## 1. GENERAL

The EASYRAIL is a building maintenance system consisting of a monorail fixed around the perimeter of a building or structure and a traversing trolley, from which is suspended a SOLSIT powered seat, a SOLO cradle or a 2 m ALTA or TANGOR cradle. The trolley travels along the monorail to reach the various parts of the building for maintenance purposes.
The rail is fixed to the building by means of steel brackets anchored on the façade.
The height of lift is limited to 40 m.
The maximum suspended load on each lifting point is 500 kg. The trolley is either manually or power operated.

## 2. MECHANICAL SPECIFICATION OF THE RAIL

| | | |
|---|---|---|
| Aluminium profile: | | 175 x 73 mm |
| Standard length: | | 5800 mm |
| Weight kg/m: | | 9.61 |
| Aluminium material: | | type 6005 A 151 |
| Limit of elasticity: | | Re ≥ 160 MPa |
| Breaking strain: | | Rm ≥ 200 MPa |
| Standard elasticity: | | E = 69 500 MPa |
| Termal expansion: | | 23 10E-06/°C |
| Section: | | S = 35.61 $cm^2$ |
| Inertia: | Ixx = 1280 $cm^4$ | Iyy = 122 $cm^4$ |
| | Wxx = 146 $cm^3$ | Wyy = 33.4 $cm^3$ |
| Minimum bending radius (outer/inner) | | R = 800 mm |

The maximum distance between brackets is limited to 4.4 m with a suspended load of 500 kg.
The deflexion of the rail under a load of 500 kg is less than 1/400th of the span, i.e. less than 11 mm.

**The RAILSCAF machine conforms to EU Directives and is manufactured in accordance with ISO 9001.**

TÜV CERT DIN EN ISO 9001:2000 Certificat : 01 100 6535

## 3. PROTECTION

### 3.1. Anodisation

Gives protection against corrosion by a layer of aluminium oxide class 20, 20µ thickness.
The colours available are:

| | | |
|---|---|---|
| – Natural aluminium | – Light beige | Eurocolor 2005 |
| – Gold | – Dark beige | Eurocolor 2006 |
| | – Chestnut | Eurocolor 2007 |
| | – Black | Eurocolor 2008 |

### 3.2. Powder coating paint

The colours available are in the RAL range, mat or gloss.

## 4. SITE INSTALLATION

The rails are delivered to site in lengths of 5.8 m. Each rail weighs ±55 kg.
The minimum radius of the curves is 800 mm, and are made in the factory before despatch.
The rails are fixed to the brackets with M10x20 stainless steel screws.

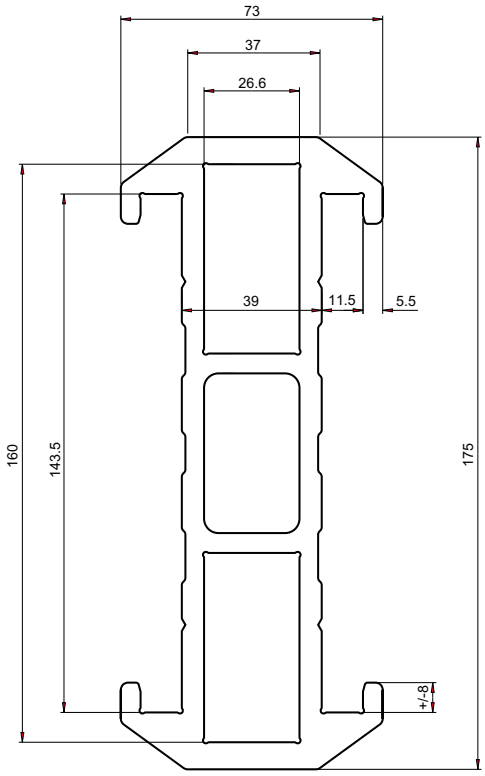
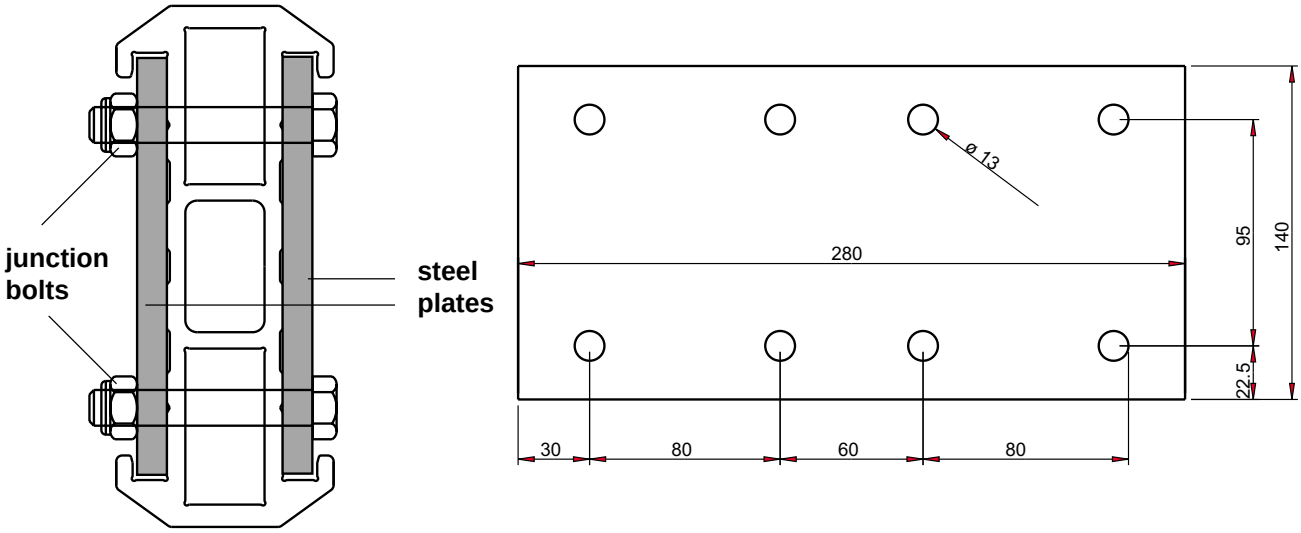



*Fig. 1. Easyrail profile*

## 5. RAIL CONNECTIONS

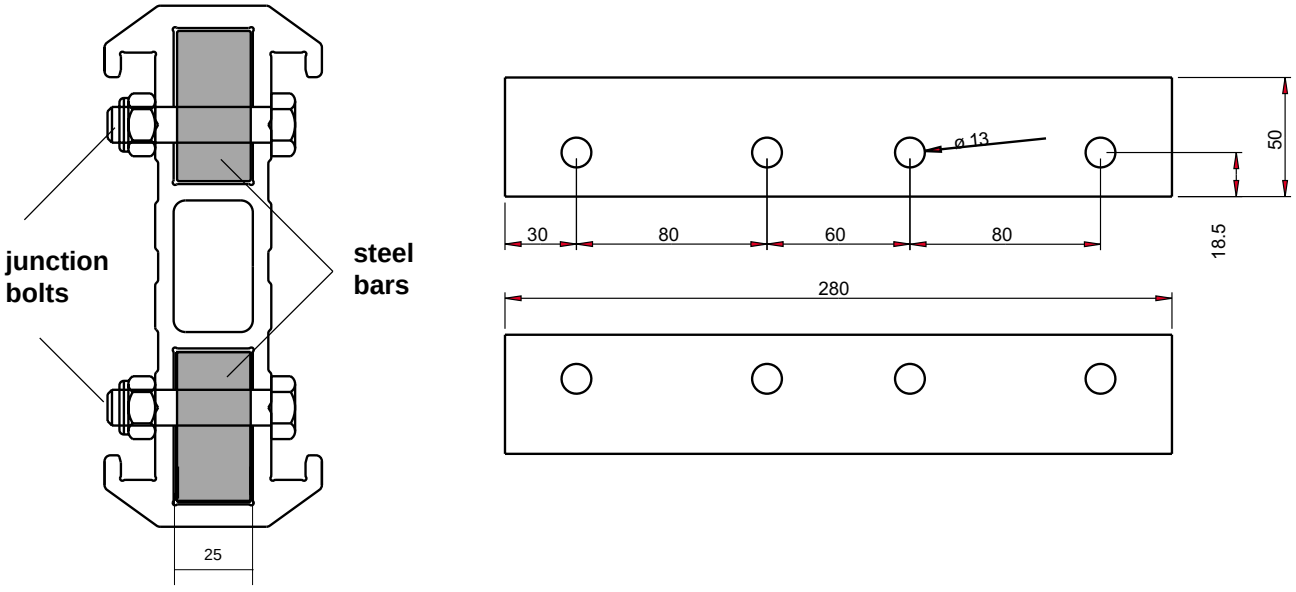
### 5.1. Standard Connection

The economical standard connection is done with two steel plates bolted on the surface of the two rails to connect. This connection is designed for the full capacity: span of 4.5 m with a load of 500 kg, or span of 5.5 m with a load of 400 kg. The standard connection is easy to install, as the steel plates can slide along the rails after adjustment.



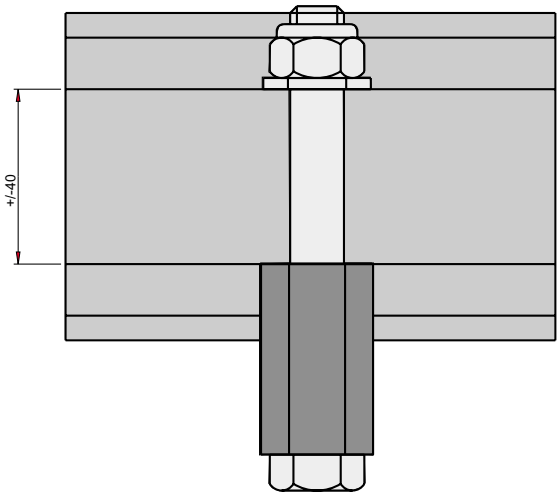

### 5.2. Internal Connection

This connection is made by two steel bars inserted inside the two rails to connect, and bolted together. This connection cannot be used at full capacity, but only for a load of 500 kg with a span of 3.6 m or for a load of 400kg with a span of 4.5 m.



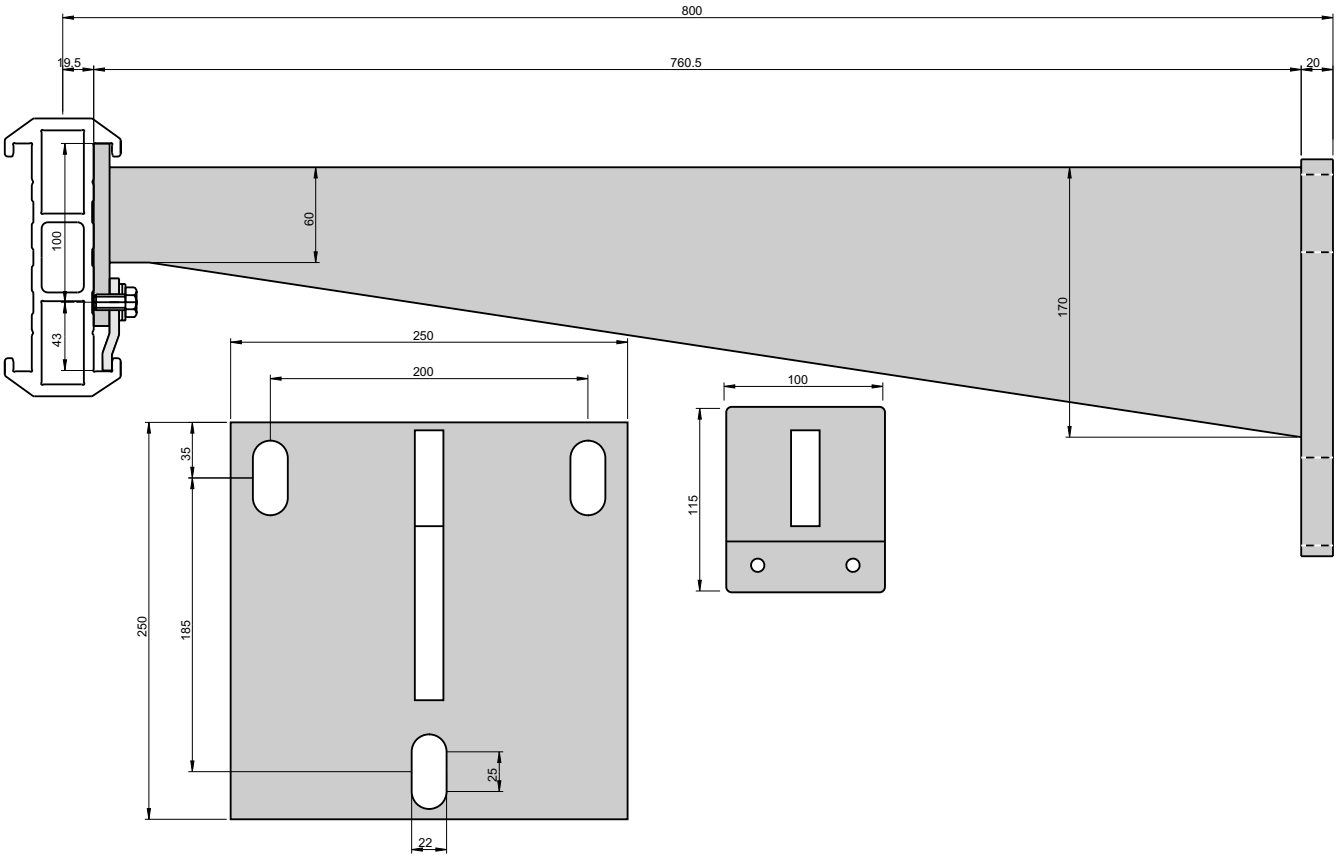
## 6. RAIL END STOP

On "open" trackways an end stop must be fitted at the end of each rail and bolted to the rail.




## 7. BRACKETS

The brackets designed to support the rail, are positioned on the facade at a maximum span of 5.5 m for straight lengths. For curves, brackets are positioned according to site configuration (see technical sheet TT65).

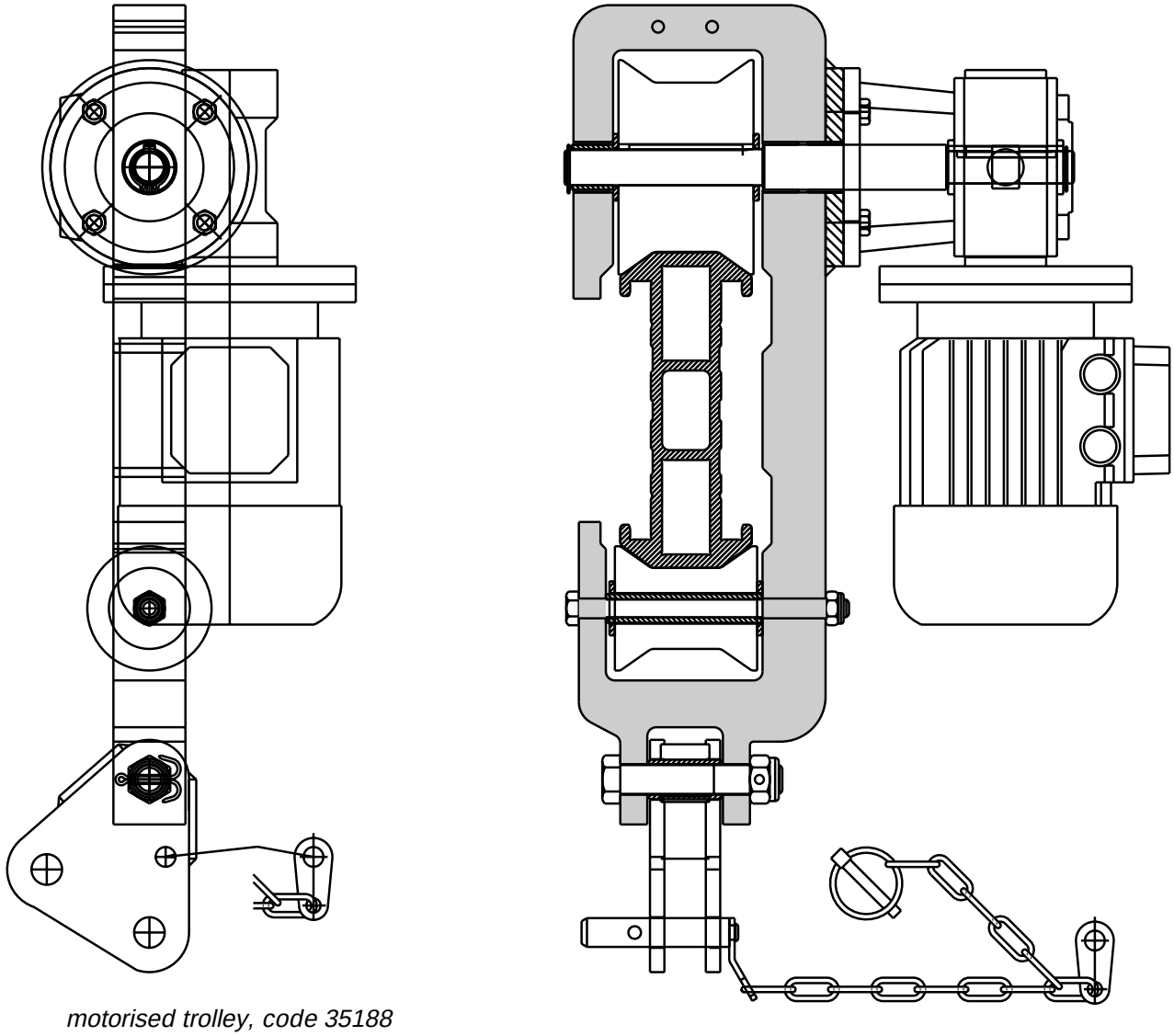


## 8. TRAVERSING TROLLEY

### 8.1. Motorized trolley

The traversing trolley consists of a hot dipped galvanized steel casing with two nylon guiding rollers. The upper roller is driven by a gear motor. The trolley can be used either alone (for ALTA SOLO platform) or as twin trolleys for the suspension of longer platforms (ALTA, TANGOR)

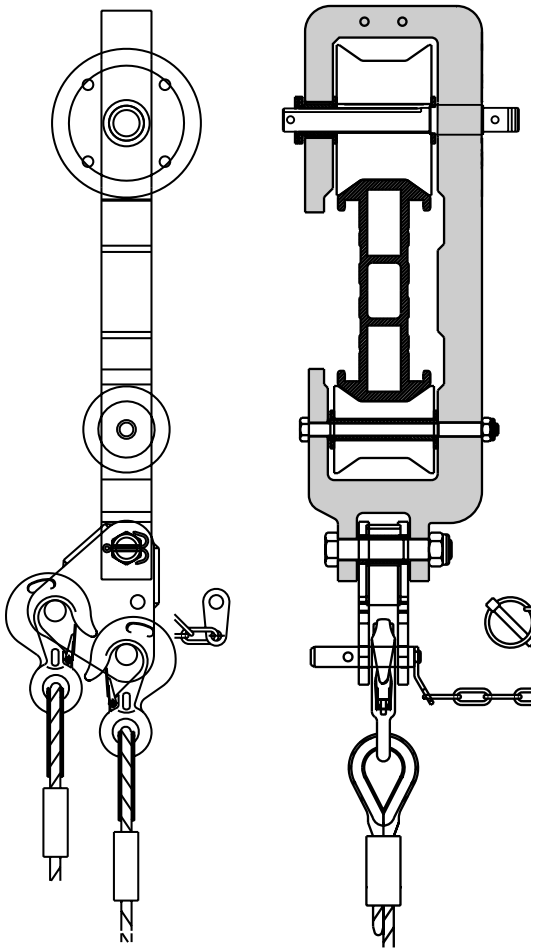
| | |
|---|---|
| Motor technical data: | worm gear motor |
| Protection: | IP55 |
| Insulation Class | F |
| Voltage: | 3 phase, 380/415V - 50/60Hz |
| Controls: | by push buttons on pendant control box or on cradle control box |



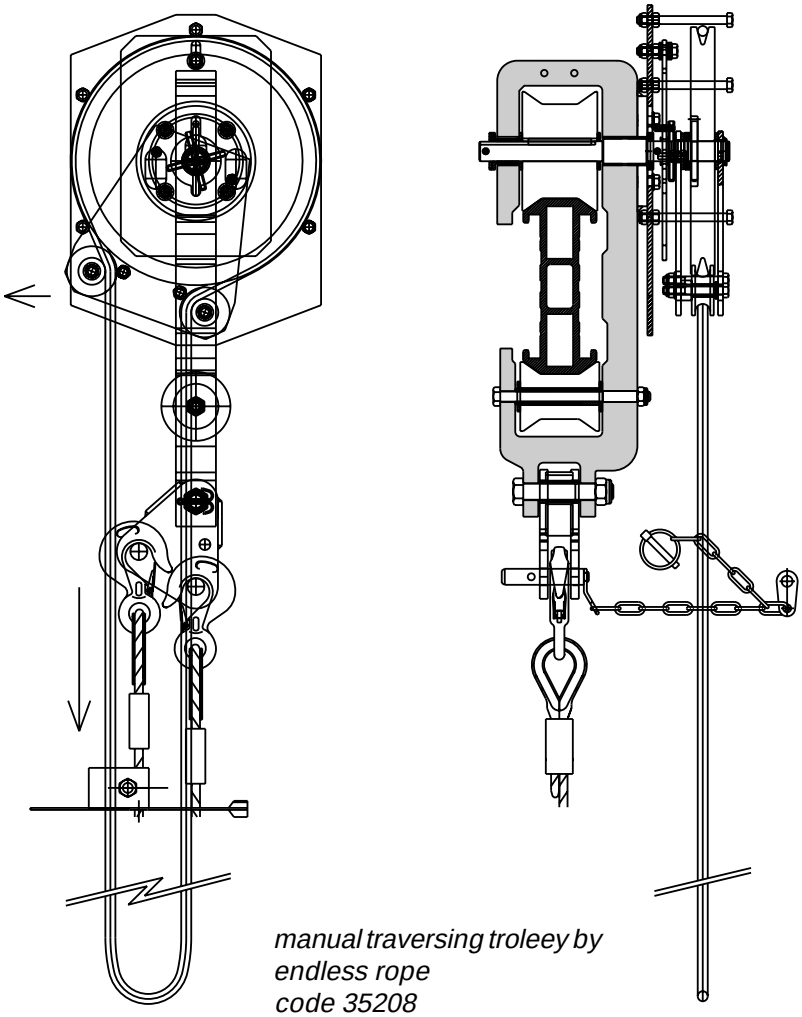
*motorised trolley, code 35188*

### 8.1. Manual traversing trolley

The manual traversing trolley consists of a hot dipped galvanized steel casing with two nylon guiding rollers.
The manual trolleys can be either
– free moving trolleys, or
– moved by endless rope drive.



*free mowing trolley, code 35198*



*manual traversing troleey by endless rope code 35208*