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Span 400

ACCESS TOWER SYSTEM

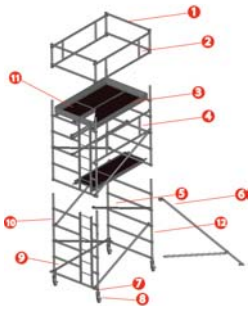
Assembly Guide

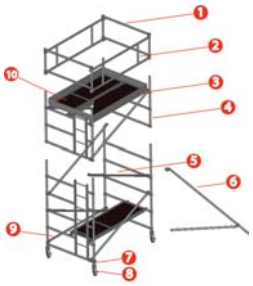
This Assembly guide is designed to provide you with step by step instructions to ensure your system is erected easily and safely using the 3T (Through the Trap) Safety Standard. Before assembly please read the safety notes carefully.

Span 400 is a mobile access tower system complying with EN 1004 and WAHR, with vertical ladder access, designed for Class 3 loading.

EN1004-3-8/12-XXCD

ASSEMBLY COMPONENTS





4m Platform Height Tower Assembly

1. Guardrail Frame
2. Bracing Frame
3. Toeboard Set
4. Bracing Frame
5. Diagonal Brace
6. Stabiliser
7. Adjustable Leg
8. Castor
9. Horizontal Brace
10. 5 Rung Ladder Frame
11. Fixed and Trapdoor Platform
12. 5 Rung Frame

3m Platform Height Tower Assembly

1. Guardrail Frame
2. Bracing Frame
3. Toeboard Set
4. 3 Rung Frame
5. Diagonal Brace
6. Stabiliser
7. Adjustable Leg
8. Castor
9. Horizontal Brace
10. Fixed and Trapdoor Platform

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.

Unlocked

Locked

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

Unlocked

Locked

2. Base

Push the four leg assemblies into a pair of 5-rung (2m) frames, with 10cm (4ins) of threaded leg showing.

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.

Unlocked

Locked

3. Locking down the platform

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

Unlocked

Locked

4. BUILD PROCESS

1

Insert castors and adjustable legs into the 5 rung frames. Clip horizontal brace onto the vertical member just above the 1st rung, with claw facing outwards.

2

Attach diagonal braces in opposing directions from the 1st to the 3rd rung. Attach platform to the 2nd rung (ensure hinge opens outwards and above ladder). Check the base with a spirit level in both vertical and horizontal directions and adjust the legs if necessary.

3

Fit Guardrails (horizontal braces) to the 4th rung either side of the ladder close to the platform. Insert 1 standard frame and ladder frame to the lower frames, and engage locking pins.

4

Continue diagonal bracing in a zig-zag pattern by attaching 2 diagonal braces on each side (4th to 6th and 6th to 8th rungs).
Fit stabilisers to the base unit - see separate section on stabilisers below.

5

Fit trapdoor platform to the 7th rung of the tower.

6

Using the 3T method, clip 3 horizontal braces on the 8th, 9th and 10th rungs on the inside of the platform. Clip 1 bracing frame to the outside of the tower with claws outwards.

7

Fit additional standard and ladder frames and lock. Clip 3 diagonal braces from rung 9 to 13 in a zig zag pattern and from rung 11 to 13 (opposing direction). Also move the trapdoor platform from the 2nd rung to the 12th rung.

8

Using the 3T method. Clip 3 horizontal braces to the 13th, 14th and 15th rungs on the inside of the platform. Clip 1 bracing frame to the outside of the tower with claws outwards.

9

Fit two guardrail frames and lock. Fit two bracing frames and one plain platform the opposite side of the ladder on the 15th rung. Then remove the horizontal brace from inside the platform and place on the lower rung.

10

Fit 1 trapdoor platform above the ladder on the 15th rung to form the working platform and fit toeboards to complete the build. For towers of different heights see separate section below.

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 caster 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 casters and stabilisers are in firm contact with the ground.
- Check tower is vertical (spirit level) and adjust legs as required.
- Reapply the caster brakes.

Safe Working Loads and Working Heights (WAHR)

The safe working load at each level of platform is 360Kg 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 360Kg 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.
- Braces are 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.

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, with the exception of - 2 diagonal braces are used per extension set, rather than 4. See attached figure for bracing details.

Single Width

Towers Above 4m

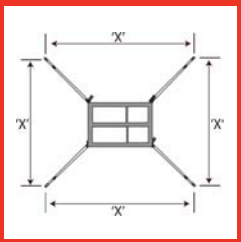
To build towers with platform heights greater than 4m, build as shown up to step 8. Repeat steps 7 and 8 until desired height is reached. Finish building the tower by completing steps 9 and 10.

Towers with "uneven" platform heights (3m, 5m, 7m etc)

Build as shown up to step 6 (3m platform) or step 8 (5m). Install 1m frames and guardrails using the 3T method described in step 6. Install platforms at working level and guard using guardrail frames and braces. See section 1 for exploded view of the assembly.

5m Platform

STABILISERS



Lightly tighten the upper clamps above the fourth 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.

Span400 ladder frame double width towers 2m, 2.5m and 3m length to BS 1139 incorporating EN 1004 and												
Platform Height in Metres		2.1	3.4	4.2	5.4	6.3	7.5	8.3	9.6	10.4	11.6	12.5
Platform Height in Feet		6'11"	11'0"	13'9"	17'10"	20'6"	24'7"	27'4"	31'5"	34'1"	38'2"	40'11"
Number of Rungs to Platform		5	8	10	13	15	18	20	23	25	28	30
Tower Weight in Kg (2m length)		118	153	166	189	212	256	266	279	325	334	379
Tower Weight in Kg (2.5m length)		107	171	184	210	236	286	297	342	362	409	423
Tower Weight in Kg (3m length)		300	186	200	228	257	312	324	375	394	448	461
NB: Quoted platform heights have 6" extension on adjustable legs for levelling that could be increased or reduced												
Description	Weight (kg)											
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	4	6	8	9	12	12	15	16	18	19
Horizonal Brace	1.7/2.0/2.4	1	3	4	6	7	9	10	12	13	15	16
Trapdoor Platform	14.1/17.5/20.0	1	2	2	2	3	4	4	5	5	6	6
Standard Platform	13.8/17.2/19.7	1	1	1	1	1	1	1	1	1	1	1
Toeboard Set	8.7/11.5/14.4	1	1	1	1	1	1	1	1	1	1	1
Guardrail Frame	4.0	2	2	2	2	2	2	2	2	2	2	2
Bracing Frame	3.8/4.4/5.2	2	3	3	4	4	5	5	6	6	8	8
5-rung Upper Frame	9.3	1	1	2	2	3	3	4	4	5	5	6
5-rung Uadder Frame	12.6	1	1	2	2	3	3	4	4	5	5	6
3-rung Upper Frame	5.8		1		1		1		1		1	
3-rung Ladder Frame	7.2		1		1		1		1		1	
Stabiliser (50430)	5.2		4	4	4	4						
Large Stabilisers (9090)	6.8						4	4	4	4	4	4

Span400 ladder frame single width towers 2m, 2.5m and 3m length to BS 1139 incorporating EN 1004 and WAHR								
Platform Height in Metres		2.1	3.4	4.2	5.4	6.3	7.5	8.3
Platform Height in Feet		6'11"	11'0"	13'9"	17'10"	20'6"	24'7"	27'4"
Number of Rungs to Platform		5	8	10	13	15	18	20
Tower Weight in Kg (2m length)		70	127	134	170	178	213	227
Tower Weight in Kg (2.5m length)		78	140	147	188	196	237	251
Tower Weight in Kg (3m length)		84	151	158	204	212	257	271
NB: Quoted platform heights have 6" extension on adjustable legs for levelling that could be increased or reduced								
Description	Weight (kg)							
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	2	4	4	6	6	8	8
Horizonal Brace	1.7/2.0/2.4	1	3	3	3	3	3	3
Trapdoor Platform	14.1/17.5/20.0	1	2	2	3	3	4	4
Toeboard Set	6.8/8.4/9.8	1	1	1	1	1	1	1
Guardrail Frame	2.7	2	2	2	2	2	2	2
Bracing Frame	3.8/4.4/5.2	2	2	4	6	6	8	8
5-rung Upper Frame	7.3	1	1	2	2	3	3	4
5-rung Ladder Frame	10.6	1	1	2	2	3	3	4
3-rung Upper Frame	4.5		1		1		1	
3-rung Ladder Frame	5.9		1		1		1	
Stabiliser (50430)	5.2		4	4	4	4		
Large Stabilisers (9090)	6.8						4	4

USAGE ADVICE

- We recommend a minimum of two people to assemble, dismantle and move the platform 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.

INSTANT UPRIGHT

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