



Better
Exteriors.

ARCHITECTURAL MASONRY INSTALLATION GUIDE

These suggestions are a guide only and should be used in addition to the relevant Australian Standards for trade practices. It is to be noted that installation may differ from site to site with varying conditions on each project, (i.e. Pool surrounds, Vehicle access & loading, Paving Supports systems etc). The contractor should decide if these suggestions are suitable for their application or require further adjustment.

The suggestions that are given are done so in good faith and to the best of our knowledge and experiences at the time of printing. These suggestions in no way replace the services of professional contractors, engineers and/or consultants.

Handling and Storing

The product quantities, sizes and colour should be checked upon delivery and any discrepancies or defects reported within 5 working days of delivery date and prior to installation. Claims for faulty or defective goods will not be accepted once the product has been installed. If the order exceeds one pallet it is important to source from all pallets whilst laying as this will enable a natural blending to occur.

A full size ARCHITECTURAL MASONRY paver or equivalent product weighs 20kg or more. Please ensure that the correct OH&S practices are used to handle a product of this weight.

ARCHITECTURAL MASONRY pavers come with a protective layer between each paver. These sheets should be used when restacking the paving stones or walling panels on the job site to avoid damaging the surface of the product.

IMPORTANT:

The pavers should NEVER be stacked in a criss-cross formation at any time during installation. Stacking the pavers in this way causes a differential in drying rates and can cause surface variations that are permanent. It is recommended that the product be laid within a few weeks of delivery.

The product should not be stored for extended periods of time as this may result in shadowing and surface variations on the pavers due to weathering or differential drying rates that are permanent. Any marks that occur because of restacking or extended storage are not the responsibility of the manufacturer.

Acceptable Deviation

COLOUR & TEXTURE

ARCHITECTURAL MASONRY pavers are manufactured using natural materials and therefore variations in colour and texture are an inherent characteristic of the product. We suggest sourcing tiles from all pallets delivered whilst laying. This will enhance the natural look of the product and the overall effect of the area that has been installed.

DIMENSION

ARCHITECTURAL MASONRY pavers are an individually manufactured product and a variation in dimension may occur. It is the responsibility of the user to inspect products prior to installing. Minor marks and small chipping are not structural and therefore are not considered defects. Any paver with excessive chipping or variation in thickness and dimension may be subject to a warranty claim if the product has not been laid.

Plan Dimension Acceptable Variation - +/- 2mm

Thickness Dimension Acceptable Variation - +/- 2mm

Foundation

It is recommended that ARCHITECTURAL MASONRY pavers be installed with a foundation of concrete or compacted crush rock. The concrete slab will be to engineers or contractors specifications in accordance with the relevant Australian standards. This may vary depending on the end use of the product (i.e. Pedestrian traffic, Vehicle traffic etc...).

PEDESTRIAN TRAFFIC ONLY

Compacted crushed rock 75mm thick or Reinforced concrete 75mm thick*

VEHICLE TRAFFIC

Reinforced concrete 100mm thick*

*Engineers advice should be sought in the design of all concrete bases. Expansion / control joints are suggested on concrete foundations. See 'Control Joints' subheading for more information.

Slope

When dealing with outdoor flooring special attention must be paid during planning in order to respond adequately to rainwater run-off. This is done by dividing the floor field into different drainage surfaces if necessary and giving them effective slope and perfect levelness. This will avoid trapping water and moisture on the floor surface, which can cause undesirable and unsightly effects like rings, saltpeter efflorescence and dirt build up.

The following slopes are recommended:

Small flooring surfaces: gradient > 1%

Large flooring surfaces: gradient > 2%

Cutting

ARCHITECTURAL MASONRY pavers can be cut using a grinder with a masonry or diamond blade. It is recommended that cutting be done using a bench stone saw with a wet diamond blade. The product should be washed immediately after it is cut to avoid the cutting paste drying and staining the surface of the product.

(Please note that when cutting ARCHITECTURAL MASONRY products you are exposed to silica dust due to the ingredient of sand in the product. Using wet cutting processes or using dry systems with vacuums at the source is required. Appropriate respiratory protection should always be worn when cutting or grinding ARCHITECTURAL MASONRY products.)

Safety Protection Required (Cutting/Grinding/Drilling):

Eye protection
Respiratory Protective Equipment
Hearing Protection

Control / Expansion Joints

All control / expansion joints should be free and clear of grout and mortar. If there are control joints in the substrata (concrete base) these should be followed through to the top surface of the pavers. The placement of the joints shall be in accordance with the engineers/contractors specifications with reference to the relevant Australian standards. The control joints may be filled with flexible mastic to keep the joint clean of dirt and debris.

Please consult the relevant manufacturer for further information.

Compounds

MORTAR BED COMPOUND

The recommended mortar bed compound to lay ARCHITECTURAL MASONRY pavers is that of a mix consisting of:

1. 4 parts Medium Washed Sand (as per Australian Standards)
2. 1 Part Grey Cement (not high early strength)
3. Clean water: Note additional water can be added to achieve the desired consistency
4. Bonding agent: This will help with the workability, adhesion and strength.

The ingredients are to be mixed dry to create the mortar. Add water sparingly just to allow workability.

BONDING SLURRY COMPOUND

The recommended bonding slurry compound is that of a mix consisting of:

1. Cement and water mixed into a workable paste or;
2. Cement and Bonding Agent mixed into a workable paste

Laying Methods:

RIGID

It is always recommended to use a qualified experienced trades person for this installation method. Product should not be laid in very hot conditions (above 32C) or in very wet (rainy) conditions, as this can affect the strength of the mortar bed and the adhesion of the products.

1. The concrete where the pavers are to be laid is to be cleaned and dampened.
2. The slurry mix is to be applied to the concrete where the mortar is to be placed in an even coat (1-2mm thick).
3. Place the mortar mix on the concrete and the paste for the paver to be laid on. Spread the mortar mix evenly on the concrete where the paver is to be laid. The mortar bed should be 30-40mm thick depending on the weight of the paver. It is important the mortar bed has no voids in it prior to laying the paver.
4. Remove all loose material from the back of the paver before laying.
5. The back of the paving stone should have the slurry mix applied to it in an even coating 1-2mm thick. Wet the top of the mortar bed to assist with adhesion.
6. Place the paving stone into position gently tapping down with a rubber mallet. (It is recommended to use a white rubber mallet to avoid marking the product). It is important to ensure that there are no air voids under the product as this may cause the adhesion of the pavers to fail or the product may not be fully supported.
7. Tap the paving stone down to the desired level. Allow a space between each product for a grout joint.
30mm – 5mm / 38mm – 6mm / 48 – 7mm / 58 – 8mm
8. Trowel fill any voids around the product and remove any excess mortar and discard it.
9. Remove all excess material from the surface of the paving stone using a clean sponge with clean water. It is important to work as cleanly as possible to avoid marking the product.
10. Do not spread too much mortar as it may begin to dry before you have laid the paving stone. Work in smaller controlled areas.

FLEXIBLE

Note: ARCHITECTURAL MASONRY pavers (500mm and above) are NOT to be laid on a sand bed only.

ARCHITECTURAL MASONRY pavers can be laid using a flexible laying process however ideally the rigid method will provide a better long lasting result. When using the flexible method good drainage allowing water and moisture to drain away from the pavers quickly is critical. If moisture cannot escape and gets trapped in the joints or in the bed this can result in picture framing on the product which can be very difficult to remove.

Note: This method of installation is only applicable for products smaller than 0.2m² in plan area. It is not appropriate for products larger than 0.2m² in plan area. It is always recommended to use a qualified experienced trades person for this installation method.

1. The Base course shall be levelled within a tolerance of no more than 5mm from the base of the level in any direction. It shall be of an even thickness and adequate drainage precautions taken. It should be correctly compacted to suit the intended application. There should be no ponding on the surface of the base course as this may cause problems with the integrity of the paving application.
2. The Bedding sand must be of appropriate grading for the bedding application. The level of sand compaction must be taken into account when setting the levels for the bedding sand.

3. It must be spread evenly and appropriate precautions must be taken to ensure adequate drainage. It should not be assumed that the pavers will "bridge" a poorly prepared base or bedding sand.
4. The pavers can be placed on the bedding sand and the grid lines adjusted using a screwdriver where necessary.
5. An edge beam may be necessary to put in place if the paving area doesn't provide them i.e. a wall or kerb etc. The edge beams are generally made using a concrete mix to the relative Australian standards.
6. The thicknesses of the bedding sand should not exceed 35mm when compacted.
7. Compacting of the paver can be done using an appropriate compacting plate. It is recommended to cover the plate with a soft layer of material to avoid chipping the surface of the pavers (ie Carpet). Compacting of the pavers should be kept back 1m from the laying edge unless it has the appropriate edge beam or structural edge i.e. wall or kerb etc.
8. The joints in the pavers should be a minimum of 6mm and can be filled after compaction with appropriate jointing sand. It can be swept into the joints. It is not recommended to use a rigid style of grout for this method of laying.
9. The area can be re-compacted after the joints have been swept with sand and more sand applied where necessary.
10. The sand should be dry and the joints should be filled as soon as possible after the initial compacting has taken place.
11. Regular checks should be done to ensure that the paving is performing as desired and any maintenance should be carried out to ensure the structural integrity of the paving.

TILE

Please note that the above laying suggestions do not apply when installing ARCHITECTURAL MASONRY pavers 28mm tile. This product should be treated as a tile and laid accordingly using an appropriate tile adhesive product designed for external use.

Please note:

Our Tile products should be laid using tile laying methods NOT paving laying methods.

PEDESTAL

ARCHITECTURAL MASONRY pavers can be laid using Pedestal Support Systems. This method of laying is commonly used on balconies, decks and roof top gardens. To determine the correct number of supports and the correct sizes and thicknesses that can be used in this application contact the manufacturer for assistance.

Maximum Span 38mm Thick units – 500mm

Maximum Span 48mm Thick units – 600mm

Grouting Compound

It is recommended to use a high-grade pre-bagged grouting compound that is suitable for the application. It should cater for Grout joints of between 7-10mm and be suitable for external use. Follow the manufacturer's directions for guidelines in mixing and applying the grout. Ensure you keep the pavers clean throughout the grouting process and don't allow the grout to dry completely on the pavers before removing.

Sealing

All ARCHITECTURAL MASONRY products can be sealed. It is recommended to use a penetrating sealer. This will help protect the pavers from oil-based stains and generally make them easier to clean. We recommend using a professional sealing applicator. For further information about the appropriate sealers and trades that can apply them contact BETTER EXTERIORS for assistance.

Cleaning

AFTER LAYING AND GROUTING

The following method should NOT be used for HONED finished products.

ARCHITECTURAL MASONRY pavers should be cleaned when the grouting material has cured. This clean will enable any grouting and mortar residue to be removed.

1. Wet the area you wish to clean down.
2. Apply acid water mix (20 parts water to 1 part Hydrochloric acid)
3. Gently agitate surface with a stiff broom
4. Wash surface thoroughly

Note: It is recommended to work small areas at a time (3-4 square meters) and thoroughly wash as you go. It is important to have a well wet down surface before you apply the cleaning mix. Never apply acid mix to dry pavers. Care needs to be taken not to over etch (burn) the product by using a mix that is too strong or washing an area too much. It is also recommended that all appropriate safety protection be worn while handling the acid including gloves and eye protection. Remember to always add acid to water not the other way round.

MAINTENANCE

ARCHITECTURAL MASONRY pavers will generally require minimal maintenance. Normally sweeping and cleaning with a high pressure water wash on a regular basis is all that is required. Maintenance can be assisted by having the paving sealed with the appropriate sealer (see SEALER section). If there are marks on the pavers that cannot be cleaned by sweeping or water washing then chemical cleaning may be required.

For organic stains using a household bleach product on the stain may assist in removing it from the paver. Alternatively, the product could be re-washed again using an acid wash process (See process in this section under After Laying & Grouting). Professional cleaning companies that specialize in cleaning pavers can also assist in removing marks that don't come off with simple cleaning processes. BETTER EXTERIORS can provide contact information regarding professional cleaning services.