

# SAFETY INSTRUCTIONS AND INSTALLATION GUIDE

## Rapid-Edge Protection Systems

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## SAFETY INSTRUCTIONS

Always check RAPID-EPS products before installation.

Do not use damaged rapid panel, rapid posts or rapid clamps & latches

Always follow installation instructions carefully. Do not use in any other way other than shown.

**Always use personal fall protection equipment during installation.**

**Never use installed Rapid Posts to tie off personal fall protection equipment.**

**Never use Rapid Posts to secure scaffolding.**

When storing posts and panels use Rapid-EPS stillages or other suitable stillage to prevent accidental damage.

RAPID-EPS system is designed for construction sites and should not be used to protect the general public.

Erected panels and posts should not be used for supporting construction materials in any way or form.

Rapid-EPS Ltd products liability only applies to combinations of Rapid-EPS Ltd. products that are assembled according to Rapid-EPS instructions.

If the Rapid-EPS edge protection is subject to a high load e.g. after a fall a qualified person must inspect the relative rapid panels and posts before being used again.

In case of any uncertainty contact Rapid-EPS Ltd.

**IMPORTANT.**

**Always carry out a risk assessment and produce a method statement for the installation of Rapid-EPS system or Rapid post prior to the commencement of any installation.**

**Always use personal fall protection equipment**

See Code of Practice PFPE ref. BS 8437

## Safety and Installation Instructions for RAPID-EPS Conforms to European Standard EN 13374 Class A. American Standard – OSHA- 1926.502

### GENERAL

Rapid-Edge Protection System (EPS) has been designed for quick installation of edge protection to buildings under construction

The system does away with the need to drill the concrete slab and bolt post anchors in position. It requires no special tools, spanners or wrenches. Installation time is cut dramatically, as is the removal when finished.

### EPS Elements

There are 5 elements to the EPS system.

1. Rapid Post Standard
2. Rapid Post Extra (up to 4M)
3. Rapid panel
4. Rapid full height panel
5. Rapid clamp & Rapid latch (for securing panels to posts)

All components of the rapid post are manufactured in steel with zinc plate and colour passivate finish. (15 micron thickness to BS EN 12329:2000) Safety parts powder coated red.

Rapid posts can be fixed in position in seconds.

Standard posts to fit between slabs from 2.0 metres to 3.4 metres. Extra long are available up to 4 metres.

Rapid panels are 2700mm long x 1275mm high with 320mm continuous toe board at the bottom edge.

Rapid panels are secured to post with Rapid clamps & Rapid latch and are designed to secure panels to rapid posts quickly and easily

Removal of Rapid Panels and Rapid posts is reverse of installation.

Rapid Posts should be fitted at **maximum** centres of 2.3 metres.

Where panels fit to a corner always use 2 posts for each panel.

Maximum allowable unsupported overhang from post to panel edge is 400mm

### Traceability

Most Rapid-EPS products are marked with a serial number for inspection and traceability.

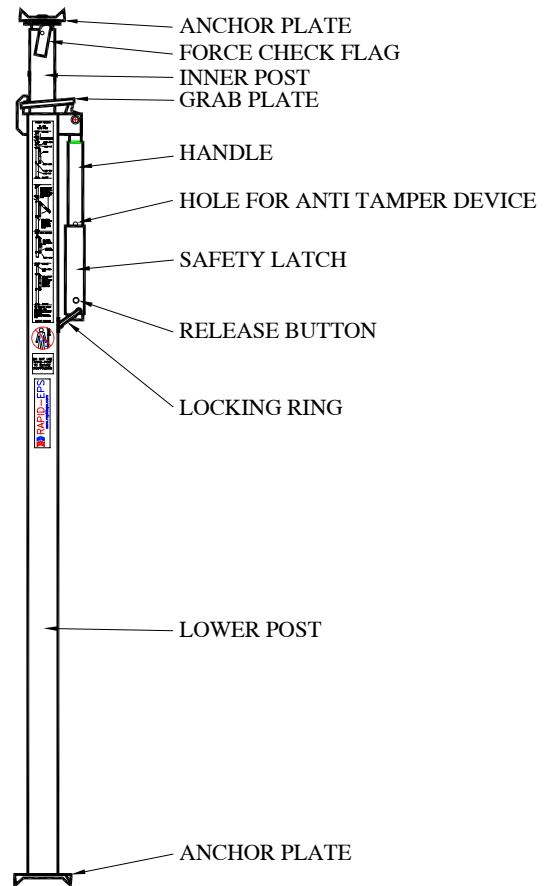
**PRODUCT INFORMATION**

**RAPID POST**

PRODUCT CODE.....REPS001  
 WEIGHT.....9.5 Kg.  
 CLOSED HEIGHT.....2 METRES  
 MAXIMUM EXTENDED HEIGHT.....3.4 METRES

FINISH.....SAFETY LATCH AND FORCE CHECK FLAG  
 POWDER COAT RED  
 POST AND ALL OTHER COMPONENTS  
 ZINC PLATE (15 micron) YELLOW PASSIVATE

Complies with standard EN 13374 class A  
 Spare parts: Contact Rapid EPS

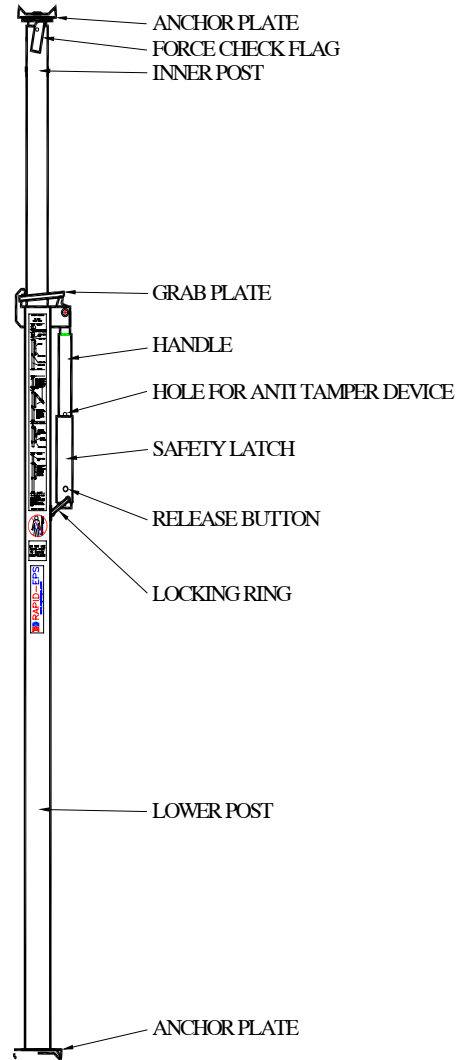


## RAPID POST EXTRA

PRODUCT CODE.....REPS002  
 WEIGHT.....16.5 Kg  
 CLOSED HEIGHT.....2.6 METRES  
 MAXIMUM EXTENDED HEIGHT.....4 METRES

FINISH.....SAFETY LATCH AND FORCE CHECK FLAG  
 POWDER COAT RED  
 POST AND ALL OTHER COMPONENTS  
 ZINC PLATE (15 micron) YELLOW PASSIVATE

Complies with standard EN 13374 class A  
 Spare parts: Contact Rapid EPS



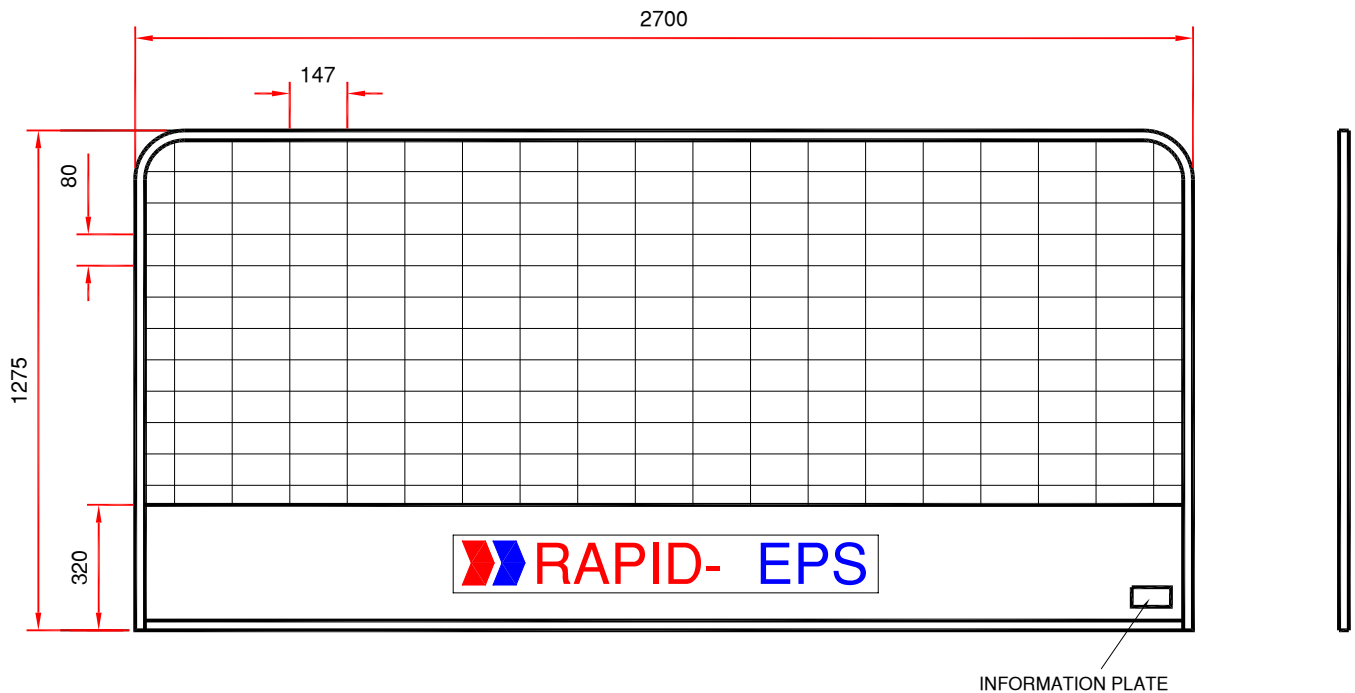
## RAPID PANEL

PRODUCT CODE.....REPS003  
 WEIGHT.....20 Kg  
 FINISH.....POWDER COAT

Complies with standard EN 13374 class A edge protection

These are manufactured from 25x25 zinc plated steel box section frame with 4mm diameter zinc plated wire infill panel.

The toe board is manufactured from 1mm x 320mm galvanised steel sheet and fitted at the bottom edge.



EN 13374  
 CLASS A EDGE PROTECTION  
 SUPPLIED BY :-  
 YEAR AND MONTH, IN THAT ORDER, OF MANUFACTURE OR SERIAL NUMBER

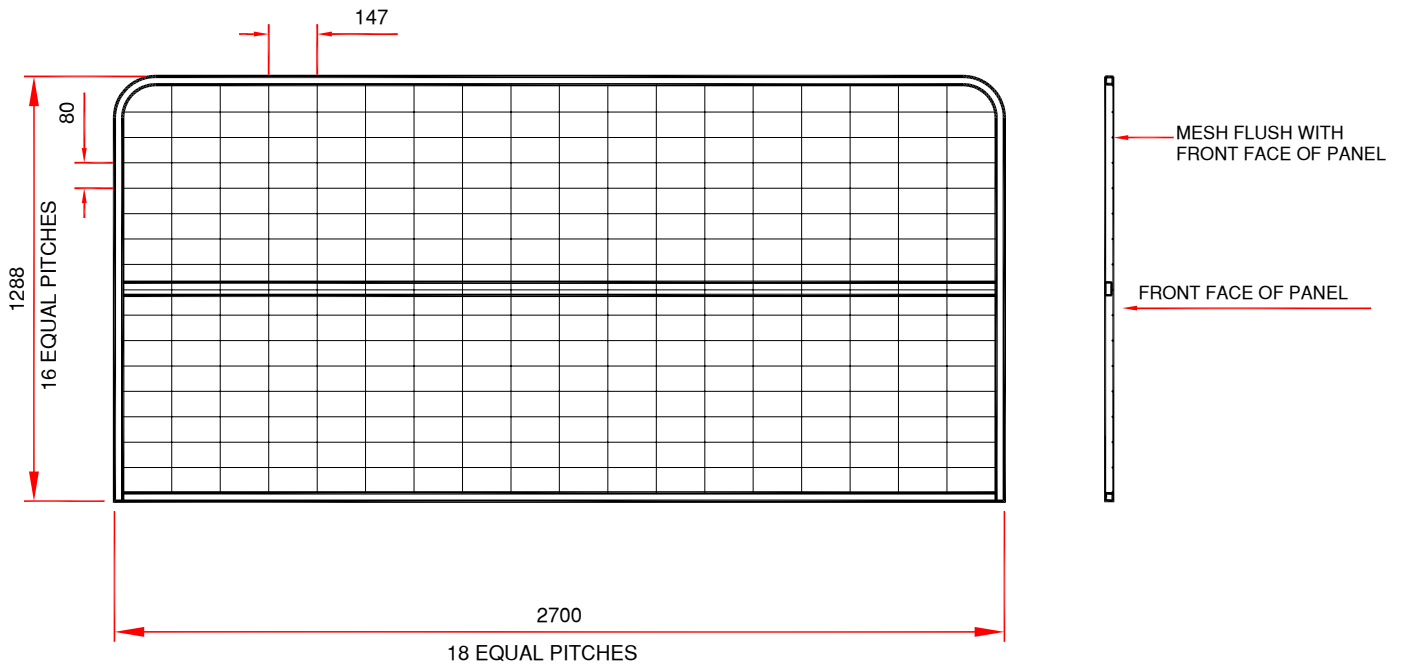
INFORMATION PLATE TO BE FIXED TO EACH PANEL

## RAPID PANEL EXTRA HEIGHT

PRODUCT CODE.....REPS004  
 WEIGHT.....16.5 Kg  
 FINISH.....POWDER COAT

Complies with standard EN 13374 class A edge protection

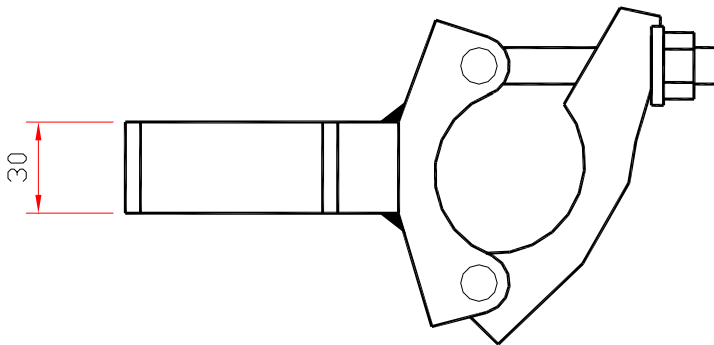
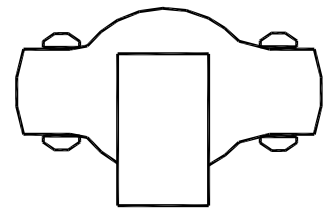
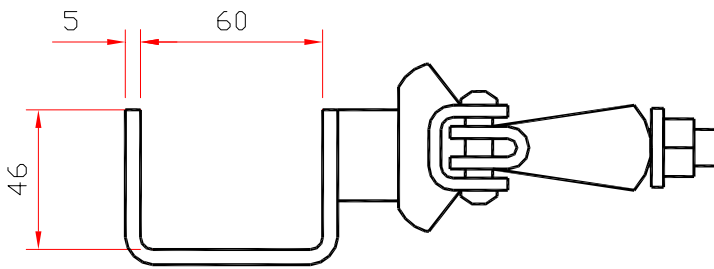
These are manufactured from 25x25 zinc plated steel box section frame with a 40x20 box section centre rail for added strength. The infill panel is made of 4mm diameter zinc plated wire mesh to the same aperture opening as the standard Rapid Panel.



**RAPID CLAMP**

PRODUCT CODE.....REPS005  
WEIGHT.....0.75 Kg  
FINISH.....ZINC PLATE, YELLOW PASSIVATE

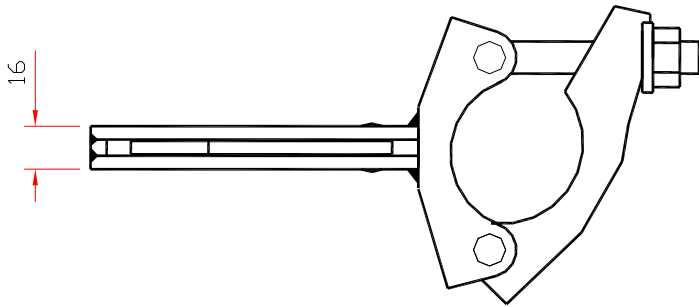
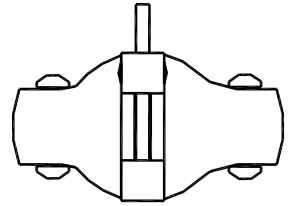
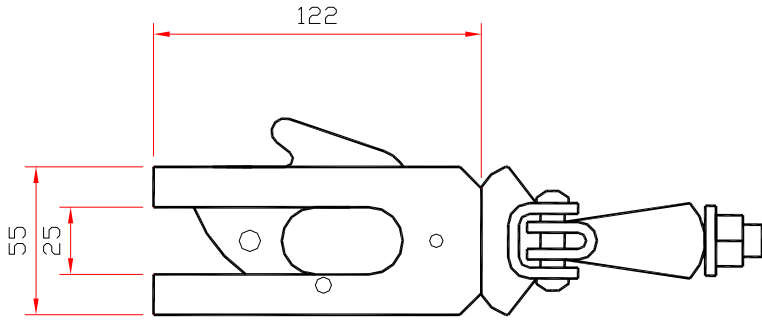
Channel section welded to a standard scaffold fitting



## RAPID LATCH

PRODUCT CODE.....REPS006  
WEIGHT.....1 Kg  
FINISH.....ZINC PLATE, YELLOW PASSIVATE

Channel section welded to a standard scaffold fitting



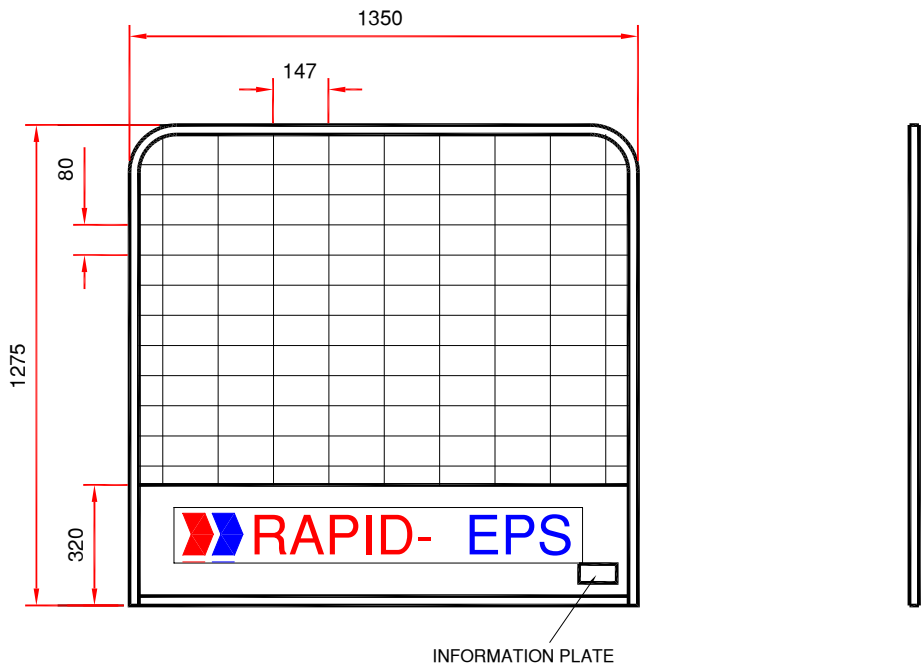
## RAPID PANEL HALF SIZE

PRODUCT CODE.....REPS007  
 WEIGHT.....11 Kg  
 FINISH.....POWDER COAT

Complies with standard EN 13374 class A edge protection

These are manufactured from 25x25 zinc plated steel box section frame with 4mm diameter zinc plated wire infill panel.

The toe board is manufactured from 1mm x 320mm galvanised steel sheet and fitted at the bottom edge.



EN 13374  
 CLASS A EDGE PROTECTION  
 SUPPLIED BY :-  
 YEAR AND MONTH, IN THAT ORDER, OF MANUFACTURE OR SERIAL NUMBER

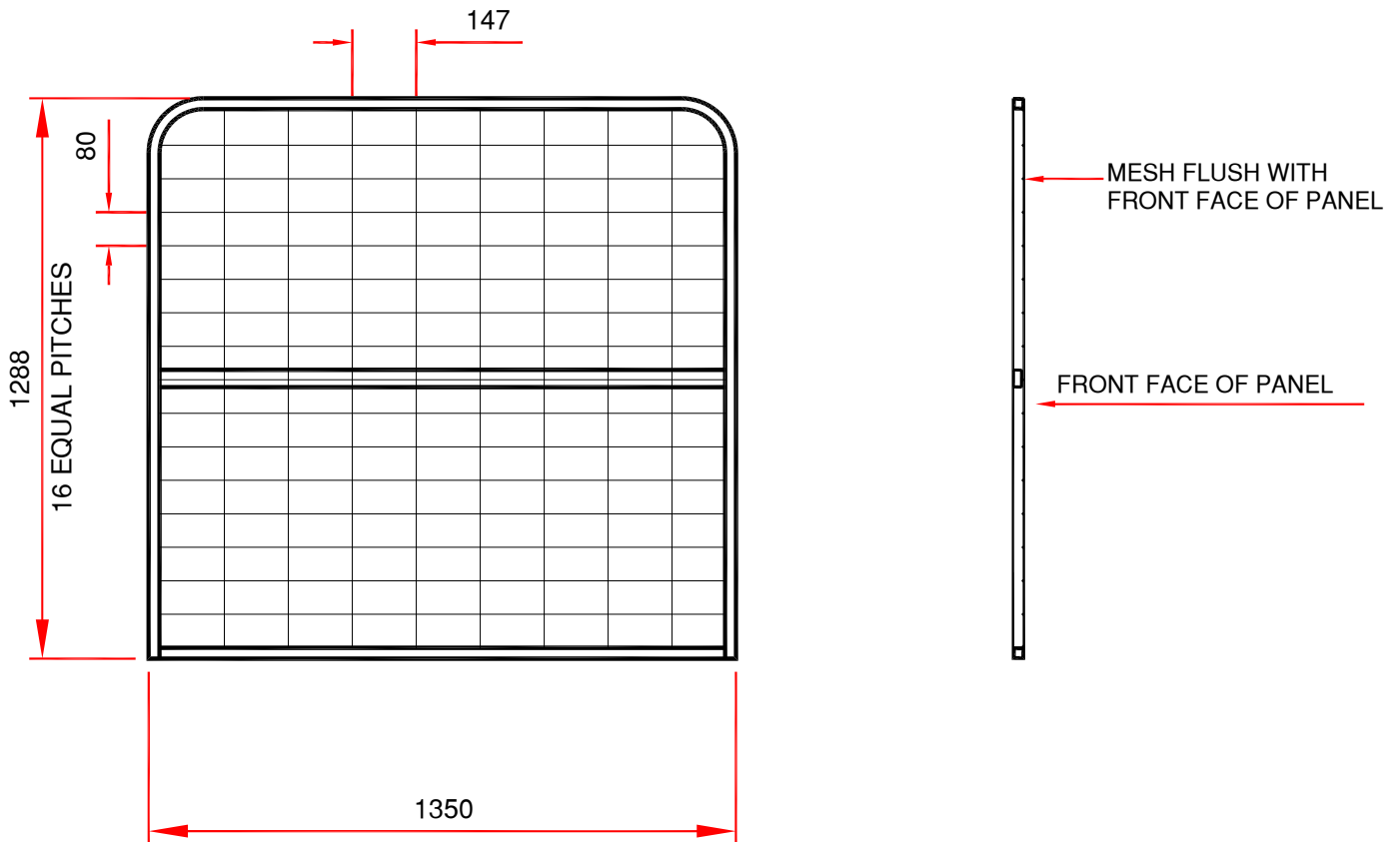
INFORMATION PLATE TO BE FIXED TO EACH PANEL

## RAPID PANEL EXTRA HEIGHT HALF SIZE

PRODUCT CODE.....REPS008  
 WEIGHT.....9.5 Kg  
 FINISH.....POWDER COAT

Complies with standard EN 13374 class A edge protection

These are manufactured from 25x25 zinc plated steel box section frame with a 40x20 box section centre rail for added strength. The infill panel is made of 4mm diameter zinc plated wire mesh to the same aperture opening as the standard Rapid Panel.

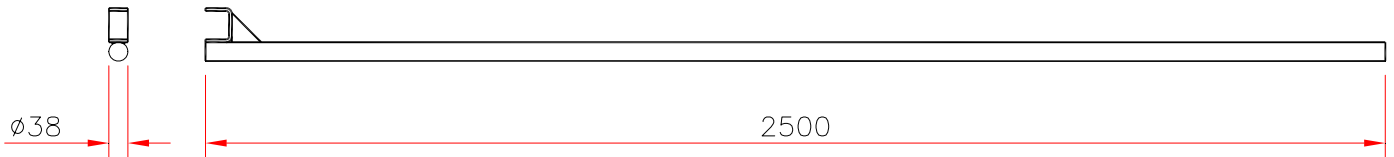


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## **RAPID PANEL LIFTING POLE**

PRODUCT CODE.....REPS009  
WEIGHT.....2.7 Kg  
FINISH.....ALUMINIUM SELF COLOUR

Lifting poles designed for lifting the extra height panels in position without the need for installation personal to use steps and/or PFPE.



## HANDLING

**Ref: EN 13374**

### **Classification of edge protection system**

#### **CLASS A**

Class A protection provides resistance to static loads only, based on the requirements to: support a person leaning on the protection or provide a handhold when walking beside it; and arrest a person who is walking or falling towards the protection.

Class A refers to a working surface with an angle of incline,  $x$ , that is 0 – 10 degrees. (fig 1)

However Rapid EPS Ltd recommend that the post should only be used on level surfaces.

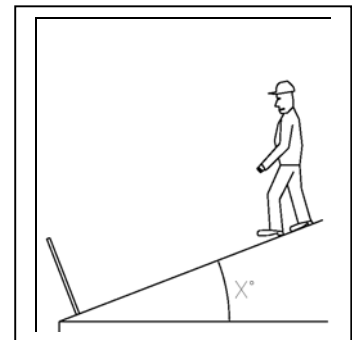


fig 1

#### **Distance between posts**

For steel mesh panels

Maximum centre to centre distance between safety posts is 2.4 Metres

Rapid EPS Ltd recommends 2.3 Metres between safety posts.

#### **Design of edge protection**

EN 13374 sets the following requirements for Classes A, B, and C edge protection:

Edge protection must be at least 1 Metre high, measured perpendicular to the underlying working surface.

Principle (top) and intermediate guard rails or other means of intermediate protection must be provided.

Toe board with a height of at least 150mm above the underlying working surface. Distance between working surface and the bottom edge of the toe board should be a maximum of 20mm.

## Class A design

The edge protection may not deviate from the vertical line A by more than 15 degrees.  
Rapid EPS LTD recommends max 1.5 degrees from vertical.

The edge protection opening may not be more than 470mm in any direction, when intermediate guard rails are used.

The edge protection opening may not be more than 250mm in any direction, when there is no intermediate guard rail.  
For example, the opening between the safety post and wall.

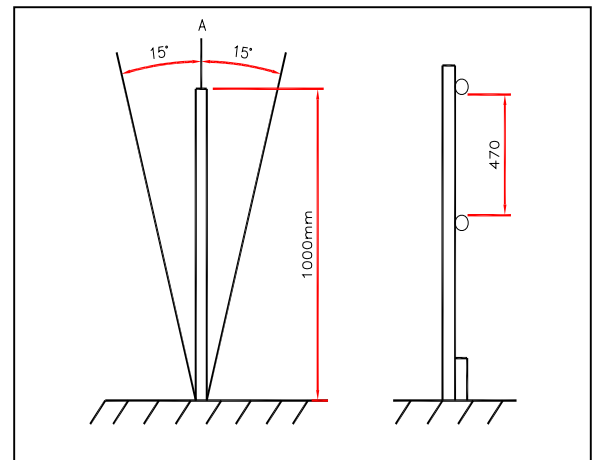


fig 2

## Corners

Always fit 2 posts in the corners to support panels.

## Overhang

Maximum permitted unsupported extension of steel panel from a post must be a maximum of 400mm. This presupposes that the steel panel is secured to the post.

## Wind load

Maximum wind load the edge protection system can withstand is 0.6kN/m<sup>2</sup>. This represents a wind speed of approximately 30m/s.

Maximum working wind conditions 0.2kN/m<sup>2</sup>  
This is approximately 18m/s.

Never fill in the edge protection panels with sheeting or plywood as this will significantly increase the wind loading on the system. Always check the permitted wind load is not exceeded.

## Ice and snow

Always keep edge protection free of ice and snow as the system is not designed for static or dynamic loads resulting from ice and snow.

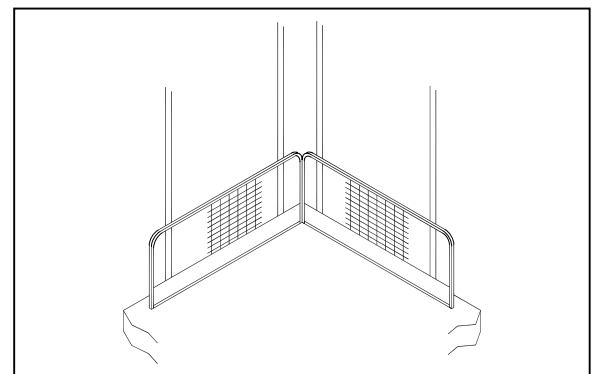


fig 3

## INSTALLATION DETAILS

### Equipment Required.

Tape measure  
Magnetic spirit level  
Scaffolding spanner  
PFPE (Personal fall protection equipment)  
Hard hat  
High visibility vest or jacket  
Safety boots or shoes  
Gloves

**Always read safety instructions (sheet 3) before commencing installation. In accordance with these safety instructions and installation guide.**

**Installation personal must be trained to fit Rapid-EPS edge protection systems. Contact your Distributor for training details.**

**Safety is your responsibility for yourself and others, always follow your risk assessment, method statement and these safety instructions and installation guide.**

**Always work in two's to install, adapt and dismantle Rapid EPS systems.**

Make sure all equipment is on site ready for installation.  
Once your PFPE has been fitted proceed as follows.

Check where posts and panels are to be erected and that there are no obstructions. i.e. building materials in the way. Contact the site foreman or manager if you have any problems.

Starting from either left hand or right hand side, position the first Rapid Post approximately 400mm from one edge and 200mm from the other edge. (Fig 12 sheet 22)

Install the post as shown on the instructions on the post or see (Fig 4 to 9 on sheets 19 and 20)  
Use a magnetic spirit level to check the post is perpendicular.

Rapid clamps and latches should be fitted to the post before installation between ceiling and floor.  
It is possible to fit clamps and latches to the post after installation if preferred.

A rapid clamp is always at the bottom of the post, making sure when a panel is fitted the gap at the bottom between the floor and the underside of the panel is no more than 20mm.

The rapid latch is fitted higher up the post near the top of the panel. The latch must coincide with one of the horizontal wires of the panel. The clamp and latch must face inside away from the building edge.

Using a scaffold spanner secure the clamp and latch. (Fig 10 sheet 21)

## Installation details continued.

Lift up a rapid panel with the toe board to the bottom and the advertising strip facing outwards from the building. Place the bottom edge of the panel frame into the channel section of the rapid clamps on the first 2 posts. Push the top of the panel towards the post engaging the horizontal wires into the latch. The latch will fall back under gravity securing the panel. (Fig 6 sheet 21)

The first rapid panel is now fitted.

Continue along fitting the next rapid post as previously described. Take the second rapid panel and making sure of the correct panel orientation overlap the second panel to the first and place the bottom edge into the bottom clamp of the second rapid post. Follow the same pattern of fitting i.e. post, panel until the designated area is covered. (Fig 9 & 10 sheet 23 and Fig 11 sheet 24)

Note: Instead of using rapid latches to secure the top of the panel to the rapid post, it is acceptable to use a rapid clamp inverted and placed over the panel wire.

Never place the rapid clamp over the top square section of the panel frame, as it would be possible to move the rapid panel sideways. (Fig 12 sheet 24)

When rapid latches are used to hold the top of the panel, for further security there is a hole through the latch so a bolt or tie wrap can be inserted for added security.

Secondary trades access (e.g. power floating, grouting, screeding etc)see sheet 25.

Wherever the Rapid EPS system is used installation is the same.

## Full height edge protection

Full height protection panels are the same physical dimensions as the standard edge protection panel. They do not have a toe board; instead they are a box section frame with a centre rail and full mesh insert. (sheet 9)

Before fitting the rapid posts make sure a rapid clamp is fitted 150mm down from the top of the inner tube. This makes sure that the top panel can be fitted without the need of stepladders or small platforms. Fit the rapid posts and bottom rapid panel as previously described. Then with 2 lightweight aluminium installation poles, (sheet 14) Lift the full height frame up and place against the rapid posts and slide up the posts. then lift the box section frame of the panel into the channel of the previously attached rapid clamp. This ensures the full height panel is controlled and not left swinging from the installation poles. (Fig 19 sheet 26 and fig 20 sheet 27)

These panels are secured back to the rapid post with either a rapid latch or a rapid clamp which ever is preferred.

## Other areas to consider using Rapid EPS system are:

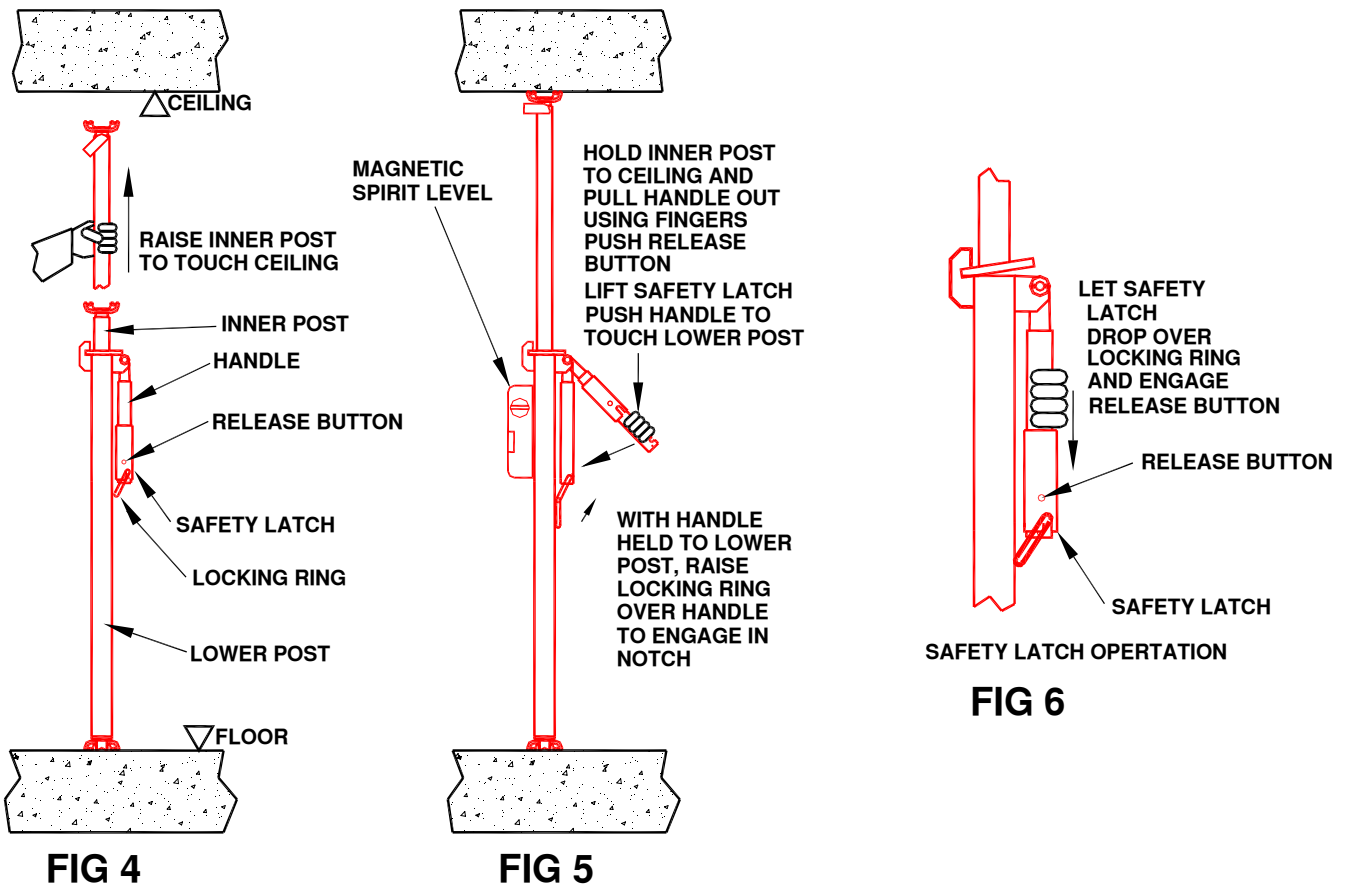
- Hazardous working areas within the building
- Edges of walkways
- staircases
- lift shaft openings.

## Rapid Post Installation

Follow the diagrams below (fig 4, 5 and 6)

Maximum out of alignment from perpendicular 1.5 degrees.  
Use magnetic spirit level to ensure post is perpendicular.

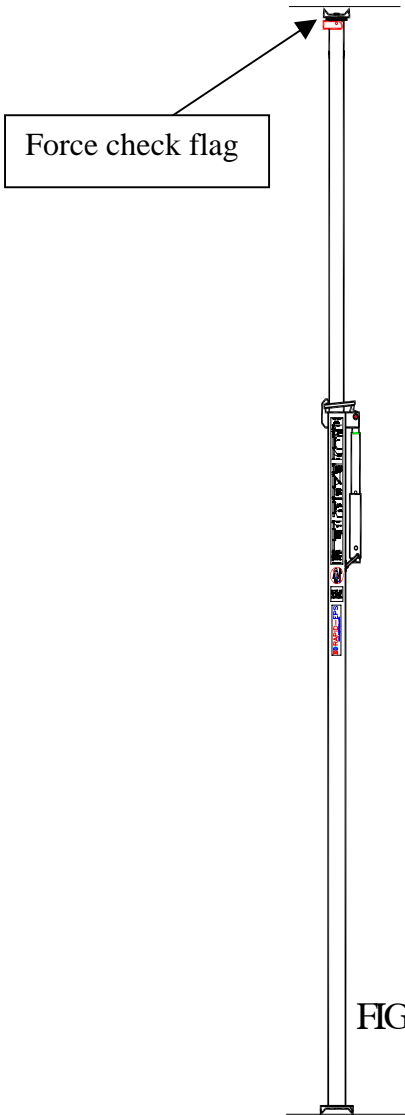
Weight of rapid post 9.5 kg.  
Weight of rapid post extra 16.5 kg.



## To Release Rapid Post

Press release button. Slide safety latch up the handle, press handle towards post and swing locking ring down.

Pull handle outwards from post to release, and with opposite hand slide inner post down into lower post. For safety pull handle towards post and refit locking ring and slide safety latch down to engage release button.

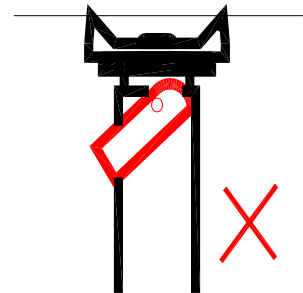
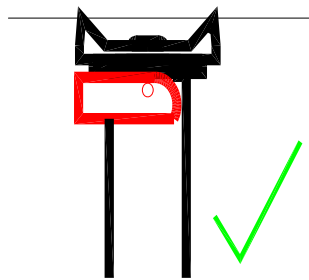


### IMPORTANT!

Incorporated in the design of the rapid post is a force check flag. This is for the installers of the post to check that the correct force has been applied.

When the rapid post has been installed correctly, the force check flag should be at right angles to the post (fig 8)

If the force check flag is not at right angles to the post (fig 9) Re-install the post



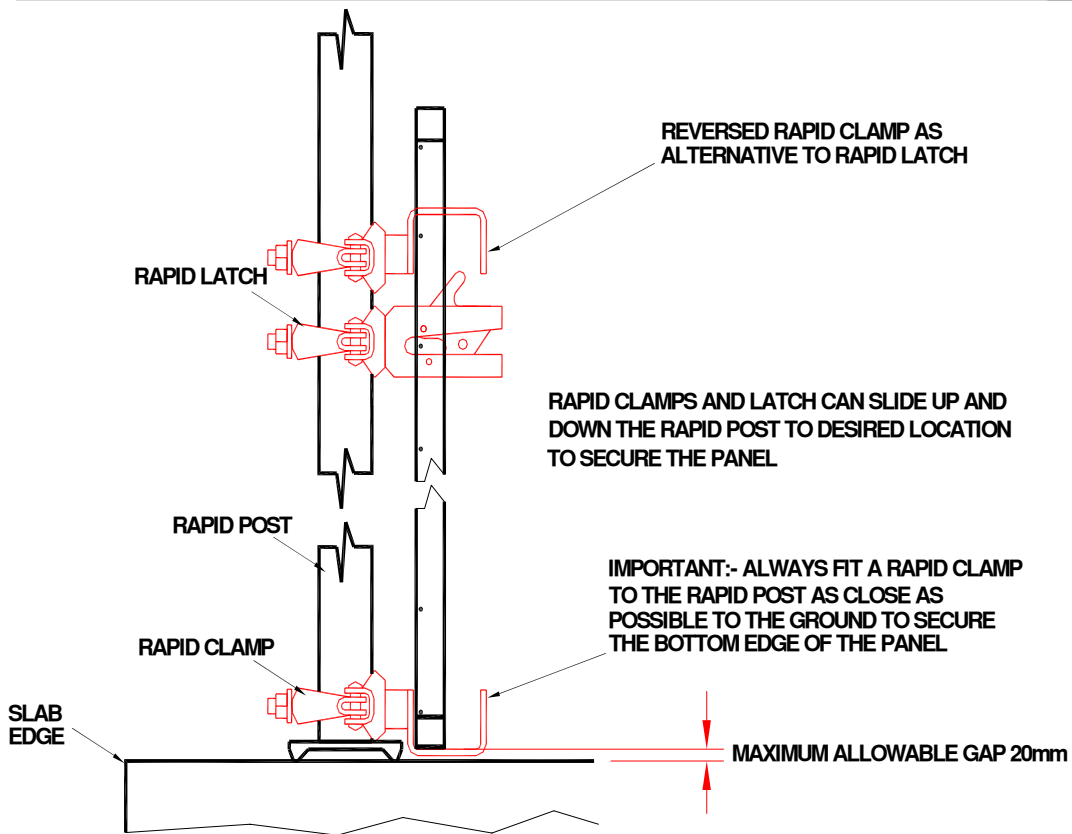


FIG 10

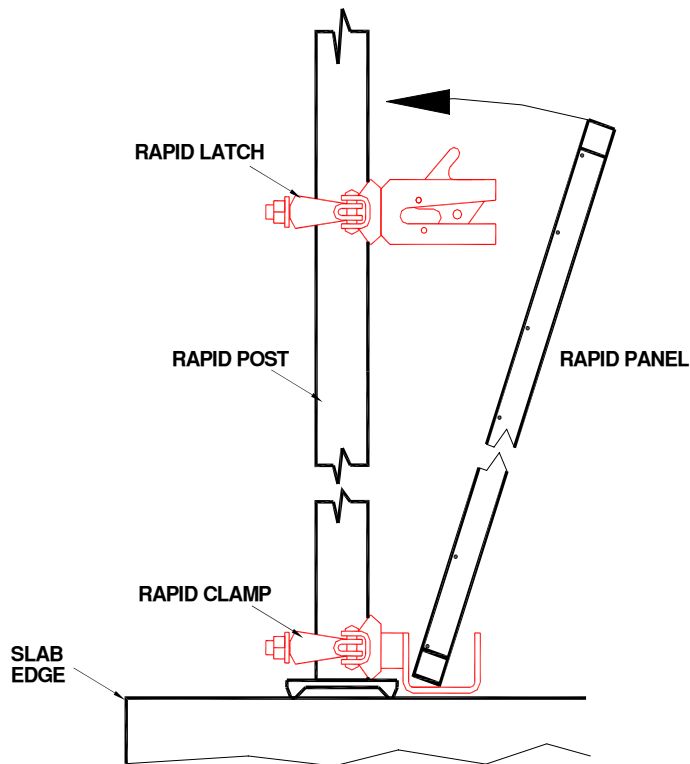
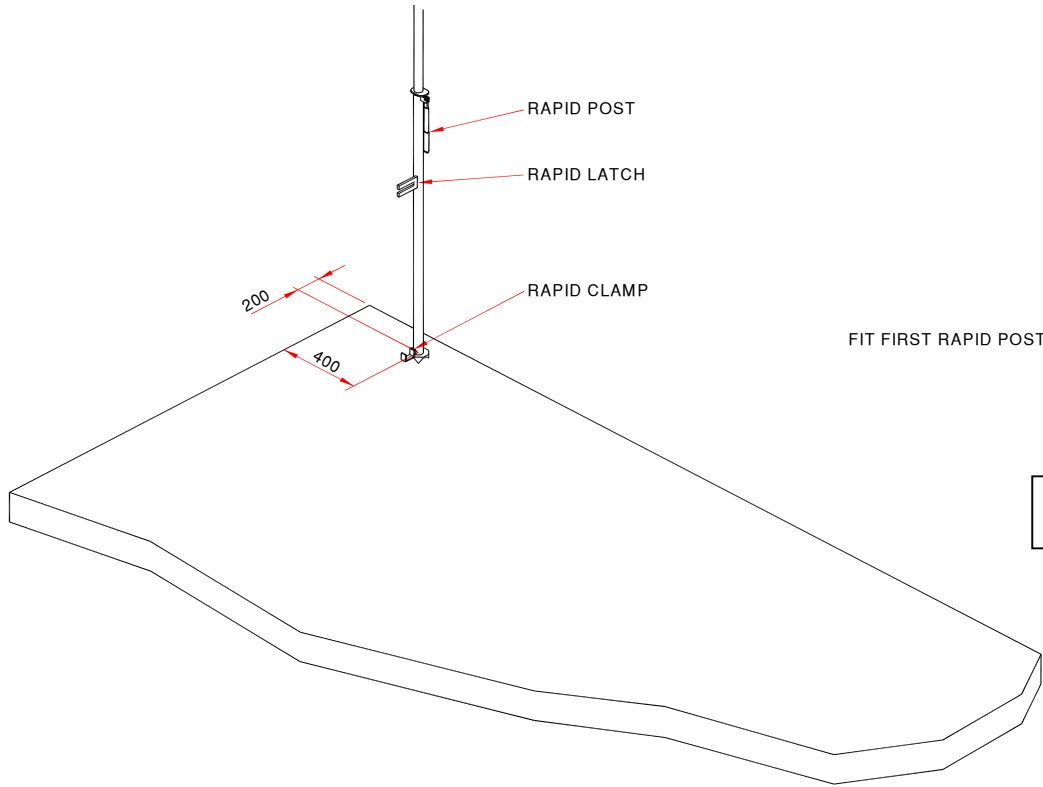
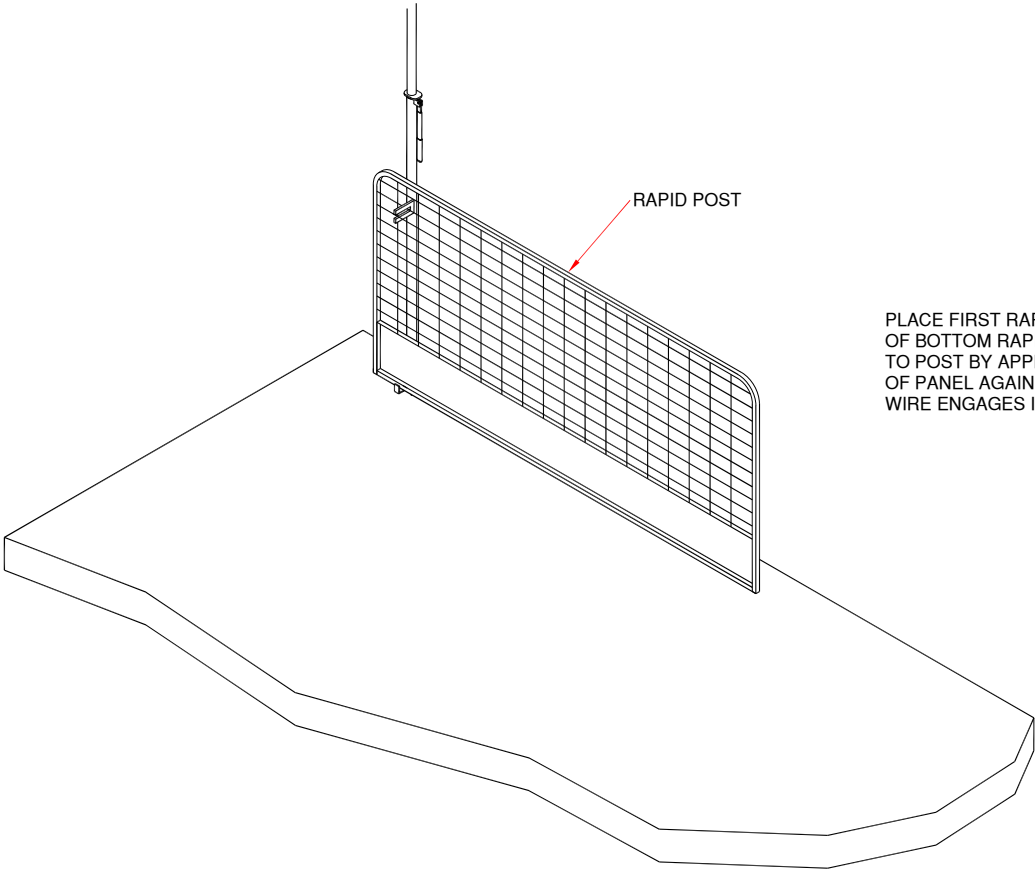


FIG 11



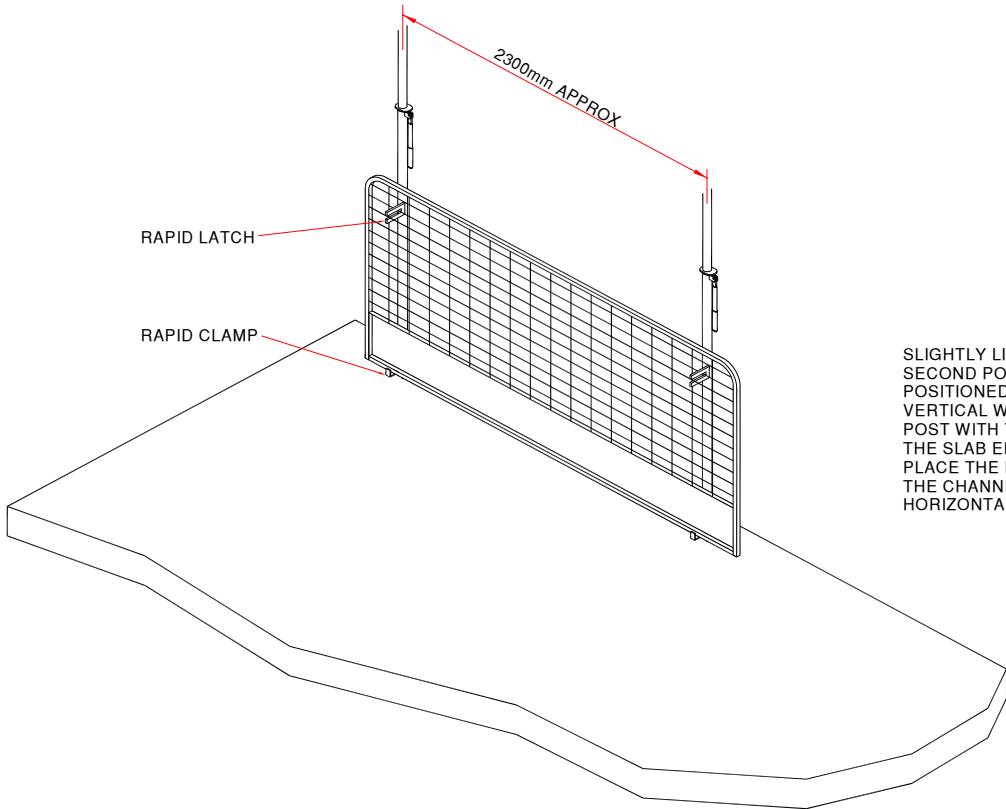
FIT FIRST RAPID POST AS INSTRUCTIONS

**FIG 12**



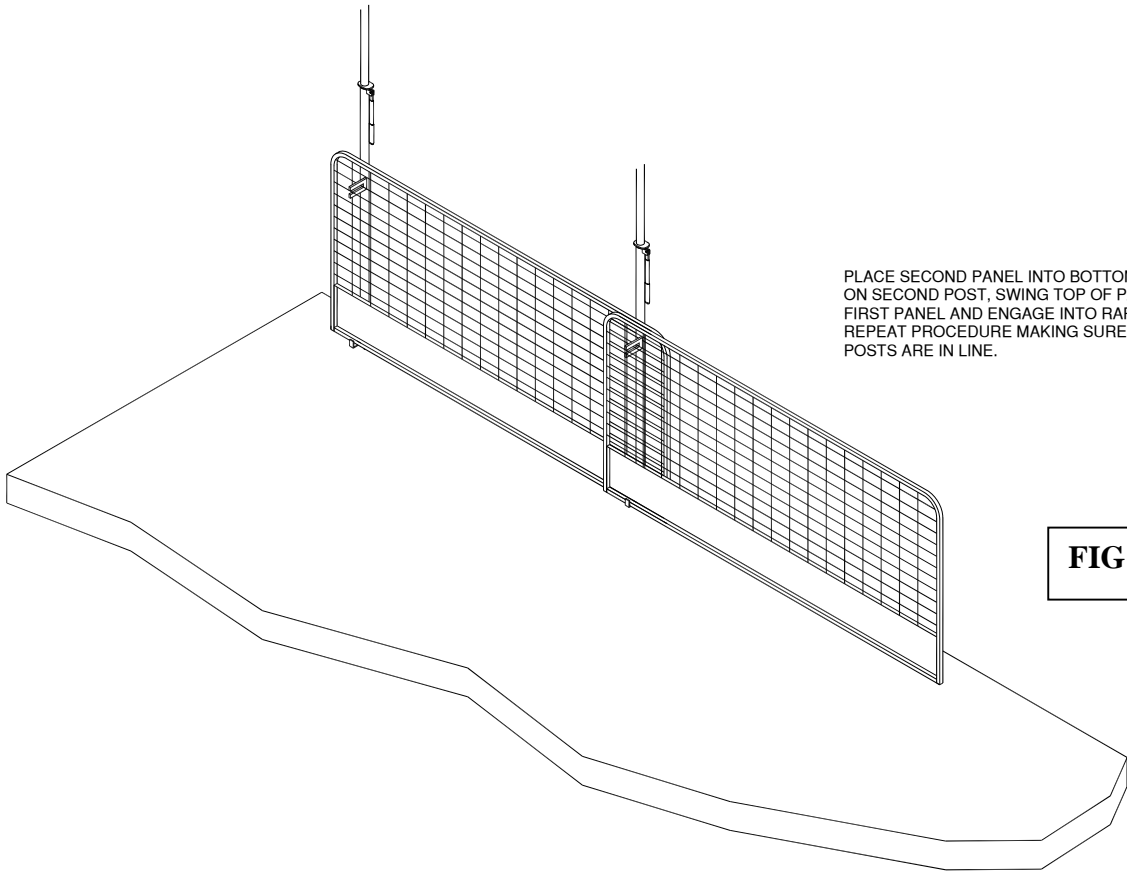
PLACE FIRST RAPID PANEL INTO CHANNEL OF BOTTOM RAPID CLAMP. OVERLAP PANEL TO POST BY APPROX 200mm. SWING TOP OF PANEL AGAINST POST ENSURING PANEL WIRE ENGAGES IN RAPID LATCH.

**FIG 13**



SLIGHTLY LIFT FREE END OF PANEL AND PLACE SECOND POST BEHIND. POST NEEDS TO BE POSITIONED BETWEEN SECOND AND THIRD VERTICAL WIRE. VISUALLY LINE UP THE SECOND POST WITH THE FIRST AND KEEP IT PARALLEL TO THE SLAB EDGE. FIT THE RAPID POST AS PREVIOUS. PLACE THE BOTTOM EDGE OF THE PANEL INTO THE CHANNEL OF THE BOTTOM CLAMP AND ENGAGE HORIZONTAL PANEL WIRE INTO RAPID LATCH ABOVE

**FIG 14**



PLACE SECOND PANEL INTO BOTTOM RAPID CLAMP ON SECOND POST, SWING TOP OF PANEL AGAINST FIRST PANEL AND ENGAGE INTO RAPID LATCH. REPEAT PROCEDURE MAKING SURE PANELS AND POSTS ARE IN LINE.

**FIG 15**

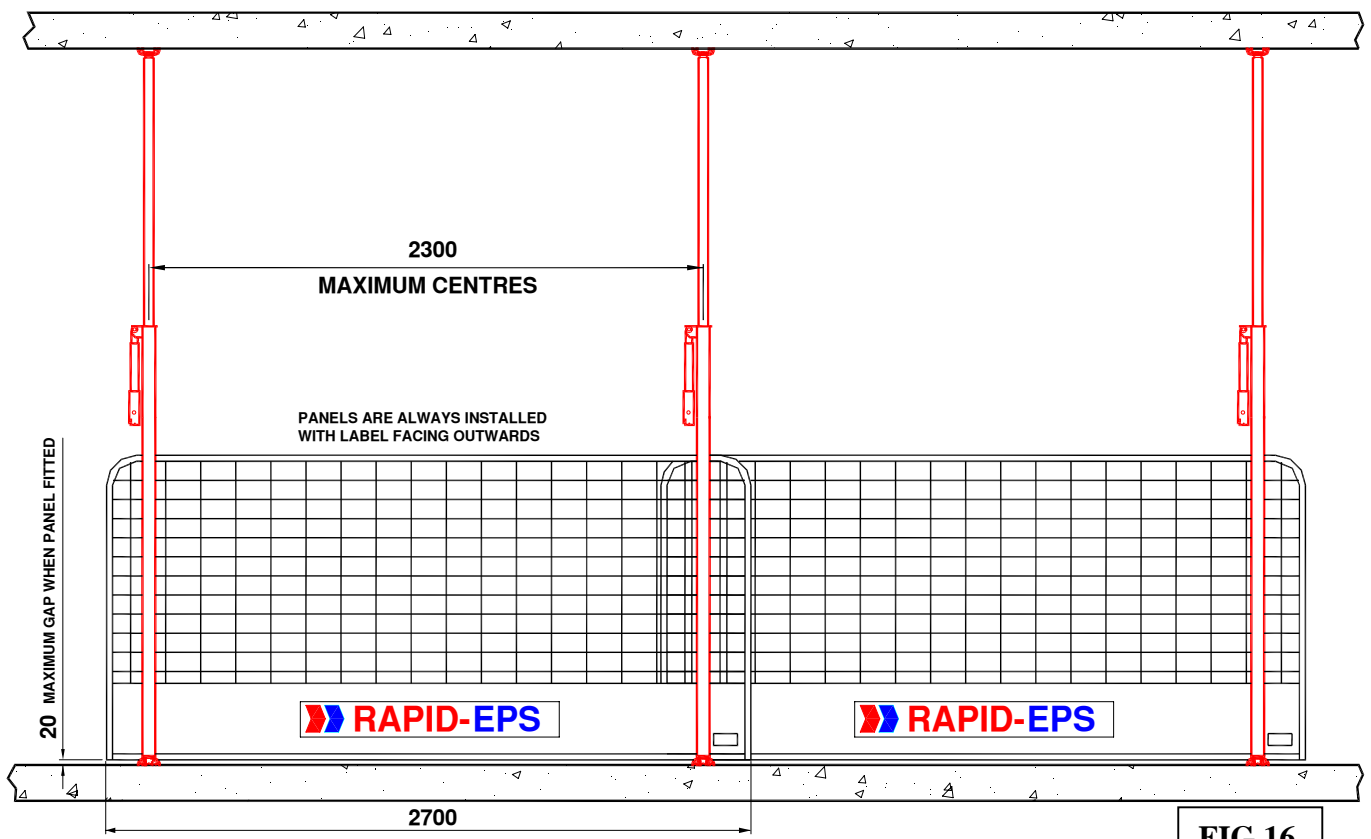


FIG 16

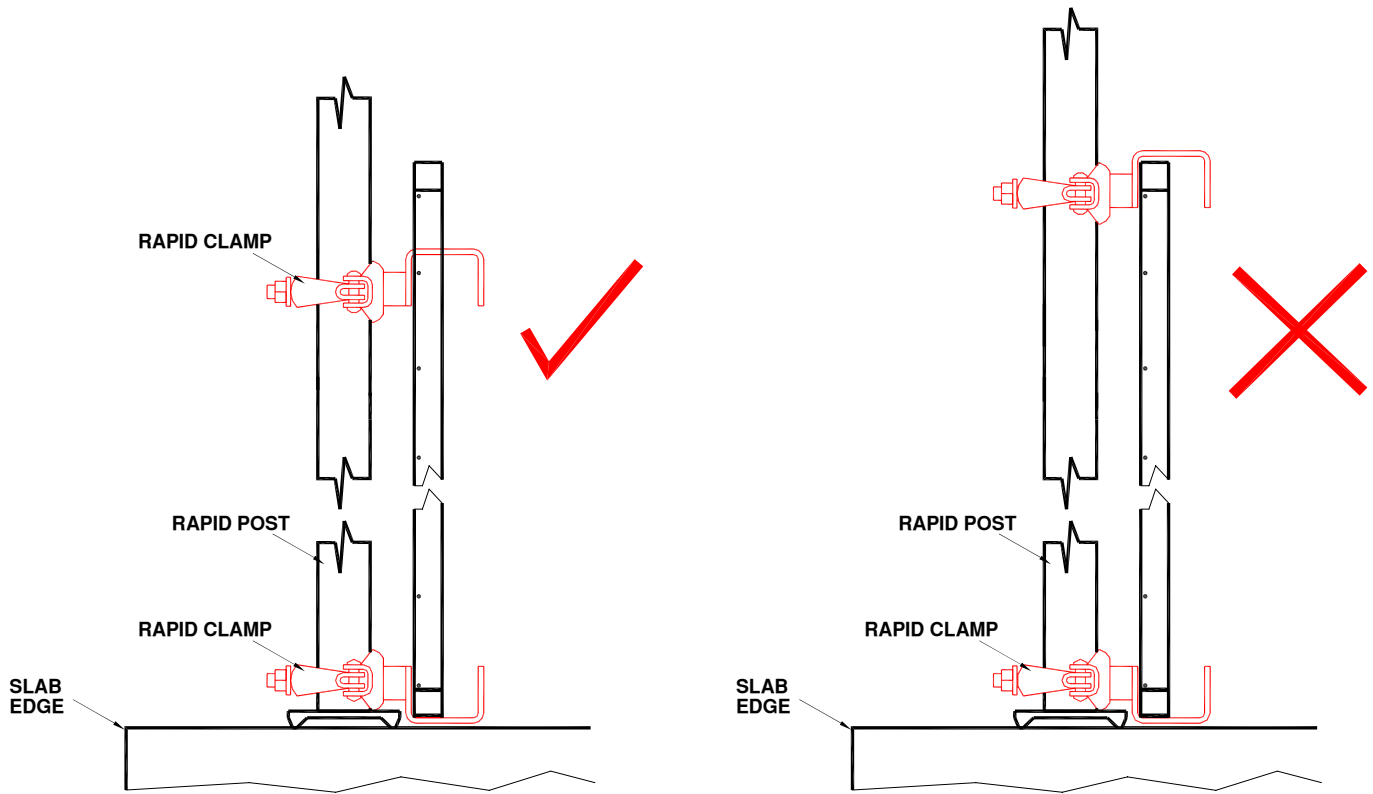
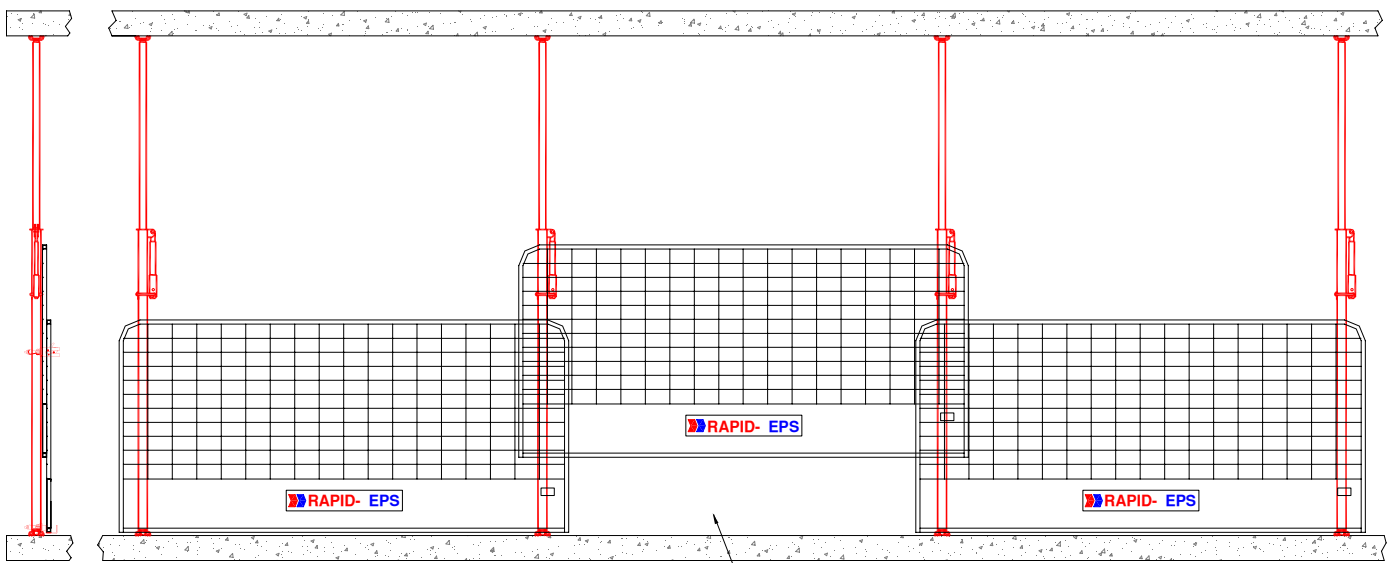


FIG 17

## Secondary trades access

When secondary trades require access to slab edge rapid panels can quickly and easily be raised to allow access but still maintain a safe working environment. (see fig 18)



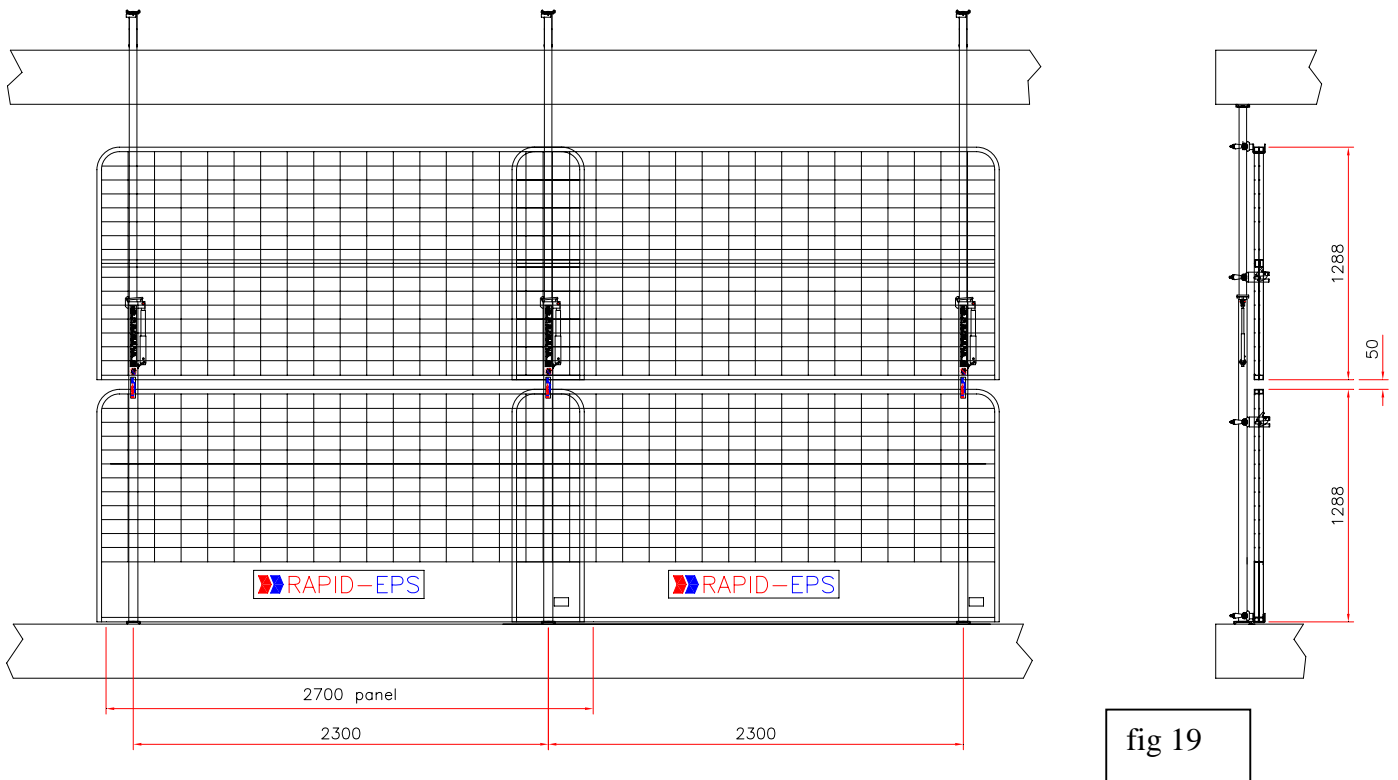
**RAPID PANELS CAN BE LIFTED 450mm AND FASTENED BACK TO POST LEAVING A GAP FOR FOLLOWING TRADES TO WORK SAFELY**

## Full Height Edge Protection

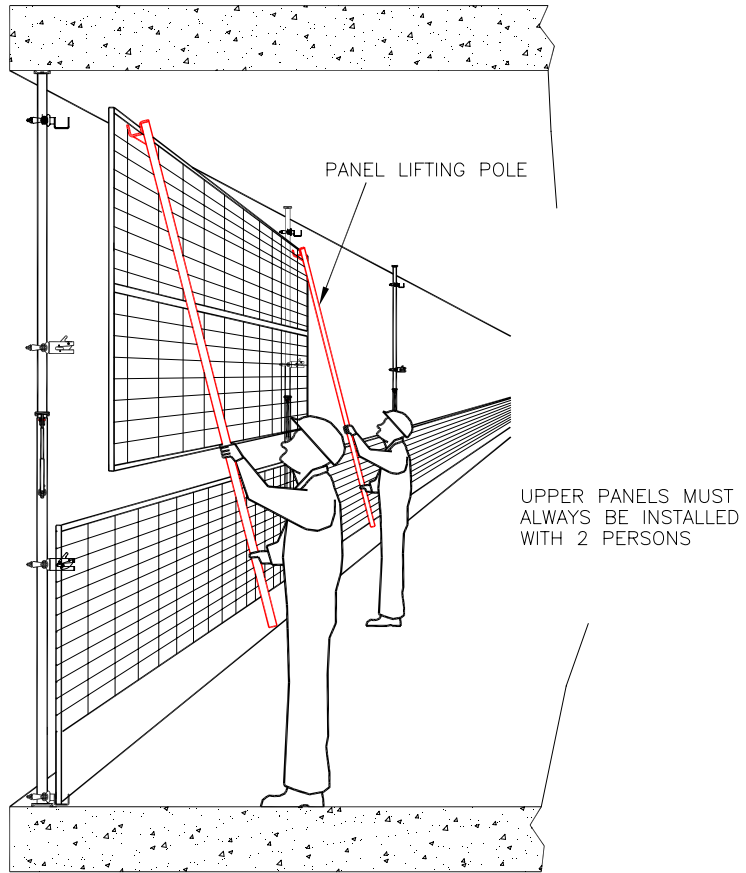
Using the standard edge protection rapid panel and rapid post, if required this can be made into a full height system by using extra rapid clamps and rapid latches together with a full height panel.

Depending on the distance between floors we can add a further 1 or 2 panels to fill the gap. (see below) The standard edge protection panel is fitted first to give initial protection, then the uppermost panel is fitted followed by a third panel (if required) that overlaps the top panel.

By using Rapid EPS lite weight aluminium poles, the fitters can lift the top panel from floor level without the need for steps or small platforms thus making it safer for installers. See sheet 10 for description and drawing of full height panels.



The full height system shown above is using the standard Rapid Post. Using Rapid Post Extra it is possible to go to 4M high where the panels do not overlap.



**FIG 20**

## Checking

Edge protection should be checked by the installer during assembly.  
Prior to hand over a final inspection of the assembled edge protection must be done.

## Checklist

Check that the edge protection system complies with the requirements of EN 13374 Class A.

- a) The selection of the edge protection corresponds with the required class.
- b) The rapid post spacing is not exceeded.
- c) Height of the edge protection panels is a minimum of 1m from the floor.
- d) Openings in the edge protection do not exceed the requirements.
- e) Rapid posts are secured and an anti-tamper device fitted. (if required).
- f) The edge protection is not subjected to excessive wind load.

## User Inspection

It is recommended that Rapid EPS edge protection installations should be inspected before use, every 7 days and following any event that may jepordise its safe use. e.g. high winds, collision, impact etc.

## Damage report

Any damage or missing sections etc. must be reported to the site manager for immediate action.

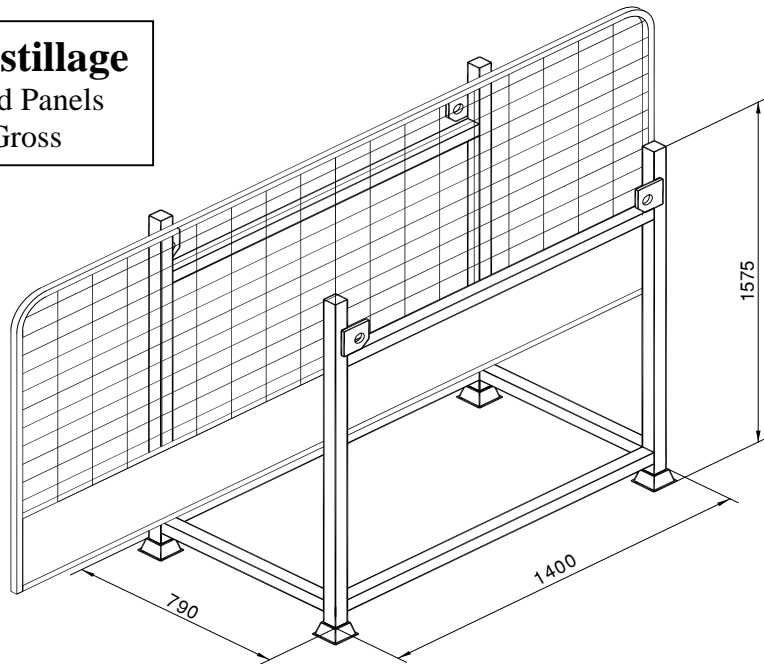
## Regular inspection

The edge protection must be regularly inspected while in use as part of general site safety.

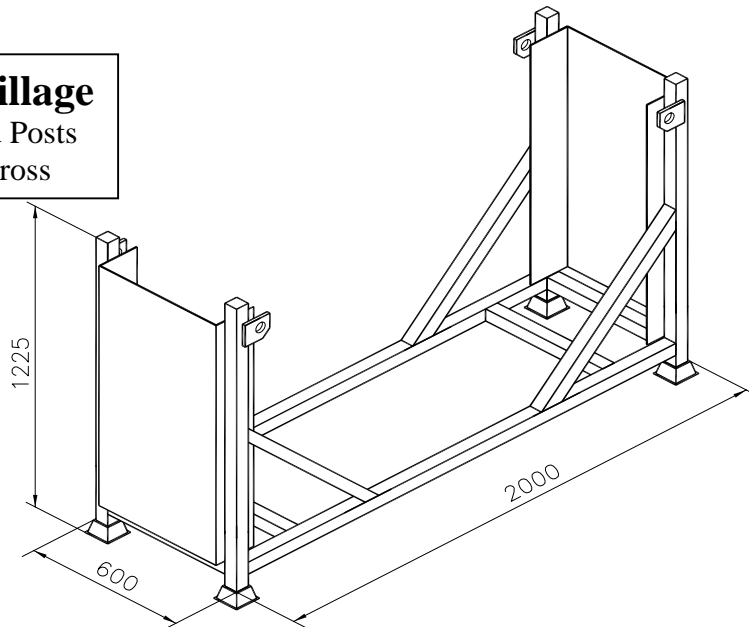
## Dismantling

Dismantling is carried out in reverse order as installation.  
Remove rapid panels and store in the appropriate stillage.  
Remove rapid posts and store in appropriate stillage.

**Rapid Panel stillage**  
Capacity: 25 Rapid Panels  
Weight: 600 Kg Gross



**Rapid Post stillage**  
Capacity: 50 Rapid Posts  
Weight: 600 Kg Gross



## **Safety checks**

Safety checks should be made on all products before being used again, preferably after use and before the products are placed in a store.

All safety checks must be made by a competent personnel.

Check:

- a) No parts are cut or joined. e.g. by welding or bolting etc.
- b) No parts are bent to excess or in any way deformed
- c) No extra holes have been drilled in component parts
- d) No excessive corrosion has occurred that can affect strength
- e) No visible cracks have appeared in welds or material
- f) Parts fit together

## **Reconditioning**

Any products that are rejected can in many instances be reconditioned. Any reconditioning must only be carried out by competent personnel.

Spare parts are available from Rapid EPS

## **Scrapping**

Products or components which have not been possible to recondition should be destroyed so they cannot be used.

## **Storage**

Store all Rapid EPS in a dry ventilated area protected from environmental effects, e.g. weather and corrosive substances.

## Frequently asked questions.

**Q.** How many times can the rapid post be used before the disc springs weaken, reducing the tension in the post?

**A.** Using the information provided by the disc spring manufacturer, the fatigue life of the springs is calculated to be over 2 million cycles. Therefore post tension is not affected.

**Q.** Will the post tension be affected when it is left compressed in position on a site.

**A.** No. Constant load, no load or cyclically loaded does not affect the disc springs performance.

**Q.** After operating the post there is a score line around the inner tube where the grab plate holds, also there is a small indentation at the point on the inner tube where the secondary lever secures the inner tube to the outer tube. Will this have any bearing on the rapid post performance?

**A.** These marks are an inherent feature of the posts design and do not affect its performance.