

THE FOLLOWING GUIDELINES ARE RECOMMENDED BY REVELSTONE AS THE MANUFACTURERS, AS THE CORRECT WAY TO INSTALL THERE CAST STONE PRODUCTS.

It must be understood that as Revelstone does not provide an installation service, the company cannot be held responsible for any defects which may arise from incorrect installation by contractors or clients. It is important that only experienced installers and contractors are used; do not use installers who are unfamiliar or inexperienced with cast stone products. ALL INSTALLATIONS ARE DONE AT THE USERS OWN RISK.

## STORAGE & HANDLING

All Revelstone products must be handled carefully to avoid damaging edges and surface of the product. Pavers should always be stored undercover on their edge not horizontally (stacked) prior to being laid. To make your paving slabs easier to handle, lean them against a wall and raise them off the ground on old pieces of timber. This also helps to prevent any moisture from the ground being absorbed causing a damp mark on the pavers. All pavers from Revelstone are manufactured and stored undercover their entire lives before you receive them; this explains the dark sweat mark apparent on the face of the slab when you receive delivery. This occurs due to heat being created between the pavers in storage and will generally go away in time depending on the site conditions. Pavers are heavy and bulky and suitable lifting and handling equipment should be used. The correct safety gear and protective clothing must be worn at all times i.e. gloves, dust masks, safety boots etc.

## AREA & BASE PREPARATION

Before starting the existing ground must be evaluated and the relevant subbase or subgrade chosen (SABS 1200D degree of accuracy I). Every job will have different requirements and therefore the contractor must decide what is required in each situation. The following must be considered - existing ground conditions, finished paved surface levels, expansion joints, drainage of paved area and correct paver choice for expected usage - 50mm-60mm for high traffic/heavy/commercial and 40mm-45mm for commercial/residential/foot traffic. Clear the area to be paved of all vegetation and remove topsoil, consolidating and levelling the ground with a roller to the required depth. When laying pavers adjacent to a house ensure the top level is below the damp proof course - approximately 150mm. When laying next to a lawn make sure the finished paving level is just below that of the lawn to make cutting accessible. All paved areas should have a slight slope to disperse water and ensure easy run off. The ideal slope or "fall" is 4cm-5cm in every 3 metres away from building or house - 1:50 approximately.

## SOLID PAVING - GROUTED

- Once your base is cleared of all roots etc. - a 50mm-75mm compacted hardcore or base course must be bought in and compacted - medium to heavy traffic usage.
- With a rake or screeding straight edge, put a topping of 20mm-40mm dry mix of sand and cement (4:1) in to which the paver will be bedded.
- Starting in a corner mark out the area to be paved with string lines and pegs, adjusting the height according to the average thickness of the pavers.
- It is vital to brush the backs of the pavers with a steel brush and water removing all loose dust etc.
- Use an angle grinder with all the necessary safety equipment in order to cut the slabs - a diamond blade is essential.
- Before you grout the pavers it is important to humor - doing all the necessary adjustments for height and size, this may require lifting and swapping of pavers to achieve a regular

# How to lay Revelstone Pavers.

grout gap of 5mm-25mm approximately – depending on paver choice.

- Using a spirit level and a straightedge ensure the paving is level and the “fall” is correct during laying. Once area is grouted it is very costly to now remove and relay pavers that have major height differences from another.
- As the product is simulated to replicate real stone these variations are essential in order to create the natural stone appearance – no perfect straight lines and flat surfaces etc!!
- You can now fix the slabs – make a wet creamy cement slurry (cement/water) and pour it under each slab creating a bond with the base.
- Now gently tap slab down into the base ensuring sufficient adhesion using a rubber mallet.
- Continue using spirit level and straight edge to ensure levels and “fall” are being maintained.
- Having laid all the paving lightly sprinkle the area with water to set it off, do not flood the area.
- On completion allow the paving to settle and become solid before grouting.
- Paved area may then be pointed or grouted – standard joint 5mm-25mm – depending on paver choice.

- This is easily done using a semi dry mortar mix of 3 parts building sand to 1 part cement, fed into the gap taking care so as not to stain the slabs.
- It is vital to clean the slabs off with clean water whilst grouting – changing the water and sponges regularly. This will determine the outcome of your paved area whether it is dull and has a grey film of cement left behind on the surface or not.
- It can either be smoothed over by sponge or pointed – using a special tool or a rounded piece of wood.
- Once paving is completed wet the area consistently for 3 days afterwards especially during hot weather as this will allow area to cure at a normal rate and reduce joints drying too quickly. Allow no major traffic/usage over it for two or three days to allow paving to settle and cure.

## LOOSE PAVING – UNGROUTED

This is recommended when groundcovers, grasses or stone chip is chosen to create a more soft landscape feel.

- Once the site has been levelled and excess top soil removed and the area well compacted (water is a good compactor) you can begin.

- It is advisable to lay bidim cloth under your 20mm-30mm sand base to prevent weeds, subsidence, moles, stone mixing with the soil etc. This is a more effective option than plastic which breaks down over time and pools water which bidim allows to drain through it.
- Lay a 20mm-30mm layer of builder’s sand on top of your bidim/well compacted top soil.
- The pavers are then pressed down into sand base and levelled from the top using a spirit level.
- A joint size of between 20mm-40mm for stone chip and 30mm-50mm for groundcovers, etc. is recommended.

## SUSPENDED PAVING – SAND BAG METHOD

Unlike conventional paving or tiling on a concrete slab in which the pavers or tiles are glued directly onto a concrete base layer using tile adhesive or some other binding agent to create an impervious watertight surface, in suspended paving the pavers are mounted on small polythene sandbags, without the use of any adhesive or binding agent. All that is needed to keep the pavers firmly in place is their weight. Moreover, they are laid 5-10mm apart which creates a water permeable surface.

A very innovative installation involving steel re enforced pavers (optional) and sand bags has been successfully completed on a number of commercial jobs recently.

By doing this it allowed the waterproofing on the roof to be untouched and protected by the now suspended paved allowing use of the area without compromising the waterproofing and allowing effective run off of rainwater.

- Plastic bags are used - it is important to fill them up to a consistent measurement to ensure a flat and even finished height - necessary adjustments will be required when this type of installation is used as pavers do vary in thickness.
- The sandbags used are filled with a mixture of dry sand and cement (6:1) which hardens once the laying process has been completed. Over time the polythene outer casing will deteriorate leaving a hard and durable sand / cement core.
- The pavers have numerous bags situated beneath them to stabilise and suspend them. A layer of Interdek should be put on top of the torch on membrane prior to installation in order to protect during installation.
- The bags must be situated in a way that it supports the corners of the pavers –

4 corners to 1 bag as well as 1/2 centred for bigger size pavers.

- The average joint should be about 5-10mm which is left open to allow water to run off effectively beneath slab to designated drains via the correct falls being provided on the slab.

Suspended paving is finding increasing favour among some of the country's leading architectural practices.

According to Johnny Schwartz a partner of Louis Karol Architects – one of the suspended-paving pioneers – the process offers some distinct advantages over conventional roof-top or terrace paving.

🏗️ In the first instance it allows for the creation of a level paved surface on a base which is sloped for drainage purposes. Flat surfaces are achieved by altering the thickness of the supporting sandbags to compensate for the slope. Secondly, because the paved surface is permeable, there is no water pooling even during the heaviest of storms. This means that as soon as the rain has abated, the surface can be walked on without any concerns for wet feet.

Another major advantage is the fact that the paved surface creates a protective layer which

shields the waterproofing on the base layer from the sun's UV rays and from other forms of possible damage. However, in the event that the base layer does require some routine or other maintenance, it is easily effected by simply lifting the pavers and then re-inserting them once the work is completed.

Contrast this with the expense and inconvenience of lifting and replacing pavers which have been grouted to the base layer. Moreover, no expansion joints are needed with suspended paving and there is no chance that the pavers will crack or lift due to wind or earth induced movement, 🏗️

says Schwartz

There are other ways to suspend paving other than sand bags – rubber offcuts, specially engineered plastic foot plates, adhesive etc.

## CLEANING OF PAVERS

- It is vital to keep the slabs clean using a sponge and water whilst laying and especially when grouting.
- Should the product be badly soiled or stained use acidic cleaners sparingly to remove grout and cement stains. This is however done at your risk and must be supervised by the contractor or installer responsible.

- A synthetic acid alternative – Nanoproof Tile and Surface Cleaner – is recommended and is available from us.

- Doing small areas of less than 1m<sup>2</sup> at a time with a medium to soft plastic bristle brush, rinsing off heavily with water/ soap solution to dilute so as not to damage the pavers.

- This will clean off most adhering cement, grouting and efflorescence marks appearing on the newly laid product.
- As it is a cement product it requires time after being laid to dry out to its original colour, etc. Often the slab has a wet patch in the middle after being laid, this is because the slab dries from the outside in. This drying out patch will disappear depending on how much moisture etc. has been trapped under the slab and how long this takes to move out through natural osmosis.

For sealing of pavers see [Outdoor Tiles and Pavers Sealing guide](#).

**PLEASE NOTE:** The specification above is not suitable for heavy commercial conditions: extra consideration must be given in terms of the sub base, strength of the topping screed and grouting, correct thickness of product, condition of existing ground, long term usage, expansion joints, drainage and expected loads which the paving will be expected to carry.