



DEKTON®

ULTRACOMPACT SURFACES







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04	DEKTON: ULTRA-COMPACT SURFACE
06	TECHNOLOGY: ULTRA-PERFORMANCE AND ULTRA-COMPACT
08	FORMATS: FREEDOM OF DESIGN
10	APPLICATIONS: VERSATILITY
12	VENTILATED FACADES
20	CLADDING
24	FLOOR COVERINGS AND STAIRS
30	INSPIRATIONS: REALISATION OF SENSATIONS
34	TECHNICAL CHARACTERISTICS
36	SUSTAINABILITY AND CERTIFICATIONS
38	COSENTINO GROUP: EVOLUTION / INNOVATION / EXPANSION

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## SCIENCE AND TECHNOLOGY HELPS US TO DEVELOP NEW MATERIALS THAT IMPROVE LIFE IN OUR HOMES.

The sophisticated raw materials used to make **DEKTON** can also be used in the production of quartz, glass and porcelain.

In mere hours and through a unique technological process; **DEKTON** reproduces what nature has taken thousands of years to produce. The result is a slab with exclusive technical features and aesthetics, with endless applications for both indoor and outdoor use.

Due to its properties, **DEKTON** is a unique material in the world, as it has the highest quality and technical characteristics among the different existing surfaces in the market.



## PROPERTIES

From the outset, DEKTON has been designed so it can be used on almost all existing applications in regard to construction surfaces.

Currently its main features are as follows, although new generations of DEKTON that are being developed will mean it can be used in other types of more specialised applications.

LOW WATER ABSORPTION



COLOUR STABILITY



DIMENSIONAL STABILITY



ABRASION RESISTANT



STAIN RESISTANT



RESISTANCE TO FREEZING AND THAWING



SUPERIOR MECHANICAL RESISTANCE



MAXIMUM RESISTANCE TO FIRE AND HEAT



FIREPROOF MATERIAL



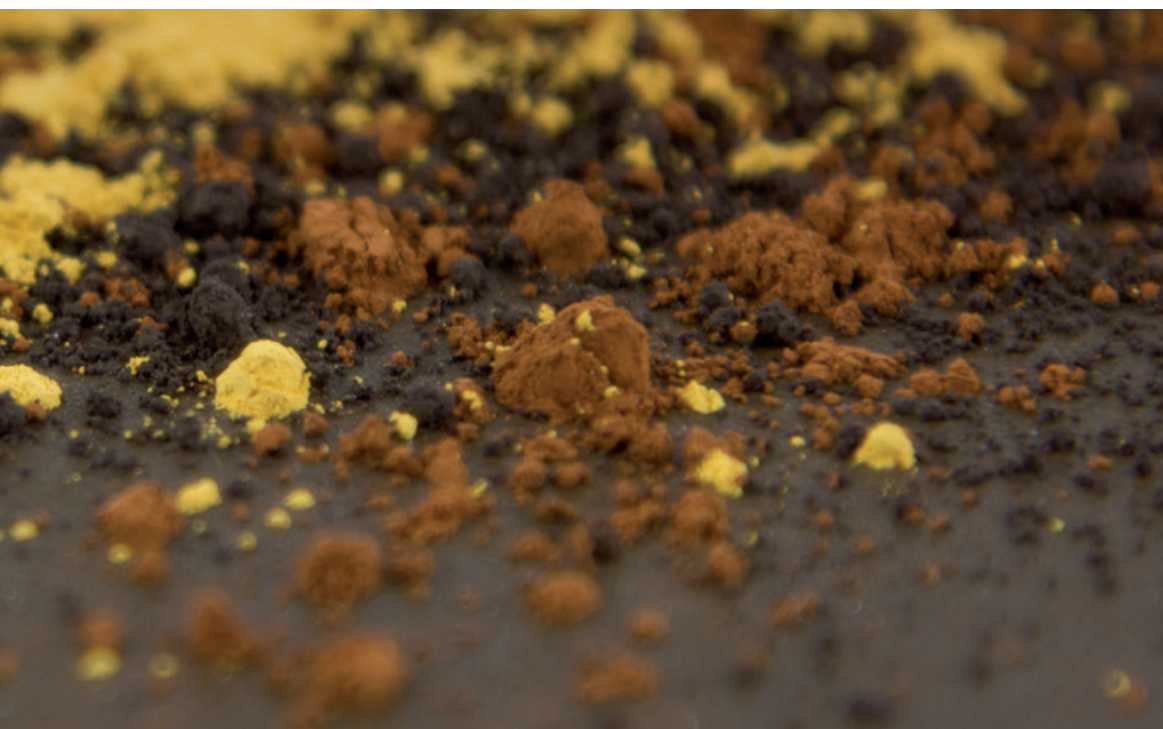
HIGHLY SCRATCH RESISTANT



HIGHLY UV RESISTANT



SUITABLE FOR CONSTANT CONTACT WITH WATER



## CHEMICAL COMPOSITION

This product does not contain resins or organic additives, so no polymerisation reactions are used to produce it. The chemical composition of the product is totally inorganic.

Different formulas are used depending on the type of product to be obtained, this means that the final chemical composition can vary without this affecting the physical or chemical properties.

One half of the final chemical composition of DEKTON is as follows: silico-aluminates, amorphous silica, crystalline silica, zircon and inorganic pigments. The content of crystalline silica in all colours and formula will always be below 11% in weight.

The product is classified with TARIC code: 6914.90.00.90. However, according to its technical features, it belongs to Group Bla according to EN 14411:2006, for tiles for flooring applications for both indoor and outdoor use.





### MANUFACTURING PROCESS

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#### RECEPTION AND PREPARATION OF RAW MATERIALS

At the very start of the process, the quality of the raw materials is controlled to check their suitability. All raw materials are stored separately to prevent cross contamination.

Raw materials are transported by a system of conveyor belts, from their location to a series of hoppers or purification systems designed exclusively for this process.

#### GRINDING AND STANDARDISATION

From the hoppers or purification systems, the **DEKTON** formula is transported to a wet grinding process, in which different raw materials are mixed in a certain ratio and ground to a specific particle size.

This particle size fully determines the speed and process of the chemical reaction which results in **DEKTON**. It also determines the final properties of the product. This mixture is stored separately before use, for a certain settling period.

#### PIGMENTATION

The pigmentation process consists of a complex systems of mixers, thinners and agitators. This system is capable of mixing, depending on the colour/effect to be developed, inorganic pigments with the rest of the **DEKTON** formula. These pigments are also part of the chemical reaction, which results in **DEKTON**, therefore the quality control of its chemical composition is very extensive and laborious.

#### ATOMISATION

The already coloured **DEKTON**, is dried by atomisation to obtain a specific size and shape of the granule, and a particular moisture.

The various powders obtained are stored in separate silos. In this case, the moisture controls the fluidity of these small granules, enabling them to be deposited in the different receptacles that feed some of the subsequent decoration systems, and flow between the channels feeding other decoration systems or that permit their movement during mixing systems.

#### DECORATION SYSTEMS

Through various devices, which are unique for their design and function, these small granules generated in the previous section, will be carefully positioned on different parts of a belt, forming a continuous slab. These decoration devices obtain the different aesthetic effects.

These effects can be produced throughout the entire volume of the slab or only on the surface. In total, in the first phase of the production process, there are 16 different decorating systems that can work alone or simultaneously, or even in groups, resulting in a highly versatile design.

#### SHAPING SYSTEM

The continuous slab is separated into different fragments, which then create the final slab format. These fragments are ultra-compacted at very high

pressure. To do this, a unique press was designed for its capacity to compact and dimensions.

The result of this process is to bring the small coloured granules as close together as possible. This process is essential to accelerate the chemical reaction that is generated subsequently. This process gives the slabs sufficient mechanical resistance to transport them to the next section which is the final thermal process.

#### THERMAL PROCESS

During this process, the final slab is generated with its physical, chemical and aesthetic properties. This process involves the application of a high temperature so that the different coloured granules react following a specific reaction route.

During this process, the transformation of the initial raw materials and pigments in various intermediates are produced. By using heat, they are controlled to react and so that they can follow the correct synthesis path.

#### SORTING AND STORAGE

The last step of the manufacturing process is the sorting and storage of slabs. These are sorted in a horizontally in an automated warehouse.



## ULTRAPERFORMANCE

DEKTON's superior technical characteristics offer unique resistance to UV rays to maintain a stable colour in outdoor spaces, resistance and exceptional performance.

The product has excellent resistance to impacts, scratches and abrasion and therefore can be used in high traffic areas.

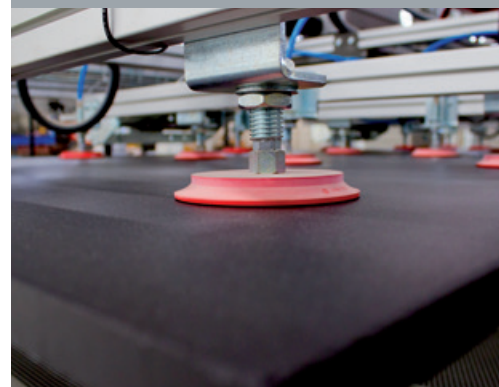
It also offers thermal shock resistance to heat, frost and thaw, so the product can be used outdoors in all weather conditions.

This powerful combination allows the use of **DEKTON** in many indoor and outdoor applications.

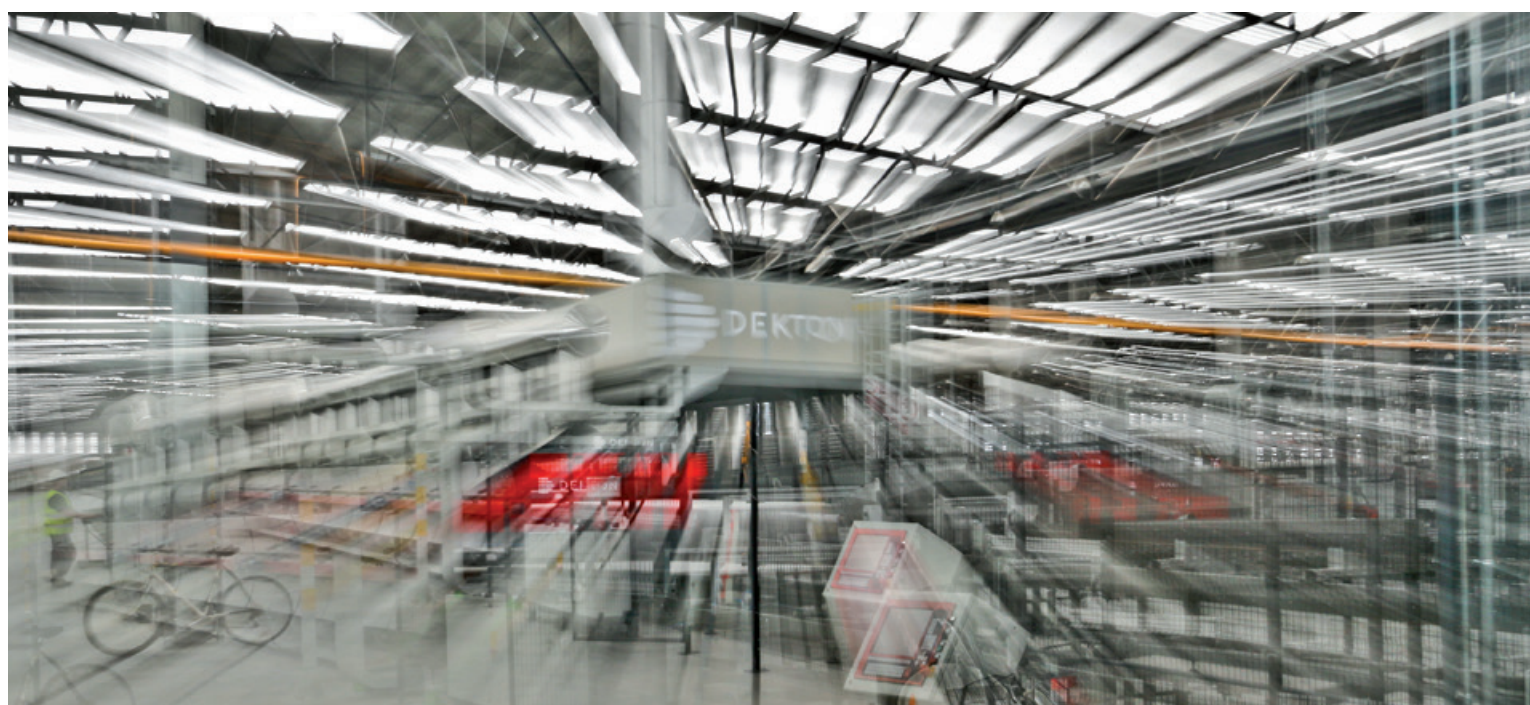
## ULTRACOMPACT

DEKTON is a sophisticated blend of raw materials, using a unique technological process (TSP), which is an accelerated version of the metamorphic changes that occur when natural stone is exposed to high pressure and temperature for thousands of years.

The **DEKTON** press is 25,000 tonnes, the largest press in the world, which makes the stone into an ultra-compact surface of an unprecedented size and thickness, and ensuring extreme performance. This level of compaction contributes significantly to the low porosity of the material, making it a product that requires minimal maintenance and which is long-lasting.



THE CONTINUOUS EFFORTS  
WE MAKE IN R&D ARE ONE OF THE  
BASIC PILLARS OF OUR BUSINESS.



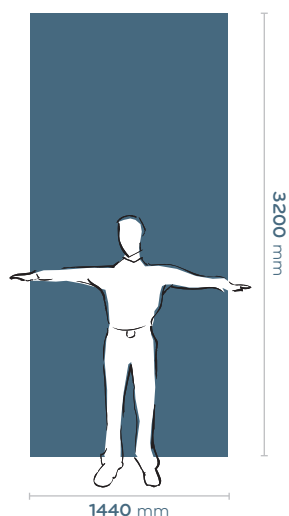


DEKTON is presented in large format slabs with minimum thickness, expanding the design possibilities to previously unknown possibilities.

DEKTON slabs measures 3200 mm. x 1440 mm. and thicknesses from 8 mm. to 20 mm. depending on the applications, design or desired effect.

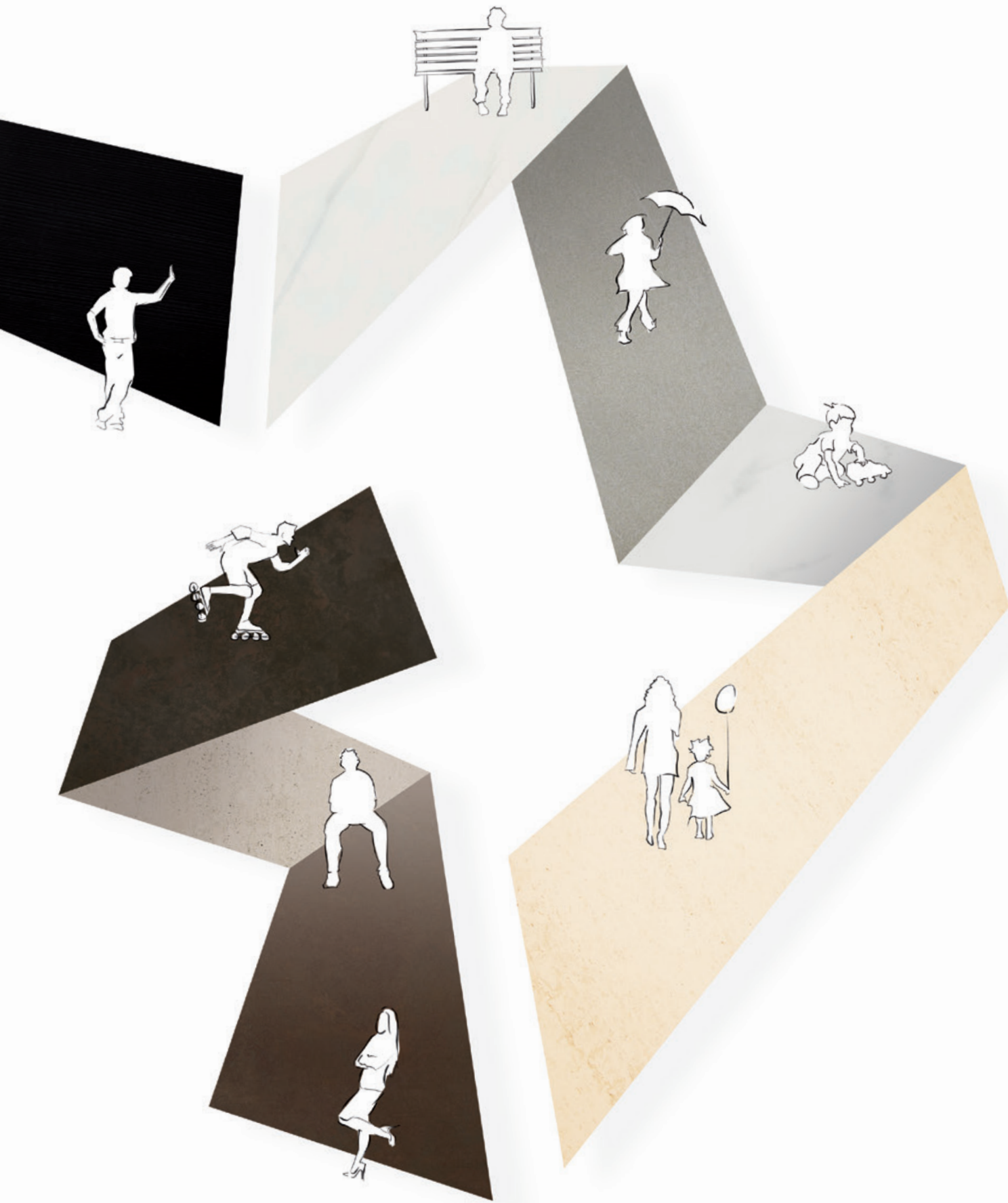
Asides from the huge advantage of its size, the 3D design completes its extraordinary ability to be produced in a much more clean, complete and bright way, as well as designing seamless, uninterrupted and unlimited surfaces and spaces, where colour and texture flow freely in all directions and senses, expressing itself in all its fullness, with total freedom.

### ULTRASIZE



### ULTRATHICKNESS

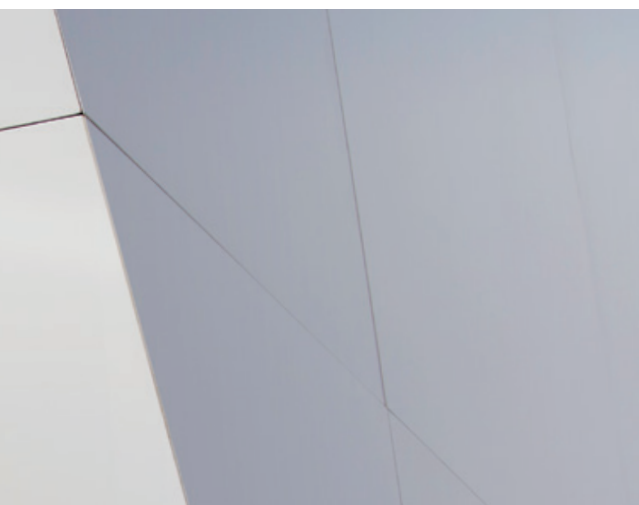




APPLICATIONS: VERSATILITY



ENDLESS APPLICATIONS SO  
THAT THE DESIGN FLOWS  
IN ALL SPACES.  
INDOORS AND OUTDOORS.



**DEKTON is a new product-leader that is demonstrated in all fields, in all spaces, indoors and outdoors, and in all scales. Endless applications so that the design flows.**

In the **DEKTON** manufacturing process, up to 16 different decoration techniques are used, which enable a three-dimensional design and countless aesthetic possibilities.

With the design potential and features of **DEKTON**, it exponentially increases the possibility of imagining multiple ambitious, complex and free applications, connecting indoor and outdoor spaces by using a single product, for full consistency.

The **DEKTON** properties allows us to produce customised products, a free choice of formats and a wide range of thicknesses for each application.

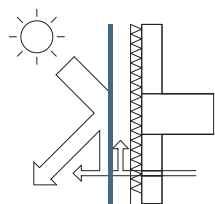


The ventilated façade is a high performance constructive solution for building enclosures that take advantage of mechanical anchoring elements, a metal structure is used to attach the cladding material to the wall of the building.

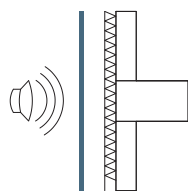
Between the inner and outer cladding layer, an air chamber is created which generates a micro-ventilation effect by convection. The mechanical and aesthetic properties of **DEKTON**, make it an ideal material for this application, and also for other types of façades, such as attached façades, curtain walls, etc.

## ADVANTAGES

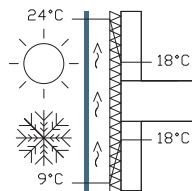
### ENERGY SAVINGS



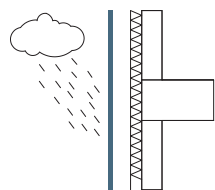
### ACOUSTIC INSULATION



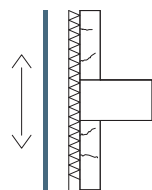
### HEALTH AND SAFETY: PREVENTS THERMAL BRIDGES AND CONDENSATION



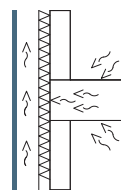
### PROTECTION AGAINST WATER FILTRATIONS



### SUPPORT WALL PROTECTION



### THERMAL INSULATION



## PROPERTIES

### WHAT MAKES DEKTON IDEAL FOR FACADES

3200 mm. x 1440 mm. Format

12 mm. and 20 mm. thickness

Flexural strength

Excellent dimensional stability

Resistance to freezing and thawing

Colour stability

Possibility of unlimited design: format, details, joints, colours etc.

## ANCHORING SYSTEMS FOR DEKTON

### CONCEALED FASTENING THROUGH REAR UNDERCUT ANCHORS



**Recommended thicknesses:**

12 mm. and 20 mm.

**Formats:** Free choice of format, prior verification of calculation, up to a maximum of 3200 mm x 1440 mm.



The structure consists of profiles and clamps. These clamps are attached to the existing support, through appropriate sized plugs for this support. The horizontal profiles will be subsequently attached to the mullion profiles. The **DEKTON** pieces will be hung on these horizontal profiles.

The design of the structure must provide for the absorption of thermal expansion and contraction, as well as possible movements of the support, without the cladding being affected by the tension.



### CONCEALED FASTENINGS THROUGH HORIZONTAL PROFILES EMBEDDED IN THE GROOVES OF THE EDGES

The structure consists of profiles and corbels. The vertical profiles are anchored directly to the existing support through corbels and horizontal profiles that are embedded into the grooves in the **DEKTON** pieces. An adhesive fastening system is not necessary. The adoption of this system is directly related to the format of the piece, because the fixings are only on the edges.

The design of the structure must provide for the absorption of thermal expansion and contraction, as well as possible movements of the support, without the cladding being affected by the tension.



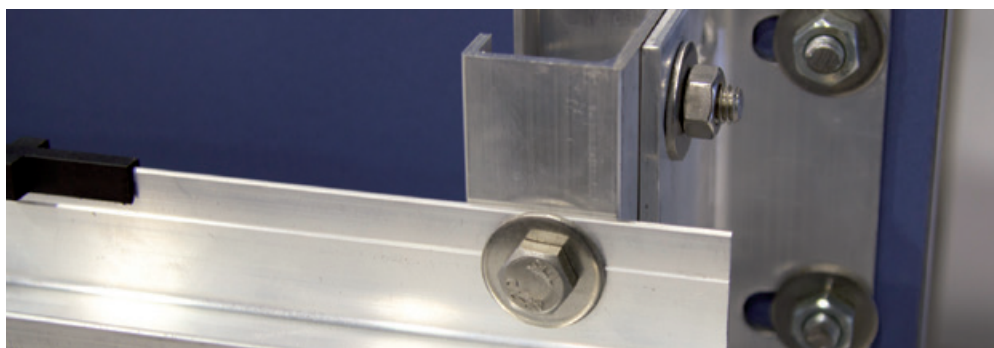
**Recommended thicknesses:**

12 mm. and 20 mm.

Depending on the necessary system and groove.

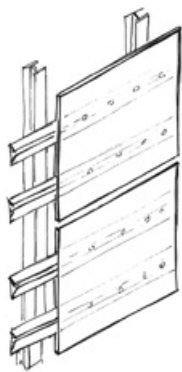
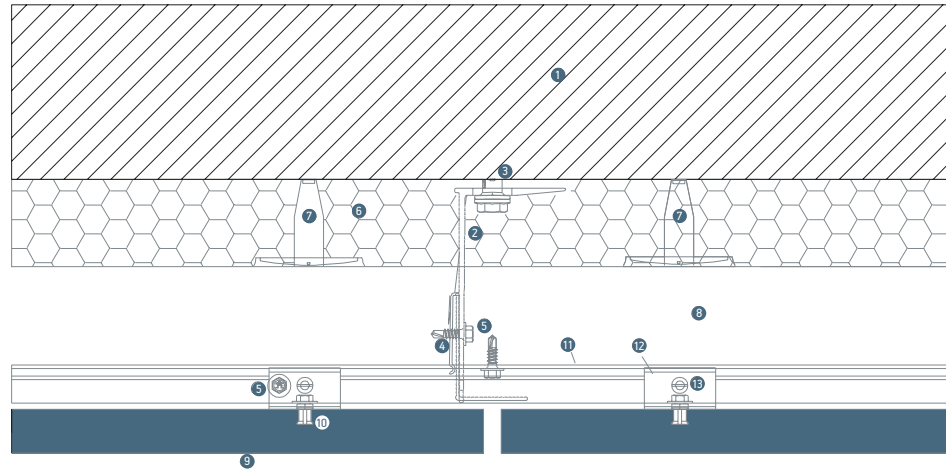
**Format:**

Free selection of format, up to a maximum piece height of 1440 mm. (check system calculations)

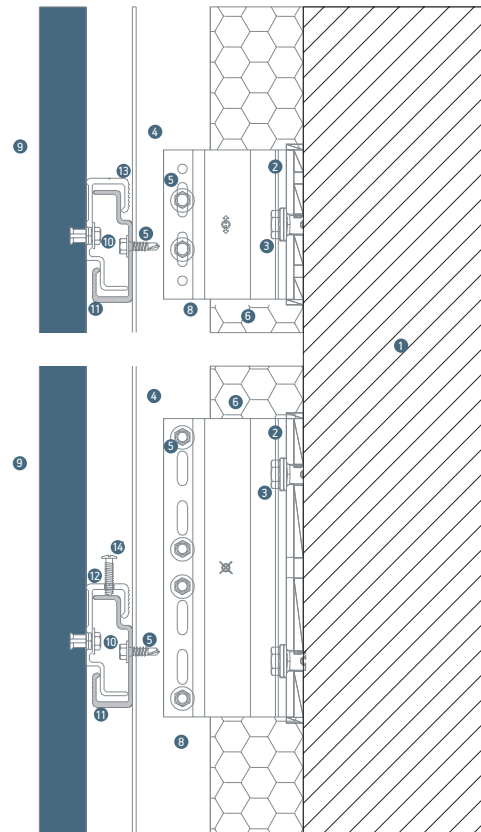


\*NB: For both fixing systems, the definition of type, position and number of anchors should be reflected in the technical design of the ventilated façade. These will be provided by those responsible for the system depending on the manufacturer's recommendations. During the use of Dekton for ventilated facades, Cosentino S.A advises that is necessary to use a rear mesh in order to guarantee the security with this kind of application.

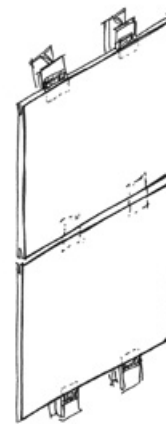
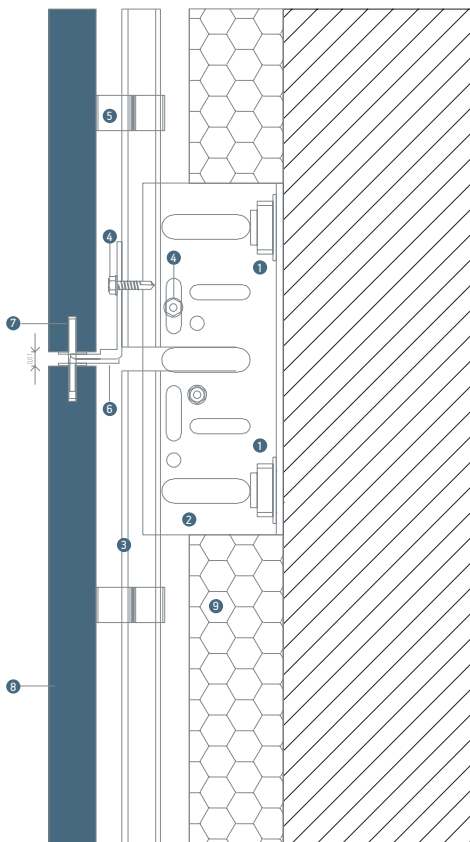
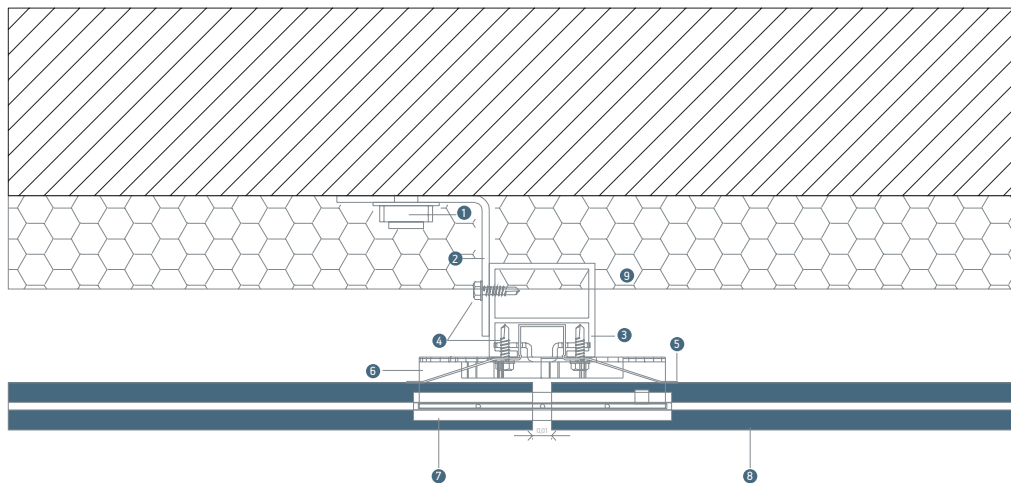
CONCEALED FASTENING THROUGH REAR UNDERCUT ANCHORS



- 1 Support wall
- 2 Corbels
- 3 Anchoring ring
- 4 Vertical profile
- 5 Screw
- 6 Insulation
- 7 Insulation fixing
- 8 Air chamber
- 9 Dekton
- 10 Cladding fixing
- 11 Horizontal hanging guide
- 12 Levelling nail
- 13 Hanging nail
- 14 Regulating screw



CONCEALED FASTENING THROUGH CONTINUOUS GROOVES WITH STAPLES

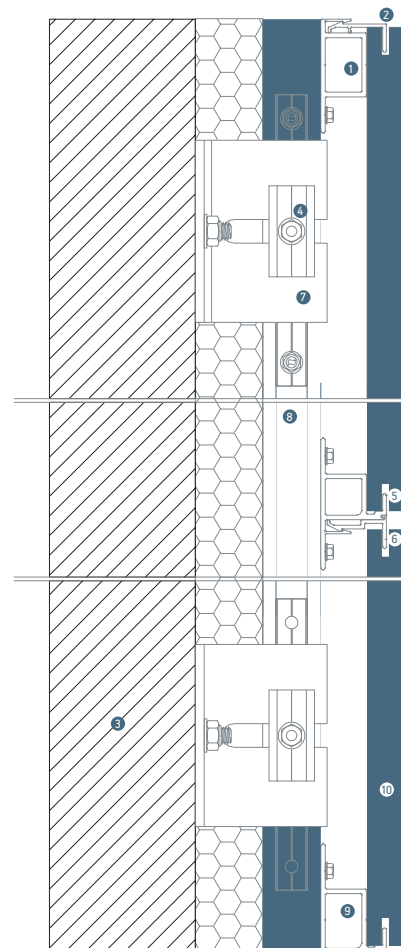
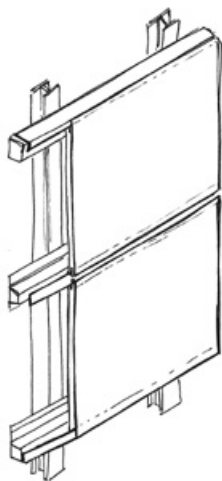
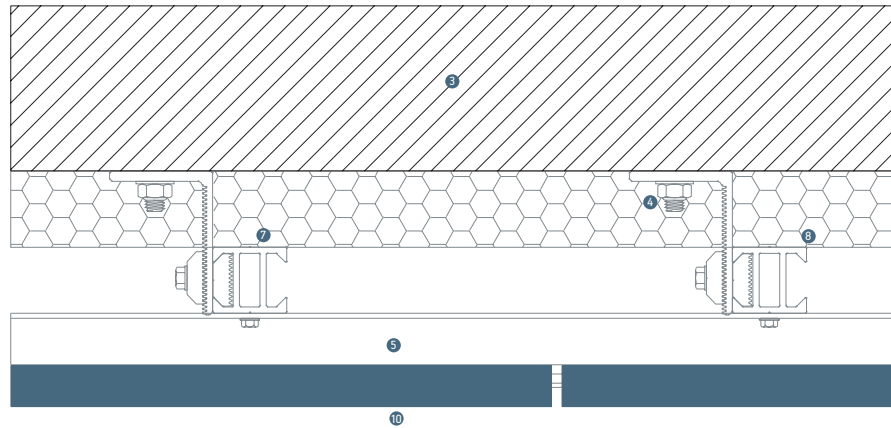


- 1 Anchoring ring
- 2 Corbels
- 3 Vertical profile
- 4 Screw
- 5 Stainless steel pressure spring
- 6 Clamp
- 7 EPDM clamp cover
- 8 Dekton
- 9 Insulation



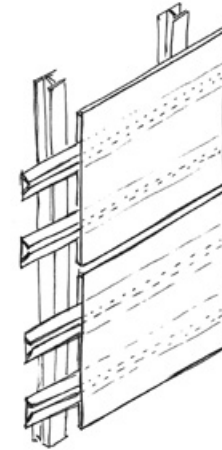
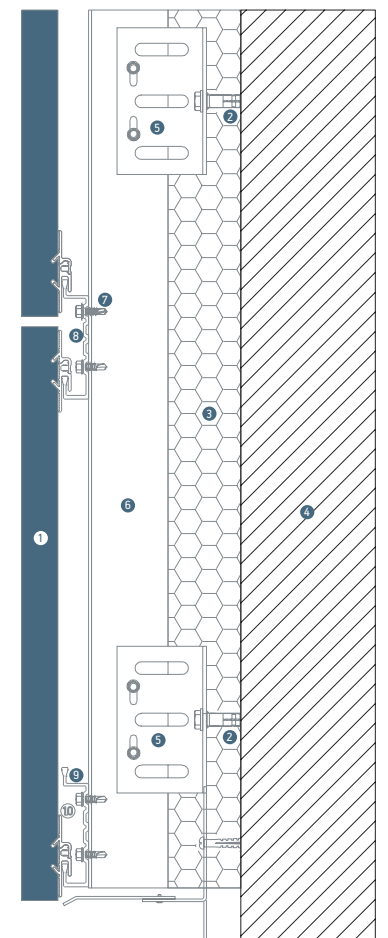
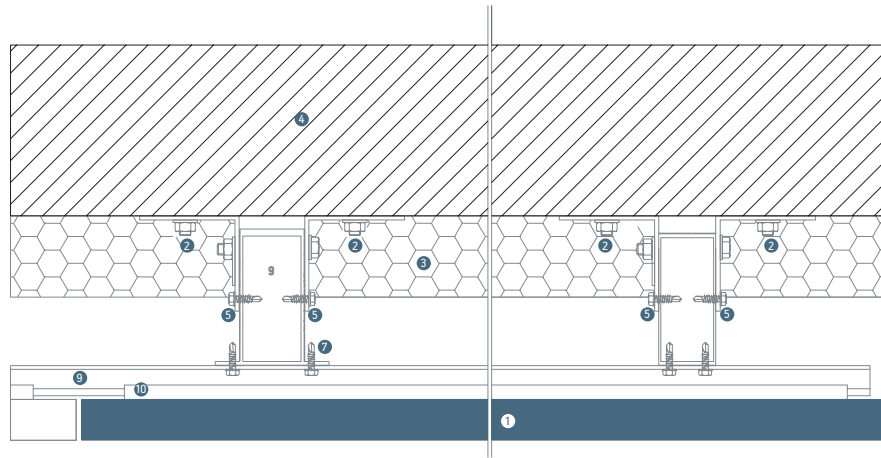
# VENTILATED FACADES: DETAILS

## CONCEALED FASTENING: GROOVE WITH CONTINUOUS PROFILE



- |    |  |
|----|--|
| 1  | Closing crossbar                           |
| 2  | Closing clip                               |
| 3  | Support wall                               |
| 4  | Anchoring pieces for the brackets to studs |
| 5  | Intermediate crossbar                      |
| 6  | Intermediate clip                          |
| 7  | Corbels                                    |
| 8  | Vertical profile                           |
| 9  | Start crossbar                             |
| 10 | Dekton                                     |

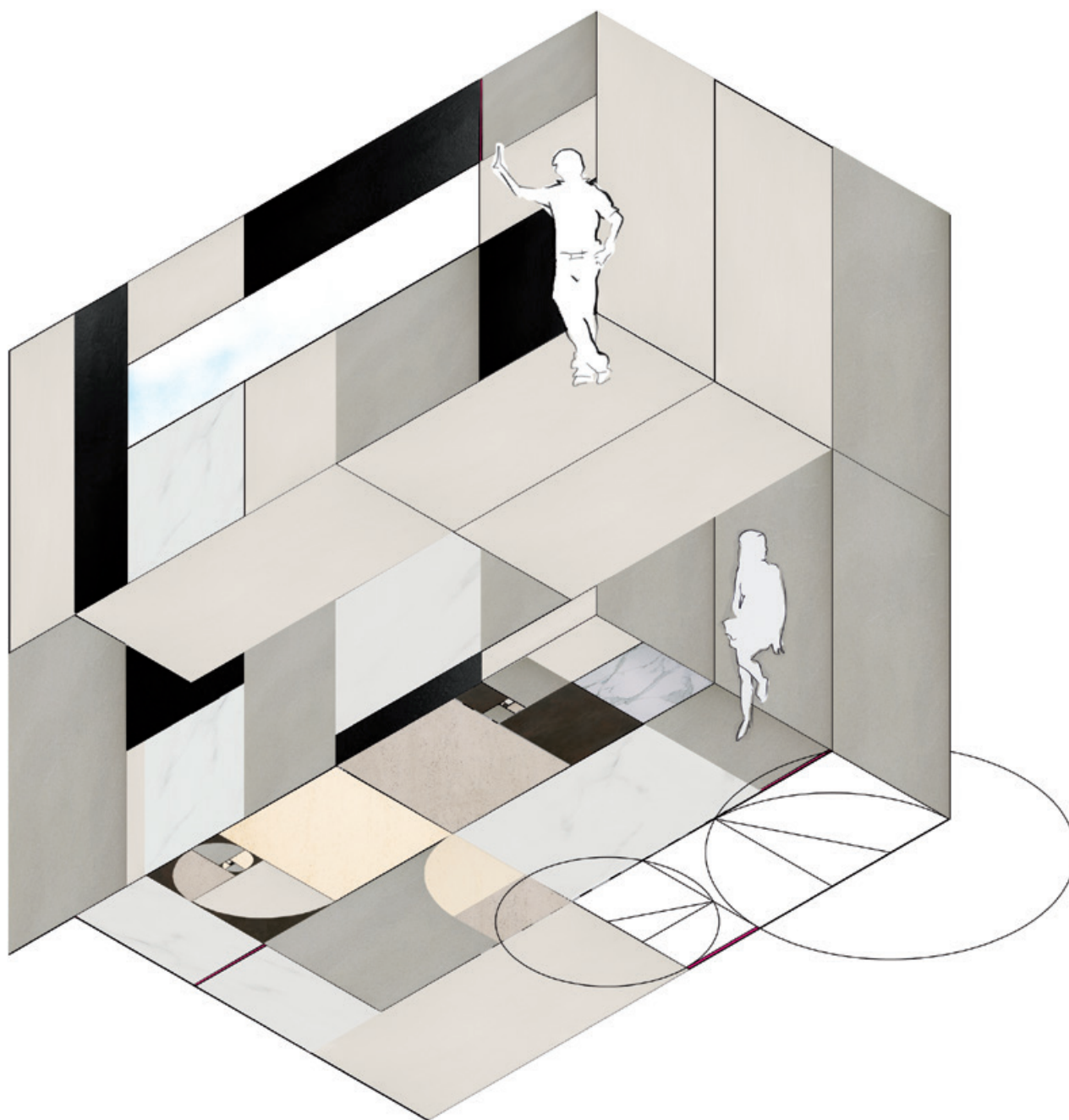
CONCEALED FASTENING THROUGH HORIZONTAL PROFILES  
EMBEDDED IN THE GROOVES AT THE REAR OF THE PIECE



- |    |                    |
|----|--------------------|
| 1  | Dekton             |
| 2  | Screw              |
| 3  | Insulation         |
| 4  | Support wall       |
| 5  | Support corbel     |
| 6  | Vertical profile   |
| 7  | Screw              |
| 8  | Staple             |
| 9  | Horizontal profile |
| 10 | Anchoring profile  |







**DEKTON** is an ideal solution for covering interior and exterior walls, as due to the ultra-compaction of each slab in the manufacturing process under a pressure of 25,000 tons, its high resistance, easy to clean and versatile formats and textures, provide the freedom to unify both indoor and outdoor spaces, enjoying exclusive aesthetic values without sacrificing comfort, maximum performance, durability and safety.

## PROPERTIES

THAT MAKE DEKTON IDEAL FOR INDOOR AND OUTDOOR COVERINGS.

3200 mm. x 1440 mm. large format

Versatility of formats

Thicknesses of 8 mm., 12 mm. and 20 mm.  
(depending on the requirements of the project)

High flexural strength.

Excellent dimensional stability, reduced joints.

Colour stability.

Possibility of endless design: format, details, joints, colours...

Resistance to freezing and thawing.

Reduced porosity and good maintenance and cleaning.

## INSTALLATION RECOMMENDATIONS

Large format design possibilities

Check consistency of the surface.

Reduced 2 mm joints between pieces.

Respect the building's expansion joints.

The use of C2E adhesives according to Standard EN 12004 is recommended.



## CLADDING SYSTEMS FOR DEKTON

### SIMPLE PANELLING SYSTEM

The cladding of indoor and outdoor walls can be achieved by a single cladding system, using adhesive cement plaster directly on the outside of the building or the interior support wall, to which the **DEKTON** pieces are stuck.

### MIXED PANELLING SYSTEM

The cladding of indoor and outdoor walls by mixed panelling, consists of adding to the use of cement adhesives, with the use of mechanical reinforcing elements embedded in the separation joints between **DEKTON** pieces and mechanically fixed to the enclosure.

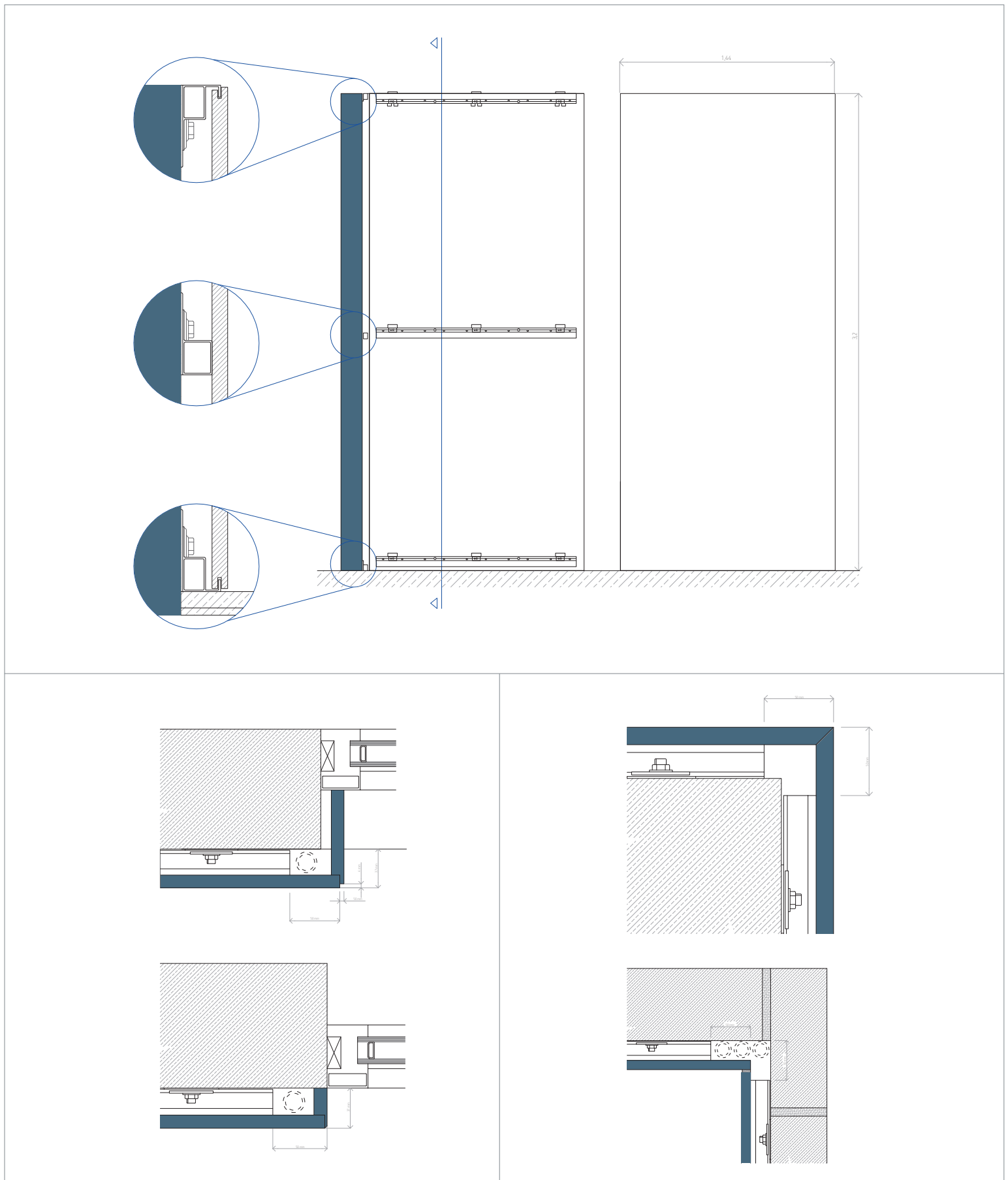
### DRY PANELLING SYSTEM

The cladding of indoor and outdoor walls by dry veneer, consists of using a metal substructure affixed to the enclosure, to which the **DEKTON** pieces are stuck.

The use of either system will depend on the size of the **DEKTON** piece, the building height to be coated, and weather conditions of the area where the building is located. The project management shall demonstrate compliance with the regulation in each case. **For the installation, follow the manufacturer's recommendations.**

# CLADDING

## MECHANICAL FASTENING FOR DRY PANELLING SYSTEM

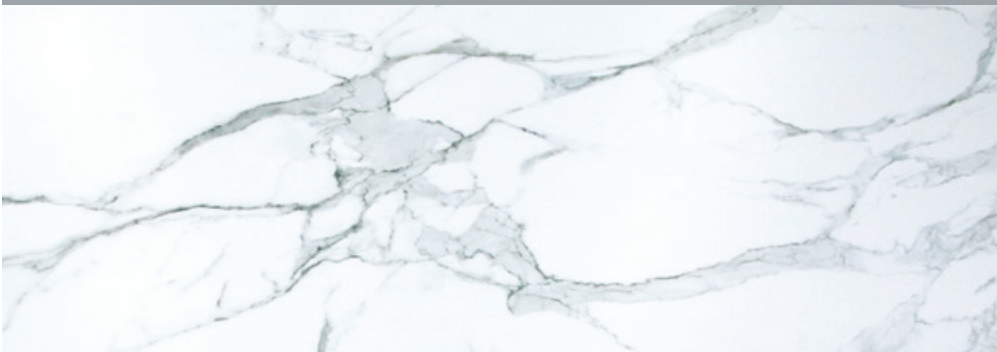




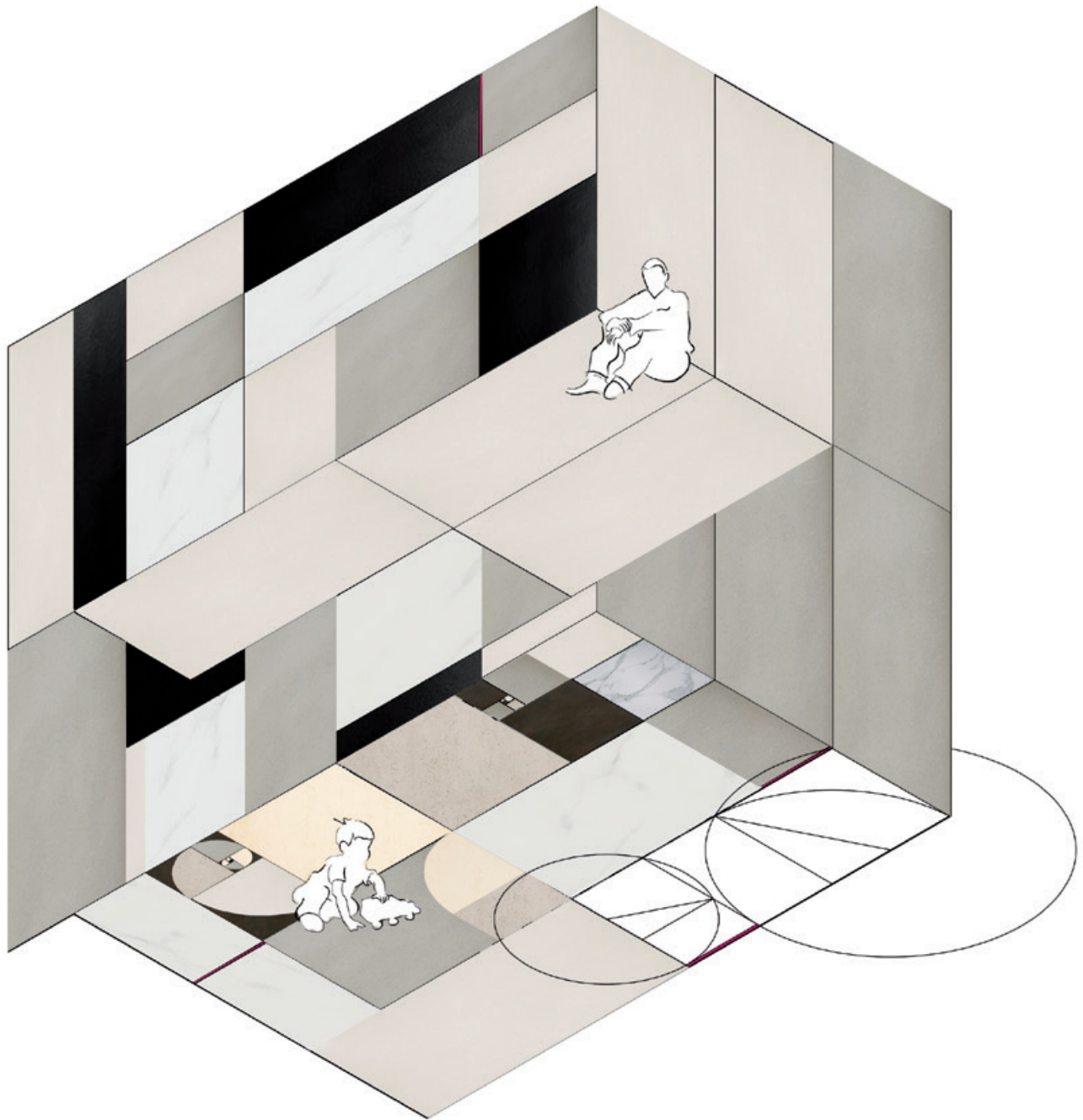
IMAGINE DEKTON

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PERSONALISE TEXTURE.  
ADAPT TO THE DESIGN CHARACTERISTICS  
OF EACH PROJECT. MAKE IT UNIQUE.







**DEKTON** floor coverings are a good alternative for areas with high requirements as far as performance and design are concerned, both indoors and outdoors.

The revolutionary **DEKTON** properties allow the designer total freedom to design the format to work, forgetting the limitations in place to now.

The solution is suitable for installation in office buildings, apartments, and high traffic areas where durability and abrasion resistance are two important factors.

The placement is similar to the placement of pieces in traditional formats but with the advantages of a large format.

## PROPERTIES

THAT MAKE DEKTON IDEAL FOR FLOOR COVERINGS.

3200 mm. x 1440 mm. Format

Thicknesses of 8 mm., 12 mm. and 20 mm.  
(depending on the requirements of the project)

Versatility of formats

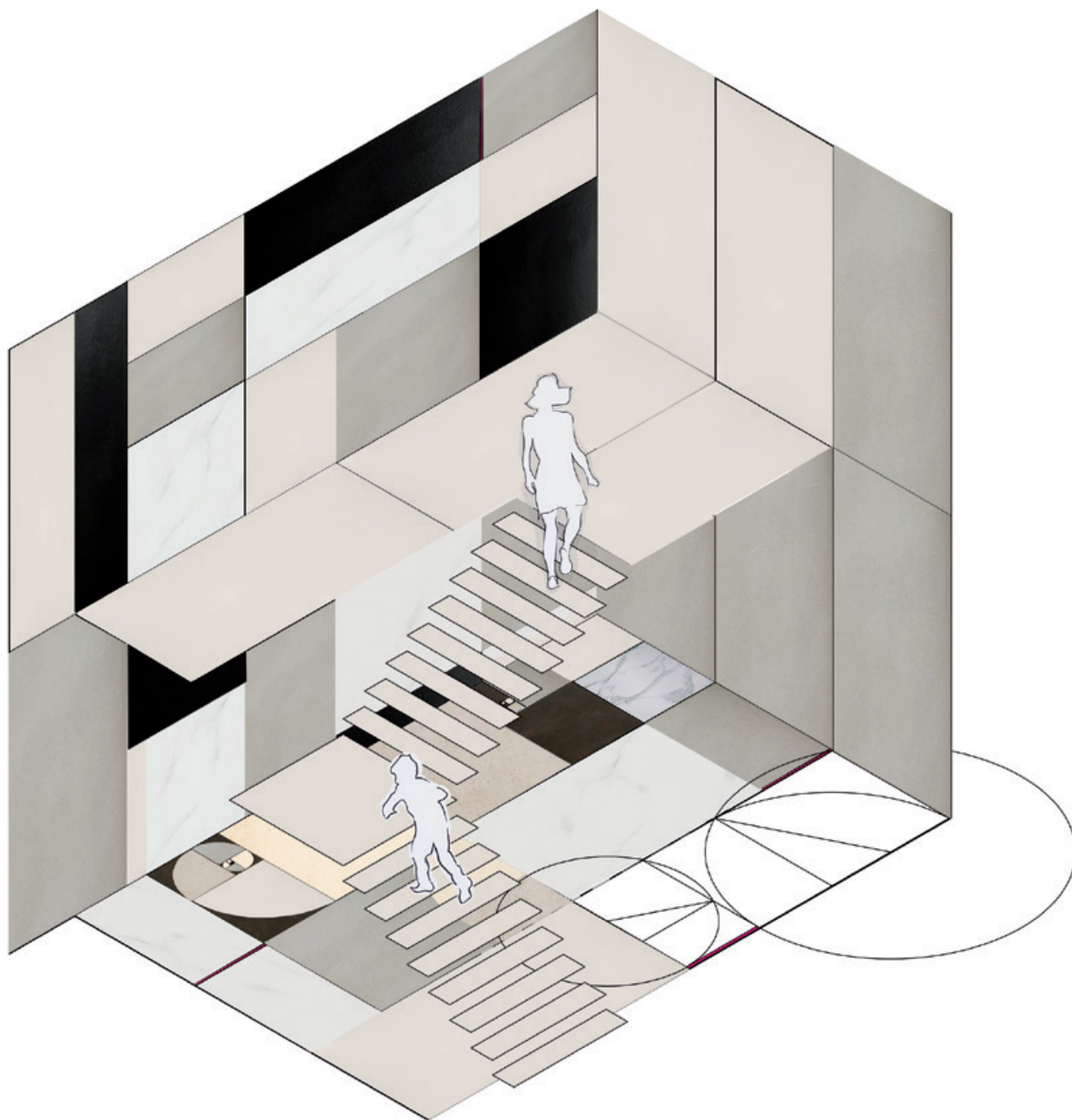
High resistance to abrasion.

High flexural strength.

Excellent dimensional stability,  
reduced joints.

Resistance to freezing and thawing.

Reduced porosity and good maintenance  
and cleaning.



DEKTON provides continuity to floors between spaces at different heights.

3D volume decoration, coupled with excellent mechanical properties and large format, means the ability to design unlimited, uninterrupted steps, achieving uniform stairs and totally seamless spaces, both indoors and outdoors.

## PROPERTIES

THAT MAKE DEKTON IDEAL FOR STAIRS.

3200 mm. x 1440 mm. Format

Thicknesses of 8 mm., 12 mm. and 20 mm.  
(depending on the requirements of the project)

High flexural strength.

It allows exposed edges as the volume is coloured.

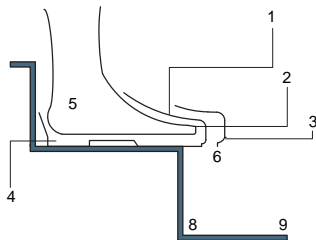
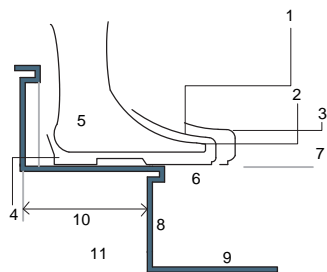
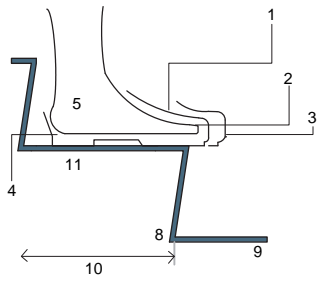
Reduced porosity and good maintenance and cleaning.

High resistance to abrasion.



## INSTALLATION RECOMMENDATIONS

- Large format design possibilities.
- Choosing a thickness depending on project.
- Check the flatness of the support.
- Reduced 2 mm joints between pieces.
- Respect the building's expansion joints.
- The use of C2 class adhesives according to Standard EN 12004 is recommended.
- For the installation, follow the manufacturer's recommendations.



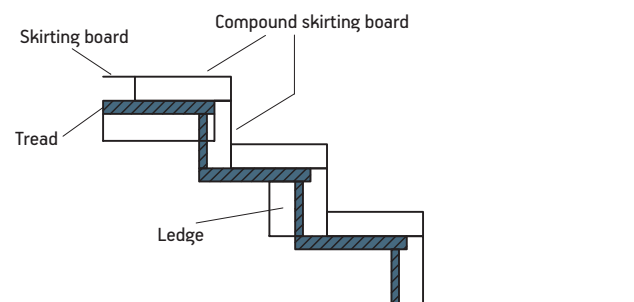
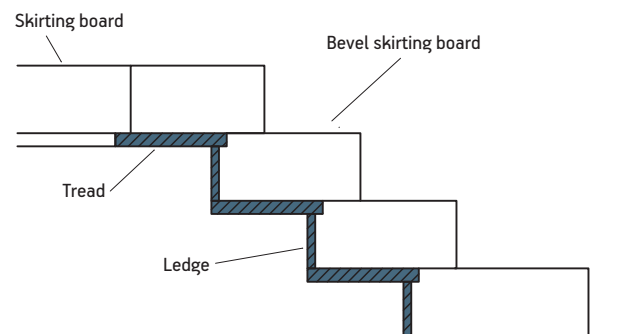
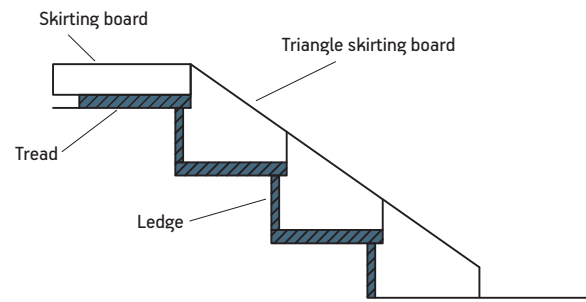
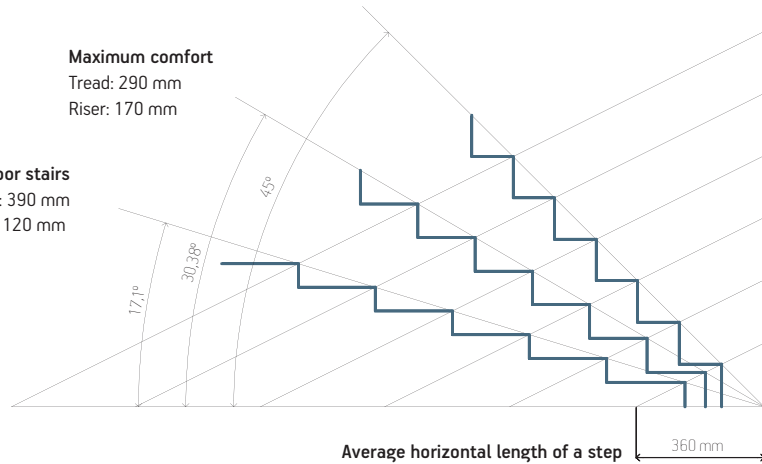
- 1 Contour male footwear 95th percentile (normal footwear)
- 2 Foot contour
- 3 95th percentile male footwear profile (winter boots)
- 4 95th percentile female footwear profile (normal heeled footwear)
- 5 Heel
- 6 Expanse
- 7 Large foot expanse
- 8 Riser
- 9 Tread
- 10 Tread depth
- 11 Effective tread depth

**Low traffic areas**  
Tread: 210 mm  
Riser: 210 mm

**Format type:**  
2 risers + treads = 630 mm

**Maximum comfort**  
Tread: 290 mm  
Riser: 170 mm

**Outdoor stairs**  
Tread: 390 mm  
Riser: 120 mm



FLOOR COVERINGS AND STAIRS







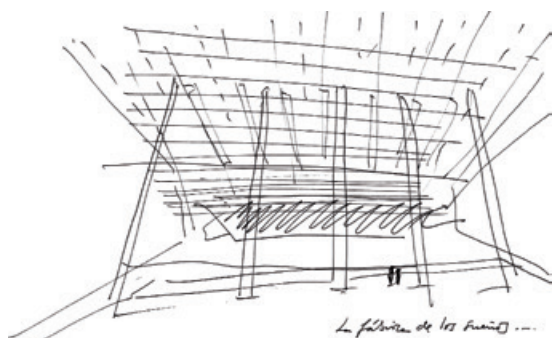
Antonio Álvarez  
Salvador García

"If anything defines Japanese architecture it is the careful use of building materials, allowing optimisation for the sake of excellent spatial skills. Different constructive solutions have been proposed using the same material depending on the function.

The choice of **DEKTON** has enabled me to unify several features that were required for this project using one material.

Its natural appearance, hardness, durability and especially the availability of large formats that suit the needs of the project idea and not the other way about as happens a lot of the time were evaluated."





## Octavio Mestre

"Earth's ore is usually extracted in mines and underground galleries. But in Macael (Almería), everything is so bright that the impressive marble quarries explode in front of the open sky.

This same luminosity surprises us when we visited the new DEKTON factory. Because, if the base product is extracted from the land, the raw material of this "grand carapace," as Victor Hugo of the Notre Dame would say-emerges a product that unites the goodness of nature, man's ingenuity.

Although, a zero porosity, ultra compact material, is more the work of alchemists than men, as it solves many of the problems we face daily as architects.

It lets us use maximum sizes with minimum thickness, it can be used interchangeably, indoors or outdoors, and therefore is destined to revolutionise the future of architecture. It is, if I may say, something very similar to the much hyped, philosopher's stone.

I do not want to talk about the virtues of the product that you can find on their website (you should have a look) .

Just to note how, from cutting-edge research, a huge capacity for work and sincere honesty, one can circumvent the crisis: Intelligence, like smoke, always finds a chimney to escape."



## Patxi Mangado

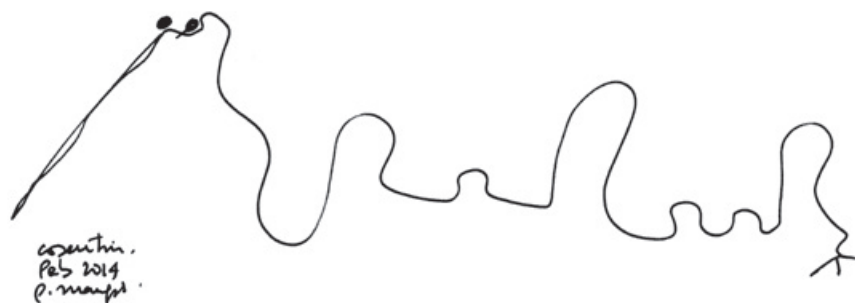
"What I like most about DEKTON is that it does not make me give up my appreciation for natural materials, those which we mistakenly call "traditional", as being so, they continue to demonstrate their contemporaneity more than ever.

DEKTON is the result of speeding up the processes that nature sequences over hundreds, thousands or millions of years, producing them in hours, as a result of technical and applied research. But to do so, a great deal of time and intensity has been necessary. Time in the effort to achieve the product, and intensity applied to the development of better construction and architectural research.

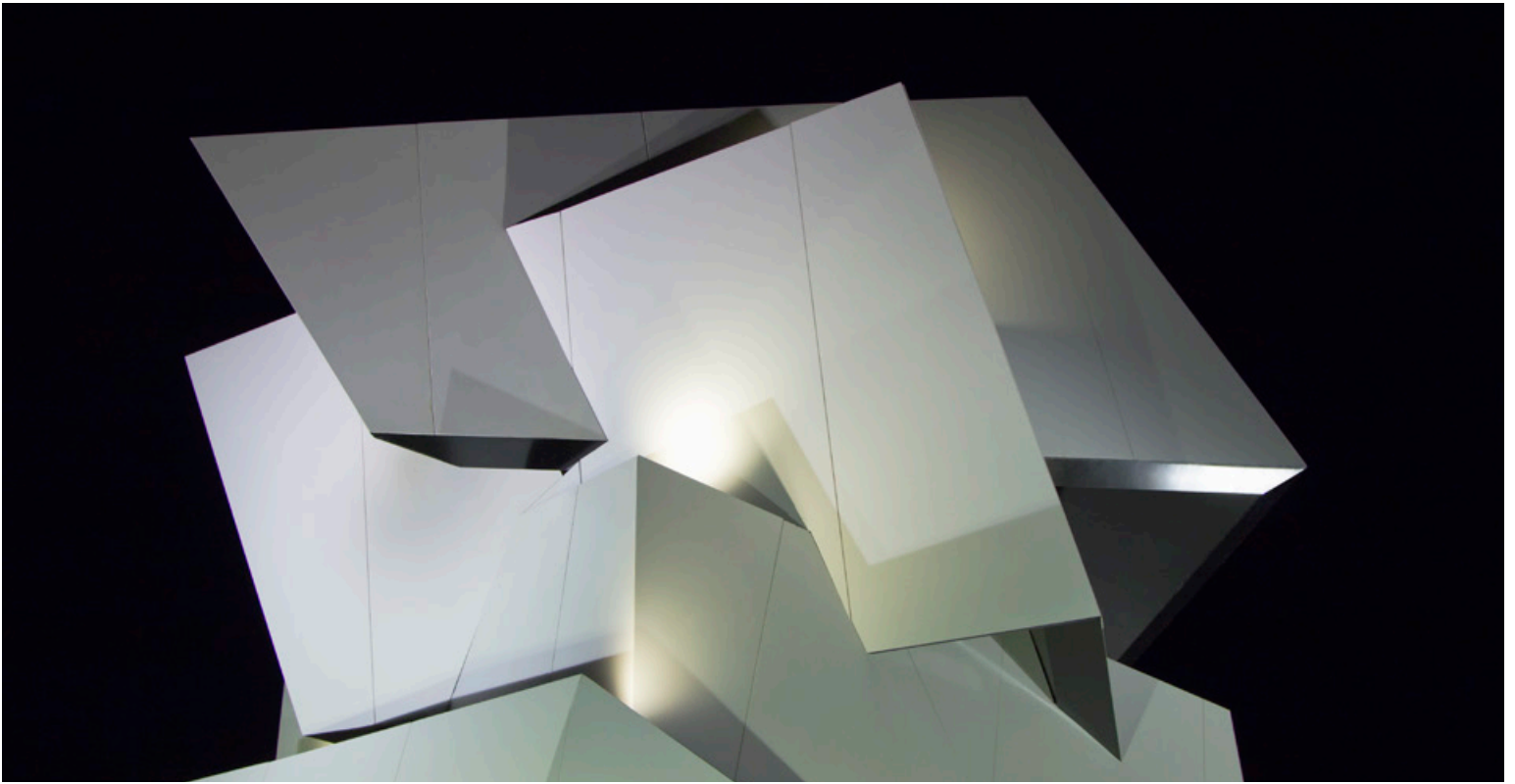
I like to think of this material as a synthesis that is at the centre of a geological triangle formed by stone, steel and glass. Just like stone, in DEKTON we can see the honesty and beauty of the material that sculpts and works the surface, offering the rich possibility of three-dimensionality.

When it is hit, it sounds like steel and when facing the light, it reflects like glass.

Is it possible to condense time into a few hours of production? This time that gives strength and value also to materials that build the architecture? DEKTON is the practical result of the best technique applied to this goal of condensing natural time."







Daniel Libeskind

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## BEYOND THE WALL

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"When you look at a material, you don't only pay attention to the colour or its production process or its chemical and physical properties, you sense the feelings it conveys."



"I became interested in **DEKTON** and Cosentino's production because it is a company that is not only creating a new material, but for them the word sustainability - which, incidentally, was used in the inaugural speech of President Obama over twenty times - means something. It is not just an empty word to be able to call a building "green". It means creating a sustainable environment; it means not wasting our resources, it means creating something that is efficient, that behaves appropriately in our cities with all the problems that reside in them, and it means that you can maintain over time and contribute positively to the environment. This was my first thought about **DEKTON**. And then, I discovered even more: the material has a lot of character, an intrinsic character that is as deep as a natural stone, but in a completely innovative way and with improved compaction resistance, properties etc.

How many wonderful buildings that we admire are beautiful in an image, a snapshot for five minutes, but when you come back a year later to the famous work of architecture, it can be found dilapidated because

the materials are in poor condition ... For this reason, I admire Cosentino's material, because it is a durable material, and for a building to be sustainable, it must be a building that not only has a new façade that lasts five years, but that resists pollution and all the problems we have in our cities ... so this is my connection to **DEKTON**.

I learned a lot about **DEKTON**, and I'm still learning , because it really is still a new item on the market. It is something new and I see great potential: its ability to create angles and how it embraces corners and how it creates continuity between the indoors and outdoors, something that rarely happens . And it is not only its natural origin that interests us, but its ability to develop the future is also part of it. I love the fact that it is a 21st century material that transmits innovative feelings. It is traditional, but it is also innovative. I really believe what I am saying. It is something of a special interest. Working with **DEKTON** in "Beyond the Wall" I have been shown the complexity, versatility, possibilities and even the challenges of designing with a material such as **DEKTON**.

I am currently working on several projects, some very complex and others that we must restore large-scale buildings that were built many years ago. So what do I do? Well, I think about this material and its great potential, with dimensions ranging from a minimum thickness of 0.8 cm, large thickness slabs, and which are also available in large format ... You couldn't imagine how difficult it is to get materials with these features ... Also, I think it's a very competitive product, it is not expensive when compared to many others on the market. I am sure that this is the ideal material.

As I walked around the **DEKTON** factory and thought about how the world is changing - especially in Europe - in a society such as the service industry, I was stunned by the beauty of the factory and I thought this is what really creates culture.

Not only talking about it, but action. This is poetic and I was impressed with the ability of this entrepreneurial family organisation that really moves into other aspects of materiality.



DATASHEET According to STANDARD EN-14.411

Test	Standard	Determination	UD	Family I*	Family II*	Family III*
Flexural and bending strength	UNE EN ISO 10.545-4	Average flexion resistance	N/mm <sup>2</sup>	60	67	59
		Average bending load	N	2.548	2.313	2.356
		Average bending strength	N	14.966	13.559	13.818
Water absorption, open porosity and densities	UNE EN ISO 10.545-3	Boiled water absorption	%	0	0,1	0,1
		Vacuum water absorption	%	0,1	0,1	0,1
		Open porosity	%	0,2	0,2	0,2
		Apparent relative density	g/cm <sup>3</sup>	2,51	2,61	2,53
		Apparent density	g/cm <sup>3</sup>	2,50	2,61	2,52
Resistance to deep abrasion	UNE EN ISO 10.545-6	Abrasive volume	mm <sup>3</sup>	125	106	115
Determination of dimensions and surface aspect	UNE EN ISO 10.545-2	Length and width	%	±0,6% (±2 mm)	±0,6% (±2 mm)	±0,6% (±2 mm)
		Thickness	%	±5% (±0,5 mm)	±5% (±0,5 mm)	±5% (±0,5 mm)
		Straightness of sides	%	±0,5% (±2 mm)	±0,5% (±2 mm)	±0,5% (±2 mm)
		Rectangularity	%	±0,5% (±2 mm)	±0,5% (±2 mm)	±0,5% (±2 mm)
		Central curvature	%	±0,5% (±2 mm)	±0,5% (±2 mm)	±0,5% (±2 mm)
		Lateral curvature	%	±0,5% (±2 mm)	±0,5% (±2 mm)	±0,5% (±2 mm)
		Warping	%	±0,5% (±2 mm)	±0,5% (±2 mm)	±0,5% (±2 mm)
		Surface appearance (Undamaged tiles)	%	100	100	100
Determination of impact resistance	UNE EN ISO 10.545-5	Coefficient of average restitution	-	0,85	0,85	0,85
Determination of thermal linear dilation	UNE EN ISO 10.545-8	Dilatation between 30-100°C	°C <sup>-1</sup>	6,5 · 10 <sup>-6</sup>	5,1 · 10 <sup>-6</sup>	0,3 · 10 <sup>-6</sup>
Determination of thermal shock resistance	UNE EN ISO 10.545-9	Damage	-	Approved / undamaged	Approved / undamaged	Approved / undamaged
Determination of humidity dilation	UNE EN ISO 10.545-10	Maximum expansion	mm/m	0,1	0,1	0,1
		Average expansion	mm/m	0,0	0,0	0,0
Determination of freeze resistance	UNE EN ISO 10.545-12	Damage	-	Approved / undamaged	Approved / undamaged	Approved / undamaged
Determination of chemical resistance	UNE EN ISO 10.545-13	CINH <sub>2</sub> / Cleaning products	Class	UA (undamaged)	UA (undamaged)	UA (undamaged)
		Bleach / Salts for pools	Class	UA (undamaged)	UA (undamaged)	UA (undamaged)
		HCl (3% v/v)	Class	ULA (undamaged)	ULA(undamaged)	ULA(undamaged)
		Citric Acid (100g/l)	Class	ULA (undamaged)	ULA(undamaged)	ULA(undamaged)
		KOH (30 g/l)	Class	ULA (undamaged)	ULA(undamaged)	ULA(undamaged)
		HCl (18%)	Class	UHA(undamaged)	UHA (undamaged)	UHA (undamaged)
		Lactic Acid (5%)	Class	UHA(undamaged)	UHA (undamaged)	UHA (undamaged)
		KOH (100 g/l)	Class	UHA(undamaged)	UHA (undamaged)	UHA (undamaged)
Determination of stain resistance	UNE EN ISO 10.545-14	Green agent	Class	5	5	5
		Red agent	Class	-	-	-
		Mud (solution)	Class	5	5	5
		Olive oil	Class	5	5	5

\* Check references for families.



## DATASHEET According to STANDARD ASTM (American Society for Testing Materials)

Test	Standard	Determination	UD	Family I *	Family II *	Family III *
Moisture expansion	ASTM C370	Average moisture expansion	%	0,02	0,005	0,004
Breaking strength	ASTM C648	Average breaking strength	lbf	3.963	4.896	3.932
Flexural properties	ASTM C674	Average modulus of rupture	psi	10.828	13.997	9.005
Water absorption, bulk density, apparent porosity and apparent specific gravity	ASTM C373	Average water absorption	%	0,03 (Impervious)	0,05 (Impervious)	0,01 (Impervious)
Static coefficient of friction (skid resistance)	ASTM C1028	Static coef. Friction dry	-	0,80	0,77	0,77
		Static coef. Friction wet	-	0,66	0,56	0,69
Wet dynamic coefficient of friction (DCOF)	ANSI A137.1 section 9.6.1	Average DCOF	-	0,57		0,47
Relative resistance to wear (Taber abrasion)	ASTM C501	Average Abrasive Wear Index		182,2	337	240
Thermal shock resistance	ASTM C484	Defects	-	No defects	No defects	No defects
Bond strength	ASTM C482	Average bond strength	psi	423	437	357
Resistance to chemical substances	ASTM C650	<b>Common Household and cleaning chemicals</b>				
		Acetic acid, 3% (v/v)	-	Not affected	Not affected	Not affected
		Acetic acid, 10% (v/v)	-	Not affected	Not affected	Not affected
		Ammonium chloride, 100 g/l	-	Not affected	Not affected	Not affected
		Citric acid solution, 30 g/l	-	Not affected	Not affected	Not affected
		Citric acid solution, 100 g/l	-	Not affected	Not affected	Not affected
		Lactic acid, 5% (v/v)	-	Not affected	Not affected	Not affected
		Phosphoric acid, 3% (v/v)	-	Not affected	Not affected	Not affected
		Phosphoric acid, 10% (v/v)	-	Not affected	Not affected	Not affected
		Sulfamic acid, 30 g/l	-	Not affected	Not affected	Not affected
		Sulfamic acid, 100 g/l	-	Not affected	Not affected	Not affected
		<b>Swimming pool chemicals</b>				
		Sodium hypochlorite solution, 20 mg/l	-	Not affected	Not affected	Not affected
		<b>Acids and bases</b>				
		Hydrochloric acid solution, 3%	-	Not affected	Not affected	Not affected
		Hydrochloric acid solution, 18% (v/v)	-	Not affected	Not affected	Not affected
Potassium hydroxide, 30 g/l	-	Not affected	Not affected	Not affected		
Potassium hydroxide, 100 g/l	-	Not affected	Not affected	Not affected		
Absorption and bulk gravity	ASTM C97	Average weight percent absorption	%	0,02	0,04	0,02
		Average density	lb/ft <sup>3</sup>	156	160,63	157,6
Modulus of rupture	ASTM C99	Average modulus of rupture dry conditions	psi	8.128	9.042	7.369
		Average modulus of rupture wet conditions	psi	7.490	8.446	7.480
Flexural strength	ASTM C880	Average flexural strength dry conditions	psi	6.840	3.118	5.858
		Average flexural strength wet conditions	psi	6.205	4.187	5.119
Compressive strength	ASTM C170	Average compressive strength dry conditions	psi	34.409	>55.000	44.882
		Average compressive strength wet conditions	psi	17.823	>55.000	40.165
Abrasion resistance	ASTM C1353	Average index of abrasion	-	349	349.48	265.8

\* Check references for families.

## SLIPPERINESS REPORT

According to STANDARD EN-14.631

Natural Finish		
Value	48	23
Determination	USRV dry	USRV web

According to STANDARD DIN 51130

Natural Finish	
Value	7,2



Cosentino SA, in its policy of continuous improvement in line with sustainable development, has developed in recent years a number of investments in environmental improvement of the production process.

These actions are aimed at:

Eliminating or reducing atmospheric emissions from industrial facilities.

Improving waste management and minimising the generation thereof.

Implementing water treatment systems in order to optimise their use and minimise their discharge.

Improving sustainable mobility.

Creating green spaces.

Energy efficiency.

## SUSTAINABLE DEVELOPMENT

### ATMOSPHERE

**Air protection is essential not only in environmental terms but also for the health of people. Among the measures that have been taken in manufacturing DEKTON, we can highlight:**

- Enclosed conveying systems for micronised raw materials from the truck to the mill.
- Integrated transport systems to minimise the potential emissions from the point of generation of coloured raw material (spray) to the point of storage (24 hermetic silos)
- Centralised dust collection and purification systems through 7 hose filters, which are located in different sections of the factory.
- Installation for extraction, processing, and recovery of the fumes from the furnace.
- MRD and SPR systems to recover heat from the furnaces.

### GREEN SPACES

**More than 25,000 m<sup>2</sup> of green spaces have been created in the new industrial park Local species and more than 200 trees have been uses, adapted to the arid conditions of the area.**

### ENERGY EFFICIENCY

Besides already mentioned saving measures (such as reusing heat from the fumes of the furnace) other efficiency measures have been programmed.

For outdoor street lighting, LED lighting has been used with timers depending on traffic. Maximum use of natural light has been made by installing skylights.

### EVALUATION OF WASTE

The following systems for the recovery of waste generated in the production process have been installed:

- Set of installations aimed at reuse of raw waste prior to the cooking process.
- Dust Recovery System from the various emission catchment areas.
- Sweeper-scrubber cleaning machines with water recycling system .

### WATER USE AND MANAGEMENT

**Water is a limited resource. This has been taken into account in the manufacturing of DEKTON, adopting the following measures:**

- Fours deposits located throughout the factory, allowing the collection of water for cleaning and reuse in the process.
- System for obtaining water by reverse osmosis technology.

- Decantation and clarification process that allows the treatment and recovery of process waters.

### SUSTAINABLE MOBILITY

**Within the Cosentino sustainability policy, sustainable mobility plays a prominent role. In this line, and with regard to the new industrial park where DEKTON is made, over 2 miles of bike lanes have been designed and bikes were bought for workers to move about.**

Additionally, sustainable movement is promoted in the industrial park, with the use of electric vehicles, for both workers and suppliers.



# SUSTAINABLE AND ENERGY SAVING PROCESSES ARE AN IMPORTANT PART OF COSENTINO MANAGEMENT.



## ISO 14001



This recognition certifies and consolidates the Cosentino the quality of the Cosentino environmental management system.

This certificate covers the entire process in which the company is involved in from the design, manufacture and processing of **DEKTON**, to their distribution and marketing.

It certifies among other things, the control of emissions into the atmosphere, waste management programmes, treatment systems and re-use of industrial water, disposal of chemical substances, and control of environmental hazards.

## NSF



**DEKTON®** by Cosentino is being tested and evaluated under NSF International Standard 51 for the various products.

Achieving the NSF certificate and therefore the right to use the logo for certified products, is a toxicological evaluation of all the ingredients of the various products, conducting proficiency testing and successfully passing unannounced annual audits at all manufacturing sites.

To see the list of products that are in force under this certification, visit the NSF website.

[www.nsf.org](http://www.nsf.org)

## GREENGUARD



The Greenguard Certified programme identifies those products that have been tested to ensure that their chemical and particle emissions are in line with strict guidelines for indoor air pollutants. Similarly Greenguard has another certificate "Greenguard for Children & Schools" which assesses the sensitive nature of school communities along with the specific characteristics of this type of building. This type of certificate includes the maximum control of requirements with regard to chemical product emissions.

**DEKTON®** by Cosentino has been analysed by Greenguard, proving that it does not emit any VOCs and thus has achieved certifications for both Greenguard Certified (Certificate No. 41572-410) and Greenguard Gold (Certificate No. 41572-420). The different certificates for Cosentino products can be downloaded from the Greenguard website.

[www.greenguard.org](http://www.greenguard.org)

## ETA



### European Technical Assessment (ETA)

**DEKTON®** by Cosentino is being evaluated by the ITeC (Institute of Construction Technology of Catalonia) as a product for ventilated façades. After achieving the European Technical Assessment, e CE mark will be directly applied to the product for this type of applications.

COSENTINO'S STRONG  
COMMITMENT TO INNOVATION  
IN SURFACES HAS BECOME A  
HALLMARK OF THE BRAND.



Cosentino Group is a global family-owned company that produces and distributes high value innovative surfaces for the world of design and architecture. It has its own culture based on innovation, which has led it to develop pioneering products that have become major figures in the market.

Cosentino currently operates the largest quartz production plant in Spain and the largest natural granite production plant in Brazil. Also, it distributes its products to more than 80 countries around the world and it has more than 2,400 employees. More than 85% of Cosentino Group's turnover is derived from international markets.



Cosentino's headquarters are located in the Industrial Park in Macael in the province of Almería (Spain), with a total area of about one million square meters. This is the productive, administrative and logistic hub from which the group controls and monitors its international distribution system.

This park contains the most important production facilities including: three Silestone and Eco by Cosentino plants, a marble plant and the new DEKTON plant.

The latter is an innovative production installation that covers more than 170,000 metres squared, equipped with the most cutting-edge technology and a minimum daily production capacity of 1,500 slabs that are 2 cm thick, In the future, planned capacity will be a total of 6,000 slabs daily.

In addition to the new DEKTON plant, a new distribution center called Intelligent Logistics Platform has been created, ensuring the supply of DEKTON, Silestone and Eco by Cosentino, seven days a week, 365 days a year. This platform automatically loads and places all orders for slabs using advanced warehouse management software.



## COSENTINO INNOVATION TIMELINE

1990		<p><b>SILESTONE</b> Kitchen and bathroom worktops</p> <p>Natural quartz for the decoration of kitchens and bathrooms with a wide range of colours and the highest performance.</p>
2000		<p><b>NATURAL GRANITE</b> Produced in Brazil</p> <p>Committed to innovation with the commissioning of one of the most modern granite factories in the world.</p>
2004		<p><b>BACTERIOSTATIC PROTECTION</b></p> <p>An exclusive bacteriostatic protection developed by Cosentino that stops the spread of bacteria on surfaces including in edges and gaps.</p>
2006		<p><b>SENSA</b> Natural granite with exclusive protection</p> <p>Unique granite with an exclusive anti-stain protection that repels liquids and with NSF certificate for the entire product life.</p>
2007		<p><b>PREXURY</b> Semi-precious stones</p> <p>Surfaces made with semi-precious stones and other natural materials that allow you to create unique spaces.</p>
2009		<p><b>ECO by Cosentino</b> Recycled surfaces</p> <p>New material composed of 75% of recycled materials, which includes an ecological resin derived from corn.</p>
2010		<p><b>INTEGRITY</b> Integrated sinks</p> <p>Worktop and sink fused in one piece, without joints, crevices or limits. Perfect integration.</p>
2012		<p><b>SUEDE</b> New exclusive texture</p> <p>New extra matte Silestone finish with a unique never-seen-before texture and the same features as the polished finish.</p>
2013		<p><b>DEKTON</b> Large format ultra-compact surface.</p> <p>A product with extraordinary features with zero porosity thanks to its exclusive Cosentino compaction process.</p>



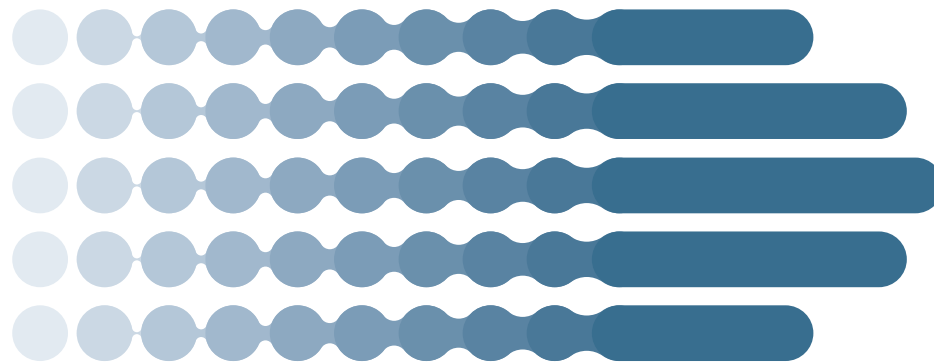
**Thanks to its innovative activity both in production processes and business lines, Cosentino has retained its position as world leader in the field of stone materials.**

Cosentino has its own cross-cutting R & D centre at its headquarters based in Spain, which includes six laboratories: ceramics and glass, pigments, polymers, natural stone, quartz, and general research.

Much of the success of Cosentino is down to many collaborations essential in generating significant progress. We do not explore alone, we do not research in solitude. Collaboration with universities, companies and technological institutes of worldwide reference and association with architects, designers and industry leading engineers, are essential areas for work, progress and innovation."



FOR DECADES COSENTINO HAS  
 COMBINED THE BEST THAT NATURE  
 PROVIDES US WITH THE LATEST  
 TECHNOLOGY THAT GIVES US THE SCIENCE.



## SINTERING AND PRESSING

DEKTON uses unique Particle Sintering technology (TSP), a highly technological process that represents an accelerated version of metamorphic change than natural stone undergoes when subjected to high temperatures and pressures over thousands of years.

TSP is a process that sinterises mineral particles to ensure that they join together, so that the internal structure is altered and compacted.

The **DEKTON** press is 25,000 tonnes, the largest press in the world, which makes the stone sheet into an ultra-compact surface, guaranteeing extreme performance .

This development represents a technological breakthrough capable of generating a new process, a revolutionary material and a leading product .

COSENTINO CENTERS NETWORK



CANADA

Cosentino CALGARY\*

USA

Cosentino ANAHEIM  
Cosentino ATLANTA  
Cosentino AUSTIN  
Cosentino BOSTON  
Cosentino CHARLOTTE  
Cosentino CHICAGO  
Cosentino CINCINNATI  
Cosentino DALLAS  
Cosentino DENVER\*  
Cosentino FORT LAUDERDALE\*  
Cosentino HOUSTON  
Cosentino LENEXA  
Cosentino LONG ISLAND\*  
Cosentino MIAMI  
Cosentino MINNEAPOLIS  
Cosentino ORLANDO  
Cosentino PITTSBURG\*  
Cosentino PHILADELPHIA  
Cosentino PHOENIX  
Cosentino SACRAMENTO\*  
Cosentino SAN DIEGO  
Cosentino SAN FRANCISCO  
Cosentino SEATTLE  
Cosentino SPOKANE  
Cosentino CENTRAL TEXAS\*  
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Cosentino WESTCHESTER

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Cosentino MEXICO-LATAM

ESPAÑA

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Cosentino SANTANDER  
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Cosentino GIRONA  
Cosentino GRANADA  
Cosentino ALMERÍA  
Cosentino VIGO

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Cosentino DUBLIN CENTRE

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Cosentino LISBOA  
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UK

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Cosentino EAST LONDON  
Cosentino GLOUCESTER  
Cosentino HOOK  
Cosentino MANCHESTER

BRASIL

Cosentino BELO HORIZONTE  
Cosentino FORTALEZA  
Cosentino GOIÂNIA  
Cosentino LATINA VITORIA  
Cosentino RECIFE  
Cosentino SAO PAULO  
Cosentino SANTA CATARINA

\* Opening soon



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AUSTRIA  
Cosentino VIENNA

BELGIUM  
Cosentino BELGIUM

NORWAY  
Cosentino OSLO

SWEDEN  
Cosentino SCANDINAVIA

SWITZERLAND  
Cosentino ZURICH

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Cosentino THE NETHERLANDS

NEW ZEALAND  
Cosentino AUCKLAND

MALAYSIA  
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Cosentino DÜSSELDORF  
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Cosentino VENEZIA  
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Cosentino TOULOUSE

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Cosentino BRISBANE  
Cosentino MELBOURNE  
Cosentino SYDNEY  
Cosentino CITY SYDNEY

TURQUIA  
**Logistic Warehouses**  
Cosentino ANKARA  
Cosentino ESTAMBUL  
Cosentino IZMIR

LOGISTIC  
**Operators**  
SOUTH AFRICA  
Cosentino CITY SINGAPUR  
DUBAI  
JAPAN

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**DEKTON**<sup>®</sup>  
ULTRACOMPACT SURFACES

A product designed by **COSENTINO**

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