



Evorail Standard freestanding system

Evorail has its very own original design which makes the system aesthetically pleasing like no other on the market.

Evorail system provides a permanent edge protection without the need to mechanically fix through the roofing membrane or roof structure and provides full protection where regular access for maintenance and inspections are required.

The strength, stability and safety of Evorail is derived from our in house designed cantilever principal, hence there is no need to drill and puncture the roof membrane. This avoids noise disturbance during installation and potential penetrative water damage.

Evorail is Robust

With all the systems fixings grade A2 stainless steel, manufactured from MAGNAtube which is 20 times the corrosion resistance of galvanised tube and eco friendly re-cycled weights gives it a minimum lifespan of at least 25yrs, therefore making the system maintenance free.

Evorail is Modular

The system consists of MAGNAtube pre-assembled uprights, 2.5mt rails and our slide on weight. The 2.5mtr hand and knee rails are connected with the Evorail upright, which is fast, straightforward and easily adjustable to provide that perfect level finish. With no requirement for drilling, the system is easily mounted on the platform supplied.

Evorail is Versatile

The system has been specifically designed to fit all shapes and sizes of flat roofs, even circular designs. The system can also cope with level changes, roof falls and difficult designs, such as ductwork passing over the roof edge and cable trays/plant mounted at the roof edge.

Membrane Protection

Evorail is supplied with a rubber mat under the feet to protect the roof membrane. The rubber weights are also membrane friendly; for ultimate protection extra roof membrane or specified matting can be placed under the foot and weight. This is not supplied with Evorail.

Testing & Certification

All Evorail systems have been tested and approved by Satra Technology. Full documentation is available on request.

All Evorail systems comply with the following requirements:

- BS EN 13374: 2013
- European Directive 2001/45/CE
- BS6399; Part 2 1997 Code of Practice for Wind Load.
- Working at heights regs. 2005

BS EN 13700: 2021 – new legislation

Evorail is compliant to the new technically advised standard for this we would need to obtain from every customer the site specific wind detail, building detail as each 2.5m bay needs a calculation giving information for adjacent buildings and detailing the layout how many metres are facing North, South, East & West if the system requires a gate, toe boards etc. This would then enable us to obtain a site specific wind calculation (at expense to buyer) and design the system accordingly, depending on the appropriate system there may also be a need for a calculation to ensure the roof is suitable for the weight being used (at expense to buyer) the system also needs to have a return on every 'D' end and have toe boards if no upstand is present, the system has to be set a 1100mm

Evorail Aesthetics

The extra smooth finished can be further enhanced with application of powder coating. This can be specially ordered to the client's choice of any RAL Number they require. Evorail standard system is one of many freestanding systems available in our product range.

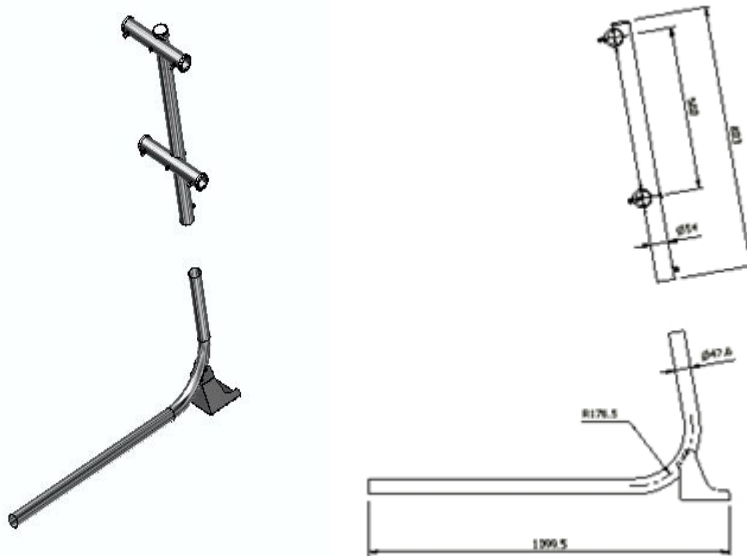
- Evorail Radius
- Evorail Non-Trip
- Evorail Collapsible
- Evorail Top Fixed / Side Fix
- Evorail Parapet

In a choice of materials

- MAGNAtube
- Aluminium
- Stainless steel

We also offer bespoke systems designed by our in-house fully experienced design engineers.

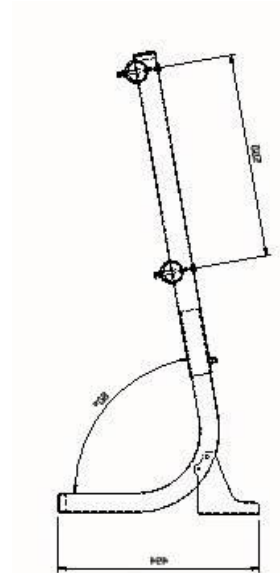
Specification



Evorail Standard Long Upright - ERSLU

The upright is used as the main support to the system; the 2.5mtr rail easily slides in and is locked on using a 5mm allen key. The stop inside the upright gives 2.5mt centres naturally without the need of measuring on site.

Material – MAGNAtube Component weight – 7.5 kilos

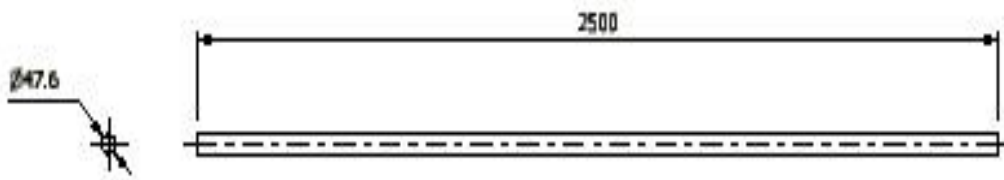


Evorail Standard Short Upright - ERSSU

The upright is used as the 2nd main support to the system; the 2.5mtr rail easily slides in and is locked on using a 5mm allen key. The stop inside the upright gives 2.5mt centres naturally without the need of measuring on site. level finish.

Material – MAGNAtube

Component weight – 6.0kilos

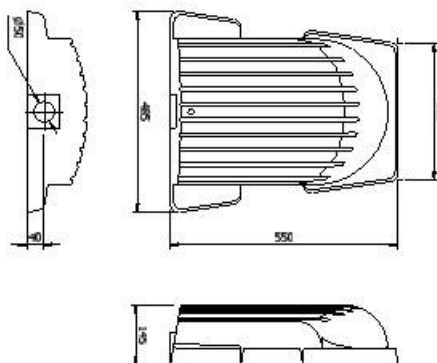


Evorail 2.5mt Rail – ERAIL

The 2.5mt rail connects the long and short upright together, top and mid rail.

Material – MAGNAtube

Component weight – 4.2 kilos

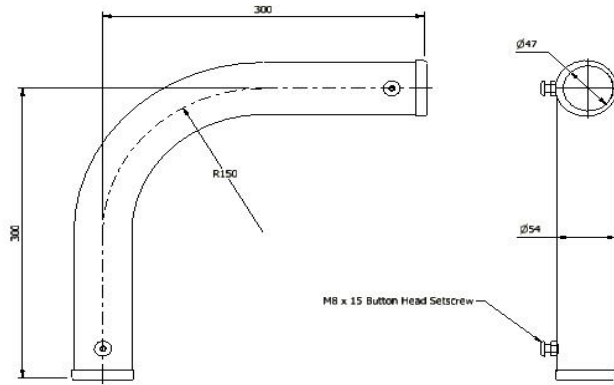


Evorail Rubber Weight – ERRUW

The easy slide on weight gives the stability to the system.

Material – re-cycled rubber

Component weight – 20.0 kilos

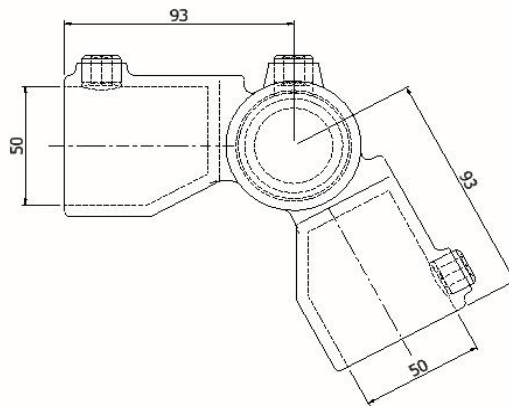
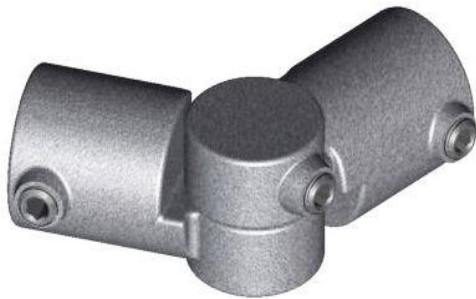


Evorail Sweeping Bend – ERSWB

The sweeping bend provides the means to be able to change direction through 90-degree corners.

Material – MAGNAtube

Component weight – 1.4 kilos

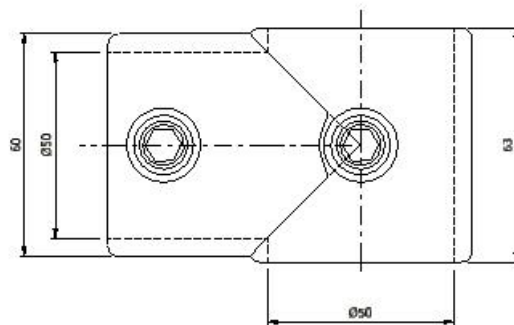


Multi bend – ERMUB

This allows you to change direction at corners that are other than 90 degrees, and also can be used for changes in roof levels.

Material – Galvanising to BS EN 1461: 2009

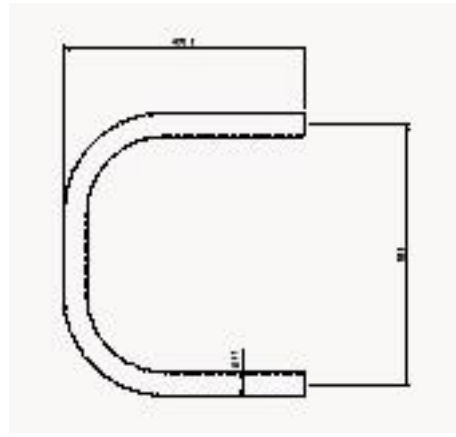
Component weight – 1.5 kilos



T – Piece – ERTPI

The T piece is used in conjunction with a free-standing end and is used many

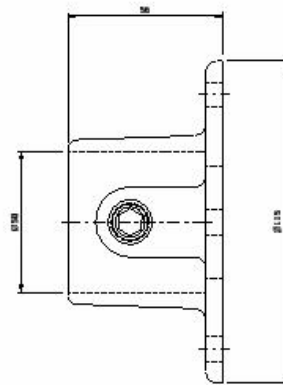
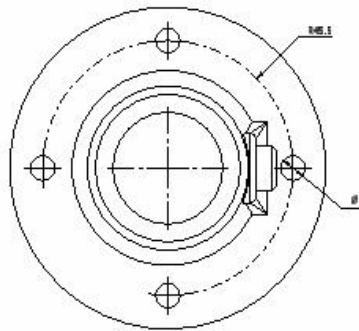
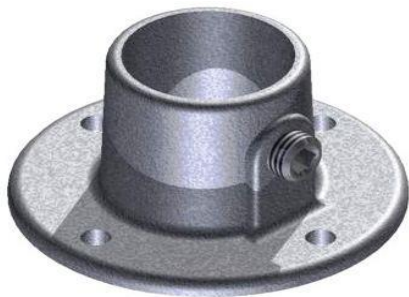
different instances. Material – Galvanising to BS EN 1461: 2009 Component weight – 1.0 kilo



Evorail – D End ERDEN

The D End is installed at the end of each run when the system is not attached to a wall, this creates a aesthetically pleasing and safe termination of the system .

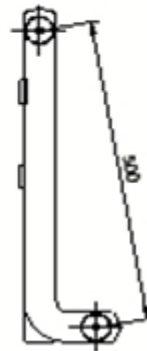
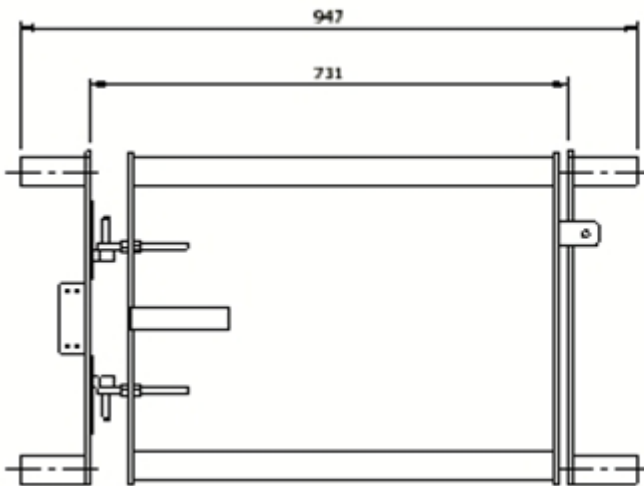
Material – MAGNAtube Component weight – 2.8 kilos



Wall bracket – ERWBK

Used at the end of a run where you can fix into a wall/cladding.

Material – Galvanising to BS EN 1461: 2009 Component weight – 1.1 kilos



Evorail Self Closing Gate – ERSWG

Used to safely gain access through the Evorail system.

Material – Hot dipped Galvanised EN ISO 1461 Component weight – 20 kilos

General

Evorail standard is a fully designed and tested guardrail which uses cantilever balanced uprights, without the requirement for physical fixing into the roof's membrane / structure. It's a permanent freestanding guardrail which has adjustment in the uprights which caters for rise and falls of the roof, therefore keeping the system level to the parapet at all times.

Material

- Evorail standard is manufactured from MAGNAtube (corrosion resistant coated steel tube upto 20 times the corrosion resistance of galvanised tube)
- Evorail – hand & knee rails are 48mm external diameter.
- All fixings are grade A2 stainless steel.
- All additional cast clamps used are galvanized malleable cast iron produced to BS EN 1562: 2012 and KTH350-10 Galvanised in conformance with BS EN 1461:2009
- The uprights are fitted with fluted rubber mats to protect the roof
- All rubber weights are also roof membrane friendly.
- Any on site tube cuts can be protected by a selection of plastic cap ends, to prevent exposure to rust.

Layout

- Height of Evorail is set at 1100mm.
- When possible, we recommend that the system be installed at **least one metre** from the roof edge
- All uprights are set at 2.5mt centres, alternating the long upright and short upright. Rubber weights to be fixed on every long upright at 5mt centres.
- All free-standing ends should be **double weighted** or supported by being fixed with a wall bracket.
- Toe boards if no upstand present
- System to have a return on every D End

Test criteria

Evorail standard was tested to the Health and Safety Executives Specialist Inspectors Report No 15.

- All testing was carried out on a roof pitch of 10 degrees as Building Regulations stipulate a flat roof can be 0 – 10 degrees in pitch.
- All guardrail testing was carried on a 5mtr straight run without any returns or double weights.
- A 0.7kn load was applied to the top rail at the very end of the 5mt straight run without moving more than 100mm at the base.
- A 0.3kn load was applied to the top rail between vertical supports in the first bay from one end. Tube deflection did not exceed 35mm.
- BRE wind testing report available on request.
- Site specific wind report if complying to EN 13700 as set out in standard



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