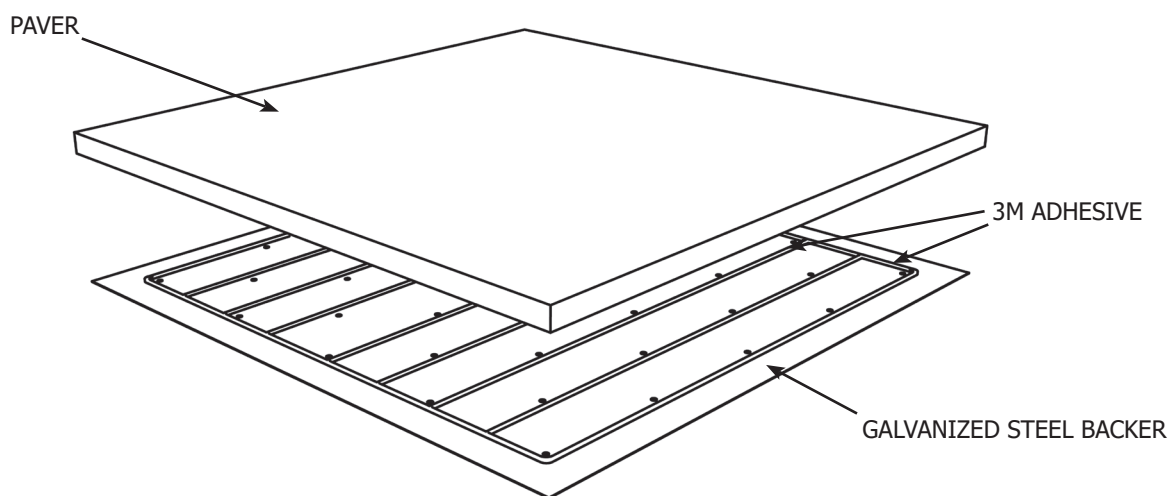




# Bison Paver Backer Assembly & Installation Guide

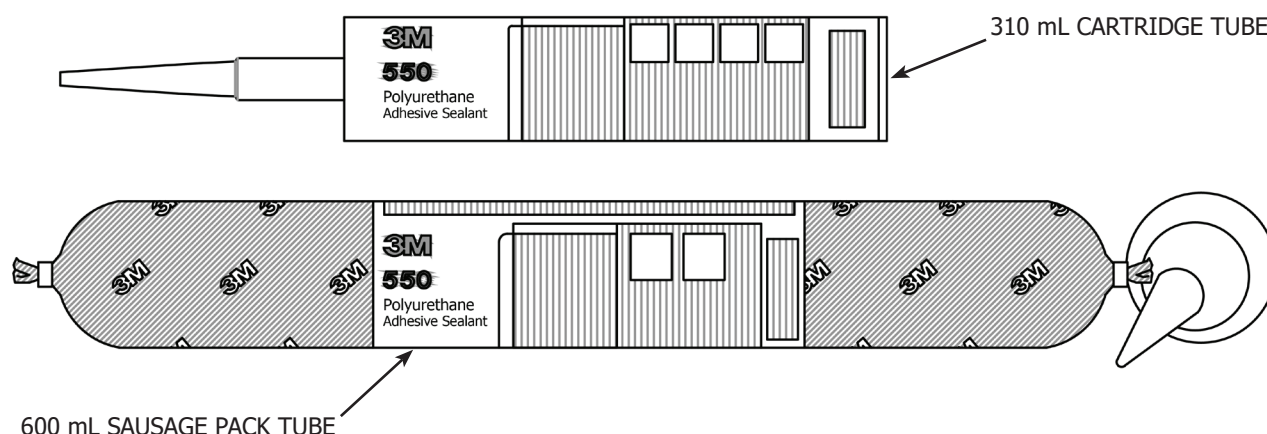
Designed for use with Bison Pedestals, the Bison Paver Backer offers a simple and lightweight paver backing to enhance the impact resilience and provide additional support to paver surface materials for outdoor areas. Adhere the Bison Paver Backer to the desired surface pavers on site before installation.

The Bison Paver Backer is recommended for use with Bison Pedestals ranging from 1/8" to 36" in height. The standard 593 x 593 mm Bison Paver Backer is compatible with square pavers measuring 593-601 mm x 593-601 mm. NOTE: The Bison Paver Backer does not provide wind uplift resistance.



## Paver Backer Adhesive

Bison will provide adequate 3M adhesive based on the quantity of Paver Backers ordered. Subject to 3M adhesive availability, the tubes will either be provided as 310mL cartridges or 600mL sausage packs, as shown below. Make sure to use the appropriate corresponding applicator as they may differ from cartridge to sausage pack. NOTE: Store adhesive in a cool dry place between 40°F and 75°F (4°C and 24°C).



## Adhesive Tube Quantities

Use the table below to determine how many Paver Backers each tube size should accommodate.

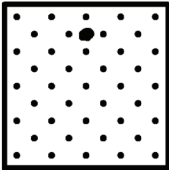
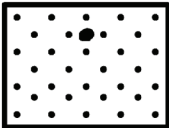
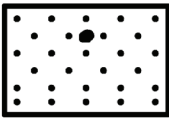
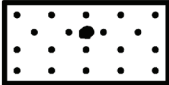
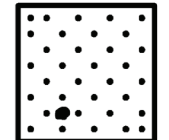
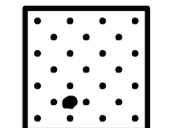
PAVER BACKER MODEL (SIZE*)	FITS 2CM PAVER SIZES	BACKERS PER 310 mL TUBE**	BACKERS PER 600 mL TUBE**
PT-BACKER-2424 (24"x24")	593-601mm x 593-601mm	6	12
PT-BACKER-2418 (24"x18")	593-601mm x 445-453mm	8	16
PT-BACKER-2416 (24"x16")	593-601mm x 395-403mm	9	18
PT-BACKER-2412 (24"x12")	593-601mm x 295-303mm	11	22
PT-BACKER-2020 (20"x20")	495-503mm x 495-503mm	8	16
PT-BACKER-1818 (18"x18")	445-453mm x 445-453mm	10	20

\*Paver Backer sizing is nominal.

\*\*These figures are approximate, based on the recommended 1/8" DIA. bead of adhesive.

## Standard Paver Backer Sizes

Confirm your paver sizes in metric units (mm) prior to purchasing Paver Backers. Paver Backers can be combined to accommodate larger format pavers.

PT-BACKER	MODEL NAME	DIMENSIONS	FITS 2CM PAVER SIZES	WEIGHT w/ ADHESIVE*
	PT-BACKER-2424	23.35" x 23.35" x 0.02" (593 x 593 x 0.6mm)	593 - 601mm x 593 - 601mm	3.05 lbs (1.38 kg)
	PT-BACKER-2418	23.35" x 17.52" x 0.02" (593 x 445 x 0.6mm)	593 - 601mm x 445 - 453mm	2.28 lbs (1.03 kg)
	PT-BACKER-2416	23.35" x 15.55" x 0.02" (593 x 395 x 0.6mm)	593 - 601mm x 395 - 403mm	2.02 lbs (0.92 kg)
	PT-BACKER-2412	23.35" x 11.61" x 0.02" (593 x 295 x 0.6mm)	593 - 601mm x 295 - 303mm	1.51 lbs (0.68 kg)
	PT-BACKER-2020 (SPECIAL ORDER)	19.49" x 19.49" x 0.02" (495 x 495 x 0.6mm)	495 - 503mm x 495 - 503mm	2.12 lbs (0.96 kg)
	PT-BACKER-1818 (SPECIAL ORDER)	17.52" x 17.52" x 0.02" (445 x 445 x 0.6mm)	445 - 453mm x 445 - 453mm	1.71 lbs (0.78 kg)

\*These figures represent a maximum weight, based on the recommended 1/8" DIA. bead of adhesive.

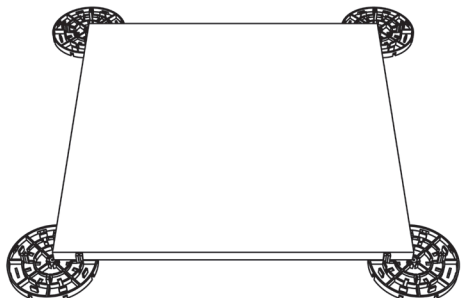
## Adhering a 2cm Paver to the Paver Backer

During assembly, limit exposure to standing moisture, direct sunlight, and temperatures outside of 40°F to 100°F (5°C to 37°C).

CAUTION: Use gloves when handling Paver Backers.

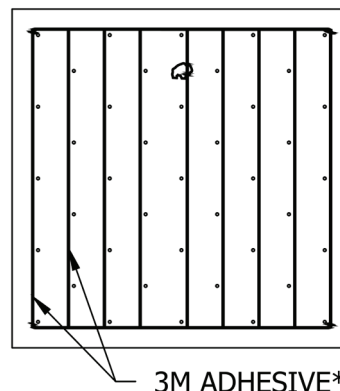
### 1.) Paver Placement

Place paver finish face down over four (4x) pedestals as shown. Pull pavers from different boxes and/or pallets in order to achieve an even color distribution.



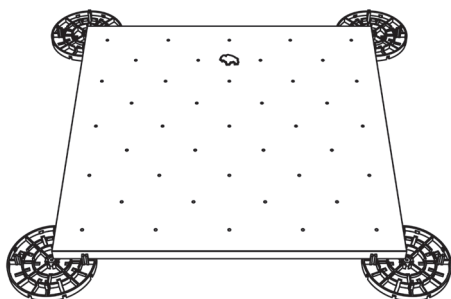
### 2.) 3M Adhesive

Run a 1/8" DIA. bead of provided 3M adhesive, offset 1/4" from the holes as shown in the pattern below. \*IMPORTANT: For proper adhesion and performance, adhesive must be applied exactly as shown. To prevent moisture from entering between paver and backer, a continuous perimeter bead of adhesive must be applied along the edge of the backer.



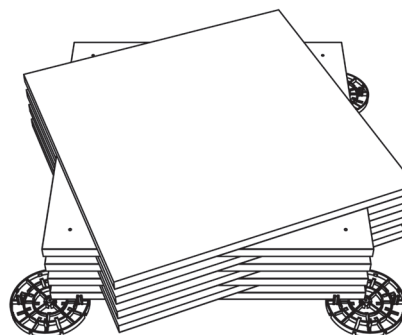
### 3.) Paver Backer Placement

Place the adhesive side of the backer squarely onto the paver, carefully aligning by hand to make sure that the backer does not extend beyond any edge of the paver. Apply pressure to the backer, and wipe away any excess adhesive that may have seeped through the holes or beyond the edge of the backer.



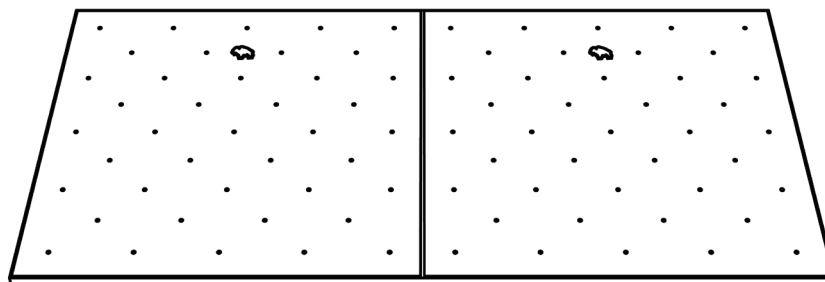
### 4.) Assembly Stacking

Repeating the first three steps, gently stack pavers backer to backer in pairs, rotating as shown. Stack no more than ten (10x) pavers high, and let them sit for 2 to 4 hours, or until the adhesive has cured, before handling.



## Paver Backer Combinations

Bison Paver Backers can be used in combination to accommodate larger format 2cm pavers. When using multiple backers below a paver, assembly is required before installation. During installation, in order to maintain adequate support in case of breakage, a pedestal must be placed at each corner of every backer. Many combinations are possible. The chart on the next page provides information for the most common paver backer combinations.



## Paver Backer Combinations (continued)

2CM PAVER SIZE*	PT-BACKER COMBINATIONS	FITS PAVER SIZES (mm)	BACKER WEIGHT w/ ADHESIVE**
36" x 18"	(2x) PT-BACKER-1818	890-906mm x 445-453mm	3.42 lbs (1.55 kg)
36" x 24"	(2x) PT-BACKER-2418	890-906mm x 593-601mm	4.56 lbs (2.07 kg)
36" x 36"	(4x) PT-BACKER-1818	890-906mm x 890-906mm	6.84 lbs (3.10 kg)
40" x 20"	(2x) PT-BACKER-2020	990-1006mm x 495-503mm	4.24 lbs (1.92 kg)
48" x 12"	(2x) PT-BACKER-2412	1186-1202mm x 295-303mm	3.02 lbs (1.37 kg)
48" x 16"	(2x) PT-BACKER-2416	1186-1202mm x 395-403mm	4.04 lbs (1.83 kg)
48" x 18"	(2x) PT-BACKER-2418	1186-1202mm x 445-453mm	4.56 lbs (2.07 kg)
48" x 24"	(2x) PT-BACKER-2424	1186-1202mm x 593-601mm	6.10 lbs (2.77 kg)
48" x 48"	(4x) PT-BACKER-2424	1186-1202mm x 1186-1202mm	12.20 lbs (5.53 kg)

\*Paver sizing is nominal.

\*\*These figures represent a maximum PT-BACKER combination weight, based on the recommended 1/8" DIA. bead of adhesive.

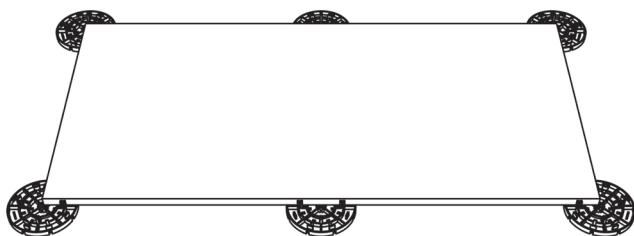
## Adhering Multiple Paver Backers to the Underside of Large Format 2cm Pavers

During assembly, limit exposure to standing moisture, direct sunlight, and temperatures outside of 40°F to 100°F (5°C to 37°C).

CAUTION: Use gloves when handling paver backers.

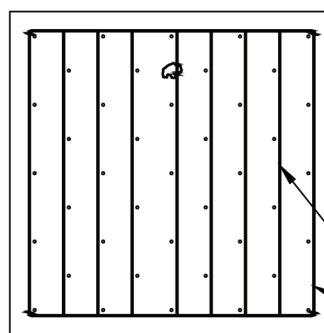
### 1.) Paver Placement

Place paver finish face down over pedestals as shown. Pull pavers from different boxes and/or pallets in order to achieve an even color distribution.



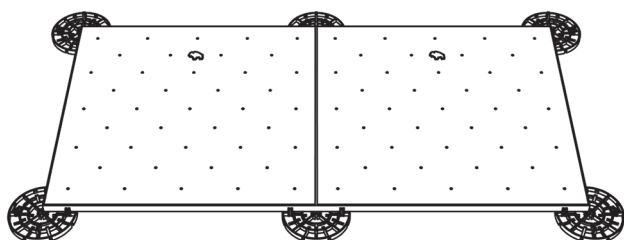
### 2.) 3M Adhesive

Run a 1/8" DIA. bead of provided 3M adhesive, offset 1/4" from the holes as shown in the pattern below. \*IMPORTANT: For proper adhesion and performance, adhesive must be applied exactly as shown. To prevent moisture from entering between paver and backer, a continuous perimeter bead of adhesive must be applied along the edge of the backer.



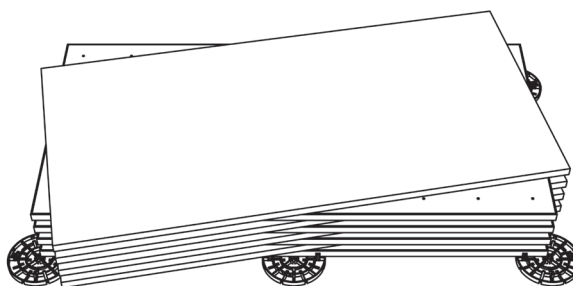
### 3.) Paver Backer Placement

Place the adhesive side of the backers squarely onto the paver, carefully aligning by hand to make sure that the backers does not extend beyond any edge of the paver. Apply pressure to the backers, and wipe away any excess adhesive that may have seeped through the holes or beyond the edge of the backers.



### 4.) Assembly Stacking

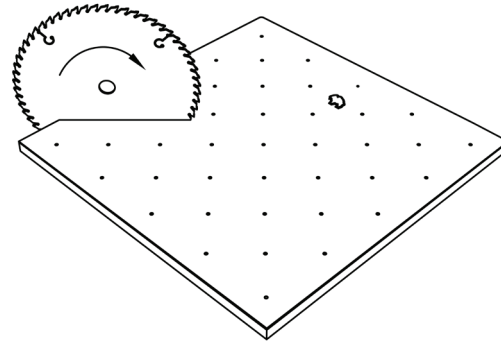
Repeating the first three steps, gently stack pavers backer to backer in pairs, rotating as shown. Stack no more than ten (10x) pavers high, and let them sit for 2 to 4 hours, or until the adhesive has cured, before handling.



## Cutting Paver Backers & 2cm Pavers

Bison Paver Backers and 2cm Pavers may be cut pre- or post-assembly. It is important to select the appropriate tools and blades before cutting the backer and paver materials.

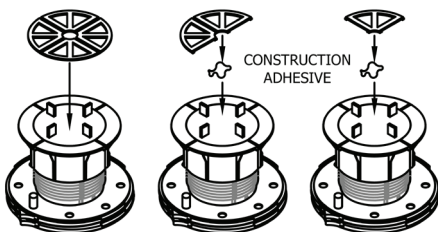
- For extended lifespan of the cutting blade, consider using a diamond etched porcelain/ceramic blade for cutting 2CM Pavers. When cutting Paver Backers, use either a jigsaw or a steel cutting abrasive wheel. If cutting the tray before adhering, a sheet metal shear may be used.
- If cuts are to be radial or curved, score the 2cm Paver along the desired cut line, and then cut through with a smaller diameter circular blade. Scoring the paver (by itself or adhered to the Paver Backer) before cutting helps to prevent fracturing. Consider creating incremental relief cuts up to the score line if the curve causes too much stress for the blade.
- If cutting the paver **BEFORE ADHERING** to the backer:
  - Measure and cut the paver along the desired cut line.
  - Place the cut paver atop the backer, aligning finish paver sides with the finish sides of the backer. Trace your cut line onto the backer, and then proceed to cut the backer by itself.
  - Once cut to desired shape and size, use a metal file or angle grinder to smooth any sharp edges or burrs created along the cut line. CAUTION: Do not run your fingers along the cut line or any visible burrs.
  - IMPORTANT: Follow Bison's recommended assembly instructions to adhere the cut backer to the cut paver including the adhesive perimeter seal between backer and paver. Remove any surface debris, and if using a wet cutting technique, dry materials prior to applying adhesive.
- If cutting the paver and backer **AFTER ADHERING**:
  - Measure and cut the backer assembly along the desired cut line.
  - Once cut to desired shape and size, use a metal file or angle grinder to smooth any sharp edges or burrs created along the cut line. CAUTION: Do not run your fingers along the cut line or any visible burrs.
  - Use a small amount of cleaner to remove any adhesive from the paver or saw blade, if needed. Wash with a clean rag and mild soap to remove any slippery residue.
  - IMPORTANT: It is necessary to apply a bead of the provided adhesive along any cut edges to maintain a continuous perimeter seal between the backer and paver. Remove any surface debris, and if using a wet cutting technique, dry materials prior to applying adhesive.
- Paint cut edges of the backer with a primer or cold galvanizing spray to re-administer galvanizing layer removed by cutting (exposure to heat, grinding, and/or water) to prevent rusting damage.



## Working with Shims

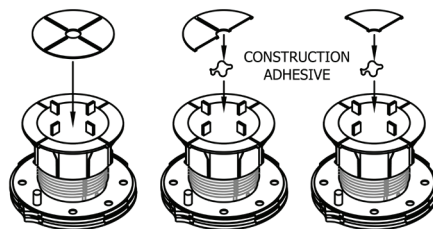
### PS1 - 1/8" Shims - Rigid

PS1s may be placed on top of pedestals to accommodate for minor leveling of pavers with thickness variations. Use no more than 2 shims. If using only a partial segment, adhere it to the pedestal with construction adhesive.



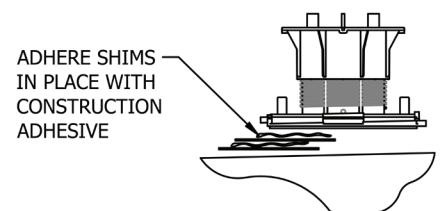
### B11 - 1/16" Shims - Flexible

B11s may be placed on top of pedestals to accommodate for minor leveling of pavers with thickness variations. Use no more than 2 shims. If using only a partial segment, adhere it to the pedestal with construction adhesive.



### PS1 and B11 Shims Under Pedestals

Place shims (whole or in segments) under the pedestal in a stairstep fashion to compensate for sloping substrates. Use no more than 2 shims. Adhere them to each other and to the pedestal with construction adhesive. IMPORTANT: Do not adhere to substrate.



## Maintenance Recommendations

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Routine maintenance of your paver deck system will enhance the beauty, reduce major repairs, and prolong the life of your deck. Below is a list of maintenance guidelines that should be performed on a regular basis:

1. Check for pavers that rock. If you notice pavers rocking back and forth while walking on the deck, simply lift the paver up and shim one or more corners until the paver is level on all four corners. Bison 1/16" (1.6 mm) B11 Shims or 1/8" (3.2 mm) PS1 Shims can be used for this purpose.
2. Depending on substrate materials, some settling may occur. Remove the paver and adjust the pedestal until a level height is achieved. You may need to do this to more than one pedestal to level out an area.
3. Clean drains and scuppers on a regular basis. Water should completely drain off the roof deck within 48 hours after rainfall under ambient drying conditions. Standing or pooling water can be detrimental to some waterproofing systems.
4. Periodically check the spacer tabs between pavers, and replace broken spacer tabs immediately. Loss of spacer tabs could create unsafe deck movement.
5. There should be no more than a 3/16" (4.5 mm) gap between pavers or at any perimeter edge, and the deck should not exhibit any lateral movement which could create an unsafe condition.
6. Follow the paver manufacturer's suggestions for upkeep and maintenance of the pavers.
7. Retain extra Bison Paver Backers and pavers in a convenient location for future replacements.

## Important

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The Bison Paver Backer was designed to provide a simple and lightweight paver backing to enhance the impact resilience and provide additional support to 2cm porcelain paver surface materials for outdoor areas. **IMPORTANT:** Wind Uplift Systems must be installed precisely according to separate Wind Uplift Engineering documents not included herein. The Bison Paver Backer is not compatible with fastening kits, and therefore does not provide wind uplift protection.

The Bison Paver Backer will not prevent any surface material from cracking, chipping, or breaking. When using Bison Paver Backers with customer supplied surface materials, including but not limited to concrete, stone, porcelain, and/or ceramic pavers not sold by Bison, the customer must independently verify surface material product strength, span rating, weight bearing capacity, material compatibility, and suitability for the intended use.

The Bison Paver Backer is made of G90 galvanized steel which provides resistance to but will not completely prevent corrosion. Any cut edges should be sealed with primer or cold galvanizing spray to readminister the galvanizing layer. Bison Paver Backers should NOT be installed fully submerged in any type of water. Accelerated corrosion can occur when Bison Paver Backers are used in tidal areas or in direct contact with highly chlorinated or salt water which reduces the normal lifespan of the product.

In the event of surface material cracks, chips, or breaks, the Bison Paver Backer is designed to help prevent an individual from falling through the paver surface to the subsurface below. The Bison Paver Backer is intended to support the surface material after absorbing impact for a limited time. **IMPORTANT:** To avoid further damage or injury, the customer must replace any cracked, chipped, or broken surface materials and the accompanying Bison Paver Backer immediately. The Bison Paver Backer is not intended to be a reusable product, and must be replaced with the surface paver.