

ELITE
SAFETY SYSTEMS

Pro-Guard Freestanding Guardrail System

Installation Guide



English

Deutsch

Francais

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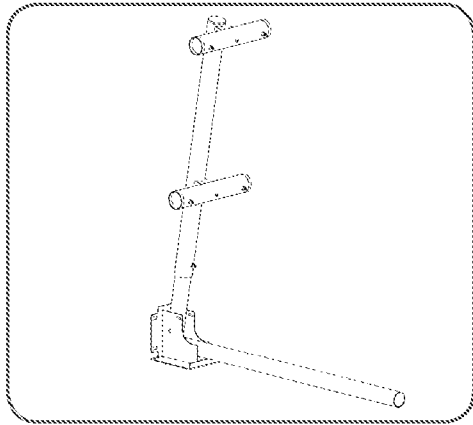
2.

Installation

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1. Product Data

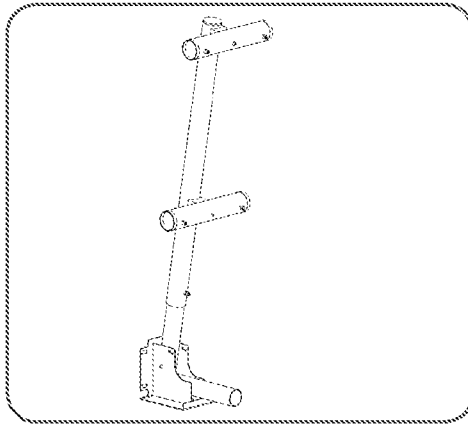
1.1 Component Identification



Main Upright

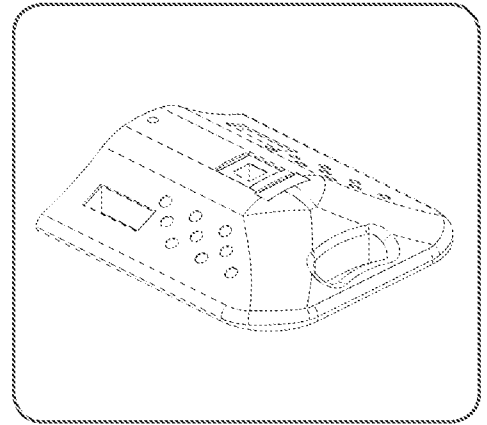
The main upright sits on the roof and has a counterbalance weight and the adjustable top riser unit attached.

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.



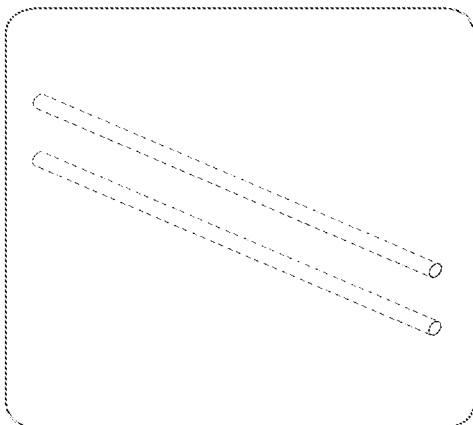
Intermediate upright

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.



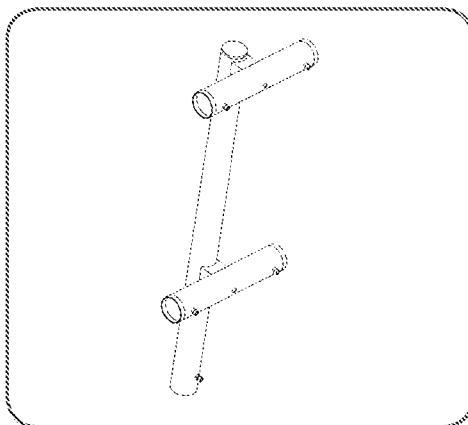
Counterweight

The weight is designed to be attached to each of the main uprights, and is fixed in place with a stainless steel cap head screw which provides the necessary counterbalance weight to prevent the system from being moved.



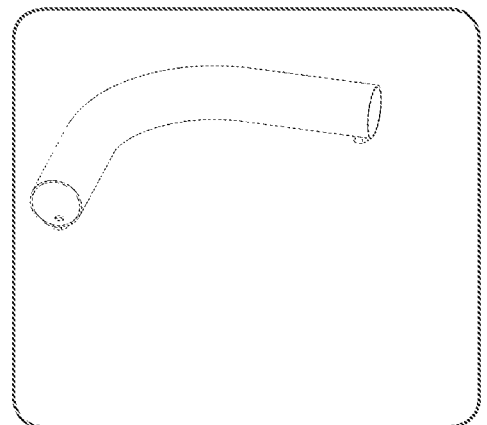
Crossrails

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.



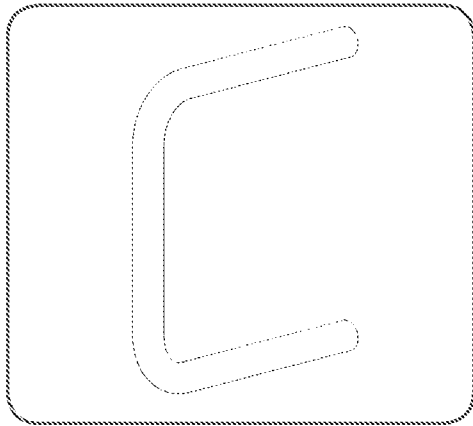
Top Riser

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.



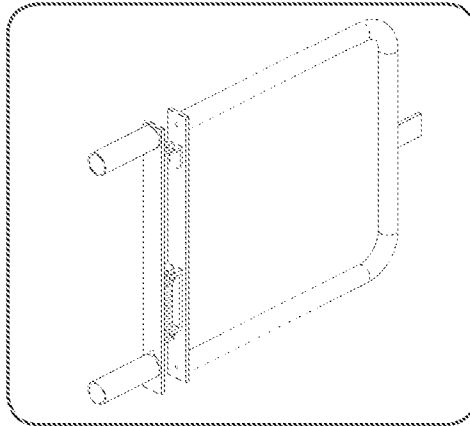
Swept Bend

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.



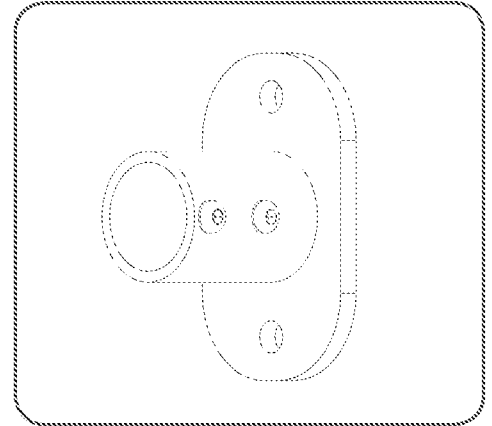
'D' End Termination

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.



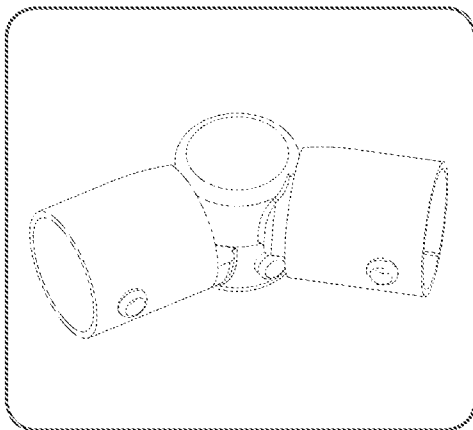
Access Gate

The half height access gate is designed to connect straight into a main upright and is used on conjunction with a 'D' end termination to provide a convenient access and egress point through the guardrail system.



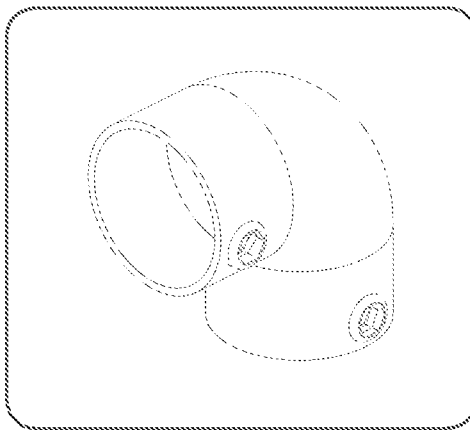
Wall Fix Flange

Used in pairs the wall fix flanges are used to terminate ends of the guardrail to a masonry wall. The wall flange has two 14mm diameter holes for use with various concrete fixings.



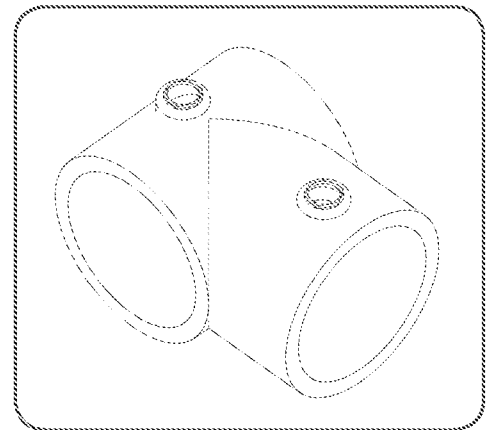
Variable Elbow

Used to form an acute or obtuse corner in the guardrail the 166 fitting is typically used in pairs.



90 Deg elbow

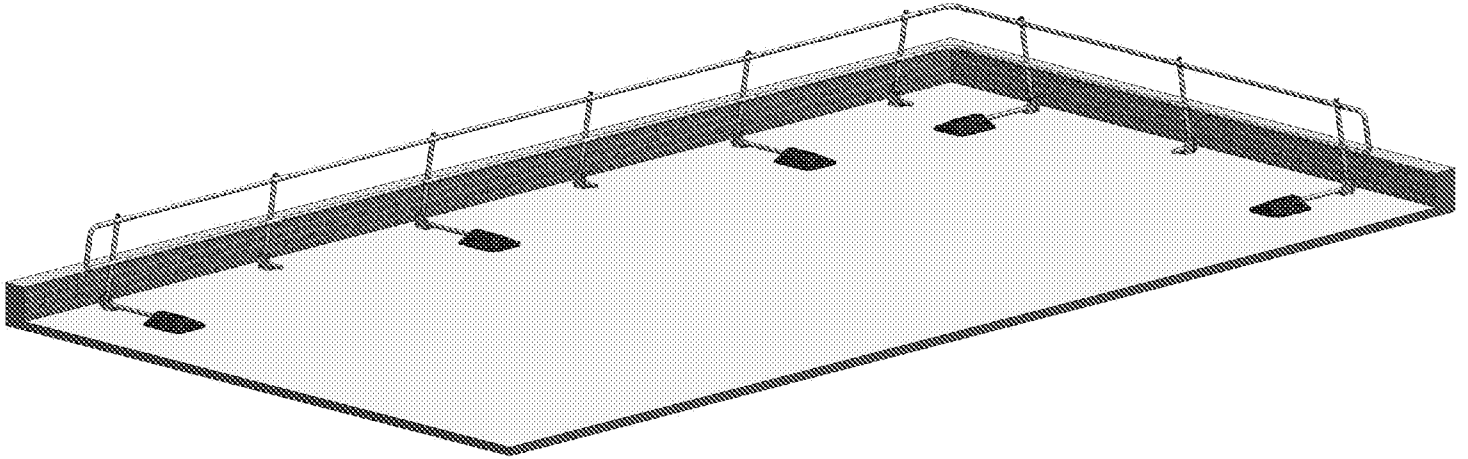
The 90 deg elbow can be used as an alternative to a swept bend when tight er corners are required.



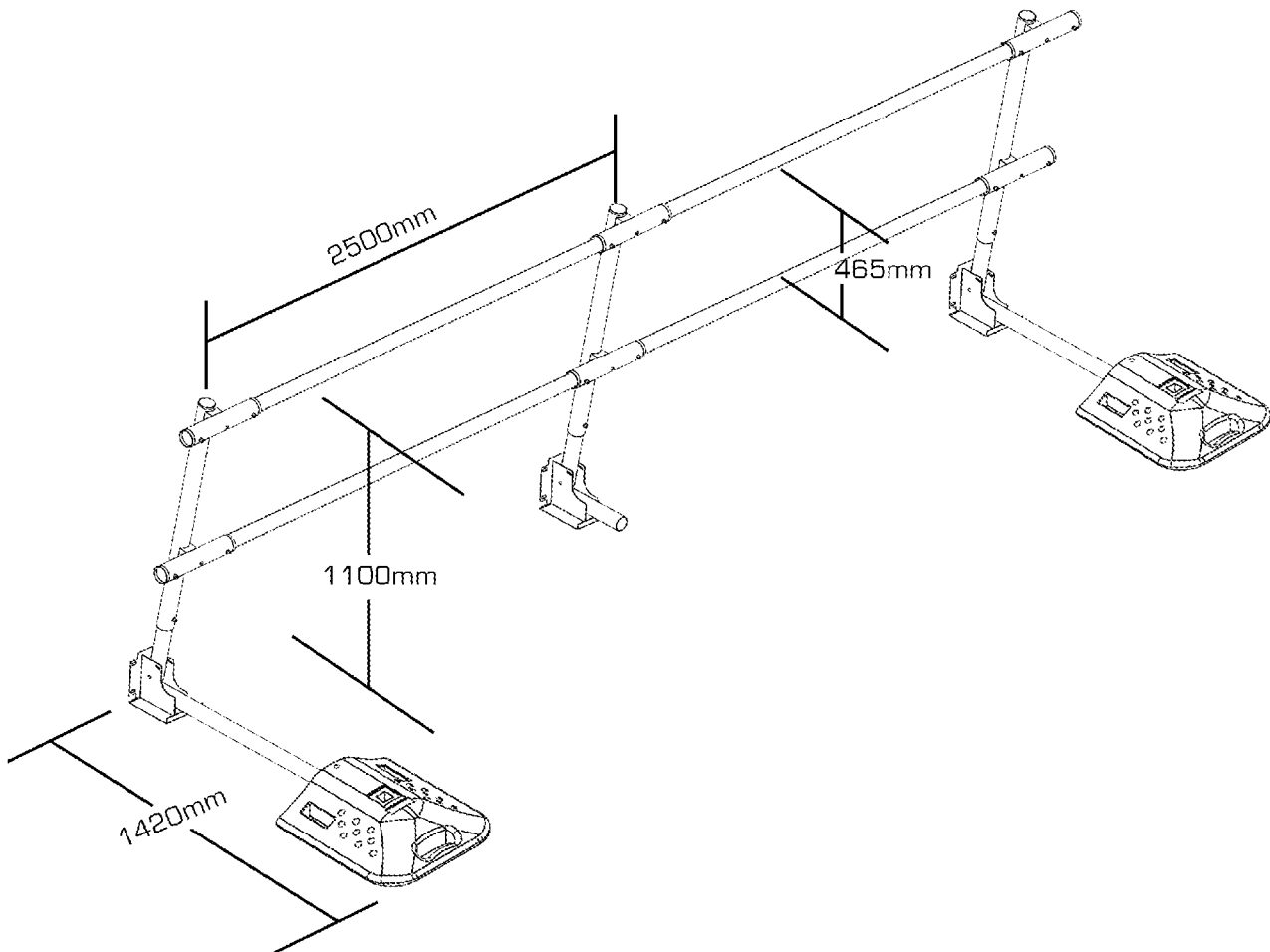
Short Tee

The short tee is used to join two perpendicular tubes together. The Short tee is also used to connect the extra weight needed on a D end termination upright.

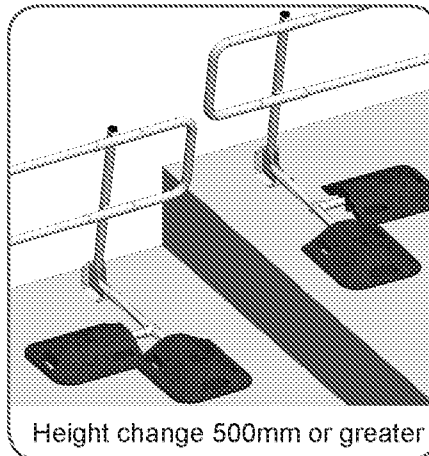
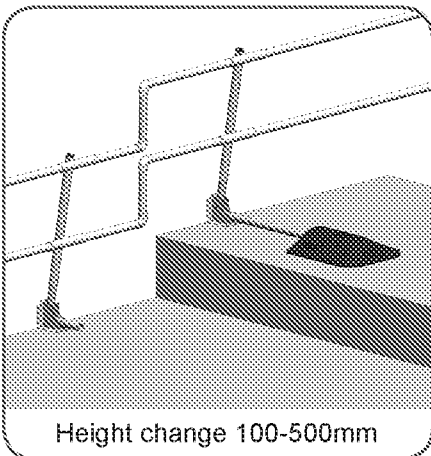
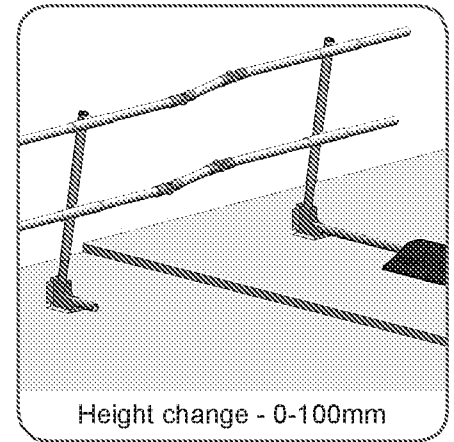
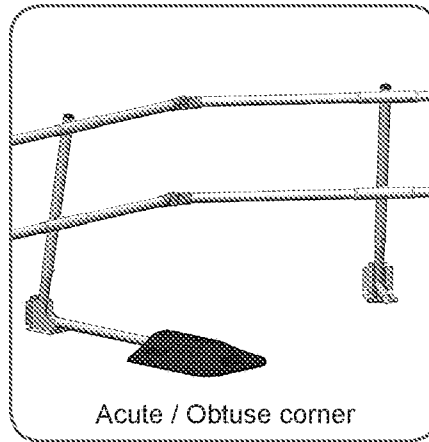
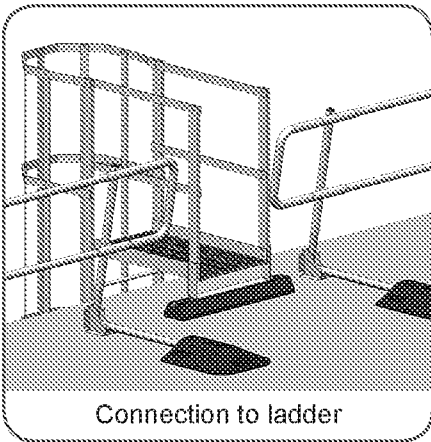
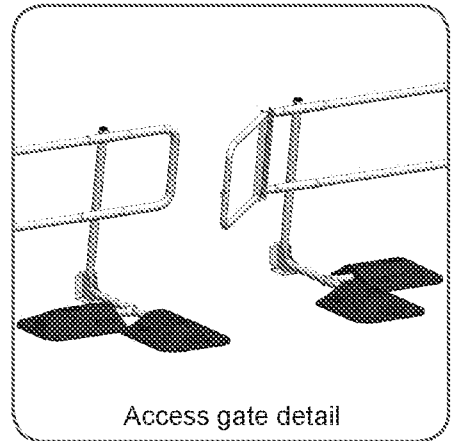
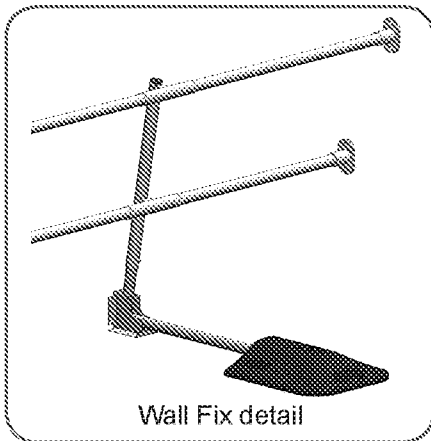
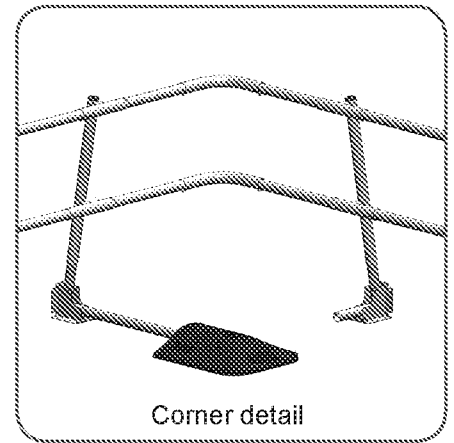
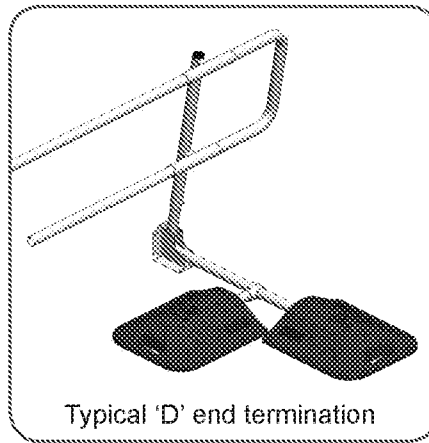
1.2 Typical Configuration



1.3 In-situ Dimensions



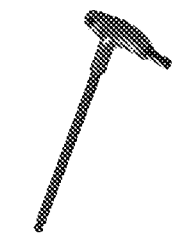
1.4 Typical Details



2. Installation

2.1 Preparation prior to installation

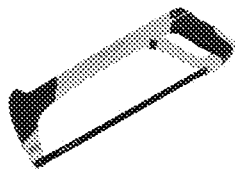
The following tools will be required to install the guardrail system



6mm and 8mm
Hex Tool
(Allen Key)



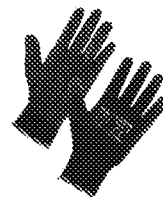
Measuring tape



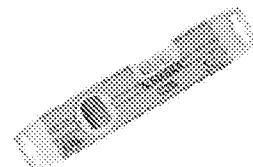
Hacksaw or powered
reciprocating saw



Safety goggles
or other eye
protection



Protective gloves



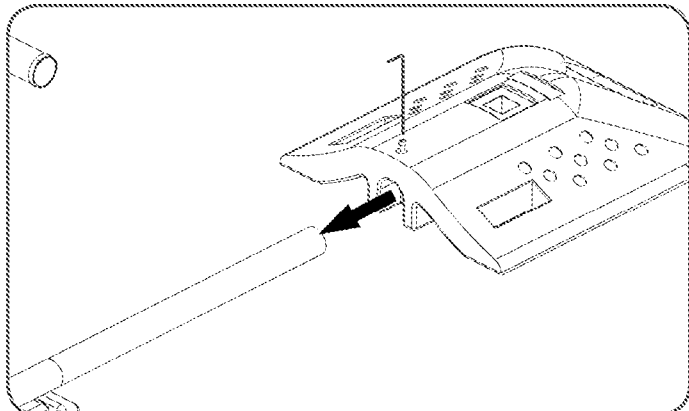
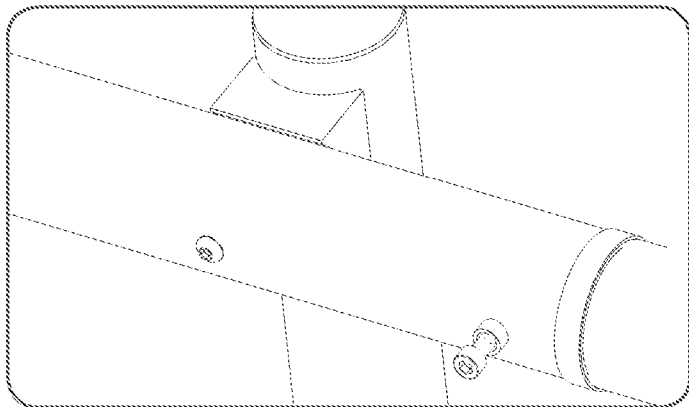
Spirit Level

2.2 Installation methods

The installation of the freestanding guardrail system and add-on parts is explained in detail in the following instructions.

General tips to aid installation:

Before beginning the installation ensure that you have all the required tools and also any ancillary components such as corners, access gates, and end terminations required to complete the installation.



Installation instructions:

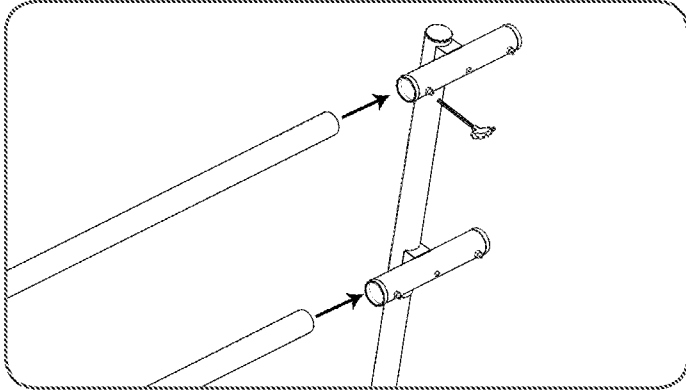
The ideal places to begin installation are a termination point such as a 'D' end /wall termination, or a corner.

Where a 'D' end termination is used as the starting point the 'D' end components should be inserted into a Main upright (MSUP), and using a 6mm hex tool tighten the grub-screws in the TRS tight against the 'D' end tube.

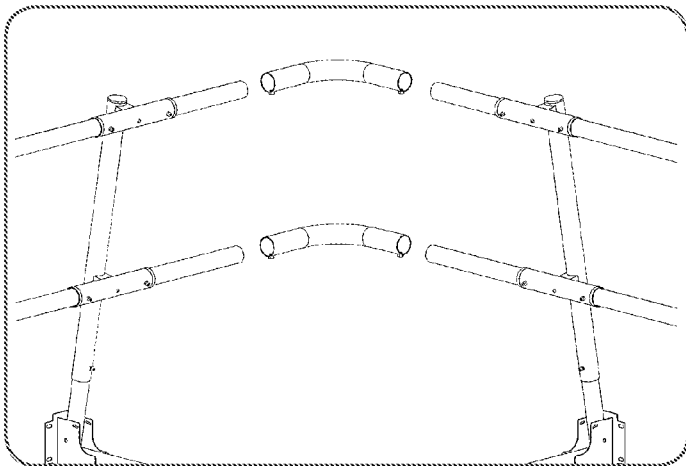
Once inserted the upright complete with 'D' end should be placed against the abutment wall leaving a gap of approx 50mm against the wall.

Once placed correctly the 20kg counterweight (ELW) should be connected onto the base tube of the MSUP, ensuring the weight is fully inserted onto the tube, and tighten the grub-screw against the tube

2.2 Installation methods



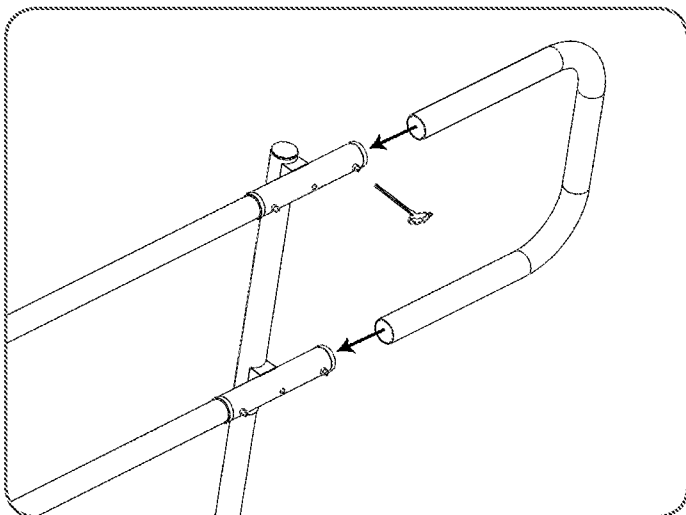
Continue by inserting the 2.50m crossrails (CR2.5) into the open end of the TRS, and fasten in place by tightening the grub-screws in the TRS against the crossrails, making sure that the uprights are installed as MSUP and ISUP alternate as Section 1.2 'Typical Configuration'.



CORNER INTERSECTIONS

Corner intersections are assembled using the swept corner components (SC90). Once the position of the corner is established, cut the top and mid rails at the point where they would intersect the swept corner.

After inserting and tightening the cut tubes into the TRS, attach the swept bend and tighten the grub screws. **Be sure not to exceed the 2500mm centres of any upright.**

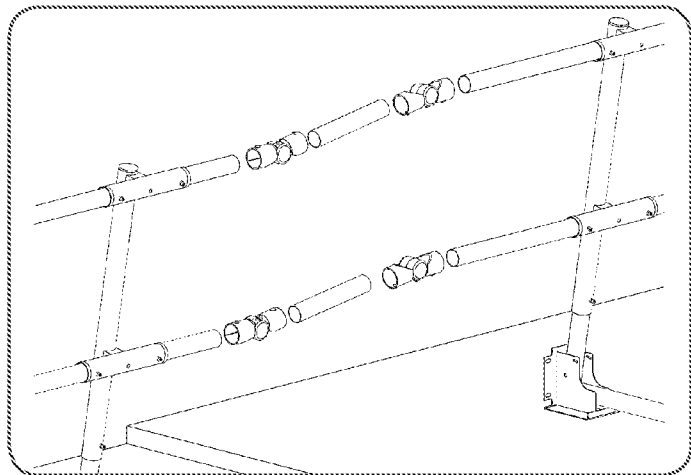


D' END TERMINATIONS

D' end terminations are constructed using the DE180 component. **The DE180 component can only be used with a weighted upright (MSUP).**

Insert the DE180 component into the MSUP as shown and tighten the grub screws against the DE180.

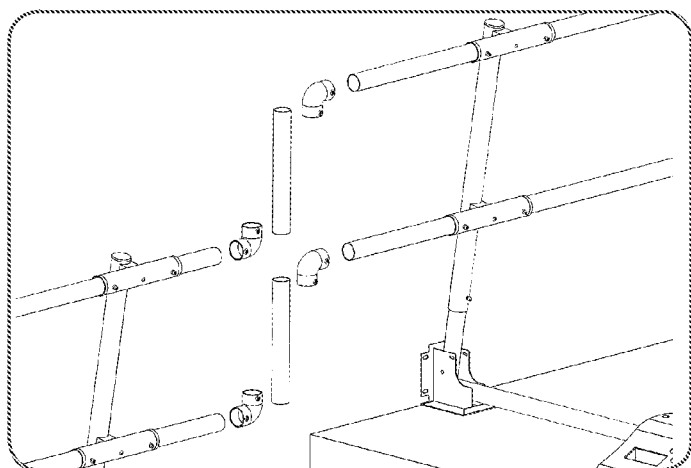
2.2 Installation methods



CHANGE IN HEIGHT 0-100mm

Changes in height 0-100mm are constructed using two Variable elbows (166-D48) per crossrail, (4 in total per change in height). Once the position of the change in height has been established cut the horizontal crossrails to accommodate the variable elbows to produce a gentle sloping change in height as shown.

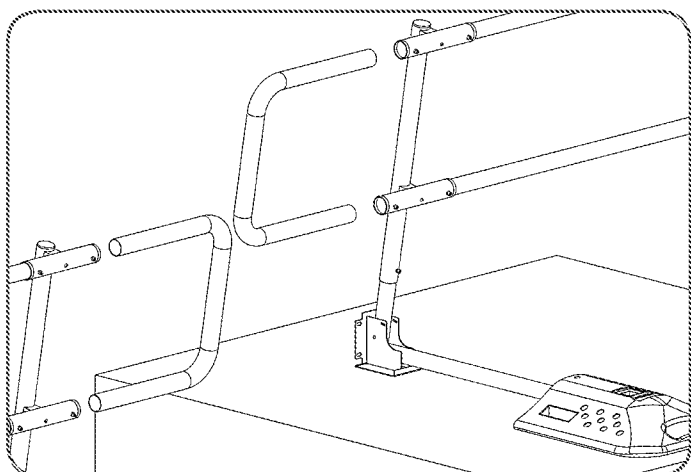
Be sure not to exceed the 2500mm centres of any upright.



CHANGE IN HEIGHT 100-500mm

Changes in height 100-500mm are constructed using two 90 degree elbows (166-D48) per crossrails (4 in total per change in height). Once the position of the change in height has been established cut the horizontal crossrails to accommodate the elbows to produce a change in height as shown.

Be sure not to exceed the 2500mm centres of any upright.

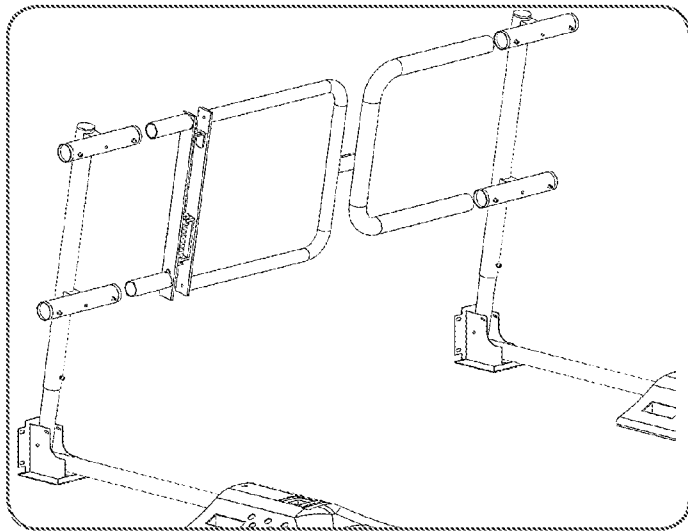


CHANGE IN HEIGHT OVER 500mm

Changes in height over 500mm are constructed using D end terminations and are treated as two independent sections of guardrail. Once the position of the change in height has been established insert a 'D' end termination as shown.

Be sure not to exceed the 2500mm centres of any upright.

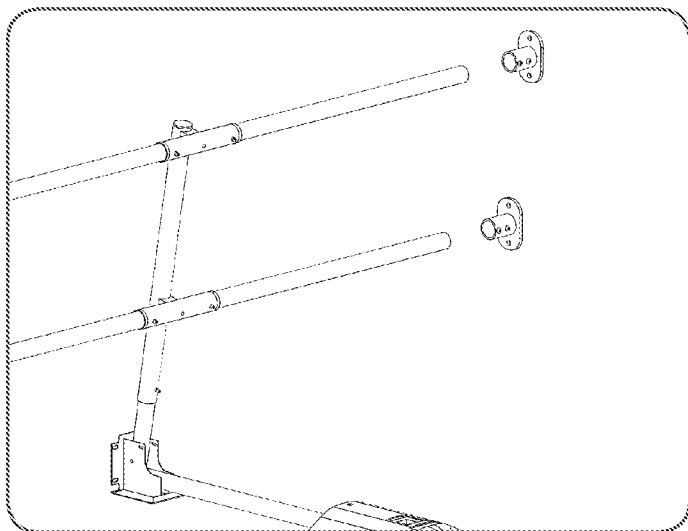
2.2 Installation methods



ACCESS GATE ASSEMBLY

Access points through the guardrail system are constructed using the Half height spring loaded access gate (HHSLGATE) and a 'D' end termination, in association with main weighted uprights (MSUP). Attach the access gate to the main upright as shown and tighten the grub screws to secure it in place. At the opposite side attach a 'D' end termination into a main upright and tighten the grub screws.

Be sure to place the gate in the correct orientation so that the self closing spring automatically closes the gate



WALL FIX END TERMINATION

End terminations that require permanent fixing into brickwork etc are constructed using a purpose made fitting (132 - D48) as shown. Each fitting is fixed into the brickwork using suitable fixings.

Be sure not to exceed the 2500mm centres of any upright

2.3 Post installation and annual maintenance inspection checklist

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.



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