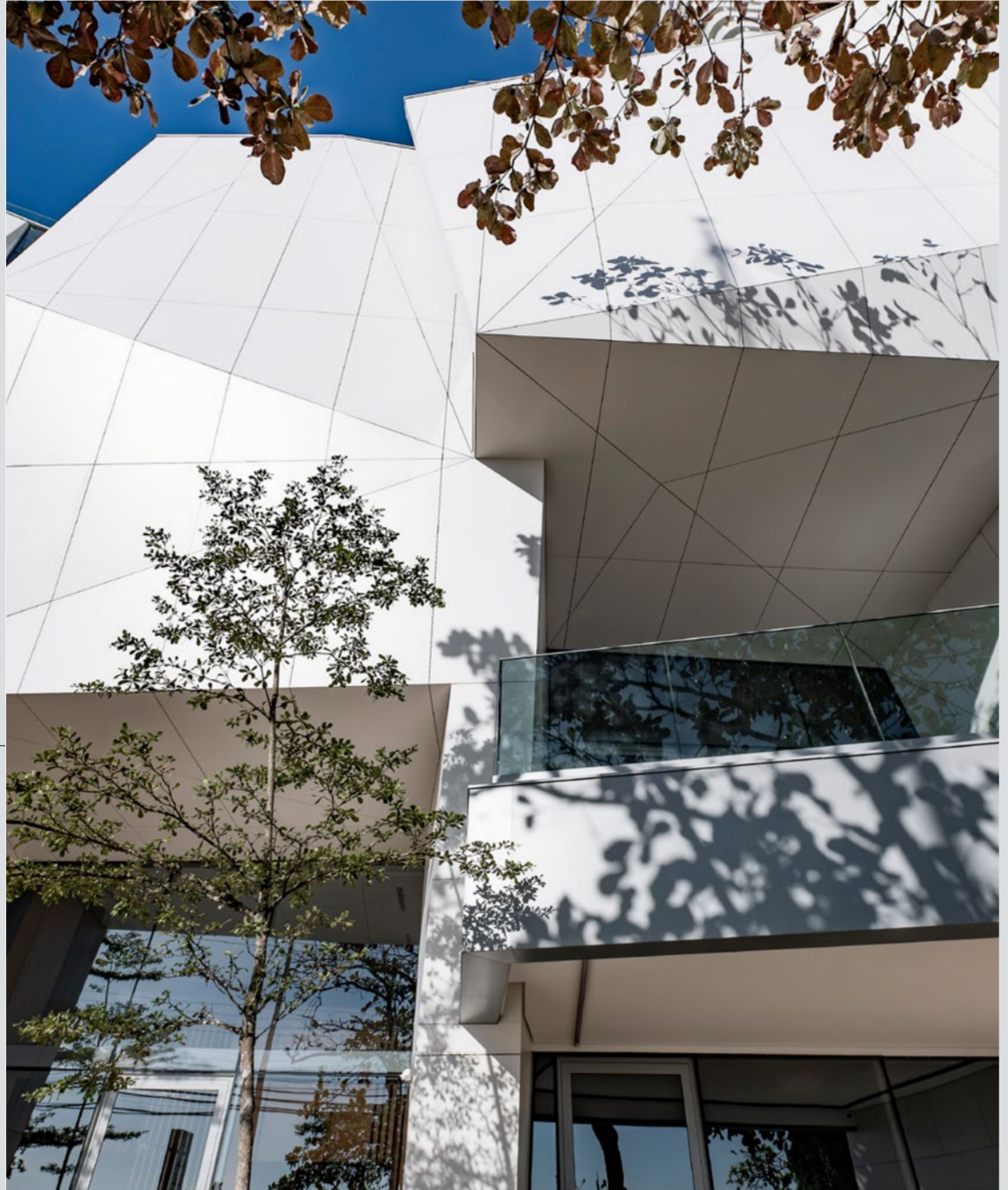


COSENTINO®

Cosentino Facades

COSENTINO FACADE
FIXING SYSTEMS



DEKTON®

Cosentino Facades

→ 06

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BY COSENTINO



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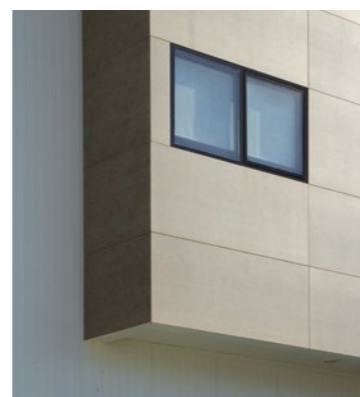
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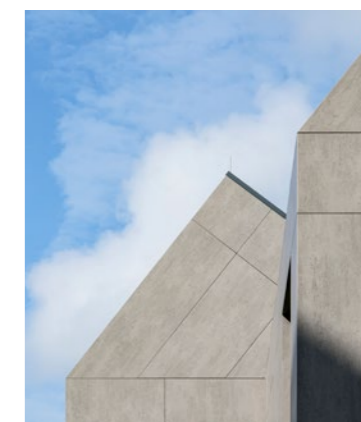
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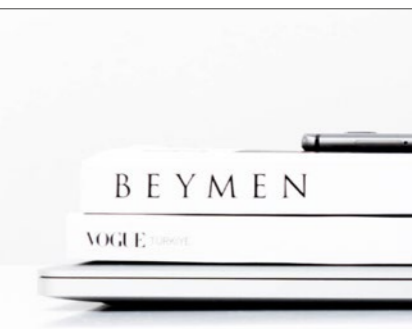
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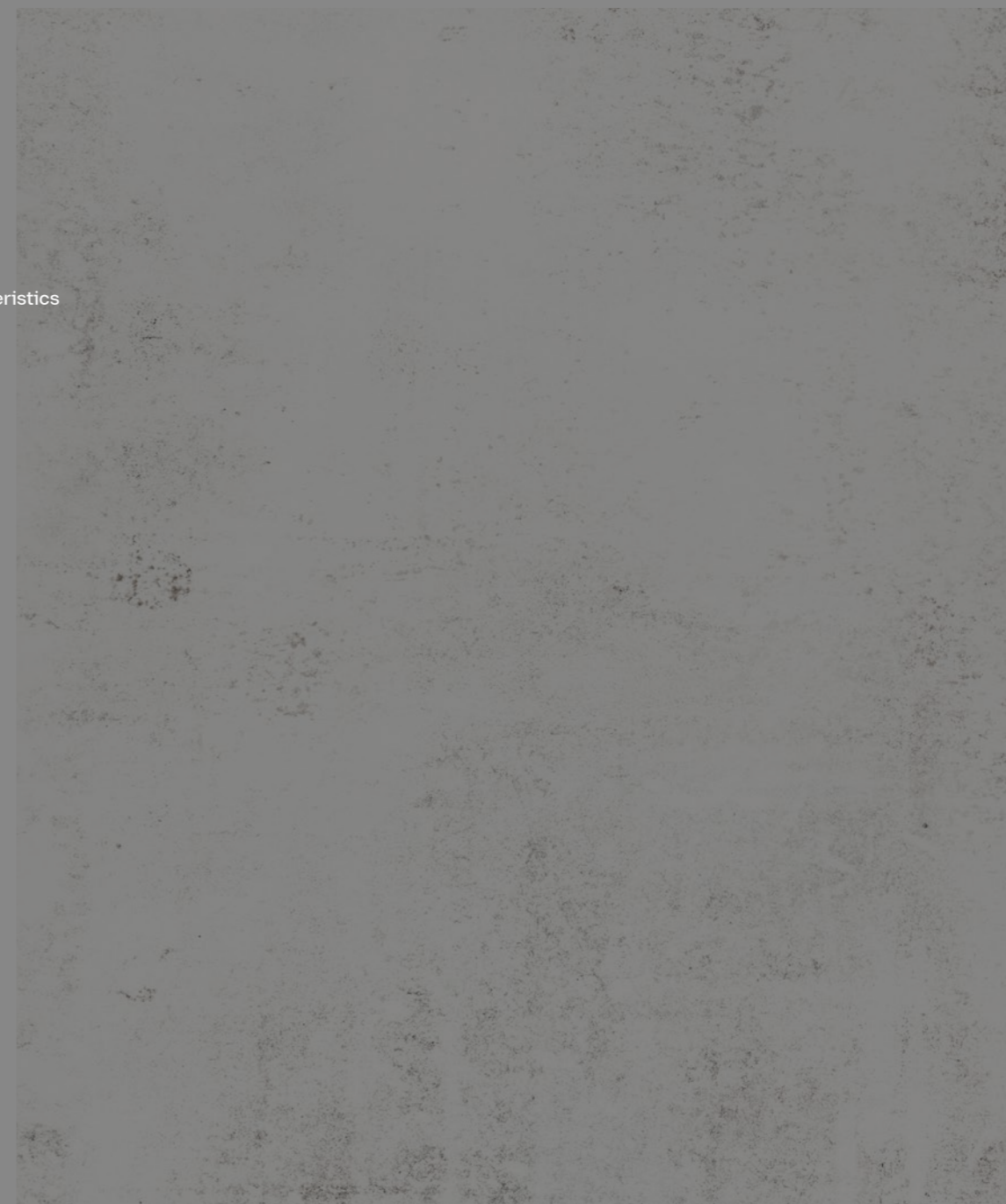
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Dekton by Cosentino

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In the span of a few hours, Dekton emulates what nature took thousands of years to create, thanks to the exclusive TSP Technology.

Product description & characteristics

Dekton is D an ultra-compact material, manufactured using a 25,000 ton press (>450 kg/cm²) and a sintering process at around 1,200 °C, with useful dimensions of 3,200 x 1,440 mm in standard format, thicknesses of 30/ 20 / 12 / 8 and 4 mm (it has a safety mesh glued on the reverse for 8, 12 and 20 mm thick ventilated facades and all 4mm thick applications) Fire reaction A2 s1 d0 (according to EN 13501) for thicknesses 8, 12, 20 mm, and B s1 d0 for 4mm thickness, unaffected by UV radiation (ΔE<1 tested in Xenon chamber to 5.000 h), with thermal conductivity ≤ 0,483 W/m °K (according to EN 12664), Specific heat < 700 J/kg°C (measured with DSC), Surface resistivity < 65 TΩ/m (at 1000V) and must fulfil these functional mechanical properties according to EN 10545: Bending strength>45 N/mm², Density > 2,52 ± 4% g/cm³. Porosity <0,2%. Linear expansion 5,1-6,5 x 10⁻⁶ °C⁻¹ and Average absorption [according to ASTM C97] < 0.05%. Suitable for outdoor applications even in aggressive environments (petrol, diesel, various solvents) and can be cleaned with water or other products using pressurised water, with commercial cleaning products or, in the case of persistent stains, specific chemical products (e.g. sulphuric acid, bleach, hydrogen peroxide, acetone, caustic soda).



The production takes a number of hours, but a manufacturing plant can produce up to 3.000 slabs a day.

Composition

Dekton is made from inorganic materials, which naturally exist in over 90% of the Earth's crust.

- Dekton is a totally inorganic material.
- Dekton uses inorganic materials not only for the bulk of the product but also for pigmentation and veining.
- More than 20 different inorganic materials are used to create a Dekton slab.



Production

Dekton uses exclusive TSP Technology (Sinterized Particle Technology), a high tech process which represents an accelerated version of the metamorphic change that natural stone undergoes when subjected to high temperatures and pressure over thousands of years. TSP technology synthesises truly innovative procedures from the most advanced technology industries. This evolution represents a technological and industrial leap capable of generating a new process, a revolutionary material and a leading product.

The production process takes approximately 4 hours and Cosentino's manufacturing plant can produce up to 3,000 slabs a day. From start to finish the process includes the following steps:

1. Decontamintaion of the raw materials.
2. Mixing of materials.
3. Addition of pigments
4. Distribution of material on conveyor belts.
5. Volume decoration process.
6. Compaction.
7. Drying and secondary decoration.
8. Sintering.



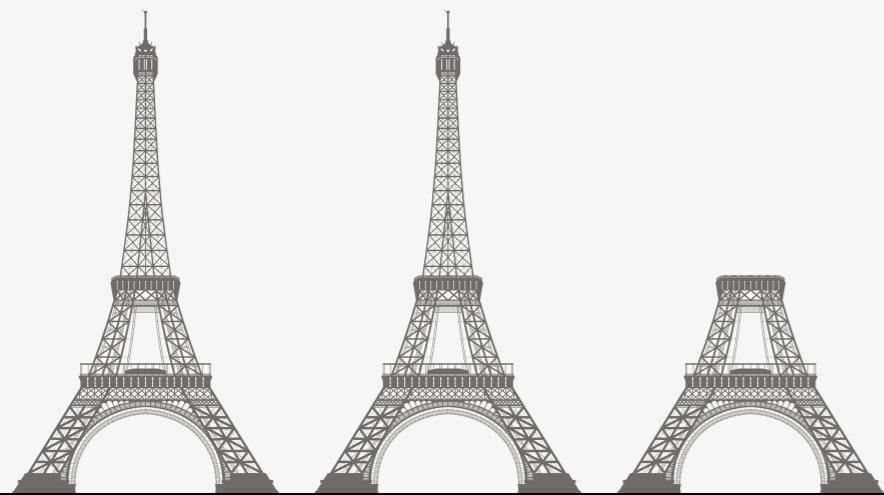
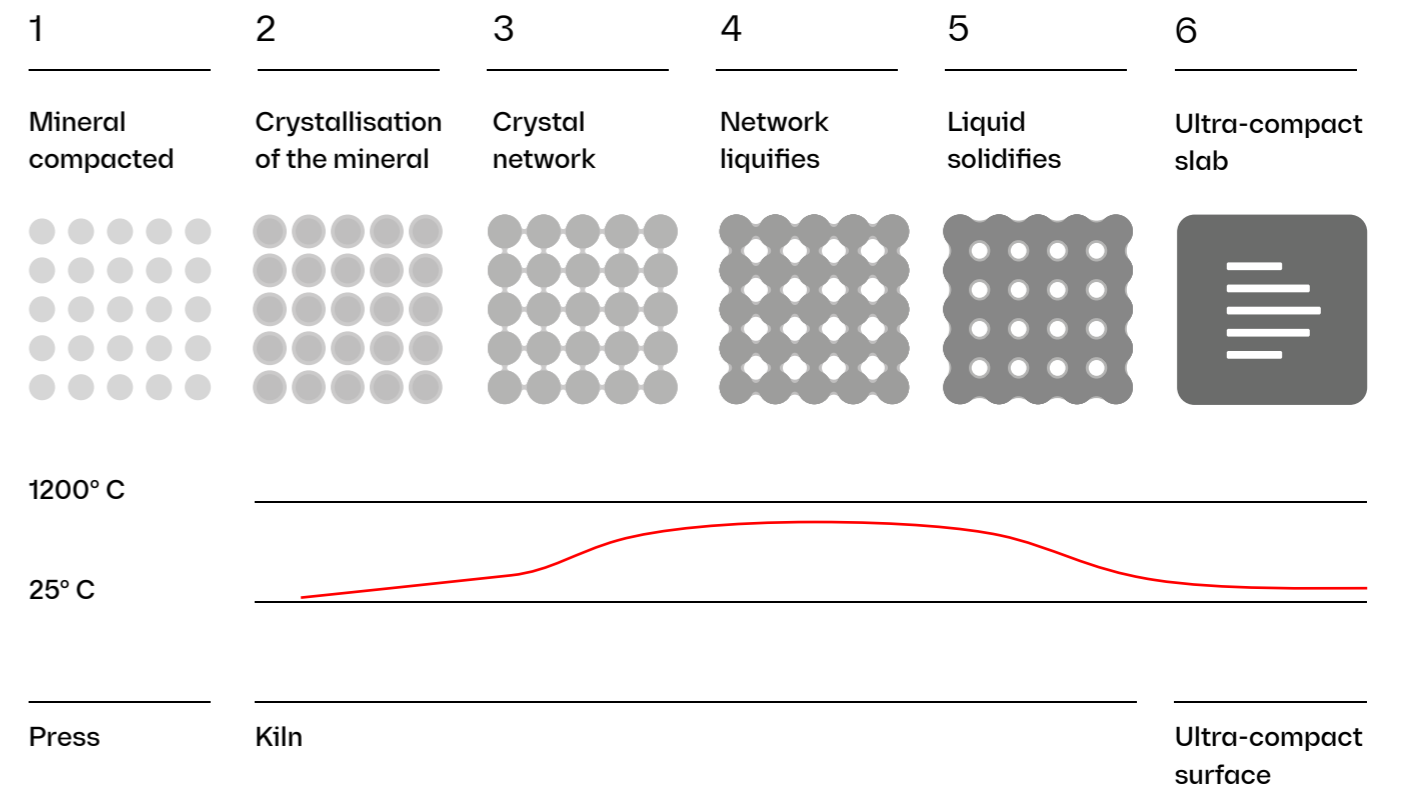
Compaction

Compaction using a unique press made specifically to manufacture ultra-compact panels. Panels are pressed at 25,000 cubic tons (50,000,000 lb.). This compaction helps to align particles to achieve almost zero-porosity by forcing air and moisture out, hence the need for the homogeneous particle sizes. Superficial textures (slate, wood, leather, linen, etc...) can also be added during the compaction stage.

Sintering process

During this process, the transformation of the raw materials and pigments takes place. By using heat, reactions are controlled so that the correct synthesis path is followed.

- The kiln is 200 metres (218 yards) long.
- Temperatures reach approximately 1250°C (2300 °F).
- The total process time depends on the thickness of the slab (around 4 hours).



Two and a half Eiffel Towers = 25,000 cubic tons (50,000,000 lbs)

Ultra-compact surface panel

Dekton Protek

For use in ventilated facades, Dekton has a reinforcing mesh on the back to prevent pieces from falling off in the event of accidental breakage during installation or maintenance.

Multiple applications

Standard applications

Dekton is a material suitable for multiple applications, both interior and exterior, in different scales and with infinite design possibilities.



Outdoor worktops



Kitchen worktops



Flooring for bathrooms and pools



Exterior walls & facades



Bathroom surfaces



Outdoor flooring



Interior walls



Bathroom walls



Indoor floors



Stairs

Some facade applications

- Ventilated facades.
- Adhere facades.
- Cladding on EIFS systems.
- Facades of industrialized systems.
- Curtain wall.
- Facade gap filling.
- Facade panelling (e.g. insulation panels, honeycomb panels, etc.)
- Facade complements.

Product features

Dekton has all the technical features required for any hard surface, even in a demanding application such as a facade.



Fireproof material

Dekton can withstand high temperatures without burning, scorching or cracking. European Standard EN 13501 and ASTM E84 testing, classifies Dekton as a noncombustible material.



Highly resistant to ultraviolet (UV) light

Dekton is highly resistant to UV light and will not fade or degrade over time in any kind of outdoor application.



Superior mechanical resistance

Dekton's variety of thicknesses and its average flexural strength >45 N/mm² allow it to be used in applications where resistance to wind or impact are a project requirement.



Low water absorption

Dekton's water absorption is negligible so it does not undergo any expansion movement due to it nor does it degrade due to humidity.



Colour durability

Dekton's control of pigmentation and decoration in the manufacturing process provides better colour consistency from one slab to another, resulting in a long lasting product that will not fade over time.



Scratch resistant

Dekton is one of the most scratch-resistant surfaces on the market with a resistance of 7 out of 10 on the Mohs scale.



Dimensional stability

Dekton expansion is minimal so it can be installed with thin joints between panels. These joints will keep their width in all conditions with very low expansion.



Resistance to freezing and thawing

Dekton's resistance to durability tests in freezing and thawing situations and its application in various weather conditions prove its high performance.



Abrasion resistant

Dekton is even more resistant to abrasion than granite and porcelain, making it the ideal surface for facades or high-traffic flooring in commercial applications.



Maximum fire and heat resistance

Dekton has been successfully installed on facades in areas exposed to high temperatures.



Easy cleaning and low maintenance

Most graffiti can be removed from Dekton with standard cleaning products. Maintenance costs are reduced.



Stain resistant

Dekton is resistant to stains from a variety of sources. The stains will not be permanent so they can easily be removed without altering their finish.

Advantages of Dekton facade system

Dekton offers clear advantages in its application on facades.

1

Large format

Thanks to the large standard format that Dekton allows of 3200 x 1440 mm and possible up to 3300 x 1630 mm depending on portfolio, it gives freedom to the design of the facade and the ability to use different formats in order to make the best use of the material.

4

Endless design and colour possibilities

The variety of Dekton colours allows for a wide range to be used as another design tool, maintaining uniformity and character.

7

Solutions for joints

Dekton allows for angled joints with straight or bevelled edges, and even with bespoke pieces to create a monolithic look, thanks to its reduced resistance to expansion.

2

Wide range of thicknesses

The variety of Dekton thicknesses available, 4, 8, 12, 20 and 30 mm, allows you to apply thicker or thinner pieces as required. This maintains the consistency of the whole and gives each section the required technical features.

5

Adaptation to complex geometric shapes

The possibility to produce Dekton in simple or complex pieces makes it a versatile material for covering complicated volumes.

8

Unlimited shapes

Architectural plans with different gradients and complex geometrics can push materials to their limits. Few of them can work under traction and compression in the face of inclement weather and remain unchanged and requiring little maintenance over time.

3

Colour perfection

Thanks to a rigorous system of measurements and quality controls from its production onwards, Dekton ensures the stability of its tone throughout the facade, making it possible to use the material in large panels while maintaining visual harmony.

6

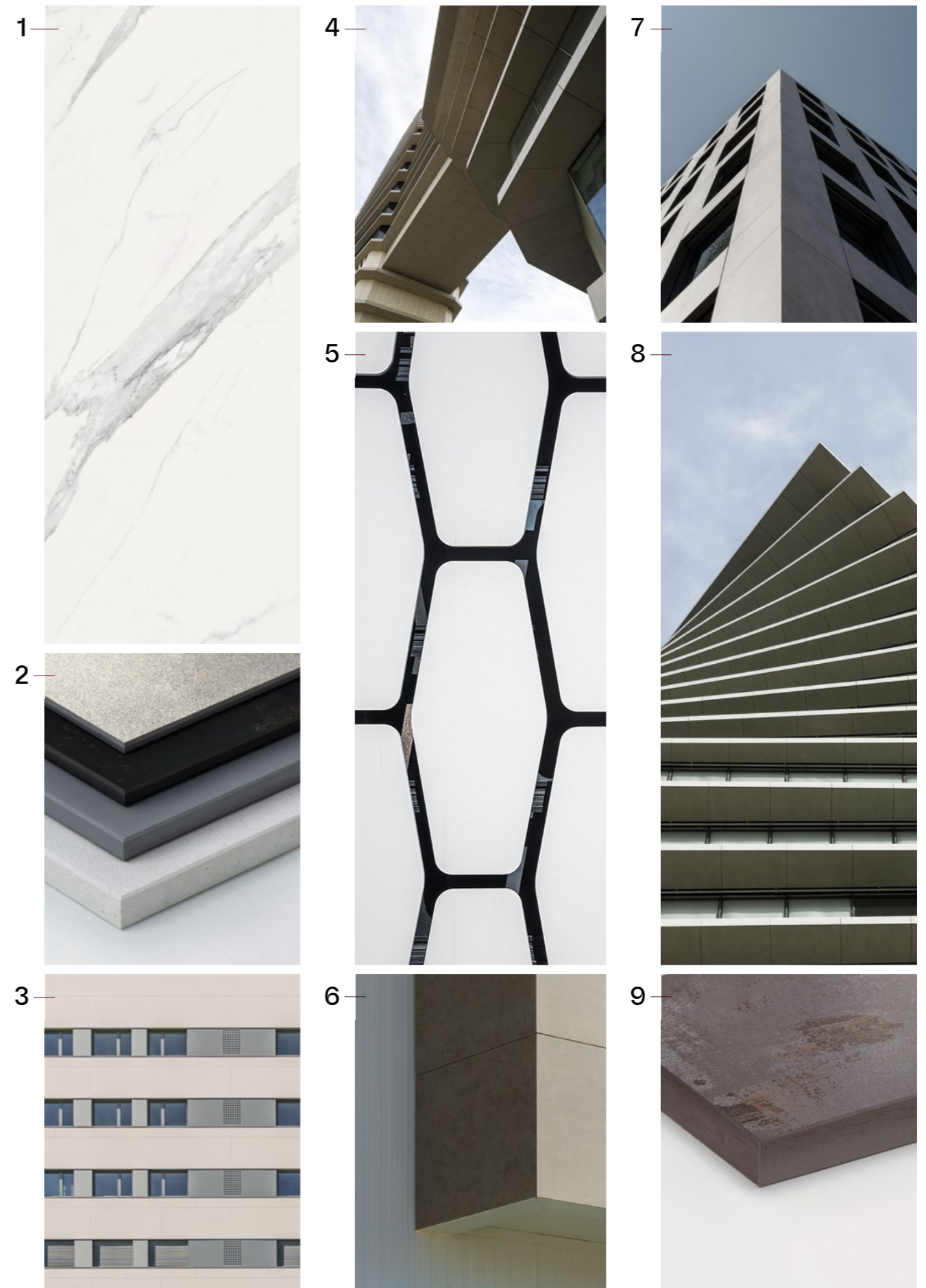
Flat surfaces: visual continuity

The excellent flatness offered by Dekton ensures that facade surfaces are virtually free of any gaps. This means that it is ideal for promoting design around it, where visual continuity and uniformity are key.

9

Uniform colour

Dekton is coloured throughout the whole mass of the product allowing better integration of the edges with the surface of the piece.



Technical specifications

Key technical data

- Density $2.52 \pm 4 \%$ g/cm³
 - Average bending strength ≥ 45 N/mm²
 - Modulus of elasticity: 73,000 N/mm²
 - Linear thermal expansion $5,1-6,5 \times 10^{-6} \text{ }^\circ\text{C}^{-1}$
 - Water absorption 0.1%. (Bla Group)
 - Porosity 0.2%.
 - Maximum expansion 0.1 mm/m.
 - Thermal conductivity 0.483 W/m °K
 - Reaction to fire.
 - Dekton A1 (withouth ancillary mesh)
 - Dekton Protek 8/12/20: A2-s1-d0 (with ancillary mesh)
 - Dekton Slim Protek 4mm: B-s1-d0 (with ancillary mesh)
- EN 13501-1 2018 and NFPA/IBC class A ASTM E 84.



Dekton technical data sheet

According to EN 14411, ANSI A137.1, ISO 13006 standards

| | Thickness | Unit | Family I | Family II | Family III | Family IV |
|------|-----------|--|------------|------------|------------|------------|
| Peso | 8 mm | Kg/m ² [lb/ft ²] | 20 [4.10] | 20 [4.10] | 20 [4.10] | 20 [4.10] |
| | 12 mm | | 30 [6.20] | 29 [6.00] | 30 [6.20] | 31 [6.40] |
| | 20 mm | | 50 [10.30] | 48 [9.90] | 50 [10.30] | 51 [10.50] |
| | 30 mm | | 77 [15.80] | 72 [14.80] | 77 [15.80] | 76 [15.60] |

| Flexural strength EN ISO 10545-4 Tested format: 200 x 200 mm | Thickness | Unit | Family I | Family II | Family III | Family IV |
|---|-----------|------------------------|--------------|--------------|--------------|--------------|
| Breaking strength Flexural resistance | 8 mm | N N/mm ² | 2,304 55 | 2,282 53 | 1,993 50 | 2,164 50 |
| | 12 mm | N N/mm ² | 4,992 54 | 4,616 48 | 4,947 54 | 4,509 49 |
| Breaking strength Flexural resistance | 20 mm | N N/mm ² | 14,174 54 | 13,708 50 | 13,629 52 | 13,614 53 |

| Test Standard | Determination | Unit | Family I | Family II | Family III | Family IV |
|---|--|-------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Water absorption, open porosity and density EN ISO 10545-3 | Water absorption (Ev) | % | 0.1 | 0.1 | 0.1 | 0.1 |
| | Open porosity | % | 0.2 | 0.2 | 0.2 | 0.2 |
| | Apparent relative density | g/cm ³ | 2.51 | ≤ 2.43 | 2.53 | 2.44 |
| | Apparent density | g/cm ³ | 2.50 | ≤ 2.43 | 2.53 | 2.44 |
| Impact resistance EN ISO 10545-5 | Coefficient of restitution (COR) | - | 0.85 | 0.85 | 0.85 | 0.92 |
| Resistance to deep abrasion EN ISO 10545-6 | Wear volume | mm ³ | 125 | 106 | 115 | 119 |
| Determination of linear thermal expansion EN ISO 10545-8 | Expansion 30 - 100 °C | 10 ⁻⁶ . °C ⁻¹ | 6.5 | 5.1 | 6.3 | 5.8 |
| Thermal shock resistance EN ISO 10545-9 | Damage | - | Pass/ no damage | Pass/ no damage | Pass/ no damage | Pass/ no damage |
| Moisture expansion EN ISO 10545-10 | Maximum expansion | mm/m | 0.1 | 0.1 | 0.1 | 0.1 |
| | Average expansion | | 0.0 | 0.0 | 0.0 | 0.1 |
| Frost resistance EN ISO 10545-12 | Damage | - | Pass/ no damage | Pass/ no damage | Pass/ no damage | Pass/ no damage |
| Resistance to chemicals EN ISO 10545-13 | CINH ₄ / Cleaning products | Class | A (no damage) | A (no damage) | A (no damage) | A (no damage) |
| | Bleach / Swimming pool salts | | A (no damage) | A (no damage) | A (no damage) | A (no damage) |
| Resistance to staining EN ISO 10545-14 | Green agent | Class | 5 | 5 | 5 | 5 |
| | Iodine (solution) | | 5 | 5 | 5 | 5 |
| | Olive oil | | 5 | 5 | 5 | 5 |
| Absorption and bulk specific gravity ASTM C97 | Average absorption | % | 0.05 | 0.04 | 0.04 | 0.03 |
| | Bulk specific gravity | lb/ft ³ | 157.3 | 159.6 | 150.9 | 154.4 |
| Modulus of rupture* ASTM C99 | Modulus of rupture (dry conditions) | psi | 7,918 | 7,821 | 8,144 | 7,510 |
| | Modulus of rupture (wet conditions) | | 7,948 | 7,573 | 7,251 | 6,705 |
| Moisture expansion ASTM C370 | - | % | 0.003 | 0.003 | 0.001 | 0.005 |
| Linear thermal expansion ASTM C372 | - | 10 ⁻⁶ . °C ⁻¹ | 6.10 | 5.11 | 5.69 | 5.78 |

Dekton technical data sheet

According to EN 14411, ANSI A137.1, ISO 13006 standards

| Test Standard | Determination | Unit | Family I | Family II | Family III | Family IV |
|--|---|-----------------|--------------------------|----------------------|---------------------------|--------------------------------|
| Water absorption ASTM C373 | - | % Class | 0.0 Impervious | 0.0 Impervious | 0.0 Impervious | 0.0 Impervious |
| Crazing resistance ASTM C424 | - | - | No crazing observed | No crazing observed | No crazing observed | No crazing observed |
| Bond strength ASTM C482 | - | psi | 189 | 367 | 133 | 409 |
| Edge and diagonal warpage ASTM C485 | Edge warpage | % in | - 0.01 / 0.01 0 / 0 | 0 / 0.04 0 / 0.01 | - 0.01 / 0.02 0 / 0.01 | - 0.01 / 0.03 0 / 0.01 |
| | Diagonal warpage | % in | - 0.02 / 0 - 0.01 / 0 | 0 / 0.04 0 / 0.01 | - 0.01 / 0.01 0 / 0 | - 0.02 / 0.03 - 0.01 / 0.01 |
| Facial dimensions and thickness ASTM C499 | Maximum variation from nominal | % | 0.05 | 0.08 | 0.07 | 0.09 |
| | Maximum variation from average | % | - 0.05 | - 0.06 | 0.04 | - 0.08 |
| | Thickness (range) | in | 0.008 | 0.012 | 0.019 | 0.013 |
| Wear resistance (Taber abrasion) ASTM C501 | Average wear resistance index | - | 182.2 | 337 | 240 | 239 |
| Wedging ASTM C502 | Average wedging | % in | 0 0 | 0 0 | 0 0 | 0 0 |
| | Average breaking strength | lbf | 1,192 | 1,176 | 1,171 | 1,138 |
| Breaking strength ASTM C648 | Minimum breaking strength | | 1,144 | 1,070 | 1,067 | 1,013 |
| | Chemical resistance ASTM C650 | | Class A | Class A | Class A | Class A |
| | Common cleaning chemicals | | Not affected | Not affected | Not affected | Not affected |
| | Acetic acid, 3% (v/v) | | Not affected | Not affected | Not affected | Not affected |
| | Acetic acid, 10% (v/v) | | Not affected | Not affected | Not affected | Not affected |
| | Ammonium chloride, 100 g/L | | Not affected | Not affected | Not affected | Not affected |
| | Citric acid solution, 30 g/L | | Not affected | Not affected | Not affected | Not affected |
| | Citric acid solution, 100 g/L | | Not affected | Not affected | Not affected | Not affected |
| | Lactic acid solution, 5% (v/v) | - | Not affected | Not affected | Not affected | Not affected |
| | Phosphoric acid, 3% (v/v) | | Not affected | Not affected | Not affected | Not affected |
| | Phosphoric acid, 10% (v/v) | | Not affected | Not affected | Not affected | Not affected |
| | Sulfamic acid, 30 g/L | | Not affected | Not affected | Not affected | Not affected |
| | Sulfamic acid, 100 g/L | | Not affected | Not affected | Not affected | Not affected |
| | Swimming pool chemicals | | Class A | Class A | Class A | Class A |
| | Sodium hypochlorite sol., 20 mg/L | - | Not affected | Not affected | Not affected | Not affected |
| | Acids and bases | | Class A | Class A | Class A | Class A |
| | Hydrochloric acid sol., 3% (v/v) | | Not affected | Not affected | Not affected | Not affected |
| | Hydrochloric acid sol., 18% (v/v) | - | Not affected | Not affected | Not affected | Not affected |
| | Potassium hydroxide, 30 g/L | | Not affected | Not affected | Not affected | Not affected |
| | Potassium hydroxide, 100 g/L | | Not affected | Not affected | Not affected | Not affected |
| Flexural strength ASTM C880 | Flexural strength (dry conditions) | psi | 3,471 3,030 | 3,594 3,045 | 3,520 3,172 | 3,058 2,817 |
| | Flexural strength (wet conditions) | | | | | |
| Resistance to freeze-thaw cycling ASTM C1026 | - | - | Not affected | Not affected | Not affected | Not affected |
| Resistance to deep abrasive wear ASTM C1243 | Average resistance | mm ³ | 82.6 | 65 | 76.4 | 87.3 |
| | Maximum resistance | | 89.1 | 72 | 83.1 | 95.3 |
| Resistance to staining ASTM C1378 | | | Class A | Class A | Class A | Class A |
| | Contrasting grout | | Not affected | Not affected | Not affected | Not affected |
| | Carbon lamp black | | Not affected | Not affected | Not affected | Not affected |
| | Waterproof ink (black) | - | Not affected | Not affected | Not affected | Not affected |
| | Washable ink | | Not affected | Not affected | Not affected | Not affected |
| | Potassium permanganate sol., 1% | | Not affected | Not affected | Not affected | Not affected |
| | Methylene Blue solution, 1% | | Not affected | Not affected | Not affected | Not affected |

→ (*) Tested thickness: 12 mm. (n/c) Does not classify. (N/A) Does not apply.

Dekton XGloss Technical Data Sheet

According to EN 14411, ANSI A137.1, ISO 13006 standards

| Test Standard | Determination | Unit | Family I | Family II | Family III | Family IV |
|--|--|---------------------------------------|-------------------------------------|---------------------|--------------------------------|--------------------------------|
| Water absorption, open porosity and density EN ISO 10545-3 | Water absorption (Ev) | % | | 0.1 | 0.1 | |
| | Open porosity | % | N/A | 0.2 | 0.2 | N/A |
| | Apparent relative density | g/cm ³ | | ≤ 2.43 | 2.53 | |
| | Apparent density | g/cm ³ | | ≤ 2.43 | 2.53 | |
| Flexural tensile strength or modulus of rupture EN ISO 10545-4 | Average flexural resistance | N/mm ² | | 45 | 55 | |
| | Average break load | N | N/A | 2.313 | 2.356 | N/A |
| | Average break strength | N | | 13.559 | 13.818 | |
| Impact resistance EN ISO 10545-5 | Coefficient of restitution (COR) | - | N/A | 0.85 | 0.85 | N/A |
| Resistance to deep abrasion EN ISO 10545-6 | Wear volume | mm ³ | N/A | 106 | 115 | N/A |
| | Determination of linear thermal expansion EN ISO 10545-8 | Expansion 30 - 100 °C | 10 ⁻⁶ · °C ⁻¹ | N/A | 5.1 | 6.3 |
| Thermal shock resistance EN ISO 10545-9 | Damage | - | N/A | Pass/ no damage | Pass/ no damage | N/A |
| Moisture expansion EN ISO 10545-10 | Maximum expansion | mm/m | N/A | 0.1 | 0.1 | N/A |
| | Average expansion | | | 0.0 | 0.0 | |
| Frost resistance EN ISO 10545-12 | Damage | - | N/A | Pass/ no damage | Pass/ no damage | N/A |
| | Resistance to chemicals EN ISO 10545-13 | CINH ₂ / Cleaning products | Class | N/A | A (no damage) A (no damage) | A (no damage) A (no damage) |
| Resistance to staining EN ISO 10545-14 | Green agent | | | 5 | 5 | |
| | Iodine (solution) | Class | N/A | 5 | 5 | N/A |
| | Olive oil | | | 5 | 5 | |
| Absorption and bulk specific gravity ASTM C97 | Average absorption | % | N/A | 0.04 | 0.04 | N/A |
| | Bulk specific gravity | lb/ft ³ | | 159.6 | 150.9 | |
| Modulus of rupture* ASTM C99 | Modulus of rupture (dry conditions) | psi | N/A | 7,821 | 8,144 | N/A |
| | Modulus of rupture (wet conditions) | | | 7,573 | 7,251 | |
| Compressive strength* ASTM C170 | Compressive strength (dry conditions) | psi | N/A | 38,864 | 52,955 | N/A |
| | Compressive strength (wet conditions) | | | 42,980 | 20,648 | |
| Moisture expansion ASTM C370 | - | % | N/A | 0.003 | 0.001 | N/A |
| Water absorption ASTM C373 | - | 10 ⁻⁶ · °C ⁻¹ | N/A | 5.11 | 5.69 | N/A |
| Linear thermal expansion ASTM C372 | - | 10 ⁻⁶ · °C ⁻¹ | N/A | 5.11 | 5.69 | N/A |
| Crazing resistance ASTM C424 | - | - | N/A | No crazing observed | No crazing observed | N/A |

→ (*) Tested thickness: 12 mm. (n/c) Does not classify. (N/A) Does not apply.

Dekton XGloss Technical Data Sheet

According to EN 14411, ANSI A137.1, ISO 13006 standards

| Test Standard | Determination | Unit | Family I | Family II | Family III | Family IV |
|--|--|-----------------|--------------|----------------|----------------|-----------|
| Bond strength ASTM C482 | - | psi | N/A | 367 | 133 | N/A |
| Facial dimensions and thickness ASTM C499 | Maximum variation from nominal | % | | 0.08 | 0.07 | |
| | Maximum variation from average | % | N/A | - 0.06 | 0.04 | N/A |
| | Thickness (range) | in | | 0.012 | 0.019 | |
| Wear resistance (Taber abrasion) ASTM C501 | Average wear resistance index | - | N/A | 337 | 240 | N/A |
| Wedging ASTM C502 | Average wedging | % in | N/A | 0 0 | 0 0 | N/A |
| | Average breaking strength Minimum breaking strength | lbf | N/A | 1,176 1,070 | 1,171 1,067 | N/A |
| Chemical resistance ASTM C650 | Common cleaning chemicals | | | Class A | Class A | |
| | Acetic acid, 3% (v/v) | | | Not affected | Not affected | |
| | Acetic acid, 10% (v/v) | | | Not affected | Not affected | |
| | Ammonium chloride, 100 g/L | | | Not affected | Not affected | |
| | Citric acid solution, 30 g/L | | | Not affected | Not affected | |
| | Citric acid solution, 100 g/L | | | Not affected | Not affected | |
| | Lactic acid solution, 5% (v/v) | - | N/A | Not affected | Not affected | N/A |
| | Phosphoric acid, 3% (v/v) | | | Not affected | Not affected | |
| | Phosphoric acid, 10% (v/v) | | | Not affected | Not affected | |
| | Sulfamic acid, 30 g/L | | | Not affected | Not affected | |
| | Sulfamic acid, 100 g/L | | | Not affected | Not affected | |
| | Swimming pool chemicals | | | Class A | Class A | |
| | Sodium hypochlorite sol., 20 mg/L | - | N/A | Not affected | Not affected | N/A |
| | Acids and bases | | | Class A | Class A | |
| | Hydrochloric acid sol., 3% (v/v) | | | Not affected | Not affected | |
| | Hydrochloric acid sol., 18% (v/v) | - | N/A | Not affected | Not affected | N/A |
| | Potassium hydroxide, 30 g/L | | | Not affected | Not affected | |
| Potassium hydroxide, 100 g/L | | | Not affected | Not affected | | |
| Flexural strength ASTM C880 | Flexural strength (dry conditions) | psi | N/A | 3,594 | 3,520 | N/A |
| | Flexural strength (wet conditions) | | | 3,045 | 3,172 | |
| Resistance to freeze-thaw cycling ASTM C1026 | - | - | N/A | Not affected | Not affected | N/A |
| Resistance to deep abrasive wear ASTM C1243 | Average resistance | mm ³ | N/A | 71.1 | 74.2 | N/A |
| | Maximum resistance | | | 77.4 | 77.4 | |
| Resistance to staining ASTM C1378 | Contrasting grout | | | Class A | Class A | |
| | Carbon lamp black | | | Not affected | Not affected | |
| | Waterproof ink (black) | - | N/A | Not affected | Not affected | N/A |
| | Washable ink | | | Not affected | Not affected | |
| | Potassium permanganate sol., 1% | | | Not affected | Not affected | |
| | Methylene Blue solution, 1% | | | Not affected | Not affected | |

→ (*) Tested thickness: 12 mm. (n/c) Does not classify. (N/A) Does not apply.

Dekton Slim Technical Data Sheet

| Test Standard | Determination | Unit | Value |
|--|----------------------------------|-------------------------------------|--------------------|
| Water absorption, open porosity and density EN ISO 10545-3 | Water absorption by boiling | % | 0 |
| | Water absorption by vacuum | % | 0.1 |
| | Open porosity | % | 0.2 |
| | Apparent relative density | g/cm ³ | 2.51 |
| | Apparent density | g/cm ³ | 2.50 |
| Flexural tensile strength or modulus of rupture EN ISO 10545-4 | Average flexural resistance | N/mm ² | 46 |
| Impact resistance EN ISO 10545-5 | Coefficient of restitution (COR) | - | 0.82 |
| Resistance to deep abrasion EN ISO 10545-6 | Wear volume | mm ³ | 142 |
| Linear thermal expansion EN ISO 10545-8 | Expansion 30 - 100 °C | 10 ⁻⁶ . °C ⁻¹ | 5.7 |
| Thermal shock resistance EN ISO 10545-9 | Damage | - | Pass/ no damage |
| Reaction to fire EN 13501-1 | Class | - | A1 |
| Impact resistance EN 14617-9 | Breaking height | cm | 25 |
| | Average fracture work | J | 2.4 |
| Water absorption, apparent porosity ASTM C373 | Average water absorption | % | 0.2 |
| Breaking strength ASTM C648 | Average breaking strength | lbf | 528 |

Dekton Slim Protek* Technical Data Sheet

| Test Standard | Determination | Unit | Value |
|--|----------------------------------|-------------------------------------|--------------------|
| Flexural tensile strength or modulus of rupture EN ISO 10545-4 | Average flexural resistance | N/mm ² | 48 |
| Impact resistance EN ISO 10545-5 | Coefficient of restitution (COR) | - | 0.82 |
| Resistance to deep abrasion EN ISO 10545-6 | Wear volume | mm ³ | 142 |
| Linear thermal expansion EN ISO 10545-8 | Expansion 30 - 100 °C | 10 ⁻⁶ . °C ⁻¹ | 6 |
| Thermal shock resistance EN ISO 10545-9 | Damage | - | Pass/ no damage |
| Reaction to fire EN 13501-1 | Class | - | B,s1,d0 |
| Impact resistance EN 14617-9 | Breaking height | cm | 32 |
| | Average fracture work | J | 3.2 |
| Water absorption, apparent porosity ASTM C373 | Average water absorption | % | 0.2 |
| Breaking strength ASTM C648 | Average breaking strength | lbf | 661 |

→ (*) Includes 300 g/m² fiberglass mesh with epoxy resin.

Our environmental pillars

Sustainability in the factory

We measure and monitor, prevent, reduce and offset those emissions we cannot yet reduce.



We promote the efficient use of natural resources and encourage the use of renewable energy to reduce our carbon footprint.



We recycle and reuse water, thus reducing our water footprint.

Circular Economy



We recover and reuse waste.



We innovate to encourage the use of waste for new uses.

We design low impact products

A more sustainable future is what we all want. And we are developing the materials to make it possible.

€29,4 MILL Investment in environment and safety.



We reduce and address our Organizational Carbon Footprint, mitigating emissions and transforming them into added value through offset projects.



E-Smart mobility is our plan to measure and optimize our logistics routes and the mobility of our employees.

CoMA

We are the only company in the sector with its own waste recovery plant.



We are researching a new generation of sustainable composite materials.

Dekton is Carbon neutral from cradle to grave. Sunlit Days is the first Silestone® collection to be carbon neutral.

We analyse the life cycle of our products throughout the entire value chain.

We are the only company in the sector with its own waste treatment and recovery plant.

A more sustainable future is what we all want. And we are developing the materials to make it possible.

We are leading a new circular development model for our industry and society. We reuse more materials, make better use of resources and find better ways to recover waste.

Our products have been developed with recycled or recovered raw materials in their formulation.

A space for the development of recovery projects that has also made it possible to reduce the environmental impact of transporting waste.

The launch of our own Waste Management and Recovery Plant was a major milestone in the Circular Economy Strategy in 2018.

Expansion work has begun on our waste treatment and recovery plant to ensure the long-term storage and treatment of the waste generated.

Consumption of recycled raw materials (%)

| 2021 | 2022 | 2023 |
|-------|-------|-------|
| 6,52% | 7,63% | 9,60% |

Recovery Solid Waste (%)

| 2021 | 2022 | 2023 |
|--------|--------|--------|
| 12,38% | 15,81% | 16,50% |

WASTE VALORISATION

Since 2018 we have our own:

→ Non-hazardous Waste Management Company



→ Waste Management and Valorisation Plant

El 9,6% of the raw materials used were recycled or recovered. This was 2% more than in 2022.

In 2023 we recovered 54.796 tons of solid waste of which +16,5% was recovered.

COSENTINO^{RE3}

→ R3DUCE

→ R3CYCLE

→ R3USE



We make the most of every drop of water, as if it were the last

Our technological capacity enables us to recycle and recirculate water, over and over again, thus reducing our water footprint.

Water belongs to everyone. We don't waste a drop. In accordance with our Zero Discharge policy, we recover water and reuse it in our production processes or in the irrigation of green areas.

In 2023, we inaugurated the Wastewater Regeneration Plant (ERAR), which has allowed us to achieve water circularity in Cantoria. With a capacity to regenerate 600,000 m³ of water per year.

RESOURCE CONSUMPTION WATER IN 2023

99% Recycled water and zero discharge

We treat and recirculate more than 80,000 m³ of water per day.

This is enough to irrigate 1,500 soccer fields every day.

Or to supply a city of 400,000 people.

Cosentino CO₂ neutral

We have identified those projects that meet the characteristics needed to make responsible compensation, and that have a strong social component that supports the achievement of the Sustainable Development objectives of UN Agenda 2030.



ZERO EMISSIONS STRATEGY

The ultra-compact Dekton surface is classified as Carbon Neutral.

We offset our CO₂ emissions over the entire product life cycle.



We promote biodiversity

We convert our emissions into revitalised woods, improved marine ecosystems and we have created a Green Belt surrounding our industrial park that protects its natural environment.

In addition, we have carbon credits for two renewable energy production projects: Loma Los Colorados Landfill Gas Project, in Chile, and Oaxaca II and IV Wind Energy Projects, in Mexico, which have a direct impact on sustainable development by supporting the local economy and creating job opportunities, thus generating a dual social and environmental impact.



GREEN SPACES

Our offsetting has a dual impact, as it addresses emissions that are unavoidable

170,360 m² Reforested areas In all the green belt of the Industrial Park of Cantoria.

+ 7,000 shrubs and trees

Our sources of electrical energy make us proud

In our manufacturing process, 100% of the electrical energy used in Cantoria (Spain) and Brazil comes from certified renewable sources with a Guarantee of Origin (GoO).

But we want to go further than that. For this reason, in 2023 we started up our Solar Plant, one of the largest self-consumption photovoltaic plants in Europe. In addition, we are using the roofs of the production plants to increase our self-consumption capacity.

Most significant energy efficiency projects:

- Solar photovoltaic facilities at locations other than Cantoria
- Heat recovery at Dekton
- Fuel optimisation of Silestone RTOs (Regenerative Thermal Oxidizers)
- Installation of high-efficiency electric motors.

ENERGY CONSUMPTION

66,000 solar panels. Over 20 MW peak power. 36,500 MWh per year.

Over an area of more than 40 hectares.

We generate 20% of our current consumption.

This is equivalent to the annual electricity consumption of 73,000 households in Spain.

Self-consumption Electrical Energy %

| 2021 | 2022 | 2023 | 2025 goals |
|------|------|------|------------|
| 0% | 2% | 20% | 29% |

We measure and monitor our organizational carbon footprint

En 2023 hemos calculado por quinto año consecutivo la Huella de Carbono Organizacional de la compañía, reportando las emisiones indirectas (alcance 3).

Indirect emissions account for 86% of our Organizational Carbon Footprint.

| | | |
|---------|---------|---------|
| Scope 1 | Scope 2 | Scope 3 |
| 20,27% | 1,48% | 78,25% |

We take a step further in the calculation of our Organizational Carbon Footprint of direct and indirect emissions on a half-yearly and annual basis, which allows us to anticipate and reduce our CO2 emissions.

We do this through more efficient and productive processes, collaborating with our suppliers, through more sustainable mobility, by engaging in UN recognised projects that have an impact on people's lives, and by committing to the revitalisation and protection of natural environments.

Proof of this commitment is our B score in the Carbon Disclosure Project (CDP), a not-for-profit charity that scores companies on their decarbonisation strategy and ESG policy through transparent disclosure of the corporate strategy.

495,463.14 tCO₂e

TOTAL HCO 2023

-10.3%

reduction in the Carbon Footprint rate per unit produced compared to 2018

-1.3%

reduction in the Carbon Footprint rate per unit produced compared to 2022

-35%

Voluntary 2030 emissions reduction target



Environmental Declaration of Product

This document contains the Environmental Product Declaration (EPD) of the Dekton construction surface and the results of its Life Cycle Assessment (LCA). For this purpose, we have based this on data collected during 2020 and on the previous Dekton® EPD published in 2016, with EPD N°. S-P-00916. The calculations were carried out using the SimaPro software, version 9.1.1.1, which is fed by more than 4,000 Ecoinvent databases, version 3.7.

60 years is considered a typical life for the product.

This study has been carried out to understand the environmental impact of this construction surface, including all the stages of the life cycle ("from the cradle to the grave"). This means that the results reflect the analysis of the production, transport, installation, use and end-of-life phases. Other objectives of this study are to establish a systematic process of continuous improvement in all phases of this cycle, and to achieve the basic results to publish an Environmental Product Declaration (EPD).

The system boundaries determine which processes are included in this declaration. This document considers each of the processes of raw material procurement and product manufacture, transport to the customer and end of life of the product ("from cradle to grave with options").

The general description of the processes considered and the system boundaries is as follows:



EPD SYSTEM

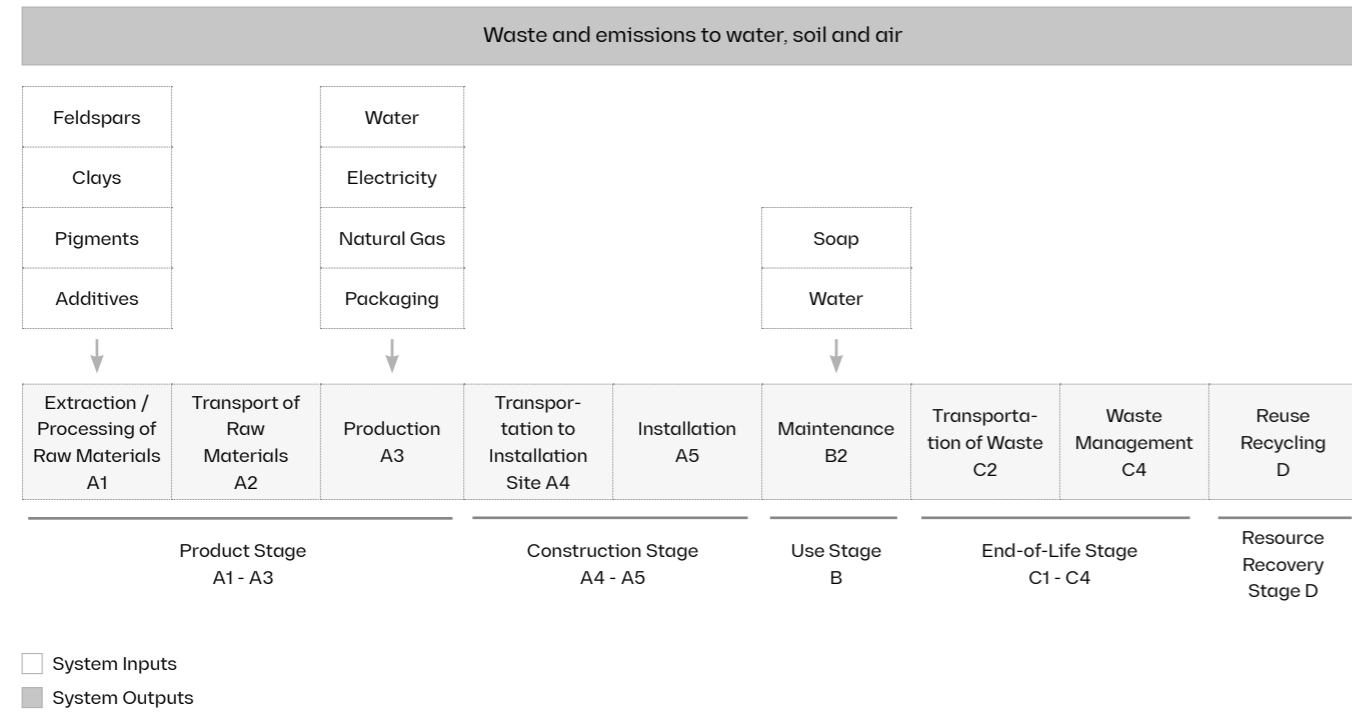
- In accordance with standards ISO 14025:2006 and UNE-EN 15804:2012+A2:2019
- Based on the PCR 2019:14 Construction Products version 1.11
- EPD N°. S-P-00916 – version 3
Publication date: 01/10/2016
Date of the update: 29/04/2024
Valid until: 08/12/2026
- The International EPD System,



Description of system boundaries

| | PRODUCT STAGE | | CONSTRUCTION STAGE | | USE STAGE | | | | | | | END-OF-LIFE STAGE | | | | RESOURCE RECOVERY STAGE | | |
|----------------------|--|--------------------|--------------------|--------------------|------------------|---------|-----------------|------------|------------------|--------------------|----------------|-------------------|----------------|--------------------|---------------------|-------------------------|----------------------------------|------|
| | A1. Raw materials | A2. Transportation | A3. Production | A4. Transportation | A5. Installation | B1. Use | B2. Maintenance | B3. Repair | B4. Substitution | B5. Rehabilitation | B6. Energy use | B7. Water use | C1. Demolition | C2. Transportation | C3. Waste treatment | C4. Discharge | D. Reuse, recycling and recovery | |
| Declared modules | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Module | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D | |
| Geographic location | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. | Int. |
| Specific data | More than 99 % specific data is used in this EPD | | | | | | | | | | | | | | | | | |
| Variation - products | Less than 10 % within each product group | | | | | | | | | | | | | | | | | |
| Variation - sites | Less than 10 % | | | | | | | | | | | | | | | | | |

System boundaries including modules



Dekton Trilium

A building is energy efficient when it is designed to minimise the amount of conventional energy used on a daily basis.



Energy efficiency: Leed and Bream

The sustainability of architectural projects has gone from being an interesting and desirable addition, to representing a real need that must be considered from the very beginning of the design stage. A building or infrastructure will be sustainable as long as it complies with different criteria, from its impact on the environment where it is located, to the origin of the materials used in its construction.

A building is energy efficient when it is designed to minimise the amount of conventional energy used on a daily basis. It is not just about saving on the energy bill. There are many other benefits to this approach: easier fitting of materials, lower maintenance costs and reduced obsolescence and material degradation. In order to undertake the construction of a sustainable energy building, two types of strategy must be developed: passive design strategies, focused on taking advantage of the climate and the environment in which the building is located; and active design strategies, such as the use of different renewable energy sources to supply the building.



LEED

LEED (Leadership in Energy and Environmental Design) is the most widely used sustainable building rating system in the world. LEED provides a framework for classifying eco-friendly and highly energy-efficient buildings, and is available for almost all types of architectural projects. When constructing a building, taking into consideration LEED certification is key to reducing costs before, during and after the project.



Sustainable sites

To minimise effects on microclimates, humans and wildlife by reducing heat islands. Using material in non roof applications with a $RS \geq 0,33$ and in roof application with $RSI \geq 82$ or $RSI \geq 39$ (depending on slope). You can get 2 Leed Credits as Dekton solar reflectance (RS) and solar reflectance index are.

SR= 0,462 grey colours
SR= 0,674 cream colours
SR= 0,790 white colours

SRI= 52 grey colours
SRI= 81 cream colours
SRI= 98 white colours



Regional priority

Regional priority credits (RP) are those existing LEED credits that help project teams focus on their local priorities in terms of environment, social equity and public health. Requirements: One credit is awarded for each Regional Priority credit achieved, up to a maximum of four.

Cosentino is a company with a growing global presence. It currently distributes its products and brands in more than 80 countries, using its own distribution channel in 37 of them. This is key to understanding and meeting the regional priorities for each project.



Material and resources

To encourage the use of products and materials for which life-cycle information is available and that have preferable environmental, economical, and social life-cycle impacts. You can get 1 Leed credit as Dekton has its own environmental product declaration and the carbon footprint reduction plan is in development.

Requirements: To use products from at least five different manufacturers that meet at least one of the following responsible sourcing and extraction criteria. The total value of the construction products used in the project that meet these criteria must represent at least 40% of the total value of construction products permanently installed in the project. You can get 1 Leed credit because Dekton Trillium and Radium uses up to 80% of reused materials, Eter up to 30% and white range has various percentages of reused materials.



Innovation

To encourage building teams to achieve exceptional and innovative efficiency Requirements: To excel in innovation beyond the elements listed in the LEED guide.

You can get from 1 to 5 Leed credits as Innovation is part of Cosentino's DNA. As a leading company, Cosentino innovates and anticipates solutions, together with its clients and partners, that offer design, value, and inspiration to people's lives.



Indoor environmental quality

To provide a comfortable thermal environment that supports and promotes occupant productivity and well-being. Requirements: To meet all requirements for both design and technical comfort control. To design the building envelope in order to meet either ASHRAE Standard 55- 2017 or ISO 7730:2005 requirements.

You can get 1 Leed Credit because Dekton is certified for its use in ventilated facade.

To use materials inside the building (and within the waterproofing membrane) to meet the low emission criteria listed below. a. FLOORING: At least 90% of the total cost of the flooring installed meets the VOC content requirements. b. WALLS: At least 75% of the total costs of the walls installed meets the VOC content requirements.

Yo can get 1 Leed Credit as Dekton is Greenguard Gold certified.

BREEAM

BREEAM is one of the most important and recognised sustainability certifications in the world. It focuses on assessing the environmental impact of all types of architectural projects. BREEAM assesses impacts in ten different categories ranging from ecological land-use to the use of sustainable materials and infrastructures and buildings energy efficiency. BREAM encourages the development of projects from a sustainable approach that generates economic, environmental and social benefits for all those involved in the construction and subsequent use of the building or infrastructure.



Cosentino designs its materials from an innovative and sustainable approach that helps architects and designers to meet the requirements of the BREEAM evaluation system. Both the design of the products and the materials used in their manufacture are focused on guaranteeing the lowest environmental impact on each architectural project. In this sense, the energy efficiency of buildings using Cosentino materials in their construction is particularly relevant.



Health and well-being

HEA 02 Indoor air quality.
To encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes. Requirements: Volatile Organic Compound (VOC) emission levels. The selected products must comply with the emission limits specified in the guide.

You can get 1 Breeam credit as Dekton is Greenguard Gold certified.

HEA 04 Thermal Comfort.
To ensure, through design, both the achievement of comfortable temperature and the necessary control devices to maintain a thermally comfortable environment for the building's occupants.

You can get 1 Breeam credit as Dekton is certified for facade use.



Materials

MAT 01 Life cycle impact.
To encourage the use of construction materials with a low environmental impact over the full life cycle of the building. Requirements: At least five products specified at Design Stage (DS1) and installed by the Post-Construction Stage (PCS 2) are covered by verified Environmental Product Declaration.

You can get 1 Breeam credit as Dekton is EPD certified.

MAT 06 Material efficiency.
To recognise and encourage measures to optimise efficiency of materials. Material efficiency: "...This includes using fewer materials, reusing existing demolition and dismantled materials and, where appropriate, procuring materials with higher levels of recycled content..."

You can get 1 Breeam credit as Dekton uses different percentages of recovered materials in some of its colours: - Dekton Trilium and Radium, up to 80% - Dekton Eter, up to 30% - White range, various percentages.



Innovation

INN 01 Innovation.
To support innovation within the construction industry through the recognition of sustainability related benefits which are not rewarded by standard BREEAM issues. Requirements: Up to a maximum of 10 credits are available, with the total BREEAM score capped at 100%, in aggregate from a combination of the following: a) 1.c Indoor air quality: All product types comply with the emission limits, test requirements and additional requirements listed in the guide. (1 CREDIT) b) 1.g At least 10 products specified at Design Stage (DS) and installed by the Post-Construction Stage (PCS) are covered by the manufacturer's verified Environmental Product Declaration (1 CREDIT).

You can get these points as Dekton is Greenguard gold and EPD certified.

Certifications

Dekton is in the process of certification of the following worldwide certifications with environmental implications.

ISO 9001



Cosentino has been found to conform to the Quality Management System standard: ISO 9001:2015 This certificate is valid for design, manufacturing, production, distribution, sales and marketing of Dekton ultra-compacted surfaces.

ISO 14001



This recognition certifies and consolidates 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 its distribution and marketing. It certifies, among other aspects, the efficient use of raw materials, 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.

NFPA 285



This standard provides a test method for determining the fire spread characteristics of exterior wall and panel assemblies used as components of curtain wall assemblies that are constructed of combustible materials or contain combustible components.

Wall assemblies are tested for the following capabilities: resistance to flame spread on the outside face, vertical flame spread from floor to floor, lateral flame spread from the wall compartment of fire origin to adjacent spaces.

ETA 14/0413



It is a European technical approval based on EAD 090062-00-0404 "Mechanically Fastened Exterior Facade Cladding Kits". It is a reference document for application in Europe and other markets. It includes technical data for three different ventilated facade systems for 12 and 20 mm. DKT1 for undercut anchor system and DKT2 and DKT3 for edge grooving systems with continuous profile or clips.

NOA



NOA certificate has been approved and designed to comply with the Florida Building code including the High Velocity Hurricane Zone. It includes two types of systems, with Dekton 12mm installed on aluminium profiles and hangers fixed to plywood attached to wooden battens, steel stud framing or masonry, and Dekton 8 mm installed with an adhere system. It includes test reports about static air pressure, cyclic wind pressure loading, flame spread and smoke generation, freeze and thaw cycles and water absorption.

BS 8414

The test method BS 8414 Part 1:2020 assesses the performance of an external non-loadbearing cladding system, a ventilated facade and external wall insulation systems when applied to the face of a building and exposed to an external fire under controlled conditions.

The fire exposure is representative of an external fire source or a fully-developed (post-flashover) fire in a room, venting through an opening such as a window aperture that exposes the cladding to the effects of external flames. Internal and external fire spread, visible flames and mechanical stability are assessed.

BBA 16/5346



This Agreement certifies Dekton relating to ventilated cladding for fixing to an aluminium support subframe, and for use ventilated facade on external masonry, concrete or steel frame walls of new and existing buildings.

Greenguard



Greenguard Environmental Institute is a non-profit organisation whose mission is to protect public health and improve quality of life through programmes that improve air quality indoors. Some studies by the Environmental Protection Agency in the USA have proved that indoor air contamination can be 100 times higher to outdoor contamination levels.

In energy efficient constructions, pollutants tend to become trapped in living spaces instead of moving freely in the environment. Some of the most harmful contaminants indoors are Volatile Organic Compounds (VOCs), carbon monoxide, particles from cooking and nitrogen oxide. These contaminants can cause sick building syndrome, which causes dizziness, nausea and related illnesses.

Dekton has been analysed by Greenguard, proving that it does not emit any type of VOC and thus has achieved Greenguard Certified (Certificate No. 41572-410) and Greenguard Gold (Certificate No. 41572-420) Certifications.

Other product certifications

EPD



DGNB LABEL



NSF



ICC



APPLUS



CoC (Civil Defence)



VOC Eurofins



DoP



DBCe



Carbon Neutral



KOMO



Incombustible



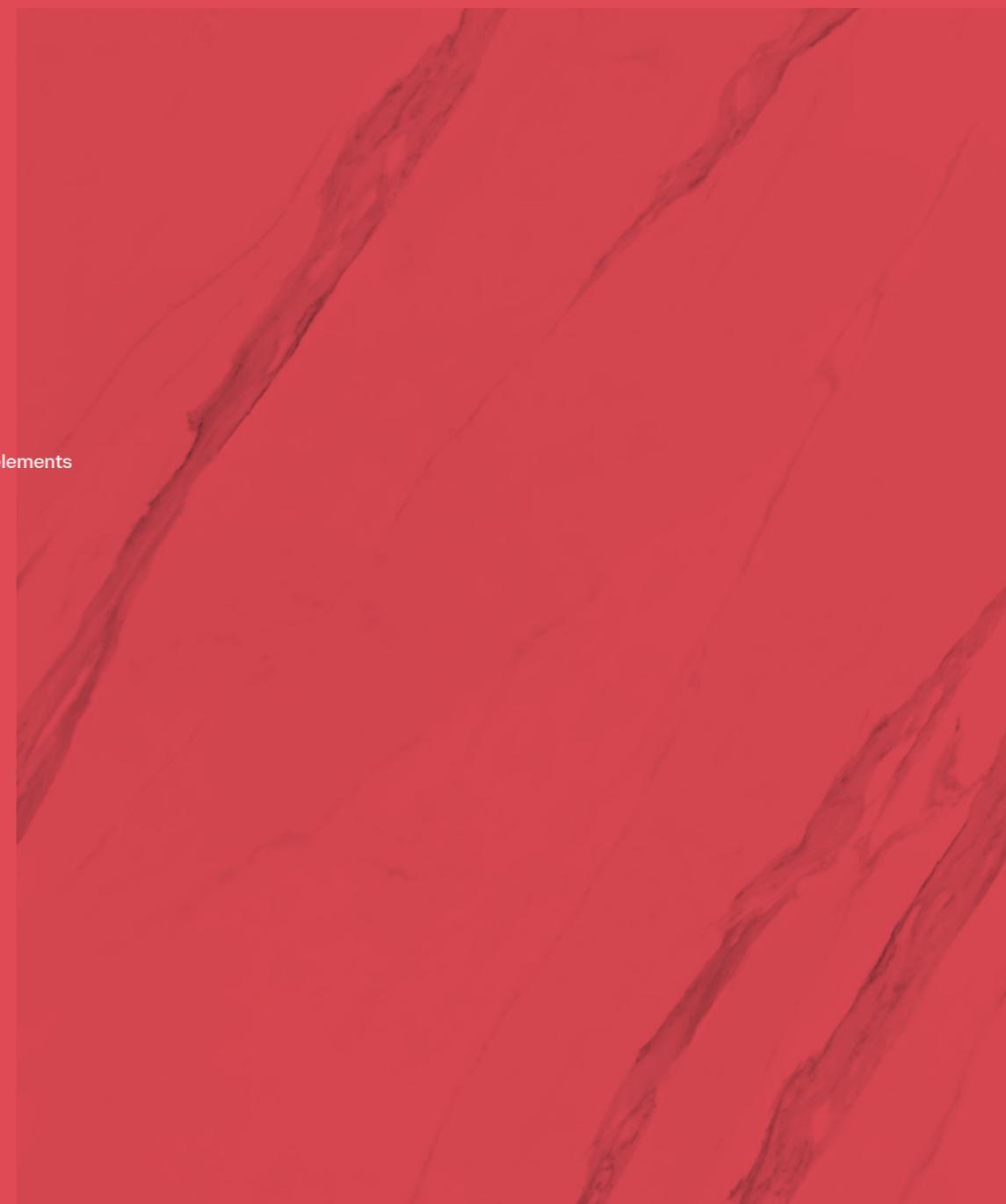
Dekton A1; Dekton Protek A2 s1 d0 8/12/20mm (with mesh). Dekton Slim Protek 4mm (with mesh) B s1 d0.

* To obtain more information about hues with NSF certificate please visit www.nsf.org

Product Range

02

- 36 Sizes, formats and thicknesses
- 37 Textures
- 38 Colours and surfaces
- 50 Dekton iD
- 56 Colour stability
- 57 Customising cuts and special elements



Sizes, formats and thicknesses

Formats

Dekton offers a wide variety of slab formats and customization, along with thicknesses of 4; 8; 12; 20 and 30 mm that respond to designers' functional and creative needs in any interior or exterior project, no matter its complexity.



Large format slabs

- From 320 x 144 cm. Our standard format varies from 320 x 144 cm as a minimum nominal size to a maximum size of 330 x 163 cm in colors with QuickCut technology.
- 300 x 100 cm. New format in 8 mm for a selection of colors.
- From 330 x 163 cm. Our new ultra large format available in a colors selection from the portfolio.



Standard slabs, ready to install:

- 260 x 100 cm in 4 mm. Optimma format.
- Formats with maximum yield based on a standard slab. Examples:
 - 142 x 106 cm
 - 142 x 142 cm
 - 142 x 71 cm
 - 142 x 79 cm
 - 159 x 142 cm
 - 159 x 71 cm
 - 71 x 71 cm
- Format customization according to the needs of the project

Standard formats (cm)

| | | | | | |
|---------|-----------|-----------|-----------|-----------|----------|
| | 142 x 142 | 144 x 320 | 143 x 159 | 143 x 106 | 143 x 79 |
| 71 x 71 | 71 x 142 | 71 x 320 | 71 x 159 | 71 x 106 | |

Textures

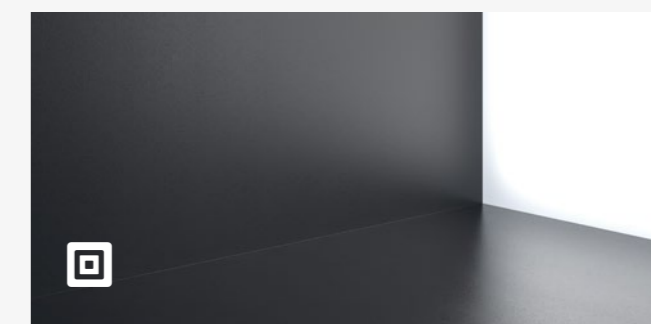
Different Sensations. Richness of Shades.

Dekton comes in different textures so that the only limit is the architect's or designer's imagination: from the finish ultra-glossy, to matte or velvety textured options.



X-Gloss

A luminous and dazzling finish achieved by mechanical polishing, without the need for enamels or other materials.



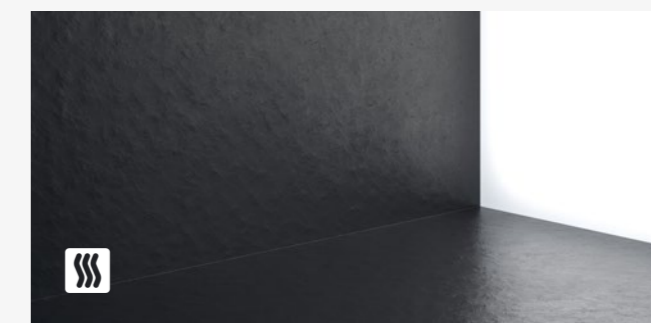
Matte

The matte texture pursues a natural, shine-free appearance, ideal for achieving a harmonious and timeless finish. Most Dekton products are manufactured with this finish.



Velvet

Velvet is Dekton's velvety texture. The materials chosen in Velvet create a feeling of warmth and comfort. This texture is perfect in classic colors, with veins.



Matte or Textured Velvet

Matte or Textured Velvet textures combine the warmth of velvet with the roughness of a textured, imperfect material. It is ideal for emulating a realistic finish, with the advanced features of Dekton.

Colours and surfaces

Types of patterns

We have classified our range of colours into three different clusters of patterns to facilitate the design process. All our portfolio is labeled as Infinite Pattern, Singular Pattern and Smooth Pattern, depending on the effect desired for large surfaces and the placement of slabs adjacent to one another, taking into account the directionality of the design, shades and variations.

However this classification is merely indicative and we recommend that you go to our Product to obtain an individual assessment that guarantees how you can materialize your project the way you imagined.



Singular pattern

Designs with chromatic ranges of greater complexity and very marked directionality, which result in patterns with a lot of character and variation in smaller pieces and adjacent placements. We recommend that you consult our advisors for use on large surface claddings.



Armonk Professional Center. New York City. USA

Infinite pattern

Plain colours or designs with a uniform or quasi-uniform composition and structure that, when used for coverings such as floors, walls, or facades, allows for the random placement of boards and cut-outs achieving total visual homogeneity. Recommended for large surfaces.



ToHa by Ron Arad and Avner Yashar. Tel Aviv, Israel



Dekton Kovik 8mm. Sistema de Fachada DKB

Smooth pattern

Designs with a directionality in the graphic structure that has to be taken into account when cutting and placing adjacent boards, either if continuity in the holistic design is sought or otherwise. It is a very versatile type of pattern but it requires the placement and cutting of boards accordingly. Recommended for large surfaces.

Match your style with Dekton

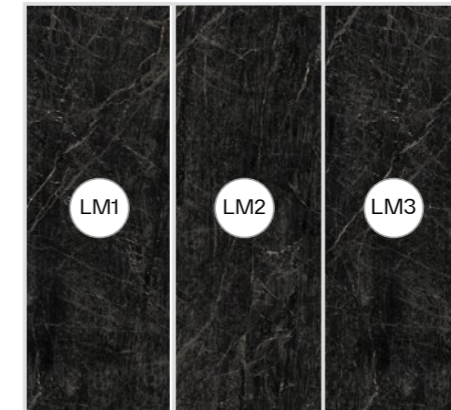
Dekton Design Match

There are designs that leave their mark. Veins that run along walls and continue on floors and facades with patterns that would be impossible for a natural stone, but not for Dekton.



Lineal Match

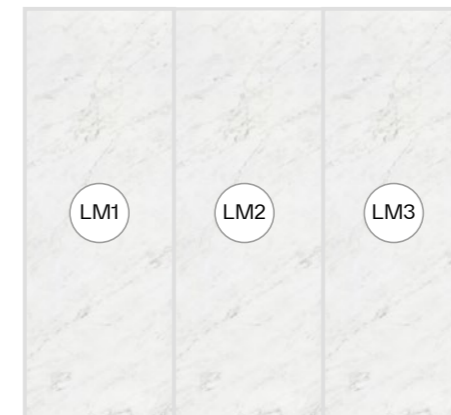
We present a new concept that includes references of the same colour to create a fluid and continuous atmosphere. Focused on large-area flooring and vertical cladding applications. A new design conceived to position the slabs vertically. The slab is rotated 180° in each of its iterations, thus creating a continuous and harmonious design.



Dekton Somnia
Available in 4, 8, 12 mm and
Optimma format 260 x 100 cm x 4 mm



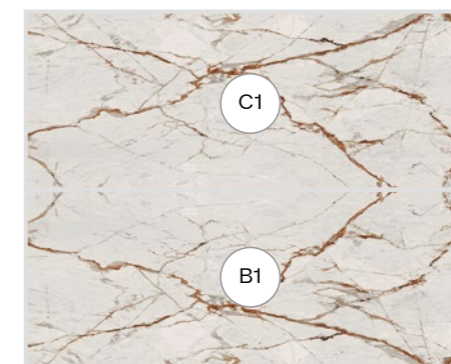
Dekton Trance
Available in 4, 8 and 12 mm thicknesses



Dekton Marina **NEW**
Available in Optimma format
260 x 100 cm x 4 mm (LM1, LM2 and LM3)

Book Match

Based on some of our designs, we have created unique, symmetrical and interchangeable references that allow compositions and designs to be made where the veins have continuity between different pieces. Each piece has a unique combination of numbers and letters to select the patterns that best suit your needs according to colour and available thicknesses. Material on request, check availability.



Dekton Awake
Available in 4, 8 and 12 mm thicknesses.



Dekton Lucid y Morpheus
Available in 8, 12 mm and
Optimma format 260 x 100 cm x 4 mm

CASE STUDY

444N Orleans Building

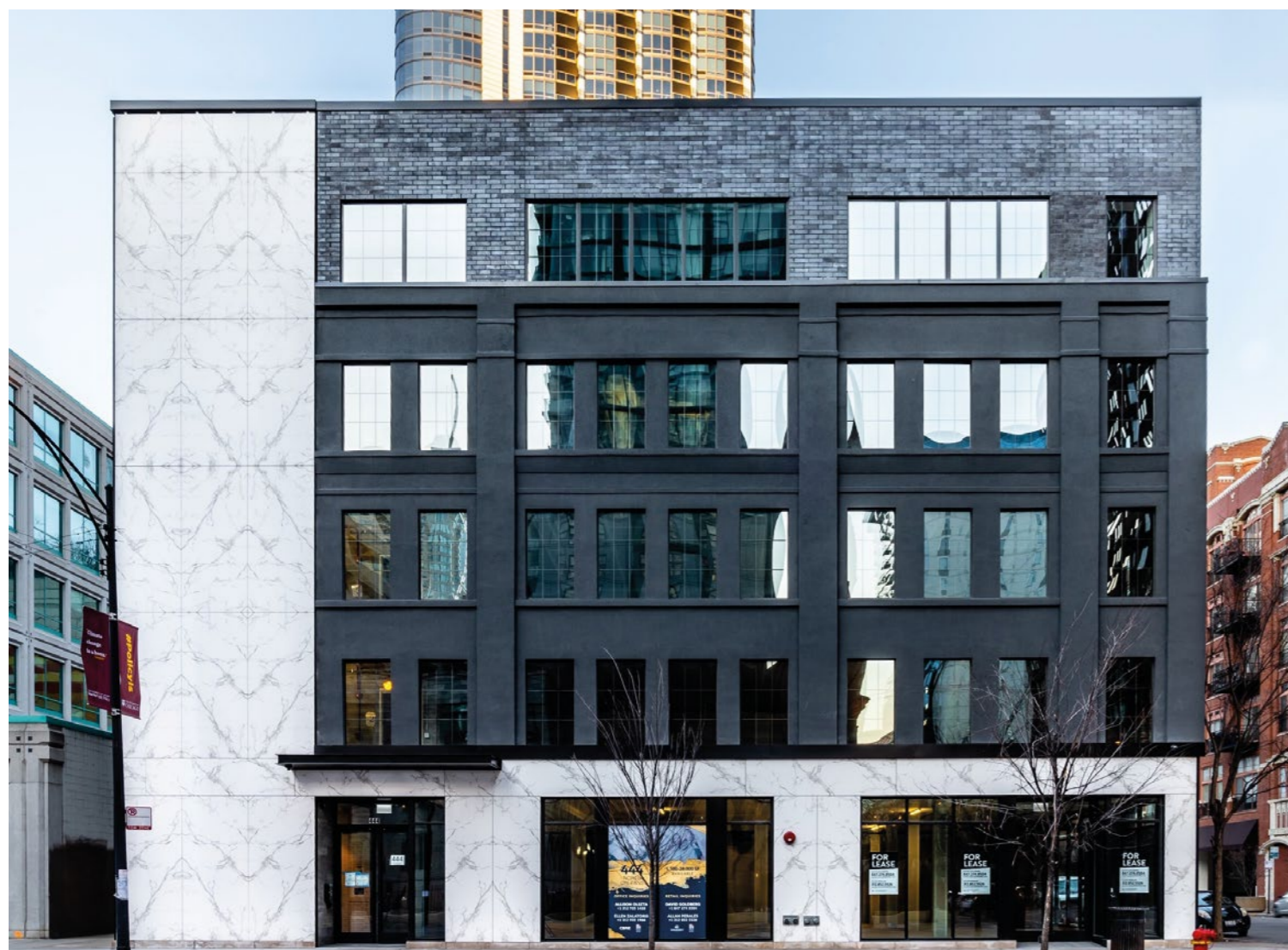
Chicago, USA

Material

Dekton Aura Bookmatch

Thickness

12 mm



Design and installation of flooring and cladding

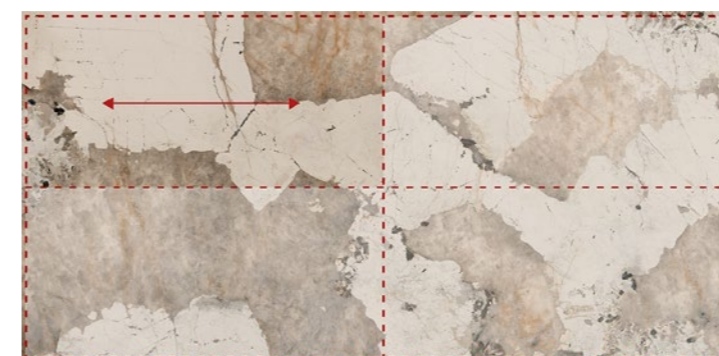
Due to the fact that Dekton designs have been conceived for large format (full slab), it is possible that in smaller formats used for facades, colour jumps, certain contrasts or changes in directionality between pieces can be observed. We recommend taking this aspect into account from the design phase.

In the 142 x 106 cm and 142 x 79 cm formats, the orientation of the graphic cannot be changed by applying the price of the pricelist. See possible quote options.

Differences in the directionality of the vein according to the cut pattern and the desired format:

Option A: Vein parallel to the piece.

Option B: Grain perpendicular to the piece.



Singular Design: Dekton Khalo



Singular Design: Dekton Trance

The colours susceptible to changes in the directionality of the vein are those belonging to the Singular and Smooth designs.

| Singular Design | | | | Smooth Design | | Infinite Design | | |
|-----------------|-----------|---------|---------|------------------|---------------|-------------------|--------------|--------|
| Adia NEW | Kelya | Neural | Trilium | Ava NEW | Kira | Polar NEW | VK04 Grafite | Sirius |
| Arga | Khalo | Opera | Vigil | Nebu NEW | Kovik | Sandik NEW | VK03 Grigio | Umber |
| Aura 22 | Laos | Rem | | Trevi NEW | Kreta | Aeris | Halo | Uyuni |
| Awake | Laurent | Reverie | | Bromo | Lunar 22 | Albarium 22 | Micron | Zenith |
| Bergen | Lucid | Soke | | GK07 Ceppo | TK06 Marmorio | Argentium | Mooné | |
| Daze | Marina | Somnia | | Danae | Nilium 22 | VK02 Avorio | Nacre | |
| Entzo 22 | Morpheus | Taga | | Fossil | TK05 Sabbia | Domoos | VK01 Nebbia | |
| Helena 22 | Natura 22 | Trance | | Keon | Valterra | Dunna | Sasea | |
| Kairos 22 | | | | | | Eter | | |

New launches

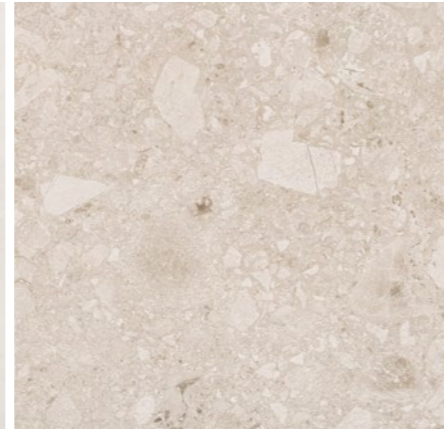
Pietra Edition Collection



Polar   



Sandik   



Ava  




Trevi   



Adia   



Nebu   

 Ultra Texture  Ultra Matt  Velvet Texture  XGloss  Quick Cut Technology  Dekton Slim 4mm

Dekton Polar and Dekton Trevi

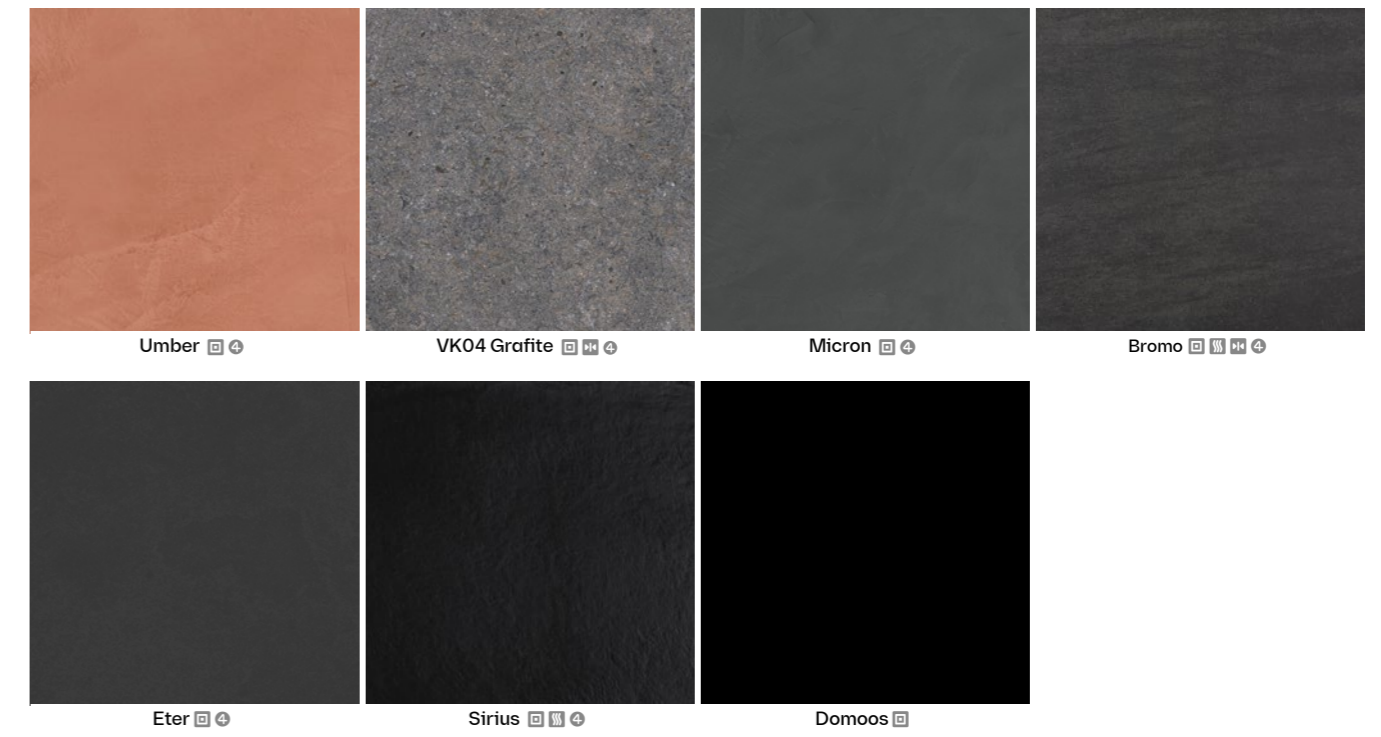
Colour chart, patterns and finishes

Infinite pattern

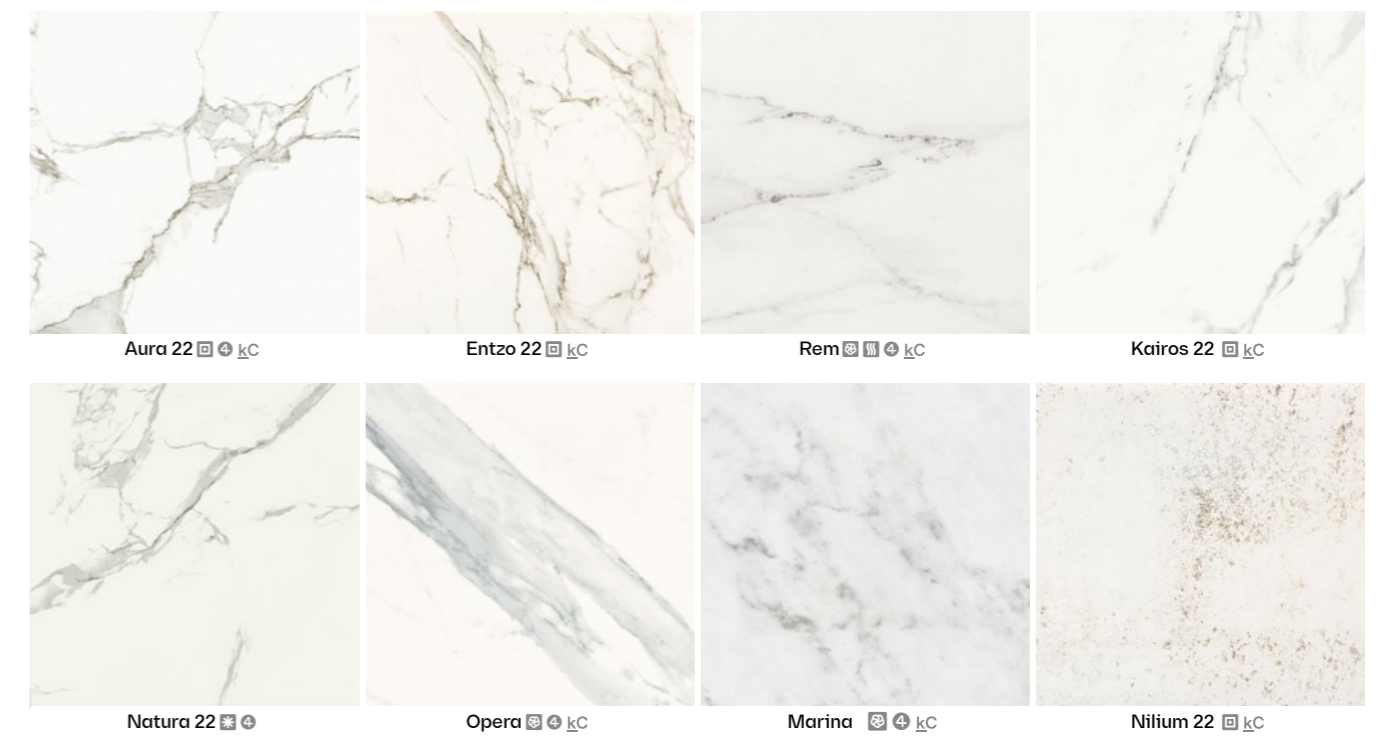


Ultra Texture Ultra Matt Velvet Texture XGloss Quick Cut Technology Dekton Slim 4mm

Infinite pattern



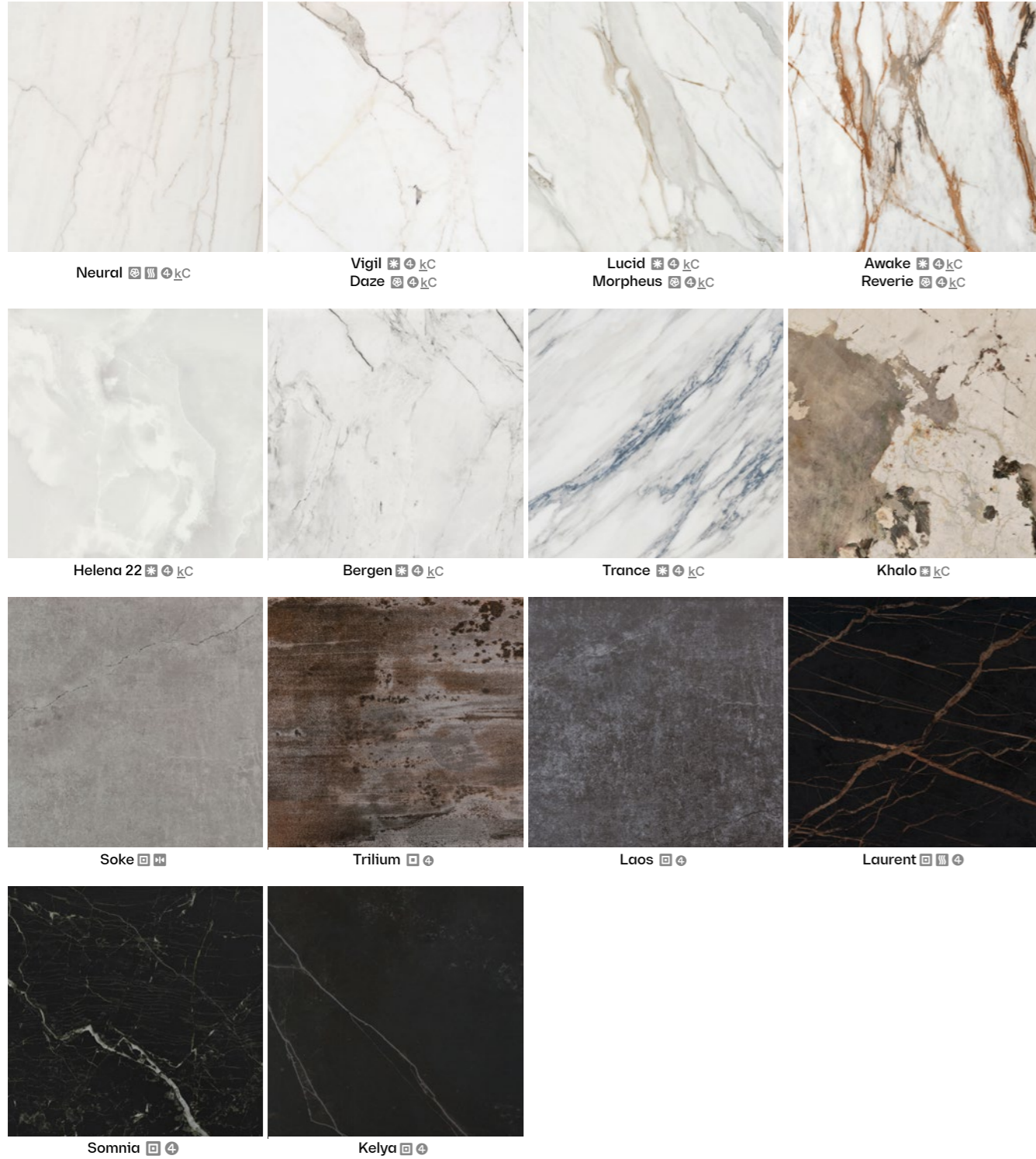
Singular pattern



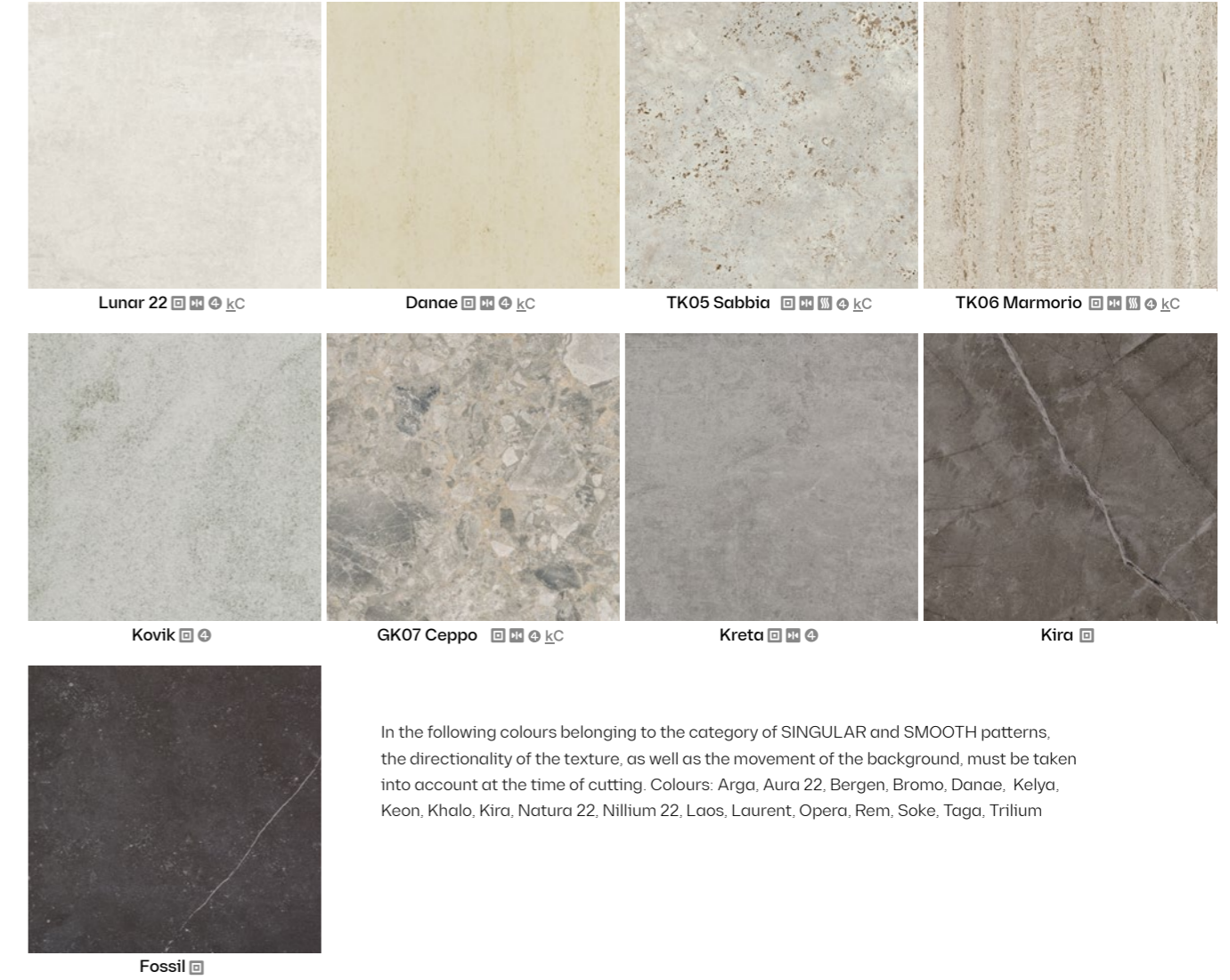
Colour chart, patterns and finishes

Ultra Texture
 Ultra Matt
 Velvet Texture
 XGloss
 kC Quick Cut Technology
 Dekton Slim 4mm

Singular pattern



Smooth pattern



In the following colours belonging to the category of SINGULAR and SMOOTH patterns, the directionality of the texture, as well as the movement of the background, must be taken into account at the time of cutting. Colours: Arga, Aura 22, Bergen, Bromo, Danae, Kelya, Keon, Khalo, Kira, Natura 22, Nillium 22, Laos, Laurent, Opera, Rem, Soke, Taga, Trilium

Dekton iD

From printing specific graphics in any colour to changing texture, to creating a completely original design that includes custom colours, textures and finishes, keeping the benefits of Dekton unchanged.

Two different levels of customisation to suit each project

Dekton iD is a breakthrough service by Cosentino that enables the possibility to customise our Dekton products.



DEKTON iD PRO

From 1000 sqm

Combine any of our colour bases. Choose one of our textures. Print a design like patterns, graphics or even your brand.

1

Base colour selection

The first step is the selection of the base colour. You can choose any colour available from the wide range of Dekton.

2

Design application onto Dekton surfaces

You can apply countless customised designs to Dekton surfaces, as well as colours and grades that will transform its appearance.

3

Texture selection

The different textures available, such as matt, ultra-gloss, wood and slate, to name a few, will provide the finish with attractive nuances and a unique feel to the touch.

4

Thickness selection

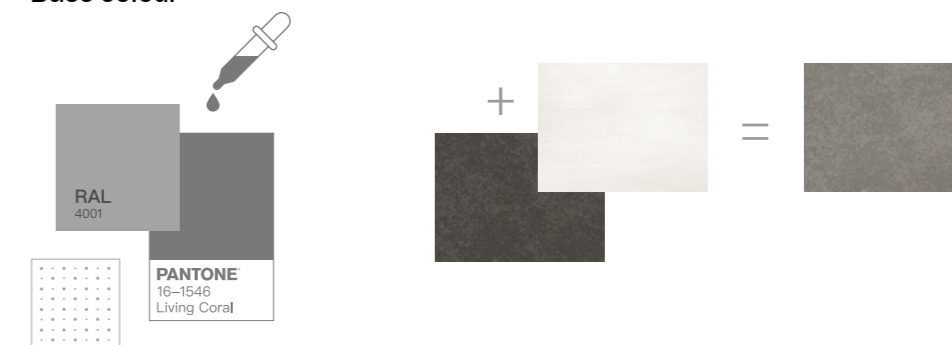
While Dekton standard thicknesses are 4, 8, 12, 20 and 30 mm.

5

Cutting

Dekton large format slabs can be cut to size, regardless of the shape.

Base colour



Design



Textures



DEKTON ID UNLIMITED

From 2500 sqm

Create your fully personalised colour, texture and finish from scratch. Even the colour bases, texture, finishes, formats and much more.

1

Base colour

The customer sends the Dekton iD team his/her initial idea: it can be a colour or the image or photo that sparked the customer's inspiration. From that moment, the Dekton iD team will perform a series of tests to achieve the desired colour. Meanwhile, the customer will be receiving samples and can adapt the product to his/her preferences.

2

Designs

You can apply countless customised designs to Dekton surfaces, as well as colours and grades that will transform its appearance.

3

Textures

The different textures available, such as matt, ultra-gloss, wood and slate, to name a few, will provide the finish with attractive nuances and a unique feel to the touch.

4

Effects

Additional finishes that provide, selective gloss, pearlescent effects and unique inks, creating light base-relief, among others.

Thanks to the effects, it is possible to create all kinds of visual sensations to enhance a texture or colour, providing a very original final design.

5

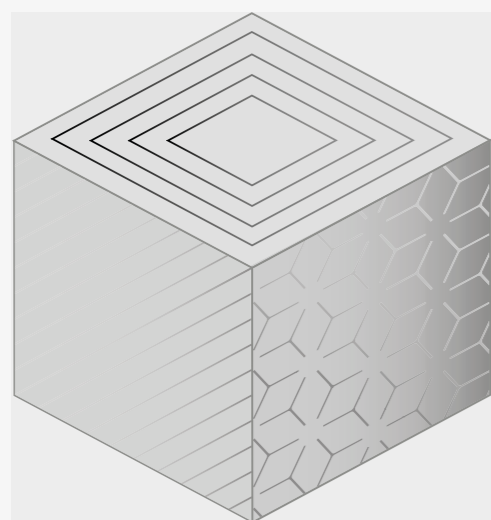
Thickness

While Dekton standard thicknesses are 4, 8, 12, 20 and 30 mm, Dekton iD Pro allows you to create specific thicknesses to suit the requirements of each project.

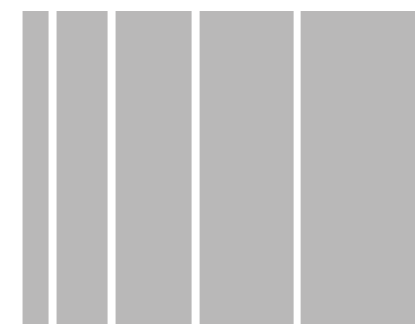
6

Cutting

Dekton large format slabs can be cut to size, regardless of the shape.



Thickness



4 8 12 20 30

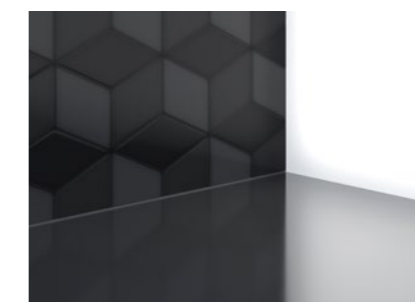
Cutting



Effects



Selective relief



Base relief



Vivid Colours

Basic workflow



Send us your idea

Send your idea to customdk@cosentino.com and start from scratch customising its colour, texture and format thanks to Dekton ID.

Or release your creativity on Dekton surfaces with the help of Dekton ID Unlimited. You can check the project's development either through the samples that you will receive from Cosentino, or personally, through visiting Cosentino's facilities.



Personalised advice

Cosentino's R+D team will help you with your project, supporting you at every step of the process:

From the initial idea, to the features and creative possibilities of Dekton.



We bring your vision to life

Dekton ID's aim is clear: to achieve a perfect, customised result just like you imagined it.

DEKTON ID

INDIVIDUALLY DESIGNED

CASE STUDY

Streamlight Tower: Merging form with function, innovative facades from Dekton

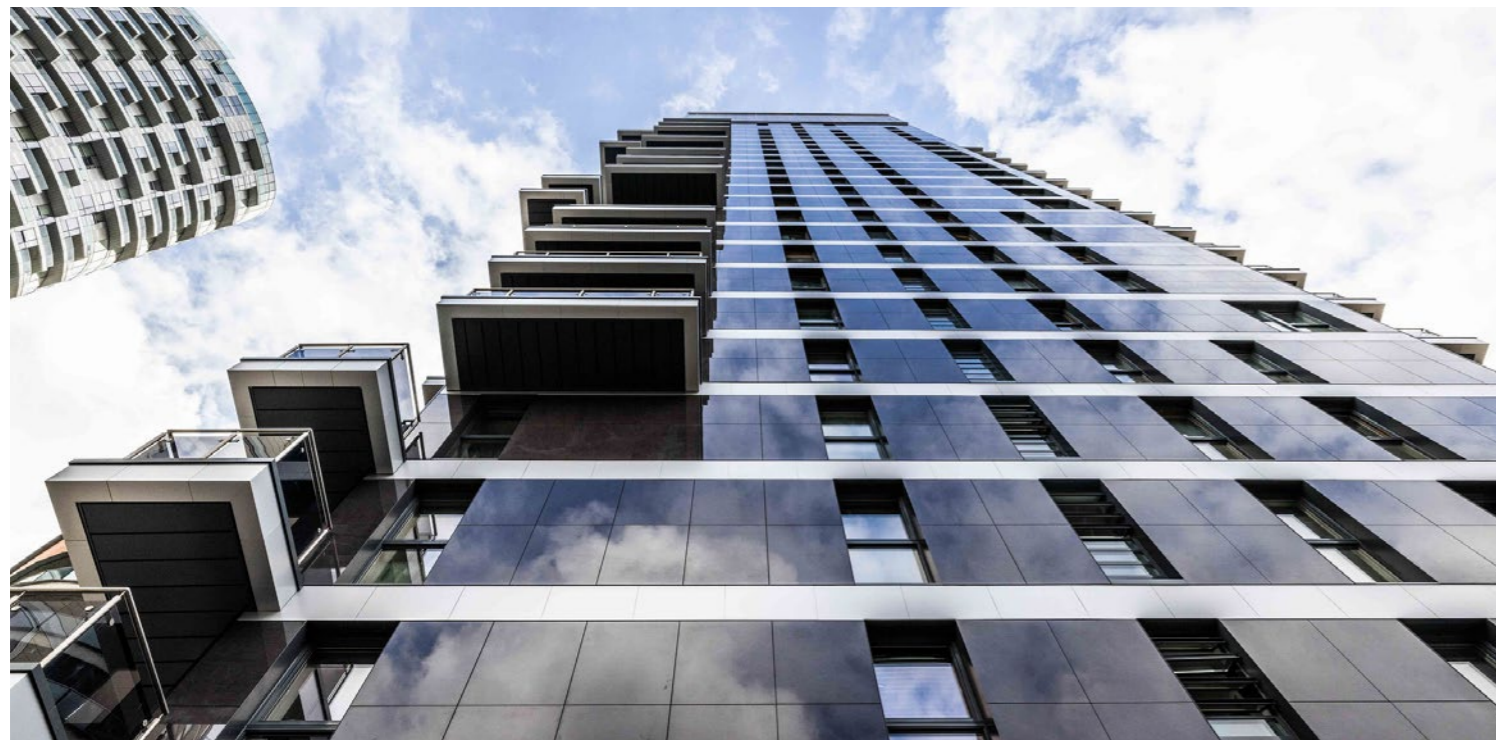
London. United Kingdom

Thickness

4,600 slabs
Dekton iD Eter Alberta and
Dekton iD Sasea Alberta

Thickness

12 mm



Colour stability

Accelerated Dekton Ageing.

Cosentino has conducted tests on Dekton surfaces to prove its stability to ultraviolet light. These tests have been done in an accelerated ageing xenon arc light chamber.

To do these tests two colours were selected as representative of the white and black ranges, Zenith and Domoos.

Tests have been conducted with a team model (Q Sun XE 3 HS) with daily light filters and irradiation of 0.51 W/m² in 340 nm and following a typical 102/18 cycle based on ISO 11341:2004 with the following test parameters: Dark panel temperature 63°C, air chamber temperature 43°C, humidity 30%; 1.42 hours of light/18 minutes of light and water spraying.

After 5000 hours of exposure, samples were measured and compared with a parameter that clearly determines colour variation. This is ΔE (Delta E) from CIELab. When the difference between two colours is ΔE<1 this means that both colours can be considered the same. If the colour change is ΔE>1, then it can be noticed by the human eye.

Results of this test:

| Dekton Colour | Exposure time | ΔE* |
|---------------|---------------|-----|
| Domoos | >5000 | <1 |
| Zenith | >5000 | <1 |

These values show that Dekton is not altered by UV radiation so it can be used in outdoor applications with full guarantee of colour stability throughout the entire colour range.

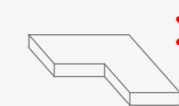
Customising cuts & special elements

With Dekton it is possible to produce straight and curved cuts with special designs for each project. It is also possible to produce 3D elements in L-shape for corner cladding, U-shape for columns and any type of customised element.

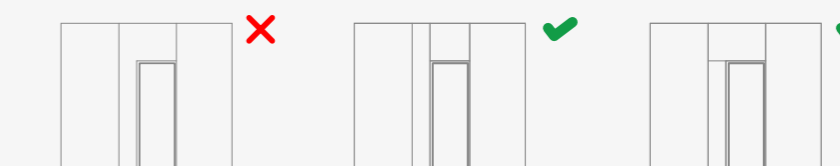
Please contact the Project Service Unit (PSU) to find a customised solution.

Pieces with unique shapes (L & U shapes)

Corners in facade openings are typically weaker points where stresses of the building structure or support wall can be easily transmitted to the cladding causing cracks to appear. This can be due to several factors such as the deviation of slabs and beams, differential settlements of foundations, expansion of the wall support etc.

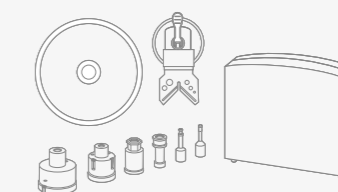


For this reason, it is not recommended to cut special shaped pieces (L or U shapes) in facade application.

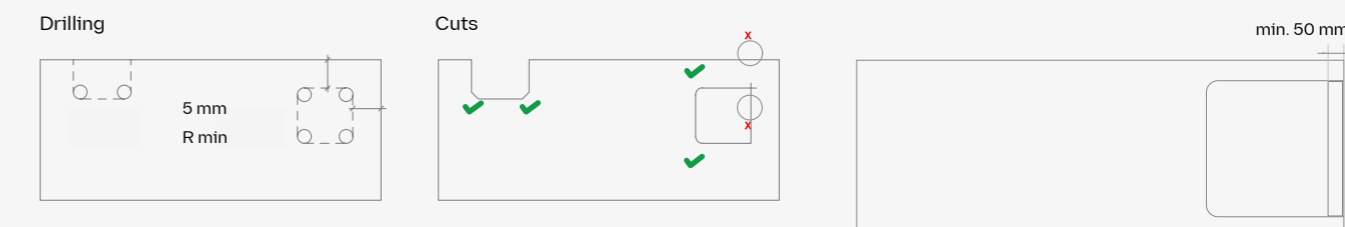


Cut-outs

When cut-outs are to be done on site, the recommended process is drilling in the corners before cutting. Mortises need to have drill holes with a minimum radius of 5 mm before cutting. These cannot be done too close to edges and a minimum distance of 50mm to the edge is advisable.



Disco y broca homologados



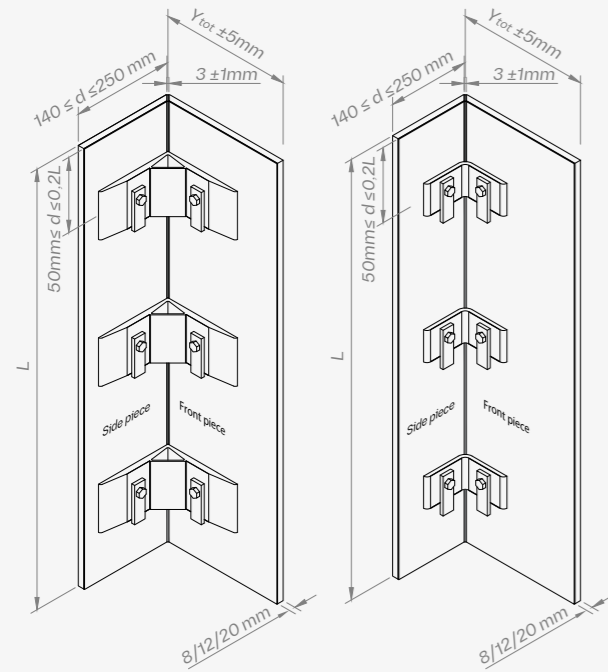
Corner solution with KEIL

Details with minimum joint, for L or U shaped assemblies.

Sealed mitered joint

KIT ANGULAR KEIL FA 100

REVEAL ATTACHMENT KEIL FA 60

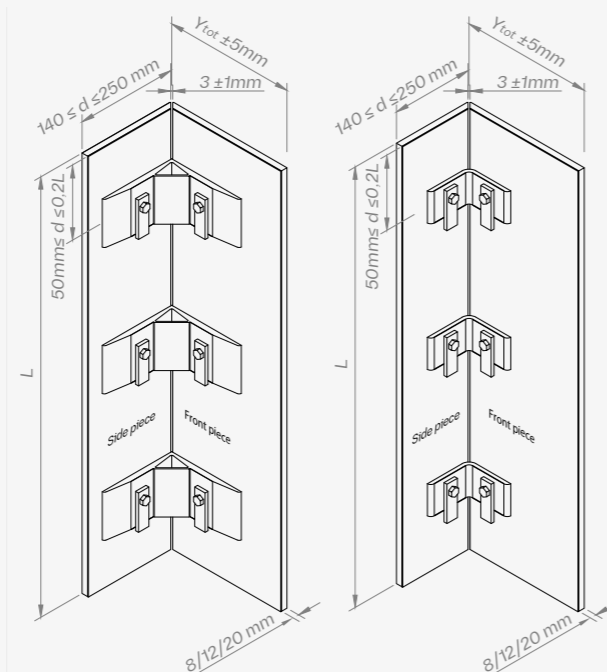


Sealed joint with Akemi Everclear 300 sealant, in a similar color to Dekton. Limitations and warranty subject to supplier's terms and conditions.

Open mitered joint

KIT ANGULAR KEIL FA 100

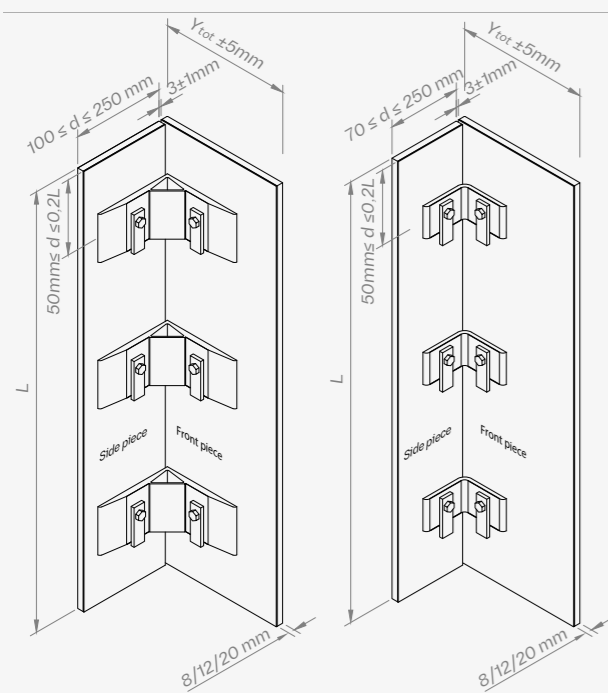
REVEAL ATTACHMENT KEIL FA 60



Open joint with exposed edge

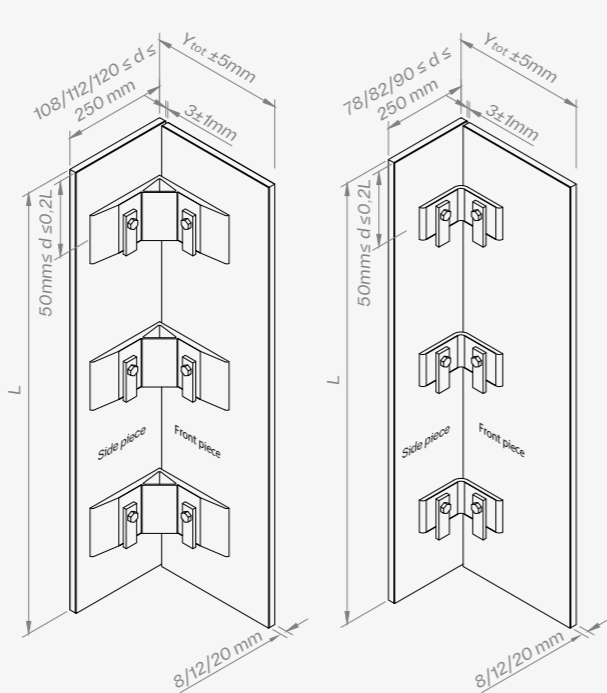
KIT ANGULAR KEIL FA 100

REVEAL ATTACHMENT KEIL FA 60



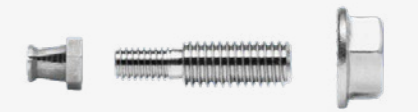
KIT ANGULAR KEIL FA 100

REVEAL ATTACHMENT KEIL FA 60



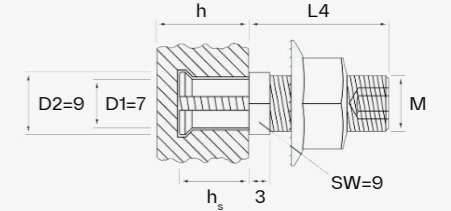
Keil double-threaded hexagon socket bolts

For Dekton corner assemblies using Keil's FA 60 and FA 100 reveal attachment sets, the use of double-threaded hexagon socket bolts is recommended, with A4 stainless steel M6 thread equivalent to the length of the anchor sleeve + hexagonal head and M8 in L4 length.



FA 60 set: Full set including: Aluminium L-bracket, 2 serrated washers, 2 Keil anchor sleeves, M6/M8 hexagon socket bolts and locknuts.
 Dekton 8 mm: Keil anchor hs=5,5 mm
 Dekton 12 mm: Keil anchor hs= 8,5 mm

Kit FA 100: Full set including: Aluminium L-bracket 100 x 100 x 60 mm, serrated washers, M6/M8 hexagon socket bolts and locknuts.
 Dekton 8 mm: Keil anchor hs=5,5 mm
 Dekton 12 mm: Keil anchor hs= 8,5 mm



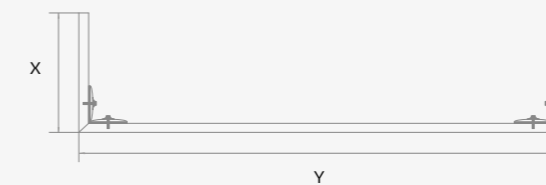
Assembled pieces (L & U mounting)

Beveled edges of integral corners and U-shapes include drill holes, reinforced profiles, and metallic elements to reinforce the joint.

For return pieces with mechanical fixing systems in ventilated facade application, it is recommended a minimum width of 70 mm and a maximum of 250 mm when the pieces have exposed edge, and between 140-250 mm when the pieces have miter edge. Dimension limitations, overhangs and distances between angular brackets and drill holes for special solutions should be studied for each case (Ask for support from the Project Service Unit - Facades technical department)

Cosentino was able to supply the assembled pieces in accordance with the installation drawings supplied by the project engineers.

U shape



L shape



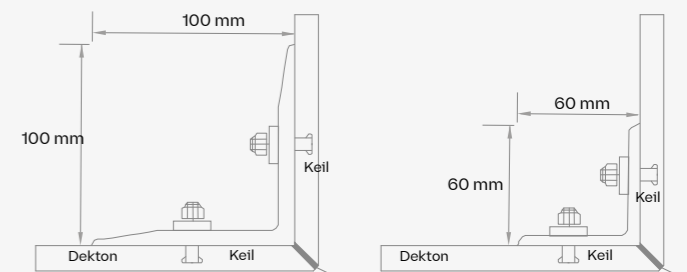
- Beveled corners joined with mechanical fixing:
- 70 mm ≤ X ≤ 250 mm for pieces with exposed edge
- 140 mm ≤ X ≤ 250 for pieces with miter edge
- Minimum open joint ≥ 3mm

Cosentino's technical department offer specialised support to define and optimise a solution for each project.

Integral sealed corner

There is the option of filling the joints with sealant. The side piece to be joined with a sealed joint must have a 3 mm joint and be mechanically fixed with reveal angles to the front piece, so that the sealant only works under traction and does not receive additional stress.

The sealing warranty will be subject to the conditions and warranty provided by the sealant manufacturer.



For pieces installed in a horizontal position facing down, with possibility of water accumulation on their rear face. (e.g. parts in suspended ceilings, lintel and eaves), the sealing of the holes with the SikaHyflex 600 sealant product will be needed.

The instructions on temperature and curing times of the sealant provided by the manufacturer will be followed.

Cladding System

03

- 62 Types of fixing
- 64 Cladding system
- 70 Dekton corner solutions



Types of fixing

Ventilated facade

The ventilated facade is a construction solution that allows for the establishment of a physical separation between the exterior cladding solution and the supporting wall of the building.

This separation creates a ventilated chamber that allows the renewal of air, which allows a series of thermal, acoustic and functional advantages that give it great added value.

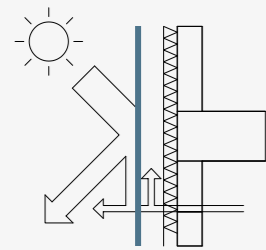
Glue and ETICS facade system

Dekton can also be used for facade cladding and ETICS facade systems with the recommended adhesives, depending on the type of substrate and panel size.

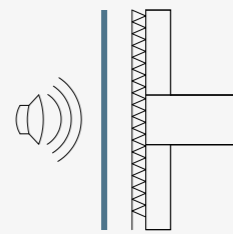
Curtain wall

Dekton can also be installed in the opaque areas of a curtain wall, always integrated with the fixing systems available from suppliers and manufacturers for this application.

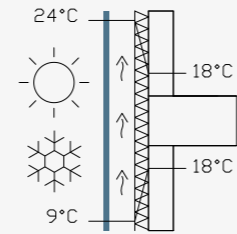
Ventilated facade advantages



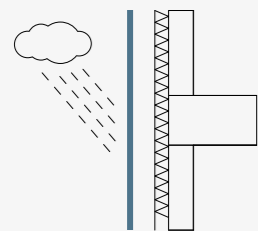
Energy savings



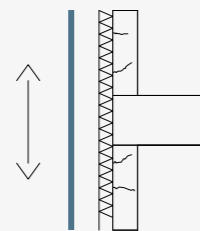
Acoustic insulation



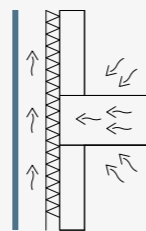
Health: prevents thermal bridges and condensation



Protection against water filtrations



Support wall protection



Thermal insulation

Structural requirements

In facade projects, Cosentino provides a wide range of certifications available and data sheets for static calculations required on each project.

Wind loads

The local standards must be considered in order to determine the best solution for the panel and fixing, especially in tall buildings or areas classified with high wind loads.

→ Dekton, with its range of thicknesses and systems, can be adapted to the different wind loads of each project. Cosentino continues to test and validate its cladding solutions through external laboratories.

Fire classification

Many European countries have adopted the European Reaction to Fire classification system (Euroclasses). Testing is defined in standard UNE-EN 13501-1: Fire classification of construction products and building elements. There are seven Reaction to Fire classification levels, depending on the contribution to fire: A1, A2, B, C, D, E and F, from best (A1 and A2 are non-combustible) to worst. There are three smoke intensity levels: s1, s2 and s3. There are three classes of burning droplets: d0, d1 and d2 (Table A)

Seismic performance

In the event of an earthquake, lightweight ventilated facades perform better than heavier materials and solid wall solutions.

Lightweight substructures used in ventilated facades function by absorbing and dissipating the tensions generated due to building movements limiting the damage and making it easier to repair.

→ Cosentino has carried out seismic tests, included in some systems and certificates, in external laboratories when required by certain projects or regulations.

Table A

| Contribution to fire A-B-C-D-E-F | Smoke production s1, s2, s3 | Flaming droplets/particles d0 - d1 - d2 |
|--------------------------------------|--|--|
| A1 No contribution to fire. | No test needed | No test needed |
| A2 No contribution to fire. | s1 Quantity/Speed of emission low. | d0 No burning droplets |
| B Very limited contribution to fire. | s2 Quantity/Speed of emission average. | d1 Slow rate of burning droplets. |
| C Limited contribution to fire. | s3 Quantity/Speed of emission high. | d2 High degree of burning droplets. |
| D Acceptable contribution to fire. | | |
| E Acceptable contribution to fire. | Not tested | - |
| F No performance requirements. | | |

The fire requirements will usually depend on the height of the building; for 18m and higher, buildings in Spain require a B-S3-d2 classification.

→ Dekton panels A1 class (without mesh) and Dekton Protek 8/12/20mm A2-s1-d0 class (with mesh) are non-combustible and suitable for facade installation in any type of building and at any height, meeting the most stringent fire performance requirements.

Cladding System

Fachada ventilada

DKT1 ●
Hidden mechanical fixing using undercut screws on the reverse side of the piece.

Thickness: 8, 12 and 20 mm
Price: *****
Format: All formats.
Certificates: ETA, BBA (12 y 20 mm)

DKT2 ●
Hidden mechanical fixing with metallic profile on the continuous grooved edge of the piece.

Thickness: 12 and 20 mm
Price: ***
Format: not suitable for big formats on vertical layout.
Certificates: ETA, BBA

DKT3 ●
Hidden mechanical fixing with clips at intervals along the groove on the edge of the piece.

Thickness: 12 and 20 mm
Price: **
Format: not suitable for big formats on vertical layout.
Certificates: ETA, BBA

DKT4
Mechanical fixing using visible clips that hold the pieces.

Thickness: 4, 8, (12 and 20 mm)
Price: *
Format: Not suitable for big formats on vertical layout.

DKBG
Mixed fixing (mechanical plus chemical) hidden in the groove on the reverse side of the piece.

Thickness: 8, 12 (and 20 mm)
Price: ****
Format: All formats

DKC ●
Chemical structural fixing of pieces onto profiles.

Thickness: 4, 8 (and 12 mm)
Price: *
Format: All formats

DKR
Rivet or screw fixing system with visible spot anchors.

Thickness: 4 and 8 mm.
Price: *

Glue and ETICS facade system

DKB
Pieces are fixed directly to the enclosure using mainly cement based adhesives.

DKS
Fixing of pieces onto an external thermal insulation system (ETICS)

Thickness: 4 and 8 mm
Price: **

Curtain wall

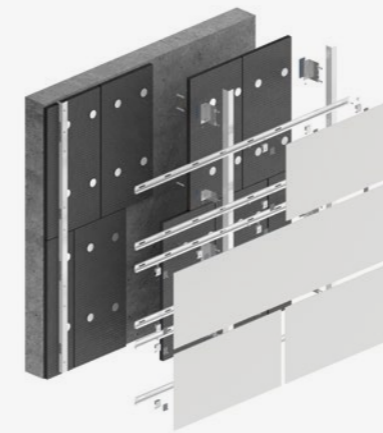
DKCW
Fixing in opaque areas of the curtain wall with perimeter chemical anchors with or without caps and middle reinforcement as required.

Thickness: 4, 8, 12 and 20 mm.
Price: *****

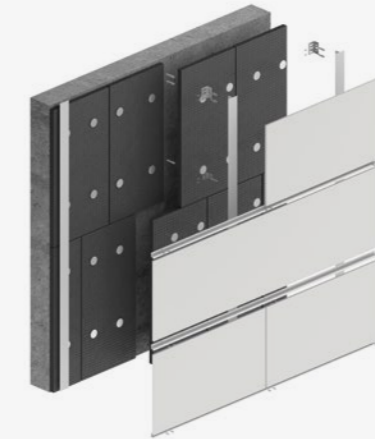
● Systems certified for ventilated facades

* Indicates an approximate price level compared from the lowest price (*) to the highest price (*****).

DKT1



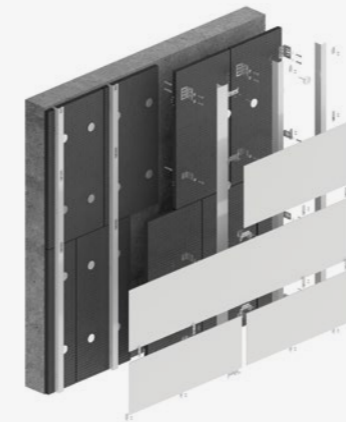
DKT2



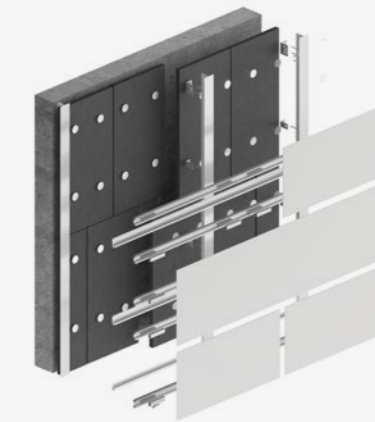
DKT3



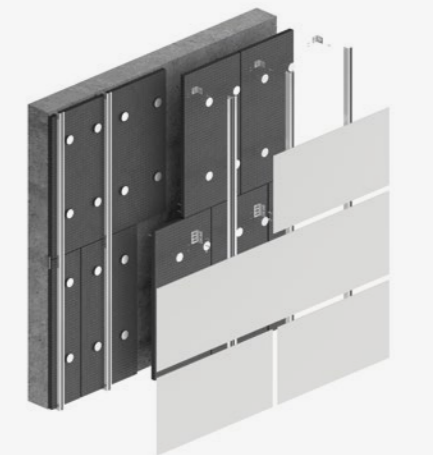
DKT4



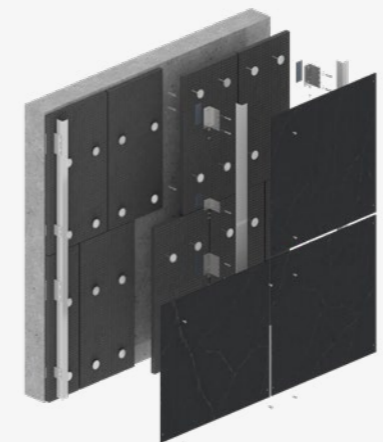
DKBG



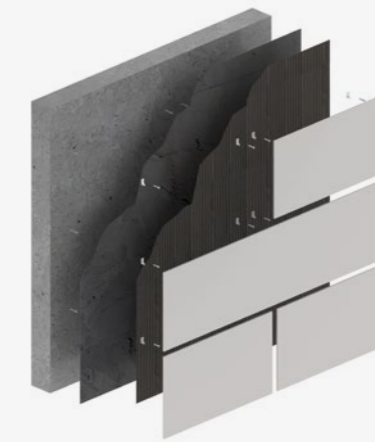
DKC



DKR



DKB



DKS

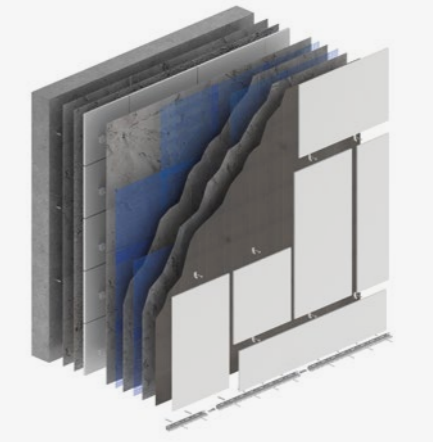


Table for different thicknesses and facade systems

| FACADE SYSTEM | DESCRIPTION | MAX. SIZE | 4 mm (with mesh) | 8 mm | 12 mm | 20 mm |
|---------------|---|-------------------|---|-------------------------------|-----------------------------|----------------------------|
| DKT1.1 | Undercut anchor-Keil | FULL SLAB | ● | KH 4 M6/_ KH 5.5 M6/_ ● | KH 8.5 M6/_ ● ● | KH 8.5 M6/_ ● |
| DKT1.2 | Undercut anchor-Fischer | FULL SLAB | ● | FZP II 11x5 M6/T/_PA ● | FZP II 11x8 M6/T/_PA ● ● | FZP II 11x10 M6/T/_PA ● |
| DKT2 | Grooved edge and continuous profile | V: 1440 x H: 3200 | ● | ● | ● ● | ● |
| DKT3 | Grooved edge and spot clips | V: 710 x H: 3200 | ● | ● | ● ● | ● |
| DKT4 | Visible clips | V: 1200 x H: 3200 | System Supplier Documentation | | | |
| DKC | Chemical Anchor (Sika, Bostik, Soltec, Innotec, Dow Corning, Dinamic Bond...) | FULL SLAB | Documentación técnica del proveedor de fijaciones | | | ● |
| DKBG | Groove on the reverse with clips | | ● | System Supplier Documentation | | |
| DEKCLIP | Groove on the reverse with clips (Only ES and PT) | | ● | ● ● | ● | ● |
| DKB | Direct Adhesion | R2 (UNE 12004)* | C2S2 (UNE 12004)* | | | ● |
| DKS | ETICS | | System Supplier Documentation | ● | ● | ● |
| DKR | Rivet or screw fixing | FULL SLAB | ● | ● ● | ● | ● |
| DKCW | Curtain wal | Per CW supplier | ● | ● ● | ● | ● |

● ETA 14-0413 ● Possible ● Possible, not recommended ● Most common thickness ● Not Possible

Note: The author of the project must assess the appropriate thickness based on the planned activity and specific needs that cannot be collected in this guidance sheet. The definition and calculation of each system must be done by a competent technician according to the particular conditions of each project.

Dekton 4 mm is always supplied with mesh for all facade applications. Dekton 8, 12 or 20 mm is supplied with mesh for ventilated facades and without mesh for facade cladding and ETICS direct adherence systems.

*This is a generic classification. Please consult the specific products and their classification recommended by the different suppliers.

Parts of a ventilated cladding system

- Supporting wall
- Mechanical or chemical anchoring to the wall
- Substructure
- Substructure consisting of vertical or horizontal profiles
- Insulation and waterproofing
- Fixings
- Dekton

Supporting wall

Support material can be either structural (beams, columns, slabs, bearing walls...) or not structural (brick walls, block walls, stud walls...).

The usual engineering of a ventilated facade considers substrate walls to bear directly horizontal loads (such as wind loads), while dead loads are designed to be directly supported by structural elements.

Insulation and waterproofing

Insulation should be applied continuously over substrate walls in order to achieve the required thermal and acoustic comfort level inside the building and avoiding thermal breaks when possible -weaknesses in the insulation will be where there is the greatest loss of energy from the building.

There are many materials available on the market, to be chosen considering their different properties such as thermal insulation values, fire resistance, waterproofing, etc.

- Mineral wool
- EPS, XPS
- PUR, PIR
- Other insulation materials (cork, natural fibres...)

Air chamber

One of the main features of ventilated facades is the air chamber. It is designed to act as a pillow of pressure to prevent water from reaching the insulation or supporting wall.

By ventilating the chamber, the moisture that could arise from water that may pass through the cladding system, whether from the internal wall's surface or appearing as condensation, will be removed by evaporation or simply slide down the back of the panel and fall from the wall bracket.

→ Chamber Width

It is generally considered that the minimum width of the chamber should be at least 20mm, behind the rear of the facade panel. However, in some countries such as GB and Scandinavian countries, the regulations indicate a minimum width of 50mm. Therefore, it is important that national regulations and building codes are adopted in each country.

This minimum width is only suitable for low buildings, up to 10m. As the facade increases in height, the chamber needs to increase in width. For example, in Belgium and the Netherlands the following chamber width is recommended:

| Building Height (m) | 0-10 | 10-20 | 20-50 |
|------------------------|------|-------|-------|
| Min. cavity width (mm) | 20 | 25 | 30 |

The type of joint used between the panels will also influence the width of the chamber. Open horizontal joints will allow more air movement than closed joints and therefore wider cavities should be considered when using closed profiles in horizontal joints.

→ Protection of insulation in the chamber

Just as the chambers are ventilated through the upper and lower part of the facade (it is considered that this ventilation is achieved with a cross section of at least 50 cm² for each linear metre), it is also important to allow the air to enter and exit below and above openings like windows.

These openings need to be protected so that birds and small animals cannot enter the chamber. In the absence or failure of protection this could result in damage to the insulation, air chamber, or even on the supporting wall. This protection is usually achieved by fitting a perforated profile. It is important that the perforations are the correct size to allow a flow of air, while keeping creatures out.

Ventilated facade substructure

General indications for the main structure

1. Based on the cutting of the facade and the arrangement of the system's profiling, define the anchor points of the brackets in the support elements.
2. Verify the correct level of flatness, deviations and plumb of the substrate wall and correct if necessary, according to the project tolerances.
3. Anchor the supporting brackets to load bearing areas of the building (e.g. Slab edges) and use the vertical profiles to align the retaining brackets.

Fixed point supporting brackets carry the vertical weight of the profiles and cladding, as well as support horizontal wind loads (pressure and suction). This kind of bracket is usually longer than retaining brackets and present several drill holes for fixed points to the vertical profile.

Retaining brackets with sliding point fixing only support horizontal loads (wind loads).

Each vertical profile usually has a single fixed point of attachment to a support bracket, and the rest of the joints are sliding points to allow expansion of the vertical profiles.

Place the necessary brackets according to the load bearing capacity of the support wall and the structural calculation made. To do this, the type of anchorage (mechanical or chemical) must be defined according to the support wall properties, carrying out on-site dowel extension and load tests if necessary, in order to define the load bearing capacity of the supporting wall.

In case of fixing onto a stud wall, brackets should be fixed onto the studs.

The length of the brackets can be adapted to achieve the desired distance between exterior panels and the support wall, so that small differences in vertical alignment can be corrected.

4. Insert the vertical profiles into the brackets, adjust and level so the profiles are not subject to stress before screwing the profiles to them.
5. Use the round holes for screwing vertical profiles to brackets with fix points, and vertical slot holes for sliding points.

6. Leave a gap between the end of one profile and the beginning of the other, typically 20mm or at least 10mm, according to length and expansion of vertical profiles. Facade cladding should never extend over a joint between profiles.

7. The supplier of the substructure should define the cantilever of the profiles depending on static calculations made and system chosen.

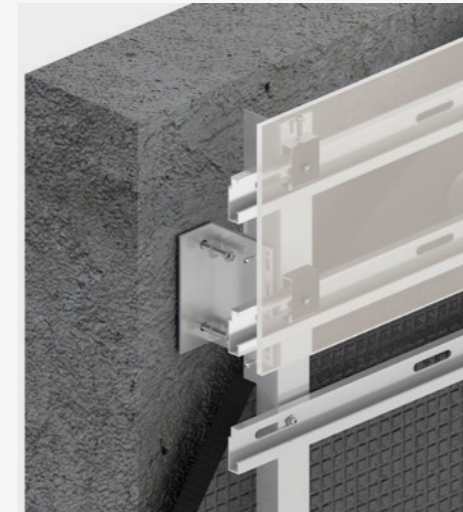
8. It is recommended that the air chamber between cladding and insulation is wide enough to avoid interference between the subframe and inner layers of the wall (insulation and waterproofing).

9. For panel installation, refer to each type of panel fixing system.

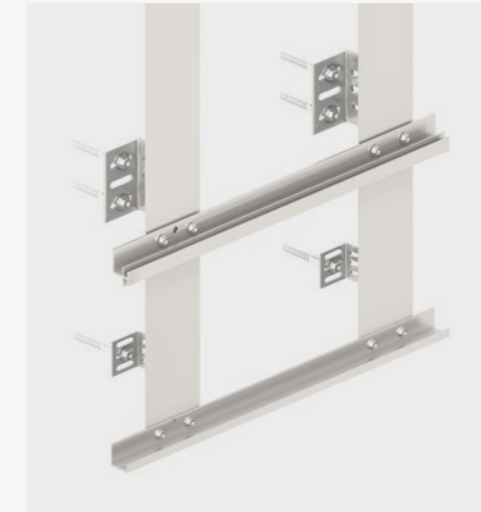
General recommendations for Dekton on ventilated facades

1. The minimum width recommended for pieces in ventilated facades is 200mm;
2. Proportion (width: length) of 1:14 is recommended in order to ease manufacture and manipulation of pieces.
3. Custom cutting tolerances and machining of cut and machined pieces in our factory can be discussed with our Technical Department.

DKT1



DKT2 / DKT3



DKT4



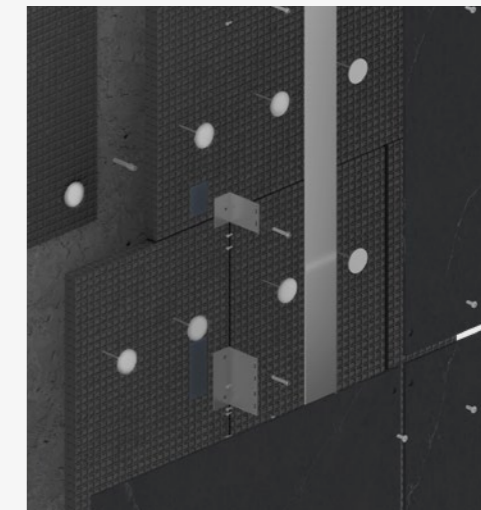
DKBG



DKC



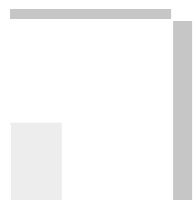
DKR



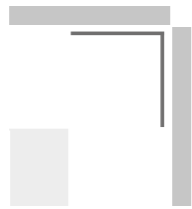
Dekton corner solutions

Open exterior corner

Open exterior corner



Open exterior corner with hidden profile.



Open exterior corner with visible profile



Corner with overlap

Exterior corner with overlap



Exterior corner with overlap and hidden profile



Bevelled corner

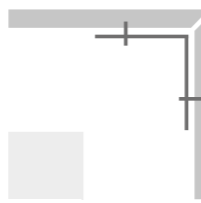
Exterior bevelled corner



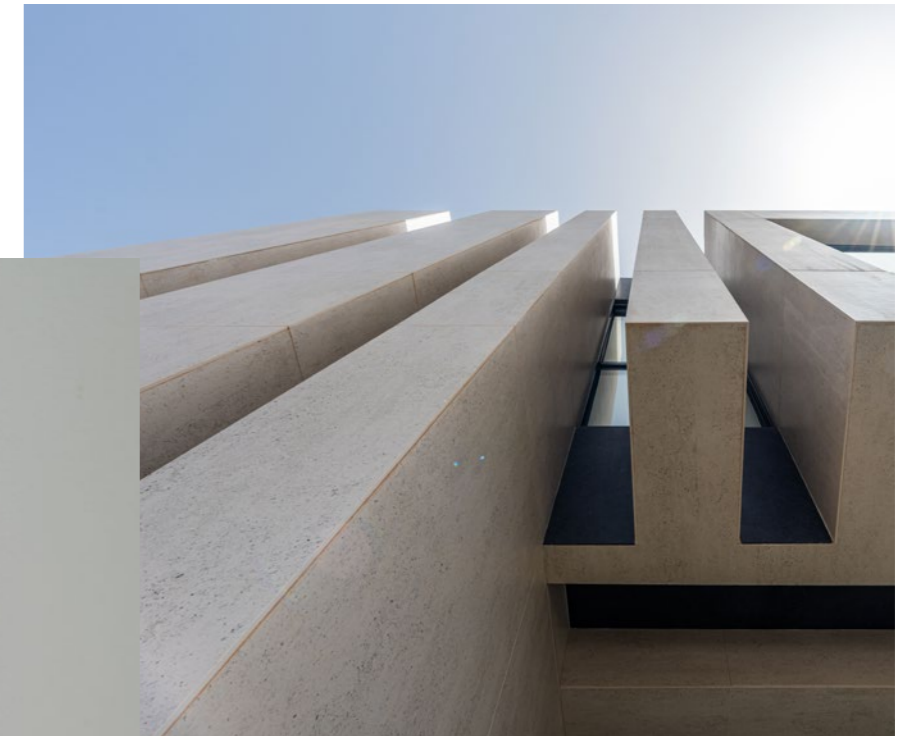
Exterior bevelled corner with hidden profile



Exterior integrated bevelled corner



Building in Eschbach. Germany



Villa in Vera, Almería. Spain



Eagle Facade, Brisbane. Australia



School in Manchester. United Kingdom

Joints between panels in ventilated facade systems

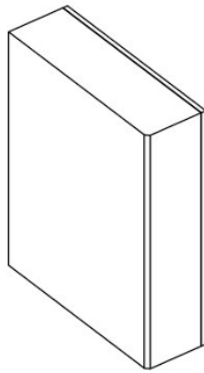
Cladding and subframe should apply joints where building expansion, compression and structural joints are designed, as well as between panels.

- Structural joints must be placed in the same position as the ones of the building.
- Compression joints are made horizontally at each level, with a recommended gap of 15mm. They are commonly used in North America.
- Expansion joints are made vertically, each 6m, and at 5m from the corner of the building, recommended with 10mm thickness.
- Vertical and horizontal joints between panels are recommended to have a minimum of 6mm (butt end joints are not recommended due to possible tension between panels) and up to 10mm, while 6-8 mm is the most common joint width with minimal penetration of water. The dimensions of the joints between panels should be made considering the size, expansion and shrinkage of the panels and substructure.

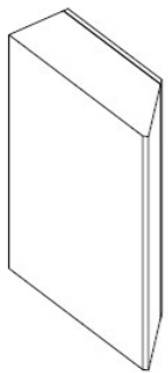
Edges

The following table shows the recommended edge finish depending on the possible impact on the pieces.

Straight edge



Mitred edge



Standard microbevel $\leq 2\text{mm}$ included.
Bevel $> 2\text{mm}$: subject to quote

Types of Fixing

04

VENTILATED FACADE - HIDDEN MECHANICAL SYSTEMS

- 78 DKT1 - Hidden undercut drill hole
- 128 DKT2 - Continuous groove on the edge and fixing with profile
- 146 DKT3 - Continuous groove on the edge and fixing with clips
- 164 DKBG - Groove on the reverse with clips

VENTILATED FACADE - VISIBLE MECHANICAL SYSTEMS

- 180 DKT4 - Visible clips
- 200 DKR - Rivets

VENTILATED FACADE - CHEMICAL SYSTEMS

- 232 DKC - Chemical fixing with adhesive

FACADE CLADDING AND ETICS FACADE SYSTEMS

- 260 DKB - Glued on continuous substrate
- 290 DKS - Glued on ETICS system

CURTAIN WALL

- 304 DKWC - Curtain wall system



Fixing systems

Ventilated facade - Hidden mechanical systems



DKT1
Hidden mechanical anchoring system with undercut drill hole

P. 78



DKT2
Edge grooving system with continuous profile

P. 128



DKT3
System with clips in the groove on the edge

P. 146



DKBG
Mechanical or mechanical-chemical systems with double back grooving

P. 164

Glued and ETICS facade system



DKB
Fixing with cement-based adhesive

P. 260



DKS
ETICS system with Dekton cladding

P. 290

Ventilated facade - Visible mechanical systems



DKT4
Fixing system with visible clips

P. 180



DKR
Rivet or screw fixing system with visible spot anchors

P. 200

Curtain wall



DKCW
Curtain wall system

P. 304

Ventilated facade - Chemical systems



DKC
Fixing consisting of chemical anchoring of pieces on profiles

P. 232



DK T1

Hidden mechanical anchoring system with undercut drill hole

The panels are fixed to the wall by attaching the metal hangers on the horizontal profiles.

Each plate has two adjustment points and a fixed point at the top, which makes possible the adjustment while preventing undesired movements of the piece.

DKT1 system lends lots of design freedom and a wide range of combinations, allowing modification of panel sizes both horizontally and vertically. Projects with impossible layouts. There are very complex facades with

different formats in the same design. A flexible system is needed to optimise the points of fixing the material to the substructure and that responds to the principal loads of each project. The screws are anchored to the profile, ensuring the fixing of the entire piece to the substructure.

Dekton has the certifications for ventilated facades according to ETA 14/0413 and BBA 16/5346 in thicknesses 12mm and 20mm, although it can be used in other non-certified thicknesses.

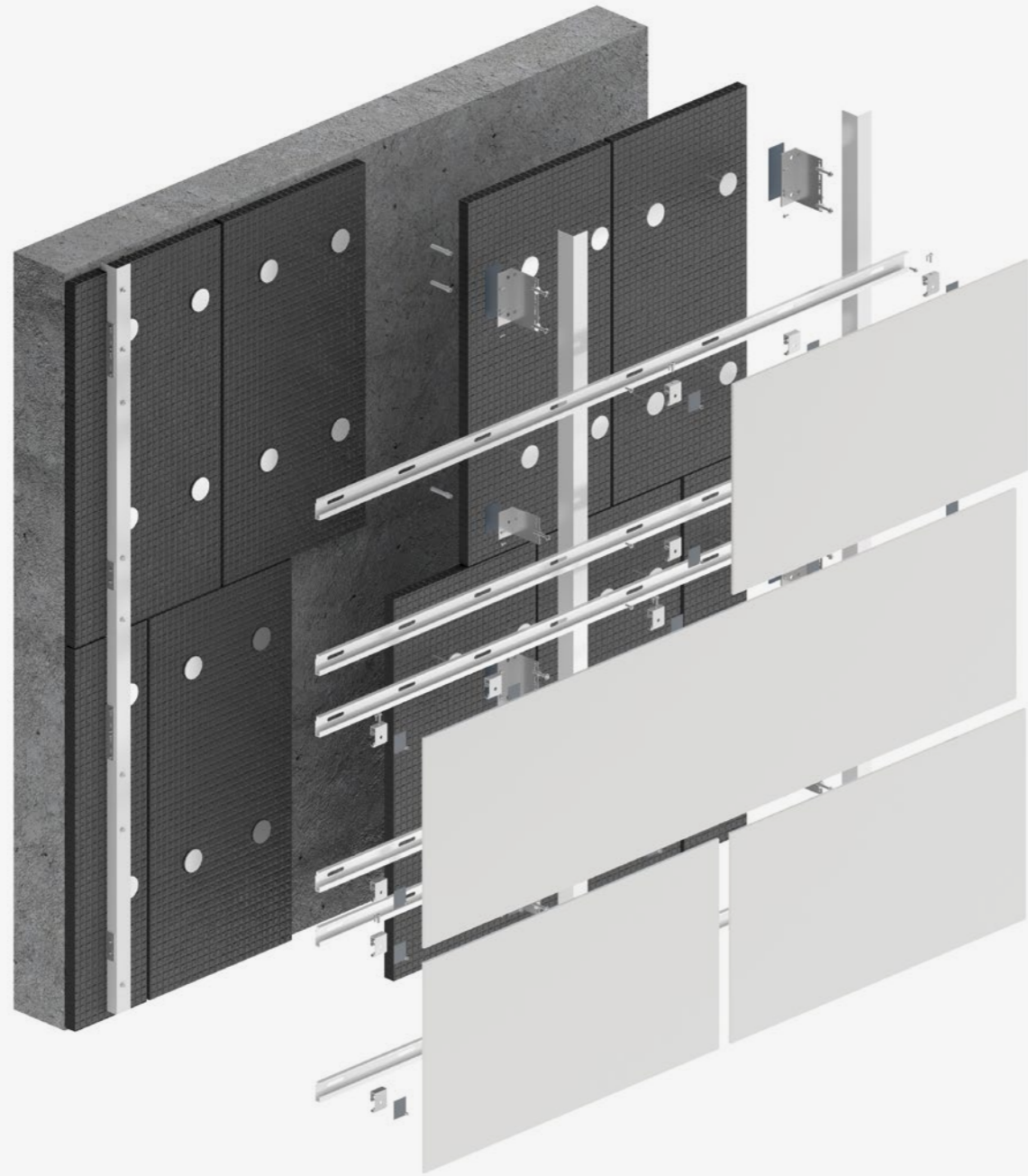


In the DKT1 system, individual stresses that Dekton material and anchors must absorb are calculated depending on the density of fasteners and minimum distances between drill holes.

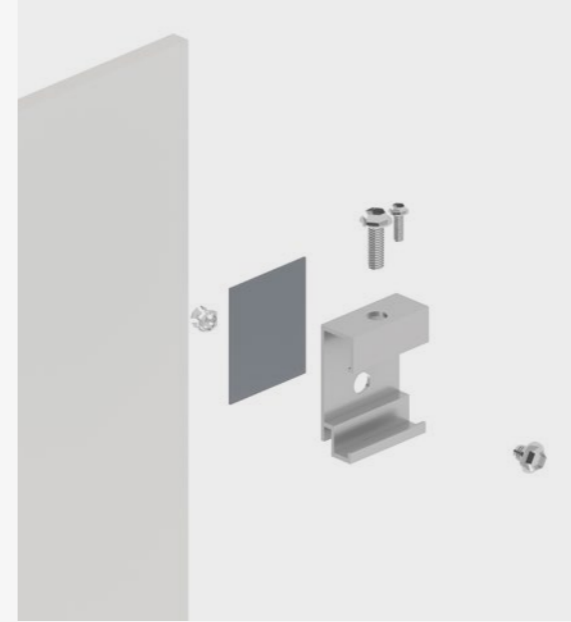
The cylindrical drilling, as well as the undercut drilling, achieve a clean and precise hole, where the plug and the pan head screw work together under tension and shear on the back of the material.

Concealed fixing system by using metal hangers attached to the panel via undercut anchors to the back of the pieces.

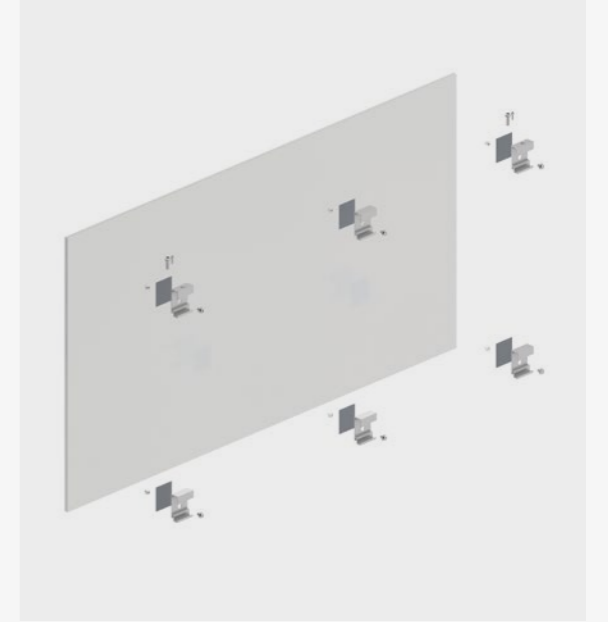




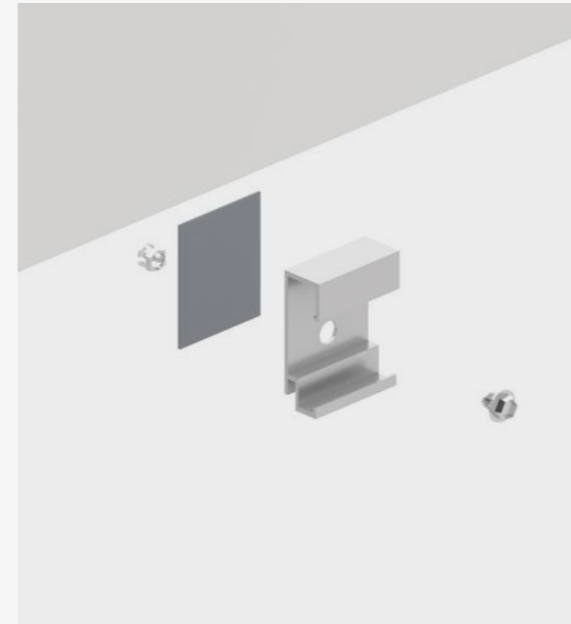
Adjustable hanger



Back view



Fixed hanger



Joints



Secondary structure and general assembly instructions

1. Arrange the horizontal profiles by levelling and marking their position on the vertical structure previously installed.

2. Fix the horizontal profiles to the vertical ones in horizontal slots with self tapping screws.

To control the expansion direction of the horizontal profile, use one fixed point in each profile and sliding points for the rest of the fixings.

3. Insert the undercut anchors into the rear panel drill holes.

Minimum recommended distribution is 4 anchors per panel.

Minimum recommended distance to perimeter is between 5-20 cm.

4. Pre-assemble the hanging clips to the rear panel face by fixing them into the undercut anchors. Attach the adjustable hangers at the top level on the corners, and the rest of the hangers to the rest of the anchors with the corresponding screws and bolts.

5. Hang the piece with the assembled hangers by hooking and positioning them into the horizontal profiles.

When installing the panels, it is recommended to always follow the same direction from bottom to top, for an easier hanging and levelling process.

6. Adjust the final position and the joints width with levelling screws on the upper corner adjustable hangers,

and fix one of them to the horizontal carrier profile with a blocking screw to control the direction of expansion without creating tension (one fixed point per piece) and to avoid slab movements.

Dead load of the panel is considered to be supported by these two upper anchors.

7. The rest of the hangers are for retention of horizontal loads due to action of the wind.

This system makes it easy to replace the pieces, provided the correct size of joint is used to install the new piece.

System description

Hidden system

Supporting substructure composed of: metal brackets, adjustable for correction of unevenness compatible with different types of supports and can include thermal break insulation; vertical metal profiles of different sections according to the required application; horizontal metal profiles type C-Carrier/Rail; hidden anchorage system by means of undercut screw and fixing by means of Hanger/Clip accessory to the Dekton Panel.

Installation process

Brackets installed on the surface to be covered by means of a mechanical system or welding; vertical profiles installed on brackets with a regulation and fixing system, by means of specific screws*; horizontal C-Carrier/Rail profiles with a regulation and fixing system, installed by means of specific screws* on vertical profiles; Hanger/Clip accessory after joining with hidden anchorage to the back of the Dekton surface, installed on C-Carrier/Rail with a system of regulation and fixing.

*Specific screws according to the structural calculation of each project or indicated by the supplier of the substructure.

- **Fixings:** Undercut anchors and hangers on horizontal profiles.
- **Depth of undercut drill and anchor:** to be defined according to the thickness of Dekton and static calculation.

Recommended undercut anchors

Keil anchors:
 8 mm: KEIL hs=4,0 mm and KEIL hs=5.5 mm
 12 mm: KEIL hs= 8,5 mm
 20 mm: KEIL hs= 8,5 mm

Fischer anchors:
 8 mm: FZP11 11x5 M6/T/_PA
 12 mm: FZP11 11x8 M6/T/_PA
 20 mm: FZP11 11x10 M6/T/_PA

Other anchors
 Please contact the Technical Department

Technical note: Horizontal application. It is possible to use this type of fixing in lintels and suspended ceilings as long as there is no accumulation of water in the area of the drill hole, as this could cause the material to crack in this area during freeze-thaw cycles. In this position, it is essential to seal the drill holes with a sealant before inserting the plug and screw. (For detailed instructions on how to use it, please contact Cosentino)

Fig. 1

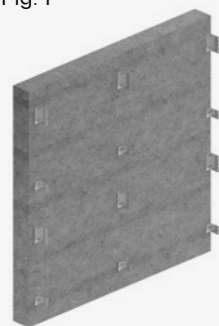


Fig. 2

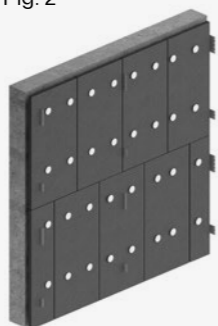


Fig. 3

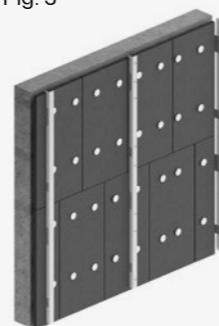


Fig. 4

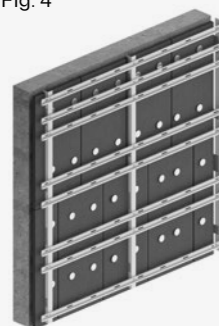


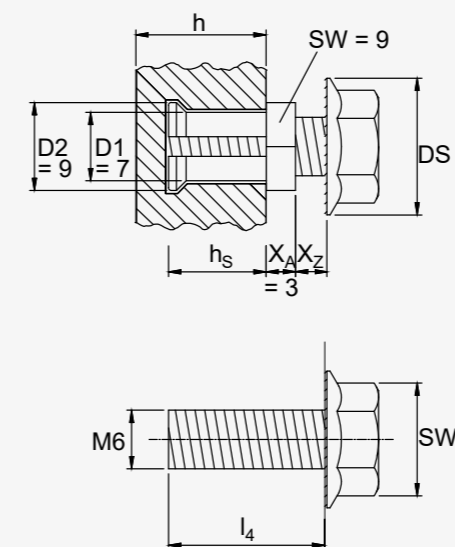
Fig. 5



Fig. 6

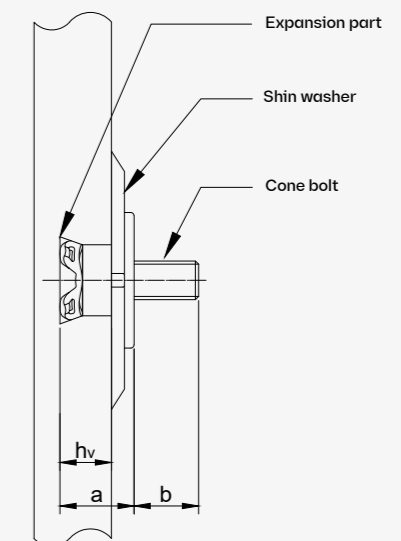


KEIL KH undercut anchor. Anchor sleeve and hexagonal screw (DKT1.1)



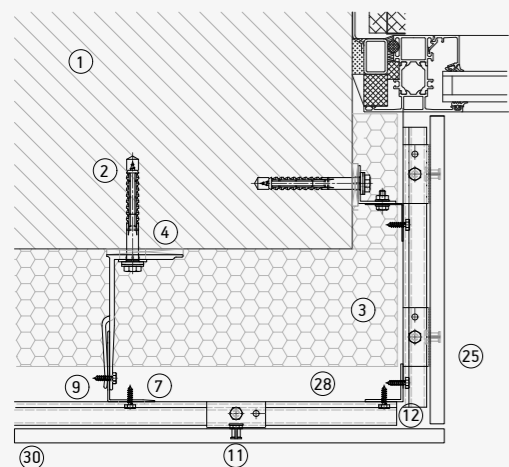
h: panel thickness; D1: drill hole; D2: undercut; SW: half spanner gap; X_a: anchor hex; X_z: clamping thickness; h_s: insertion depth; l₄: nominal length

FISCHER FZP II Undercut anchor (DKT1.2)

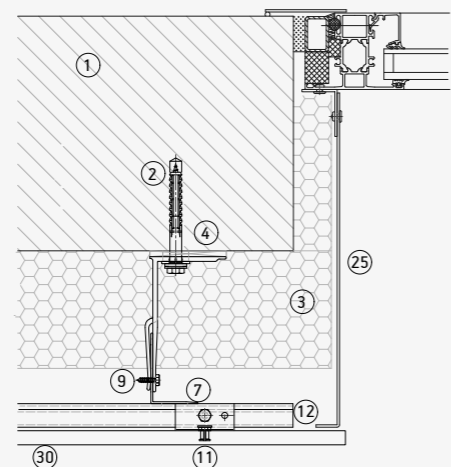


DKT1.1 KEIL. Horizontal section

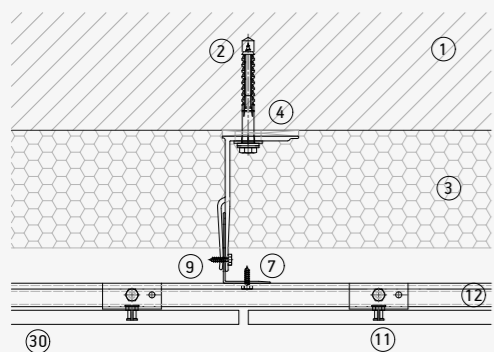
Dekton jamb



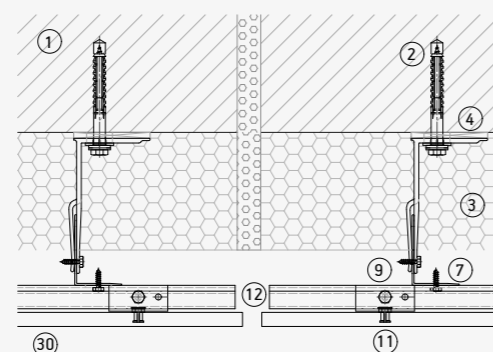
Metallic jamb



Vertical joint

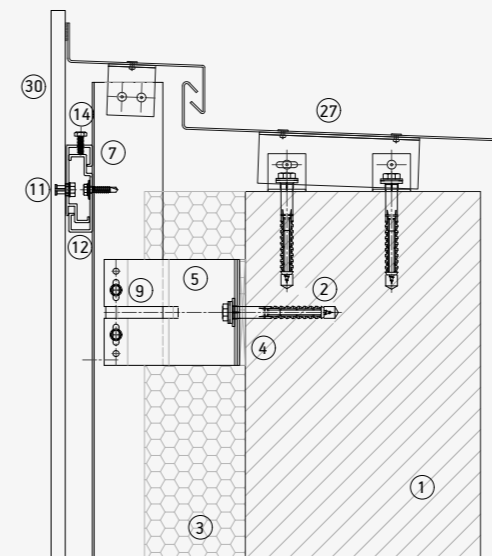


Vertical expansion joint

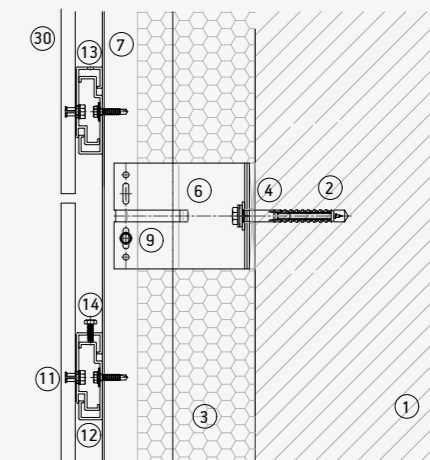


DKT1.1 KEIL. Vertical section

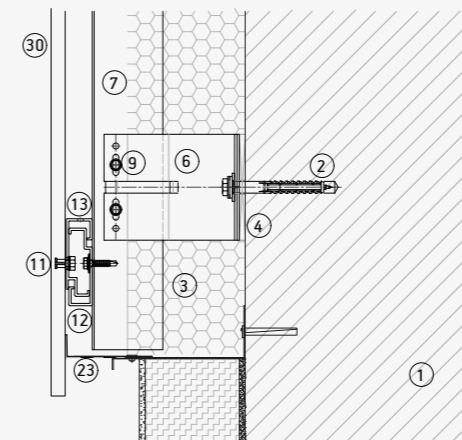
Upper detail



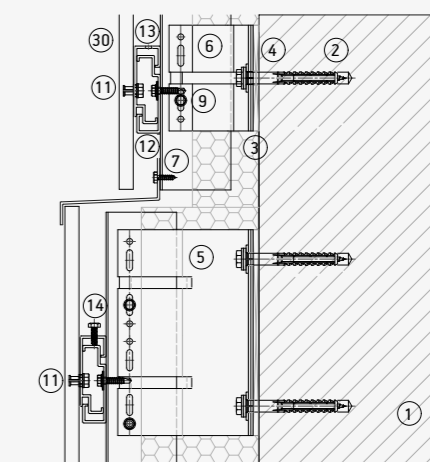
Horizontal joint



Bottom detail



Joint between profiles



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.

- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clamp.

- 18. Intermediate visible clamp.
- 19. Interior back clamp
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill

- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.

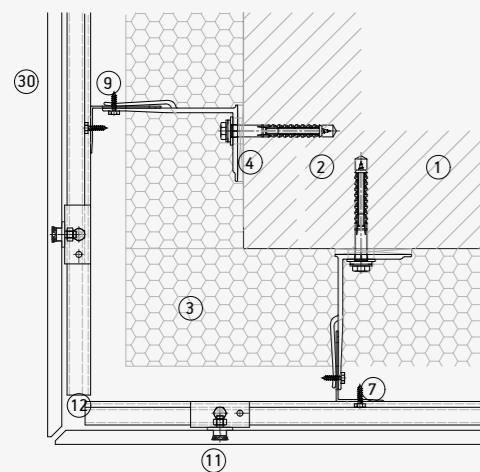
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
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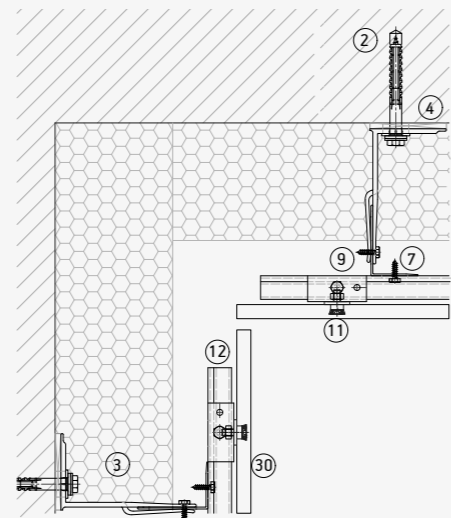
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

DKT1.2 FISCHER. Horizontal section

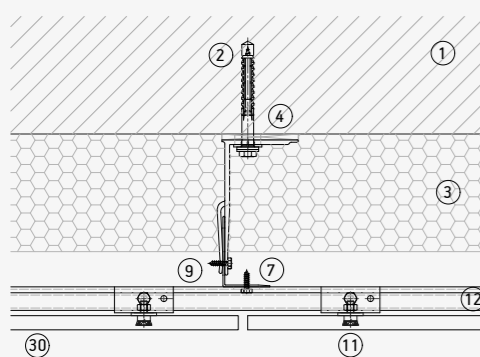
Mitered external corner



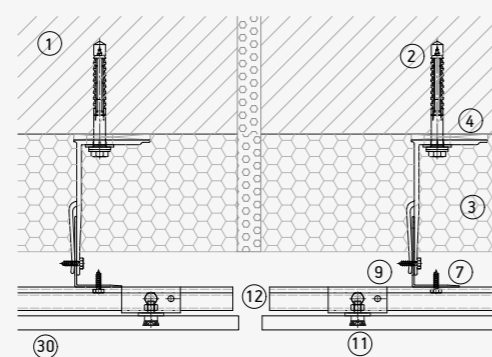
Internal Corner



Vertical joint



Vertical expansion joint



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.

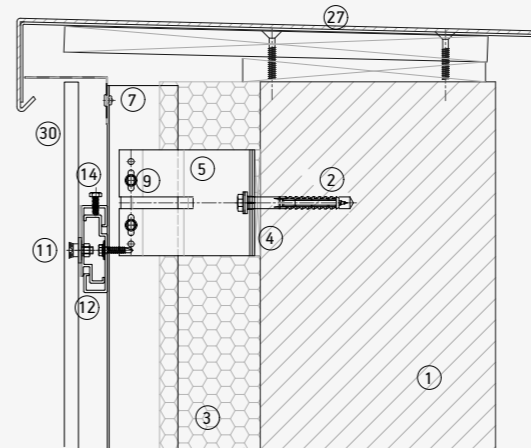
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clamp.

- 18. Intermediate visible clamp.
- 19. Interior back clamp
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill

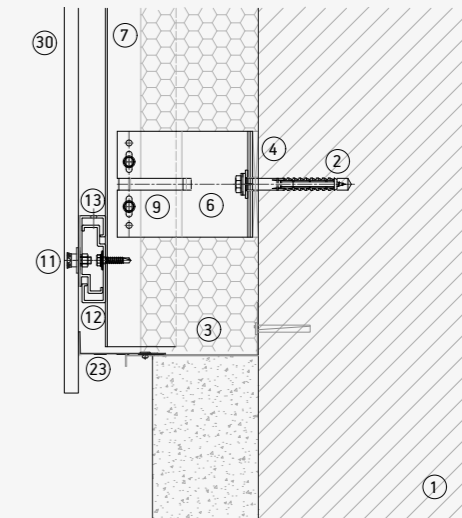
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

DKT1.2 FISCHER. Vertical section

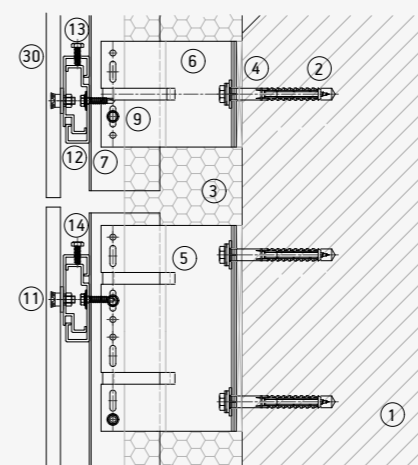
Upper detail



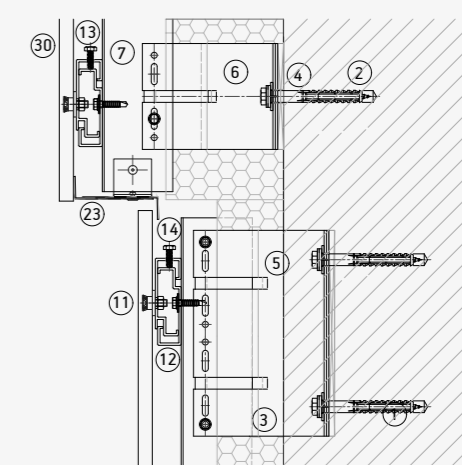
Bottom detail



Horizontal joint



Joint option between profiles



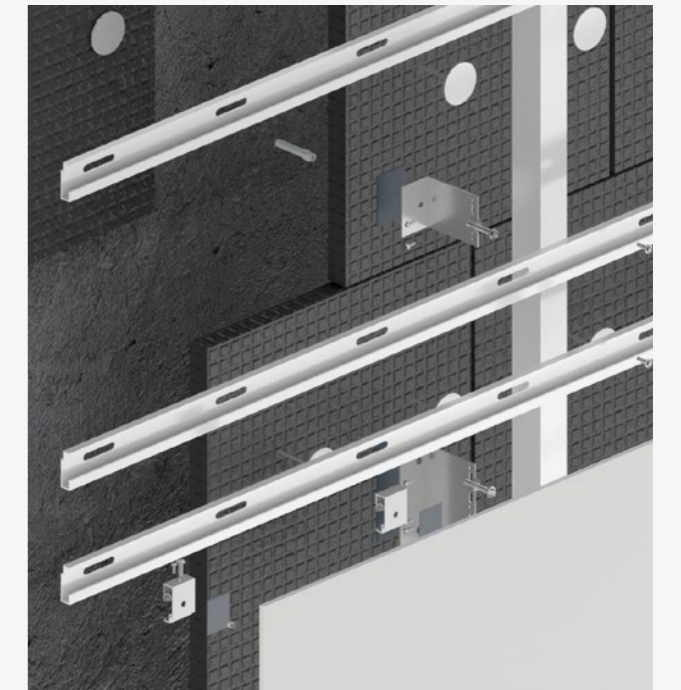
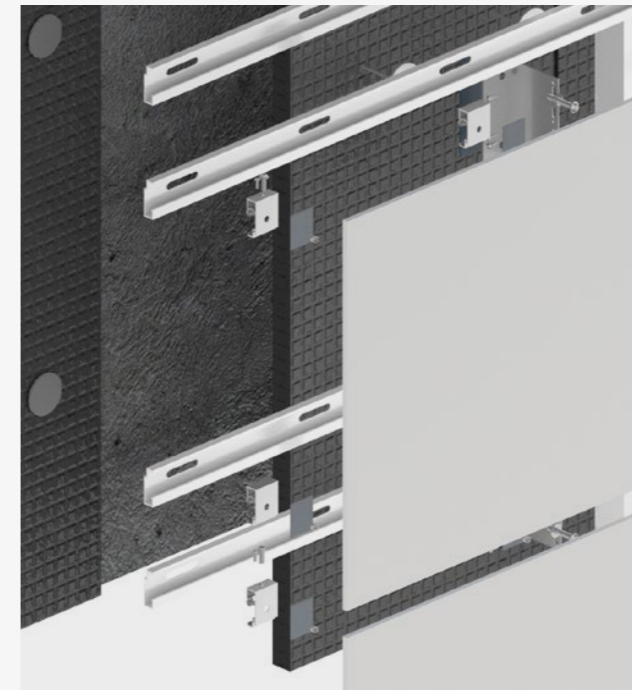
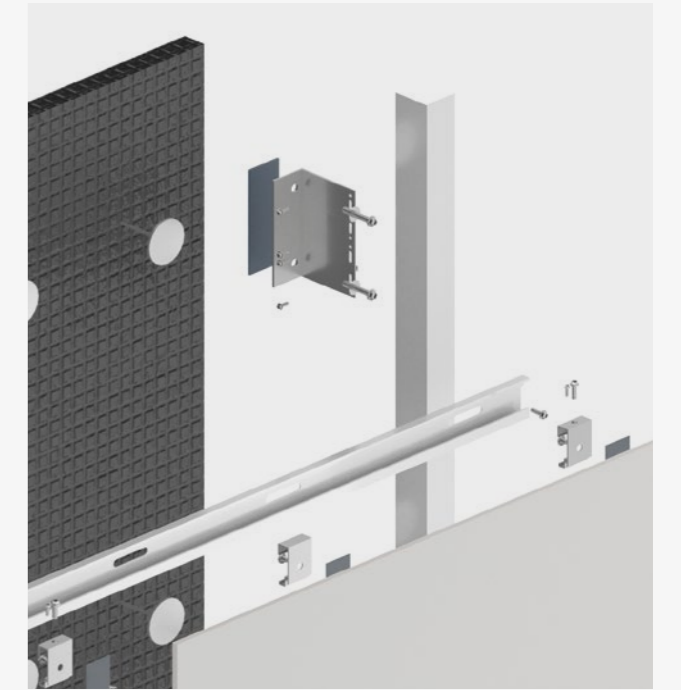
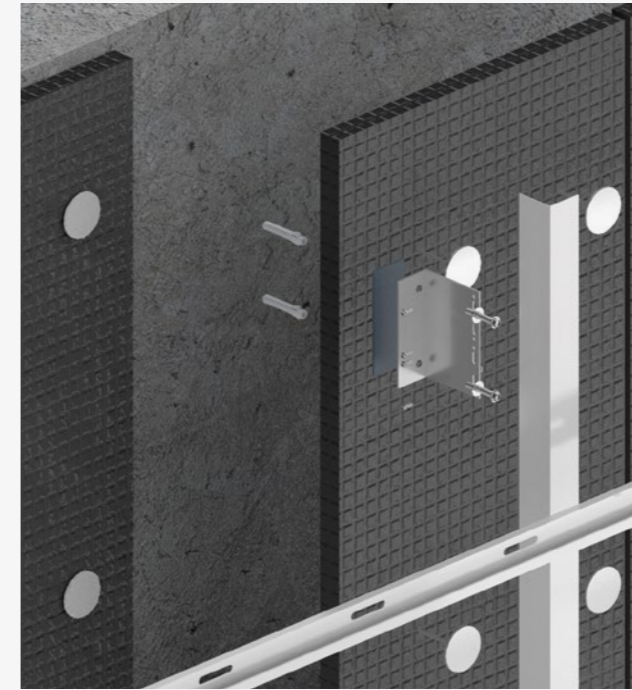
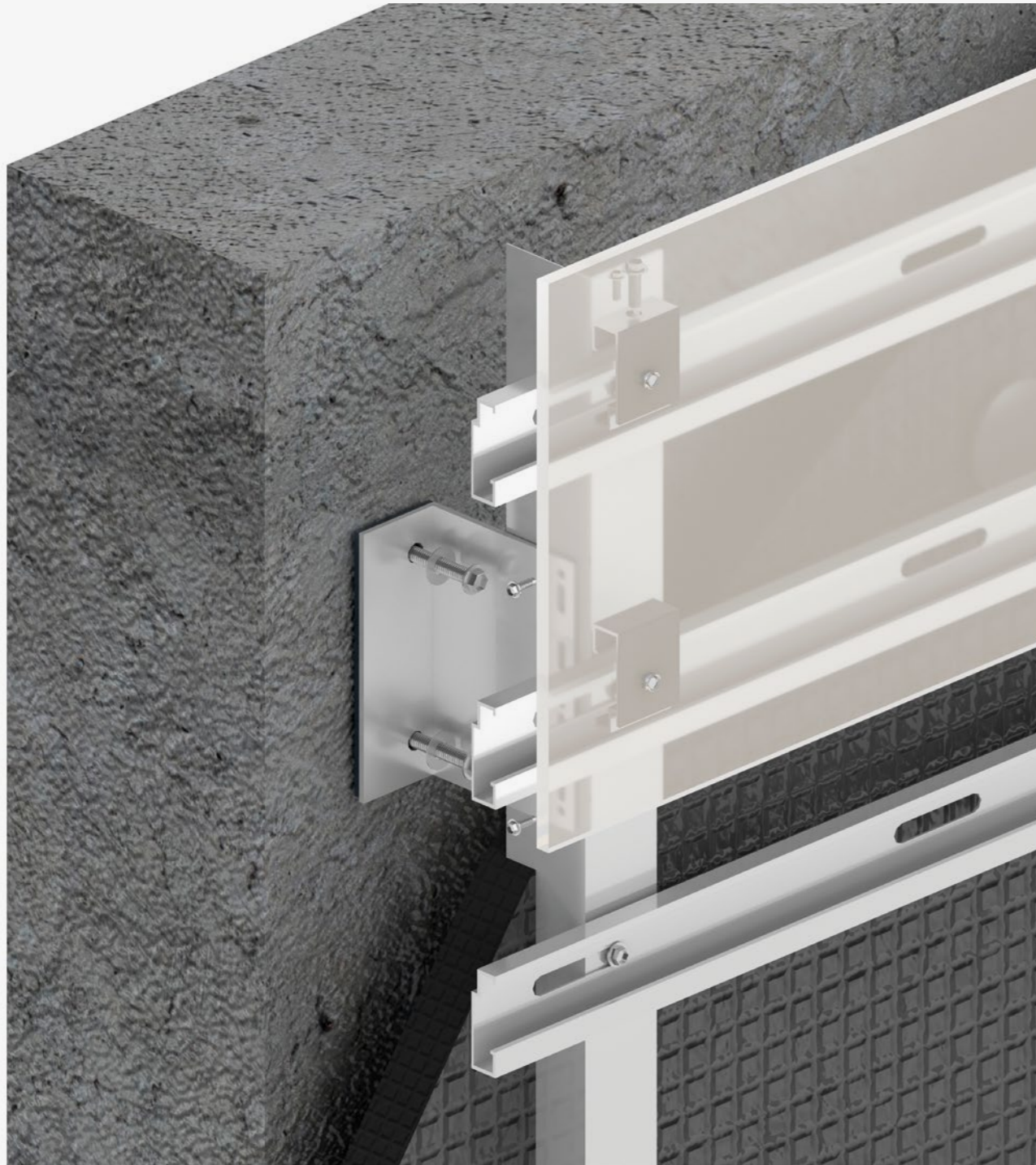
- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.

- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clamp.

- 18. Intermediate visible clamp.
- 19. Interior back clamp
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill

- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

System structure



Static calculations

Schemes and data to be defined with SDP software

Panels in horizontal or vertical layout. Maximum wind loads shown in the following configurations depend on the grid spacing and distance from drill holes to the edges.

These configurations have been calculated considering a distance of fixing to the edges of 200 mm. For other distances and configurations please contact our Technical Department. In general, it is not recommended to drill holes at less than 5 cm from the edges.

They cannot be considered as definitive data for execution and on-site installation of the project but only as indicative, and it is necessary for a qualified technician to make a specific project calculation for the entire facade system (including

all other elements such as anchors to substrate, brackets, profiles, screws and Dekton fixing elements among others), based on the stresses to which the system will be subjected.

How to use the reference configurations:

- Determine the design wind load KN/m².
- Choose the table according to the fixing system and Dekton thickness.
- Select the closest design wind load. The wind load chosen should not be less than actual requirements.
- Select a reference configuration showing maximum spacing between fixings.

DKT1.1 KEIL - Full slab configuration

Dekton 8 mm - KEIL hs=4.0 / hs=5.5 mm depth

| Design wind load kN/m ² | Horizontal | Grid spacing (mm) | Vertical | Grid spacing (mm) |
|------------------------------------|------------|-------------------|----------|-------------------|
| 1 | H1 | H 700 x V 520 | V1 | H 520 x V 700 |
| 1.4 | H2 | H 560 x V 520 | V2 | H 520 x V 560 |
| 2 | H3 | H 461 x V 520 | V3 | H 520 x V 461 |
| 2.5 | H4 | H 467 x V 347 | V4 | H 347 x V 467 |

Dekton 12 mm - KEIL 8.5 mm depth

| Design wind load kN/m ² | Horizontal | Grid spacing (mm) | Vertical | Grid spacing (mm) |
|------------------------------------|------------|-------------------|----------|-------------------|
| 3 | H1 | H 700 x V 520 | V1 | H 520 x V 700 |
| 3.5 | H2 | H 560 x V 520 | V2 | H 520 x V 560 |
| 5.5 | H4 | H 467 x V 347 | V4 | H 347 x V 467 |

DKT1.1 KEIL. Layout

The design wind loads that are compared to the reference design wind loads provided in this document must have share capitalization coefficients on the wind load applied to the characteristic values according to the applicable standards and regulations.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system to withstand the demands.

Design wind loads and fixing distances should be calculated per local standards, regulations and certificates applicable, with further testing if required.

The project competent technician/ designer must consider the coefficients of increase of actions and reduction of resistance of materials, as well as the calculation of anchors to tension, shear, and combined tension and shear loads as applicable.

Cosentino does not provide static calculations for projects.

Cosentino will not accept any liability whatsoever for any direct or indirect damage resulting from any errors, omissions or miscalculations of the static calculations for the project.

There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.

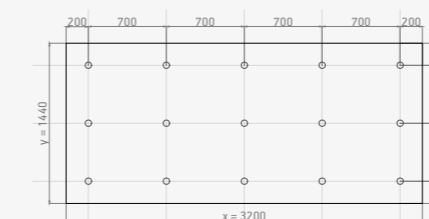
HORIZONTAL CONFIGURATION



H4

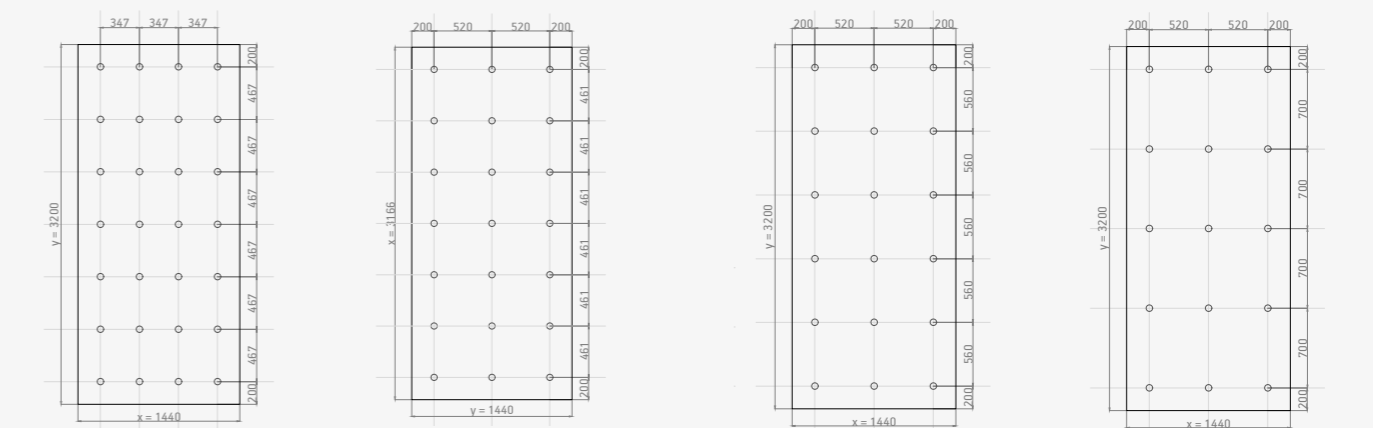
H3

H2



H1.

VERTICAL CONFIGURATION



V4

V3

V2

V1

DKT1.1 KEIL. Layout

The design wind loads that are compared to the reference design wind loads provided in this document must have share capitalization coefficients on the wind load applied to the characteristic values according to the applicable standards and regulations.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system to withstand the demands.

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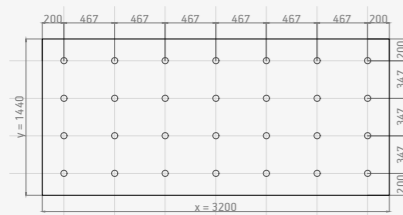
Cosentino does not provide static calculations for projects.

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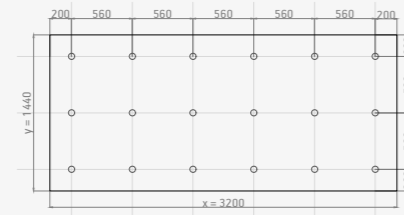
There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.

12mm Depth - KEIL 8,5mm

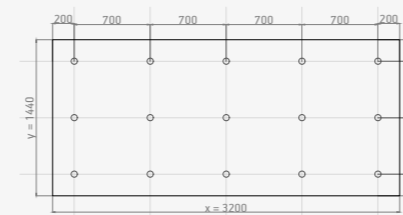
HORIZONTAL CONFIGURATION



H4. Max. Design wind load: 5.5 kN/m²

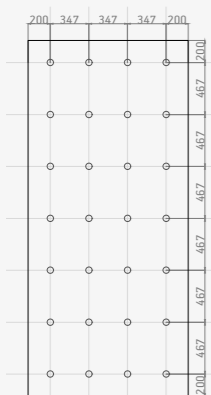


H3. Max. Design wind load: 3.5 kN/m²

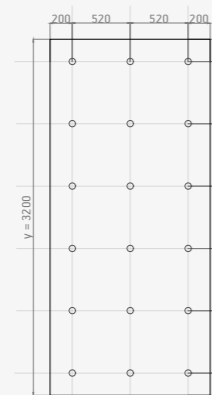


H2. Max. Design wind load: 3.0 kN/m²

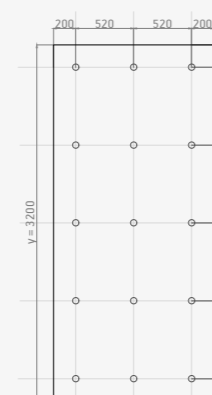
VERTICAL CONFIGURATION



V4. Max. Design wind load: 5.5 kN/m²



V3. Max. Design wind load: 3.5 kN/m²



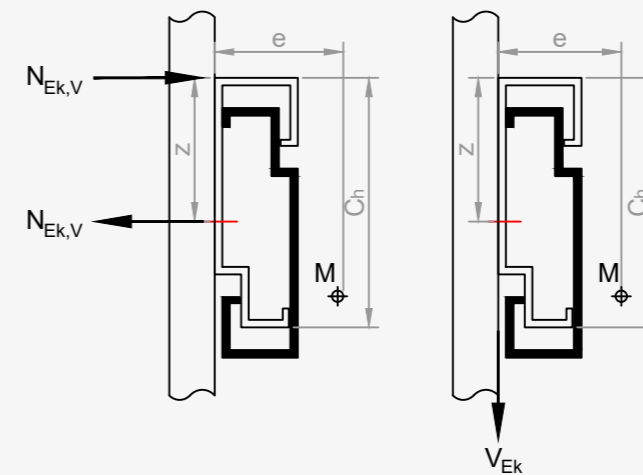
V2. Max. Design wind load: 3.0 kN/m²

Checking the panel weight and torsion effect on the horizontal profile on the anchor:

It is recommended to consult with the system supplier about the torsion of the horizontal profile influence on the tensions increase in the upper corner anchors and hangers. The selection of the hanger type appropriate to the project requirements should be considered by the qualified designer.

For flush fixed anchors and for installation of horizontal load-bearing profiles permanent loads due to torsion of the profile shall be considered in addition to actions from dead load and wind in direction of the anchor axes. The verification can be omitted, if there is no horizontal distance between anchor and vertical load-bearing profile (NEk,V = 0).

It is recommended to consult undercut anchor supplier's documentations and the Facades Technical Department of Cosentino for further details on application of this verification diagrams.



$$\frac{N_{Ed}}{N_{Rd}} \leq 1$$

$$\frac{V_{Ed}}{V_{Rd}} \leq 1$$

$$\frac{N_{Ed}}{N_{Rd}} + \frac{V_{Ed}}{V_{Rd}} \leq 1$$

$$N_{Ed} = N_{Ek,w} \cdot \gamma_M + N_{Ek,v} \cdot \gamma_F$$

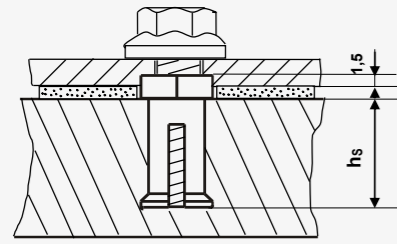
$$N_{Rd} = N_{Rk} / \gamma_M$$

$$V_{Ed} = V_{Ek} \cdot \gamma_F$$

$$V_{Rd} = V_{Rk} / \gamma_M$$

- N_{Rk} = Characteristic value of tensile load-bearing capacity
- N_{Ek,w} = Characteristic value of the tensile force of wind load
- N_{Ek,v} = V_{Ek} · e/z
- γ_M = Recommended partial safety factor
- V_{Ek} = Characteristic value of the shear force
- γ_F = Partial safety factor according to EN 1990:2010
- V_{Rk} = Characteristic value of the shear load-bearing capacity
- M = shear center

DKT1.1 KEIL. APLICATION



For Example

- with stamped hexagon or groove of 9,2mm and boring for M6

1.1 Insertion depth hS=10,0

- for 3mm bracket clamping thickness 1,5mm (with stamped hexagon 1,5mm)
=> 7.555.020.734 Anchor AA hS=10
Bolt M6x14,5 DS14
- for 3mm bracket clamping thickness 3mm
=> 7.555.020.715 Anchor AA hS=10
Bolt M6x16 DS14

1.2 Insertion depth hS=8,5

- for 3mm bracket clamping thickness 1,5mm (with stamped hexagon 1,5mm)
=> 7.555.020.752 Anchor AA hS=8,5
Bolt M6x13 DS14
- for 3mm bracket clamping thickness 3,0mm
=> 7.555.020.777 Anchor AA hS=8,5
Bolt M6x14,5 DS14

1.3 Insertion depth hS=7,0

- for 3mm bracket clamping thickness 1,5mm (with stamped hexagon 1,5mm)
=> 7.555.020.780 Anchor AA hS=7
Bolt M6x11,5 DS14
- for 3mm bracket clamping thickness 3mm
=> 7.555.020.830 Anchor AA hS=7
Bolt M6x13 DS14

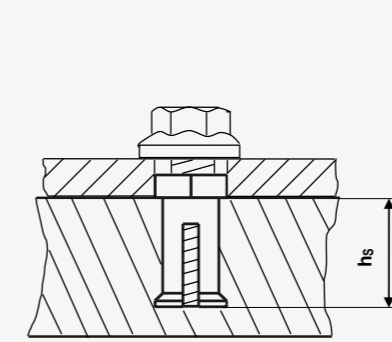
1.4 Insertion depth hS=5,5

- for 3mm bracket clamping thickness 1,5mm (with stamped hexagon 1,5mm)
=> 7.555.020.724 Anchor AA hS=5,5
Bolt M6x10 DS14
- for 3mm bracket clamping thickness 3mm
=> 7.555.020.712 Anchor AA hS=5,5
Bolt M6x11,5 DS14

1.5 Insertion depth hS=4,0

- for 3mm bracket clamping thickness 1,5mm (with stamped hexagon 1,5mm)
=> 7.555.020.820 Anchor AA hS=4
Bolt M6x8,5 DS14
- for 3mm bracket clamping thickness 3mm
=> 7.555.020.742 Anchor AA hS=4
Bolt M6x10 DS14

DKT1.1 KEIL. APLICATION



For Example:

- for thickness of brackets $\geq 4,5$ mm
- with hexagonal through hole or elongated hole (e.g. 9,2mm x 12mm)

2.1 Insertion depth hS=10,0

- for 4,5mm bracket clamping thickness 1,5mm
=> 7.555.020.734 Anchor AA hS=10
Bolt M6x14,5 DS14

2.2 Insertion depth hS=8,5

- for 4,5mm bracket clamping thickness 1,5mm
=> 7.555.020.752 Anchor AA hS=8,5
Bolt M6x13 DS14

2.3 Insertion depth hS=7

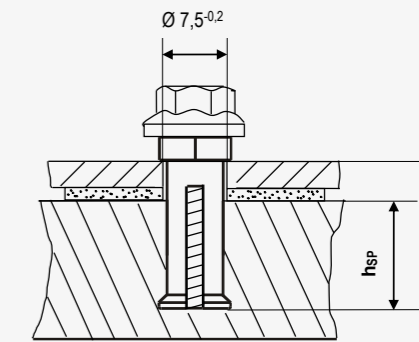
- for 4,5mm bracket clamping thickness 1,5 mm
=> 7.555.020.780 Anchor AA hS=7
Bolt M6x11,5 DS14

2.4 Insertion depth hS=5,5

- for 4,5mm bracket clamping thickness 1,5 mm
=> 7.555.020.724 Anchor AA hS=5,5
Bolt M6x10 DS14

2.5 Insertion depth hS=4

- for 4,5mm bracket clamping thickness 1,5mm
=> 7.555.020.820 Anchor AA hS=4
Bolt M6x8,5 DS14



For Example:

3.1 Insertion depth panel hSPanel=7,0

- for 2mm (with 2-3mm elastic rubber) and through hole
=> 7.555.020.809 Anchor AA hS=10
Bolt M6x13 DS 14

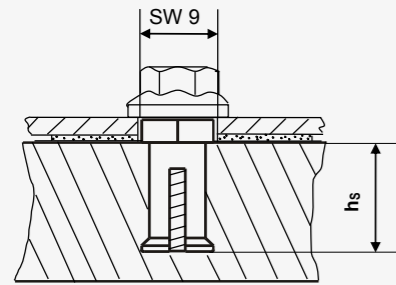
3.2 Insertion depth panel hSPanel=5,5

- for 2mm (with 2-3mm elastic rubber) and through hole
=> 7.555.020.823 Anchor AA hS=8,5
Bolt M6x11,5 DS 14

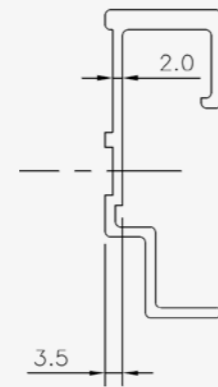
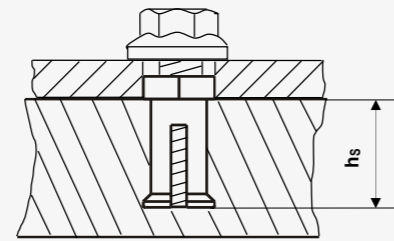
3.3 Insertion depth panel hSPanel=4,0

- for 2mm (with 2-3mm elastic rubber) and through hole
=> 7.555.020.804 Anchor AA hS=7
Bolt M6x10 DS 14

DKT1.1 KEIL. Application



Keil SFS



For Example:

- for thickness of brackets $\leq 2,5\text{mm}$ (+2-3mm elastic layer)
- with hexagonal through hole or elongated hole (e.g. 9,2 x 12mm)
- clamping thickness zero

4.1 Insertion depth $h_s=10,0$
 => 7.555.020.809 Anchor AA $h_s=10$
 Bolt M6x13 DS14

4.2 Insertion depth $h_s=8,5$
 => 7.555.020.823 Anchor AA $h_s=8,5$
 Bolt M6x11,5 DS 14

4.3 Insertion depth $h_s= 7,0$
 => 7.555.020.804 Anchor AA $h_s=7$
 Bolt M6x10 DS14

4.4 Insertion depth $h_s= 5,5$
 => 7.555.020.856 Anchor AA $h_s=5,5$
 Bolt M6x8,5 DS14

4.5 Insertion depth $h_s= 4,0$
 => 7.555.020.697 Anchor AA $h_s=4$
 Bolt M6x7 DS14

For Example:

- for 3,5mm thick SFS hanger
- with hexagonal through hole or elongated hole (e.g. 9,2mm x 12mm)
- clamping thickness (xz) =0,5mm

2.12 Insertion depth $h_s=8,5$
 => 7.555.020.914 Anchor AA $h_s=8,5$
 Bolt M6x12 DS14

2.13 Insertion depth $h_s=7$
 => 7.555.020.913 Anchor AA $h_s=7$
 Bolt M6x10,5 DS14

2.14 Insertion depth $h_s=5,5$
 => 7.555.020.912 Anchor AA $h_s=5,5$
 Bolt M6x9,0 DS14

2.15 Insertion depth $h_s=4$
 => 7.555.020.911 Anchor AA $h_s=4$
 Bolt M6x7,5 DS14

DKT1.2 FISCHER. Layout

The design wind loads that are compared to the reference design wind loads provided in this document must have factors on the wind load applied to the characteristic values according to the applicable standards and regulations.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system to withstand the demands.

Design wind loads and fixing distances should be calculated per local standards, regulations and certificates applicable, with further testing if required.

The project competent technician/ designer must consider the coefficients of increase of actions and reduction of resistance of materials, as well as the calculation of anchors to tension, shear, and combined tension and shear loads as applicable.

Cosentino does not provide static calculations for projects.

Cosentino will not accept any liability whatsoever for any direct or indirect damage resulting from any errors, omissions or miscalculations of the static calculations for the project.

There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.

DKT1.2 FISCHER - Full slab configuration

Dekton 8 mm - Fisher FZP II 8 mm depth

| Design wind load kN/m^2 | Horizontal | Grid spacing (mm) | Vertical | Grid spacing (mm) |
|----------------------------------|------------|-------------------|----------|-------------------|
| 1 | H1 | H 700 x V 520 | V1 | H 520 x V 700 |
| 1.4 | H2 | H 560 x V 520 | V2 | H 520 x V 560 |
| 2 | H3 | H 461 x V 520 | V3 | H 520 x V 461 |
| 2.5 | H4 | H 467 x V 347 | V4 | H 347 x V 467 |

Dekton 12 mm - Fisher FZP II 8 mm depth

| Design wind load kN/m^2 | Horizontal | Grid spacing (mm) | Vertical | Grid spacing (mm) |
|----------------------------------|------------|-------------------|----------|-------------------|
| 3 | H1 | H 700 x V 520 | V1 | H 520 x V 700 |
| 3.5 | H2 | H 560 x V 520 | V2 | H 520 x V 560 |
| 5.5 | H4 | H 467 x V 347 | V4 | H 347 x V 467 |

Drills sealing in Dekton tiles in horizontal position

With DKT1 KEIL undercut anchor fixing system for Dekton 8,12 o 20 mm in rainscreen cladding, in tiles installed in horizontal position with drills facing up, or in a position where water accumulation or standing water is expected, (e.g. lintel parts, soffits, eaves...), it is compulsory to seal the holes with an UV-resistant, suitable elastic sealant like SikaHyflex 600, or similar sealant products, before placing the undercut anchors.

This recommendation assumes correctly drilled KEIL undercut holes, and correct anchor and screw lengths.

Lack of sealant or poorly anchor sealing combined with freeze and thaw cycles may lead to material chipping around KEIL anchors. The sealing has been proofed effective to avoid water accumulation and subsequent cracks in drilling area.

This kind of failure has not been detected with other undercut anchor fixings systems to date and it is only extended to KEIL drills, and this is why it cannot be considered a failure in Dekton material but a weakness in relation with KEIL technology drilling.

If the installation of KEIL undercut anchors has been included in the order to Cosentino, it is recommended to inform in cut tickets and/or production drawings attached to the order the specific pieces that are going to be with the front face down and will require the sealing, in order to Cosentino to apply the sealant product.

If KEIL undercut anchors are to be installed by the customer or an arranged installer, it is recommended that the customer/installer applies the sealant in the holes as described below.



Water Penetration in hole



Pictures with examples of chippings produced by water penetration into the drills, combined with freezing temperatures, causing the product breakage.

Cosentino shall not be liable for any incidence that may arise as a consequence of these recommendations. The responsibility shall be borne in all cases by the installation company.

Sealant installation process:

A few drops of the sealant supplied in a cartridge are applied with a gun, filling the entire hole.

Then the corresponding anchor is inserted together with its hanger or fastener plus screw or with a double threaded pin, that will expel the excess sealant out of the hole.

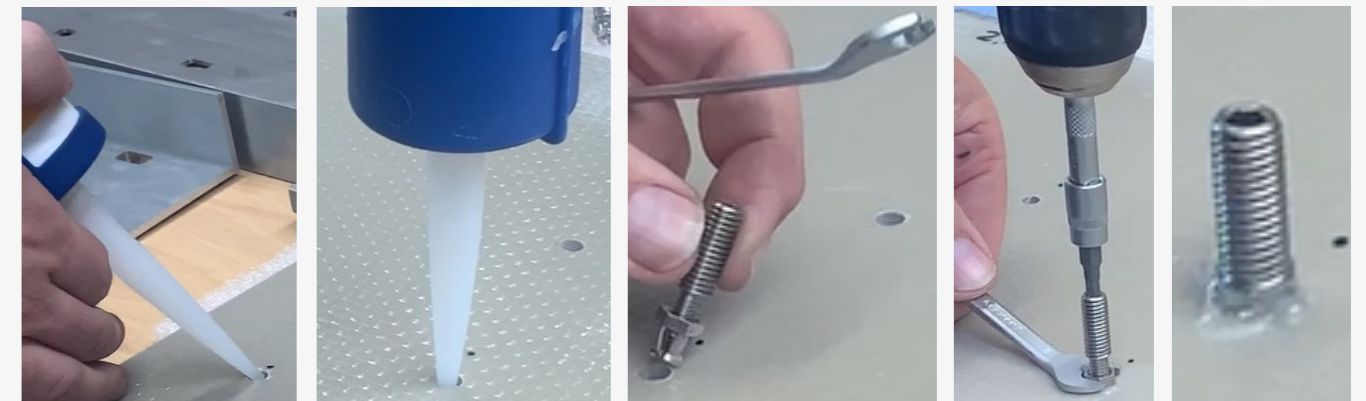
Application process:

a) A few drops of the sealant supplied in a cartridge are applied with a gun, filling the entire hole.

b) Undercut Anchor is inserted into Dekton drills.

c) Hanger or fastener is hold in its position and Screw in applied. In case you use a Stepped Threaded bolt M6/M8 this is inserted together with anchor and installed with screwdriving machine.

d) Excess of sealant will be expelled around hexagonal socket.



It is important to consult the Technical Data Sheets and to follow the application manuals with indications about temperatures, application and curing times from the sealant supplier.

For SikaHyflex 600:

- Range of temperatures for application. (+ 5 +40 °C)
- Maximum time after silicone application to insert bolt is 15 minutes. (23 °C 50 % RH)
- Time for total curation will be 24 hours (23 °C 50% RH)
- Approximate material consumption with optimal use:
 - 850 drill per 300 ml Sika Hyflex 300 ml. cartridge
 - 1700 drills per 600 Sika Hyflex 600 ml. Sausage.

CASE STUDY

Eagle Facade

Brisbane, Australia

Material

880 m² Dekton Zenith

Facade system

DKT1.1 Keil

Thickness

12 mm

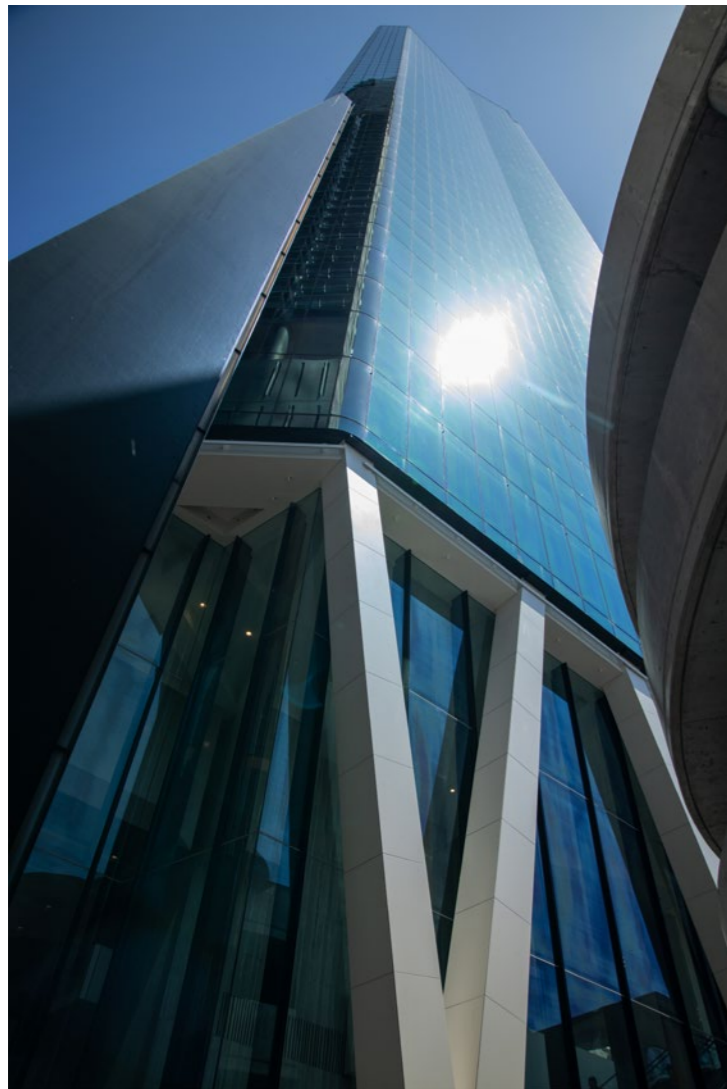
The rebirth of One One One Eagle Street office building in Brisbane: a sustainable, stylish renovation.

Located in the vibrant riverside precinct at 111 Eagle Street, One One One Eagle Street is one of the iconic and recognisable elements that define the city of Brisbane. Today we explore the remarkable transformation of its facade. The renovation project was undertaken by Cox Architecture, renowned for bringing expertise and vision to one of the city's most prestigious shopping centres. This building, recognised for its eco-friendly design with a 6-star rating and carbon neutral certification, has written a new chapter.

Brendan Gaffney from Cox Architecture is enthusiastic about the project: "One One One Eagle Street in Brisbane is a world-class commercial tower. And what we like to describe to people when they come to visit the building is the incredible V-shaped column structure. As they go through the podium and reach the ground, they are covered in a white luminescent material which makes them glow and is a real eye-catcher".



The renovation of its facade focused on the external columns of the building, which required a material that not only met sustainability standards, but also offered fire resistance. Cosentino's Dekton surface proved to be the ideal choice. Specifically, Dekton Zenith, an advanced material renowned for its durability and aesthetics, was selected and cut to size for this application. The installation used a ventilated facade system with mechanically fixed Keil anchors, ensuring a blend of aesthetics, functionality and safety.

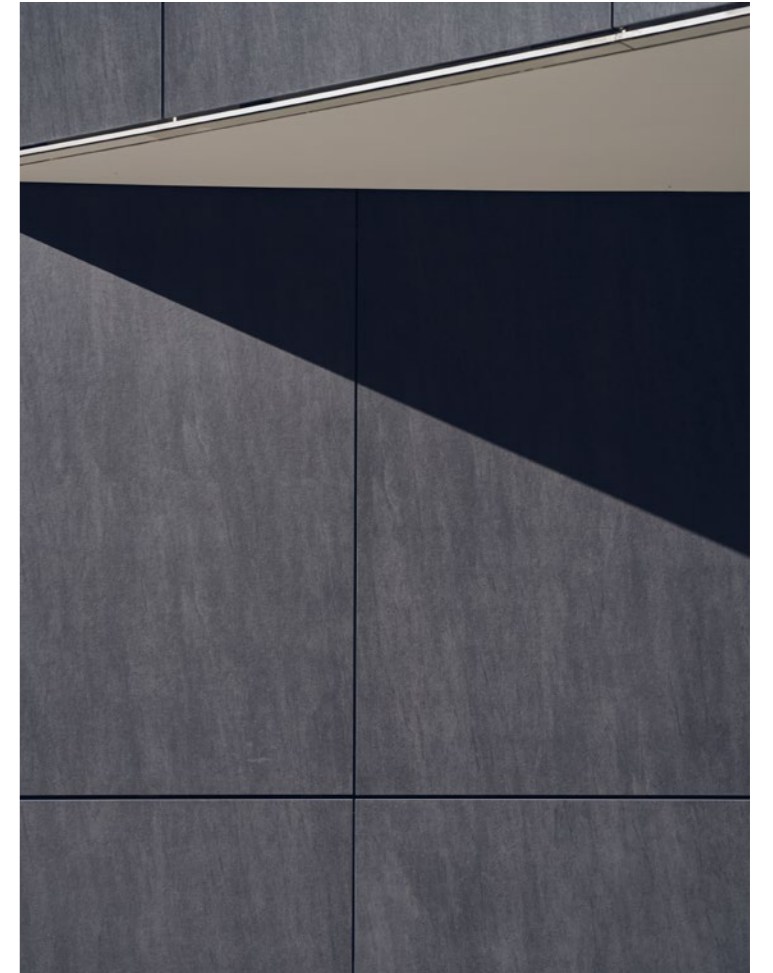
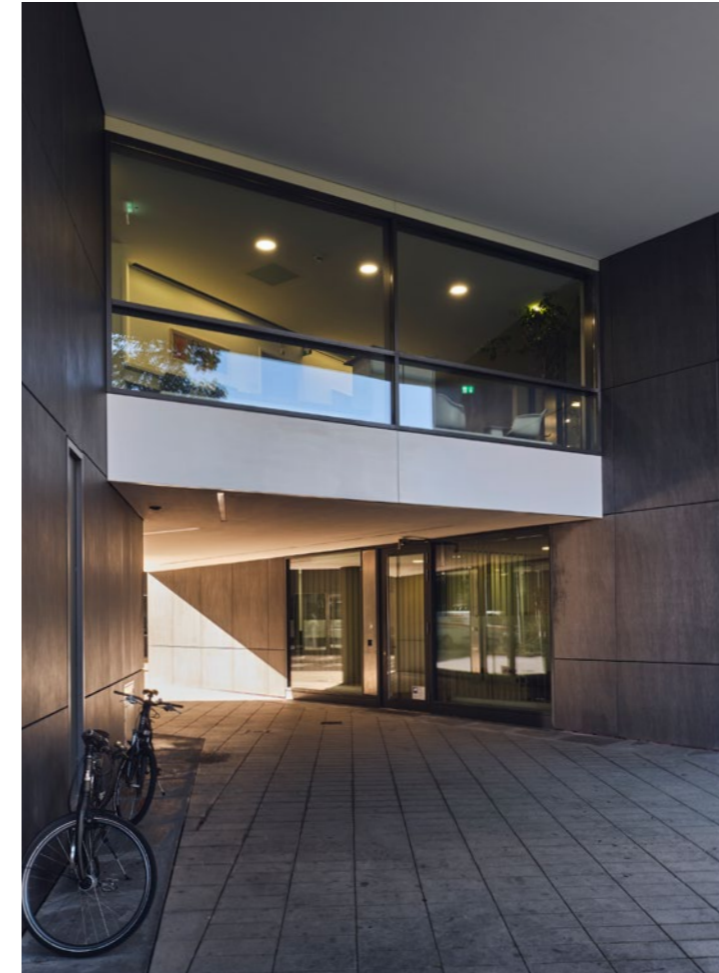


Dekton Zenith, a strategic choice by Cox Architecture.

Dekton Zenith was a carefully considered choice by the team at Cox Architecture. Gaffney points out: "Cox chose the Cosentino Dekton Zenith product for a number of reasons. The first is longevity: we know it's going to be here for a long time and that's really what we were looking for. The second is its incredibly consistent colour and texture, so it has a perfect finish that catches the light beautifully. In addition, it can be supplied in very large format pieces, manufactured off-site and precisely milled and cut with concealed fixings – critical elements for the project".

The collaboration between Cox Architecture and Cosentino goes beyond the choice of material; it represents a strategic alliance focused on innovation and sustainability in construction. Gaffney continues: "We would certainly work with Cosentino again on our premium commercial facades, simply because of their ability to deliver an incredibly diverse range of premium products". He also emphasises the importance of prefabrication in contemporary architecture: "The fact that they can deliver them prefabricated, cut and tapered, ready to be fixed on site, is of paramount importance to us. The idea of prefabrication is very important and it is where architecture and the construction industry are going in the future".





CASE STUDY

Office building in Munich

Munich, Germany

Materials

2,500 m² Dekton Bromo and Danac

Facade system

DKT 1.1 KEIL

Thickness

12 mm

CASE STUDY

Wissenschaftspark Osnabrück

Osnabrück, Germany

Materials

2,325 m²
Dekton Aeris and Kreta

Facade system

DKT1.1 KEIL

Thickness

12 mm





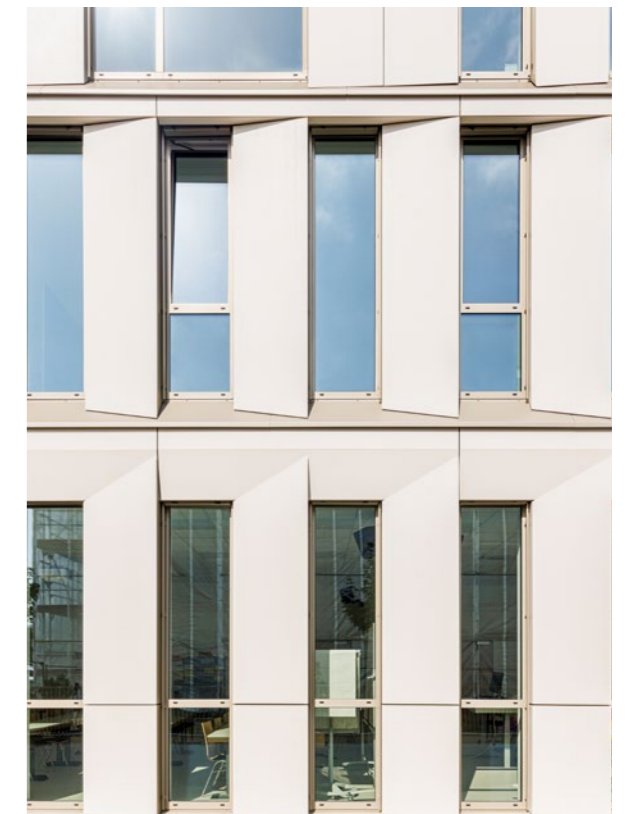
Open for the future

"We wanted to achieve a maximum effect with minimal means," says architect Gerwin Tornij. "The facade consists of transparent and opaque elements in only two widths, which we arranged differently. The windows are set back. The light-coloured cladding adjoins them at a shallow angle - sometimes on the left, sometimes on the right. The opposite reveal and the horizontally continuous floor plate have a warm bronze tone. Thus the facade appears valuable, varied and slightly different from every viewing direction."



Sustainable and easy to care for

"The curtain wall is very energy-efficient. The rainwater downpipes are a special feature," says Stefan Bobermin of HOFF und Partner, "They are concealed behind the facade in the open spaces created by the elements arranged at angles." When choosing the cladding, building approvals and short delivery times were a prerequisite, as the building was to be completed quickly. In addition, the client wanted a permanently aesthetic, low-maintenance and sustainable surface, as the property was to remain owner-occupied and easily lettable in the long term. "So our recommendation fell on the large-format Dekton panels from Cosentino."



CASE STUDY

Holocaust Museum

St. Louis, Missouri. USA

Materials

Dekton Sirius and Lunar

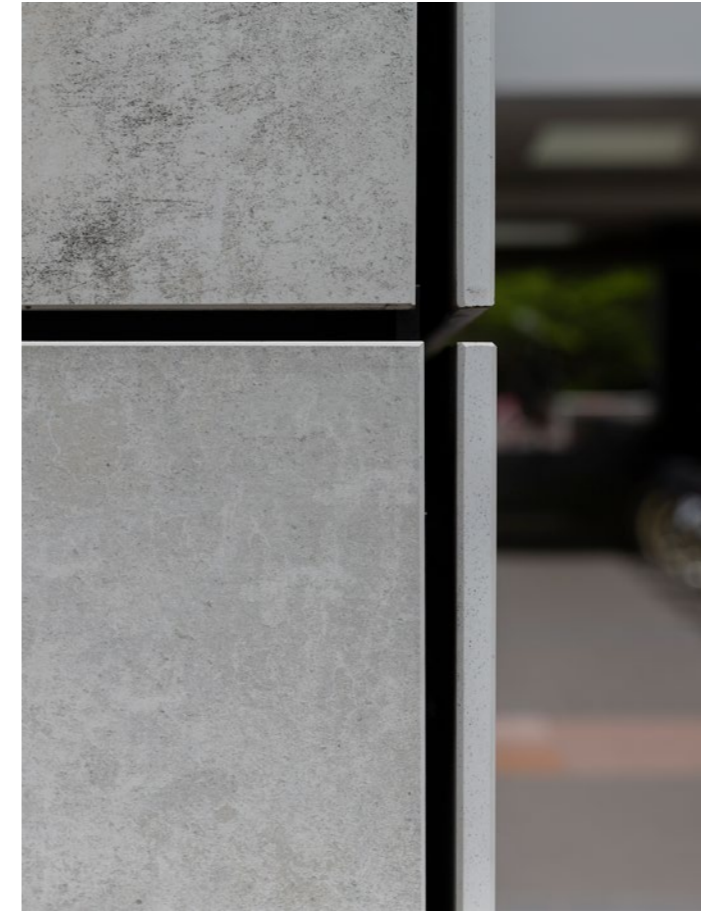
Facade system

DKT 1.1 KEIL

Thicknesses

4 and 12 mm





CASE STUDY

The Crowne Plaza

Canberra, Australia

Material

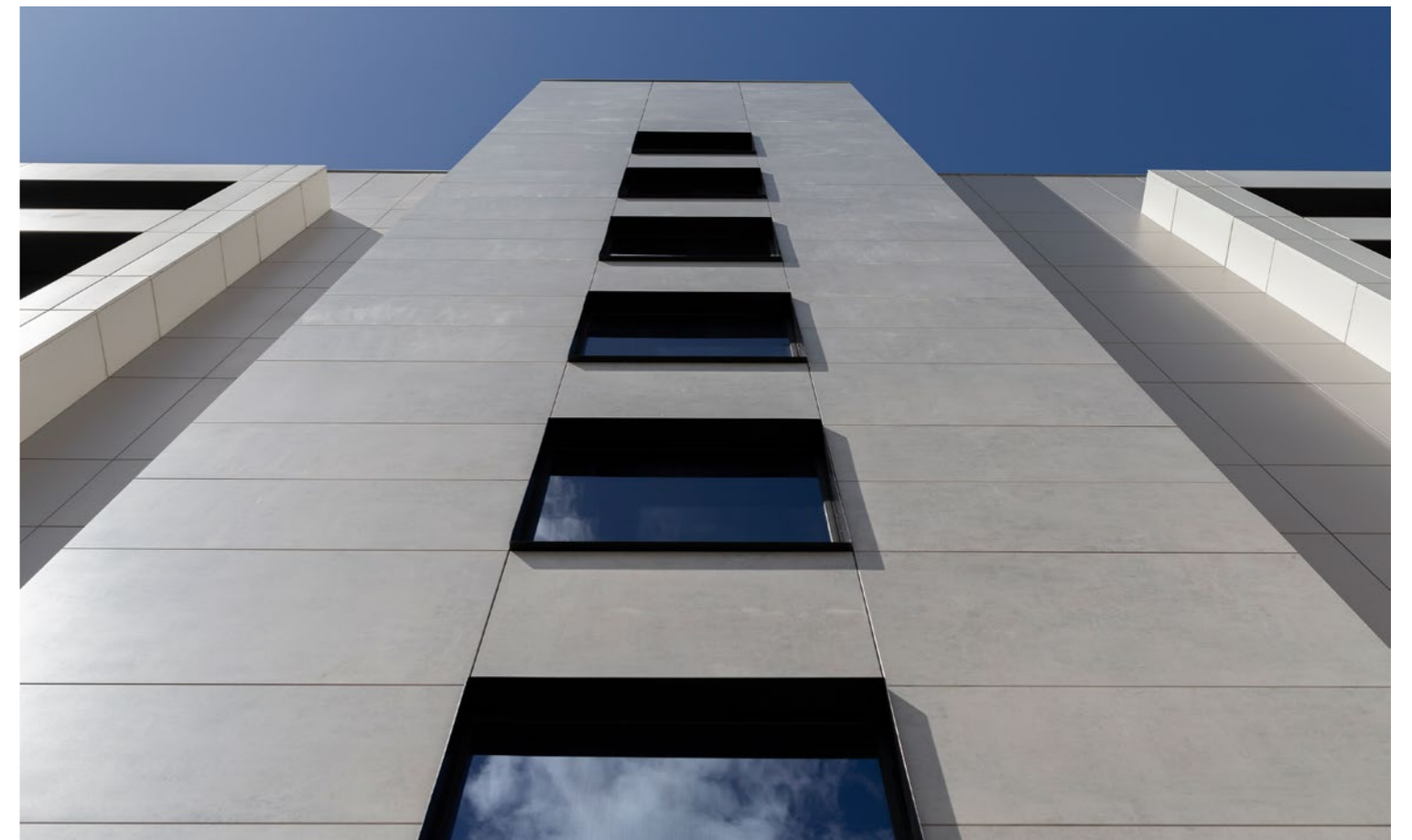
570 m² Dekton Lunar

Facade system

DKT 1.1 KEIL

Thickness

12 mm





CASE STUDY

Museum in Roquetas de Mar

Roquetas de Mar, Almería.
Spain

Materials

Dekton Danae, Keon, Sterling and Kairos

Facade system

DKT 1.1 KEIL and DKB

Thicknesses

4, 8 and 12 mm



CASE STUDY

Marriot Hotel

Reykjavik. Iceland

Material

4,000 m² Dekton Domoos

Facade system

DKT 1

Thickness

12 mm



CASE STUDY

Bundang Gwell Prugio

Seoul. South Korea

Material

5,016 m² Dekton Zenith

Facade system

DKT 1.2 Fischer

Thickness

12 mm



CASE STUDY

Dalvey Haus

Singapore

Material

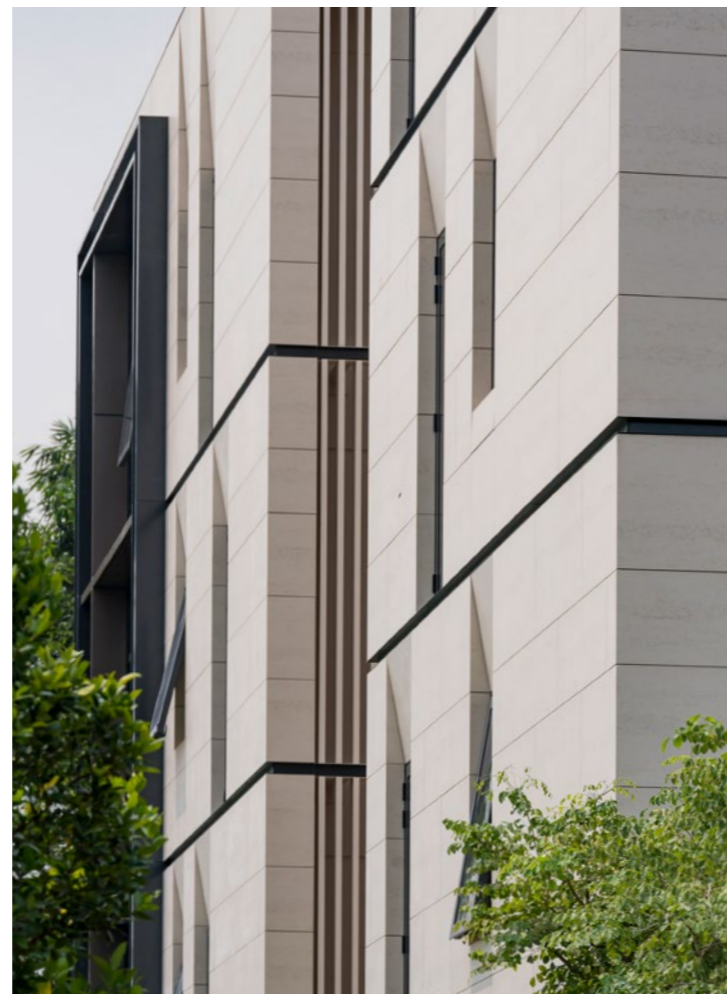
3,500 m² Dekton Danac

Facade system

DKT 1.2 Fischer

Thickness

12 mm





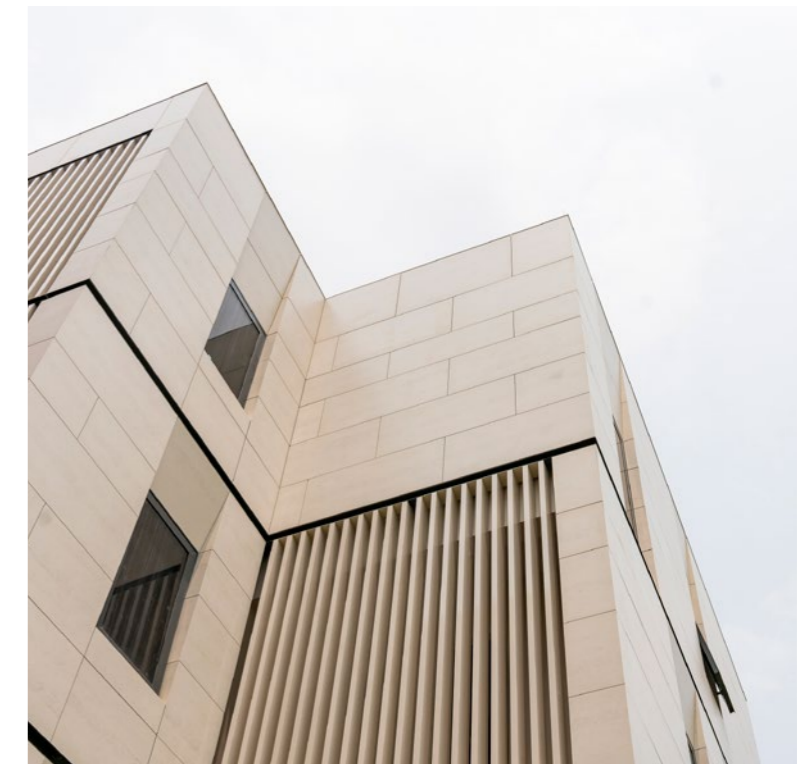
This high-end residential development partners with Cosentino for a sophisticated and functional cladding, from its facade to its interiors.

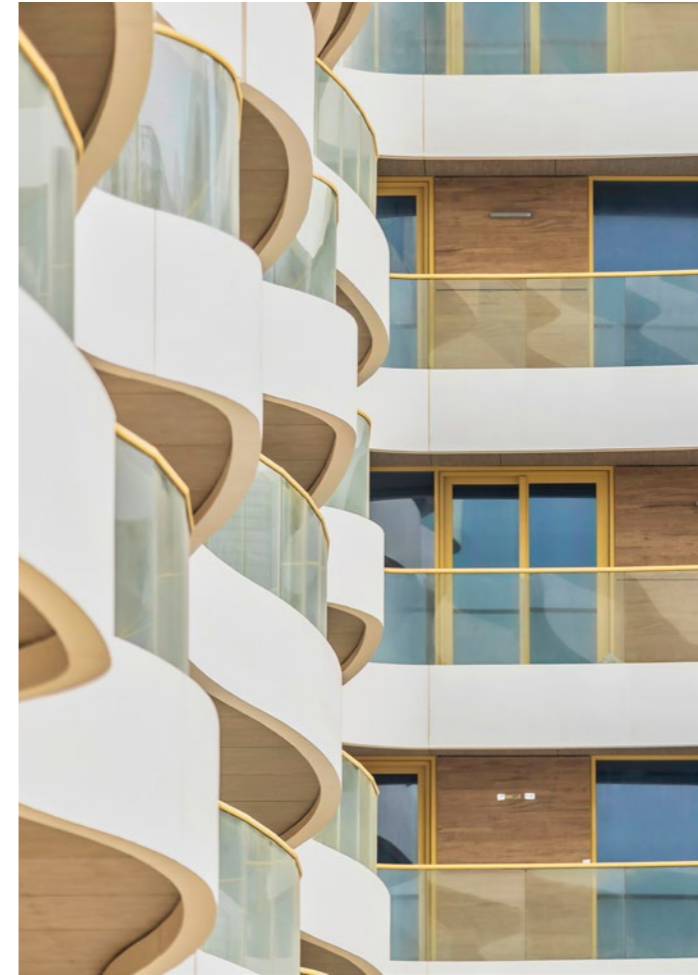
“Our contractor suggested using Dekton instead of marble to achieve a similar look and feel to that of marble on the facade, but allowing for cost savings and ease of maintenance, an idea with which the customer agreed”, says the studio. In fact, Dekton is a comprehensive, customised and sustainable technical solution that allows the creation of facades resistant to the most demanding conditions.



“It required a lot of coordination with the installers of the facade support system (installed using the Fischer ventilated facade system) to achieve the planned design, maintaining the size of the slabs and the orientation of their fibres while sticking to the customer’s budget”, says the studio.

In the end, the result fully met expectations. The studio highlights the clean architectural lines and cube-shaped structure of the development, whose facade features recessed windows strategically placed to create multiple viewpoints framing the green views of the surroundings. According to the professionals, its minimalist look translates into a timeless facade that pays great attention to detail and exudes calm and tropical exuberance.





CASE STUDY

Qaryat Al Hidd

Saadiyat Island, Abu Dhabi. UAE

Materials

55,000 m²
Dekton Valterra, Sterling, Zenith, Irok and Bento

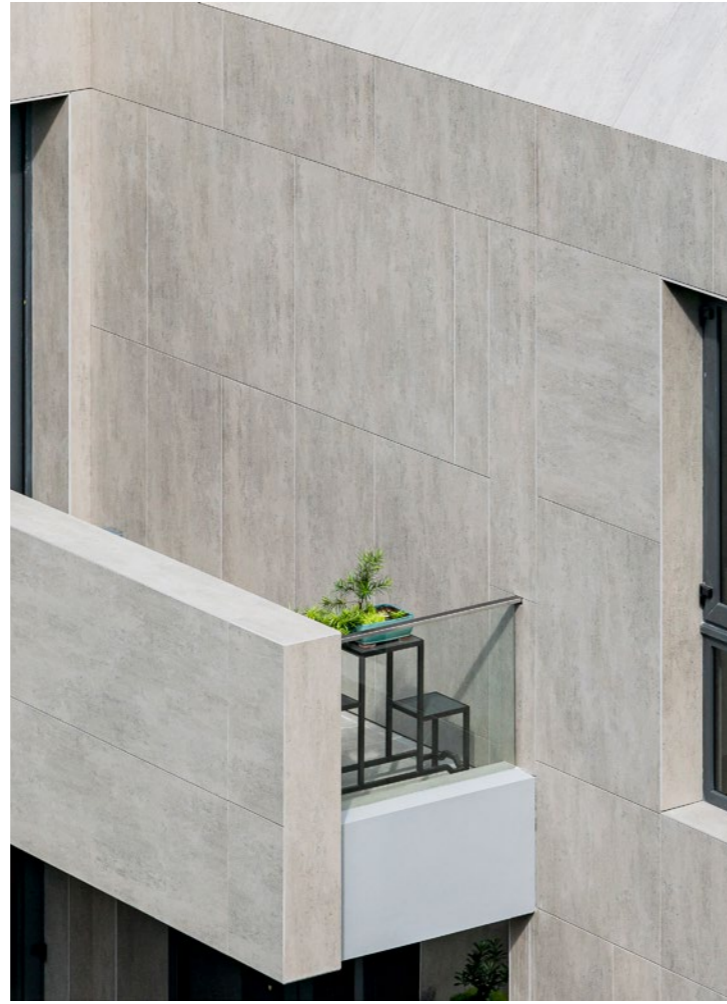
Facade system

DKT 1.1 KEIL

Thickness

12 mm





CASE STUDY

Villa in Singapore

Paya Lebar. Singapore

Material

394 m² Dekton Keon

Facade system

DKT1.2 FISCHER

Thickness

12 mm



Valdebebas Building, Madrid, Spain

DK T2

Edge grooving system
with continuous profile

Traditional fixing system widely used in natural stone. A continuous groove is made in the edges of the piece to place a continuous profile where it is to be fitted. There is a single starter and end profile and a double middle profile for horizontal joints.

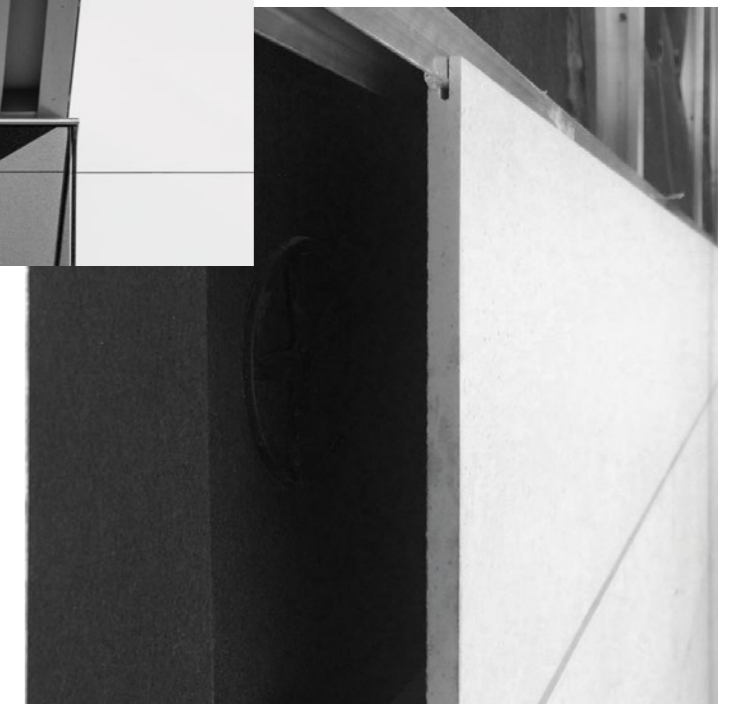
This system is limited to horizontal panel sizes up to a maximum of 1.44 m and a minimum Dekton thickness of 12 mm, which allows for grooving.

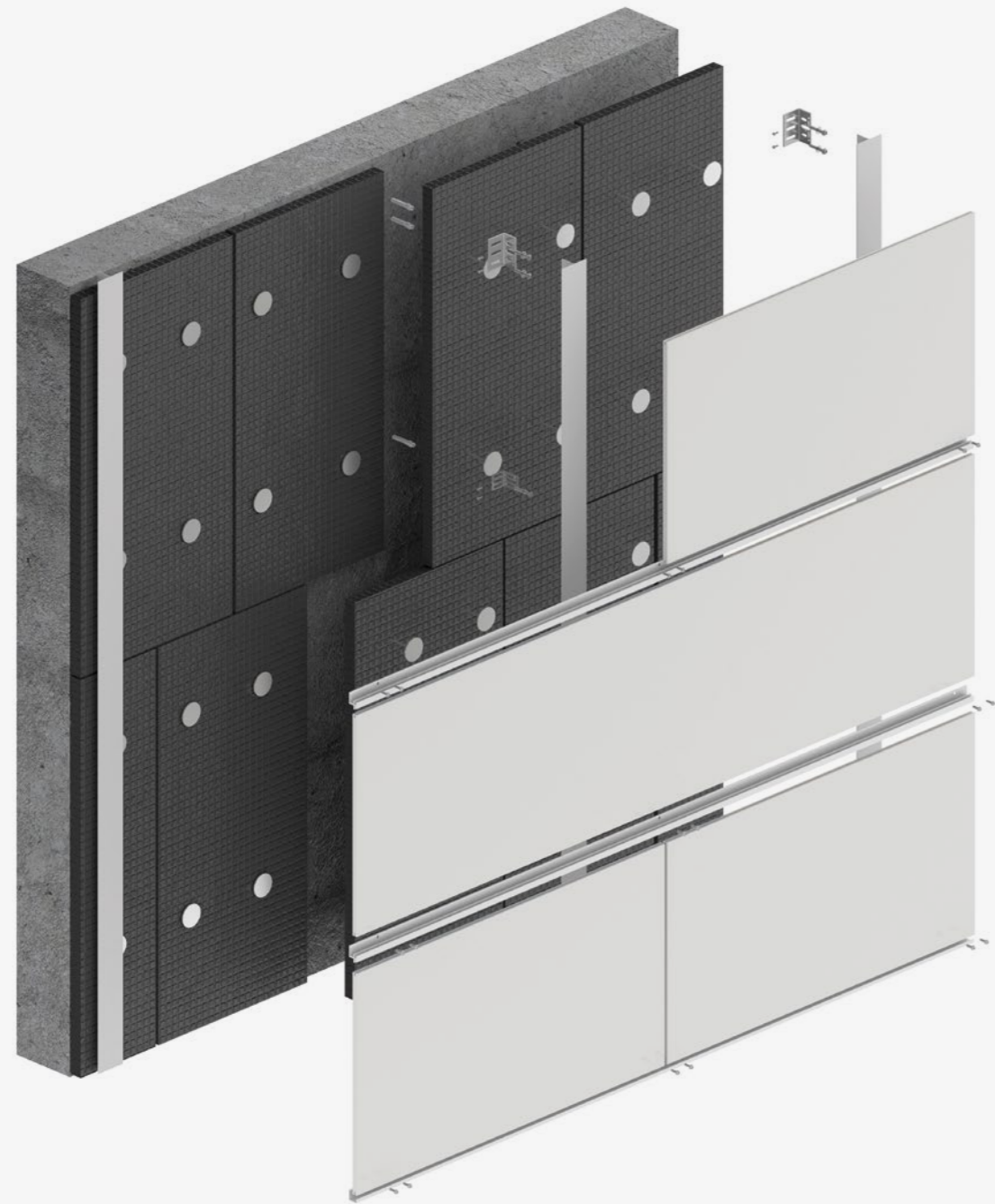


This solution creates an almost hermetic ventilated chamber, due to the continuity of the supporting profile itself. A groove of 3-4 mm minimum and with a depth of up to 10 mm is required to conceal the length-wise profile that is anchored to the uprights of the sub-structure.

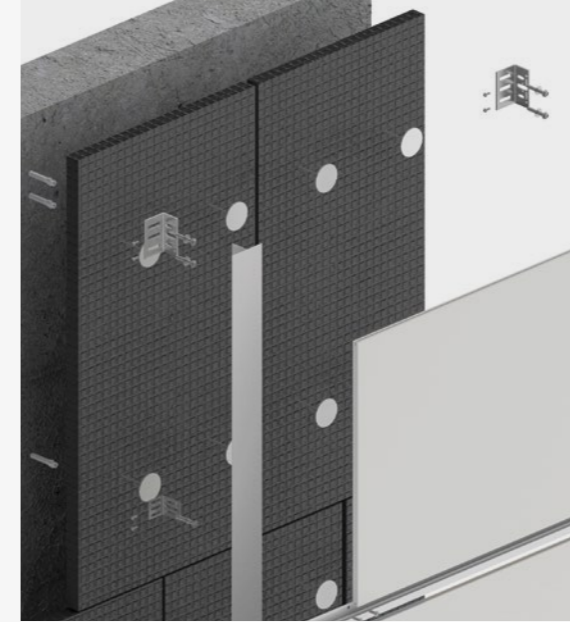
With this system, it is important to ensure correct air entry at the base of the facade, as the horizontal joints are enclosed by the horizontal profile that holds each piece.

Hidden mechanical fixing with metallic profile on the continuous groove of the edge of the piece.





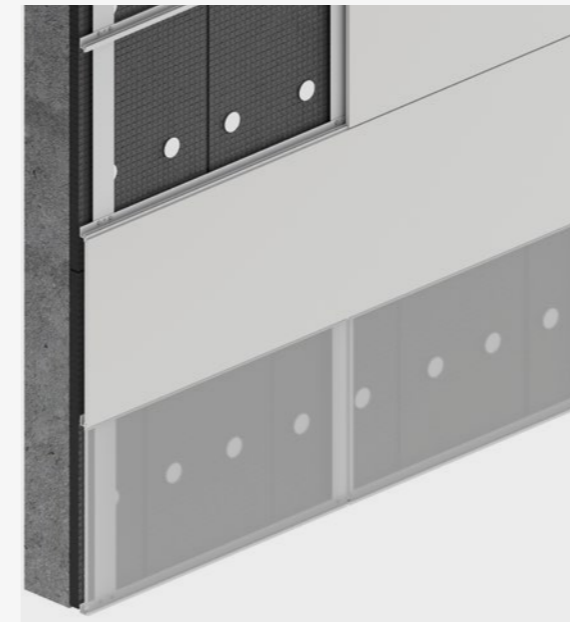
System detail



Middle profile detail



Bottom profile



Bottom profile detail



System structure



General fixing instructions

1. Define the layout of the horizontal profiles over the vertical substructure.
2. Drill the vertical profile to fix the horizontal rails from bottom to top on the facade so the grooved edge Dekton slab can be placed on it.
3. Place the horizontal rail over one piece, insert inside the top grooves of the piece. Level and fix it to the vertical profiles.
4. Enter the rest of the pieces from the row, using spacers to achieve the desired gap for vertical joints.
5. For some systems, the installation process may require installing first both bottom and top horizontal profiles. If so insert Dekton pieces into the top groove first and then into the bottom profile.
6. Repeat the process for all rows until the top, installing a top-end profile on the top row pieces.
7. The maximum cantilever distance of horizontal rails must be defined by the system supplier.

Installation sequence from one side to another and from bottom to top

Fig. 1

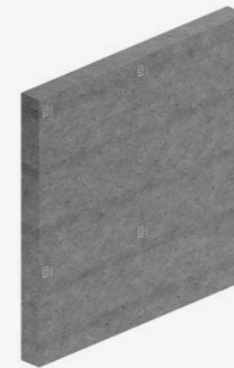


Fig. 2

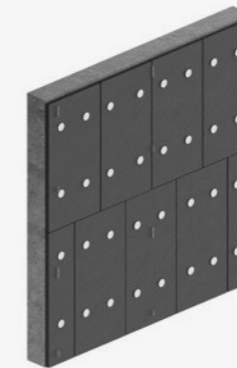


Fig. 3



Fig. 4



Fig. 5

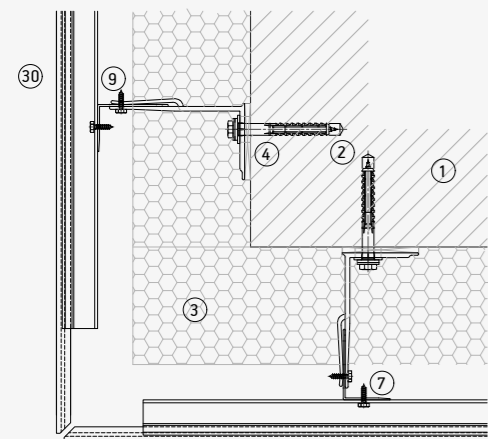


Fig. 6

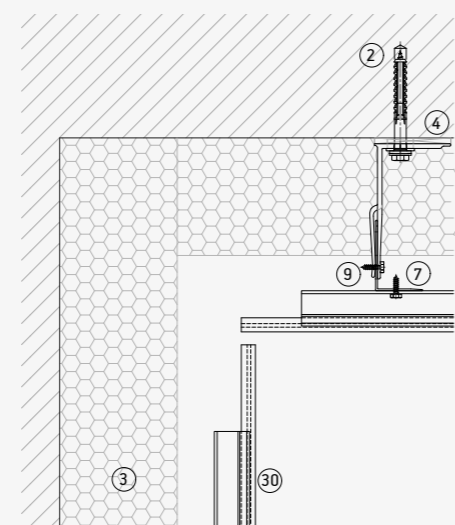


Horizontal section

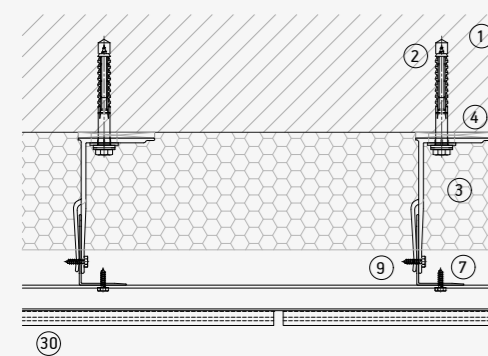
Mitered external corner



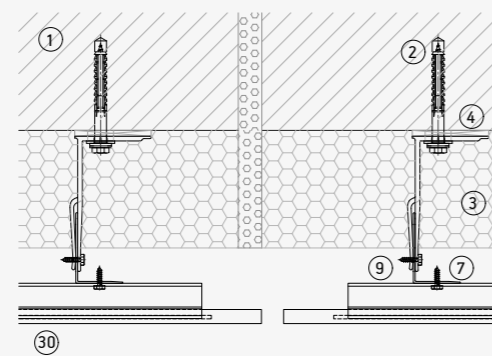
Internal Corner



Vertical joint



Vertical expansion joint



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.

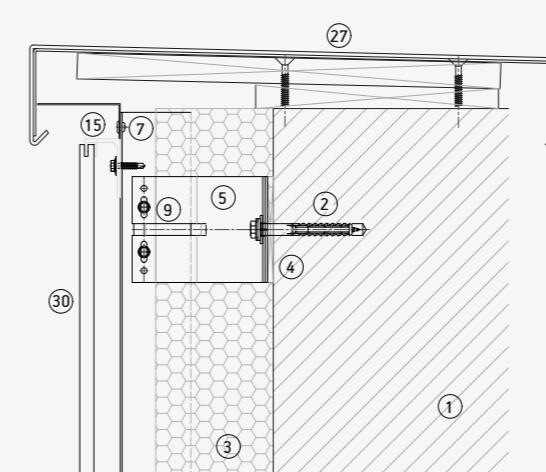
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clamp.

- 18. Intermediate visible clamp.
- 19. Interior back clamp
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill

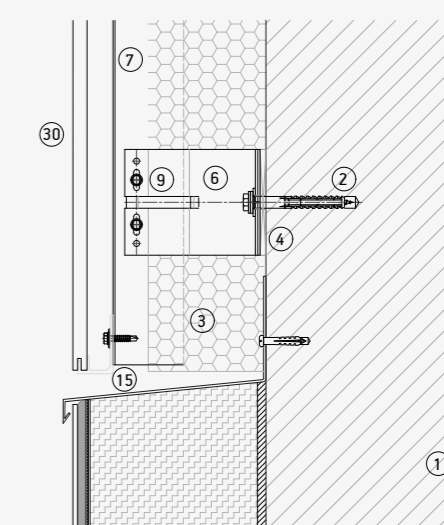
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Vertical section

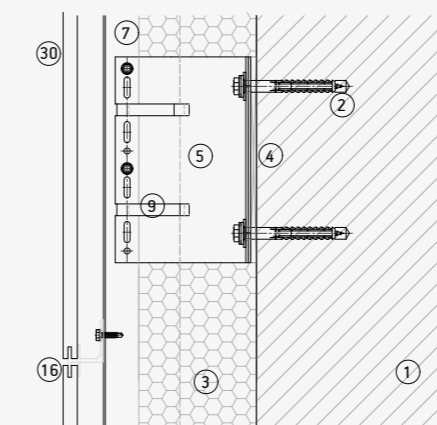
Upper detail



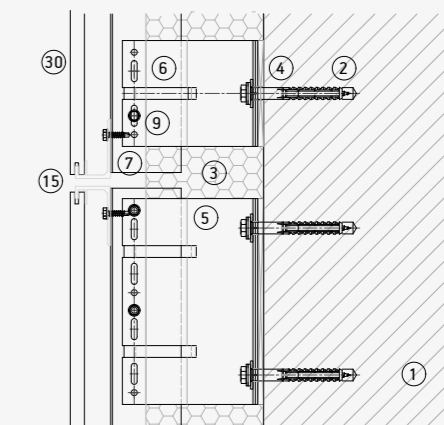
Bottom detail



Horizontal joint



Joint between profiles



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.

- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clamp.

- 18. Intermediate visible clamp.
- 19. Interior back clamp
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill

- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

System description

Hidden system

Supporting substructure made up of; metal brackets, adjustable for correction of unevenness compatible with different types of supports, can include thermal break insulator; vertical metal profiles of different sections according to the required application; continuous horizontal metal profiles type H intermediate or J start/end rail; hidden anchorage system by means of continuous grooving in the Dekton panel for fixing by insertion.

Installation process

Brackets installed on the surface to be covered by means of a mechanical system or welding; vertical profiles installed on brackets with a system of regulation and fixing, by means of

specific screws*; continuous horizontal H-Type profiles with a system of regulation and fixing, installed by means of specific screws* on vertical profiles; positioning of the lower edge of the Dekton panel on continuous H-Carrier/Rail profile; installation of the blocking device on the upper part, continuous H-Carrier/Rail profile.

*Specific screws according to the structural calculation of each project or indicated by the supplier of the substructure.

The minimum width of the grooves is 3mm, and the depth of grooving typically goes 10mm. Groove dimensions need to be defined for each project according to the Dekton thickness chosen and the project static calculations.

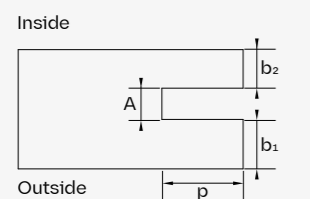
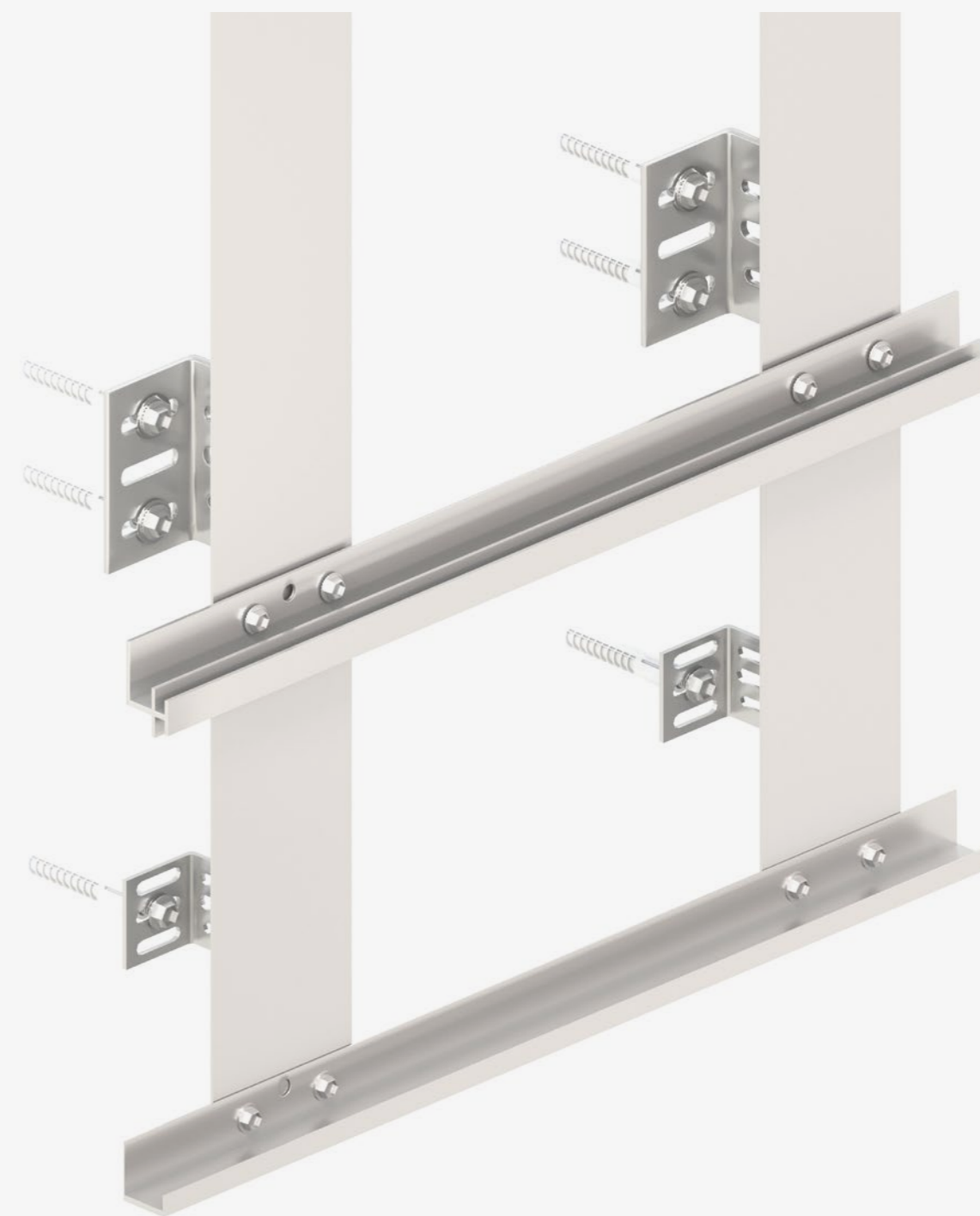
Cutting and machining

At the Cosentino Factory all slabs can be cut and machined following project drawings and delivered to site in the desired order.

Please consult with the Project Service Unit department for special project requirements.

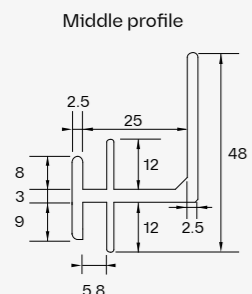
Grooves can be done following provided project details and static calculations.

System structure

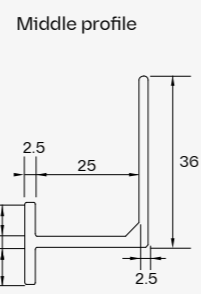
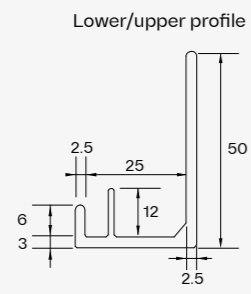


Geometry of the grooves

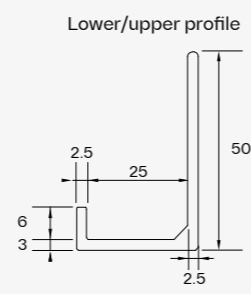
| Fixing the cladding | Dekton thickness (mm) | Geometry of the grooves | | | |
|---------------------|-----------------------|-------------------------|---------|--------|--------|
| | | b1 (mm) | b2 (mm) | A (mm) | p (mm) |
| DKT2.1 | 12 | 4 | 5 | 3 | 10 |
| | 20 | 12 | 5 | 3 | 10 |
| DKT2.2 | 12 | 4 | 4 | 4 | 10 |
| | 20 | 8 | 8 | 4 | 10 |



Cross-section DKT2.1



Cross-section DKT2.2



Static calculations

Schemes and data to be defined with SDP software

Panel in horizontal layout. Maximum wind loads shown in the following configurations depend on the grid spacing and distance from drill holes to the edges.

For further distances and configurations please consult with our Technical Department. The results consider a partial safety factor applied to the resistance of Dekton material minimum recommended of 1.5.

The tables and diagrams presented are based on Dekton calculation software and refer only to Dekton. They cannot be considered as definitive data for on-site installation and it is necessary for a qualified technician

to make a specific project calculation for the entire facade system including support anchors, brackets, profiles, screws and Dekton fixing elements to the facade

How to use the reference configurations:

- Determine the design wind load kN/m².
- Choose the table according to the fixing system and Dekton thickness.
- Select the closest design wind load. The wind load chosen should not be less than actual requirements.
- Select a reference configuration showing maximum spacing between fixings.

Full slab configuration

Dekton 12 mm

| Design wind load kN/m ² | Horizontal | Spacing between hor. profiles (mm) |
|------------------------------------|------------|------------------------------------|
| 0,5 | H2 | 1200 |
| 1 | H4 | 900 |
| 1,5 | H6 | 600 |
| 2 | H8 | 400 |
| 6 | H10 | 170 |

Dekton 20 mm

| Design wind load kN/m ² | Horizontal | Spacing between hor. profiles (mm) |
|------------------------------------|------------|------------------------------------|
| 0,5 | H1 | 1440 |
| 1 | H3 | 1000 |
| 1,5 | H5 | 650 |
| 2 | H7 | 500 |
| 5,5 | H9 | 350 |

Layout

The design wind loads that are compared to the reference design wind loads provided in this document must have share capitalization coefficients on the wind load applied to the characteristic values according to the applicable standards and regulations.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system to withstand the demands.

Design wind loads and fixing distances should be calculated per local standards, regulations and certificates applicable, with further testing if required.

The project competent technician/ designer must consider the coefficients of increase of actions and reduction of resistance of materials, as well as the calculation of anchors to tension, shear, and combined tension and shear loads as applicable.

Cosentino does not provide static calculations for projects.

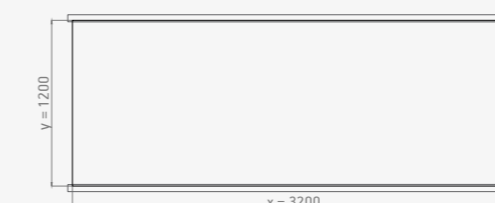
Cosentino will not accept any liability whatsoever for any direct or indirect damage resulting from any errors, omissions or miscalculations of the static calculations for the project.

There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.

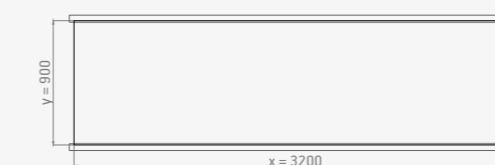
The configurations shown are valid when using the profiles and grooves indicated below. Any other groove or profile shall be validated by a project-specific test to be carried out by the Technical Management (pages 15 and 18 of the ETA).

12 mm

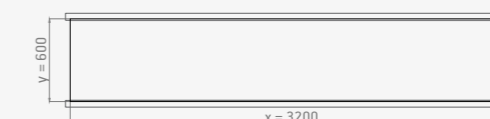
HORIZONTAL CONFIGURATION



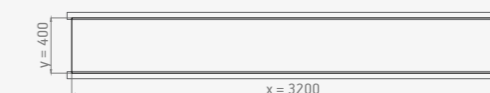
H2. Max. Design wind load: 0.5 kN/m²



H4. Max. Design wind load: 1.0 kN/m²



H6. Max. Design wind load: 1.5 kN/m²



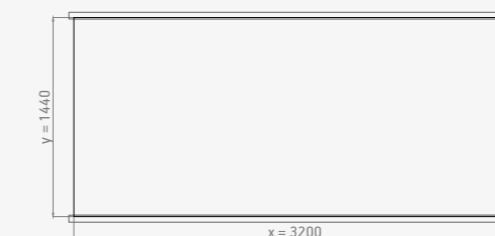
H8. Max. Design wind load: 2.0 kN/m²



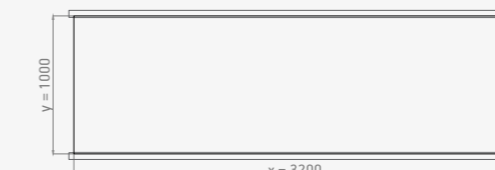
H10. Max. Design wind load: 5.5 kN/m²

20 mm

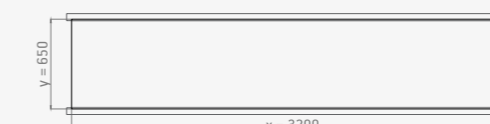
HORIZONTAL CONFIGURATION



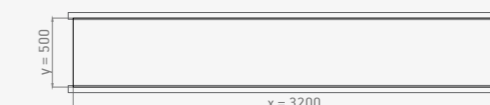
H1. Max. Design wind load: 0.5 kN/m²



H3. Max. Design wind load: 1.0 kN/m²



H5. Máx. Design wind load: 1.5 kN/m²



H7. Max. Design wind load: 2.0 kN/m²



H9. Max. Design wind load: 6.0 kN/m²



CASE STUDY

Valdebebas 127

Madrid, Spain

Materials

7,600 m²
Dekton Warm (customised)
Dekton Korus

Installation system

DKT2

Thickness

12 mm







CASE STUDY

LD Hotel

Sevilla, Spain

Material

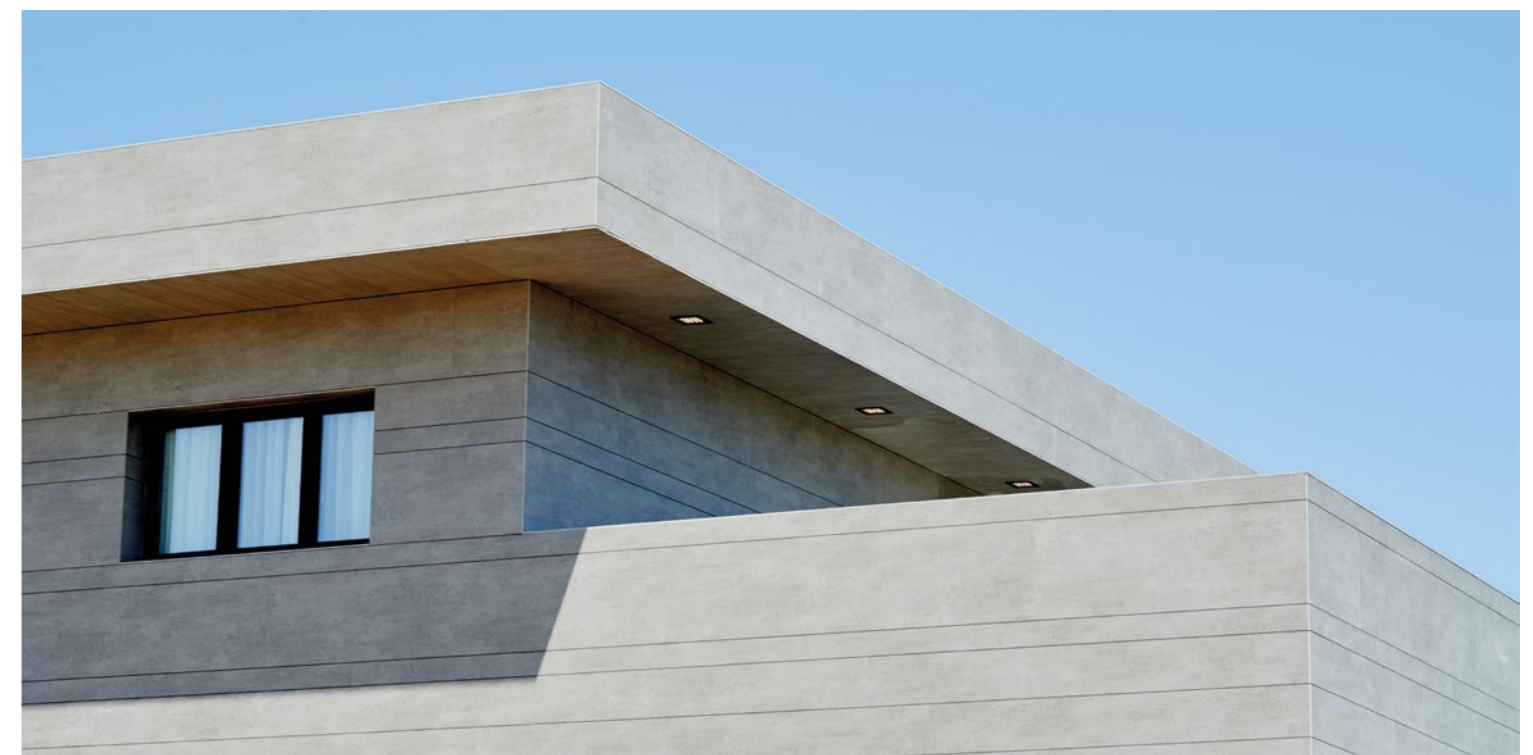
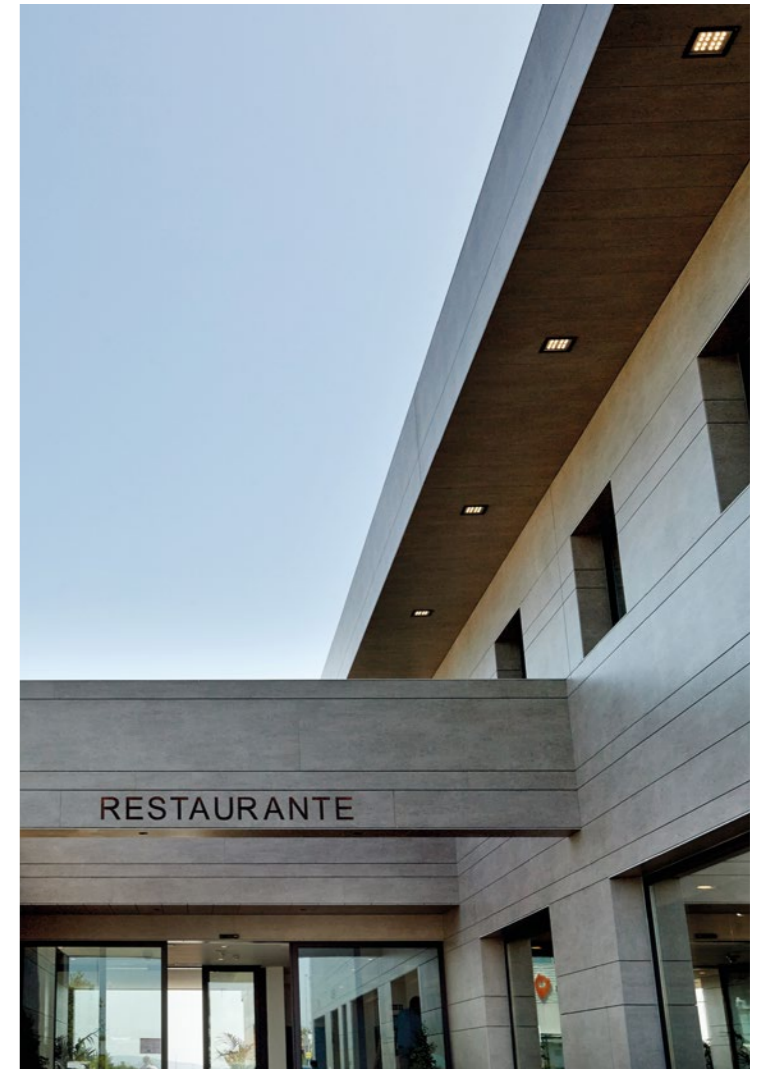
2,500 m² Dekton Keon

Facade system

DKT2

Thickness

12 mm





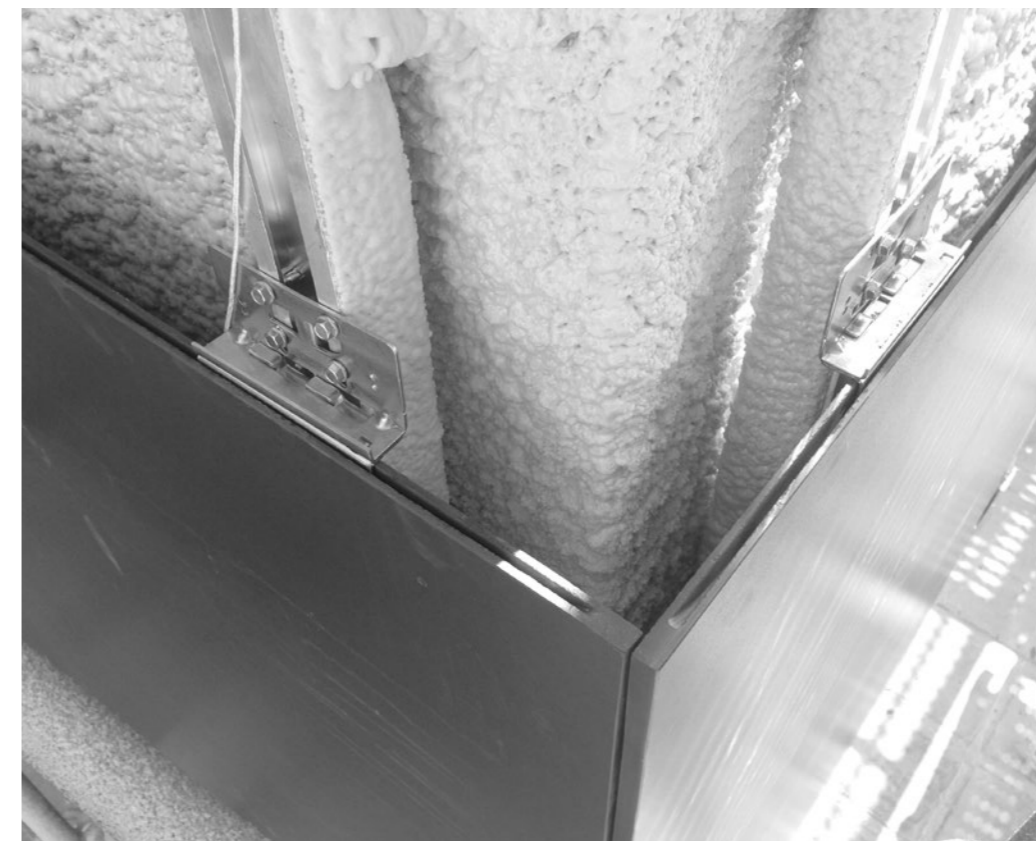
Tabacalera apartment building, A Coruña, Spain

DK T3

System with clips in the groove on the edge

This system is suitable for horizontal cutting of Dekton in thicknesses of 12 mm and 20 mm. In the DKT3 system, pieces are fastened to the profile by hidden clips that are inserted at intervals along a continuous groove at the edge of the piece, which can end at 3 cm at each extreme,

thereby improving the aesthetics and functionality of the lateral pieces. This system is fairly flexible, although there are certain dimensional limits, as the maximum a piece can be for 12 mm thickness is 70 cm vertical and 100 cm for 20 mm thickness.

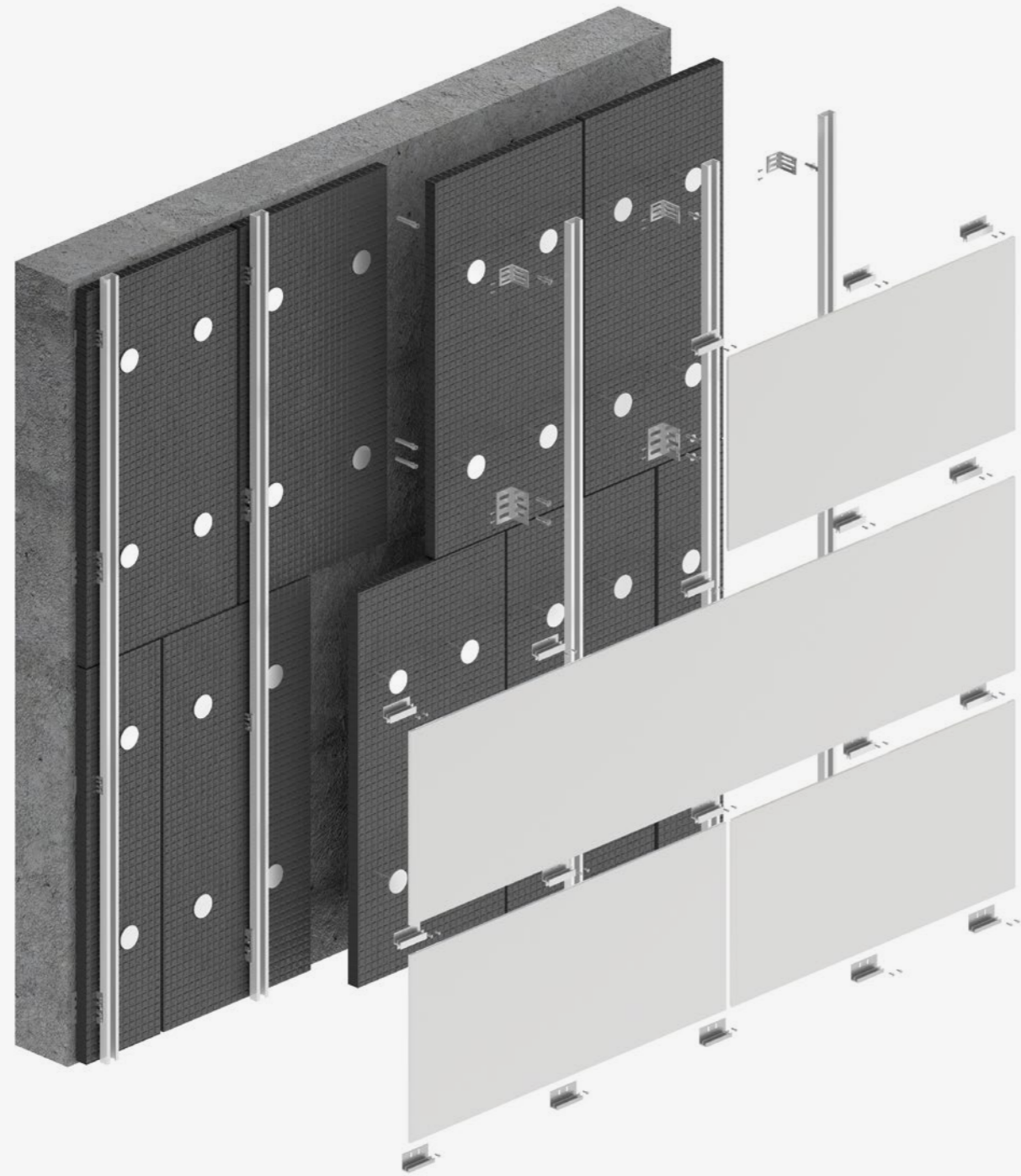


In cases that require a greater dimension on the vertical section, 30 mm thickness should be used to counteract fatigue on the grooved part of the material from the anchoring.

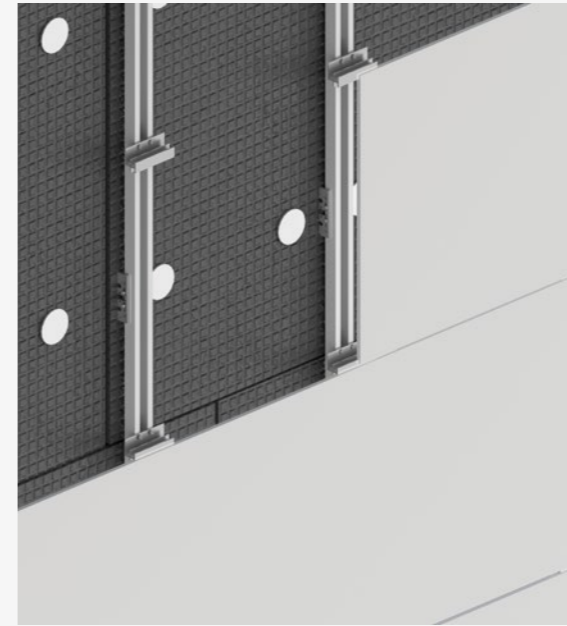
This system usually has two different types of clips: a single starter/end clip and a double middle clip, which are screwed to the vertical profiles.

Hidden mechanical fixing with clips at intervals along the groove on the edge of the piece.

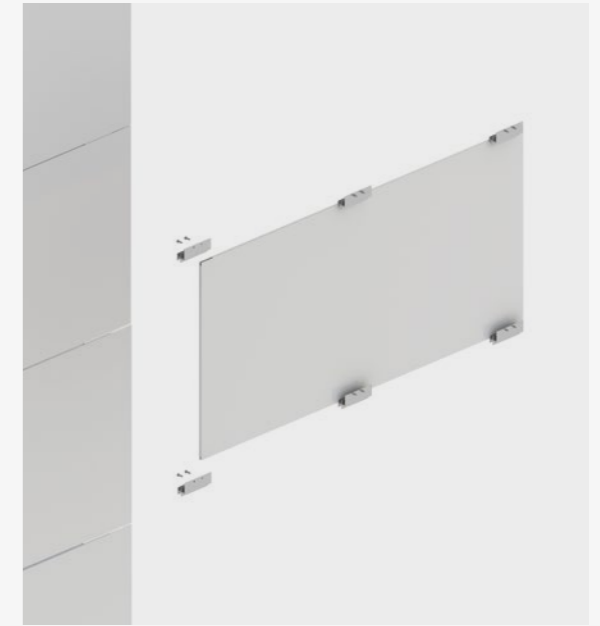




Joints



Middle clips



Bottom clips



Bottom clips detail





General fixing instructions

1. Define the layout and position of the clips over the vertical substructure.
2. In some clip systems, a spring is installed into the vertical profiles before fixing the clips, in order to avoid looseness between the Dekton piece and vertical profiles.
3. Screw the bottom clips to the vertical profiles.
4. Place the Dekton piece with grooved edges laying on the clips, that will support the piece weight.
5. Place the intermediate clips, inserting the tabs into the top grooves of the Dekton piece and screw the clips to the vertical profiles.
6. Repeat the process by placing another piece over the installed clips and fixing with upper clips.
7. Finish with the top pieces. Installing a top-end clip with a slotted hole and screw them to the vertical profile. Insert the clips into the top groove of the panel by adjusting its position vertically.
8. Maximum cantilever distance of horizontal rails must be defined by the system supplier.

Installation sequence from one side to another and from bottom to top

Fig. 1

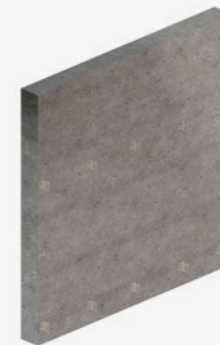


Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



System description

Hidden system

Supporting substructure made up of; metal brackets, adjustable to correct unevenness and compatible with different types of supports, can include thermal break insulators; vertical metal profiles of different sections according to the application required; horizontal metal profiles or H-Carrier/Rail or J-Carrier/Rail type clips; hidden anchoring system by means of continuous grooving in the Dekton Panel for fixing by insertion.

Installation process

Brackets installed on the surface to be covered by means of a mechanical or welding system; vertical profiles installed on brackets with a regulation and fixing system, by means of specific screws*; specific horizontal profiles or H-Carrier/Rail or J-Carrier/Rail clip with a regulation and fastening system, installed by means of specific screws* on vertical profiles; installation of the lower edge of the Dekton panel on a point profile or H-Carrier/Rail or J-Carrier/Rail clip; installation of the locking device on the upper part, point profile or H-Carrier/Rail or J-Carrier/Rail clip.

*Specific screws according to the structural calculation of each project or indicated by the supplier of the substructure.

The minimum width of the grooves is 3mm, and the depth of grooving typically goes from 10mm to 15mm. Groove dimensions need to be defined for each project according to the Dekton thickness chosen and the project static calculations.

Cutting and machining

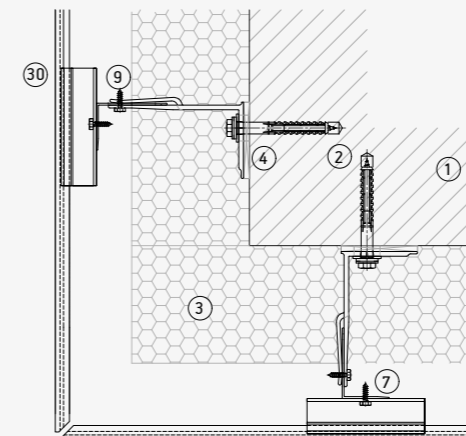
At the Cosentino Factory all slabs can be cut and machined following project drawings and delivered to site in the desired order.

Please consult with the Project Service Unit department for special project requirements.

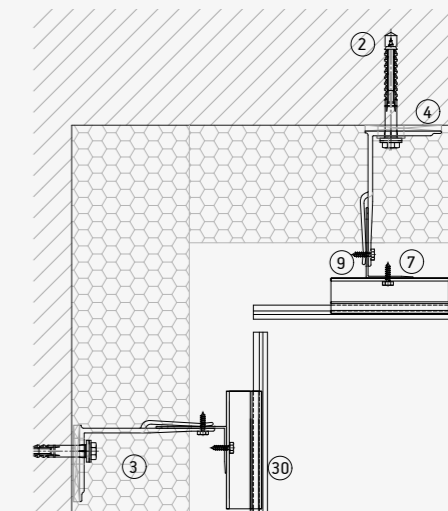
Grooves can be made following provided project details and static calculations.

Horizontal section

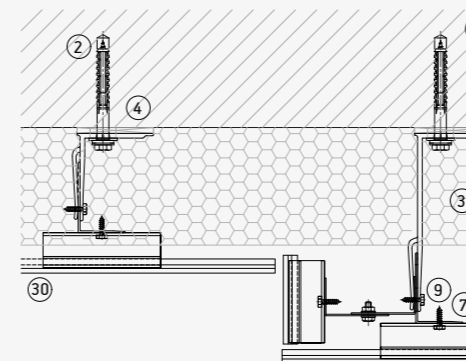
Mitered external corner



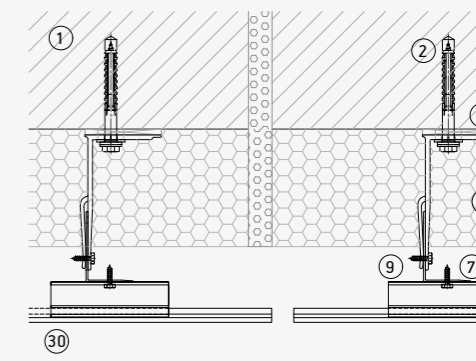
Internal Corner



Vertical joint



Vertical expansion joint

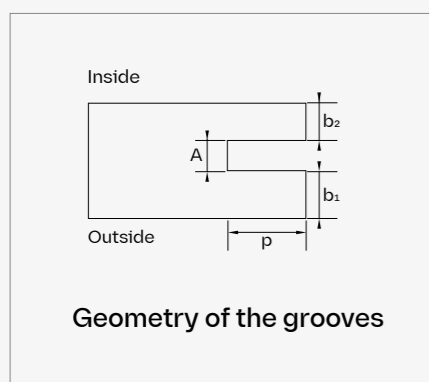


1. Supporting wall.
2. Anchor bracket.
3. Insulation.
4. Insulating layer.
5. Fixed bracket.
6. Adjustable bracket.
7. L profile.
8. T profile.
9. Self tapping screw.
10. Rivet.

11. Undercut anchor.
12. Horizontal rail.
13. C hanger.
14. Adjustable C hanger.
15. Bottom/top edge profile/clip.
16. Intermediate edge profile/clip.
17. Bottom/top visible clip.
18. Intermediate visible clip.

19. Interior back clip
20. Exterior back profile
21. Chemical fixing system
22. Security fixing
23. Ventilation profile
24. Lintel
25. Jamb
26. Window sill
27. Top coping
28. Corner profile

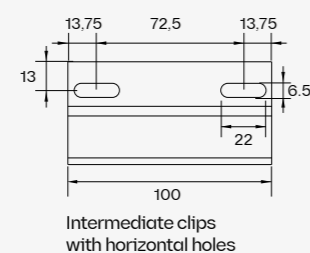
29. Bonding adhesive
30. Dekton



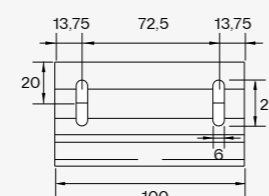
Geometry of the grooves

| Fixing the cladding | Dekton thickness (mm) | Geometry of the grooves | | | |
|---------------------|-----------------------|-------------------------|---------|--------|--------|
| | | b1 (mm) | b2 (mm) | A (mm) | p (mm) |
| DKT3 | 12 | 4 | 5 | 3 | 10 |
| | 20 | 12 | 5 | 3 | 10 |

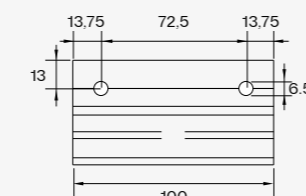
Cladding fixings



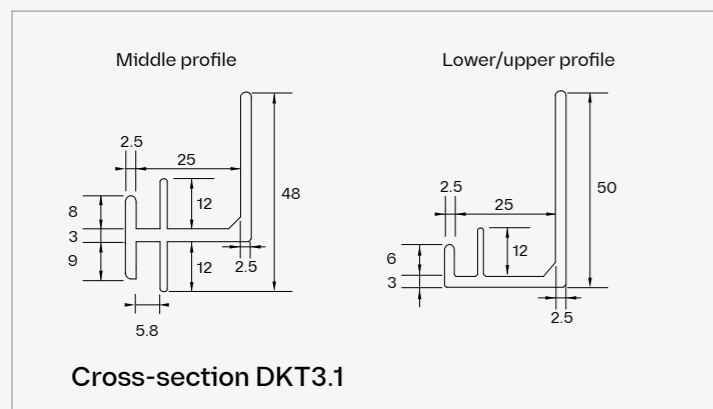
Intermediate clips with horizontal holes



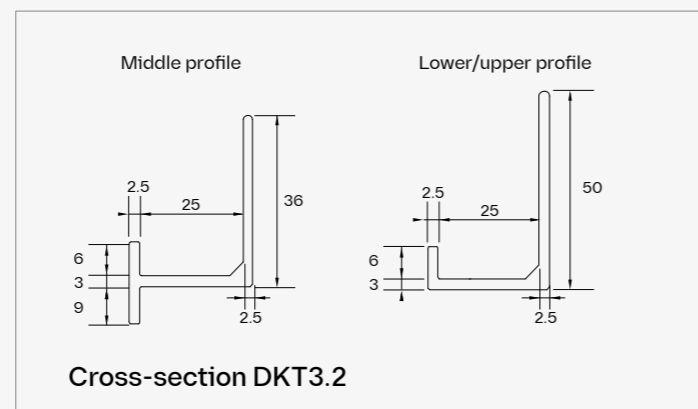
Intermediate clips with vertical holes



Intermediate clips with fixed drill holes



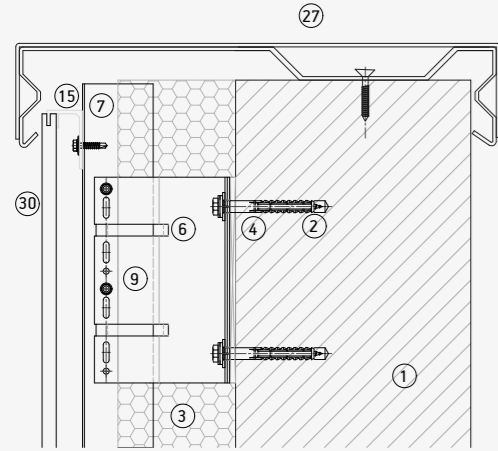
Cross-section DKT3.1



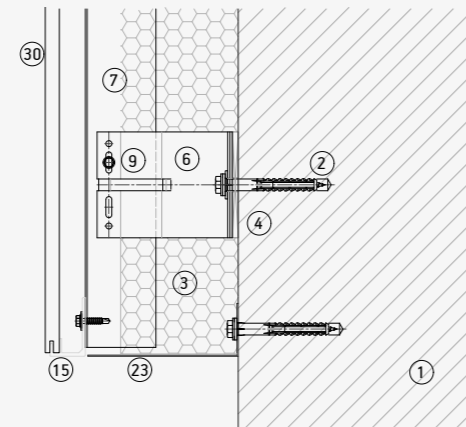
Cross-section DKT3.2

Vertical section

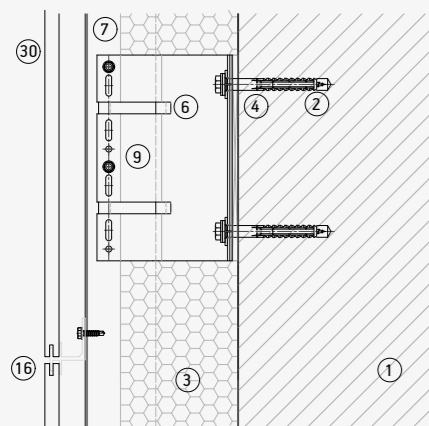
Upper detail



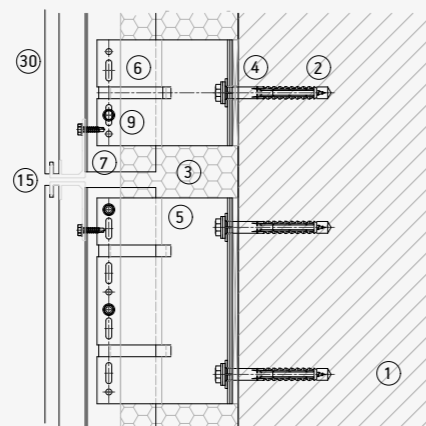
Bottom detail



Horizontal joint



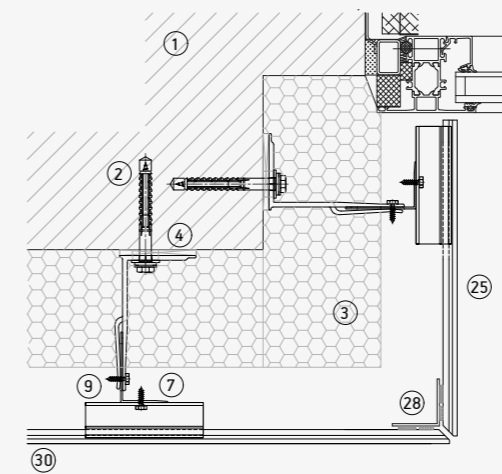
Joint between profiles



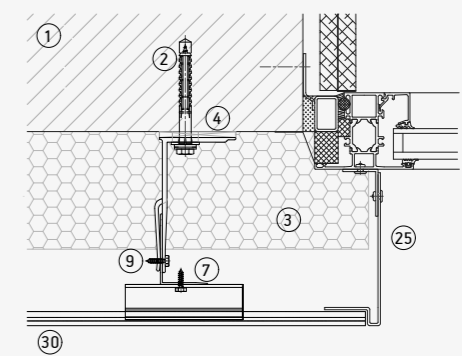
- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Vertical section

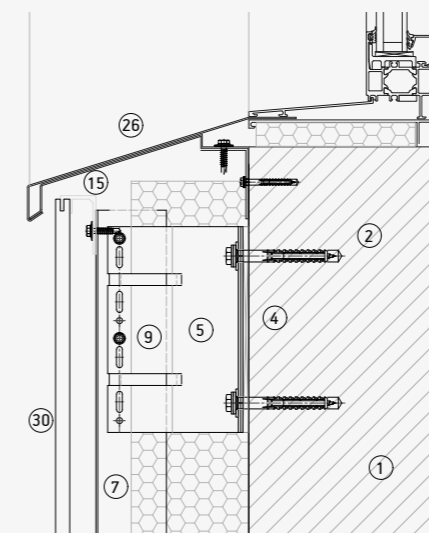
Dekton jamb



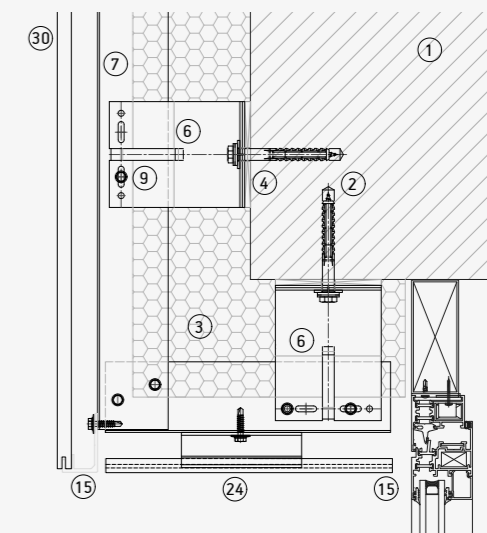
Metallic jamb



Metallic window sill

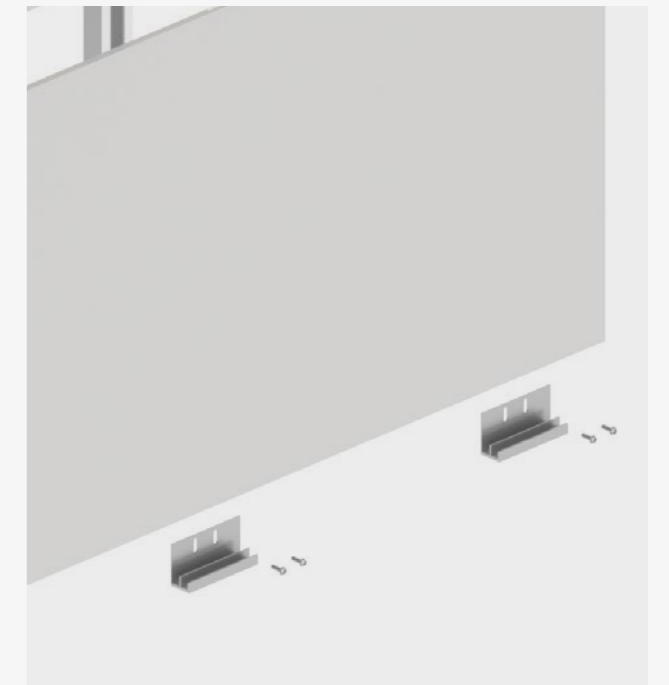
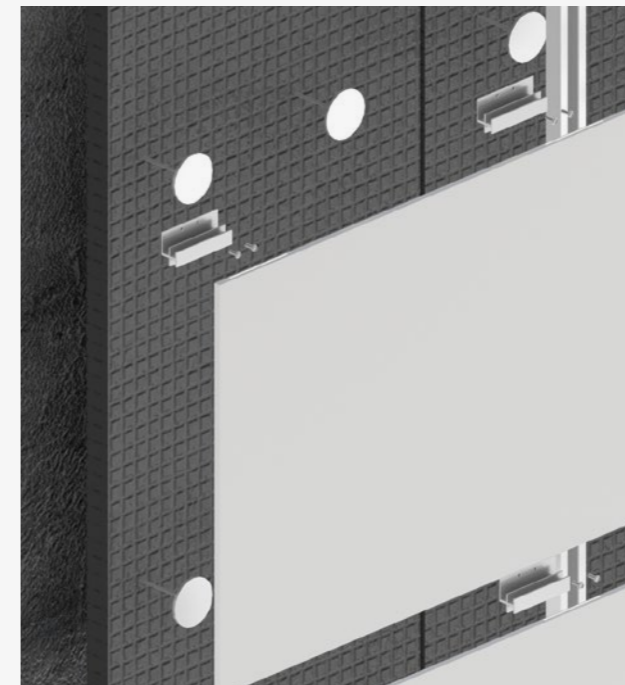
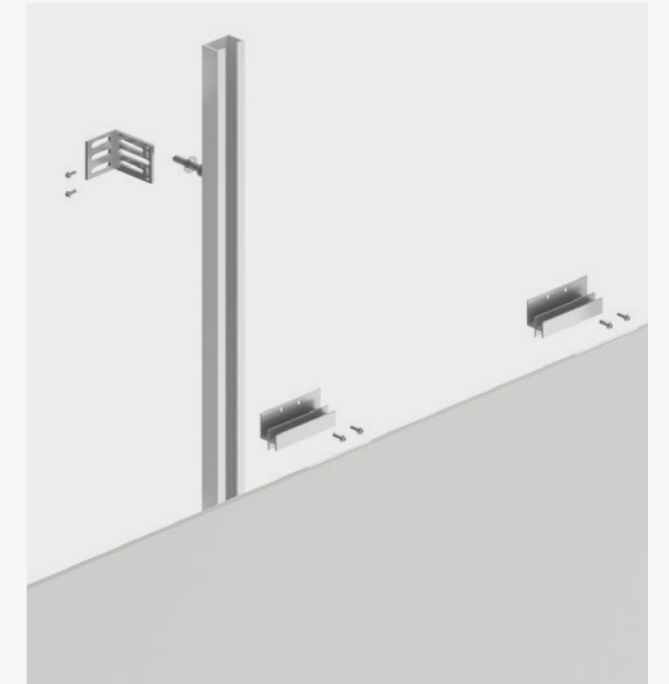
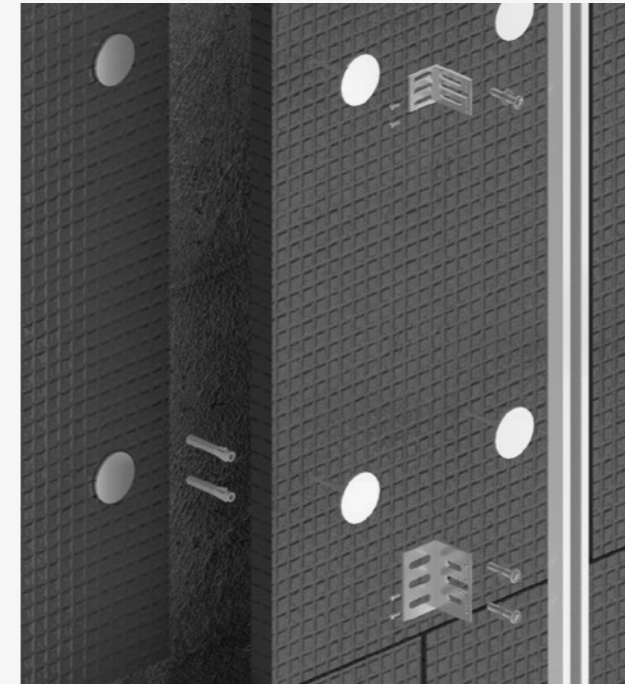
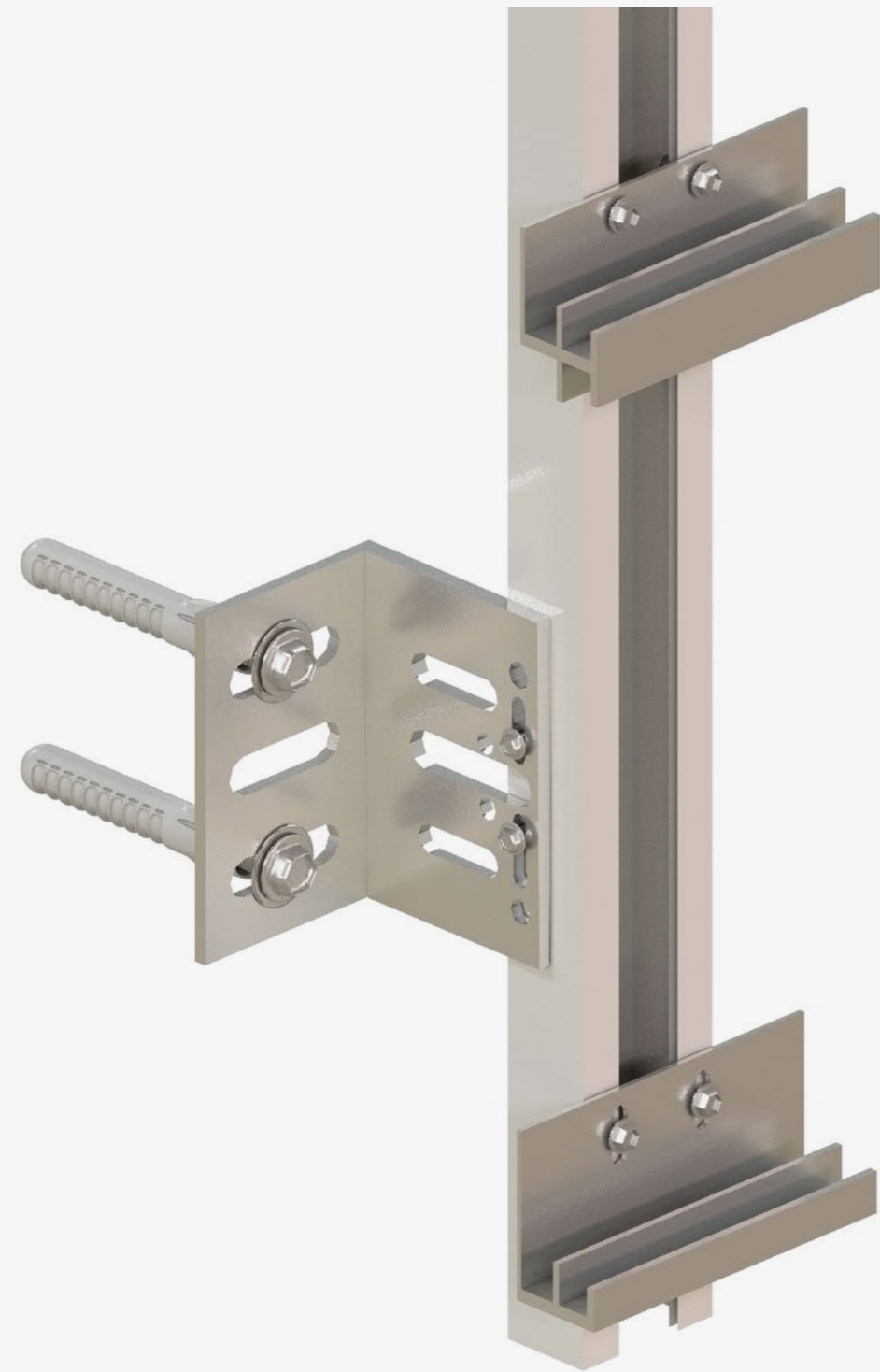


Dekton lintel



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

System structure



Static calculations

Schemes and data to be defined with SDP software

Panels in horizontal or vertical layout. Maximum wind loads shown in the following configurations depend on the grid spacing and distance from drill holes to the edges.

These configurations have been calculated considering a distance of fixing to edges of 200 mm. For further distances and configurations please consult with our Technical Department.

The tables and diagrams presented are based on Dekton calculation software and refer only to Dekton. They cannot be considered as definitive data for on-site installation and it is necessary for a qualified technician to make a specific project calculation for the entire facade

system including support anchors, brackets, profiles, screws and Dekton fixing elements to the facade

How to use the reference configurations:

- Determine the design wind load kN/m².
- Choose the table according to the fixing system and Dekton thickness.
- Select the closest design wind load. The wind load chosen should not be less than actual requirements.
- Select a reference configuration showing maximum spacing between fixings.

Complete configuration table

Dekton 12 mm

| Design wind load kN/m ² | Horizontal | Spacing between top/ bottom clips (mm) | Spacing between clips (mm) |
|------------------------------------|------------|--|----------------------------|
| 5,5 | H7 | 170 | 450 |
| 2 | H5 | 400 | 450 |
| 1,5 | H3 | 600 | 450 |
| 1 | H1 | 700 | 450 |

Dekton 20 mm

| Design wind load kN/m ² | Horizontal | Spacing between top/ bottom clips (mm) | Spacing between clips (mm) |
|------------------------------------|------------|--|----------------------------|
| 6 | H6 | 350 | 450 |
| 2 | H4 | 500 | 450 |
| 1,5 | H2 | 650 | 450 |
| 1 | H1 | 700 | 450 |

Layout

The design wind loads that are compared to the reference design wind loads provided in this document must have factors on the wind load applied to the characteristic values according to the applicable standards and regulations.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system to withstand the demands.

Design wind loads and fixing distances should be calculated per local standards, regulations and certificates applicable, with further testing if required.

The project competent technician/ designer must consider the coefficients of increase of actions and reduction of resistance of materials, as well as the calculation of anchors to tension, shear, and combined tension and shear loads as applicable.

Cosentino does not provide static calculations for projects.

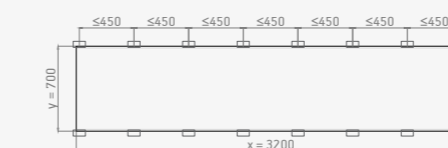
Cosentino will not accept any liability whatsoever for any direct or indirect damage resulting from any errors, omissions or miscalculations of the static calculations for the project.

There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.

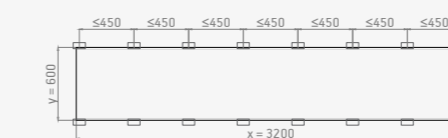
The configurations shown are valid when using the profiles and grooves indicated below. Any other groove or profile shall be validated by a project-specific test to be carried out by the Technical Management (pages 15 and 19 of the ETA).

12 mm

HORIZONTAL CONFIGURATION



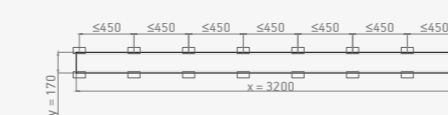
H1. Max. Design wind load: 1 kN/m²



H3. Max. Design wind load: 1,5 kN/m²



H5. Max. Design wind load: 2 kN/m²



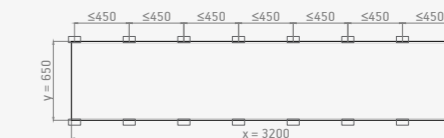
H7. Max. Design wind load: 5,5 kN/m²

20 mm

HORIZONTAL CONFIGURATION



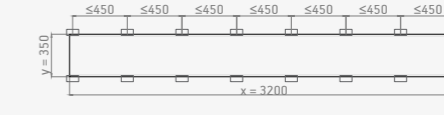
H1. Max. Design wind load: 1 kN/m²



H2. Max. Design wind load: 1,5 kN/m²



H4. Max. Design wind load: 2 kN/m²



H6. Max. Design wind load: 6 kN/m²

CASE STUDY

Building facade in Bergamo

Bergamo, Italy

Material

158 m² Dekton Entzo

Installation system

DKT3

Thickness

12 mm



Dekton provides a solution to the structural problems of this Italian facade

It was necessary to find a material as beautiful as natural stone and with a finish similar to Calacatta. The wide range of Dekton colours made it possible to find the closest finish to the original cladding: Entzo. The result is the same chromatic and 'natural' stone effect required by municipal and provincial authorities for areas of historic interest.



In short, Dekton ventilated facades are perfect both for the refurbishment of existing cladding and for new projects. There are five properties that make Dekton the perfect solution for ventilated facades:

1. Lightweight;
2. Large format slabs (Jumbo format 330 x 163 cm);
3. Quick installation;
4. Natural appearance;
5. High static and architectural performance.



Delfin Tower, Benidorm, Spain

DKBG

Mechanical or mechanical-chemical systems with double back grooving

DKBG is a mechanical or hybrid fixing system (mechanical with chemical reinforcement).

The type of mechanical anchorage is made up of a series of clips of variable length with two inclined flanges that are fixed to the discontinuous grooves of greater or lesser length made in

the rear face of the piece, and later they are fitted and fixed within a rail horizontal with hook function.

In this type of hybrid system, two hanger profiles (upper and lower) or a clamp-type clip are chemically and mechanically anchored to the material by means of an adhesive and an inclined



or straight grooving with more or less travel on the back of the piece, forming a metal hook.

In both types of systems, the profiles with support rail function that are assembled to the uprights of the substructure ensure the stability of the fixing under heavy loads.

Mechanical or hybrid (mechanical + chemical) fixation with dovetail-shaped grooves on the back of the pieces.



CASE STUDY

ToHa by Ron Arad and Avner Yashar

Tel Aviv, Israel

Materials

28,000 m² of Strato and 6 Dekton iD colours

Facade system

DKBG

Thicknesses

12 and 20 mm

For the ToHa building project in Tel Aviv, Israel, over 28,000 m² of Dekton by Cosentino has been used to clad the facade, flooring, lifts, ceilings and interior partitions.

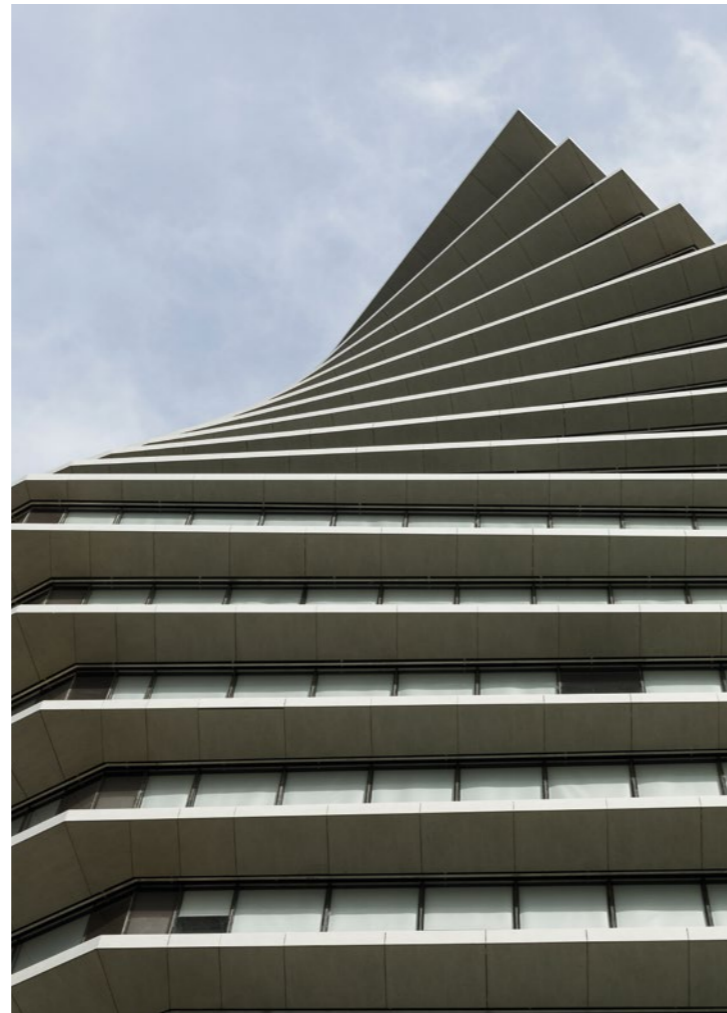
Located in the centre of Tel Aviv at the junction of two shopping streets, the ToHa building reaches 29 storeys high. Its unique, faceted profile, inspired by the geometry of an iceberg, was designed by Ron Arad together with Avner Yashar's local team to house an office complex that includes a public garden, viewing point and restaurant.

Over 28,000 m² of Dekton by Cosentino was used to clad the building's facade, flooring, elevators, ceilings and interior partitions. The pieces, formed by more than 10,000 different types, were manufactured and cut at Cosentino's headquarters in Cantoria (Almeria, Spain) and transported by ship to Israel.

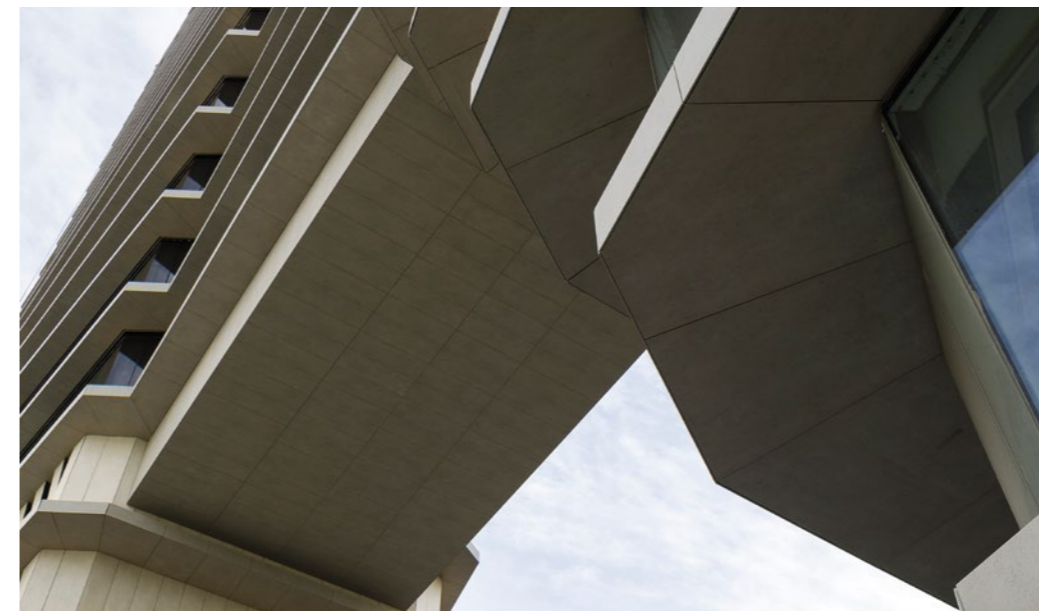
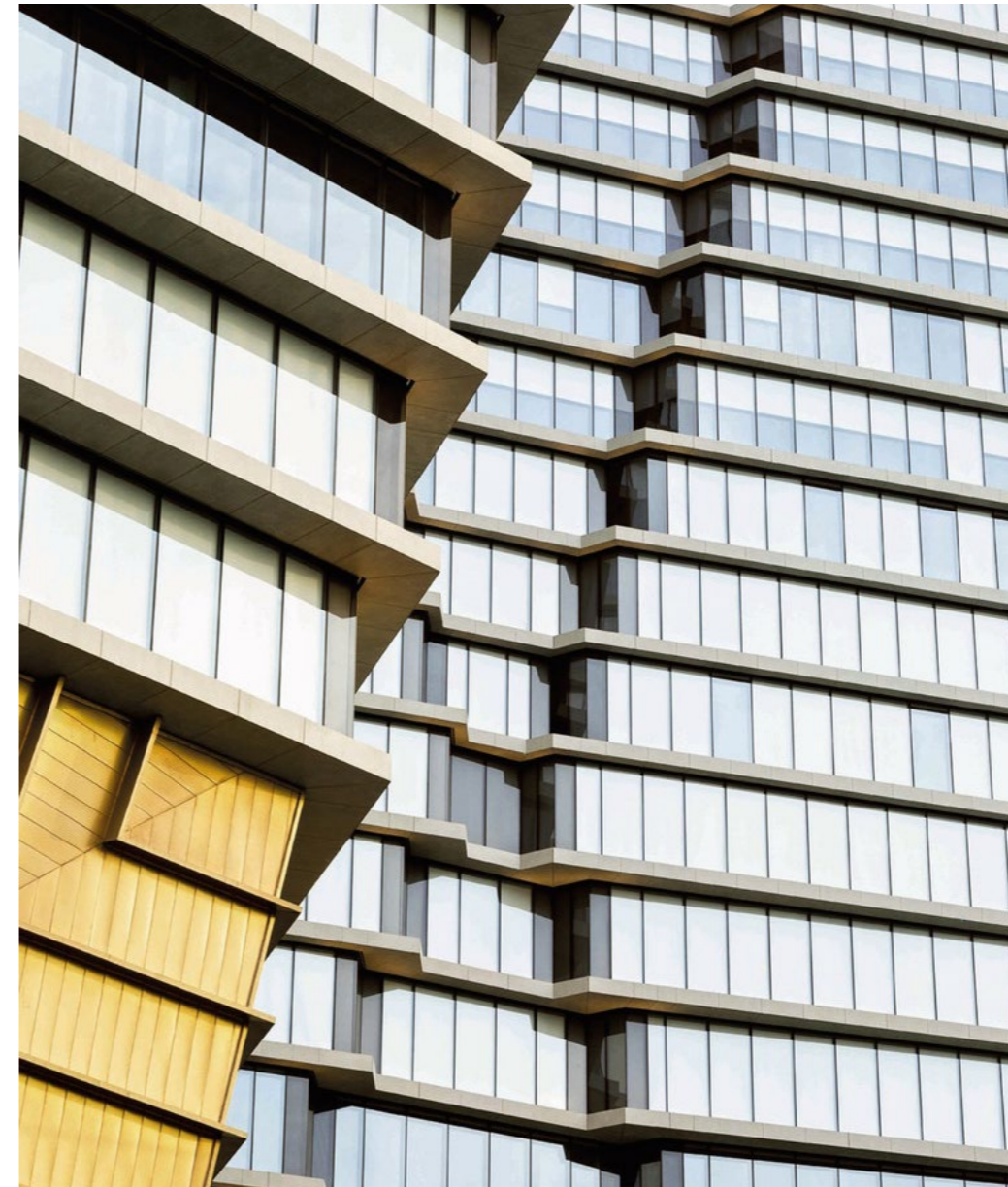


Architectural and decorative aspect of the project.

A key strategic focus of the project was to reduce the building's surface area at street level to create a large garden area, improving the quality of the surrounding area for the public. As a result, the building rises up on two huge legs that widen progressively, framing a spiralled profile. Geometrically versatile, Dekton adapts with precision to the complexity of the building, thanks to its infinite range of formats, from minimal thickness to maximum surface areas.



On the intermediate floors, the broken perimeter of the concrete slabs is clad with panels 12 millimetres thick and up to two metres wide which, thanks to minutely accurate cutting, define the vertexes and edges exactly to create an image of perfection.



From a functional point of view, this ambitious project turns the traditional layout of an office block on its head, locating facilities on the ground floor to free up space at the top. This way, the upper levels can be dedicated to leisure use and the offices are distributed up from the seventh floor, optimising access to natural light and views.

The technical foundations are clad using a unique ventilated facade system that alternates the orientation of intersecting Dekton panels.

This application allows for the passage of air between the large-format (320 x 70 cm) pieces and creates a uniform frontage that gives texture and depth to the elevation. Cosentino also offers the opportunity to custom-make a personalised palette of six colours, based on the Strato model, that create a progressive colour gradation from the lower part upwards.



Inside, a huge 30-metre atrium acts as a vestibule and meeting point. The offices face outwards, through a glass facade, and inwards towards the central courtyard lit by a large light well.

Finishes have been carefully chosen to create a comfortable workplace and coherent corporate image. The possibility to produce large-format Dekton pieces for floors, walls and ceilings allows the number of joints to be reduced and the sense of continuity to be maximised.



Project details

Name: ToHa
Location: Tel Aviv, Israel
End date: 2019
Architecture: Arad Architects, Yashar Architects
Collaborators: Buro Happold Engineering, Israel David Engineering (Consultant structural engineer)
Client: Gav-Yam Amot Totseret Ha-Aretz

Cosentino materials

Application: Roof
Material: Dekton by Cosentino
Colour: Strato
Thickness: 4 mm
Quantity: 1,800 m²
Format: 140x30 cm

Application: Flooring
Material: Dekton by Cosentino
Colour: Soke, Sirius, Strato
Thickness: 8 and 20 mm
Quantity: 3,500 m²
Format: Various: 320x144, 140x80, 80x170 cm

Application: interior walls/facade
Material: Dekton by Cosentino
Colour: Zenith, Sirius, Kadum, Spectra, Strato
Thickness: 8 mm
Quantity: 2,000 m²
Format: Various: 80x270, 70x300

Application: Ventilated facade
Material: Dekton by Cosentino
Colour: Strato, Spectra
Customised colours: Totzeret1, Totzeret2, Totzeret3, Totzeret4, Totzeret5, Totzeret6
Thickness: 12 mm
Quantity: 20,000 m²
Format: various

Photography credits: Fernando Alda



CASE STUDY

Sea Towers

Barcelona, Spain

Material

17,000 m²
Dekton Nayla

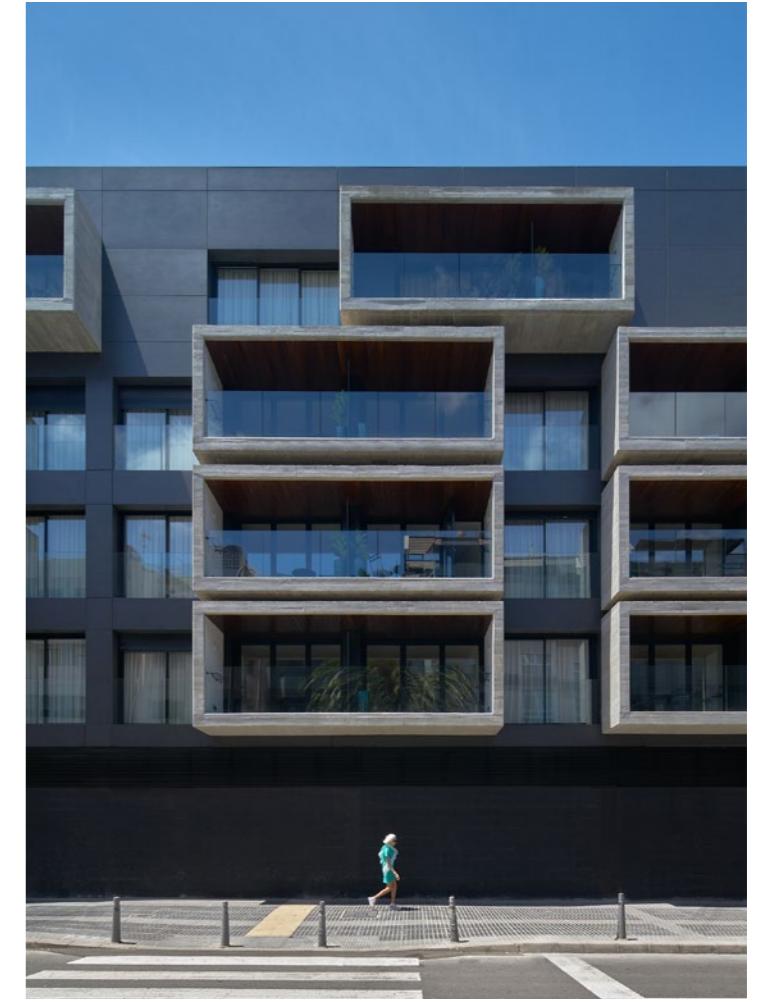
Facade system

DKBG

Thickness

8 mm





CASE STUDY

Marina Guanarteme

Las Palmas de Gran Canaria.
Spain

Materials

671 m² Dekton Eter, Domoos and Soke

Facade system

DKBG-X and DKC

Thicknesses

4, 8 and 20 mm

CASE STUDY

Art Hotel Las Palmas

Las Palmas de Gran Canaria,
Spain

Materials

1,200 m²
Dekton Aeris and Dekton Eter

Facade system

DKBG

Thickness

8 mm





CASE STUDY

Delfin Tower

Benidorm, Alicante. Spain

Material

3,400 m² Dekton Zenith

Facade system

DKBG

Thickness

8 mm

DK T4

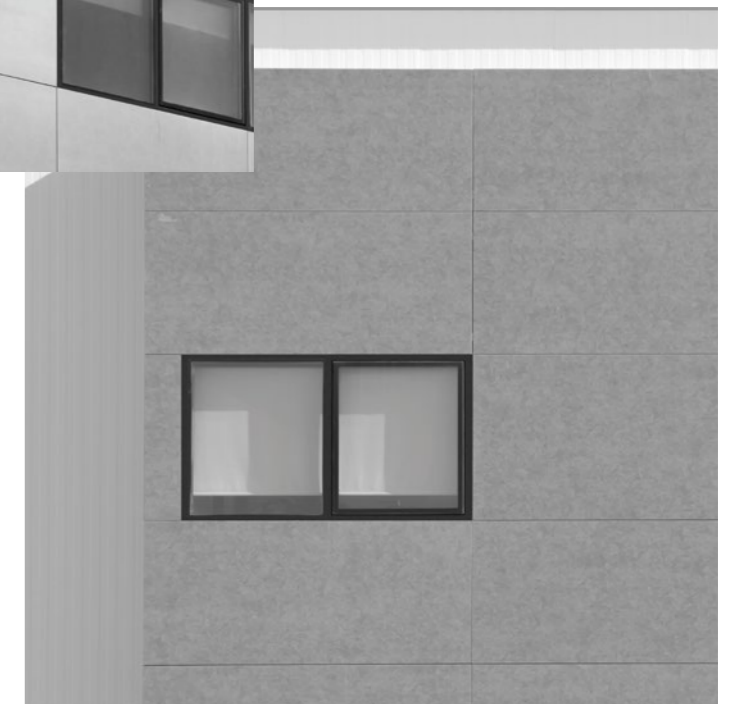
**Visible clip
fixing system**

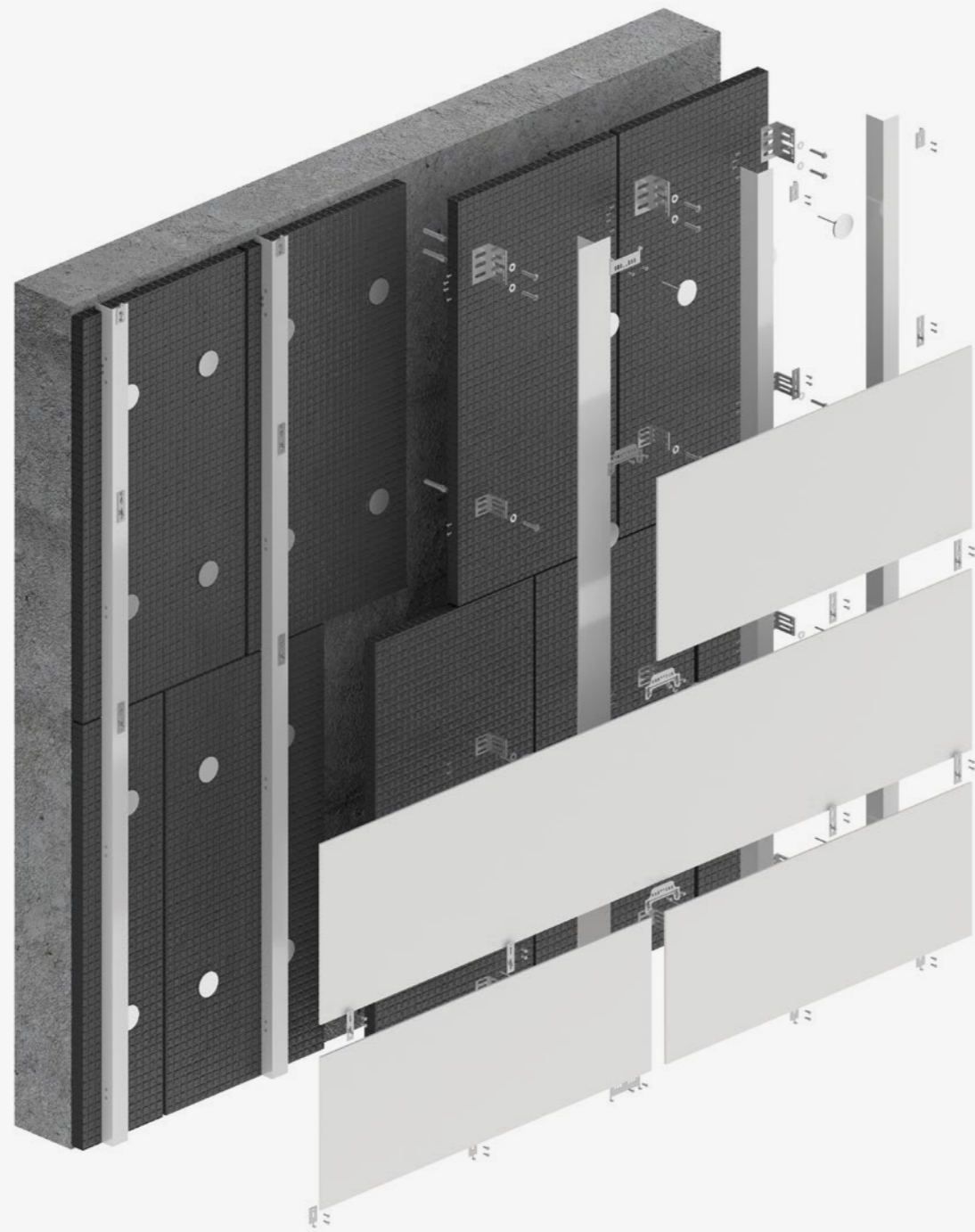
In the DKT4 system of visible fixing, the piece is shown as it is, with the fixing tabs of the upper and lower pieces visible to the eye. The clips hold both pieces and keep them in line with the plane of the facade, as well as maintaining the distances (joints) between consecutive pieces. Although this type of fixing is

fairly flexible in adapting to the thickness of the material, it is ideal for the smaller sizes, lighter weights and smaller thicknesses.

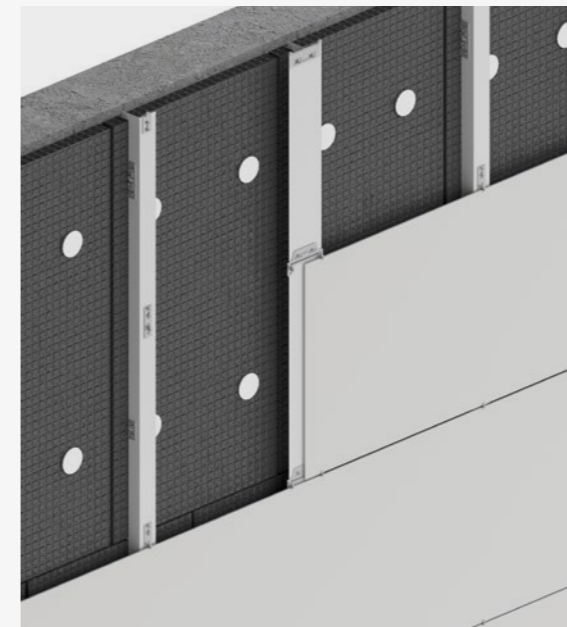


Mechanical fixing
using visible clips
that hold the pieces.

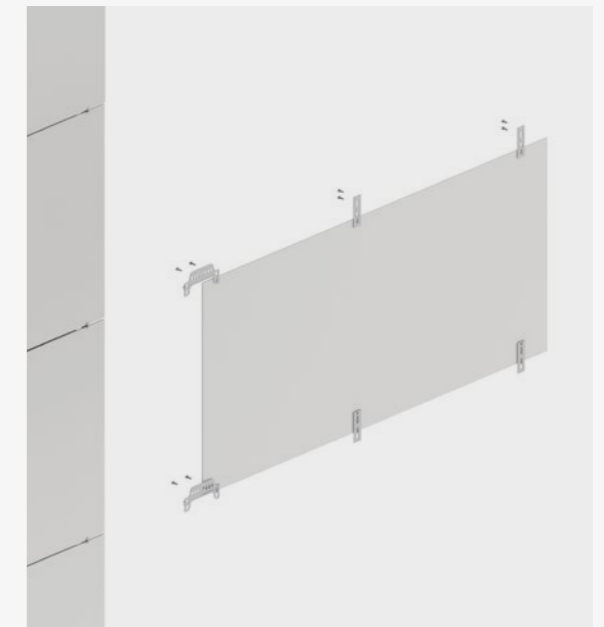




Bottom and middle clips



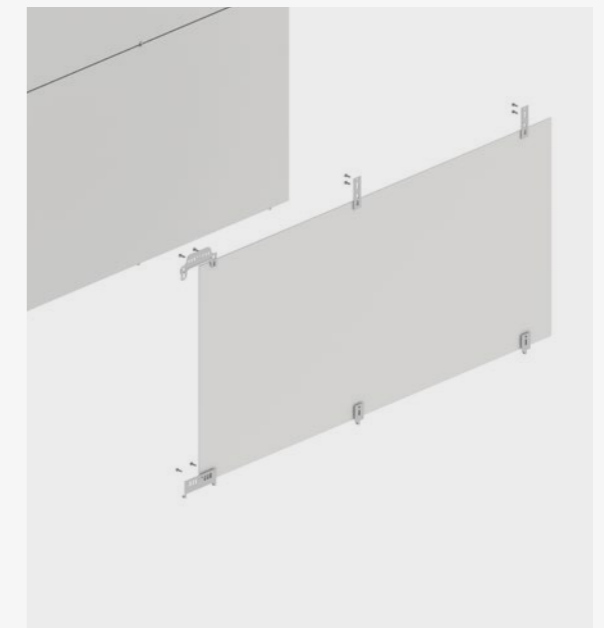
Middle clips



Joints



Bottom clips



Application

For the installation of Dekton 8 mm in metal structures using a visible fixing system.

The information provided here is intended as a general guide only as the use of mechanical anchors requires verification of mechanical calculations, which are beyond the scope of this guide.

This guide does not address the performance of the clip fixing structure. It is the responsibility of the supplier of the structure to ensure that the system meets the requirements of the project.

The design and dimensions of the substructure depend on the facade construction and the system used. The distances between the profiles of the substructure and their width are determined by the load to be supported both by suction and by the weight of the Dekton slab itself. The distances specified in this document are for information purposes only and shall be validated by the system provider.

Each project requires a specific and detailed design. The substructure shall be designed by a third party in accordance with all relevant standards and taking into account the design and its execution. Project specific calculations and drawings shall be prepared by a qualified and competent person.

System materials and accessories

Dekton Protek by Cosentino slab

Ultracompact Dekton Protek 8 mm slabs have a mesh adhered to its rear face to prevent slab detachment and weigh less than 22 Kg/m² for 8mm thickness, allowing the use of visible mechanical anchors for application in ventilated facades.

Cosentino restricts the use of this mechanical solution to slab sizes up to 3200 x 710 mm (Horizontal x Vertical).

Physical features of Dekton in accordance with ISO 10545

| | |
|-------------------|------------------------|
| Thickness | 8 ± 5 % mm |
| Water absorption | < 0,1 % |
| Flexural strength | > 45 N/mm ² |

System description

Visible system

Supporting substructure made up of; metal brackets, adjustable to correct unevenness and compatible with different types of supports, can include thermal break insulators; vertical metal profiles of different sections according to the required application.

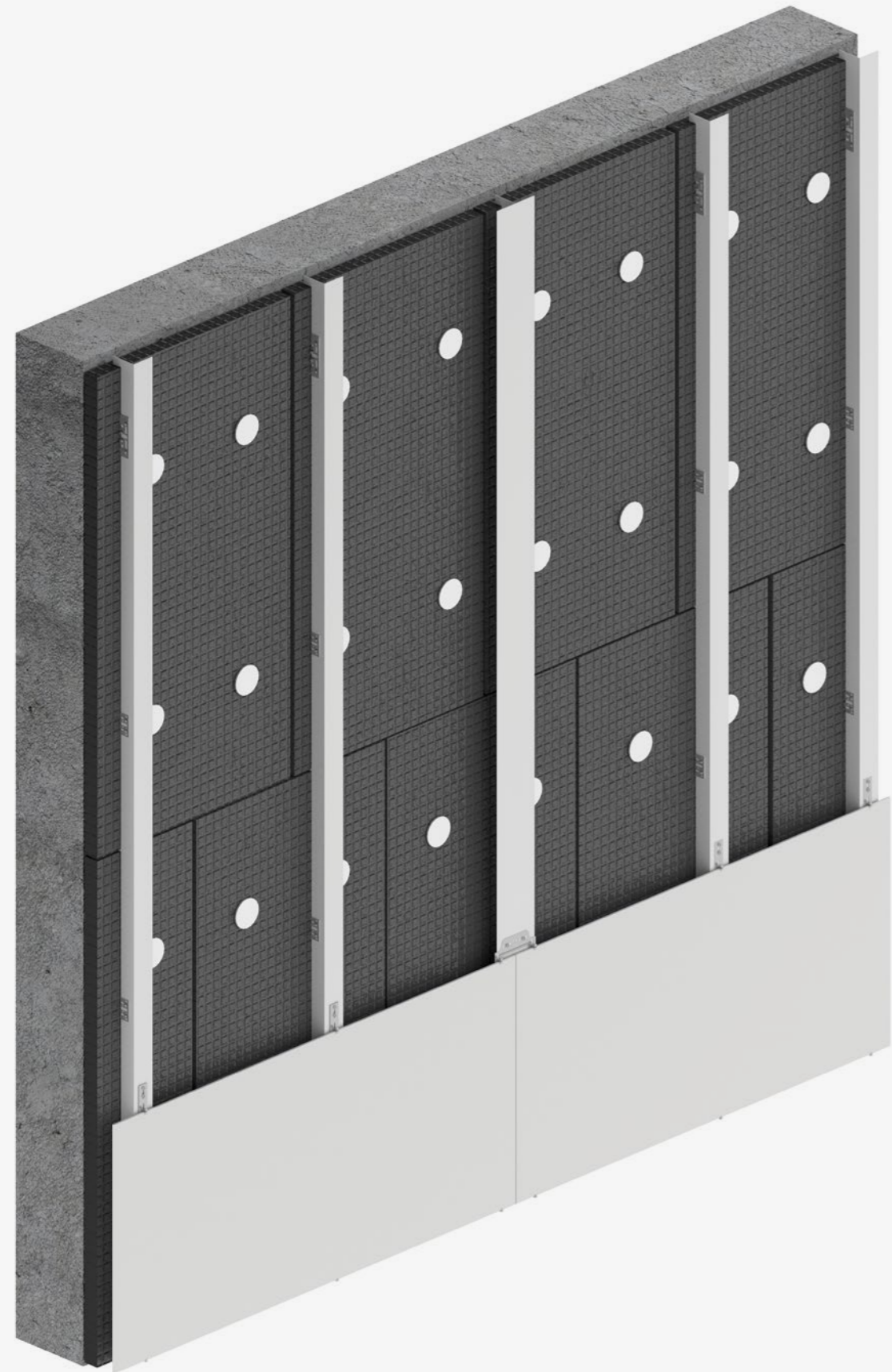
Installation process

Brackets installed on the surface to be covered by means of a mechanical system or welding; vertical profiles installed on brackets with a system of regulation and fixing, by means of specific screws*; visible accessory of clip type with a system of regulation and fixing, installed by means of specific screws* on the vertical profiles; Installation of the lower edge of the Dekton panel on a visible accessory such as the clip type; installation of the lock on the upper part, visible accessory such as clip type.

*Specific screws according to the structural calculation of each project or indicated by the supplier of the substructure.



System structure



General fixing instruction

1. Define the layout and position of the clips over the vertical substructure.
2. In some clip systems, a spring is installed into the vertical profiles before fixing the clips, in order to avoid looseness between the Dekton piece and vertical profiles.
3. Screw the bottom clips to the vertical profiles.
4. Place the Dekton piece with grooved edges laying on the clips, that will support the piece weight.
5. Place the intermediate clips, inserting the Dekton pieces into the clip tabs and screw the clips to the vertical profiles.
6. Repeat the process by placing another piece over the installed clips and fixing with upper clips.
7. Finish with the top pieces by installing a top-end clip with a slotted hole, by screwing them to the vertical profile, and fixing the piece into the clip tab by adjusting its position vertically.
8. Maximum cantilever distance of horizontal rails must be defined by system supplier.

Installation sequence from one side to another and from bottom to top

Fig. 1

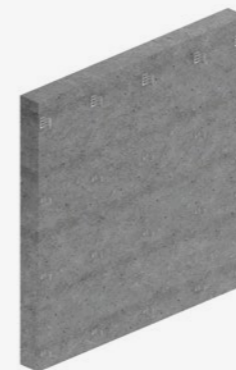


Fig. 2

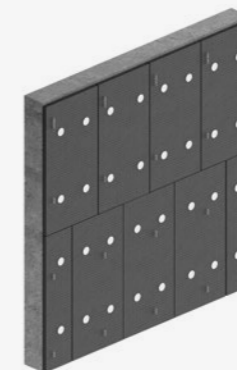


Fig. 3

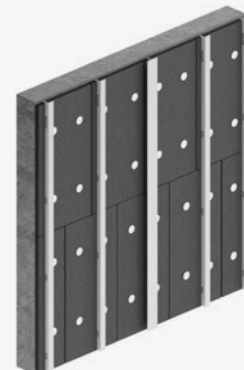


Fig. 4



Fig. 5

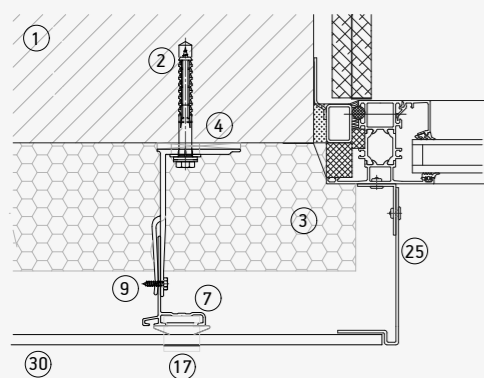


Fig. 6

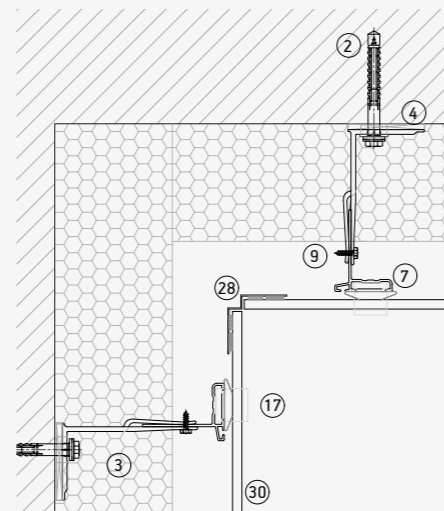


Horizontal section

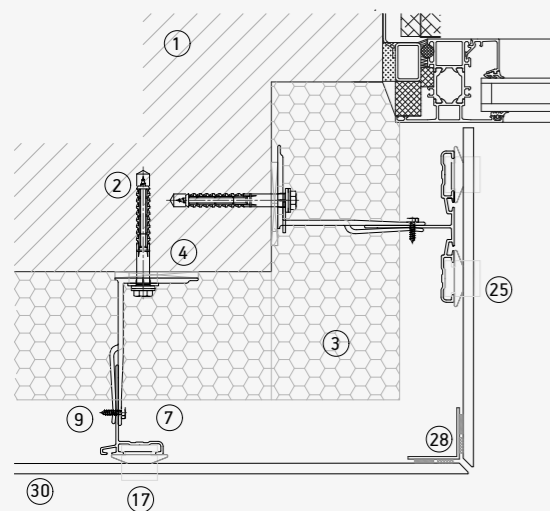
Metallic jamb



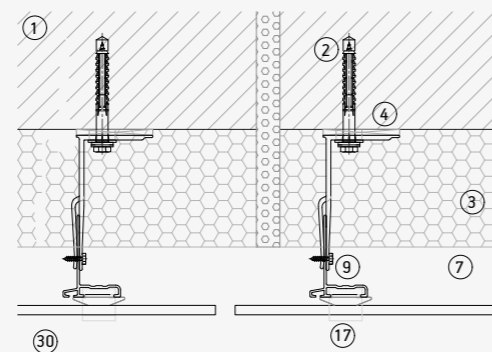
Internal Corner



Dekton jamb



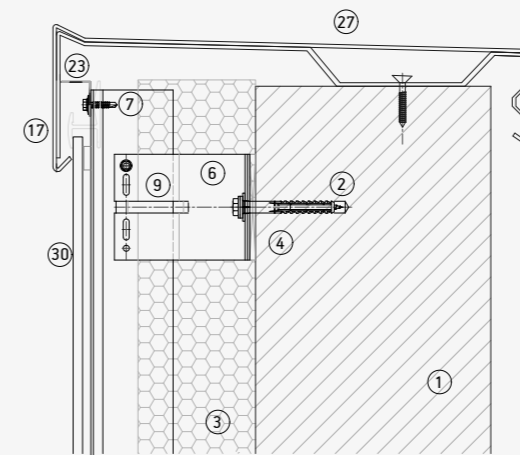
Vertical expansion joint



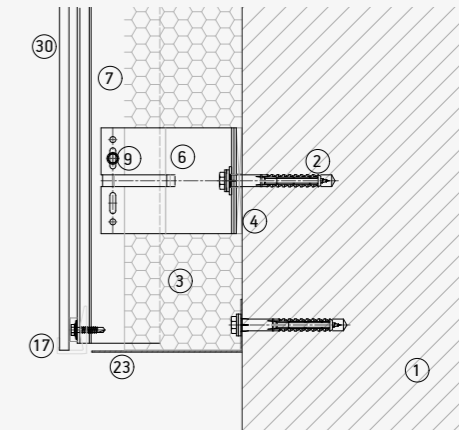
- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Vertical section

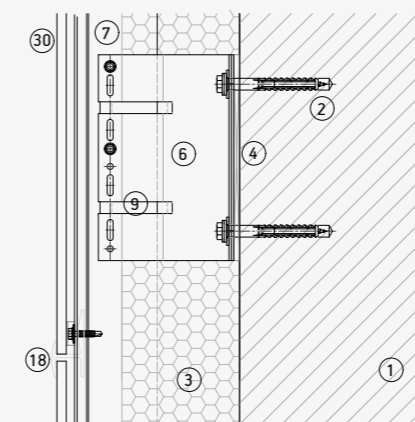
Upper detail



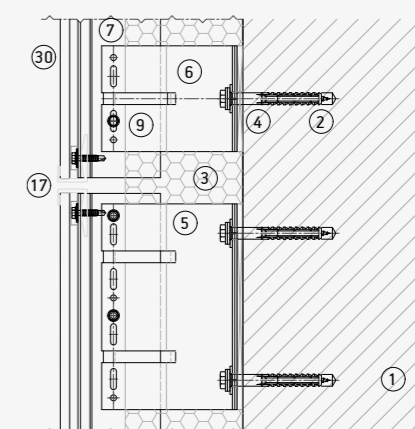
Bottom detail



Horizontal joint



Joint between profiles



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Static calculations

Schemes and data to be defined with SDP software

Panels in horizontal layout. Maximum wind loads shown in the following configurations depend on the grid spacing and distance from drill holes to the edges.

For further distances and configurations please consult with our Technical Department. The results consider a partial safety factor applied to the resistance of Dekton material minimum recommended of 1.8 for this system.

The tables and diagrams presented are based on Dekton calculation software and refer only to Dekton. They cannot be considered as definitive data for on-site installation and it is necessary for a qualified technician

to make a specific project calculation for the entire facade system including support anchors, brackets, profiles, screws and Dekton fixing elements to the facade

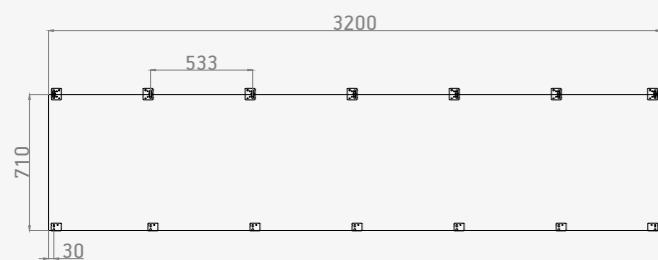
How to use the reference configurations:

- Determine the design wind load kN/m^2 .
- Choose the table according to the fixing system and Dekton thickness.
- Select the closest design wind load. The wind load chosen should not be less than actual requirements.
- Select a reference configuration showing maximum spacing between fixings.

Wind loads and configurations for Dekton Protek 8mm

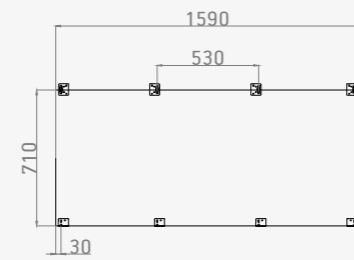
| Configuration | Horizontal (mm) | Vertical (mm) | Anchors | Result (Pa) |
|---------------|-----------------|---------------|---------|-------------|
| C1 | 3.200 | 710 | 14 | 3.500 |
| C2 | 1.590 | 710 | 8 | 4.000 |
| C3 | 600 | 710 | 4 | 5.400 |
| C4 | 3.200 | 470 | 14 | 5.300 |
| C5 | 1.590 | 470 | 8 | 6.100 |
| C6 | 600 | 470 | 4 | 6.157 |
| C7 | 3.200 | 355 | 14 | 7.000 |
| C8 | 1.590 | 355 | 8 | 8.100 |
| C9 | 600 | 355 | 4 | 10.000 |
| C10 | 3.200 | 1200 | 14 | 2.100 |

Configuration C1



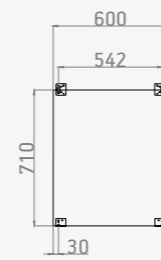
C1. Max. Design wind load: 3,5 kN/m^2

Configuration C2



C2. Max. Design wind load: 4 kN/m^2

Configuration C3



C3. Max. Design wind load: 5,4 kN/m^2

Layout

The design wind loads that are compared to the reference design wind loads provided in this document must have factors on the wind load applied to the characteristic values according to the applicable standards and regulations.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system to withstand the demands.

Design wind loads and fixing distances should be calculated per local standards, regulations and certificates applicable, with further testing if required.

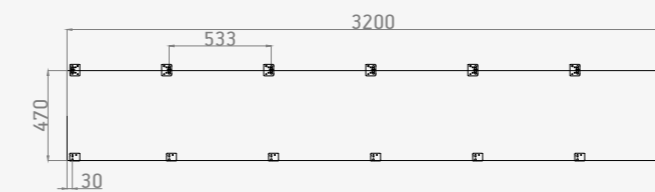
The project competent technician/ designer must consider the coefficients of increase of actions and reduction of resistance of materials, as well as the calculation of anchors to tension, shear, and combined tension and shear loads as applicable.

Cosentino does not provide static calculations for projects.

Cosentino will not accept any liability whatsoever for any direct or indirect damage resulting from any errors, omissions or miscalculations of the static calculations for the project.

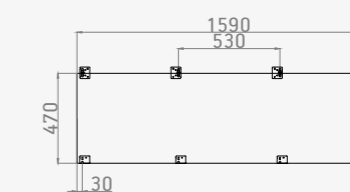
There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.

Configuration C4



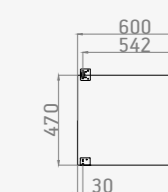
C4. Max. Design wind load: 5,3 kN/m^2

Configuration C5



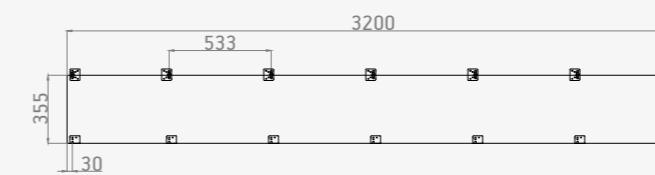
C5. Max. Design wind load: 6,1 kN/m^2

Configuration C6



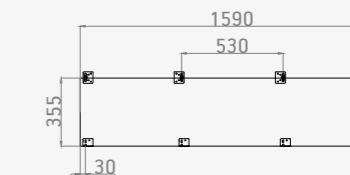
C6. Max. Design wind load: 6,157 kN/m^2

Configuration C7



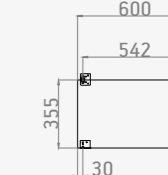
C7. Max. Design wind load: 7 kN/m^2

Configuration C8



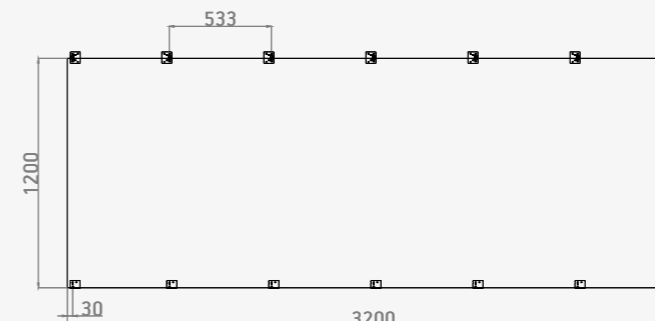
C8. Max. Design wind load: 8,1 kN/m^2

Configuration C9



C9. Max. Design wind load: 10 kN/m^2

Configuration C10



C10. Max. Design wind load: 2,1 kN/m^2

Dekton material can withstand this fixing distances configuration. The resistance and load capacity of the clamps should be revised per supplier's info.

Fixing: Visible clip

For the fixing of 8 mm Dekton slabs, Cosentino only supplies the clips and screws needed to fix the clips to the structure.

Clip fixing system

The fastening for the Dekton cladding is done by means of DKT4 clips. These clips are manufactured in stainless steel AISI-304. The DKT4 clips are a visible system as the clip tabs are exposed, forming a 6 mm horizontal joint.

With the DKT4 clips, no machining is required to fix the 8 mm Dekton slabs. The Dekton surface is fixed between the tabs of the clip and the supporting surface of the vertical profile.

Two different sizes of clips are available: Double and Single.

The clips are fixed to the profile by means of two 4.2 x 14 self-drilling screws in AISI-304 stainless steel, available on request. For better integration into the overall appearance of the facade, clips are supplied lacquered in a similar colour to the Dekton slab.

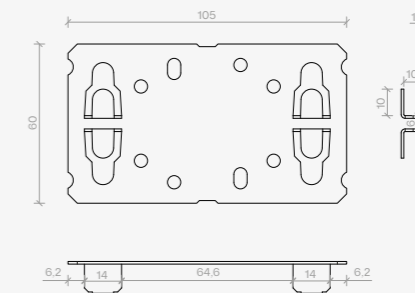
Physical features of tested mechanical fixing in accordance with DIN EN 10028-7

| | |
|--|-----------------------------|
| Steel type | 304L |
| Modulus of elasticity | 193,000 N/mm ² |
| Mechanical resistance (R _m) | 500 - 700 N/mm ² |
| Limit of elasticity (R _{p0.2}) | 220 N/mm ² |
| Elongation | 45 % |
| Brinell Hardness HB | 82 Brinell |
| Density | 7,90 g/cm ³ |
| Thermal expansion coefficient | 17,3 · 10 ⁻⁶ °C |

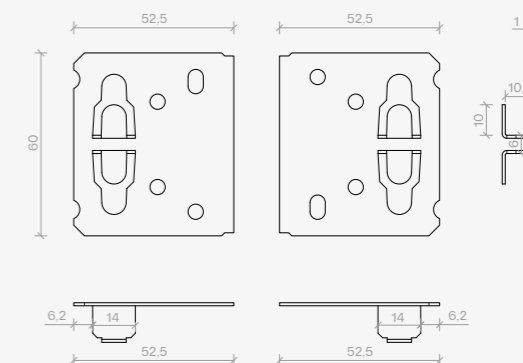
| CLIP TYPE | PERMISSIBLE LOAD |
|--------------------|------------------|
| Starter / End clip | 200 N |
| Middle clip | 110 N |

Visible clips

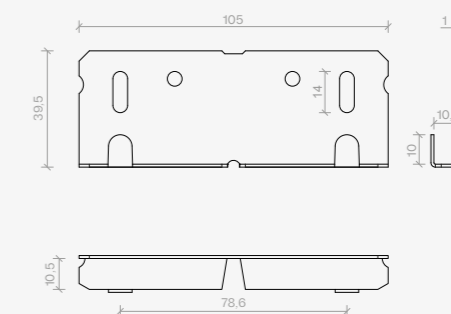
Double middle clip



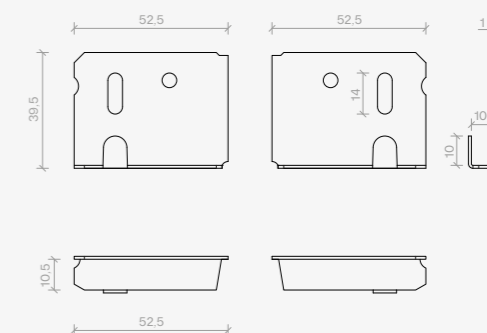
Single middle clip



Double starter/end clip



Single starter/end clip



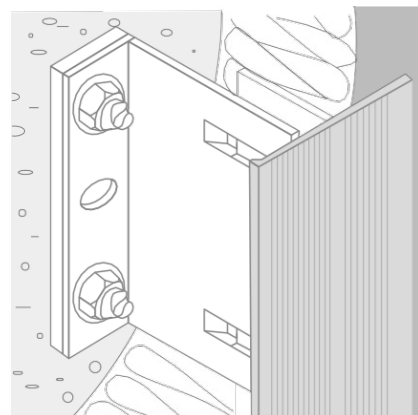
Profile systems

The recommended profile types for this system are listed below.

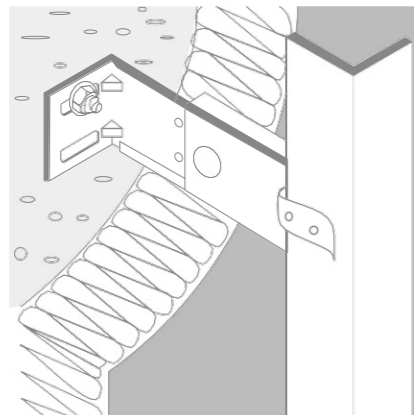
Dekton can be fixed with the DKT4 (Visible clip) system using aluminium profiles (6060 or 6063) with a minimum thickness of 2 mm.

T-shaped aluminium profiles will be used for vertical joints with a minimum width of 110 mm and T- or L-shaped aluminium profiles for intermediate vertical joints with a minimum width of 40 mm.

Metal substructure



Aluminium



Galvanised steel

Design recommendations

The dimensions of the perpendicular substructure depend on the facade construction. The distances between the profiles of the substructure and their width are determined by the load to be supported both by suction and by the weight of the Dekton slab itself. The distances specified in this document are for information purposes only and shall be validated by the system provider.

Each project requires a specific detailed design. The substructure shall be designed by a third party in accordance with all relevant standards and taking into account the design and its execution.

Project specific calculations and drawings shall be prepared by a qualified and competent person. Cosentino cannot provide or approve any structure design or anchor layout.

Cosentino only provides information on the behaviour of the slab if the anchoring system detailed in this guide (Clip and Screw) is used. Any variation in any of the elements used, which are listed in this guide, could affect the results obtained.

It is recommended that an engineering company performs the relevant calculations or a project specific test to simulate the specific conditions of each project.

| ELEMENT | PARAMETER | UNIT | VALUE |
|-------------|---|------|-------|
| Dekton slab | Maximum slab height (Vertical height) | mm | 1200 |
| | Maximum horizontal distance | mm | 600 |
| Anchor | Maximum vertical resistance (Weight) | N | 110 |
| | Maximum perpendicular resistance (Wind) | N | 574 |





CASE STUDY

Nonantola Building

Nonantola. Italy

Material

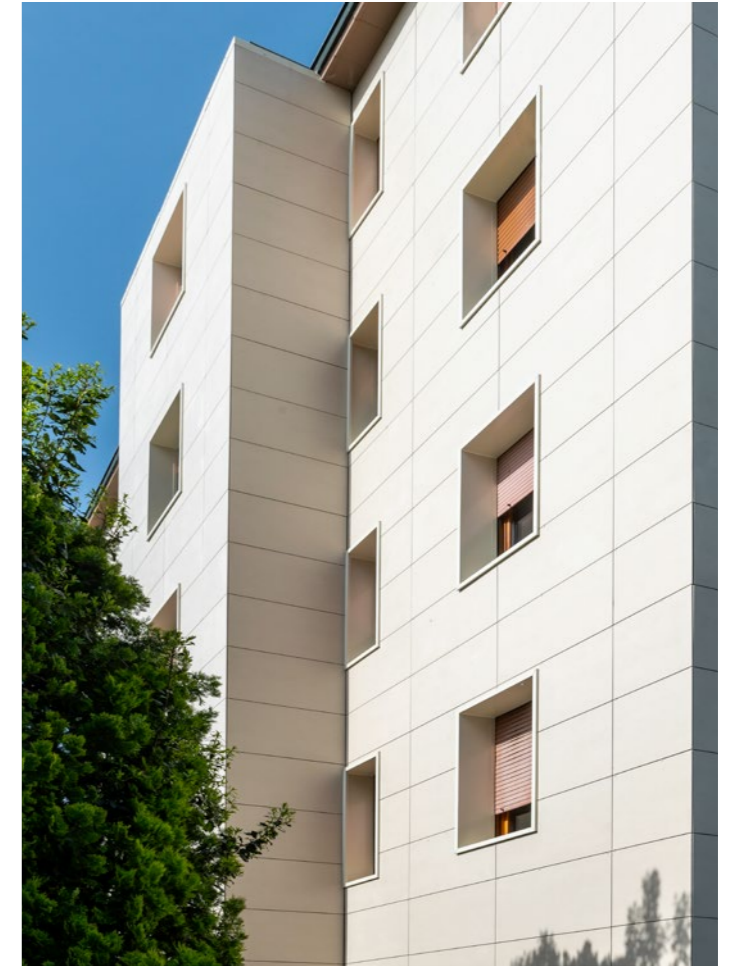
Dekton Sasea
32,292 m²

Facade system

DKT4

Thickness

8 mm



CASE STUDY

Yuvalim Ness Ziona

Ness Ziona. Israel

Material

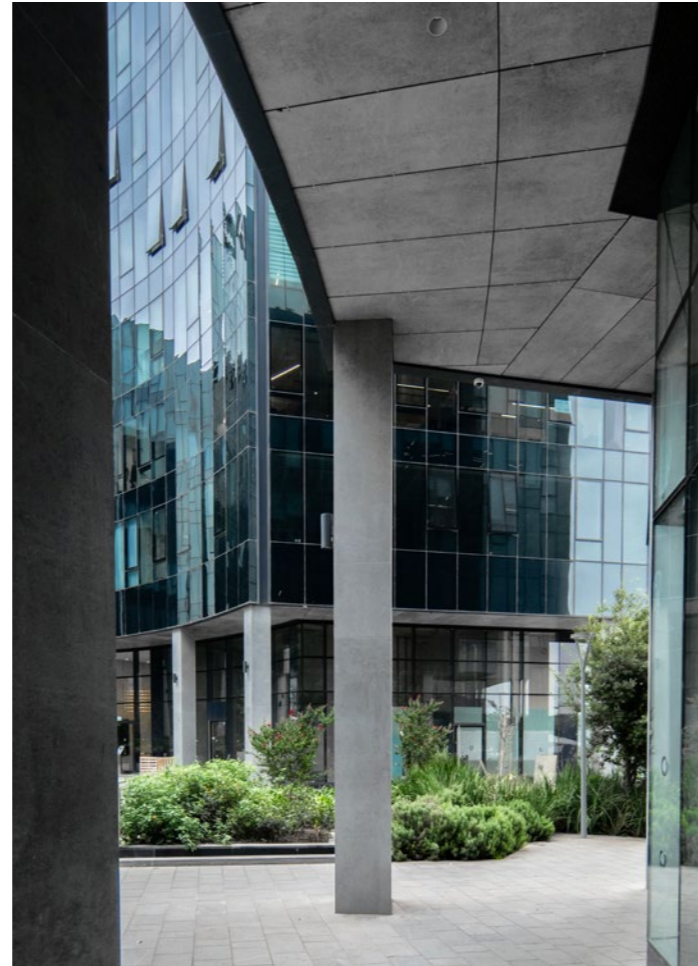
Dekton Lunar and Soke

Facade system

DKT4

Thickness

12 mm





DK R

Rivet fixing system

It is a visible mechanical fixing system using Dekton coloured rivets. Possibility of cutting large slab formats up to full slab formats, both vertically and horizontally, mainly in thicknesses of 4 and 8 mm. To do this, the pieces must be pre-drilled in the workshop or on site with a water supply.

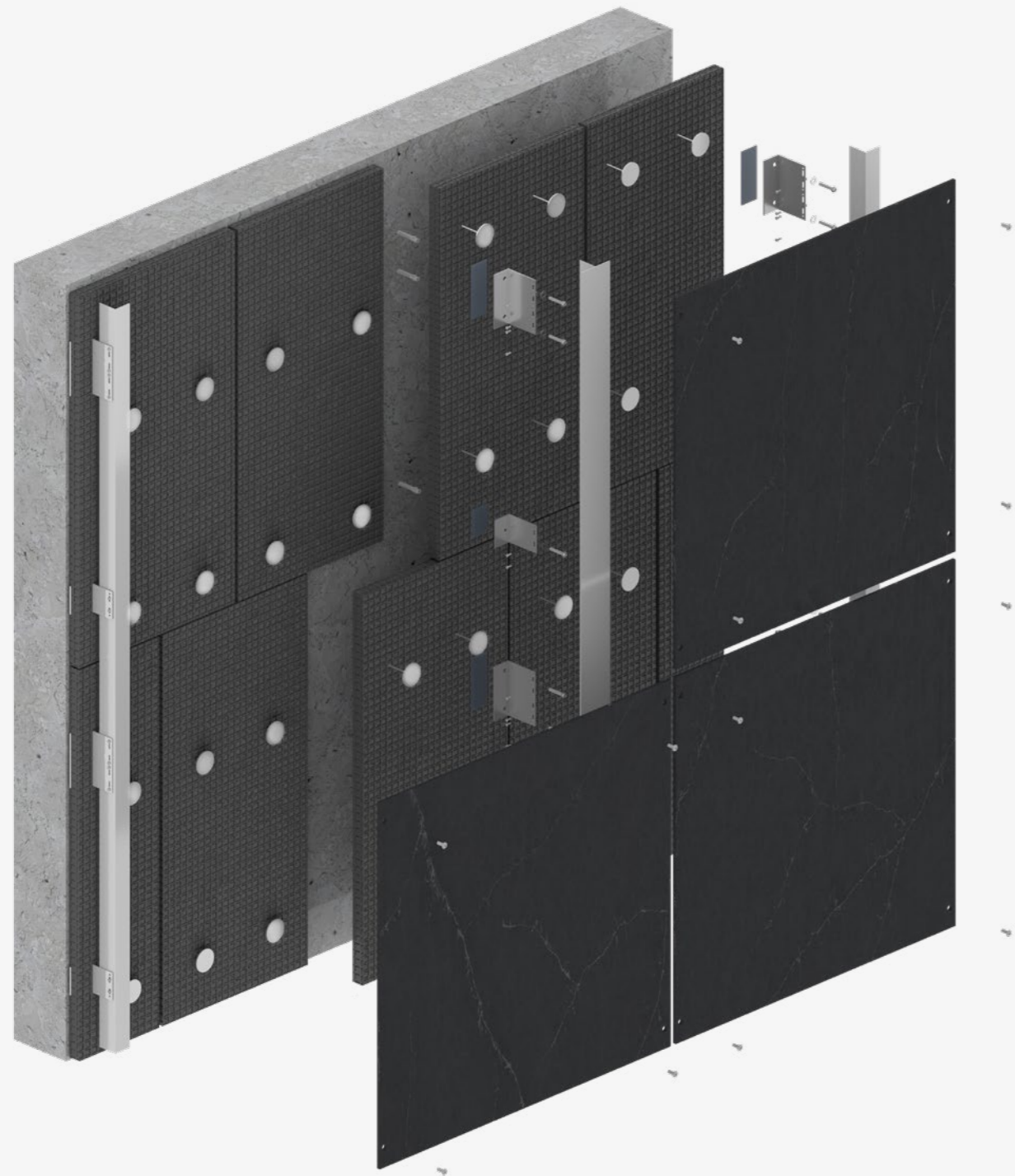
Dry drilling of 4 mm Dekton panels is possible with the right drill bit. Dekton coloured rivets can be supplied by Cosentino so that they blend in better with the overall appearance of the facade and are less noticeable from a distance.



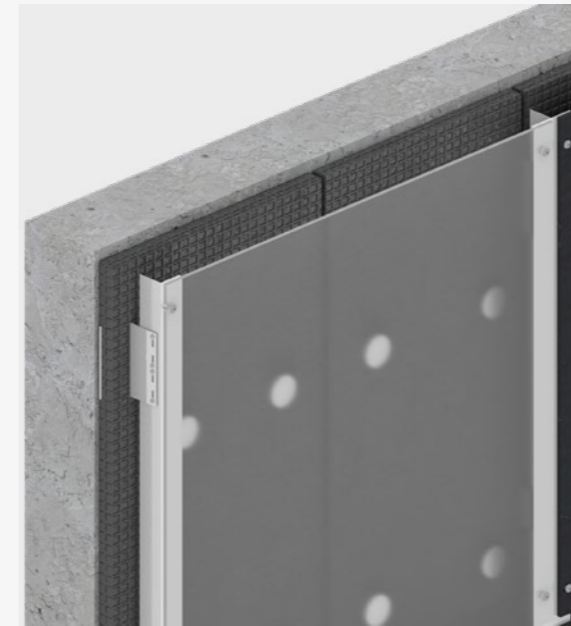
A range of accessories such as fixed point spacers, a self-centering drill bit and a rivet nose piece are required for the correct installation of the panels. All of these can be supplied by Cosentino. The idea of this system is that the rivets do not exert pressure on the piece, but that the piece hangs on the profiles and is always free to move in a way that is compatible with the expansion of the profiles.



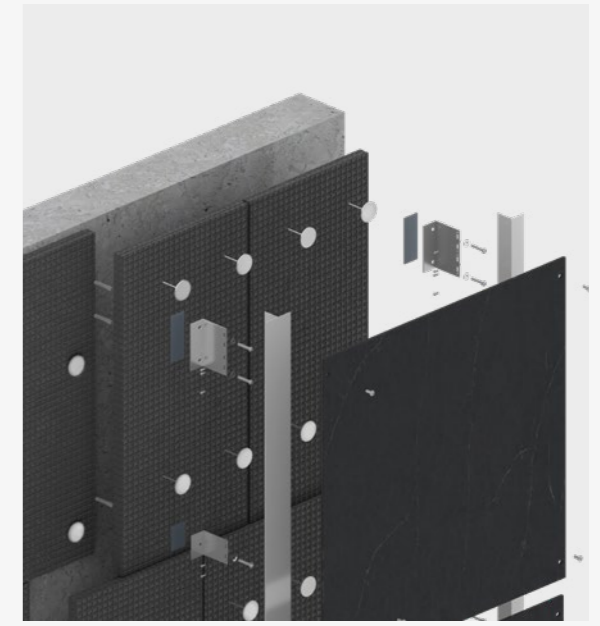
Visible mechanical fixing with rivets.



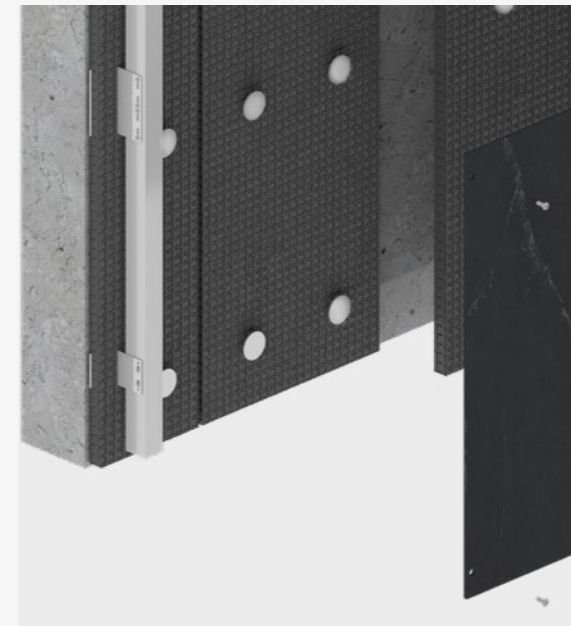
Joint



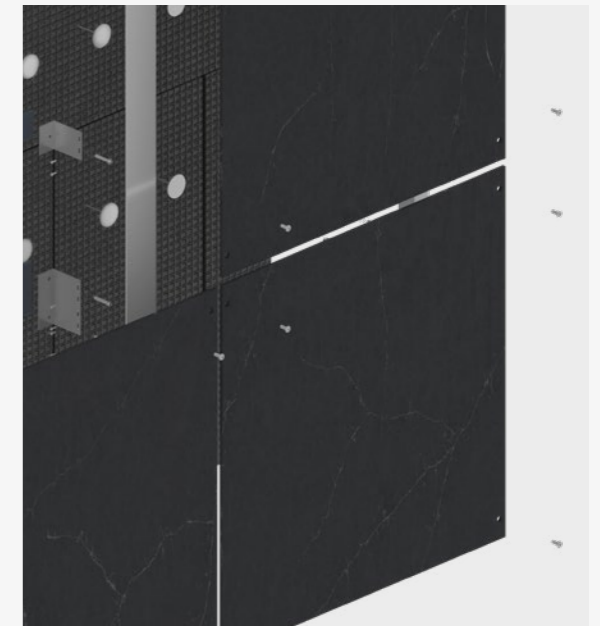
System details



Start detail



System details



System structure



General fixing instruction

1. The vertical profiles are fitted after the general wall brackets have been installed. They must be perfectly level, plumb and free of tension, including the necessary joints between the profiles and the fixed and free fixing points of the brackets indicated in the installation drawings.
2. The Dekton panels are pre-drilled with a 10 mm diameter drill bit in the directions shown in the drawings. The panels must be installed from top to bottom, using temporary horizontal support profiles for correct levelling, following the marked layout lines.
3. **Panel installation:** Once the panel is in place, the hole is drilled in the profile using the self-centering drill bit so that they are concentric. Two fixed points per piece are then placed with a rivet plus cylinder and the remaining ones without cylinder as movable points. This is achieved by using the rivet nose piece, which prevents the rivet head from exerting excessive pressure on Dekton. The use of a pneumatic or cordless riveter is recommended for faster and more efficient rivet installation.
4. It is important to follow all the instructions in the application guide for this system to ensure proper installation of the panel and to maintain warranty coverage.

Fig. 1

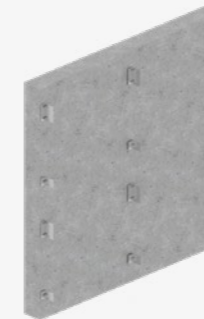


Fig. 2

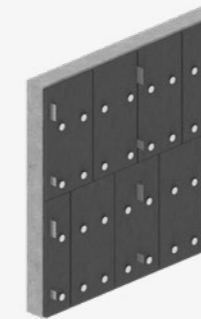


Fig. 3



Fig. 4



Fig. 5



Application

For the installation of Dekton 4 and 8 mm in metal structures using a rivet fixing system.

- The installation of Dekton with this type of system must comply with certain fundamental principles, which will ensure the proper functioning of the system:
- Compliance with the minimum and maximum distances from the fixing to the edge.
 - Provide each slab with two fixed points and the remainder with sliding points.
 - Use a self centering drill bit to place the rivet in the hole and the profile in the Dekton slab.
 - Install the rivet without over-tightening, using the nose piece.

Fixing: Rivet

Cosentino recommends two types of rivets for fixing Dekton 4 mm and 8 mm:



| Profiles Types | Thickness Dekton | Rivet* | | | | |
|------------------|------------------|-------------------------|---------|--------|--------|-----------------------|
| | | Type | Head | Body | Length | Apriete |
| Aluminium | 4 mm | Alum/Stain A2 AP16 5x16 | Ø 16 mm | Ø 5 mm | 16 mm | Between 6 and 12 mm |
| | 8 mm | Alum/Stain A2 AP16 5x18 | Ø 16 mm | Ø 5 mm | 18 mm | Between 7 and 13,5 mm |
| Galvanised steel | 4 mm | Alum/Stain A2 D15 5x14 | Ø 15 mm | Ø 5 mm | 14 mm | Between 4 and 9,5 mm |
| | 8 mm | Alum/Stain A2 D15 5x18 | Ø 15 mm | Ø 5 mm | 18 mm | Between 8 and 13,5 mm |

In case of marine environment, KS treatment (rivet body anodizing) can be applied.



Black body



Dark grey body



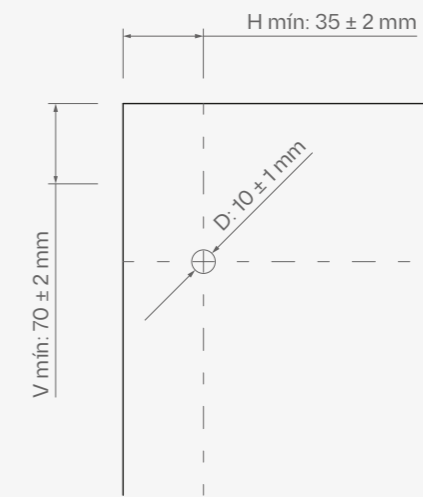
Light grey body

For better integration into the overall appearance of the facade, the rivets can be supplied by the supplier with their head lacquered in a similar colour to the Dekton piece.

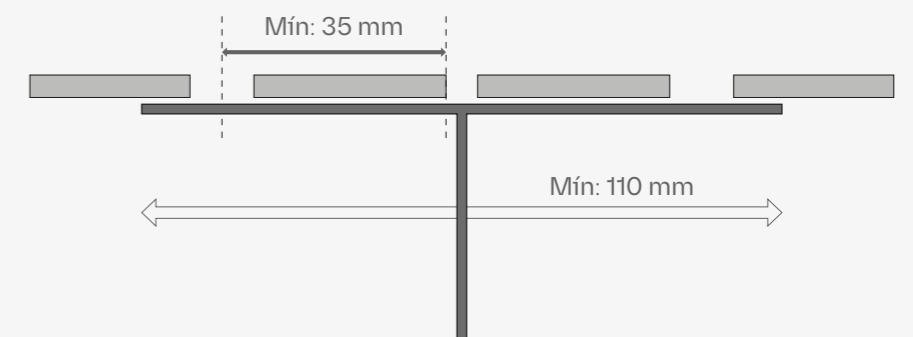
Distances from the drill hole to the edge

The minimum distance to the edge of the slab shall be 35 mm horizontally and 70 mm vertically.

The maximum distance from the rivet to the edge, in both directions, shall be 150 mm.



These distances will allow a minimum joint between slabs of 5 mm at the "T" profile of the vertical joint, as shown in the following diagram:



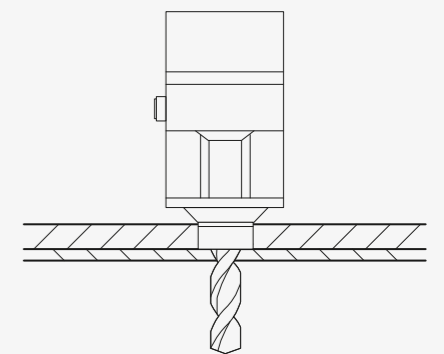
Slab installation: Accessories

It is recommended to install from the top of the facade downwards.

Having drilled the slab according to the established distances between profiles and to the corner, follow the process below to install the slab, properly levelled, in its final position:

1. Drill holes

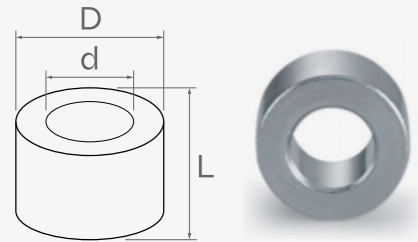
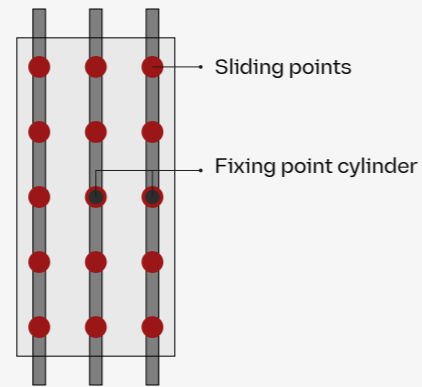
Using the centralising tool, drill holes in the profiles concentric to the holes in the Dekton slabs. This accessory is easily adaptable to any type of drill.



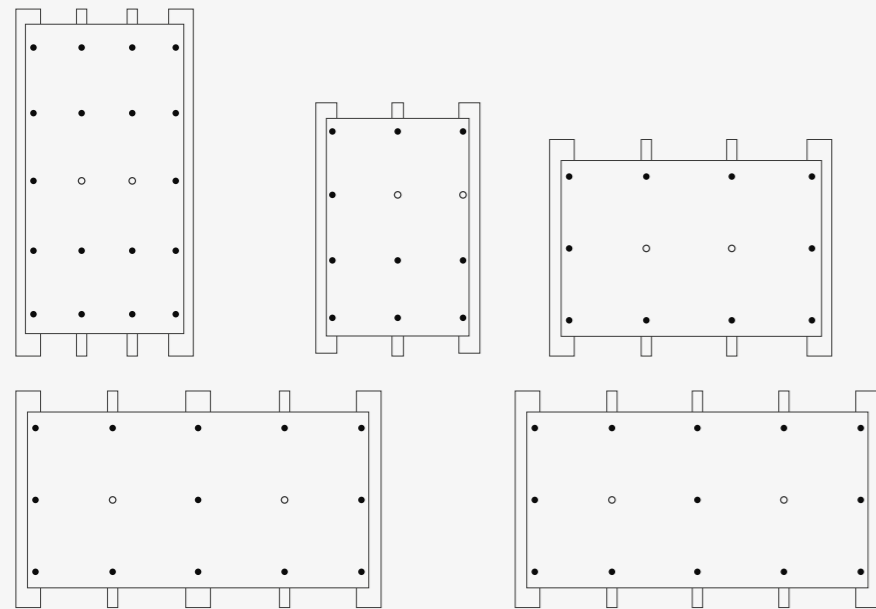
2. Placement of fixed point rivets

Regardless of slab size, place two rivets per slab. Each rivet will be placed by means of a fixed point cylinder. The load of the slab will be transferred to these points.

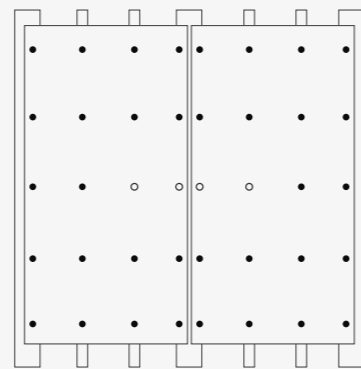
The positioning criteria are: They are placed in different vertical profiles, aligned with each other, pointing to the centre of the slab and in a non-symmetrical arrangement, always applying the same criteria for each row of slabs: e.g. centre right.



Examples of correct positioning of fixed points



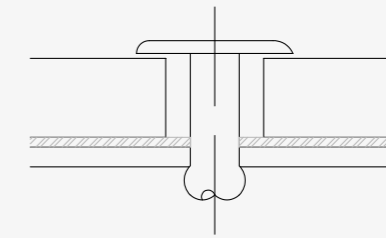
Examples of bad positioning of fixed points



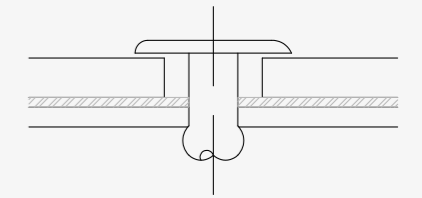
- Sliding points
- Fixed points

3. Placement of sliding rivets.

In the remaining holes, only the rivet is placed. They are sliding points where the expansion of the panel and the profile is allowed. These points do not bear the load of the slab but the wind load.



Sliding point Dekton 8 mm

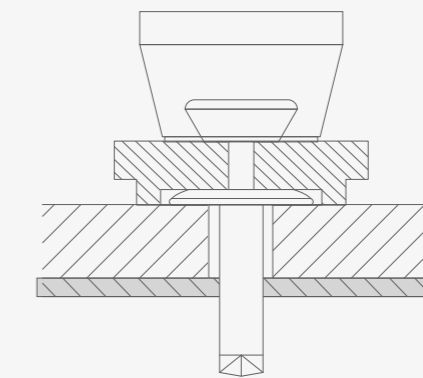


Sliding point Dekton 4 mm

4. Use of nose piece.

The use of a cordless riveter is recommended for installing the rivets. It will be necessary to use a nose piece so that there is not total pressure of the rivet on the slab and the slab can move.

In this way, the rivets will hold the slab but will not put pressure on it (to check that the pressure is not excessive, slide a sheet of paper between the slab and the rivet head).



5. Removal of the rivet shank.

After placing the rivet, the stem should have been removed. In case there is any leftover piece, it should be removed.

Cosentino supplies all the accessories and tools needed for the installation of Dekton duly referenced.

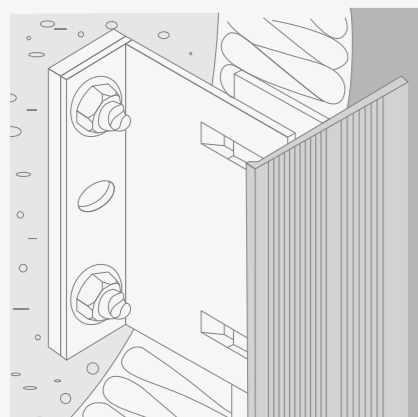
Profile systems

The recommended profile types for this system are listed below.

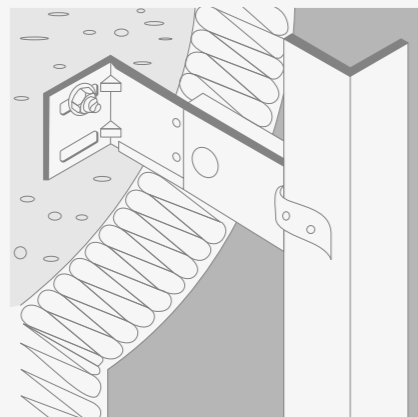
Dekton can be used with rivet fixing system using aluminium profiles (6060

or 6063) with a minimum thickness of 2 mm, T-shaped for vertical joints with a minimum width of 110 mm, and T-shaped or L-shaped for intermediate vertical joints with a minimum width of 40 mm.

Metal substructure



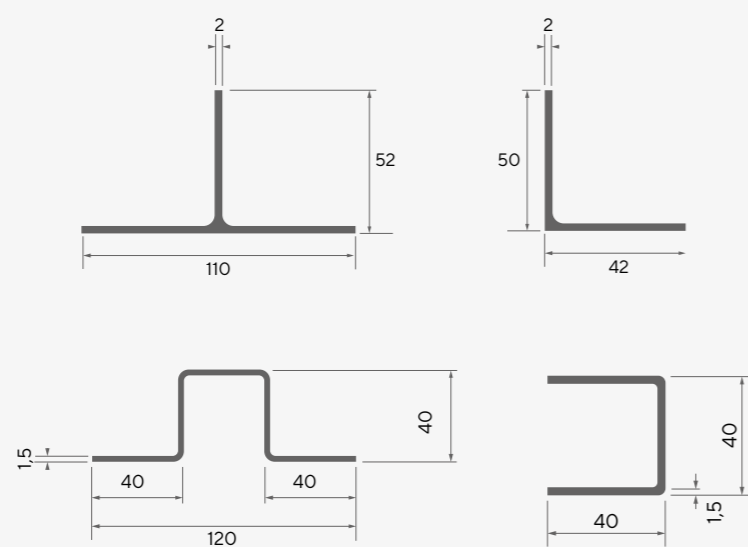
Aluminium



Galvanised steel

Or using galvanised steel (minimum Z 275) with a minimum thickness of 1.5 mm, Omega-shaped for vertical joints with a minimum width of 120 mm, and U-shaped for intermediate vertical joints with a minimum width of 30 mm.

The distance between profiles, as well as the distance from the support brackets to the wall, will be defined by a qualified technician according to the project conditions.



Accesories for riveting

The following accesories can be applied with Dekton 4 mm and 8 mm:

- Self centering drill bit DK D = 10 mm, 1 unit.
- Spare bits for drill centering tool DK HSS D 5.1, 1 unit.
- Fixed point rivet cylinder DK 4 mm FP-A-9 5x3.5-5.1, Box 100 units.
- Fixed point rivet cylinder DK 8 mm FP-A-9 5x7.4-5.1, Box 100 units.
- Rivet nose piece ALUMINIUM/ STAINLESS STEEL C16, 1 unit.
- Rivet nose piece STAINLESS STEEL C15, 1 unit.



Self centering drill bit



Spare self centering drill bit



Fixed point rivet cylinders



Rivet nose piece

Design wind load and configurations recommended for full slab 3200 x 1440 mm.

| Reference | Dekton thickness | Orientation | Maximum horizontal distance between rivets | Maximum vertical distance between rivets | Test value [Pa] | Safety factor | Result |
|----------------|------------------|-------------|--|--|-----------------|---------------|--------|
| V-DKR-04-H-OP1 | 4 mm | Horizontal | 522 mm | 650 mm | 6.000 | 3 | 2.000 |
| V-DKR-04-H-OP2 | 4 mm | Horizontal | 626 mm | 433 mm | 6.000 | 3 | 2.000 |
| V-DKR-04-V-OP1 | 4 mm | Vertical | 457 mm | 612 mm | 6.000 | 3 | 2.000 |
| V-DKR-08-H-OP1 | 8 mm | Horizontal | 626 mm | 650 mm | 6.000 | 3 | 2.000 |
| V-DKR-08-V-OP1 | 8 mm | Vertical | 685 mm | 612 mm | 5.800 | 3 | 1.933 |

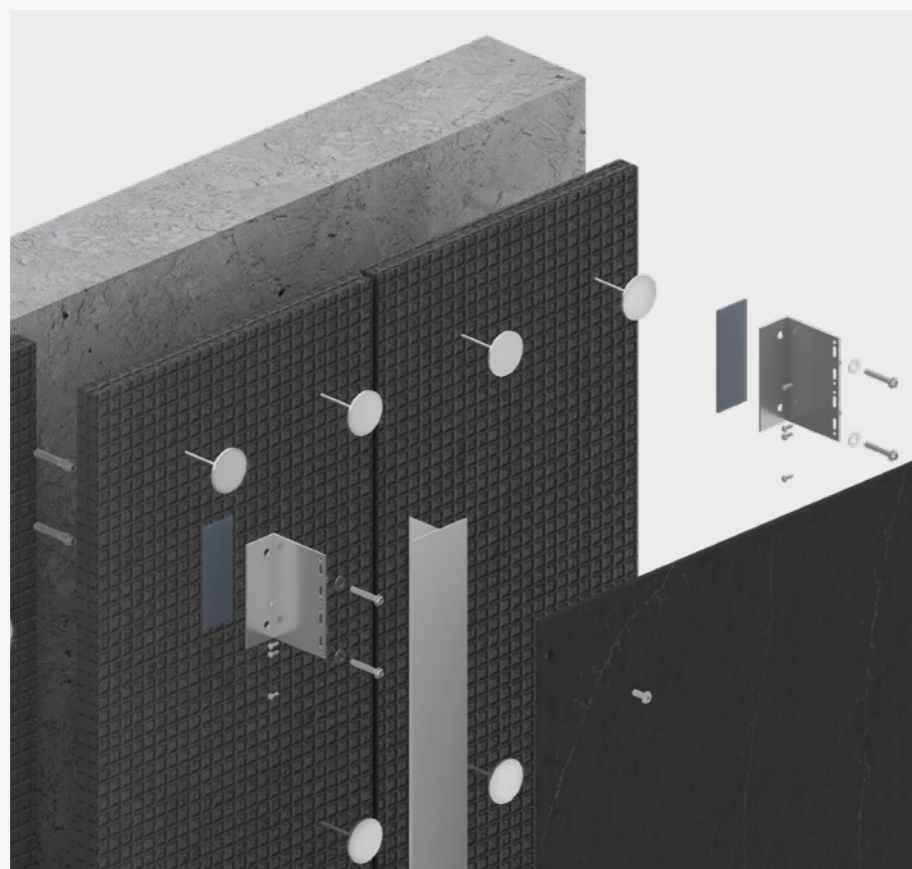
System description

Hidden system

Load-bearing substructure composed of adjustable metal brackets to compensate for unevenness, compatible with different types of support and can include thermal break; vertical metal profiles of different sections. Visible spot mechanical fixing system with aluminium/stainless steel or stainless steel/stainless steel rivets painted in the same colour as the Dekton panel, to be installed with the necessary accessories supplied by Cosentino.

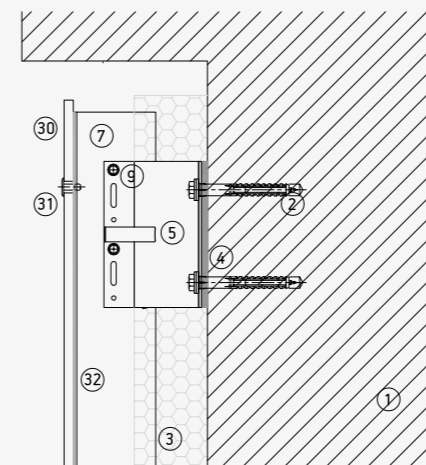
Installation process

Brackets installed on the surface to be covered by means of a mechanical system or welding; vertical profiles installed on brackets with a regulation and fixing system, by means of specific screws; riveting on pre-drilled pieces with Cosentino accessories according to the system application guide.

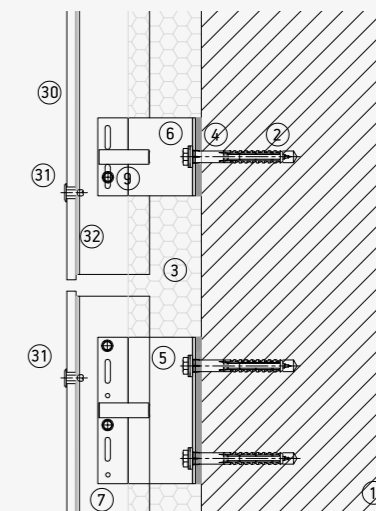


Vertical section

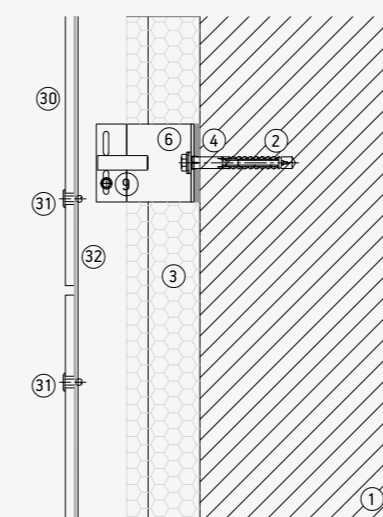
Top edge



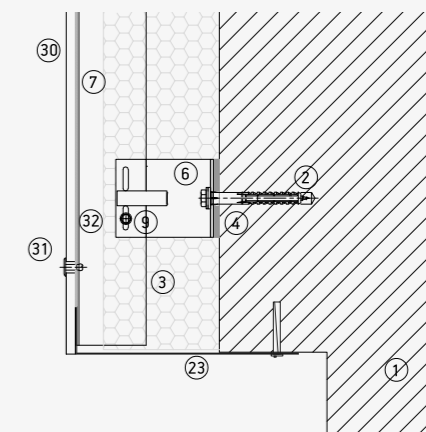
Horizontal expansion joint



Horizontal joint



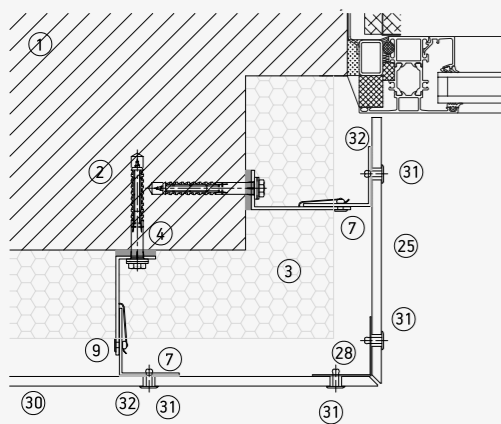
Start



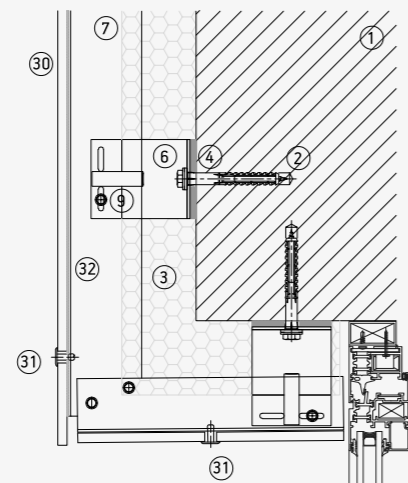
- | | | | |
|------------------------|-------------------------------------|----------------------------|--------------------------|
| 1. Supporting wall. | 11. Undercut anchor. | 19. Interior back clip | 29. Bonding adhesive |
| 2. Anchor bracket. | 12. Horizontal rail. | 20. Exterior back profile | 30. Dekton |
| 3. Insulation. | 13. C hanger. | 21. Chemical fixing system | 31. Rivet for Dekton |
| 4. Insulating layer. | 14. Adjustable C hanger. | 22. Security fixing | 32. Foam band (optional) |
| 5. Fixed bracket. | 15. Bottom/top edge profile/clip. | 23. Ventilation profile | |
| 6. Adjustable bracket. | 16. Intermediate edge profile/clip. | 24. Lintel | |
| 7. L profile. | 17. Bottom/top visible clip. | 25. Jamb | |
| 8. T profile. | 18. Intermediate visible clip. | 26. Window sill | |
| 9. Self tapping screw. | | 27. Top coping | |
| 10. Rivet. | | 28. Corner profile | |

Vertical section

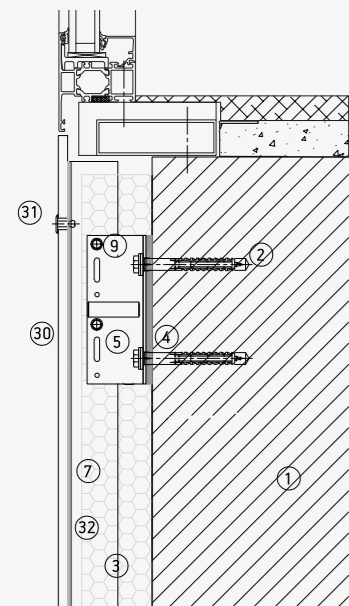
Dekton jamb



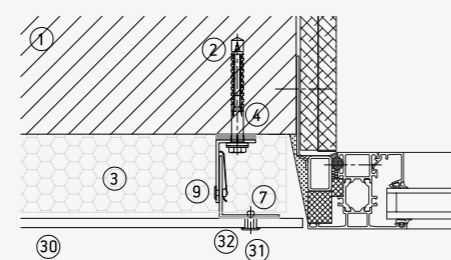
Dekton lintel



Window start



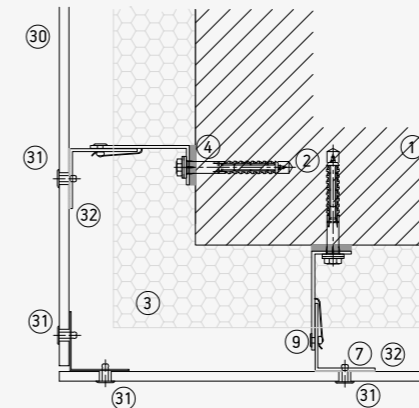
Window side



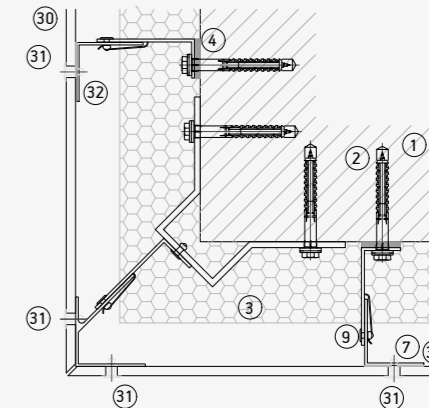
- | | | | |
|------------------------|-------------------------------------|----------------------------|--------------------------|
| 1. Supporting wall. | 11. Undercut anchor. | 19. Interior back clip | 29. Bonding adhesive |
| 2. Anchor bracket. | 12. Horizontal rail. | 20. Exterior back profile | 30. Dekton |
| 3. Insulation. | 13. C hanger. | 21. Chemical fixing system | 31. Rivet for Dekton |
| 4. Insulating layer. | 14. Adjustable C hanger. | 22. Security fixing | 32. Foam band (optional) |
| 5. Fixed bracket. | 15. Bottom/top edge profile/clip. | 23. Ventilation profile | |
| 6. Adjustable bracket. | 16. Intermediate edge profile/clip. | 24. Lintel | |
| 7. L profile. | 17. Bottom/top visible clip. | 25. Jamb | |
| 8. T profile. | 18. Intermediate visible clip. | 26. Window sill | |
| 9. Self tapping screw. | | 27. Top coping | |
| 10. Rivet. | | 28. Corner profile | |

Horizontal section

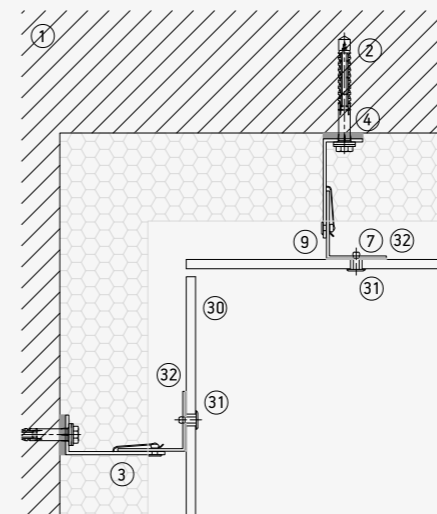
Exterior corner



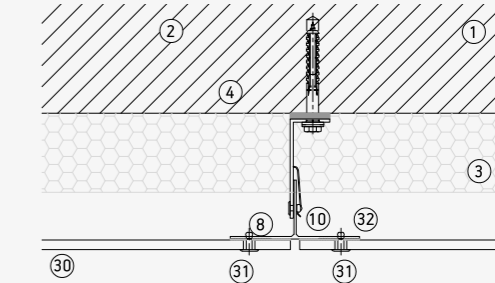
Mitred exterior corner



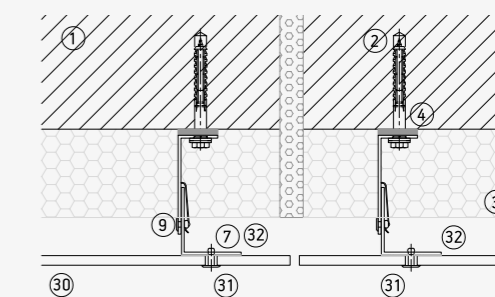
Interior corner



Vertical joint



Vertical expansion joint



- | | | | |
|------------------------|-------------------------------------|----------------------------|--------------------------|
| 1. Supporting wall. | 11. Undercut anchor. | 19. Interior back clip | 29. Bonding adhesive |
| 2. Anchor bracket. | 12. Horizontal rail. | 20. Exterior back profile | 30. Dekton |
| 3. Insulation. | 13. C hanger. | 21. Chemical fixing system | 31. Rivet for Dekton |
| 4. Insulating layer. | 14. Adjustable C hanger. | 22. Security fixing | 32. Foam band (optional) |
| 5. Fixed bracket. | 15. Bottom/top edge profile/clip. | 23. Ventilation profile | |
| 6. Adjustable bracket. | 16. Intermediate edge profile/clip. | 24. Lintel | |
| 7. L profile. | 17. Bottom/top visible clip. | 25. Jamb | |
| 8. T profile. | 18. Intermediate visible clip. | 26. Window sill | |
| 9. Self tapping screw. | | 27. Top coping | |
| 10. Rivet. | | 28. Corner profile | |

Static Calculations

Schemes and data to be defined with SDP software

Panels in horizontal or vertical layout. Maximum wind loads shown in the following configurations depend on the grid spacing and distance from drill holes to the edges.

These configurations have been calculated considering a distance of fixing to edges of 200mm. For further distances and configurations please consult with our Technical Department.

The tables and diagrams presented are based on Dekton calculation software and refer only to Dekton. They cannot be considered as definitive data for on-site installation and it is necessary for a qualified technician to make a specific project calculation for the entire facade

system including support anchors, brackets, profiles, screws and Dekton fixing elements to the facade

How to use the reference configurations:

- Determine the design wind load kN/m².
- Choose the table according to the fixing system and Dekton thickness.
- Select the closest design wind load. The wind load chosen should not be less than actual requirements.
- Select a reference configuration showing maximum spacing between fixings.

Complete slab configuration

| | | | H (mm) | V (mm) | Riv. hor. (uds) | Riv. ver. (uds) | Dist. horiz. (mm) | Dist. vert. (mm) | Rivets (uds) |
|--------------------------|-------------|----------|--------|--------|-----------------|-----------------|-------------------|------------------|--------------|
| Complete slab horizontal | Dekton 4 mm | Opción 1 | 3200 | 1440 | 7 | 3 | 522 | 650 | 21 |
| | | Opción 2 | 3200 | 1440 | 6 | 4 | 626 | 433 | 24 |
| | Dekton 8 mm | Opción 1 | 3200 | 1440 | 6 | 3 | 626 | 650 | 18 |
| | | Opción 2 | 3200 | 1440 | 7 | 3 | 522 | 650 | 21 |
| Complete slab vertical | Dekton 4 mm | Opción 1 | 1440 | 3200 | 4 | 6 | 457 | 612 | 24 |
| | | Opción 2 | 1440 | 3200 | 4 | 7 | 457 | 510 | 28 |
| | Dekton 8 mm | Opción 1 | 1440 | 3200 | 3 | 6 | 685 | 612 | 18 |
| | | Opción 2 | 1440 | 3200 | 3 | 7 | 685 | 510 | 21 |

The design wind loads that are compared to the reference design wind loads provided in this document must have share capitalization coefficients on the wind load applied to the characteristic values according to the applicable standards and regulations.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system to withstand the demands.

Design wind loads and fixing distances should be calculated per local standards, regulations and certificates applicable, with further testing if required.

The project competent technician/ designer must consider the coefficients of increase of actions and reduction of resistance of materials, as well as the calculation of anchors to tension, shear, and combined tension and shear loads as applicable.

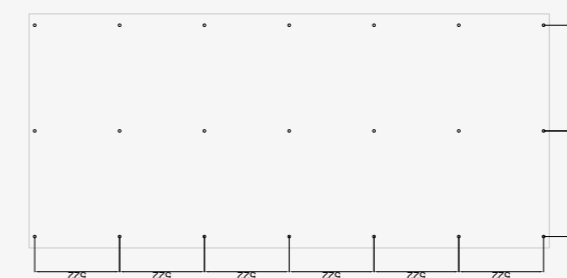
Cosentino does not provide static calculations for projects.

Cosentino will not accept any liability whatsoever for any direct or indirect damage resulting from any errors, omissions or miscalculations of the static calculations for the project.

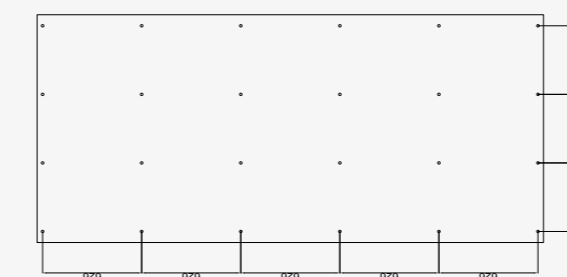
There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.

Layout

Horizontal slab - 4 mm

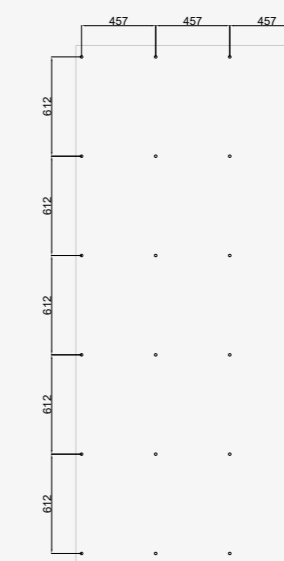


Option 1 - 522 x 650 mm

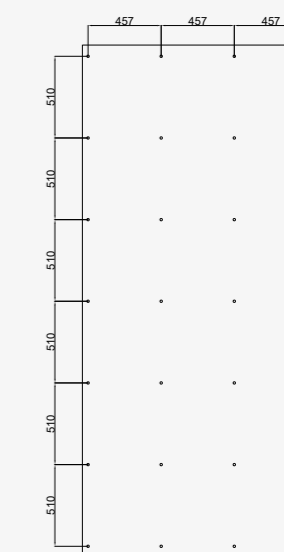


Option 2 - 626 x 433 mm

Vertical slab - 4 mm

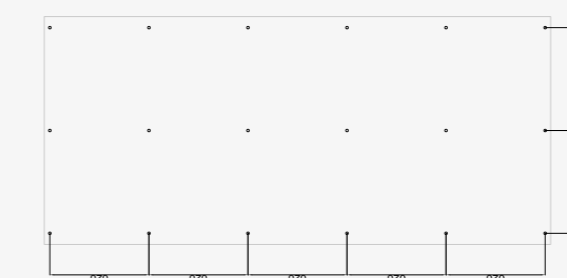


Opción 1 - 457 x 612 mm

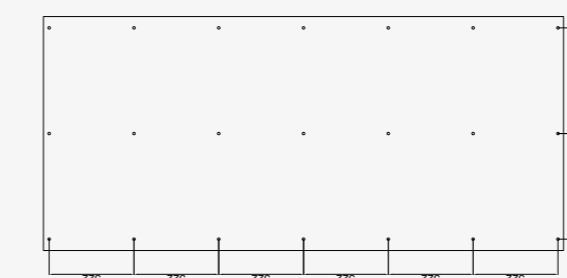


Opción 2 - 457 x 510 mm

Horizontal slab - 8 mm

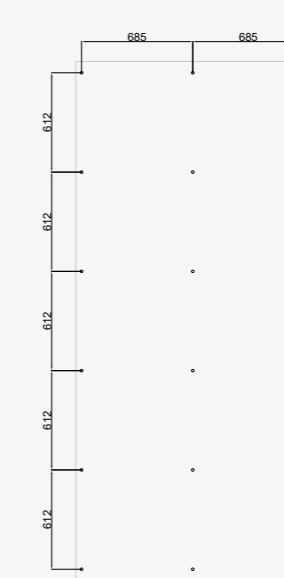


Option 1 - 626 x 650 mm

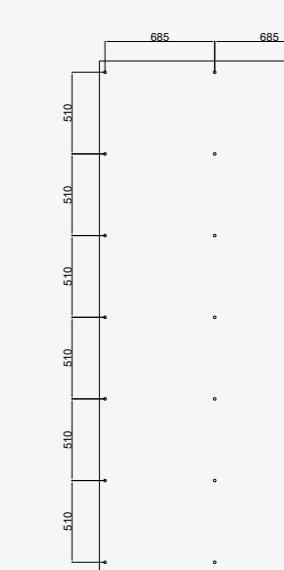


Option 2 - 522 x 650 mm

Vertical slab - 8 mm



Option 1 - 685 x 612 mm



Option 2 - 685 x 510 mm

Dekton installation on wood battens

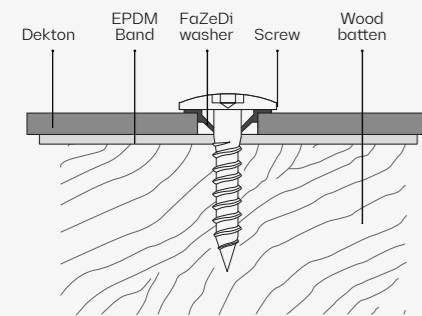
The slab can be installed with open joints or with joint profiles.

When mounting on wood battens, EPDM band shall always be placed on all wood battens in direct contact

with the backside of the slab. This is to protect the wood from moisture.

Once the panel has been drilled according to the established distances between profiles and to the corner, follow

the process below to install the slab, properly levelled, in its final position:



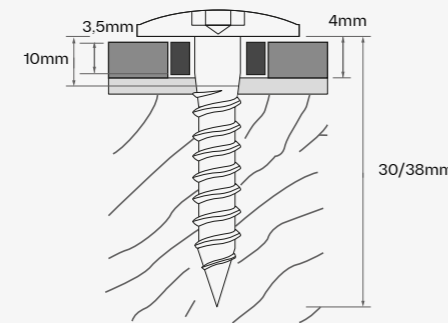
Place the FaZeDi washer to help correct centering in the Dekton panel hole and screw with the supplied T20W Torx bit.

Tight the screw till the head contacts the FaZeDi washer.

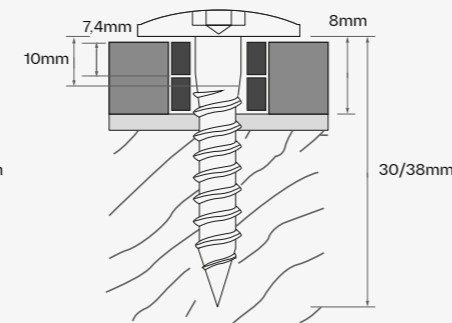
Regardless of the slab size, place two fixed points per slab.

For Dekton 4 mm, these fix points include sleeves of $\varnothing 9.5 \times 3.5 - 5.1$ mm and, for Dekton 8 mm, sleeves of $\varnothing 9.5 \times 7.4 - 5.1$ mm.

Fix points are placed aligned in horizontal in a centered position in the slab and with same criteria in slabs situated in same line (e.g. centre - right).



Fix point - Dekton 4 mm

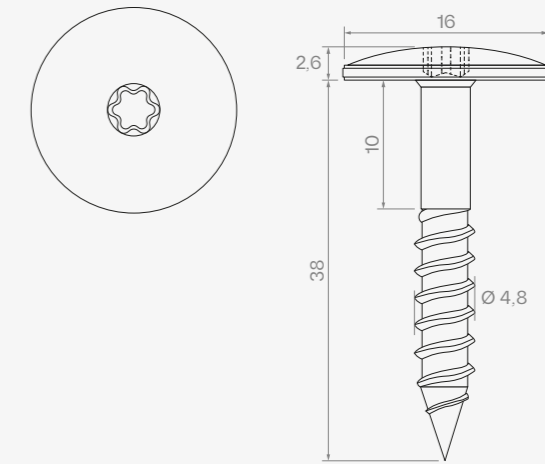


Fix point - Dekton 8 mm

Screws

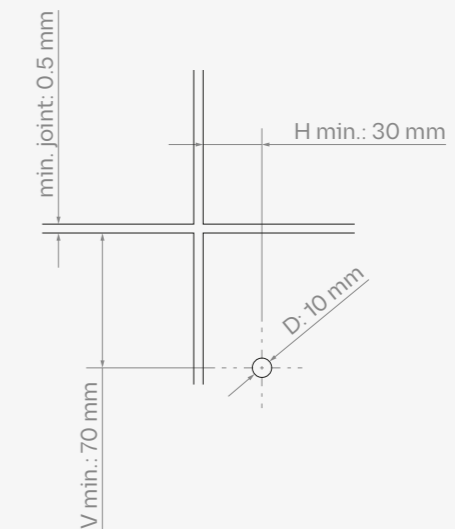
The TW-S-D16-4.8xL screw is available in 30 mm and 38 mm lengths. The screw has a 10 mm threadless area and an effective anchoring length in the wood of 20 or 28 mm.

For better integration into the overall appearance of the facade, screws can be lacquered in the Dekton slab colour.



Distances to edge and joints

- The minimum distance to the edge of the tile shall be 30 mm horizontally and 70 mm vertically.
- The maximum distance from the screw to the edge, in both directions, shall be 100 mm.
- A minimum joint of 5 mm is advised between Dekton tiles.

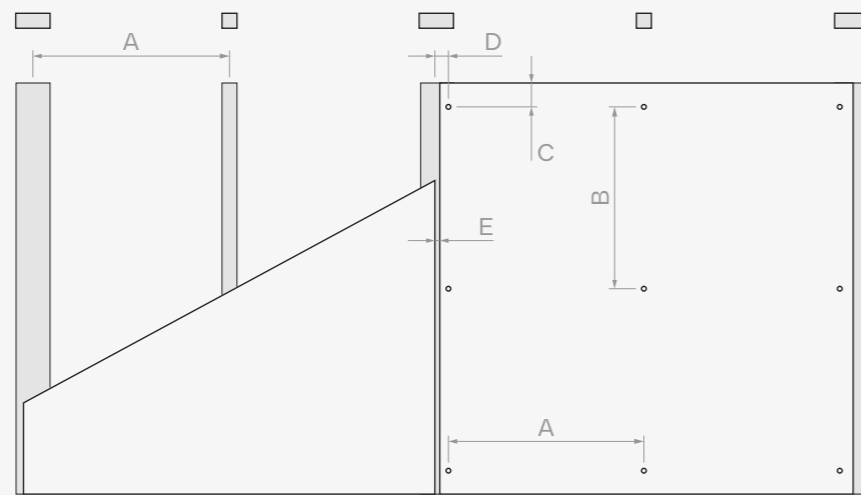


Wood battens recommendations

- The substrate used has to fulfil local standards and be certified to its use in facade application.
- For 8 mm thick Dekton, you must choose a batten with a minimum thickness of 25 mm (for the 20 mm long screw) to avoid interference on the rear wall.
- For 4 mm thick Dekton, the minimum batten must be 30 mm.
- The substrate must be selected so that the distance from the screw to the edge of the substrate is not less than 15 mm.
- Rubber band or EPDM is needed to protect wood from moisture.
- In battens with certain treatments for external uses such as accoya wood (acetylated wood), it is recommended to use special A4 stainless steel quality fixings.

Fixing distances

- The installer will be responsible for establishing a plumb and resistant supporting wall able to bear loads appearing on facade according to project conditions.
- The straightness of the substructure may have a maximum tolerance of ± 3 mm, measured per every two meter.
- Following distances must be observed to fix Dekton®:



A. Maximum distance between battens/profiles or horizontal fixings:
 400 mm for Dekton® 4 mm.
 600 mm for Dekton® 8 mm.

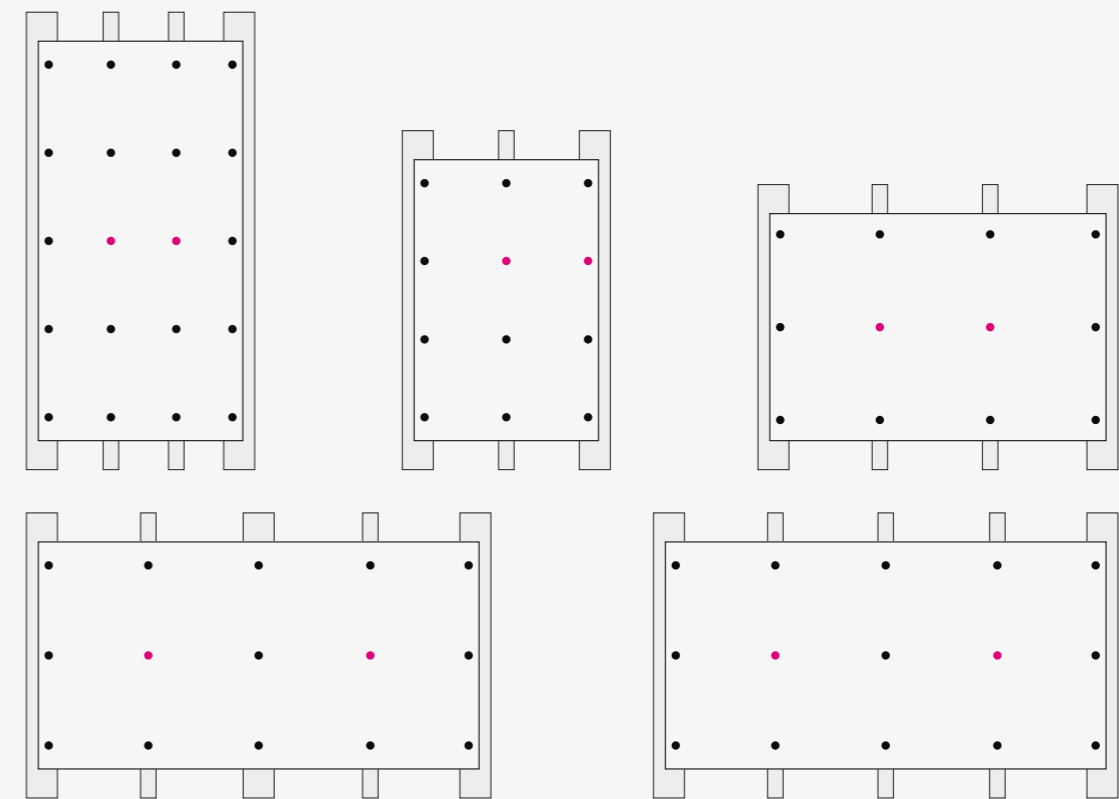
B. Maximum vertical distance between fixings:
 400 mm for Dekton® 4 mm.
 600 mm for Dekton® 8 mm.

C. Vertical distance to edges:
 between 70 and 100 mm.

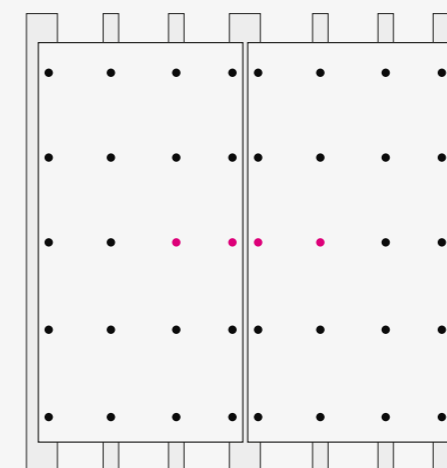
D. Horizontal distance to edges:
 between 30 and 100 mm.

E. Minimum joint width:
 5 mm.

Examples of correct positioning of fixed points



Examples of incorrect positioning of fixed points



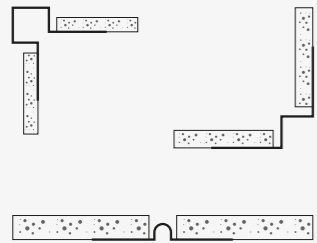
Key

- Sliding points
- Fixed points

Accessories

Following accessories can be applied together with Dekton® 4 mm and 8 mm:

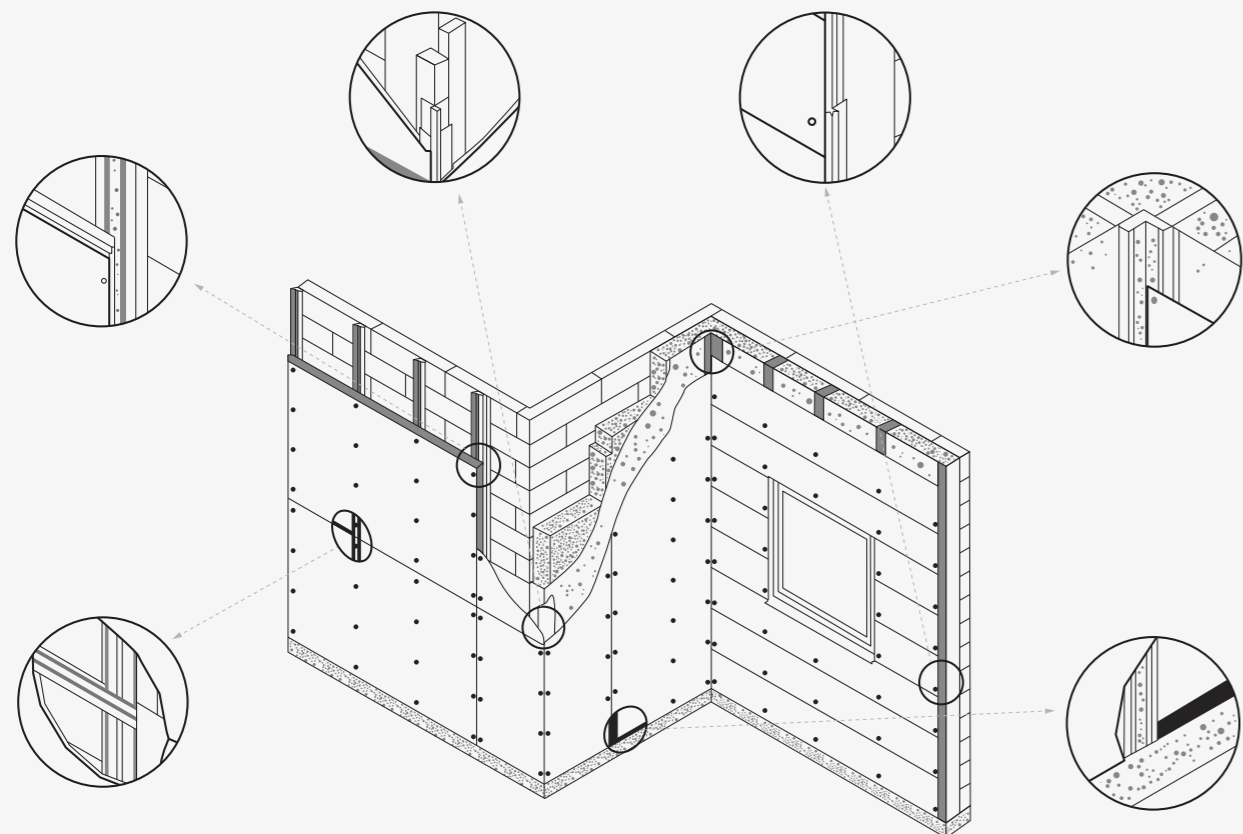
- Screw TW S Ø16 4.8 x 38 mm.
- Fa-Ze-Di washer.
- Inox sleeve of Ø9.5 x 3.5 - 5.1 mm for Dekton® 4mm and Ø9.5 x 7.4 - 5.1 mm for Dekton® 8 mm.
- EPDM band 70 mm / 110 mm.



Indoor/outdoor corner profiles, joint profiles.

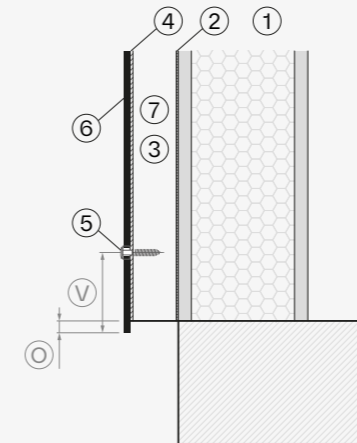


EPDM or Rubber between Dekton® and wood battens.

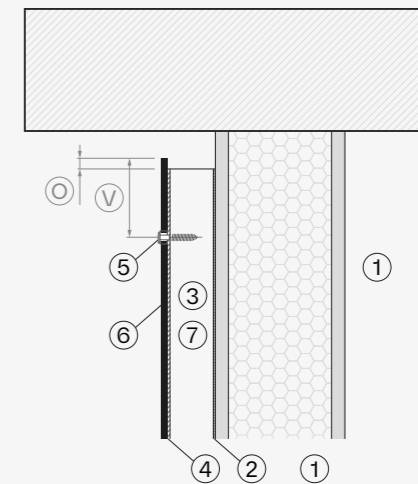


Vertical section

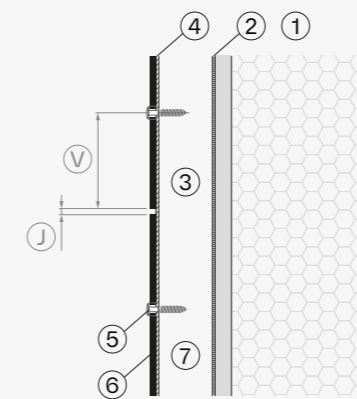
Bottom detail



Upper detail



Horizontal joint

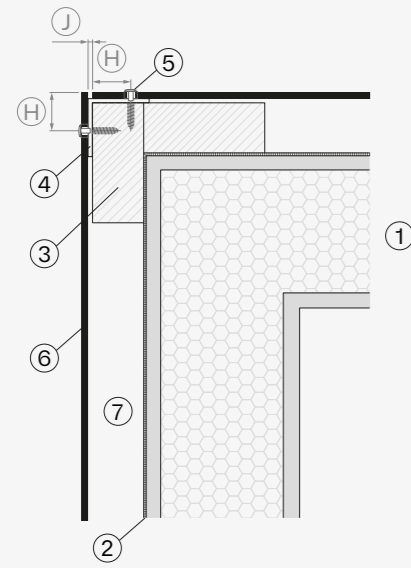


- 1. Supporting wall
- 2. Wind barrier
- 3. Wood batten
- 4. EPDM band
- 5. Screw
- 6. Dekton® Protek
- 7. Air chamber

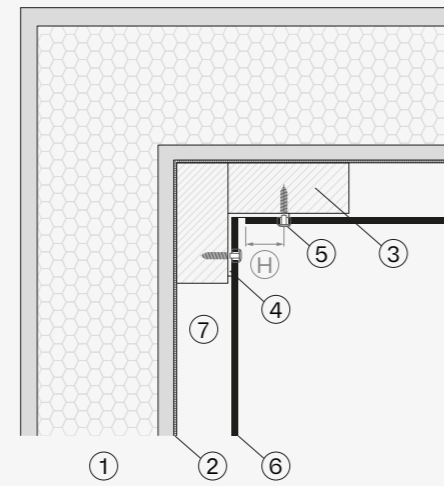
- H. Horizontal edge distance (30 - 100 mm)
- V. Vertical edge distance (70 - 100 mm)
- O. Overhang (10 mm)
- J. Joint width (5 mm)

Horizontal section

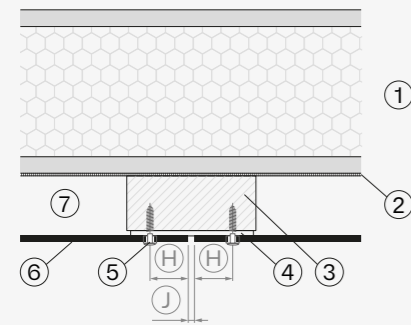
External corner



Internal corner



Vertical joint



- 1. Supporting wall
- 2. Wind barrier
- 3. Wood batten
- 4. EPDM band
- 5. Screw
- 6. Dekton® Protek
- 7. Air chamber
- H. Horizontal edge distance (30 - 100 mm)
- V. Vertical edge distance (70 - 100 mm)
- O. Overhang (10 mm)
- J. Joint width (5 mm)



CASE STUDY

Elan Centre

Netanya, Israel

Materials

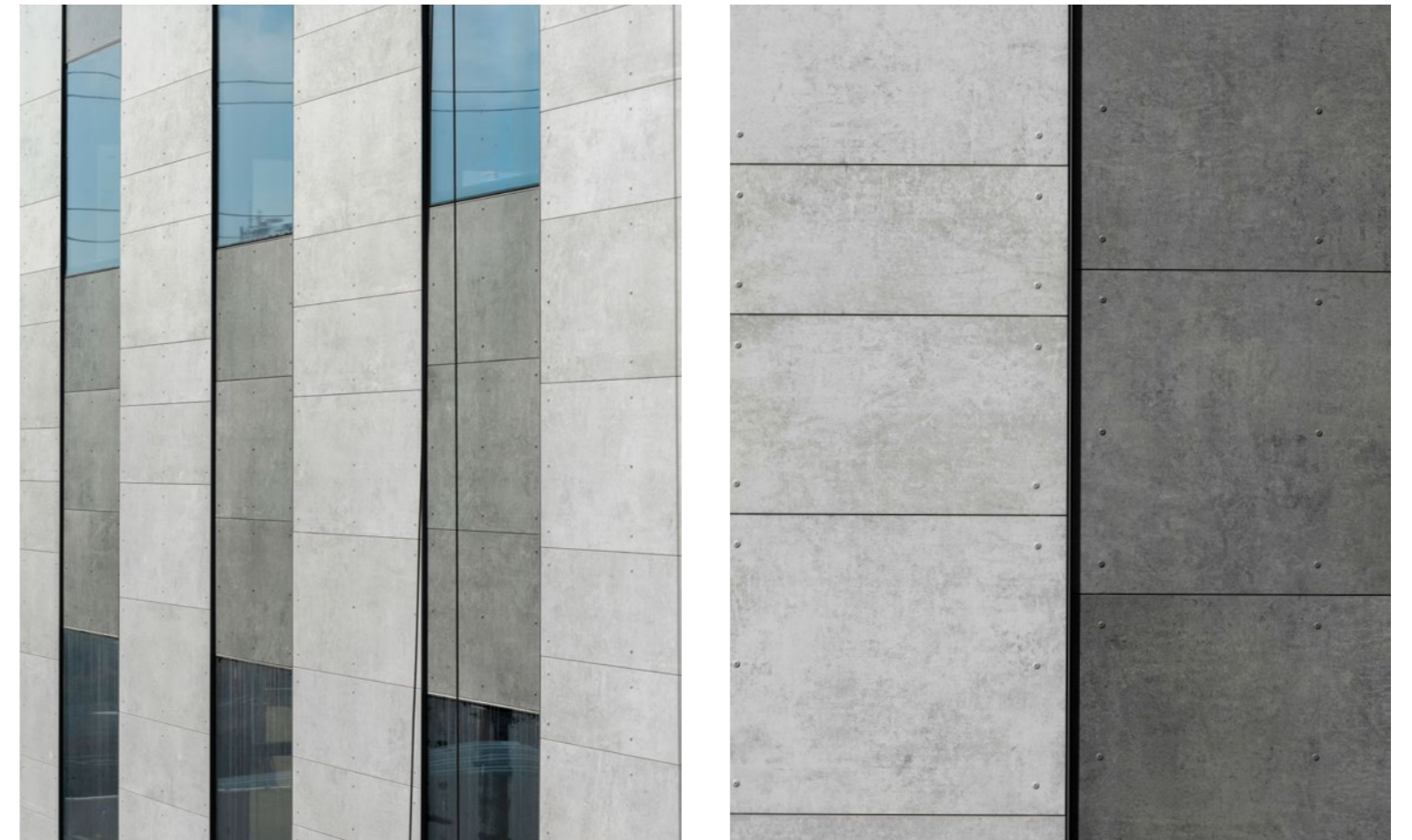
2,200 m²
Dekton Kreta / Dekton Lunar

Facade system

DKCW and DKR

Thickness

8 mm





CASE STUDY

Hadar Project

Tel Aviv, Israel

Materials

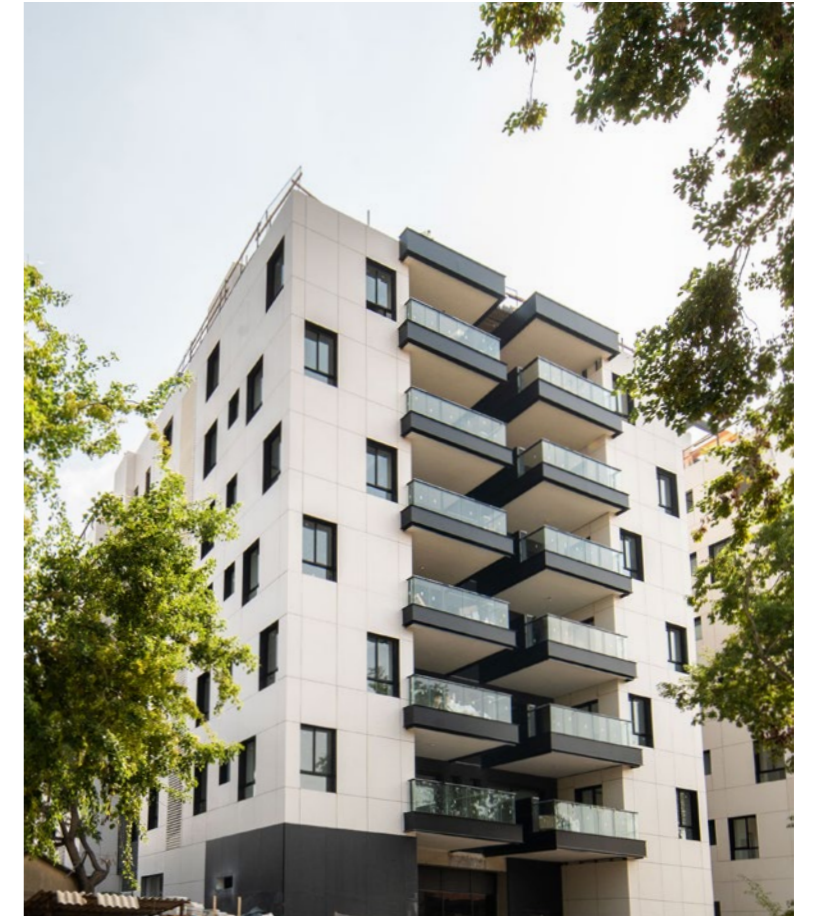
Dekton Moone 4,500 m²
Dekton Strato 1,500 m²

Facade system

DKR

Thickness

8 mm



CASE STUDY

Pearl Sea

Vila do Conde. Portugal

Material

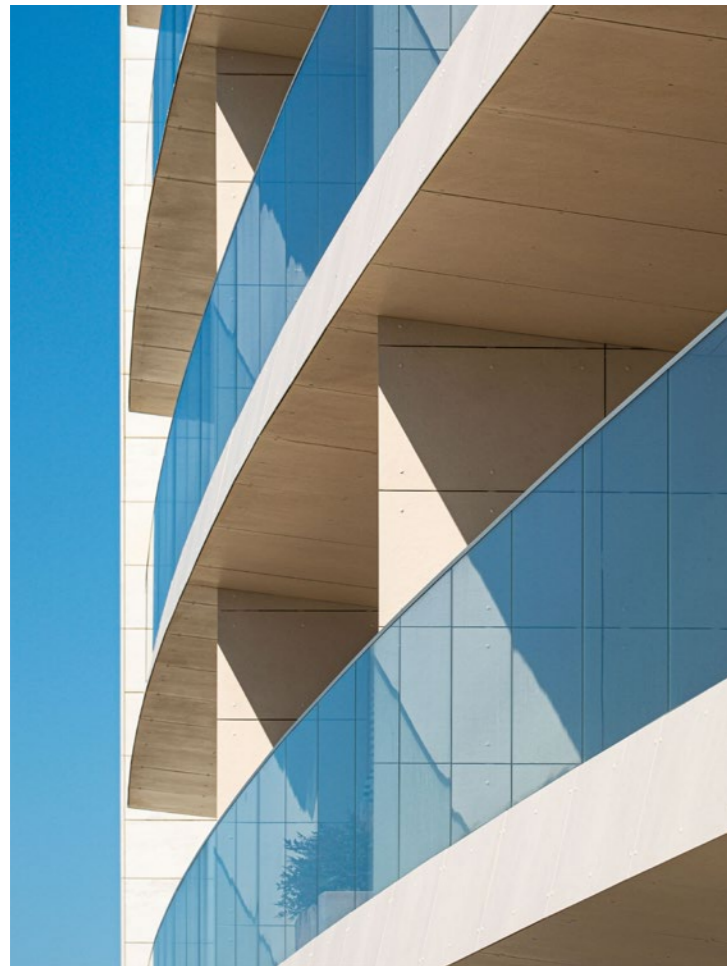
2.000 m²
Dekton Edora

Facade system

DKR

Thickness

4 mm





DKC

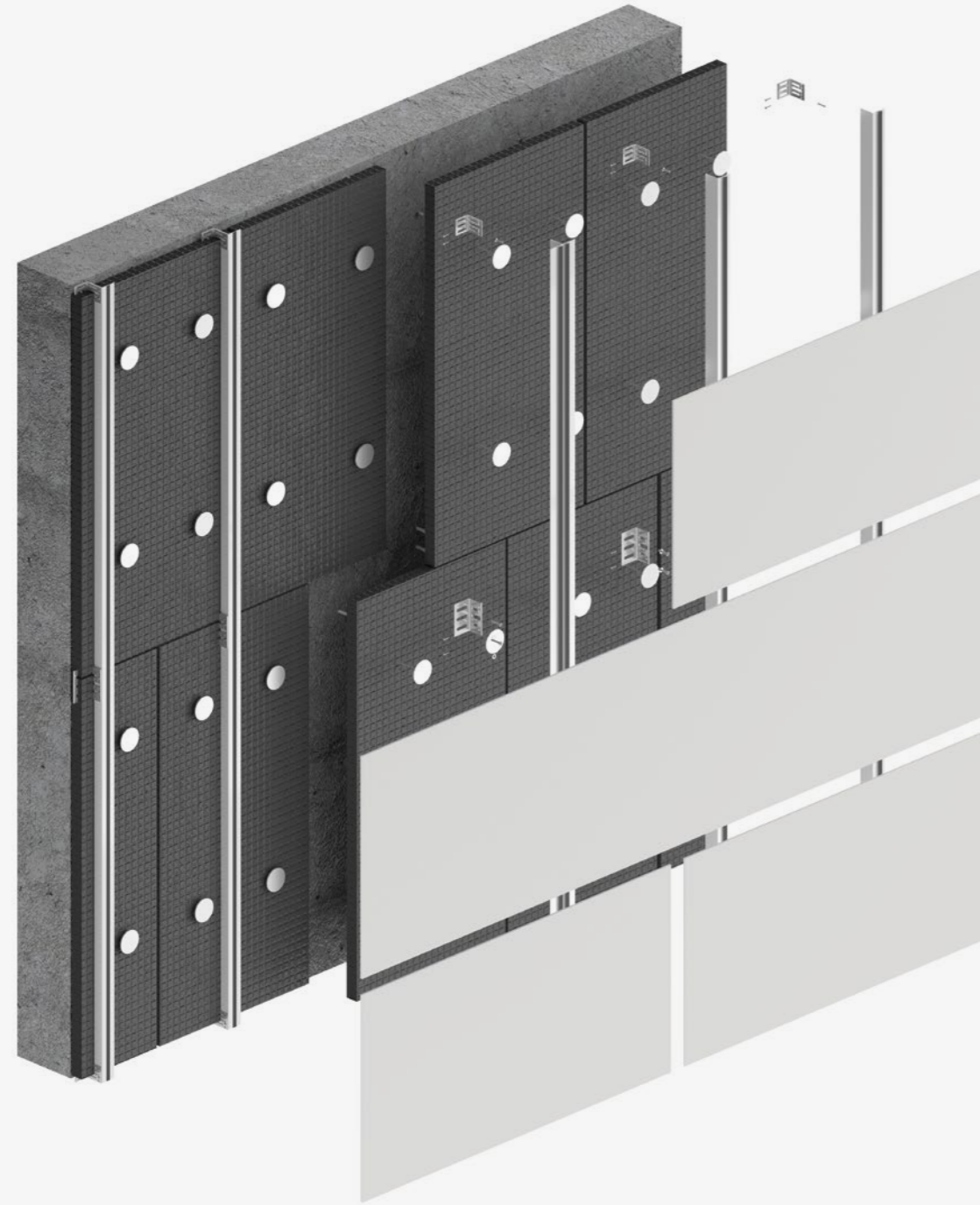
Chemical anchor system

DKC is a totally chemical fixing system, which allows parts to be glued directly to the supporting substructure with structural adhesives, avoiding any machining of the part. Starting from a profile, two strips of double-sided tape are placed in the center while they are added to the perimeter of said profile.

During fixing, the double-sided tape secures the piece while the adhesive is curing. You can work with a wide range of formats and even design pre-assembled elements in the factory. This system allows a wide range of thicknesses, with 8mm pieces being the most demanded in renovation works and for changes of image.



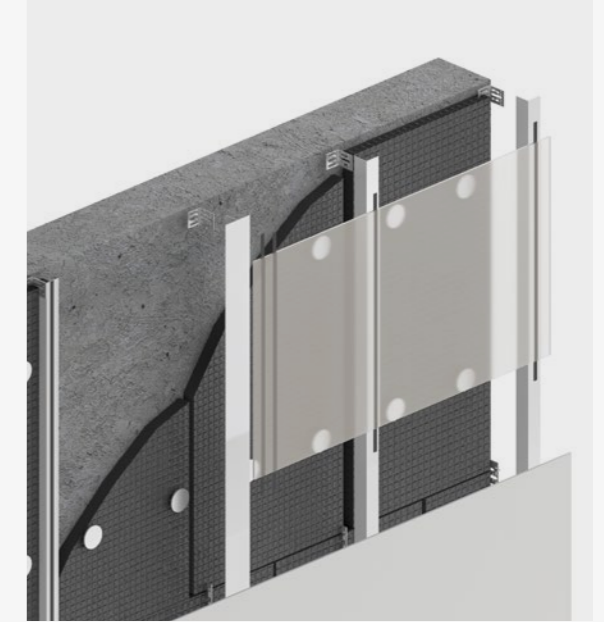
Fixing with chemical anchoring on profiles.



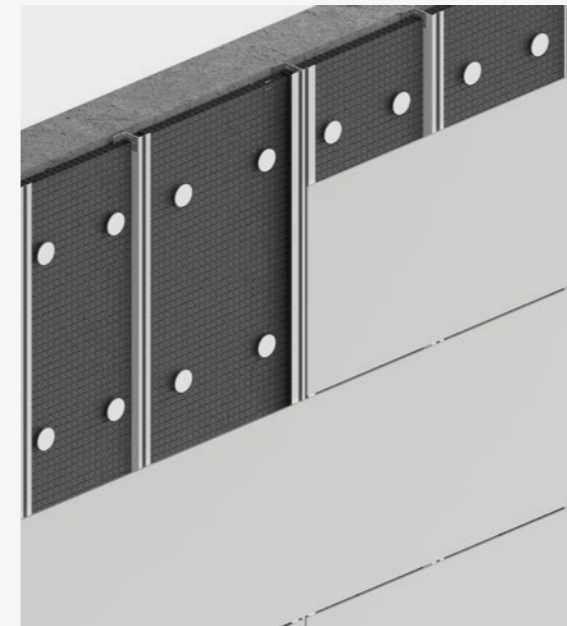
Substructure



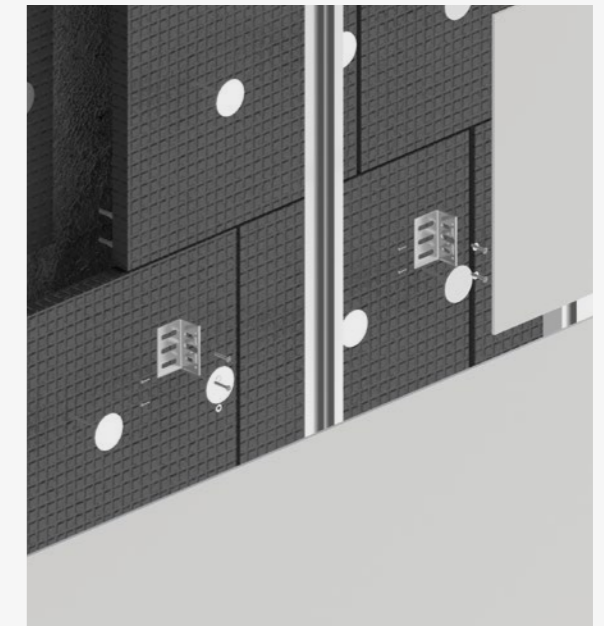
Chemical anchor system



Joint

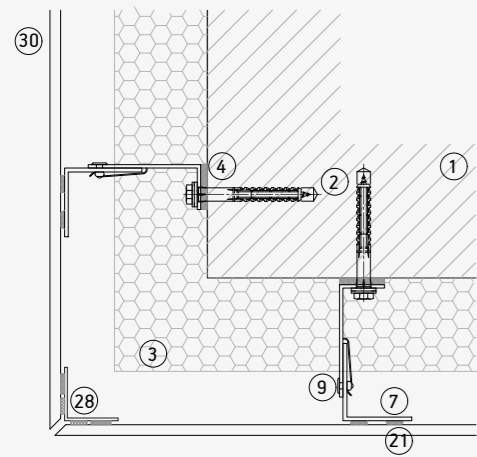


System detail

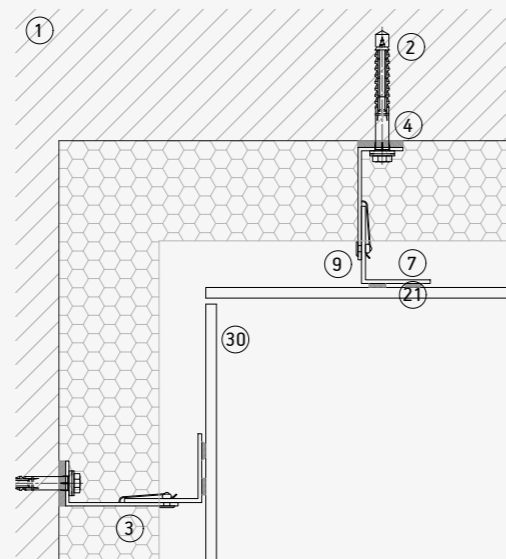


Horizontal section

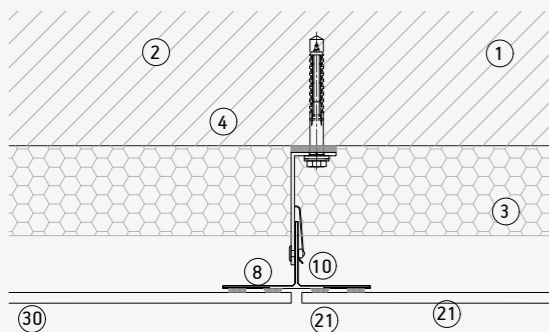
Mitered external corner



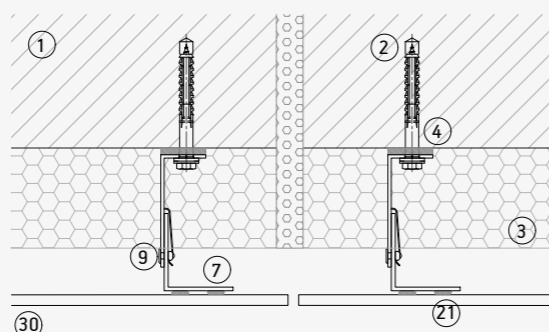
Internal Corner



Vertical joint



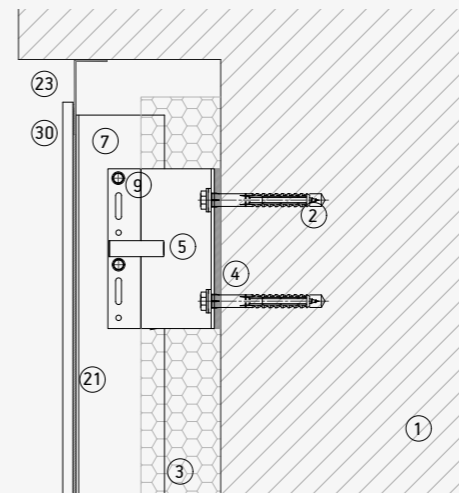
Vertical expansion joint



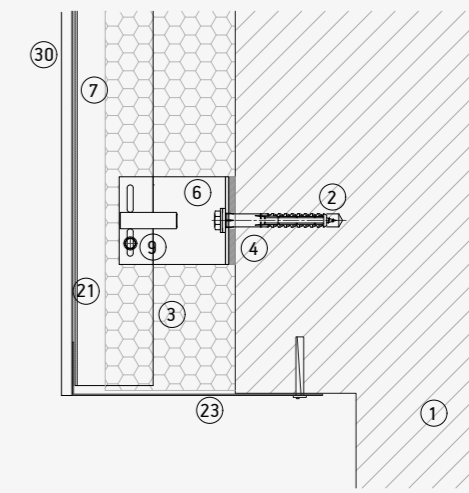
- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Vertical section

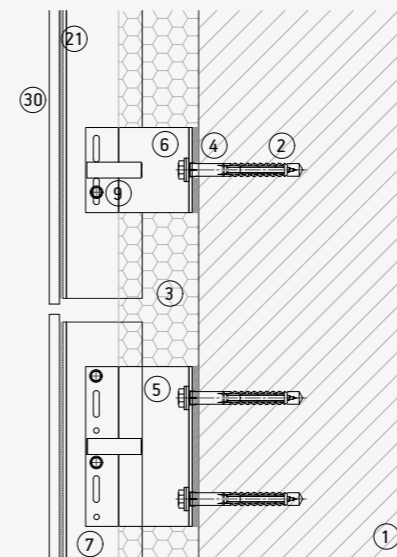
Upper detail



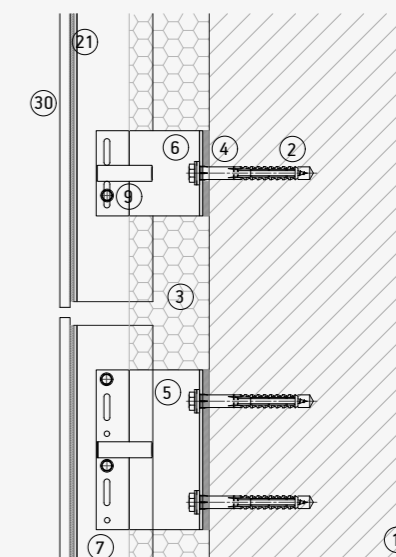
Bottom detail



Horizontal joint



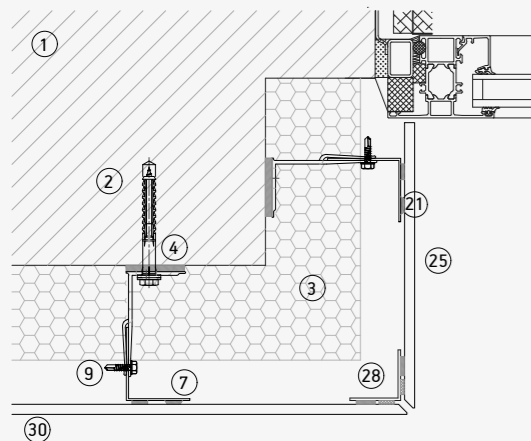
Joint between profiles



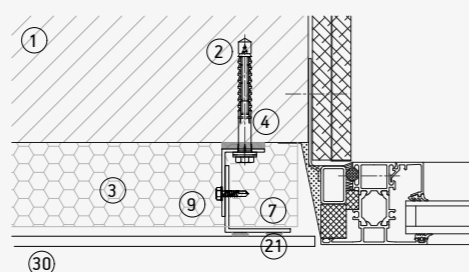
- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Sections

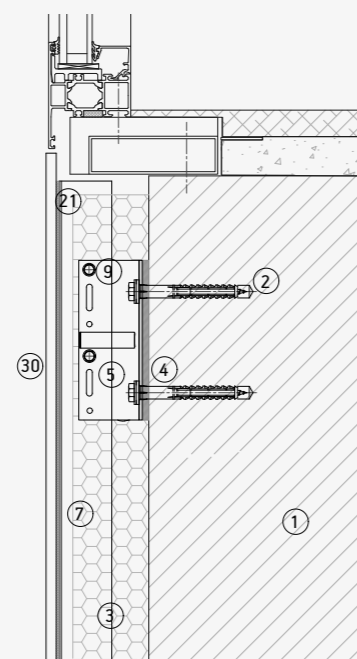
Dekton jamb



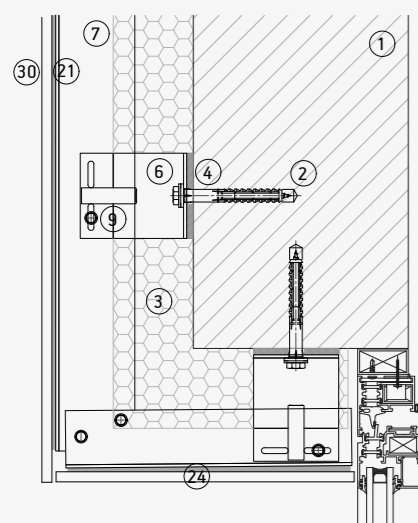
Window section without jambs



Window without sill



Dekton lintel



- | | | | |
|------------------------|-------------------------------------|----------------------------|----------------------|
| 1. Supporting wall. | 11. Undercut anchor. | 19. Interior back clip | 29. Bonding adhesive |
| 2. Anchor bracket. | 12. Horizontal rail. | 20. Exterior back profile | 30. Dekton |
| 3. Insulation. | 13. C hanger. | 21. Chemical fixing system | |
| 4. Insulating layer. | 14. Adjustable C hanger. | 22. Security fixing | |
| 5. Fixed bracket. | 15. Bottom/top edge profile/clip. | 23. Ventilation profile | |
| 6. Adjustable bracket. | 16. Intermediate edge profile/clip. | 24. Lintel | |
| 7. L profile. | 17. Bottom/top visible clip. | 25. Jamb | |
| 8. T profile. | 18. Intermediate visible clip. | 26. Window sill | |
| 9. Self tapping screw. | | 27. Top coping | |
| 10. Rivet. | | 28. Corner profile | |

System description

Hidden system

Supporting substructure made up of; metal brackets, adjustable for the correction of unevenness compatible with different types of supports, can include thermal break insulator; vertical metal profiles of different sections; hidden system of chemical fixing by means of adhesive to the back of the Dekton Panel, according to the manufacturer's recommendations for its application.

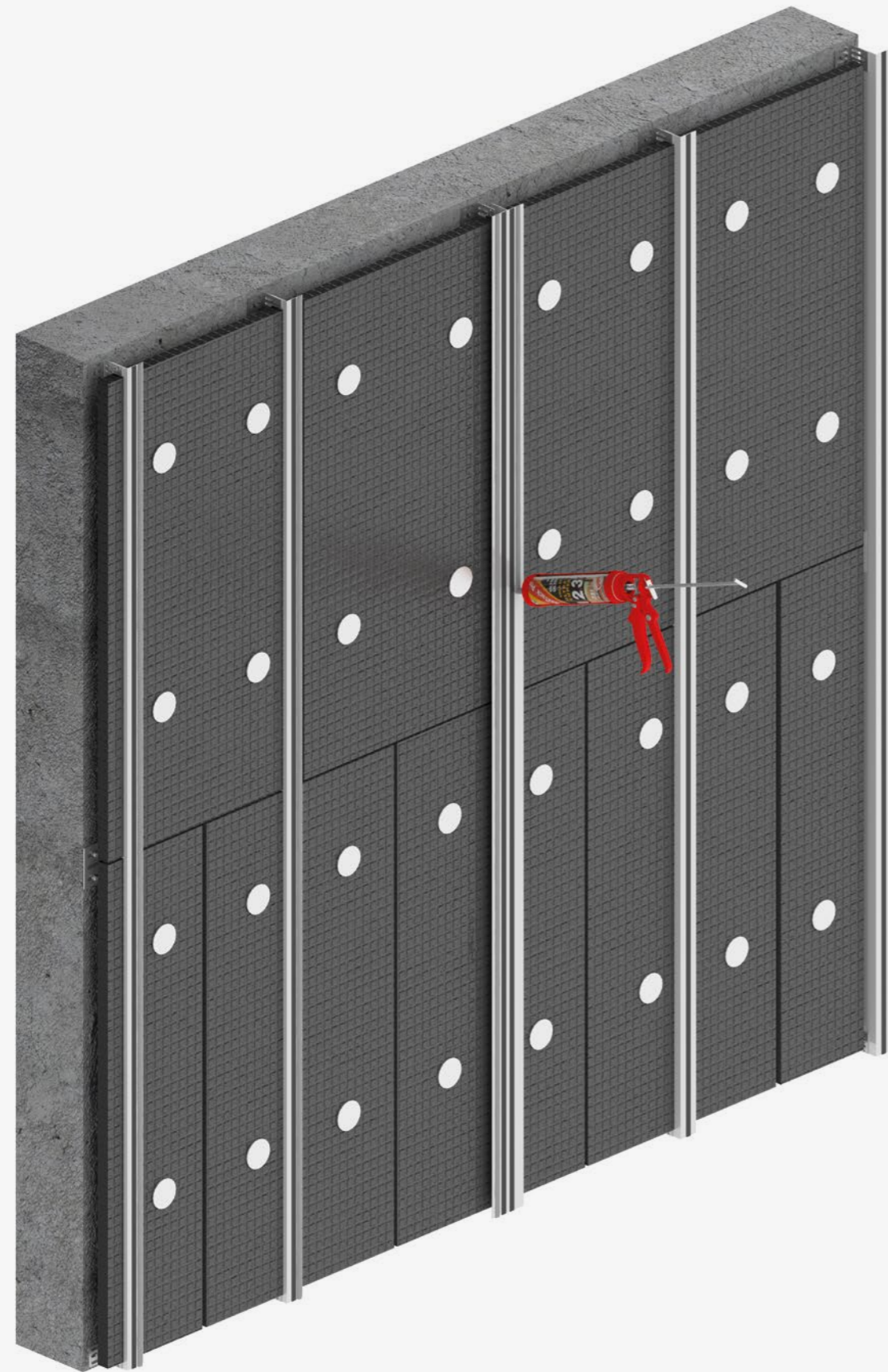
Installation process

Brackets installed on the surface to be covered by means of a mechanical system or welding; vertical profiles installed on brackets with a regulation and fixing system, by means of specific screws*; possible installation of accessories according to the requirements of the manufacturer of the chemical system and subsequent installation of the adhesive to the vertical profile as indicated; installation of the panel to the chemical system by means of support from the back of the Dekton panel.

*Specific screws according to the structural calculation of each project or indicated by the supplier of the substructure.



System structure



General fixing instructions

The vertical profiles should be placed following general subframe installation, in a single vertical plane.

- A predetermined horizontal datum is marked on the support frame; the first row determines the uniformity of the gaps and panel alignment throughout the facade installation.

Carrier rail preparation:

- Treat the bonding surfaces per adhesive provider's recommendations, applying a uniform layer of adhesion promoter over the vertical profiles surface if needed and allowing it to dry per the instructions given.

Dekton Panel preparation (non-porous material):

- Clean the bonding surface ensuring it is dry and grease free.
- Apply adhesion promoter if needed per supplier's instructions.
- Apply the adhesion promoter uniformly per supplier's instructions.

Adhesive application: :

- Place the double-sided adhesive tape on the vertical profiles to provide temporary support to Dekton pieces while adhesive is curing and ensure the consistency of the adhesive applied.
- Apply the continuous, uniform lines of adhesive along the vertical profiles, approximately 10 mm away from

the adhesive tape, panel by panel. The use of a pneumatic or battery powered applicator is recommended for easier and continuous application.

Panel installation:

- The initial panel is positioned on the bottom edge and aligned. Press the panel against the adhesive, and correct bedding of adhesive (it is advisable to place a temporary L-profile support at the bottom, especially for large format panels).
- Consecutive Dekton panels are placed in a similar way, using temporary packers to achieve uniform joints between panels. The gaps should be calculated to allow thermal movement of pieces and profiles.

Fig. 1

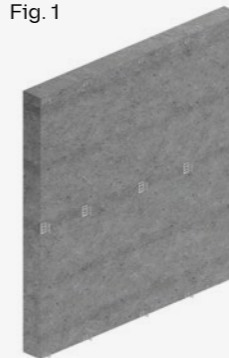


Fig. 2

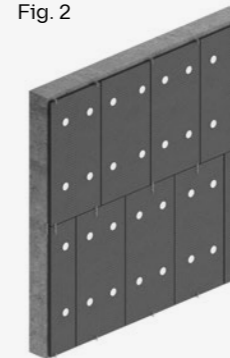


Fig. 3

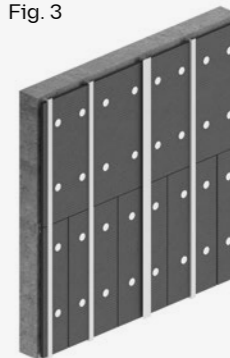


Fig. 4



Fig. 5



Fig. 6



Static calculations

Schemes and data to be defined with SDP software

Panels in horizontal or vertical layout. Maximum wind loads shown in the following configurations depend on the grid spacing and distance between vertical profiles.

These configurations have been calculated considering a distance of fixing to edges of 200mm. For further distances and configurations please consult with our Technical Department.

The tables and diagrams presented are based on Dekton calculation software and refer only to Dekton. The amount of necessary adhesive beads must also be taken into account with the adhesive supplier. They cannot be considered as definitive data for on-site installation and it is necessary for a qualified technician to make a specific project calculation for

the entire facade system including support anchors, brackets, profiles, screws and Dekton fixing elements to the facade

How to use the reference configurations:

- Determine the design wind load kN/m².
- Choose the table according to the fixing system and Dekton thickness.
- Select the closest design wind load. The wind load chosen should not be less than actual requirements.
- Select a reference configuration showing maximum spacing between fixings.

Full slab configuration

| Dekton 4 mm Design wind load kN/m ² | Horizontal | Spacing between horiz. profiles (mm) | Vertical | Spacing between vert. profiles (mm) |
|---|------------|--------------------------------------|----------|-------------------------------------|
| 0,5 | H2 | 800 | V1 | 720 |
| 2 | H3 | 540 | - | - |
| 2,5 | H5 | 460 | V2 | 480 |
| 4 | - | - | V3 | 360 |

| Dekton 8mm Design wind load kN/m ² | Horizontal | Spacing between horiz. profiles (mm) | Vertical | Spacing between vert. profiles (mm) |
|--|------------|--------------------------------------|----------|-------------------------------------|
| 2 | H1 | 1070 | - | |
| 3 | H2 | 800 | - | |
| 3,5 | - | | V1 | 720 |
| 5 | H4 | 640 | - | - |
| 11 | - | | V2 | 480 |

Cosentino recommends checking current local regulations to apply the partial safety factors for increasing actions and reducing material resistance appropriate to each project. If there are no current regulations, Cosentino recommends applying a minimum partial safety factor of 1.5.

The data shown cannot be considered as data for the execution of the project but only as indicative, and it is necessary that the engineering, architect or competent technician of the project carry out the calculations and necessary tests for the system

to withstand the demands. Design wind loads and fixing distances should be calculated per local standards, regulations and certificates applicable, with further testing if required.

The project competent technician/ designer must consider the coefficients of increase of actions and reduction of resistance of materials, as well as the calculation of anchors to tension, shear, and combined tension and shear loads as applicable.

Cosentino does not provide static calculations for projects.

Cosentino will not accept any liability whatsoever for any direct or indirect damage resulting from any errors, omissions or miscalculations of the static calculations for the project.

There are particular tests carried out with different subframe companies and suppliers. It is recommended to pay attention in these tests to the specific elements and references used.



CASE STUDY

Villa in Sanxenso

Sanxenxo, Pontevedra.
Spain

Material

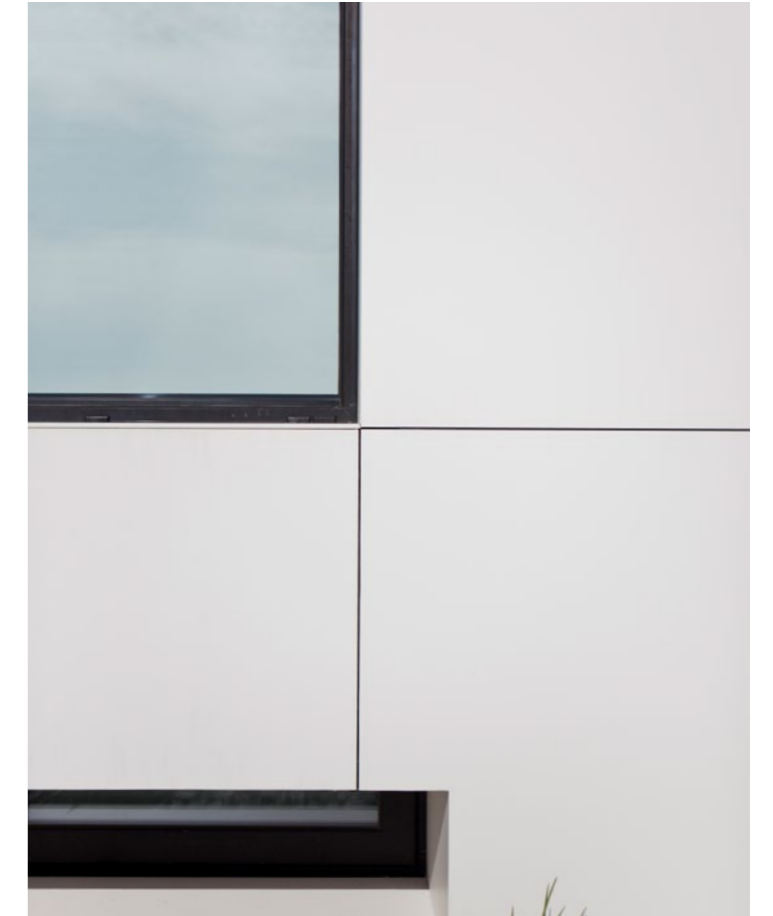
308 m²
Dekton Zenith and Sirocco

Facade system

DKC

Thickness

8 mm





CASE STUDY

Nautical School Urbher

La Coruña, Galicia. Spain

Materials

1,590 m² Dekton Kovik, Eter and Mooné

Facade system

DKC and DKT4

Thickness

8 mm





CASE STUDY

Copenhagen Building in Balneário Camboriú

Balneário Camboriú/SC. Brazil

Material

700 m² Dekton Uyuni

Facade system

DKC

Thickness

4 mm

Considered one of the slenderest buildings in Brazil, the Copenhagen Building in Balneário Camboriú conveys elegance and modernity with its 173 meters high on the seafront.

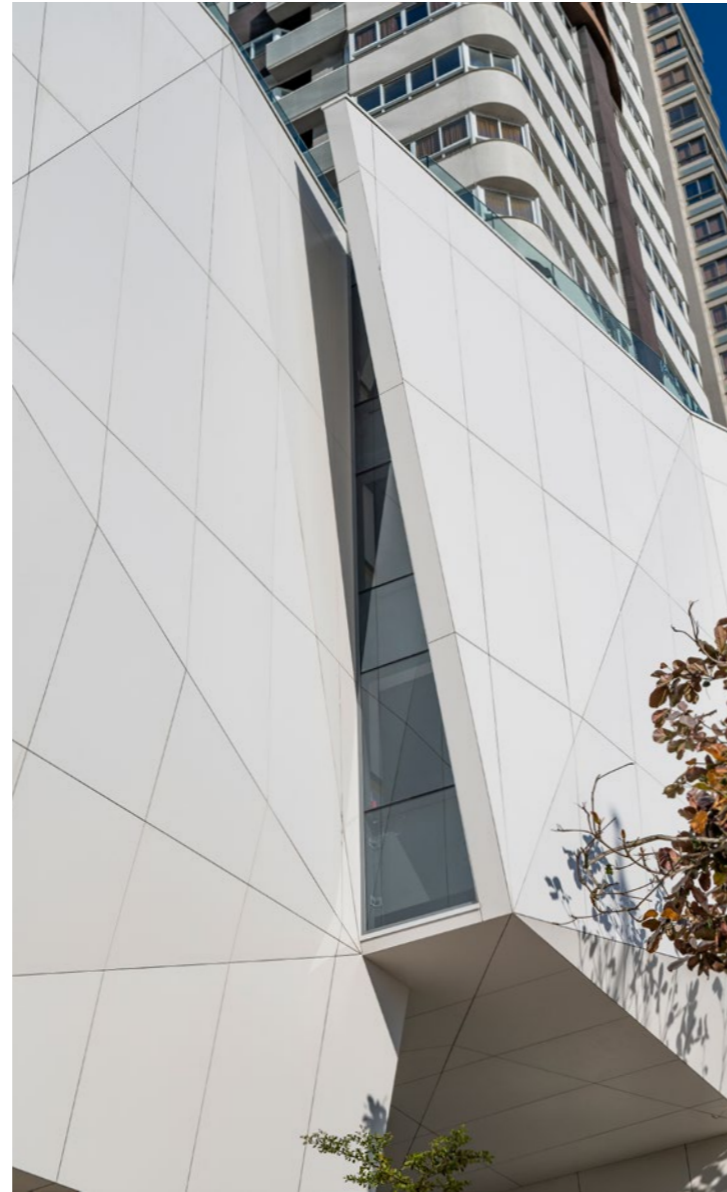
Combining sophistication and technology, it is the ideal place for you to share the best moments. With a contemporary design, it stands out from the entrance, with a work in the form of a monolith, paying homage to two astronomers who made history in 1970.

Cechinel's Copenhagen Building offers spacious apartments with high-quality details. The apartments have more than 236m² of private space with a high standard of finishing, including 4 suites, integrated living room, kitchen, balcony and 4 parking spaces and beautiful views of the sea.

Dekton Uyuni: versatility and durability

The building is completely covered with ready-made facade systems with glass and ACM, ventilated using ACM (copper) and Dekton Uyuni (front basement).

The choice of Dekton as the facade material was defined due to the versatility of the material,



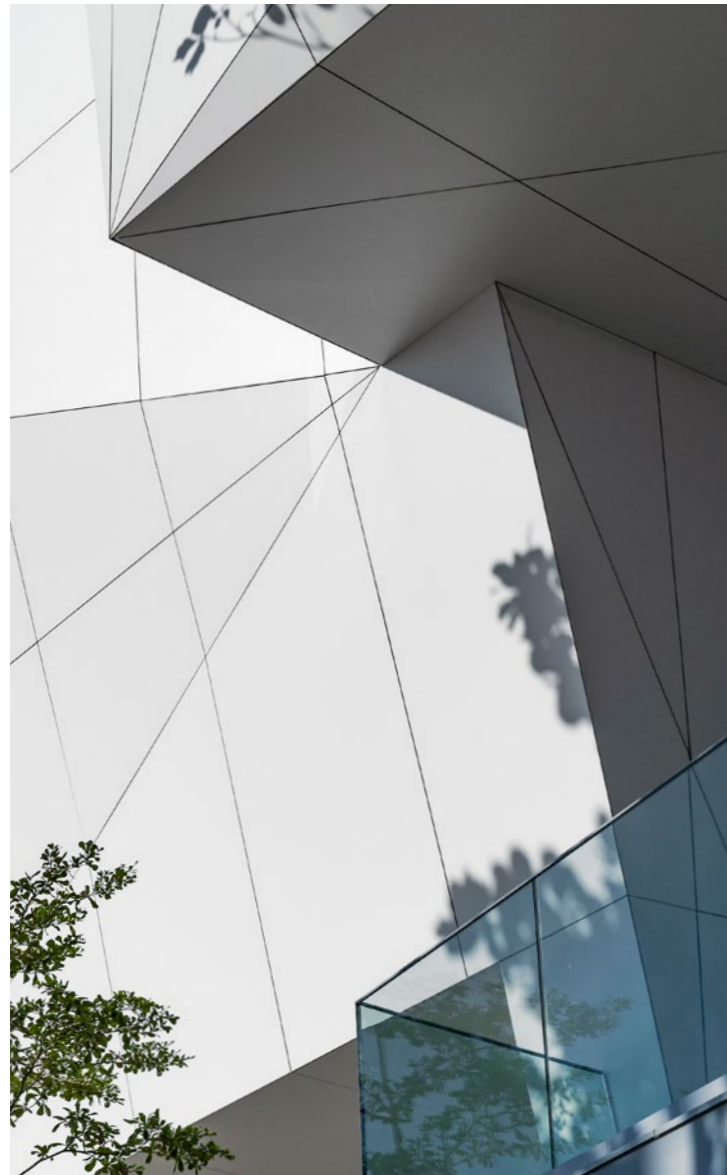
which allowed the execution of large plans, needs that the architectural project required to enhance the polished shape of the base. The durability and easy maintenance of the product also influenced the choice, not just thinking about creating something beautiful, but because it is functional and lasts for a long time.

The color was also due to the shape and the application by the sea. Bringing beauty, lightness and durability. Dekton® is resistant to salt spray, sun, rain and wind, it is easy to apply due to its light weight, in addition to the size of the sheets, which made it easy to fit onto the sides of the facade, achieving a "cut" appearance.

Volumetric facade

The facade is very interesting from a constructive point of view, highlighting both its cutting and volumetrics. To achieve the fascinating interplay of broken planes and angles, a chemical anchoring system (DKC) was used on a framework of metal profiles.

This gluing system includes a range of cleaning and priming products to ensure proper adhesion of the double-sided tape and adhesive line to both the Dekton panel and the supporting profile. It is imperative that the system is comprehensive, validated by the supplier and applied by qualified fitters in strict accordance with the product application guide.



CASE STUDY

Rebouças

Pinheiros, São Paulo, Brazil

Material

3,000 m² Dekton Kovik

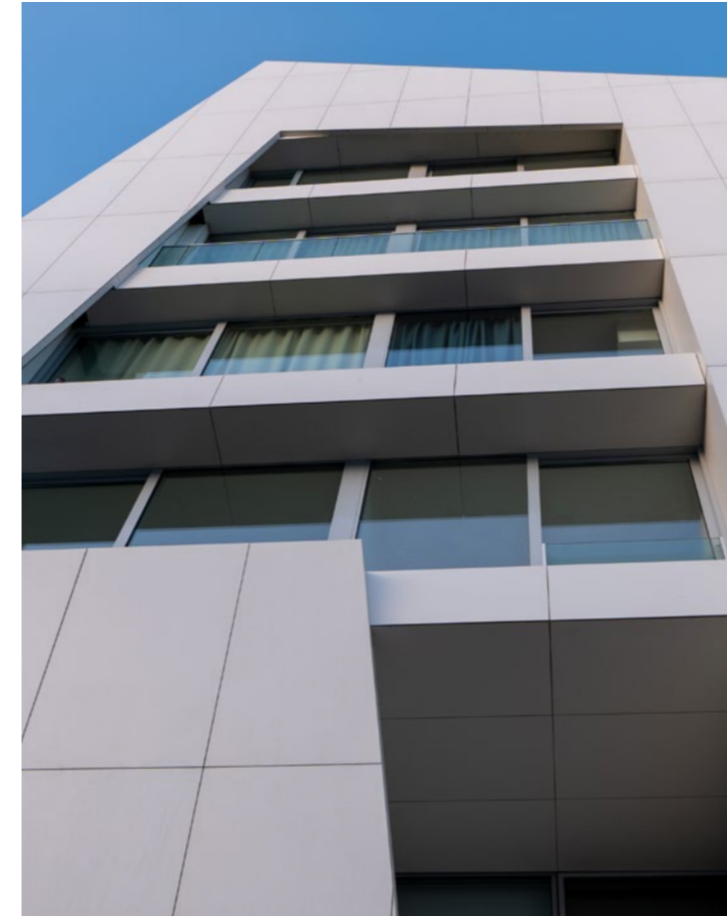
Facade system

DKC

Thickness

8 mm





CASO PRÁCTICO

MeuseView in Visé

Hermalle-sous-Argenteau.
Belgium

Material

8,800 m² Dekton Nayla

Facade system

DKC

Thickness

8 mm





CASE STUDY

Rosh Hanikra

Rosh Hanikra, Israel

Materials

400 m²
Dekton Kelya
Dekton Soke

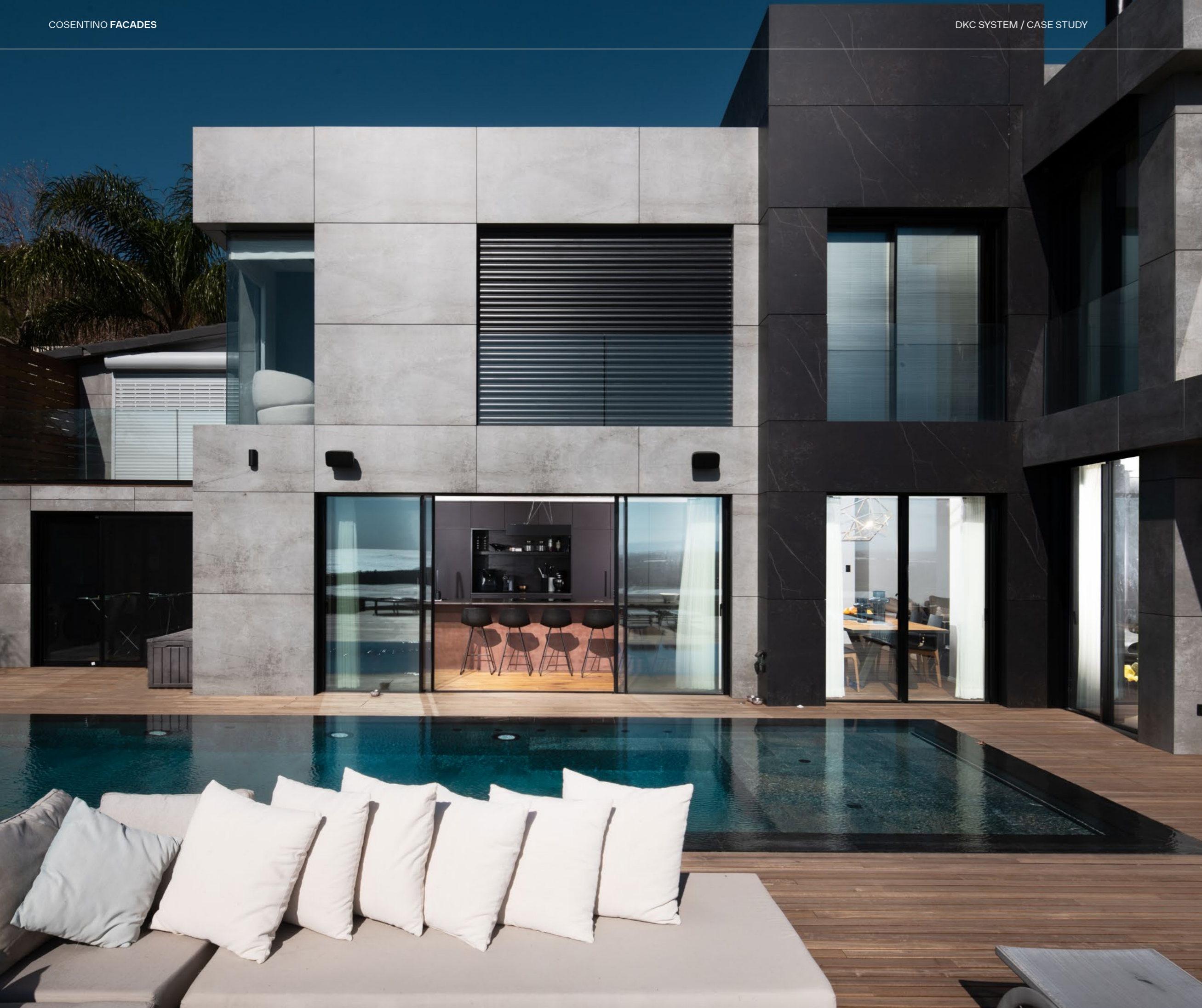
Facade system

DKC

Thickness

8 mm







Villa in Yio Chu Kang, Singapore

DK B**Direct adhesion**

The DKB system is a glued facade system, without format limitations and where 8mm thickness is commonly used. Each piece is applied directly to the cladding, thanks to a layer of improved cement based adhesive applied according to the technique

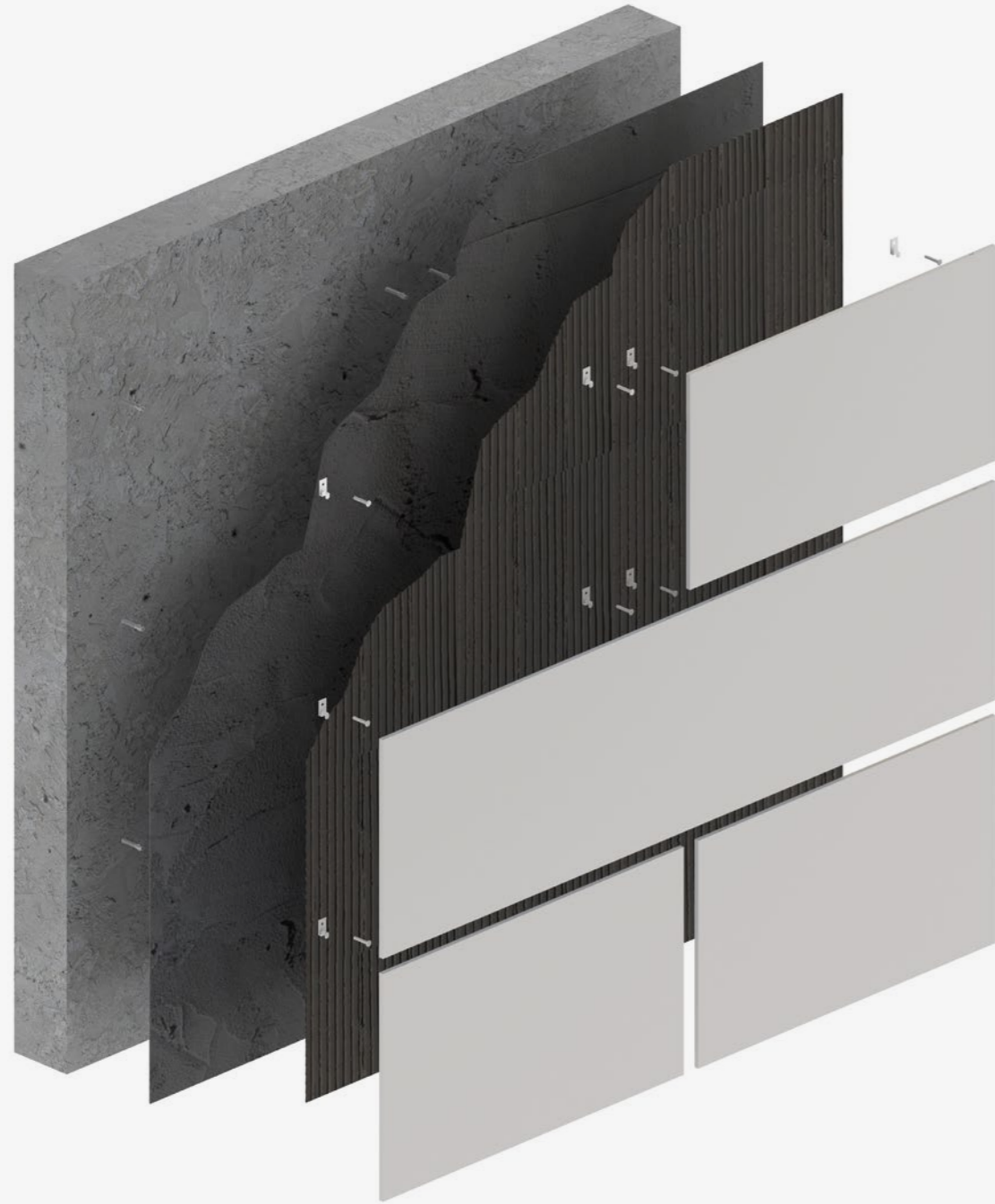
of double gluing on the support and back of the piece, leaving horizontal and vertical joints of at least 3 mm. Generally, the use of hidden security clips is always recommended (and is compulsory in some places according to local standards), slotting the edge



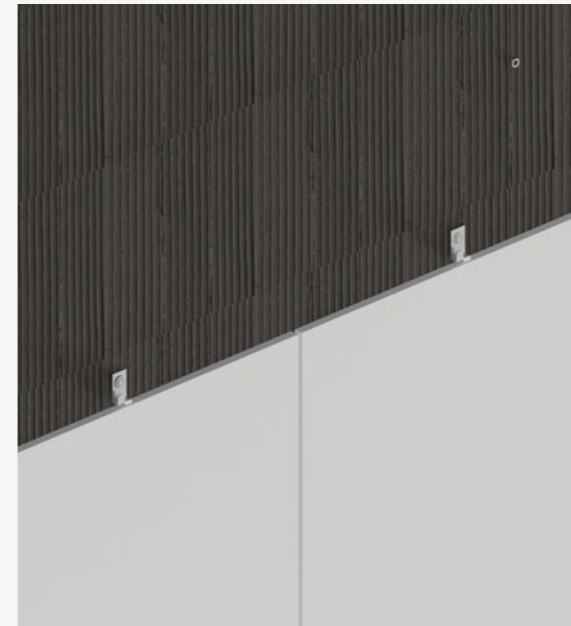
of the piece or making a regular groove on the back, and always following the local regulations applicable to each project.

Fixing with cement-based adhesive.





Joint



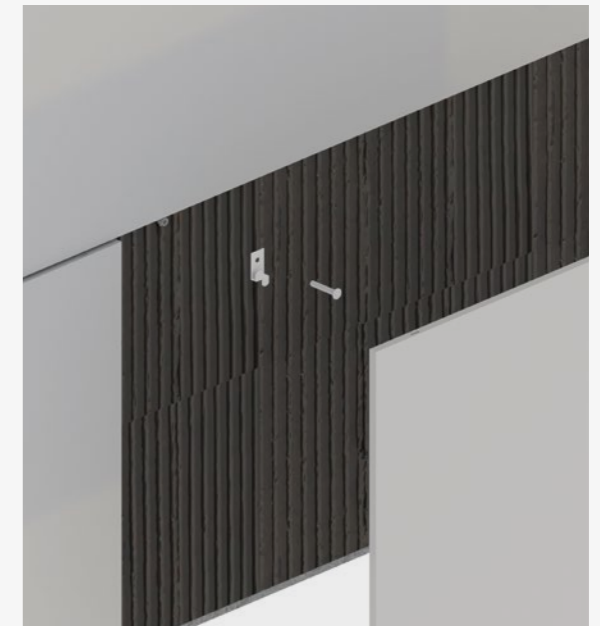
Detail of system layers



Bottom



System detail



System components

Thanks to its high performance, when correctly installed, Dekton is an ideal material for installing outdoors on vertical walls, ensuring proper function.

The right format and thickness of Dekton will depend on local regulations and project requirements and will need to be verified by those undertaking the project.

In a general way we can distinguish:

Structural support

This is what supports the facade system, so it is necessary to ensure it is adequate and in good condition to withstand the mechanics as a whole. The suitability of the fixing background in question must always be checked beforehand and must be:

- Healthy and free of cracks.
- Treated and stable throughout.
- Mechanically resistant to support the loads and their use.
- Dry, clean and without loose pieces.

Adhesive

This is used to form the connection between the piece and the support.

Dekton

Ultra-compact high-performance coating for outdoor vertical cladding: durable, with high mechanical resistance, low absorption and hygrothermal expansion, with a wide range of finishes and low maintenance.

System structure



General fixing instructions

1. Clean, prepare and level the supporting wall.
2. Apply the adhesive to both the supporting wall and the Dekton pieces with toothed trowel.
3. Place the Dekton pieces.
4. Meeting of the placement joints.
5. Filling joints with grout.
6. Removal and cleaning of excess material.
7. Final cleaning of the facade.

Fig. 1

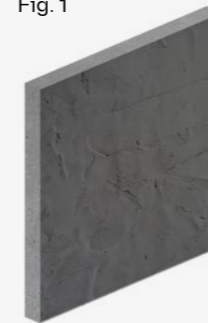


Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Laying surface

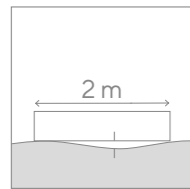
The laying surface is the layer on which the Dekton fixing adhesive will be placed or, failing that, the visible side of the structural support if it allows it. The best results will depend on a perfect surface and review of conditions.

The supporting wall can be of two types:

- Traditional "wet" construction consisting of brick or ceramic block or concrete, which may be structural or an enclosure between the pillars and slabs of an independent structure.
- Dry construction using a grid system of profiles or strips covered internally and externally by panels designed for ceramic cladding installation.

Flatness

The deviation in flatness of a fixing surface must be measured with a rigid rule of 2m in length, and must be less than 3mm for 8 and 12mm Dekton thicknesses and less than 1.5mm for 4mm Dekton thicknesses. In the case of traditional supports (e.g. brick, block), it is necessary to apply the mortar to regularize the support.



Curing time

Wait a minimum of 7-10 days per cm. of thickness to avoid possible subsequent damage to the covering due to the effect of the retraction of the support. Installing Dekton without meeting with this condition would void the product warranty (only for cementitious base support).

Dimensional stability

The dimensions of the support must be constant or have variations within reasonable limits over the course of time. In order to avoid the effects of retraction in concrete supports, it is necessary to wait about 1 month from starting the project before proceeding with the installation of Dekton.

Mechanical resistance

The laying surface must be able to withstand the operating loads, the permanent weight of the covering and the stresses of the laying system without breakage or damage. It must reach a minimum mechanical resistance to flexion, indicated by the application standard, in order to be able to withstand the stresses to which it will be subjected once the covering is laid.

Water sensitivity

Water-sensitive supports may require a waterproofing primer.

Surface finish

In the case of very smooth and slightly absorbent supports, it is necessary to increase roughness. In the case of crumbling supports, a hardening primer must be applied or the entire surface must be removed until the support is sound.

All of this is to guarantee values of adherence and internal cohesion that comply with applicable regulations.

Clean surface

Before applying the adhesive, the surface must be dry and free of dust or other elements. If the surface is exposed to the sun, or is very absorbent, it is advisable to wet it first.

Adhesive

With regard to the bonding or adhesive material, it is essential to consult with the selected local supplier prior to installation and to faithfully follow their product recommendations and application instructions.

The basic rules to be observed are as follows:

1. Use of cementitious adhesives

Class C2 (improved) and S2 (highly deformable) cement adhesives must be used.

| Application type | Dekton | Dekton Protek* |
|------------------|--------|----------------|
| Fixed facade | C2S2 | R2 |

*Dekton Protek is the mesh product line.

An improved cementitious adhesive as described below will suffice for the installation of Dekton. For the installation of Dekton Protek* it is necessary to use a resin-based R2 adhesive. (According to standard UNE EN 12004).

2. Placement of pieces

Placement using the double gluing technique (support and back of the piece) parallel to the short side of the piece.

This technique has several advantages:

- It allows for a greater distribution of stress by ensuring the maximum possible contact surface (> 90%) between the support and the adhesive and the adhesive and the piece.
- It avoids the formation of efflorescence by preventing the eventual stagnation of rainwater on the surface of the tile.
- For the same reason, it avoids the possibility of detachment due to ice formation.
- It should always be applied with a toothed trowel. Its geometry has to be defined according to the format of the piece, the support and the type of adhesive.

3. Adapting the right adhesive

Adapting the right adhesive according to the environmental conditions of the project:

- In windy, hot and/or dry conditions, choose a class E adhesive, with extended open time.
- In cold conditions, with risk of frost at night, choose an optional class F, fast-setting adhesive.
- In periods of climatic instability, with risk of rain, choose an optional fast-setting class F adhesive or protect the tile.

4. Elastic sealing of joints

To protect the upper edges of the coating against the penetration of rainwater by the elastic sealing of joints with carpentry and the arrangement of specific construction elements, such as copings, water droppers, etc.

5. Plan for security laying with a mixed adhesive-anchoring system

For Dekton it is considered imperative, in accordance with certain international regulations, to provide for safety installation with a mixed adhesive-mechanical anchoring system, to be chosen in relation to the weight of the piece, the height of the cladding and the project conditions.

In short, in order to obtain the required results with large-format pieces, specific high-tech materials must be used for bonding and grouting, and specific installation methods and techniques must be employed. You must always have the support and guarantee of the supplier of the adhesive system.

Joins

A fundamental part of a cladding system is the pattern of laying joints and the arrangement of the movement joints.

Never use jointless or butt joints for cladding.

Due to its low rate of expansion of $6.3 \times 10^{-6} \text{ }^\circ\text{C}^{-1}$ (according to UNE EN ISO 10545-8) Dekton could be installed with minimum laying joints of 3 mm.

However, in all project applications, the current application standard, complete design of the cladding (including the arrangement and size of the joints) and the instructions from the adhesive supplier (depending on the climatic conditions of use and the size of the pieces) will prevail with regard the widths of:

Laying joints between pieces

Depending on the conditions of the project, a minimum joint of 3 mm (always with technical support on site from the adhesive supplier) or a standard joint of 5 mm could be used.

Cladding expansion joint

To avoid the accumulation of stress due to the expansion and contraction of the cladding. This is marked in maximum regular areas (in m²) or in maximum lengths of separation between joints in linear metres (e.g. according to conditions, minimum thickness 8 mm, every 16 m² or 4 linear metres).

Perimeter motion joint

Joined with other perpendicular walls or with horizontal floors and elements (e.g. eaves, upper floors...)

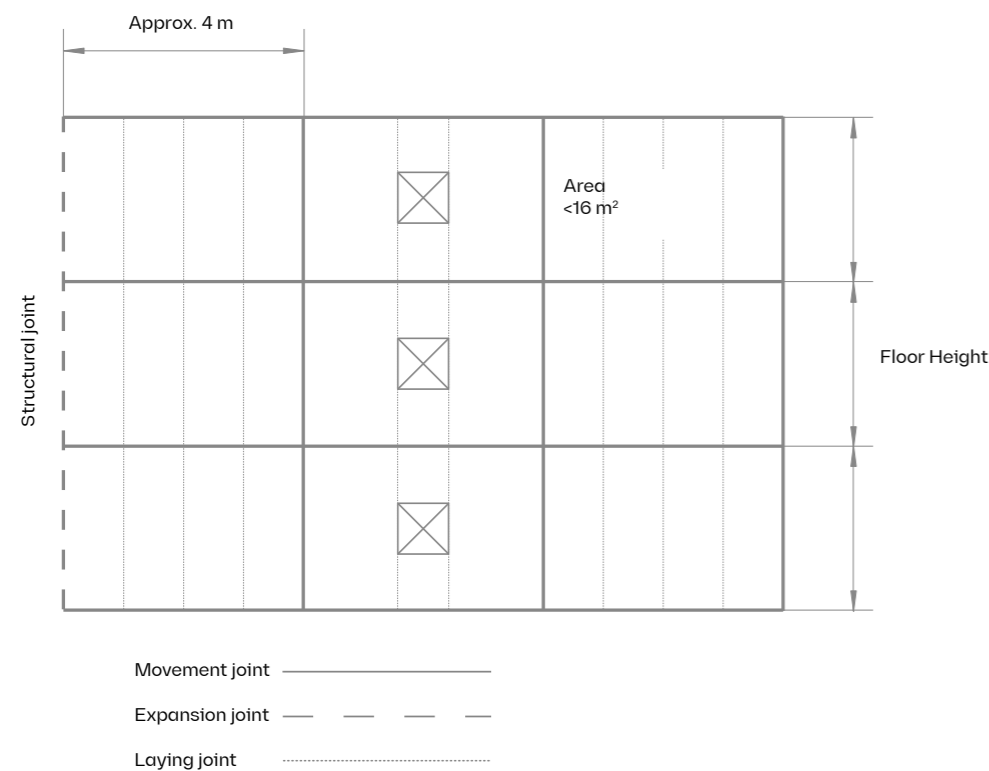
Structural movement joints

Which will be respected by the cladding both in its location and in its sizing.

E.g. Arrangement of cladding expansion joints in 4 x 4 m modules, respecting building expansion joints according to the structural project. Movement joints should be provided at the edges of the slabs, change of plane and at any movement joints in the support.

The recommended joint material in outdoor applications should be at least CG2WA for cement-based systems and RG for resin-based systems (according to EN13888).

Diagram of joints on cladded facade



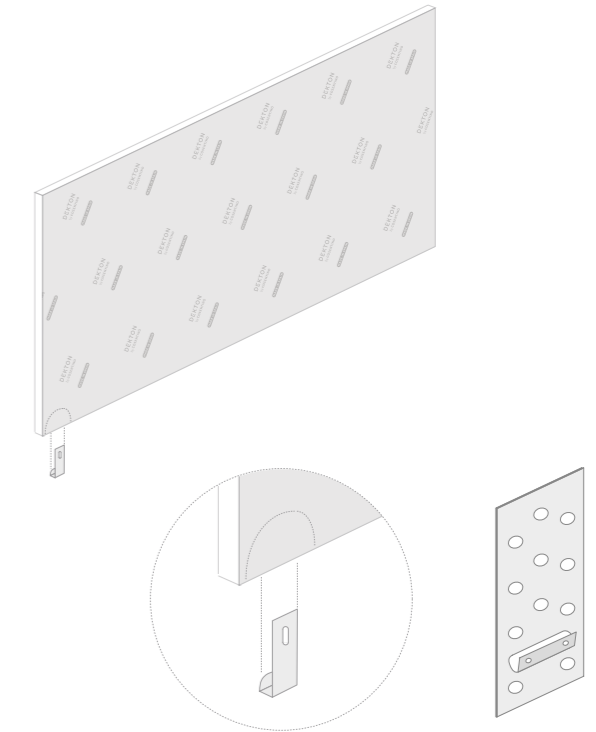
Mechanical safety fixing

For Dekton it is considered imperative, in accordance with certain international regulations, to provide for safety installation with a mixed adhesive-mechanical anchoring system, to be chosen in relation to the weight of the piece, the height of the cladding and the project conditions.

Its use is necessary, given that even if the adhesive cement is applied correctly, it is not easy to predict the stresses that the pieces will have to resist due to project site or due to changes in temperature and expansion, seismic movements and other factors.

The use of a safety fixture prevents the piece from falling if it becomes detached from the support, allowing time for repair.

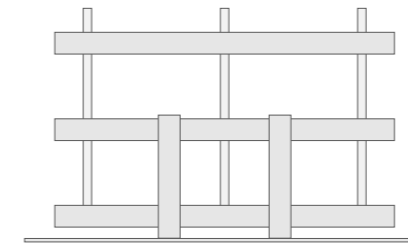
There are different type of suppliers of this type of fixture, depending on the thickness of the pieces, with machining on the edge or on the back of the Dekton piece (as required).



Project preparation

Palletizing and transfer of the material

To facilitate collection on site and transfer, Dekton pieces are supplied vertically in specifically designed wooden frames or boxes, all shrink-wrapped to avoid sudden movements.

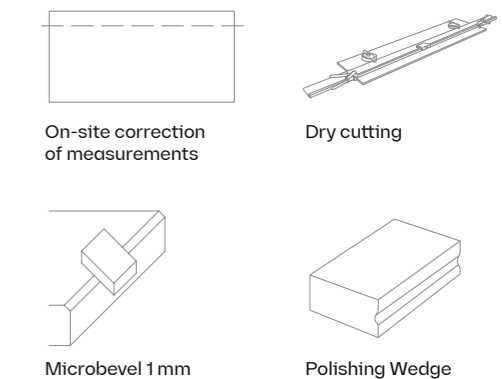


For the handling of the pieces on site, appropriate safety measures must be taken to remove and move the pieces one by one, using the necessary means of support. It is especially important to use suitable suction cups depending on the size and weight of the piece. We recommend glass-type suction cups with suction pump.

Cutting of construction pieces

Cosentino may supply cut to size pieces. However, to make adjustments on the project site, simple cutting, drilling and machining can be carried out on site using appropriate tools. This will allow you to reposition pieces, resolve corners, joints with pillars, etc.

On-site cutting is possible using dry cutting machines. We recommend the use of polishing blocks to micro-bevel the pieces.

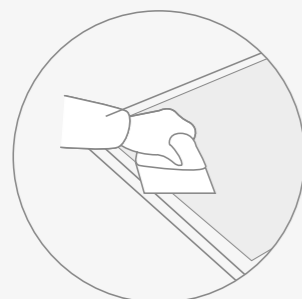


Laying and adhesion of pieces

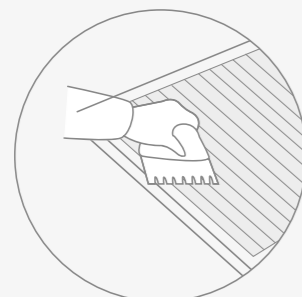
Laying of pieces must always be done considering the characteristics of the adhesive: open time, life span, maximum application thickness... as well as the manufacturer's indications.

Double gluing

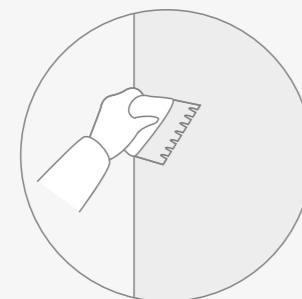
Laying should be done using the double gluing technique (adhesive on the piece and on the support) guaranteeing perfect adhesion to the pieces and avoiding the formation of gaps. The adhesive is first spread on the support with the smooth part of the trowel, then combed with the notched part, parallel to the short side of the piece. Never apply the adhesive by "sticking" or "pinching".



Application diagram with trowel



Application diagram with toothed trowel on the piece



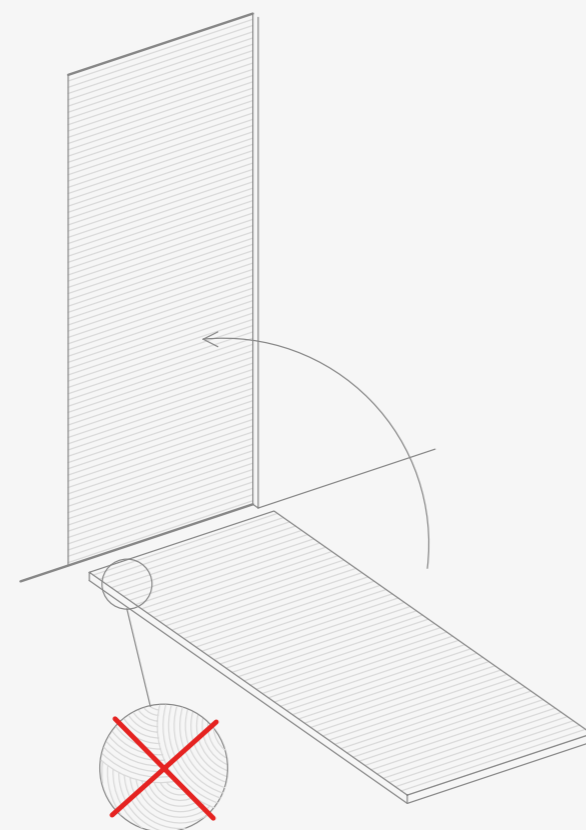
Application with toothed trowel on the wall

Toothed trowel

It should always be applied with a toothed trowel to define its geometry according to the format of the piece, the support and the type of adhesive. In parallel grooves between support and piece.

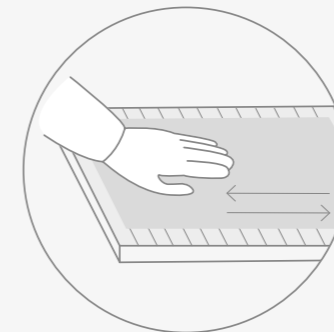
Double gluing:
Use the toothed trowel tool.

Parallel lines:
Parallel cut side of the piece.



Sliding movement

To allow air to be released and better contact between the piece and the support, reversible sliding movement must be employed. Set it in its final position, moving it perpendicular to the direction of the grooves the equivalent of the width of the trowel and return it to its final position respecting the width of the marked joint.



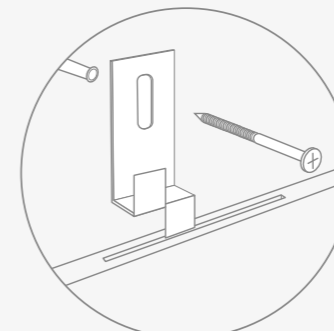
Use of crosses

In order to respect the stipulated joint width, the use of crosses is recommended and the edges should always have a micro bevel.



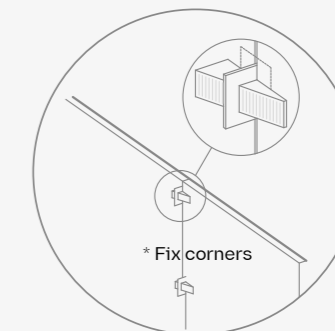
Mechanical safety fixing

The mechanical safety fixings will fit into the slots made on the edge of the plate or on the back side of the plate using MS polymer-type mounting adhesive and will be conveniently fixed to the support. All of this should be done following the manufacturer instructions.



Auxiliary systems

The use of auxiliary systems to improve the final levelling of the cladding is recommended, such as levelling wedges, ensuring regular thickness of the adhesive layer of at least 3 mm.

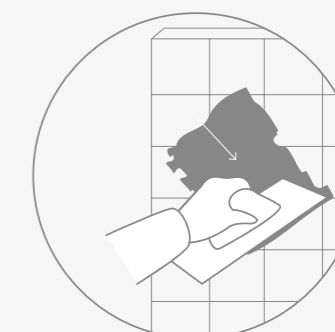
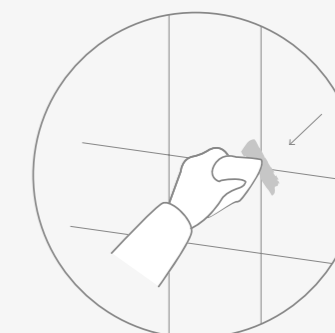


Grouting material

When filling the joints, the appropriate grout should be chosen and applied according to the manufacturer's instructions. It is advisable to use a rubber trowel of the appropriate hardness to the width of the joint to extend the material diagonally to the direction of the joints.

The final texture and curvature will be set on the joint using a pointing trowel or equivalent tool. In some cases, flexible stainless steel spatulas or extrusion guns can be used to apply the grout.

Tilt the rubber trowel 45 degrees.



System description

Applied as a cladding for facades, mixed with cement based adhesive in a thin layer with double gluing and mechanical safety fixings to the substrate. Type C2TES2 adhesive for Dekton without mesh and type R2 adhesive (according to UNE EN 12004) for Dekton with mesh, with improved adhesion, reduced slip, extended open time and very formable. 3-5 mm wide placement joints, grouted with cement mortar with high resistance to abrasion and reduced absorption

type CG2AW (according to UNE EN 13888). Expansion joints every 16 m2 or 4 linear metres, perimeter joints and expansion joints following structural expansion joints of the building. Upper end of the facade with a special piece for water drips, with the facade meeting resolved with a perimeter joint.

Size, thickness and finishes

| | |
|------------------|--------------------------------|
| Full slab format | Up to 330 x 163 cm |
| Thickness (cm) | 0.4 ⁽¹⁾ - 0.8 - 1.2 |
| Finishes | Smooth, Textured or Polished |

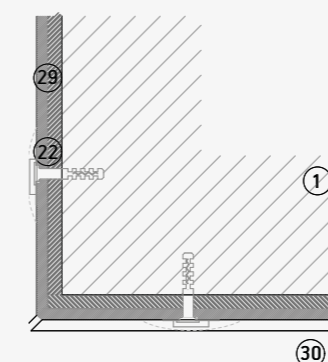
(1) The 4mm. thickness incorporates 300 g/m² glass fibre mesh with epoxy resin and is called Dekton Protek.

Recommended size of slabs in this system to minimize waste

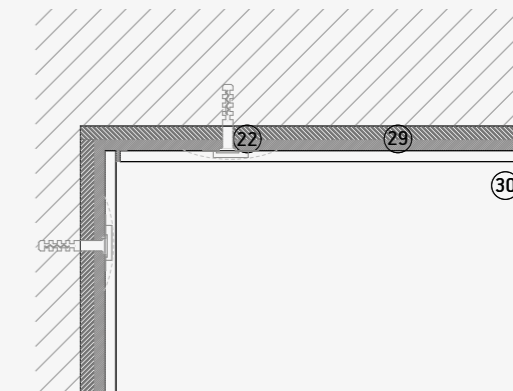
| Formats (cm) | Formats (inches) | N° of pieces |
|--------------|------------------|--------------|
| 71 x 71 | 28" x 28" | 8 |
| 71 x 106 | 28" x 42" | 6 |
| 71 x 142 | 28" x 56" | 4 |
| 71 x 159 | 28" x 63" | 4 |
| 71 x 320 | 28" x 126" | 2 |
| 106 x 142 | 42" x 56" | 3 |
| 142 x 142 | 56" x 56" | 2 |
| 142 x 159 | 56" x 63" | 2 |

Horizontal section

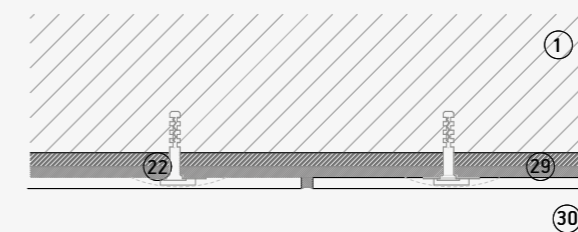
External corner bevelled



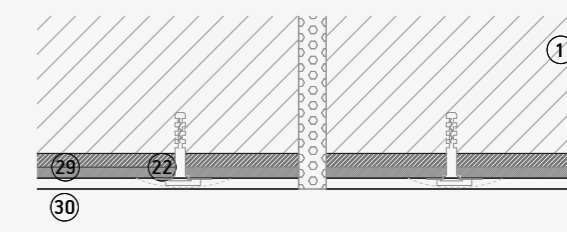
Internal Corner



Vertical joint



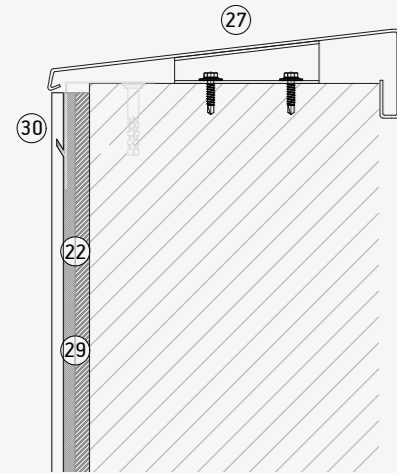
Vertical expansion joint



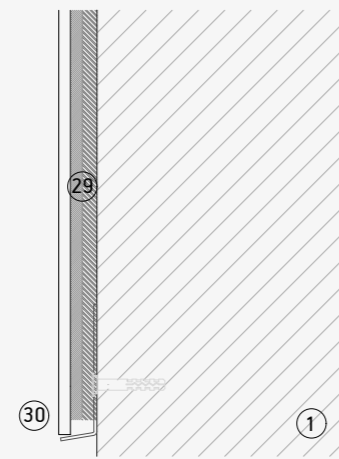
- | | | | |
|------------------------|-------------------------------------|----------------------------|----------------------|
| 1. Supporting wall. | 11. Undercut anchor. | 19. Interior back clip | 29. Bonding adhesive |
| 2. Anchor bracket. | 12. Horizontal rail. | 20. Exterior back profile | 30. Dekton |
| 3. Insulation. | 13. C hanger. | 21. Chemical fixing system | |
| 4. Insulating layer. | 14. Adjustable C hanger. | 22. Security fixing | |
| 5. Fixed bracket. | 15. Bottom/top edge profile/clip. | 23. Ventilation profile | |
| 6. Adjustable bracket. | 16. Intermediate edge profile/clip. | 24. Lintel | |
| 7. L profile. | 17. Bottom/top visible clip. | 25. Jamb | |
| 8. T profile. | 18. Intermediate visible clip. | 26. Window sill | |
| 9. Self tapping screw. | | 27. Top coping | |
| 10. Rivet. | | 28. Corner profile | |

Vertical section

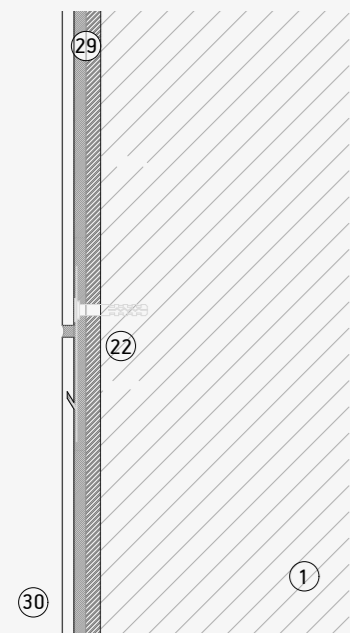
Upper detail



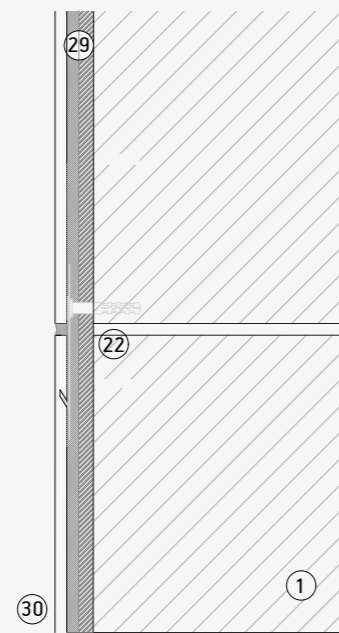
Bottom detail



Horizontal joint



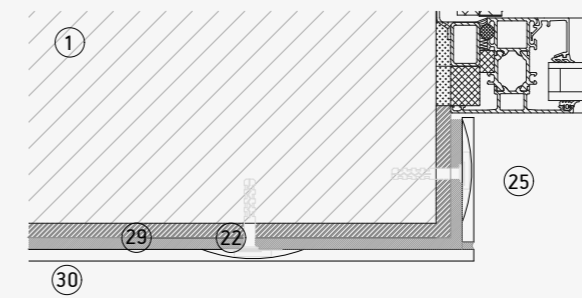
Horizontal profiles joint



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Vertical section

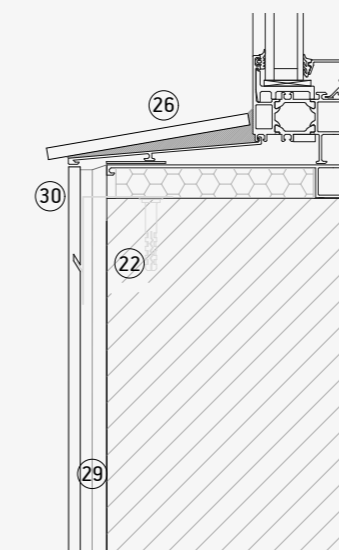
Dekton jamb



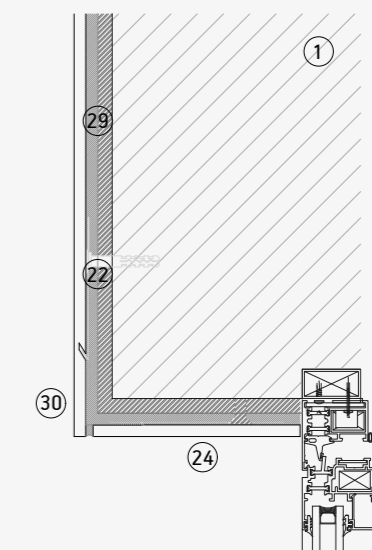
Metallic jamb



Dekton window sill



Dekton lintel



- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

CASE STUDY

Ferrara Stone Headquarter

Piana degli Albanesi, Palermo.
Italy

Materials

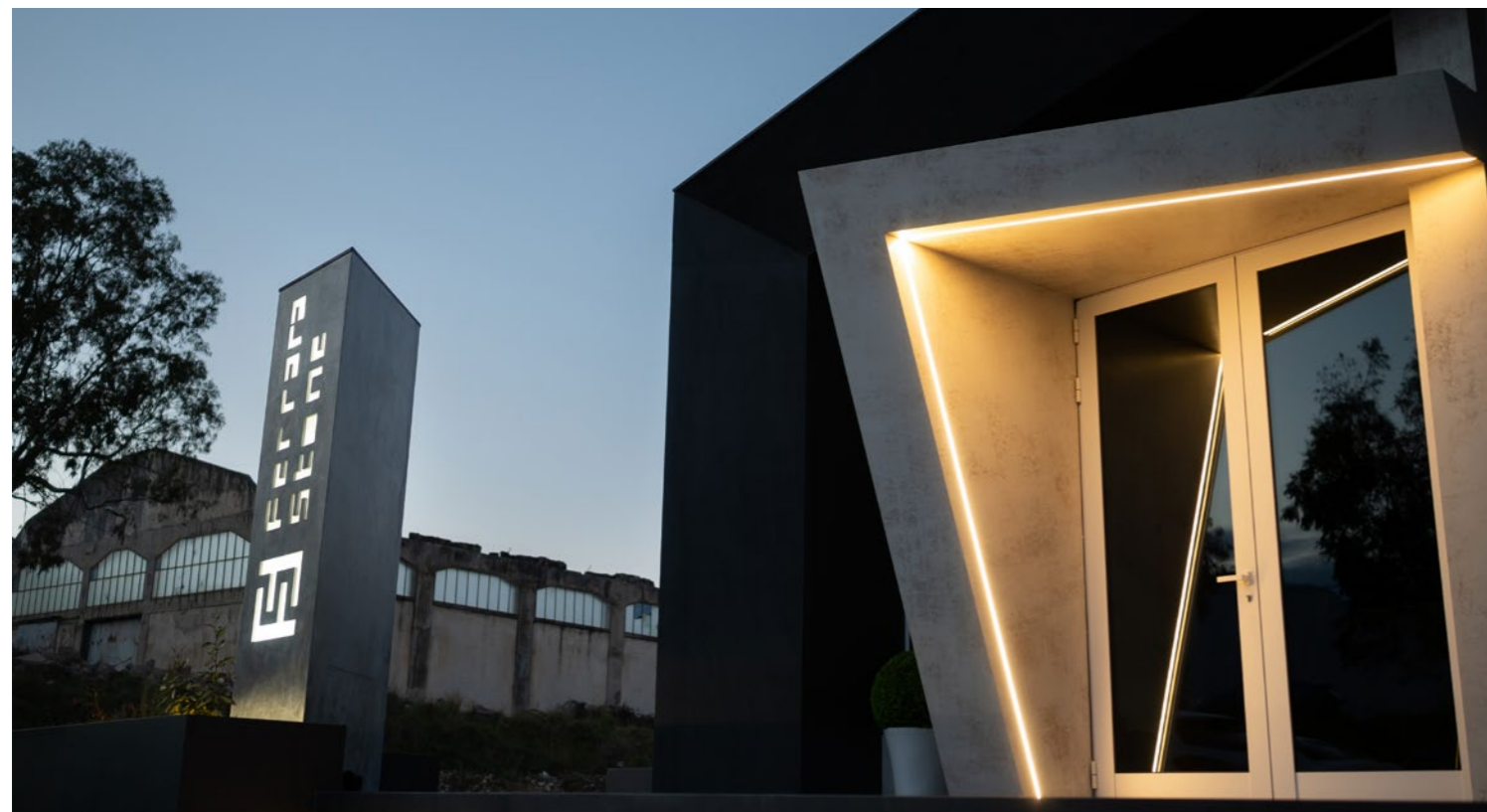
264 m²
Dekton Nilium, Bromo and Orix

Facade system

DKB

Thickness

8 mm



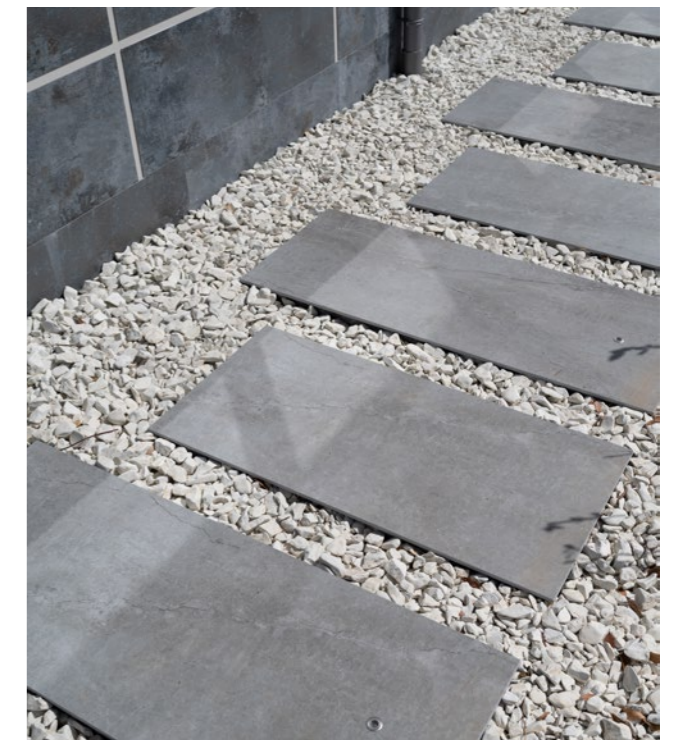


The company's new offices were inaugurated in 2023, an expansion and strengthening in line with constant commitment and attention towards technological innovation; a 150 kW photovoltaic system has been created which allows the company to be 60% self-sufficient in terms of energy and at a technological level it has inserted new machinery for production.



A facade in Dekton Nilium and Dekton Bromo

Both for the interior and exterior of its new headquarters, Ferrara Stone has chosen Cosentino materials. Starting from the outside, the facade in Dekton Nilium and Bromo immediately stands out, as do the cladding of the side facades in Dekton Orix and the flooring in Bromo. Furthermore, Dekton Orix was used to cover a pillar where the company logo has been placed.





CASE STUDY

Costa Rica's Legislative Assembly

San José. Costa Rica

Material

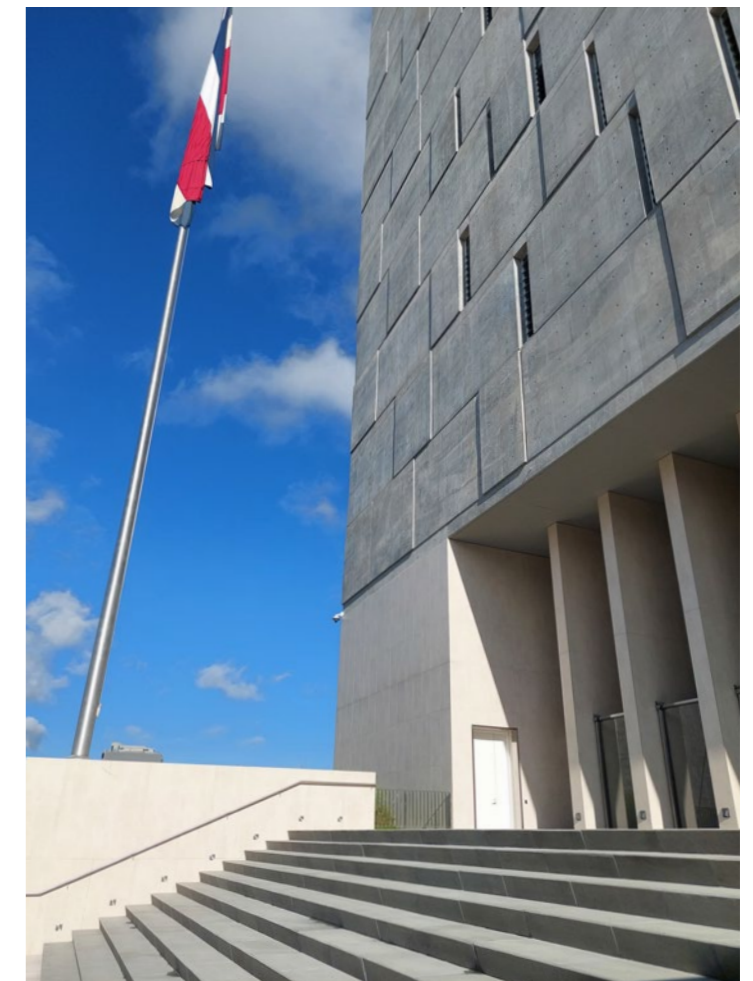
3,500 m² Dekton Blanc Concrete

Facade system

DKB

Thickness

8 mm



CASE STUDY

Verdizela Villa

Corroios. Portugal

Materials

327 m² Dekton Rem and Aeris

Facade system

DKB

Thickness

4 mm





CASE STUDY

La Gramoia

Girona, Spain

Materials

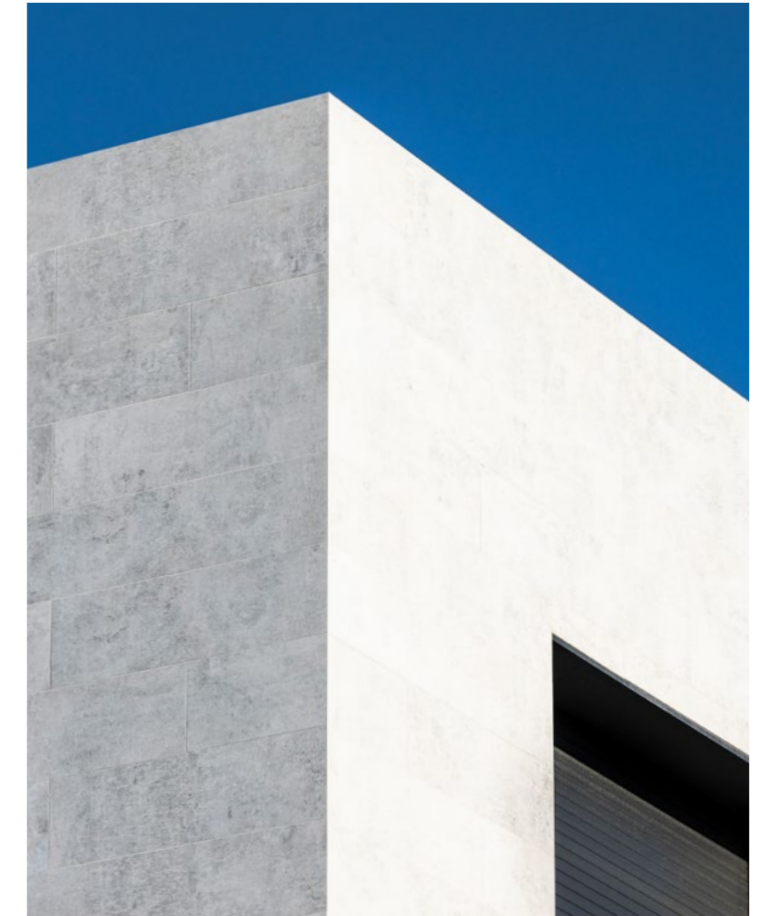
700 m² Dekton Lunar and Bromo

Facade system

DKB

Thickness

8 mm





CASE STUDY

Zen Leaf

Lombard, IL. USA

Material

111 m² Dekton Domoos

Facade system

DKB

Thickness

8 mm



CASE STUDY

Villa in Singapur

Singapore

Material

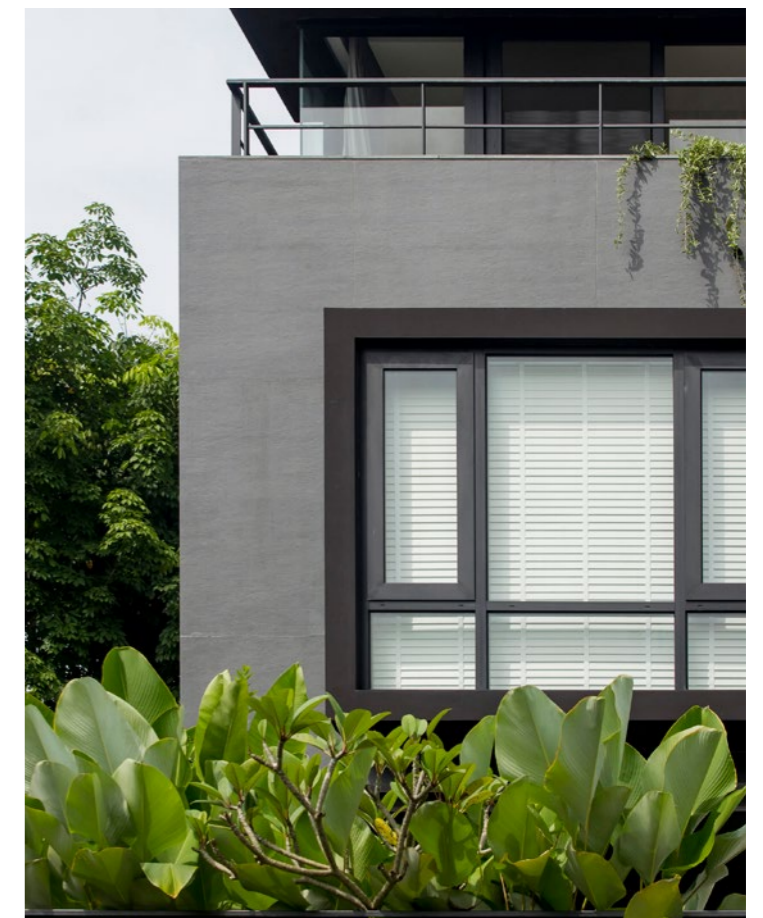
350 m² Dekton Bromo and Soke

Facade system

DKB

Thickness

12 and 20 mm





Project with DKS system: Poland

DK S

ETICS/EIFS system

In our fast-moving world, homes undergo multiple refurbishments for aesthetic and decorative reasons as well as to create warmer indoor environments. The DKS system is an External Thermal Insulation Composite System (ETICS) clad on the outside with Dekton.

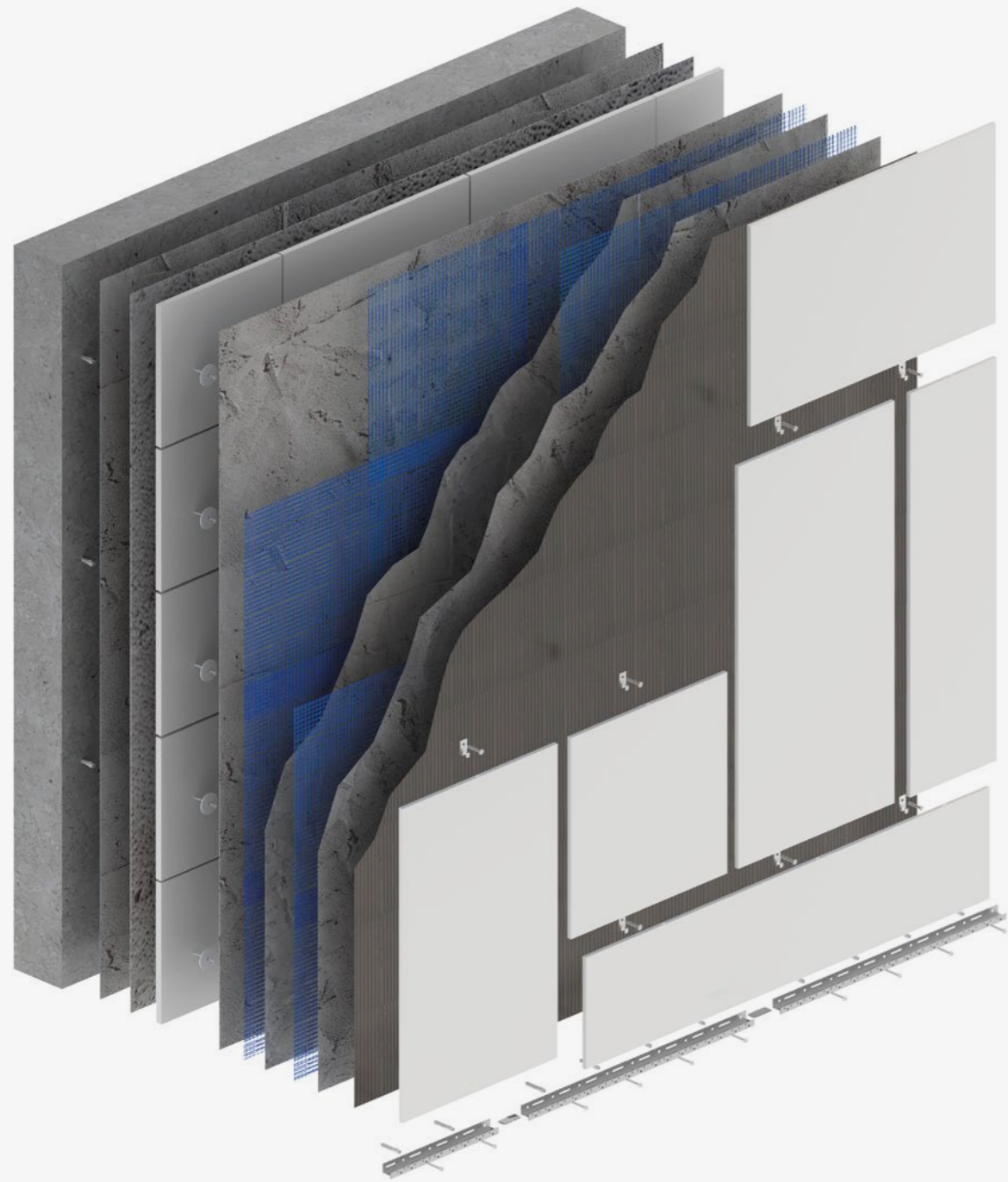
On an ETICS that is ready to be finished with cladding, Dekton is applied using a suitable cement based adhesive.



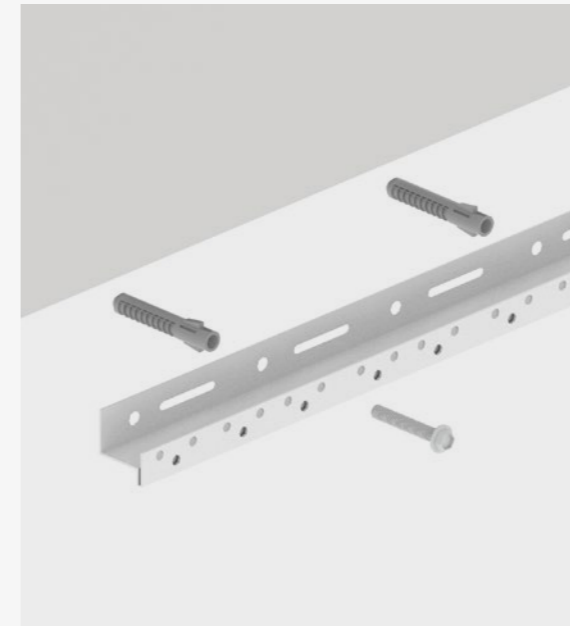
Because the pieces are adhered to the finished reinforced layer of the insulation system, there is a limit to the weight and format, which must be indicated by the ETICS supplier. The product and application instructions of the ETICS supplier must be followed to fully guarantee the application.

Fixing pieces of an external thermal insulation (ETICS) project of high energy-efficiency.

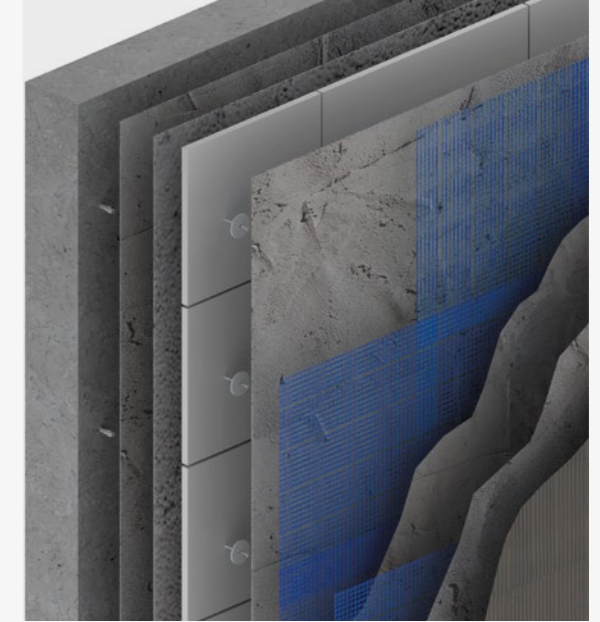




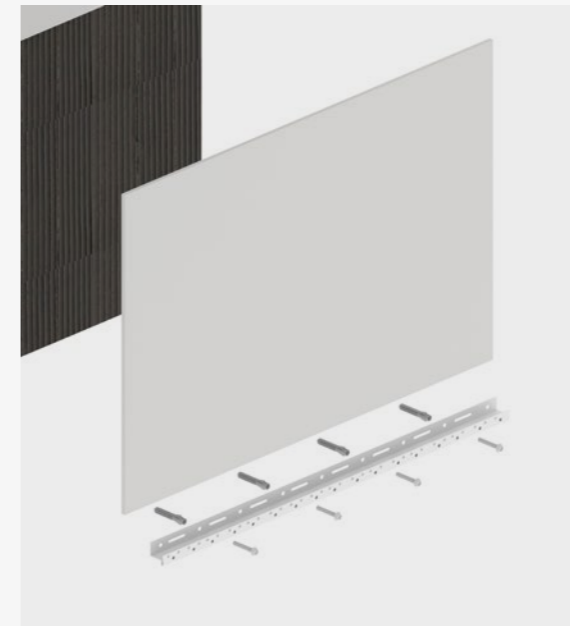
Starting profile



System detail



Bottom slab



System detail



System structure



General fixing instructions

1. Preparation of supporting wall.
2. Positioning of the starting profile.
3. Cutting and preparation of the insulation.
4. Placing the insulation on the wall.
5. Sanding of the entire surface.
6. Positioning of the fixings on the insulation panels.
7. Positioning of the rest of the profiles.
8. Resolution of the singular points.
9. Application of the mortar base and placement of the fibreglass mesh in the regularisation layer.
10. Positioning of the fixings on the fibreglass mesh.
11. Planning of the placement and expansion joints.
12. Placement of the Dekton pieces.
13. Meeting of the placement joints.
14. Filling the expansion joints.
15. Removal and cleaning of excess material.
16. Final cleaning of the facade.

Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



For Dekton 8 mm thickness cladded onto ETICS(EIFS).

For cladding Dekton onto ETICS(EIFS), it is essential to use complete systems supplied and guaranteed by the ETICS(EIFS) provider. They will indicate the main characteristics that the cladding must meet.

Maximum format

The ETICS(EIFS) provider indicates, in their certificates or technical documentation, the maximum possible formats for the cladding. As an indicative guide, below are some of the formats from reference manufacturers:

Available colours

Depending on the type of insulation and system characteristics, the provider may indicate a minimum reflection index of the cladding material to limit the use of dark colours.

Joints

The provider of the ETICS(EIFS) system will also be the supplier of the cement-based adhesive and the grouting material, and will indicate the dimension and width of the tile-to-tile joints, expansion joints, perimeter movement joints, and structural movement joints in accordance with the applicable regulations.

| Reference | Maximum surface | Longer side | Length-width ratio | Example |
|---------------------------|---------------------|-------------|--------------------|------------------|
| Danotherm. Danosa | 0.24 m ² | 600 mm | - | 600 x 400 mm |
| Capatect. Caparol | 0.72 m ² | 1,200 mm | - | 1,200 x 600 mm |
| Mapetherm Tile System | 1.00 m ² | 1,500 mm | < 3 | 710 x 1.420 mm |
| Propam Aister Ceram | 0.36 m ² | 900 mm | - | 900 x 400 mm |
| Baumit Ceramic System EPS | 0.36 m ² | 600 mm | - | 600 x 600 mm |
| Webertherm Ceramic Plus | 0.24 m ² | 600 mm | < 3 | 600 x 400 mm |
| Traditerm Ceramic | 0.09 m ² | 300 mm | < 3 | 300 x 300 mm |
| Stootherm Vario Ceramic | 0.09 m ² | - | - | 300 x 300 mm |
| Webertherm style* | 2.5 m ² | 2,500 mm | - | 1,000 x 2,500 mm |

* In specific markets. Check with the supplier.

These maximum formats are indicative and based on public documentation from each manufacturer. This information should be verified at the beginning of the study of each project to see if there are any specific modification or adaptation to the project conditions.

Cosentino, as a cladding supplier, does not assume any legal liability for the use of its products on ETICS/EIFS systems. It is the installer's responsibility to ensure that the ETICS/EIFS system is installed correctly and complies with all applicable standards and regulations.

Mechanical safety fixing

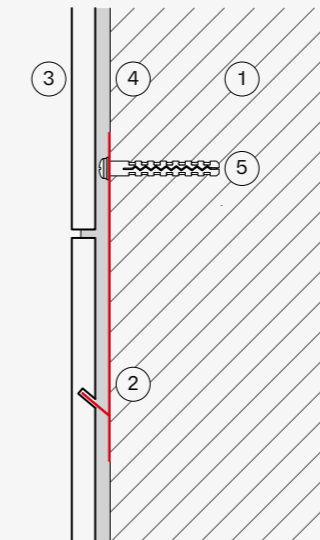
For the cladding of Dekton on ETICS(EIFS), it may be necessary, in accordance with the applicable regulations, to use a mechanical safety fixing.

It will be the responsibility of the Technical Project Management to indicate its use.

In case these fixings are necessary, for Dekton 8 mm, visible fixings can be used by means of a clamps or hidden by means of fixings with back grooving (Raimondi type) in the Dekton tile.

The number and quantity of them shall be indicated by the fixings supplier.

For its fixing to the support, follow the instructions of the supplier of the ETICS(EIFS) system.



Cross section detail of the hidden safety fixing

Key

1. ETICS(EIFS) system
2. Punctual security fixing clamp
3. Dekton 8 mm tile*
4. Cement-based adhesive
5. Fixing system**

(*) Consult the specific technical documentation for the execution of punctual back grooving on Dekton.

(**) Consult the supplier of the ETICS(EIFS) system.

Dekton 8 mm installation

The installation of Dekton on ETICS/EIFS system should be carried out according to the supplier's instructions, taking into account a cladding of about 21 Kg/m².

This is a reinforcement of the standard ETICS/EIFS system with plaster designed to increase its mechanical resistance to compression and traction in order to support the weight and thermal expansions generated by the cladding.

This reinforcement usually includes a greater number of mechanical fixings of the thermal insulation and reinforcement of the finishing layer of the ETICS/EIFS system through the use of stronger mesh, additional layers or the use of plasterings of greater performance.

The intervention of a technician is necessary to size the system according to the regulations concerning the thermal efficiency of the building.

The complete Dekton solution on ETICS/EIFS system must be validated by the supplier according to the specific conditions of the construction site. They shall be complete and guaranteed systems including the adhesive for Dekton 8 mm cladding, which shall be at least C2S1 type (according to EN 12004) for tiles under 700 mm length and C2S2 type (according to EN 12004) for greater tiles.

The installation of Dekton 8 mm on ETICS/EIFS system will be carried out bearing in mind the conditions of the constructions site and the characteristics of the adhesive: open time, lifetime, maximum application thickness, etc.

Installation should be carried out in accordance with the following recommendations:

1. Double gluing

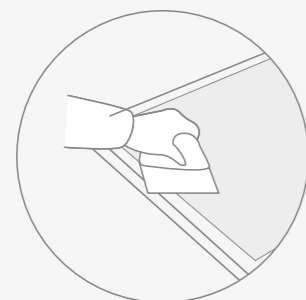
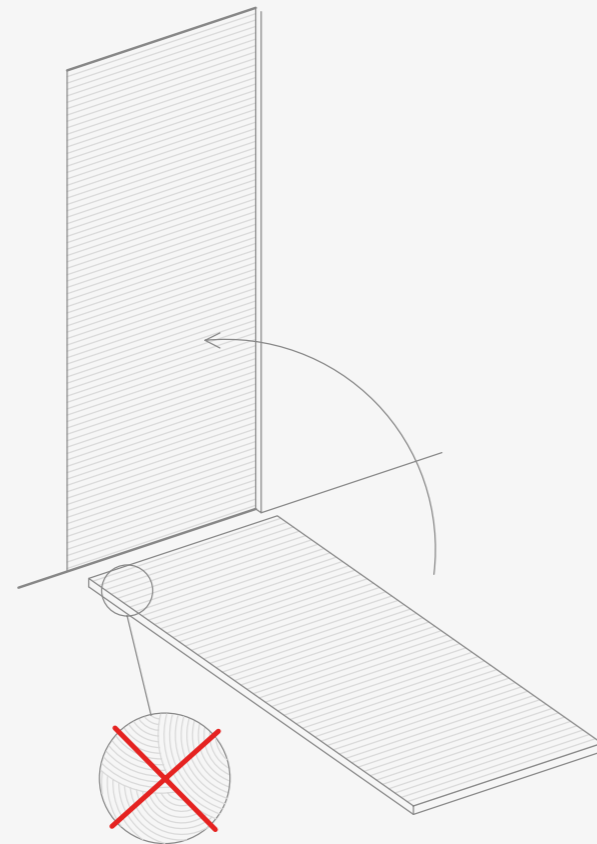
Installation is carried out according to the technique of double gluing (adhesive on the tile and on the substrate), which ensures perfect adherence and prevents gaps from forming.

The adhesive is first spread on the substrate with the smooth side of the trowel, then combed with the toothed side, parallel to the short side of the tile.

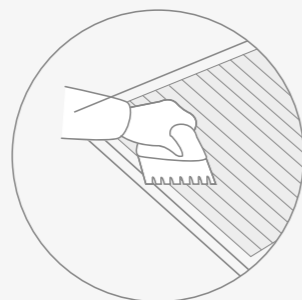
Never apply the adhesive by 'sticking' or 'pinching'.

2. Toothed trowel

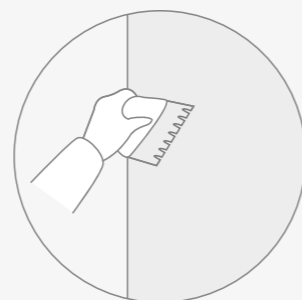
Apply the adhesive using a toothed trowel of 8 x 8 on both the substrate and the tile. Apply in parallel lines to the short side of the Dekton tile.



Application with trowel on the tile



Application with toothed trowel on the tile

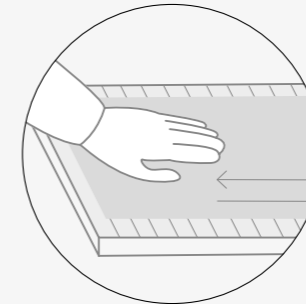


Application with toothed trowel on the wall

3. Sliding movement

In order to facilitate the release of air and better contact between tile and substrate, whenever possible make a reversible sliding movement:

1. Place the tile in its final position.
2. Move it perpendicular to the adhesive lines in proportion to the width of the trowel tooth.
3. Finally, put it back in its final position, respecting the width of the joint.



In any case, it is advisable to flatten the tile to facilitate air release and ensure adhesion between the different parts (Dekton - Adhesive - Substrate).

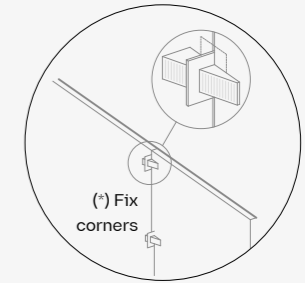
4. Use of spacers

The use of spacers and micro-bevelled edges (at least 1 mm) are recommended in order to comply with the stipulated joint width.



5. Auxiliary systems

The use of auxiliary systems to improve the final levelling of the cladding is recommended, such as levelling wedges, ensuring regular thickness of the adhesive layer of at least 3 mm.

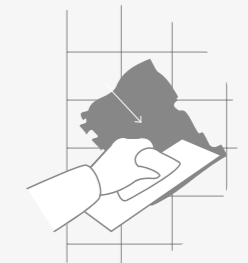


6. Grouting material

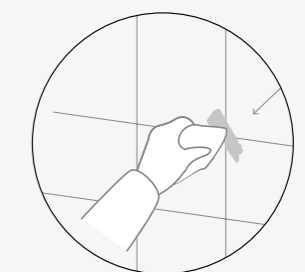
Use an appropriate grout for joints and apply according to the instructions of the manufacturer.

It is recommended to apply the adhesive in the joint to allow sufficient mortar to penetrate.

It is advisable to use a rubber trowel of the appropriate hardness to the width of the joint to spread the material diagonally to the direction of the joints.



The final texture and curvature will be set on the joint using a pointing trowel or equivalent tool

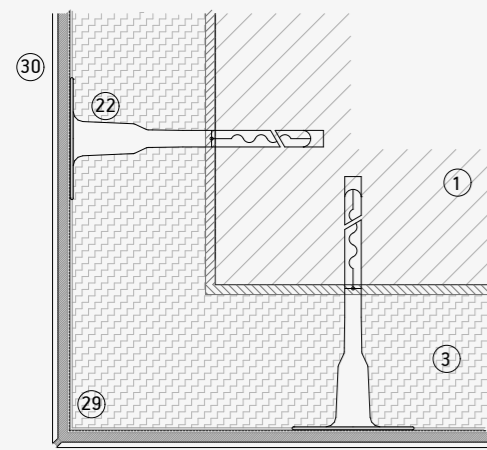


In some cases, flexible stainless steel spatulas or extrusion guns can be used to apply the grout.

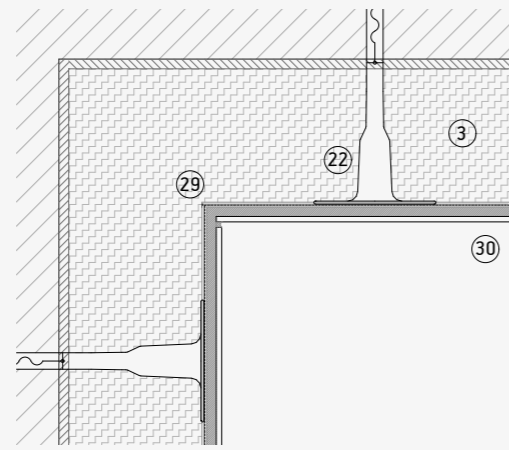
The cleaning process should start when the grout loses its sheen, early in the setting process

Horizontal section

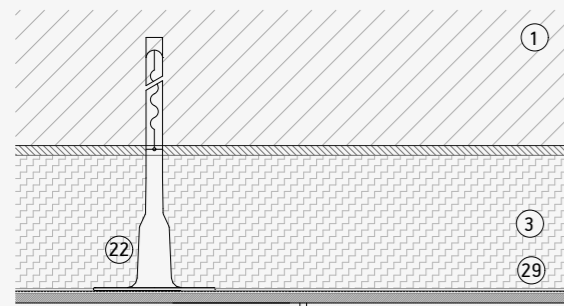
External corner



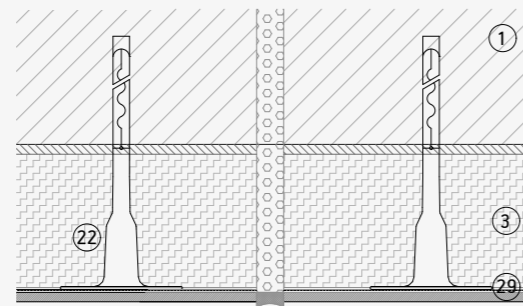
Internal Corner



Vertical joint



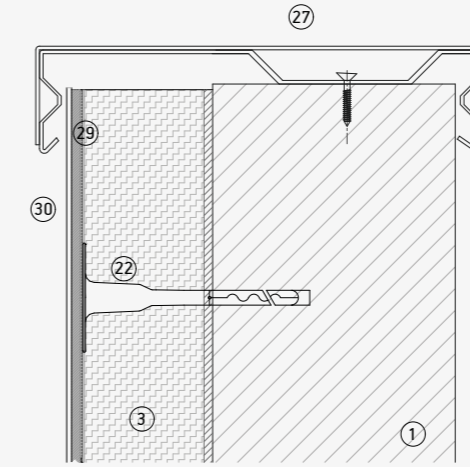
Vertical expansion joint



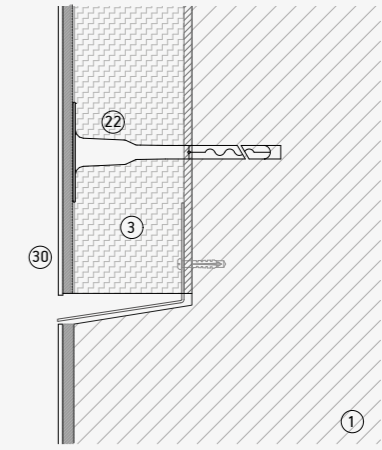
- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Vertical section

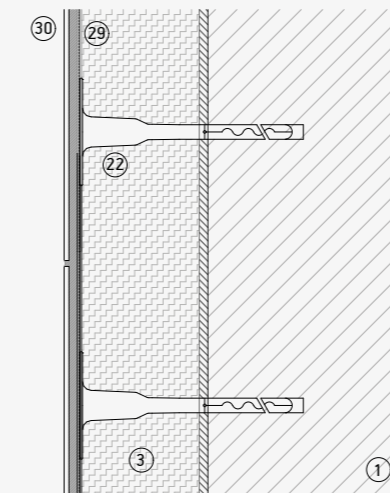
Upper detail



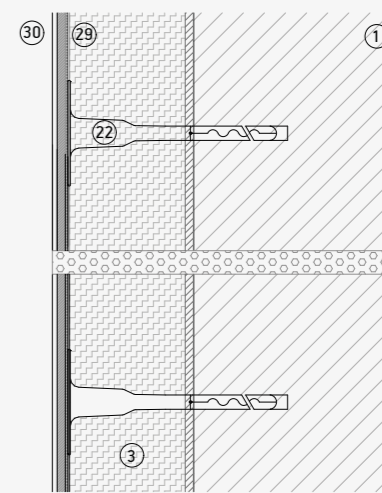
Bottom detail



Horizontal joint



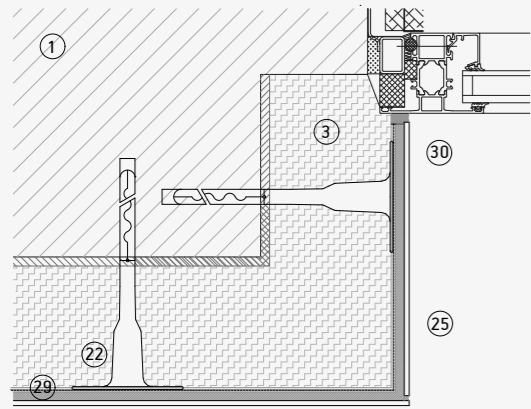
Horizontal profiles joint



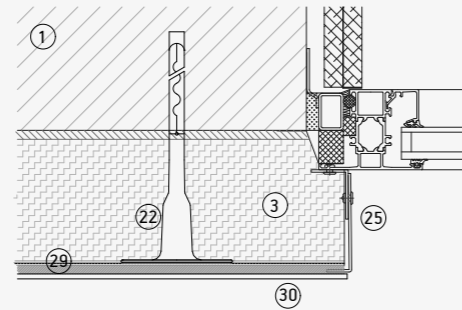
- 1. Supporting wall.
- 2. Anchor bracket.
- 3. Insulation.
- 4. Insulating layer.
- 5. Fixed bracket.
- 6. Adjustable bracket.
- 7. L profile.
- 8. T profile.
- 9. Self tapping screw.
- 10. Rivet.
- 11. Undercut anchor.
- 12. Horizontal rail.
- 13. C hanger.
- 14. Adjustable C hanger.
- 15. Bottom/top edge profile/clip.
- 16. Intermediate edge profile/clip.
- 17. Bottom/top visible clip.
- 18. Intermediate visible clip.
- 19. Interior back clip
- 20. Exterior back profile
- 21. Chemical fixing system
- 22. Security fixing
- 23. Ventilation profile
- 24. Lintel
- 25. Jamb
- 26. Window sill
- 27. Top coping
- 28. Corner profile
- 29. Bonding adhesive
- 30. Dekton

Vertical section

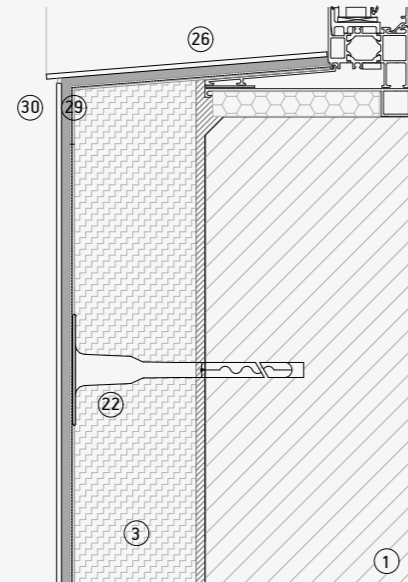
Dekton jamb



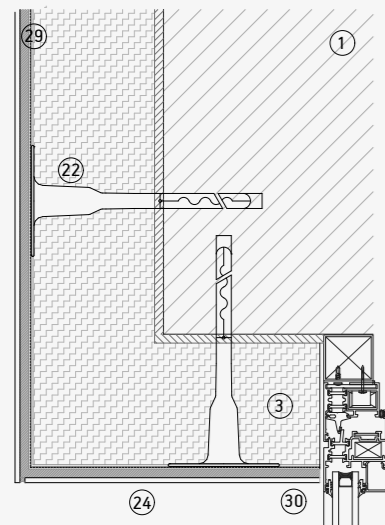
Metallic jamb



Dekton window sill



Dekton lintel



- | | | | |
|------------------------|-------------------------------------|----------------------------|----------------------|
| 1. Supporting wall. | 11. Undercut anchor. | 19. Interior back clip | 29. Bonding adhesive |
| 2. Anchor bracket. | 12. Horizontal rail. | 20. Exterior back profile | 30. Dekton |
| 3. Insulation. | 13. C hanger. | 21. Chemical fixing system | |
| 4. Insulating layer. | 14. Adjustable C hanger. | 22. Security fixing | |
| 5. Fixed bracket. | 15. Bottom/top edge profile/clip. | 23. Ventilation profile | |
| 6. Adjustable bracket. | 16. Intermediate edge profile/clip. | 24. Lintel | |
| 7. L profile. | 17. Bottom/top visible clip. | 25. Jamb | |
| 8. T profile. | 18. Intermediate visible clip. | 26. Window sill | |
| 9. Self tapping screw. | | 27. Top coping | |
| 10. Rivet. | | 28. Corner profile | |

System description

Applied as an external thermal insulation system (ETICS) coating, fire classification according to EN:13501 B-S1-d0, consisting of Aluminium Starter Profile. Gluing of EPS/XPS or Mineral Wool (MW). The sheets will be bonded with adhesive mortar, guaranteeing at all times 100% contact with the surface of the sheet. The pieces are mechanically anchored by nylon plugs with a steel screw and thermally insulated head. The layout and number of fixings will depend on the exposure of the building and its height, with a minimum of 4-5 pcs/m². Placement of corner profiles on edges as reinforcement, as well as in openings, fixed with mortar. Placement of water drip protection in areas of window openings. Installation of the frame profile at the point where the insulation system meets the metalwork. Fitting of a proportional part of the reinforcing mesh in the corner of windows and doors.

The surface of the panels will be covered with a structural gluing reinforced with glass fibre mesh and anti-alkaline treatment and coated with mortar highly malleable and mechanical strength, mixed with glass fibre and rated R2 according to EN 1503-3. Application of Dekton in a maximum format, to be defined according to the supplier of the ETICS/EIFS system, with resin based adhesive type R2 for Dekton with mesh and cement based adhesive type C2S2 for Dekton without mesh.

Including, if indicated by the project's Operational Director, visible mechanical safety fixings screwed to the reinforced structural plaster.

Application limits

Application limits of Dekton on ETICS/EIFS System:

- Insulation type: EPS, XPS or mineral wool
- Maximum Dekton Slim Protek: Format limitation specified by the supplier of the ETICS system.

→ Rendering System:

1. Finishing and reinforcing mortar.
2. Glass fibre net: 125 gr/m²
3. Mechanical metal fixing anchors (optional).
4. Adhesive mortar (C2 E S2 or R2T EN 12004)
5. Joint Mortar: CG2 EN 13888.

- Maximum building height: 20 m (6-7 floors)
- Reflection index of tiles: >20%.
- Maximum weight: Dekton + adhesive < 25kg/m²



DK CW

Wall curtain system

A curtain wall is a non-loadbearing exterior wall cladding system consisting of linear elements that are connected to each other and anchored to the main structure of the building.

It can be divided into structural and infill elements (fixed or movable). The structural elements usually

follow a grid pattern with vertical elements or mullions fixed to the building structure to support their own weight, the forces transmitted to them by the horizontal elements or transoms, and the loads acting on the facade such as wind (suction and pressure), seismic and impact loads. The infill elements are divided into

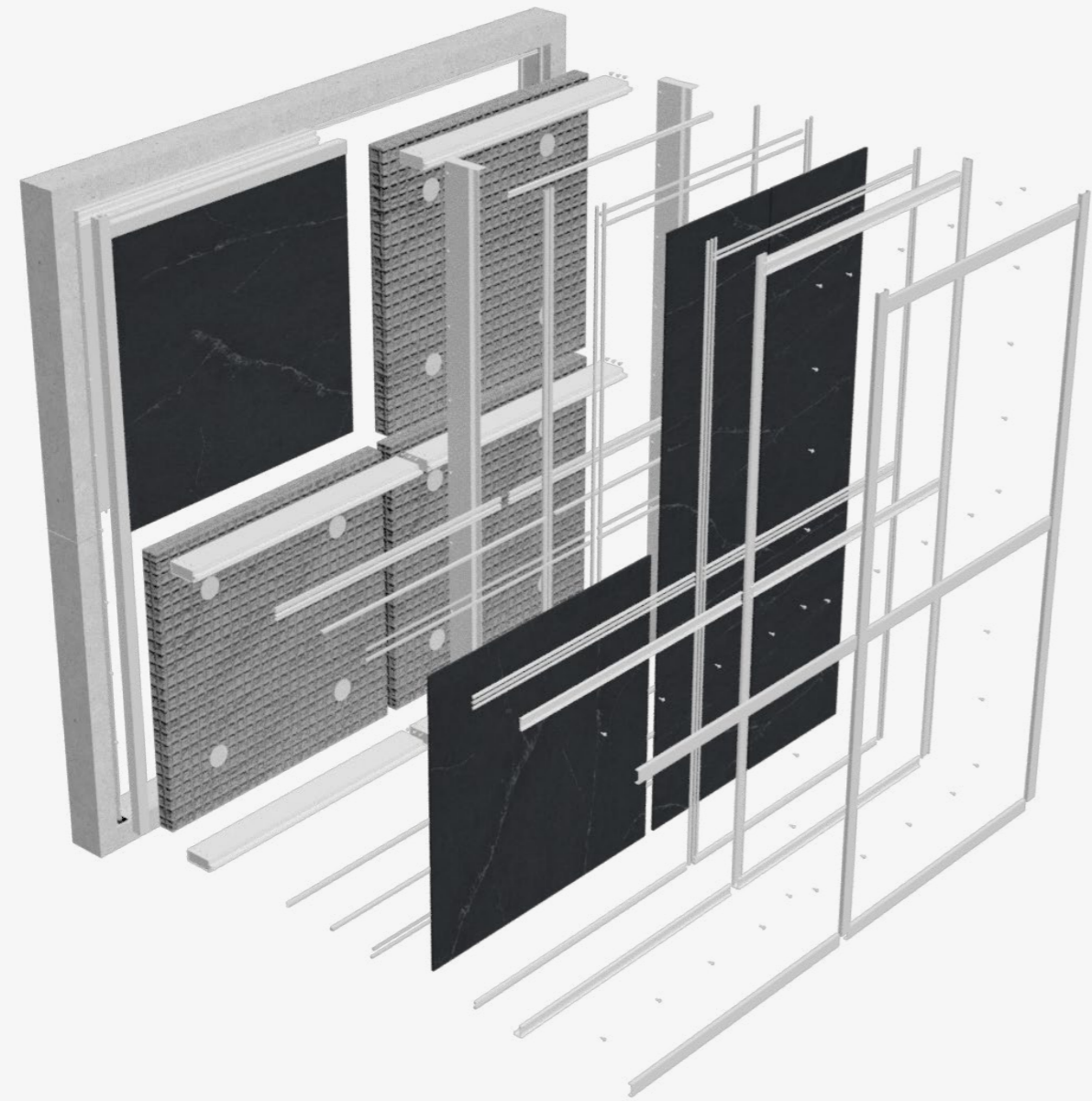


transparent or translucent and opaque, including Dekton, which can be fixed to mullions and transoms using different systems depending on the type of structure and project requirements.

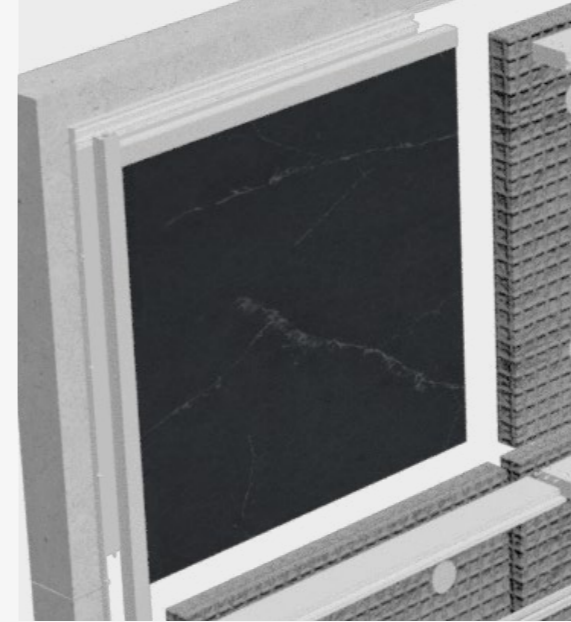
The curtain walling systems can be divided into two main types: the STICK type, with a framework of profiles with opaque and transparent areas that are transported, assembled and installed individually on site, and the UNITISED type, where all the elements are pre-assembled in the workshop and then transported and installed on site.

Depending on how they are fixed, there are two types of infill elements: those fixed with structural silicone for glazing (SSG) and those fixed with a press and cap system.

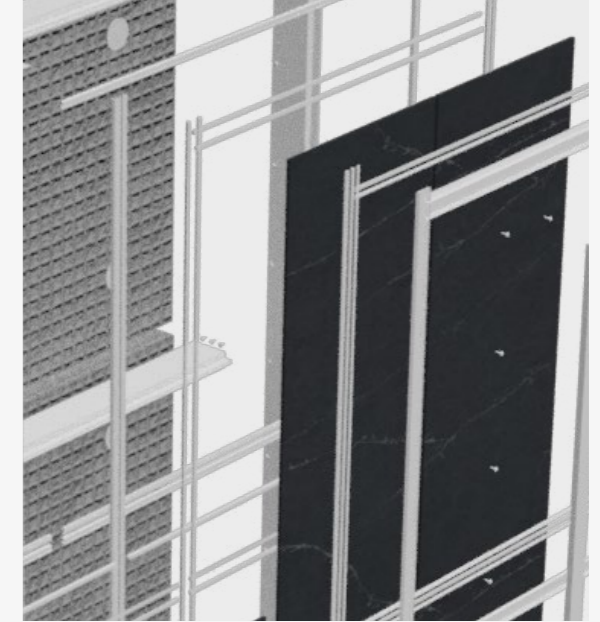




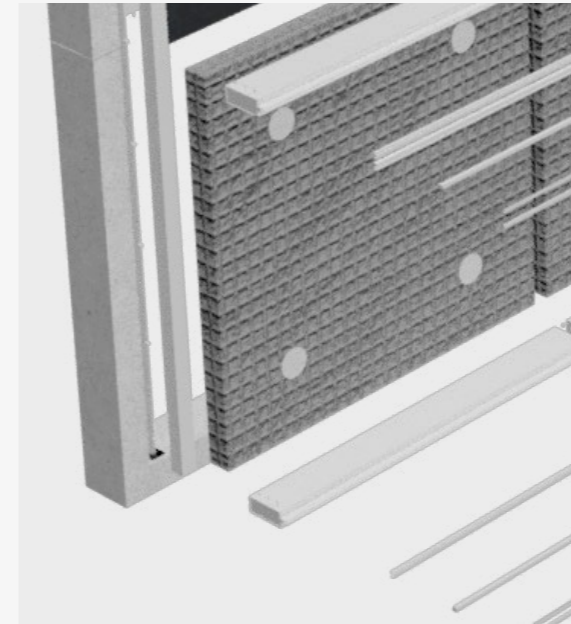
Detailed view of the system



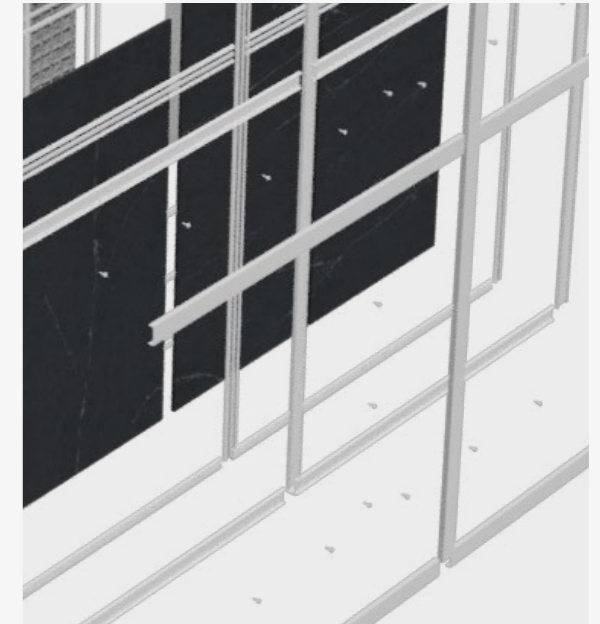
Detailed view of system layers



Start



Detailed view of system layers



System description

Curtain wall system

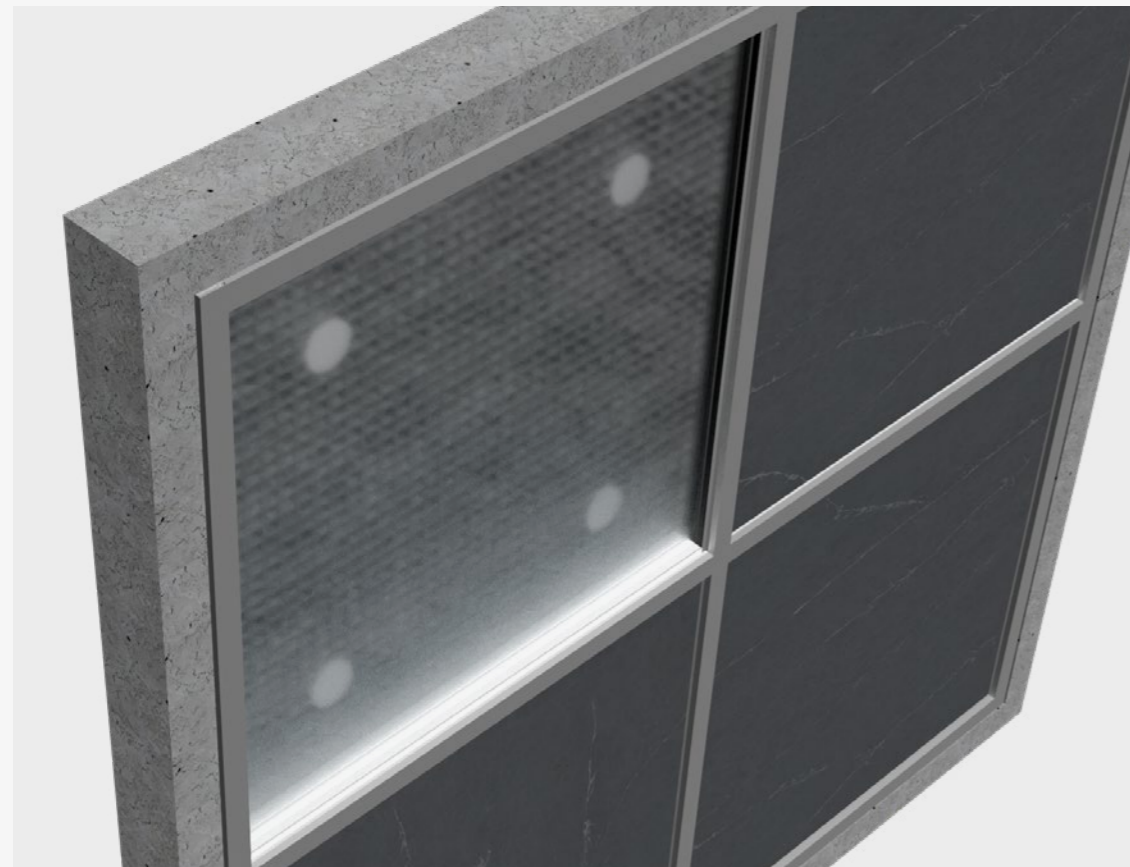
Load-bearing substructure composed of:

- Adjustable vertical mullions for fixing the slab edge and compensating for unevenness, compatible with different types of support and can include thermal break.
- Horizontal profiles or transoms fixed to the mullions with the fixing elements supplied by the curtain wall structure manufacturer.

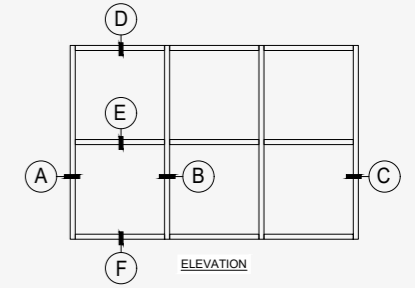
Installation process

Brackets installed on the surface to be covered by means of a mechanical system or welding; vertical mullions installed on brackets with a regulation and fixing system, by means of specific screws; horizontal transoms fixed to the mullions by means of fixing elements. Installation of Dekton in opaque areas according to the system specified in the project designed and calculated by the industrial supplier of the curtain wall.

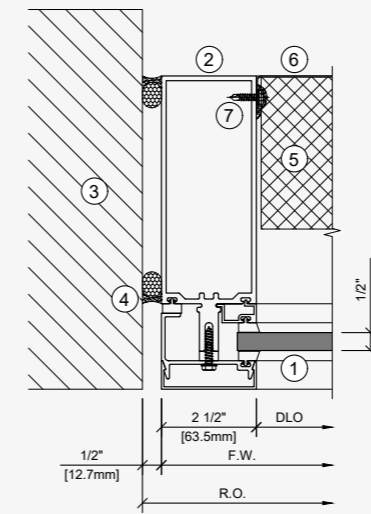
- Perimeter fixing of Dekton in opaque areas using a structural adhesive system with safety plates.
- Middle fixings according to the design and calculation of the system.



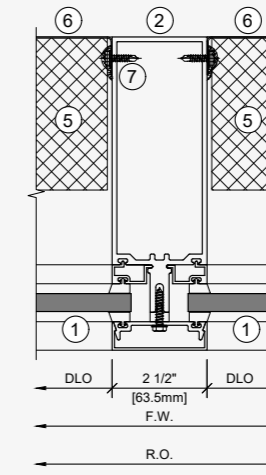
Traditional Stick system with caps



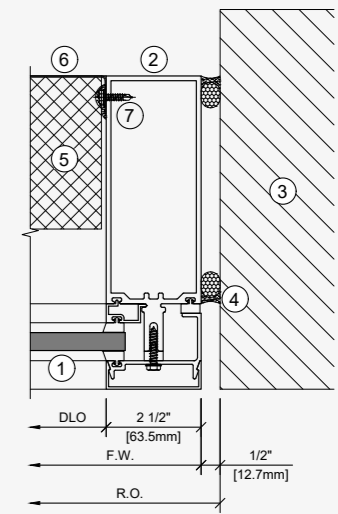
Jamb detail



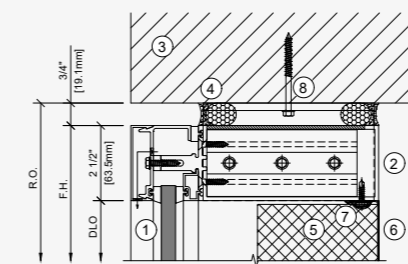
Vertical joint



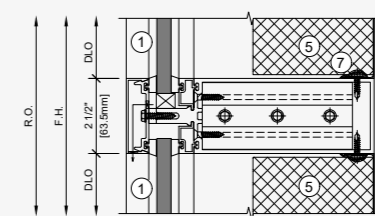
Jamb detail



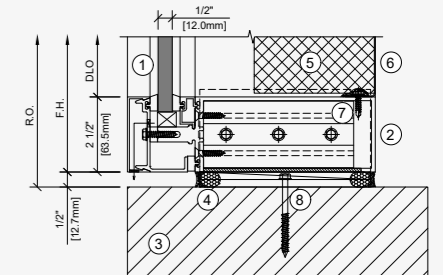
Top edge



Horizontal joint



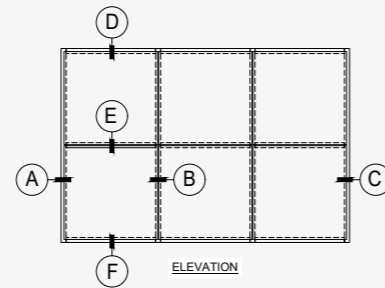
Start



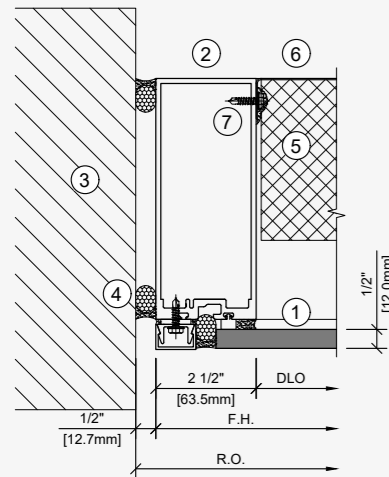
- | | |
|-------------------------|------------------------|
| 1. Dekton | 5. Insulator pad |
| 2. Curtain wall system. | 6. Rear panel |
| 3. Supporting wall | 7. Rear panel fixings |
| 4. Primary seal | 8. Curtain wall anchor |

Traditional SSG

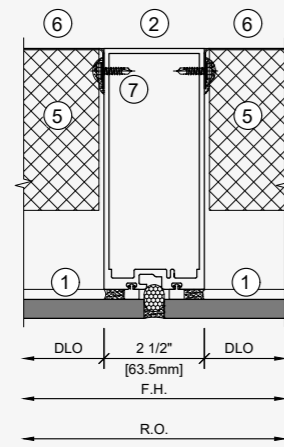
Stick system with structural silicone for glazing



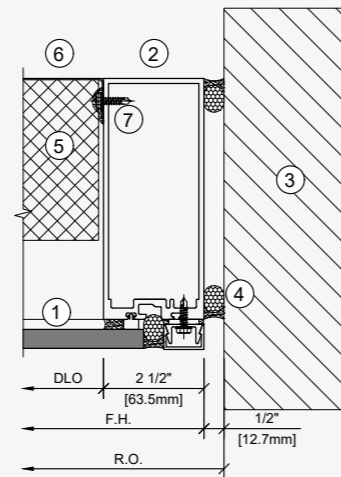
Jamb detail



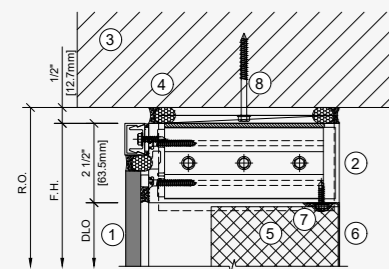
Vertical joint



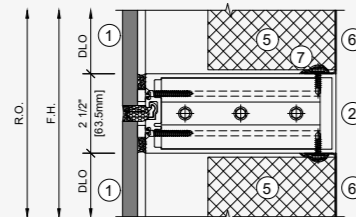
Jamb detail



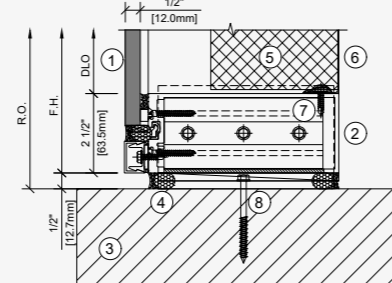
Top edge



Horizontal joint



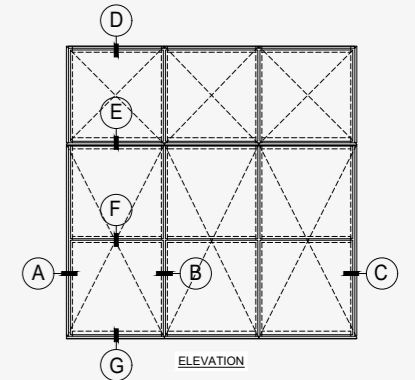
Start



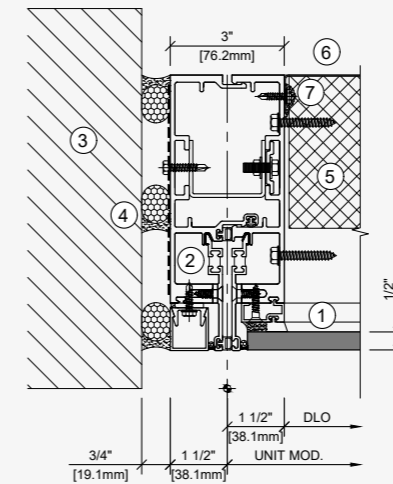
- 1. Dekton
- 2. Curtain wall system.
- 3. Supporting wall
- 4. Primary seal
- 5. Insulator pad
- 6. Rear panel
- 7. Rear panel fixings
- 8. Curtain wall anchor

Traditional SSG

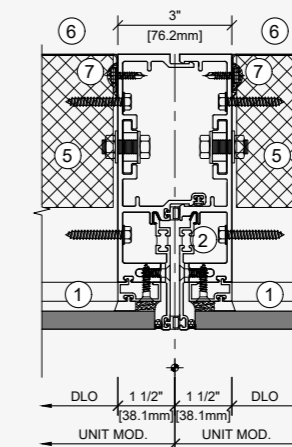
Stick system with structural silicone for glazing



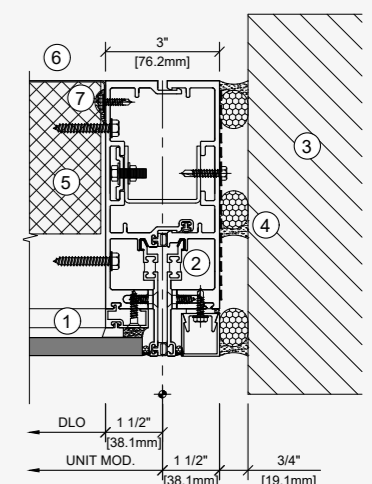
Jamb detail



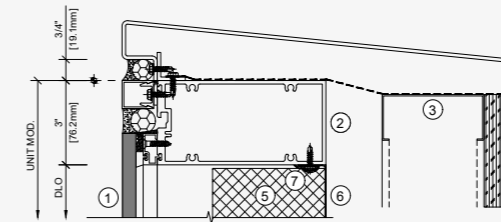
Vertical joint



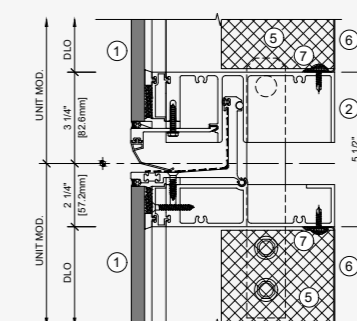
Jamb detail



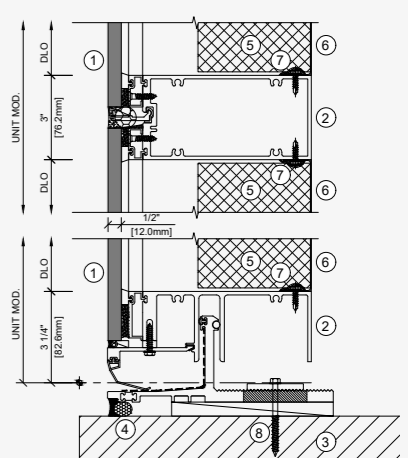
Top edge



Horizontal joint

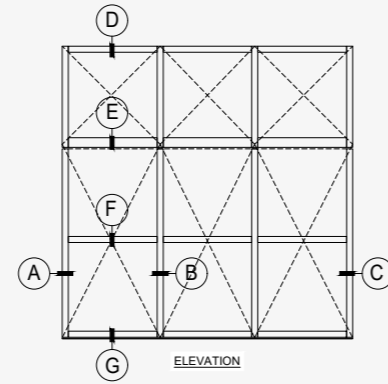


Start

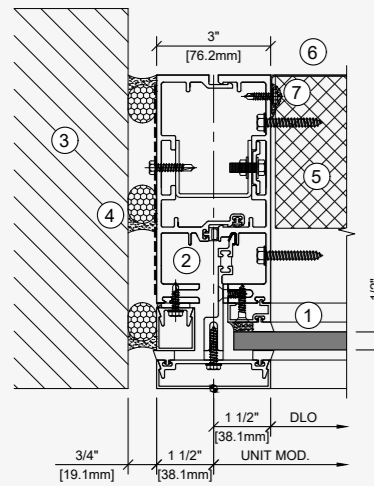


- 1. Dekton
- 2. Curtain wall system.
- 3. Supporting wall
- 4. Primary seal
- 5. Insulator pad
- 6. Rear panel
- 7. Rear panel fixings
- 8. Curtain wall anchor

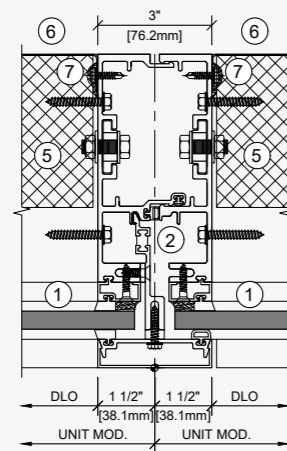
DKCW Unitised system With structural silicone and caps



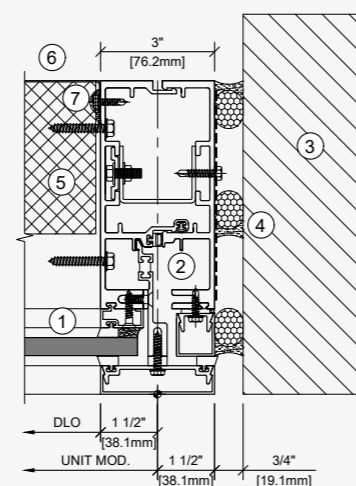
Jamb detail



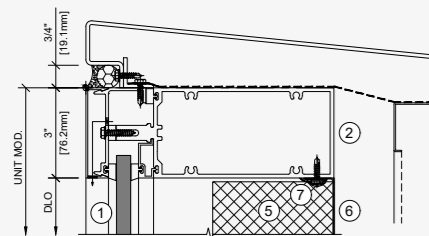
Vertical joint



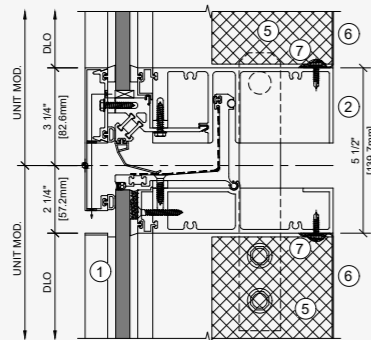
Jamb detail



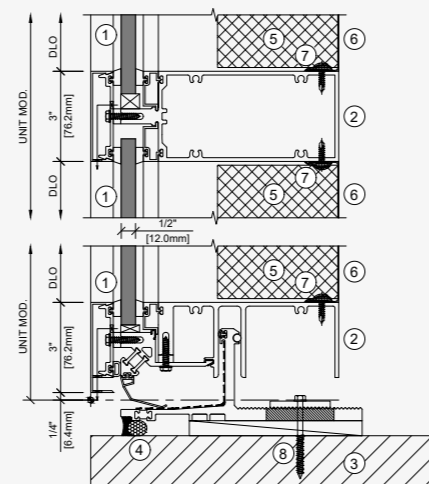
Top edge



Horizontal joint



Start



- 1. Dekton
- 2. Curtain wall system.
- 3. Supporting wall
- 4. Primary seal
- 5. Insulator pad
- 6. Rear panel
- 7. Rear panel fixings
- 8. Curtain wall anchor



CASE STUDY

Elan Centre

Netanya, Israel

Materials

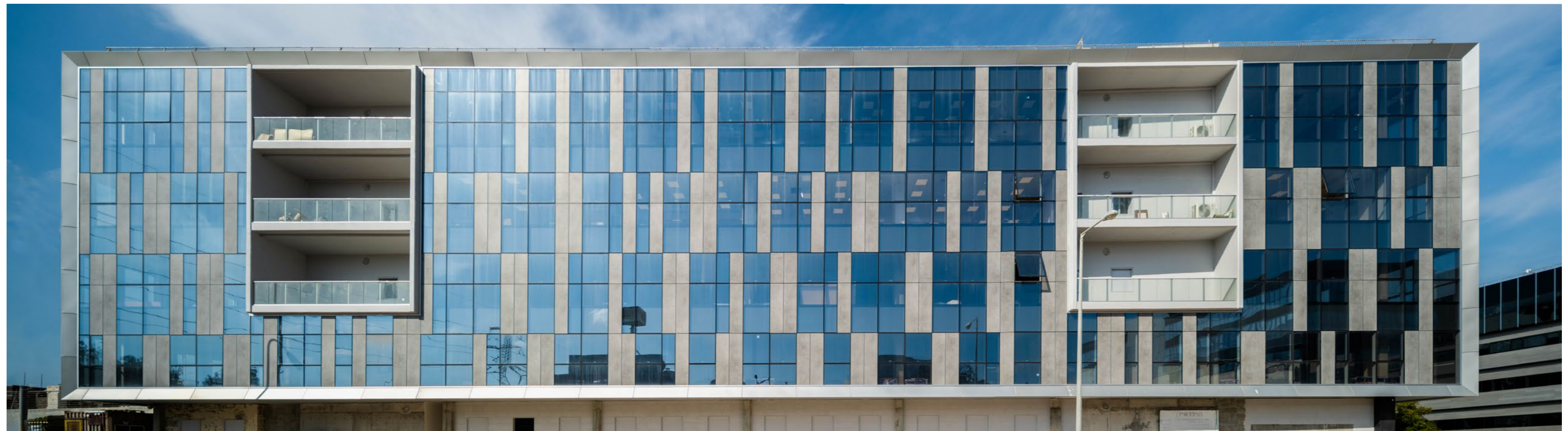
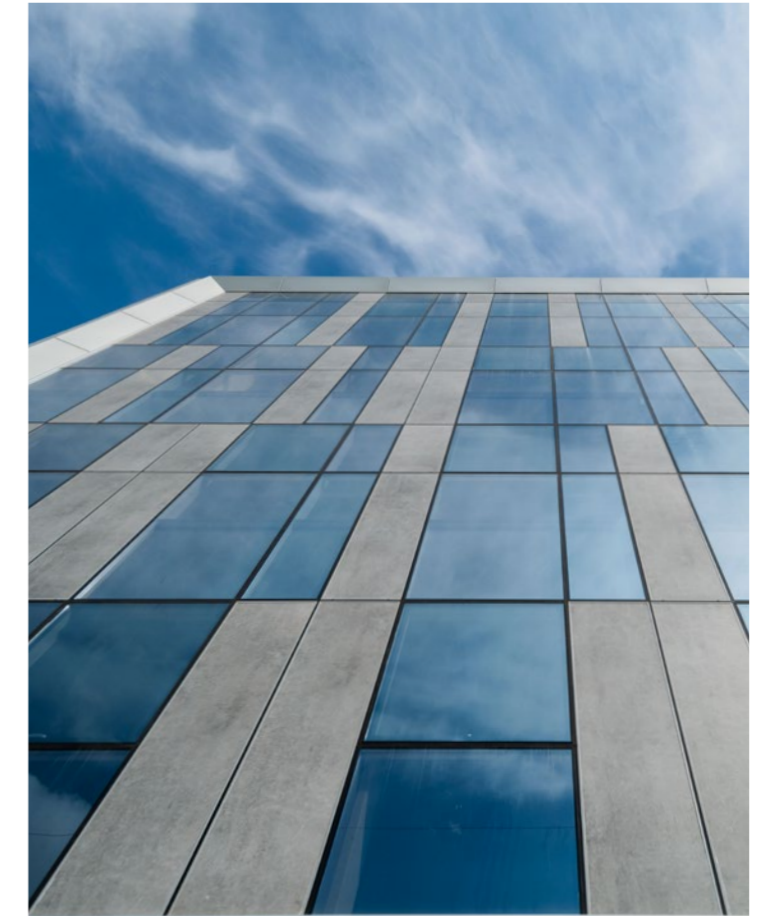
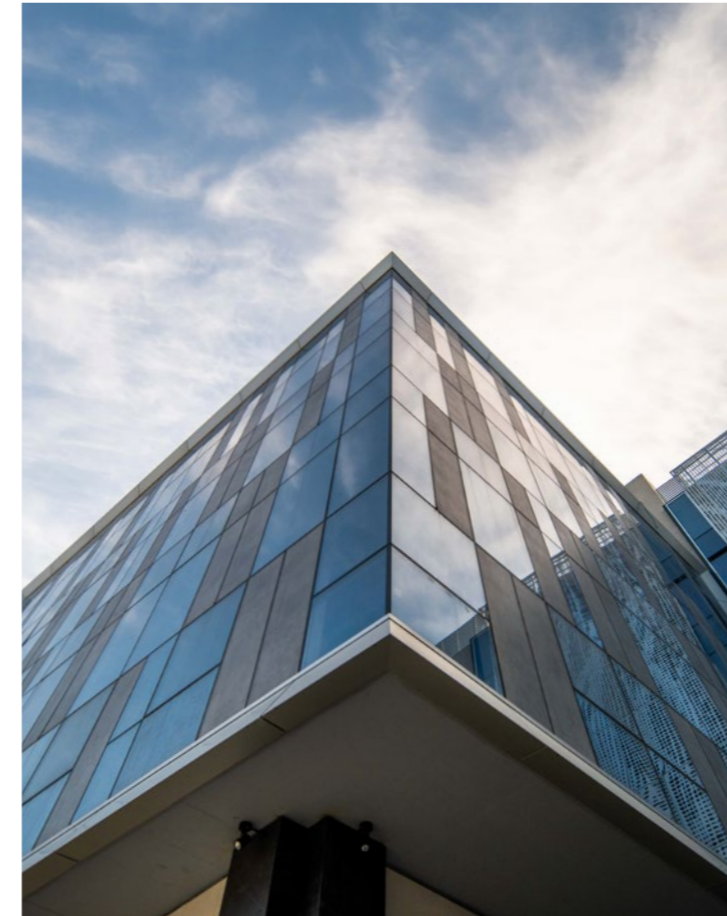
2,200 m²
Dekton Kreta
Dekton Lunar

Facade system

DKCW and DKR

Thickness

8 mm





CASE STUDY

Golf Project

Tel Aviv, Israel

Material
4,500 m² Dekton Aeris

Facade system
DKCW

Thickness
8 mm

Processing & Installation

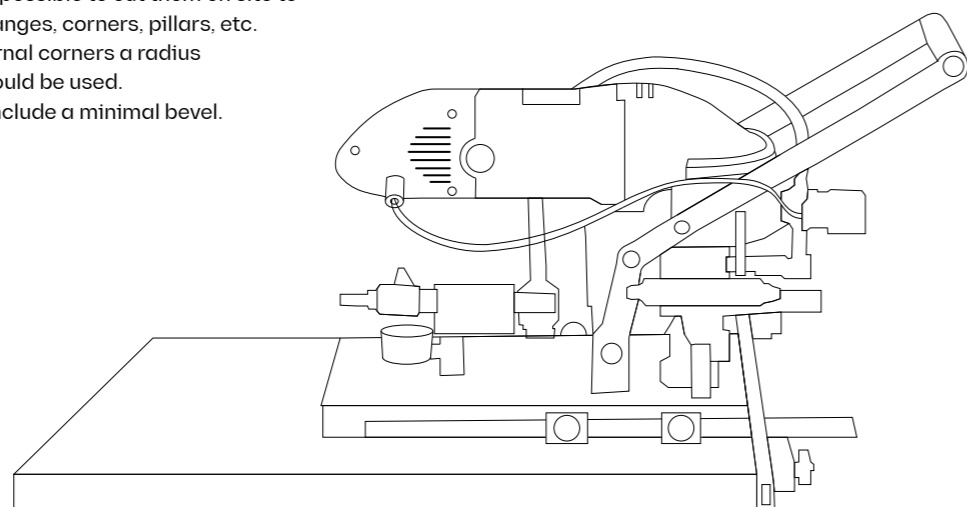
05

- 320 Shape alterations
- 326 Cutting and machining
- 328 Material handling procedure
- 337 Processing
- 338 Cleaning and maintenance
- 340 Contact details



Shape alterations

Although Cosentino can supply pieces to bespoke measurements, it is possible to cut them on site to deal with design changes, corners, pillars, etc. For pieces with internal corners a radius of at least 10mm should be used. Pieces will always include a minimal bevel.

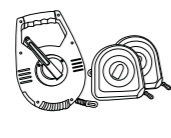


Generic Tools

Measuring tools



M01 Leveling system



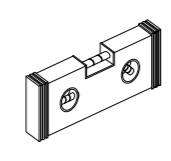
M02 Tape measure



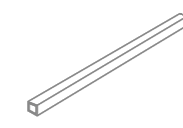
M04 Digital tape measure



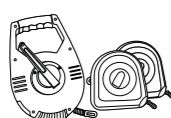
M05 Laser measuring tool



M06 Spirit level



M07 Metal ruler

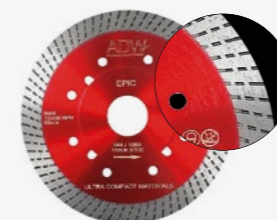


M03 Tape measure

Disc cutter

Ceramic blade 115mm & 125mm Rubi, Italdiamant, ADW, KGS

ADW Epic
Available in 115, 125 & 180 mm



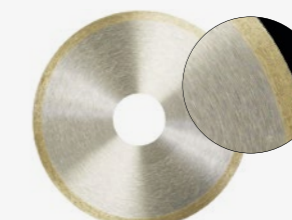
Cut speed



Quality



Italdiamant Continous RIM
Available in 125 mm



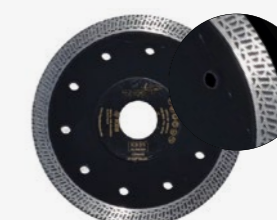
Cut speed



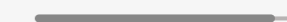
Quality



KGS Red K835
Available in 115 & 125 mm



Cut speed



Quality

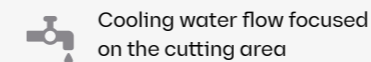


Recommended parameters

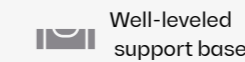
| | | | |
|----------------------------|---------------|---------------|---------------|
| Diameter of the blade (mm) | 115 | 125 | 180 |
| Rotation speed* (rpm) | 11,000-12,000 | 11,000-12,000 | 11,000-12,000 |

* The cut speed should be adjusted according to the type of machine and the thickness of the material. A thicker piece will require a reduced speed.

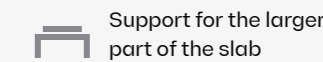
Requirements my machine should meet



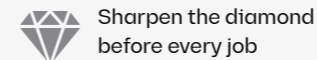
Cooling water flow focused on the cutting area



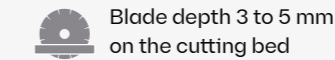
Well-leveled support base



Support for the larger part of the slab



Sharpen the diamond before every job



Blade depth 3 to 5 mm on the cutting bed

Specific Tools

For production with machinery in stonemason workshops, consult with Cosentino Quality department.

Circular saw for wet or dry blade cutting

Rubi TC-125

- Precise cutting guide.
- Double dust reduction system: suction or wet system.
- Height-adjustable cutting head (plunge effect), hinged from 90° to 45°.



Montolit Moto Flash Line dry cutter

- Precise cutting guide.
- Single dust reduction system: suction.



Raimondi Power Raizor

- Precise cutting guide.
- Double dust reduction system: suction or wet system.
- Adjustable cutting head for diverse cutting angles (45°, 90°, 180°).



Makita SP6000

- Precise cutting guide.
- Single dust reduction system: suction.
- Height-adjustable cutting head (plunge effect), hinged from 90° to 45°.



Score and snap cutting technology

Rubi Slim cutter

- Guided straight cut.
- Progressive separation of the material, reducing the risk of breakage.



Montolit system for cutting

- Guided straight cut.
- Progressive separation of the material, reducing the risk of breakage.



Raimondi Raizor

- Guided straight cut.
- Progressive separation of the material, reducing the risk of breakage.



Drilling

To drill holes in situ, the following procedures must be followed: preparation procedures and anufacturer's recommendations.

Rubi DRYGRES diamond drill bits kit



DRYGRES 4DRILL diamond drill bits



Fixings Alterations

Portable machinery

Fischer Mobile Drilling
Equipment BSN 100. DKT1



Fischer Mobile Drilling
Equipment BSN 100. DKT1



Keil portable drill.
DKT1



Maincer HFV ventilated
facades tool. DKT2 & DKT3



Raimondi Rai-Cut.
DKB



Handling Tools

RUBI - Slab Trans Heavy Duty

- 6 vacuum suction cups Ø20 cm
- Maximum piece size 320x180 cm
- Maximum load up to 140 kg



RAIMONDI - Easy move MK III
with vacuum suction cups

- 6 vacuum suction cups Ø15 cm
- Maximum piece size 320x180 cm
- Maximum weight 260 kg



Cutting and machining

At the Cosentino Factory all slabs can be cut and machined following project drawings and delivered to site in the desired order.

Please consult with the Project Service Unit department for special project requirements.

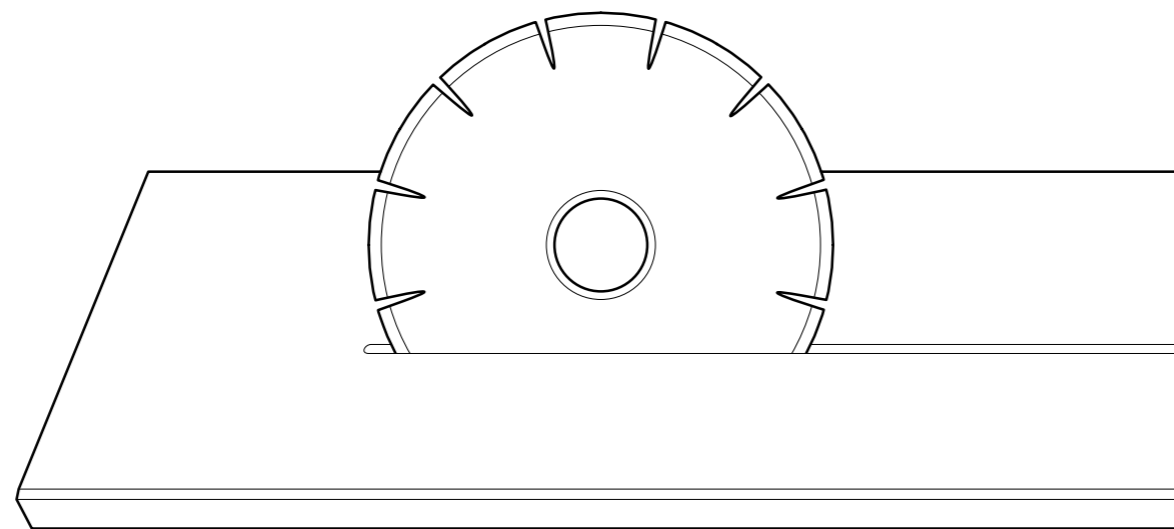
Undercut drill holes can be machined in the pieces following strict quality control according to the anchor manufacturer. The holes will be drilled according to the design of the facade, cut plane, and static calculations provided, or the calculations recommended by the Technical department.

Holes and grooves can be made following the project data and static calculations provided.

Please consult with our Technical Department for Cut to Size tolerances.

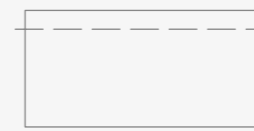
Anchors and hangers also can be installed to panels if ordered.

Cosentino can recommend suppliers of screws and undercut anchors (DKT1 system) for materials supply by said suppliers to third parties.

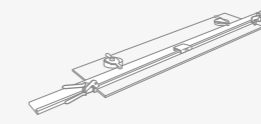


Quick guide to correct elaboration

Cutting tools



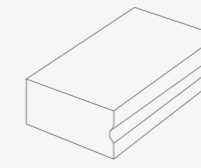
On-site correction of measurements



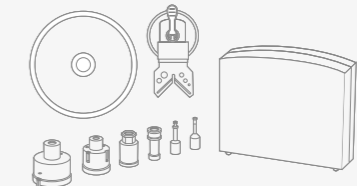
Dry cutting



Microbevel 1mm



Polishing wedge



Certified blades and drill bits

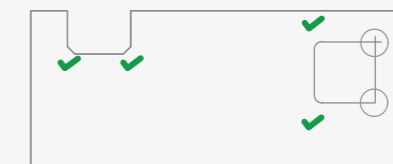
Cutting on site

On-site cutting is possible using dry cutting machines. We recommend the use of polishing blocks to micro-level the pieces.

1st Holes



2nd Cuts



Material handling procedure

Recommendations to be considered when moving Cosentino pieces:

Health & safety

Risks associated with handling and transport

Operators and fitters dealing with Dekton, Silestone, Sensa and/or Scalea materials, must comply with all applicable occupational health and safety laws and regulations.

During transport and handling of Dekton, Silestone, Sensa and/or Scalea materials, risks such as bumps, cuts, musculoskeletal disorders, entrapment or blast injuries can occur due to incorrect handling.

Always take the necessary occupational safety measures to meet the requirements of local regulations. This Sheet is not an exhaustive document or a substitute for the relevant laws and regulations, and is provided for information purposes only. Safety measures will depend on the specific conditions of each job.

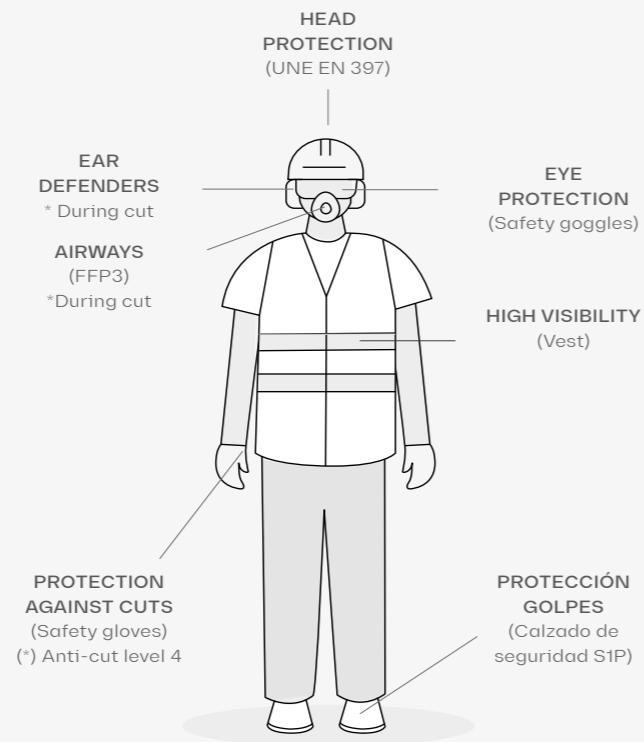
Please also refer to product Safety Datasheets and Good Practice Guidelines which are available on the website osh.cosentino.com, or request such documents from the distributor or manufacturer.

Main risks and preventive measures in warehouses

- Do not throw the slabs.
- Do not knock the slabs.
- Remove broken slabs/parts.
- Wear safety goggles and cut resistant gloves (minimum cut resistance level 4 according to EN 388).
- **WARNING:** The material can be very sharp, especially the broken pieces.
- Waste material should be handled with care.
- Avoid banging the waste material to reduce its size, as a broken piece could break off.

Personal Protective Equipment

When handling the slabs, the following Personal Protective Equipment (PPE) must be worn:



For more information, please consult Cosentino's technical documentation on Health and Safety at the following link

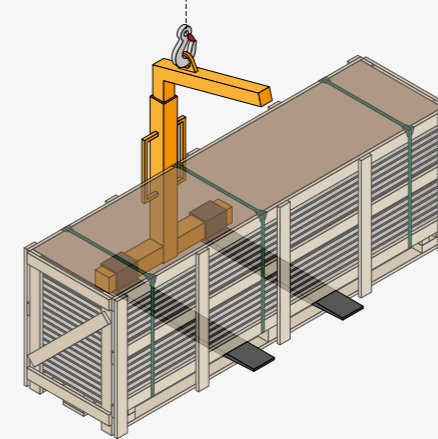


Receipt of material

- A good communication flow is recommended regarding incoming material logistics. There must be proper coordination between supplier, carrier and recipient of the goods. It is imperative to obtain delivery information showing the quantity, the date of arrival and the specifics of the material to be received in order to optimise the time on site of the different work teams.
- Always pay attention to the loading and unloading instructions found on the pallet wrapping. Unloading the pallet from the wrong position can significantly affect the integrity of the product.
- Incoming material will be checked immediately before unloading, and immediately after unloading. The points to be checked are the condition of the pallet, the number of packages and pieces, and the integrity of the pieces or slabs.
- In the case of an incident during the receipt of the material, a photographic report will be drawn up and Cosentino's project manager will be contacted immediately. Furthermore, whenever possible, the incident should be recorded on the delivery note.
- Knowing how and when the material will be received will facilitate the correct management of the unloading at the workplace, allowing the necessary auxiliary equipment to be prepared, storage location to be reserved and delivery notes to be correctly kept.
- It is recommended to check the packing list included in each package.

Non-standard packaging: pallets, crates, etc

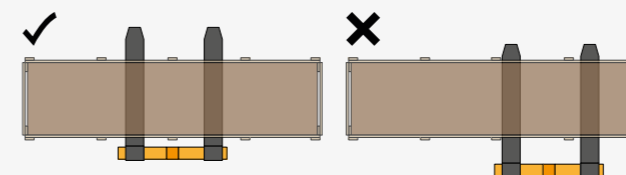
Handling with overhead crane/lorry-mounted crane



1. Handling with a fork attachment

When handling this type of packaging, the use of a fork attachment for overhead crane/lorry-mounted crane is mandatory.

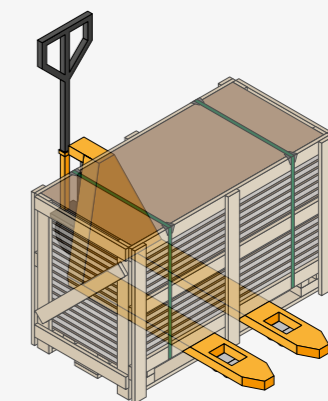
When handling non-standard packaging, the forks of the attachment must be centred to ensure good weight distribution. The forks should be inserted under the packaging, bringing it as close as possible to the attachment carriage to make the load more stable and prevent it from swaying, which could damage the material.



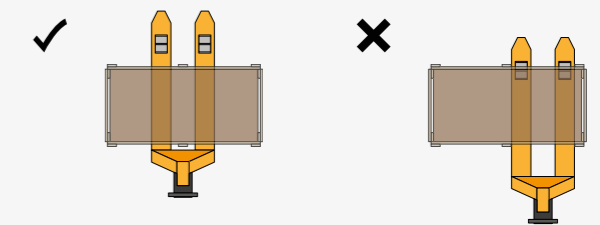
2. Handling with slings

Packages to be handled with slings must be labelled with information indicating the appropriate area for use.

Handling with pallet jack



When handling non-standard packaging, the forks of the pallet jack must be centred to ensure good weight distribution. The forks should be inserted under the packaging, bringing it as close as possible to the carriage of the pallet jack to make the load more stable and prevent it from swaying, which could damage the material.

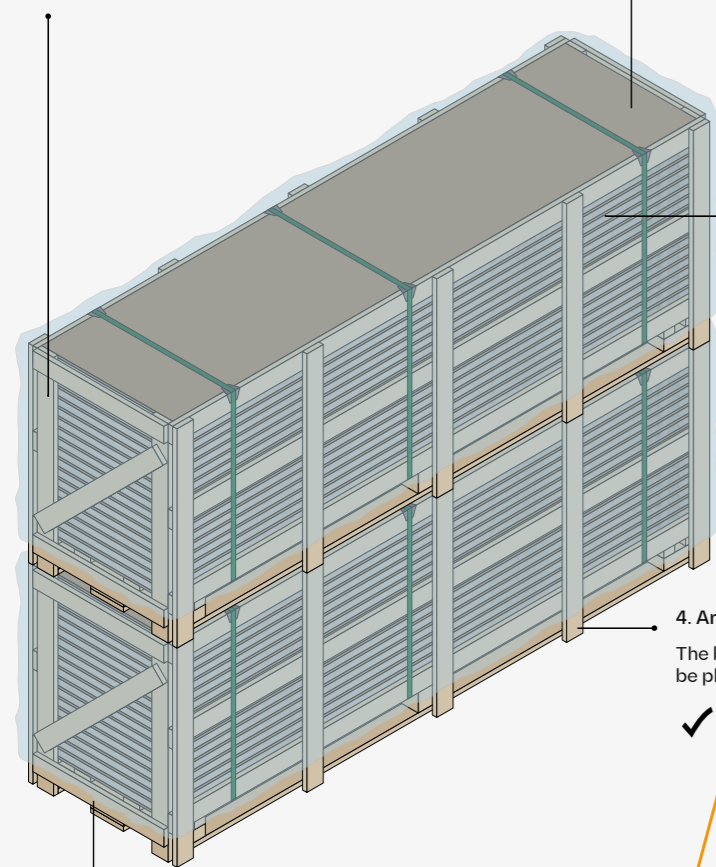


Preparation and securing of manufactured products

1. Types of packaging for manufactured products

There are a number of options depending on the method of transport:

- Crate for flooring.
- Pallet for manufactured products.
- A-Frame for facades.



2. Crate/pallet/A-Frame assembly

The material shall be secured in the crate/pallet/A-Frame according to the following criteria:

- The type of order.
- Customer-specific documentation.

In the case of mixed loading with slabs, the process to be followed is detailed in the section on securing the slabs.

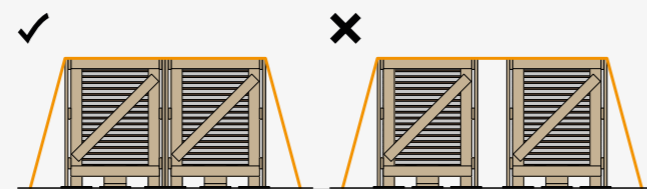
3. Maximum load capacity

The load carried by each type of packaging must not exceed the following weights:

- Crate for flooring: 1,000 Kg.
- Pallet for manufactured products: 1,500 Kg.
- A-Frame for facades: 1,800 Kg.

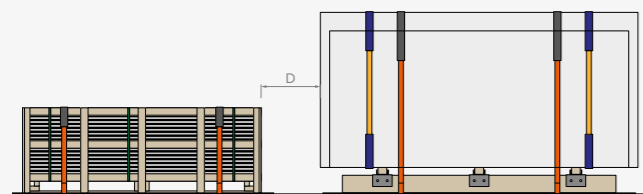
4. Arrangement

The base of the crates/pallets/A-Frames should be placed adjacent to each other.



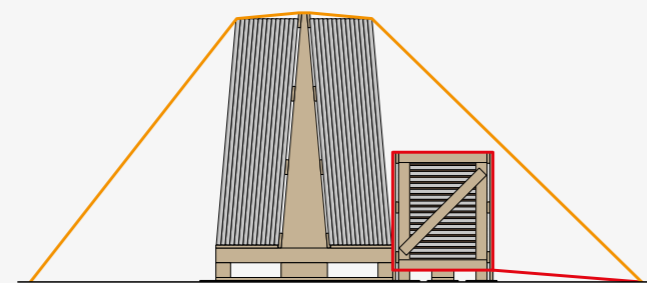
6. Distances between elements

The distance between crates/pallets/A-Frames and the slab A-Frames must be between 300 mm [12"] and 500 mm [20"].



5. Securing of crates/pallets/A-Frames of different heights

Make sure that each item is properly and individually secured to the transport (e.g. loop lashing).



Container loading and securing

1. Wooden buffer stop (front)

Before positioning the A-Frame, place a wooden buffer stop at the front of the container. The wooden buffer stop shall be fixed to the floor of the container.

2. Diagonal struts (Recommended)

It is recommended that a cross-shaped fastening be made at the bottom of the container using lashing straps. In the event of a sudden movement, this cross would prevent any possible horizontal sliding of the slabs from the A-Frame.

3. Placing the A-Frame in the container

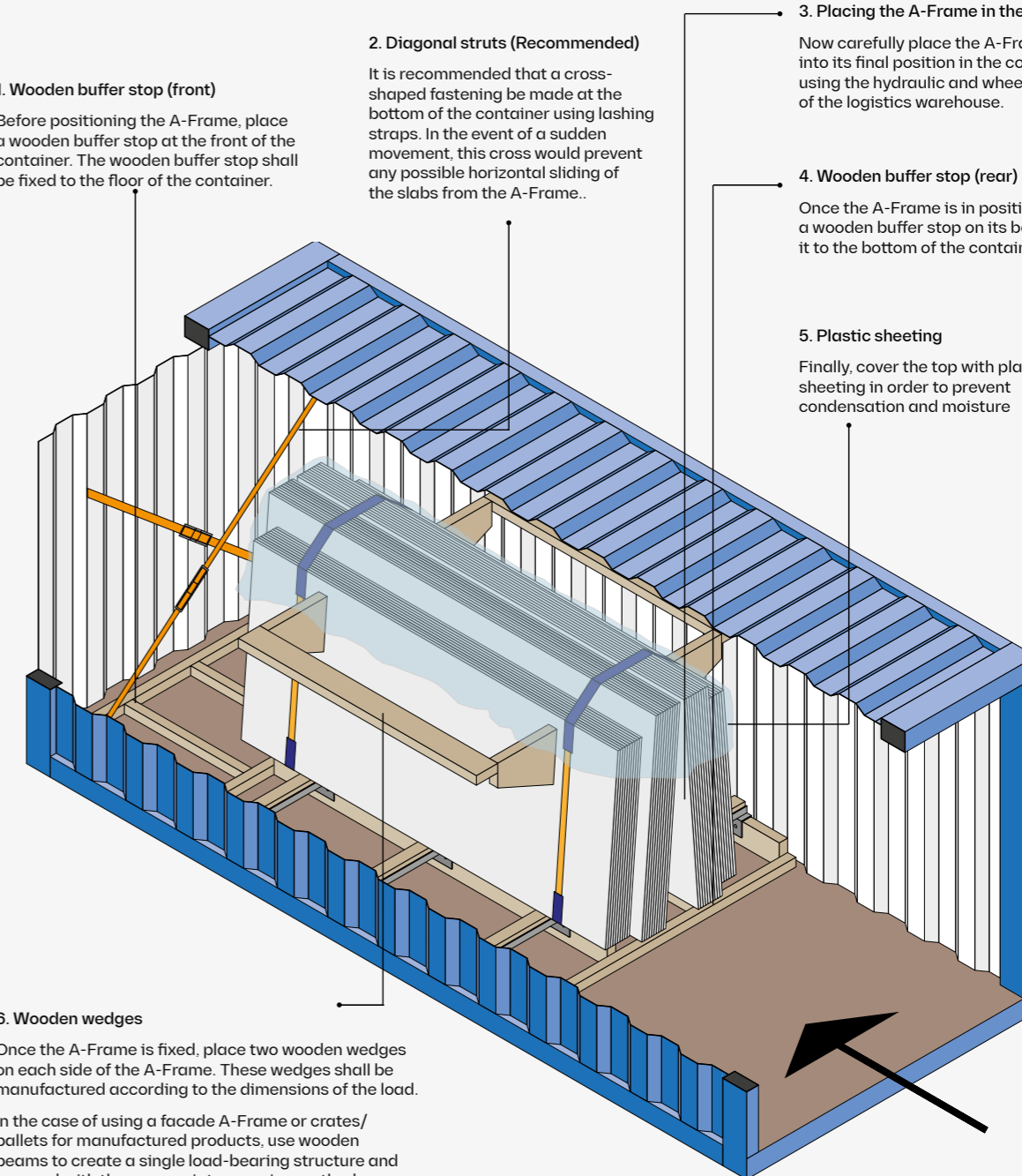
Now carefully place the A-Frame into its final position in the container using the hydraulic and wheel system of the logistics warehouse.

4. Wooden buffer stop (rear)

Once the A-Frame is in position, place a wooden buffer stop on its back, fixing it to the bottom of the container.

5. Plastic sheeting

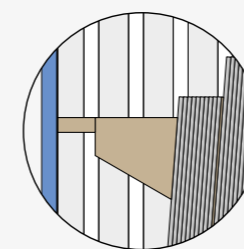
Finally, cover the top with plastic sheeting in order to prevent condensation and moisture.



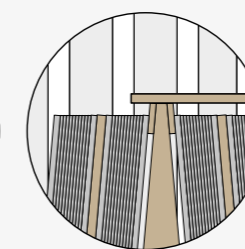
6. Wooden wedges

Once the A-Frame is fixed, place two wooden wedges on each side of the A-Frame. These wedges shall be manufactured according to the dimensions of the load.

In the case of using a facade A-Frame or crates/pallets for manufactured products, use wooden beams to create a single load-bearing structure and proceed with the appropriate securing method.



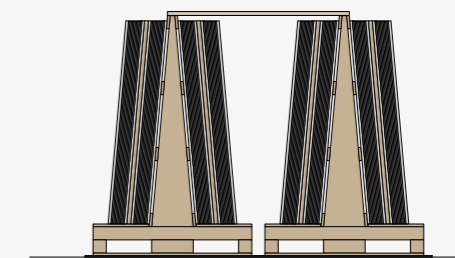
Wooden wedges.



Wooden beams

FACADE A-FRAME

In the case of using a facade A-Frame or crates/pallets for manufactured products, use wooden beams to create a single load-bearing structure and proceed with the appropriate securing method.



Preparation and securing of slabs

1. Maximum load capacity

The load carried by each type of A-Frame must not exceed the following weights:

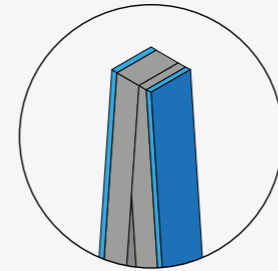
A-Frame for land transport: 15,000 Kg.

A-Frame for maritime transport: 23,000 Kg.

A-Frame for facades: 1,800 Kg.

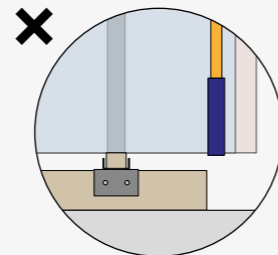
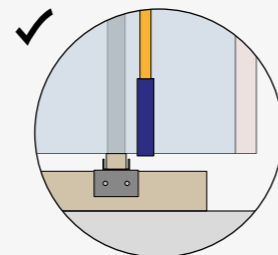
2. Protections

Any areas of the A-Frame that are not made of wood shall be covered with protective foam to prevent any potential damage to the slabs.



5. Fitting the lashing straps

The lashing straps shall be positioned close to the outer areas of the A-Frame beam.



4. Securing the A-Frame

After assembling the A-Frame, two ratchet straps shall be used to secure the material.

The straps must be tightened to the maximum.

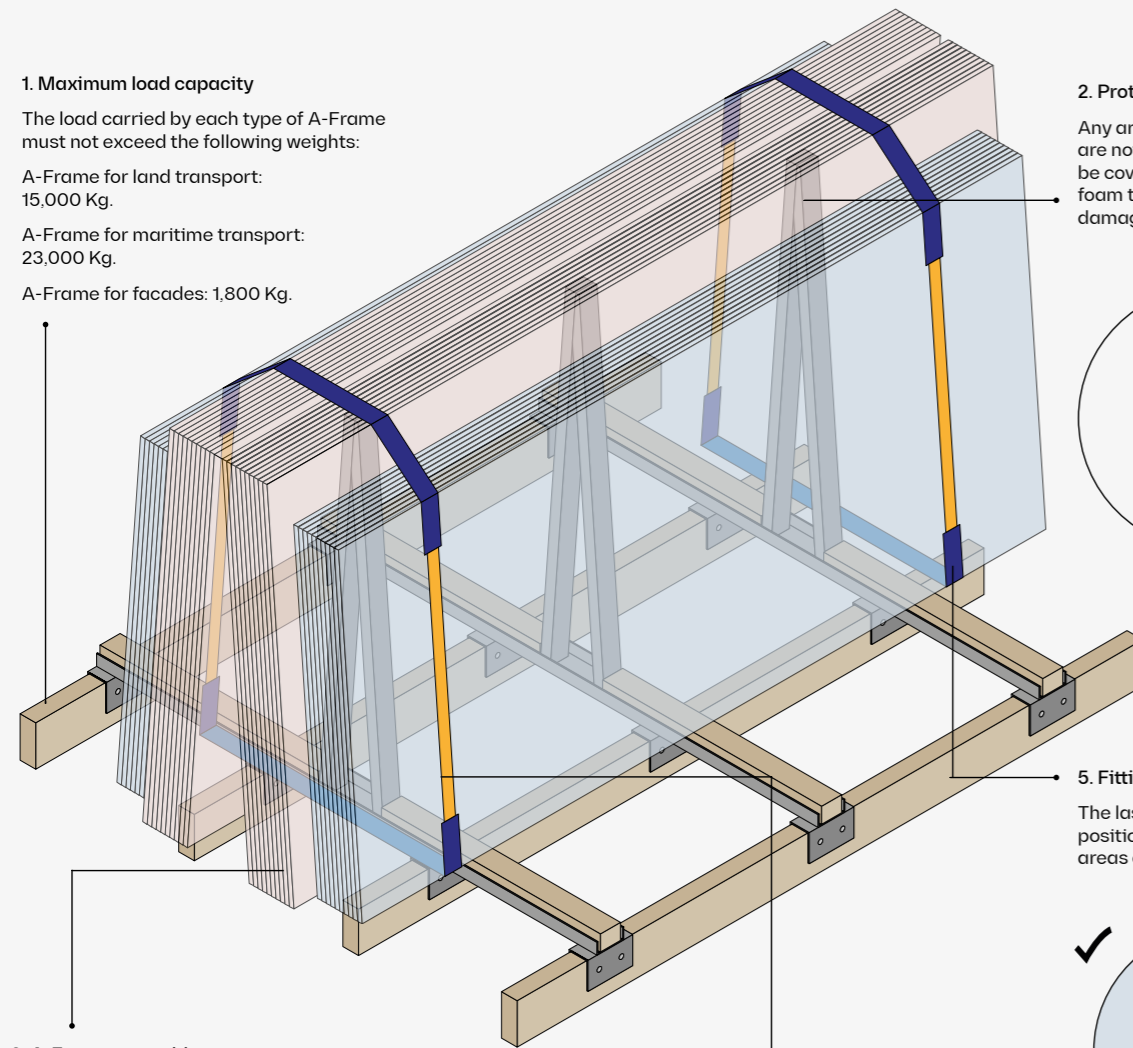


3. A-Frame assembly

The material shall be stored according to the method of transport and the material(s) (sizes and thicknesses) that make up the order.

However, it must always be observed that:

- Larger slabs should be placed on the inside of the A-Frame.
- Smaller slabs should be placed on the outside.
- 5 calibrated timber strips shall be supplied to separate the thinner thicknesses (8 mm and 12 mm) and 3 for the thicker ones.
- For Dekton Slim (4 mm) slabs, follow the recommendations in the Dekton Slim slabs Transportation & handling sheet.



Handling

For more information, consult the Specification Sheet: Material handling procedure available in the Technical Documentation section at www.cosentino.com

Packaging

Personalized or custom packaging: we package all our materials, treating each piece with great care, adding protections that ensure correct transit to their destination.

Vertical or horizontal design possibilities (flooring)

Optional use of other different specific materials. Our wooden packaging is treated according to the NIMF-15 standard and is FSC certified.

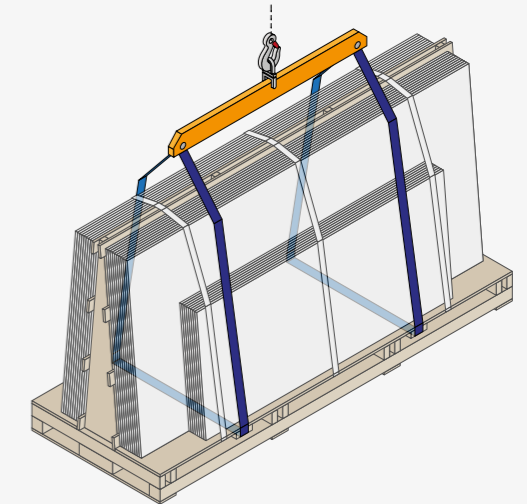
Palletizing will be vertical by default, with the possibility of studying horizontal palletizing according to the project layout and characteristics.

Information sheets available via QR code on the packaging (safety, material,...)

Any other palletizing, packaging or labeling request can be studied for implementation in the project.

Handling Facades A-Frame (wooden/metallic)

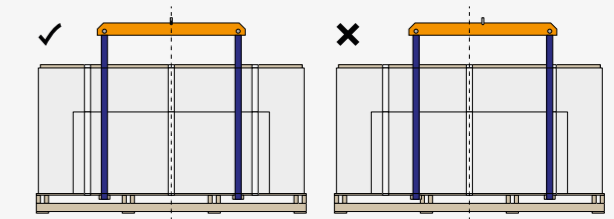
Handling with overhead crane/lorry-mounted crane



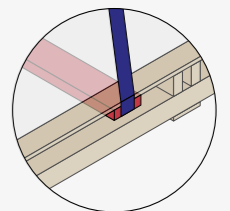
Handling with a lifting beam

When handling the A-Frame, we recommend using a lifting beam connected to straps (polyester or similar).

Place the load in the centre to balance the weight and prevent it from swaying.



The reinforcement area for handling with slings must be marked on the A-Frame.

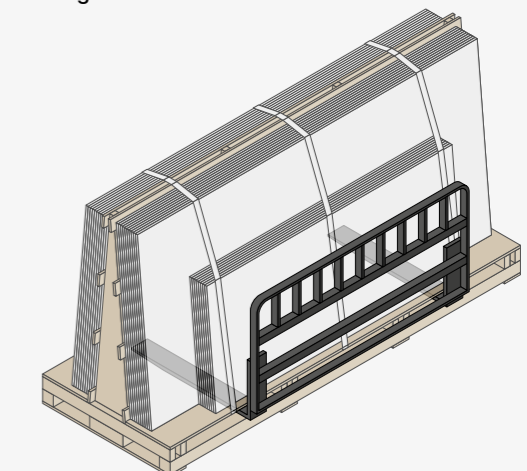


Package handling

The transport from the storage location to the installation site must be carried out by mechanical means (fork-lift truck, manitou, etc.). The package must be handled according to the instructions on the package.

It is essential that the staff operating cranes, auto cranes or fork-lifts are fully qualified and have received specific training for the task. It must be ensured that the staff in charge of these activities receive the guidelines provided by Cosentino regarding the handling of materials.

Handling with fork-lift

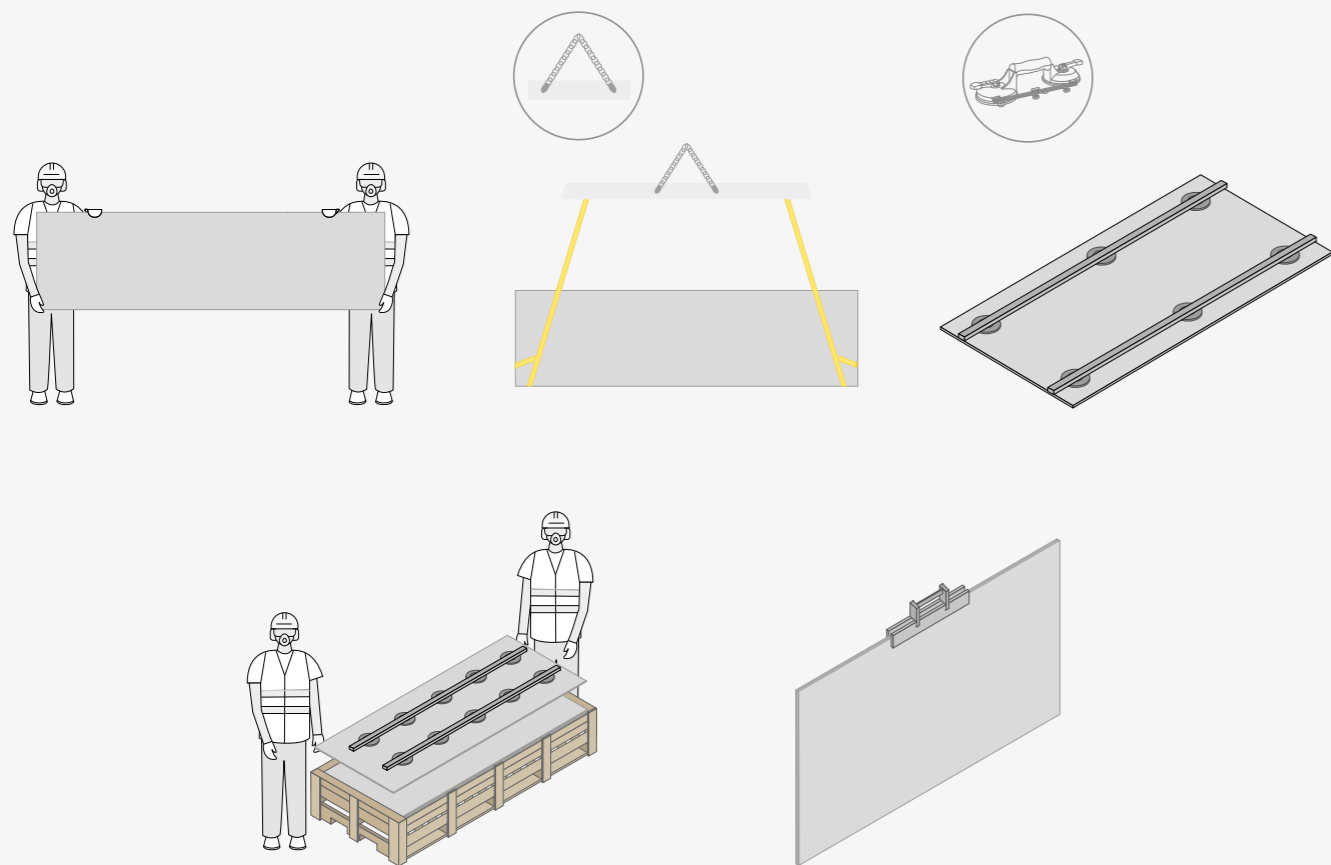


Movement of individual pieces

- Carefully open the pallets on site. Procedure for opening pallets: Remove the plastic wrap, then secure the pieces with clips and finally cut the plastic straps.
- It is recommended to have a jigsaw.
- Plan and arrange resting places at strategic points on the way between the material collection area and the installation area. It is recommended that these resting places be equipped with an element that ensures cushioning, such as a piece of wood or compressed foam, and a vertical support so that both the piece and the workers can rest before the next section or movement.

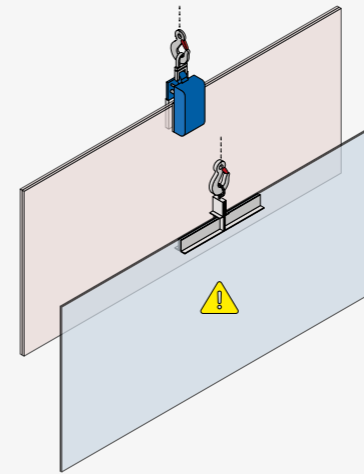
- Manual handling is limited to 25kg per person. At least two people are required to handle pieces over 25 kg, with four being the recommended number for handling standard, large-format pieces. If the dimensions of the pieces do not allow for easy handling by four people, it is recommended to use manual suction cups or a carrying frame with multi suction cups in order to facilitate the grip and distribution of weights along the slab.
- It is recommended to use mechanical means for the transport of pieces, avoiding as much as possible moving the pieces manually. Some examples of mechanical means are tackles, glass lifting tools, etc.

- For individual movement of pieces, and depending on the size of the piece, we can recommend 2 types of tools:
 1. A glass lifting tool for individual movement. It is characterized by a cushioned, grip surface greater than 80cm. This type of tool can usually be found in the glass sector. For example: INSEMAC 30 – load 800kg – for pieces longer than 250cm.
 2. Double-lip vacuum suction cups, which provide a grip for the roughest surfaces, can also be used. At least 2 suction cups must be used when moving the piece in teams of two people, and up to 4 suction cups in order to facilitate vertical transport.
- The movement of the slabs will be carried out vertically to avoid the bending and twisting of the material, and therefore guarantee its integrity.



Slabs handling

Handling with overhead crane/ lorry-mounted crane



1. Handling one or two slabs at a time

Always keep in an upright position. Alligator clamps should be used and placed in the centre of the load to balance the weight and prevent it from swaying.



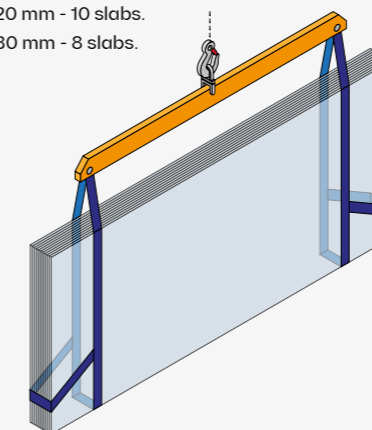
The maximum recommended number of slabs per Dekton and thickness is:

- 12 mm - 2 slabs.
- 20 mm - 2 slabs.
- 30 mm - 1 slab.

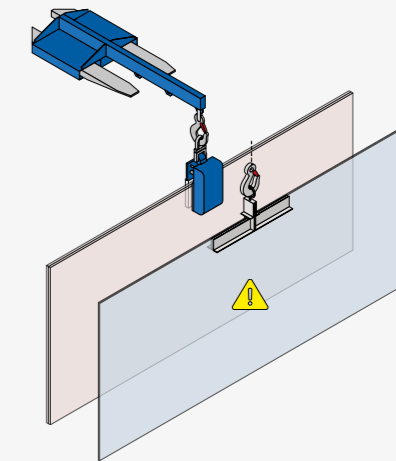
2. Handling several slabs at once

Always keep in an upright position. We recommend using a lifting beam connected to straps (polyester or similar). The recommended maximum number of slabs for Dekton that can be moved in bundles at one time is as follows:

- 4 mm - PROHIBITED to handle with this system.
- 8 mm - 14 slabs.
- 12 mm - 14 slabs.
- 20 mm - 10 slabs.
- 30 mm - 8 slabs.



Handling with a fork-lift



A fork-lift boom is required to connect it to the clamp.

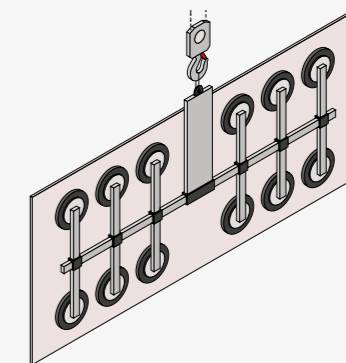
It can be used to handle Dekton slabs up to the following maximum quantities:

- 12 mm - 2 slabs.
- 20 mm - 2 slabs.
- 30 mm - 1 slab.

Warning: When handling 4 and 8 mm thick Dekton slabs, only glass lifting clamps should be used. A maximum of 2 slabs can be handled at a time.



Handling with suction cups



Handling with suction cups

A frame should be used to distribute the pressure and support points as evenly as possible.

The recommended pressure, per suction cup, is 0.6 to 0.7 bar.

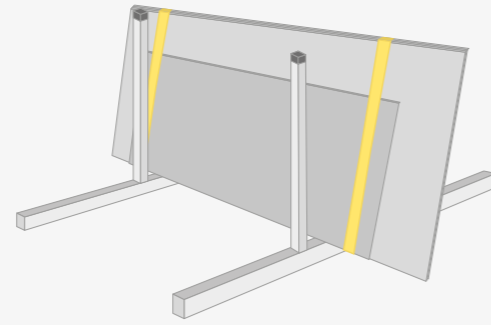
Warning: When handling manually with suction cups, conveyors such as 'EasyTrans' should be used. Any slab + handling system exceeding 25 Kg [55 lb] and, in general, any large format slab should be carried by two operators.

Storage

Assignment of a storage area equipped for the unloading and storage of Cosentino material. The area must be clean, level and delimited, in a way that allows the material efficient organization. To ensure the product integrity, the storage area must be located outside the transit area on site.

Whenever possible, place safety bars to prevent rollover and protection in case of accidental rollover.

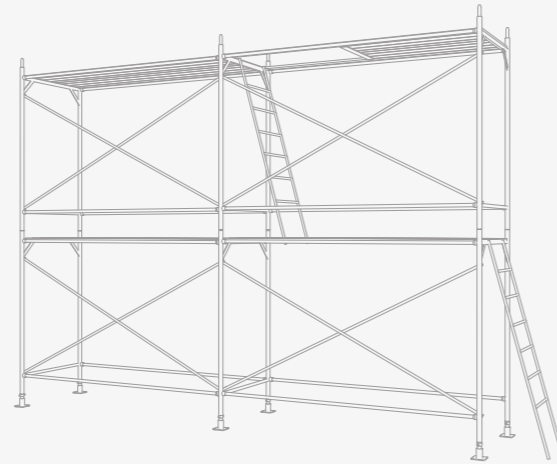
For pieces with machining, their storage and stockpiling on-site in a horizontal position or with the machined face exposed to the elements should be avoided. Otherwise, the machined faces must always be protected from water penetration into the machining.



Scaffolding

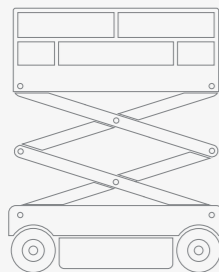
There are different types of scaffolding on the market and any can be used depending on the project size, the work to be done and the size of the parts to be fitted:

- Mast climbing work platforms: ideal for large-format pieces and where loading is carried out on the same platform, always in compliance with the loading limitations according to the manufacturer's specific instructions. The length of the platforms can be up to 30 metres. It is the scaffolding system most used by Cosentino's customers due to its versatility and speed of assembly.
- Supported scaffolding with platforms for unloading material. This type of scaffolding is ideal for facades with small cuts.
- Suspended scaffolding. They are used for small jobs, such as replacement or maintenance work, as the maximum load they can carry is very small and restrictive. This type of scaffolding is mainly used in small renovations or on replacements.

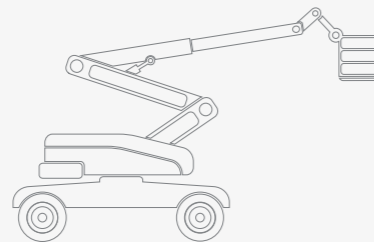


For all these models, it will be necessary for the worker to be trained in the equipment use and to have specific training in height working.

Scissor lift



Crane arm with platform

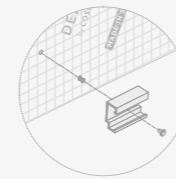


Processing

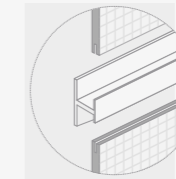
Normally, slabs are delivered cut and drilled from the factory following the project design.

Available mechanical operations for facades

DKT1. Undercut drill
TK (thickness = 8/12 and 20 mm)

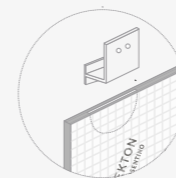


DKT2. Continuous grooved edge
Width 3/4 mm. (thickness = 12 and 20 mm.)

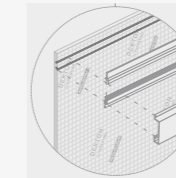


CR2. 1. (thick. 12mm, width 3mm, depth 10mm.)
CR2. 2. (thick. 20mm, width 3mm, depth 10mm.)
CR2. 3. (thick. 12mm, width 4mm, depth 10mm.)
CR2. 4. (thick. 20mm, width 4mm, depth 10mm.)

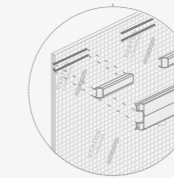
DKT3. Intermittent grooved edge
Width 3/4 mm. (thickness = 12 and 20 mm.)



DKBG. Rear groove continuous or spot
CR4 (thickness = 8 and 12 mm)



Continuous groove



Spot groove

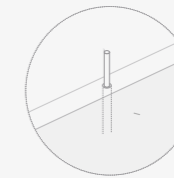
DKR. Riveting
(thickness = 4 and 8 mm)



DKB. Intermittent groove on the reverse
CR5 (thickness = 8 and 12 mm)



Intermittent hole on the edge
T1 (thickness = 12 and 20 mm)



- Dekton machining dimensions may vary depending on the specific conditions of each project.
- The thickness of the material will depend on the systems used and the requirements of the project.
- Cosentino is not responsible for mechanical calculations, nor does it indicate the necessary holes and grooves per m².
- The pieces intended for a ventilated facade will incorporate a mesh on the back of it.
- This mesh is available on request (minimum order to set up a complete slab).
- In some references, both the orientation of the texture/decoration and the background movement must be taken into account.

The following items are included in the quotation for facade projects at no additional cost:

1. NON-RETURNABLE PACKAGING
2. TRANSPORT TO DELIVERY POINT.
3. SAFETY MESHING (for Dekton 4 mm and Dekton ventilated facade).
4. REFERENCED PALLETIZING (following project plans).
5. CUTTING OPTIMISATION (Project Modulation)

Cleaning and maintenance

Dekton has practically zero porosity, so is easy to clean. Rainfall is effective to remove any accumulated dirt and to keep the external cladding clean.

But the dirt and soil depends largely on the local atmospheric conditions depending on the location of the project. In heavily industrialized areas, coastal areas and the areas where construction works are being carried out, it might be necessary to clean the product occasionally or on a periodic basis, solely for the purpose of aesthetic appearance.

If Dekton cleaning is required, the schedule might be adjusted with other cleaning operations of the external facade for example, glass and painted aluminium components.

If an automatic wall cleaning machine is to be used, a pre-test should be done in the early stage of equipment design to confirm that there is no detrimental effect on the panel as well as to clarify the cleaning effect and frequency.

Final cleaning on site

After the installation of Dekton, the surface usually shows remains of work, in the form of film or small accumulations of cement, lime, epoxy, etc. Therefore, it is necessary to do a final cleaning job to ensure total cleanliness.

For all cleaning products, the recommendations included in the manufacturer's SDS must be followed.

Cleaning protocol:

A) Prepare the cleaning products and tools

- Descaling detergent. (Acid-based buffer)
- Epoxy remover cleaning product
- High-pressure washer
- Brush or scourer and sponge can be used if a high-pressure washer is not available

B) Procedure

- Mix the acid product and water (according to the manufacturer's instructions)
- Spread the mix on the facade and leave it for few minutes (according to the manufacturer's instructions)
- Clean with a high-pressure washer; if you do not have a high-pressure washer, it is recommended to scrub with a brush and rinse with a damp sponge.

Cleaning and Maintenance

Maintenance has the important purpose of removing dirt superficially embedded. Correct maintenance guarantees a natural appearance of the facade.

The site should be inspected on a six monthly or yearly basis, depending upon the atmospheric conditions where the project is located as defined above.

For cleaning, it is recommended to use a neutral detergent with high cleaning power, avoiding products with too much soap or presence of wax.

The simplest procedure for cleaning is to spread the solution, following the manufacturer's instructions, wait a few minutes and clear out with a high pressure washer; without the high-pressure washer, it is recommended to scrub with a brush and rinse with a damp sponge.

Stubborn Stains

For stubborn stains, those which have been there for a while, or of a special composition, that are stuck to the surface and cannot be removed with daily cleaning, we recommend following the table below.

| STAIN | CLEANING PRODUCT |
|---------------------------------|---|
| Liquids and organic residues | Conventional detergent, grease remover |
| Grease and oil | Degreaser |
| Rubber | Degreaser |
| Resins, putties, silicone, dyes | Solvent, Acetone |
| Traces of cement adhesives | Acid |
| Plaster | Plaster remover, Acid detergent |
| Tar | Degreaser |
| Nicotine | Abrasive cleaning product, Solvent, Acetone |
| Metal Rust | Metal cleaner, hydrochloric acid |

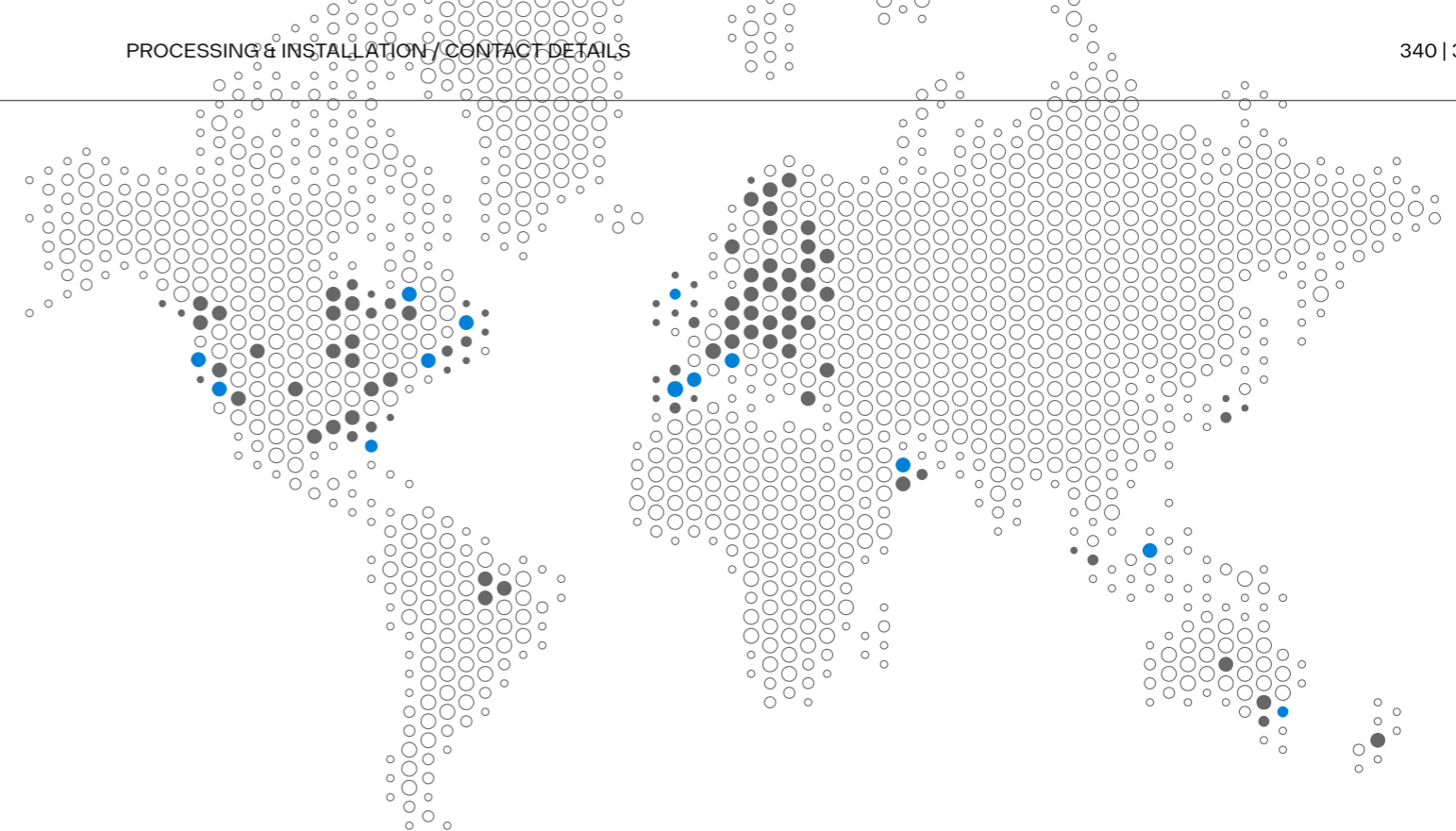
* Avoid contact of Dekton with hydrofluoric acid.

Contact details

We have a presence all over the world in order to be close to our clients and their projects.

Our Cosentino CITIES, located in some of the world's most iconic cities, create spaces where everyone can discover Dekton and the latest market trends with all five senses. As well as being used as an office, these spaces can be set up for meetings, classes, exhibitions, and much more. We see them as dynamic, social spaces and the ideal setting for exchanging ideas.

Wherever they are in the world, our Cosentino CENTERS are the epicentre of our company. Anyone with a curiosity or passion for design is welcome to visit our warehouses to experience our life-size products close-up and to see them in use. We know all there is to know about Dekton's rich colour variety and what it brings to the world of design.



• COSENTINO CITY

USA

Cosentino AMERICAS
 Cosentino ANAHEIM
 Cosentino ATLANTA
 Cosentino AUSTIN
 Cosentino BOISE
 Cosentino BOSTON
 Cosentino CHARLOTTE
 Cosentino CHICAGO
 Cosentino CINCINNATI
 Cosentino DALLAS
 Cosentino DENVER
 Cosentino DETROIT
 Cosentino FORT LAUDERDALE
 Cosentino HAWAII
 Cosentino HOUSTON
 Cosentino KANSAS CITY
 Cosentino LONG ISLAND
 Cosentino LOS ANGELES
 Cosentino MILWAUKEE
 Cosentino MINNEAPOLIS
 Cosentino NASHVILLE
 Cosentino NEW JERSEY
 Cosentino NEW ORLEANS
 Cosentino OKLAHOMA CITY
 Cosentino ORLANDO
 Cosentino PHILADELPHIA
 Cosentino PHOENIX
 Cosentino PITTSBURGH
 Cosentino PORTLAND
 Cosentino RALEIGH
 Cosentino ROCHESTER
 Cosentino SACRAMENTO
 Cosentino ST. LOUIS
 Cosentino SALT LAKE CITY
 Cosentino SAN DIEGO
 Cosentino SAN FRANCISCO
 Cosentino SAVANNAH
 Cosentino SEATTLE
 Cosentino SPOKANE

CANADA

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 Cosentino VIRGINIA
 Cosentino WASHINGTON DC
[Cosentino CITY LOS ANGELES](#)
[Cosentino CITY MANHATTAN](#)
[Cosentino CITY MIAMI](#)
[Cosentino CITY SAN FRANCISCO](#)
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[Cosentino CITY SEATTLE](#)
 Cosentino HUB HOUSTON
 Cosentino HUB NORFOLK
 Cosentino HUB WEST COAST

MALAYSIA

Cosentino KUALA LUMPUR

MEXICO

Cosentino MEXICO DF
[Cosentino CITY LOS CABOS](#)

PUERTO RICO

Cosentino PUERTO RICO

SPAIN

Cosentino HQ
 Cosentino A CORUNA
 Cosentino ALMERÍA
 Cosentino BARCELONA
 Cosentino BILBAO
 Cosentino CASTELLÓN
 Cosentino GIRONA
 Cosentino GRANADA
 Cosentino MADRID
 Cosentino MERIDA
 Cosentino MURCIA
 Cosentino SAN SEBASTIÁN
 Cosentino SANTANDER
 Cosentino SEVILLA
 Cosentino TOLEDO
 Cosentino VALENCIA
 Cosentino VALLADOLID
 Cosentino VIGO
 Cosentino ZARAGOZA
 Cosentino MALLORCA
 Cosentino TENERIFE
 Cosentino GRAN CANARIA
[Cosentino CITY MADRID](#)
[Cosentino CITY BARCELONA](#)
[Cosentino CITY MALLORCA](#)
[Cosentino CITY MALAGA](#)

PORTUGAL

Cosentino LISBON
 Cosentino PORTO
[Cosentino CITY LISBON](#)

BRAZIL

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 Cosentino GOIANIA
 Cosentino SANTA CATARINA
 Cosentino SAU PAULO
 Cosentino RIO DE JANEIRO
[Cosentino CITY SAU PAULO](#)

IRELAND

Cosentino DUBLIN

UNITED KINGDOM

Cosentino BELFAST
 Cosentino DARLINGTON
 Cosentino EAST LONDON
 Cosentino GLOUCESTER
 Cosentino HOOK
 Cosentino MANCHESTER
 Cosentino NEWMARKET
 Cosentino SCOTLAND
[Cosentino CITY LONDON](#)

DENMARK

Cosentino DENMARK

FINLAND

Cosentino HELSINKI

GERMANY

Cosentino BERLIN
 Cosentino DÜSSELDORF
 Cosentino MÜNCHEN
 Cosentino STUTTGART

ITALY

Cosentino BARI
 Cosentino CATANIA
 Cosentino CATTOLICA
 Cosentino MILANO
 Cosentino ROMA
 Cosentino TORINO
 Cosentino VENEZIA
[Cosentino CITY MILAN](#)

FRANCE

Cosentino BORDEAUX
 Cosentino LYON

COSSENTINO MARSEILLE

Cosentino PARIS
 Cosentino RENNES
 Cosentino STRASBOURG
 Cosentino TOULOUSE
[Cosentino CITY PARIS](#)

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Cosentino VIENNA

BELGIUM

Cosentino BELGIUM
[Cosentino CITY ANTWERP](#)

NORWAY

Cosentino OSLO

SWEDEN

Cosentino GÖTEBORG
 Cosentino STOCKHOLM
[Cosentino CITY STOCKHOLM](#)

SWISS

Cosentino ZÜRICH

NETHERLANDS

Cosentino THE NETHERLANDS
[Cosentino CITY AMSTERDAM](#)

ISRAEL

Cosentino CAESAREA
[Cosentino CITY TEL AVIV](#)

TÜRKIYE

Cosentino ANKARA
 Cosentino ISTAMBUL
 Cosentino IZMIR
[Cosentino CITY ISTAMBUL](#)

SINGAPORE

Cosentino SINGAPORE
[Cosentino CITY SINGAPORE](#)

AUSTRALIA

Cosentino ADELAIDE
 Cosentino BRISBANE
 Cosentino MELBOURNE NORTH
 Cosentino MELBOURNE SOUTH
 Cosentino PERTH
 Cosentino SYDNEY
[Cosentino CITY SYDNEY](#)
 Cosentino HUB SYDNEY

NEW ZEALAND

Cosentino AUCKLAND
 Cosentino LO CHRISTCHURCH

JAPAN

Cosentino LO JAPAN
[Cosentino CITY TOKIO](#)

SOUTH AFRICA

Cosentino JOHANNESBURG
 Cosentino LO CAPE TOWN

UAE

Cosentino LO DUBAI
[Cosentino CITY DUBAI](#)

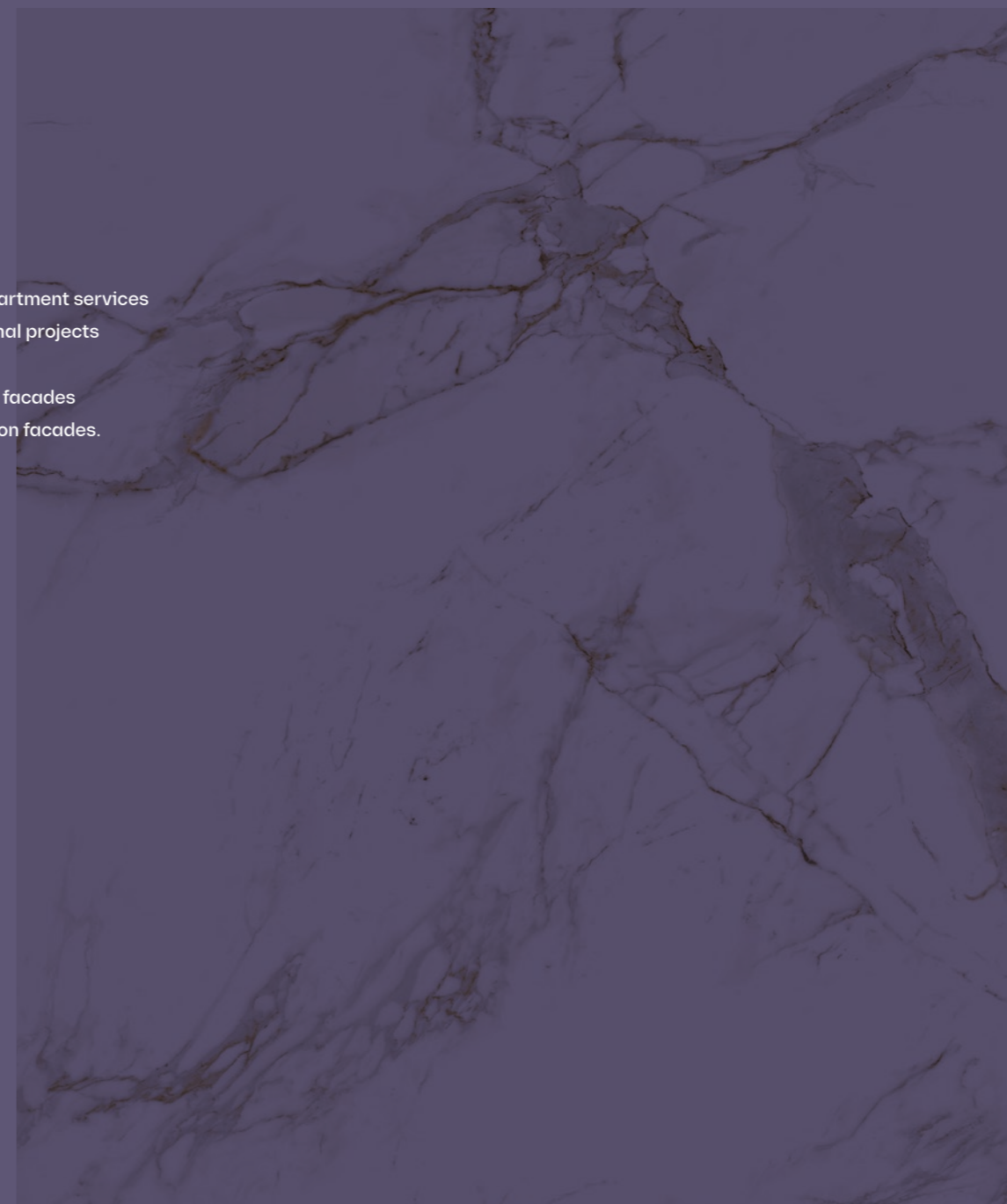
POLAND

Cosentino WARSAW
 Cosentino KATOWICE
 Cosentino POZNAN

Project Quotation

06

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- 360 Dekton warranty



PSU and Facades technical department services

The services offered by the Project Service Unit (PSU) and the Technical Facades Departments (FacadesLab, FacadesCentral) for the facade project are grouped into four different categories.

Basic project/technical advice

- Network of associated installers
- Specific test for for each project
- Providers of associated systems

Project implementation/Technical proposal

- Study of customised projects
- Quotation
- Technical drawings
- Project rendering
- Project delivery customisation

Project support on site

- Technical assistance for the installation of Dekton and Cosentino products on site with Cosentino Quality team.
- Final site visit: optional on request.
- After sales quality service
 - Dekton Training at Factory . Theoretical and Practical.
 - Virtual visit to the Facades Showroom (Facades Lab)



Project definition

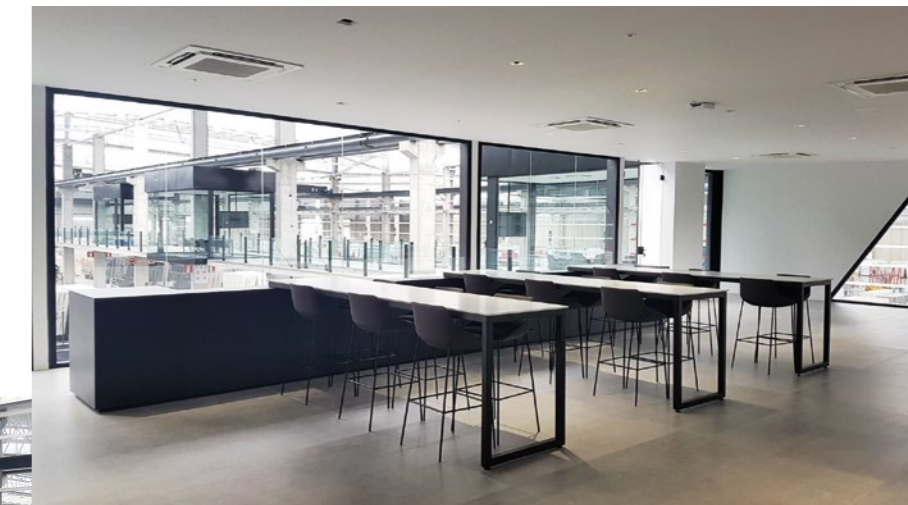
Basic project/technical advice

- Initial meeting with facade specialist from salesforce
- Material definition: Colour, Thickness (Dekton iD services)
- Recommended optional systems
- Standards and certifications applied
- Performance and design optimisation
- Initial quotation
- References from previous facades (Case Studies)
- Cosentino City visit
- Virtual visits to the factory.
- Facade models in Augmented Reality
- Facade videos
- Factory visit (depending on the project)

Customised Projects

Project implementation/Technical proposal.

- Tender quotation and project description
- Assistance in special construction solutions for facades with Dekton
- Advice on setting fixing distances for Dekton using proprietary software
- 3D Rendering Model (depending on project)
- Collaboration with system suppliers (together with suppliers, facade consultants and technical installation office)
- Static calculation
- Workshop plans
- Final Quotation (including system and installation through associated third-party installers, depending on markets)



Installation advisory service

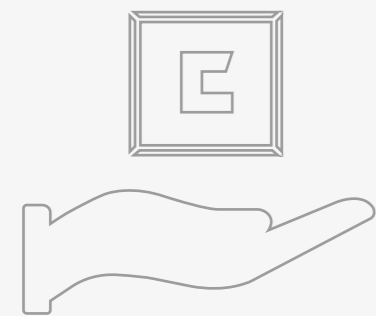
Project support on site

CONTRACTOR

- Associated installer program
- Consulting and mock-up for construction site management service
- Technical Support at on site meetings

INSTALLER

- Cut to size panels
- Panel machining
- Customized supply and palletizing
- Planned service time
- Support and advice visits to the jobsite.



Aftersales service

- Final on site visit
- Warranty delivery
- Optional Making off project Case Study for marketing, (e.g. professional photos, videos, presentation on social media...)
- Dekton Use and Cleaning Manual ava

* Cosentino no es responsable de la instalación de sus productos realizada por terceros

Integral services for international projects

At Cosentino Group, we meet the demands of architects and designers who seek inspiration and information to execute construction and renovation projects. Every project entrusted to us through our sales and service network goes through several stages that guarantee efficiency and safety:



Initial Consultation

A Project Manager takes care of managing more than 15 analysis and implementation experts.



Production

We create turnkey projects and offer solutions for each of the phases in a personalised manner.



Logistics

A team of more than 170 people send the material via an automated platform.



Quotes and Technical Proposal

Detailed study of each element of your project.



Mock-ups and Layouts

Upon request, customers can be sent life-size samples of their project.



Implementation and Support

We advise customers in the project implementation as well as technical support.



Dekton Warranty

Transportation insurance to guarantee the perfect condition of our shipment.

Initial Consultation

We assess project requirements in detail and we advise on the use of one or various brands (Silestone, Dekton, Sensa or Scaleda), depending on its characteristics and the application type: worktops, facades, cladding or flooring.

A Project Manager takes care of managing more than 15 analysis and implementation experts. Legal consultations are carried out on construction permits, certificates are arranged and software is used to prepare and manage plans.



Initial advice, analysis and technical proposal

DETAILED STUDY OF ALL PARTS OF YOUR PROJECT

- Assignment of a project manager
- A team of more than 15 experts (experienced architects, engineers, etc.) involved in the analysis and execution of the project
- Software for management and interpretation of blueprints
- A team of designers
- Different teams look at the study
- Advice on construction regulations
- A chance to obtain certificates
- Advice and solutions for LEED certification

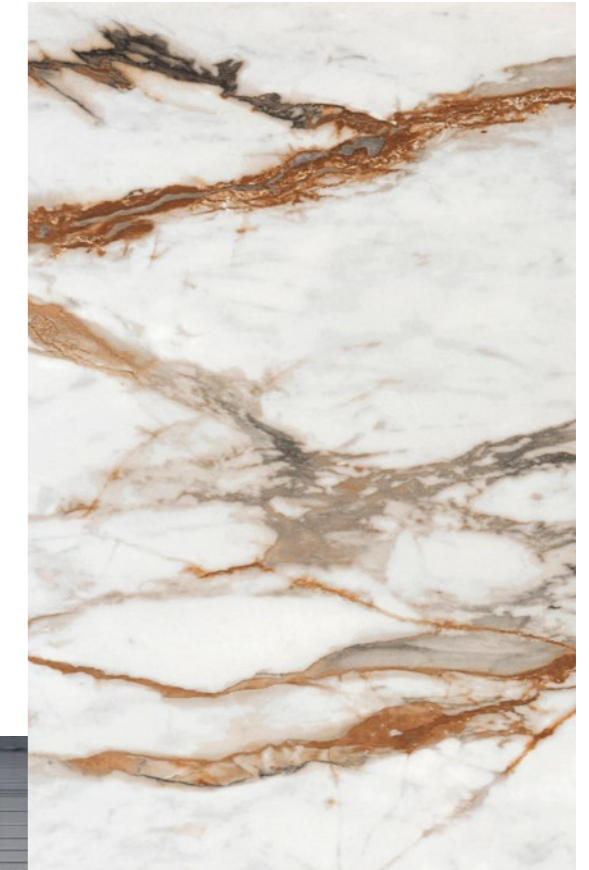
QUOTATION AND TECHNICAL PROPOSAL

- A study of customer proposals and input of new ideas by our team of experts
- Design recalculations: Less Waste = Higher savings/Improved aesthetic finish
- A detailed budget for items
- Speedy budget implementation <48h
- Completion of specific certificates or tests for the project
- Coordination in security documentation

Production

At Cosentino, we can adapt to satisfy the needs and preferences of each architectural, decoration or design professional, thereby creating turnkey projects and providing solutions for each of the phases in a personalised manner.

The Cut To Size (Mármoles) factory has more than 360 employees and a production capacity of more than 150,000 m²/month. It has CNC cutting machines, CNCs for manufacturing facades, countertops, flooring and cladding, furniture, etc. It has automatic cutting lines that range from 30x15 cm format to the full slab format (330x163 cm), as well as meshing and polishing lines.



Logistics

The material produced is packaged with the aim of limiting the weight and dimensions per package and taking into account the agreed design for the piece placement order.

Every day, a team of more than 170 people send the material via an automated platform that is adapted to the customer's requirements in terms of time and volume.

At Cosentino, we have signed delivery contracts with the main shipping companies and can accommodate more than 150 containers at our own facilities.

Quotes and technical proposal

A budget is drawn up for each part of the project based on the initial proposal, any changes suggested by the experts, any new designs and the inclusion of customised colours.

Design and development

An R&D + Innovation team together with our internal designers, work in direct contact with the customer through our Custom Colour Product Manager.

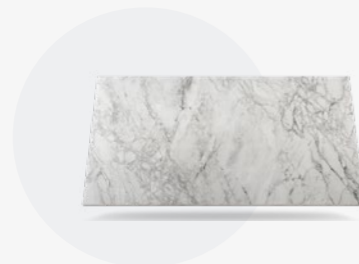
Mock-ups and Layouts

We create 3D digital models to present the final image of the project, as well as mock-ups or physical prototypes. Upon request, customers can be sent life-size samples of the brands to be used in the construction process.

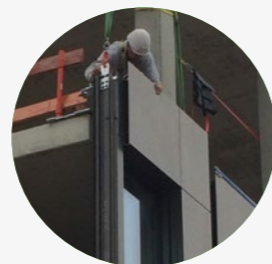
We offer the possibility of preparing a mock-up to be able to validate structures and modulated systems in advance.



Possibility of the final project aspect in 3D Digital



We ship actual size samples



Possibility of on-site mock-up

Implementation and Support

A budget is drawn up for each part of the project based on the initial proposal, any changes suggested by the experts, any new designs and the inclusion of customised colours.

1

Production

Guaranteed deadlines thanks to the link between the Project and Factory through our Project Manager.

Daily review of production date plans adjusting to work setbacks.

Production factory: More than 140 workers.
Max capacity of 240,000 m² CTS a month.

The Cut To Size (Mármoles) factory has a production capacity of more than 150,000 m²/month.

3

Packing

Customised packaging. We pack all our materials treating each piece as an individual unit, adding specific protection in each case.

Vertical or horizontal design possibilities.

Optional use of other different specific materials.

Organisation by lots, items and size.

Information sheets (safety, material, use, maintenance, etc.)

5

Post-sales

Incident management and resolution. Cosentino's specialised staff can travel for 'on-site' assessment and resolution.

Transportation insurance to guarantee the perfect condition of our shipment.

Monitoring and traceability of all shipments to their destination.

Training in the use and maintenance of the material in each application.

2

Quality control

Validation of production plans by the customer as well as the final product before loading and shipping.

Each piece of the finished product is individually checked by our quality team.

Support when receiving the material/piece from our Technicians, according to the project

4

Logistics

We manage the goods efficiently from point to point for the customer thanks to a Logistics and Planning team of more than 170 people.

More than 40 Containers and 20 trucks per day.

Preferential agreements with the world's leading shipping companies.

Dry port in our facilities with capacity for more than 150 containers.

Agility in customs and ports.

General conditions of Sale Cosentino Group (“Cosentino”)

1. Scope and validity

The present General Conditions of Sale shall be applicable provided that the parties have not agreed upon other specific conditions expressly and in writing. The same shall be of priority application, where appropriate, on the general conditions of the purchaser.

The Client acknowledges that the General Conditions of Sale have been made available to them prior to the business relations to which they may apply. The undertaking by COSENTINO of the sale of a product to the Client implies the acceptance for this, fully and without reservation, of its terms that are considered automatically and duly incorporated into the business relations between the parties.

Signing the delivery note or delivery document implies the acceptance of the present General Conditions of Sale, as well as the quality, quantity and state of the goods.

When the sale refers to Dekton panels for facades, the client acknowledges that the Conditions of Service Provision and the Technical Conditions for Facades form an indissoluble part of these General Conditions of Sale.

COSENTINO offers are not binding until a written confirmation of the order has been issued.

Orders sent by the client are binding. They may be accepted by COSENTINO within two weeks of receipt, either in writing or by delivery of the material to Client. If the order is submitted electronically and a confirmation of receipt is issued, such confirmation of receipt does not constitute a binding acceptance of the order.

2. Pricing

The sales prices of the products shall be those that are set in COSENTINO's offers and rates, disclosed to the Client, or alternatively the specific terms and conditions agreed upon between COSENTINO and the Client. The corresponding taxes shall be added to said prices.

COSENTINO may change the sales prices of products at any time. The increase in the sales price shall not affect those already-underway orders that have been expressly accepted by COSENTINO.

COSENTINO reserves the right to set a credit limit for each Client and subordinate deliveries on the basis of this limit and/or the presentation of an adequate payment guarantee. In the event of any delay in payment, COSENTINO may proceed to recover the goods pending payment and/or initiate appropriate legal action.

3. Product guarantee and delivery

COSENTINO guarantees that the products are marketed under the terms of the specific product guarantee that is made available to the Client, which the latter declares to know and accept.

The order represents an acquisition commitment for the Client,

COSENTINO reserving the right to suspend or cancel them, in cases where the provided guarantees of solvency are deemed insufficient.

The product delivery dates agreed upon with Clients shall always be merely indicative, with any delivery subject to

the availability of stock. COSENTINO shall not be liable for any non-delivery of products or delays of the same.

The Client must review the goods at the time of reception, informing COSENTINO in writing as soon as possible and, in any event, no later than seven (7) days as from the delivery date of the goods, of any external and apparent defects that they may see. The delivery of materials shall be understood as delivered by simply making them available to the purchaser, in the COSENTINO facilities.

Any exchange or return of goods consisting of full slabs that the Client may request within thirty (30) days following the receipt of the goods shall be verified and approved by COSENTINO.

Furthermore, any exchange or return of goods consisting of full slabs requested by the Client after thirty-one (31) until ninety (90) days from the date of receipt of the products must be verified and authorised by Cosentino and a refund fee equal to 25% of the price of the goods will be applied.

Returns of full slabs will not be accepted after ninety (90) days from the receipt of the products.

As a general principle, materials produced or purchased especially for the Client will not be returned.

If COSENTINO produces tools or orders them for Customer's orders and charges the incurred costs proportionately to the Customer, ownership of such tools and their accessories does not pass to the Customer, nor does the Customer have a right to their delivery. In particular, the tools will not be delivered to the Customer.

COSENTINO reserves the right to make partial deliveries. The Goods may present reasonable deviations in weights and quantities, attributable to the production processes. A deviation of up to 10% in weights and quantities is allowed.

Any costs for inspections and acceptance procedures will be borne by the Client.

4. Packaging and transportation

The packaging, if any, is not included in the given prices and shall be borne by the Client. The delivery, unless otherwise agreed, will be ex-works (EXW according to Incoterms 2020), with transport and unloading at Customer's expense and risk. If the transport is carried out by means, commission or management of Cosentino, it will be understood that the transport agreed upon with Cosentino is as Client's agent.

5. Quality and measurement

No claim will be accepted if the material has been used or subjected to any transformation, treatment, or modification process by the Client.

The measures to be recorded shall be obtained by proportionally deducting those incoming, chamfers and commercial trade in simply sawn blocks or tables and they will be true if their edges are cut to a fixed size.

In the case of natural stone, the samples provided do not mean that the supply will be absolutely identical in tone and aspect, as they are natural products, which, although carefully selected and prepared, may be subject to variations in hue, grain and composition. The variations introduced by nature in the same shall not be considered defects: no claims for this reason will be addressed. The Client may examine the product in our facilities. Any claims for differences or

defects in the material must be made by the purchaser upon delivery of the goods, or within a maximum period of eight (8) days following receipt of the same.

6. Terms of payment

Payments shall be made in the way and timeline established in the corresponding invoice. Notwithstanding the foregoing, and unless COSENTINO and the Client have expressly agreed otherwise, payments shall be made through a charge to the account the Client has designated for said purpose. Each time the Client places a new order, and it is accepted by COSENTINO, the customer expressly authorises COSENTINO to submit the corresponding invoice to the bank account that has been provided to COSENTINO and that is reflected in the corresponding invoice. Therefore, the Client expressly recognises that they will not have the right to request the return of the invoices from their bank corresponding to the purchases that COSENTINO draws on said current account, for breach of the conditions of article 48 of Royal Decree-Law 19/2018, of 23 November, on payment services and other urgent financial measures (“RD 19/2018”) or any other regulation that may be applicable.

In any case, and in order to avoid any doubt, the Client expressly waives the right to request the return of the charges made as a result of the invoices drawn by COSENTINO, in accordance with the provisions of Article 34 of RD 19/2018 or any other regulation that may be applicable.

The Client authorises COSENTINO to report the declarations contained in the present clause to the financial institution in which the payments are directly debited.

Notwithstanding the foregoing, COSENTINO reserves the right to claim, where it considers appropriate, the payment by other means (cheque, transfer, promissory note, etc.).

In the event of total or partial breach of the payment obligations assumed by the Client, COSENTINO shall have the right to settle the outstanding sales as well as to compensation for damages and payment of the corresponding interest. Furthermore, the Client must bear the financial and banking expenses caused by the delay in payment.

7. Retention of title

The Products shall remain the property of COSENTINO until any and all claims of COSENTINO arising from its business relationship with CLIENT have been paid in full.

In the case of current accounts, this retention of title shall serve as security for the claim for the balance to which COSENTINO is entitled.

Prescription, engineering, consulting and construction support services are ancillary services provided free of charge and without any obligation or responsibility on the part of COSENTINO, unless a separate additional order is made for such services and the corresponding amount is paid.

8. Liability

Apart from those cases derived from non-conformity of the products, any claim for damages brought by the Client when there is no gross negligence or fraud is expressly excluded. The contractual liability of COSENTINO is limited to the purchase value of the products. Under no circumstance shall COSENTINO be financially liable to the Client for loss of profit, income lost, costs of downtime or, in general, for losses of any kind that the Purchaser may suffer due to non-delivery or faulty delivery of the products.

The Client shall be solely liable, exempting COSENTINO where applicable, for damages stemming from the improper use, storage, preservation, processing or handling of products.

For this purpose, COSENTINO has provided the Client with all the necessary documentation and instructions for the safe and proper use of products.

Likewise, COSENTINO is exempt, with regard to third parties, of any legal, contractual or extra-contractual liability that may arise from the handling, treatment and installation of products made by companies other than COSENTINO.

The Client is responsible for complying with the existing legal provisions on the environment, and especially for the managing waste produced in the handling and processing of acquired materials or their packaging.

Therefore, COSENTINO shall have the right to modify the delivery times of the goods agreed with the corresponding client and/or these General Conditions of Sale due to circumstances beyond its scope or control, including, among others, regulatory changes, natural or social or legal conditions (restrictive regulations on foreign trade operations, changing market conditions that may restrict or substantially affect the product supply or prices, as well as unforeseen tariffs or taxes) or force majeure that are beyond its control.

9. Health and safety requirements

The Client will comply, at all times, with all regulations that may apply to the implementation, handling, storage, manufacturing and disposal of products marketed by COSENTINO.

Products purchased from COSENTINO may contain crystalline silica (please see the corresponding label and Safety Data Sheet). Incorrect processing of the products, or without appropriate measures for protection, may cause serious illness, such as silicosis or lung cancer.

Consult a competent health and safety professional in order to implement the required occupational measures for containing the source of dust, such as tools with a water supply and ventilation systems that ensure air renewal.

Employers of the professionals who ultimately process the products are responsible for informing employees and ensuring that the workplace complies with the applicable local regulations for limiting occupational respirable crystalline silica exposure.

To be exact, the Client must carry out, regarding each position, periodic risk assessments in accordance with applicable sector regulations, and implement the appropriate risk control measures.

All boards are accompanied by a safety label with the identified hazards. The Safety Data Sheets, labels and the Guide to Good Practices are available in your language at osh.cosentino.com, accessible by scanning the following QR code, at www.cosentino.com, or upon request to the manufacturer at info@cosentino.com.



10. Personal data protection

In compliance with the current legal framework in matters of data protection, we inform you that the underlying personal data of these conditions will be included in a file under the liability of COSENTINO, with registered address Ctra. Baza a Huércal – Overa, Km. 59 – 04860 Cantoria (Almería), for purposes of managing business relations. Likewise, the Parties ensure compliance with the duty of information regarding their employees whose personal data is communicated between the Parties in order to maintain and fulfil the contractual relationship. The legal basis that legitimises the processing of the data of the interested Parties is the need for the entering into and execution of this contract, as well as the lawful interest of the Controller.

The retention period of their data will be 15 years in order to comply with the legal obligations of the company. However, they may exercise their rights of access, rectification, abolition, objection, limitation and portability by means of written communication to the address provided or to the Data Protection Officer gdpr@cosentino.com providing a photocopy of their

Spanish National ID card or equivalent document, and indicating the right that is requested. Likewise, if they consider their personal data protection rights to be violated, they may file a claim with the Spanish Data Protection Agency (www.aepd.es) or any other entity that is competent in this matter.

The Client accepts that COSENTINO has the right to provide the Client's data in a commercial relationship to a credit insurance agency in order to contract credit insurance.

11. Cosentino industrial property rights

The Client acknowledges that the trademarks and trade names that identify COSENTINO and its products are and will solely and exclusively belong to COSENTINO, and that they may not claim anything or have any rights with respect to the same. Trademarks and trade names shall only be used by the Client for product marketing, clearly stating the Client's relationship with COSENTINO, that COSENTINO is the owner of the trademarks and trade names, and complying with the guidelines and requirements established by COSENTINO in all circumstances.

In that regard, the Client undertakes to not register or request the registration of any name, trademark, trade name, internet domain, social media profile, or any other form of industrial or intellectual property that contains or

resembles the trademarks or trade names that identify COSENTINO and its products in a misleading way about the origin of the products or about the Client's relationship with COSENTINO.

In the event that the Client is interested in the design, implementation or use of a web page for the promotion and marketing of COSENTINO products, prior written authorisation by COSENTINO shall be required to

agree upon the characteristics, design and contents of the same, as well as the domain name that will be used for this purpose, in detail. To the contrary, COSENTINO shall be empowered to demand that the Client cease using said web page at any time.

Furthermore, COSENTINO may require that the Client use any of COSENTINO's web pages instead of alternative web pages.

If, for any reason, the Client registers any name, domain, trademark, social media profile or trade name that contains, is equal to or similar to the trademarks and trade names registered or used by COSENTINO, the Client will be obliged to immediately transfer the ownership of said records to COSENTINO upon the formal request of and at no cost to the latter.

The Client shall not use any trademark, trade name or copyright of COSENTINO as a part of its company name or trade name.

COSENTINO reserves all proprietary rights, patent rights, design rights and copyrights with respect to images,

drawings, designs, details, cost estimations and other documents. This also applies to any document designated as "confidential". The express written consent of Cosentino is required before such documents may be disclosed to third parties.

12. Assingment

COSENTINO shall be entitled to transfer or assign in favour of third parties the manufacturing and delivery of the goods as well as assign the delivery of any other services under these General Conditions of Sale.

13. Applicable law and jurisdiction

The present General Conditions of Sale shall be subject to Spanish law or that law that would be applicable to the commercial relationship between the Cosentino subsidiary that carries out the sale and the Client.

In case of discrepancies regarding the interpretation, application or execution thereof or dispute regarding the terms set forth in these general conditions, the Parties agree to submit to the jurisdiction of the courts and tribunals of the city of Almería or those courts that may be competent to settle any dispute between the Cosentino subsidiary and the Client. Notwithstanding, COSENTINO may request any measure seeking to satisfy its interests before a different court.

COSENTINO and the Client agree to the non-applicability of the United Nations Convention on Contracts for the International Sale of Goods (CISG) or Vienna Sales Convention.

"The client undertakes not to market the products supplied by Cosentino to individuals or legal entities (hereinafter, "Persons"), or entities in which such Persons have an ownership stake or control, that (i) appear as persons sanctioned by laws, regulations, directives, judgements, programmes or restrictive measures with regards to international economic-financial sanctions imposed by the United Nations, the European Union, including the Kingdom of Spain, or any other Member State whose regulations on Sanctions are applicable. This includes the Office of Financial Sanctions Implementation (OFSI) of the Her Majesty's Treasury (HMT) of the United Kingdom and/or the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) (hereinafter, "Sanctioned Persons"); (ii) have an ownership stake in or control a Sanctioned Person; (iii) act directly or indirectly for or on behalf of a Sanctioned Person; (iv) are constituted, located or with an operating headquarters or resident in a country or territory, or whose government is recorded in laws, regulations, directives, judgements, programmes or restrictive measures with regards to international economic-financial sanctions imposed by the United Nations, European Union, the Kingdom of Spain, the OFSI of HMT and/or the OFAC (hereinafter, "Sanctions"); (v) maintain business relationships or carry out transactions with Clients that involve the transfer of funds from or to countries, territories or jurisdictions subject to Sanctions."

Technical conditions of Dekton facades

This document outlines the technical conditions for the specific use of Dekton for facades, including the limitations on the use of the materials and systems supplied by Cosentino.

1. Dekton slab: specifications and finishes

The technical specifications of the Dekton panel can be found in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later. Performance may vary slightly depending on the technical families of finishes chosen (Families I, II, III and IV), so it is recommended to analyse the performance per range before making a final choice.

The four families of finishes are listed in Annex N of ETA 14/0413 issued by ITeC on 20/07/2020. The performance of each family of finishes is listed in the 'Declaration of Performance No. 092013DK' document, updated as of January 2019.

The environmental impact of Dekton panels is described in the Environmental Product Declaration (EPD). S-P-00916 – Version 2, last updated 09/12/2021.

The colour stability of Dekton finishes has been evaluated using accelerated ageing tests. The results are included in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

The specifications of the Dekton facade system when used as a ventilated facade with mechanical fixings are set out in the European Technical Assessment ETA 14/0413 issued by ITeC on 20/07/2020. The system designer shall refer to

sections 1, 2 and 3 of such document for the technical description of the system, its specifications for use and its performance.

In the event that the fixing solution proposed by the project designer differs from that described in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, Cosentino recommends that the verification tests contained in the European Assessment Document EAD 090062-00-0404 be carried out: Kits for mechanically fixed exterior facade cladding.

2. Limitations on use, cutting, handling, assembly and transport

Depending on the expected impact on the panels, the recommended edge finish for Dekton panels will vary. See the table of recommendations in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

The use of flat L- or U-shaped Dekton panels for facades is not recommended due to the concentration of stress in the inner corners. See the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

When drilling holes in the panels, holes must first be drilled in the corners of the hole. The minimum distances from the holes to the edge of the panel must be maintained. See the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

Three-dimensional pieces can be created by mechanically assembling return parts with straight or bevelled

edges on ventilated facades. Please refer to the limitations contained in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

Corners between adjacent facades can be made as indicated in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

3. Impact category

The impact resistance of Dekton facade surfaces varies according to their thickness and family. This value is given in section 3.5 of Dekton ETA 14/0413 dated 18/01/2022. The panels were subjected to a series of hard and soft body impacts at different energy levels. The results place Dekton in impact category IV for thicknesses of 12 mm or 20 mm.

Category IV: The degree of exposure in use should be a zone out of reach from ground level.

It is the responsibility of the project engineer to decide which facade construction solution is ultimately chosen for a specific project.

4. Fixings used in Dekton panels and their limitations of use

The Dekton facade panel allows for various mechanical fixing systems to the substructure. The fixing systems can be hidden (DKT1, DKT2 and DKT3) or visible (DKT4 and DKR). There are also gluing systems such as chemical (DKC), mixed (DKBG), with cement-based adhesives (DKB) or on external ETICS type insulation (DKS). However, not all of

these fixing systems are suitable for use on ventilated facades. Please refer to the limitations contained in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

The instructions and limitations of use for each type of fixing system on the back of the panel, as set out in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later, and in the relevant ETA standards, must be followed:

→ DKT1 System: Manual and Annex 2 of ETA 14/0413

→ DKT2 System: Manual and Annex 2 of ETA 14/0413

→ DKT3 System: Manual and Annex 2 of ETA 14/0413

→ DKT4 System: Manual

→ DKR system: Manual

→ DKBG system: Manual

→ DKC system: Manual

→ DKB system: Manual

→ DKS system: Manual

In the event that the fixing solution proposed by the project designer and facade contractor differs from that described in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, Cosentino recommends that the verification tests contained in the European Assessment Document EAD 090062-00-0404 be carried out: Kits for mechanically fixed exterior facade cladding.

5. Adhesive fixings for cladding panels

For glued fixings, whether chemical (DKC), mixed (DKBG), with cement-based adhesives (DKB) or on external ETICS type insulation (DKS), the installer must strictly adhere to all the criteria and limitations for design, calculation, placement patterns, cleaning, surface preparation, pre-priming, gluing process, tapes and temperature of use specified in the Dekton manuals and in the technical documentation of the adhesive suppliers.

As these are products not manufactured by Cosentino, the installer must request technical documentation from the supplier of the adhesive and its ancillary components for each gluing system.

6. Substructure, slab support and anchors and their limitations of use

The general instructions for the substructure and its anchoring to the main structure of the building, as described in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later, must be followed.

In the case of ventilated facades, the general instructions for the substructure and its anchoring to the main structure of the building, as described in the Cosentino Facade Manual and in Annex 4 of ETA 14/0413, dated 20/07/2020, must also be followed.

In the case of joints between facade panels, the structural and thermal movement joints of the building must be respected, as recommended in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later.

7. Other materials supplied by Cosentino and their limitations of use

Cosentino can supply the customer with materials that are not manufactured by Cosentino but are part of the facade design, such as fixings, glues, adhesives, structural profiles, anchors or thermal insulation elements, among others.

In this case, it is the sole responsibility of the customer to use these materials in accordance with the technical instructions of their suppliers.

Cosentino shall not be held responsible for any failure on the part of the customer to comply with the technical data sheets, product specifications and limitations on the use of materials manufactured by other companies and supplied by Cosentino for use in facades.

8. On-site installation

The instructions and recommendations given in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023) and later, must be followed.

In the case of ventilated facades, the general installation instructions, as described in the Cosentino Facade Manual and in Annex 4 of ETA 14/0413, dated 20/07/2020, must also be followed.

9. Reaction to fire and fire transmission through the air gap

Within the limits of liability set out in the agreement, an aggregate limit of €100,000 shall apply in respect of claims relating to the combustibility of the facade cladding or panels, the insulation material and its fixing systems, or claims relating to the fire safety of any air gap barrier or fire compartmentation (or lack thereof) on the building facade.

10. Quality requirements (QA/QC)

It is the responsibility of the project designer to specify the quality requirements for the execution of the facade, which may include requirements for dimensions, flatness, testing, sampling, etc. The quality requirements to be met will depend on the geographical location of the project.

If there are no specific quality requirements for facades in the project drawn up by the architect, and if the requirements to be followed by the facade contractor are not specified, Cosentino will follow the quality requirements set out in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023). In the absence of other standards, Cosentino recommends that the facade contractor follow the quality criteria of the Centre for Window and Cladding Technology (CWCT) in its 'Guide to good practice for facades', section 'Quality'.

In particular, Cosentino requires the customer to validate the production drawings and the final product prior to loading and shipment.

Cosentino's quality team checks the finished product and assists with the reception of the piece/material by its technicians for each project.

11. Facade maintenance and cleaning

It is the responsibility of the project designer to specify the maintenance and cleaning requirements of the facade throughout its life cycle. In any case, Cosentino recommends that the requirements for final cleaning of the job, maintenance, cleaning and conservation set out in the Dekton Facades Maintenance and Cleaning document be followed.

12. Reference standard according to geographical area

It is the responsibility of the project designer to specify the reference standards to be followed in the development of the facade solutions, including requirements for wind load, impact resistance, fixings, durability, reaction to fire, fire resistance, etc. The technical standards to be met will depend on the geographical location of the project.

If there is no specific standard for facades in the project drawn up by the architect, and if the standard to be followed by the facade contractor is not specified, Cosentino will follow the European standard for its calculations, checks and recommendations. In particular, the European Assessment Document EAD 090062-00-0404 shall be taken into account: Kits for mechanically fixed exterior facade cladding and the European and international reference standards listed in section 4 of both documents, together with all their Annexes.

13. Health and Safety (H&S) requirements

It is the responsibility of the project designer to specify the health and safety requirements to be met in the

development of the facade solutions. These requirements will depend on the country in which the project site is located.

If there are no health and safety requirements for facades in the project drawn up by the architect, and if these are not specified by the facade contractor, Cosentino will follow the health and safety requirements indicated in the Cosentino Facade Manual – Cosentino Facade Fixing Systems, rev. 08 (March 2023).

14. Liability

Engineering, site and installation support (if applicable) are services for which Cosentino is liable only if a separate order for such services is placed and paid for. In this case, Cosentino's civil liability (general and professional) towards the customer shall be limited to the amount invoiced for these services.

15. Dekton brand

Only those facade elements that have been manufactured exclusively from Dekton components in accordance with the current Cosentino facade manuals can be branded as Dekton. The use of construction components other than those recommended by Cosentino in its manuals shall render this right null and void. Furthermore, Dekton test reports relating to such units will no longer be valid.

16. Supplementary conditions

These Technical Conditions for Facades supplement, but do not replace, Cosentino's General Terms and Conditions of Sale and Terms and Conditions for the Provision of Services, in the version in force at the time of prescription or sale. These three documents apply to the ancillary services of facade prescription, consultancy and installation (where applicable).

Notes for Dekton prescription on facades

This note is joint and severally supplied together with the preliminary study or specific documentation issued to the architects for their project at design stage. For future deliverables during design stage, this note will be understood as delivered and accepted by the architects and will also be valid for any of the deliverables that would be sent to the architects during that stage.

The drawings supplied by Cosentino, if any, have been drawn up based on information received by Cosentino and sent by the designer. Cosentino is not responsible for the accuracy and scope of the information received, whether in dimensions, orientation, height, or others. The plans are not drawn for installation; their objective is to give indications to the designer about the application of Dekton on the facade during the development of the project.

The calculations supplied by Cosentino, if any, have been prepared based on the information received by Cosentino and sent by the designer. Cosentino is not responsible for the accuracy and scope of the information received, whether in dimensions, orientation, height, or others. Calculations are not made for installation; their objective is to give indications and limitations to the designer on the application of Dekton on the facade during the development of the project.

For the **impact resistance** of a facade cladding, please refer to the European approved document "Kits for external wall claddings mechanically fixed". Dekton surfaces on facades have an impact resistance that varies according to their thickness and their family. This information is included in section 3.5 of the ETA 14-0413 dated 18.01.2022, issued by Dekton. The panels have been subjected to a series of hard body and soft body impacts at different energy levels. The results classify Dekton in the impact category IV for thicknesses of 12mm or 20mm. Category IV: The degree of exposure to use must be an area out of reach from ground level. The responsibility for the decision of the built solution of the facade to be adopted in the specific project falls on the designer.

The facade study carried out by Cosentino Technical Team, in accordance with the instructions received, has focused on what was requested, which can be one of these four options: a) Dekton panels without reference to their fixing system; (b) Dekton panels for adhered attachment to a continuous surface; (c) Dekton panels excluding fastening substructure; or (d) Dekton panels including a fastening substructure.

The facade study carried out by Cosentino Technical Team is complemented by the following documents, which are an inseparable part of the study:

- [ETA 14-0413 certification, dated 18.01.2022, for ventilated \(not adhered\) facades.](#)
- [Dekton Environmental Product Declaration.](#)
- [Technical Manual of Dekton Facades.](#)
- [Maintenance and Cleaning requirements for Dekton Facades.](#)
- [25-year Dekton Facades warranty.](#)
- [Conditions of Provision of Services \(CPS\)](#)
- [Technical Conditions of Facades \(TCF\)](#)

We recommend that the designer consult the Cosentino **Manuals, Certificates and Tests** for Dekton facades, accessible on the web, <https://www.cosentino.com/professional/technical-documentation> and/or with the Technical Department of Cosentino.

Dekton Warranty

Cosentino has a specific team from the Quality Department, trained to provide on-site support. In addition, we have our Dekton Trainers. Their mission is to provide training and the certification of workshops for the proper preparation of materials.

Cosentino offers a 25-year material guarantee on its Dekton facades executed anywhere in the world and offers its clients, if necessary, all its support and project monitoring services so that they are executed according to the highest quality standards.



*Warranty subject to the terms and conditions of the "Dekton Facades Warranty" to be requested from Cosentino Global, S.L.U.

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* To obtain more information about colours with an NSF certificate please visit www.nsf.org

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