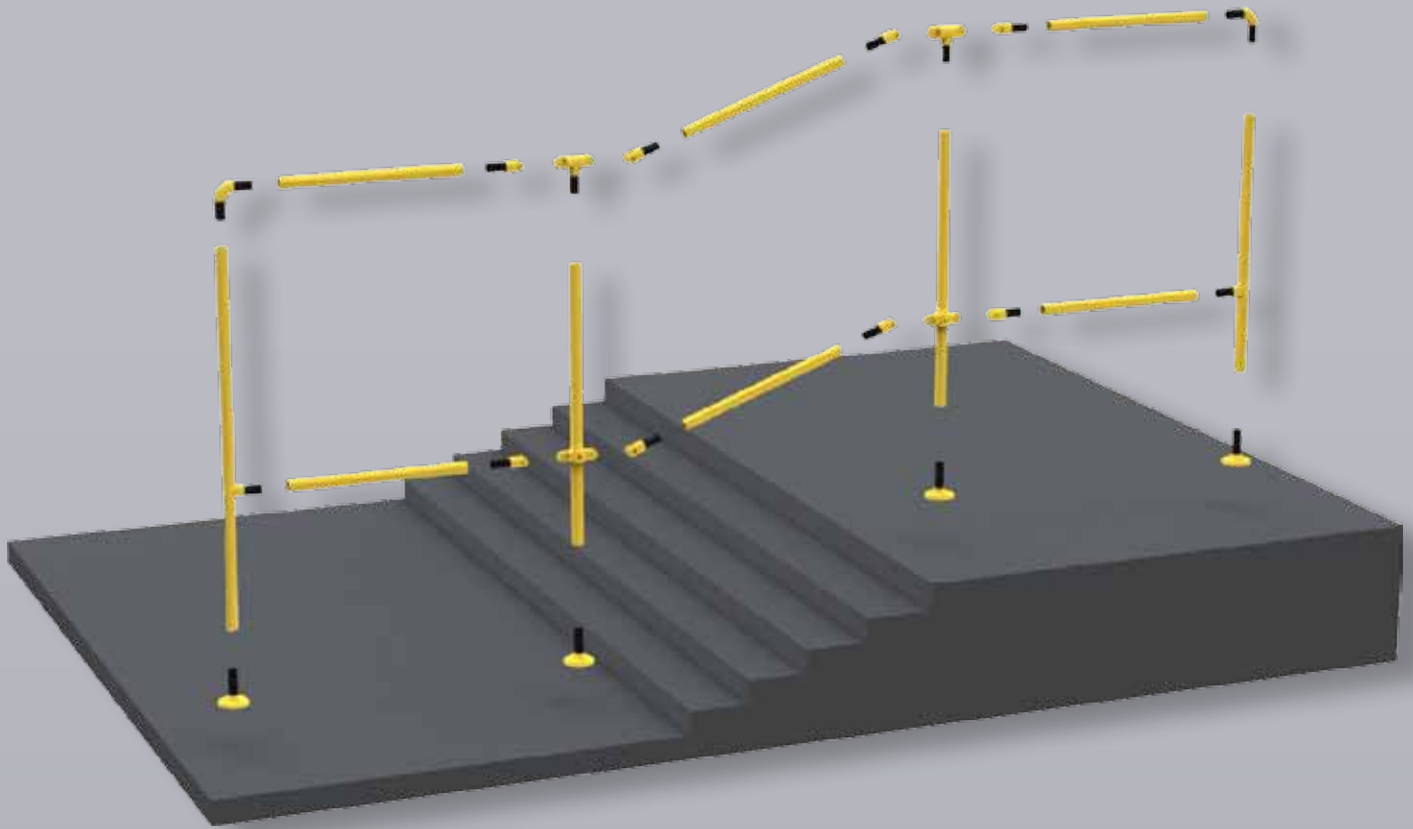




Warmagrip™

Modular Handrail Data Sheet & Installation Guide



Description

The modular handrail system is ideal for a variety of applications. Constructed from exceptionally strong steel with a unique high quality PVC coating, which offers the all important 'warm to touch' requirement as set down by the current building regulations the product is a breakthrough for handrail systems.

All connections fit flush, resulting in a pleasing, streamlined appearance. The internal connections allow the construction of continuous handrail systems without raised external fittings.

Characteristics

Meets Building Regs.	Modular internal connection
Strong construction	Quick and easy to install
UV Stable	Helps with DDA
Lightweight	45mm diameter tube
No snag points	Slip resistant surface
Not cold to the touch	Contrasting colour
Adjustable fittings	Choice of colours
Security fixings	Corrosion resistant

Applications

Walkways	Ramps
Fire escapes	All staircases
Industrial plants	Marinas
Schools	Hospitals
Warehouses	Factories
Ideal for use with single, double or multiple mid rails.	

Typical Technical Data

Description:	Modular hand rail system.
Top Finish:	Tube & Fittings: 4mm PVC coat with max strength 2mm steel core. Base Foot & Side Mount: Powder coated cast steel. Component fixings: Two part security hex head interscrew (Black zinc coated). Floor fixings: M10 concrete anchor bolts (supplied with base feet).
Stock Colours:	Components & Tube: Safety Yellow (RAL 1003) and Grey (RAL 7004)
Tube Diameter:	External diameter: 45mm
Design Life:	All Tubes & Components have a design life of 40+ years
Testing Data:	BS6399-1:1996 - Testing carried out by British Research Establishment (Report available on request)

Minimum horizontal load (kN/m)	Examples of types of occupancy and specific uses	Test Result
0.22	Offices: Light access stairs and gangways.	PASS
0.36	Domestic: All areas service exclusively one single family dwelling Offices: Light pedestrian traffic routes	PASS
0.74	Offices: Areas not susceptible to overcrowding Domestic: All other domestic and residential not covered above Areas without obstacles: Stairs, landings, corridors and ramps External balconies	PASS

Safety

When installing the modular handrail system standard personal protective equipment should be worn as a minimum. Safety goggles, heavy duty gloves and overalls. It should be cut in a well ventilated area or close to extraction points. Always ensure that it is installed in manageable sections, preferably two men should be available for installation. No special permissions or licences are required at the time of going to print.

Preparation

Ensure that the areas to have the handrail system fitted are clean, dry and free from loose and friable material. Any “dished” or damaged surface areas should be patch repaired to provide a reasonably flat and consistent surface.

If required, it can be cut on site to suit, ideally using a chop saw with a metal cutting blade.

Please ensure that goggles and gloves are worn at all times when any form of cutting is required.

Fixings

A male & female Hex Head Security fixing 45mm long (these are used for top tube and base foot only).

A male & female Hex Head Security fixing 60mm long (these are used for Mid Rail components).

M10 floor bolts (used for wall mounting and base foot).

Tools Required


- 10mm Masonry drill bit (not supplied)
- Hex Head Security Allen key (2 required can be ordered)
- Hammer (not supplied)
- 17mm Spanner & Socket (not supplied)
- Tape Measure (not supplied)
- Spirit Level (not supplied)
- Hack saw or chop saw (if tube is required to be cut down) (not supplied)
- 12mm Steel drill bit (if tube is required to be cut down & fixing hole re-drilled) (not supplied)
- Stanley knife (If new fixing holes is required for recessing the PVC) (not supplied)

Troubleshooting

Potential problems:


- 1) If after installation the handrail does not seem rigid enough and movement in the handrail system appears more than would be expected.
 - A) The first thing to check is that all floor fixings are on a flat even surface and are securely fixed. Always ensure either an anchor fixing or a bolt system is used. If fixing into timbers a simple wood screw would not be appropriate as this will cause movement over time due to the screw holes becoming enlarged. Even a small amount of movement in the base feet will multiply the movement at the top of the handrail.
 - B) It is important that the black fixing bolts are as tight as they can be. If the bolts are slightly loose, this will again cause the handrail to move. If the bolts cannot be tightened enough by hand a drill driver bit is available, which will allow the fixings to be tightened further.

1 Base Foot Flange




Code	Colour
52A018G	Grey
52A018Y	Yellow

2 90° Elbow




Code	Colour
52A002G	Grey
52A002Y	Yellow

3 Hand Rail End




Code	Colour
52A003G	Grey
52A003Y	Yellow

4 90° Tee




Code	Colour
52A022G	Grey
52A022Y	Yellow

5 3 Way Elbow




Code	Colour
52A006G	Grey
52A006Y	Yellow

6 63.4° Tee




Code	Colour
52A001G	Grey
52A001Y	Yellow

7 Mid Rail Single




Code	Colour
52A021G	Grey
52A021Y	Yellow

8 Mid Rail Double



Code	Colour
52A020G	Grey
52A020Y	Yellow

9 63.4° Midrail Double



Code	Colour
52A023G	Grey
52A023Y	Yellow

10 Mid Rail Corner



Code	Colour
52A011G	Grey
52A011Y	Yellow

11 Adj Mid Rail Double




Code	Colour
52A009G	Grey
52A009Y	Yellow

12 Adjustable Tee




Code	Colour
52A019G	Grey
52A019Y	Yellow

13 Adj Connector Set




Code	Colour
52A024G	Grey
52A024Y	Yellow

14 Adj Mid Rail Single



Code	Colour
52A004G	Grey
52A004Y	Yellow

15 Side Mount Bracket




Code	Colour
52A015G	Grey
52A015Y	Yellow

16 Wall Mounted Elbow




Code	Colour
52A027G	Grey
52A027Y	Yellow

17 Wall Mounted Tee




Code	Colour
52A026G	Grey
52A026Y	Yellow

18 Scroll End



Code	Colour
52A025G	Grey
52A025Y	Yellow

Tube			
Length	Location	Yellow Code	Grey Code
790mm	19	52A014Y790	52A014G790
800mm	20	52A014Y800	52A014G800
845mm	21	52A014Y845	52A014G845
890mm	22	52A014Y890	52A014G890
900mm	23	52A014Y900	52A014G900
990mm	24	52A014Y990	52A014G990
1400mm	25	52A014Y1400	52A014G1400



Vertical Tubes

- 990 Tube - The standard tube for upright component installation with the exception of the handrail end bend.
- 890 Tube - The vertical tube used only with the Handrail End Bend component (be aware the middle hole is off centre).

Horizontal Tubes

- 1400 Tube – This tube is used for the “on the wall” fittings and can also be used as an upright where there is a requirement to bury the handrail uprights into the concrete (to be buried approx. 410mm down. Note if concreting in, it is recommended to cut away the PVC from the steel).
- 900 Tube – This tube is used between two non adjustable components.
- 845 Tube – This tube is used between a non adjustable and adjustable component.
- 800 Tube – This tube is used between a non adjustable component and a Handrail End Bend only.
- 790 Tube – This tube is used between an adjustable component and a Handrail End Bend only.

Cutting the Tube

If you are ordering tubes which you know will need to be cut down to size, simply order the next size up. (Remember all standard sized tubes have a pre-drilled hole 35mm in from each end).

All tube sizes are calculated to achieve 1000mm centres and uprights to achieve 1100mm.

NOTE: If you cut the tube a suitable rust prevention coating should be applied to any cut ends.

Q. What if my area does not fall exactly on a multiple of 1000mm?

A. **Simply cut the tube down to achieve your overall length. e.g. 1800mm is 1 No. 1000mm section and 1 No. 800mm section (this section has been cut).**

Bespoke tube sizes can be produced either during manufacturing or on-site, the simple procedure is:

1. Cut tube to required length using a chop saw with a metal cutting blade.
2. The pre-drilled fixing holes would usually be removed during the cutting process and will need to be re-drilled to allow for components to be fixed to the tube.
3. Measure 31mm in from the newly cut length of tube and mark centrally in accord with the pre-drill holes at the other end of the tube.
4. Pilot drill a hole between 3mm and 5mm through one side of the tube. (repeat this process on both sides of the tube)
5. Drill 12mm holes through both sides of the tube using the pilot holes as a guide.
6. Using a cutting knife, bevel the PVC outer around the 12mm drilled hole to allow security fixing to pull down flush to follow with the pre-drilled holes maintaining the aesthetics of the product.

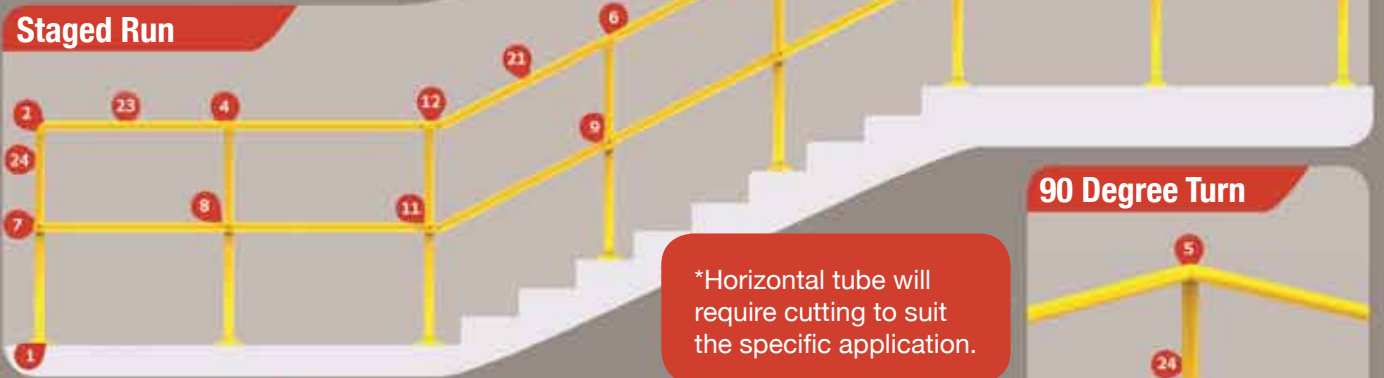


Scenerios – A small selection of applications

Modular Configurations

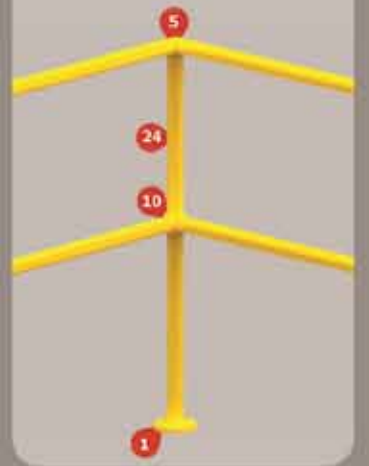
The railing system consists of many modular components that can provide a solution to a variety of applications.

Staged Run



*Horizontal tube will require cutting to suit the specific application.

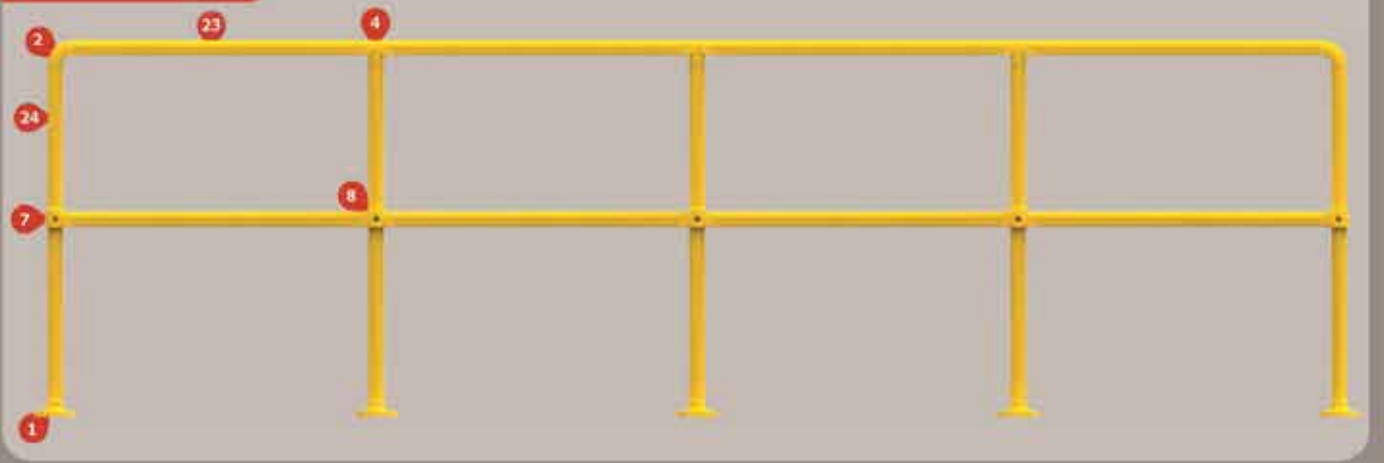
90 Degree Turn



Wall Mounted Run



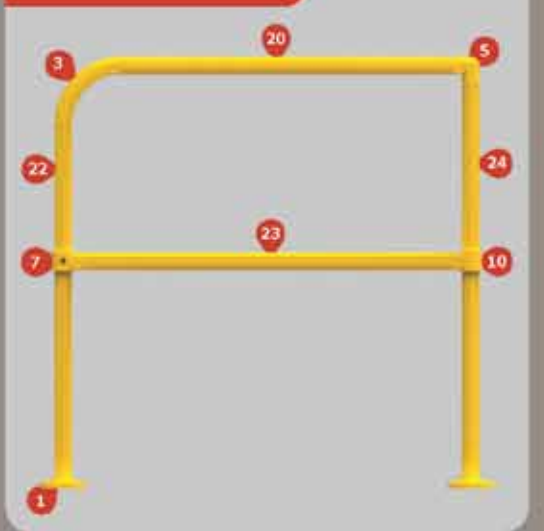
Straight Run



Side Mounted Run



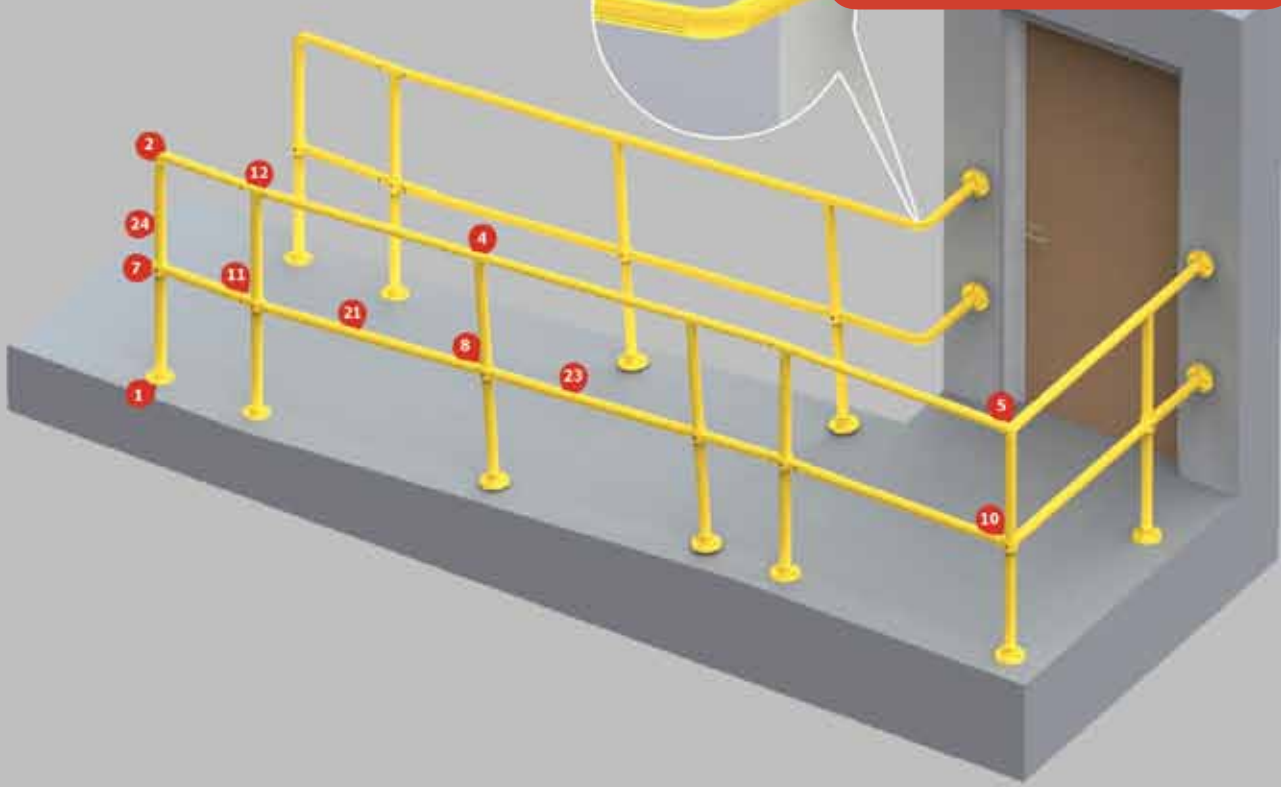
End Bend Finish



Modular Configurations Continued

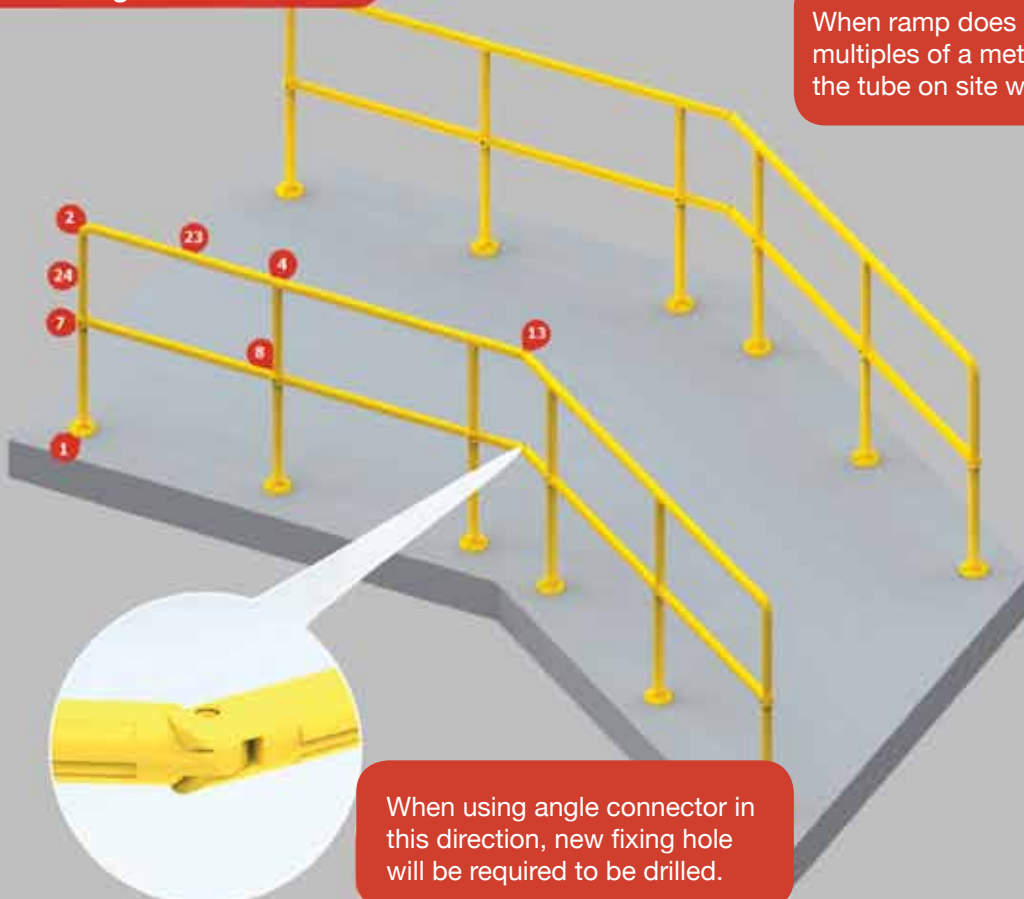
Run On A Slope With An Elbow

When using elbow connector in this direction, new fixing hole will be required to be drilled.



Run With An Angles Turn

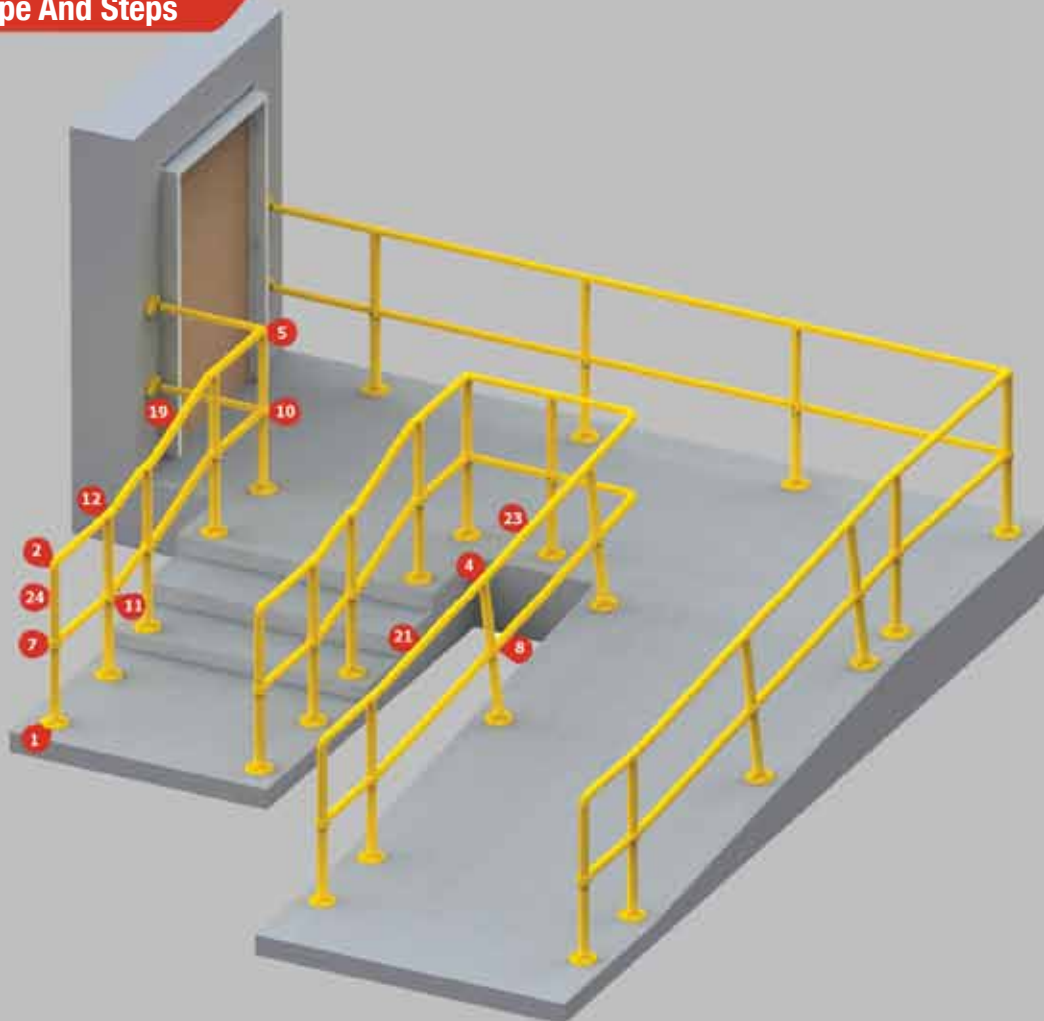
When ramp does not end in multiples of a metre, cutting of the tube on site will be required.



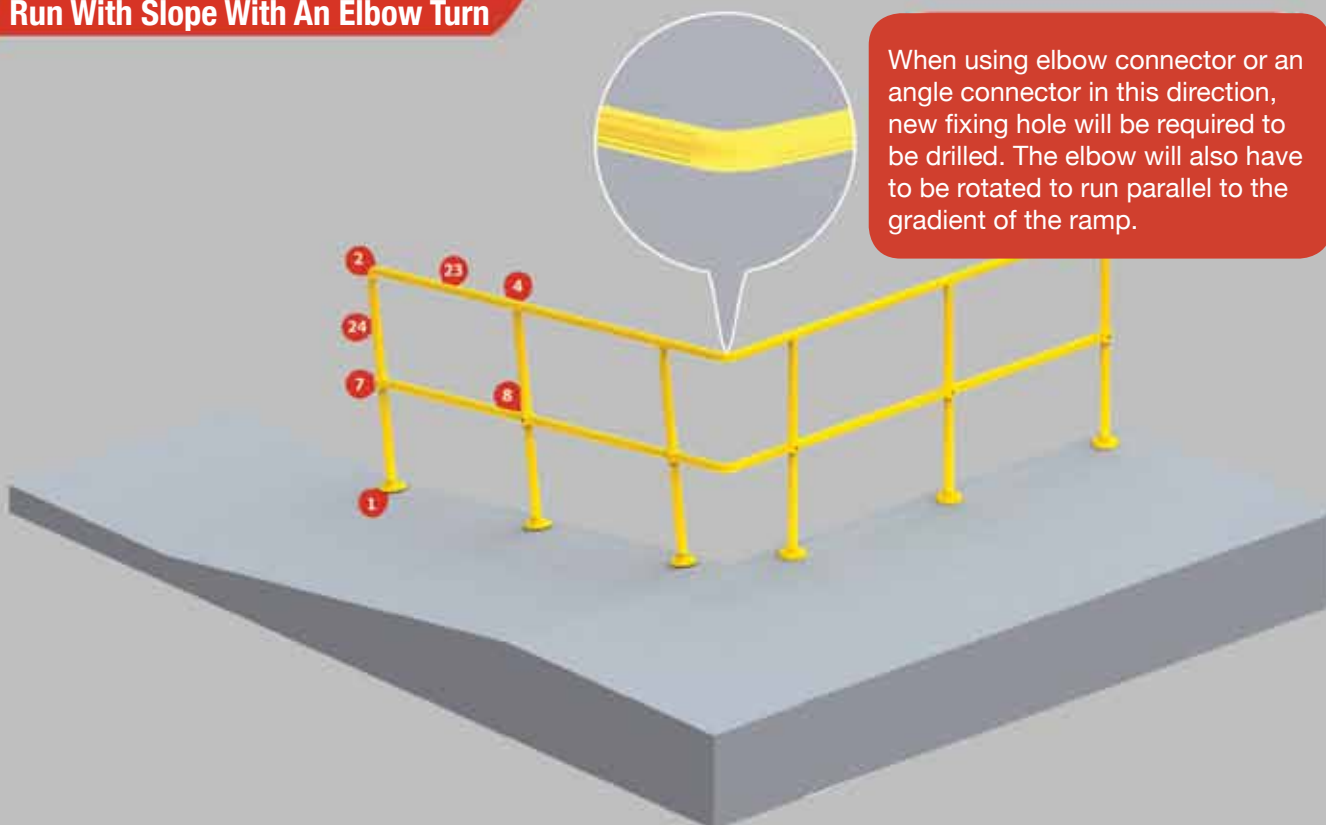
When using angle connector in this direction, new fixing hole will be required to be drilled.

Modular Configurations Continued

Run With Slope And Steps

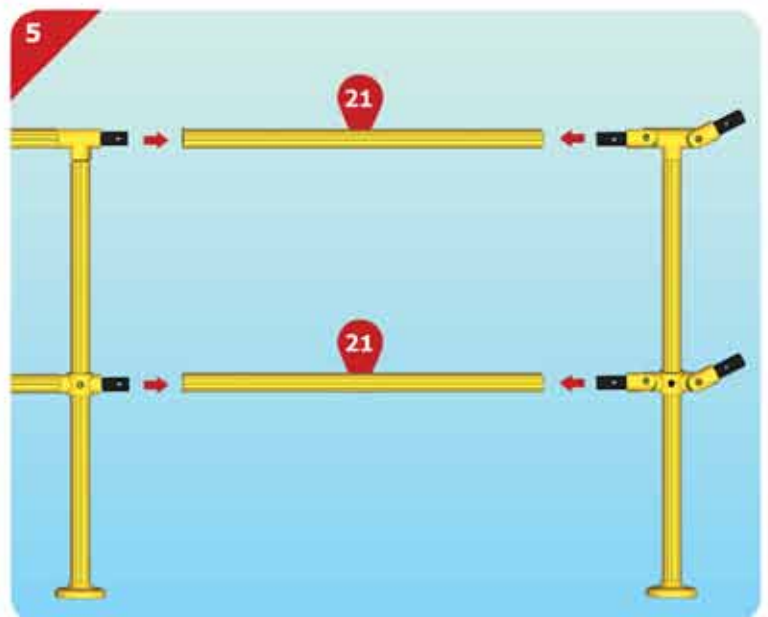
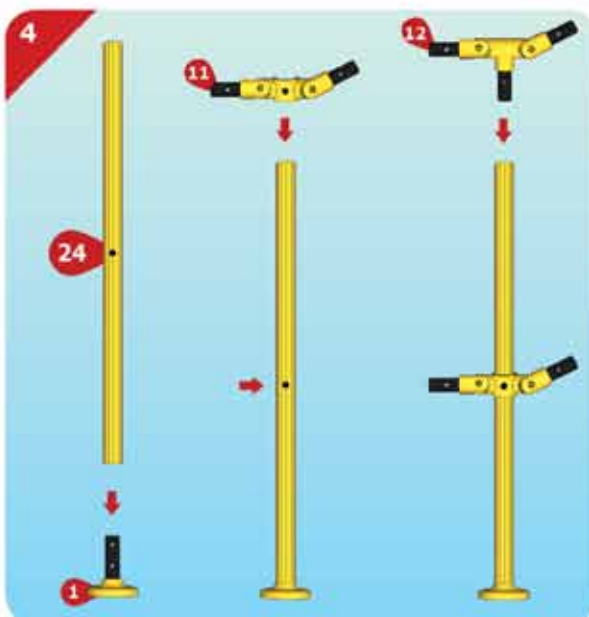
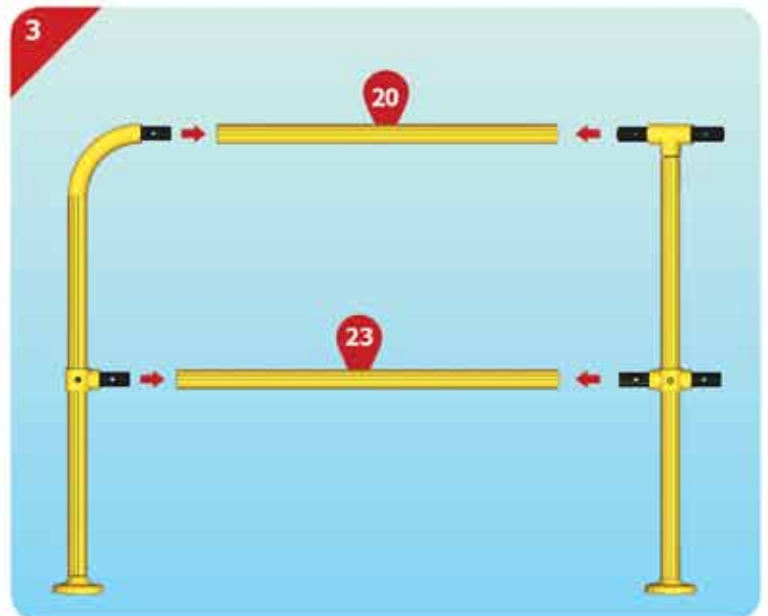
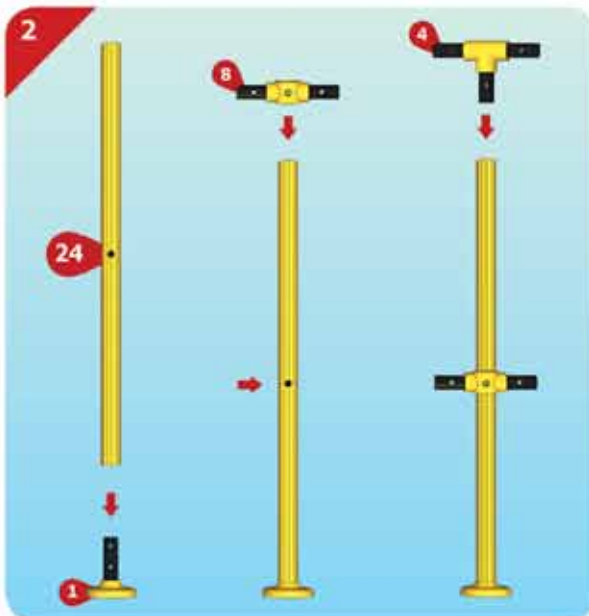
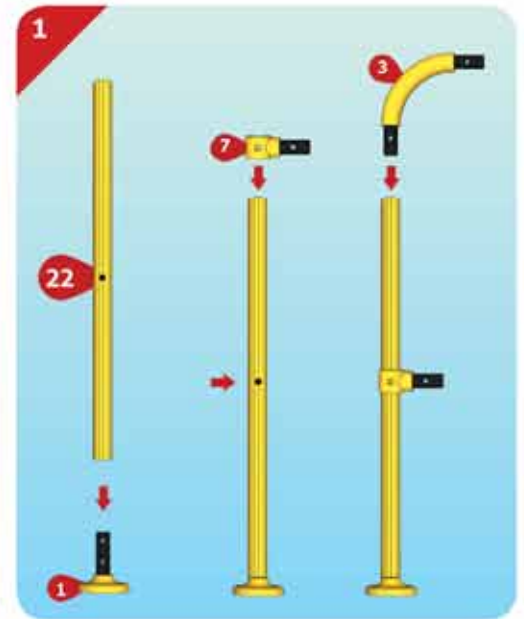
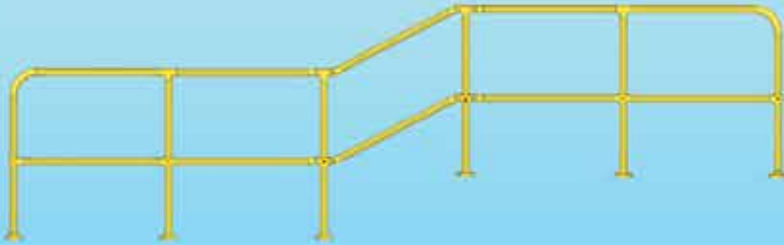


Run With Slope With An Elbow Turn

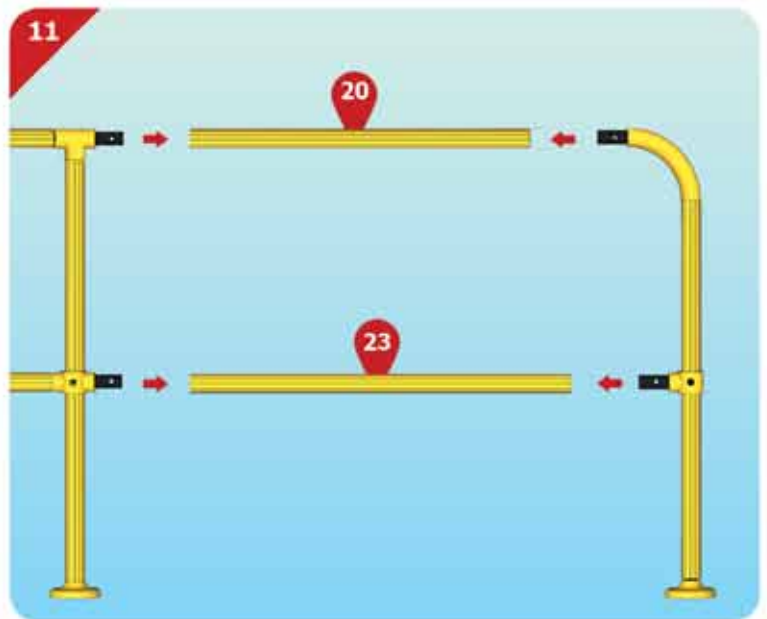
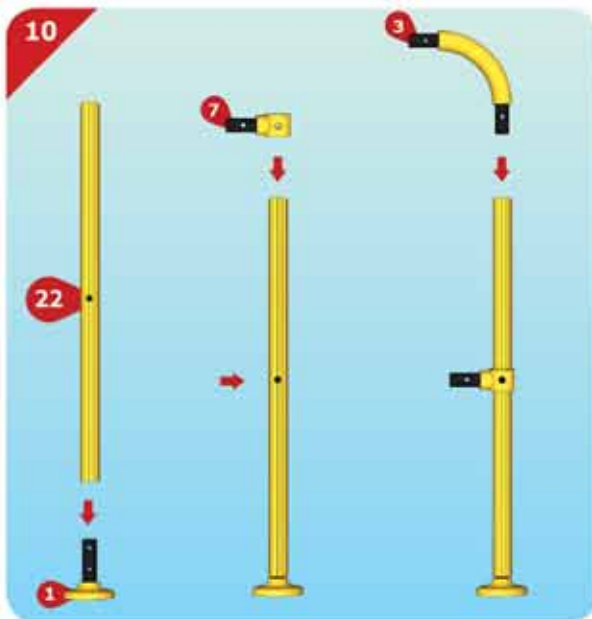
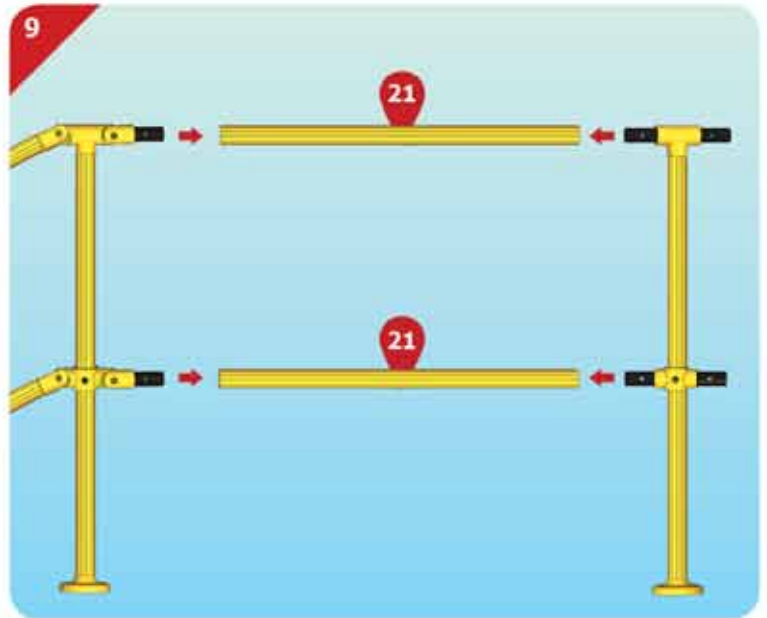
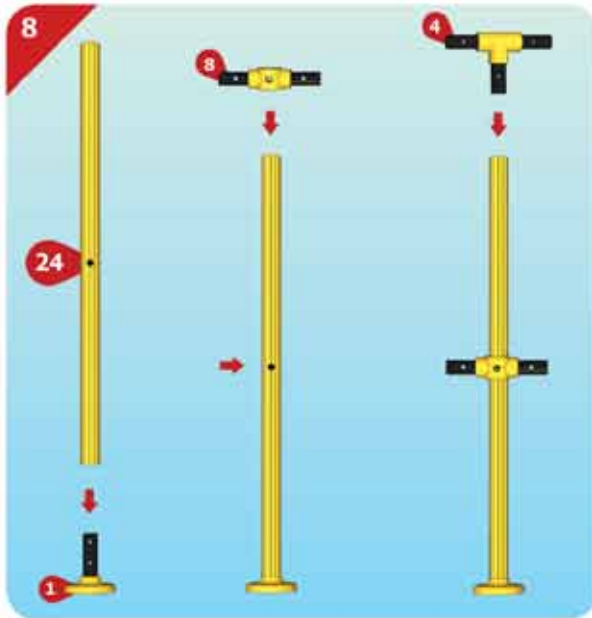
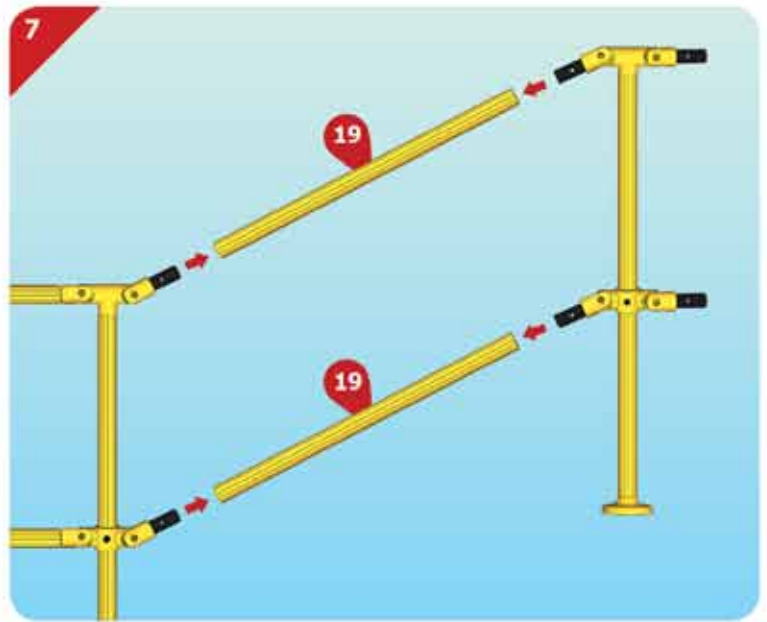
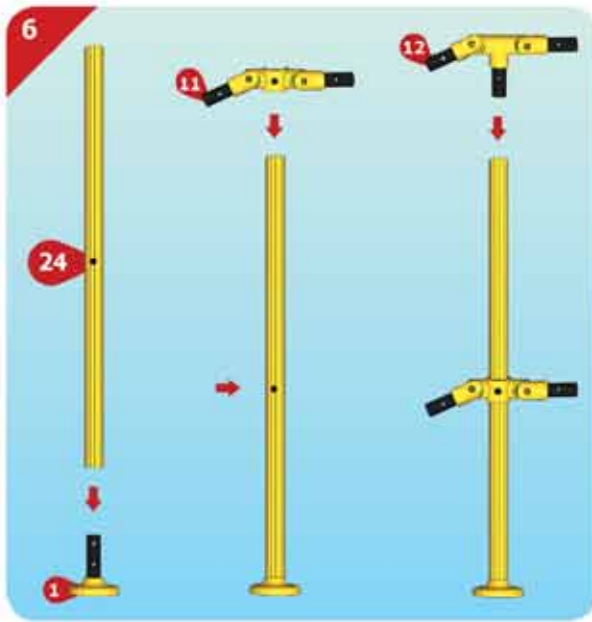


Standard Run Installation

The following guide depicts our standard handrail run, the majority of handrail applications will use similar components to the ones shown. The standard run below is just one of the many different combinations that can be achieved when using this modular handrail system.



All components are supplied with the correct bolt fixings attached, simply remove bolts and re-fix components to the specified tube.





Cleaning Guide and Tips

Whilst the system is extremely resilient to dirt and contaminants, it can, as with most other things, become dirty.

Dirt and debris can easily be removed using a cloth and a simple chemical free cleaning agent. This method of cleaning should be carried out on a regular basis.

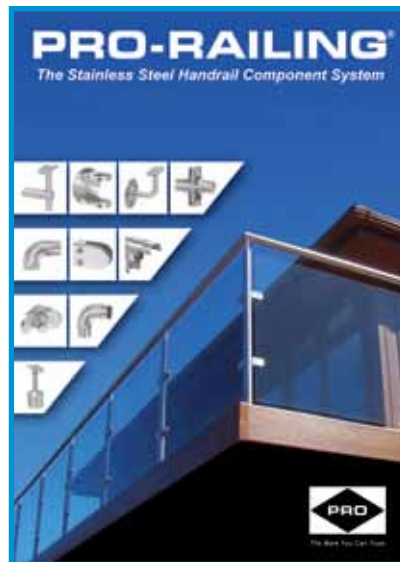
It is always advisable to test any cleaning product before starting the cleaning procedure. This can be done in an inconspicuous area of the installation or, if preferred, a sample can be sent, free of charge for testing purposes.

General Routine Maintenance

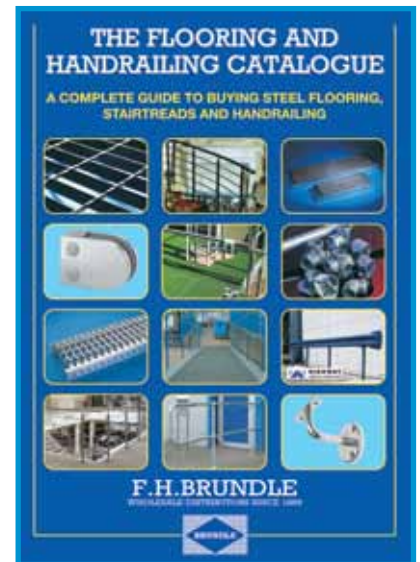
The security of the fixings/adhesive should be checked on a regular basis. Circumstances will vary, based upon the volume of traffic etc, but, as a guide, monthly inspections would be advisable.



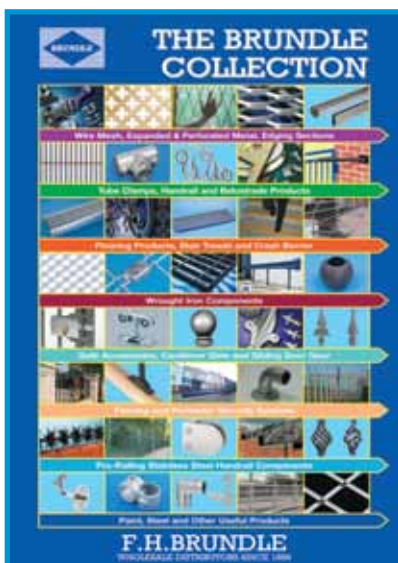
Wrought Iron Components



Pro-Railing Catalogue



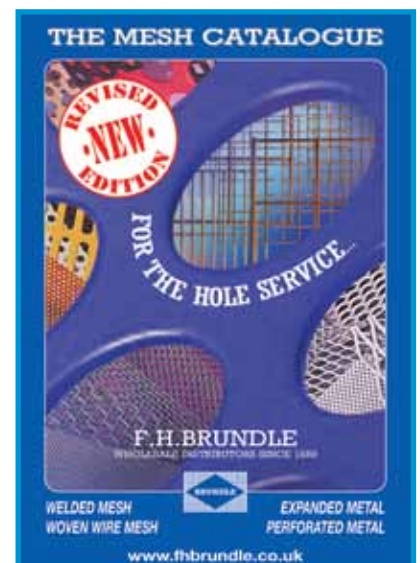
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