

# Installation Guides

## Installation Guide to Paver Walkways and Patios

### Tools Needed:

- Wooden stakes
- Wide blade masons chisel
- Masons string (twine)
- Stiff bristle street broom
- 3-5lb. rubber hammer
- Hard tooth garden rake
- Chalk line
- 25 ft. measure tape
- 1" diameter sand screed guides (pipe, wood, etc.)
- 6-8 ft. 2" x 4" or 2" x 6"
- Small pry bar
- 4 ft. Level
- Wheelbarrow
- Flat shovel

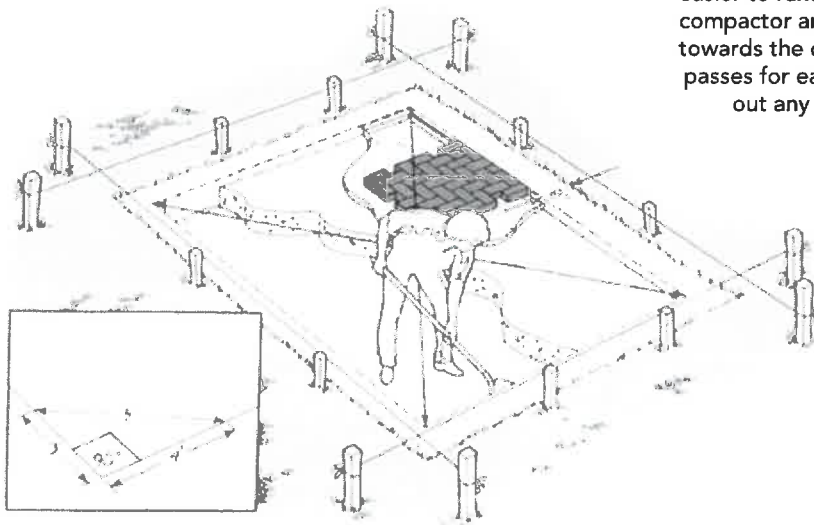
### Rental: (Look in Yellow Pages for local rentals)

- 3hp to 5hp plate compactor (not a jumping jack)
- Mason diamond saw
- Block/Paver splitter

### INSTALLATION

First measure area you intend to pave. Determine square footage by multiplying (length x width = square footage) add 5% for breakage and cutting. Measure lineal feet of open edges, those not up against a permanent structure such as a house, etc. This will indicate lineal footage of PAVE EDGE required. Draw a plan on a piece of paper showing all important dimensions. Take this plan to your supplier so that they can help you determine the proper amount of materials needed to complete your project.

Using the 3-4-5 triangle method to determine a perpendicular line, measure parallel lines from the perpendicular line to establish a boundary. Place stakes every 4 feet to 6 feet and at corners. These stakes should be 8" outside of the planned



edge of the pavers. NOTE: You can check to make sure an area is square by making sure both sets of cross corners measure the exact same distance.

### EXCAVATION

NOTE: Before any digging call your local utility companies to locate any underground lines.

Using a flat shovel cut evenly to remove sod/dirt to a depth of at least 7" (18cm) to allow room for 2-3/8" (6cm) paver, compacted sand, minimum of 4" (10cm) compacted crushed stone base (more if soil is very soft). If the house is of new construction there might be potential for settling next to the foundation. We suggest you increase base thickness to 6" (15cm) or a total excavation of 9" (23cm) within 2 feet (1 meter) of new foundation. Excavation should be 6" (15cm) wider on sides where PAVE EDGE restraint is to be used.

### BASE PREPARATION

This is very important. The more time and effort you put into the preparation of the base, the better the project and the longer it will last. Use either 3/4" (19mm) or 1/2" (13mm) graded base material that includes sizes down to fine dust. This material is easier to compact and will give a tight, close-knit surface of compaction.

### Method of Compaction:

First, run your plate compactor over the excavated soil. (Make sure no soil gets stuck to the bottom of the plate compactor). Each pass should overlap the previous one by about 4". Now spread your gravel base material out evenly in about 2" layers. If material is dry and dusty use a garden hose to thoroughly wet it down, this helps make the gravel faster to compact and easier to rake. Start around the outer perimeter with the plate compactor and again overlap each pass about 4" working towards the center. You should make at least two complete passes for each layer. Use the hard tooth garden rake to smooth out any unevenness.

When finished with the base it should be very smooth and flat. If you were to put a straight edge flat on the surface there should be no more than a 1/4" (6mm) maximum gap anywhere along the straight edge and the base.

### Slope and Grade:

Slope and Grade are important to ensure proper run-off. It is best to plan a 1/4" (6mm) per foot drop, but try not to exceed 1/2" (12mm) per foot.

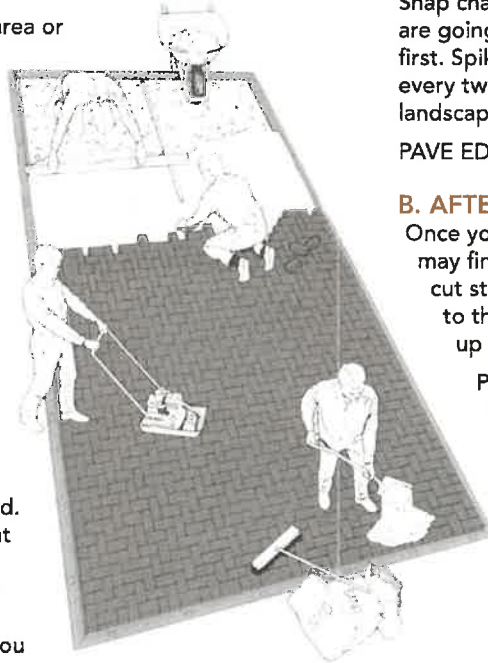
## SAND SETTING BED

**NOTE:** It is important to keep your sand dry and covered in case of rain.

Do not attempt to level any area or surface irregularities with the sand. This will result in an uneven surface and unwanted settling.

Lay your screed guides (1" (25mm) electrical conduit, 1" strips of wood or other suitable rigid 1" guide) 4' to 6' apart and parallel.

Work from side to side with your screed guides, screed a 10' section of sand. You will use the 6 ft. to 8 ft. 2"x6" to loosely spread the sand and to strike off any excess. **DO NOT** walk on or work from your screeded sand. Do not worry about voids that screed guides have left after you have removed them. You will lightly fill them with sand and trowel them smooth as you are laying the pavers.



## LAYING THE PAVERS

(Instructions for Small Areas Only)

Starting from a permanent edge such as a house, driveway, or even a piece of PAVE EDGE, lay your first paver starting from either side. (As you start laying Pavers, work from right to left, then left to right and so on, one row of pavers at a time.) Set the pavers lightly onto the sand, never press them or hammer them in. Be sure to allow 6" (15cm) to PAVE EDGE on the open sides later. If you are starting with PAVE EDGE as a starting point (see pave edge installation below), run a string line across the front of the laying edge about every 4 feet.

If there are some Pavers lagging behind, go about three rows of Pavers back and using a small pry bar, wedge between the Pavers and pry the Pavers forward until they are in line again.

Do not worry too much about gaps at this point, they will even out during tamping later. Many different laying patterns are possible, but herringbone provides the best surface interlock.

Set the pavers hand tight, but **DO NOT** use a hammer to adjust the pavers or set them. If you are doing the project over a couple of days, cover the entire area with plastic overnight if rain is expected. Do not lay Pavers over the 6" (15cm) extended base area where PAVE EDGE is to be set later.

## CUTTING THE PAVERS

You will need to cut pavers if you have to go around a post or come up against an existing structure or where a radius is desired.

You do not need to cut (except maybe 1/2" stones) on sides where PAVE EDGE is installed. Mark any stones to be cut with a crayon or chalk and allow for up to a 1/4" (6mm) gap between the stone and the edge. This will be filled with sand later. You should use either a diamond blade mason saw or a paver splitter.

## PAVE EDGE Installation

### A. BEFORE SAND SCREEDING

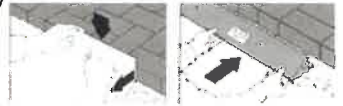
Snap chalkline on base material before you screed sand if you are going to start laying your pavers from a PAVE EDGE line first. Spike edging so that the chalk line remains visible. Spike every two feet with 10" (25cm) x 3/8" (9mm) diameter steel landscape spike. (Available through your paver supplier.)

PAVE EDGE not only holds the Pavers, but the sand as well.

### B. AFTER PAVERS HAVE BEEN LAID

Once you have completed the laying of pavers on the sand you may finish placing the PAVE EDGE spikes. First, using a trowel, cut straight down the side of the pavers into the sand down to the base and pull back the sand. Be careful not to scrape up the base material.

Placing the edging flat onto the base, push PAVE EDGE frost heave lip under the sand, using a hammer to tap against the back of the PAVE EDGE until the edging is tight to the pavers. Now, spike the edging approximately every two feet. Pound the spikes in until the head of the spike is touching the edging.



### C. USE PAVE EDGE RIGID FOR STRAIGHT AREAS

### D. USE PAVE EDGE FLEXIBLE FOR CURVED AREAS

### THE FINAL STEP

Assuming that you have now laid all your pavers, placed and spiked all your PAVE EDGE, you are ready for the last step.

**NOTE:** During this step the pavers will settle in about 1/4" lower during compaction (only if 1" loose screeded sand has been used). This should be their final height.

A. Sweep any debris or loose sand off of the Pavers.

B. Using a vibratory plate compactor, 3 HP to 5 HP, you should make at least two passes over the pavers. Starting around the perimeter and working inward, overlap each pass 2 to 4 inches. Make the second pass at a 45 degree angle to your first. The first pass of the compactor will accomplish the following:

- will level the Pavers
- compact the sand bedding
- force sand up into the joint

C. Repeat Step B if pavers are not yet level and flat.

D. Using a DRY medium or coarse washed sand for the joints, spread a thin layer of the jointing sand over the surface. Use a stiff bristle street broom and sweep back and forth over the entire pavement until sand has stopped filling into joints.

E. Now, alternating between compacting and sweeping, continue to work the material into the joint. If when you make a pass with the plate compactor and no more joints open up, you are then finished.

F. Sweep off all excess sand and backfill edges with top soil and sod or seed. (Be sure to water freshly seeded or sodded areas regularly).

Congratulations! YOU have now installed a maintenance free pavement for your patio or walkway. Yours to enjoy for a long time to come.