

# PORCELAIN PAVERS

**POPA 2.0**

An Italian porcelain paver made in USA



**RE-QUALIFY  
SYSTEM**

  
**KRONOS**  
USA



# RE-QUALIFY SYSTEM



**Re-Qualify System** is Kronos innovative approach to Green and Eco-Sustainability.

Re-Qualify System is Kronos new philosophy, approach and mission, to minimize the environmental impact in remodeling as well as new construction projects by:

reducing or fully eliminating the use of adhesives and setting materials;

reducing or fully eliminating the use of water;

reducing or fully eliminating any waste resulting from the production cycle.

All the above for a more environmentally friendly production cycle and the consequent significant results of both energy and economic savings.

## KRONOS GREEN APPROACH



### CO<sup>2</sup> REDUCTION

In the last 10 years Kronos has reduced its CO<sup>2</sup> emissions by no less than 17%. New investments for a further reduction are planned, using techniques for reutilizing heat generated during the production process and creating energy by cogeneration.



### GREEN ENERGY

Kronos uses Green Energy. All electricity used at the Kronos plants is obtained from cogeneration and hydroelectric power station.



### RECYCLING PROCESS: ZERO WASTE

Kronos tiles are produced following a specific process that allows the addition of recycle content to the layer body of the tiles. This makes possible for Kronos to use pre-and-post consumer waste to create a body layer and thus a tile of high quality.

Kronos tiles and slabs, consist of 60% to 70% recycled material, depending on the product.

The pre-consumer recycling system is 100%.

Post-consumer recycling is under study and some preliminary trials should start shortly.



### LOCAL RAW MATERIALS

Kronos sources most of its natural raw materials for tile production in Europe (80%) and Italy (20%).

All the raw materials come from a radius of 800 Km.



### H<sub>2</sub>O MANAGEMENT AND PURIFICATION

All waste-water is reused through the manufacturing process, this is already 100%.



### RECYCLED/RECYCLABLE PACKING MATERIAL

All our paper packaging materials are made from recycled paper and are further recyclable.

European transport of our products is on reusable "Europallets", a pallet return system has been put in place.

Kronos participates in the "Interseroh Recycling Program" in Germany.

All intercontinental shipping is on special disinfected pallets "FAO".

Kronos uses "Heat treatment certified pallets" that are disinfected by heat and not by poisonous gas.



### LIFE CYCLE ASSESTEMENTS

A life Cycle Assessment (LCA) is also known as an "eco-balance" or cradle-to-grave-analysis.

It is the investigation and evaluation of the environmental impact of a given product or service caused or necessitated by its existence.

Kronos tiles and slabs have a very long life cycle.

Technically, Kronos tiles and slabs may be used for many hundreds of years without losing their looks or their technical quality. Innovation and design plays a major role at Kronos.

Kronos has developped specif systems to install its Porcelain Pavers without cement, glues, mortar or setting materials both on floors and walls. It is no longer necessary to grout the joint line between Kronos Porcelain Pavers, our products can be installed "DRY".

The elimination of setting materials allows significant savings in terms of cost and times of transportation and installation.

The job sites are immediately available after Kronos Porcelain Pavers are dry installed while the use of traditional setting materials makes necessary to let the installation cure and dry. Kronos Porcelain Pavers dry installation also significantly reduces the creation of dusts and pollutants.

In fact the users of spaces created with Kronos Porcelain Pavers will be less prone to allergies and respiratory problems that may be caused by breathing residual dusts and moisture caused by traditional settings methods.

STONE: moonstone 60x60 - 23 1/2"x 23 1/2" rectified









# POPA 2.0

## Dedicated to outdoors

POPA 2.0 pavers are ideal for temporary flooring at exhibitions, trade shows, festivals and other outdoor events. It is suitable for permanent flooring over existing hard surfaces such as terraces, pathways, swimming pool surrounds and rooftop decks.

Since they can be installed either on hard surfaces such as concrete, sand or gravel screed; they offer endless opportunities for landscape design creativity in both domestic and commercial applications.



STONE: creamstone 60x60 - 23 1/2"x 23 1/2" rectified





QUARTZITE: crystal white 60x60 - 23 ½"x 23 ½" rectified



QUARTZITE: sandy island 60x60 - 23 ½"x 23 ½" rectified





OCEAN STONE: tan 60x60 - 23 1/2"x 23 1/2" rectified



OCEAN STONE: black 60x60 - 23 1/2"x 23 1/2" rectified





OCEAN STONE: white cool 60x60 - 23 1/2"x 23 1/2" rectified



ICON TRAVERTINE: pearl 60x60 - 23 1/2"x 23 1/2" rectified



ICON TRAVERTINE: river 60x60 - 23 1/2"x 23 1/2" rectified





TEX WOOD: brown 60x60 - 23 ½"x 23 ½" rectified



TEX WOOD: grey 60x60 - 23 ½"x 23 ½" rectified





TEX WOOD: ivory 60x60 - 23 1/2"x 23 1/2" rectified

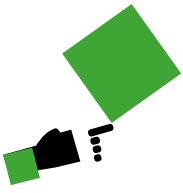


TIMBER WOOD: ipe 60x60 - 23 1/2"x 23 1/2" rectified



# WHY CHOOSE POPA?

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**LIGHTER  
AND EASIER  
TO HANDLE  
THAN  
CONCRETE  
BLOCKS**



**SUPERIOR  
IN FIRE  
RESISTANCE  
AND DURABILITY  
TO WOOD TILES**

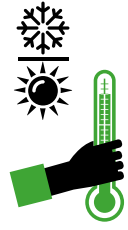


**SUPERIOR IN  
STRENGTH  
AND IMPACT  
RESISTANCE TO  
CERAMIC TILES**

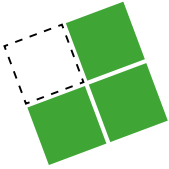
**SUPPORTS OVER  
2000LB**



**MORE COST  
EFFECTIVE THAN  
GRATING OR GRID  
STRUCTURES FOR  
ELEVATED PAVING  
INSTALLATIONS**



**RESISTANT TO  
DAMAGE BY  
FROST, SNOW,  
ICE AND HEAT  
(-40°F - 210°F)**



**EASY TO  
INSTALL**



**EASY TO CLEAN  
STAIN,  
CHEMICAL  
AND SALT  
RESISTANT**



**FADE  
RESISTANT**



**SLIP RESISTANT  
AND QUICK  
DRAINING**



**VIRTUALLY NO  
MAINTENANCE**

## VERSATILE INSTALLATION

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**INSTALLATION  
ON GRASS**



**INSTALLATION  
ON GRAVEL**



**ADHESIVE INSTALLATION  
ON FOOTING**



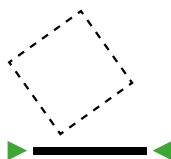




**REMOVABLE AND REUSABLE**



**AVAILABLE IN A BROAD RANGE OF COLORS/ STYLES**



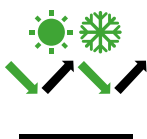
**INSTALLATION ON SINGLE PLY MEMBRANES**



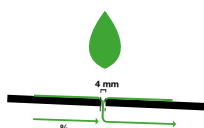
**MASSIVE OVER LIFE COST SAVINGS**



**INSPECTABLE AND REMOVABLE**



**THERMAL INSULATION (HOT/COLD)**



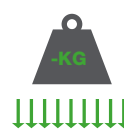
**THE SLIGHT GAP BETWEEN GRES SLABS ALLOWS A QUICK WATER DRAINAGE**



**BEST ACOUSTIC INSULATION**



**IT ALLOWS FOR PLANAR AND UNIFORM SURFACES WITH NO UNEVEN LEVELS OR VISIBLE WATER DRAINAGE SYSTEMS (GRIDS OR WATER DISCHARGE PIPES).**



**LESS LOAD BEARING IN ATTICS AND ON BALCONIES AS THE LAST LAYER OF CONCRETE AND GLUE IS NOT NECESSARY**

**FLOATING INSTALLATION ON SPACER FEET**



**RAISED INSTALLATION ON FLAT SURFACES**



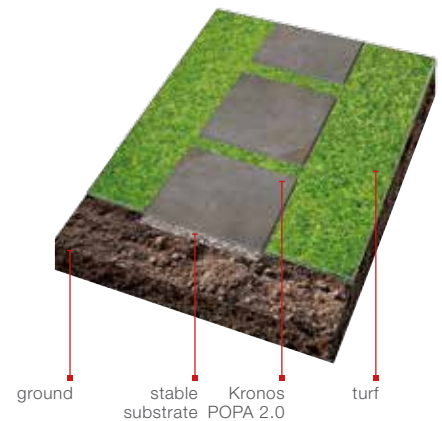
# A SOLUTION FOR EVERY NEED

## LAY ON GRASS, ZEN GARDEN

Lay on grass is quick and easy. It consists in laying the stoneware slabs on the turf or placing them in the topsoil to make them more stable.

PLUS:

- easy to install and remove
- quick water drainage keeping the ground unchanged
- ideal to create continuity between indoor and outdoor flooring
- intended use:  
garden paths  
barbecue areas  
gazebos  
walkways  
beach resorts  
exhibitions and events

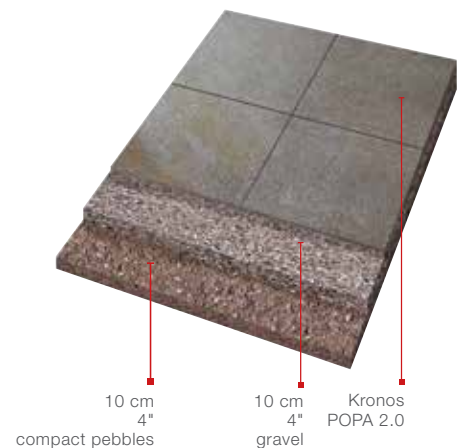
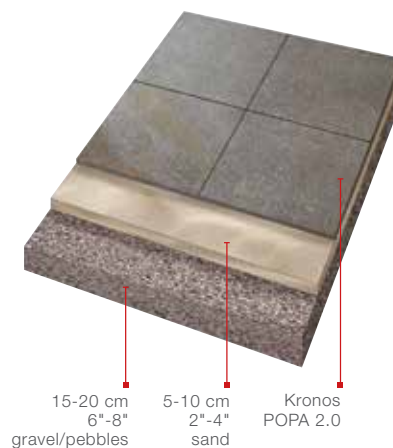


## DRY-INSTALLATION ONTO SOFT GROUND

Soft ground is intended to mean surfaces that have never been paved, such as gardens, courtyards, sandy areas, etc...

PLUS:

- easy to install and remove
- quick water drainage keeping the ground unchanged
- ideal where it is not possible to lay permanent flooring
- intended use:  
garden paths  
barbecue areas  
gazebos  
walkways  
beach resorts  
exhibitions and events



## ACCESSORIES FOR DRY INSTALLATION ON GROUND

### SPACER

Spacers thickness 3 mm.



### DM SPACER

A simple idea and so brilliant.

The new Mini DM Spacer allows you to create super-fast, easy and effective external paving on difficult substrates.

Its configuration ensures maximum stability of the flooring as well as creating stylish scapes that are always uniform.

- Mini Dm spacer without aglet for gravel ground
- Mini Dm spacer for surfaces in sand and grass





## ADHESIVE INSTALLATION

### DRAINING SCREED

It is ideal for garden and courtyard flooring because it ensures that water is drained correctly, using the special glues.

### VEHICLE TRANSIT PAVEMENT

It is ideal for parking lots and garage ramps, thanks to the extremely high resistance of ceramic surface to dynamic and concentrate loads.

### PLUS

- high resistance to dynamic and concentrate loads
- ideal to create continuity between pedestrian areas and vehicle accessible areas, using the same material

### DRAINING SCREED



### DRIVE FLOOR



## RAISED FLOOR

**A**

### RAISED FLOOR WITH FIXED HEIGHT PEDESTAL

The simplest solution to achieve a 15 mm - 6" raised floor from existing soil.



**B**

### RAISED FLOOR WITH SELF-LEVELING SE OR NM PEDESTAL

Self-leveling pedestals: they automatically justify slopes to 5%.

Adjustable pedestals: the height can be adjusted using the appropriate regulation key, also at the end of the installation.



**C**

### RAISED FLOOR WITH ADJUSTABLE PEDESTAL AND JOIST

This system is ideal to lay raised large slabs such as 20x120 cm - 8"x48" and 40x120 cm - 16"x48". It allows greater stability of flooring without the bending risk of the slabs.



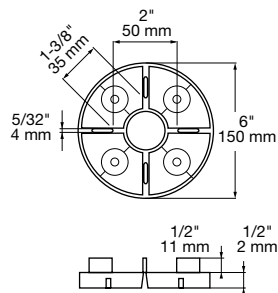
# A FIXED HEIGHT PEDESTAL



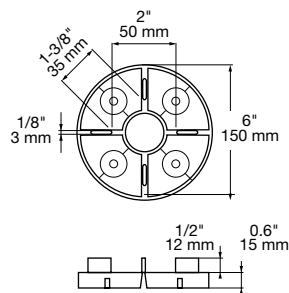
The fixed height pedestal is available in 3 different versions: EH12 style (h. 12 mm - 1/2"), EH15 style (h. 15 mm - 0.6") and EH20 style (h. 20 mm - 3/4"). This support has always been the quickest and cheapest solution for raised floor installation. In case of differences in level or imperfections of slabs, 4 exclusive balancers are provided for an automatic balancing of the paver. The rubber shim LH3 (3 mm - 1/8" thick) is available and suitable for any pedestal to create thickness, if necessary, on top or under the support.



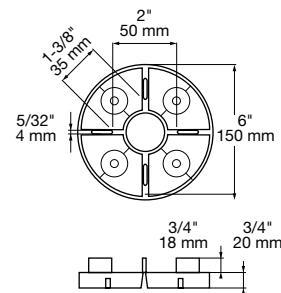
The base is provided of 4 precut lines to facilitate any cutting of the base in case of need (example for those pedestals placed at the corner or along the perimeter).



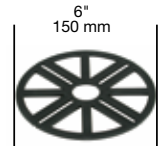
EH12



EH15



EH20



RUBBER SHIM LH3

## APPLICATION EXAMPLE



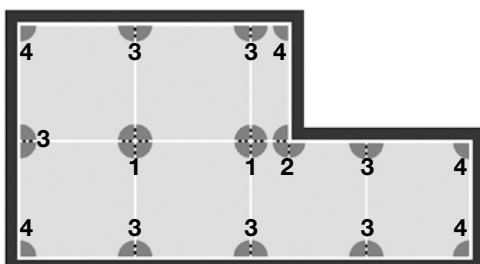
centre of the floor



edge of the wall



corner of the wall





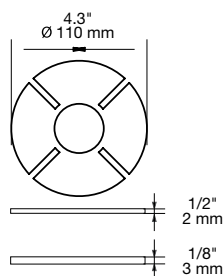
# B1 SE SELF-LEVELING PEDESTAL



The self leveling pedestal SE with a self-leveling head was the first of a long series of raised floor accessories for outdoor. It's an elevated flooring accessory that combines super technical features and exceptional aesthetic with maximum easiness of installation. SE has come to be recognized as the market's most exclusive solution to deal with sloping installation surface. In this regard, the product is capable of providing exceptional results thanks to its tilting movement, which is capable of compensating slopes up to 5%. The adjustment is performed using a regulation key, which can be applied from above once the flooring installation is completed and guarantees the precision alignment of the entire floor surface. This unrivaled product also counts numerous additional advantages, which are enjoyed every day all around the world by architects, builders and installers.

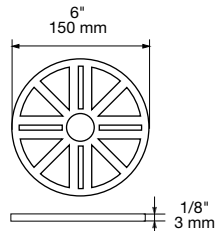
## PLUS:

- Self-leveling head that automatically justify slopes to 5%;
- Adjustable height from 1.1" to 21.6" (from 28 to 550 mm) once pavement is finished thanks to exclusive regulation key
- 320 cm<sup>2</sup> - 35.6" in<sup>2</sup> smooth base support
- Entirely recyclable
- Resistant to temperatures between -40° to 120 °C
- Resistant to acids and ultraviolet deterioration
- Suitable to any self-supporting outdoor paving system
- Protect by international PATENT
- Head with upper part of soft non-slip and anti-noise rubber
- Tabs easy to remove



## LGH2 - LGH3

LGH2 and LGH3 rubber shim.  
Non-slip and anti-noise.  
To put on the pedestal's head.



## LH3

Rubber shim LH3.  
To put both over the head or under the base.

SE 0	SE 1	SE 2	SE 3	SE 4
1.125" - 1.5" 28 - 38 mm	1.5" - 2" 37,5 - 50 mm	2" - 3" 50 - 75 mm	3" - 4.75" 75 - 120 mm	4.75" - 6.75" 120 - 170 mm

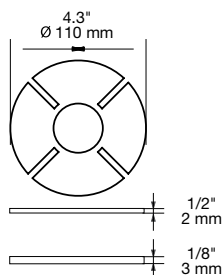
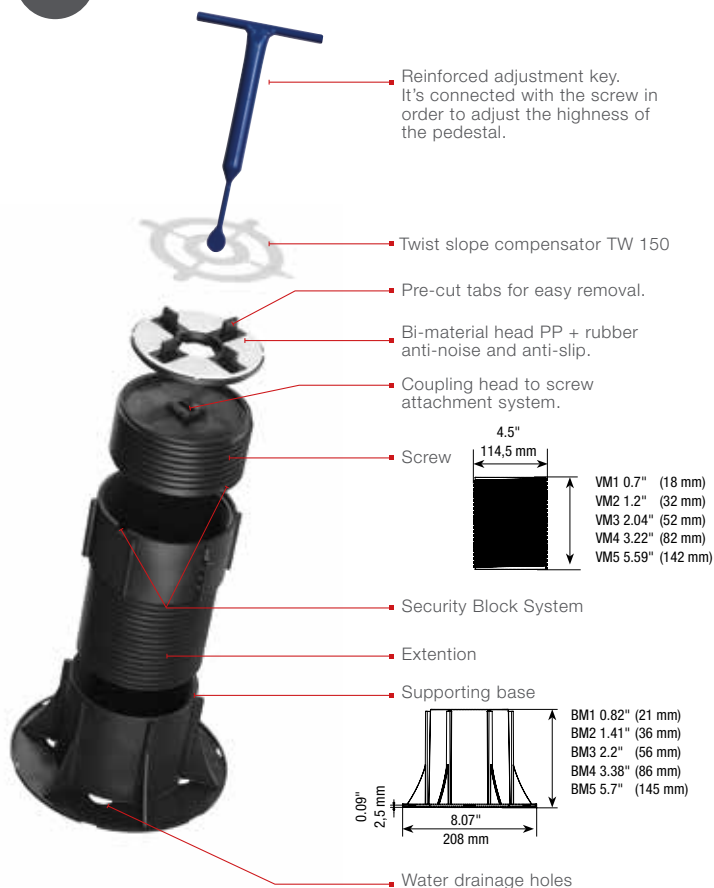
SE 5	SE 6	SE 7	SE 8	SE 9
6.75" - 8.5" 170 - 215 mm	5.5" - 9" 140 - 230 mm	7.25" - 10.75" 185 - 275 mm	9.25" - 12.75" 235 - 325 mm	8" - 13.5" 205 - 345 mm

SE 10	SE 11	SE 12	SE 13	SE 14
9.875" - 15" 250 - 385 mm	11.75" - 15.75" 300 - 400 mm	10.5" - 18" 270 - 455 mm	12.4" - 19.75" 315 - 500 mm	14.25" - 21.75" 365 - 550 mm

## APPLICATION EXAMPLE

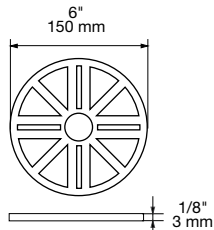


# B2 NM NEW-MAXI ADJUSTABLE PEDESTAL



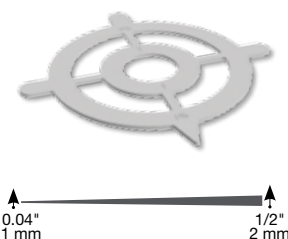
## LGH2 - LGH3

LGH2 and LGH3 rubber shim.  
Non-slip and anti-noise.  
To put on the pedestal's head.



## LH3

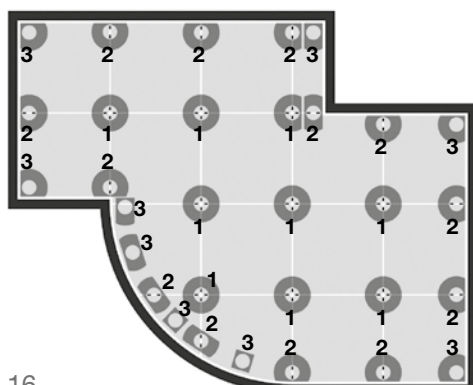
Rubber shim LH3.  
To put both over the head or under the base.



## TW 150

The Twist slope compensator TW 150, created in the specific 150 thickness for the Star.T support, allows the inclination from 0% up to 1%: suitably matched and adjusted ensure the perfect flatness of any pavement.

## APPLICATION EXAMPLE



NM 1	NM 2	NM 3
1"-1.57"	1.57"-2.75"	2.36"-3.39"
25- 40 mm	40 - 70 mm	60 - 100 mm

NM 4	NM 5	
3.54"-6.30"	5.90"-10.63"	
90 - 160 mm	150 - 270 mm	



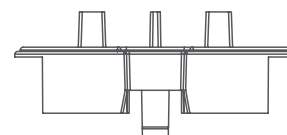
# C HEIGHT-ADJUSTABLE PEDESTAL FOR JOIST

**Area<sub>+</sub>**  
METAL FRAME



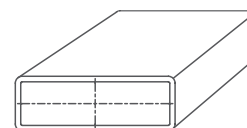
PLUS:

- This system makes it possible to lay on a raised surface even formats consisting of slats of limited widths and mixed formats.
- It remains possible to inspect the interspace and to remove the slabs.
- Definitely more stable than traditional pedestals, it enables the decking to be raised to a higher height with no need for perimeter containment.

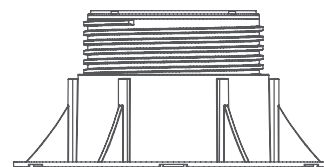


Head

Sliding head: 2 cm - 3/4"  
Metal joist 60x20 mm - 24"x0.7" section - L.  
240-2 cm - 94.48"-3/4"



joist (2,40 ML - 94.48")



## APPLICATION EXAMPLE



Pedestal + Head

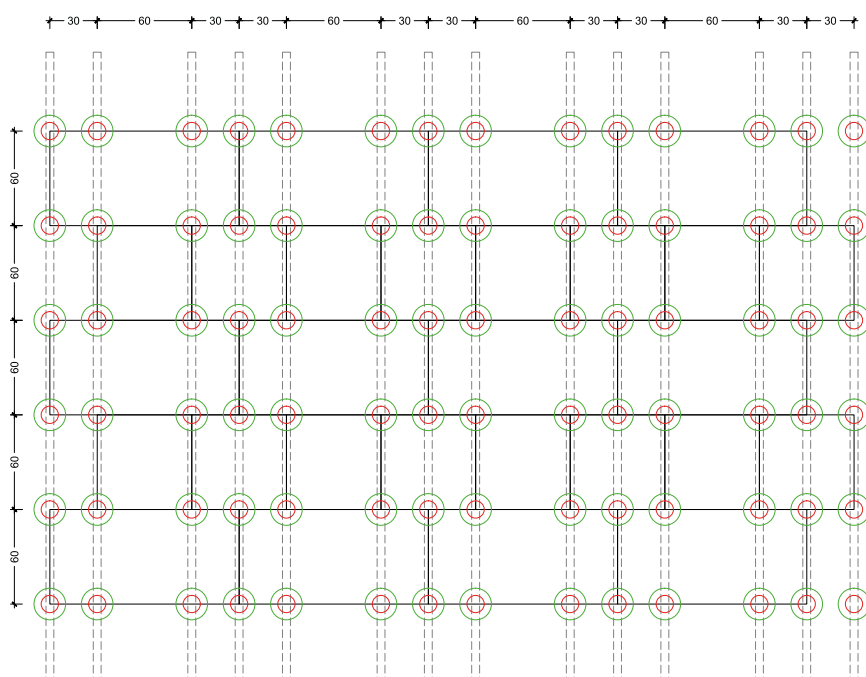


Head



Joist

60x60 + 60x120 (STUGGERED AT 30)  
23½"x23½" + 23½"x48" (STUGGERED AT 11¼")



Supporting base STAR.T, (10-15 mm / 0.3"-0.6")  
Extension STAR.T, (5 mm / 0.2")  
NM1T, (25-40 mm / 0.98"-1.57")  
NM2T, (40-70 mm / 1.57"-2.75")  
NM3T, (60-100 mm / 2.36"-3.93")  
NM4T (90-160 mm / 3.54"-6.29")



8 15  
**STAR.T**

PROLUNGA 15  
**STAR.T**

Star.T can be adjusted in height by the millimeter starting from 8 mm thickness in its upper part, up to 15 mm by applying and rotating the lower base of the support.

The Star.T extension is a fixed support which is positioned under the Star.T to increase the height of 5 mm, with the possibility of superimposing additional Star.T extensions in case of need. The Star.T extension is the only one adaptable to Star.T, allowing you to reach the height of the adjustable supports NM1 and SE0.

# LAYING INSTRUCTION

## Laying 2 cm - 3/4" in outdoor

Consequently, the size and nature of the porcelain stoneware slabs, due to the pronounced anti-slip surface (which always retains a thin layer of water), special attention should be given to the slope and inclination %, that the customer wants to give to the floor plan and direction laying of the slab stoneware. The % of slope and slope of the floor must meet the architectural choices of the project and the needs for natural runoff of rainwater. These vary according to the geographical area, orientation and exposure of the affected area, if it is completely bare, etc. etc.

By way of example, not binding, of the Swiss office UPI, recommends slopes not less than 1, 5% per linear meter.

## Cutting

To cut 2 cm - 3/4" make the measurements needed and mark the part to be removed on the piece, then cut with an electric tool or water-cooled circular construction saw.

## The Doghe (grout staves) SKE 2.0 and "Struttura Exter" 60x60 - 23½"x23½" (1 cm - 0.39")

Consequently the special structure (bas-relief grooves) which reproduces a wood grooves effect the exterior staves dimensions of each piece may have subtle differences from inner staves. This due to the caliber of production that can have significant dimensional variations to each production. Unfortunately this affects the outside slats only.

For this reason the products concerned must have a minimum aesthetic tolerances, to improve then we may recommend the following countermeasures:

1. To use pedestals with crosses of at least 4 mm - 0.15" in order to have the same size for the joint (SKE 2.0).  
In the traditional installation use crosses to 4 mm - 0.15" (the aim is repeating the same internal dimensioning leakage per piece).
2. To lay down the material following always the same production (verifiable from the back of the slab).
3. Adopt the basket diagram laying.

## Thermal expansions effects on surfaces

The strong thermal excursions ( -15° + 70°) which are subjected the FLAT ROOFS, involve the need to consider the effects on building materials.

Materials that often have among their different COEFFICIENT of dilatation.

The regulations provide for the establishment of special ELASTIC expansion JOINTS in building structures, in the perimeter and in the fractionation of insoles.

Our Flooring as well as having its own THERMAL EXPANSION COEFFICIENT and their dynamic behavior, they lay down and are installed on foundations and structures that move.

They contract and dilate in measure also important depending on the size even for some cm.

The effect that you might encounter in relation to the use of dry flooring is a misalignment of joints in release of raised floor or uncoupling the plastic module.

If they would be glued flooring instead, they might break and deteriorate.

It is therefore essential to avoid or limiting the occurrence of these flaws, making a large perimeter joints and avoiding, where possible, the stationing of heavy weights/structures that inhibit the correct movement of the flooring. It is necessary to split up the flooring area in the case of plastic module also at the slope change of the base.

To do this, it is advisable to use the accessories provided in the catalog and elastic joints/shackles available normally at specialty retailers.



## Recommendations for SKE2.0 on elevated installation

The Monolithic product SKE self-carrying 2.0 is definitely suitable for external use for support and elevated installation. There is no specific legislation for outdoor products in porcelain in elevation, the closest to our product is relating to the cement slabs (concrete).

To this legislation our SKE 2.0 RESPONDS IMPROVEMENT on all comparative tests, e.g. resists more than 1400 kg per slab (test result as per EN 1339 KN 14 >).

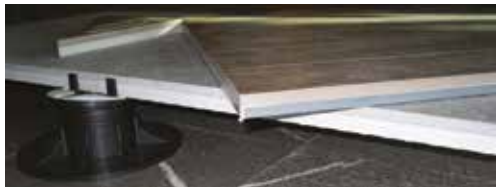
This means, according to the adopted standard, the material is suitable for "COLLECTIVE and public use without LIMITATION of the height of the pedestals or sleepers".

If we compare our product SKE 2.0 to the elevated indoor norms, his weakness point is the LOAD/DYNAMIC HARD body SHOCK (for example a hard object fall such as a hammer or other rigid material of less than 4.5 kg from 40 cm - 16" height) EN 12825.

In fact the particular stiffness of the gres porcelain does not help us, because the gres slab can break or shatter, we must therefore consider this risk and in face of this advise in some uses such as mechanical workshop or where floor heights are higher than the 3.93" (10 cm) using reinforcements to be applied on the back of the slabs :



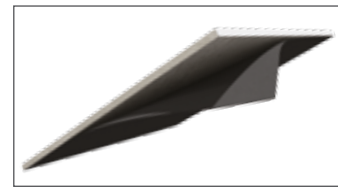
glued fiber protection



metal tray



metal tray stuck



SHOCK CONTROL®  
protective layer

These applications do not increase the floor weight capacity, but they are just a guarantee against breakage and limit the risk of accidents.

## Wind Uplift

When Kronos Porcelain pavers single slab are installed on a pedestal system, they essentially rely on gravity, its own weight equal to 35lb, tight spacing between the pavers and tight containment around the perimeter to keep the pavers in place without movement. The open joint space between pavers allows wind to flow above, below and around the deck surface, which tends to reduce uplift forces somewhat and restricts movement of the pavers.

It should not however be inferred that uplifting of the pavers by wind will never occur as it is difficult, if not impossible, to test for every contingency or circumstance where wind uplift may be possible.

The Saffir-Simpson Hurricane Wind Scale defines wind speeds over 74 mph to be hurricane velocity, where for example it is stated that a Category 1 (74-95mph) storm means: 'Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters.' Furthermore, It is generally accepted that the average person standing on the open ground will be rocked around at wind speeds of 35-40mph; it's difficult to stand up and you would stumble frequently.

The only wind uplift test for roofing products known to Kronos is the Florida Building Code 2007 TAS 108 Test Procedure for testing air permeable rigid discontinuous roof systems. Whilst this test procedure may have some relevance to pavers installed in 'floating' deck applications, Kronos engaged the Florida International University International Hurricane Research Center to devise a series of tests to evaluate the resistance of porcelain pavers to wind uplift using the FIU's Wall of Wind facility. Variables incorporated in the test program included different wind angles, pedestal height and type, parapet wall height, paver layout and the use of locking devices along the parapet walls.

This report is intended to provide additional information about wind uplift where ¾" single slab porcelain pavers as supplied by Kronos are installed on fixed or adjustable height pedestals. It should not be construed as a guarantee or warranty of any kind, including but not limited to warranties of merchantability or fitness of porcelain pavers for a specific purpose. None of the information contained in this report is intended to substitute for the engineer's, specifier's, architect's, builder's or contractor's own analysis, investigation, and due diligence regarding the appropriate choice, application and installation of ¾" single slab porcelain pavers on fixed or adjustable height pedestals in any particular location or application, which is not the responsibility of Kronos .

The test report is available on request from Kronos on the strict understanding that it is provided for the exclusive use of the recipient. No reproduction or transmission by facsimile, email or other electronic means is permitted without Kronos specific permission.

# DON'T WORRY SHOCK CONTROL® 2.0

WE SUGGEST YOU THAT YOU ADOPT THE SHOCK CONTROL 2.0  
WHEN THE FLOOR IS FOR HEAVY LOADS TRAFFIC OR  
WHEN IS ALLOCATED ON HIGH PEDESTAL > 4 INCH

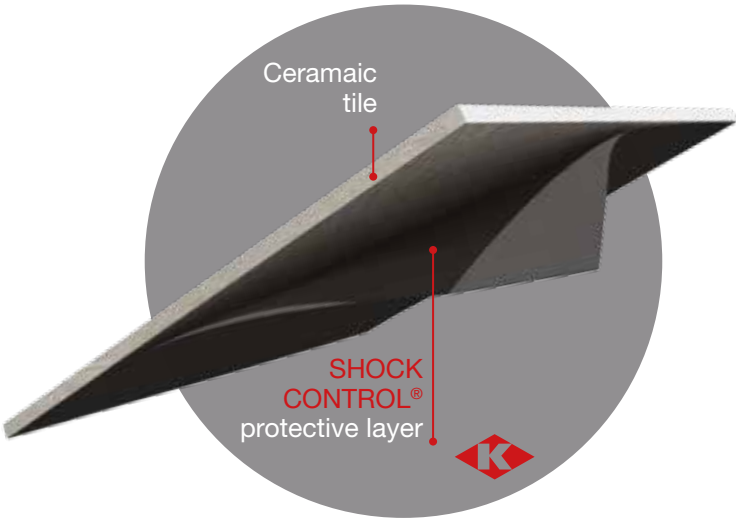




# SHOCK CONTROL® 2.0

The only patented system able to pass the dynamic loading test for “hard object impact” with reference to UNI EN 12825:2003 norm.

We suggest you that you adopt the Shock CONTROL 2.0 when the floor is for heavy loads traffic or when is allocated on high pedestal > 4 inch.



## INSTALLATION

Installation of protective layer SHOCK CONTROL® is quick and easy. It can be easily applied by a single person within seconds without any tool in 4 short passages.



**1** Choose the proper size of SHOCK CONTROL® considering the size of the tile and apply it on the tile's lower surface, avoiding folds and aligning the edges.



**2** Starting from one side, peel the protective foil, ensuring perfect adhesion of SHOCK CONTROL® to ceramic's surface.



**3** Proceed smoothly until joining adhesion on the entire surface, avoiding wrinkles or air bubbles.



**4** The tile is immediately ready to be applied on pedestals for the realization of the exterior elevated floor.

## TEST

SHOCK CONTROL ® is the only PATENTED system for ceramic tiles' protection, that can guarantee with its application the overcoming of the dynamic loading test for “hard object impact” with reference to UNI EN 12825:2003 norm. SHOCK CONTROL ® is the only protective reinforcing system created to be coupled with ceramics, allowing 2 cm - 3/4" thick ceramic tiles for outdoor raised floors to pass the dynamic loading test for hard object impact in all the three tests:

TEST PASSED		NO CERAMIC FRAGMENT DETACHED FROM THE PANEL
Pic. 1,2	•	DROP TEST IN THE MIDDLE OF THE PANEL
Pic. 3	•	DROP TEST ON ONE SIDE OF THE PANEL
Pic. 4	•	DROP TEST AT 7 cm - 2.7" ON DIAGONAL



1



2



3



4

# PLANT RACK

## MIXY 30

60x60x30 cm - 24" x 24" x 11.9"  
1 kit A + 2 tiles

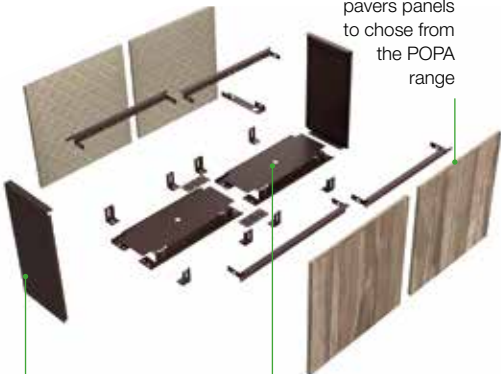


kit A  
the kit is containing these  
articles:  
- one metal base panel  
- two sides on metal  
panels  
- metal rod to secure the  
two panels

2 porcelain  
pavers panels  
to chose from  
the POPA  
range

## MIXY 30

120x60x30 cm - 48" x 24" x 24"  
1 kit A + 1 kit B + 4 tiles



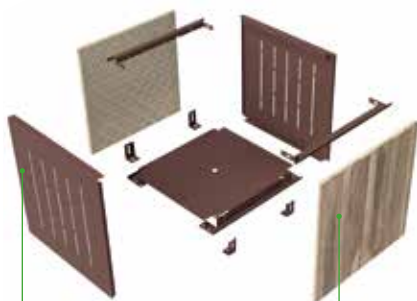
kit A  
the kit is containing  
these articles:  
- one metal base panel  
- two sides on metal  
panels  
- metal rod to secure the  
two panels

kit B  
the kit is containing these  
articles:  
- one metal base panel  
- metal rod to secure the  
two panels

4 porcelain  
pavers panels  
to chose from  
the POPA  
range




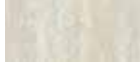



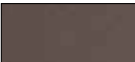

## MIXY 60

60x60x60 cm - 24" x 24" x 24"  
1 kit A + 2 tiles



kit A  
the kit is containing  
these articles:  
- one metal base panel  
- two sides on metal  
panels  
- metal rod to secure  
the two panels

2 porcelain  
pavers panels  
to chose from  
the POPA  
range

		POPA 20					
		STONE		ICON TRAVERTINE		QUARZITE	
METAL JOIST/FRAME POWDER COAT							
		moonstone	creamstone	pearl	river	crystal white	sandy island
	bianco		●	●	●	●	●
	m2	●	●				●
	m3	●					



## MIXY 60

180x60x60 cm - 70.86" x 24" x 24"

1 kit A + 2 kit B + 6 tiles



kit A  
the kit is containing these articles:  
- one metal base panel  
- two sides on metal panels  
- metal rod to secure the two panels

kit B  
the kit is containing these articles:  
- one metal base panel  
- metal rod to secure the two panels

6 porcelain pavers panels to chose from the POPA range

## MIXY 60

240x60x60 cm - 94.48" x 24" x 24"

2 kit A + kit S + 6 tiles



kit A  
the kit is containing these articles:  
- one metal base panel  
- two sides on metal panels  
- metal rod to secure the two panels

kit S  
the kit is containing these articles:  
- one metallic base panel  
- two metals supports

6 porcelain pavers panels to chose from the POPA range

OCEAN STONE			TEX WOOD			TIMBER WOOD	
							
white cool	black	tan	grey	brown	ivory	teak	ipe'
●		●			●		
		●	●	●		●	●
	●		●	●		●	●

TIMBER WOOD: teak 60x60 - 23 ½"x 23 ½" rectified / STONE: moonstone 60x60 - 23 ½"x 23 ½" rectified





# OUTDOOR WOOD-BURNING FIREPLACE



Fireplace with top made of ceramic material.



Fireplace with top made of ceramic material and fire protections.



The fireplace is supplied with a steel cover plate to cover the combustion chamber when not in use, in order to prevent the escape of ashes in the wind & rain.



Top detail.



## AVAILABLE COLORS



1

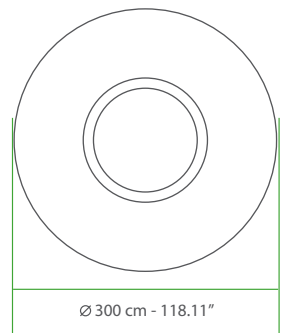


2

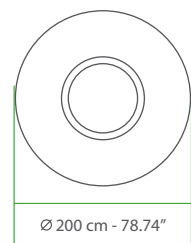


3

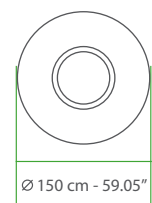
## AVAILABLE SIZES



Ø 300 cm - 118.11"



Ø 200 cm - 78.74"



Ø 150 cm - 59.05"

## STONE

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US7903 MOONSTONE



US7904 CREAMSTONE

## TEX WOOD

---



US7900 GREY



US7901 BROWN



US7902 IVORY

## TIMBER WOOD

---



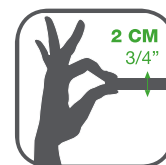
US7905 TEAK



US7906 IPE'







## ICON TRAVERTINE

---



US7908 PEARL



US7909 RIVER

## QUARTZITE

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US7907 CRYSTAL WHITE



US7910 SANDY ISLAND

## OCEAN STONE

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US7911 WHITE COOL



US7912 BLACK



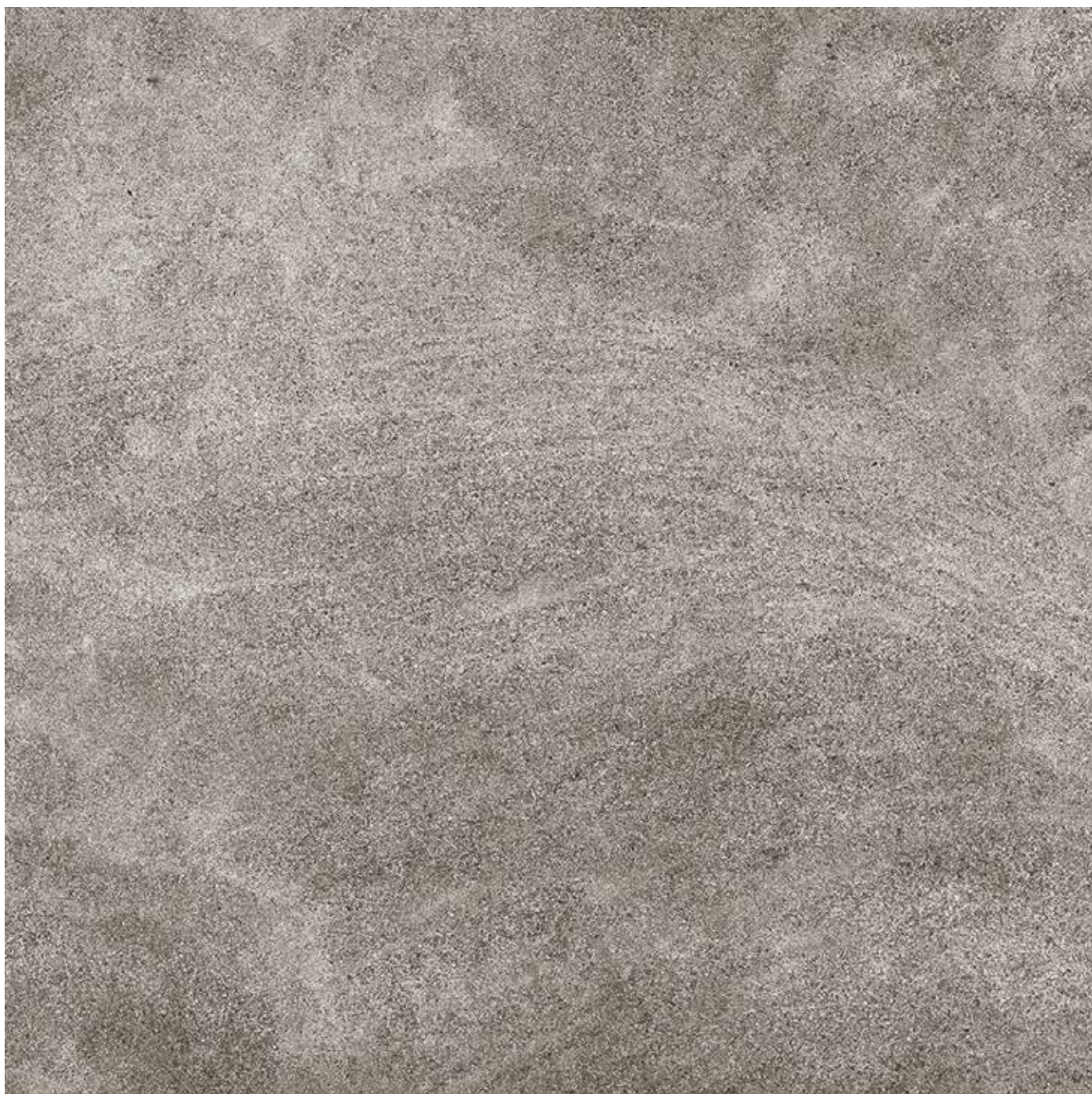
US7913 TAN

STONE - MOONSTONE US7903





**60x60 cm - 23½"x 23½" RECTIFIED**





STONE - CREAMSTONE US7904



**60x60 cm - 23½"x 23½" RECTIFIED**





TEX WOOD - GREY US7900





**60x60 cm - 23½"x 23½" RECTIFIED**



## TEX WOOD - BROWN US7901





**60x60 cm - 23½"x 23½" RECTIFIED**



TEX WOOD - IVORY US7902





**60x60 cm - 23½"x 23½" RECTIFIED**



TIMBER WOOD - TEAK US7905





**60x60 cm - 23½"x 23½" RECTIFIED**



TIMBER WOOD - IPE' US7906





**60x60 cm - 23½"x 23½" RECTIFIED**

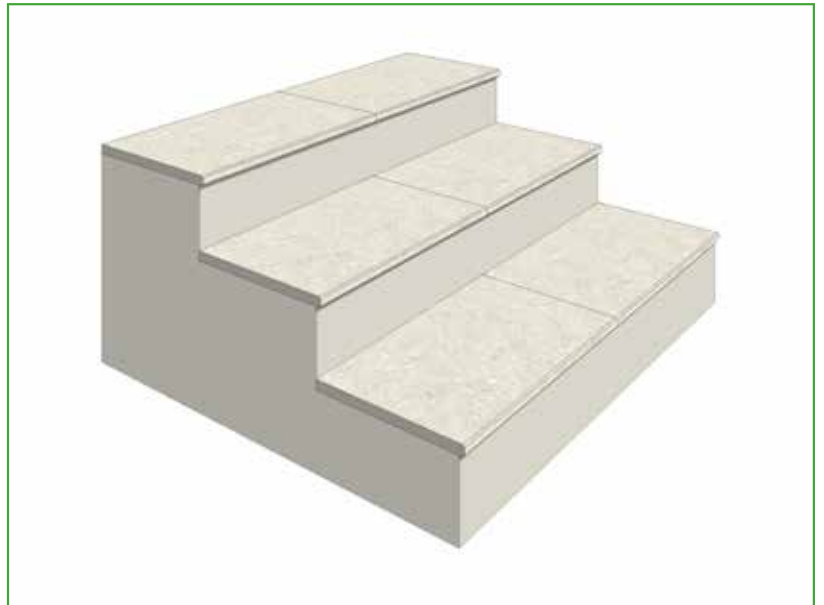
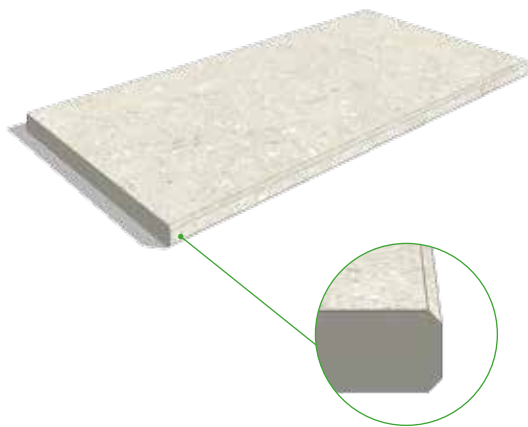


# SPECIAL PIECES

## DOUBLE BEVEL COPING

30x60 - 11¼" x 23½"

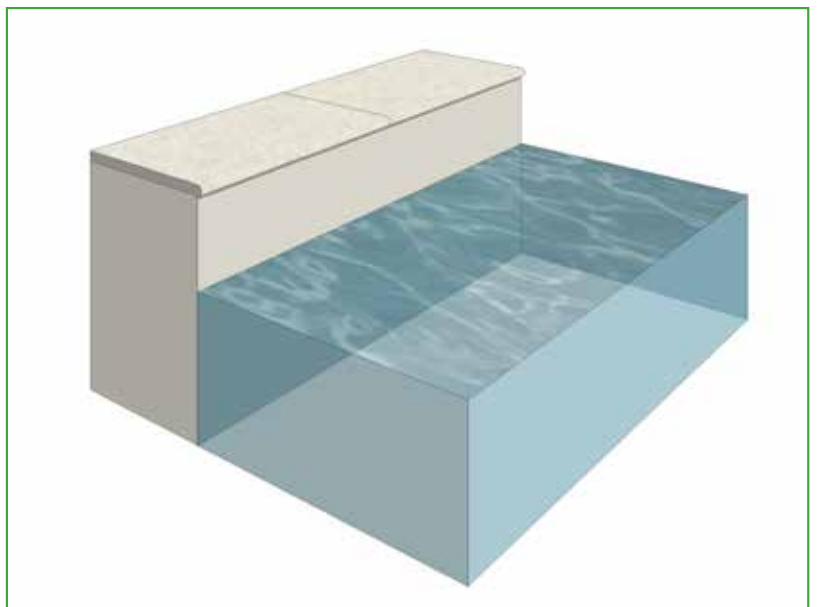
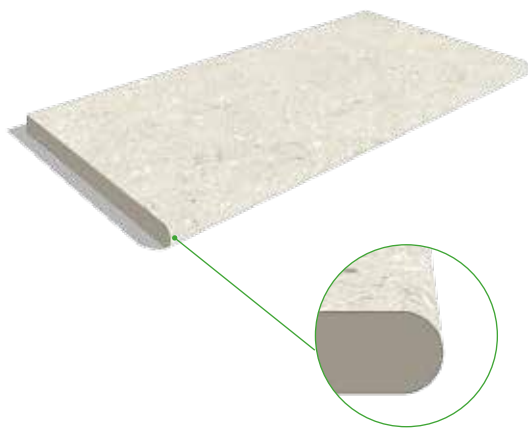
Available in all colours.



## FULL BULLNOSE COPING

30x60 - 11¼" x 23½"

Available in all colours.





# TECHNICAL CHARACTERISTICS

STANDARS	CHARACTERISTICS OR PROPERTIES	COMPLIANCE WITH STANDARDS UNI EN 14411 G ASTM	DECLARED VALUE
ISO - 10545-3 ASTM - C 373-88	Water absorption	E <= 0.5 %	< 0.1 %
ISO - 10545-9 ASTM - C 484	Thermal shock resistance	Requested	Complies with standard
ISO - 10545-12 ASTM - C 1026	Frost resistance	Requested	Complies with standard
ISO - 10545-6 ASTM C - 1243-93	Abrasive wear	<175 mm <sup>2</sup>	139 mm <sup>2</sup>
ISO - 10545-2	Straightness / ASTM - C 485	+/- 0.75 % (+/- 1.8 mm)	Complies with standard
	Straightness / ISO - 10545-2	+/- 0.5 % (+/- 1.5 mm)	Complies with standard
	Thickness / ASTM - C 499	+/- 1.02 mm	Complies with standard
	Thickness / ISO - 10545-2	+/- 0.5 % (+/- 0.5 mm)	Complies with standard
	Length and width / ASTM - C 499	+/- 0.5 % (+/- 2.0 mm)	Complies with standard
	Length and width / ISO - 10545-2	+/- 0.6 % (+/- 2.0 mm)	Complies with standard
ISO - 10545-4 Bending strength in N (thickness >= 7.5 mm)	ASTM - C 648	>= 250 LBF Average	>= 225 LBF Individual
	ISO - 10545-4	>= 1300 Newton	> 13000
ASTM - C 650	Chemical resistance	As reported	Resistant
ISO 10545-14	Resistance to stain	-	5
ISO 10545-13	Chemical resistance	UB min.	UA ULA UHA
ISO 10545-8	Coefficient of linear thermal-expansion	-	$\alpha=6.3 \times 10^{-6} \text{ }^{\circ}\text{C}^{-1}$
ISO 10545-5	Impact resistance	-	0.88
EN 12825	Static load	-	Centre 9.6 Kn Centre point of sides 6.5 Kn Diagonal 8.19 Kn (CLASSE 3)
	Dymanic laod capacity - hand object impact test	-	Test not passed
	Dymanic laod capacity - soft object impact test	-	Test passed
EN 1339	Bendind strength - breaking force in N	Kn 14.38	classe 14
ENV 12633	Slip resistance	> / = CL1	CL 2
DIN 51130	Slip resistance	-	R11
DIN 51097	Slip resistance	-	A + B + C min.
DM 236/89 B.C.R.A.	Slip resistance	-	> 0.40
Static coefficient of friction ASTM 1028-07 BOT 3000 Dynamic coefficient of friction (sectio n 9.6 ANSIA 137.1 2012)	Slip resistance	-	> 0.60 WET > 0.60 DRY
			>= 0.42
EN 13501-1	Fire resistance	-	A1 - A1 FL

# PACKAGING

2.0 MONOLITHIC RECTIFIED CERAMIC TILE		Thickness	Unit / Box	SqFt / Box	Boxes / Pallet	SqFt / Pallet	Weight / Box	Weight / M <sup>2</sup>	Weight / SqFt	Weight / Pallet (included)	Pallet Size
US7903	Moonstone 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7904	Creamstone 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7900	Grey 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7901	Brown 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7902	Ivory 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7906	Ipè 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7905	Teak 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7908	Pearl 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7909	River 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7907	Crystal white 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7910	Sandy island 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7911	White cool 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7912	Black 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"
US7913	Tan 23 ½ -in x 23 ½ -in	3/4" - 20mm	2	7.75	36	279	72 lb	100 lb	9.3 lb	2650 lb	42"x 42"



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