

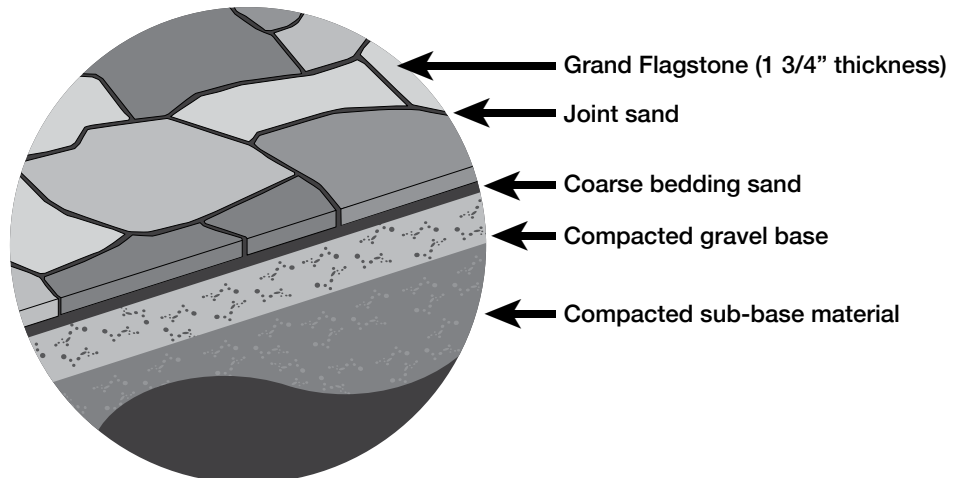
**Specifications per pallet**

Weight/pallet	±2,100 lbs/953 kg*
Layers/pallet	8
Coverage	90 sq. ft./pallet
Section coverage	11 sq. ft./layer

\*Including the pallet.

**STANDARD COLOURS**

- Manitou





# GRAND FLAGSTONE

## INSTALLATION

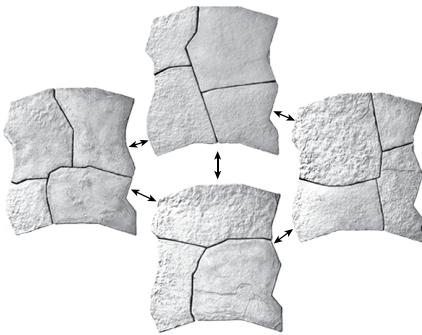


### INTERLOCKING LAYERS

Grand Flagstone has been designed so that each layer of slabs on pallet is an interlocking set.

Each interlocking set, or layer, of slabs has been designed to interlock with all other layers.

### COMMON POINTS FOR INTERLOCKING LAYERS



### PROPERLY PLACED INTERLOCKING LAYERS



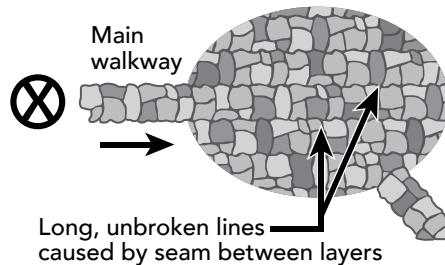
### LAYOUT ORIENTATION

Layout orientation is important with Grand Flagstone. Due to the nature of the interlocking sets of slabs, there are long, unbroken joints between rows.

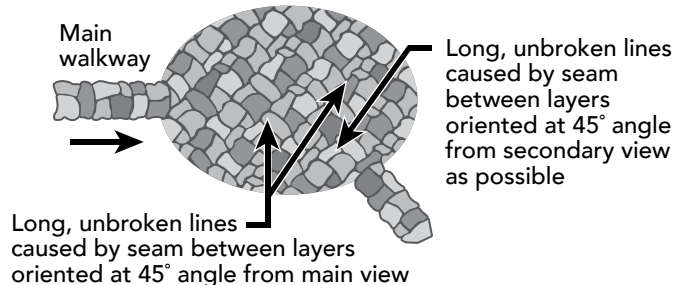
Often, the irregular nature of the Grand Flagstone limits how noticeable these unbroken joints are in the finished project. However, the lines become slightly more noticeable when you are looking parallel to the unbroken joints than when you are looking at them on an angle.

To limit this effect, Grand Flagstone layers should be laid at a 45° angle from the most common viewing angle. This viewing angle would most likely be a patio entrance or step location.

### INCORRECT VIEW



### CORRECT VIEW



### INSTALLING CRACKED PIECES

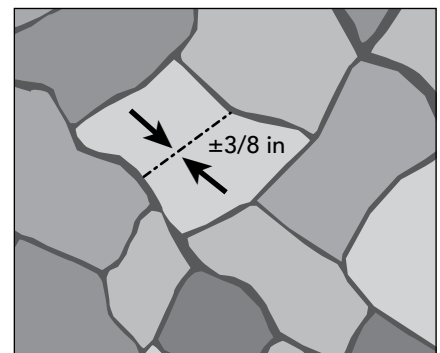
Individual pieces of Grand Flagstone can crack either during delivery to the job or during on-site handling prior to placement. Typically less than 5% of the pieces will crack. There are two methods to deal with cracked pieces.

The first method is to use the cracked pieces to fill in around the edges of the project where there is always a need for small pieces.

The second method is to use the cracked pieces to enhance the layout pattern.

Since Grand Flagstone is designed to create an irregular flagstone walking surface, an extra crack simply provides another joint line in the Grand Flagstone pattern. Place the cracked pieces next to each other with a 10 mm (3/8 in) joint between them. The joint is filled with polymeric jointing sand just like all other joints.

If necessary, the cracked pieces may need to be trimmed to create a smooth edge or provide a larger joint to match all the other joints in your project.



1. Trim broken edges if needed.
2. Install pieces with typical 10 mm (3/8 in) joint.



Thank you for your interest in installing Brown's paving products. You will find that these products truly combine the look of natural stone with the efficiency and consistency of concrete pavers. The following guide lays out proper installation techniques for Brown's Grand Flagstone. For optimal colour blending, you must mix and install products from several different pallets simultaneously. We hope this provides helpful tips for a fast, enjoyable installation.

### SAFETY

Make safety a top priority when installing Brown's paving products by the following points:

1. Contact your local utility marking service prior to excavating. Be sure to follow all governmental safety regulations.
2. Always wear the appropriate personal protective equipment (PPE). This may include gloves, steel-toed boots, safety glasses, hearing protection.
3. Flagstone slabs are heavy. Follow proper lifting techniques to avoid back injury. Also, use two people to set larger pieces.

### PROJECT PLANNING

The first step in installing Brown's paving products is to plan your project. Paver layout and placement is important to ensure a functional and good-looking installation. Remember, Brown's flagstone products are suitable for pedestrian loading only (patios, walkways, etc.) and will not support the load of a vehicle.

### EXCAVATION AND BASE PREPARATION

Once you are ready to start construction, you will need to lay out the project area:

1. Mark out the area of the installation with marking paint.
2. Mark a second line 305 mm (12 in) outside the first line that indicates the area to be excavated. This over-excavation will allow for proper base installation.
3. Excavate to the required depth and grade for the installation of the specific paving product you are installing (see cross-sections for minimum recommended excavation depths).
4. Once the excavation depth has been established, compact the sub-grade using a plate tamper. Brown's Concrete Products Limited recommends laying a woven geotextile down before applying any granular base materials.

### PERMEABLE INSTALLATIONS

Unless specified, avoid compaction of existing sub-grade soils if installing a permeable pavement.

### PLACE THE COMPACTED GRAVEL BASE

1. For standard paver and flagstone installations, begin by spreading half of the granular base material in the excavation.
2. Compact this first lift to 98% Standard Proctor density using a plate tamper and adding water as needed.
3. Add the second lift of granular material and compact it in the same manner as the first. For permeable paver installations, install open graded sub-base and base course material as specified in the project drawings.

*NOTE: Lifts should not exceed 150 mm (6 in) thickness.*

### KEY POINT

When installing granular base materials, be sure to consider proper grades to prevent water from standing on the surface and make sure that water is directed away from building structures.

### PAVER INSTALLATION

Bedding material requirements and paver installation vary by product type. Please see the following product-specific installation instructions and tips for more details on paver installation.



# GRAND FLAGSTONE INSTALLATION



## BEDDING SAND INSTALLATION

1. Using screed rails on the compacted granular base, apply bedding sand at a maximum thickness of 25 mm (1 in). By using a screed board along the top of the screed rails, the bedding sand will level evenly.
2. Bedding sand should be compacted since Grand Flagstone slabs should not be compacted after installation.

## FLAGSTONE INSTALLATION

1. Begin by laying the individual pieces of Grand Flagstone on the screeded bedding material according to your details project plan.
2. Separate individual pieces approximately 10 mm (3/8 in) from each other. When units are set with a 10 mm (3/8 in) gap, a full pallet will produce 90 sq. ft. (8.36 sq. m.) coverage.
3. Cut units as needed to finish edges.

**NOTE:** To ensure proper colour distribution, mix layers from several bundles at one time.

## JOINT SAND INSTALLATION

1. Once the flagstone pieces are installed, fill all joints with jointing sand suitable for large joints. Sweep the sand into the joints between flagstones until the joints are completely filled.
2. Follow the jointing sand manufacturer's recommendations for wetting the sand.

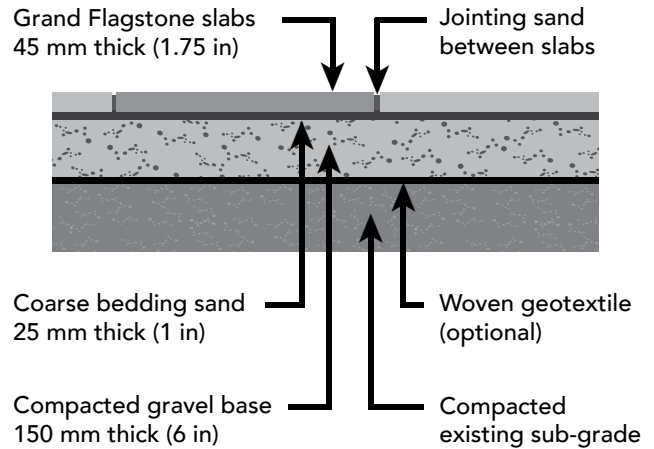
**CAUTION:** Grand Flagstone slabs should not be compacted after installation.

## OTHER CONSIDERATIONS: SEALING

You may want to apply a sealer to protect the flagstone slabs from spills and stains. Always use a high-quality sealer specifically formulated for wet-cast concrete.

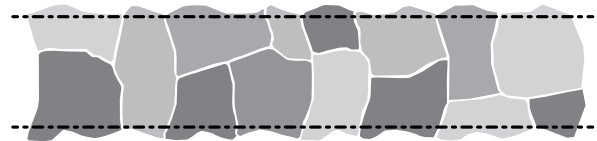
**NOT SUITABLE for vehicular traffic.**

## TYPICAL CROSS-SECTION



## STRAIGHT WALKWAY INSTALLATION

Leave jagged edge or trim to provide smooth edge (optional).



## PLACING GRAND FLAGSTONE

