

BELGARD

Porcelain Pavers Installation Guide

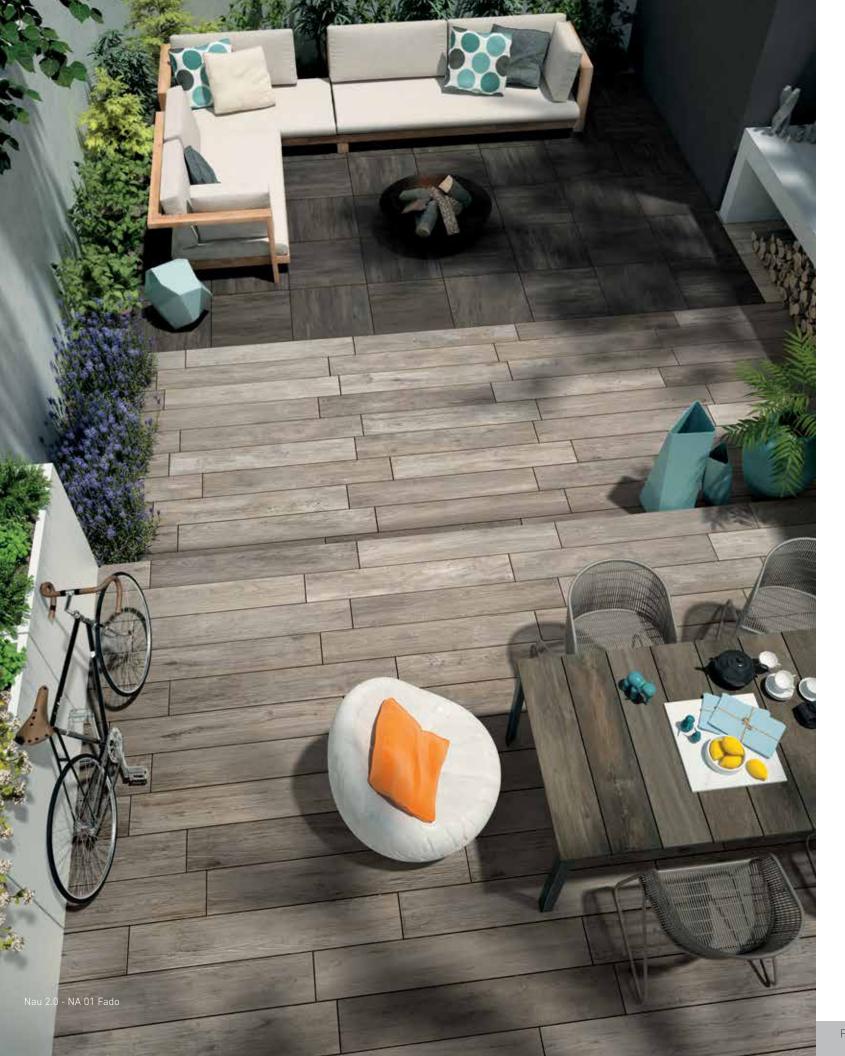


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PRODUCT OPTIONS











Available Colours



Available Colours







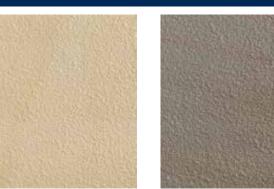
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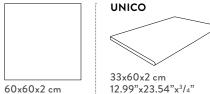


Lagos Grey EP 03 ST shadevariation S L I G H T



EP 04 ST

Shapes & Sizes



12.99"x23.54"x3/4" 23.54"x23.54"x³/₄" NAT NAT

RIFT



Laying Systems

INSTALLATION SAND SET OVER COMPACTED BASE 1











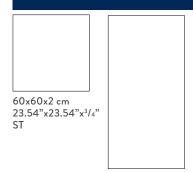


MORTAR BED

ADHESIVE INSTALLATION



Shapes & Sizes



Gross weight per box

Boxes / full pallet

Pallet gross weight

Sq ft / pallet

Pieces / Box

Sq ft / box

Cremo Delicato

EP o1 ST

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

Laying Systems

INSTALLATION SAND SET OVER COMPACTED BASE 1



INSTALLATION ON PERMEABLE AGGREGATE BASE 1 1



MORTAR BED **ADHESIVE** INSTALLATION



FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR





Gross weight per box

🦺 Boxes / full pallet

Pallet gross weight

Sq ft / pallet

Pieces / Box

👣 Sq ft / box





60x60x2 cm 24"x24"x³/4"

33.00 kg / 73 lbs

2

7.75

30

232.5

990 kg / 2183 lbs



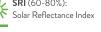


UNICO

27.00 kg / 60 lbs

3





RIFT

14.70 kg / 33 lbs

14

NAT STA Natural surface

PL Aged Piallata structure surface

RD Radiale surface





60x60x2 cm

23.54"x23.54"x3/4"

33.00 kg / 73 lbs

7.75

30

232.5

990 kg / 2183 lbs





60x120x2 cm

23.54x47.17"x3/4"

33.40 kg / 74 lbs

7.75

20

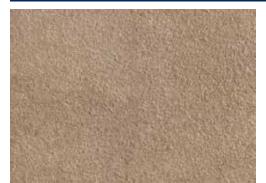
155

668 kg / 1473 lbs















Shapes & Sizes



Lab_mou

LB o4 ST

shadevariation S L I Q H T

60x60x2 cm 23.54"x23.54"x³/₄" ST

Gross weight per box

Pieces / Box

Sq ft / box

Boxes / full pallet

Pallet gross weight

Sq ft / pallet







INSTALLATION ON PERMEABLE AGGREGATE BASE 0 1



MORTAR BED **ADHESIVE** INSTALLATION 0



FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR

NAT









Available Colours



Acid OF o1 ST shadevariation



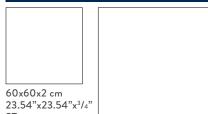
Romantic OF 02 ST



Dark OF o3 ST shadevariation S L I G H T



Shapes & Sizes



90x90x2 cm 35.35"x35.35"x³/₄"







INSTALLATION ON PERMEABLE AGGREGATE BASE 0 1



MORTAR BED **ADHESIVE** INSTALLATION 1



PEDESTAL INSTALLATION ON **CONCRETE FLOOR**













60x60x2 cm

23.54"x23.54"x3/4"

32.65 kg / 72 lbs

2

7.75

30

232.5

979.76 kg / 2160 lbs



SRI (60-80%): Solar Reflectance Index

STA

PL Aged Piallata structure surface

RD Radiale surface





60x60x2 cm

23.54x23.54"x3/4"

32.90 kg / 73 lbs

2

7.75

30

232.5

987 kg / 2176 lbs



90x90x2 cm

35.35"x35.35"x³/₄"

37.60 kg / 83 lbs

8.7

18

156.6

677 kg / 1493 lbs



STA NAT Aged Piallata structure surface

Gross weight per box

Pieces / Box

Sq ft / box

Boxes / full pallet

Pallet gross weight

Sq ft / pallet





Nau 2.0





Jura Beige **NE 10** ST

NE 12 ST

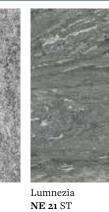
shadevariation 67





shadevariation 2 S L I G H T















shadevariation \$2 \$ L I G H T shadevariation shadevariation

shadevariation S L I G H T

NA o1 RD shadevariation MODERATE



NA 02 RD

shadevariation MODERATE

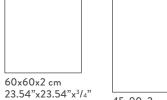
Available Colours



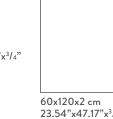
Laying Systems

NA 04 RD shadevariation MODERATE

Shapes & Sizes







60x120x2 cm

33.40 kg / 74 lbs

7.75

20

155

668 kg / 1473 lbs



60x60x2 cm

33.00 kg / 73 lbs

2

7.75

30

232.5

990 kg /2183 lbs

30x120x2 cm 11.73"x47.17"x³/₄" RD

45x90x2 cm

37.00 kg / 82 lbs

8.7

27

234.9

999 kg / 2203 lbs

Laying Systems



INSTALLATION

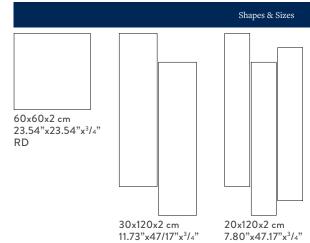
ON PERMEABLE

1 1

shadevariation \$\frac{2}{s \ L \ I \ G \ H \ T}\$







RD

Gross weight per box

Pieces / Box

👣 Sq ft / box

Boxes / full pallet

Pallet gross weight

Sq ft / pallet



INSTALLATION SAND SET OVER COMPACTED BASE



MORTAR BED ADHESIVE INSTALLATION 1



FIXED PEDESTAL INSTALLATION ON CONCRETE FLOOR



MORTAR BED **ADHESIVE** INSTALLATION 1













Gross weight per box

Pieces / Box

👣 Sq ft / box

Boxes / full pallet

Pallet gross weight

Sq ft / pallet







23.54"x47.17"x3/4" 23.54"x23.54"x3/4" 17.64"x35.35"x3/4" 11.73"x47.17"x3/4"



44	SRI (60-80%):
<u>※</u>	Solar Reflectance Index

30x120x2 cm

33.40 kg / 74 lbs

2

7.75

20

155

668 kg / 1473 lbs

NAT	STA	
Natural surface	Aged structure	

RD ST Radiale surface





RD

60x60x2 cm

23.54"x23.54"x3/4"

32.23 kg / 71 lbs

2

7.75

30

232.5

967 kg / 2132 lbs



30x120x2 cm

11.73"x47/17"x3/4"

33.40 kg / 74 lbs

2

7.75

20

155

668 kg / 1473 lbs



20x120x2 cm

7.80"x47.17"x3/4"

20.90 kg / 46 lbs

5.1

30

151.8

627 kg / 1383 lbs











Available Colours



RR o1 ST / STA



Grå RR 02 ST / STA shadevariation



Laying Systems

Svart RR o3 ST / STA shadevariation S L I Q H T

INSTALLATION

SAND SET OVER COMPACTED BASE



Acid OF o1 ST shadevariation S L I Q H T



Romantic OF 02 ST

Shapes & Sizes



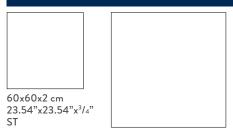
Dark OF o3 ST shadevariation S L I Q H T

Available Colours



Gothic OF 04 ST shadevariation

Shapes & Sizes



90x90x2 cm 35.35"x35.35"x³/₄"



90x90x2 cm

35.35"x35.35"x3/4"

37.60 kg / 83 lbs

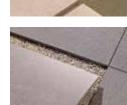
8.7

18

156.6

677 kg / 1493 lbs

INSTALLATION ON PERMEABLE AGGREGATE BASE 1





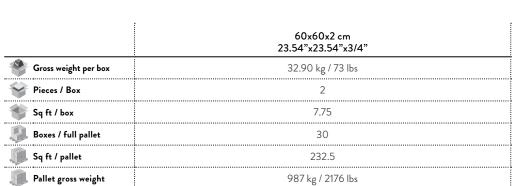




RD













INSTALLATION ON PERMEABLE AGGREGATE BASE 1 1



MORTAR BED ADHESIVE INSTALLATION



PEDESTAL INSTALLATION ON **CONCRETE FLOOR**





Gross weight per box

Boxes / full pallet

Pallet gross weight

Pieces / Box

Sq ft / box

🦺 Sq ft / pallet





60x60x2 cm

23.54"x23.54"x3/4"

33.00 kg / 73 lbs

2

7.75

30

232.5

990 kg / 2183 lbs







UNICO

27.00 kg / 60 lbs

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STA Natural surface

NAT

Aged Piallata structure surface

ST Radiale surface











STA NAT

PL Aged Piallata structure surface RD ST





Signature

Available Colours

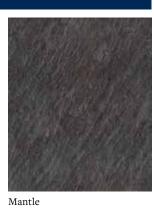












Artico





Glacier QR o1 NAT

Mountains QR 02 NAT

Waterfall QR o3 NAT shadevariation

QR 04 NAT shadevariation V3

QR o5 NAT shadevariation MODERATE

Laying Systems

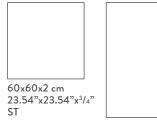
SI o1 RD shadevariation MODERATE

Havana SI 04 RD shadevariation MODERATE

Shapes & Sizes

SI o5 RD shadevariation MODERATE

Shapes & Sizes



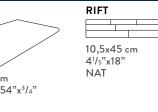


17.64"x35.35"x3/4" 23.54"x47.17"x³/₄"

ST









1 1

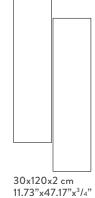
INSTALLATION ON PERMEABLE

MORTAR BED

AGGREGATE BASE









INSTALLATION ON PERMEABLE AGGREGATE BASE 0 1



MORTAR BED ADHESIVE INSTALLATION



FIXED PEDESTAL INSTALLATION ON

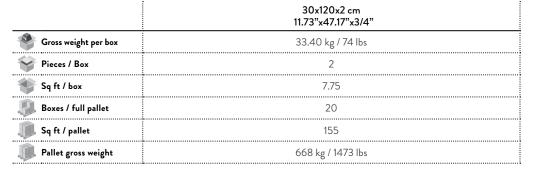


60x90x2 cm + 30x60x2 cm 23.54"x35.35"x³/₄" + 11.73"x23.54"x³/₄" ST (QR 02 - QR 03 - QR 05)

	60x60x2 cm 23.54"x23.54"x3/4"	45x90x2 cm 17.64"x35.35"x³/4"		UNICO	MODULAR	RIFT
Gross weight per box	32.23 kg / 71 lbs	37.00 kg / 82 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 (1-30x60 +	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	967 kg / 2132 lbs	999 kg / 2203 lbs	668 kg / 1473 lbs	-	668 kg / 1473 lbs	-







CONCRETE	FLOOR	
INSON Innovative Products	2 _deck	













PL Aged Piallata structure surface

RD Radiale surface





















Available Colours



Chambrod



Origin



Available Colours



SO o5 ST

Pierre Bleue **SO** 10 ST shadevariation S L I Q H T

SO 11 ST shadevariation

1

INSTALLATION

ON PERMEABLE

AGGREGATE BASE

0 1



Classic SD 02 RD shadevariation MODERATE

Shapes & Sizes

SD 03 RD shadevariation MODERATE

Shapes & Sizes



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

60x60x2 cm

23.54"x23.54"x3/4"

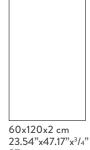
7.75

30

232.5

Pallet gross weight 979.76 kg / 2160 lbs 657 kg / 1449 lbs 668 kg / 1473 lbs

Gross weight per box 32.65 kg / 72 lbs



90x90x2 cm

36.50 kg / 81 lbs

8.7

18

156.6



60x120x2 cm

23.54"x47.17"x3/4"

7.75

20

155



RIFT

14

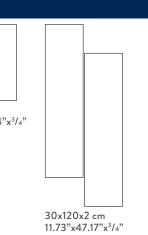
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RD





INSTALLATION ON PERMEABLE AGGREGATE BASE 0 1



MORTAR BED **ADHESIVE** INSTALLATION



FIXED PEDESTAL **INSTALLATION ON** CONCRETE FLOOR

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	MORTAR BED	
	ADHESIVE	
	INSTALLATION	
i	0	

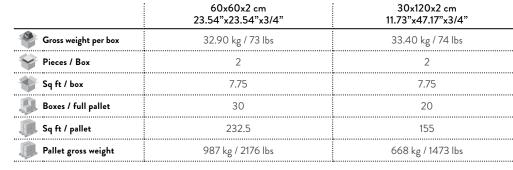












iform	shadevariation Slight	shadevariation Moderate	shadevariation Substantial	SRI (60-80%):	NAT	STA	PL	RD
pearance	variation	variation	variation	Solar Reflectance Index	Natural surface	Aged structure	Piallata surface	Radiale surface

UNICO

33.40 kg / 74 lbs 27.00 kg / 60 lbs 14.70 kg / 33 lbs

3

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Pieces / Box

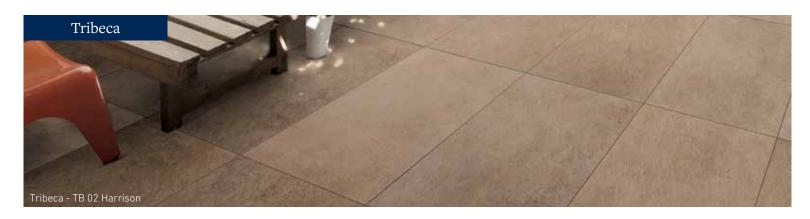
Sq ft / box

Boxes / full pallet

Sq ft / pallet

ST

Structured surface



Available Colours







Hudson TB o3 NAT shadevariation



Greenwich TB 04 NAT shadevariation



Broadway TB o5 NAT shadevariation

Shapes & Sizes



45x90x2 cm 17.64"x35.35"x³/₄" 60x60x2 cm 23.54"x23.54"x³/₄" NAT



10,5x45 cm 4¹/₅"x18" NAT

Laying Systems









MORTAR BED ADHESIVE INSTALLATION







RD



Gross weight per box

Boxes / full pallet

Pallet gross weight

Sq ft / pallet

Pieces / Box

👣 Sq ft / box





60x60x2 cm

23.54"x23.54"x3/4"

33.00 kg / 73 lbs

7.75

30

232.5

990 kg / 2183 lbs



45x90x2 cm

17.64"x35.35"x3/4"

37.00 kg / 82 lbs

8.7

27

234.9

999 kg / 2203 lbs



RIFT

14.70 kg / 33 lbs

14

STA

Aged Piallata Radiale Structured structure surface surface surface

INTRODUCTION



Porcelain Pavers Installation Guide: 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, guartz, 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 unmatchable 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 $(-60^{\circ} \text{ F to } +140^{\circ} \text{F}).$
- 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
- 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 colours 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.

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.

• Once the Heavy Duty plastic pallet covers have been removed from the pallet, the un-used boxed pavers should be protected from

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:

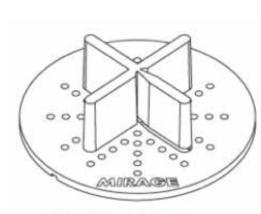
• NEVER compact porcelain pavers with a plate compactor.

the elements to insure the integrity of the protective cardboard boxes.

- 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.







Mirage® Space G plus spacers





Porcelain Pavers Installation Guide: Introduction



Porcelain Pavers Installation Guide: Introduction

CLEANING PRODUCTS:

Types of Detergents Where sales are permitted	SOLVENTS (bleaching solution, oil of turpentine, acetone,		Alkaline based detergents ALKALI (alkaline-based professional detergents)
	trichloroethylene, nitrate based thinner)	phosphoric acid)	
TYPES OF STAIN			
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 catalogue are LEED compliant and 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 outwith urban areas), in order to cut effects on the microclimate and the habitat to a minimum. This is achieved thanks to 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)

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 because they contain 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 Optimisation of energy performance (1 Point)

INNOVATION 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)

VOC CONTENT

Mirage® material guarantees a very low amount of air pollutants.

EQ_4.2 Low-emission materials (1 Point)

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
ARDESIE	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
CCDDIT	Cremo Delicato EP 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
ESPRIT	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
I A D 21	LAB_Mou LB 04	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
LAB_21	LAB_Fog LB 07	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
MACHILID	Square MP 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
MASHUP	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
NIA N45	Jura Beige NE 10	From 1 To 2 Credits	_	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
NA.ME	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
	Fado NA 01	From 1 To 2 Credits	_	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
NAU	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
	RR 01 Vit	From 1 To 2 Credits	_	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
NORR	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
	Acid OF 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
OFFICINE	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
	Glacier QR 01	From 1 To 2 Credits	-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
QUARZITI 2.0	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
	Artico SI 01	From 1 To 2 Credits		1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
SIGNATURE	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
	Chambrod SO 05	From 1 To 2 Credits		1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
STONES_2.0	Pierre Bleue SO 10	From 1 to 2 credits	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	Z Credits	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
	Origin SD 01		-	1 Credit	From 1 To 4 Credits	1 Credit	From 4 To 8 Credits
SUNDECK							
	Classic SD 02	-	-	1 Credit	From 1 To 4 Credits	1 Credit	From 3 To 6 Credits
	Spirit SD 03	- I T- 0.0 - 12	-	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



Porcelain Pavers Installation Guide: Introduction

Porcelain Pavers Installation Guide: Introduction

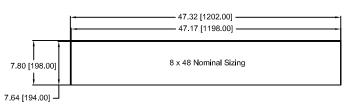
Legal Disclaimer

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)

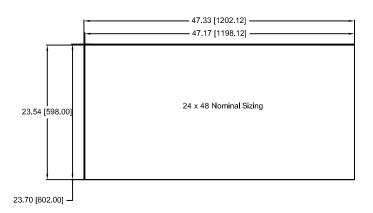
8"x 48" Nominal sizing

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



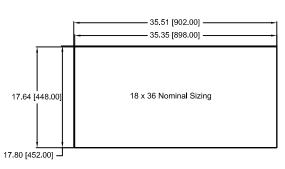
24"x 48" Nominal sizing

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"



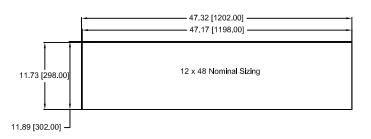
18"x 36" Nominal sizing

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"



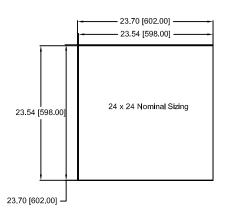
12"x 48" Nominal sizing

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"



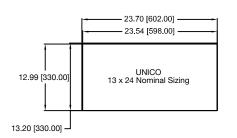
24"x 24" Nominal sizing

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"



UNICO 131/5"x 24" Nominal sizing

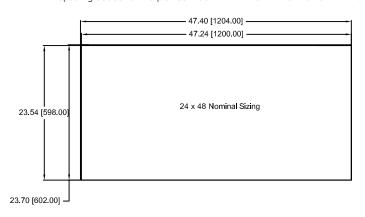
Calibrated unit cut sizing without spacing = 330x598mm or 12.99" x 23.54" With 4mm spacing added to two planes = 330x602mm or 13.20" x 23.70"



CALIBER - (U) - only for modular collections

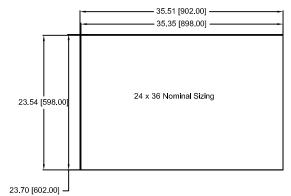
24"x 48" Nominal sizing

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"



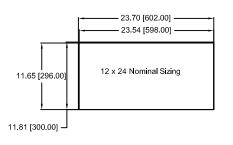
24"x 36" Nominal sizing

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"



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



JOINT INFILLING INFORMATION: When porecelain pavers are installed as sand set installations, you may fill the 4mm paver joints with:

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



Porcelain Pavers Installation Guide: Introduction

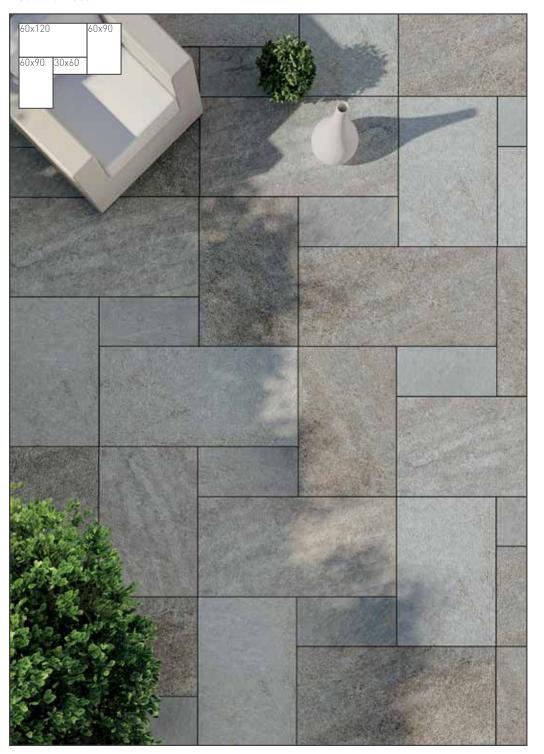
MODULAR PROJECT:

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 #4

Module percentages:

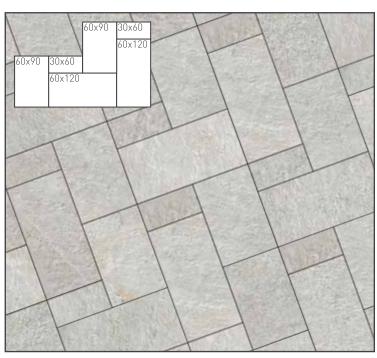
- modular (1 pc. 60x90 + 1 pc. 30x60) 40%
- 60x120 40% 60x60 20%



MODULAR #3

Module percentages:

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



MODULAR #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 (CaCl₂).

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)
	Cementitious Adhesive Overlay, Concrete Base Installation	
4.	Permeable Over Open Graded Aggregate Installation	(Pedestrian Foot Traffic)
5.	Stepping Stone Sand Set on Compacted Road Base Installation	(Pedestrian Foot Traffic)
6.	34" 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.

For more information visit Belgard.com/porcelain

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INSTALLATION OPTIONS



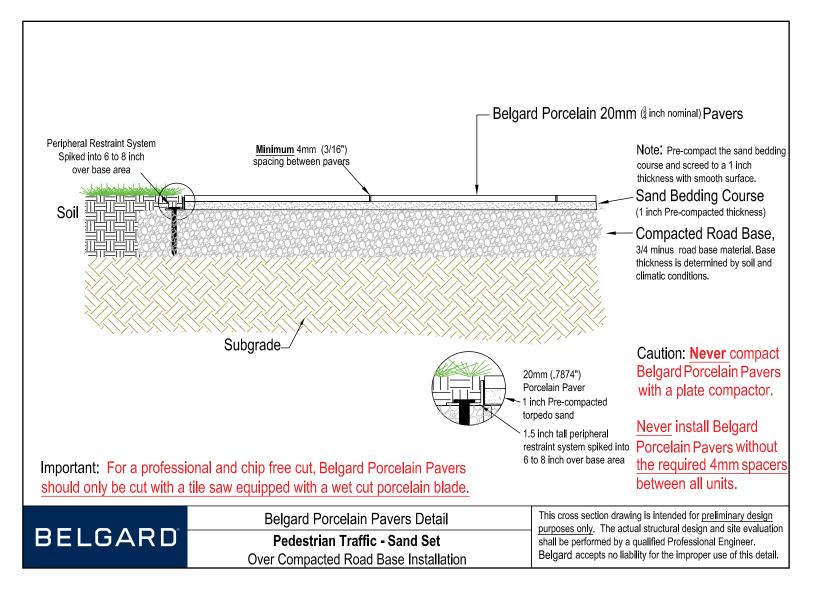
Sand Set over Compacted Road Base Installation – (Pedestrian Foot Traffic)



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

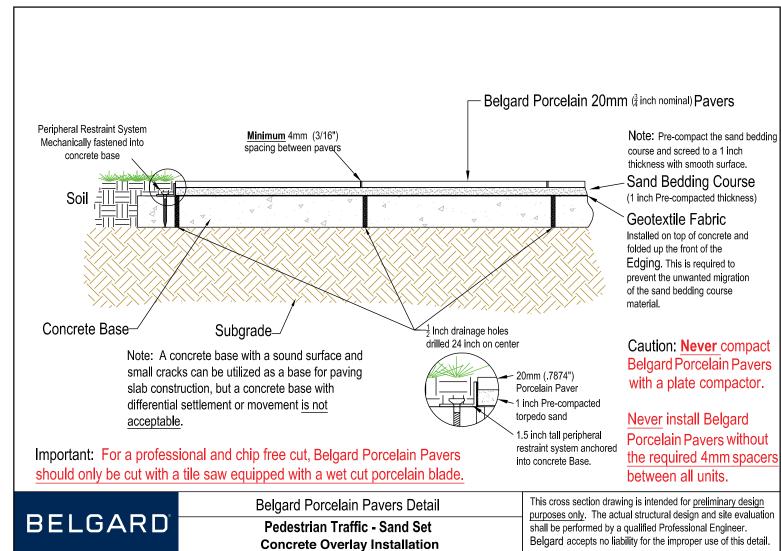
INSTALLATION NOTES:

- 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 <u>low profile</u> edge restraint with a <u>vertical height of 1 ½ inches</u> 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.



INSTALLATION NOTES:

- Follow the detail drawing below.
- The required edge restraint system is a <u>low profile</u> edge restraint with a <u>vertical height of 1 ½ inches</u> 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.





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



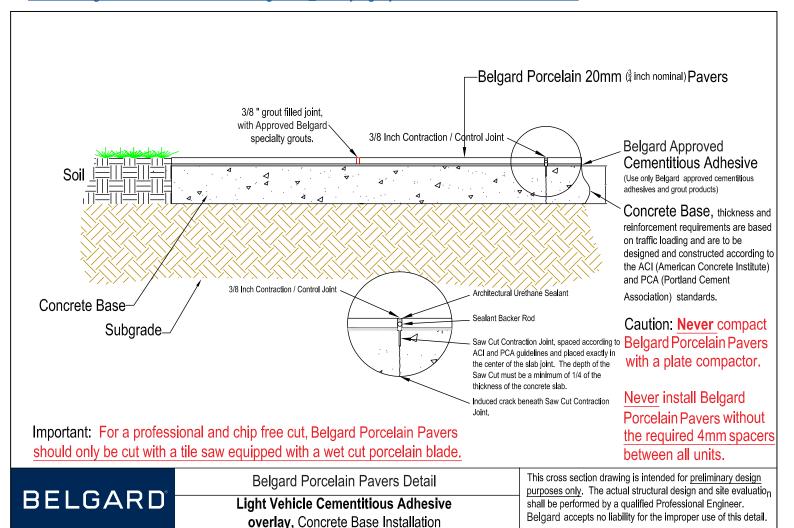
4. Permeable Over Open Graded Aggregate Installation (Pedestrian Foot Traffic)

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 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, www.mapei.com/public/US/products/kerapoxytds ea.pdf

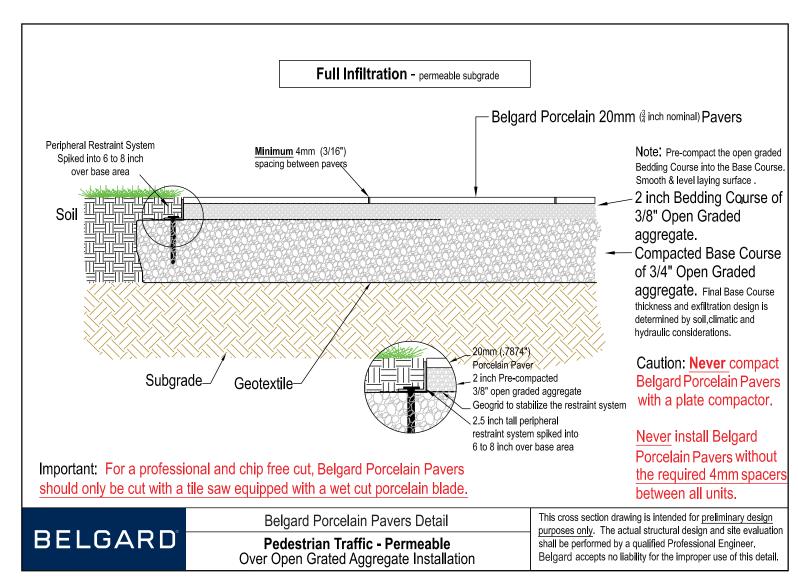
For Cementitious adhesive and grout installation, refer to the manufacturer's technical instructions and specifically as they relate to outdoor installations.

- 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 /
- 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/



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.

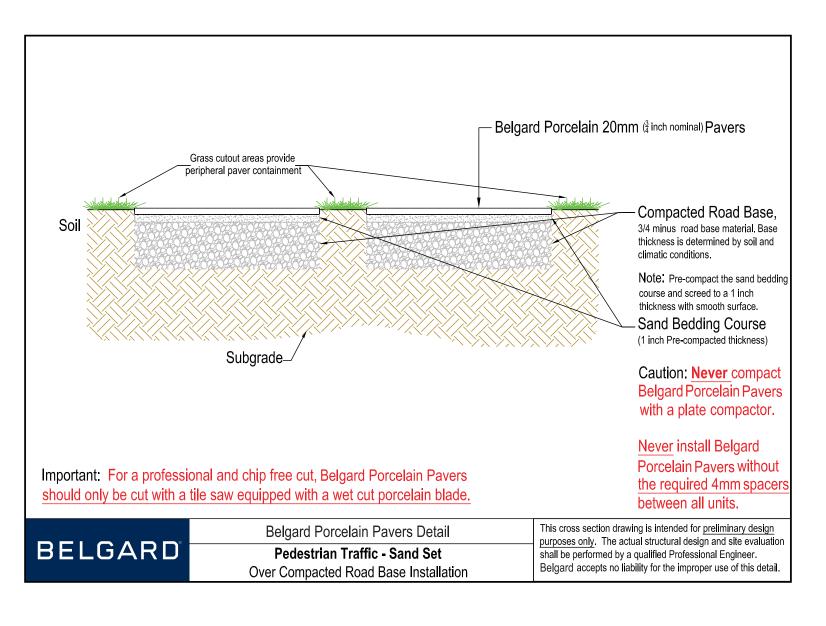




5. Stepping Stone Sand Set on Compacted Road Base Installation (Pedestrian Foot Traffic)



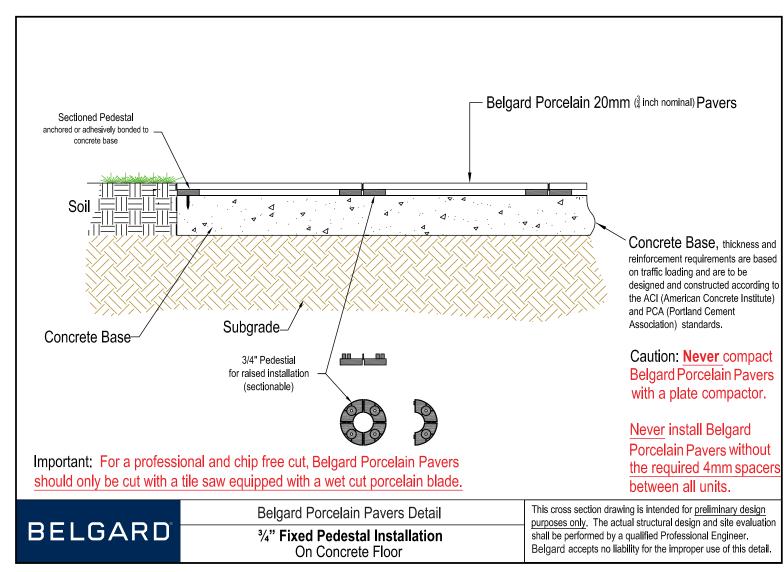
6. ¾" Fixed Pedestal Installation on Concrete Floor (Pedestrian Foot Traffic)



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)



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

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.

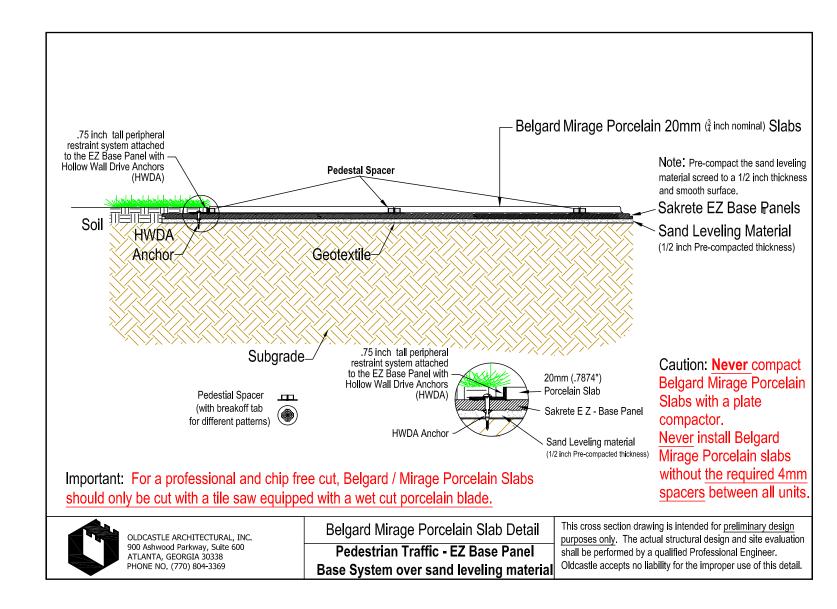
Step 6: Install, Sweep and Hydrate Polymeric Sand

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.





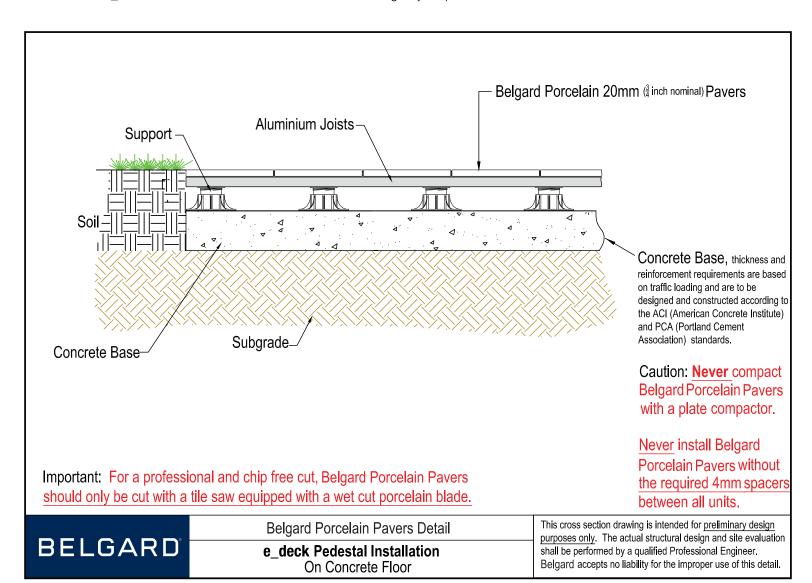
8. e_deck: Pedestal System for Decking Installation, on Concrete Floor (Pedestrian Foot Traffic)



8. e_deck: Pedestal System for Decking Installation, on Concrete Floor (Pedestrian Foot Traffic) Cont.

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

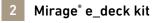




For further details and the technical specifications for galvanized steel sheet, please contact your Belgard dealer.

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

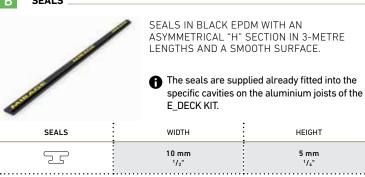
Belgard is only responsible if it supplies a complete system, therefore including the slabs with galvanized steel sheet attached.

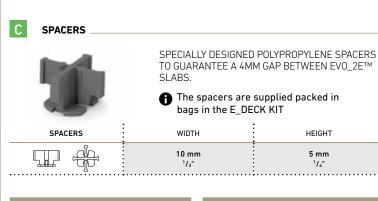




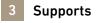
THREE CAVITY JOISTS IN STRENGTHENED ALUMINIUM WITH TEETH AND CAVITY, ON THE UPPER SURFACE, SPECIFICALLY SIZED FOR THE STRUCTURE COMPONENTS.

ALUMINIUM JOISTS	LENGTH	WIDTH	HEIGHT
	3000 mm	70 mm	30 mm
	120"	2³/₄"	1¹/₄"





Ш		KIT CONTENTS			NA - 5	KIT PACKING DA SI - SD 30x120 N	TA A 19,7x120
	M	ALUMINIUM ,		\	SURFACE / KIT	4,5 sqm/KIT	
	JOISTS	4 pcs		kq	WEIGHT/ KIT	19 kg	
	Italia	5010505			KIT / PALLET	54 KIT	
	SPACERS	40 pcs	0 pcs		sqm / PALLET	243 sqm/PALLET	
'	A E DECK	K KIT DIMENSI	ON: 130x70x32	200	mm - 5 ¹ /	₄ "x 2 ³ / ₄ "x 128"	••••••

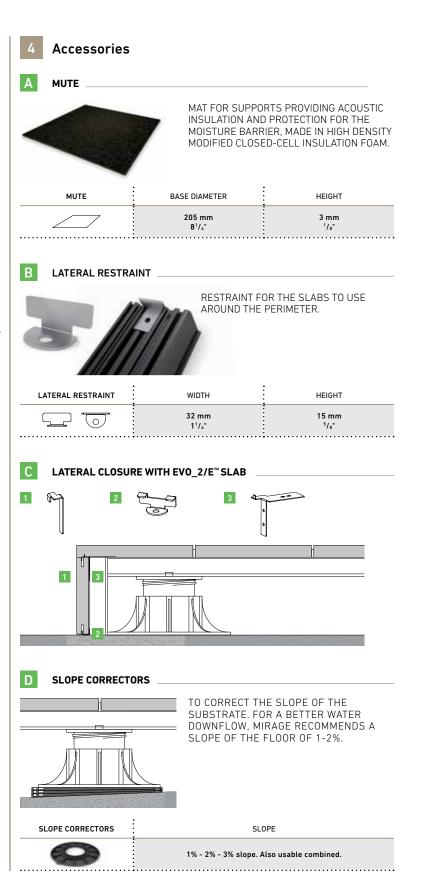


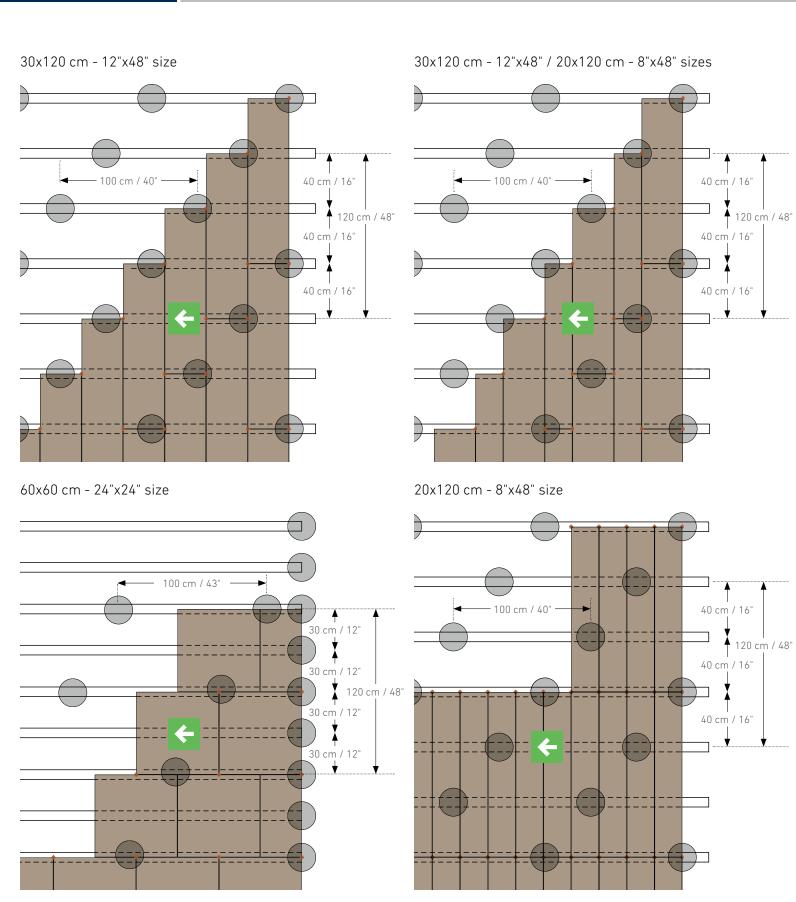


ADJUSTABLE-HEIGHT SUPPORTS FOR RAISED FLOORING, COMPLETE WITH A HEAD IN BI-MATERIAL AND A RUBBER FINISH TO PREVENT NOISE AND SLIPPING.

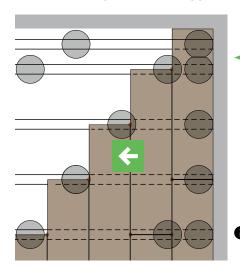
SUPPORTS	BASE DIAMETER	HEAD DIAMETER	HEIGHT
	205 mm 8¹/₄"	70 mm 2³/₄"	MAX 300 mm MAX 8"
	SUPPORTS sqm E_DECK KIT		
		3,5 pcs	







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

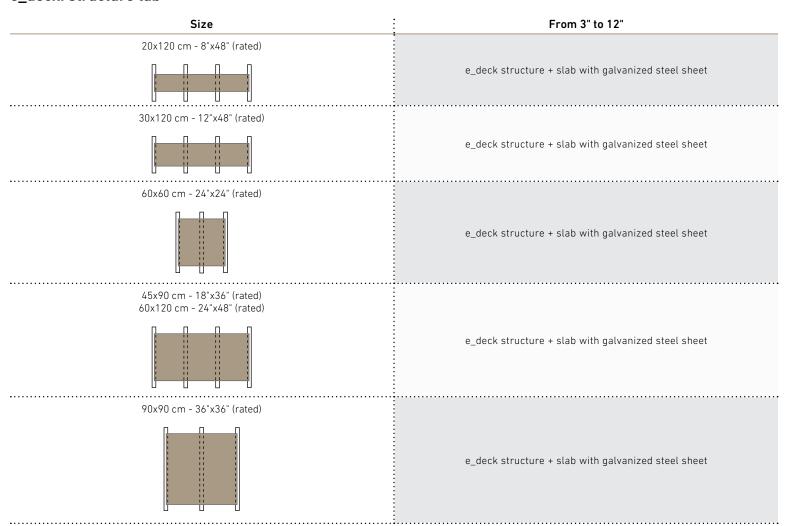


←

Supports can be cut if necessary

Supports must be placed on the perimeter, to obtain the right stability of the floor. 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

















- 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!



Notes



Notes



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Notes

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