once moved - prepare the tower for use.
- Check all castors and stabilisers are in firm contact with the ground.
- Check tower is vertical (spirit level) and adjust legs as required.
- Reapply the castor brakes.

REMEMBER - NEVER STAND ON AN UNGUARDED PLATFORM

ALTERNATIVE CONFIGURATIONS

Single Width Tower

The build process for the Single Width Tower is the same as double width, the bracing pattern is as shown in Section 4.

Towers Above 4m

To build towers with platform heights greater than 4m, build as shown up to step 7. Repeat steps 6 and 7 until desired height is reached. Finish building the tower by completing steps 8 and 9.

STABILISERS



Lightly tighten the upper clamps above the sixth rung on each corner post. Position the lower clamp above the bottom rung. Ensure the lower arm is as horizontal as possible. Position the stabilisers so that the footpads are approximately equidistant from each other, as seen here. Telescopically adjust the leg and reposition the clamps as required to make firm contact with the ground. Ensure the clips with locking pin are in place. When in the correct position, tighten the clamps firmly.

To position the tower against a wall, do not remove the stabiliser, move parallel with the wall.

To position the tower in a corner, remove the inside stabiliser and place the outside two parallel with the wall.

Ballast weight maybe used to stabilise the tower, please contact your supplier for the correct amount of ballast weight required.

TOWER COMPONENTS REQUIRED

The following tables show a full list of components to build the tower to the platform height specified, complying with the requirements of EN 1004 and Work at Heights Regulations (WAHR).

Braces, platforms, guardrail, bracing frames and toeboards are length specific; 2m, 2.5m or 3m. Three unit weights in ascending order are given for these items, for 2m, 2.5m and 3m respectively. Other components are common to towers of all lengths, and their unit weights are also given. Total self-weight of towers are indicated, according to length and height.

Span500 ladder frame standard width towers 2m, 2.5m and 3m length to BS 1139 incorporating EN 1004 and WAHR											
Platform height in metres	2.2	3.2	4.2	5.2	6.2	7.2	8.2	9.2	10.2	11.2	12.2
Platform height in feet	7'2"	10'6"	13'10"	17'2"	20'4"	23'7"	26'11"	30'2"	33'6"	36'9"	40'0"
Number of rungs to platform	4	6	8	10	12	14	16	18	20	22	24
Tower weight in Kg (2m length)	95.5	145.7	163.6	180.6	212.6	229.6	261.6	278.6	317	334	366
Tower weight in Kg (2.5m length)	108	162.4	182	200.1	237.2	255.3	292.4	310.5	354	372.1	409.2
Tower weight in Kg (3m length)	119.3	176.8	198.2	217.3	258.7	277.8	319.2	338.3	386.1	405.2	446.6

NB: Quoted platform heights have 6" extension on adjustable legs for levelling that could be increased or reduced

Description	Weight (kg)	2.2	3.2	4.2	5.2	6.2	7.2	8.2	9.2	10.2	11.2	12.2
6" Castor	2.2	4	4	4	4	4	4	4	4	4	4	4
Adjustable Legs	1.1	4	4	4	4	4	4	4	4	4	4	4
Diagonal Brace	1.8/2.2/2.5	3	5	7	9	11	13	15	17	19	21	23
Horizontal Brace	1.7/2.0/2.4	6	6	9	10	13	14	17	18	21	22	25
Trapdoor Platform	14.1/17.5/20.0	1	2	2	2	3	3	4	4	5	5	6
Standard Platform	13.8/17.2/19.7	1	1	1	1	1	1	1	1	1	1	1
D/W Toeboard Set	8.7/11.5/14.4	1	1	1	1	1	1	1	1	1	1	1
2-rung d/w Ladder Frame	9.3	1	0	1	0	1	0	1	0	1	0	1
4-rung d/w Frame	8.8	1	2	2	3	3	4	4	5	5	6	6
4-rung Ladder Frame	12.1	1	2	2	3	3	4	4	5	5	6	6
Telescopic Stabiliser	5.2		4	4	4	4	4	4	4			
Large Stabilisers	6.8									4	4	4

Span500 ladder frame single width towers 2m, 2.5m and 3m length to BS 1139 incorporating EN 1004 and WAHR											
Platform height in metres	2.2	3.2	4.2	5.2	6.2	7.2	8.2				
Platform height in feet	7'2"	10'6"	13'10"	17'2"	20'6"	23'10"	27'2"				
Number of rungs to platform	4	6	8	10	12	14	16				
Tower weight in Kg (2m length)	75.0	123.6	138.2	155.3	184.0	201.1	236.2				
Tower weight in Kg (2.5m length)	83.0	135.8	151.8	170.3	203.8	222.3	262.2				
Tower weight in Kg (3m length)	90.2	146.1	163.5	183.4	220.8	240.7	284.5				

NB: Quoted platform heights have 6" extension on adjustable legs for levelling that could be increased or reduced

Description	Weight (kg)	2.2	3.2	4.2	5.2	6.2	7.2	8.2
6" Castor	2.2	4	4	4	4	4	4	4
Adjustable Legs	1.1	4	4	4	4	4	4	4
Diagonal Brace	1.8/2.2/2.5	3	5	7	9	11	13	15
Horizontal Brace	1.7/2.0/2.4	6	6	8	10	12	14	16
Trapdoor Platform	14.1/17.5/20.0	1	2	2	2	3	3	4
S/W Toeboard Set	6.8/8.4/9.8	1	1	1	1	1	1	1
S/W Toeboard Set	6.8/8.4/9.8	1	1	1	1	1	1	1
2-rung s/w Ladder Frame	3.8	1	0	1	0	1	0	1
4-rung s/w Frame	7.2	1	2	2	3	3	4	4
4-rung s/w Ladder Frame	10.5	1	2	2	3	3	4	4
Telescopic Stabiliser	5.2		4	4	4	4	4	
Large Stabilisers	6.8							4

USAGE ADVICE

- We recommend a minimum of two people to assemble, dismantle and move the tower.
- Check that all components are on site and in good working order.
- Ensure that assembly location is checked to prevent hazards during assembly, dismantling or moving and while working on the tower. Particular attention should be given to the ground condition, whether level or sloping, obstructions and wind conditions. The ground condition should be capable of supporting the tower structure.
- Towers must always be climbed from the inside of the assembly and using the built-in ladder if provided.
- Adjustable legs should only be used to level the tower.
- Lifting operation should be done inside the effective base area of the tower.
- Moving the tower should only be done by manual effect from the base of the tower. When moving tower be aware of overhead hazards (eg. electric cables).
- No personnel or material should be on the platform whilst the tower is being moved.
- Beware of horizontal loads which can lead to instability of the tower. The maximum side force is 20kg.

- When tying in the tower, attach a tie to each upright at 4m height intervals. Ensure that couplers are suitable for 50mm diameter aluminum tube.
- Do not use boxes or steps to gain additional height. If extra height required, contact your distributor to get extra components.
- Do not lift or suspend assembled mobile tower.
- Components are normally hoisted using a rope. Always lift within the tower structure or within the base rectangle defined by the stabilisers.
- Damaged components, or components from other tower systems should never be used.
- Stabilisers should always be fitted when specified. Use the type of stabiliser shown on the component list according to the tower height.
- When wind exceeds Beaufort force 4, cease using the tower. Wind speeds:

Force	Peak Mph	Peak Kph	Guidance
4	18	29	Moderate breeze - raises dust & loose paper
6	31	50	Strong breeze - difficult to use umbrella
8	46	74	Gale force - walking is difficult

CARE AND MAINTENANCE OF THE TOWER AND COMPONENTS

- Keep all equipment clean, especially spigots and sockets where frames join. Spigots should fit easily into stocks. Lubricate with light oil.
- Remove dirt or paint from adjustable legs with a light brush. Lightly oil the leg locks.
- Do not strike or hammer components. Do not throw or drop onto hard surfaces.
- Lightly oil spring mechanism of the hooks.
- For transport and storage, components are best stored vertically.
- Damaged parts should be repaired or replaced, contact your supplier.

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