

Infinia

Rigid Installation Guide

600 x 600 x 40mm and 600 x 300 40mm



General Information

On delivery, the product should be inspected. If there are any issues, please report them immediately and do not commence installation.

Before installation commences a certain amount of sorting of the product may be required to ensure consistency of colour, texture and dimensional tolerance.



Health and Safety Information

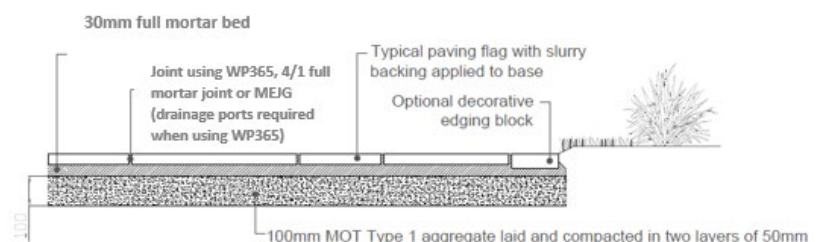
Safe working practices should be employed at all times during the construction process and all necessary Personal Protective Equipment (PPE) should be worn.



Pavement Design

For most domestic applications, a sub-base of a minimum of 100mm should prove to be sufficient. However, the paving design must be based upon the prevalent ground conditions, type and frequency of anticipated loads.

Consideration should be given for the inclusion of movement joints, at 6m centres, if the area is subjected to prolonged periods of direct sunlight, the area is a large open expanse of paving or the selected colour of paving is the dark option.



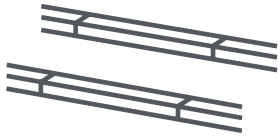
1 Typical section through a patio constructed in accordance with Marshall's Register Installation Procedures
D01 Scale 1:20 @ A3

If you are Considering a flexible installation with this product, please seek advice from our Technical Department or Pavement Engineer.



Excavation

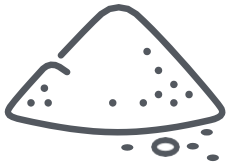
To allow the new paving to be installed correctly, a certain amount of excavation may be required. The depth of this excavation will depend upon the thickness of the required sub-base plus the sand and/or mortar, and the paving flag thickness. An extremely important factor to consider when working out the depth of excavation is Domestic application only that the finished surface level of the paving, when being laid up to an existing structure, must be a minimum of 150mm below the DPC to prevent problems with rising damp in the structure.



Edge Restraints

Edge restraints should be sufficiently robust to resist the lateral displacement from imposed loadings placed upon the pavement and are installed prior to the installation of the sub-base. The restraint must provide a consistent vertical face to a level below the laying course material.

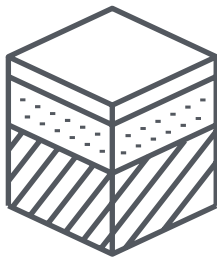
For steep inclines or gradients, (greater than 1:20) the provision of intermediate restraints should be considered. Their spacing should be related to the severity of incline and overall area of paving.



Sub-base - Material Selection

Granular sub-base material should be well graded (40mm to dust) Type 1 quality material. Inferior quality material may be liable to failure under loading and be susceptible to frost or moisture movement.

Recycled materials such as crushed masonry or concrete can be considered, provided it is well graded and compacts to give a close textured finish. Materials containing organic matter should not be used.



Sub-base - Construction

Sub-base material should be placed in layers not exceeding 75mm in thickness or twice the nominal maximum aggregate size. Each layer should be fully compacted before the next layer is placed. Sub-base tolerance to be +5 -10mm from specified levels. The surface should be clean and suitably close textured to prevent migration of finer material through the construction.

A minimum longitudinal fall of 1.25% (1 in 80) and cross-fall of 2.5% (1 in 40) should be incorporated in the sub-layer construction to provide adequate surface water runoff from the wearing course.

Rigidly Laid Paving - Material Selection

Paving units should be cleaned by washing the units with a sponge and clean water. This is to remove any dust, loose material, packaging or production aids. To avoid damaging the units, stack the units on timber battens with spacers between them.

ADVISORY NOTE The backs of the units should be primed using Marshalls' Paving Primer prior to placement upon the bedding mortar. This assists bonding and helps to prevent potential marks appearing through the paving units. It is also a very useful technique for ensuring elements, such as wall copings, caps and step treads, adhere and do not become loose.

Flags should be supported on a full 'wet' workable mix mortar bed of 1-part cement to 3 or 4 parts sharp sand. The mortar bedding should be laid to give a thickness between 30mm and no more than 40mm (which reduces to approximately 25mm after tamping down the paving); however, some adjustment may be necessary to ensure that the units are fully supported and do not rock or move.

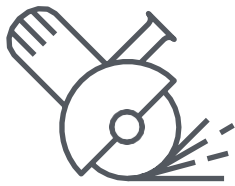
Paving units should be laid with a joint width of 5-10mm generated by the use of spacers. Joint widths can be varied slightly in order to achieve straight lines or maintain bond pattern.

Keep checking levels and gradient across the units. String lines can be helpful to define levels and lines within the laying pattern to maintain the correct joint width. Spacing packers e.g. window packers are useful for use as temporary spacers.

For most paving units, a damp mortar mix of 1-part cement to 4-parts building sand can be used. If mortar gets onto the surface of the units, clean off immediately using a damp sponge frequently rinsed in clean water. If implementing

Alternatively, Marshalls' Weatherpoint 365 Jointing Compound can be used, provided that the joint is free draining by way of draining ports through the mortar bed onto the sub-base. If implementing Marshalls Exterior Jointing Grout as a jointing material the design of the Infinia unit has a pencil edge detail, so the width of the joint at the face will be larger so ensure you take that into account when spacing your units.

Under no circumstances should dry or semi dry sand/cement mixes be brushed into the joints. This practice leads to staining of the paving and does not constitute a true rigid joint.



Cutting

Cutting may be carried out using a water and dust suppressed diamond tipped power saw. It must, however, be noted that the aesthetic finish achieved will depend greatly upon the choice of cutting mechanism and level of skill. Specific equipment or blade types should be used when cutting. Ensure you clean down the surface of the product immediately after cutting to ensure no permanent staining takes place to the surface of the flag.

If more than 25% of a flag requires cutting then the remaining piece should be cut from the internal corner of the cut to the external corner of the flag, at an angle of preferably 45°.



Inclement Weather

Laying operations should be discontinued (and any open work face covered) if weather conditions are such that the performance of the paving may be jeopardised. Laying operations should not be undertaken when the temperature is below 3°C on a falling thermometer and below 1°C on a rising thermometer. All unfinished areas and stockpiles of materials should be covered in the advent of inclement weather to prevent saturation.



For more information

Please contact Marshalls Group Technical Services on **0370 411 2233** or email grouptechnicalservices@marshalls.co.uk