

**ELITE**  
SAFETY SYSTEMS

# Pro-Guard Freestanding Guardrail System

## Operation & Maintenance Manual



English

Deutsch

Francais

# CONTENTS

## 1.

### General Information

|                           |   |
|---------------------------|---|
| 1.1 Introduction .....    | 3 |
| 1.2 Manufacturer .....    | 3 |
| 1.3 Design Criteria ..... | 3 |

## 2.

### Safety Guidelines

|                                             |   |
|---------------------------------------------|---|
| 2.1 Basic safety whilst installing .....    | 4 |
| 2.2 Duties, Liabilities and Warranties..... | 4 |

## 3.

### Product Data

|                                    |     |
|------------------------------------|-----|
| 3.1 Description .....              | 5   |
| 3.2 Overview of Description .....  | 5   |
| 3.3 Material .....                 | 5   |
| 3.4 Testing .....                  | 5   |
| 3.5 Component Identification ..... | 6-7 |
| 3.6 Typical Configuration .....    | 8   |
| 3.7 In-Situ Dimensions .....       | 8   |

## 4.

### Installation

|                                                          |   |
|----------------------------------------------------------|---|
| 4.1 Post installation check and annual maintenance ..... | 9 |
|----------------------------------------------------------|---|

## 1. General information

### 1.1 Introduction

The information contained within this guide apply only to freestanding guardrail systems mentioned in this document and those which have been designed to the "Design Criteria" referred to in section 1.3 and manufactured by the company referred to in section 1.2.

It is the responsibility of the installer to:

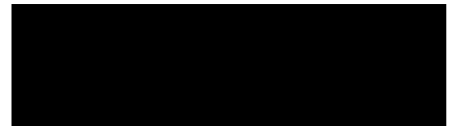
- Ensure that local, regional and national regulations are observed
- Observe the requirements (laws, regulations, directives, etc.) on safe operation and handling mentioned in the installation and use instructions
- Make sure that the installation and use instructions are available to the personnel who install and use the guardrail systems and that the information given, such as instructions, warnings and safety requirements are followed in every detail
- Observe special instructions and requirements with regard to planning and installation of guardrail systems

### 1.2 Manufacturer

The manufacturer of the guardrail systems covered in this documentation is:

Elite Safety Systems Ltd  
Unit 3 Holbrook Enterprise Park  
Sheffield  
S20 3GL

Tel:  
Email:  
Web:



### 1.3 Design Criteria

The guardrail system covered by this documentation is generally designed to comply with the following legislation:

- BS 13374:2013 - Class A
- EN ISO 14122 PART 3
- HSG-33 Health and safety in Roof Work
- HSE INDG 284 "Working on Roofs"
- BS 6399: Part 2 1995 Wind Code

## 2. Safety Guidelines

### 2.1 Basic safety whilst installing

The installers should be familiar with working at height, and with any tools or temporary access equipment they may be using to install the guardrail system.

Only trained personnel should be used to install this system.

Every precaution should be taken to ensure that any health and safety risks associated with the installation are properly assessed and any control measures taken.

### 2.2 Duties, Liabilities, and Warranties

For the safe handling and a problem free installation it is necessary that installers and users have a good knowledge of the safety instructions and regulations. These installations instructions must be observed and understood by anyone installing or using the system. In addition the accident prevention rules and regulations that apply in the place of installation must also be observed.

The scope and duration of the form of warranty are laid down in the manufacturers sales and delivery terms and conditions. The installation and use instructions valid at the time of delivery are always decisive for any warranty claims arising from defective documentation.

The following terms also apply above and beyond the sales and delivery terms and conditions:

No liability shall be assumed for damages to persons and property which has occurred due to one or more of the following reasons:

- Unintended use of the guardrail system
- Incorrect installation of the guardrail system
- Use of the guardrail system with defective safety equipment or incorrectly installed or non-functional safety and protective equipment
- Ignorance or non-observance of these installation and use instructions
- Insufficiently qualified or insufficiently instructed installation and operating personnel
- Improperly performed repairs
- Use of non-genuine spare parts
- Unauthorised structural modifications to the guardrail system
- Insufficient monitoring of components that are subject to wear and tear,
- Catastrophes caused by foreign objects and acts of providence

The operator and the installation firm must, under their own responsibility, ensure that:

- The safety requirements given in section 2 et seq. are observed,
- Any unintended use is excluded,
- Any intended use is ensured above and beyond this, and the guardrail system is used in accordance with the contractually agreed conditions of use.

### 3. Product Data

#### 3.1 Description

Our freestanding edge protection system is a cantilevered guardrail system that does not require any mechanical fixing into the roof surface. This system has been designed and manufactured to fully comply with current H.S.E regulations.

#### 3.2 Overview of system

Our Freestanding guardrail is a modular system that consists of components which connect together to form a fully compliant edge protection system for flat roof areas with a maximum pitch of 15 degrees.

The system is designed to be variable in height to accommodate undulations within the roof surface, however the minimum height of the system should be set to that shown in the current British standard.

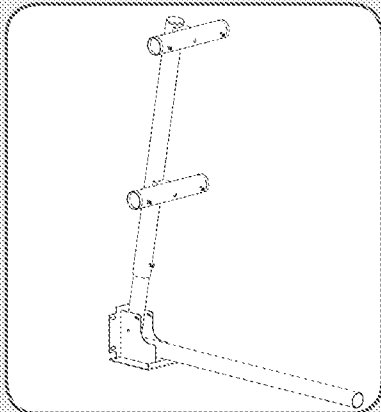
#### 3.3 Material

The main and intermediate uprights are fabricated from 2mm galvanised steel equivalent to BS EN ISO 1461, with the upper and lower cross rails manufactured from 1.5mm x 47.65mm external diameter galvanised steel. The counterweight is manufactured from 100% recycled pvc compound with the fixing screws manufactured from stainless steel

#### 3.4 Testing

Our freestanding guardrail system has been tested for compliance to the standards shown in *1.3 Design criteria* by the SATRA technology centre.

### 3.5 Component Identification



## 1. Main Upright - MSUP

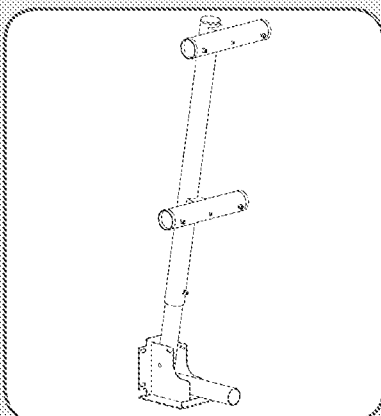
The main upright sits on the roof and has a counterbalance weight and the adjustable top riser unit attached.

The front foot which rests on the roof is protected by a rubber isolation pad. By loosening the fixing screws in the body of the top riser, the unit can be moved up and down the main upright to adjust the height of the top and middle rails.

#### MATERIAL

The main upright is manufactured from 2mm x 48.30mm steel tube, which has a galvanised coating and is available powder coated to any RAL colour.

NOTE: Main upright shown here with top riser unit attached.



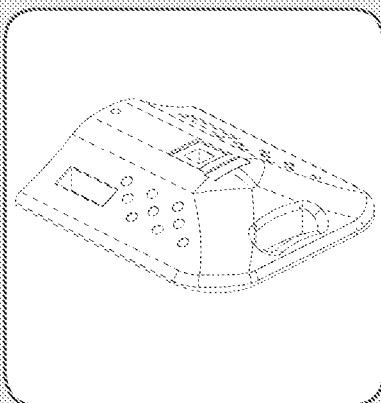
## 2. Intermediate Upright - ISUP

The intermediate upright is a shortened version of the main upright and is designed to be installed un-weighted as an intermediate support. Just as with the main upright, this component consists of two separate parts but is delivered pre-assembled and ready to install. The intermediate upright also features the protective rubber pad to isolate the foot from the roof membrane.

#### MATERIAL

The main upright is manufactured from 2mm x 48.30mm steel tube, which has a galvanised coating and is available powder coated to any RAL colour.

NOTE: Intermediate upright shown here with top riser unit attached.



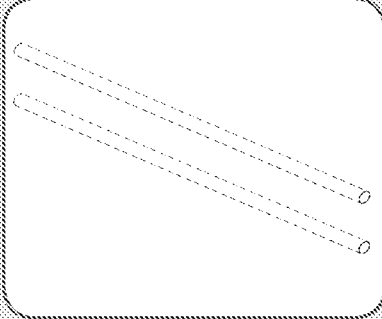
## 3. Counterweight - ELW

The weight is designed to be attached to each of the main uprights, and is fixed in place with a small zinc coated grub screw which provides the necessary counterbalance weight to prevent the system from being moved.

#### MATERIAL

The weight is manufactured from 100% recycled PVC compound.

### 3.5 Component Identification

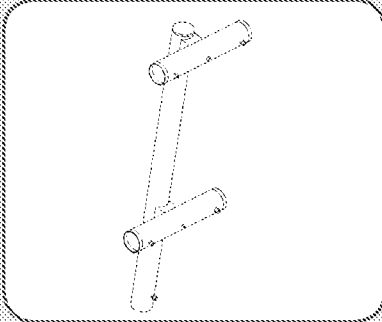


#### 4. 2500mm Crossrails - CR2.5

All the main cross rails are supplied pre-cut to 2.50m lengths for ease of installation. This fixed length means there is no need to measure or cut the tubes to ensure the uprights are spaced evenly.

##### MATERIAL

The lightweight main rails are manufactured from 1.5mm light gauge steel making them easy to cut and transport and are galvanised coated to BS EN ISO 1461 and are available powder coated to any RAL colour.

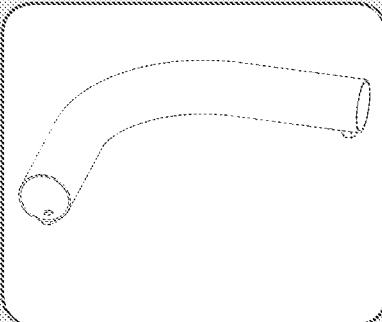


#### 5. Top Riser Unit - TRS

The top riser unit connects to the top of each upright and allows the top and middle rails to be evenly spaced whilst allowing the overall height of the rails to be adjusted to suit different applications.

##### MATERIAL

The top riser unit is manufactured from 2mm steel and are galvanised coated equivalent to BS EN ISO 1461. These are also available powder coated to any RAL colour.

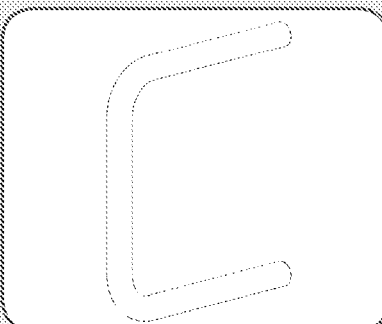


#### 6. Swept Bend - SC90

The SC90 is an ergonomically designed 90° swept bend. This flexible pre-formed component can be used for both horizontal and vertical bends. The fitting incorporates stainless steel grub screws for easy installation.

##### MATERIAL

The swept bend is manufactured from 2mm steel and is galvanised coated equivalent to BS EN ISO 1461. These are also available powder coated to any RAL colour.



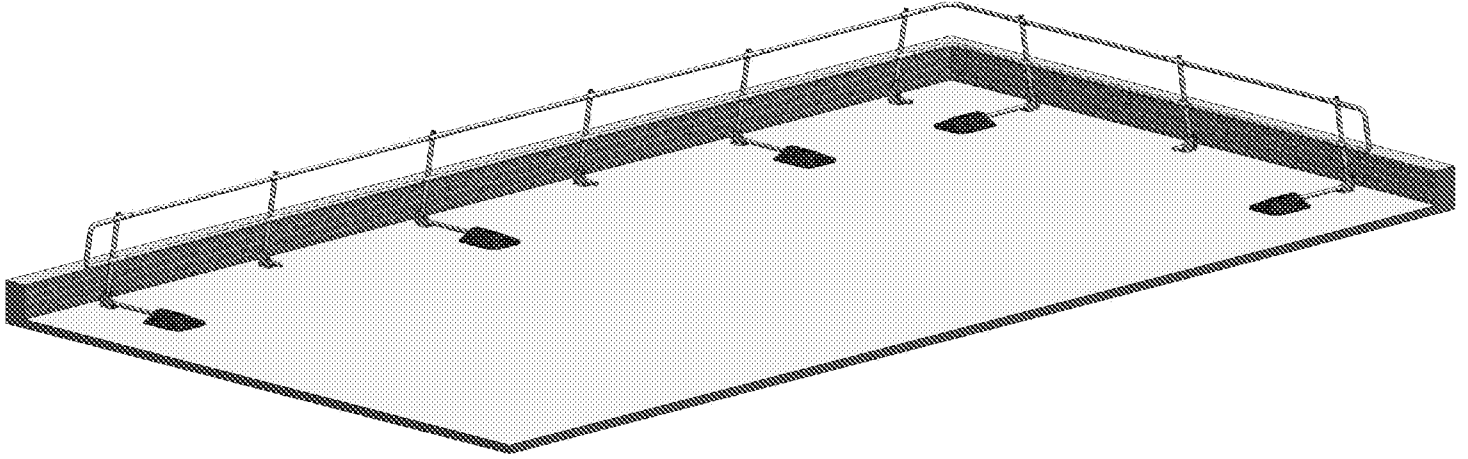
#### 7. D End Termination - DE180

The pre-formed 180° bend inserts into the top riser and is a quick and convenient way of terminating a run of guardrail. This flexible pre-formed component can be used for both horizontal and vertical terminations.

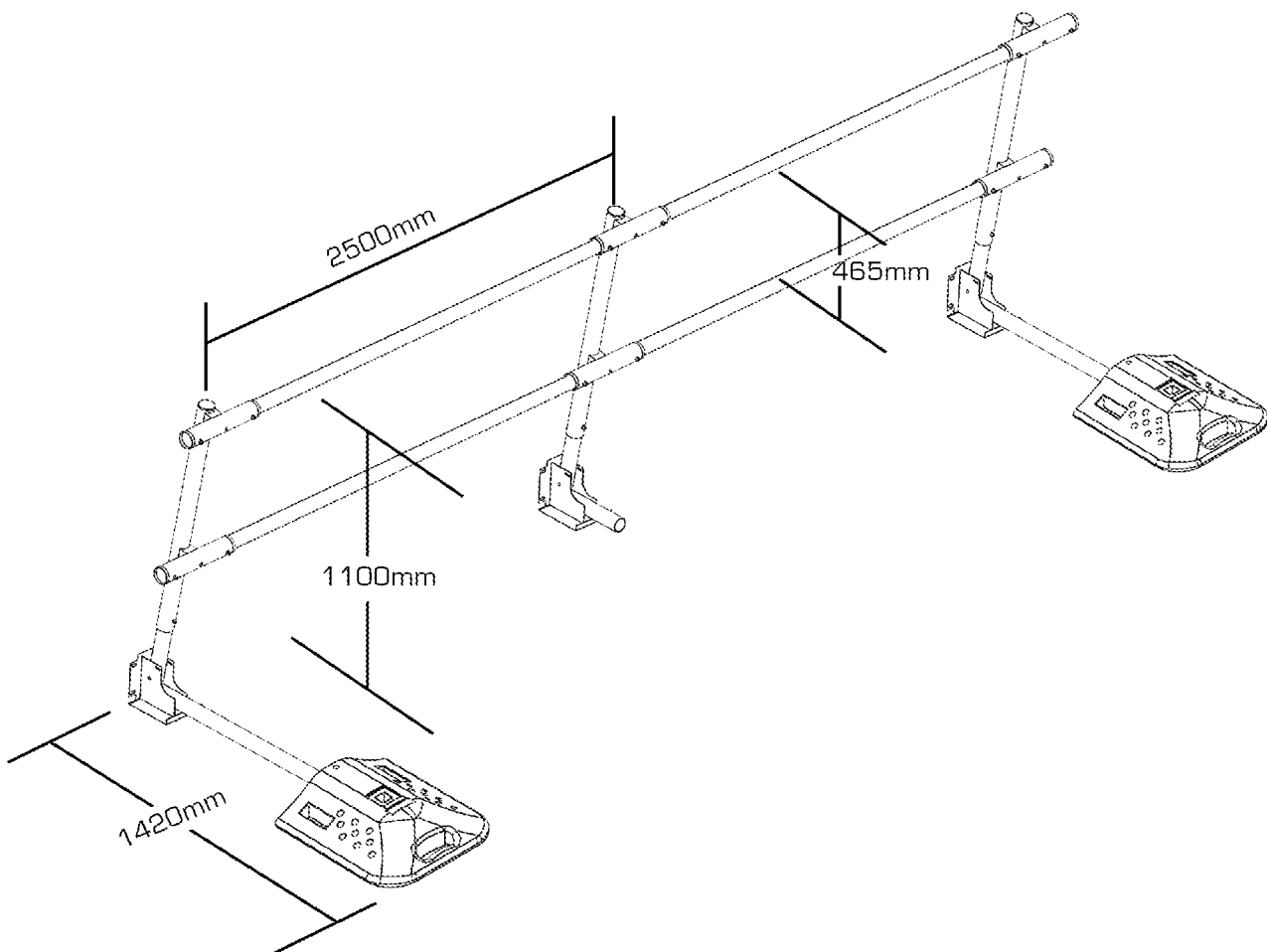
##### MATERIALS

The 'D' end are manufactured from 2mm steel and is galvanised coated equivalent to BS EN ISO 1461. These are also available powder coated to any RAL colour.

### 3.6 Typical Configuration



### 3.7 In-situ Dimensions



## 4. Installation

### 4.1 Post installation and annual maintenance

The guardrail installation should be inspected periodically by a competent person. The frequency of these inspections will depend upon the environment, location, and utilisation, but should be at least every twelve months.

#### **Pro-Guard Guardrail 10 point Maintenance Checklist**

1. Check the grub screws that hold the cross rails into the Top Riser are intact, secure, fully tightened and free from any corrosion or damage
2. Check the grub screw that secures the counterweight to the uprights are intact, secure, fully tightened and free from any corrosion or damage
3. Check that the grey and the black plastic Top Riser end caps have not been damaged, or become dislodged
4. Check the protective rubber base pad to bottom of the uprights have not been damaged, or become dislodged
5. Check the alignment of the guardrail, make sure it is parallel with the roof surface and visually that each section of guardrail is straight along its length
6. Check that any fittings such as end terminations, or Tee connectors are securely connected and tightened to the uprights or cross rails
7. Check the cross rails are straight and free from damage or corrosion
8. Check the uprights are free from damage or corrosion
9. Check that the uprights are free from damage or corrosion
10. Check that any warning signs are visible and properly affixed

#### **Note:**

It may be necessary to consult the original layout drawings to verify that the layout of the guardrail has not been changed since installation

If the system has been powder coated then the grey end caps to the ends of the top riser may not be present.

If you require any further information or have any problems installing your guardrail system that cannot be resolved using the information covered in this manual, you can obtain further information directly from the manufacturer.

Reproduction, distribution or disclosure of the contents of this document without approval from the manufacturer may result in legal action against you.

From time to time technical amendments may take place affecting this guardrail system, although every effort will be made to ensure this document remains up to date, it is your responsibility to contact the manufacturer if you have any queries.

