



# Evorail Top Fix Standing Seam O&M Manual



## **Evorail Top and Front Fix system**

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

Evorail Top Fix system provides a permanent edge protection fixed to which ever standing seam application is required, The strength, stability and safety of Evorail is derived from our designed fixing system and our own designed standing seam fixing block

## **Evorail is Robust**

With all of the systems fixings grade A2 stainless steel, its extra smooth galvanized finish (Magnatube) base plates hot dipped galvanized to BS EN ISO 1461 gives it a minimum lifespan of at least 25yrs, therefore making the system maintenance free.

## **Evorail is Modular**

The system consists of pre-assembled uprights and 2.5mt rails. The 2.5mt hand and knee rails are connected with the Evorail upright, which is fast, straightforward and easily adjustable to provide that perfect level finish.

## **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.

## **Testing & Certification**

All Evorail systems have been tested and approved by Lloyd British, Manchester University & Satra Technology. Full documentation is available on request.

All Evorail systems comply with the following requirements:

- EN 14122-3 / EN 13374
- European Directive 2001/45/CE
- BS6399 ; Part 2 1997 Code of Practice for Wind Load.
- Working at heights regs. 2005

## **Evorail Aesthetics**

All our guardrail systems are made from Magnatube which is 20 times the corrosion resistance of galvanised tube the finish can be further enhanced with the application of powder coating. This can be specially ordered to the client's choice of any RAL No they require.

Evorail standard system is one of many freestanding systems available in our product range.

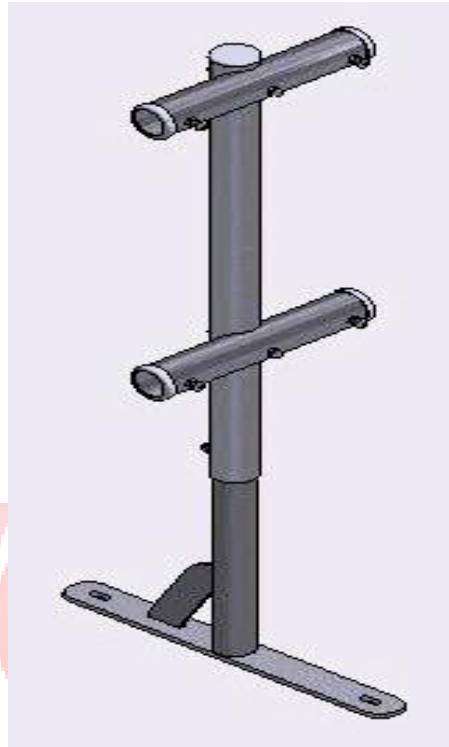
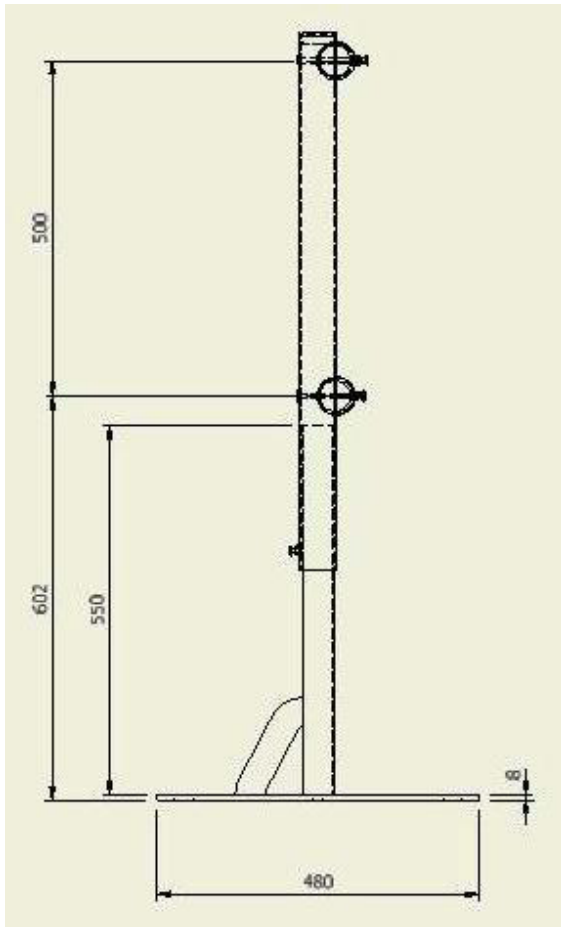
- Evorail Standard
- Evorail Non Trip
- Evorail Collapsible
- Evorail Radius

In a choice of materials

- Galvanized
- Aluminium
- Stainless steel

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

## Specification

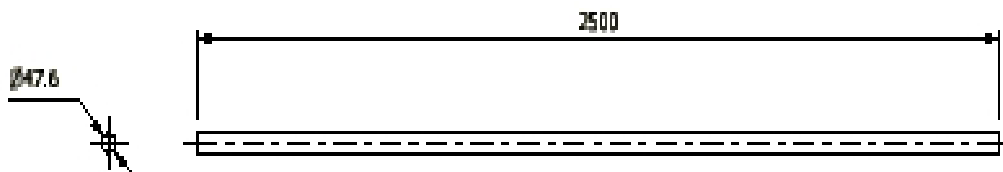


SAFETY SOLUTIONS

### **Evorail Top Fix Upright ERTFU**

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.

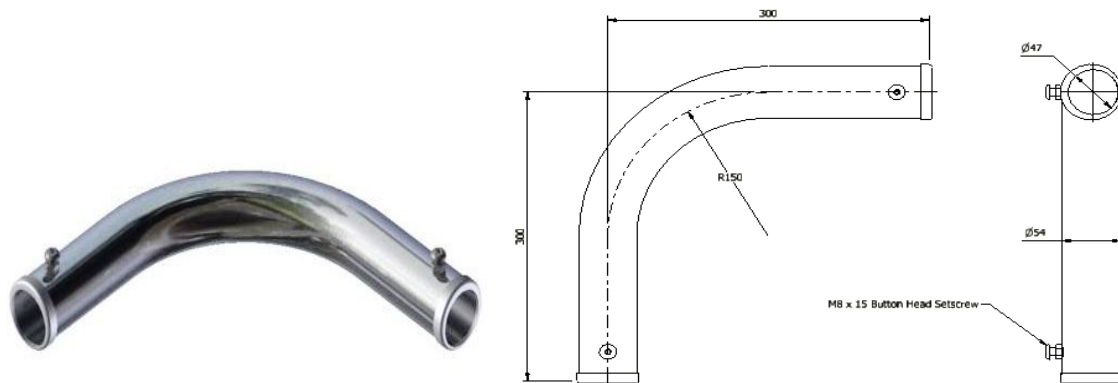
Material – Magnatube & galvanized to BS EN ISO 1461 Component weight – 7 kilos



### **Evorail 2.5mt Rail – ERAIL**

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

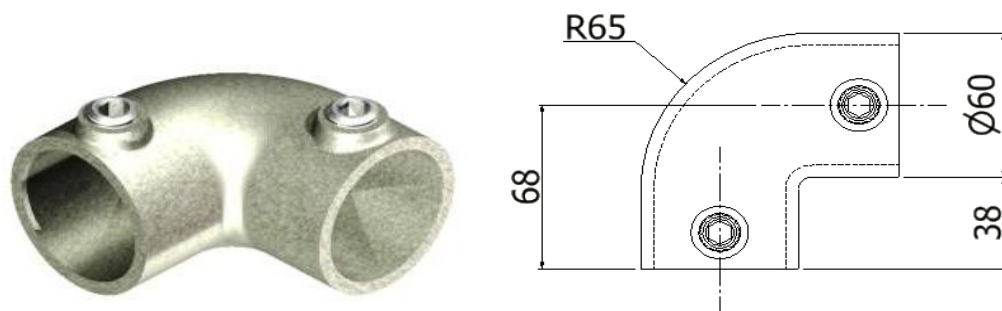
Material – Magnatube Component weight – 6.0 kilos



### **Evorail Sweeping Bend – ERSWB**

The sweeping bend provides the means to deal corners.

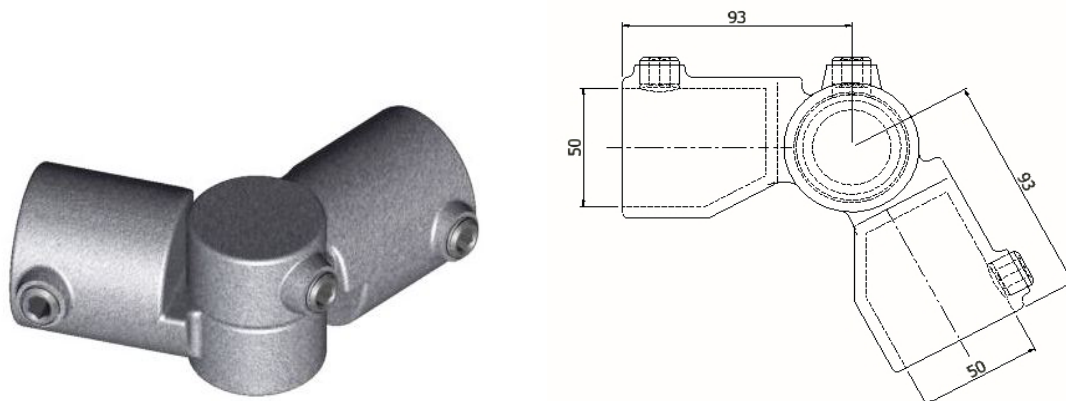
Material – Magnatube      Component weight – 1.4 kilos



### **90 Degree elbow – ER90E**

The elbow is supplied with freestanding ends and is also used to deal short tight corners and changes in level.

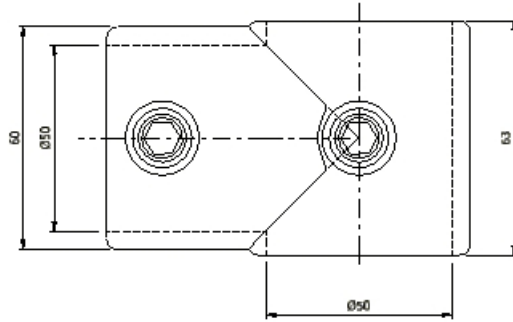
Material – Cast Iron      Component weight – 1.1 kilos



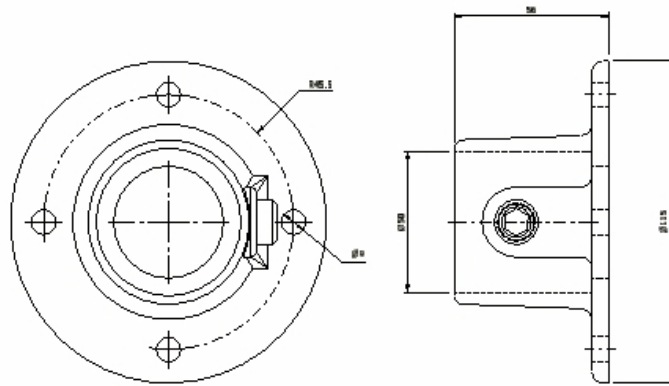
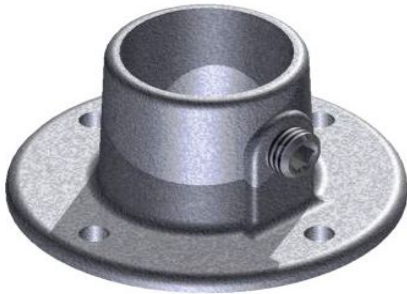
### **Multi bend – ERMUB**

This allows you to deal with corners that aren't 90 degrees, and also can be used for changes in roof level.

Material – Cast Iron      Component weight – 1.5 kilos

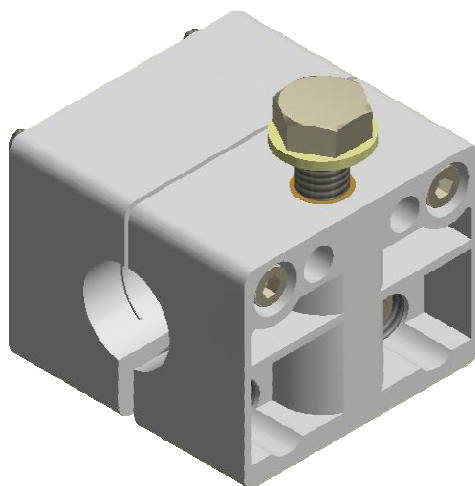
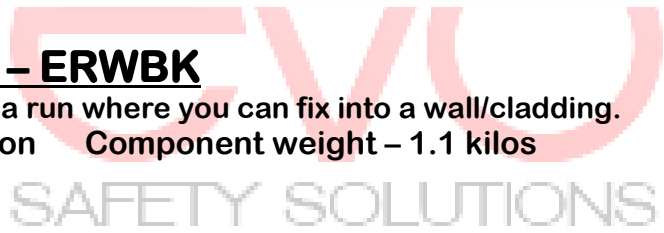


**T – piece – ERTPI** The T piece is used in conjunction with a free standing end and is used many different instances. Material – Cast Iron Component weight – 1.0 kilo



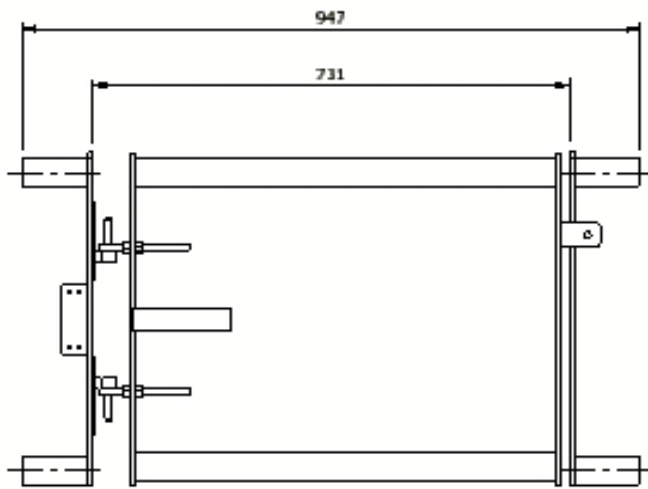
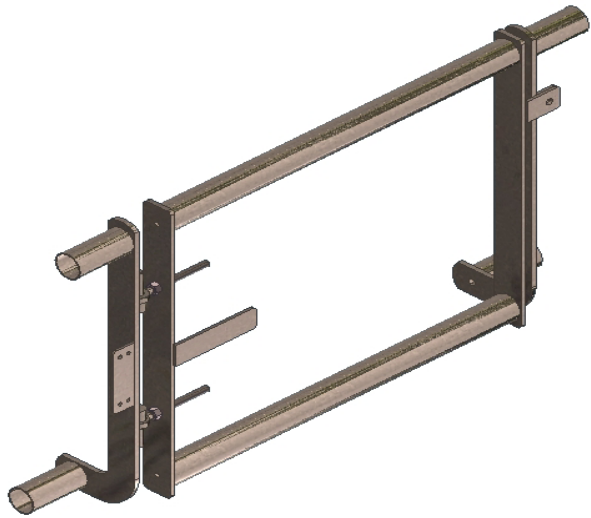
**Wall bracket – ERWBK**

Used at the end of a run where you can fix into a wall/cladding. Material – Cast Iron Component weight – 1.1 kilos



**Standing Seam Brackets – EVSCL**

Used to fix the Top Fixed upright on to the standing seam roof sheet



## **Evorail Self Closing Gate – ERSWG**

Used to safely gain access through the Evorail system.

Material – Magnatube / galvanized to BS 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, with galvanized base plates to - BS EN ISO 1461.
- 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.
- 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.
- All uprights are normally set at 2.5mt centres
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## **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.



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