COSENTINO

# Countertops design & installation





DEKTON

TECHNICAL CONTENT

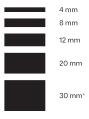
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## Design criteria

### Available thicknesses

Dekton® is a highly versatile material. This is because it has a wide range of thicknesses that help to meet all the needs that may arise when designing a kitchen.



С А в Е

D

D. Waterfall edge.

E. Cabinet cladding.

The image below shows the different

applications of the material in a kitchen:

 $\rightarrow$  (\*) All values applied to 20 mm thickness in this manual will also apply to 30 mm thickness.



A. Countertop.

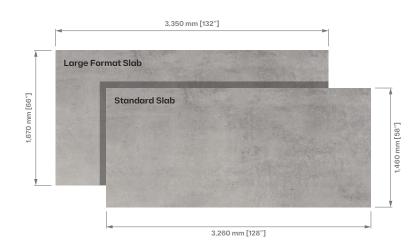
C. Front/Trim.

B. Island.

- → (●) Recommended; (●) Allowable; (●) Not recommended.
- $\rightarrow$  (1) Please refer to the specific documentation for 8 mm thick countertops.
- → (2) It is considered to be a trim for a height of up to 200 mm [8"]. Beyond that, it is considered to be a front.
- → (3) Only for fully attached waterfall edges (cabinet cladding). See section 'Waterfall edges'.
- → (4) See the Furniture Design & Installation Manual for more details on this application.

### Slab formats

Depending on the color and thickness, Dekton® comes in 2 different slab formats. Therefore, you should check\* the original dimensions when designing with our material.



→ (\*) See current portfolios or consult your local Cosentino® contact person.

### Guide to correct measurement

→ Fully fitted cabinets

Before taking detailed measurements, check that all cabinets are installed. properly leveled, in their final position.

→ Measuring tools





measure.



 $\rightarrow$  Order form templates

Standardized templates including data

such as: customer, color, edge type,

special features, barcode, etc.



→ Tape measure.

→ Angle gauge.

→ Spirit level.

→ Laser tape

### Random pattern

Some Dekton® products are created and designed to resemble natural stone. In nature, we can find stones of heterogeneous appearance that may include veins and areas of different tones and contrasts. The same goes for our materials, so it is very important to pay attention to the design and layout of the pieces before producing the material.

### → Color identification

First of all, and based on all the Cosentino® technical documentation, identify the Dekton® colors with a heterogeneous background in the patterns.

#### $\rightarrow$ Layout of the pieces

Before cutting the different pieces that will make up the countertop, place the slab on the cutting table, clean it and make a layout of these pieces in which the tone and/or vein pattern is clearly identified.

In this way, you can match areas with similar characteristics in the joints between pieces, either by tone or vein pattern, and thus avoid differences between pieces of the same slab or production.

Below are two examples of how a Dekton<sup>®</sup> color can be laid out with a random pattern:

→ Layout examples | Dekton® Bergen kC.

## Recommended

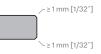
edges

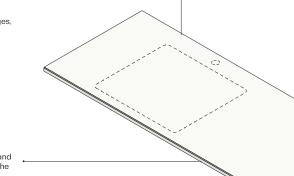
### Non-exposed edges

Those that go against the walls, in the joints of the countertop, etc.

No edge polishing is required. Simply smooth the edges, both top and bottom.

 $\rightarrow$  Unpolished flat





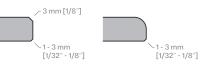
### Exposed edges

→ Knife

→ Mitered skirt

To improve the impact resistance of exposed edges and to avoid the need for subsequent cutting, use one of the following types of edging on countertops or islands:

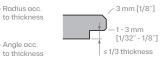
 $\rightarrow$  Polished flat  $\rightarrow$  1/4 round



 $\rightarrow$  1/2 round



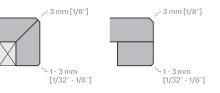
→ Dovetail



 $\rightarrow$  Round

 $\rightarrow$  Double polished flat

Full thickness



# Edge recommendations according to thickness

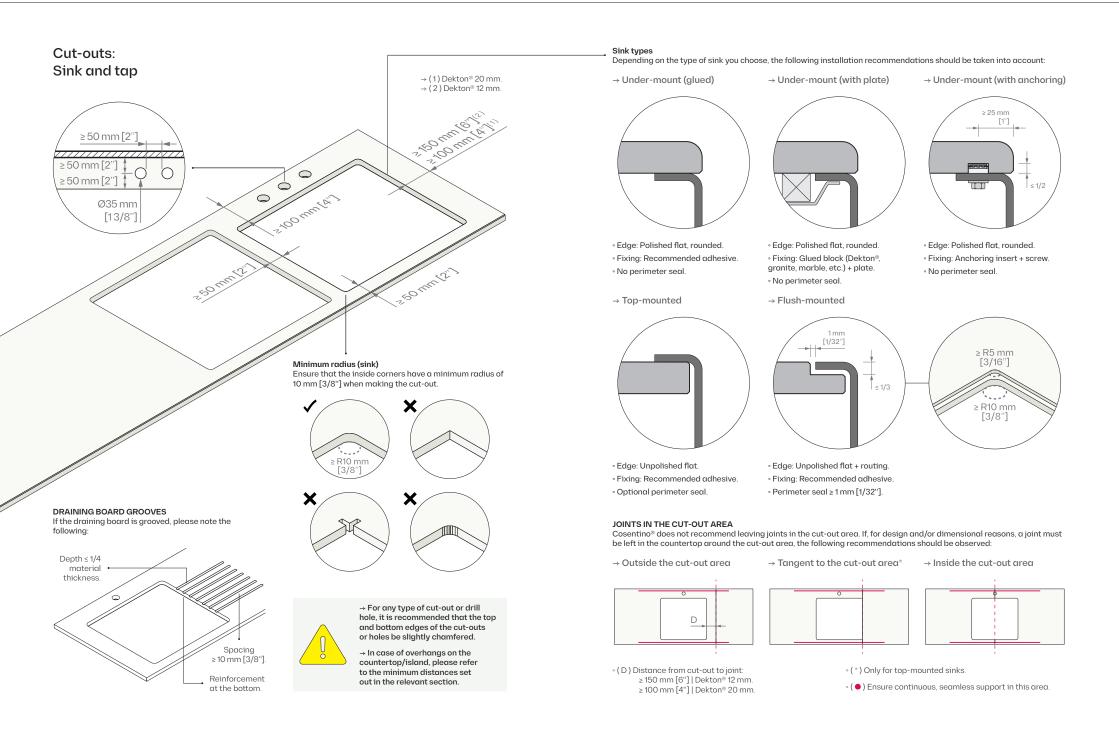
	8 mm <sup>(1)</sup>	12 / 20 mm
Unpolished flat	•	٠
Polished flat	•	٠
1/4 round <sup>(2)</sup>	•	٠
1/2 round	•	•
Round <sup>(2)</sup>	•	٠
Knife	•	•
Dovetail <sup>(2)</sup>	•	•
Mitered skirt <sup>(2)</sup>	•	•
Double polished flat	•	•

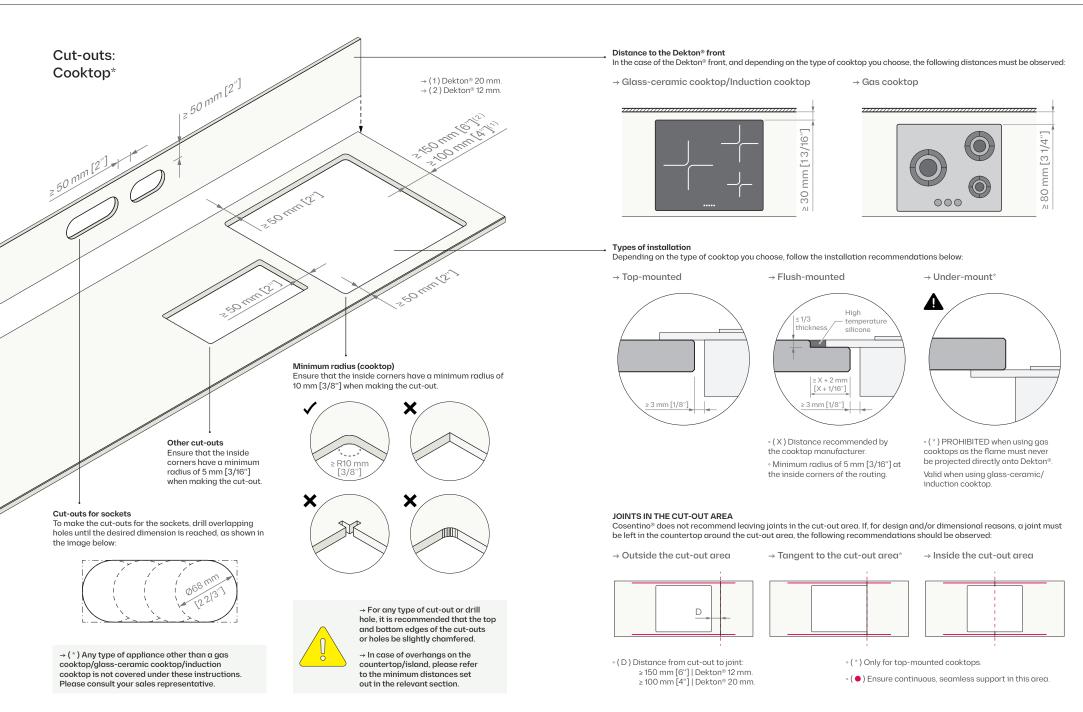
→ (●) Recommended; (●) Allowable;
(●) Not recommended.

 $\rightarrow$  For 4 mm thickness, suitable for fronts/trims or cabinet cladding, the edge should be polished, or at least smooth, with 1 mm [1/32"] bevels.

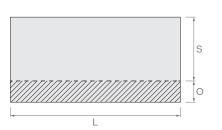
 $\rightarrow$  (1) For 8 mm thickness suitable for fronts/trims or cabinet cladding. For countertop application, please refer to the specific technical documentation.

→ (2) Valid only for straight sections.





### Island overhangs without cut-out/drill hole



1. Long side overhang		
	12 mm 20 mm	
0	≤ 300 mm [12'']	≤ 600 mm [24'']
S	≥2·O	
L	≥ 600 mm [24'']	

12 mm

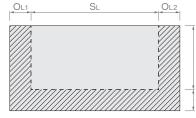
≤ 300 mm [12'']

≥2·O

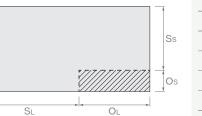
≥600 mm [24'']

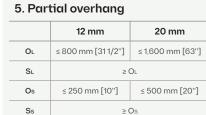
20 mm

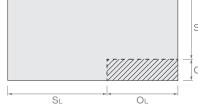
≤ 600 mm [24'']

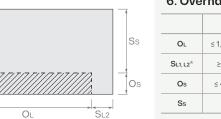


4. U-shaped overhang			
	12 mm 20 mm		
OL1, L2	≤ 250 mm [10'']	≤ 500 mm [20'']	
S∟	≥ 2 · (OL1 + OL2)		
Os	≤ 250 mm [10'']	≤ 500 mm [20'']	
Ss	≥2·Os		











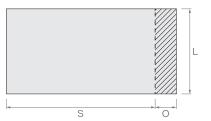
	12 mm	20 mm
OL	≤ 1,000 mm [39'']	≤ 2,000 mm [79'']
<b>S</b> L1, L2*	≥ 100 mm [4'']	≥ 50 mm [2'']
Os	≤ 400 mm [16'']	≤ 800 mm [311/2'']
Ss	≥Os	

 $\rightarrow$  (  $^{*}$  ) Below these values, it is considered to be '1. Long side overhang'.

SL1

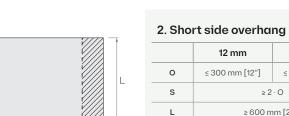
 $\label{eq:constraint} \begin{array}{l} \rightarrow (\ O \ ) \ Overhang; (\ S \ ) \ Support; (\ L \ ) \ Overhang \ length; \\ (\ O_L \ ) \ Long \ side \ overhang; (\ O_S \ ) \ Short \ side \ overhang; \\ (\ S_L \ ) \ Long \ side \ support; (\ S_S \ ) \ Short \ side \ support. \end{array}$ 

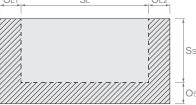
→ Maximum concentrated static load = 100 Kg [220 lb].



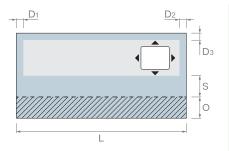
SL







### Island overhangs with cut-out/drill hole

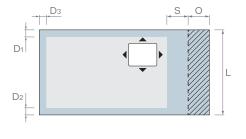


	12 mm	20 mm
0	≤ 300 mm [12'']	≤ 600 mm [24'']
S	≥	0
L	≥ 600 m	ım [24'']
<b>D</b> 1, 2	≥ 150 mm [6'']	
D3	≥ 100 mm [4'']	

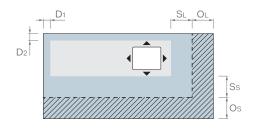
It is possible to make a cut-out/drill in this area.

Do not make cut-outs or drill holes in this area.

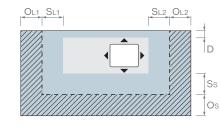
1. Long side overhang



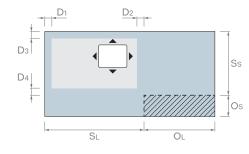
2. Short side overhang		
	12 mm	20 mm
0	≤ 300 mm [12"]	≤ 600 mm [24'']
S	≥ 0 ≥ 600 mm [24"] ≥ 100 mm [4"]	
L		
<b>D</b> 1, 2		
D3	≥ 150 m	nm [6'']



3. L-shaped overhang		
	12 mm 20 mm	
OL, S	≤ 250 mm [10'']	≤ 500 mm [20'']
SL, S	≥ OL.s ≥ 150 mm [6''] ≥ 100 mm [4'']	
D1		
D2		

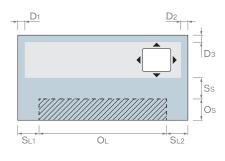


4. U-sl	4. U-shaped overhang		
	12 mm 20 mm		
OL1, L2	≤ 250 mm [10"]	≤ 500 mm [20'']	
SL1, L2	≥ OL1,L2 ≤ 250 mm [10"] ≤ 500 mm [20"] ≥ Os ≥ 100 mm [4"]		
Os			
Ss			
D			



### 5. Partial overhang

	12 mm	20 mm
OL	≤ 800 mm [311/2"]	≤ 1,600 mm [63"]
SL	≥OL	
Os	≤ 250 mm [10''] ≤	≤ 500 mm [20'']
Ss	≥Os	
<b>D</b> 1, 2, 3, 4	≥ 150 mm [6'']	≥100 mm [4'']



 $\rightarrow$  ( \* ) Below these values, it is considered to be '1. Long side overhang'.

 $\label{eq:constraint} \begin{array}{l} \rightarrow (\ O \ ) \ Overhang; (\ S \ ) \ Support; (\ L \ ) \ Overhang \ length; \\ (\ O_L \ ) \ Long \ side \ overhang; (\ O_S \ ) \ Short \ side \ overhang; \\ (\ S_L \ ) \ Long \ side \ support; \ (\ S_S \ ) \ Short \ side \ support; \\ (\ D_1 \ ), \ (\ D_2 \ ), \ (\ D_4 \ ) \ Distance \ from \ cut-out \ to \ joint. \end{array}$ 

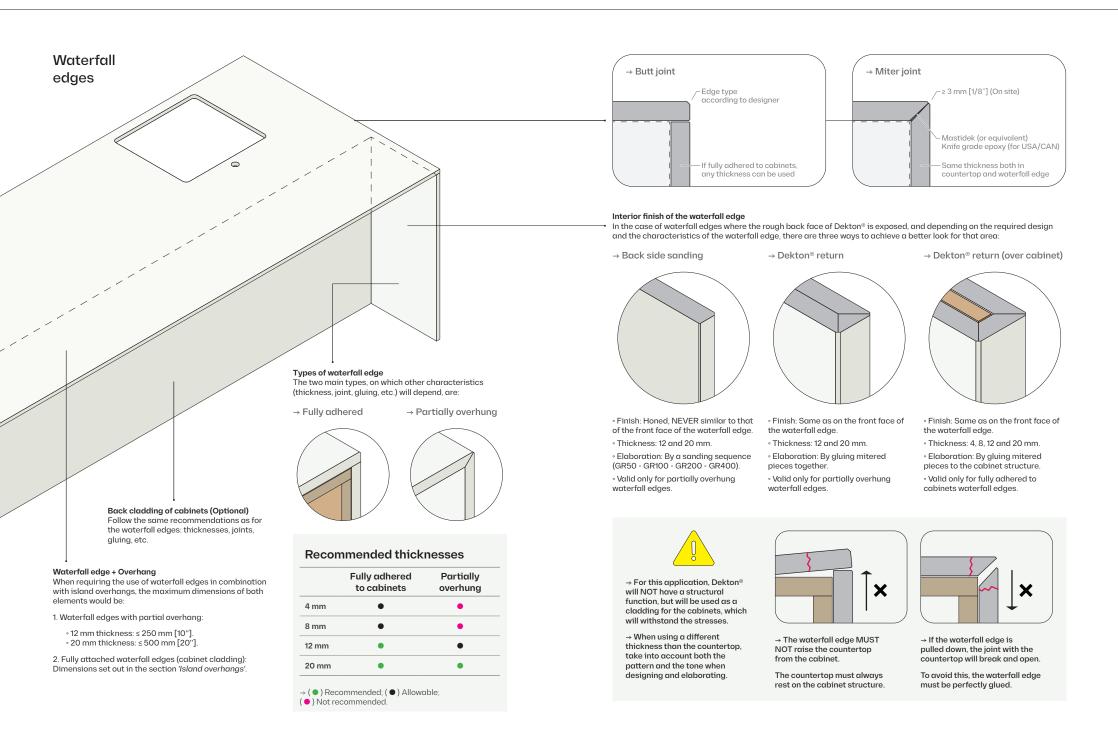
→ Maximum concentrated static load = 100 Kg [220 lb].

### 6. Overhang between supports

	12 mm	20 mm
OL	≤ 1,000 mm [39'']	≤ 2,000 mm [79'']
<b>S</b> L1, L2*	≥ 100 mm [4'']	≥ 50 mm [2"]
Os	≤ 400 mm [16'']	≤ 800 mm [311/2'']
Ss	≥ Os ≥ 150 mm [6"] ≥ 100 mm [4"]	
D1, 2		
D3		



 $\rightarrow$  If more than one cut-out/drill hole is made, the thickness of the countertop shall be 20 mm and the minimum distance between them shall be 100 mm [4"].

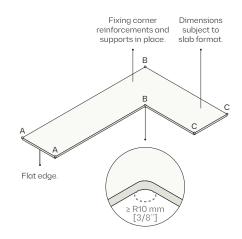


### Other considerations

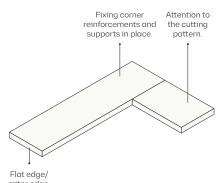
### → L-shaped countertop

For this type of countertop, make sure that the support points (A, B, C) are at the same height. In the event of slight variations in height, a support base should be placed on the ribs of the unit by means of continuous 5 mm [3/16"] neoprene or elastomer strips.

### For one-piece L-shaped countertops:



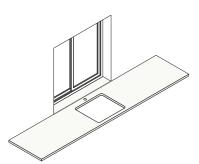
For multi-piece L-shaped countertops:



miter edge

### $\rightarrow$ Window sill

At this meeting point where a continuous. through support cannot be ensured, leave a joint gap between the countertop and the sill piece (best solution) and fill it with silicone of the same color as the countertop.



→ Resolution WITH joint.

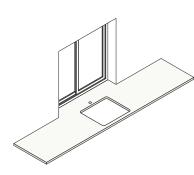
Alternatively, should having a seam not be the desired option, the following must apply:

• The support must be continuous, through and of the same material (e.g. wood) below both the countertop and the sill piece.

 Leave a perimeter gap ≥ 3 mm [1/8"] and fill with silicone.

 Make appropriate radius (≥ R10mm [3/8"]) at all internal corners.

Valid for 12 and 20 mm thickness.



### → Resolution WITHOUT joint.

## Installation criteria

### **On-site** adjustments

Ideally, the entire process should be carried out in the workshop, with the appropriate machinery, after a thorough measurement at the installation site.

However, minor adjustments can be made on site, both to the countertop and the cladding, following specific recommendations.

→ Straight dry cutting (Cladding and furniture cladding)

On-site cutting with dry cutting machines is only recommended for thicknesses of 4 mm and 8 mm, used for cladding and furniture cladding.

After cutting, use a polishing block to remove sharpened edges.



→ Straight cut with disc and water supply

It can also be made on site, for thicknesses between 8 mm and 20 mm, subject to the following requirements:

Use cutting tools recommended by Cosentino<sup>®</sup>.

Always cut with water supply.

• Sharpen the tool regularly.

After cutting, use a polishing block to remove sharpened edges.

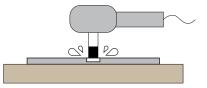


→ Drill holes

The holes can be drilled on site, e.g. to make cut-outs for sockets (overlapping holes Ø68 mm [2 2/3"]).

Drill the holes on a flat surface of lower density than Dekton<sup>®</sup> (e.g. wood) to avoid any chipping.

It is recommended that larger drill holes and cut-outs are made in the workshop.



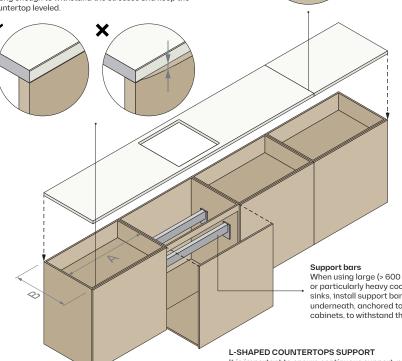
### Supports and reinforcements

→ Flat-edge countertop

#### Support

This is the part of the cabinet that bears the countertop, transmits the loads and keeps it stationary and stable.

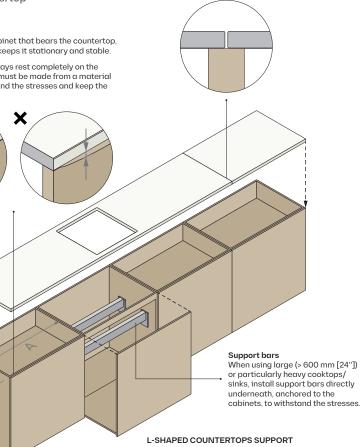
The countertop must always rest completely on the cabinet structure which must be made from a material strong enough to withstand the stresses and keep the countertop leveled.



### **Distance between two supports**

	12 mm	20 mm
А	≤ 900 mm [35'']	≤ 1,200 mm [48"]
в	<b>3</b> ≤ 700 mm [27 1/2'']	

Support between joints If possible, when a joint is to be left in the countertop, it should be placed just above a cabinet support.



It is important to ensure continuous support, passing through the corner area, for this type of countertops, especially when they are resolved in one piece.



→ Countertop with miter edge (skirt)

REINFORCEMENTS IN CUT-OUTS

Reinforce the surrounding area when the cut-out has large dimensions and/or when it is placed on

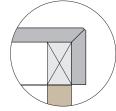
countertops with a 12 mm thickness and/or with skirt.

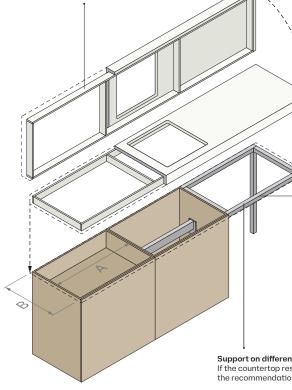
#### Reinforcement

It is the complementary part that makes a vulnerable area stronger and more resistant (e.g. in cut-outs and miter skirts).

It should be made from Dekton® or a material with similar physical properties (e.g. marble or granite). Furthermore, it should be glued in such a way that the countertop plus the reinforcement work as a whole.

Reinforcements must be placed in line with the load-bearing structure on which the cabinets are mounted. They are required on countertops with miter edges, both for reinforcement and leveling, and near cut-outs to increase rigidity.





Metal structure It must be sufficiently

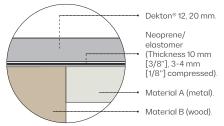
sturdy and stable to ensure continuous support of the countertop.

The support of the countertop on the metal structure should be ≥100 mm [4''].

The attachment to the other units (wood) shall always be done by mechanical fixing.

#### Support on different materials

If the countertop rests on two different materials, follow the recommendations below:



9. Sockets

It is recommended to make the

cut-outs for the sockets before

 $\bigcirc$ 

installing the front piece.

### Installation process and recommendations

#### 1. Before starting

Protect anything that could be stained or damaged, and make sure that the support area is clean and free of objects.

#### 2. Dimensions

Check the dimensions of the cabinets and of the cut pieces of the countertop, as well as the dimensions of the cladding/trim.

### 3. Supports and reinforcements

Check that the distances and recommendations set out for the chosen Dekton® thickness are observed.

#### 4. Cabinets

Check that the cabinets are correctly leveled. If not, adjust the level accordingly, depending on the type of cabinet chosen.

#### 5. Top flatness Check that the cabinet top is completely leveled, as the countertop must fully rest on the cabinet structure.

≥ 3 mm [1/8"]

7. Placement

Place the countertop pieces on the cabinets once

they have been leveled and adjust their position.

in all areas of contact with the vertical wall, and

fill the visible areas with silicone. Check that the

countertop is fully supported with a gauge.

Leave a perimeter joint of at least 3 mm [1/8"]

#### 8. Joints between pieces Minimize the size of joints between pieces by using leveling suction cups and the recommended adhesive (Mastidek or a silicone in the same color as the countertop). Use masking tape to protect the surface.

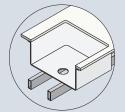
6. Adhesive Apply the recommended adhesive to the top edges of cabinets or reinforcements, taking care not to stain the rest of the unit.

### COOKTOP AND SINK INSTALLATION

**COOKTOP:** The installation should be carried out according to the type of cooktop chosen. The distances to the cladding should be observed. If this is not possible, this area should not be clad in Dekton<sup>®</sup> but in another material (e.g. steel).

**SINK:** The installation should be carried out according to the type of sink chosen.

IMPORTANT: When placing large (> 600 mm [24"]) or particularly heavy cooktops/sinks, install support bars directly underneath, anchored to the cabinets, to withstand the stresses.



#### 10. Front/Trim\*

 a. Put the front in place and adjust if necessary.
b. Apply the recommended adhesive/mastic which ensures a rigid fixation, and glue the piece to the substrate which will support the entire load of the front.

→ (\*) For gluing of fronts, follow the recommendations of the *Dekton® Interior Wall Cladding Quick Guide*. For gluing of trims, simply apply silicone beads.

### 11. Perimeter seal

Apply the recommended silicone (or grout) to all necessary joints according to the manufacturer's instructions.

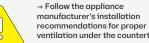
#### 12. Final cleaning

It is important to carry out a final site cleaning as soon as possible to remove any residue from the installation process.

#### WATERFALL EDGES (OPTIONAL)

Install the waterfall edge by gluing it to the cabinet according to the type of joint chosen (butt/miter) and using adhesives/mastics that ensure a rigid fixation, so that the waterfall edge does NOT have a structural function.

→ Always use tools and adhesives recommended by Cosentino<sup>®</sup>.



ventilation under the countertop.  $\rightarrow$  Failure to properly follow the

→ Failure to properly follow the instructions in this *Manual* may result in material breakage.

## Health & safety

Operators and fitters dealing with Dekton® materials, must comply with all applicable occupational health and safety laws and regulations.

Always take the necessary occupational safety measures to meet the requirements of local regulations. This *Guide* 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.

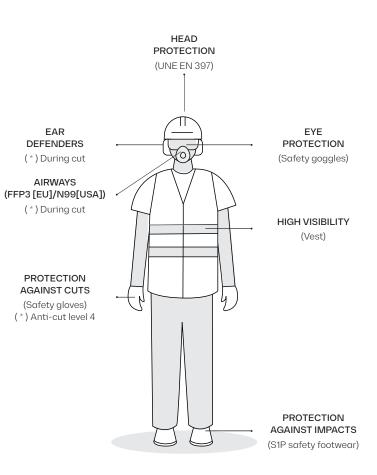
# Risks associated with handling and transport

During transport and handling of Dekton® materials, risks such as bumps, cuts, musculoskeletal disorders, entrapment or blast injuries can occur due to incorrect handling.

# Risks associated with manufacturing and transformation

The manufacturing process can involve risks such as cuts, blast injuries, entrapment, exposure to high noise levels and exposure to chemicals such as free crystalline silica dust.

Before processing the product, consult the Dekton® Safety Data Sheet and the Good Practice Guidelines available upon request from Cosentino® or on the website osh.cosentino.com.



### COSENTINO

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 $\rightarrow$  These certificates apply to Dekton® and Silestone®

 $\rightarrow$  Find information on NSF-certified colors at www.nsf.org

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