

CLASS 3 LIGHTWEIGHT ALUMINIUM TOWER

3 T-through the trap method

- 🏠 Double width span:
HD1004-3-8/12
- 🏠 Single width span:
HD1004-3-8/12
- 🏠 Mobile access and
working towers
To BS1139 part 3:
1994 (HD1004)
- 🏠 Maximum loading
2KN/m2
Total tower
Loading including
Self weight
1,000kgs
- 🏠 Ladder frames
- 🏠 Colour coded braces
- 🏠 Aluminium folding
toe board set
- 🏠 Class 3 loading
- 🏠 Wider frame
- 🏠 Easy erection
- 🏠 Platform fitted
with windlock



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NOTES

NOTES

INTRODUCTION

This manual provides the user with a step by step sequence of how to erect an EIGER 500 Aluminium Tower using the 3 T Method. The 3 T applies to both Single and Double Width Towers, the enclosed illustrations show erection sequences for both. The sequence is different for Even Platform Heights such as 2.20, 4.20, 6.20 mtrs etc and Odd Platform Heights such as 3.20, 5.20, 7.2 mtrs as shown. Prior to erection of the tower the user should familiarise himself fully with the contents of this document and pay particular regard to the various safety notes herein. On handover of the structure to any third party, a copy of these instructions should be passed over to ensure that they are aware of the permitted uses of the tower.

Safety Notes

Two operatives are required to erect the towers detailed in this manual.

Check that the ground upon which the tower is to be used is capable of withstanding the combined weight of the tower and any necessary loading.

The maximum safe working load per individual platform is 294kg uniformly distributed. Refer to page 17 for overall loadings.

Temporary means of gaining additional height e.g. stepladders or trestles placed on the top of the working platform must not be used.

Access to or from the working platform must be gained only via the ladder access provided. In all cases the user must climb within the structure of the tower – never by climbing the outer face of the tower.

Tower components must be raised/lowered in a controlled manner, never thrown or dropped. If using a rope, a reliable knot such as a clovehitch or timber hitch should be employed. No hoisting arrangements should be used without specific design from the manufacturer.



Where restricted ground space prohibits the attachment of stabilisers physical ties (see page 8) or ballast weights must be employed – in such circumstances the supplier should be consulted for guidance.

Prior to erection, check via component schedules that all necessary parts are available and that they are in good working order.

For further information on inspection and maintenance – contact the manufacturer direct.

Repositioning of Components

Some Towers require the repositioning of components during the erection sequence. Please refer to component repositioning table on page 17 of this instruction manual before commencing erection.

Moving the Tower

Check that the course to be followed is free of ground or overhead obstructions e.g. roof trusses, electricity cables, raised manhole/gratings etc. The tower shall be moved only by manual pushing near to its base – never by any mechanical means such as forklift/towing etc. Great care must be taken when moving a tower over uneven ground. Stabilisers should be raised a minimum amount but not greater than 12mm (1/2") to clear the ground of any obstructions and the top platform height must not exceed 2.5 times the smallest base dimension. Neither men nor materials should be present on the tower while it is being moved.

Having re-sited the tower ensure that it is still level and that the stabilisers are correctly adjusted and secure. Ensure that the castors are relocked. Check that no environmental changes influence the safe use of the tower.

SAFE WORKING LOADS!

INDIVIDUAL PLATFORMS

The maximum safe working loads per individual platform is 294Kg uniformly distributed.

WORKING LEVEL

The maximum safe working load per working level is 588Kg on Double Width Towers, 294Kg on Single Width. A working level is created by the use of 2 platforms DW, 1 Platform SW. The maximum number of working levels per tower is 2.

COMPLETE TOWER STRUCTURE

The maximum safe working load of the Tower structure including self weight and ballast is 1,000Kgs.

COMPONENT REPOSITIONING TABLE

Tower Platform Height (Mtrs)	Reposition Platform & Guardrails from 1st Rung 0.70m to working level	Reposition Platform & Guardrails from 2nd Rung 1.20m to working level	Reposition Platform & Guardrails from 3rd Rung 1.70m to working level	Reposition Platform & Guardrails from 4th Rung 2.20m to working level
2.70	✓			
4.70	✓			
5.20		✓		
5.70			✓	
6.20				✓
6.70	✓			
7.20		✓		
7.70			✓	
8.20				✓
8.70	✓			
9.20		✓		
9.70			✓	
10.20				✓
10.70	✓			
11.20		✓		
11.70			✓	
12.20				✓

SINGLE WIDTH

(SW) Ladder Frame

AVAILABLE IN TWO LENGTHS 1.8M AND 2.5M

	INTERNAL/EXTERNAL										INTERNAL USE ONLY												
	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2
WH	1.2	1.7	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2
PH	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
HATCH PLATFORM	6	6	6	6	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
HORIZONTAL BRACE	2	2	3	4	5	7	7	8	9	11	11	12	13	15	15	16	17	19	19	19	20	21	22
DIAGONAL BRACE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOEBOARD SET SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FIXED STABILISER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TELESCOPIC STABILISER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEMI JUMBO STABILISER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BALLAST Wt (kg)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TOWER WEIGHT 1.8m (kg)	73.62	76.69	100.31	106.93	137.04	145.86	150.29	159.59	166.22	175.04	179.47	184.77	191.68	198.50	205.93	213.74	221.74	230.00	238.56	247.49	256.74	266.31	276.17
TOTAL TOWER WEIGHT 2.5m (kg)	69.64	85.21	109.28	116.35	152.63	162.35	166.78	176.53	183.61	193.33	197.76	203.23	209.53	216.68	224.33	232.33	240.68	249.33	258.33	267.67	277.35	287.30	297.50

USING THE TOWER

Wind conditions have a considerable bearing on the safe use of a tower. Due regard must be paid to certain circumstances where wind conditions are magnified e.g. in long open-ended buildings, between buildings where the wind may have a funnelling effect, or where the tower is positioned close to the corner of a building. Never attach tarpaulins or other covering to a tower without first seeking the suppliers advice.

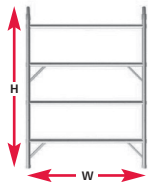
WIND DESCRIPTION	BEAUFORT SCALE	SPEED (MPH)	VISIBLE INDICATIONS	ACTION REQUIRED
Medium Breeze	4	13-18	Raises dust and loose paper, small branches move on trees	Safe to work on tower
Fresh Breeze	5	19-24	Small tree in leaf begins to sway	Cease to work on tower
Strong Breeze	6	25-31	Large branches in motion, umbrella's used with difficulty, telegraph wires whistle	Ensure that the tower is tied to a rigid structure
Gale Force	8	39-46	Twigs break off trees, progress generally impeded	Dismantle tower if storms forecast



EQUIPMENT OVERVIEW

Double Width Frames

= 1450mm Span



4 Rung

Frame - DW

Width 1450mm

Height 2000mm

Weight 9.15Kg



3 Rung

Frame - DW

Width 1450mm

Height 1500mm

Weight 6.86Kg



2 Rung

Frame - DW

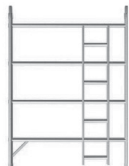
Width 1450mm

Height 1000mm

Weight 4.95Kg

Double Width Ladder Frames

= 1450mm Span



4 Rung Ladder

Frame - DW

Width 1450mm

Height 2000mm

Weight 11.8Kg



3 Rung Ladder

Frame - DW

Width 1450mm

Height 1500mm

Weight 8.85Kg



2 Rung Ladder

Frame - DW

Width 1450mm

Height 1000mm

Weight 5.9Kg

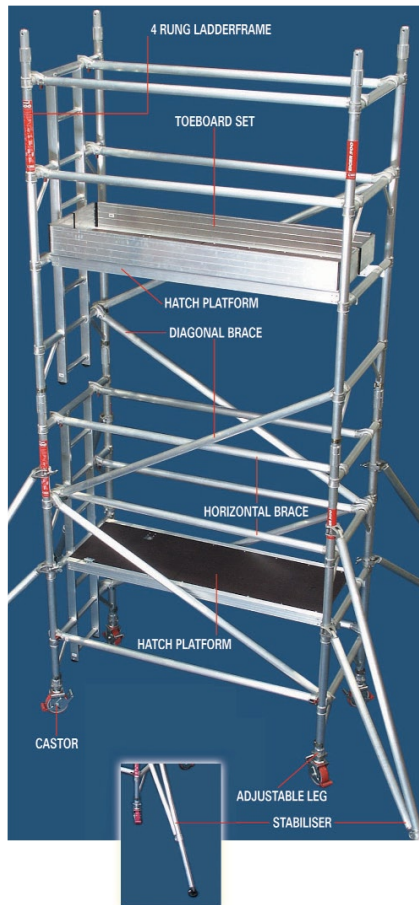
SINGLE WIDTH

(SW) Ladder Frame

AVAILABLE IN TWO LENGTHS 1.8M AND 2.5M

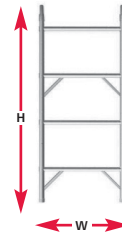
	INTERNAL/EXTERNAL														INTERNAL USE ONLY									
	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2	
WH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PH	1.2	1.7	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	
CASTOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTABLE LEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 RUNG LADDER FRAME	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
2 RUNG END FRAME	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
3 RUNG LADDER FRAME	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
3 RUNG END FRAME	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
4 RUNG LADDER FRAME	1	0	1	1	2	1	2	1	2	1	2	3	2	3	2	3	4	3	4	3	4	5	4	5
4 RUNG END FRAME	1	0	1	1	2	1	2	1	2	1	2	3	2	3	2	3	4	3	4	3	4	5	4	5

COMPONENTS
- SINGLE WIDTH



Single Width Frames

= 850mm Span



**4 Rung
Frame - SW**
Width 850mm
Height 2000mm
Weight 7.5Kg



**3 Rung
Frame - SW**
Width 850mm
Height 1500mm
Weight 5.62Kg



**2 Rung
Frame - SW**
Width 850mm
Height 1000mm
Weight 3.75Kg

Single Width Ladder Frames

= 850mm Span



**4 Rung Ladder
Frame - SW**
Width 850mm
Height 2000mm
Weight 10.2Kg



**3 Rung Ladder
Frame - SW**
Width 850mm
Height 1500mm
Weight 7.65Kg

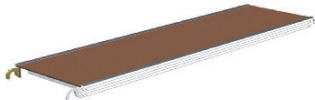


**2 Rung Ladder
Frame - SW**
Width 850mm
Height 1000mm
Weight 5.10Kg



EQUIPMENT OVERVIEW

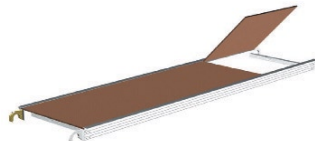
Standard Platform



Platform 1.8m	Platform 2.5m
Length 600mm	Length 600mm
Width 1800mm	Width 2500mm
Weight 13.9Kg	Weight 18.5Kg

Hatch Platform

Platform 1.8m	Platform 2.5m
Length 600mm	Length 600mm
Width 1800mm	Width 2500mm
Weight 15.04Kg	Weight 19.2Kg



Toeboard Set



DW 1.8m	SW 1.8m
Length 1800mm	Length 1800mm
Depth 150mm	Depth 150mm
Weight 6.28Kg	Weight 5.28Kg

DW 2.5m	SW 2.5m
Length 2500mm	Length 2500mm
Depth 150mm	Depth 150mm
Weight 7.22Kg	Weight 6.22Kg

Adjustable Leg and Castor

Adjustable Leg
Overall Size 740mm
Adjustment 330mm
Overall Size 1.42Kg

Locking Castor
Size 150mm
Weight 3.26Kg



STEP 3

Fit trapdoor platform onto 6th rung (3.20 mtr level) above the ladder.



STEP 4

Locate 4 rung frames and fit diagonals onto lowest rungs, attach stabilisers to each corner.



STEP 5

Access the platform and secure guardrail braces and diagonal brace at opposite end of tower.



STEP 6

Fit Toeboard assembly.

Dismantling the Eiger 500 using the 3 T Method

Remove Toeboard set and pass down the tower. Detach the furthest end of the 4 Guardrail and 1 Diagonal Brace and immediately go to protected trapdoor position on ladder frame to detach braces fully. Reverse steps 7 to 1.

ERECTION SEQUENCE

For Single Width 850 Tower

3.2 Mtr Platform Height

This erection sequence starts with 4 rung frames, showing the method for odd platform heights such as 3.20, 5.20, 7.20 etc.

Follow steps 1 to 3 in the erection guide for the Double width Tower P12

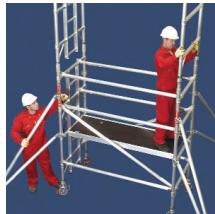


STEP 1

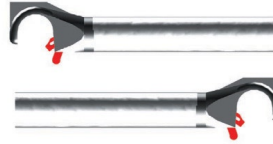
Fit trapdoor platform onto 2nd rung of 4 rung frame, attach 4 guardrail braces onto both sides of platform on 3rd and 4th rungs from the ground. Fit diagonal braces.

STEP 2

Access the tower through trapdoor platform, locate 4 rung frames and fit diagonal braces and stabilisers.



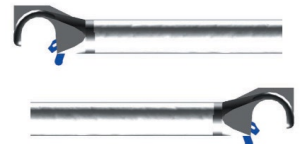
Horizontal Braces



1.8 metres
Hook Centres 1800mm
Weight 2.02Kg

2.5 metres
Hook Centres 2500mm
Weight 2.50Kg

Diagonal Braces



1.8 metres
Hook Centres 2100mm
Weight 2.02Kg

2.5 metres
Hook Centres 2700mm
Weight 2.50Kg

Stabilisers



Fixed
Max Outreach
1570mm
Weight 3.91Kg



Telescopic
Max Outreach
1950mm
Weight 4.58Kg



Semi-Jumbo
Max Outreach
2500mm
Weight 5.88Kg

EQUIPMENT OVERVIEW

Stability of Tower

Stabilisers shall always be fitted where specified, these increase the effective base area of the tower and increase its stability as a free standing structure. Best effect is obtained from the stabilisers when they are arranged in a footprint as near to a square. (See Fig. 1) When using the tower against a strong wall they may be positioned as at Fig. 2, but the wall must be at least 2/3 of the height of the top working platform. Towers to be left unattended in exposed positions should be tied to a secure structure or alternatively dismantled. Horizontal forces, such as that exerted against the tower during drilling into a building face, can generate instability in the structure and must not be used as a means of access to any adjacent structure. Towers are not designed to be suspended.

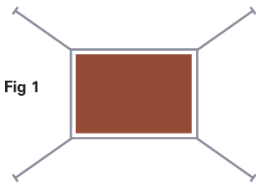


Fig 1

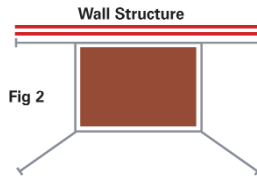


Fig 2

Installation of Stabilisers

When locating stabilisers on towers, maximum stability will be achieved by positioning at an angle of 45°. Extend stabiliser leg to maximum adjustment and ensure that the top coupler is positioned to the underside of the casting. Securely lock the top coupler before attaching the lower arm to the frame upright. Ensure that the rubber foot is in contact with the ground surface.

(DW) Ladder Frame AVAILABLE IN TWO LENGTHS 1.8M AND 2.5M

		INTERNAL/EXTERNAL																INTERNAL USE ONLY					
WH	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2
PH	1.2	1.7	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2
STANDARD PLATFORM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HATCH PLATFORM	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5
HORIZONTAL BRACE	6	6	6	6	10	10	10	10	10	10	10	14	14	14	14	14	18	18	18	18	22	22	22
DIAGONAL BRACE	2	2	3	4	5	6	7	8	9	11	11	12	13	15	15	16	17	19	19	20	21	22	23
TOEBOARD SET DW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
FIXED STABILISER	0	0	0	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TELESCOPIC STABILISER	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4
SEMI JUMBO STABILISER	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4	4
TOTAL TOWER WEIGHT 1.8m (Kg)	91.77	96.43	104.82	127.52	158.44	160.35	173.69	180.75	188.19	200.88	206.12	236.66	249.30	259.31	263.60	289.89	297.33	307.34	312.58	343.12	350.56	358.37	365.81
TOTAL TOWER WEIGHT 2.5m (Kg)	104.89	109.55	118.39	141.54	178.63	189.54	194.78	202.29	210.18	223.77	229.01	265.72	278.81	289.72	294.96	326.47	334.36	345.27	350.51	387.22	395.11	403.37	411.26

DOUBLE WIDTH

(DW) Ladder Frame

AVAILABLE IN TWO LENGTHS 1.8M AND 2.5M

		INTERNAL/EXTERNAL														INTERNAL USE ONLY							
WH	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2
PH	1.2	1.7	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2
CASTOR	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
ADJUSTABLE LEG	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2 RUNG LADDER FRAME	0	0	1	0	1	1	0	1	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1
2 RUNG END FRAME	0	2	1	0	0	1	1	0	0	1	1	0	0	1	0	1	0	1	1	0	0	1	1
3 RUNG LADDER FRAME	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
3 RUNG END FRAME	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
4 RUNG LADDER FRAME	1	0	1	1	2	1	2	2	3	2	3	3	4	3	4	4	5	4	5	5	6	5	6
4 RUNG END FRAME	1	0	1	1	2	1	2	2	3	2	3	3	4	3	4	4	5	4	5	5	6	5	6

Ballast

Where shown in the component list, ballast must be used to stabilise against overturning. Only use solid materials as ballast (ie: no loose materials) and position to avoid overloading individual components. Ballast should be supported by base of tower and securely fastened to prevent removal.

Colour Coding

Colour coded trigger assemblies allow easy identification of component sizes/brace types or horizontal/diagonal braces.

Horizontal Brace Red
Diagonal Brace Blue

Tying-in

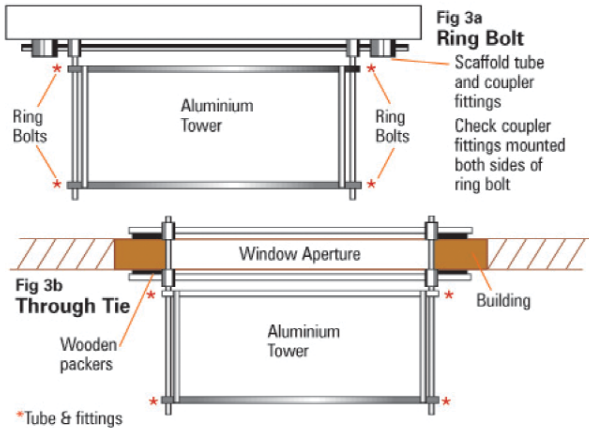
The towers in this manual are designed for use as free standing units up to heights of 8m OUTDOORS/12m INDOORS. Towers in excess of these heights, where the optimum base dimensions cannot be achieved, will need to be tied to a secure structure.

Special couplers, which will accommodate the differing diameters of scaffold tube and alloy tube, are available from your supplier. Typical tie arrangements can be found below. Manufacturers instructions should be followed where anchor bolts are to be used.



EQUIPMENT OVERVIEW

Tying-in



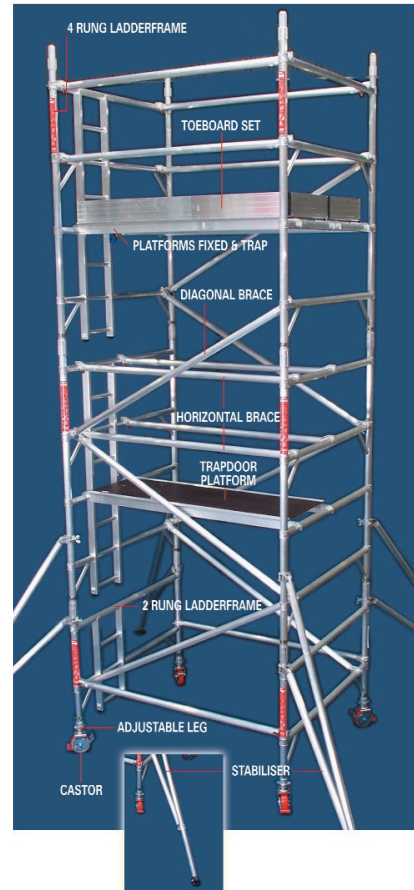
Ring and Anchor



Training

Pop-Up Products Limited are full members of the Prefabricated Aluminium Scaffolding Manufacturers Association (PASMA), an association of the UK's major manufacturers of aluminium tower systems. PASMA member companies have their equipment approved to EN 1004:2004, and therefore carry BS Kitemark, guaranteeing the user that stringent standards of design and fabrication have been met.

COMPONENTS - DOUBLE WIDTH



**STEP 9**

Climb ladder and using the trapdoor platform for protection sit with both feet on the ladder fit 4 guardrail braces onto 9th and 10th rungs to both sides of tower.

**STEP 10**

Access the platform and secure Guardrails and Diagonal brace at opposite end of tower. NOTE: If building the tower beyond the 4.20 mtr level, continue with steps 4 and 5 until desired working height is achieved, then follow step 8.

**STEP 11**

Fit Toeboard assembly.

Dismantling the Eiger 500 using the 3 T Method

Remove Toeboard set and pass down the tower. Detach the furthest end of the 4 Guardrail and 1 Diagonal Brace and immediately go to protected trapdoor position on ladder frame to detach braces fully. Reverse steps 9 to 1.

Aluminium towers are designed to be erected and dismantled by operatives lacking in intensive skills and training. Provided that the erector can interpret the basic instructions in the suppliers manual and can competently check the finished structure then no problems should arise. PASMA recognise, however, that increasingly more specific training in the use of this type of equipment is required. PASMA therefore sponsors a training course based on a format agreed by all its member companies, the content of which has been devised from their collective experience in all the industry. Hence it has great value as a training programme and is widely recognised by the Health & Safety Executive as being the industry benchmark. Further details on this programme are available on request.

ERECTION SEQUENCE For Double Width 1450 Tower

4.20 Mtr Platform Height

From the component schedules in this manual ensure that you have all the parts necessary to complete the tower and check that they are in a serviceable condition.

Some Towers require the repositioning of components during the erection sequence. Please refer to component repositioning table on page 17 of this instruction manual before commencing erection.

Ensure that the base onto which the tower will be erected is reasonably level and is capable of supporting the weight of the tower and its load.

Ensure that the interlock clips are disengaged. Two men will be needed to erect the tower in a safe manner.

**STEP 1**

Insert castor / adjustable leg assemblies into base of 2 rung ladder frame and one standard end frame, allowing approximately 75mm of extended leg for levelling. Press down firmly on breaking mechanism to lock castors.

**STEP 2**

Fit a horizontal (Red) brace onto the vertical member of one frame, resting directly onto the alloy casting at the first horizontal rung position. Ensure that the sprung trigger faces to the outside of the tower.

NB - For Single Width STEP 4 go to Page 14

**STEP 3**

Join second base frame to first ensuring brace hook again rests directly onto alloy casting. Fit second horizontal brace in corresponding position. Level around base of tower by using a spirit level, making adjustments as necessary to adjustable legs.

**STEP 4**

Locate 4 rung frames and fit diagonals onto lowest rungs, attach stabilisers to each corner.

**STEP 5**

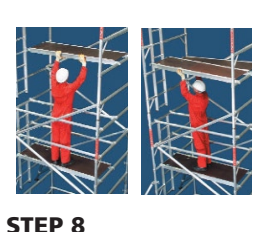
Locate trap door platform on 4th rung 2.20 mtr level above ladder.

**STEP 6**

Climb ladder and using the trap door platform for protection sit with both feet on the ladder fit 4 guardrail braces on 5th and 6th rungs above trap door to both sides of platform and secure diagonal brace. Access the platform and secure guardrails and diagonal brace at opposite end of the tower.

**STEP 7**

Fit next lift of 4 rung frames and attach diagonal braces.

**STEP 8**

If working height of tower is achieved on this frame, locate standard platform on 8th rung and slide across to opposite side of tower, locate trapdoor platform above the ladder, this is the 4.20 mtr level.