# CLIMALLOY

ITEM NO 80-010.

## ALUMINIUM TOWERS 'STEP' & 'SPAN TECHNICAL SPECIFICATION SHEETS

## COMPONENT BREAKDOWN & ERECTION GUIDE
## CLIMALLOY OFFERS ALL THESE FEATURES

* OUTSTANDING STRENGTH
* OUTSTANDING SAFETY
* ALL TO B.S. 1139 UNDER B.S. 5750 QUALITY SYSTEM
* OUTSTANDING VERSATILITY — 2 WIDTHS — 3 LENGTHS
* LADDER/STAIRWAY OPTIONS

B.S. 1139

## SPAN TOWER COMPONENT GUIDE

| |  Castor & Leg |  6 Rung Frame |  3 Rung Frame |  Guardrail Frame |  Trap Platform | |  Fixed Platform |  Horizontal Brace |  Diagonal Brace |  Toe Board Length |  Toe Board Width | Stabilizers/ Outriggers (see p. 6 for requirements) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WIDTH/LENGTH OPTIONS 2 Widths (2'6"(SW) or 4'6"(DW)) 3 Lengths 6'8' or 70' | | | | | S/W 2'6" | D/W 4'6" | D/W 4'6" | | | | | S/W 2'6" | D/W 4'6" |
| **HEIGHT 1.33m (4'4")** | 4 | — | 2 | — | 1 | 1 | 1 | 2 | 2 | — | — | | |
| **2.46m (8'1")** | 4 | 2 | — | 2 | 1 | 1 | 1 | 4 | 4 | 2 | 2 | ✓ | |
| **3.58m (11'9")** | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 6 | 2 | 2 | ✓ | |
| **4.74m (15'7")** | 4 | 4 | — | 2 | 1 | 1 | 1 | 4 | 8 | 2 | 2 | ✓ | ✓ |
| **5.83m (19'2")** | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 4 | 10 | 2 | 2 | ✓ | ✓ |
| **7.02 (23'1")** | 4 | 6 | — | 2 | 1 | 1 | 1 | 4 | 12 | 2 | 2 | ✓ | ✓ |
| **8.15 (26'9")** | 4 | 6 | 2 | 2 | 1 | 1 | 1 | 4 | 14 | 2 | 2 | ✓ | ✓ |
| **9.30m (30'6")** | 4 | 8 | — | 2 | 2 | 1 | 2 | 8 | 16 | 2 | 2 | ✓ | ✓ |
| **10.42m (34'10")** | 4 | 8 | 2 | 2 | 2 | 1 | 2 | 8 | 18 | 2 | 2 | ✓ | ✓ |
| **11.58m (37'10")** | 4 | 10 | — | 2 | 2 | 1 | 2 | 8 | 20 | 2 | 2 | ✓ | ✓ |
| **12.70m (41'8")** | 4 | 10 | 2 | 2 | 2 | 1 | 2 | 8 | 22 | 2 | 2 | ✓ | ✓ |
| **13.86m (45'8")** | 4 | 12 | — | 2 | 2 | 1 | 2 | 8 | 24 | 2 | 2 | ✓ | ✓ |
| ***15.80m (49'2")** | 4 | 12 | 2 | 2 | | 1 | 2 | 8 | 26 | 2 | 2 | | ✓ |

* D/W only.

CLIMALLOY

THE SUPERIOR ALUMINIUM TOWER

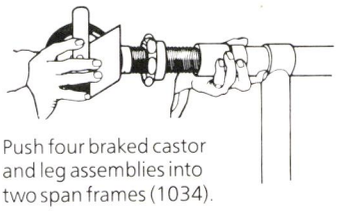
*See next page showing inclined ladders.*

*See pages 5/6 showing how the stabilizers and outriggers should be used.*

# Instructions for SPAN TOWER erection

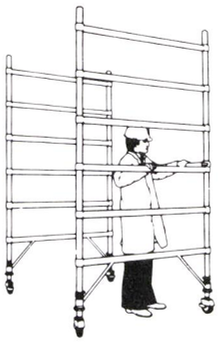
The components overleaf are for a 1.8 (6ft.) Climalloy span tower. The following components should be substituted for 2.5m (8ft.) and 3.0m (10ft.) towers.

| | 1.8m (6ft.) | 2.5m (8ft.) | 3.0m (10ft.) |
|---|---|---|---|
| Horizontal Brace | 1073 (red) | 1076 (green) | 1078 (indigo) |
| Diagonal Brace | 1074 (orange) | 1077 (blue) | 1079 (clear) |
| Platform | 1051 | 1052 | 1053 |
| Trap Platform | 1208 | 1209 | 1210 |
| Toe Board | 1127 | 1144 | 1145 |

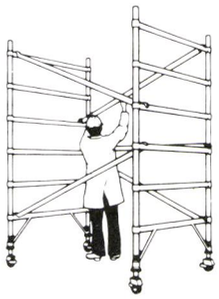


**1** Push four braked castor and leg assemblies into two span frames (1034).

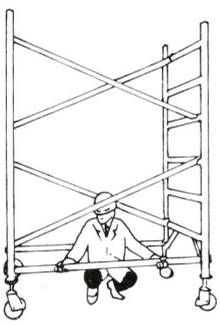
**2** Ensure castors are locked. Fit temporary brace (1073 — red) to first span frame.



**3** Erect second span frame.

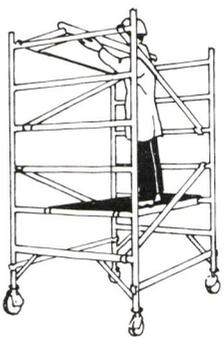


**4** Fit four diagonal braces (1074 — orange) to two span frames, from first to third rungs and from fourth to sixth rungs, front to back.

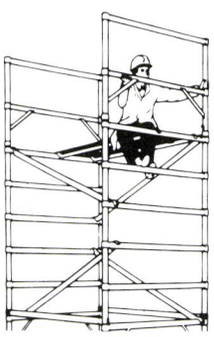


**5** Fit foot brace (1073) and move temporary brace to foot tie position below bottom rung of frame. Adjust castors for level, check that brakes are on and adjustable legs locked. If stabilizers/ outriggers are required fit now.
See pages 5/6.

**6** Install one platform (1051) on second horizontal members as a working platform.



**7** Using this platform, fit one platform board (1051) to top of frames. Continue erection to desired height ensuring that platforms are moved as erection progresses. Always ensure that stabilizers/outriggers are fixed before height limit is exceeded — see notes overleaf.



**8** Erect guard rail frames (1045).

**9** Fit trap platform board.

**10** Fit two horizontal braces (1073) between two guard rail frames.

**11** Fit toe boards (1124 & 1127).

## INSTRUCTION FOR SPAN TOWER SINGLE WIDTH ERECTION

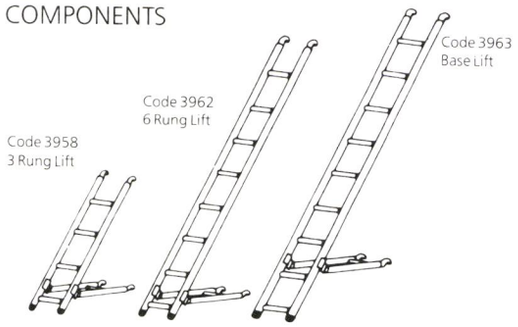
The erection of single width span towers follows exactly the same procedure for that of double width span towers except that only two diagonal braces (1074 — orange) can be used for each set of spant frames for single width towers up to 4.00m (13'0''). However, four diagonal braces per set of span frames are recommended.

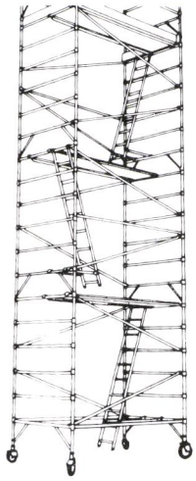
SEE PAGE 6 FOR MAXIMUM SAFE WORKING HEIGHT.

**The preferred method of ladder access for aluminium towers as stated by the Health and Safety Executive is by inclined ladders. Stephens & Carter offer two systems.**

## 70° Clip-in Ladders

COMPONENTS



PLATFORMS PER LIFT

| | 1.8m | 2.5M | 3.0m |
|---|---|---|---|
| D/W FULL DECK | 1051C 1208C | 1052C 1209C | 1053C 1210C |
| D/W HALF DECK | 1051C | 1052C | 1053C |
| S/W | 1208C | 1209C | 1210C |

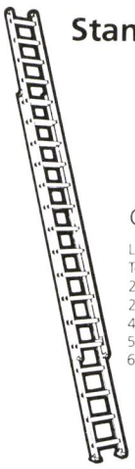
**NOTES ON ERECTION**

BRACING

Diagonal bracing should be as per standard erection guide.

Handrailing and toe boarding should be erected from standard components to comply with current regulations.

## Standard 'D' Rung Ladder & patented fixings



COMPONENTS

LADDERS

| Tower Height/m | |
|---|---|
| 2 | Code 825 |
| 2·3 | Code 3364 |
| 4·5.5 | Code 3365 |
| 5·7 | Code 3366 |
| 6·9 | 3367 |

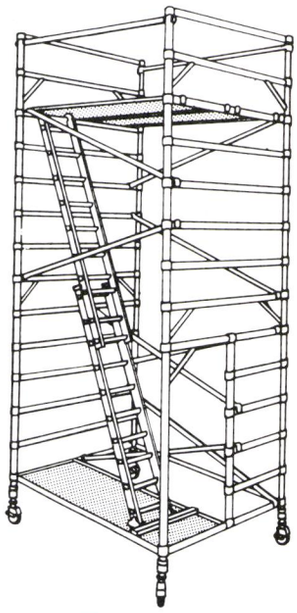
STANDARD PLATFORM

| | |
|---|---|
| 1.8m | Code 1051 |
| 2.5m | Code 1052 |
| 3.0m | Code 1053 |

PLATFORM LADDER STOP
Code 3369

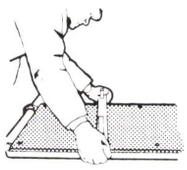
Erection as per Climalloy span tower erection guide except for the bottom lift having one portal frame.

PORTAL FRAME
Code 2858B



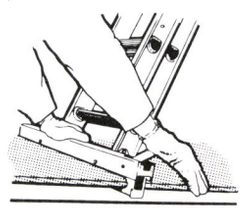
**1** A standard platform is then placed on the lowest rungs of the bottom frames.

**2** The ladder stop is then positioned on the platform.



**3** The ladder can then be positioned in the tower by placing the ladder on the lower platform against the ladder stop and hooking the top of the ladder to the top of the frame rung.

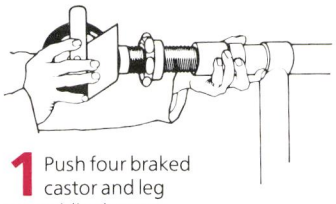
**4** Finally ensure ladder is at the correct angle and lock platform stop in place.



# STEP TOWER COMPONENT GUIDE

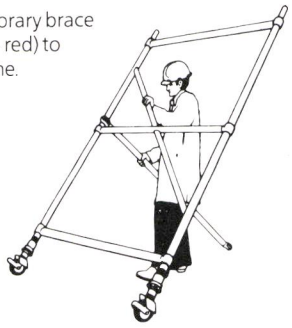
| Height | Castor & Leg | Step Frame D/W | Guardrail Frame D/W | Swing Platform | Fixed Platform | Clip-in Stairway | Horizontal Brace | Bannister Brace | Top Bannister Brace | Toe Board Length | Toe Boards Width D/W | Stabilizers/ Outriggers (see p.6 for requirements) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.29m (7'6") | 4 | 2 | 2 | 1 | 1 | 1 | 5 | — | 2 | 2 | 2 | |
| 4.39m (14'5") | 4 | 4 | 2 | 1 | 2 | 2 | 6 | 2 | 1 | 2 | 2 | ✓ |
| 6.49m (21'3") | 4 | 6 | 2 | 1 | 3 | 3 | 7 | 3 | 1 | 2 | 2 | ✓ |
| 8.59m (28'2") | 4 | 8 | 2 | 1 | 4 | 4 | 8 | 4 | 1 | 2 | 2 | ✓ |
| 10.69m (35'0") | 4 | 10 | 2 | 1 | 5 | 5 | 9 | 9 | 1 | 2 | 2 | ✓ |
| 12.79m (41'10") | 4 | 12 | 2 | 1 | 6 | 6 | 10 | 11 | 1 | 2 | 2 | ✓ |
| 14.89m (48'8") | 4 | 14 | 2 | 1 | 7 | 7 | 11 | 13 | 1 | 2 | 2 | ✓ |

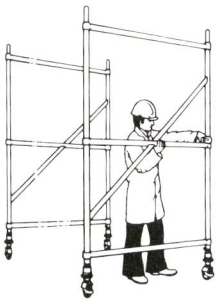
# Instructions for STEP TOWER erection



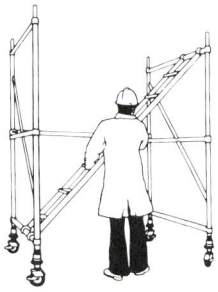
**1** Push four braked castor and leg assemblies into two step frames (1028).

**2** Fit temporary brace (1073 — red) to first step frame.

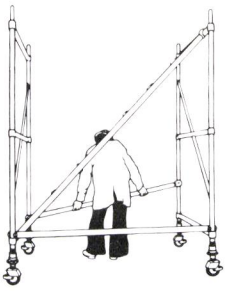




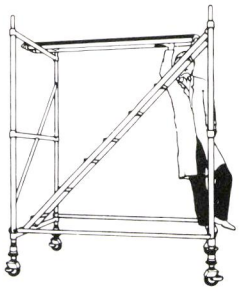
**3** Erect second step frame.



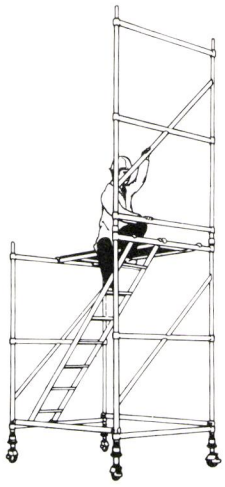
**4** Fit ladder (1070) between first two step frames. Adjust castors for level, check that wheel brakes are on and adjustable legs locked.



**5** Fit foot braces (1073 — red).

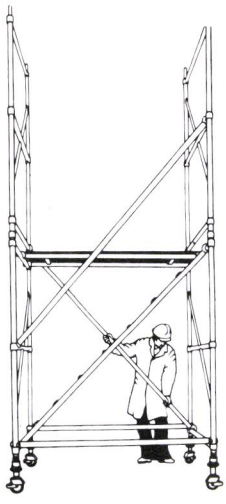


**6** Fit first platform (1051), in position as shown.

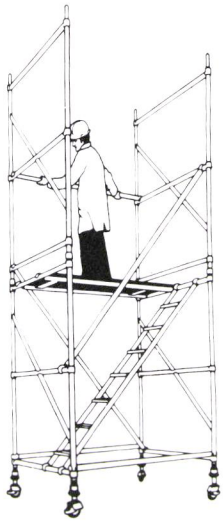


**7** Erect third step frame and lock into position.

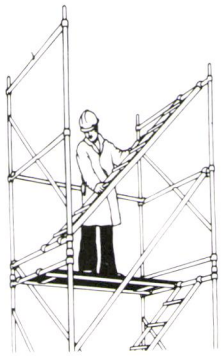
**8** Fit bannister brace (1075 — yellow) erect fourth step frame and lock into position.



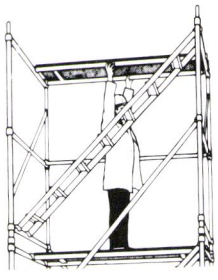
**9** Fit diagonal brace (1075 — yellow) to ensure stability of lower frame. Tower is now fully interlocked between frame sections. (For towers of 5 lifts or more this bracing is required in all lifts).



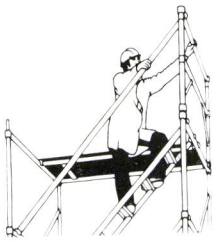
**10** Fit horizontal brace (1073 — red) between third and fourth frames.



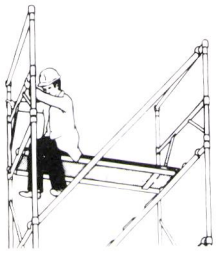
**11** Fit second ladder.



**12** Fit second platform. If stabilizers/outriggers are required, fit now. See pages 5/6.

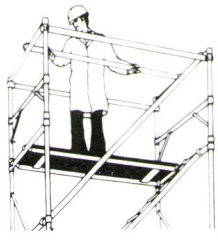


**13** Fit first guard rail, lock into position (1045) and fit bannister brace (1170 — black).

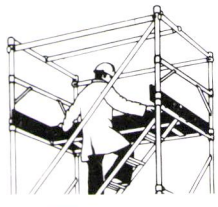


**14** Fit second guard rail and lock into position.

**15** Fit two horizontal braces (1073 — red) between two guard rails.



**16** Fit centre horizontal brace (1073 — red) between two guard rails.



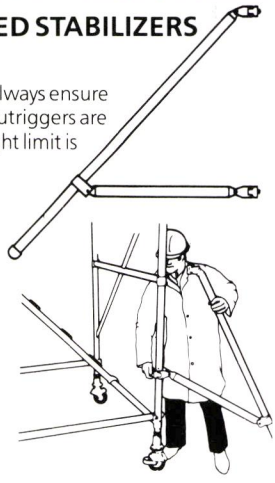
**17** Fit toe boards (1124 & 1127) around working platform. Should a fully decked platform be required, this can be achieved by using a standard swing-over platform.

SEE PAGE 6 FOR MAXIMUM SAFE WORKING HEIGHT.

SEE PAGE 6 FOR MAXIMUM SAFE WORKING HEIGHT.

## USE OF FIXED STABILIZERS

(Part No. 1090) always ensure that stabilizers/outriggers are fixed before height limit is exceeded.

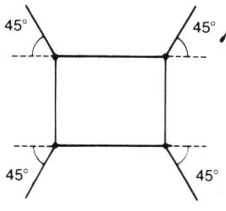


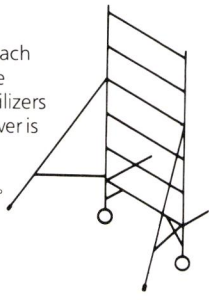
The fixed stabilizer is first coupled by its lower connection.



Then make the top connection, ensuring that the rubber foot is pushed firmly on to the ground.

Four stabilizers must be used per tower, one at each corner ensuring that the angle between the stabilizers and the plane of the tower is 45°.

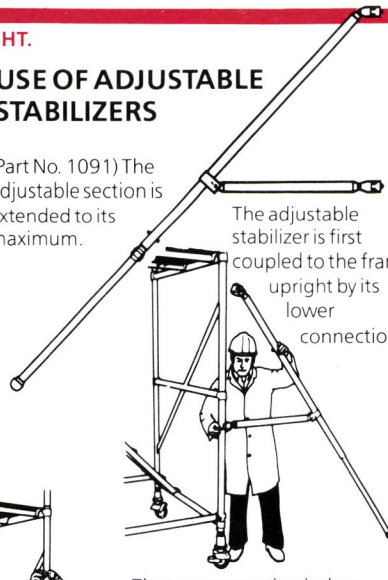


**NOTE:** If towers are to be moved, we recommend the use of mobile outriggers (see below). If stabilizers have to be used, tower heights should be reduced before they are moved to not more than 2/3rds their maximum platform heights. After moving a tower, reposition and check stabilizers to regain ground contact.

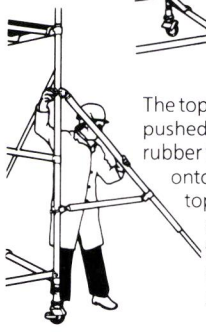
## USE OF ADJUSTABLE STABILIZERS

(Part No. 1091) The adjustable section is extended to its maximum.

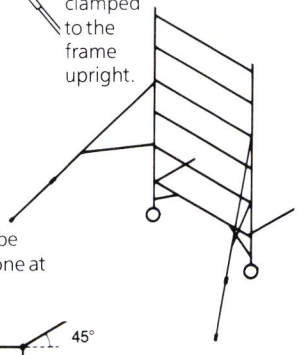


The adjustable stabilizer is first coupled to the frame upright by its lower connection.

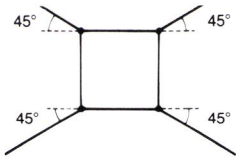




The top connection is then pushed downwards until the rubber foot is pushed firmly onto the ground and the top coupling is then clamped to the frame upright.



Four adjustable stabilizers must be used per tower one at each corner.



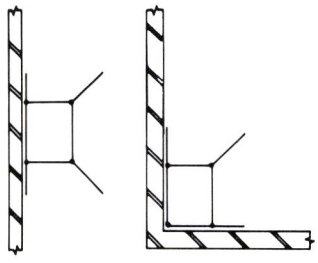

ensuring that the angle between the stabilizers and the plane of the tower is 45°.

**NOTE:** If towers are to be moved we recommend the use of mobile outriggers (see overleaf). If stabilizers have to be used, tower heights should be reduced before they are moved to not more than 2/3rds their maximum platform heights.

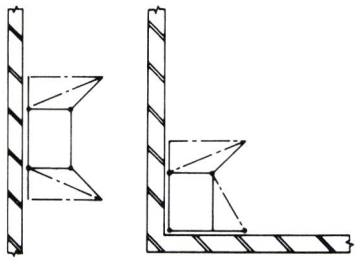
# Instructions for use of STABILISERS and OUTRIGGERS

## USE OF STABILIZERS AND OUTRIGGERS AGAINST WALLS AND IN CORNERS

When a tower fitted with fixed or adjustable stabilizers is to be used against a wall or in a corner, the stabilizers must be used in one or more of the following configurations:

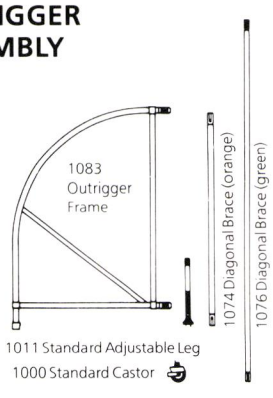


Where outriggers or jumbo outriggers are fitted, as detailed overleaf, they must be used in one of the following ways if the tower has to be positioned against a wall or in a corner.

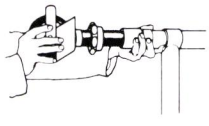


If circumstances require you to deviate from these standard stabilizer/outrigger configurations, you are advised to contact your nearest Stephens & Carter Depot and obtain the advice of our design engineers. This advice is normally given without any charge.

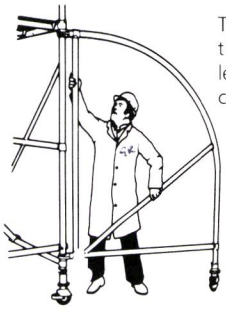
## USE OF ROLLING OUTRIGGER ASSEMBLY



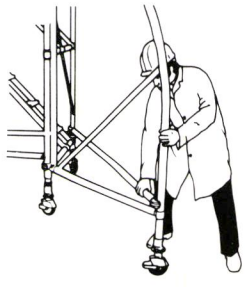

Always ensure that outriggers/stabilizers are fixed before the height limit is exceeded.



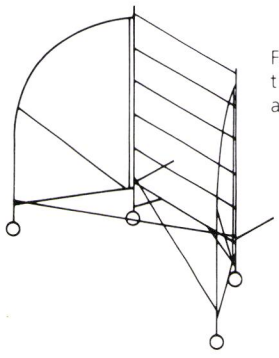
Firstly, push the braked castor and leg assembly into the foot of the outrigger frame.



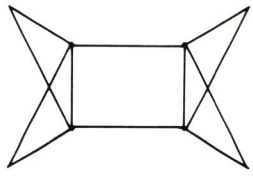
Then clip the outrigger on to the frame upright and adjust leg assembly so that the castor is securely on the ground.



Finally, clip diagonal braces into position using 1074 braces (orange) for 762mm (2'6") wide frames or 1076 (green) for 1372mm (4'6") wide frames. The braces should reach from one upright to the outer edge of the outrigger frame on the adjacent upright.



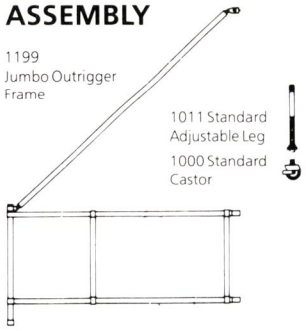
Four outrigger assemblies should be used so that there is one on each corner, giving an appearance on plan of



**NOTE:** After moving a tower reposition and check outriggers to regain ground contact.

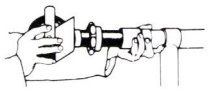
SEE PAGE 6 FOR MAXIMUM SAFE WORKING HEIGHT.

## USE OF JUMBO OUTRIGGER ASSEMBLY

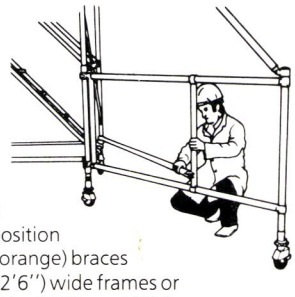




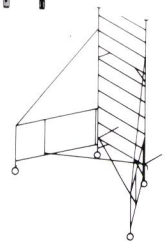
Firstly, push the braked castor and leg assembly into the foot of the outrigger frame.

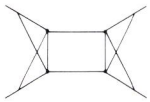


Then clip the outrigger on to the frame upright, connect the top fixing and adjust leg assembly so that the castor is firmly on the ground.



Finally, clip the diagonal braces into position using 1074 (orange) braces for 762mm (2'6") wide frames or 1076 (green) for 1372mm (4'6") wide frames. The braces should reach from one upright to the centre upright of the outrigger frame on the adjacent upright.





**NOTE:** After moving a tower reposition and check jumbo outriggers to regian ground contact.

Four outrigger assemblies should be used so that there is one on each corner, giving an appearance on plan of

**SEE BELOW FOR SAFE WORKING HEIGHTS.**

## IMPORTANT NOTES

### DOUBLE WIDTH AND STEP TOWERS

The height of free-standing towers should not exceed 3.70m (12'2") unless stabilizers or outriggers are used.

If **FIXED STABILIZERS** are used, the maximum platform height should not exceed
8.70m (28'6") externally
10.10m (33'2") internally

If **ADJUSTABLE STABILIZERS** are used, the maximum platform height should not exceed
10.44m (34'3") externally
12.72m (41'9") internally

If **ROLLING OUTRIGGERS** are used the maximum platform height should not exceed
9.45m (31'0") externally
11.73m (38'5") internally

If **JUMBO OUTRIGGERS** are used, the maximum platform height should not exceed
12.87m (42'3") externally
15.15m (49'7") internally

If the tower is not free-standing but tied-in to a building, the proper Climalloy doubles (part no. 1200) or swivels (part no. 1232) should be used. The side to be connected to the tower is marked with red paint (if it is of aluminium) or has a number 2 cast into its flap (if it is galvanised). Use in any other way will cause permanent damage to the equipment.

### SINGLE WIDTH TOWERS

The height of free-standing towers should not exceed by 2.56m (8'4") unless stabilizers or outriggers are used.

If **FIXED STABLIZERS** are used the maximum platform height should not exceed
6.90m (22'7") externally
8.00m (26'3") internally

If **ADJUSTABLE STABILIZERS** are used, the maximum platform height should not exceed
9.30m (30'5") externally
10.44m (34'3") internally

assuming that the stabilizers are fully extended. If retracted, maximum platform heights should not exceed
6.90m (22'7") externally
8.00m (26'3") internally

If **ROLLING OUTRIGGERS** are used, the maximum platform height should not exceed
8.26m (27'1") externally
9.45m (31'0") internally

If **JUMBO OUTRIGGERS** are used, the maximum platform height should not exceed
11.73m (38'6") externally
14.0m (45'11") internally

Distribution S.W.L. 272 kg (600 lbs) on a single platform. Both step and span type maximum S.W.L. per tower is 816 kg (1800 lbs).

### SAFETY NOTES

**DO NOT** — leave free-standing towers in exposed or windy conditions without securely tieing-in.

**DO NOT** — exceed recommended based width to height ratios.

**DO NOT** — overload platforms or towers.

**DO NOT** — use towers on soft ground without suitable base (i.e. scaffolding boards).

**DO NOT** — use on sloping ground without taking adequate precautions against overturning.

**Access to the working platforms should be made through the INSIDE of the tower. DO NOT lean a ladder against the outside of a tower; we recommend the use of our clip-in internal ladders.**

The 1.35m (4'5") wide span frames may be used with step frames.

The 1.8m (6'0") boards are used in both step and span.

The clip-in stairway may be used in both step and span towers 1.8m (6'0") long.

For all ten variations in tower base size, there are only seven standard brace sizes.

Legs and castors fit all end frames.

### PROVISION OF INFORMATION

Your attention is drawn to Section 6 of 'The Health & Safety at Work Act 1974'.

If you have purchased or hired any equipment for resale or rehire, you are required to provide your customer with sufficient information to ensure, as far as is reasonably practical, that the article when used correctly, is without risk to safety or health.

Therefore this erection guide should be passed on to your customer and further copies may be obtained through your local Stephens & Carter Depot.

Additional information on all aspects of the safe use of towers is covered within the PASMA Operator's Code of Practice. These are available from your local Stephens & Carter Depot.

Always insure that stabilizers/ outriggers are fixed before height limit is exceeded — see previous notes.

A ***BET*** PLANT SERVICES COMPANY

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