



## ***Large Format Paving Best Practices***

These are the general guidelines for all on-grade, **2-3/4 inch (7 cm)** slabs with a unit size of 16x16 or larger. Unit sizes larger than 101 square inches (0.65 square meters) but less than 16x16 should be installed as a typical small unit paver and not a slab.

For best results when installing large format pavers, there are three parts to be considered:

1. Pavement section
2. Setting method
3. Compaction

In addition to the design and construction best practices, internal quality control over slab heights need to be examined. This is especially critical for all paver shapes being installed over a bitumen setting bed as this is less forgiving than sand setting beds. Always notify the Production Manager in advance of manufacturing when pavers will be installed on bitumen.

**Part 1. Pavement Section** – there are five options that can be recommended for large format paving. Review each section with the project goals to reach a decision for the appropriate base and setting bed.

- a. **Good** – most cost effective solutions
  1. 1 inch sand setting bed on granular base
  2. 1-1/2 inch crushed, angular chip setting bed on granular base
- b. **Better** – offers more stability but with slight increase in cost
  1. 1 inch sand setting bed of concrete base
  2. 1-1/2 inch crushed, angular chip setting bed on concrete base
- c. **Best** – most expensive solution and most stable
  1. 1 inch bitumen on concrete base (no neoprene tack coat)

Note: A neoprene tack coat is not necessary to secure the pavers in place such as with a smaller unit paver shape. This is because large format pavers are not recommended for vehicular areas. The large format pavers will “set” into the bitumen enough to secure them in place. Additionally, the neoprene tack coat can become nuisance and messy for micro adjusting the large format pavers.

- d. **Specialty** – some projects over structures may require additional materials such as insulation, protection board and waterproof membrane. These items would occur under the setting bed instead of the granular or concrete base.

**Part 2. Setting Method** – while the method for which the large format pavers are installed is a function of the contractor’s installation procedures, these are the common and suggested methods.

- a. **Good** – two laborers in install by hand
  1. Works well for smaller jobs in tight spaces
  2. Can wear on labor for larger projects
- b. **Better** – “Back-Savers” clamp with two laborers to set into place
  1. Clamp is low maintenance, not motor or gasoline required
  2. Clamp adds additional weight to carry
  3. Clamp can limit how snug the paver can be set
  4. Bouncing or tipped the clamp can cause slab to be dislodged



Two person “Back-Savers” clamp

- c. **Best** – mechanical vacuum device
  1. Allows for vertical set direction in place and tightly abutted to adjacent slabs.
  2. Available in and for various types of equipment such as “back-savers”, cart, back loader, Probst machine or stand along boom
  3. Most expensive option
  4. Can limit use of equipment depending on space available
  5. Cannot drive machine vacuum devices over slabs

Note: Unilock should not recommend one method over another as there are too many different skill sets for labor. However, these suggested Good, Better and Best methods should increase productivity while reducing wear on labor.



Vacuum device attached to Probst mechanical installer

**Part 3. Compaction** – Care must be taken when compacting large format pavers to prevent surface and edge damage. All EnduraColor and EnduraColor Plus pavers, especially products with a zero-bevel edge, should never be compacted without using these protection devices.

- a. **Good** – small, walk behind compactor with up to 5,000 centrifugal force and urethane scuff pad attached
  1. Urethane pad provides minimal protection from surface scuffing
  2. Do not use plywood, carpet or other barriers between paver and compactor as this will reduce the necessary compaction



Provides minimal protection but damage may occur to edges or corners



- b. **Better** – attach a 4 inch “Surface Saver” roller to compactor
  - 1. Provides proper compact of slabs while protecting corners and edges
  - 2. Can be used for on small unit paver surfaces as well



Less chipping from compaction equipment with rollers

- c. **Best** – Bomag BRP Reversible Vibratory Compactor
  - 1. Provides best protection from damage to edges, corners and slab surface.
  - 2. Difficult to find local dealer



**Additional notes:**

- 1. Follow industry standards for pavers when placing and installing the sand or bitumen setting bed.
- 2. Joint sand is required for all applications.
- 3. Never slide or drag slabs across newly placed slabs or tip slabs over the edge of newly placed slabs to prevent surface and edge damage.
- 4. Always sweep loose debris from slab surface before running compactor.



General guidelines for all **2 inch (5 cm)** slabs larger than 16x16 are similar to above with the following suggestions and modifications:

**Part 1. Pavement Section** – only install 2 inch slabs on bitumen setting bed

Note: Two inch thick slabs are designed for pedestal systems and do not have spacer tabs attached to the product. When used for an on-grade application, temporary spacers are required until the joint material is placed.

1. Utilize a neoprene tack coat to secure the 2 inch slabs and reduce rocking and slippage.

**Part 2. Setting Method** – the same methods for installing the 2-3/4 inch slabs can be used with the 2 inch slabs

**Part 3. Compaction** – because the only installation recommended for on-grade application is bitumen set, compaction with any equipment is not recommended