

# Structa floor structure panels

## Technical Datasheet

Perforated steel floor panels work as part of the support structure system to provide a sturdy, permeable raised platform for laying surfaces, such as artificial grass and resin bound gravel, and installing planters off the ground, eliminating the need for a heavy, traditional, solid construction.



### WORKS AS PART OF THE RAAFT TERRACE SYSTEM

A key element of the system, these floor structure panels create a sturdy, level raised access floor which opens a huge amount of opportunities for creative terraces.

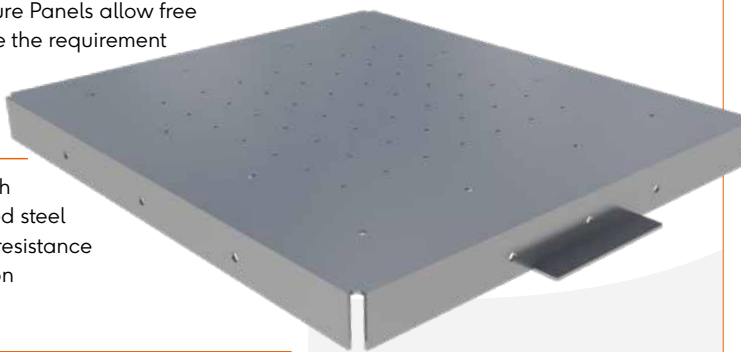
### CLASS A FIRE RESISTANCE

RaafT Floor Structure Panels are made using galvanised steel which does not burn nor pose a fire hazard.

Perforated Floor Structure Panels allow free drainage and eliminate the requirement for a drainage board

Manufactured from high performance galvanised steel that displays excellent resistance to atmospheric corrosion

Fast and easy installation to create a strong, stable, external raised floor structure



## PRODUCT INFORMATION

TO FIT	LENGTH	WIDTH	DEPTH	PRODUCT CODE
50mm Aluminium Joist	600 mm	540 mm*	48 mm	321011
	500 mm	440 mm*	48 mm	321015
TO FIT	LENGTH	WIDTH	DEPTH	PRODUCT CODE
30mm Aluminium Joist	600 mm	540 mm*	28 mm	321023
	500 mm	440 mm**	28 mm	321024
Other	Material specification	Galvanised Steel		
	Recycled content	100% recyclable		

\* To create 600mm centres when used with the RaafT Aluminium Joists

\*\* To create 500mm centres when used with the RaafT Aluminium Joists



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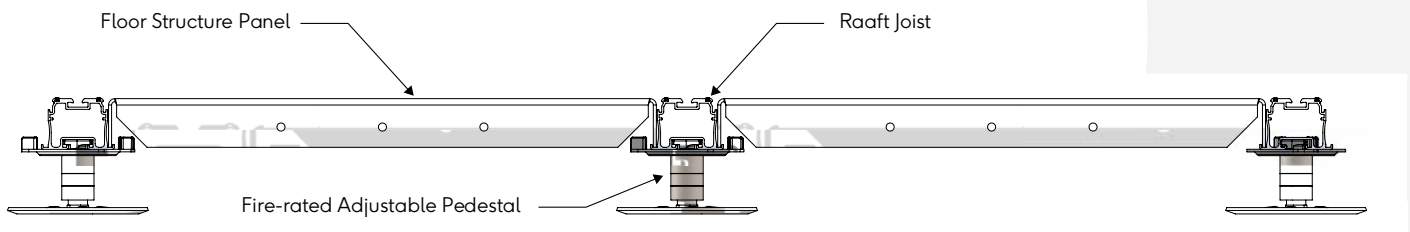
Last Updated: November 2021

### APPLICATIONS

Roof terraces, balconies and other external areas. Manufactured from pre galvanised steel or Corten A steel material to provide a high performance solution in normal environments.

### INSTALLATION INFORMATION

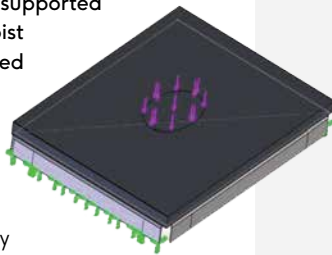
The Raaft Floor Structure Panels are installed by simply laying in the side channels of the Raaft Aluminium Joists. The joists and pedestals should be laid prior to installing the floor panels. The diagram below shows an example section build-up.



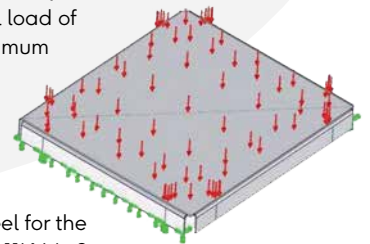
### LOADING ANALYSIS<sup>2</sup>

Loading analysis information has been collected using Finite Element Analysis. Please note the following information.

Point loading analysis on the Raaft floor structure panels in mild steel, supported along its width by the Raaft Joist system, and the surface covered in rubber to simulate safety surfacing. In this instance, the tray will take a load of 150kg in the centre of the tile for a deflection of 5mm. Under these conditions the tray has a factor of safety of 1.5.



Soil loading analysis on Raaft floor structure panels in mild steel, supported along its width by the Raaft Joist system. Soil load of 18kN/m<sup>2</sup>. The soil load of 18kN/m<sup>2</sup> will produce a maximum deflection of 6.6mm in the centre of the tray. However, the safety factor is only 0.9 giving a risk of failure under this loading. It would not be recommended to use mild steel for the trays unless the load is below 11kN/m<sup>2</sup>, i.e. 600mm soil depth.



### STORAGE & HANDLING

Steel floor structure panels are typically palletized and wrapped to ensure stability during transport. A single pallet will normally transport 50 floor panels.

Panels should ideally be stored in a sheltered location prior to installation however it will not detriment the items if this is not possible. Installers should be aware of the edges of the steel panels in case they are sharp - protective gloves should be worn at all times when handling the panels.

The following guidelines may be useful:

- Each person should be fully trained in manual handling techniques.
- The use of handling aids such as a trolley, folk-lift, pallet truck or conveyor should be used if moving large volumes of panels.
- Break up large consignments into more manageable loads.
- Ensure that the product is stored at a reasonable height, so avoiding the lifting of panels from floor level or above shoulder height.
- Reduce carrying distances of panels.



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### PROTECTIVE EQUIPMENT

We recommend that PPE (Personal Protective Equipment) is used when installing the Raaft support structure system:

- a) Good strong safety boots/shoes to protect the feet.
- b) Protective eyewear such as safety glasses.
- c) Strong gloves to protect the hands.
- d) If using loud cutting equipment then ear plugs or defenders should be worn.

### FIRST AID

The Health and Safety Regulations 1981 require all construction sites to have the following:

- a) A first aid box with enough equipment to cope with the number of workers on site.
- b) An Appointed Person to take charge of first-aid arrangements. The Appointed Person looks after first aid equipment and facilities and calls the emergency services when required. Appointed Persons do not need first aid training.
- c) A First-Aider who has undertaken training and holds an HSE approved qualification to administer first-aid. This means that they must hold a valid certificate of competence in either:
  - First aid at work (FAW) issued by a training organisation approved by HSE
  - Emergency first aid at work (EFAW) issued by a training organisation approved by HSE
  - A recognised Awarding body of Ofqual/Scottish Qualifications Authority.
- d) The number of first-aiders will depend on the site.
- e) Information should be clearly displayed on site telling workers the name of the Appointed Person(s) or First Aider(s) and where to find them.

### ENVIRONMENTAL ISSUES

Floor Structure Panels are manufactured from Galvanised steel and is 100% recyclable. As a result, the whole life cost of steel Roof Tray is excellent as it is sold for recycling and not paid disposal. The principal element used in the production of steel is iron, which is second only to aluminium in terms of natural abundance in the Earths crust. At current extraction rates there is enough iron to last another 1000+ years.

### SUPPORTING DOCUMENTS

More information on the Raaft Floor Structure Panels products can be found at [www.raaft.co](http://www.raaft.co)

1. The Installation Information given in this document is intended as a guide only. We recommend that professional opinions are obtained before work is commissioned. Raaft Ltd accepts no responsibility for any damage or loss as a result of using the Installation Information. We will be happy to engage in any discussion with regard to specific project applications.
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