



ENVIRO  
BUILD

# NON-COMBUSTIBLE FIRE RATED EXTERNAL PORCELAIN SYSTEMS

## INSTALLATION GUIDE

# TABLE OF CONTENTS

<b>PORCELAIN PAVING ON STEEL PEDESTALS</b>	<b>3</b>
Installation Overview	3
Recommended Tools	3
How the System Works	4
Spacing & Supports	5
Preparing the Area	5
Pedestals in Corners	5
Laying the Pedestals	6
Laying the Paving	6
<b>LAYOUTS FOR OFFSET DESIGNS</b>	<b>7</b>
<b>CUTTING PORCELAIN PAVERS</b>	<b>8</b>
General Tips	8
How To Cut Porcelain	8
Health & Safety	8
<b>COMPONENT FIRE RATINGS</b>	<b>9</b>
What Are Non-Combustible Flooring Systems	9
Components	9
<b>FREQUENTLY ASKED QUESTIONS</b>	<b>10</b>

# A-CLASS PORCELAIN PAVING ON STEEL PEDESTALS

## INSTALLATION OVERVIEW

MESA adjustable steel support pedestals can be used on solid, flat foundations and flat roof areas (*fig. 1*). These supports can be placed onto the surface (upon a protective rubber membrane) and their heights can be adjusted by rotating the pedestal top. A paving gasket can then be easily clipped to the pedestal top for perfectly spaced pavers. This paving solution requires no grouting. This is a floating system and therefore it does not need to be fastened to the surface beneath.

- **Porcelain Paving**

Beautifully crafted paving slabs made using 40% recycled materials.

- **Paving Gasket**

For quick, perfectly spaced paving.

- **MESA Adjustable Steel Pedestal**

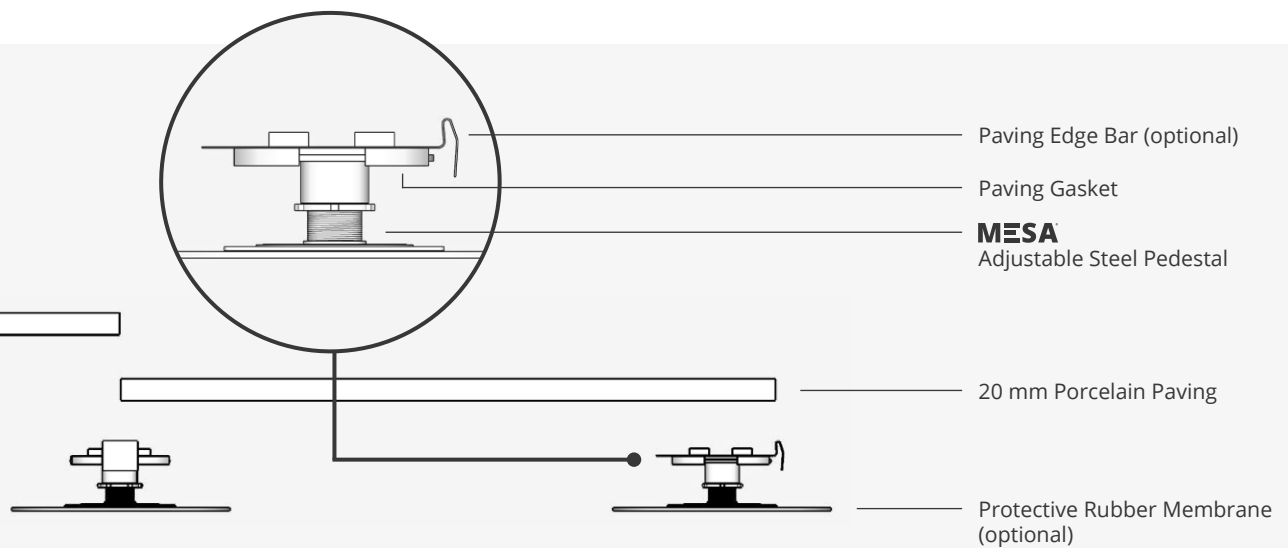
Twist to adjust levels on uneven or sloping surfaces with minimal effort for fast and effective installation.

- **Paving Edge Bar**

Used to support paving slabs at the perimeter of the paving area, along with keeping a consistent wall gapping.

- **Protective Rubber Membrane**

A supportive base used in roofing solutions to prevent damage to roof membranes by steel pedestals.



## RECOMMENDED TOOLS

- Cutting Saw (with water suppression and a blade suitable for porcelain paving)
- Spirit Level
- Safety Boots (steel toe caps & pierce resistant sole)
- Latex Grip Safety Gloves
- Dust Mask (when cutting porcelain)
- Eye Protection
- Head Protection

## HOW THE SYSTEM WORKS

MESA adjustable steel pedestals can be topped with paving gaskets for a quick and perfect spacing solution for your pavers. Paving gaskets don't need to be fixed to pedestals, simply clicked into place. The pedestal height can be adjusted by rotating the pedestal head and then locked into position using the locking nut (*fig. 2*).

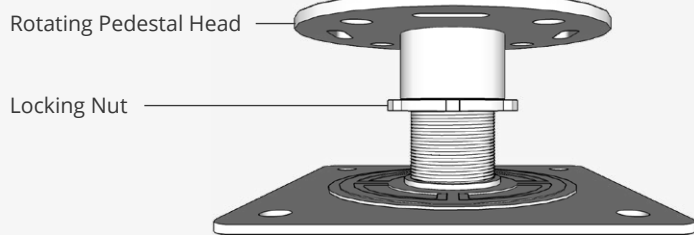


fig. 2

Paving gaskets come either with four spacer tabs or two spacer tabs and both variants have a thickness of 2 mm.

- Four angle gaskets have four spacer tabs (*below, left*) and should be used when supporting four pavers.
- Two angle gaskets have two spacer tabs (*below, right*) and should be used with paving edge bars in order to leave a gap between pavers and the perimeter.

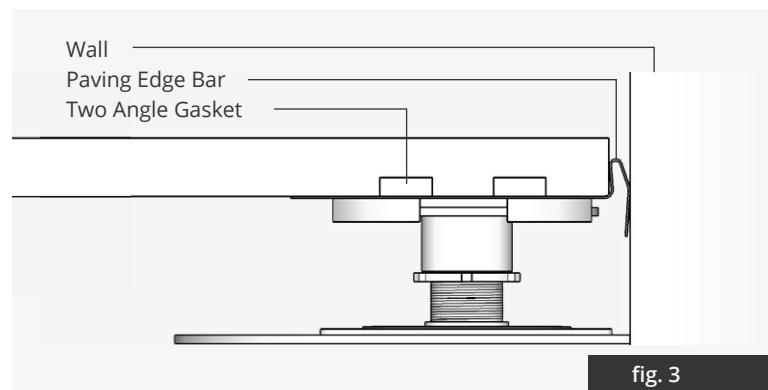
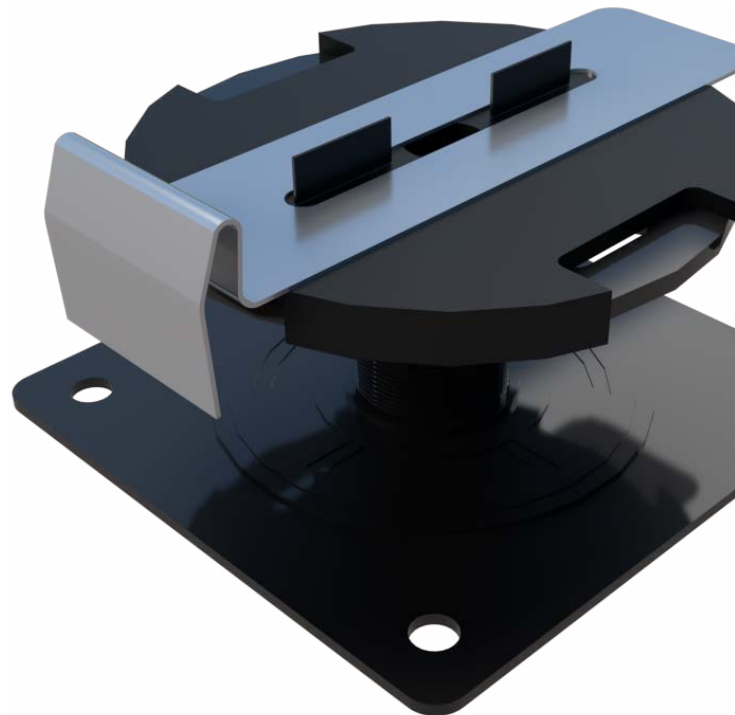


fig. 3

- Edge bars can simply be placed on top of two angle gaskets.
- The tabs on the gasket will hold the edge bar in place.
- The edge bar will leave a gap of roughly 7 mm between the paver and the perimeter (*fig. 3*).
- Pedestals in corners do not require a gasket.
- If increased noise dampening is required, the spacer tabs on a gasket can be removed using a sharp knife and used on corner pedestals.
- If an offset paving pattern is being installed (*see the Layouts For Offset Designs section on page 7*), a sharp knife can be used to remove one of the tabs from a four angle gasket to be used on sections with three angle joints.

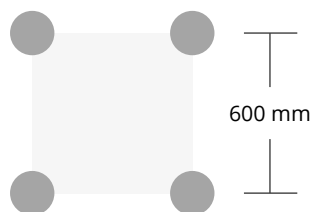


## SPACING & SUPPORTS

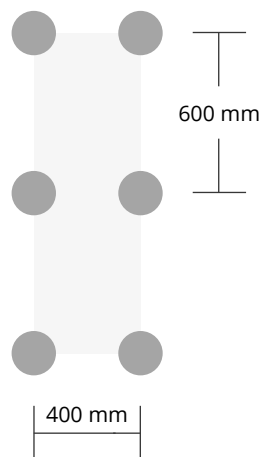
The pedestal arrangement will vary depending on the dimensions of your paving tiles. All paving sizes must be supported on each corner and at the support spans listed below.

Paving Dimensions	No. of Supports Per Paver	Support Span
600 x 600 mm	4	600 mm
800 x 800 mm	9	400 mm
400 x 1200 mm	6	600 mm

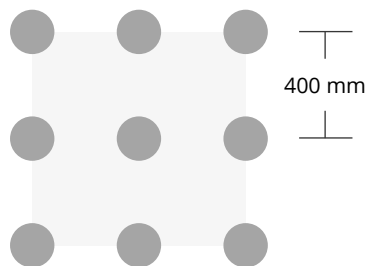
### 600 x 600



### 400 x 1200



### 800 x 800



## PREPARING THE AREA

- Clear the proposed paving area of any dirt or debris.
- Measure the width and length of the area in order to calculate the number of pedestals needed, using the information within the *Spacing & Supports* section above as a guide.
- Check that the installation area has a drainage slope that complies with building regulations.

The paving needs a slope or fall of around 1:60 (i.e. 17 mm of fall for every metre width or length of paving)

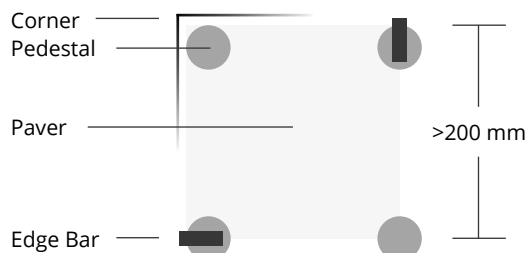


## PEDESTALS IN CORNERS

Pedestals supporting paving in corners may require a different layout. It is important that paving slabs that have been cut to fit edges and corners are supported properly.

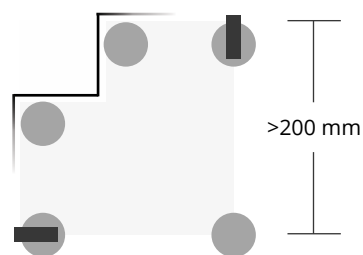
### Paving with >200 mm Width

- One pedestal in each corner.
- Corner pedestal should be fully beneath the paving slab.
- Paving Edge Bar on each wall-facing pedestal.



### Paving with >200 mm Width (Corner Fit)

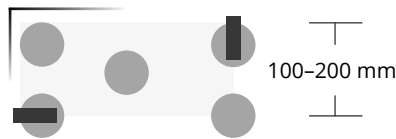
- Two pedestals supporting the cut corner.
- Corner pedestals should be fully beneath the paving slab.
- Paving Edge Bar on each wall-facing pedestal.





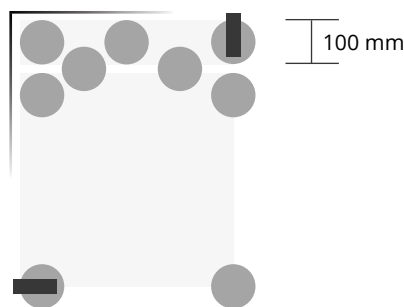
## Paving with 100–200 mm Width

- One pedestal in each corner.
- Corner pedestal should be beneath the paving slab.
- Requires central pedestal to support smaller width.



## Paving with 100 mm Width

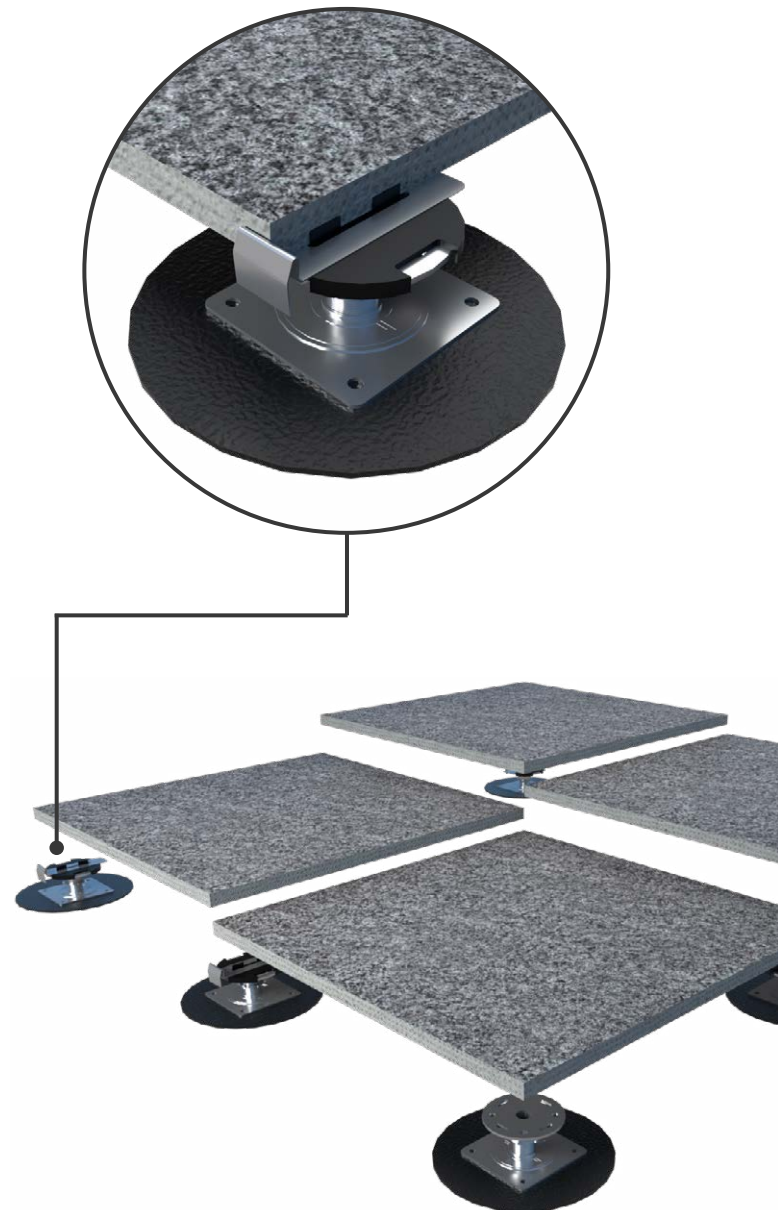
- 100 mm is the minimum possible paving width which can be supported (due to the size of the steel pedestals and because the trimmed paving slab will be too brittle and easy to snap).
- The trimmed slab should be supported at the centre and ends.
- Paving Edge Bar on wall-facing pedestals.
- Two pedestals supporting the two paving pieces (in order to maintain even gapping).



## LAYING THE PEDESTALS

1. Starting from the edge of the paving area, lay out your pedestals. The height of the steel pedestals can be adjusted by rotating the pedestal head and then locked into position using the locking nut.
2. Beneath each steel pedestal, lay a protective membrane.
3. Use a spirit level to check the level of the pedestals.
4. Place paving gaskets on your support pedestals:
  - Gaskets with two spacer tabs and an edge bar should be used on pedestals at the perimeter (see below).
  - Gaskets with four spacer tabs should be used on central pedestals.
  - Corner pedestals can be used without a gasket.

5. Edge bars should be pushed flush against the perimeter of the paving area in order to act as a spacer between the paving slabs and any walls.



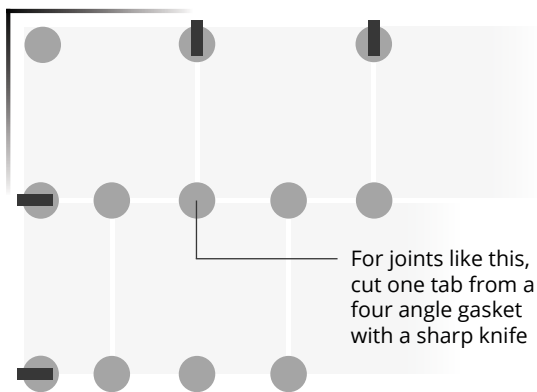
## LAYING THE PAVING

- When laying paving onto pedestals, make sure they're laid flush against any edge bars and spacer tabs on paving gaskets.
- During installation you can lay sheets of plywood over the work area to protect against any potential damage.
- Use latex grip gloves to reduce the chance of dropping pavers. 800 x 800 mm slabs should be lifted by two people as they are 27 kg each.

# A-CLASS LAYOUTS FOR OFFSET DESIGNS

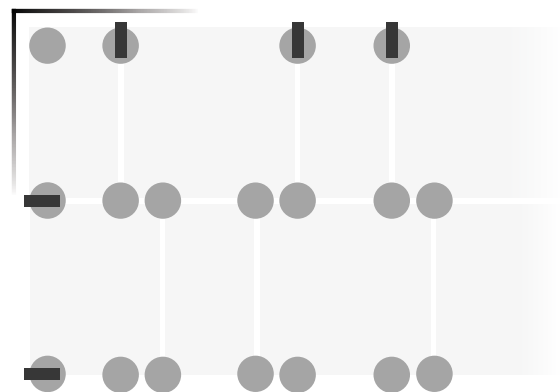
## Stretcher Bond Pattern

- Cut the first paver on every other row by a certain amount in order to produce an offset pattern.
- This single-sized pattern can be achieved with all three (600x600, 800x800 and 1200x400 mm) paving sizes.
- The layout shown below uses 600x600 mm pavers and has the joints offset by exactly half the width of each paving unit.



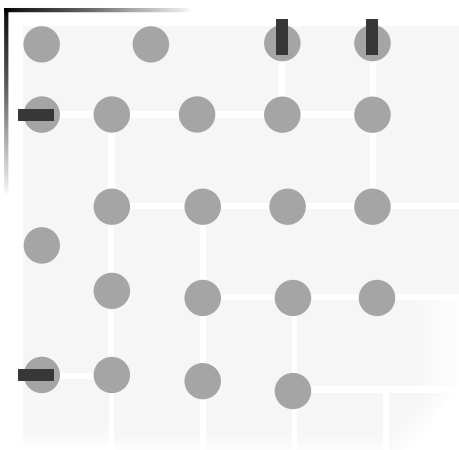
## Coursed Pattern

- This is a two-sized pattern with one common dimension.
- This pattern can be achieved with all three (600x600, 800x800 and 1200x400 mm) paving sizes.
- The layout shown below uses 600x600 mm pavers with the second size cut in half along one dimension.
- Variations can be created using different quantities of each size.



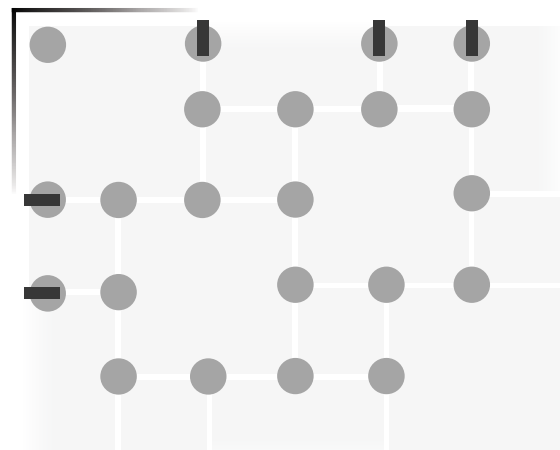
## Herringbone Pattern

- This single-sized pattern works with rectangular paving units (1200x400 mm).
- This pattern gives a fully interlocked effect.



## Dutch Pattern

- This is a two-sized pattern in which the two sizes share no common dimensions.
- Variations can be made using rectangles for the small size.



# A-CLASS CUTTING PORCELAIN PAVERS

## GENERAL TIPS

Despite porcelain pavers being considerably thicker than tiles, they are still very easy to cut. It is recommended to use a wet saw fitted with a continuous rim diamond blade designed specifically for cutting porcelain.

A 10" blade and a minimum 1.5 horsepower motor is sufficient for cutting 20 mm thick porcelain paving (8" blades work, however there is a greater chance of seizing). Thinner blades are preferable for cleaner cuts. Dressing stones can be purchased for sharpening and reactivating diamond blades. Bridge saws are recommended over a rail cart type saw as it is easier to pull a saw blade across a paver than it is to push a paver into a saw blade. Avoid cutting pavers if they have been left lying in the sunlight and are quite hot. The rapid cooling of the wet saw can cause the cut line to close up, leading to the blade jamming.

## HOW TO CUT PORCELAIN

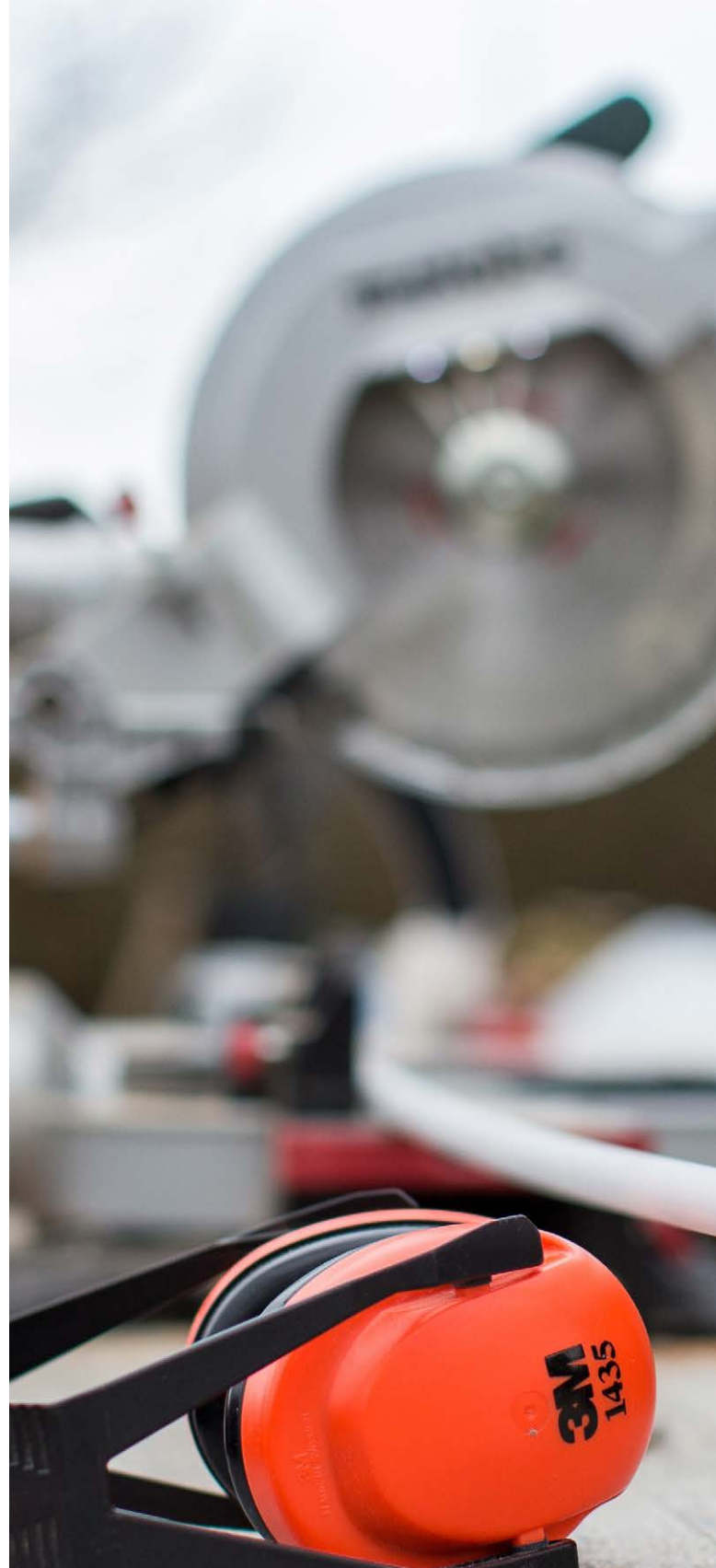
Cut from the top of the surface with the line of cut clearly marked. Mark the line with something that won't wash away as a result of the water suppression on the saw blade.

Have the blade rotating at half-revs before bringing it into contact with the tile. As the blade bites into the tile, increase the engine revs if necessary, but ensure the saw remains evenly balanced and progresses along the line of cut at a regular pace.

## HEALTH & SAFETY

The saw blade used should be water-fed for dust suppression. The dust generated from cutting porcelain is potentially carcinogenic. For this reason it is also recommended to wear a dust mask and protective eyewear while cutting. Nuisance-grade dust masks do not protect your lungs.

Use suitable personal protective equipment such as hard hats and ear defenders. Wearers should be suitably trained. A safe power source is required for the saw. Check your saw, water systems and protective equipment regularly. Replace worn cutting discs.





# A-CLASS COMPONENT FIRE RATINGS

## NON-COMBUSTIBLE SYSTEMS

Introducing an entirely new range of non-combustible materials from EnviroBuild, with solutions for every project. The fire rated systems make no compromise on quality or sustainability and are supported by an on-hand expert team.

## WHAT ARE NON-COMBUSTIBLE FIRE RATED SYSTEMS?

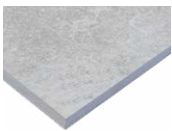
Almost every component within a system has to be individually tested to EN13501-1, and achieve either A1

or A2, s1, d0 certification. The exception are specifically listed exempted items including, electricals, door frames, membranes, gaskets and fixings. There are no longer “system level” fire tests like BS8414 available.

## WHEN ARE NON-COMBUSTIBLE SYSTEMS NECESSARY?

All balconies on buildings started since February 2019 over 18 m where people sleep are included in the legislation.

## COMPONENTS



**Porcelain Paving**  
Class A1



**Protective Rubber Membrane**  
Membranes are exempt from legislation. Always check with building control.



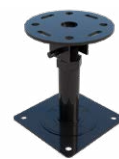
**Four Angle Gasket**  
Gaskets are exempt from legislation. Always check with building control.



**2 mm Spacer**  
Fixings are exempt from legislation. Always check with building control.



**Adjustable Steel Pedestal**  
EN13501-1 tested  
Class A2 d0 s1



**Adjustable Slope Corrector**  
EN13501-1 tested  
Class A2 d0 s1



**Two Angle Gasket**  
Gaskets are exempt from legislation. Always check with building control.



**Paving Edge Bar**  
Class A1

# A-CLASS FREQUENTLY ASKED QUESTIONS

## CARE & MAINTENANCE

- **How do I clean porcelain paving slabs?**  
A-Class paving slabs are non-absorbent, with colours that never fade, and so cleaning is as easy as cleaning any household surface. Warm soapy water and a scrubbing brush is sufficient to clean paving slabs. Cleaning products containing bleach aren't necessary.
- **Will sunlight cause porcelain paving to fade?**  
Porcelain paving is colour resistant to UV light and so the colour will be maintained over long periods.

## GENERAL

- **How sustainable are A-Class paving slabs?**  
The tiles are constructed using 40% recycled materials, reusing aggregates. As well as this, the electricity used to manufacture the tiles comes from renewable sources.
- **Can porcelain paving slabs be used structurally?**  
Porcelain can break if there is a lack of support beneath it and therefore porcelain should not be used as structural flooring.
- **What is the weight of each paving slab?**  
600x600 mm porcelain pavers are 16.1 kg. 800x800 mm porcelain pavers are 28 kg. 40x1200 mm porcelain pavers are 21.7 kg.
- **How would porcelain pavers be laid on a wet bed?**  
Lay a bed of hardcore, broken down into two layers and compacted. Prepare a mortar bed with roughly a 4:1 mix of sand to cement and add the mix over the hardcore to a thickness of around 30–40 mm.  
Paste the bottom of the porcelain slab with a slurry-based primer (adhesion is needed due to the low porosity of the product). After laying, tap into place with a rubber hammer. A pointing material can be used to fill the joints between the slabs: first wet the paving surface and then sweep into the joints with a broom, which can be neatened by running a rounded surface along the joints.

