



asp

support and protect

## LADDER REPLACEMENT STAIR



User Guide

# FOREWORD

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In 2003/2004 67 people died and nearly 4000 suffered a serious injury as a result of a fall from height in the workplace.

Falls from height are the most common cause of fatal injury. The Work at Height Regulations 2005 came into effect on 6 April 2005. The Regulations will apply to all work at height where there is a risk of a fall liable to cause personal injury.

The Regulations place duties on employers, the self-employed, and any person that controls the work of others. The Regulations do not apply to the provision of paid instruction or leadership in caving or climbing by way of sport, recreation, team building or similar activities.

As part of the Regulations, duty holders must ensure:

- all work at height is properly planned and organised;
- those involved in work at height are competent;
- the risks from work at height are assessed and appropriate work equipment is selected and used;
- the risks from fragile surfaces are properly controlled; and
- equipment for work at height is properly inspected and maintained.

The Regulations include schedules giving requirements for existing places of work and means of access for work at height.

The regulations provide a simple hierarchy for managing and selecting equipment for work at height, you must:

- avoid work at height where you can;
- use work equipment or other measures to prevent falls where you cannot avoid working at height; and
- where you cannot eliminate the risk of a fall, use work equipment or other measures to minimise the distance and consequences of a fall should one occur.

The ideal means of access for any work at height is a purpose-made stair tower, but previously these have been time-consuming and thus costly to build in traditional scaffolding.

These difficulties are now overcome by the ASP ILadder Replacement Stair Range which can be used for vertical access within scaffolds without the need to construct an external stair tower.

Ladder Replacement Stair is a simple self-contained product which is easy to store packed flat and can be collected or delivered on small vehicles including vans for the smaller models. Product selection is easy, depending only on the range of lift heights required, and users have the assurance that all models, in all possible positions, are fully-compliant with regulations.

ASP Ladder Replacement stairs are classified Class B compliant to BS EN12811.

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## INTRODUCTION

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### 1.0 Introduction

Ladder Replacement Stair is a range of self-contained, pre-assembled aluminium stair units, flat packed, which automatically adjust to a wide range of lift heights. They are less than 3 standard scaffold boards wide making them ideal for use in tube and fitting scaffolds. Vitally important, Ladder Replacement Stair is fully-compliant with BS EN12811 for all possible configurations.

Guardrails are not supplied with the Ladder Replacement Stair & users are recommended to construct these from tube and fittings. If a wider stair with integrated guardrails is more appropriate for the intended use, please specify the ASP Universal Stair.

# COMPONENT RECOGNITION

## 2.0 Component Recognition



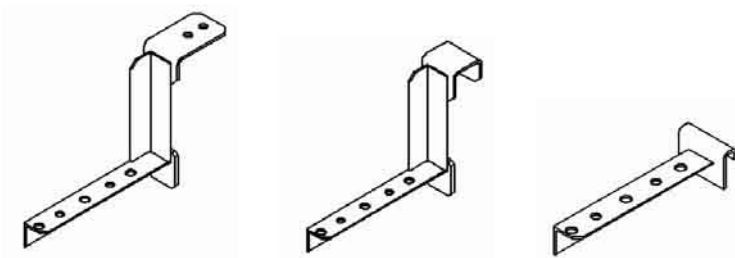
**Connectors**  
See below

**Stair body**  
2,3,6,9,12 and  
15 step models  
available

### Connectors

Supplied with tube hanger brackets 22130004 as standard.

Options available for concrete slabs, timber joists and system scaffolds.

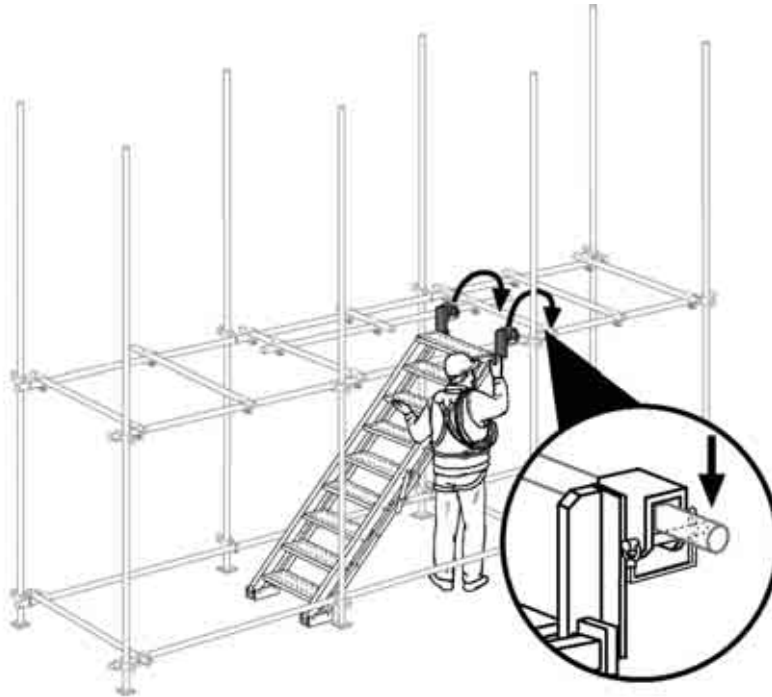


# ASSEMBLY

## 3.0 Assembly

### 3.1 Basic Assembly

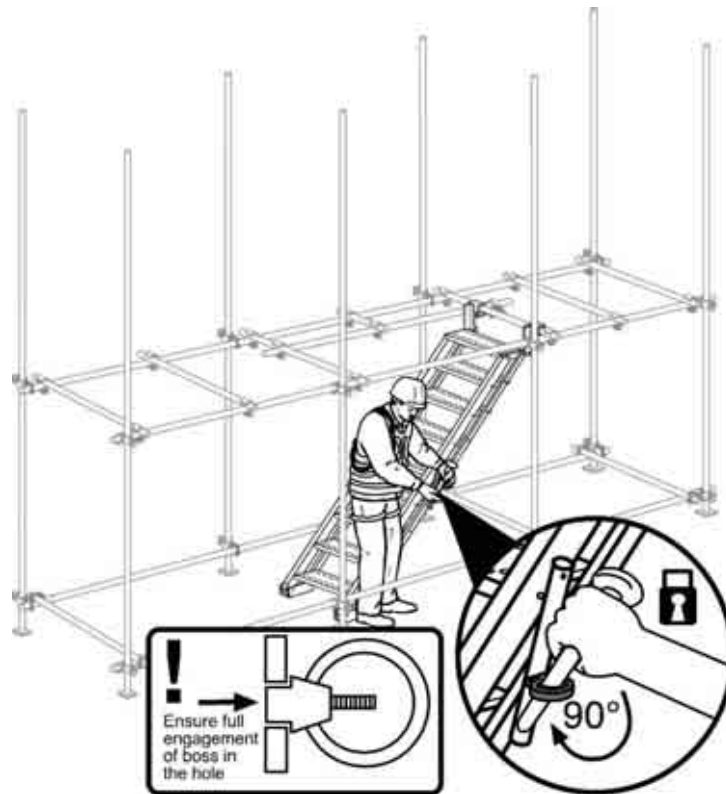
**STAGE 1 :** Connect stair to transom.



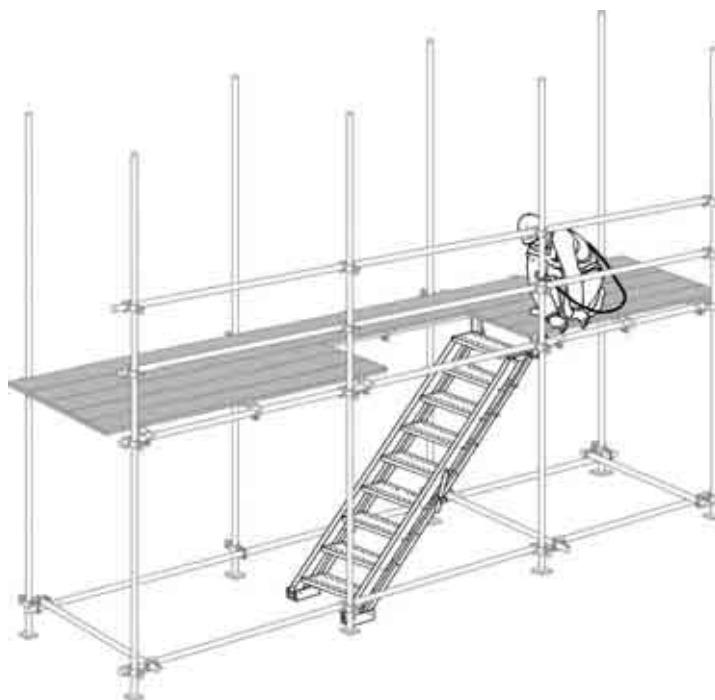
**STAGE 2 :** Grasp Treads to articulate stairs and to level treads.

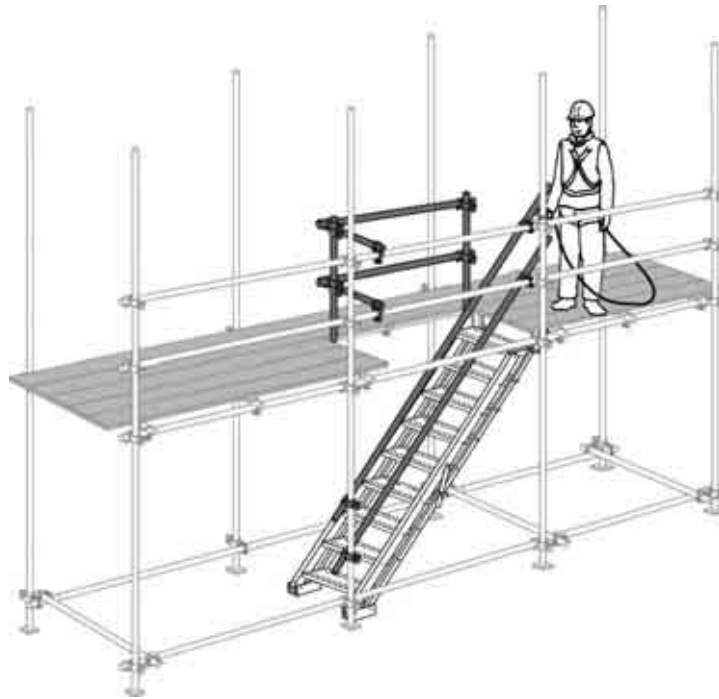


**STAGE 3 :** Using a suitable lever or podger, lock the stair eye bolts.



**STAGE 4 :** Complete boarding out the upper lift.





**STAGE 5** : Arrange suitable guardrails using tube and fittings.

**SUITABLE PPE SHOULD BE WORN DURING ALL OPERATIONS!**

# ALTERNATE HEAD CONNECTORS

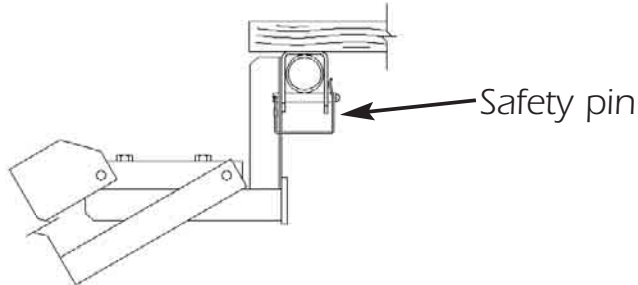
## 3.2 Alternative head connections

### 3.2.1 For connection to Scaffold tubes of diameter 48.3mm.

Use bracket Part 22130004.

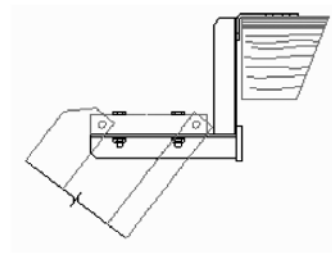
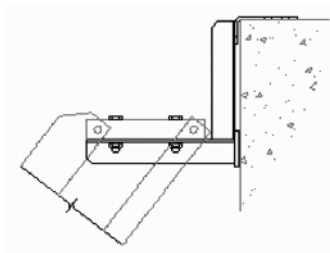
Note this is the default bracket that each stair is supplied with.

Safety pins (Part 30091270) are available as an optional extra.



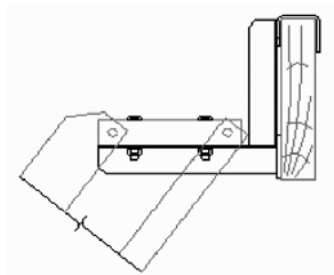
### 3.2.2 Connection to horizontal surfaces.

Use Part 22130002 fixed with bolts, screws or nails into load bearing surface. (Fixing hole diameter 12.5mm)



### 3.2.3 Connection to timber joists less than 50mm width.

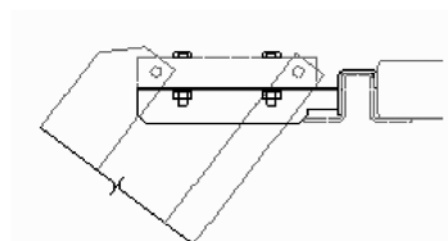
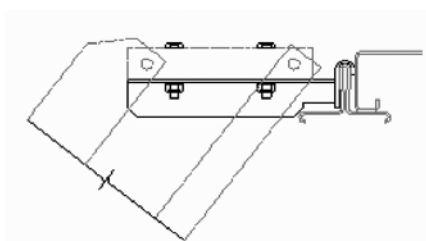
Use Part 22130004.



### 3.2.4 Connection to system scaffold transoms.

For Kwikstage batten transom use Part 22130003

For Cuplok Omega Transom use Part 22130005



# TECHNICAL DATA

## 4.0 Technical data

### 4.1 Model information

#### 4.1.1 Stair Assemblies

Part No	Model	Treads	Comment	Weight
22220000	0 LR	2	LR Brackets inclusive	11.6kg
22220001	1 LR	3		14.8kg
22220002	2 LR	6		24.3kg
22220003	3 LR	9		33.9kg
22220004	4 LR	12		43.5kg
22220005	5 LR	15		53.1kg

#### 4.1.2 Hanger Brackets

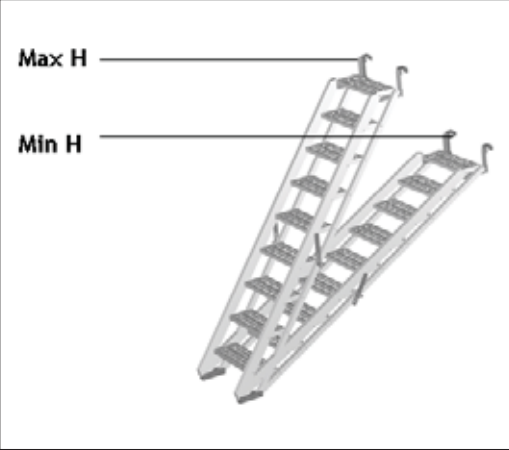
See section 3.2 above for details of bracket use.

Part No	Description	Weight
22130002	Universal Stair slab hanger (pair)	2.9kg
22130003	Universal Stair KS hanger (pair)	3.9kg
22130004	Universal Stair LR hanger (pair)	2.9kg
22130005	Universal Stair OM hanger (pair)	4.9kg

# GEOMETRY

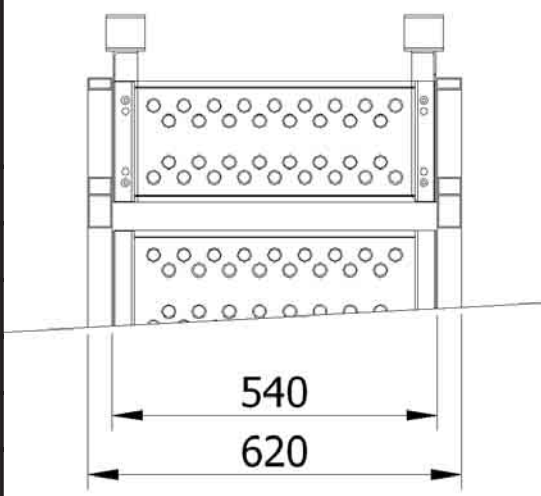
## 4.2 Model geometry

### 4.2.1 Model Application Range

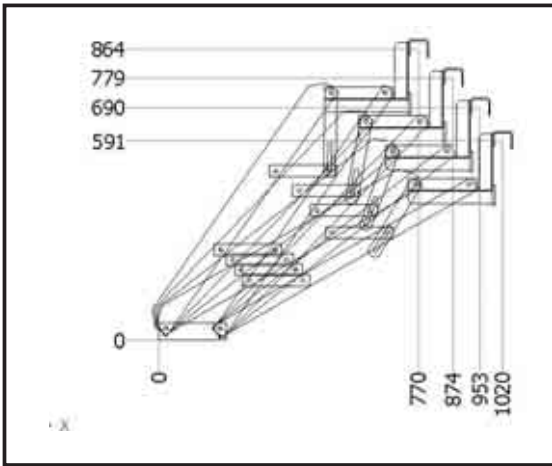
	Model Number	Treads	Application Range	
			Min H(m)	Max H(m)
	0 LR	2	0.43	0.62
	1 LR	3	0.59	0.86
	2 LR	6	1.02	1.55
	3 LR	9	1.41	2.21
	4 LR	12	1.84	2.91
	5 LR	12	2.26	3.60

Note the above table relates to application range when using hanger bracket 22130004 only.

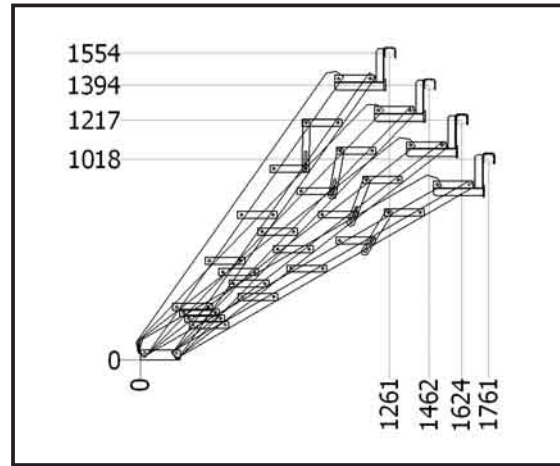
### 4.2.2 Tread details

Model Number	Number of Treads	Tread Width (m)	
0 LR	2	0.54	
1 LR	3	0.54	
2 LR	6	0.54	
3 LR	9	0.54	
4 LR	12	0.54	
5 LR	15	0.54	

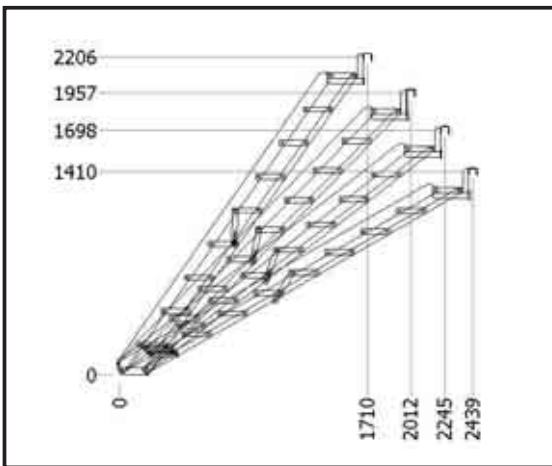
### 4.2.3 Space requirement



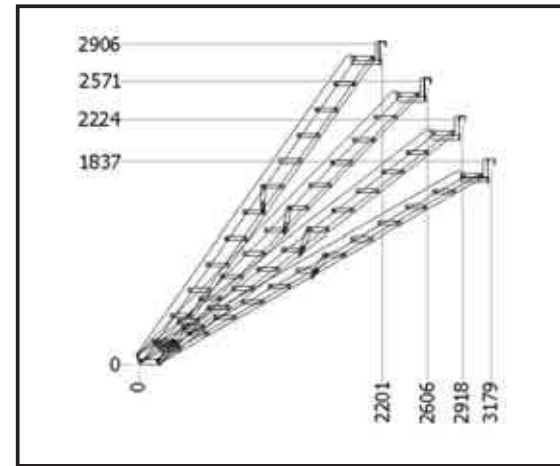
**Model 1**



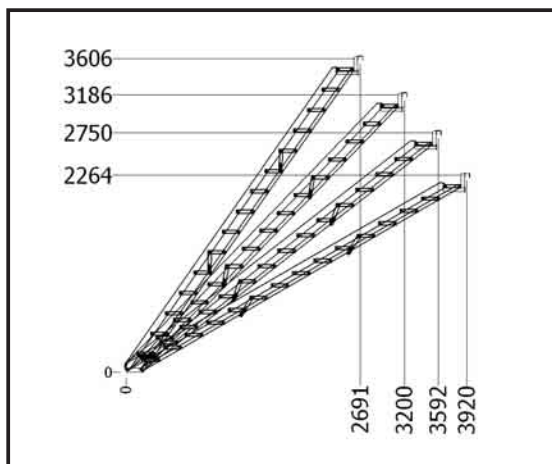
**Model 2**



**Model 3**



**Model 4**



**Model 5**

# STRUCTURAL PERFORMANCE DATA

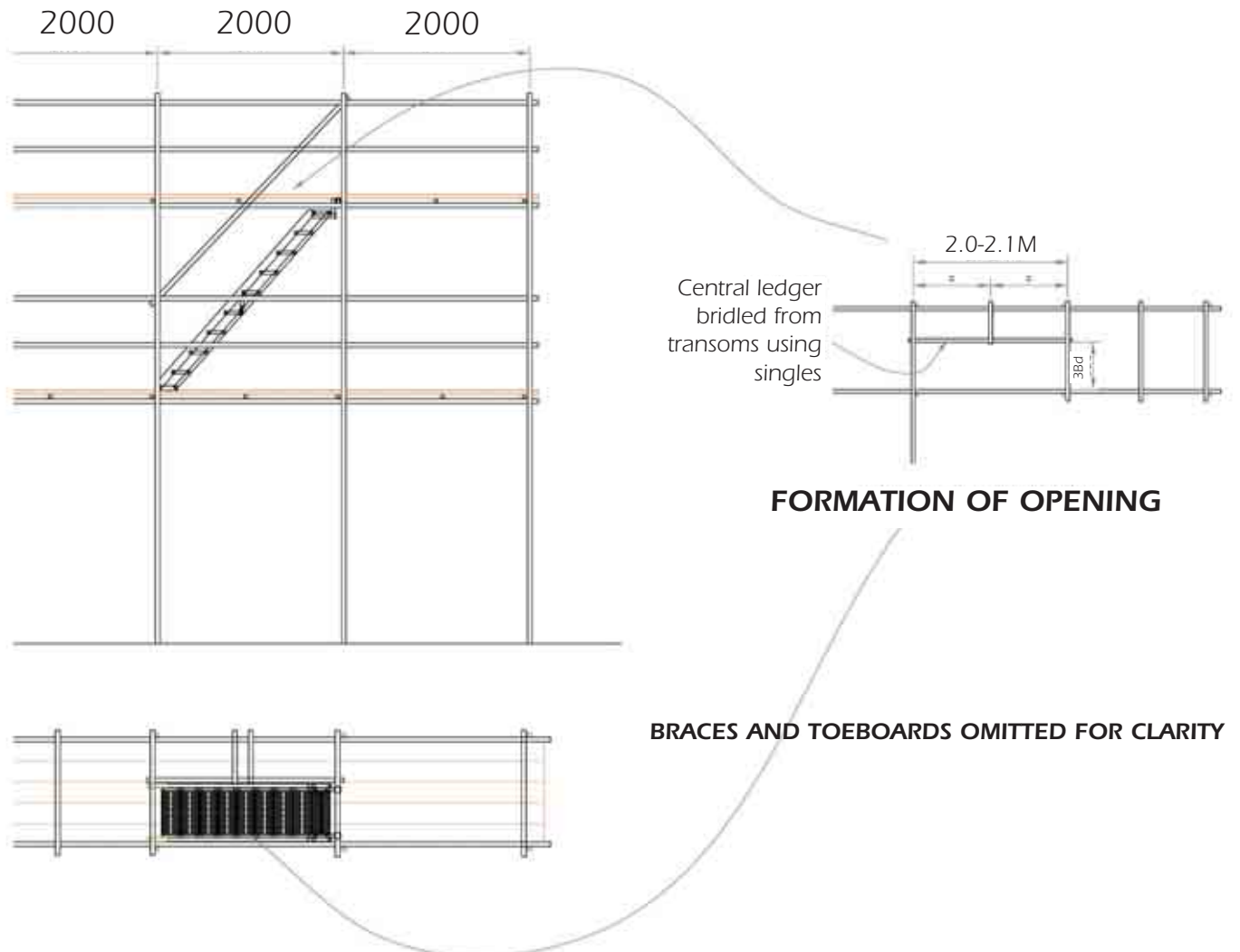
## 4.3 Structural performance data. Safe working loads.

<b>Model Number</b>	<b>Uniformly distributed load kN/m<sup>2</sup></b>	<b>Point Load kN</b>
0	>2.5	1.5
1	>2.5	1.5
2	>2.5	1.5
3	>2.5	1.5
4	>2.5	1.5
5	2.5	1.5

Note: Uniformly distributed load case assumes every tread loaded simultaneously.  
Point load case is maximum per tread.

# TYPICAL LAYOUTS

## 4.4 Typical layouts



## 4.5 Securing The Scaffold

To secure the bottom lift against unauthorised access rotate the Ladder Replacement Stair upwards and lash firmly to the transoms above



# SPECIFIC RISKS & HAZARDS

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## 5.0 Specific risks and hazards to health

### 5.1 During Installation

Appropriate PPE should be worn at all times whilst installing ASP Ladder Replacement Stairs. A minimum recommendation is leather gloves, steel toe cap boots and a hard hat.

Manual handling, lifting and placement of the Ladder Replacement Stairs requires a minimum of 2 men above Model 2.

Do not place fingers under the treads at the tread/stringer intersection whilst adjusting the stair. This gap opens and closes during adjustment prior to fixing of the locking stay.

Ensure that all guardrails and toe boards are fitted and secured at each landing position.

### 5.2 Following Installation

Keep at least one hand on a guard rail at all times whilst traversing the stairway.

Do not run entering, traversing or leaving the stairway as this will greatly increase your chances of tripping.

Ensure that the stair treads are kept free from debris and materials.

Materials are not to be stored on the stairs at any time.

Ensure that the stair treads are kept free from grease or oil spillages as this will increase the chances of slipping.

Ensure that the side mounted locking stays are firmly engaged at all times and are not tampered with.

Ensure that the hanging brackets are securely positioned and engaged. Some corrosive environments and extreme temperatures may affect the performance and durability of the alloy stairway. Contact ASP Technical helpdesk for advice if these are suspected.

## 6.0 Inspection and maintenance

### 6.1 Inspection

Inspect weekly and prior to each installation.

#### **Checklist:**

Check all bolts and nuts are in position and tight. It will be necessary to view the stair from underneath to do this.

Check for looseness of bolts.

Check all treads are free from damage.

Check all stringers are free from damage.

Check upper connection hooks and bolted fixings are secure and free from damage.

### 6.2 Maintenance

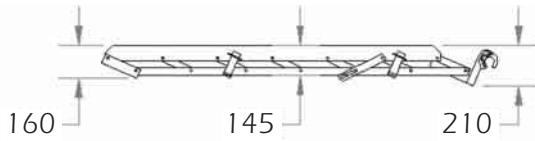
ASP Ladder Replacement stairs are a fully bolted construction and therefore any routine maintenance is straight forward using the minimum of tools.

Tools required 17mm spanner, 8mm allen key.

# DELIVERY & STORAGE

## 7.0 Delivery and storage

### 7.1 Minimum collapsed height



### 7.2 Pack details for storage and transportation

Model No	Pack Quantities	Overall pack sizes	Pack Weight (kg)
1	10		148
2	10		243
3	10		339
4	10		435
5	10		530
All packs are 730mm wide			



## **LADDER REPLACEMENT STAIR SERIES**

### **Other products in the ASP range:**

INDUSTRIAL SERIES Aluminium Beams

SPECIALIST SERIES Aluminium Beams

UBIX Temporary Roofing and Sheeting System

TRIX Temporary Roofing System

OCTAGON Scaffold System for Boards

EUROLOCK Scaffold System

UNIVERSAL Stairs

XTENDA Telescopic Transom

PREGUARD Advance Guardrail

TRISHORE Gantry Strut

Scaffolding Accessories

### **ASP Registered Design Products are available from:**

#### **Advanced Scaffold Products Ltd**

Unit 2 Bydand Lane Industrial Estate, Little Paxton, St. Neots, Cambs PE19 6EG

Telephone: 0870 609 3370 Fax: 0870 850 3307

Email: [info@asp.gb.com](mailto:info@asp.gb.com)

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