LA PIETRA MINERALE

MILANO

IDYLIUM

Technical manual

INDEX

The present technical manual is valid also for the products of AUTOMOBILI LAMBORGHINI SURFACES

1.1 IDYLIUM BY BEST SURFACE

IDYLIUM is a collection of large mineral stone surfaces, also known as sintered stone, with the best physical, mechanical, anti-bacterial, and aesthetic characteristics on the market.

An ultra-compact surface made of 100% natural materials, available in large slabs (up to 3200×1600 mm · 126" x 63"), with an unparalleled resistance to UV rays, scratches, and thermal shocks, total chemical inertia to stains and liquids, and zero porosity are some of the characteristics that distinguish the IDYLIUM product from others in the sector.

HEALTH AND SAFETY

The total lack of porosity in the finished product prevents bacteria growth, guaranteeing maximum hygiene in sensitive settings such as bathrooms and kitchens.

The absence of chemicals agents ensures the surfaces are completely inert, both during installation and in the long term, ensuring a healthy and safe home environment.

CIRCULAR PRODUCT

All our collections are produced with 100% biodegradable atomized materials: natural oxides, clays, feldspars and, of course, no resin. Idylium stone can be produced, recycled, and disposed of in accordance with the sustainability practices unique to this market sector.

A genuine bonus with Idylium's business model is the supply of recycled raw materials from the immediate locality, promoting local synergies in the Spanish district of Castellón where the company's production site is located. Employing the most advanced technologies, Idylium is manufactured using optimized production processes that allow (in order of priority): heat recovery, low energy consumption, and maximum energy efficiency, reuse of waste in the production process, minimal water supply, and use of a closed-circuit water system.

SUSTAINABILITY AND EFFICIENCY

Natural stones, such as marble, onyx, and quartzite, come mainly from areas of great natural value and their extraction can cause irreversible damage to vulnerable and abused ecosystems. Today, we are able to create a final product using sintered stone that displays all of the physical, chemical, and mechanical characteristics synonymous with natural stone and also preserves its aesthetic properties.

The factory where the Idylium mineral stone is produced acts like a veritable quarry: the unique technologies employed, capable of reproducing millennium-long geomorphic processes in just minutes, and the use of recycled or easily available components bring life to unique slabs, either with a natural look or in a sophisticated design, while simultaneously protecting our natural heritage.

Curtain walls made with large Idylium slabs can destroy organic substances deposited on them when activated by sunlight. The material exploits the natural phenomenon of photocatalysis, which is based on the adoption of a naturally present catalyst such as titanium dioxide, without any side effects on human health to create an effect that would only otherwise be possible by planting a forest in the city.

1.2 MANUFACTURING PROCESS

The factory houses several different stages, each one different depending on the type of product to be developed. The manufacturing process consists of the following sections:

1. The raw materials are chosen very carefully, above all taking into account their physical, chemical, and aesthetic parameters. At the beginning of the process, the raw materials are subject to quality control to check their suitability. The different materials are then stored separately to avoid cross-contamination and are transported by a conveyor system from their storage location to a series of hoppers designed exclusively for this process.

2. The colored Idylium formula is spray-dried to a specific size and humidity, and is stored in separate silos. In this case, humidity is used to control the flow of the products, allowing them to be deposited in the different receptacles that feed the system.

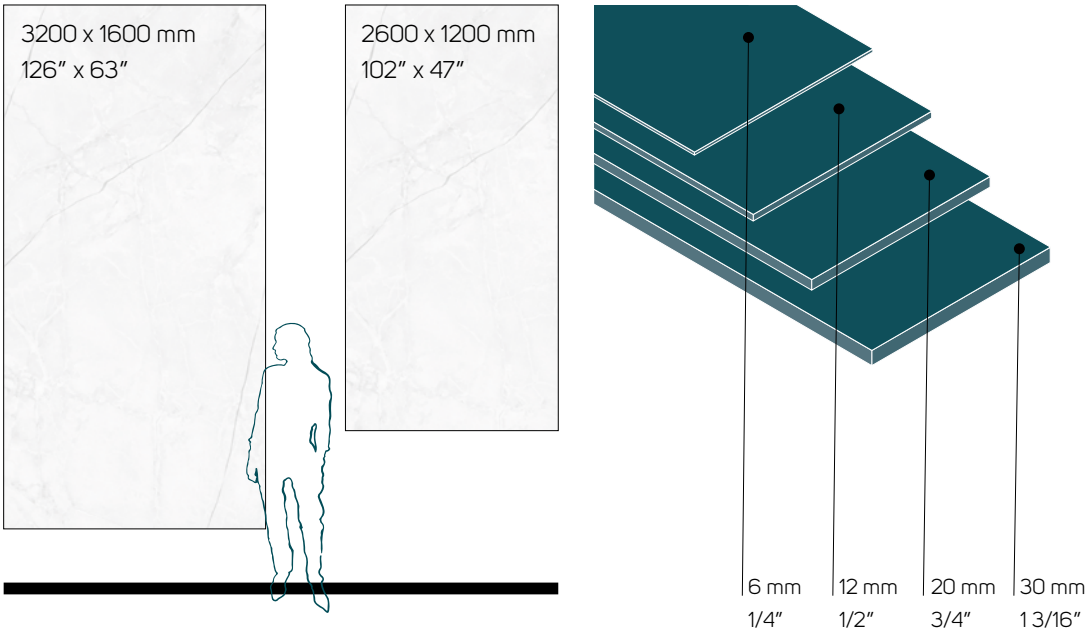
3. A range of aesthetic effects are obtained using various decoration devices unique in their design and function. These effects can be created throughout the depth of the slab or just on the surface, allowing for extraordinary design versatility.

4. In order to avoid anomalous advances, the slab is mechanized under a multi-conveyor system that allows different speeds in successive sections. This allows for very high-pressure compaction, which is essential for chemical reactions and mechanical resistance.

5. In the thermal process, high temperatures are applied to get the various raw materials and initial pigments to react. The heat is controlled by using a state-of-the-art furnace with temperature ranges from 800 to 1200 degrees Celsius. During this process, each slab acquires its final chemical, physical, and aesthetic properties.

6. The stone is classified using dual technological and manual method and then proceeds to storage where the slabs are stored vertically.

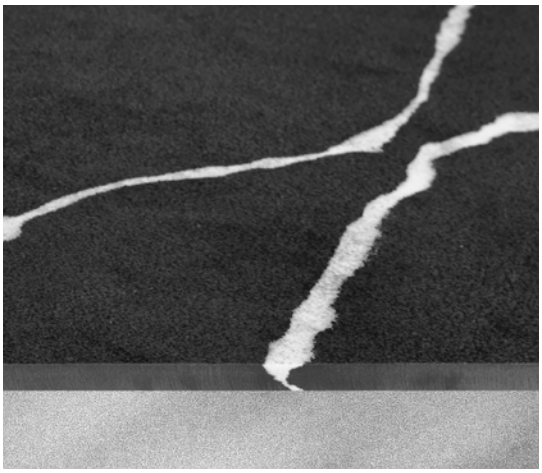
1.3 DIMENSIONS AND THICKNESSES



Size	3200 x 1600 mm · 126" x 63"		2600 x 1200 · 102" x 47"	
Thickness	6 mm	1/4"	6 mm	1/4"
	12 mm	1/2"		
	20 mm	3/4"		
	30 mm	1 3/16"		

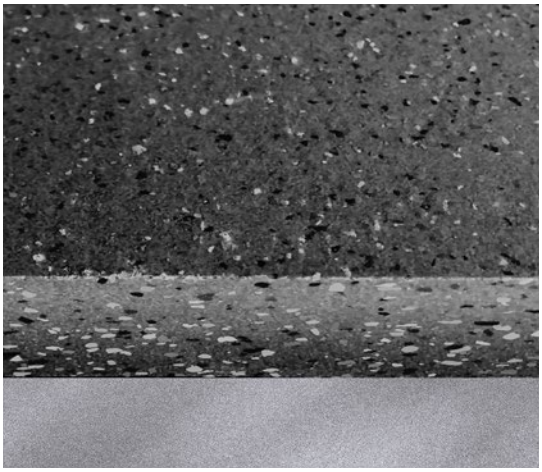
NOTES:
- The above size is the net measure. Please, bear in mind that, unless specified in the order, the slabs will be served in gross size (ex: 3240x1640mm instead of 3200x1600mm) in order to avoid that eventual breakage in the edges or corners during transport and logistic may affect the net usable size of the slab.
- For white body models, the useful size is 1580 x 3180 mm · 125" x 62".

1.4 EXCLUSIVE FEATURES



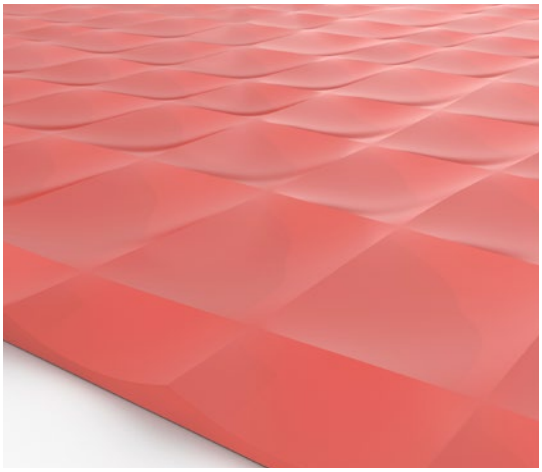
THE CONTINUOUS VEINING

The unique result of IDYLIUM technology. An authentic heart of stone, whose veins run through the entire depth of the slab and are perfectly visible in the vertical thickness, up to 30 mm (1 3/16").



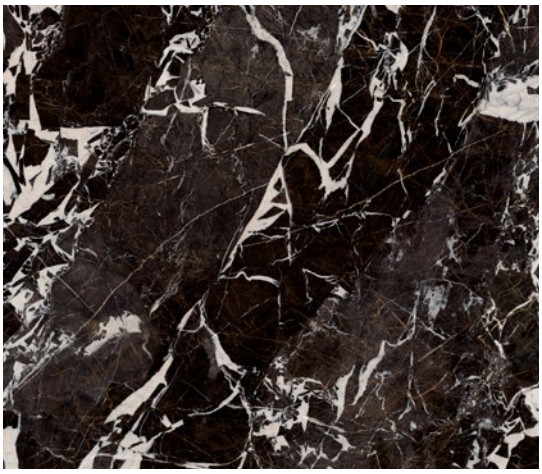
THE FULL BODY

The only surface that expresses itself also in depth and becomes three-dimensional. Special inclusions of flakes, grains, micronized minerals and metal powders homogeneously populate the entire thickness of the IDYLIUM stone, making it extra-ordinary.



THE HIGH RELIEFS

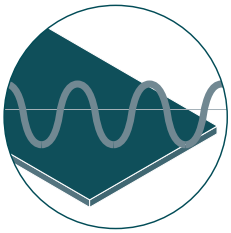
A further exploration of the three-dimensionality of surfaces. IDYLIUM technology allows for high reliefs of extraordinary depth involving up to 30% of the thickness of the slabs. Natural textures or design patterns to the highest degree of sophistication: every creative input is possible.



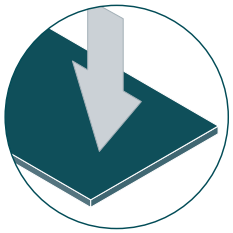
THE DIGITAL ULTRA DEFINITION

The most advanced digital acquisition and reproduction techniques, along with continuous stylistic research, interpret natural patterns with absolute fidelity and impressive richness of detail, and create cutting-edge design textures with maximum definition.

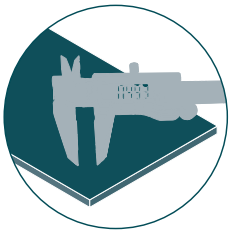
1.5 PROPERTIES



Tensionless



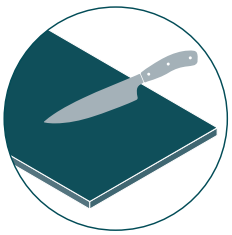
Flexural strength



Dimensional stability

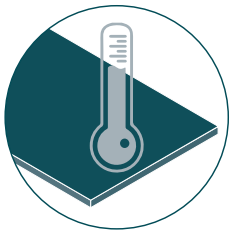
Color stability

Abrasion resistance



Scratch resistance

Fireproof



Heat resistance

Frost resistance

UV resistance

Stain resistance

Antibacterial - Non-porous

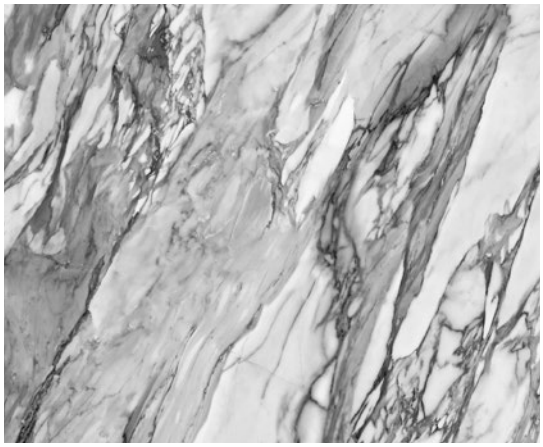
Technical specifications	standard	minimum value according to standard	Idylium value
Thickness	ISO 10545-2	±5 % Max. ± 0,5 mm ±1/64"	± 0,4 mm · ± 1/64"
Planarity	ISO 10545-2 Slab Width	±0,5 %	0,10% (± 2 mm | ±5/64")
	ISO 10545-2 Slab Length	±0,5 %	0,10% (± 4 mm | ± 5/32")
Water absorption	ISO 10545-3	≤ 0,5%	≤ 0,1%
Abrasion	ISO 10545-6 UGL	≤ 175 mm^3 · 6 11/16 in^3	≤ 140 mm^3 · 5 33/64 in^3
	ISO 10545-7 GL	Declared value	Declared value
Chemical resistance	ISO 10545-13 cleaning products	min GB - UB	GA / UA
	ISO 10545-13 Low concentration acid & bases	Declared value	**Honed** GLA/ULA **Glossy** GLB
	ISO 10545-13 High concentration acid and bases	Declared value	**Honed** GHA
Lineal thermal expansion	ISO 10545-8	Declared value	5,7· 10^{-6} $ºC^{-1}$ | 3,2 · 10^{-6} $ºF^{-1}$
Flexural strength	ISO 10545-4 < 7,5 mm · 19/64"	≥ 700 N (≥ 157 lbf)	6mm · 1/4" ≥ 1200 N | ≥ 269 lbf
	ISO 10545-4 > 7,5 mm · 19/64"	≥ 1300 N (≥ 292 lbf)	12 mm · 1/2" > 4500 N | ≥ 1011 lbf 20 mm · 3/4" > 11000 N | ≥ 2472 lbf
Modulus of rupture	ISO 10545-4	≥ 35 N/mm^2 (≥ 5076 psi)	≥ 45 N/mm^2 (≥ 6526 psi)
Frost resistance	ISO 10545- 12	Resist	Resist
Resistance to stains	ISO 10545-14	Min. 3	5
Thermal shock resistance	ISO 10545-9	Resist	Resist
Light and colour fastness	DIN 51094	Resist	Resist
Impact resistance	ISO 10545-5	Declared value, ≥ 0,55 without damage	≥ 0,80
Moisture expansion	ISO 10545-10	Declared value	≤ 0,1
Crazing resistance	ISO 10545-11	Resist	Resist
Determination of Lead and Cadmium	ISO 10545-15	Declared value	Lead < 0,1 mg/l Cadmium <0,01 mg/l
Dry heat resistance	EN 13310	Declared value	Resist
Resistance to chemical agents and dyes	UNE-EN 13310	Declared value	Resist
Scratch hardness	UNE 67-101	Declared value	**Honed** Min 6 **Glossy** Min 5
Stains	CCB UGL 160697	Declared value	Resist

1.6 FINISHINGS

Finishes are determined by the color name; not all textures are available in all colors.

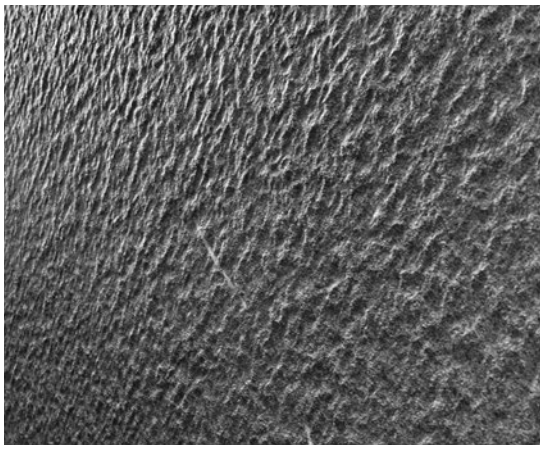
HONED

Soft matte texture typical of natural stone, smooth, pleasant to the touch.



GLOSSY

Ultra-bright effect that confers depth and preciousness.



MOONY

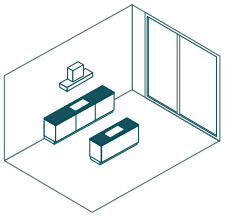
Rough, irregular texture with a light and silky effect on both surface and color.

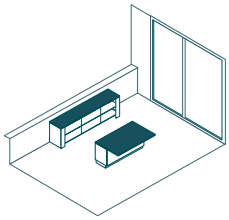
SPACCO

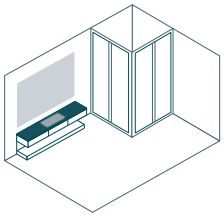
A structured rough finishing with a natural dynamism, extremely charming to the touch.

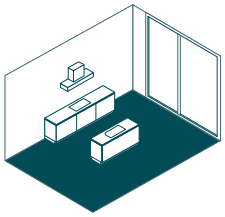
1.7 APPLICATIONS

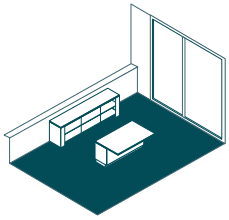
Idylium has been designed from the outset to satisfy architectural needs and provide aesthetic continuity to both indoor and outdoor environments. It offers a mechanical and aesthetic performance suitable for its wide range of end uses.

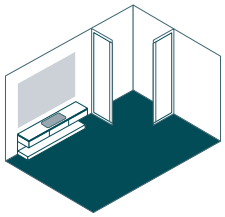

Countertops

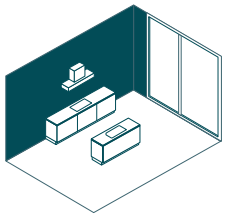

Outdoor worktops

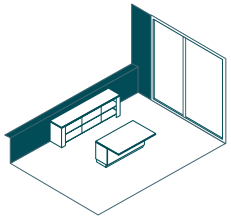

Vanity tops

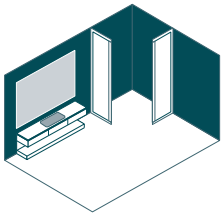

Floorings

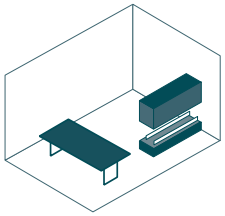

Outdoor floorings


Bathroom floorings

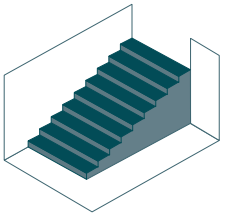

Wall coverings

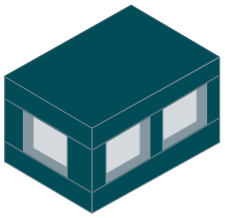

Outdoor claddings

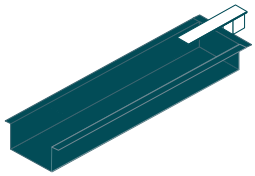

Bathroom floorings

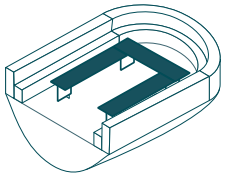

Fireplaces and furniture


Gyms


Stairs


Ventilated facades


Pools


Boats & Yachts

thickness	6 mm 1/4"	12mm 1/2"	20 mm 3/4"	30 mm 1 3/16"
Ventilated facade	■	■		
Floorings	■	■	□	
Wall covering	■			
Countertops		■	■	■
Furniture	■			
BBQ and Buffet		□	■	■

1.8 CERTIFICATIONS

CE MARKING

The CE declaration of conformity declares that a product being placed on the market conforms to the regulatory requirements of the harmonized standards or technical specifications, depending on the application and intended use of the product, set out in the Construction Products Directive 89/106/EEC.

CCC CHINA CERTIFICATION

The CCC declaration of conformity states that a product being placed on the market conforms to the regulatory requirements of the harmonized standards or technical specifications, depending on the application and intended use of the product, required by the Directive of the People's Republic of China.

ISO 9001

Quality Management System certification.

ISO 14001

Environmental Management System certification.

NSF CERTIFICATION

The NSF certification, relevant in the field of health, hygiene, and environmental certificates, declares a material to be safe for direct contact with all types of food.

2.1 WEIGHT FOR SLAB

Weight for slab

size		3200x1600 mm | 126"x63"				2600x1200 mm | 102"x47"
thickness		6 mm 1/4"	12 mm 1/2"	20 mm 3/4"	30 mm 1 3/16"	6 mm 1/4"
Nominal size		3240x1640 mm 128"x64"				2640x1240 mm 104"x49"
Unit weight	[kg/m²] [lb/ft²]	14 2,9	29 5,9	48 9,8	72 14,7	14 2,9
Full slab weight	[kg] [lb]	77 170	148 326	245 540	382 842	47 103

2.2 STORAGE TEMPERATURES

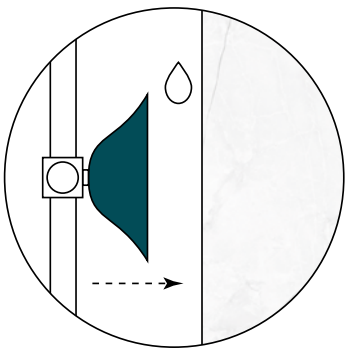
Idylium is a material resistant to both high and low temperature conditions.

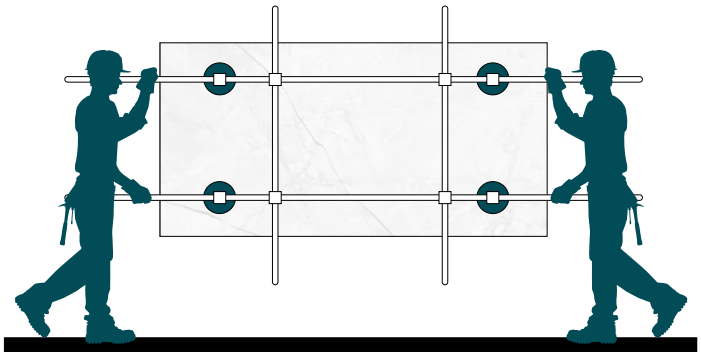
It is recommended that slabs with a protective plastic film are kept in a temperature range between -5° and +40° C (22 F - 104 F) to prevent the adhesive peeling or weakening. Therefore, it is recommended that the ambient temperature of the storage environment be controlled and exposure to the outside be avoided.

2.3 HAND TOOLS

Idylium slabs must be handled with appropriate care and safety to avoid damage to the material.
To facilitate handling of the 6 mm (1/4") slabs and processed parts, we recommend using a frame with suction cups. The suction cups are easy to move along the frame enabling it to be adapted to the required size of the part.

Panels should be handled by two or more operators, depending on the weight. They must always be transported vertically to ensure greater resistance. Anti-slip and anti-cut gloves are required to ensure a positive grip and protect hands. The panels are placed on the long edge with protection against impacts and rubbing, such as rubber or cloth strips.





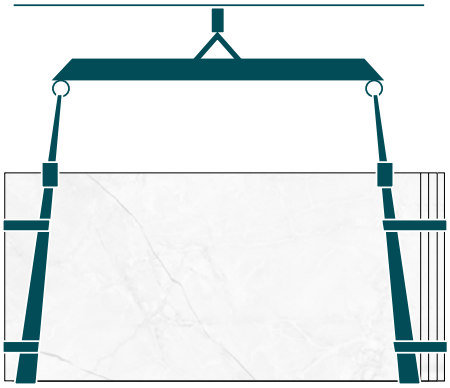
2.4 OVERHEAD CRANE AND FORKLIFT TRUCK

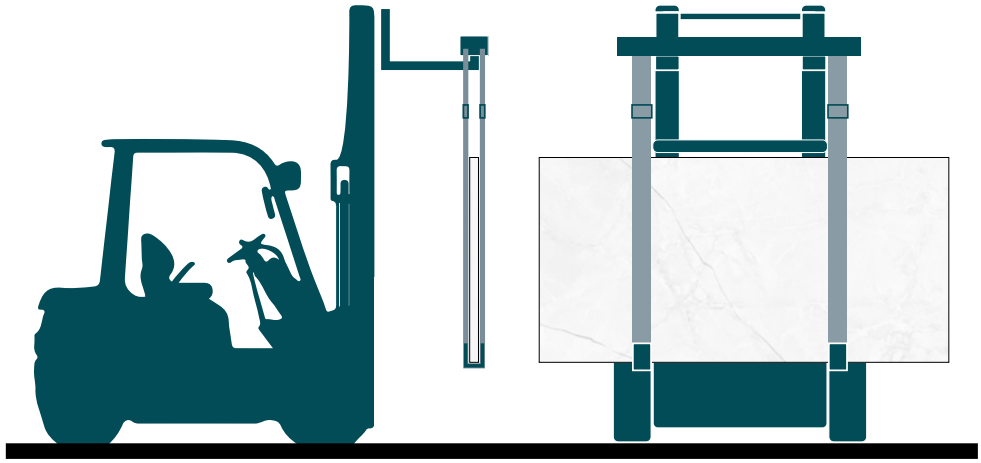
WITH SLINGS Canvas slings must be used for handling the slabs. Given the hardness of the material, always pay attention when moving and handling the slabs to avoid chipping or breaking them.

Metal slings should not be used to handle Idylium boards, and whatever handling method is used, metal parts should always be protected against impact.

A lifting beam and belt slings are the preferred method for lifting multiple slabs

Warning: Always check the maximum load capacity of the lifting equipment and hosting assistant.

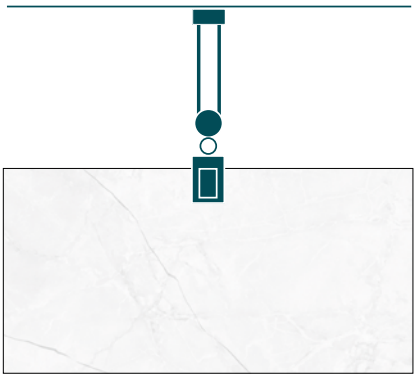


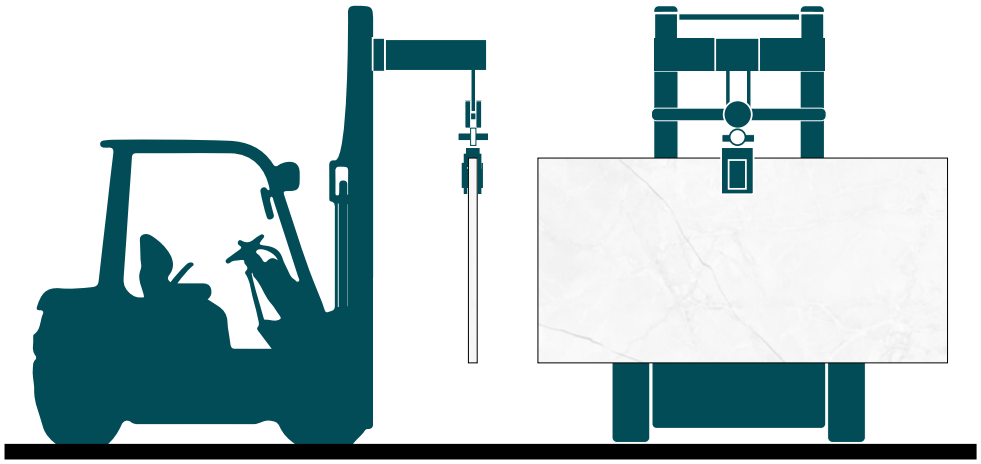


2.4 OVERHEAD CRANE AND FORKLIFT TRUCK

LIFTING WITH CLAMP Use suitable slab clamps or stone lifters, with vulanized rubber pads to avoid slippage or any possible damage. Remove the slabs from each side of the A-frame alternately in order to balance the weight and to prevent tipping.

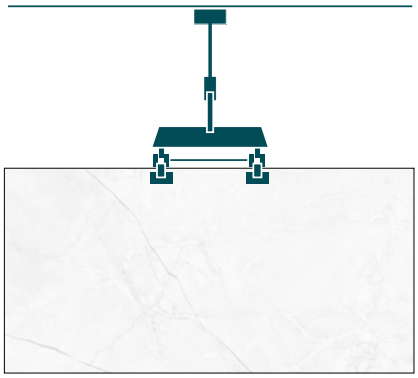
It is not recommended for more than two slabs at a time to be lifted with the clamps. We recommend using canvas slings for this purpose.

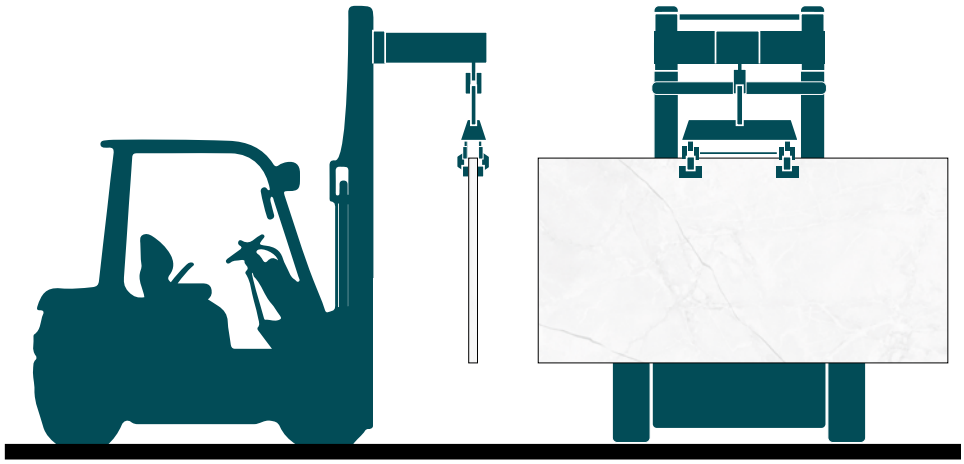




FOR 6 MM | 1/4" SLABS

We recommend a clamp that can spread the grip over a wider surface, such as a glass clamp or two-point clamp.



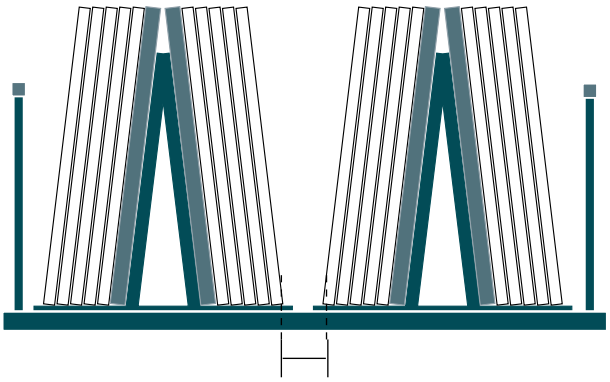


2.5 STORAGE

When placing the Idylium slabs onto storage racks, take precautions to avoid breakage and damage to the material. Protect metal beams and bars with plastic or use supports on wooden beams.

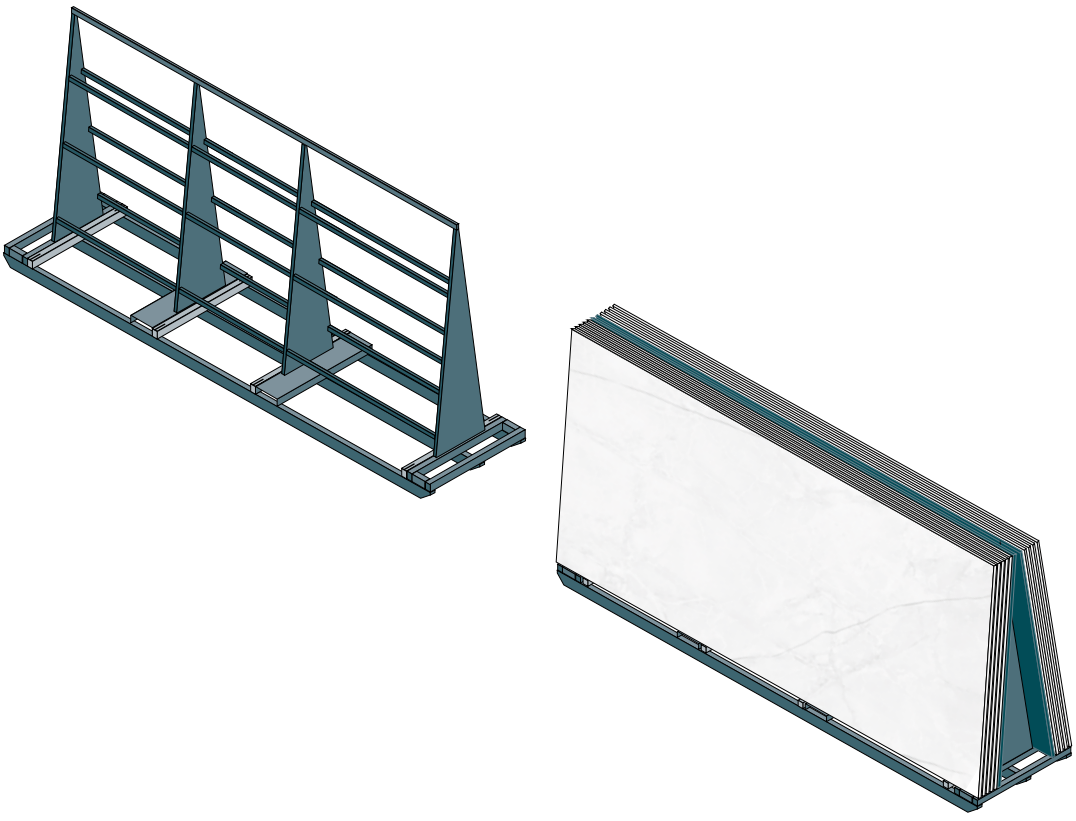
Place 6 mm (1/4") and 12 mm (1/2") slabs over at least 4 support points, evenly distributed along the back of the slab. Although full support, such as a granite or marble slab, is recommended as a preference. It is essential that the structure on which the material rests is the same size or larger than the slab so that the entire surface is well supported. Avoid placing large slabs against smaller ones.

For optimal storage, a safety area or distance of 20 cm (8") is required between the stands to avoid any possible friction during handling.



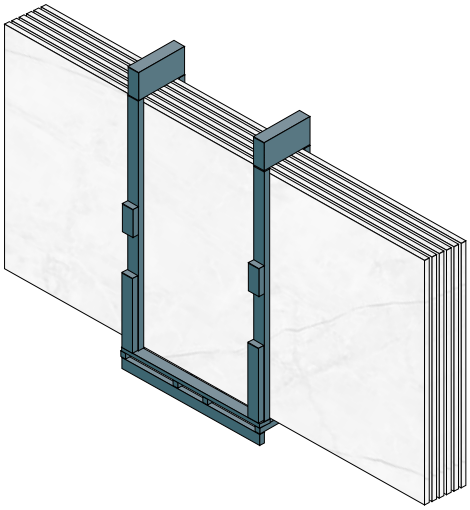
Metal A-Frame

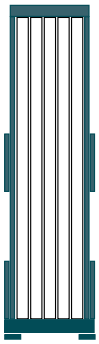
The upper part consists of a metal structure made of carbon steel profiles, lacquered with protective paint for outdoor use, with a double backrest and rubber protection for the slabs. The lower part has skids for sliding the stand into the container, holes for forklifts, and wood to protect the slab support.



Bundle/American Stand

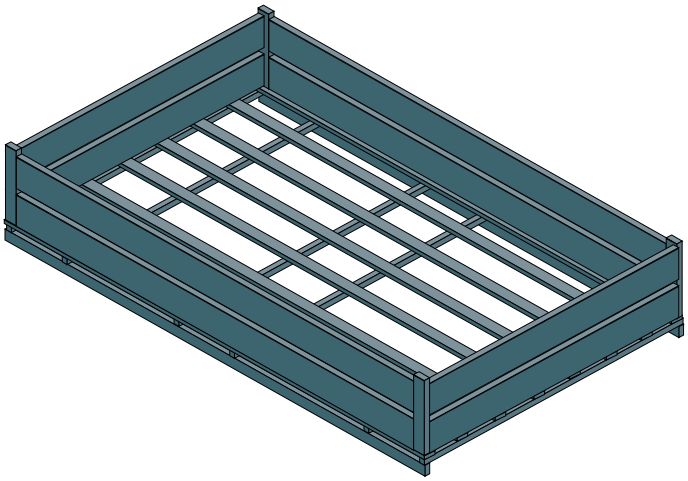
This stand has been designed and manufactured to transport Idylium slabs of all thicknesses. It is placed vertically in the container.





Wooden Crate

It is specially designed and manufactured for the transport of 6 mm (1/4") Idylium pieces. A protective sheet is placed on the whole surface of the base. Wax spots or cardboard sheets are then placed between each of the pieces, thus avoiding any kind of direct contact between them, as well as making it easier for them to be removed.



2.6 PACKING LIST

Both during handling and transport, the slabs must be balanced taking into account their center of gravity to prevent them from bending and breaking. Before lifting out the loads, we have to ensure that the lifting machinery meets the handling requirements:

1. The highest point of the lifting machine must be lower than 2250 mm (7' 4"), as the container entrance has an internal measurement of 2270 mm (7' 5").
2. The mast must be triplex with a fixed height of less than 2200 mm (7' 2"). The fork must be capable of lifting the load to 1440 mm (4' 8") without the extended mast reaching a height of more than 2270 mm (7' 5").
3. It is recommended that lifting machines with a load capacity of 8000 kg (17600 lb) are used.

METAL A-FRAME

Size LxWxH	Empty weight	Full weight	6 mm | 1/4"	12 mm | 1/2"	20 mm | 3/4"	30 mm | 1 3/16"
3300x750x1835 mm 130"x30"x72"	121 kg 266 lb	3600 kg 7920 lb	44 slabs	24 slabs	14 slabs	8 slabs

BUNDLE/AMERICAN FRAME

Size LxWxH	Empty weight	Full weight	6 mm | 1/4"	12 mm | 1/2"	20 mm | 3/4"	30 mm | 1 3/16"
3300x550x2100 mm 130"x22"x83"	70 kg 154 lb	3000 kg 6600 lb	34 slabs	21 slabs	12 slabs	7 slabs

WOODEN BOX

Size LxWxH	Empty weight	Full weight	6 mm | 1/4"
3450x1750x375 mm 136"x69"x15"	150 kg 330 lb	1700 kg 1543 lb	20 slabs
2900x1400x350 mm 114"x55"x14"	115 kg 250 lb	1050 kg 2315 lb	20 slabs

2.7 TRANSPORT

CONTAINER SIZE 20'	interior sizes WxLxH	235x589x239 cm | 7'8"x19'4"x7'10"
	metal A-frames	3 items
	bundle	7 items
	boxes 2600x1200 mm | 102"x47"	10 items
	boxes 3200x1600 mm | 126"x53"	5 items

CONTAINER SIZE 40'	interior sizes WxLxH	235x1230x239 cm | 7'8"x40'4"x7'10"
	metal A-frames	6 items
	boxes 2600x1200 mm | 102"x47"	20 items
	boxes 3200x1600 mm | 126"x53"	14 items

CANVAS-TOPPED TRUCK	interior sizes WxLxH	255x1360x285 cm | 8'4"x44'7"x9'4"
	metal A-frames	6 items
	boxes 2600x1200 mm | 102"x47"	20 items
	boxes 3200x1600 mm | 126"x53"	14 items

IMPORTANT

Indicative values. Please, pay attention to the maximum allowable weight by country.

NOTE

During transport and loading/unloading of the truck, it is recommended that the slabs are fixed mechanically to the trestle (using belts or jacks) as they could fall or be knocked loose by the wind.

In the workshop, pay special attention to if the slabs are stored outside; fix them on the stands to protect them from possible gusts of wind.

3.1 PRE-INSPECTION

Best Surfaces controls and classifies each Idylium board according to the best quality standards.

Similarly, upon delivery or prior to using the slab, the client is recommended to carry out a thorough cleaning and visual inspection to ensure the slab meets the quality requirements. The inspection should be carried out with backlighting to identify possible imperfections not discernible on the surface.

The following points are the most important for the pre-inspection:

- Planarity
- Thickness
- Cracks and crevices
- Contamination and non-graphic color dots
- Stains
- Tonality between slabs
- Brightness variation
- Embossed imperfections and lumps

The marble worker is responsible for checking that the slabs are suitable for use. If not, they should be replaced before cutting or processing. No claims will be accepted for installed or processed material that was already defective upon delivery.

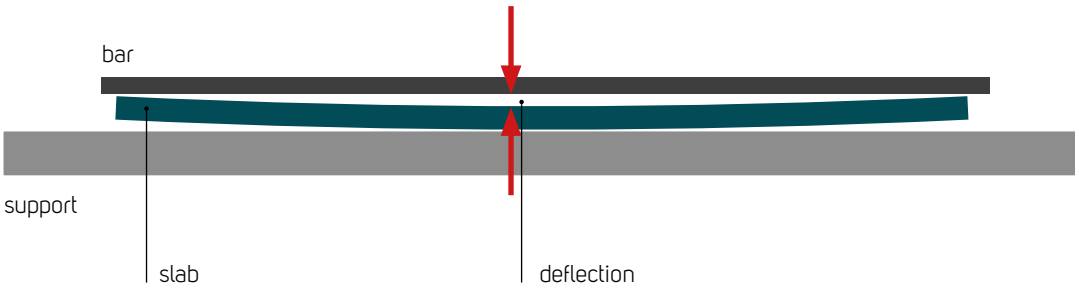
3.2 PLANARITY

To check the planarity of a slab, it must be positioned horizontally on a completely flat support.
The curvature is measured by placing a straight reference bar on the surface of the slab, covering the entire width or length of the slab.

Due to the flexibility of the material and its adaptation to the substrate, no claims for lack of flatness will be accepted for 6 mm (1/4") thick slabs.

This measurement is made with a gauge, or caliper, at the highest point of curvature. The maximum tolerance allowed is:

- 4 mm (aprox 3/16") length
- 2 mm (aprox 1/16") width



3.3 TONE

Best Surface works continuously to match the current color shade with previous versions. However, slight variations in shade may occur between different batches of the same color due to the use of natural raw materials.

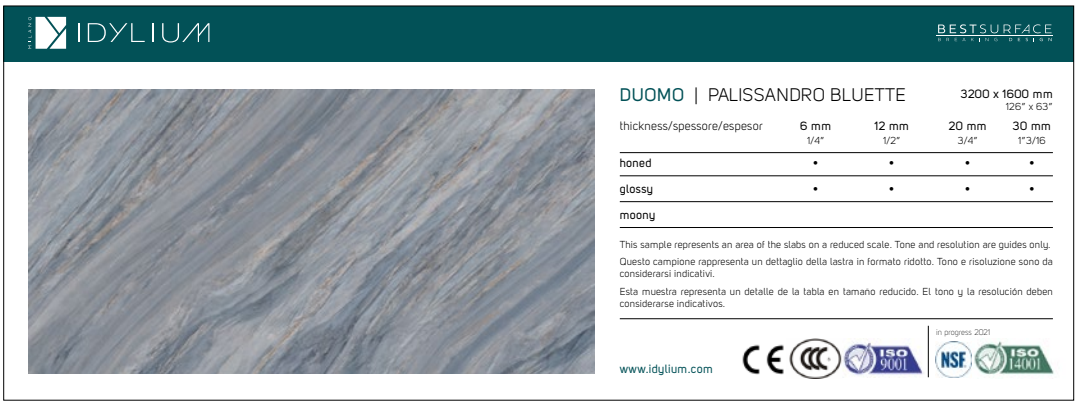
Tone variations are more noticeable between different thicknesses of the same color due to the production process used for each thickness.

Prior to commencing processing, visually inspect the slabs to ensure the shade of different slabs is acceptable. Perform this inspection under lighting conditions similar to those found at the installation site. Adjoining slabs from different batches is not recommended.

The slab label contains important information and should be recorded for future reference.

NOTE The slab's serial number can also be found in the documentation sent to the customer together with the invoice.

Sample label



NOTE The sample represents a reduced size detail of the slab and the tone and resolution should be considered indicative.

3.4 THICKNESS

thickness	tolerance (mm)	limit of relief
6 mm | 1/4"	±0,3	±30%
12 mm | 1/2"	±0,4	±30%
20 mm | 3/4"	±0,4	±30%
30 mm | 1 3/16"	±0,4	/

thickness

thickness + relief

4.1 SLABS OF 12 - 20 - 30 MM 1/2" - 3/4" - 1 3/16" THICKNESS

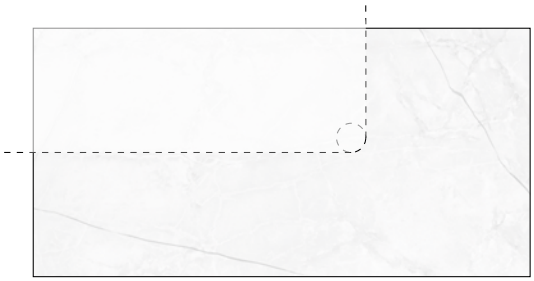
Best Surface is a unique product compared to what is currently on the market. This is due to its composition and its main distinguishing element comprising its extraordinary physical properties, such as hardness, abrasion, and mechanical resistance. As a result, the Idylium surface cannot be compared to any other surface on the market whether it be glass, marble, granite, or quartz.

Given all the indications for cutting the material in this manual, since it is not possible to us to ascertain the actual operating conditions of the machine used by the professional, in order to avoid any problems during cutting, it is recommended as good practice to carry out cutting on a 20 mm (3/4") support slab.

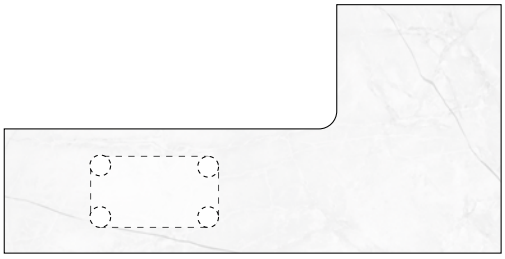
This support slab must be rigid, flat and in good condition. It can be made of the same material as the slab to be processed or of quartz conglomerate. For disc cutting, it is recommended to lower the disc up to 2-3 mm (1/8") on this support board.

Irrespective of the processing tool, it is important to follow the correct cutting sequence:

1 - first loosen the 20 mm (3/4") perimeter



2 - cut the large pieces and shapes

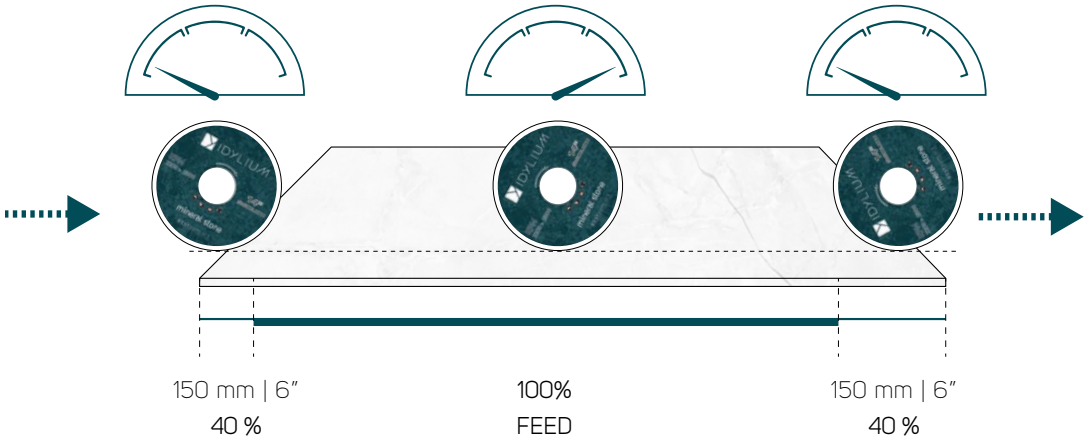


3 - cut-outs, holes and smaller shapes

4.1.1 BRIDGE SAW

For straight cut, decrease feed speed by 40% during the first 150 mm (6") towards the center and the last 150 mm (6") towards the edge. For miter cut, use a constant and reduced feed.

When cutting small pieces, it is recommended that the material be firmly held in place to avoid movement during cutting.



We recommended consulting the tool manufacturer for the correct parameters, and test in the machine. As orientative reccomendation:

Slab Thickness	Cutting feed straight	Cutting feed miter	RPM blade Ø 300 mm | 12"	RPM blade Ø 360 mm | 14"	RPM blade Ø 410 mm | 16"
12 mm 1/2"	1,0 – 1,2 m/min 40 – 60 "/min	0,6 - 0,7 m/min 24 – 27 "/min	2600 - 2900	2150 – 2500	1900 – 2200
20 mm 3/4"	0,6 – 1,0 24 – 40 "/min	0,4 – 0,6 16 – 24 "/min	2600 - 2900	2150 – 2500	1900 – 2200
30 mm 1 3/16"	0,4 – 0,6 16 – 24 "/min	0,2 – 0,4 12 – 16 "/min	2600 - 2900	2150 – 2500	1900 – 2200

Keep speeds in the lower ranges for white colors due to their greater hardness.

Before you start cutting, check:

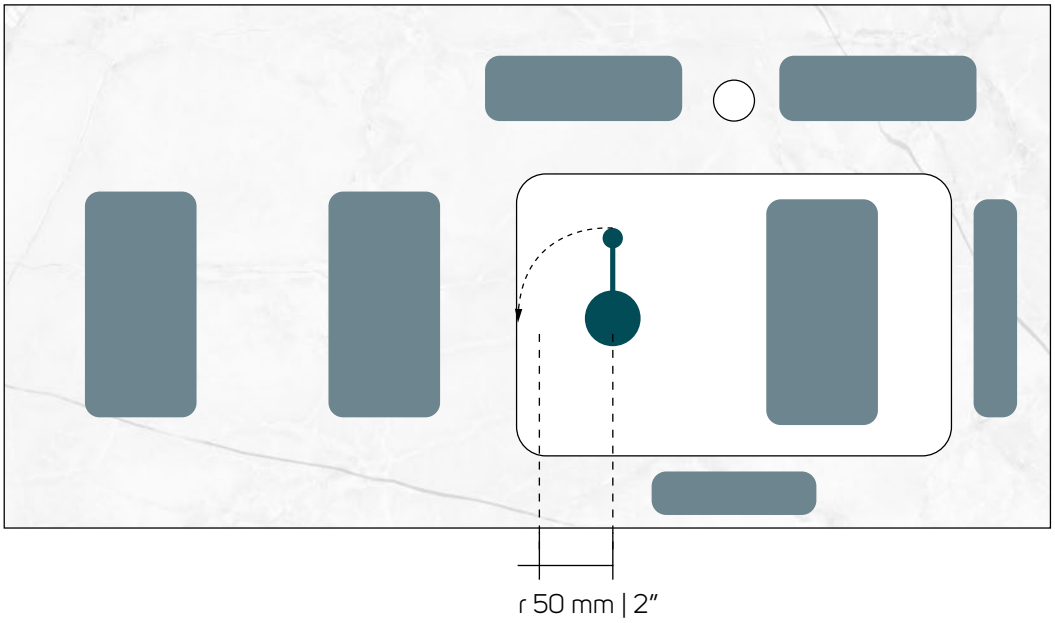
1. CUTTING TABLE: In good condition, providing continuous, rigid, and perfectly level support without any irregularities.
2. BLADE: In perfect condition, sharp and undamaged
3. WATER SUPPLY: It is essential that the maximum water flow be directed directly to the cutting point.
4. DETENSIONING: First, clean 20 mm (3/4") from each edge. Then cut in a single pass, 2 mm (1/32") below the slab.

All cut-outs must have pre-drilled corner holes with a minimum radius of 5 mm (1/4").

Avoid pluge cuts without pre-drilling the corners. Plunge feed: 0,05 - 0,1 m/min (2" - 4"/min)

Idylium recommends discs for ultra-compact/sintered surfaces. E.g.: Diatex, Italdiamant, Terminator etc.

4.1.2 NUMERIC CONTROL CNC



Before you start cutting, check:

1. SUCTION CUPS: In good condition and with sufficient capacity. Position the suction cups all around the cutting and on the inner piece and in the necessary places to reduce bending and stress on the material.

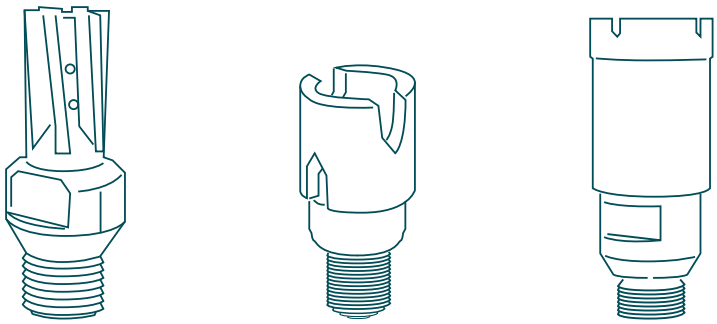
2. TOOLS: In perfect condition, sharp and undamaged

3. WATER: Direct the maximum water flow to the cutting point.

We recommended consulting the tool manufacturer for settings, as default Idylium recommends:

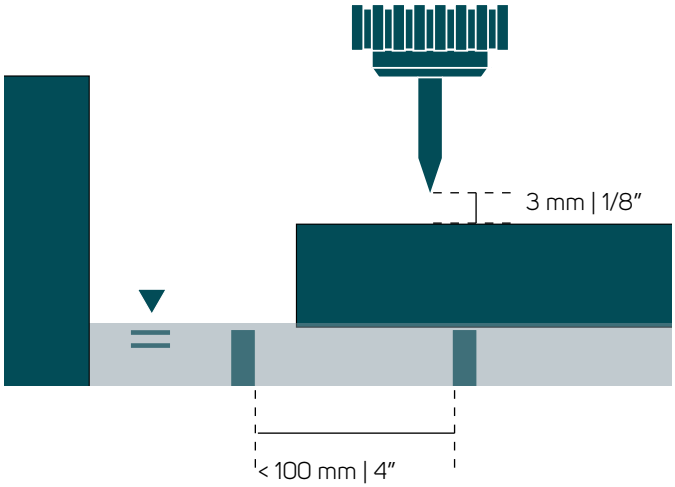
Tool	RPM	Feed	Good practice
Router (Finger bit)	4500 – 5500	150 - 250 mm/min 6 - 10 ”/min	Reduce feed at entrace and exit. Do not use the oscillation cut.
Core drill	3500 - 4000	10 mm/min 1/2 ”/min	Sharp the tool every 4 holes
Milling Bit	7000 - 9000	300-400 mm/min 12 - 16 ”/min	1mm 1/16” step Depth limit to half of the thickness.

Keep speeds in the lower ranges for white colors.



Idylium recommends tools for ultra-compact/sintered surfaces. E.g.: Diatex, Terminator, Italdiamant, etc.

4.1.3 WATERJET CUTTING SETTINGS



Before you start cutting, check:

1. SUPPORT: With slats in good condition, level, and with a maximum separation of 100 mm (4") between them.

2. WATER IN THE BARREL: It is advisable to maintain the water level higher than or level with the support.

3. INPUT: Start cutting from the outside, or in case of cutting from the excess piece, approaching the cutting perimeter.

PIERCING - LOW PRESSURE

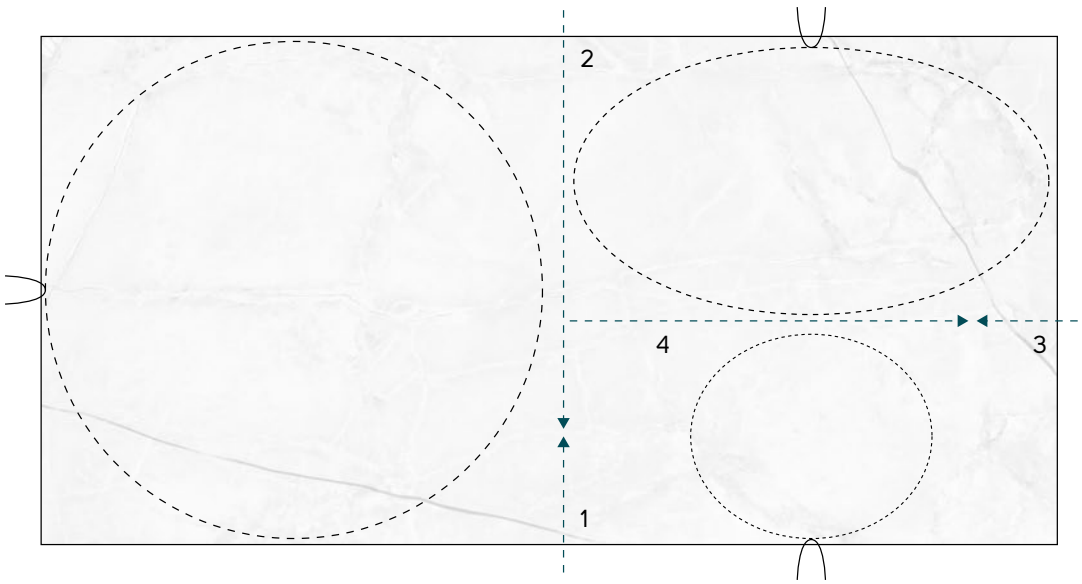
Inlet	Piercing time	Low pressure	Garnet - 80 mesh
Outside the material	10 s	600 - 700 BAR 9000 - 10000 PSJ	0,35 – 0,45 kg/min 0,70 - 1,00 lb/min

CUTTING - HIGH PRESSURE

Thickness	Feed	High pressure	Garnet - 80 mesh
12 mm 1/2"	0,4-1,0 m/min 16-40 "/min	3200 – 3800 BAR 46000-55000 PSJ	0,35 – 0,45 kg/min 0,70 - 1,00 lb/min
20 mm 3/4"	0,4-0,9 m/min 16-36 "/min	3200 – 3800 BAR 46000-55000 PSJ	0,35 – 0,45 kg/min 0,70 - 1,00 lb/min
30 mm 1 3/16"	0,3-0,6 m/min 12-24 "/min	3200 – 3800 BAR 46000-55000 PSJ	0,35 – 0,45 kg/min 0,70 - 1,00 lb/min

TIPS
- reduce the feed at interior corners
- reduce the feed for miter and inclined cuts
- Adjust the feed rates according to the required quality of the finish

GOOD PRACTICES:
- Cut first towards the edge of the slab or parallel to the edge, not towards the center of the slab
- Interior radius should be 5 mm (1/4") or greater when design permits
- For irregular or complicated shapes within the slab, we recommend first making "auxiliar" cuts: Enter 50 mm (2") into the slab (SIDE 1) and complete the cut on the opposite side (SIDE 2)



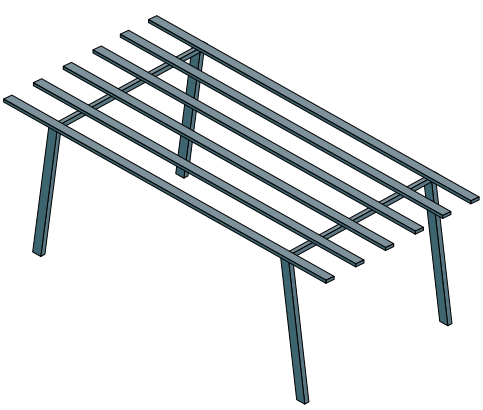
4.2 SLABS OF 6 MM - 1/4" THICKNESS

Instructions for processing 6 mm (1/4") thick slabs. Any claims based on the use of other cutting methods may not be considered valid.

CUTTING SUPPORT

Before proceeding with any operation, provide a clean, stable and flat work surface to position the slab.

We recommend a bench with aluminium profiles. Or a slab of stone or plywood of at least 20 mm (3/4"), in perfect condition.



LINEAR CUT

Linear cutting is done with a diamond cutting guide, for example: RAIMONDI Raizor. It is essential that the diamond roller is in perfect condition.

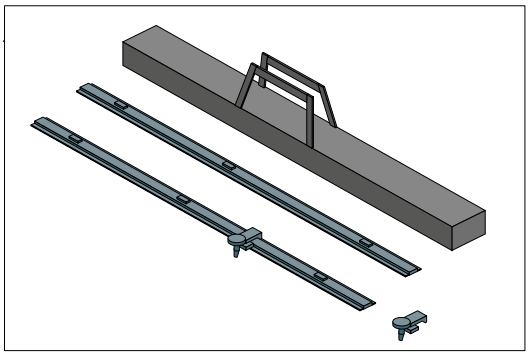
Place the slab on a stable and flat surface. Position the guide on the slab in correspondence with the cut to be made and secure it with the appropriate suction cups.

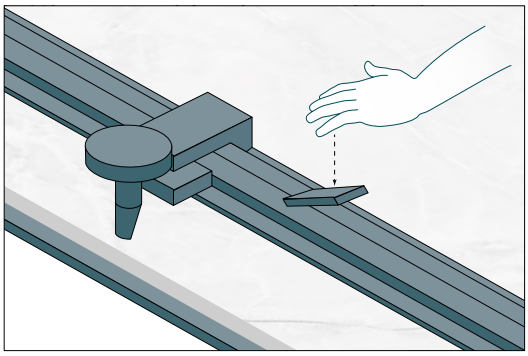
Score the surface of the slab from outer edge to outer edge, without ever detaching the blade from the engraving axis. Never interrupt or resume cutting and apply continuous, uniform pressure.

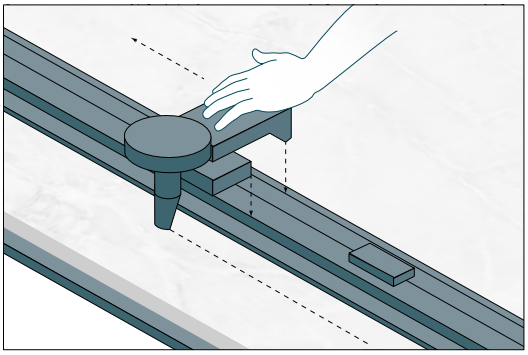
Once the cut has been made, move the slab so that the incision line protrudes 100 mm (4") from the support surface. Using appropriate cutting pliers, "click" from both ends and complete the "snap" following the incision line.

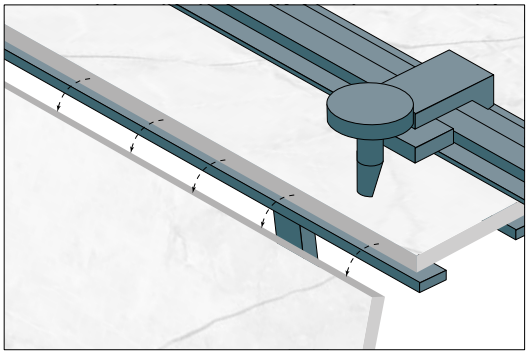
Finish the edge with a micro-bevel

Please note: Other types of cutting (e.g. cutting with a bridge saw) are not recommended.







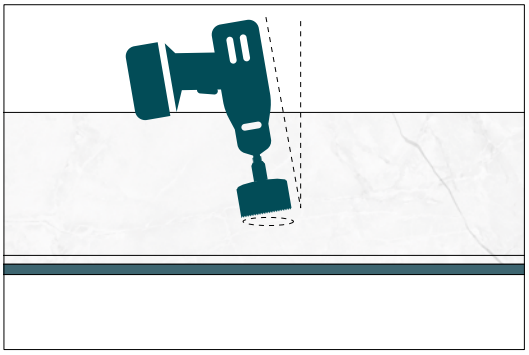


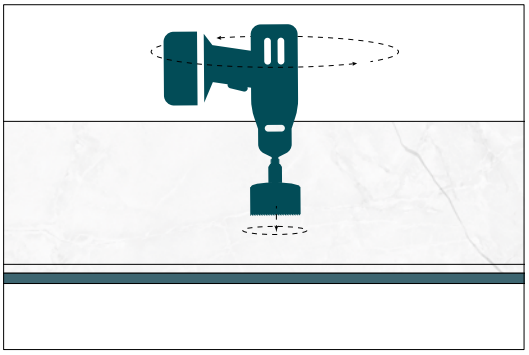
4.2 SLABS OF 6 MM - 1/4" THICKNESS

CIRCULAR HOLES

The circular holes must be made with diamond cup cutters for gres/porcelain (e.g.: Rubi Drygres or Easygres, Raimondi RAI-BIT...) mounted on a on grinder or on a drill without percussion.

Score the surface at about an 80-degree angle, then straighten the drill while avoiding exerting excessive pressure on the slab. Continue drilling in a gentle circular motion to facilitate cooling and preservation of the tool. Remove the inner core after drilling.



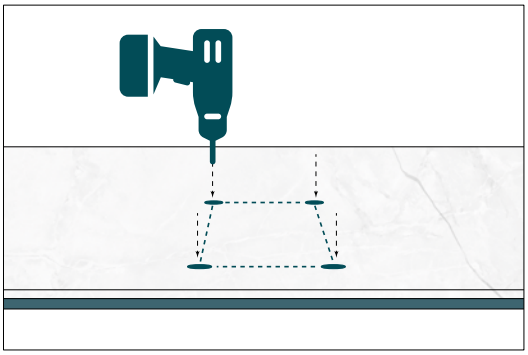


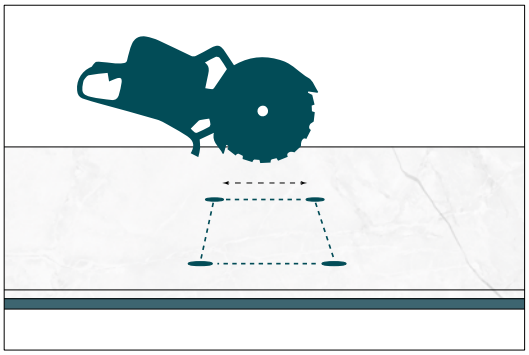
INTERNAL CUT-OUTS

When possible, always prefer circular holes made with a drill.

To make internal slab cut-outs or L-cuts, first draw the guidelines. Before cutting with a grinder, drill circular holes of Ø > 6/8 mm (1/4") at the corners of the opening to be made. See the section on circular holes.

Using an angle grinder equipped with a continuous rim diamond disc for gres/porcelain (Rubi TurboViper, Rubi electro-plated disc, Raimondi gres) follow the lines drawn and then finish the edges with a diamond pad. Make sure the disc is sharped.

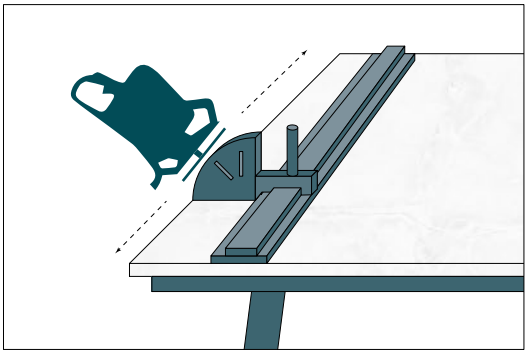




MITER CUT

Trim the miter cut with an appropriate manual traction device on its cutting guide. The 45° trimming is performed once the linear cut is completed. For a better finish leave 1 mm (1/16") of material at the top.

Alternatively, you can profile the edge with a lamel polishing disc for porcelain/gres.



4.3 MANUAL WORKING

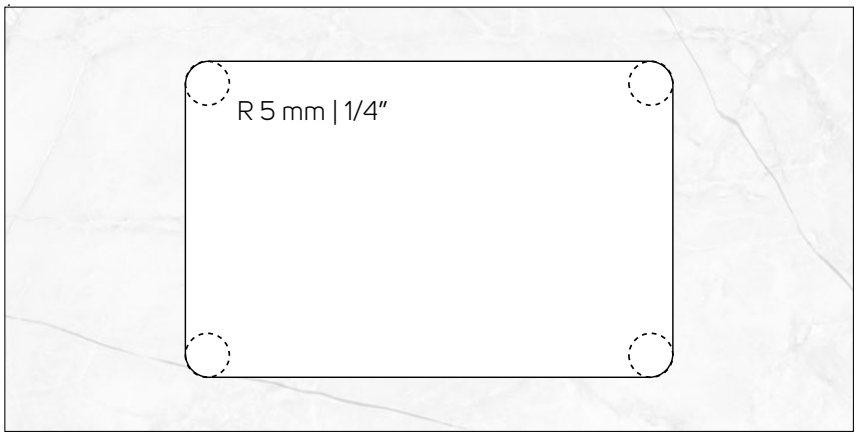
The slabs must be properly clamped during any manual machining. The support must be sufficiently rigid, perfectly flat, and in good condition.

Machining must always be carried out starting with the finished surface and working towards the raw surface. It is recommended to work with cooling water and dust suppression.

Support base

All joints must have pre-drilled corner holes with a minimum radius of 5 mm - 1/4".

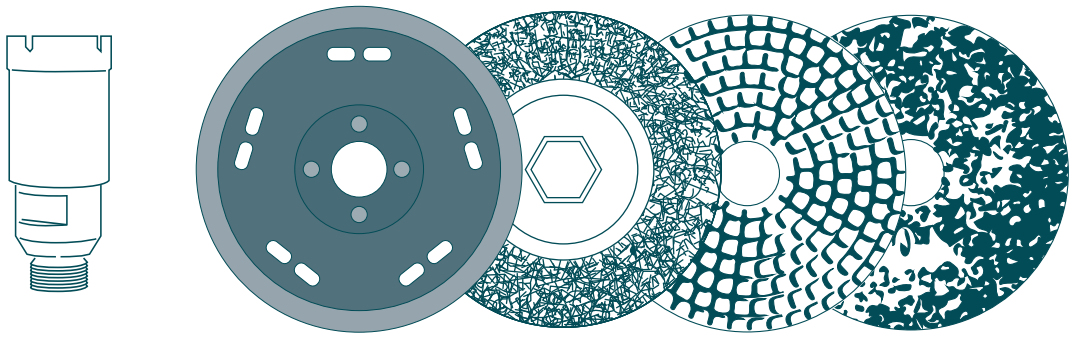
Once the cut has been completed, it is advisable to lightly sand the upper and lower sections of the freshly cut edge (60, 120 grit sandpaper).



Polishing sequence:

Finishing	Tools	
Glossy (polished)	Polishing pads (e.g. Sanwa Kenma Dia Ceramica EX; Italdiamant DS, Diatex)	Full series 50 -100 - 200 - 400 800 - 1500 – 3000 STEP 1 - 2 - 3
Honed (matte) Moony and Spacco (textured)	Polishing pads (e.g. Sanwa Kenma Dia cerâmica EX; Italdiamant DS, Diatex)	Half series 50 - 100 - 200 – 400 (800) STEP 1 - 2
Moony and Spacco (textured)	Brushes	46 - 60 - 120 - 220 400

For roughing, we recommend diamond flap discs or electroplated plates without segments.



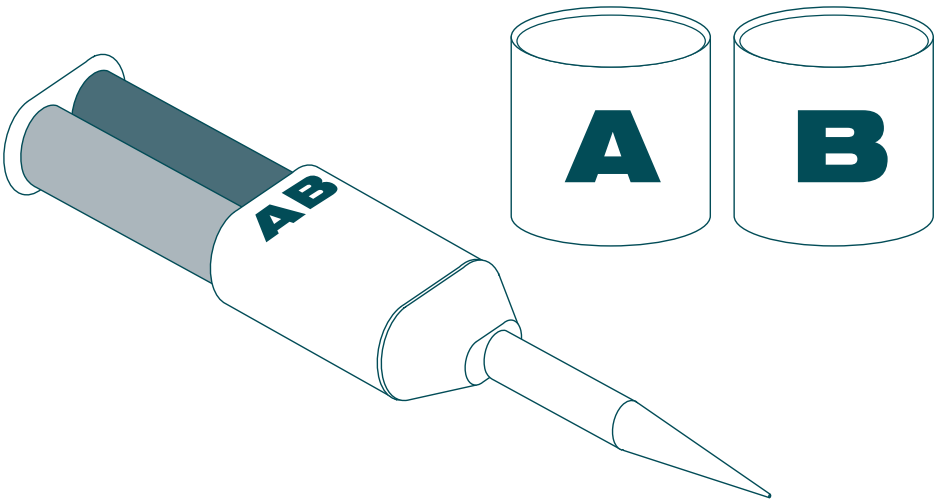
Idylium recommends discs for ultra-compact/sintered surfaces / gres: DIATEX, FREDIMAR, ITALDIAMANT

4.4 ADHESIVES

The use of high-adherence, epoxy-based, bi-component resins is recommended. They should be suitable for internal and external applications without yellowing or discoloration.

Cartridge adhesives are available in a wide range of colors compatible with Idylium products. E.g.: TENAX GLAXS FAST, AKEMI COLOUR BOND, INTEGRA SURFACE BONDER.

Epoxy-based cans can be manually colored with polyester pigments. E.g. Akemi Platinum, Tenax TITANIUM, Tenax Glaxs Fast.



The information and recommendations provided in this manual are intended for people with technical expertise who may deviate from them at their own risk and discretion.

The information and data do not necessarily cover all circumstances.

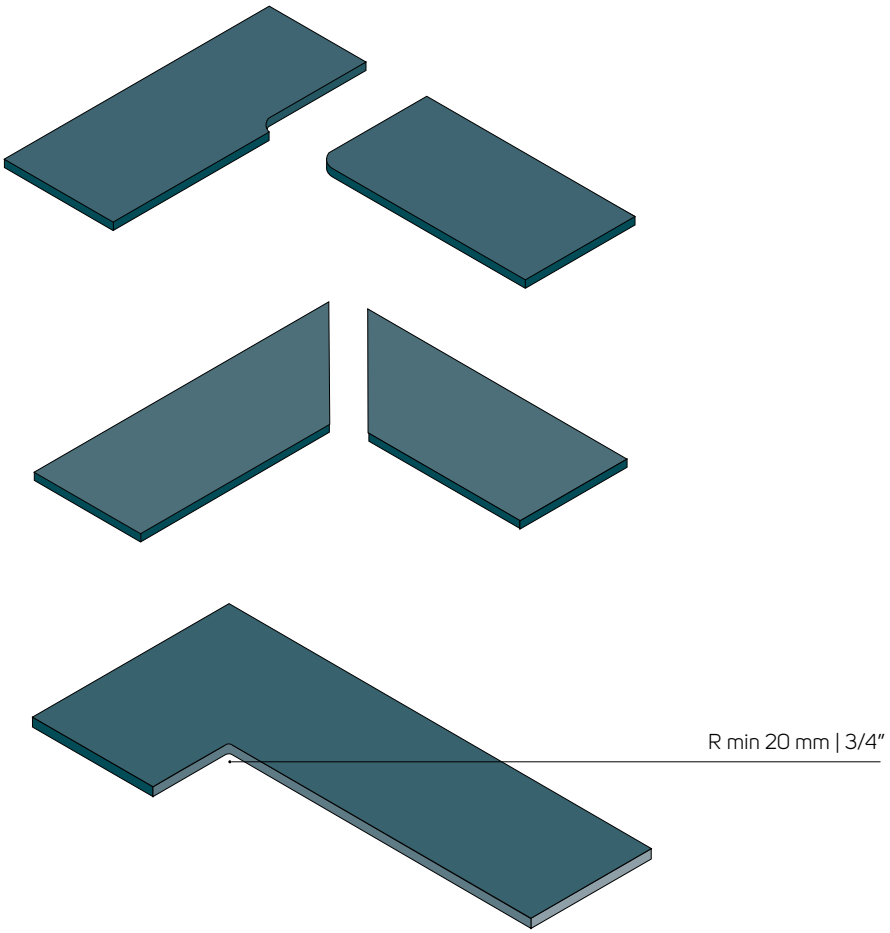
No liability will be accepted and all responsibility is waived for any damage caused by the product during manufacture and installation.

5.1 PLANNING

- Check that the base is in its final position and the structure is intact, ready for the surface being installed to be fitted. The support must be continuous, rigid, and level.
- Measure and plan the size, shape, and location of the surface. Precise measuring is essential for the correct assembly and installation of the surface.
- Plan assembly using rectangular pieces that are as large as possible to reduce the amount of slab that goes to waste.
- Mark on the furniture the location of the joins to be assembled on the worktop. It is recommended to place joins on top of complex joints. Check the uniformity of the surface in the locations where the joins are planned to be placed.
- Check the location and space available for accessories to be placed on the worktop, taking into account the distance between them and the surrounding areas.
- Do not cut visible joins or edges of the worktop from the edges of the slab.

L-SHAPED KITCHENS

In the case of an L-shaped kitchen, we have come up with a series of suggestions so as not to compromise the structural resistance of the material and thus avoiding unpleasant breakages.



It is recommended that the top and the L-shape be divided into several parts to avoid 90° angles .

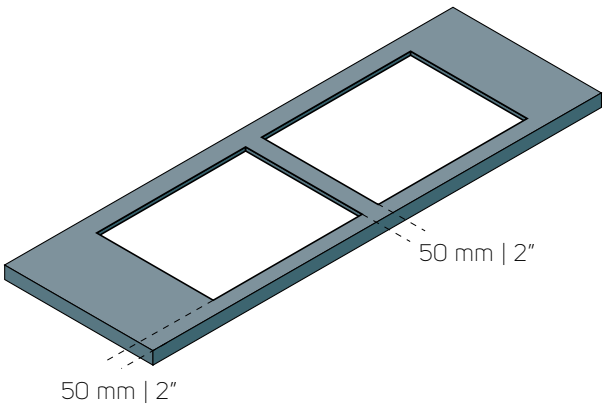
L-shaped worktops made of one piece must have a minimum radius of 20 mm (3/4”).

It is also important that the underlying units are level and in perfect condition.

5.2 CUT-OUTS

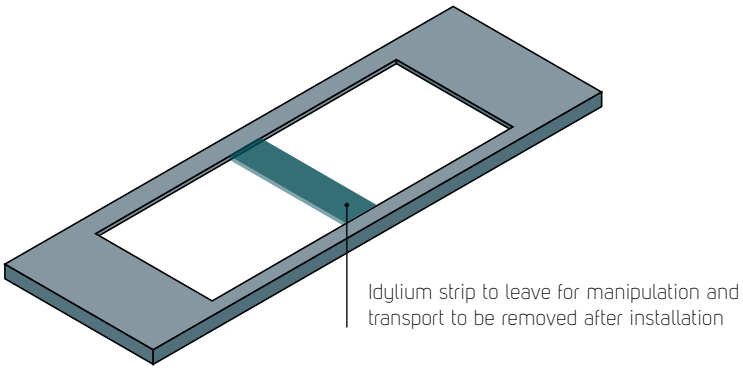
MINIMUM DISTANCE

The minimum distance between cut-outs, or between cut-out and edge, must be at least 50 mm - 2".
Distances greater than 50 mm - 2" are recommended as this will provide greater resistance to the top.



LARGE CUT-OUTS

If there is one or more large holes or interrupted/open holes, to facilitate processing, handling, and transport, it is suggested you leave a strip of material that will be cut completely once the installation is completed.
Regarding the base furniture: The front support will be crucial to guarantee the integrity of the material



All internal angles must have a clean radius of at least 5 mm - 1/4" Larger radius are recommended.
Square corners, Protruding cuts and rough radius are not permitted

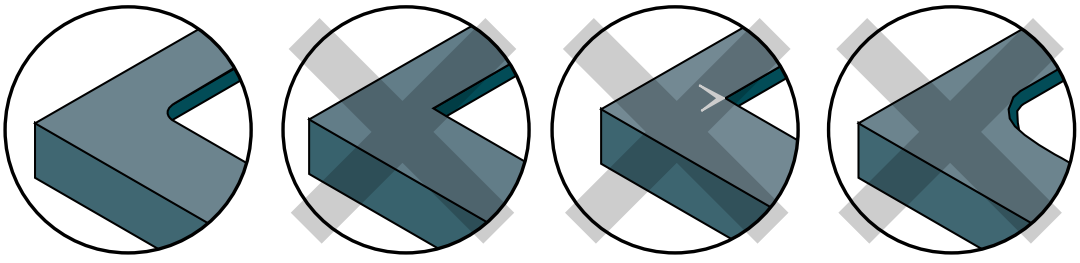


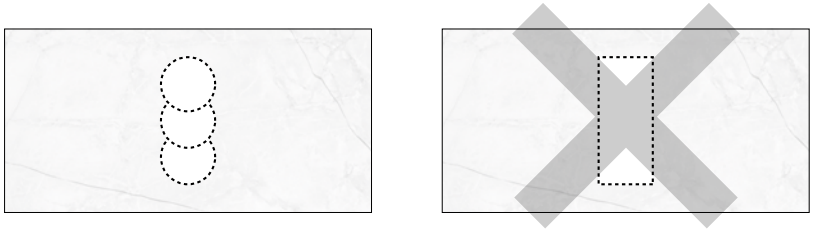
Figure 1
CORRECT

Figure 2
INCORRECT

Figure 3
INCORRECT

Figure 4
INCORRECT

Circular shapes should be preferred for sockets or switches.



CORRECT

INCORRECT

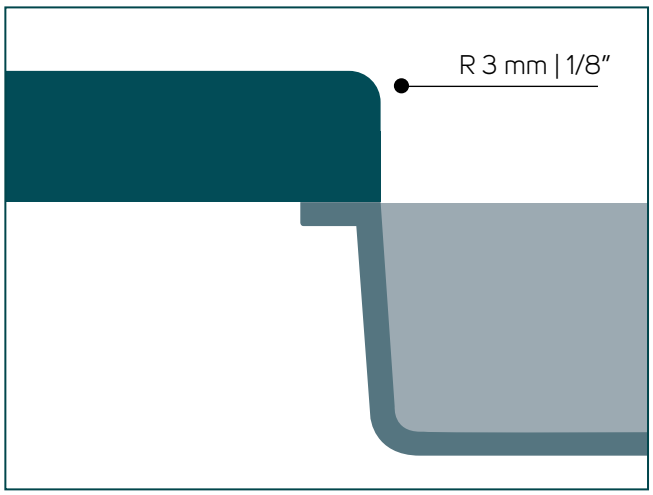
5.3 SINK

OVER-MOUNT SINK

Follow recommendations for gaps, radii, and minimum distances. This is the best option for impact resistance.

UNDERMOUNT SINK

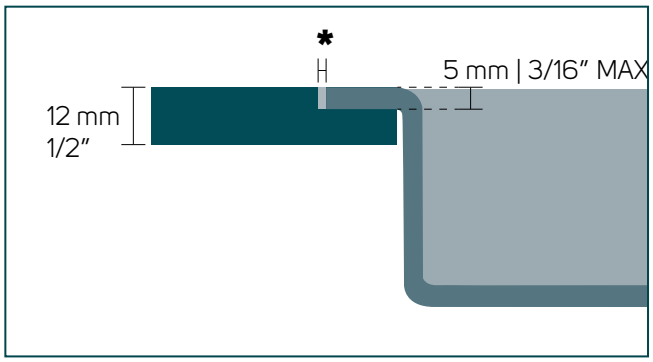
To minimize the risk of chipping by accidental impact, Idyllium suggests a half-rounded edge or a rounded bevel with a 3 mm - 1/8" radius



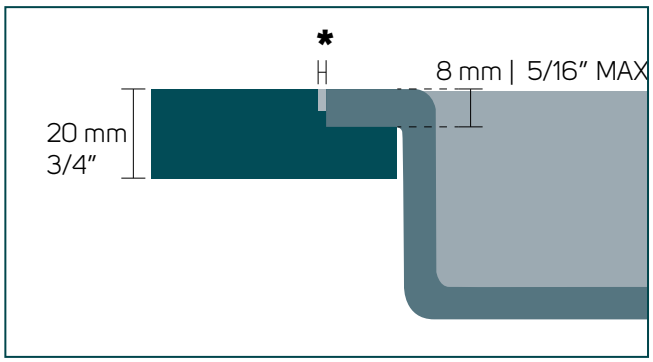
FLUSH SINK

Recess is only possible for 12 mm (1/2") and 20 mm (3/4") material.

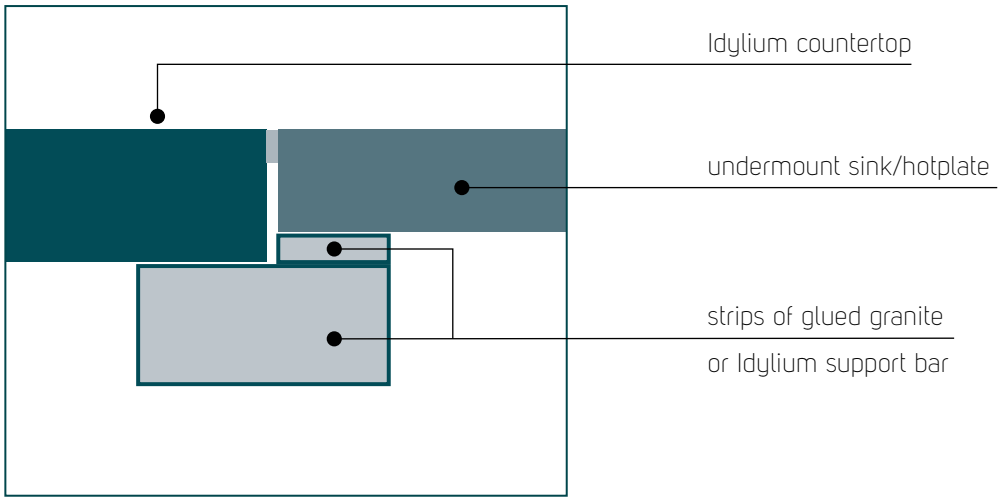
Recess depth is limited to 5 mm (3/16") on a 12 mm (1/2") and 8 mm (5/16") on a 20 mm (3/4") slab. Consider a gap of 1 mm (1/16") sealed with silicone.



* 1 mm 1/16" Silicone gap

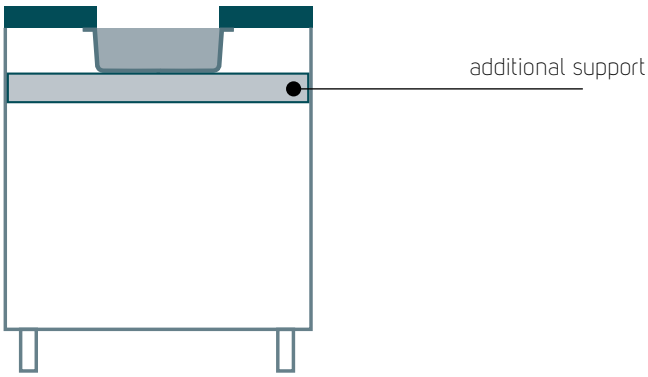


* 1 mm 1/16" Silicone gap



LARGE SINKS

Add a support bar or belts to large sinks, which should be fixed to the base structure on which the The weight of the water and everyday material could cause it to peel off or damage the worktop.

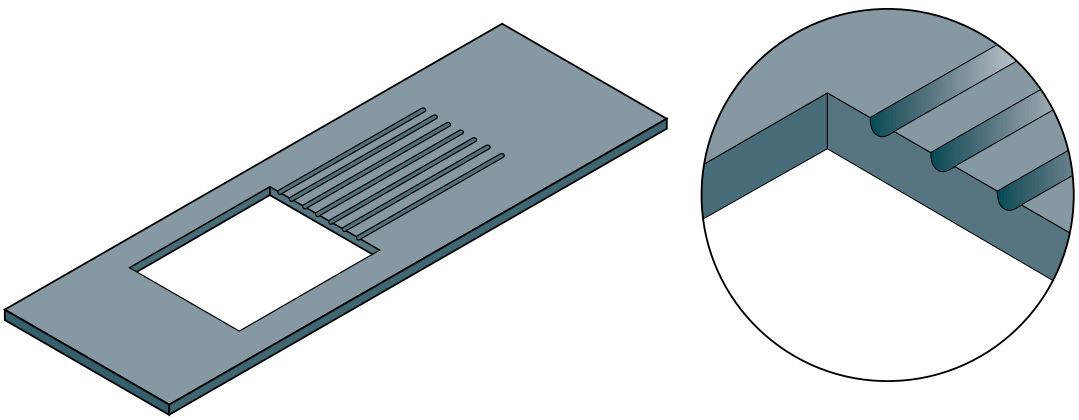


GROOVES AND DRAINING BOARD

The inclined boards must be made by a cut-out of the same material glued together. Avoid milling the surface.

Grooves depth should be limited to 25%: max 5 mm (3/16") for the 20 mm (3/4")
max 3 mm (1/8") for the 12 mm (1/2")

Polish the grooves and apply a stain protector, such as FILA Stop Dirt, Tenax DEEPER or similar..

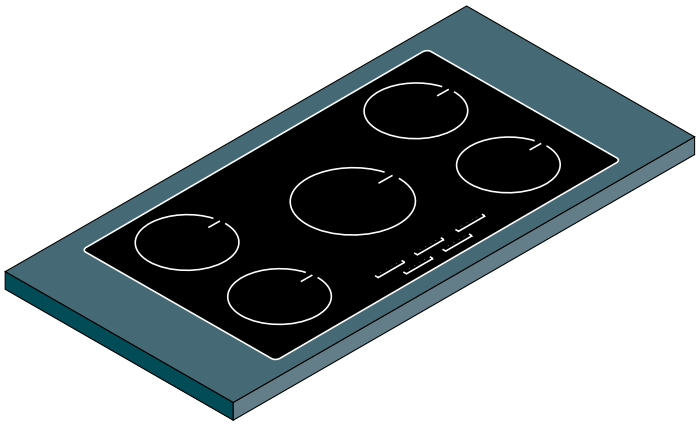


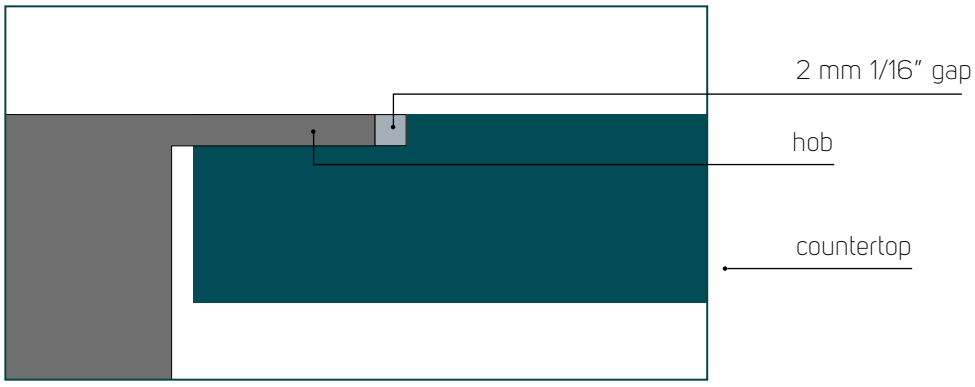
5.4 HOTPLATE

FLUSH HOB

Recessed holes are only recommended for 12 mm (1/2") and 20 mm (3/4") material.

Recess depth is limited to 5 mm (3/16") on a 12 mm (1/2") and 8 mm (5/16") on a 20 mm (3/4") slab. Consider a gap of 2 mm (1/16") sealed with heat-resistant silicone.

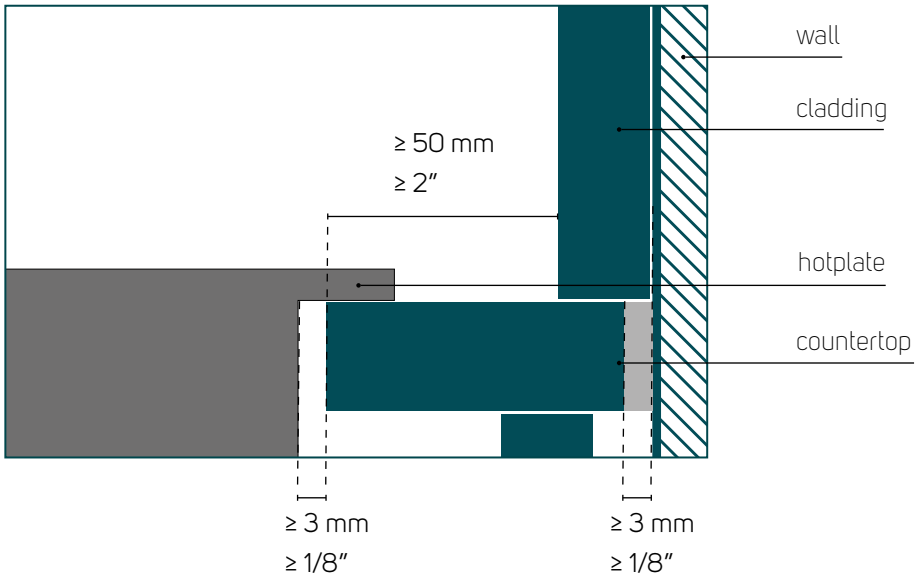




DISTANCES AND GAPS

To reduce the upstand's exposure to the heat, keep a minimum distance of 50 mm (2") between the upstand and the electric or incution hob. Increase this distance to 80 mm (3") for gas hobs.

In addition, consider a minimum expansion gap of 3 mm inside the the hob hole and in the perimeter of the worktop, in order to allows thermal expansion of the hob and walls or adjacent structures.

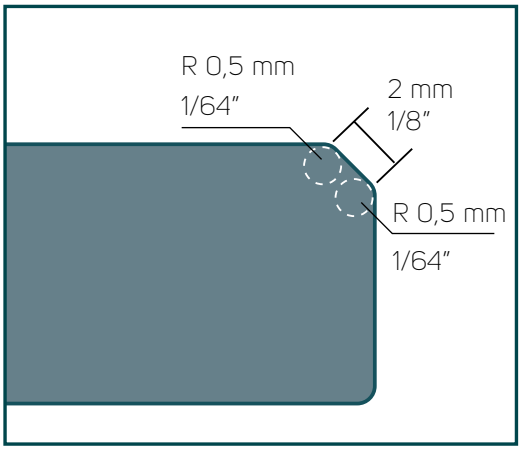


5.5 EDGES

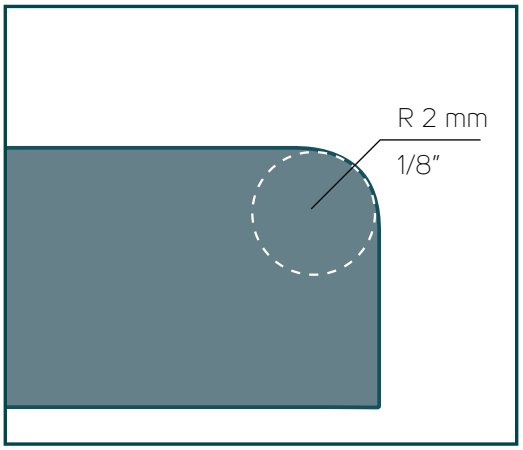
The exposed edges of the countertops should be beveled to improve their impact performance and avoid possible cuts. The larger the bevel, the greater its impact resistance.

The minimum bevel shall be 1 mm (1/16") when hidden and not exposed, and 2 mm (1/8") with rounded edges when seen and exposed. A rounded bevel is recommended, especially on edges with a high risk of impact, such as sinks and dishwashers.

CASE 1: CHAMFER / BEVEL



CASE 2: ROUNDED EDGE

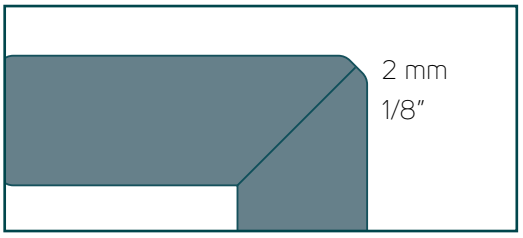


There are numerous types of edge options depending on the marbler working on the slab. These are the most common:

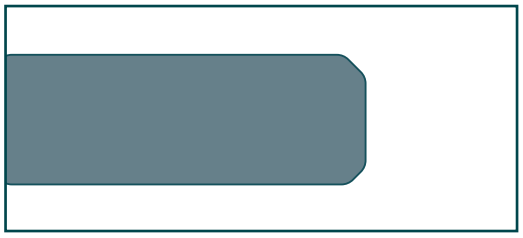
SHARK NOSE EDGE

BUTT-JOINT EDGE

MITER EDGE



DOUBLE-BEVEL EDGE



5.5 EDGES

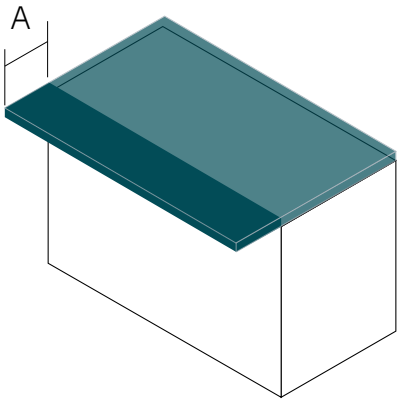
PROTECTION PROFILES

In environments with high use and a high risk of impact, for example behind the bar of a restaurant, we recommend a rounded edge of at least 3 mm (1/8") or the use of metal profiles. Examples of different profiles:

In addition to the decorative effect, the profiles also protect the edges of the countertop from mechanical damage. The spacer integrated in the profile provides a homogeneous joint between the profile and the countertop.

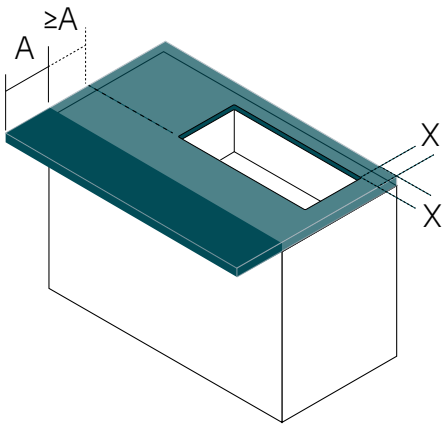
5.6 OVERHANGS

During the design phase of the countertop, overhangs must be sized according to the parameters indicated in the table below, to avoid the risk of the created piece breaking during normal use:



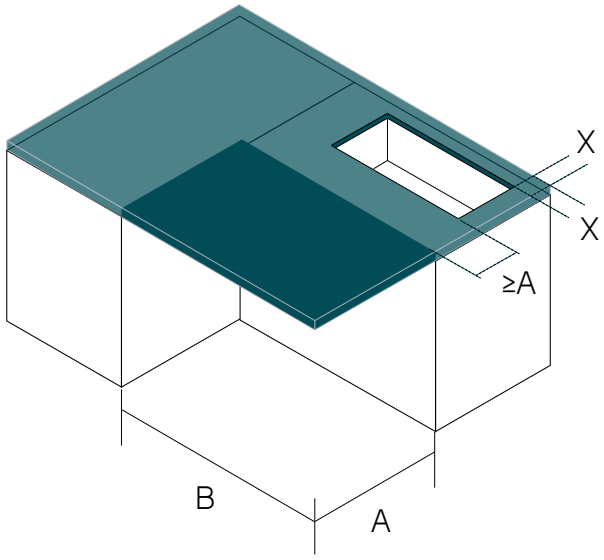
SINGLE OVERHANG

thick	6 mm 1/4"	12 mm 1/2"	20 mm 3/4"	30 mm 1 3/16"
A≤	0 mm 0"	200 mm 8"	400 mm 16"	500 mm 20"



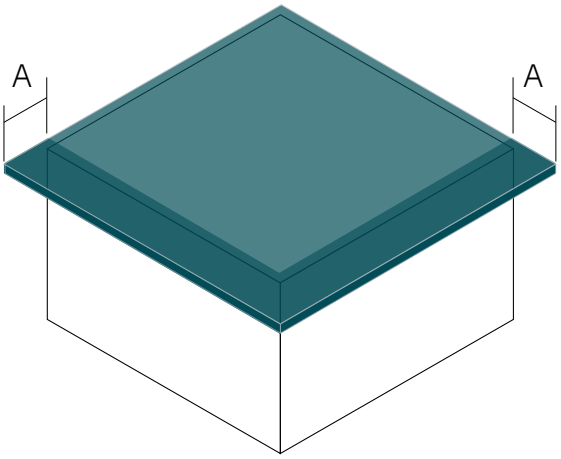
SINGLE OVERHANG WITH HOLE

thick	6 mm 1/4"	12 mm 1/2"	20 mm 3/4"	30 mm 1 3/16"
A≤	0 mm 0"	200 mm 8"	400 mm 16"	500 mm 20"
X ≥	50 mm 2"	50 mm 2"	50 mm 2"	50 mm 2"



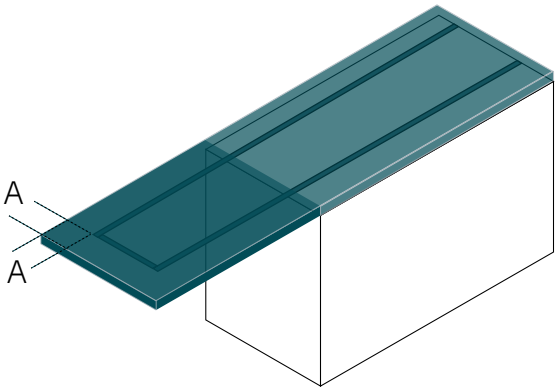
PARTIAL OVERHANG

thick	6 mm 1/4″	12 mm 1/2″	20 mm 3/4″	30 mm 1 3/16″
A≤	0 mm 0″	250 mm 10″	500 mm 20″	600 mm 24″
B≤	0 mm 0″	0,8 mm 3′	1,0 mm 3′ 6″	1,2 mm 4′
X ≥	0 mm 0″	50 mm 2″	50 mm 2″	50 mm 2″



DOUBLE OVERHANG

thick	6 mm 1/4″	12 mm 1/2″	20 mm 3/4″	30 mm 1 3/16″
A≤	0 mm 0″	200 mm 8″	400 mm 16″	500 mm 20″



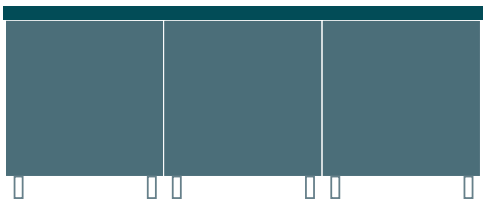
Maximum occasional static load = 100 kg (220 lbs)

Additional support is needed to exceed these parameters.

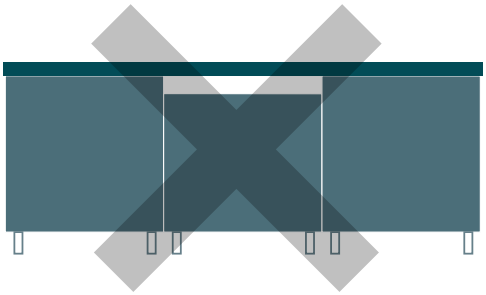
5.7 BASE CABINETS

The furniture must be in perfect condition, providing a flat, continuous, and level support before installing the countertop. The cabinets should be fixed to each other and then fixed to the wall.

The surface of the countertop must rest perfectly on the support, as any point that is not supported will result in fragility of the worktop. Therefore, do not apply isolated dots of silicone or wedges. Apply continous silicone in the entire support area so that it completely adheres to the worktop.



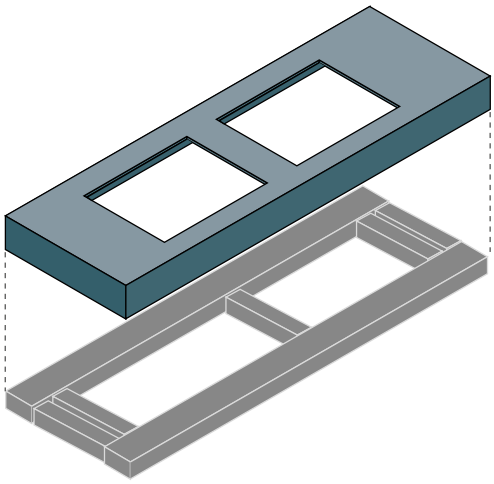
CORRECT

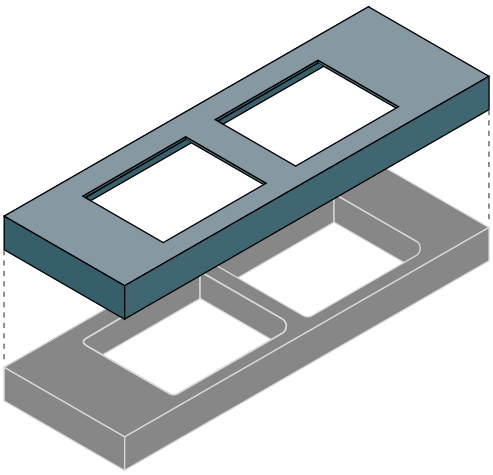


INCORRECT

MITERED-EDGE COUNTERTOPS

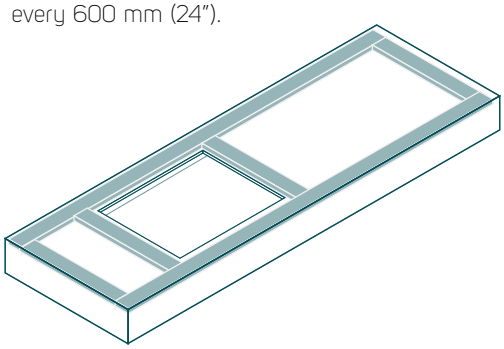
On mitered tops, a perimeter bracing is placed on the mitered edges and additional cross bracing is placed, depending on the design of the furniture. Or, alternatively, a full support can be employed.

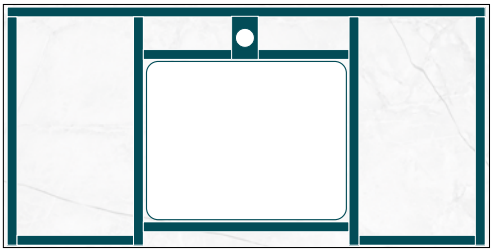




The bracings should be made with strips of Idylium or granite. Be careful when using other materials as reinforcement. The differences in thermal expansion can cause damages to the countertop.

NEVER USE QUARTZ BRACINGS. In addition to the perimeter bracings, transversal bracings will be arranged accordingly, taking into consideration: holes, joints, and placed approximately every 600 mm (24").

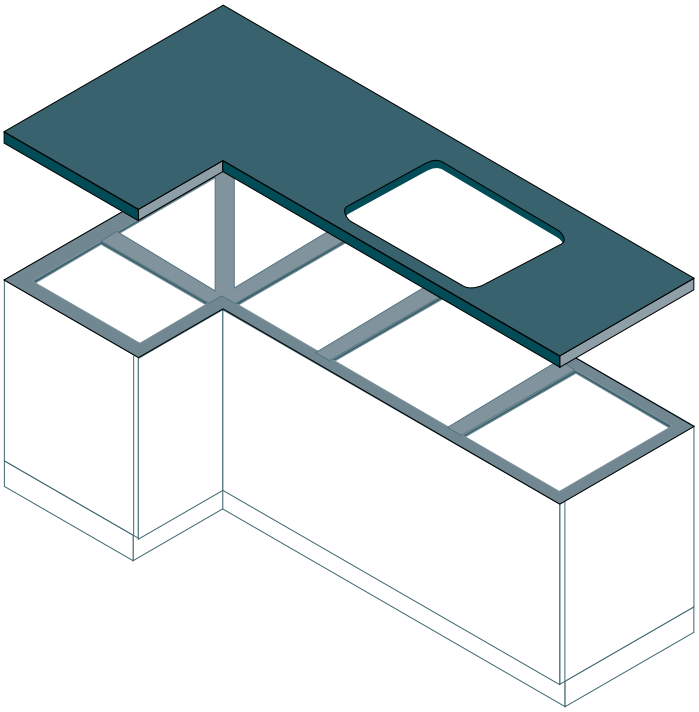




STRAIGHT-EDGE COUNTERTOPS

For 12 mm (1/2") countertops, it is advisable to prepare a total support distributed over the entire surface of the piece, to give it greater resistance. For example, use marine plywood with a minimum thickness of 20 mm (3/4") integrated into the kitchen furniture. In addition, it is important that the glue used to fix Idylium to the support is sufficiently elastic (e.g. silicone), to compensate for possible differences in expansion between the two materials.

If you choose to use a structure, it is necessary to provide adequate support approximately every 600 mm (24") with bracings and additionally at: joints, holes, and changes in direction.



JOINTS AND GLUING

Due to the texture of the Idylium slabs, a micro bevel is recommended for all joints. Each joint requires additional support from below. Before applying the adhesive, make sure that the surface to be glued is perfectly clean, dry, and untreated. If a treated surface is to be glued, it should be sanded with a coarse-grain abrasive. The recommended glues are epoxy based (e.g. Tenax, Akemi).

Due to the irregularities of the wall and the possible movements of the building, it is recommended to leave a 3 mm (1/8") perimeter expansion joint along the countertop. The meeting between the coping and the countertop will be sealed with a silicone cord for the expansion joints. To fill these joints and to fix the countertops to the furniture, substrate, or to fix the Idylium copings to the wall, a flexible silicone or adhesive will allow for adequate thermal expansion.

OUTDOORS COUNTERTOPS

Outdoor Idylium countertop should be installed on cement boards with thin-set adhesive. C2 or R2 type adhesive.

In outdoor applications, the use of wood or chipboard should be avoided because of its tendency to expand and contract as weather conditions change.

Maximum temperature: 300ºC | 550F

Linear thermal expansion: 5.7 · 10^{-6} $°C^{-1}$ | 10^{-6} F^{-1}

Test: Thermal shock resistance (ISO 10545-9); Dry heat resistance (EN 13310)

Idylium can be used on barbecues and fireplaces as cladding or countertops, but the following considerations should be taken into account:

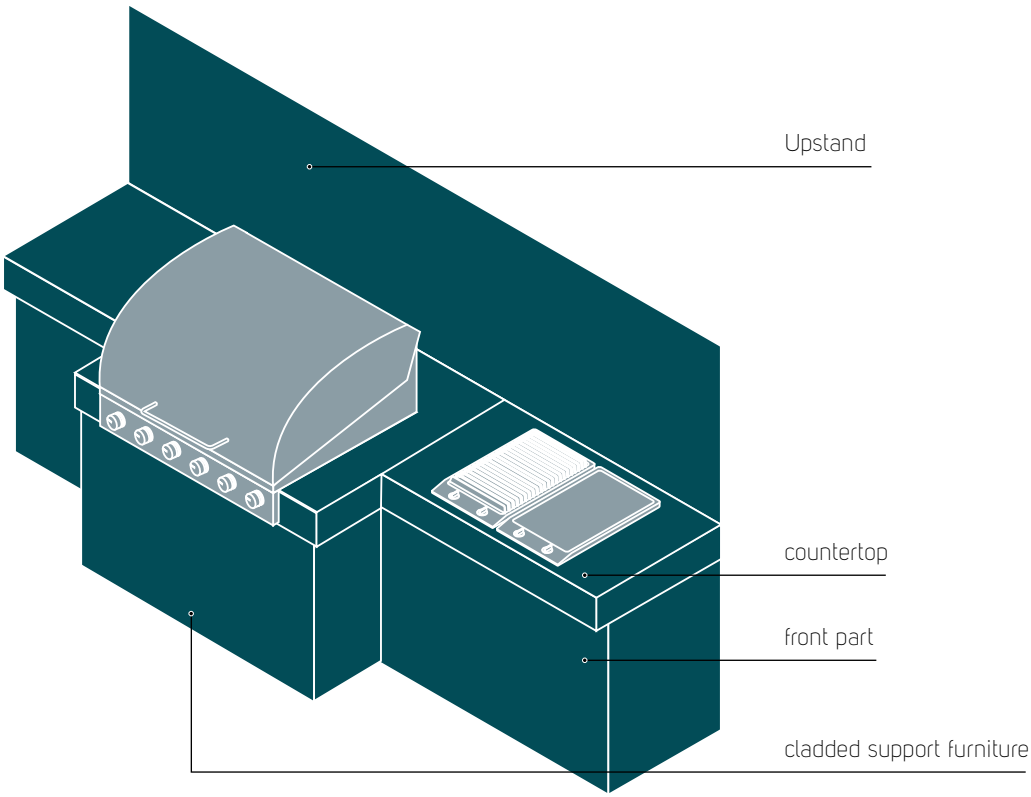
a) Always take into account how each material subject to temperature changes expands. Metallic materials have a much higher expansion than Idylium, therefore avoid direct contact and leave enough space (depending on the dimensions, maximum temperature, etc.). In general, it is recommended to leave 10 mm (3/8") gaps to avoid breakage due to this expansion.

b) Whenever possible, manufacture the countertop in several pieces to avoid interior corners. Alternatively, an internal radius of 10 mm (3/8") or more is recommended by polishing the hole edges to eliminate any possible micro-fissures that may have occurred during cutting.

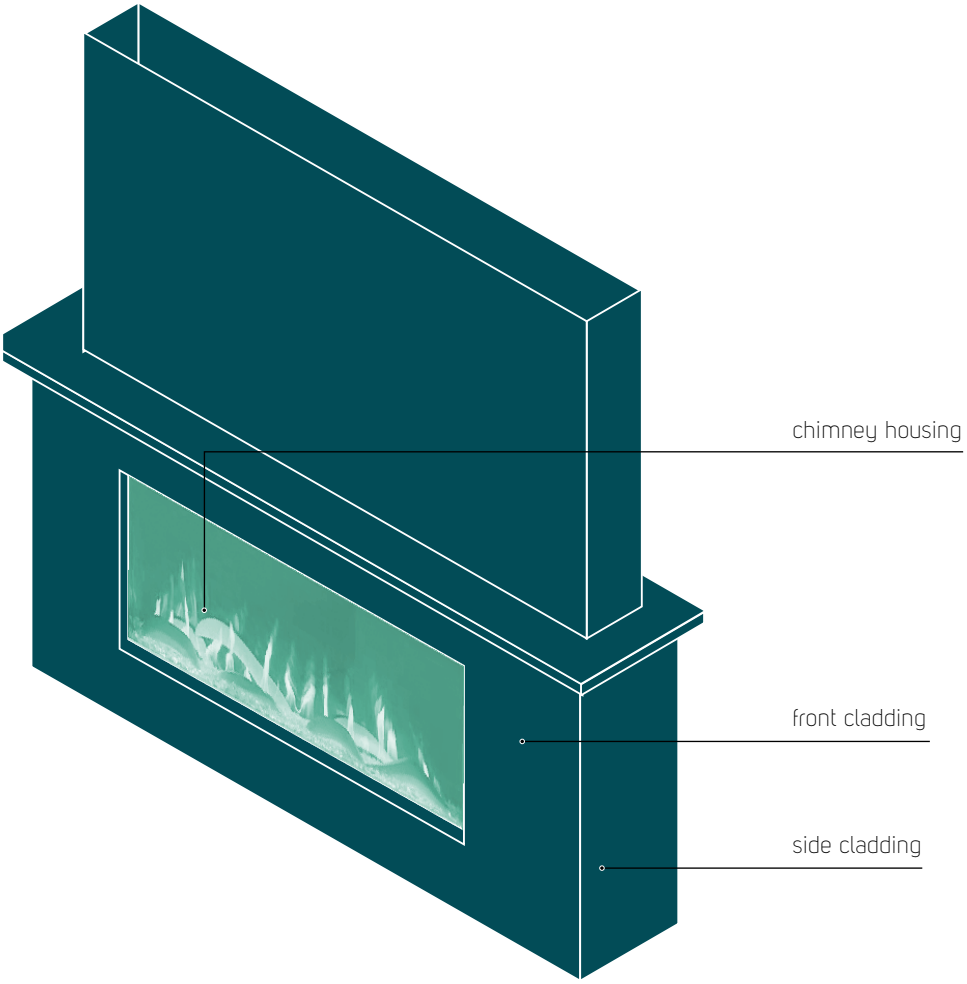
c) Do not use the material if it will be subject to direct transmission of the heat source, whether by contact, radiation, or ventilation. For example: As internal lining of the cooking or combustion area, under the grills, braziers, and paella pans.

d) Always repair the material with a refractory wall or insulation for heat dissipation. It is also recommended to be aware of all the elements that can become hot, e.g. the brazier, the ventilation duct, the handmade appliances, etc.

Examples: Barbecue countertop. It is recommended to leave a minimum space of 10 mm (3/8") between the grill/barbecue, filled with a thermal insulator, such as fiberglass insulation tape. We recommend joints on the inside corners.



Example: Chimney exterior cladding: Separated from heat by refractory (fire-resistant) interior wall. Gluing with thin-set on reinforced cement panels.



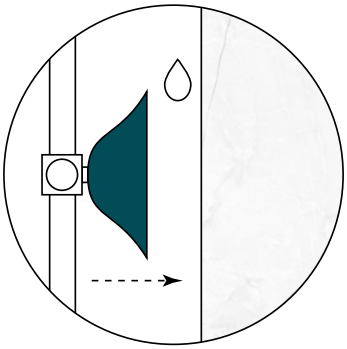
7.1 HANDLING

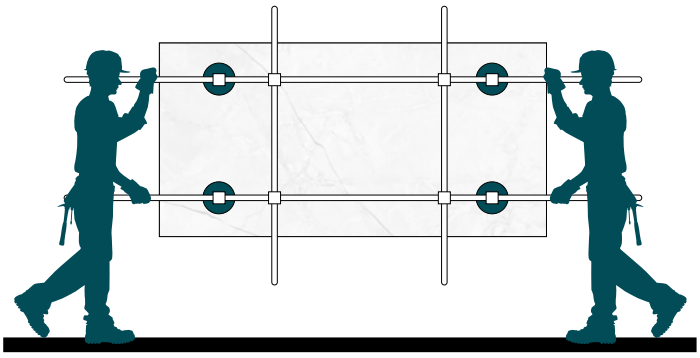
Unload the material as close as possible to the work site to minimize movement. Unobstructed access to the work site must be provided and arrangements made for moving the product from storage to the installation area.

Make sure you do not slide the slabs over each other during unpacking. Lift them one by one to avoid friction with other slabs.

Direct impacts to the slabs should be avoided during unloading and handling, and care should be taken to prevent the slabs from bending or falling.

Once the packaging has been opened, the slabs must be secured on the trestles with slings (or similar) to prevent the slabs from moving.





7.2 TOOLS

For cutting and drilling on site, it is recommended to have:

- HANDLING: big format frame or transport system, with a transport trolley suitable for the frame.
- WORK BENCH: Modular bench with aluminum profiles. Or wooden board tsufficiently large and rigid.
- CUTTING: Large cutting guide, with diamond polishing wheel and clamps. Diamond angle grinder.
- DRILLING: Core drill without percussion. Minimum Ø 10 mm (3/8")
- SANDING: Polishing pad for manual beveling, or pads and flexible discs for grinder.

Recommended tools: Raimondi, Rubi, Montolit etc.

7.3 POSITIONING

Carry out a diagnosis of the support and the layers of adequacy according to the standards (EU CEN/

TR 13548 – American ANSI A108/A118/A136.1:2020). Check maturity, flatness, cohesion, water absorption, texture, chemical compatibility, and support condition. It recommends the substrate have no more than a 3 mm (1/8") variance in 3 m (10 ft), with no more than 1.5 mm (1/16") variation in 609 mm (24").

Leave a grout joint of ≥ 2 mm (1/16") between the slabs for indoors and ≥ 3 mm (1/8") for outdoors. Respect the movement joints according to the regulations and according to the project's indications:

- Structural, coinciding with the structure joint
- Perimetral, usually 5 mm (1/4") around the perimeter
- Expansion, usually 5÷10 mm (1/4" - 1/2") depensing on the project.

The adhesive must be applied with a notched trowel using the double bond technique, which is necessary and essential to avoid air gaps on the back of the slab.

Use a class C2S1 adhesive for small tiles (< 1 m^2 - 10 sqft) and a class C2S2 adhesive for large tiles (> 1 m^2 - 10 sqft). EN 12004 define C2S2 cement based adhesives with improved bond and "highly flexible".

Note: In hot weather, it is recommended to use adhesives with extended open time (EN 12004 class E). For slabs with back mesh in outdoor environments, we recommend epoxy based adhesives (class R2).

For exterior wall cladding, the designer must evaluate the need to adopt safety hooks for the pieces. E.g. RAI-FIX staples by Raimondi.

7.4 GROUTING

Clean, brush, and vacuum the joints to ensure the area is free of standing water, dirt, dust, and foreign debris. Remove spacers and excess cement-based adhesive to ensure uniform joints. A high-performance, anti-efflorescence, quick-drying grout which is also water-repellent and has anti-mildew properties is recommended; class CG2 according to EN 13888.

Before grouting, wet the surface near the joint with a damp cloth or sponge, using a minimum amount of water so that the joints remain dry. Then, keeping the rubber trowel at a 45° angle, force the grout into the joints to completely fill the joints, leaving no gaps. Remove excess grout from the tile surface by holding the rubber trowel at a 90° angle (perpendicular to the tile surface) while moving across the slab in a diagonal direction.

7.5 CLEANING THE GROUTING AND END OF WORK

Start cleaning with a sponge as soon as the grout starts to harden (usually 10 to 30 minutes). Use as little water as possible when cleaning the surface grout, as excess water will discolor the joints. About an hour later, wipe the surface again with a clean cloth to remove any remaining smears.

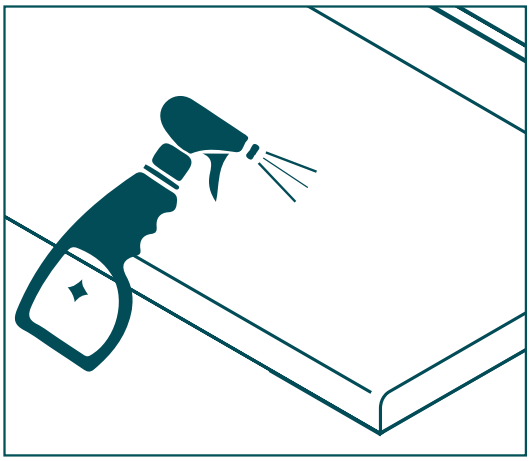
If the surface of the slabs is still dirty with traces of grout because it has not been properly cleaned, a descaling acid or a cement remover can be used, provided that they do not come into contact with metals. For exposed joints, clean thoroughly with alkaline detergents.

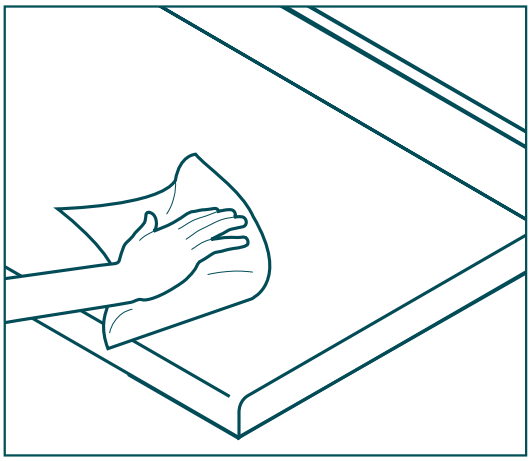
For example: Fila Deterdek (descaling acid), Fila CR10 (alkaline epoxy cleaner)

Idylium is an easy-to-clean surface as it does not absorb residues or food remains, guaranteeing good hygiene. It is also resistant to most chemical cleaning agents, although for maintenance, cleaning with a damp cloth is sufficient.

8.1 DAILY CLEANING

Use a microfiber cloth to remove surface dust. For routine maintenance of the Idylium countertop, it is advisable to use a neutral detergent together with a wet microfiber or a soft non-abrasive sponge. Rinse with clean water and dry with a cloth. For best results, we recommend cleaning any stain immediately without allowing it to dry.





The use of waxes, oil-based soaps, impregnation agents, and other treatments (water and oil repellents) on the product is not recommended because their application is not necessary and alters the appearance of the product. Some detergents on the market contain waxes and polishing additives that can leave an oily layer on the surface after several washings.

8.2 HARD-TO-REMOVE STAINS

When routine cleaning is not sufficient, it is necessary to follow specific procedures depending on the stain to be removed. The time a stain is left on the surface also plays an important role, therefore it is advisable to clean it up as soon as possible.

Advice: Start cleaning a small part of the area to test its effectiveness before using it on the whole surface. When using more aggressive products, it is recommended to rinse thoroughly after cleaning.

Below are some of the substances suitable for removing stains:

Stain	Detergent product
Fats, oils, candle wax,	Grease remover, or solvent: universal solvent, white spirits, turpentine, acetone, alcohol etc.
Remains of cement, plaster,	Acidic grout cleaner: paint stripper, descaler, cement remover etc.
Ink, iodine,	Solvent-based glue or oxidizer: hydrogen peroxide, diluted bleach
Wine, coffee, ice cream, fruit juices, blood	Ammonia, degreasers etc.
Limescale	Anti-limescale
Resins, permanent marker	Solvent or alcohol
Oxide, rust, aluminum scratch	Acid cleaner: paint stripper, descaler, cement remover etc.

8.3 CONTACT WITH HOT OBJECTS

Hot containers such as pots, coffee pots, or trays can be placed directly on the Idylium surface.

You can also place electrical appliances that give off heat on the surface. Idylium is compatible with the temperatures of domestic utensils.

For Idylium 6 mm (1/4") surfaces, it is necessary to use some form of protection against hot objects.

8.4 WARNING

Avoid products containing hydrofluoric acid and its derivatives (e.g. oven cleaners).

Do not use concentrated hydrochloric acid or caustic soda.

Avoid extreme heat through contact or radiation from electric grills, cooking surfaces, ovens, fireplaces, barbecues, etc.

Ceramic knives can scratch the surface of Idylium regardless of the finish, in the same way that they scratch other brands within the same product category and other categories.

Avoid heavy impacts near the edge of the countertop to prevent chipping.

Special considerations for glossy finishes

When cleaning surfaces with a glossy finish, it should be taken into account that the surface resistance is lower than that of other finishes such as honed, therefore, some substances may affect its initial appearance. The use of scourers, knives, and other cleaning elements that may be rough or abrasive to the surface to be cleaned should be avoided. For example, granular cleaners.

Also, avoid basic products with a pH higher than 11. If bleach is used, it should be rinsed with plenty of water and never left in permanent contact. It is recommended to use a microfiber cloth or dishcloth.

9.1 PRODUCT AND COMPANY IDENTIFICATION

Product name

IDYLIUM

AUTOMOBILI LAMBORGHINI SURFACES

Recommended uses

Use in building interiors and exteriors, including worktops, sinks, wall panelling, façades, flooring, and other similar uses.

Company name

BEST SURFACE HOLDING SRL

T. (+39) 02 50020754

www.bestsurface.com

Emergency phone number

ChemTel Inc. (24/7/365, multilingual): Worldwide: +1-813-248-0585;

United States:1-800-255-3924 (toll free); Australia: 1-300-954-583

9.2 HAZARD IDENTIFICATION

Product classification

The product is not classified as dangerous according to regulations.

Hazard identification

The product is inert and when in normal use does not pose any danger to health or the environment.

During the cutting and polishing process, dust with suspended silica particles of a respirable size can be released.

9.3 COMPOSITION/ INFORMATION ON COMPONENTS

Chemical characteristics

Mixture

substance	CAS	EINECS	Concentration
Silica crystalline	14808-60-7	238-878-4	10-15%

9.4 FIRST AID

The material in its finished form does not require special preventive measures. Preventive measures must be taken against silica dust during cutting, polishing, grinding, or drilling operations.

Inhalation: Move away from exposure and breathe fresh air. Seek medical assistance in case of discomfort.

Eye contact: Wash with plenty of water for several minutes.

Skin contact: Dust is not a skin irritant. Wash with soap and water.

Ingestion: Not applicable.

9.5 FIRE-FIGHTING MEASURES

Extinguishing media: The product is not flammable or combustible. In the event of a fire in the immediate vicinity, there are no recommended restrictions on the extinguishing media to be used.

Specific hazards of the mixture: There are no hazards arising from the composition of the product in relation to fire.

Recommendations for firefighting personnel: No special recommendations.

9.6 MEASURES IN CASE OF ACCIDENTAL SPILLAGE

Personal precautions: Not applicable

Environmental precautions: No special measures required

Cleaning method: Not applicable

9.7 HANDLING AND STORAGE

Precautions for safe handling: The product requires special handling by means of suction cup systems and special precautions in manual handling. Cut-resistant gloves should be worn to avoid accidental injury from broken pieces, safety footwear, and also glasses due to projectiles during machining or cutting. Prevent possible overexertion in manual handling.

Storage: No special storage measures are necessary except protection against impacts that may result in the breakage of the material. It is advisable to keep it in its original packaging until use.

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9.8 EXPOSURE CONTROLS

Control parameters: Due to the possibility of dust created during the cutting or polishing phase, it is recommended that these phases be carried out using wet methods.

The regulations concerning the exposure values to crystalline silica are determined by the directive 2000/39/EC and the R.D. 374 which refers to the values published by the INSHT (Spanish National Institute for Safety and Health at Work).

Daily Exposure Limits (Vle-Ed)

Substance	N. CAS	VLE - ED
Crystalline silica	14808-60-7	0,05 mg / m^3 (*)
Respirable size dust		3 mg / m^3 (*)

(*) Limit values applied in Spain. Consult the regulated values in each country. It is recommended to consult the local legislation as:

European Directive 2017/2398

OSHA's Permissible Exposure Limits – Annotated Tables https://www.osha.gov/dsg/annotated-pels

Safe Work Australia: www.safeworkaustralia.gov.au

New Zealand Workplace exposure standards and biological exposure indices: https://worksafe.govt.nz

Brazil NR15 Annex 12

Exposure controls: Exposure to dust created during machining processes (cutting or polishing) must be controlled and minimized. Exposure control must be carried out by means of collective and individual technical protection measures.

Minimize dust generation by using forced ventilation and water supply systems.

Avoid the use of compressed air and perform constant air filtering.

Work clothes: Use of specific clothing for cutting and polishing tasks. Dirty work clothes should be removed. and washed separately. Provide separate places for work clothes and clothing.

9.9 PERSONAL PROTECTION

Respiratory protection: Use type P3 (EN-143) particulate filter respiratory protectors.

Eye protection: Use of protective glasses against the projectiles.

Hand protection: Use of mechanical protection gloves to avoid accidental cuts due to breakage of pieces.

Safety shoes: Use of safety boots that minimize the risk of injury due to material falling on feet.

Ear protection: The use of hearing protection is recommended during cutting and polishing processes.

9.10 PHYSICAL AND CHEMICAL PROPERTIES

appearance	solid
odor	odorless
color	according to commercial range
Ph	not applicable
density	2350-2410 kg/m^3
water solubility	insoluble
boiling point	not applicable
flash point	not applicable
additional information	no other relevant data known

9.11 STABILITY AND REACTIVITY

reactivity	not applicable
chemical stability	stable
possibility of dangerous reactions	not known
conditions to avoid	formation of dust during machining
incompatible materials	avoid prolonged contact with strong acids
hazardous decomposition products	not known

9.12 TOXICOLOGICAL INFORMATION

The dust generated during the machining, cutting, and polishing processes contains suspended particles of free silica. Prolonged exposure to respirable crystalline silica (SiO_2) can cause pulmonary fibrosis and silicosis.

The symptoms are manifested by an appreciable loss of lung capacity.

9.13 ECOLOGICAL INFORMATION

The product is not ecotoxic and does not generate waste materials that may present a danger to the environment.

9.14 CONSIDERATIONS FOR DISPOSAL

Based on the regulations in force: European Directive 91/156/EEC, as well as Spanish Law 22/2011 and R.D. 1481 on waste disposal. In any case, please get information and follow your local applicable regulation for the management of waste.

The waste generated by the Idylium material can be disposed of by an authorized waste management company. Defective and waste products, along with small pieces, may be disposed of in landfills for inert materials. The sludge produced by the wet processing of the material should be disposed of in landfills for non-hazardous waste. It is recommended that cardboard, paper, and wood packaging be disposed of through recycling processes by authorized waste managers.

9.15 TRANSPORT INFORMATION

Land transport (ADR/RID)	Unrestricted
Sea transport (IMDG)	Unrestricted
Air transport (ICAO/IATA)	Unrestricted

9.16 REGULATORY INFORMATION

This Safety Data Sheet (MSDS) has been drafted following the guidelines of the CLP EC Regulation 1272.

9.17 OTHER INFORMATION

Risk Rating System NFPA 704

HEALTH RISK - 0
FLAMMABILITY - 0
REACTIVITY - 0

The product must not be used for purposes other than those specified by the manufacturer.

Last update: June 2021

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