Aluminium stairs

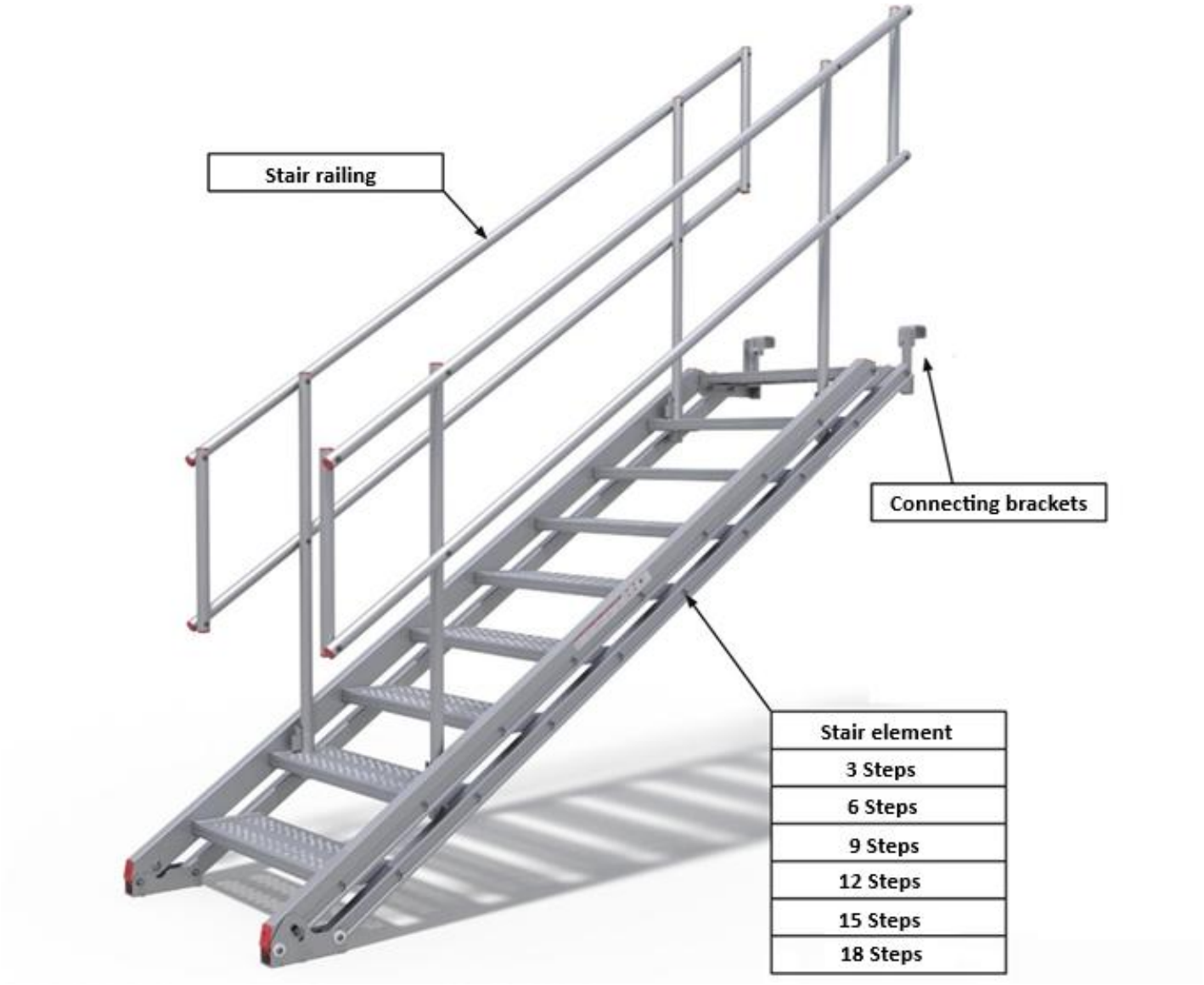
User manual

Introduction.

The Aluminium Stairis a standalone, pre-assembled, flat-packed aluminium stair unit that automatically adjusts to different lifting heights. This makes it ideal for use with tube and connector scaffolding and a variety of other applications. The Aluminium Stair meets all possible configurations to BS EN12811.

Identify parts.

Core elements



Stair Railing

The Aluminium stair railings are available in 2 lengths to match the stair element used.
Instructions on railing selection for each stair element are in 4.1 of this document.

Short stair railing	Long stair railing
	

Connection brackets

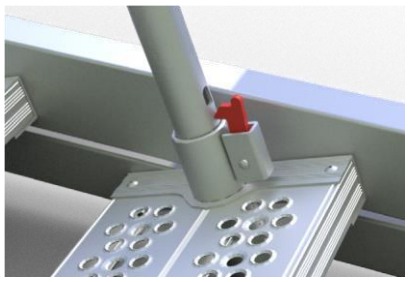
The Aluminium stairs use 2 connecting brackets. Interchangeable brackets are available when the trap is used for other applications.

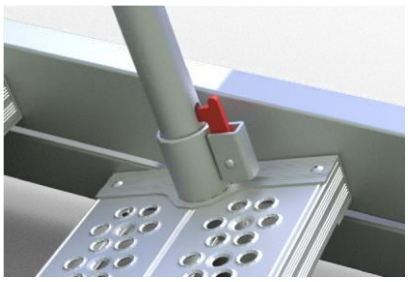
Pipe connection bracket left	Pipe connection bracket right
	
Plate connection bracket left	**Plate connection bracket right**
	

Assembly

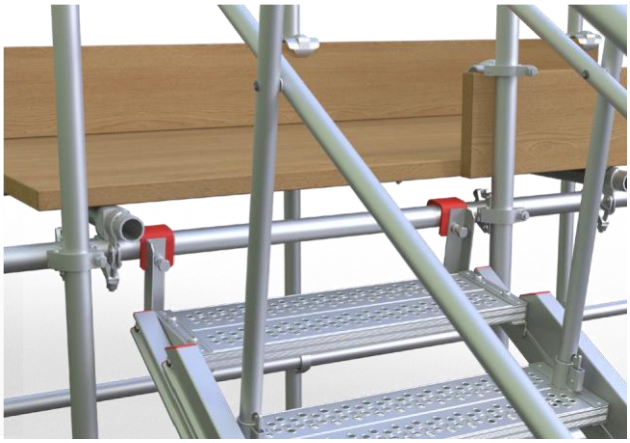
Basic installation

Step 1: Insert the stair railings into the corresponding holes. The built-in retaining springs will hold the railings in place.



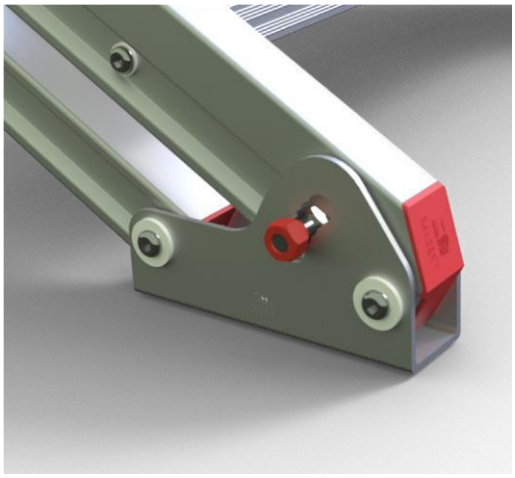


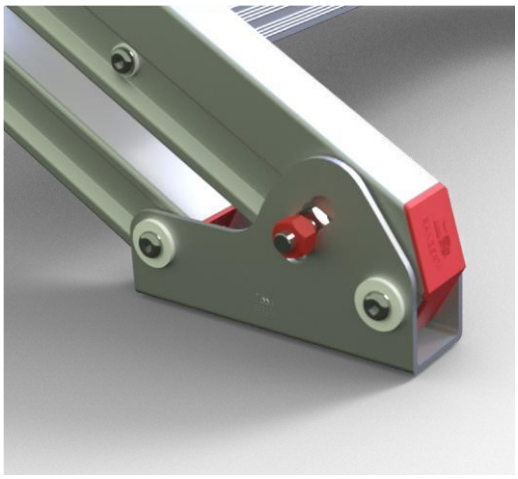
Step 2: Connect the stair element to the tube with the brackets.



Step 3: Adjust the stair railings to get the best angle and horizontal steps.

Step 4: Lock the ladder by locking the lock nut into the base plate with a standard scaffold key.



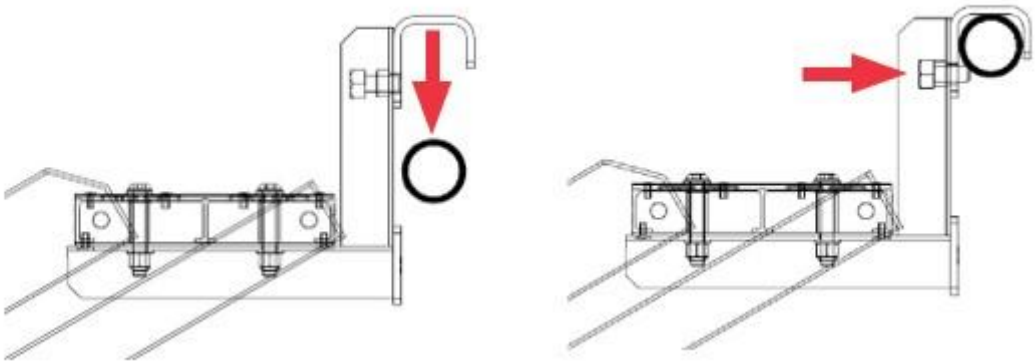


Make sure the shoulder of the nut fits into one of the pre-formed holes in the base plate

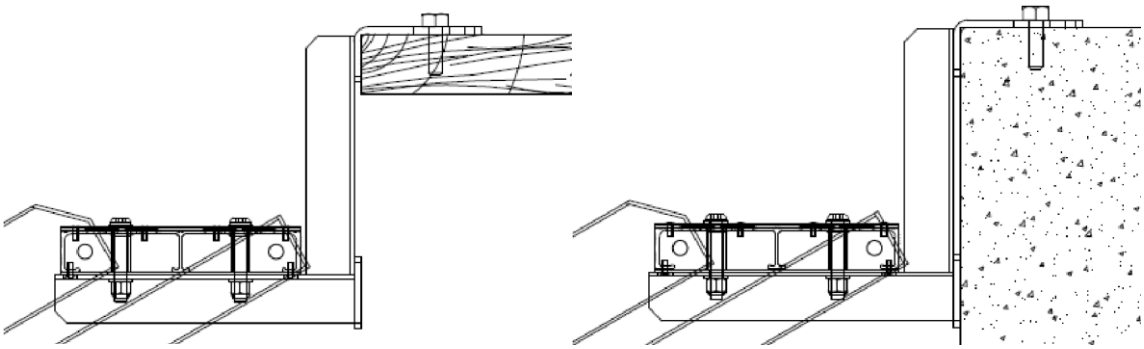
Step 5: At a safe working height, tighten the built-in anti-lift bolts on the bottom of the pipe connection brackets using a standard scaffold wrench.

Do not overtighten the anti-lift bolts.

Use the left and right tube connection brackets to attach the Aluminum ladder to 48.3 mm scaffolding tubes. The brackets can be attached to the tube with the integrated mounting bolt, preventing the ladder from being lifted upwards.



For horizontal surfaces, use the plate connection brackets on the left and right, which you secure with M10 bolts.



The tube connection brackets are also used for fixing to wooden beams with a width of up to 50 mm. The anti-lift bolt can be used to fix the ladder by turning it slightly against the wooden beam.

Technical data

Models

Stair installations:

Description	Weight
Aluminium stair 3 steps	18,49 kg
Aluminium stair 6 steps	29,66 kg
Aluminium stair 9 steps	40,71 kg
Aluminium stair 12 steps	51,92 kg
Aluminium stair 15 steps	62,91 kg
Aluminium stair 18 steps	87,80 kg

Stair railing units:

Description	Weight
Short stair railing	5,90 kg
Long stair railing	7,30 kg

Requirements fot the stair railing:

Description	Short stair railing	Long stair railing
Aluminium stair 3 steps	-	-
Aluminium stair 6 steps	2	-
Aluminium stair 9 steps	-	2
Aluminium stair 12 steps	4	-
Aluminium stair 15 steps	2	2
Aluminium stair 18 steps	-	4

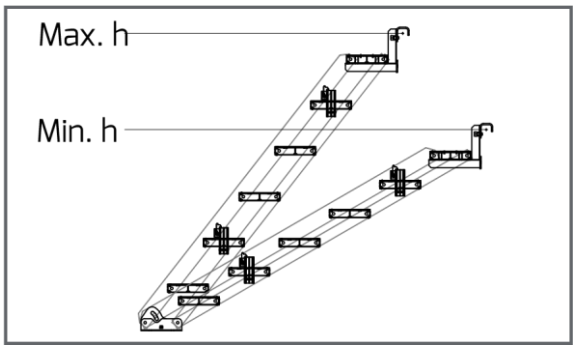
Connectors:

Description	Weight
Pipe connection bracket left	1,36 kg
Pipe connection bracket right	1,36 kg
Plate connection bracket left	1,38 kg
Plate connection bracket right	1,38 kg

Model geometry

Applications

Description	Minimum height	Maximum height
Aluminium stair 3 steps	557 mm	783 mm
Aluminium stair 6 steps	958 mm	1457 mm
Aluminium stair 9 steps	1412 mm	2130 mm
Aluminium stair 12 steps	1840 mm	2804 mm
Aluminium stair 15 steps	2267 mm	3478 mm
Aluminium stair 18 steps	2696 mm	4152 mm



The above table only refers to the applications when the tube connection brackets are used on the right and left. The height measurement is carried out up to the middle of the scaffold tube to which the connection bracket is attached.

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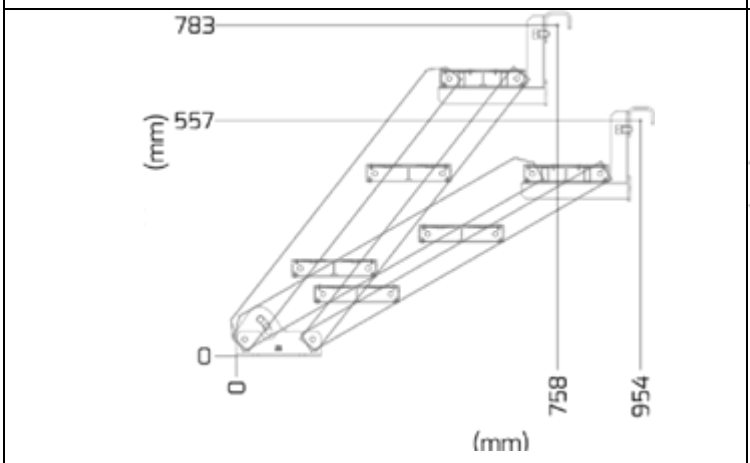
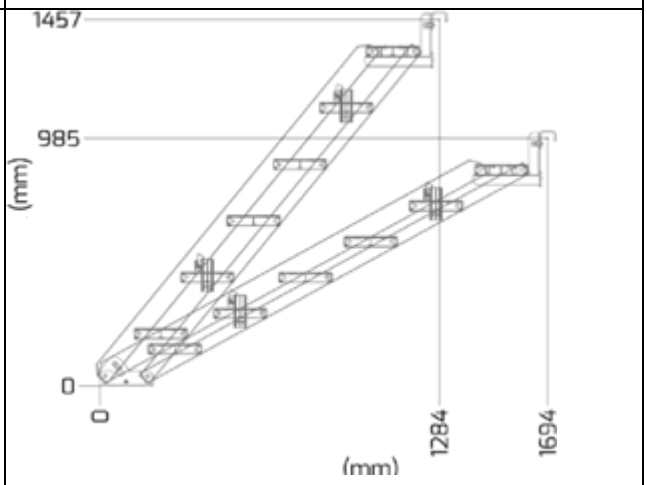
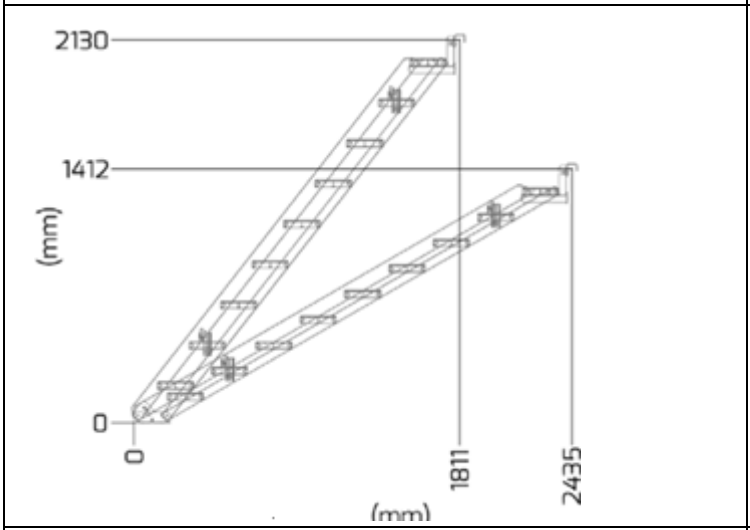
Aluminium stair 3 steps



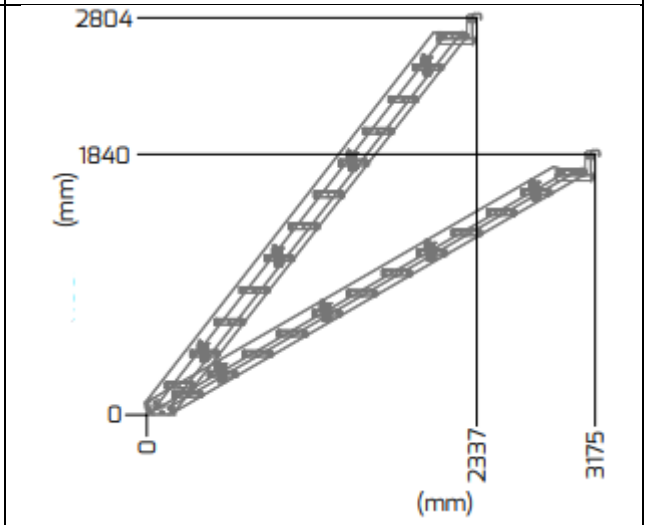
Aluminium stair 6 steps



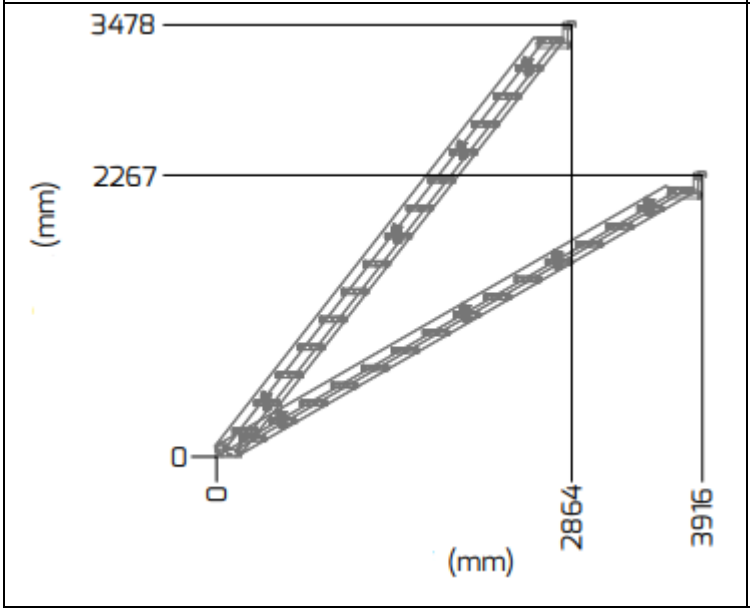
Aluminium stair 9 steps



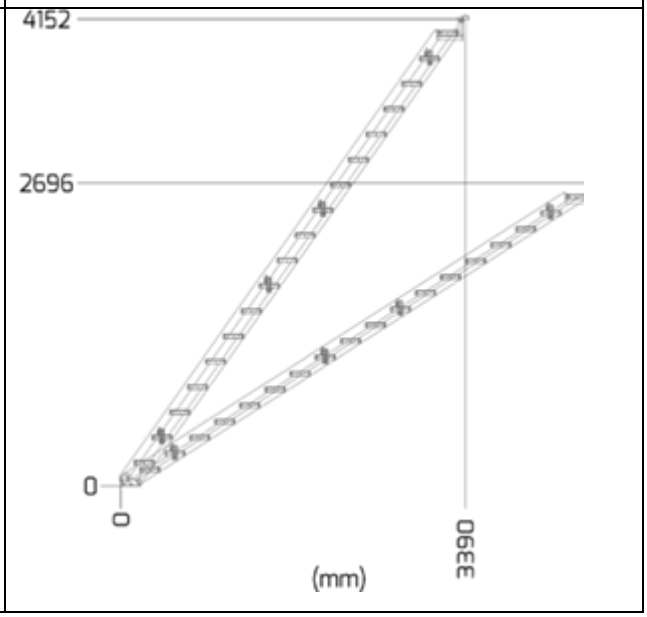
Aluminium stair 12 steps



Aluminium stair 15 steps

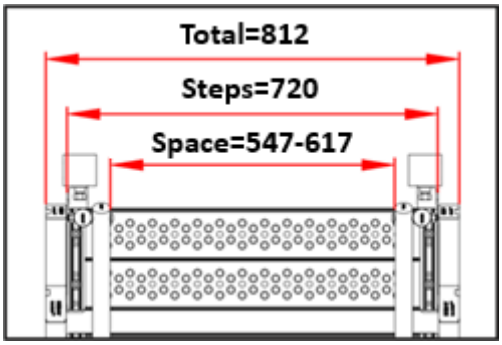


Aluminium stair 18 steps



Steps

Description	Width
Aluminium stair 3 steps	**720 mm**
Aluminium stair 6 steps	**720 mm**
Aluminium stair 9 steps	**720 mm**
Aluminium stair 12 steps	**720 mm**
Aluminium stair 15 steps	**720 mm**
Aluminium stair 18 steps	**720 mm**



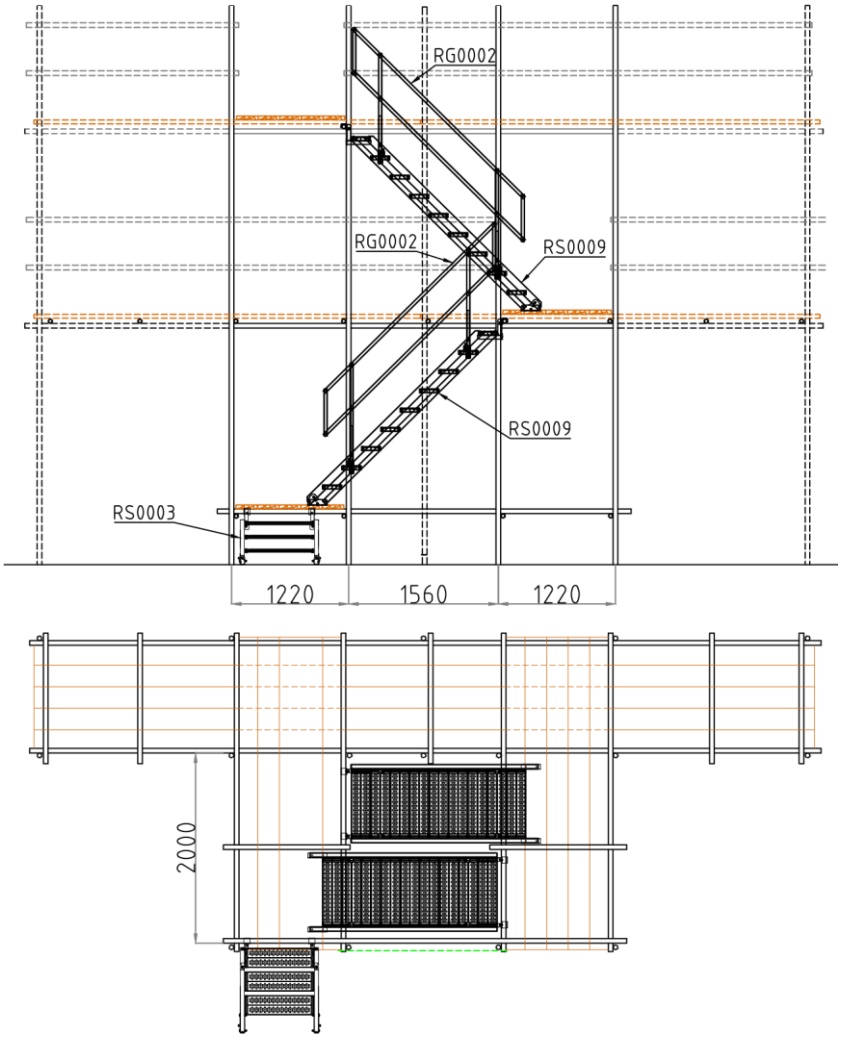
Performance data structure

Uniformly distributed load assumes that each step is loaded simultaneously. Point load is the maximum load per step.

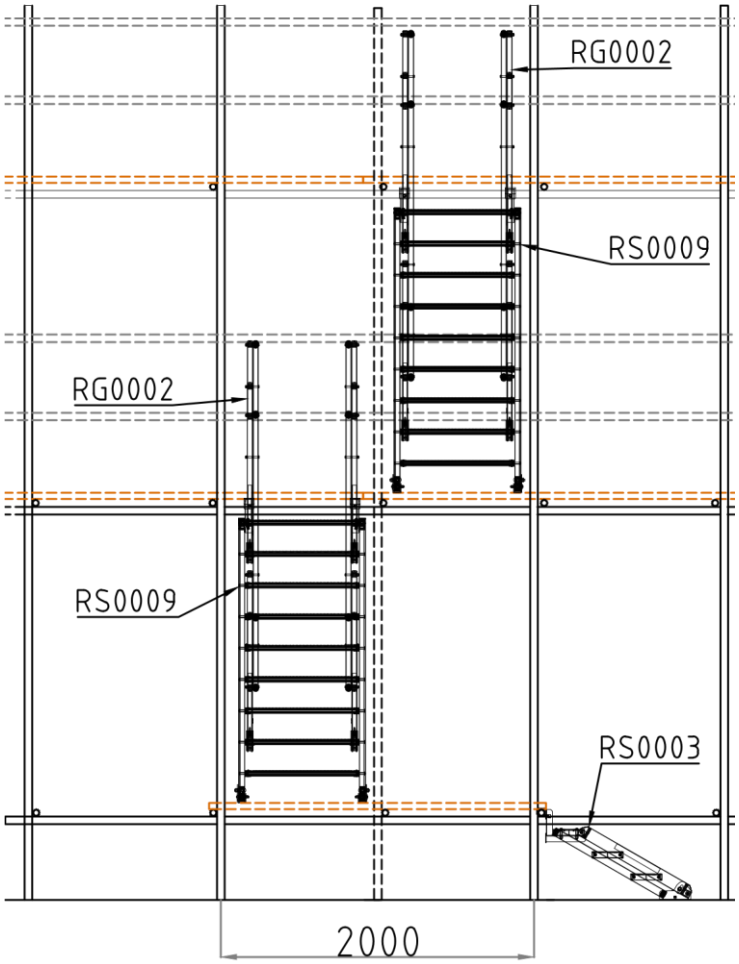
Description	Evenly distributed load	Point tax
Aluminium stair 3 steps	**> 1,5 kN/m2**	**1,5 kN**
Aluminium stair 6 steps	**> 1,5 kN/m2**	**1,5 kN**
Aluminium stair 9 steps	**> 1,5 kN/m2**	**1,5 kN**
Aluminium stair 12 steps	**> 1,5 kN/m2**	**1,5 kN**
Aluminium stair 15 steps	**> 1,5 kN/m2**	**1,5 kN**
Aluminium stair 18 steps	**> 1,5 kN/m2**	**1,5 kN**

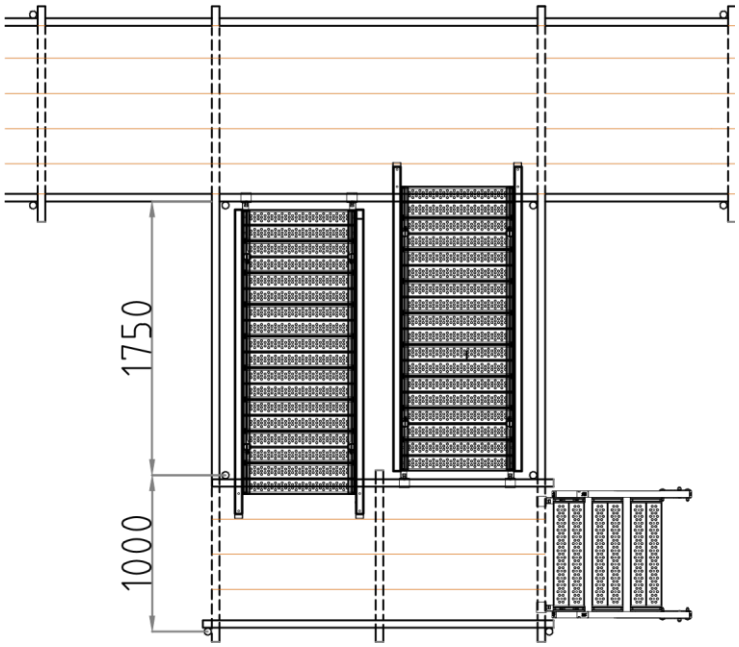
Typical layouts

Scaffolding of pipes and connectors, alternating direction, external, parallel.



Scaffolding of pipes and fittings, alternating direction, external, perpendicular.





Specific risks and hazards to health

During installation

- Ensure that the correct PPE is worn at all times during the installation process. This includes at least gloves, steel toe footwear and a hard hat.
- At least 2 people are required to move, lift and install the Aluminum stairs from RS0006 and above.
- Do not place anything between the steps where the tread/stringer intersect while the stairs are being installed, as this spacing will vary.
  Ensure that all stair railings and base plate holders are in place and securely fastened to each landing.

After installation

- Ensure that everyone holds the railing with one hand at all times when ascending the Aluminum Staircs.
- Make sure you do not enter, ascend or exit the Aluminum Stairs while running.
- Ensure that the steps of the Aluminum stairs are always free of dirt and loose materials.
- Nothing may be stored on the Aluminum Stairs.
- Ensure that the steps of the Aluminum stairs are always free of grease or oil leaks.
- Ensure that the locking bars are properly secured at all times and that the bars are not tampered with.
- Make sure the connecting brackets are properly locked.
- Some corrosive environments and extreme temperatures may affect the performance and durability of the alloy stair.Contact EasyStairs for advice when the Aluminium stair is to be used in such working environments.

Inspection and maintenance

Inspection

Perform the following checks weekly, or prior to installing an Aluminum stairs.

- Check that all nuts and bolts are properly in place and tightened.
- Check that all bolts are properly tightened.
  Check all steps, stringers, connecting brackets and handrail holes for damage.

Maintenance

The Aluminium stairs is a fully bolted construction. Routine maintenance is simple and requires a minimum of tools. Tools required: 12 mm spanner and 8 mm Allen key.