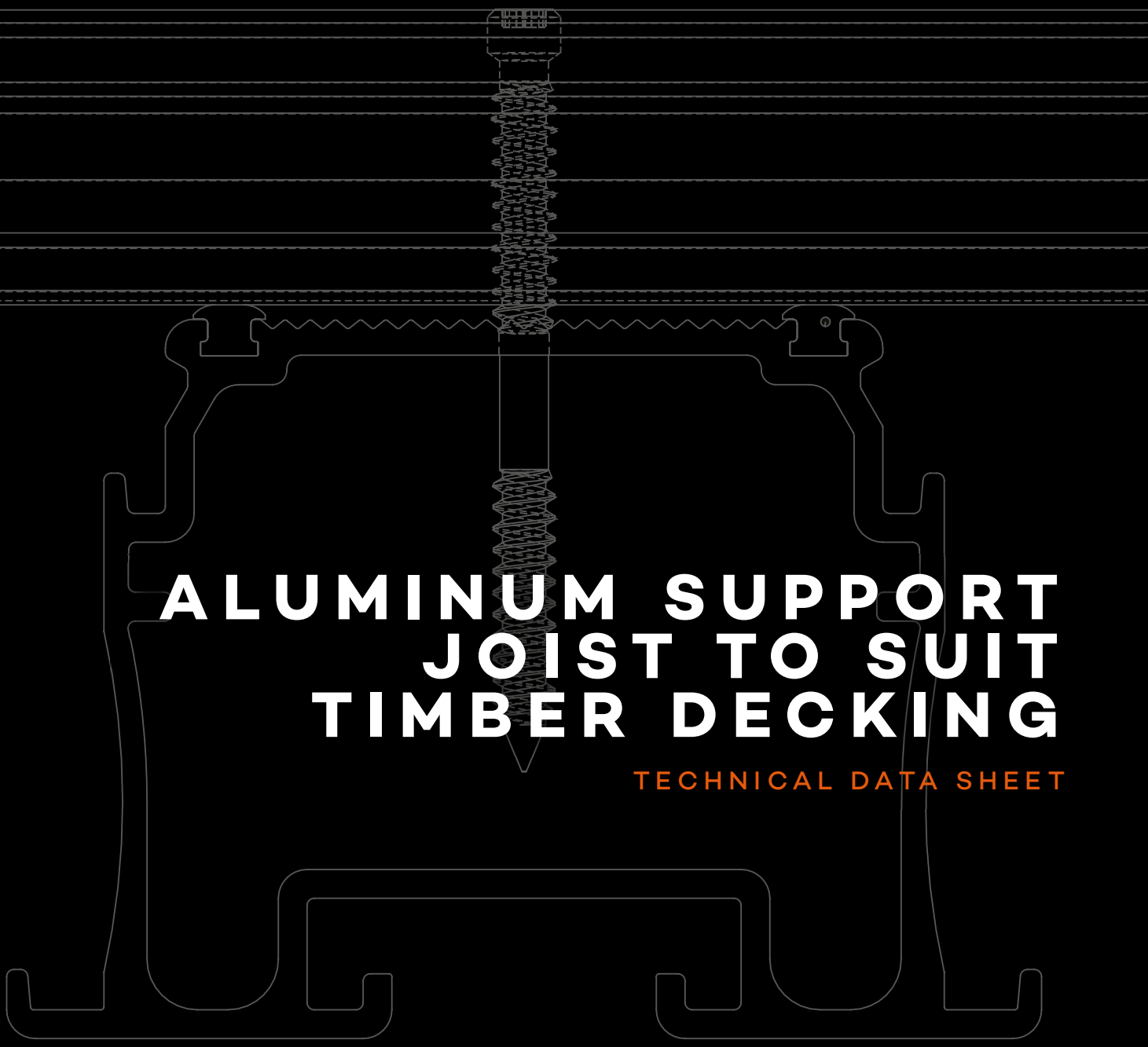
RAAFT®



ALUMINUM SUPPORT JOIST TO SUIT TIMBER DECKING

TECHNICAL DATA SHEET

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SAFE DURABLE ELEGANT

Reference:
DS-RD-0222

ALUMINUM SUPPORT JOIST TO SUIT TIMBER DECKING

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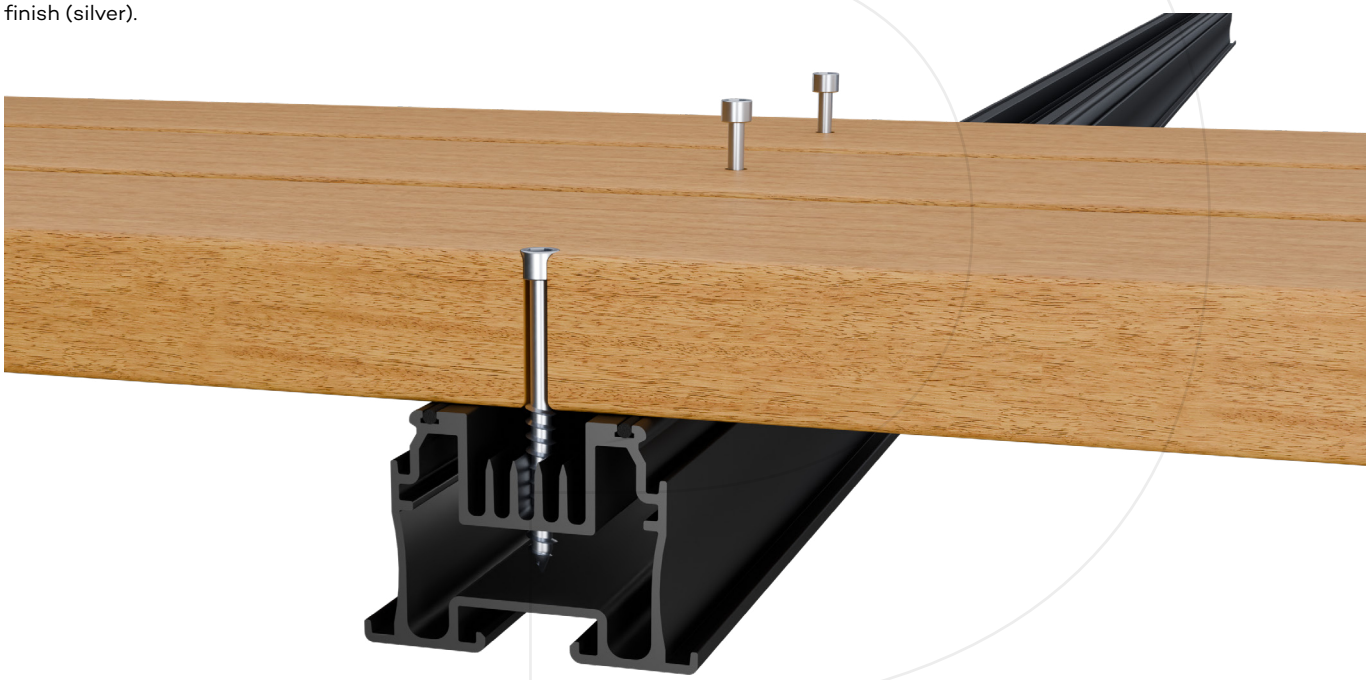
Rigid aluminum joist for use as a support structure for the Raaft range of terrace products, including Floor Structure Panels, Composite Decking and Atria Porcelain Tiles.

Available in Brown powder coat (RAL 8028) or Milled aluminum finish (silver).



Product infromation

		PRODUCT CODE
DIMENSIONS	JOIST HEIGHT	50MM (2.0 in)
	JOIST WIDTH	60MM (2.4 in)
	JOIST WIDTH AT WIDEST POINT	72MM (2.8 in)
	JOIST LENGTH	2400MM (94.5 in)
TECHNICAL	MAXIMUM UNSUPPORTED SPAN	900MM (35.4 in)
	MAXIMUM UNSUPPORTED CANTILEVER SPAN	200MM (7.9 in)
	MAXIMUM SUGGESTED LOADING	650 LBS
OTHER	AVAILABLE FINISH	Dark Brown (RAL 8028) powder coated
	MATERIAL SPECIFICATION	6063 T6 aluminum
	RECYCLED CONTENT	Part recycled 100% recyclable

Find out more or request a sample

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Applications

Roof terraces, balconies and other external areas. Joists are manufactured from aluminum alloy 6063A which is a high performance alloy with a high natural resistance to corrosive conditions in normal environments.

Installation information

Install by fixing the joists onto Raaft® Pedestals and securing the timber decking using self-drilling screws.

Storage and handling

The product is securely packed in a single flute cardboard carton to ensure no movement of the product in transit with each carton sealed with fiber tape. Depending on the size / weight of the consignment, this may be palletized.

While there is no specific weight restrictions on what is or is not safe to lift in manual handling, an assessment of the health and safety risks should be undertaken and measures taken to reduce the risk of injury so far as reasonably practicable.

The following guidelines may be useful:

a) **All personnel should be fully trained in manual handling techniques.**

b) **The use of handling aids such as a cart, folklift, pallet truck or conveyor should be used if moving large volumes of cartons.**

c) **Break up large consignments into more manageable loads.**

d) **Ensure that the product is stored at a reasonable height, to avoid lifting cartons from floor level or above shoulder height.**

e) **Reduce carrying distances of cartons.**

Protective equipment

We recommend that PPE (Personal Protective Equipment) is used when installing Joists:

a) **Wear sturdy safety boots/shoes to protect your feet.**

b) **Protective eyewear such as safety glasses.**

c) **Strong gloves to protect your hands.**

d) **When using loud cutting equipment, wear ear plugs or hearing protection.**

First aid

All construction sites should have appropriate first-aid provisions in place. This typically includes:

a) **A first aid kit with supplies suitable for the number of workers on-site.**

b) **A designated person responsible for maintaining first-aid supplies and coordinating emergency response.**

c) **One or more trained first-aid responders, depending on site size and risk level.**

Information identifying the site's designated first-aid personnel and the location of first-aid equipment should be clearly displayed and accessible to all workers.

Fire protection

Joists are made using Aluminum Alloy 6063A T6 which does not burn and is not a fire hazard.

Stability

All building materials are eventually degraded by weathering, corrosion, rot and decay. Aluminum's natural ability to resist these influences better than many materials is one of its most widely appreciated features. Aluminum reacts with the oxygen in the air to form an extremely thin layer of oxide; this layer is dense and provides corrosion protection, and is self-repairing if damaged.

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Environmental information

Joists are manufactured from aluminum containing a minimum of 80% recycled content and are fully recyclable at the end of their service life. This contributes to a favorable long-term lifecycle cost, as aluminum joists retain value and are sold for recycling rather than disposed of as waste.

The remaining 20% virgin aluminum is blended with the recycled material to meet the required alloy chemistry and ensure the specified mechanical strength and performance characteristics.

Aluminum scrap is a valuable resource and can be recycled repeatedly without degrading its properties.

Loading analysis[2]

Loading analysis data has been generated using Finite Element Analysis (FEA) based on a central point load with a safety factor of 1.5.

There is no shortage of raw materials required for aluminum production. Aluminum-bearing compounds account for approximately 8% of the Earth's crust, and bauxite remains the primary source material. At current production rates, and assuming no increased use of recycled aluminum and no new discoveries of bauxite, global reserves are estimated to last 200 to 400 years.

In addition, the amount of aluminum being recycled continues to grow, reducing the demand for virgin alumina and further lowering the environmental impact associated with aluminum production.

UNSUPPORTED SPAN	600 MM (23.6 in)	900 MM (35.4 in) (RECOMMENDED)
Maximum loading	908 lbs	**650 lbs**
Maximum deflection	0.54 mm	**0.83 mm**
Failure load*	2,204 lbs	**1,301 lbs**

*Potential risk of collapse of the section

Supporting documents

More information on the Joist products can be found at raaft.com in the Resource Center under CAD Drawing and Installation Guides.

1. The Installation Information given in this document is intended as a guide only. We recommend that professional consultations are obtained before work is commissioned. Raaft, a Kinley Systems Ltd. Group Company 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.

2. Please note, the loading analysis information is provided as a guide only. We recommend that professional consultations be obtained for construction projects prior to work being commissioned. Raaft Ltd. accepts no responsibility for any damage or loss as a result of using the loading analysis. We will be happy to engage in any discussion with regards to specific project application.

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Environmental informaion

Raaft Adjustable Pedestals are manufactured from polypropylene and are 100% recyclable. As a result, the long-term lifecycle cost of a polypropylene pedestal system is highly favorable as the material retains value and can be sold for recycling rather than disposed of as waste.

Fire protection

Joists are made using Aluminum Alloy 6063A T6 which does not burn and is not a fire hazard.

First aid

All construction sites should have appropriate first-aid provisions in place. This typically includes:

- A first aid kit with supplies suitable for the number of workers on-site.
- A designated person responsible for maintaining first-aid supplies and coordinating emergency response.
- One or more trained first-aid responders, depending on site size and risk level.

Information identifying the site's designated first-aid personnel and the location of first-aid equipment should be clearly displayed and accessible to all workers.

Stability

Polypropylene is a tough, high performance polymer with good chemical and fatigue resistance, making it exceptionally suitable for commercial adjustable pedestal systems.

Supporting documents

More information on the Raaft Adjustable Pedestal products can be found at raaft.com on the product page under Technical Support documents.

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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