



MBRICO

PREMIUM EXTERIOR PORCELAIN PAVERS
FOR CORNER PEDESTAL SUPPORTS



**PORCELAIN PAVERS
LIKE NO OTHERS.**






EASY TO INSTALL


EASY TO KEEP CLEAN
Mild environmentally friendly detergents can be used when cleaning your porcelain pavers. Pressure washers up to 1500 PSI may be used without fear of etching or striping.



ANTISLIP
The structure and texture of the porcelain paver reduce the risk of slipperiness.



RESISTANT TO MOSS AND MOLDING


EASY TO REPLACE AND REMOVE
can be easily removed and repositioned in a new area.


DRIVE OVER*
pavers are suitable for light residential vehicular traffic.
(*) When installed over reinforced concrete (4" minimum) using a thinset mortar suitable for porcelain paver.




STAIN RESISTANT
Due to the baked on glazing process nothing can be absorbed including stains.


RESISTANT TO THERMAL SHOCK


SCRATCH RESISTANT


FADE RESISTANT


FROST RESISTANT


RESISTANT TO SALTS


RESISTANT TO ACID AND CHEMICALS


ECO-FRIENDLY
20% recycled content in our usa made porcelain pavers.


NO SEALING NEEDED


SAVING OVER TIME
Low maintenance cost.

04 RAISED FLOORS.

In combination with a suitable structure the Mbrico porcelain pavers in 20mm thickness lend themselves perfectly to floors with a **suspended installation**. The adjustable stand means being able to create an air space under the floor in which to lay electrical conduit or plumbing. The raised flooring system is easy to manage, allows you to configure the underlying wiring or plumbing systems based on specific needs and also to change its configuration any time a new look is needed.

ADVANTAGES.

- LEVEL OFF UNEVEN SURFACES
- ALLOWS YOU TO HIDE UNSIGHTLY PIPES AND PLANTS WIRES AND ELECTRICAL CONDUIT
- EASY MAINTENANCE
- ALLOWS FOR WATER DRAINAGE
- RESISTANT TO THERMAL EXPANSION
- PROVIDES THERMAL AND ACOUSTIC INSULATION
- NO NEED FOR ADHESIVES
- REDUCES LABOUR COSTS

LOCATIONS.

- PATIOS
- GAZEBOS
- FACILITY AREAS OF COMMERCIAL VENUES
- ROOF TOPS



LOW HEIGHT SUPPORTS (UP TO 3/4" - 20MM) PEDESTAL INSTALLATION OVER EXISTING SUBSTRATE (PEDESTRIAN FOOT TRAFFIC)

PRACTICAL INSTALLATION

Follow the drawing below.

- Ensure concrete slab is in stable condition and has a 1" in 10' slope to divert water away from structure.
- Ensure spacer tabs are intact in the corners where the porcelain pavers might come to contact.



- A** FRONTIER20 PORCELAIN 3/4" NOMINAL (20MM) PAVERS
- B** PEDESTAL
- C** EXISTING SLAB OR SUBSTRATE

Insure the plastic 3/16" (4 mm) spacers are installed at all corners of the installed pavers, in order to prevent pavers from touching each other (and potentially chipping) and to allow better water drainage.

The stratigraphic images are just an example of the type of application and technical features of Frontier20. Landmark Ceramics recommends to refer to the specific norms valid in the various countries to carry out a state-of-the-art installation. Download Landmark Frontier20 Installation guide from outdoor.landmarkceramics.com for practical installation information.

INSTALLATION OVER LOW HEIGHT SUPPORTS (UP TO 3/4" - 20MM) PEDESTAL ON CONCRETE (PEDESTRIAN FOOT TRAFFIC)

PRACTICAL INSTALLATION

Follow the drawing below.

- Make sure the concrete slab is properly built and smooth and has 1 1/2 - 2 degree pitch and that it is pitched away from any building.
- Plastic 3/4" pedestal support must be placed and installed all corners of the pavers.



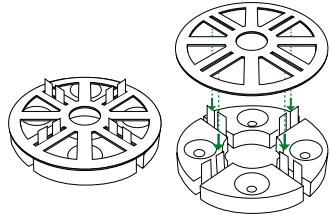
- A** FRONTIER20 PORCELAIN 3/4" NOMINAL (20MM) PAVERS
- B** PEDESTAL
- C** CONCRETE BASE
- D** SUBSTRATE

RAISED FLOORS INSTALLATION SYSTEM.




LOW HEIGHT SUPPORTS.

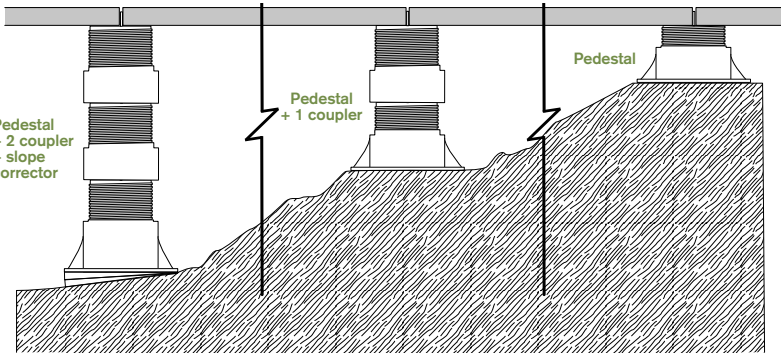
System made up of disks of variable thickness. Utilize for low height installation (up to 3/4").

	AVAILABLE HEIGHT			
	1/8"	1/4"	1/2"	3/4"
	1/8"			



ADJUSTABLE HEIGHT SUPPORTS.

	AVAILABLE HEIGHT
	
	
	0" - 1" per foot slope

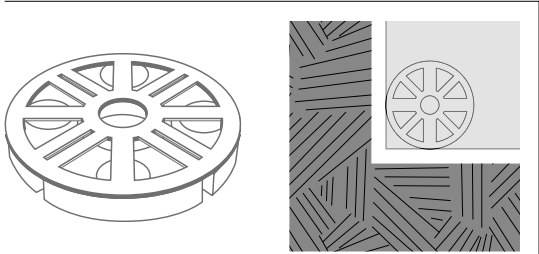


RAISED FLOORS INSTALLATION SYSTEM.

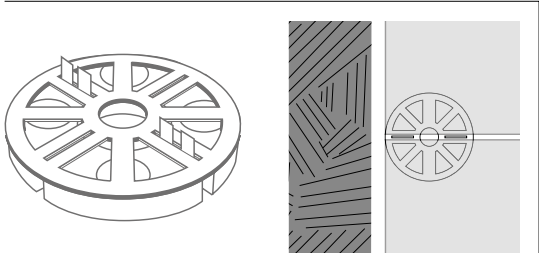
20 THICKNESS
PORCELAIN PAVERS

It is recommended to carry out raised installation onto a solid, resistant substrate with the correct inclination to guarantee water drainage. Support come equipped with four spacers that allow for the creation of grout lines between pavers. For a correct installation against walls or corners, it is necessary to keep the supports distant from the wall and remove 2 or 4 spacers as showed in the picture. Mbrico porcelain tile recommends to strictly follow the instructions for the raised installation

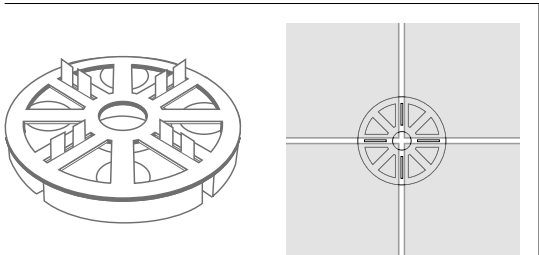
Wall corner



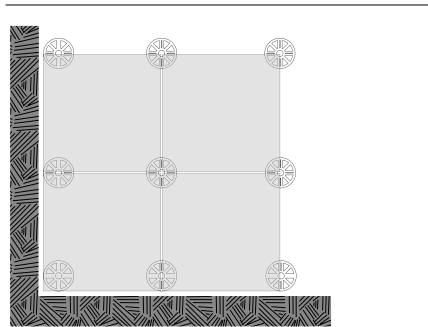
Wall border



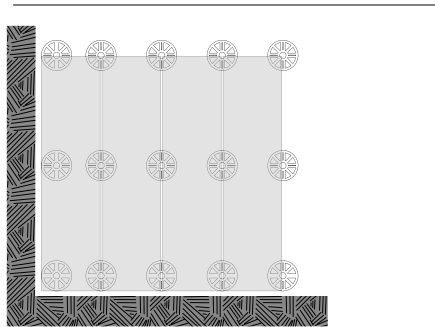
Floor center



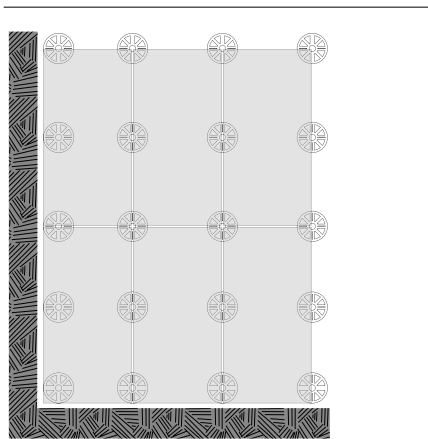
24"x24" - 12"x24" - 12"x12"



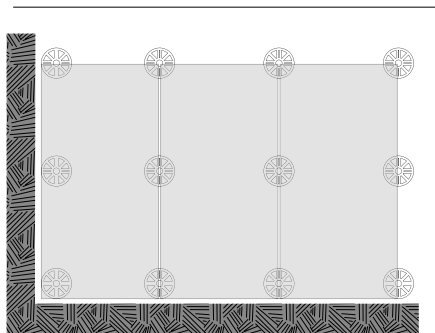
12"x48"



18"x36"



24"x48"



RAISED FLOORS INSTALLATION SYSTEM.

WARNINGS.

If the application of the 20mm slabs requires the ceramic product used in structural installations, the project engineer and/or customer must carefully assess the project requirements with regard to the technical specifications of the slabs. to prevent the risk of damage or injury, the manufacturer recommends: with regard to a raised floor installation a ceramic slab may fracture on impact if a heavy object falls on it from any significant height. therefore the manufacturer recommends to check the specific intended use before starting the installation and to follow table for raised installation provided below. in certain conditions, reinforcing must be applied on the back of the slabs

Failure to comply with these recommendations may lead to improper use of the product and could cause serious damage or injury. For further information and recommendations concerning the installation systems please contact your Mbrico representative.

SUPPORTS REQUIREMENTS

	SIZE	UP TO ¾" (20MM)	ABOVE ¾" (20MM)
	12"x12" (300x300 mm)	4 supports 0,32 pcs/sq ft	Please contact Mbrico Tile or Visit the Rooftop Track System Specifications
	12"x24" (600x300 mm)	4 supports 0,32 pcs/sq ft	
	24"x24" (600x600 mm)	4 supports 0,32 pcs/sq ft	
	24"x36" (600x900 mm)	6 supports 0,32 pcs/sq ft	
	18"x36" (450x900 mm)	6 supports 0,56 pcs/sq ft	
	12"x48" (300x1200 mm)	6 supports 0,65 pcs/sq ft	
	24"x48" (600x1200 mm)	6 supports 0,65 pcs/sq ft	

NOTE.

In case of breakage, paver must be replaced immediately.

RECOMMENDATIONS FOR THE INSTALLATION, ORDINARY CLEANING AND MAINTENANCE OF FRONTIER20.

Mbrico Porcelain recommends carrying out the procedures for the ordinary cleaning of porcelain floor surfaces using water and commercially available neutral detergents: the inclination of the surface and the space between adjacent slabs for dry-system installation favour the natural flow of water. However, it is important to take into consideration that any type of floor surface is subject to the surface tension effect of liquids: it is the same property of water that gives the tendency to transform into spherical droplets and which cause the curved top surface of a glass full of water. The surface tension can obstacle the complete drainage of water and cause a temporary stagnation of liquid on the slab edges. In order to avoid this problem, Mbrico Porcelain recommends ensuring adequate inclination of the surface during installation so as to encourage the flow of water between adjacent slabs. Please remember in any case that, in view of the distinctive advantages of porcelain stoneware, Frontier20 absorbs practically no water, which makes it highly frost-proof. This may lead to localised water pooling, mainly on the edges of the pavers, independently of the manner and quality of the laying. Laying is also recommended with a minimum gap of 4 mm (5/32"). Should liquid deposit on the surface, it is recommended to push it towards grout lines using a brush or remove it with a wet and dry vacuum cleaner.



A COMPLETE PROJECT FOR EVERY NEED.

Frontier20 is a complete project for any design need, specially developed by Landmark for contemporary outdoor spaces. The extent of the range makes it possible to design outdoor environments with looks that are always new, and to play with surfaces inspired by different materials.

ADVANTAGES.

- 01 WIDE LOOKS RANGE
- 02 A WIDE RANGE OF SIZES
- 03 AMERICAN STONES
- 04 LANDMARK DESIGN PROJECT

PROJECT

FLOOR DESIGN

Frontier20 Travertine Cross Cut Silver - 24"x24"

WALL DESIGN

Frontier20 Travertine Cross Cut Silver - 24"x24"

COUNTER

Frontier20 Travertine Cross Cut Silver - 24"x24"

PERFORMANCE COMPARISON PORCELAIN PAVERS VS. COMPETITOR OUTDOOR PAVING MATERIALS

FEATURES	PORCELAIN PAVERS	WOOD PAVERS	CLAY BRICK	CIP (CAST IN PLACE) CONCRETE	CONCRETE PAVERS	NATURAL STONE
Stainable	No	Yes	Yes (Highly)	Yes	Yes	Yes (Highly)
Freeze Thaw Proof	Yes	No	No	No	No	No
Salt Resistant	Yes	No	Salt Will Degrade	No	No	No
Acid Resistant	Yes	No	Acid Will Burn	No	No	No
Scratch Resistant	Highly	No	Somewhat	No	No	No
Moisture Absorption	< 0,5%	Highly Varried	5%	5%	5-10%	≥ 5%
Easy To Repair	Yes	Yes	No	Can Not	No	No
Uv Resistant	Unaffected	No	Yes	If Sealed	Yes/No	Unaffected
Needs Sealed	Never	Yes	Recommended	Recommended	Recommended	Recommended
Pressure Washer Safe	> 1500 PSI	No	Not Recommended	> 1500 PSI	No	No
Environmentally Friendly	Facility 98% Green	Many Exotic Rainforest Species	No	Large Carbon Foot Print	Possible Fly Ash Content	Mined Or Imported
Recycled Content	20% In Each Paver	No	Not Possible	Not Possible	If Possible Less Than 5%	Not Possible

PHYSICAL PROPERTIES	TEST ASTM	NORTH AMERICAN STANDARD A137.1*	RESULTS
Water absorption *	C373	≤ 0.5%	COMPLY WITH ANSI A137.1
DCOF Average dynamic coefficient of friction **	BOT 3000 test	≥ 0.6	≥ 0.6
Skid Resistance	DIN 51097	-	A+B+C
	DIN 51130		R11
Resistance to freeze/thaw cycling *	C1026	As reported	RESISTANT
Resistance to thermal shock	C484	As reported	RESISTANT
Warpage (edge)	C485	Warpage ± 0.4% or ± 0.05 in	COMPLY WITH ANSI A137.1
Warpage (diagonal)	C485	Warpage ± 0.4% or ± 0.07 in	COMPLY WITH ANSI A137.1
Wedging	C502	± 0.25% or ± 0.03 in	COMPLY WITH ANSI A137.1
Chemical resistance	C650	As reported	UNAFFECTED
Resistance to stain	C1378	As reported	UNAFFECTED
Thickness	C499	Range: 0.04 in	COMPLY WITH ANSI A137.1
Breaking strength	C648	250 lbf or greater	COMPLY WITH ANSI A137.1

* Average values referred to our production and related to the matt finish of the product.
 ** As far as values relating to the matt finish of the product and to tests carried out by certified external laboratories whose results are available upon request at Headoffice, we are willing to check the lot you are interested in purchasing.
 - Be sure to use pavers belonging to the same caliber.
 - Test results are available on request.
 - The information provided can be subject to change. Please refer to outdoor.landmarkceramics.com for the latest, most accurate and up-to-date information.

WARNINGS.

- Outdoor pavings installed unglued above the ground level are subject to the action of the wind, with the risk, in some cases, of becoming airborne. The manufacturer recommends to require the assistance of a qualified professional in order to check the suitability of the installation system above the ground adopted, in accordance with the local laws and regulations and the conditions of use. Failure to do so could result in serious injury or property damage.
- If the application of the 20 mm slabs requires the ceramic product used in structural installations, the project engineer and/or customer must carefully assess the project requirements with regard to the technical specifications of the slabs. to prevent the risk of damage or injury, the manufacturer recommends: with regard to a raised floor installation a ceramic slab may fracture on impact if a heavy object falls on it from any significant height. therefore the manufacturer recommends to check the specific intended use before starting the installation and to follow table for raised installation provided below. in certain conditions, reinforcing must be applied on the back of the slabs (double fiberglass mesh) supplied and applied by the manufacturer; with reference to any dry installation system of flooring above the ground level, the manufacturer recommends to comply with local regulations and conditions of use with regard to wind-load, loadbearing, seismic events, etc. Failure to comply with these recommendations may lead to improper use of the product and could cause serious damage or injury. Failure to adhere to the manufacturer's instructions for installation of slabs on raised pedestal systems may result in serious injury.
- For further information and recommendations concerning the installation systems please refer to outdoor.landmarkceramics.com website.



