



## Porcelain Pavers Installation Guide





# TABLE of CONTENTS

## PRODUCT OPTIONS

- Ardesie .....4
- Esprit .....5
- Lab\_21 .....6
- Mashup .....7
- Na.Me .....8
- Nau\_2.0 .....9
- Norr ..... 10
- Officine ..... 11
- Quarziti\_2.0 ..... 12
- Signature ..... 13
- Stones\_2.0 ..... 14
- Sundeck ..... 15
- Tribeca ..... 16

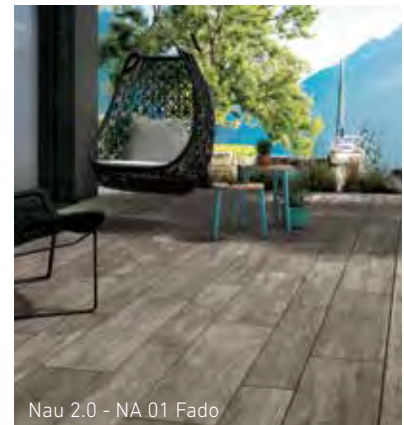
## INTRODUCTION ..... 17

## INSTALLATION OPTIONS

- Sand Set Over Compacted Road Base  
Installation (Pedestrian Foot Traffic) ..... 28
- Sand Set Over Concrete Overlay  
Installation (Pedestrian Foot Traffic) ..... 29
- Cementitious Adhesive Overlay, Concrete  
Base Installation (Light Vehicle Traffic)..... 30
- Permeable Over Open Graded Aggregate  
Installation (Pedestrian Foot Traffic) ..... 31
- Stepping Stone Sand Set on Compacted Road  
Base Installation (Pedestrian Foot Traffic)..... 32
- 3/4" Fixed Pedestal Installation on Concrete  
Floor (Pedestrian Foot Traffic)..... 33
- Installation with EZ Base Panels ..... 34
- e\_deck: Pedestal System for Decking  
Installation, On Concrete Floor..... 36



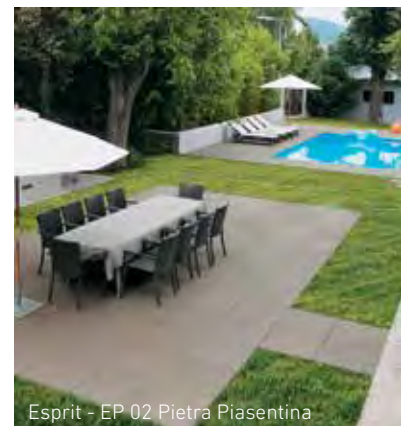
Stones 2.0 - SO 05 Chambrod



Nau 2.0 - NA 01 Fado



Stones 2.0 - SO 11 Pierre Bleue Sablée



Esprit - EP 02 Pietra Piasentina

\*Cover image is Ardesie - AD 03 African Stone





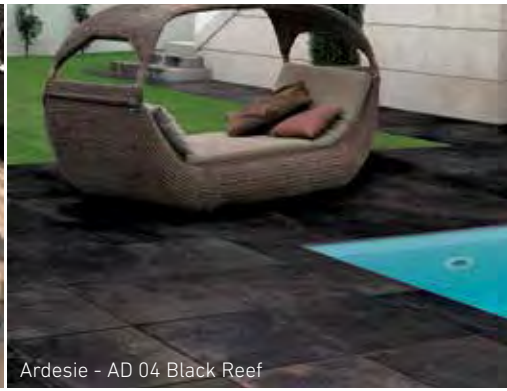
# PRODUCT OPTIONS



# Ardesie



Ardesie - AD 03 African Stone



Ardesie - AD 04 Black Reef

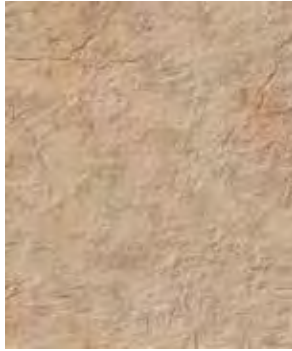


Ardesie - AD 03 African Stone

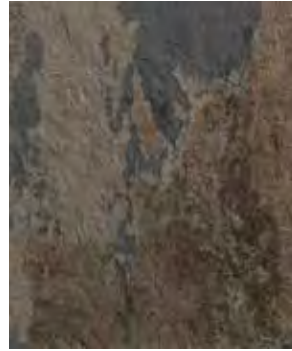
## Available Colors



Shore  
AD 01 NAT



Island  
AD 02 NAT



African Stone  
AD 03 NAT



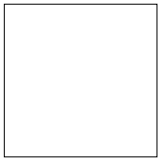
Black Reef  
AD 04 NAT



Vulcan  
AD 05 NAT

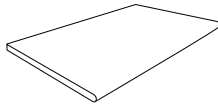


## Shapes & Sizes



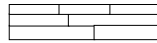
60x60x2 cm  
23.54"x23.54"x<sup>3</sup>/<sub>4</sub>"  
NAT

### UNICO



33x60x2 cm  
12.99"x23.54"x<sup>3</sup>/<sub>4</sub>"  
NAT

### RIFT



10,5x45 cm  
4<sup>1</sup>/<sub>5</sub>"x18"  
NAT

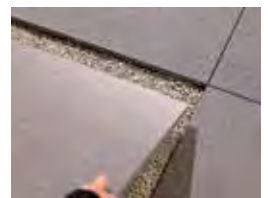
	60x60x2 cm 23.54"x23.54"x <sup>3</sup> / <sub>4</sub> "	UNICO	RIFT
Gross weight per box	33.00 kg / 73 lbs	27.00 kg / 60 lbs	14.70 kg / 33 lbs
Pieces / Box	2	3	14
Sq ft / box	7.75	—	—
Boxes / full pallet	30	—	—
Sq ft / pallet	232.5	—	—
Pallet gross weight	1034 kg / 2280 lbs	—	—

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface

# Esprit



Esprit - EP 03 Lagos Grey



Esprit - EP 02 Pietra Piasentina



Esprit - EP 01 Crema Delicato

## Available Colors



Crema Delicato  
EP 01 ST



Pietra Piasentina  
EP 02 ST



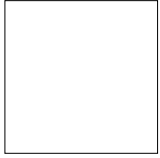
Lagos Grey  
EP 03 ST



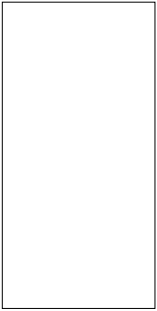
Crema Luna  
EP 04 ST



## Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x<sup>3</sup>/<sub>4</sub>"  
ST



60x120x2 cm  
23.54"x47.17"x<sup>3</sup>/<sub>4</sub>"  
ST

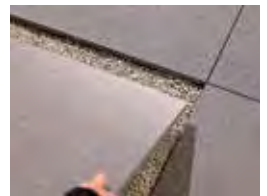
	60x60x2 cm 23.54"x23.54"x <sup>3</sup> / <sub>4</sub> "	60x120x2 cm 23.54"x47.17"x <sup>3</sup> / <sub>4</sub> "
Gross weight per box	33.00 kg / 73 lbs	33.40 kg / 74 lbs
Pieces / Box	2	1
Sq ft / box	7.75	7.75
Boxes / full pallet	30	20
Sq ft / pallet	232.5	155
Pallet gross weight	1034 kg / 2280 lbs	669 kg / 1475 lbs

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface





LAB 21 - LB 04 Lab\_mou

Available Colors



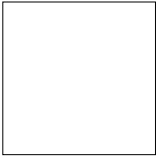
Lab\_mou  
LB 04 ST



Lab\_fog  
LB 07 ST



Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x3/4"  
ST

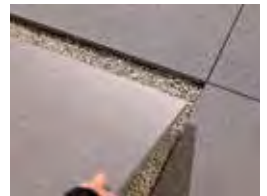
	60x60x2 cm 23.54"x23.54"x3/4"
Gross weight per box	33.00 kg / 73 lbs
Pieces / Box	2
Sq ft / box	7.75
Boxes / full pallet	30
Sq ft / pallet	232.5
Pallet gross weight	1034 kg / 2280 lbs

Laying Systems

INSTALLATION  
SAND SET OVER  
COMPACTED BASE



INSTALLATION  
ON PERMEABLE  
AGGREGATE BASE



MORTAR BED  
ADHESIVE  
INSTALLATION



FIXED PEDESTAL  
INSTALLATION ON  
CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface



# Mashup



Mashup - MP 03 Block

Mashup - MP 03 Block

Mashup - MP 03 Block

## Available Colors



Acid  
OF o1 ST

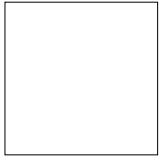
Romantic  
OF o2 ST

Dark  
OF o3 ST

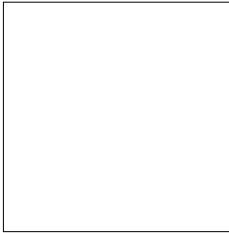
Gothic  
OF o4 ST



## Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x<sup>3</sup>/<sub>4</sub>"  
ST



90x90x2 cm  
35.35"x35.35"x<sup>3</sup>/<sub>4</sub>"  
ST

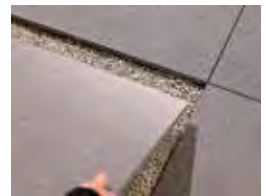
	60x60x2 cm 23.54x23.54"x <sup>3</sup> / <sub>4</sub> "	90x90x2 cm 35.35"x35.35"x <sup>3</sup> / <sub>4</sub> "
Gross weight per box	33.00 kg / 73 lbs	36 kg / 80 lbs
Pieces / Box	2	1
Sq ft / box	7.75	8.7
Boxes / full pallet	30	18
Sq ft / pallet	232.5	156.6
Pallet gross weight	1034 kg / 2280 lbs	656 kg / 1446 lbs

## Laying Systems

**INSTALLATION  
SAND SET OVER  
COMPACTED BASE**



**INSTALLATION  
ON PERMEABLE  
AGGREGATE BASE**



**MORTAR BED  
ADHESIVE  
INSTALLATION**



**PEDESTAL  
INSTALLATION ON  
CONCRETE FLOOR**



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface

# Na.Me



Na.Me - NE 10 Jura Beige

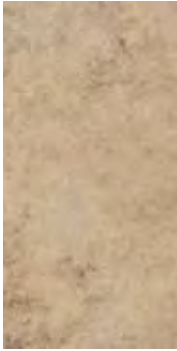


Na.Me - NE 30 Noir Belge



Na.Me - NE 20 Swiss Grey

## Available Colors



Jura Beige  
NE 10 ST



Bourgogne  
NE 12 ST



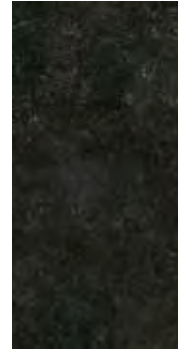
Ocean Grey  
NE 13 ST



Swiss Grey  
NE 20 ST



Lumnezia  
NE 21 ST



Noir Belge  
NE 30 ST



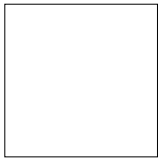
Gris Belge  
NE 31 ST



Noisette Belge  
NE 32 ST



## Shapes & Sizes



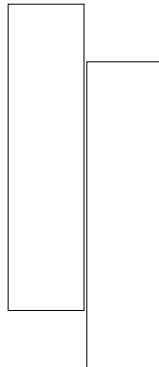
60x60x2 cm  
23.54"x23.54"x3/4"  
RD



45x90x2 cm  
17.64"x35.35"x3/4"  
ST



60x120x2 cm  
23.54"x47.17"x3/4"  
ST



30x120x2 cm  
11.73"x47.17"x3/4"  
RD

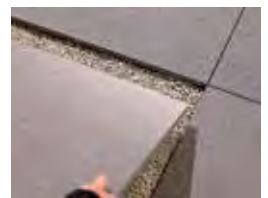
	60x120x2 cm 23.54"x47.17"x3/4"	60x60x2 cm 23.54"x23.54"x3/4"	45x90x2 cm 17.64"x35.35"x3/4"	30x120x2 cm 11.73"x47.17"x3/4"
Gross weight per box	34 kg / 74 lbs	33.00 kg / 73 lbs	37.00 kg / 81 lbs	33.00 kg / 73 lbs
Pieces / Box	1	2	2	2
Sq ft / box	7.75	7.75	8.7	7.75
Boxes / full pallet	20	30	27	20
Sq ft / pallet	155	232.5	234.9	155
Pallet gross weight	669 kg / 1475 lbs	1034 kg / 2280 lbs	997 kg / 2198 lbs	662 kg / 1460 lbs

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



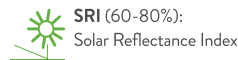
### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



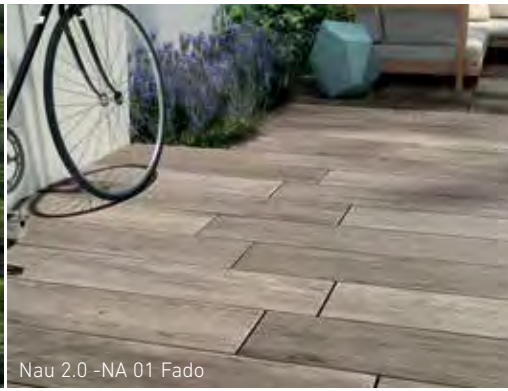
- NAT  
Natural surface
- STA  
Aged structure
- PL  
Piallata surface
- RD  
Radiale surface
- ST  
Structured surface



# Nau 2.0



Nau 2.0 -NA 02 Indie



Nau 2.0 -NA 01 Fado



Nau 2.0 -NA 02 Indie

## Available Colors



Fado  
NA 01 RD



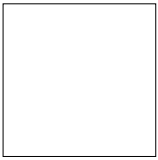
Indie  
NA 02 RD



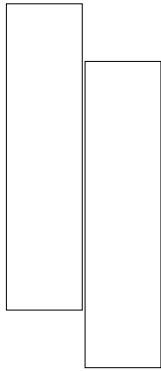
Zen  
NA 04 RD



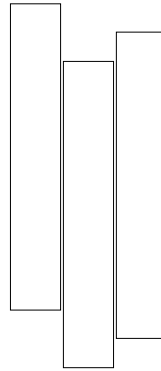
## Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x3/4"  
RD



30x120x2 cm  
11.73"x47.17"x3/4"  
RD



20x120x2 cm  
7.80"x47.17"x3/4"  
RD

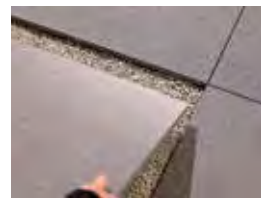
	60x60x2 cm 23.54"x23.54"x3/4"	30x120x2 cm 11.73"x47.17"x3/4"	20x120x2 cm 7.80"x47.17"x3/4"
Gross weight per box	33.00 kg / 73 lbs	33.00 kg / 73 lbs	21 kg / 46 lbs
Pieces / Box	2	2	2
Sq ft / box	7.75	7.75	5.1
Boxes / full pallet	30	20	30
Sq ft / pallet	232.5	155	151.8
Pallet gross weight	1034 kg / 2280 lbs	662 kg / 1460 lbs	626 kg / 1380 lbs

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

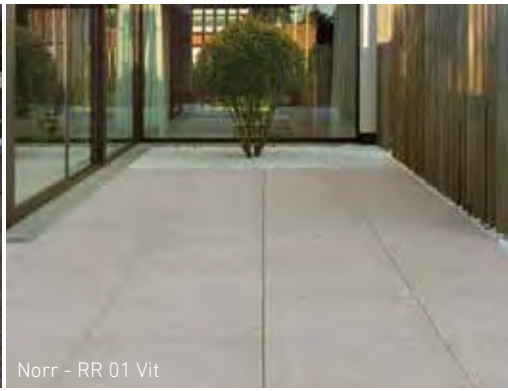
RD  
Radiale surface

ST  
Structured surface

# Norr



Norr - RR 03 Svart



Norr - RR 01 Vit



Norr - RR 02 Grå

## Available Colors



Vit  
RR 01 ST / STA



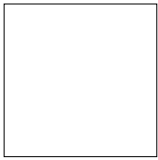
Grå  
RR 02 ST / STA



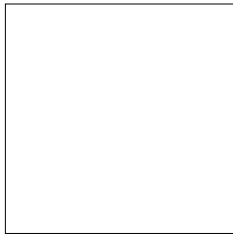
Svart  
RR 03 ST / STA



## Shapes & Sizes

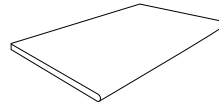


60x60x2 cm  
23.54"x23.54"x3/4"  
ST



90x90x2 cm  
35.35"x35.35"x3/4"  
ST

### UNICO



33x60x2 cm  
12.99"x23.54"x3/4"  
ST

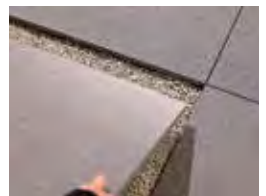
	60x60x2 cm 23.54"x23.54"x3/4"	90x90x2 cm 35.35"x35.35"x3/4"	UNICO
Gross weight per box	33.00 kg / 73 lbs	36 kg / 80 lbs	27.00 kg / 60 lbs
Pieces / Box	2	1	3
Sq ft / box	7.75	8.7	—
Boxes / full pallet	30	18	—
Sq ft / pallet	232.5	156.6	—
Pallet gross weight	1034 kg / 2280 lbs	656 kg / 1446 lbs	—

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### PEDESTAL INSTALLATION ON CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface



# Officine

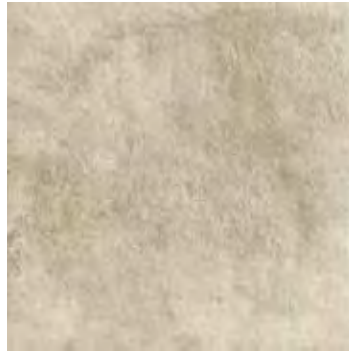
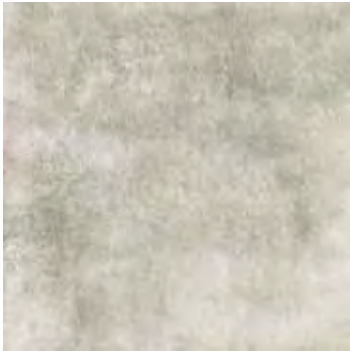


Officine - OF 02 Romantic



Officine - OF 03 Dark

## Available Colors



Acid  
OF 01 ST

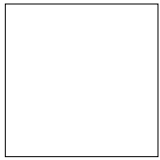
Romantic  
OF 02 ST

Dark  
OF 03 ST

Gothic  
OF 04 ST



## Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x3/4"  
ST

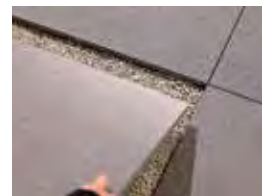
	60x60x2 cm 23.54"x23.54"x3/4"
Gross weight per box	32.90 kg / 73 lbs
Pieces / Box	2
Sq ft / box	7.75
Boxes / full pallet	30
Sq ft / pallet	232.5
Pallet gross weight	987 kg / 2176 lbs

## Laying Systems

INSTALLATION  
SAND SET OVER  
COMPACTED BASE



INSTALLATION  
ON PERMEABLE  
AGGREGATE BASE



MORTAR BED  
ADHESIVE  
INSTALLATION



PEDESTAL  
INSTALLATION ON  
CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

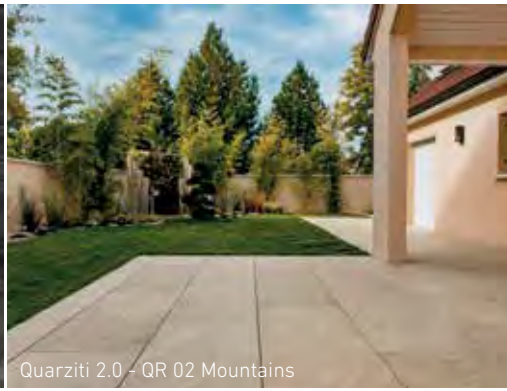
RD  
Radiale surface

ST  
Structured surface

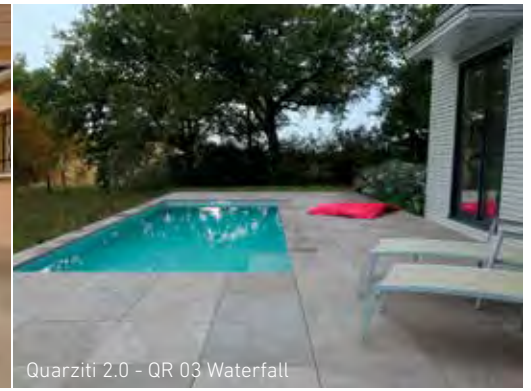
# Quarziti 2.0



Quarziti 2.0 - QR 03 / QR 04



Quarziti 2.0 - QR 02 Mountains



Quarziti 2.0 - QR 03 Waterfall

## Available Colors



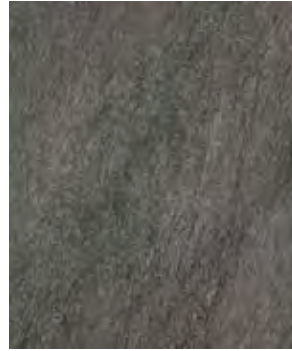
Glacier  
QR 01 NAT



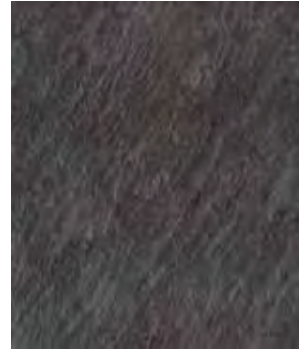
Mountains  
QR 02 NAT



Waterfall  
QR 03 NAT



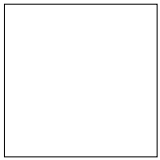
River  
QR 04 NAT



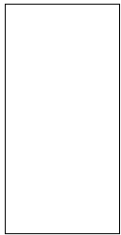
Mantle  
QR 05 NAT



## Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x3/4"  
ST

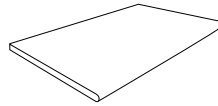


45x90x2 cm  
17.64"x35.35"x3/4"  
ST



60x120x2 cm  
23.54"x47.17"x3/4"  
ST

### UNICO



33x60x2 cm  
12.99"x23.54"x3/4"  
ST

### RIFT



10,5x45 cm  
4 1/5"x18"  
NAT

### MODULAR



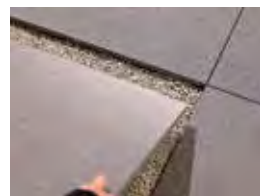
60x90x2 cm + 30x60x2 cm  
23.54"x35.35"x3/4" + 11.73"x23.54"x3/4"  
ST (QR 02 - QR 03 - QR 05)

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



	60x60x2 cm 23.54"x23.54"x3/4"	45x90x2 cm 17.64"x35.35"x3/4"	60x120x2 cm 23.54"x47.17"x3/4"	UNICO	MODULAR	RIFT
Gross weight per box	33.00 kg / 73 lbs	37.00 kg / 81 lbs	33.40 kg / 74 lbs	27.00 kg / 60 lbs	33.40 kg / 74 lbs	14.70 kg / 33 lbs
Pieces / Box	2	2	1	3	2	14
Sq ft / box	7.75	8.7	7.75	-	7.75	-
Boxes / full pallet	30	27	20	-	20	-
Sq ft / pallet	232.5	234.9	155	-	155.0	-
Pallet gross weight	1034 kg / 2280 lbs	999 kg / 2198 lbs	669 kg / 1475 lbs	-	668 kg / 1473 lbs	-



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

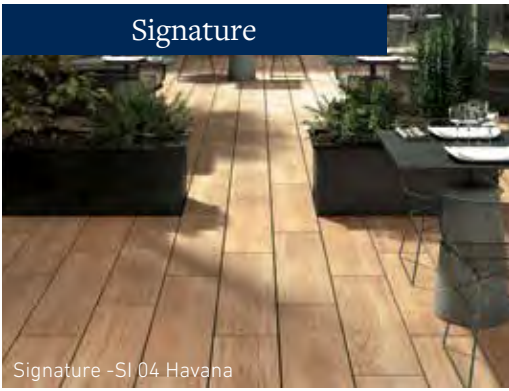
PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface



# Signature



Signature -SI 04 Havana



Signature -SI 05 Dakota



Signature -SI 02 Indie

## Available Colors



Artico  
SI 01 RD



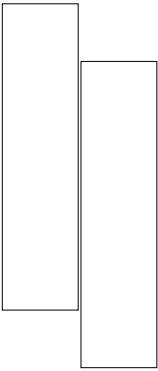
Havana  
SI 04 RD



Dakota  
SI 05 RD



## Shapes & Sizes



30x120x2 cm  
11.73"x47.17"x3/4"  
RD

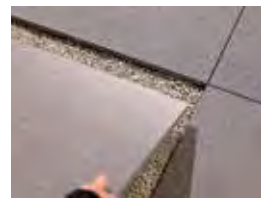
	30x120x2 cm 11.73"x47.17"x3/4"
Gross weight per box	33.00 kg / 73 lbs
Pieces / Box	2
Sq ft / box	7.75
Boxes / full pallet	20
Sq ft / pallet	155
Pallet gross weight	662 kg / 1460 lbs

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

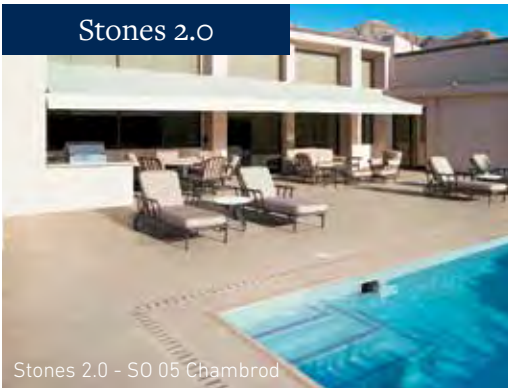
STA  
Aged structure

PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface

## Stones 2.0



Stones 2.0 - SO 05 Chambrod



Stones 2.0 - SO 11 Pierre Bleue Sablée



Stones 2.0 - SO 11 Pierre Bleue Sablée

### Available Colors



Chambrod  
SO 05 ST



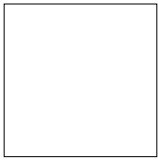
Pierre Bleue  
SO 10 ST



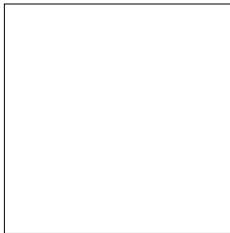
Pierre Bleue Sablée  
SO 11 ST



### Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x3/4"  
ST

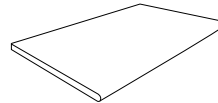


90x90x2 cm  
35.5"x35.5"x3/4"  
ST



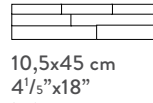
60x120x2 cm  
23.54"x47.17"x3/4"  
ST

#### UNICO



33x60x2 cm  
12.99"x23.54"x3/4"  
ST

#### RIFT



10,5x45 cm  
4 1/8"x18"  
NAT

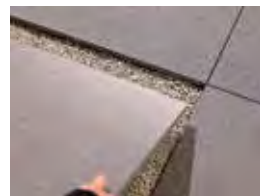
	60x60x2 cm 23.54"x23.54"x3/4"	90x90x2 cm 35.5"x35.5"x3/4"	60x120x2 cm 23.54"x47.17"x3/4"	UNICO	RIFT
Gross weight per box	33.00 kg / 73 lbs	36 kg / 80 lbs	34 kg / 74 lbs	27.00 kg / 60 lbs	14.70 kg / 33 lbs
Pieces / Box	2	1	1	3	14
Sq ft / box	7.75	8.7	7.75	—	—
Boxes / full pallet	30	18	20	—	—
Sq ft / pallet	232.5	156.6	155	—	—
Pallet gross weight	1030 kg / 2280 lbs	656 kg / 1446 lbs	669 kg / 1475 lbs	—	—

### Laying Systems

#### INSTALLATION SAND SET OVER COMPACTED BASE



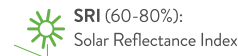
#### INSTALLATION ON PERMEABLE AGGREGATE BASE



#### MORTAR BED ADHESIVE INSTALLATION



#### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



NAT  
Natural surface

STA  
Aged structure

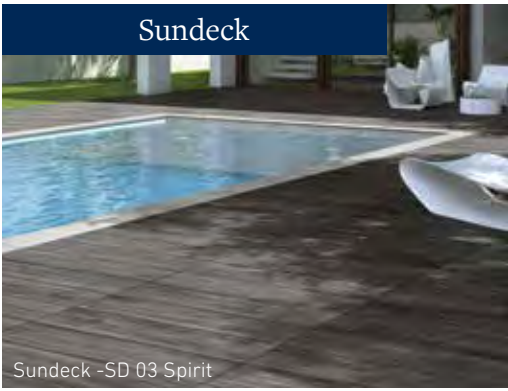
PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface



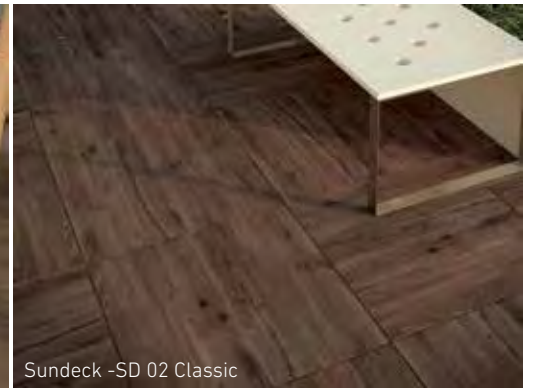
# Sundeck



Sundeck -SD 03 Spirit



Sundeck -SD 01 Origin



Sundeck -SD 02 Classic

## Available Colors



Origin  
SD 01 RD



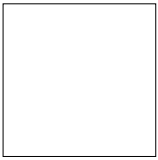
Classic  
SD 02 RD



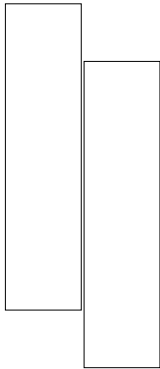
Spirit  
SD 03 RD



## Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x3/4"  
RD



30x120x2 cm  
11.73"x47.17"x3/4"  
RD

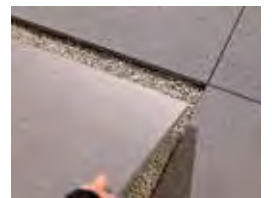
	60x60x2 cm 23.54"x23.54"x3/4"	30x120x2 cm 11.73"x47.17"x3/4"
Gross weight per box	33.00 kg / 73 lbs	33.00 kg / 73 lbs
Pieces / Box	2	2
Sq ft / box	7.75	7.75
Boxes / full pallet	30	20
Sq ft / pallet	232.5	155
Pallet gross weight	1034 kg / 2280 lbs	662 kg / 1460 lbs

## Laying Systems

### INSTALLATION SAND SET OVER COMPACTED BASE



### INSTALLATION ON PERMEABLE AGGREGATE BASE



### MORTAR BED ADHESIVE INSTALLATION



### FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

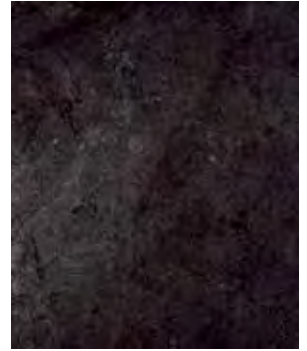
PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface

Tribeca - TB 02 Harrison

Available Colors



Watts  
TB 01 NAT



Harrison  
TB 02 NAT



Hudson  
TB 03 NAT



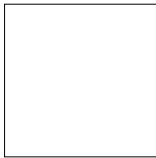
Greenwich  
TB 04 NAT



Broadway  
TB 05 NAT



Shapes & Sizes



60x60x2 cm  
23.54"x23.54"x3/4"  
NAT



45x90x2 cm  
17.64"x35.35"x3/4"  
NAT

RIFT



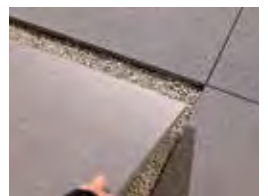
10,5x45 cm  
4 1/5"x18"  
NAT

Laying Systems

INSTALLATION  
SAND SET OVER  
COMPACTED BASE



INSTALLATION  
ON PERMEABLE  
AGGREGATE BASE



MORTAR BED  
ADHESIVE  
INSTALLATION



FIXED PEDESTAL  
INSTALLATION ON  
CONCRETE FLOOR



	60x60x2 cm 23.54"x23.54"x3/4"	45x90x2 cm 17.64"x35.35"x3/4"	RIFT
Gross weight per box	33.00 kg / 73 lbs	37.00 kg / 81 lbs	14.70 kg / 33 lbs
Pieces / Box	2	2	14
Sq ft / box	7.75	8.7	—
Boxes / full pallet	30	27	—
Sq ft / pallet	232.5	234.9	—
Pallet gross weight	1034 kg / 2280 lbs	997 kg / 2198 lbs	—



Uniform appearance



Slight variation



Moderate variation



Substantial variation



SRI (60-80%):  
Solar Reflectance Index

NAT  
Natural surface

STA  
Aged structure

PL  
Piallata surface

RD  
Radiale surface

ST  
Structured surface



# INTRODUCTION



# Porcelain Pavers Installation Guide: Introduction

## Porcelain Pavers Contractor Installation Information

### PRELUDE:

This installation manual is designed to be used by professional hardscape contractors and assumes they are already familiar with the proper construction techniques; design considerations and have the required skills for the installation of interlocking paving stones. It further assumes that the contractor has access to the required tools for such construction.

### INTRODUCTION:

Belgard Porcelain Pavers are formed by pressing, followed by vitrification: this process involves the total fusion into a single material made from natural raw materials (sand, quartz, feldspars, kaolin, clays and inorganic pigments) which, fired at temperatures above 1226.67° C (2240° F), are transformed into a product with exceptional hardness, ultra-low absorption rate and unmatched mechanical characteristics. Belgard porcelain pavers are eco-compatible and ecolabel-certified. Each unit is 20mm (0.7874") standard thickness or 3/4" nominal thickness and is durable enough to withstand use in exterior applications.

### Porcelain Pavers ADVANTAGES:

- Freeze thaw resistant—they are 100% frost-free and their properties remain unaltered at temperatures ranging from -51.1° to + 60° C (-60° F to +140°F).
- Colour durability—colour is fused by vitrification, becomes an integral part of the porcelain surface and is not affected by elements.
- Easy installation—perfect fit and for fast installs
- Low absorption rate—spills, salt and other materials will not seep into pours
- Easy to clean—household cleaners can be used to wipe down spills and dirt; can even be pressure washed with a low pressure washing device\* (see pressure washing warning below).\*
- Stylish—matches what homeowners are currently doing inside the home
- Durable—high breakage loads of up to 997.9 kg (2,200 lbs) allows for breakage reduction
- Resistant— High compressive strength and ultra-low absorption rate creates a dense surface that resists mold, moss, dirt and other staining.
- Skid-resistant—structured paver top textures create non-slip surfaces for safety; perfect for around pools/spas or in wet climates
- Modular Design—Superior accuracy in dimensional sizing and linear sides, the slabs allow for perfectly executed installations with tight and accurate lines
- Light weight— 16.8 kg (37 lbs) for the 24"x24" paver permit for easy installation, removal and serviceability and even reusability (Excluding adhered installations)
- Available in colors that have an SRI that qualifies for a LEED certification. The SRI on some units ranges between 60-80%. To receive LEED credit, the SRI must be at least 29%.
- Impermeable--deicing salt and other deicing materials can be used without concern of damage.

**\* It is important that all pressure washing of your porcelain pavers be done with a low pressure washer with a maximum of 1600 psi and nothing more powerful. When pressure washing your installation, care should be taken to prevent damage to the grout (adhesive and grout installations) and some re-sanding will be necessary when power washing an installation with sand or polymeric sand joints.**

### SPECIALTY TOOLS FOR PORCELAIN PAVER CONSTRUCTION:

- Wet cut tile saw equipped with a diamond blade manufactured for wet cutting porcelain. The saw should be designed to safely cut a 24 inch length porcelain paver.
- A paver clamp for easy handling, which can be used to both install and remove pavers.
- The use of gloves is highly recommended while handling and installing porcelain slabs.
- Appropriate notched trowels and grout float tools for cementitious adhesive and grout Installation. The appropriate tool selection would be based on the adhesive and grout manufacturer's recommendations.



### HANDLING:

- Pallets of porcelain pavers are manufactured and shipped with a Heavy Duty plastic protective pallet cover and the individual porcelain pavers are packaged in protective card board boxes. To prevent damage to your pavers, do not remove the protective card board boxes until you are ready to install them.

**CAUTION: Removing pavers from their protective packaging and handling multiple loose stones together creates the possibility for chipping.**





# Porcelain Pavers Installation Guide: Introduction

- Once the Heavy Duty plastic pallet covers have been removed from the pallet, the un-used boxed pavers should be protected from the elements to insure the integrity of the protective cardboard boxes.

## INSTALLATION INFORMATION:

Each of the following option details will include specific information relative to the selected installation. Base thicknesses vary between different geographical and climatic locations and the contractor will be installing typical base thicknesses for paving installations in their location.

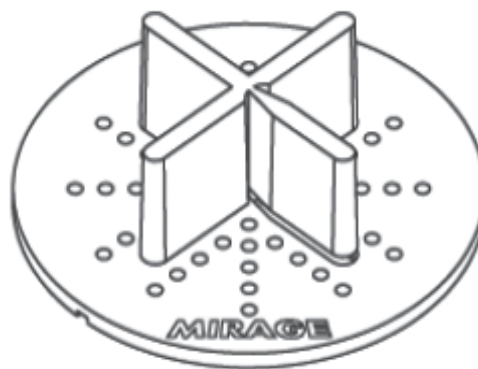
**IMPORTANT:** Installing porcelain pavers requires the bedding course sand to be pre-compacted and then struck off with a screed to the required thickness as shown in the detail drawings. The porcelain pavers are not compacted and therefore the sand layer beneath them requires pre-compaction. Do not compact dry sand, but insure the sand has a 5 to 6% moisture content so that it will compact cohesively and allow for a smooth strike off finish.

## INSTALLATION INFORMATION THAT MUST BE FOLLOWED :

- NEVER compact porcelain pavers with a plate compactor.
- ALWAYS pre-compact and strike off your sand leveling course before installing your porcelain pavers in sand set installations.
- Porcelain pavers should only be wet cut with a tile saw equipped with a wet cut porcelain blade.
- NEVER install porcelain pavers without the required 4mm spacing between them. The porcelain pavers should never be installed with a porcelain to porcelain contact. Plastic 4mm spacers (Spacer G shown in photos below) should be used on Sand Set and Permeable installations. The photo on the left illustrates the spacer installed in a perspective to support and space 4 paver corners and the photo on the right illustrates the installed spacer snapped apart (as designed) to form Space T that supports 2 paver corners. This versatility will permit your porcelain pavers to be installed in a stack bond pattern, a running bond patterns as well as a flush installation against another structure.
- For a 100 sf. project, approximately 34 spacers are needed; this allows for overages if needed.



Spacer G



Mirage® Space\_G plus spacers



Spacer T



# Porcelain Pavers Installation Guide: Introduction

## CLEANING PRODUCTS:

Types of Detergents Where sales are permitted	SOLVENTS (bleaching solution, oil of turpentine, acetone, trichloroethylene, nitrate based thinner)	ACIDS (muriatic acid, hydrochloric acid, phosphoric acid)	ALKALI Alkaline based detergents (alkaline-based professional detergents)
<b>TYPES OF STAIN</b>			
Beer			•
Lime		•	
Tar	•		
Cement		•	
Candle Wax	•		
Glue	•		
Chewing Gum	•		•
Rubber Tire, Shoes	•		
Grease, Oil			•
Ink	•		
Nicotine	•		
Felt-tip pen	•		
Resins	•		
Rust		•	
Nail Polish	•		
Cigarette		•	
Wall Paint	•	•	

## LEED COMPLIANT PRODUCTS:

All the slabs in this catalog can help obtain 10 LEED credits, depending on the material and how it is used.

Points that can be obtained by using Mirage® materials:

**SUSTAINABLE SITES:** Mirage® products help reduce the “heat island” effect (the difference in the thermal gradient within and outside urban areas), in order to minimize the effects of the microclimate on the habitat. This is achieved by the low Solar Reflection Index (SRI) of Mirage® products, which makes them especially suitable for outdoor use.

SS\_C\_7.1 Heat Island Effect – Roofing Excluded (1 Point)

SS\_C\_7.2 Heat Island Effect – Roof (1 Point) Up to 75% of open space may be paved with recreation and pedestrian friendly surfaces.

SS\_C\_5.2 Site Development-Maximize Open Space (1 Point) By not filling the joints and using an open graded aggregate base, Mirage® pavers can be installed as a permeable option.

SS\_C\_6.1 Stormwater Design- Quantity Control (1 Point)

SS\_C\_6.2 Stormwater Design-Quality Control (1 Point)

**WATER EFFICIENCY:** Installed as a permeable option, rainwater can be harvested and reused for non-potable irrigation.

WE\_C\_1 Water Efficient Landscaping (2-4 Points)

**MATERIALS & RESOURCES:** Numerous Mirage® products can help improve a building’s LEED rating in terms of “Materials & Resources”; in particular, the collections Stones 2.0, Lab\_21, Tribeca, and Norr allow LEED points to be obtained due to containing a proportion of “pre-consumer” recycled material.

MR\_C\_4.1 Recycled Material Content (1 Point) (20% pre-consumer)

MR\_C\_4.2 Recycled Material Content (1 Point) (40% pre-consumer – in addition to the point above)

**ENERGY AND ATMOSPHERE:** Mirage® products help to define the minimum energy efficiency level of the building.

EA\_C\_1 Optimization of Energy Performance (1 Point)

**INNOVATION IN DESIGN:** Mirage® material is produced in compliance with the criteria set down for Ecolabel certification, the most important environmental standard in the world for the certification of ceramic tiles.

ID\_1.1 Innovation In Design (1-4 Points)

**INDOOR ENVIRONMENTAL QUALITY:** Mirage® material guarantees a very low amount of air pollutants.

Claims made refer to LEED 2009: NEW CONSTRUCTION AND MAJOR RENOVATIONS. To see how Mirage can help a LEED Project Team earn points on other LEED rating systems, please contact your Belgard® representative.





# Porcelain Pavers Installation Guide: Introduction

## LEED credits:

Collection	Products	Sustainable Sites	Materials & Resources	Energy & Atmosphere	Innovation Design	Voc Content	Total LEED Credits
ARDESIE	Shore AD 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Island AD 02	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	African stone AD 03	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Black reef AD 04	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Vulcan AD 05	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
ESPRIT	Crema Delicata EP 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Pietra Piasentina EP 02	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Lagos grey EP 03	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Crema luna EP 04	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
LAB_21	LAB_Mou LB 04	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	LAB_Fog LB 07	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
MASHUP	Square MP 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Way MP 02	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Block MP 03	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Road MP 04	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
NA.ME	Jura Beige NE 10	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Bone Travertine NE 11	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Bourgogne NE 12	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Ocean Grey NE 13	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Berkshire NE 14	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Swiss Grey NE 20	From 1 To 2 Credits	1 Credit	1 Credit	From 1 To 4 Credits	1 Credit	From 5 To 9 Credits
	Lumnezia NE 21	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Noir Belge NE 30	-	2 Credits	1 Credit	From 1 To 4 Credits	1 Credit	From 5 To 8 Credits
	Gris Belge NE 31	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
Noisette Belge NE 32	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits	
NAU	Fado NA 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Indie NA 02	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Zen NA 04	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
NORR	RR 01 Vit	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	RR 02 Grå	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	RR 03 Svart	-	2 Credits	1 Credit	From 1 To 4 Credits	1 Credit	From 5 To 8 Credits
OFFICINE	Acid OF 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Romantic OF 02	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Dark OF 03	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Gothic OF 04	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
QUARZITI 2.0	Glacier QR 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Mountains QR 02	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Waterfall QR 03	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	River QR 04	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Mantle QR 05	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
SIGNATURE	Artico SI 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Magnolia SI 02	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Alpine SI 03	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Havana SI 04	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Dakota SI 05	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
STONES_2.0	Chambrod SO 05	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Pierre Bleue SO 10	-	2 Credits	1 Credit	From 1 To 4 Credits	1 Credit	From 5 To 8 Credits
	Pierre Bleue Sablée SO 11	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
SUNDECK	Origin SD 01	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Classic SD 02	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Spirit SD 03	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
TRIBECA	Watts TB 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Harrison TB 02	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Hudson TB 03	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Greenwich TB 04	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Broadway TB 05	-	2 Credits	1 Credit	From 1 To 4 Credits	1 Credit	From 5 To 8 Credits

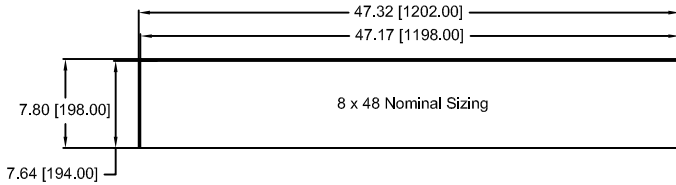
## Legal Disclaimer

The nominal measurements include 4mm for product spacers which are sold separately. Although extreme care has been taken to ensure the accuracy of all measurements set forth herein, Manufacturer assumes no liability relating thereto.

## STANDARD CALIBER - (M)

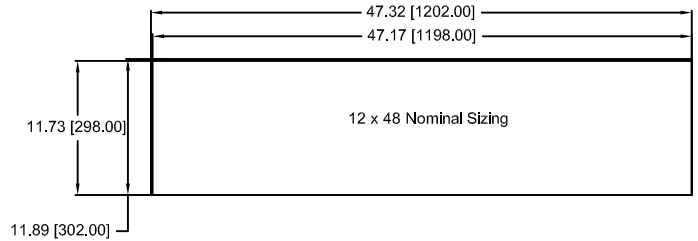
### 8"x 48" Nominal sizing

Calibrated unit cut sizing without spacing = 194x1198mm or 7.64" x 47.17"  
 With 4mm spacing added to two planes = 198mm x 1202mm or 7.80" x 47.32"



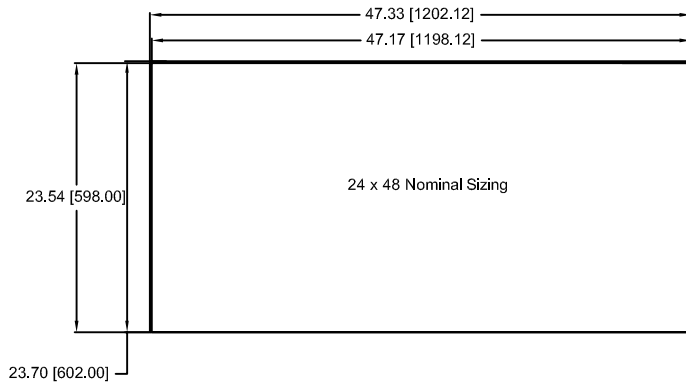
### 12"x 48" Nominal sizing

Calibrated unit cut sizing without spacing = 298x1198mm or 11.73" x 47.17"  
 With 4mm spacing added to two planes = 302mm x 1202mm or 11.89" x 47.32"



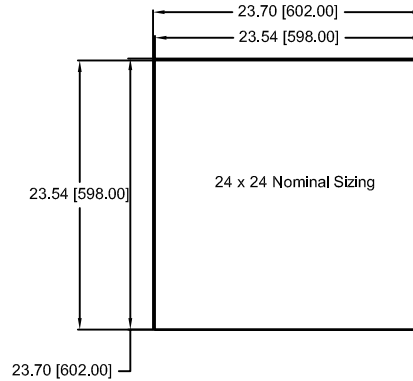
### 24"x 48" Nominal sizing

Calibrated unit cut sizing without spacing = 598x1198mm or 23.54" x 47.17"  
 With 4mm spacing added to two planes = 602mm x 1202mm or 23.70" x 47.32"



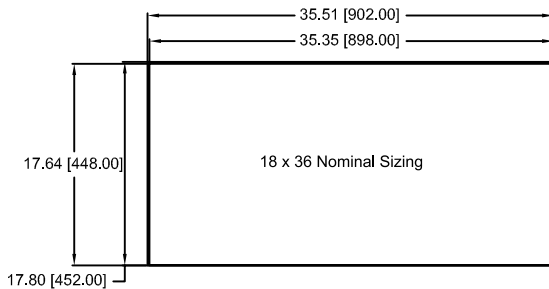
### 24"x 24" Nominal sizing

Calibrated unit cut sizing without spacing = 598x598mm or 23.54" x 23.54"  
 With 4mm spacing added to two planes = 602mm x 602mm or 23.70" x 23.70"



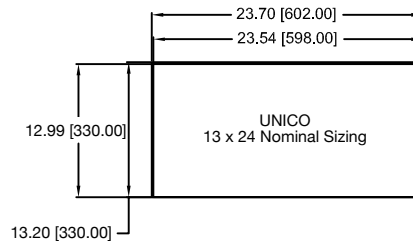
### 18"x 36" Nominal sizing

Calibrated unit cut sizing without spacing = 448x898mm or 17.64" x 35.35"  
 With 4mm spacing added to two planes = 452mm x 902mm or 17.80" x 35.51"



### UNICO 13 1/5" x 24" Nominal sizing

Calibrated unit cut sizing without spacing = 330x598mm or 12.99" x 23.54"  
 With 4mm spacing added to two planes = 330x602mm or 13.20" x 23.70"





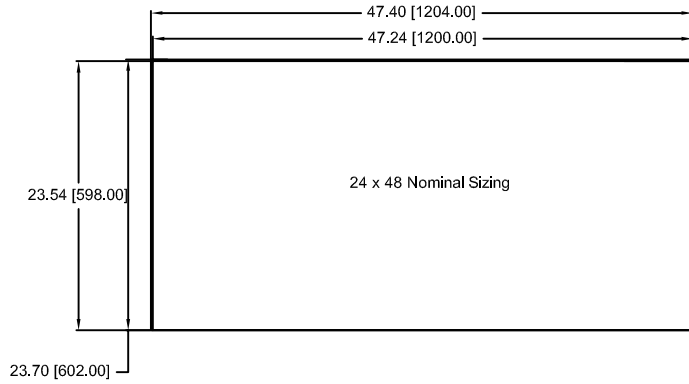


# Porcelain Pavers Installation Guide: Introduction

## CALIBER - (U) - only for modular collections

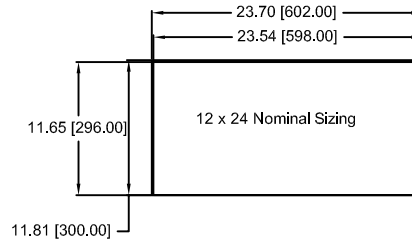
### 24" x 48" Nominal sizing

Calibrated unit cut sizing without spacing = 598x1200mm or 23.54" x 47.24"  
With 4mm spacing added to two planes = 602mm x 1204mm or 23.70" x 47.40"



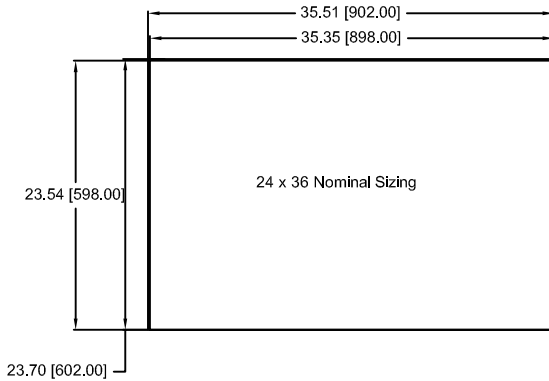
### 12" x 24" Nominal sizing

Calibrated unit cut sizing without spacing = 296x598mm or 11.65" x 23.54"  
With 4mm spacing added to two planes = 300mm x 602mm or 11.81" x 23.70"



### 24" x 36" Nominal sizing

Calibrated unit cut sizing without spacing = 598x898mm or 23.54" x 35.35"  
With 4mm spacing added to two planes = 602mm x 902mm or 23.70" x 35.51"



## JOINT INFILLING INFORMATION:

When porcelain pavers are installed as sand set installations, you may fill the 4mm paver joints with:

### **TRADITIONAL SAND**

Dry traditional sand is swept into the open joints until they are completely filled. Excess sand should be swept off of the pavement. Keep in mind that sand joint may in time have to be re-sanded as wind and rain can cause some erosion

### **CEMENT BLENDED SAND**

Dry cement blended sand (typical 3 parts sand to 1 part cement) is swept into the open joints until they are completely filled. Excess cement blended sand is swept off of the pavement. It is extremely important that all of the excess sand and dust be swept from the surface (blowers can be used for final dust removal), as any residual dust or sand can stain the surface. After joints are full and the surface is clean the pavement is misted with water to activate the cement and the curing of the mixture.

### **POLYMERIC SAND**

Polymeric sand is a manufactured sand that is blended with polymers which hardens when subjected to moisture. The sand is swept into the open joints until they are completely filled. Like cement blended sand, it is extremely important that all excess sand and dust be swept from the surface (blowers can be used for final dust removal), as any residual dust or sand can stain the surface. After joints are full and the surface is clean, the pavement is misted with water to activate the polymer and curing of the mixture.

# Porcelain Pavers Installation Guide: Introduction

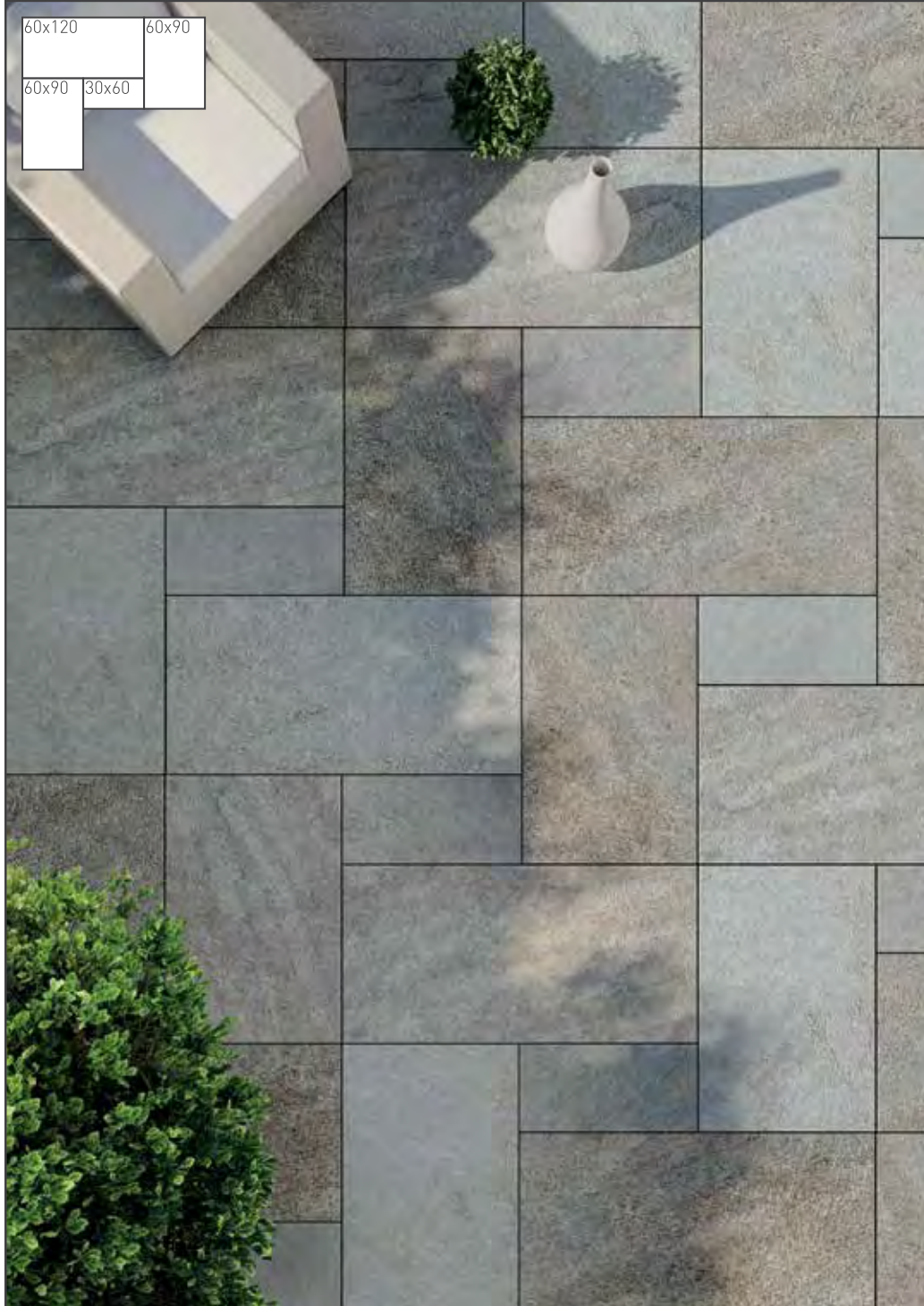
**MODULAR PROJECT:**

Available to order for the **QUARZITI\_2.0** collection (recommended for laying on gravel or sand and footing with glue)

MODULAR #1

**Module percentages:**

- modular (1 pc. 60x90 + 1 pc. 30x60) - 50%
- 60x120 - 50%



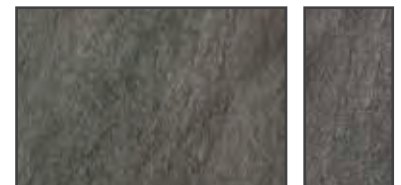
**QUARZITI 2.0**  
QR 01 NAT  
Glacier



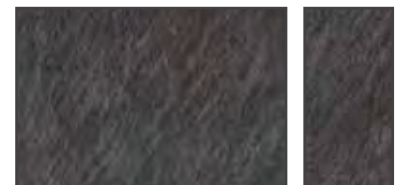
**QUARZITI 2.0**  
QR 02 NAT  
Mountain



**QUARZITI 2.0**  
QR 03 NAT  
Waterfall



**QUARZITI 2.0**  
QR 04 NAT  
River



**QUARZITI 2.0**  
QR 05 NAT  
Mantle



## MODULAR #2

### Module percentages:

- modular (1 pc. 60x90 + 1 pc. 30x60) - 40%
- 60x120 - 40% • 60x60 - 20%



## MODULAR #3

### Module percentages:

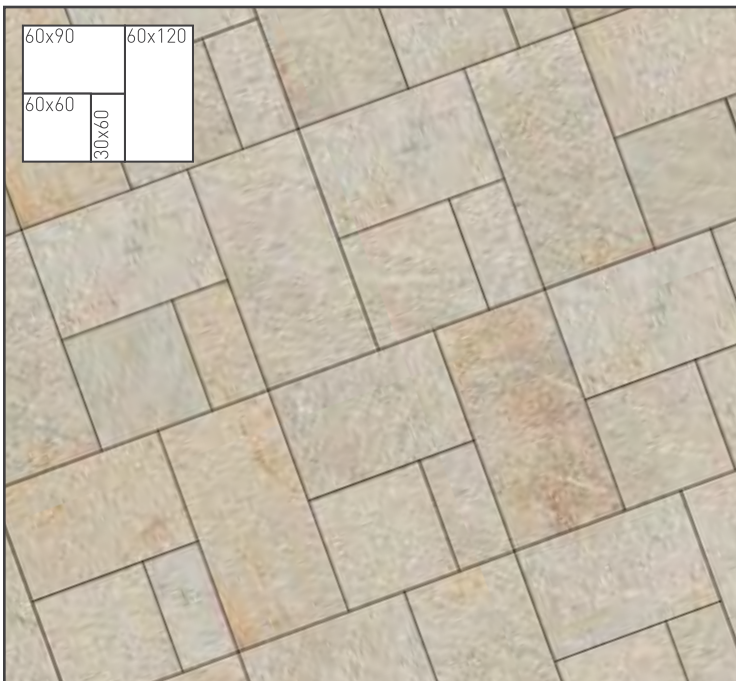
- modular (1 pc. 60x90 + 1 pc. 30x60) - 50%
- 60x120 - 50%



## MODULAR #4

### Module percentages:

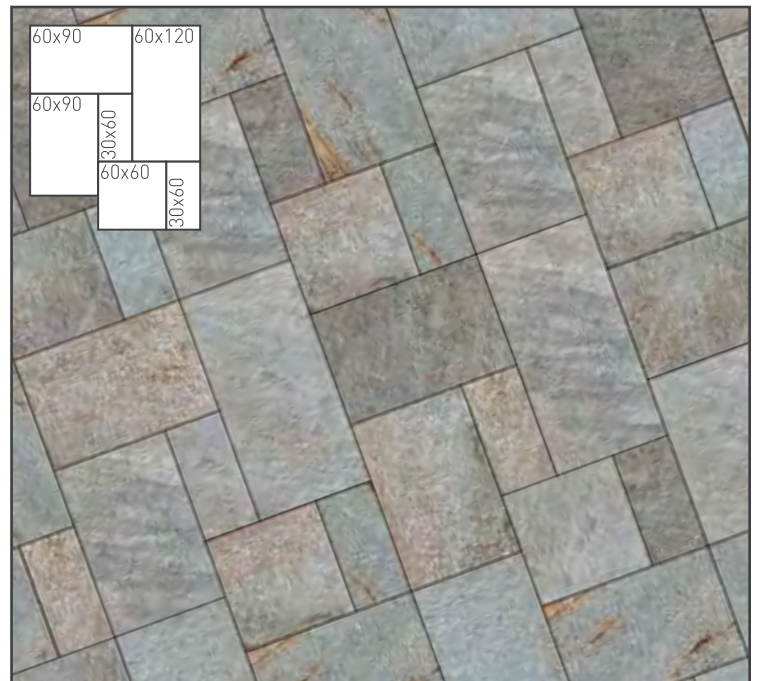
- modular (1 pc. 60x90 + 1 pc. 30x60) - 40%
- 60x120 - 40% • 60x60 - 20%



## MODULAR #5

### Module percentages:

- modular (1 pc. 60x90 + 1 pc. 30x60) - 57,1%
- 60x120 - 28,6% • 60x60 - 14,3%





# Porcelain Pavers Installation Guide: Introduction

## SNOW REMOVAL:

The surface of the Belgard porcelain paver is very hard and very resistant to scratching; normal shoveling is not a problem. Use a plastic or plastic edged shovel to insure that an edge of the paver is not accidentally caught; like on any pavement, use of metal shovels can cause chips to corners or surface. If using a snow blower, insure the impeller is adjusted to at least ¼ inch above the surface to prevent damage (1/4 inch height is recommended with snow blower use on any pavement).

Belgard approved deicing materials can be used on the porcelain pavers without concern of any damage. Approved deicing chemicals are sodium chloride (NaCl) and to the extent temperature falls below -10° C (14° F), Calcium Chloride (CaCl<sub>2</sub>).

## IMPORTANT NOTES:

- i. When selecting sand for a traditional sand or cement blended sand infill, insure the gradation of the sand is fine enough to pass through and fill the 4 mm joints.
- ii. When using Polymeric Sand it is important to follow the manufacturer’s instructions to insure there is no surface staining.
- iii. Cement blended sand and polymeric sand can both contribute to a reduction in joint plant growth and insect infiltration within the joint infill material.

## INSTALLATION OPTIONS:

1. Sand Set over Compacted Road Base Installation..... (Pedestrian Foot Traffic)
2. Sand Set over Concrete Overlay Installation ..... (Pedestrian Foot Traffic)
3. Cementitious Adhesive Overlay, Concrete Base Installation..... (Light Vehicle Traffic)
4. Permeable Over Open Graded Aggregate Installation..... (Pedestrian Foot Traffic)
5. Stepping Stone Sand Set on Compacted Road Base Installation..... (Pedestrian Foot Traffic)
6. ¾" Fixed Pedestal Installation on Concrete Floor..... (Pedestrian Foot Traffic)
7. Installation with EZ Base Panels ..... (Pedestrian Foot Traffic)
8. e\_deck: Pedestal System for Decking Installation, on Concrete Floor..... (Pedestrian Foot Traffic)

**Roof Top and Commercial Raised Pedestal Installations require engineered design. For Engineered support in these applications, please contact your local Belgard representative.**

For additional technical information on the installation of porcelain pavers, please contact Len Browning at [Len.Browning@oldcastle.com](mailto:Len.Browning@oldcastle.com).

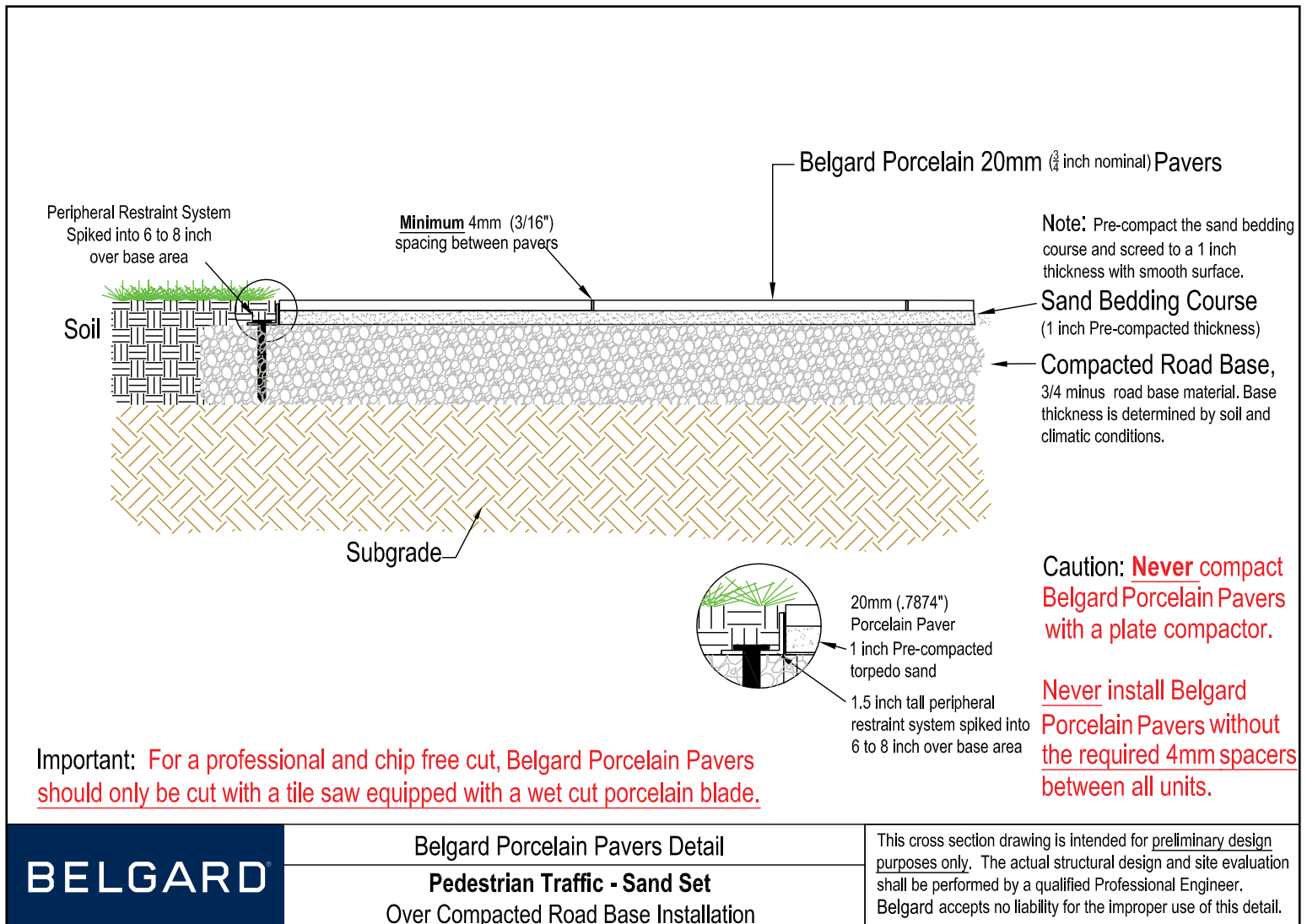


# INSTALLATION OPTIONS

# 1. Sand Set over Compacted Road Base Installation – (Pedestrian Foot Traffic)

## INSTALLATION NOTES:

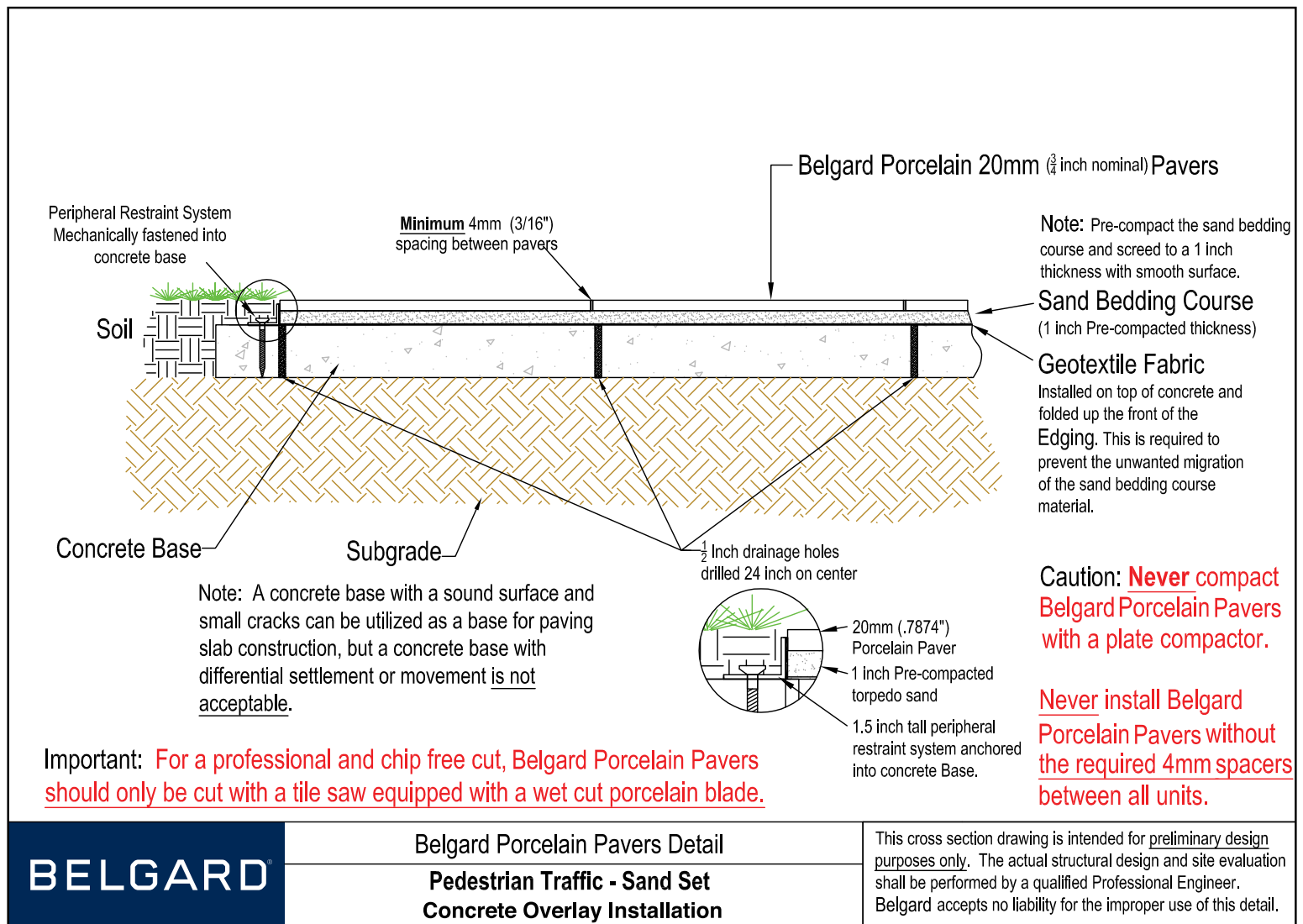
- Follow the detail drawing below.
- Base material is to be over based 6 to 8 inches beyond the edge of the pavement.
- The required edge restraint system is a low profile edge restraint with a vertical height of 1 ½ inches as shown in the drawing.
- Insure that pavement is constructed with a 1 ½ to 2 degree slope that it is pitched away from any building.
- Insure the plastic 4mm spacers are installed at all corners of the installed pavers.



## 2. Sand Set over Concrete Overlay Installation (Pedestrian Foot Traffic)

### INSTALLATION NOTES:

- Follow the detail drawing below.
- The required edge restraint system is a low profile edge restraint with a vertical height of 1 ½ inches as shown in the drawing.
- Mechanically anchor edge restraint into the concrete base.
- Insure geotextile is installed directly on top of the concrete to contain the bedding sand.
- Insure that pavement is constructed with a 1 ½ to 2 degree slope and that it is pitched away from any building.
- Insure the plastic 4mm spacers are installed at all corners of the installed pavers.



Belgard Porcelain Pavers Detail  
Pedestrian Traffic - Sand Set  
Concrete Overlay Installation

This cross section drawing is intended for preliminary design purposes only. The actual structural design and site evaluation shall be performed by a qualified Professional Engineer. Belgard accepts no liability for the improper use of this detail.



### 3. Cementitious Adhesive Overlay, Concrete Base Installation (Light Vehicle Traffic)

**INSTALLATION NOTES:**

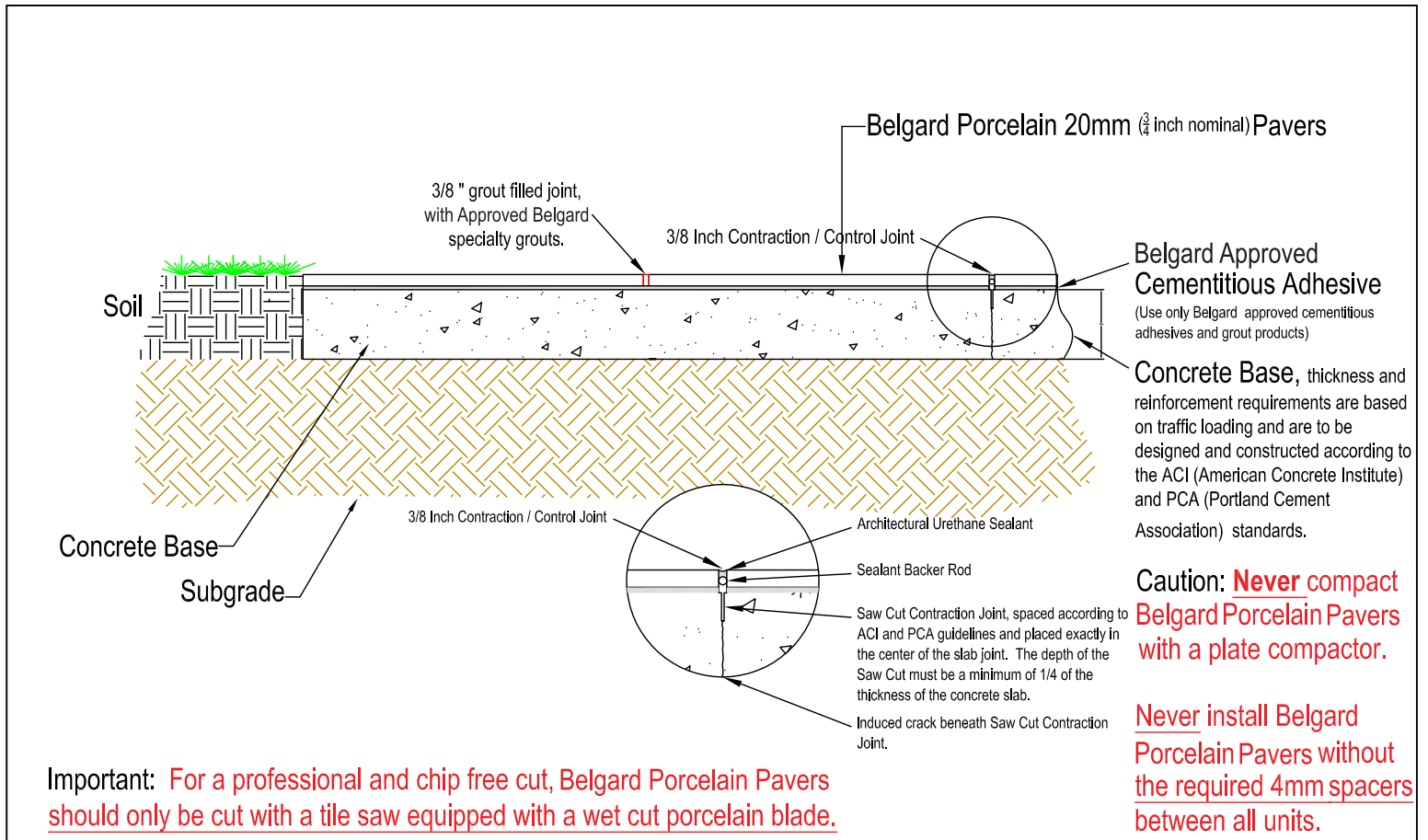
- Follow the detail drawing below.
- Insure that pavement is constructed with a 2 degree pitch and that it is pitched away from any building.
- Referenced approved Cementitious Adhesives. [www.mapei.com/public/US/products/Kerabond\\_T-Keralastic\\_EN\\_lr.pdf](http://www.mapei.com/public/US/products/Kerabond_T-Keralastic_EN_lr.pdf)  
[www.mapei.com/public/US/products/Ultraflex\\_LFT\\_EN\\_lr.pdf](http://www.mapei.com/public/US/products/Ultraflex_LFT_EN_lr.pdf)
- Referenced approved joint grout products. [www.mapei.com/public/US/products/ultracolorplus\\_tds\\_ea.pdf](http://www.mapei.com/public/US/products/ultracolorplus_tds_ea.pdf),  
[www.mapei.com/public/US/products/kerapoxytds\\_ea.pdf](http://www.mapei.com/public/US/products/kerapoxytds_ea.pdf)


For Cementitious adhesive and grout installation, refer to the manufacturer’s technical instructions and specifically as they relate to outdoor installations.

- For concrete foundation slabs that are not large enough to require contraction / control joints, a minimum 4mm (1/8” to 3/16”) grout joint is acceptable, but for larger concrete foundation slabs that do require contraction / control joints, the joint width should be a 3/8”. It is absolutely imperative that all contraction / control joints be located in the joint line of installed porcelain pavers and not beneath a paver.

**CAUTION: If a Porcelain Paver is installed over a control joint, the paver will reflectively crack along the contraction / control joint beneath it.**

- The following contractor installation video shows a cementitious adhesive installation of porcelain pavers. [www.mirage.it/en/floors-and-coverings/evo\\_2e/laying-systems/adhesive-installation/](http://www.mirage.it/en/floors-and-coverings/evo_2e/laying-systems/adhesive-installation/)

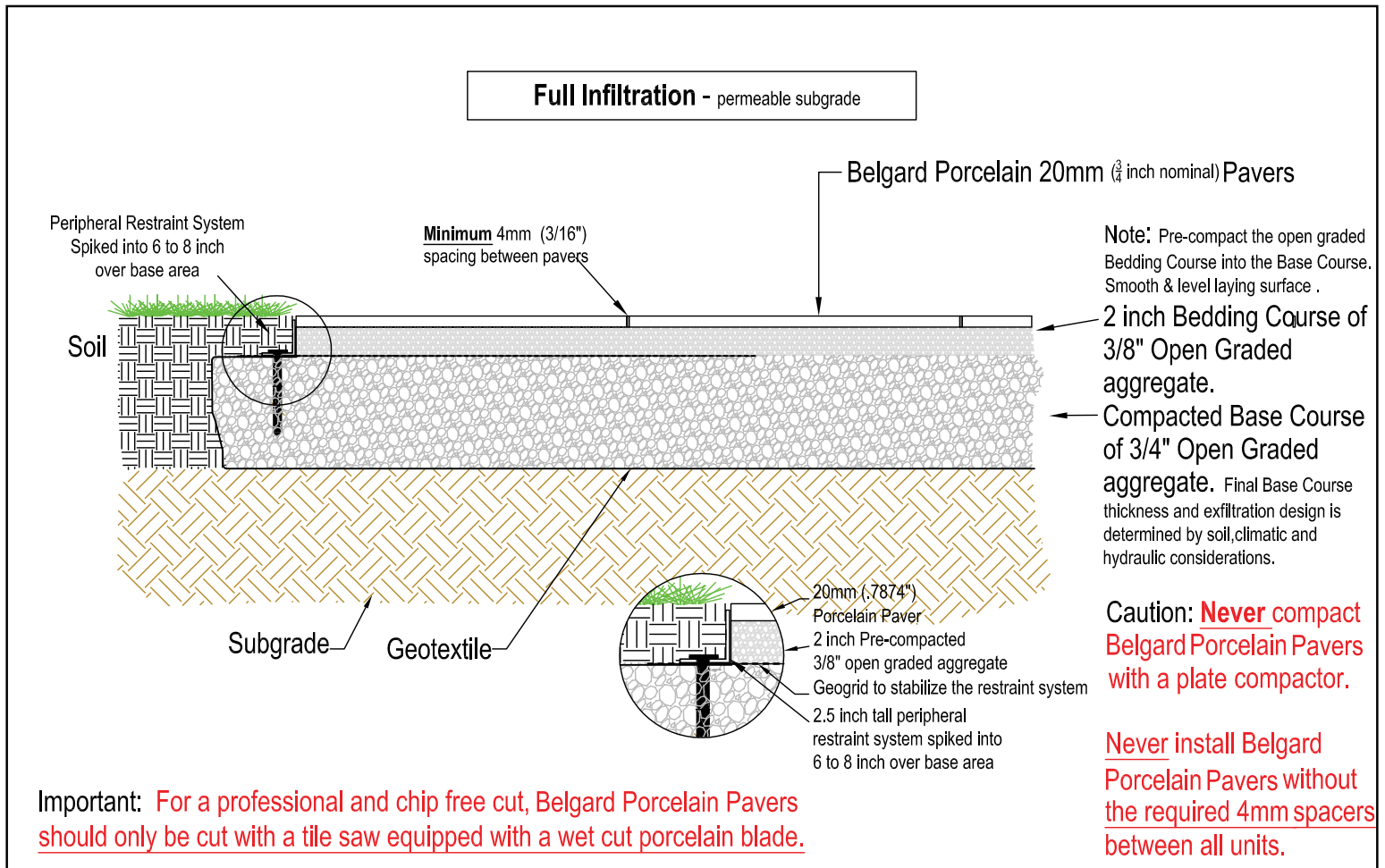


	<p>Belgard Porcelain Pavers Detail</p>	<p>This cross section drawing is intended for preliminary design purposes only. The actual structural design and site evaluation shall be performed by a qualified Professional Engineer. Belgard accepts no liability for the improper use of this detail.</p>
	<p>Light Vehicle Cementitious Adhesive overlay, Concrete Base Installation</p>	

# 4. Permeable Over Open Graded Aggregate Installation (Pedestrian Foot Traffic)

## INSTALLATION NOTES:

- Follow the detail drawing below.
- The required edge restraint system for this installation has a vertical height of 2 ½ inches as shown in the drawing. Follow the edge restraint manufacturer’s recommendations for the use of their product in permeable applications regarding geogrid usage and placement to maintain the performance of there edging.
- Insure that pavement is constructed with a 2 degree pitch and that it is pitched away from any building.
- Insure the 4mm spacers are installed between all pavers.



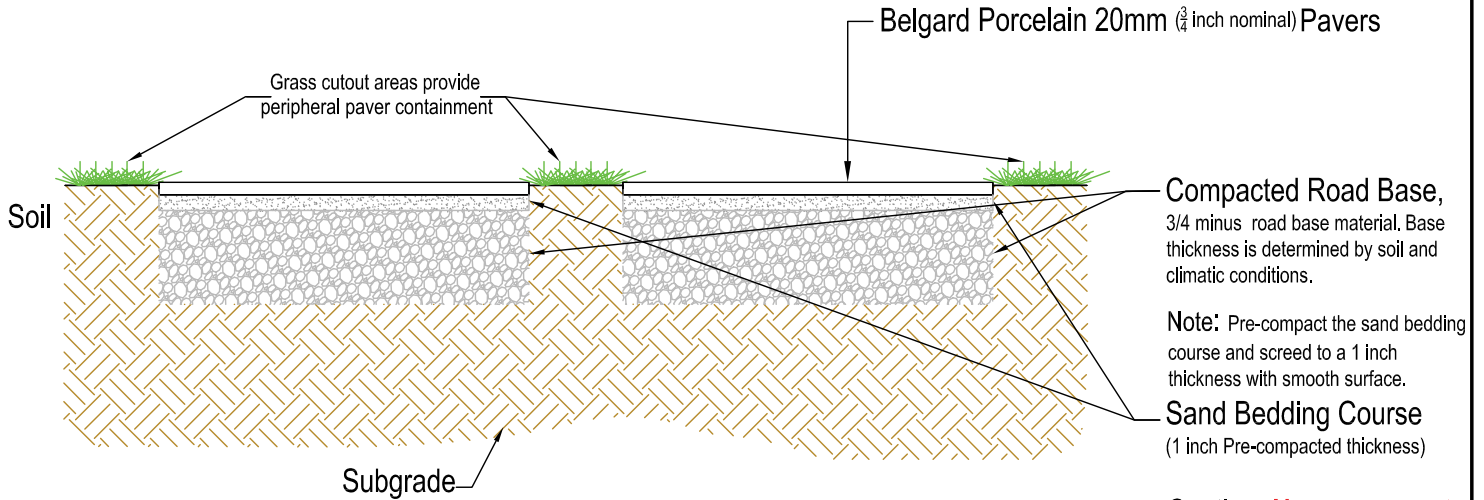
**Important:** For a professional and chip free cut, Belgard Porcelain Pavers should only be cut with a tile saw equipped with a wet cut porcelain blade.

**Caution:** Never compact Belgard Porcelain Pavers with a plate compactor.

**Never install Belgard Porcelain Pavers without the required 4mm spacers between all units.**

<b>BELGARD</b>	Belgard Porcelain Pavers Detail	This cross section drawing is intended for preliminary design purposes only. The actual structural design and site evaluation shall be performed by a qualified Professional Engineer. Belgard accepts no liability for the improper use of this detail.
	<b>Pedestrian Traffic - Permeable</b> Over Open Grated Aggregate Installation	

# 5. Stepping Stone Sand Set on Compacted Road Base Installation (Pedestrian Foot Traffic)



**Compacted Road Base,**  
3/4 minus road base material. Base thickness is determined by soil and climatic conditions.

**Note:** Pre-compact the sand bedding course and screed to a 1 inch thickness with smooth surface.

**Sand Bedding Course**  
(1 inch Pre-compacted thickness)

**Caution: Never compact Belgard Porcelain Pavers with a plate compactor.**

**Never install Belgard Porcelain Pavers without the required 4mm spacers between all units.**

**Important:** For a professional and chip free cut, Belgard Porcelain Pavers should only be cut with a tile saw equipped with a wet cut porcelain blade.

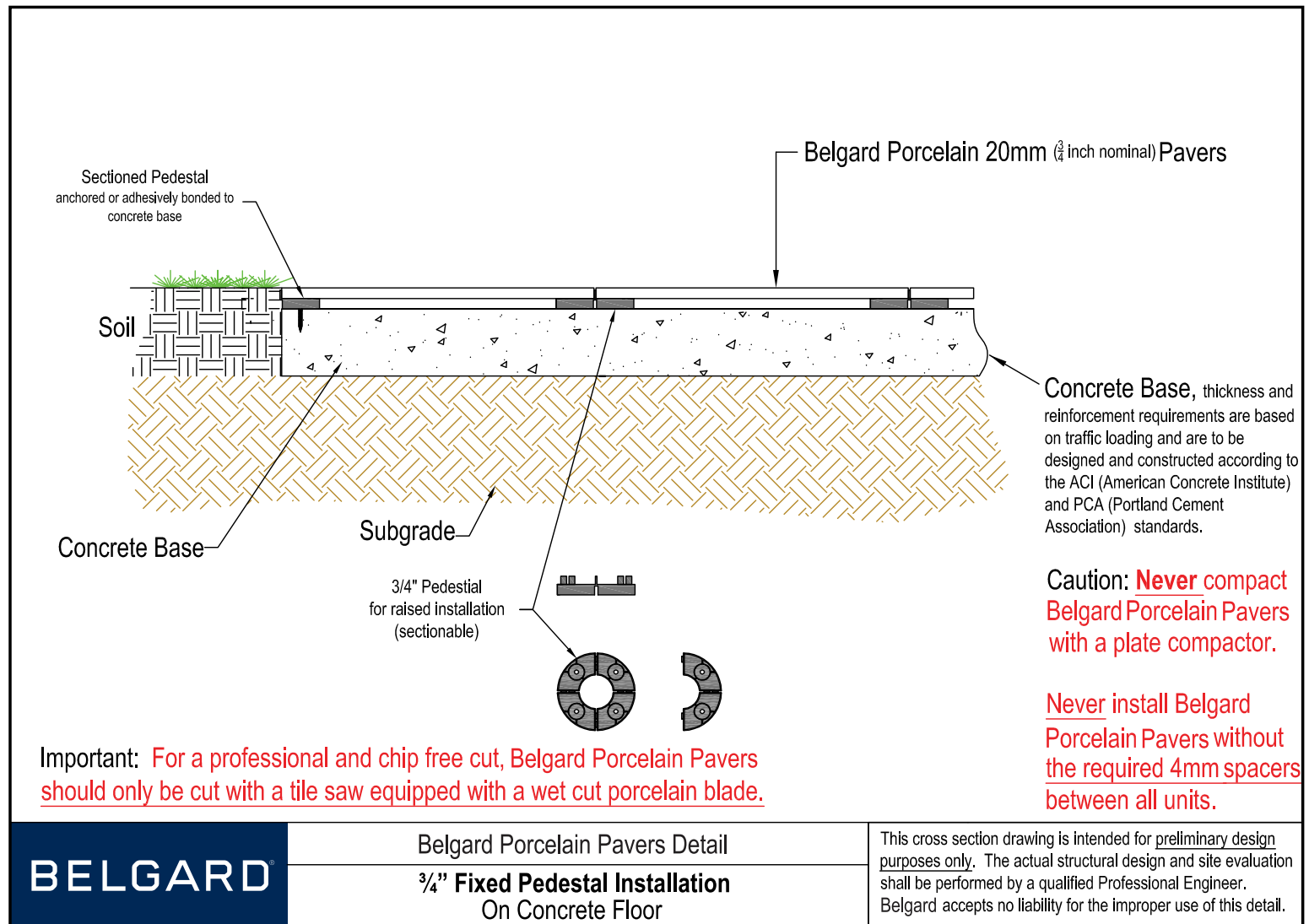


## 6. 3/4" Fixed Pedestal Installation on Concrete Floor (Pedestrian Foot Traffic)

### INSTALLATION NOTES:

- Follow the detail drawing below.
- Insure that concrete slab is smooth, even across the surface and is constructed with a 2 degree pitch and that it is pitched away from any building.
- Insure the plastic 3/4" pedestal support are installed at all corners of the installed pavers.

**NOTE:** Pedestal installations can be done with Westile and e-Deck pedestals. Use Westile pedestals for 24x24, 36x36 and 18x36. For plank and modular unit installations, use e-Deck pedestals.





## 7. Installation with EZ Base Panels (Pedestrian Foot Traffic)

### INSTALLATION NOTES:

#### Step 1: Excavation of Patio or Walkway Area

Remove all grass or plant material from the area of excavation. Excavate approximately 3 to 3 ½ inches below the finished grade and over excavate the installation area 6 inches beyond the edge of the Mirage Porcelain pavement. The excavated depth will accommodate the Geo-fabric, the pre-compacted 1/2" sand leveling layer, the Belgard EZ Base and your Porcelain slabs.

\* EZ Base installations are intended for foot traffic only.

\*\* prior to excavation, check with local utility services to ensure digging will not damage any below grade utilities.

#### Step 2: Leveling and Compacting the Excavated Area

Carefully excavate the area to create a level soil sub-grade that slightly slopes away from structures (i.e. a house). Using a hand tamper compact the sub-grade and insure the excavated area is as smooth as possible, making sure that the sub-grade is within +/- 1/4" of the excavation depth. Use a string level to establish the desired slope for your area.

#### Step 3: Geotextile and Pre-Compacted Bedding Sand Installation.

Install the geotextile barrier fabric (weed barrier) on top of the compacted sub-base. Spread a slightly hydrated layer of sand to a depth of 3/4" over the geotextile and compact the sand leveling layer. Screed and strike off the compacted sand leveling layer to a final thickness of 1/2" using a straight using a straight edge to screed which will create a smooth final sand leveling surface.

#### Step 4: Installation of EZ Base

Install Belgard EZ Base on the finished sand leveling layer so that it is fully covers the excavation area including the 6 inch over excavation.. Start laying the EZ Base units according to a staggered pattern while ensuring locking of the tongue and groove system. Trim any visible curves or protruding angles that are beyond excavated area using a utility knife.

#### Step 5: Installation of Edge Restraint and Porcelain Slabs

Lay porcelain slabs directly on the Belgard EZ Base panels. Ensure your EZ Base panels extend the 6" beyond the edge of the porcelain pavers. To properly space the porcelain slabs, insure that Spacer G pieces are installed throughout the entire installation. Install a low profile edge restraint on the EZ Base, making sure it rests firmly against the pavers. The edge restraint can be secured to the EZ Base panels with either HWDA Anchors (as shown in our detail drawing) or spikes.

#### Step 6: Install, Sweep and Hydrate Polymeric Sand

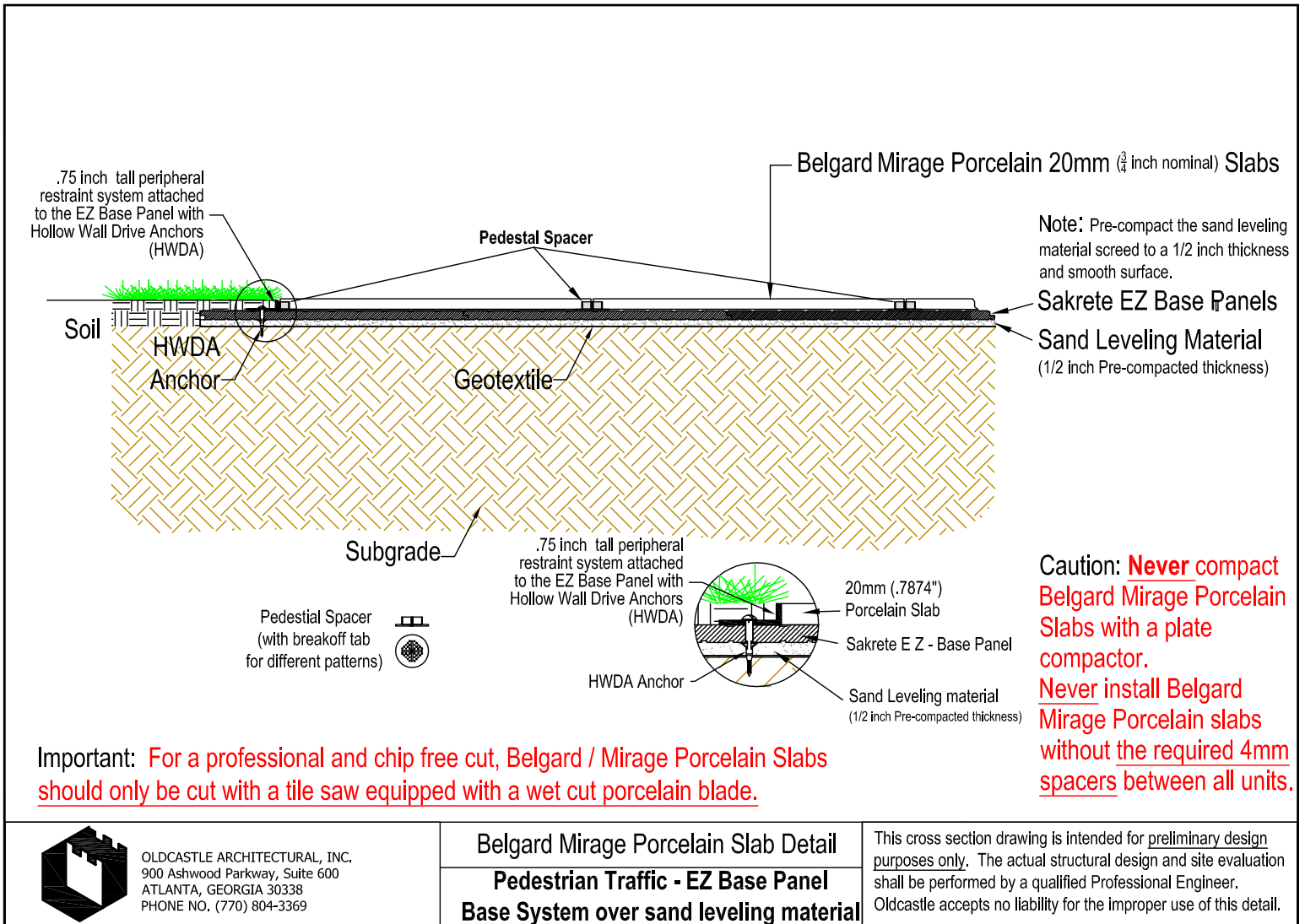
Pour, spread and sweep the polymeric sand into all slab joints, insuring all joints are filled. Sweep the surface clean with a fine bristle broom or carefully utilize a blower to remove any excess sand or remaining dust. Gently mist the surface of the installation according to the polymeric sand's manufacturer directions which will hydrate the polymeric sand joint and initiate the curing of the joint.

\*always follow the instructions from the polymeric sand manufacturer

#### A Couple of Things To Consider.

- We never compact our porcelain slabs.
- Saturating the surface with a hose will cause the polymer binder to wash out of the sand mixture and flow below the slabs as well as wash the sand out of the joints. Misting keeps the polymer suspended in the mixture so that it can bind everything together and it also keeps the sand from being washed out of the joints during the hydrating process.

# 7. Installation with EZ Base Panels (Pedestrian Foot Traffic) Cont.



OLDCASTLE ARCHITECTURAL, INC.  
900 Ashwood Parkway, Suite 600  
ATLANTA, GEORGIA 30338  
PHONE NO. (770) 804-3369

**Belgard Mirage Porcelain Slab Detail**  
**Pedestrian Traffic - EZ Base Panel**  
**Base System over sand leveling material**

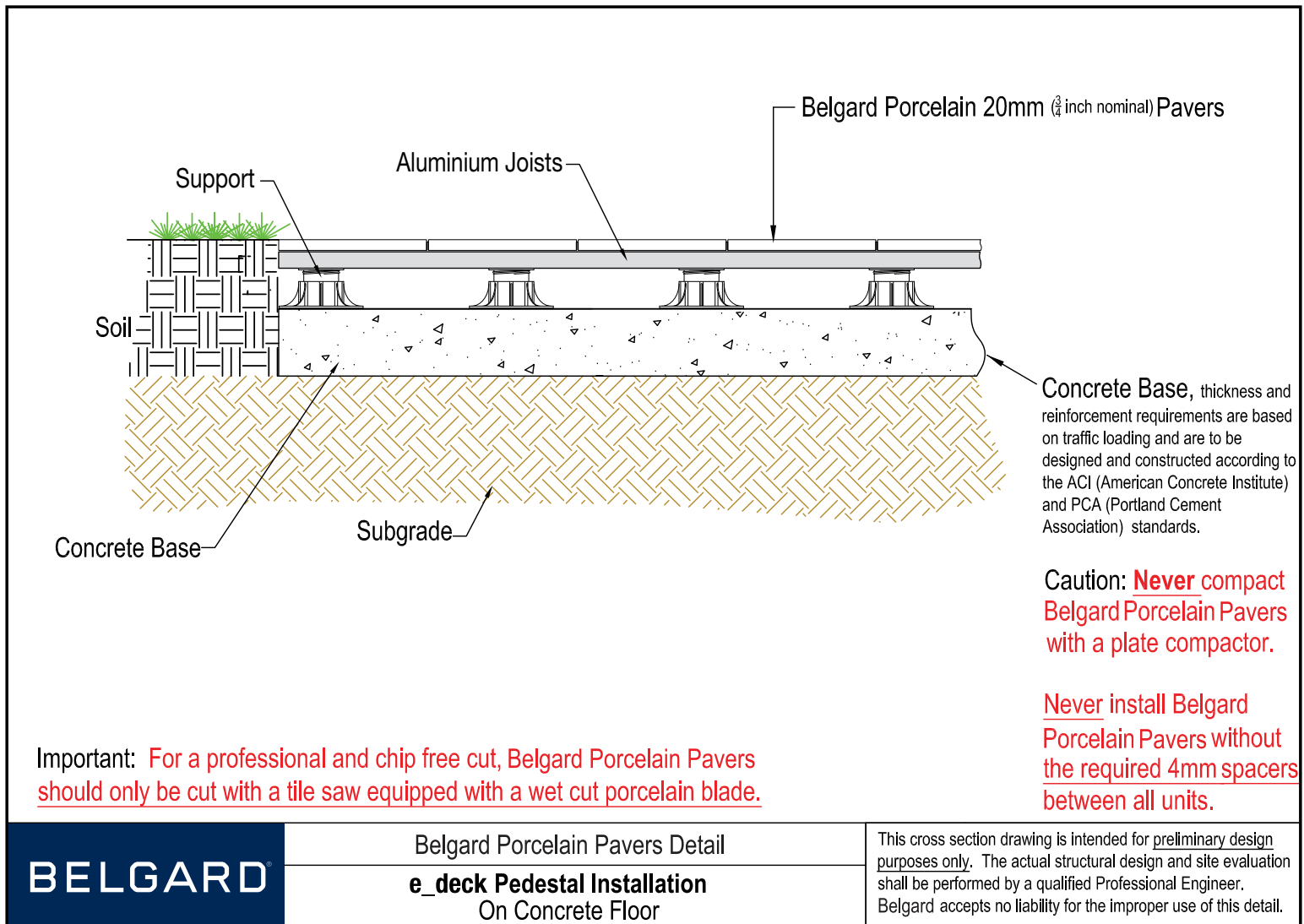
This cross section drawing is intended for preliminary design purposes only. The actual structural design and site evaluation shall be performed by a qualified Professional Engineer. Oldcastle accepts no liability for the improper use of this detail.



## 8. e\_deck: Pedestal System for Decking Installation, on Concrete Floor (Pedestrian Foot Traffic)

### INSTALLATION NOTES:

- Follow the detail drawing below.
- Insure that concrete slab is smooth, even across the surface and is constructed with a 2 degree pitch and that it is pitched away from any building.
- Insure the plastic pedestal support are installed at all corners and perimeter, to obtain the right stability of the floor.
- 8" is the Maximum height of the Pedestal Installation.
- All slabs must have a galvanized steel sheet on the back.
- The distance between joists has to be 16" for plank and 12" for other sizes.
- The flooring surface must slope in order to achieve a optimum water run-off: for slopes of the concrete base of a maximum of 3%, the e\_deck structure can level itself without needing any slope correctors.



## 1 EVO\_2/E™ porcelain stoneware with galvanized steel sheet



For further details and the technical specifications for galvanized steel sheet, please contact your Belgard dealer.

Belgard recommends the use of plus galvanized steel sheet on all the slabs of the raised flooring surface.

Belgard is only responsible if it supplies a complete system, therefore including the slabs with galvanized steel sheet attached.

## 2 Mirage® e\_deck kit

### A ALUMINIUM JOISTS



THREE CAVITY JOISTS IN STRENGTHENED ALUMINIUM WITH TEETH AND CAVITY, ON THE UPPER SURFACE, SPECIFICALLY SIZED FOR THE STRUCTURE COMPONENTS.

ALUMINIUM JOISTS	LENGTH	WIDTH	HEIGHT
	3000 mm 120"	70 mm 2 <sup>3</sup> / <sub>4</sub> "	30 mm 1 <sup>1</sup> / <sub>4</sub> "

### B SEALS



SEALS IN BLACK EPDM WITH AN ASYMMETRICAL "H" SECTION IN 3-METRE LENGTHS AND A SMOOTH SURFACE.

**i** The seals are supplied already fitted into the specific cavities on the aluminium joists of the E\_DECK KIT.

SEALS	WIDTH	HEIGHT
	10 mm 1/2"	5 mm 1/4"

### C SPACERS



SPECIALLY DESIGNED POLYPROPYLENE SPACERS TO GUARANTEE A 4MM GAP BETWEEN EVO\_2/E™ SLABS.

**i** The spacers are supplied packed in bags in the E\_DECK KIT

SPACERS	WIDTH	HEIGHT
	10 mm 1/2"	5 mm 1/4"

KIT CONTENTS		KIT PACKING DATA	
		NA - SI - SD 30x120	NA 19,7x120
	ALUMINIUM JOISTS	4 pcs	SURFACE / KIT 4,5 sqm/KIT
			WEIGHT/ KIT 19 kg
	SPACERS	40 pcs	KIT / PALLET 54 KIT
			sqm / PALLET 243 sqm/PALLET

**i** E\_DECK KIT DIMENSION: 130x70x3200 mm - 5<sup>1</sup>/<sub>4</sub>"x 2<sup>3</sup>/<sub>4</sub>"x 128"

## 3 Supports



ADJUSTABLE-HEIGHT SUPPORTS FOR RAISED FLOORING, COMPLETE WITH A HEAD IN BI-MATERIAL AND A RUBBER FINISH TO PREVENT NOISE AND SLIPPING.

SUPPORTS	BASE DIAMETER	HEAD DIAMETER	HEIGHT
	205 mm 8 1/4"	70 mm 2 3/4"	MAX 300 mm MAX 8"
SUPPORTS sqm E_DECK KIT			
3.5 pcs			



## 4 Accessories

### A MUTE



MAT FOR SUPPORTS PROVIDING ACOUSTIC INSULATION AND PROTECTION FOR THE MOISTURE BARRIER, MADE IN HIGH DENSITY MODIFIED CLOSED-CELL INSULATION FOAM.

MUTE	BASE DIAMETER	HEIGHT
	205 mm 8 1/4"	3 mm 1/8"

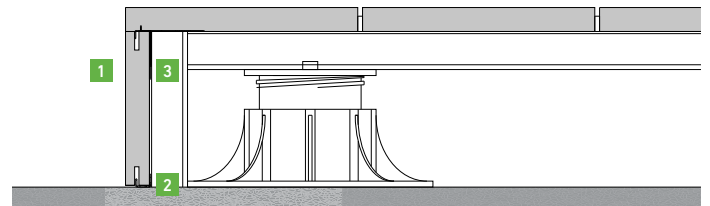
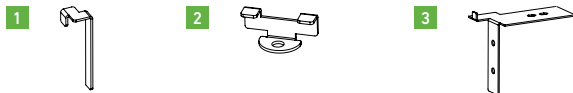
### B LATERAL RESTRAINT



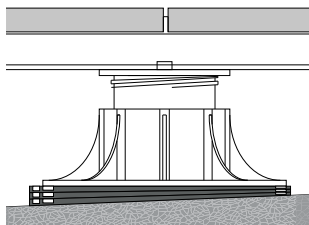
RESTRAINT FOR THE SLABS TO USE AROUND THE PERIMETER.

LATERAL RESTRAINT	WIDTH	HEIGHT
	32 mm 1 1/4"	15 mm 5/8"

### C LATERAL CLOSURE WITH EVO\_2/E™ SLAB



### D SLOPE CORRECTORS

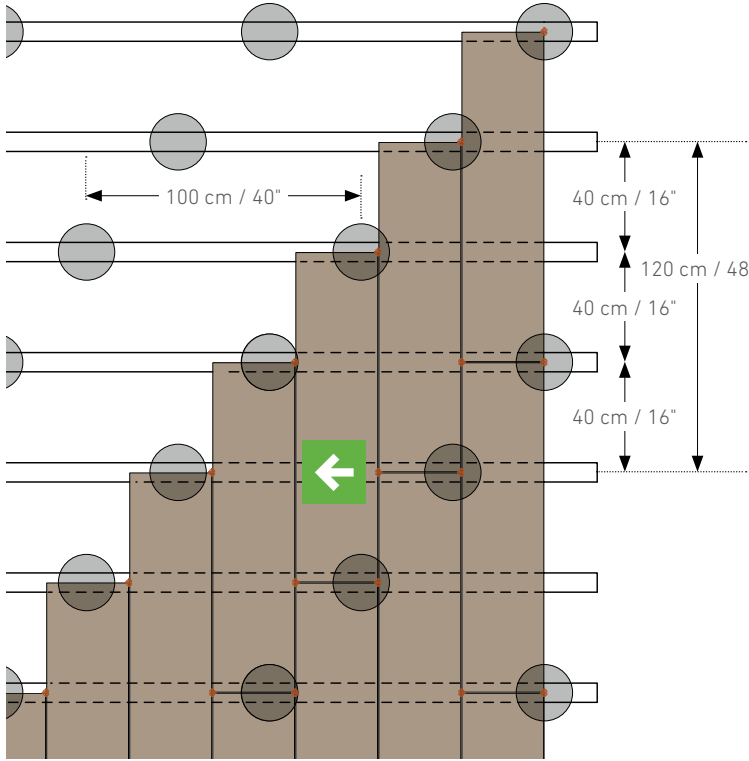


TO CORRECT THE SLOPE OF THE SUBSTRATE. FOR A BETTER WATER DOWNFLOW, MIRAGE RECOMMENDS A SLOPE OF THE FLOOR OF 1-2%.

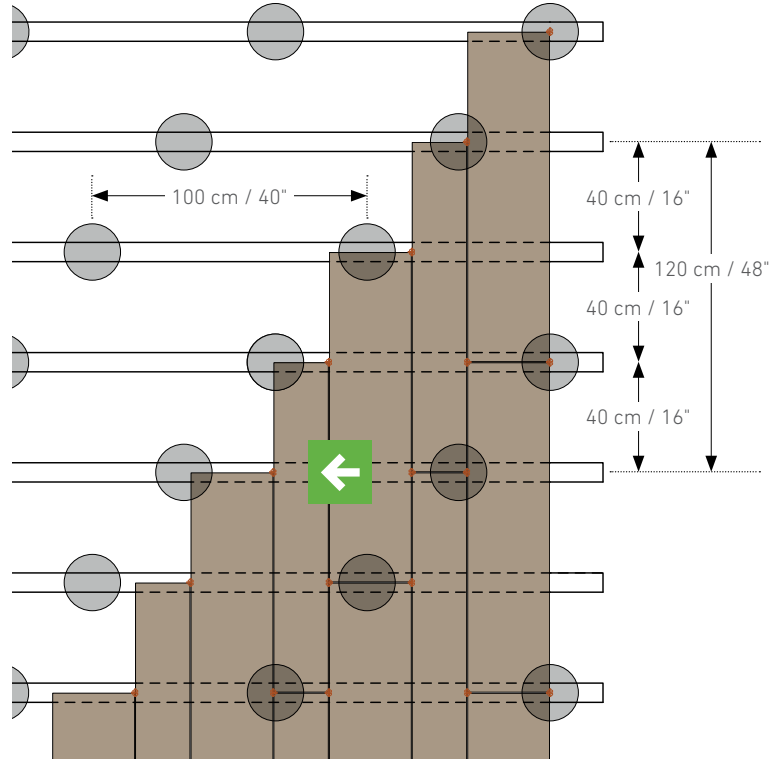
SLOPE CORRECTORS	SLOPE
	1% - 2% - 3% slope. Also usable combined.



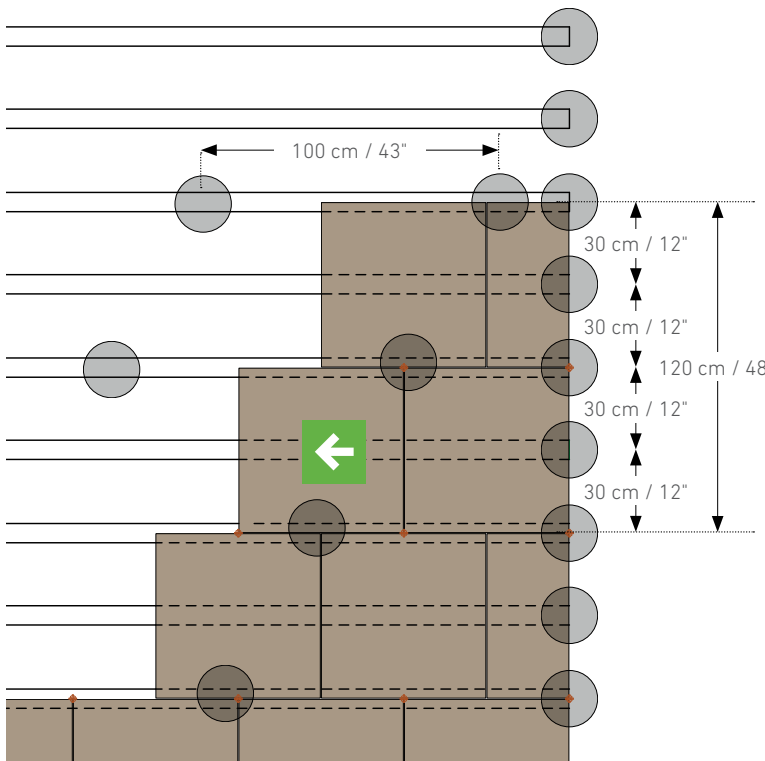
30x120 cm - 12"x48" size



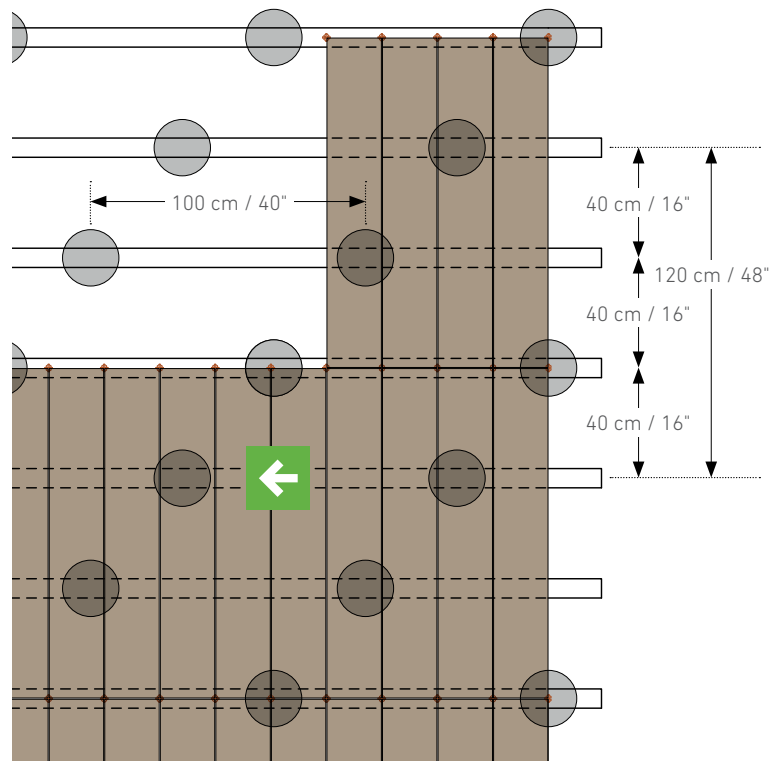
30x120 cm - 12"x48" / 20x120 cm - 8"x48" sizes



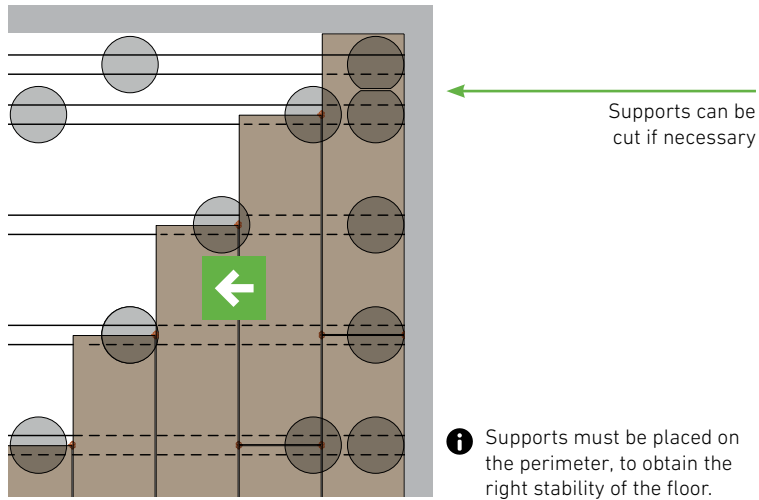
60x60 cm - 24"x24" size



20x120 cm - 8"x48" size



## Installation of **perimetral supports** and **aluminium joists**



**i** The arrow indicates the side where the flooring surface should slope in order to achieve optimum water run-off. For slopes of the concrete base of a maximum of 3%, the e\_deck structure can level itself without needing any slope correctors.

## e\_deck: structure tab

Size	From 3" to 12"
20x120 cm - 8"x48" (rated) 	e_deck structure + slab with galvanized steel sheet
30x120 cm - 12"x48" (rated) 	e_deck structure + slab with galvanized steel sheet
60x60 cm - 24"x24" (rated) 	e_deck structure + slab with galvanized steel sheet
45x90 cm - 18"x36" (rated) 60x120 cm - 24"x48" (rated) 	e_deck structure + slab with galvanized steel sheet
90x90 cm - 36"x36" (rated) 	e_deck structure + slab with galvanized steel sheet



1. Put the mute mats and the supports into position on the floor. (perimetral support must be cutted).
2. Put the joists into position (12" in -between) and secure them by pressing them down gently.
3. Start laying down tiles from the corner.
4. Use the spacers from the kit, in order to lay down the tiles properly.
5. Fix the lateral closure by using the special lateral restraint.
6. Cut on the edge the slabs, in order to fit perfectly into the lateral restraint.
7. Enjoy your new decking area!







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Belgard is also the only hardscapes company backed by the Good Housekeeping Seal. The limited warranty reflected by the Good Housekeeping Seal means that if a product bearing the Seal is defective within the first two years of purchase, Good Housekeeping will replace the product or refund the purchase price.



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