

Processing Manual

Vers. 0/2020



L A P I T E C



This manual was conceived with the goal of providing guidelines and useful tips for processing **Lapitec®** sheets.

The information contained herein reflects the highest level of technical-scientific and operational knowledge possessed by the manufacturer at the time of publication. You are therefore invited to consult the latest, most up-to-date version, which is always available in the download area of the website www.lapitec.com.

In any case, given that this is a natural sintered material, the user is advised not to limit themselves to the instructions provided in this document but rather to consult the vast technical-scientific and operational literature available on this subject, and to employ the services of professional experts for the various stages of processing and installation of the ceramic products.

In regards to the above, Lapitec S.p.A. shall not be held liable for any damage that may result during the application of the information and suggestions contained in this technical manual, insofar as considered merely information and suggestions, which must always be verified beforehand by the user.

Moreover, Lapitec S.p.A. reserves the right to make technical changes of any type without any prior warning and without direct communication to any parties.

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1. LAPITEC® SINTERED STONE

1.1/ CHARACTERISTICS

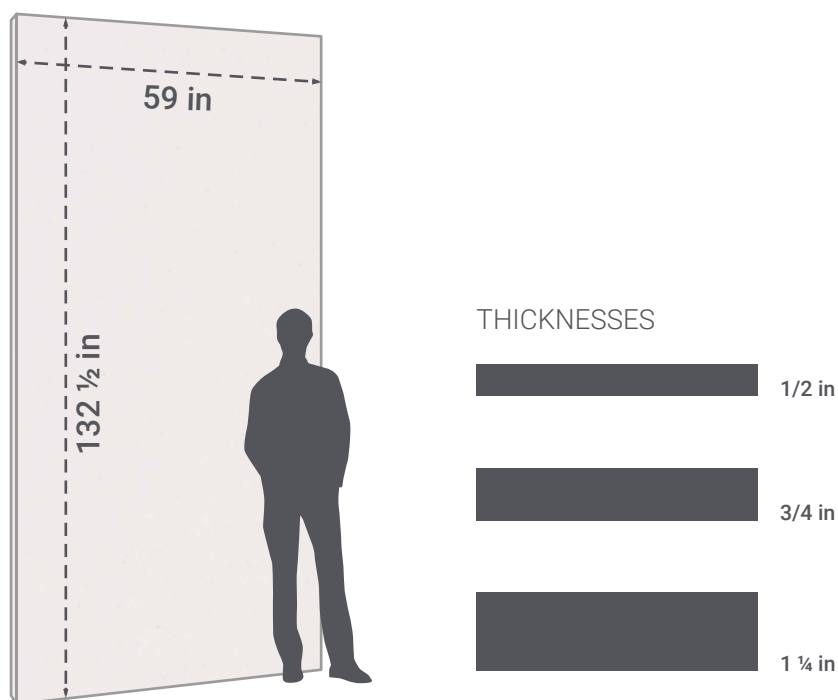
Lapitec® is a sintered stone, an innovative material manufactured in large size sheet form using an exclusive patented technology and it can be used both indoors and outdoors.

Lapitec® sintered stone is resistant to wear, atmospheric agents, exposure to sunlight (UV), heat, frost and absorption.





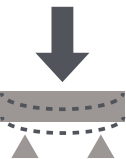



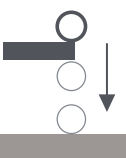

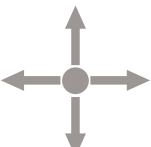
The various **Lapitec®** surface finishes make it suitable for use both for floors and for walls.

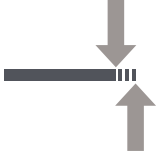

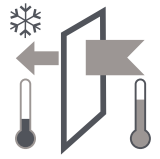
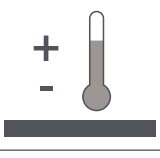


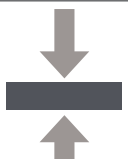
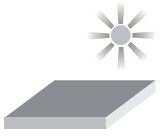

Lapitec® is compatible with a wide range of adhesives and fastenings that allow installation of various types of supports. It can be used without limitations in different environments, even particularly severe ones (damp environments, saline atmospheres, in the presence of aggressive pollutants, etc.).

Standard dimensions



1.2/ TECHNICAL DATA SHEET

TECHNICAL SPECIFICATIONS		STANDARD	VALUE
	Standard dimensions	EN 14617-16	132 1/2x59 1/16 in (1/2-3/4 in) 132 1/2x57 1/2 in (1 1/4 in)
	Thickness	EN 14617-16	1/2 - 3/4 - 1 1/4 in
	Absolute Weight	EN 14617-1	149 lb/ft3
	Water absorption	EN 14617-1	0.02%
	Flexural strength (R_{tf}) post 25 frost/thaw cycles (R_{Mf}) post 20 cycles of thermal shock (R_{sf})	EN 14617-2	7977 lbf/in2 7847 lbf/in2 7876 lbf/in2
	Deep abrasion resistance	EN 14617-4	1 in3
	Frost resistance	EN 14617-5	Resistant
	Thermal shock resistance coefficient (post 20 cycles)	EN 14617-6	0.9%
	Impact resistance	EN 14617-9	1.97 Joules (1/2 in thick) 3.3 Joules (3/4 in thick)
	Resistance to acids and bases	EN 14617-10	C4 - Resistant
	Linear thermal expansion coefficient	EN 14617-11	$5,8 \times 10^{-6} \text{ }^{\circ}\text{C}^{-1}$

TECHNICAL SPECIFICATIONS	STANDARD	VALUE
	EN 14617-12	A
	EN 13501-1	A1
	EN ISO 10456	1,3 W /m · °K
	EN ISO 10456	840 J/kgK
	EN ISO 10456	no value (dry) ∞ (wet)
	DIN 51130	R9 (Velvet) R10 (Vesuvio, Lithos, Dune) R12 (Urban) R13 (Fossil, Arena)
	ASTM C170	2506 lbf/in2 (dry) 2759 lbf/in2 (wet)
	DIN 51094	No variation
	EN 1925	0,0002 oz/in2s0,5

Lapitec® is fire resistant material, classified A1. When exposed to fire it does not ignite, does not release fumes and does not spread the flame.

Violent thermal shock such as the direct exposure to a flame may cause the material to break.



2. MANUAL PROCESSING

2.1/ INTRODUCTION

Lapitec® is a sintered stone supplied to the worksite ready for installation (cut, drilled and processed).

A good design and accurate site survey will allow all processes to be carried out at the company premises, avoiding the need for inconvenient and critical adjustments in the worksite.

Should processing be necessary in the worksite, it is recommended to strictly follow all instructions provided in this manual, using the tools supplied and/or recommended by Lapitec SpA.

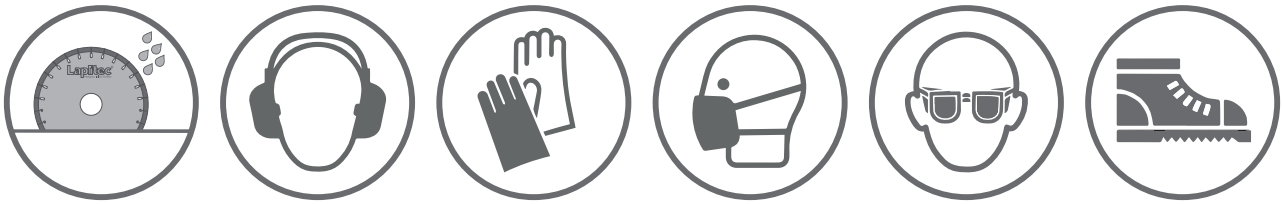
If it becomes necessary to perform any type of process, it is good practice to carry out preliminary tests for both cutting and drilling in order to acquire familiarity and avoid unfortunate inconveniences.

On request, the company can provide manufacturing scraps to use for this scope.

To perform manual processes, it is recommended to abide by health and safety legislation in force.

Each worker must have the PPE (Personal Protective Equipment) specific to the required processes.

Following are our recommendations.



2.2/ SLABS STORAGE

The slabs are packaged either on A-frames and/or in crates. Individually, they must be transported with care and stacked on their side, regardless of their format, making sure to insert materials between the different pieces, and between the slabs and the support, to prevent any potential breakages (e.g. wooden shims). The slabs must be suitably supported so as to avoid any flexion and must be housed in spaces that are not subject to any accidental impact (passageways or manoeuvring areas).

If they must be deposited outdoors, they must always be protected against the rain by a sheet, thus preventing any stagnation on the slabs. If the slabs are wet during packaging, the packaging must be completely removed and the slabs must be arranged in such a way as to perfectly dry.

During any manual processing, the slabs must be properly supported. The support must be sufficiently rigid, perfectly flat and in good condition. A wooden support is preferable to a metal one in order to prevent scratches due to rubbing on the Lapitec surfaces.

2.3/ MANUAL CUTTING

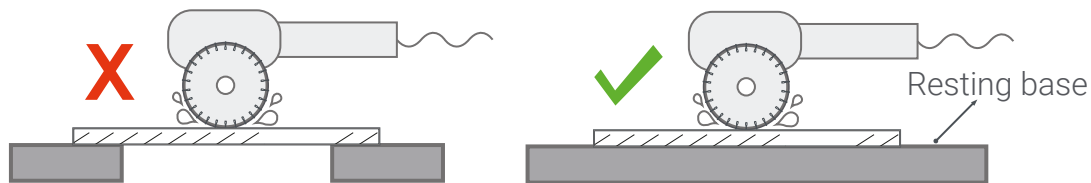
The instructions provided in this paragraph refer to manual cutting only; for benchtop processes (saw, waterjet or CNC), refer to the specific chapters.

In order to proceed, it is necessary to use the cutting tools supplied and recommended by Lapitec SpA, or alternatively, tools whose full compatibility with the indicated type has been checked, always with plenty of running water for cooling and to reduce dust. Lapitec SpA does not recommend dry cutting.

Processing must always start from the finished surface and proceed toward the unfinished one.

Once cutting is complete, it is recommended to lightly sand (with a sandpaper pad, 60/120 grit) the top and lower edge of the newly cut side. This technique will prevent inconvenient chipping and prevent the risk of cuts (the hardness of **Lapitec®** leaves the edges quite sharp).

Supplier	Tool	Grinder rotation
Lapitec®	Saw blade for manual cutting	13.000



2.3.1/ Tools - blade for cutting on job site

To process the material on-site, Lapitec SpA supplies and suggests specific tools, all tested and guaranteed. The approved tools are available at Lapitec SpA, which declares their suitability for use.

Continuous rim diamond blades for manual tools (angle grinders, flex...)

Ø 4 in Ø 7/8 connection (*) RPM from 11.000 to 13.000

Ø 5 in Ø 7/8 connection (*) RPM from 11.000 to 13.000

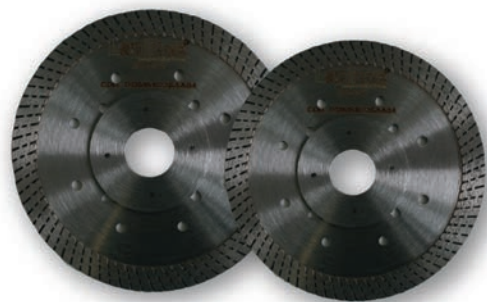
Ø 9 in Ø 7/8 connection (*) RPM from 9.000 to 11.000

(*) adapter for Ø 13/16 is also available

Lapitec® saw blade for manual cutting

Diameters 4-5-9 in

The sequences are subject to possible variations due to the continuous effort to improve processing products. It is recommended to contact the supplier or the LapitecACADEMY service for all clarifications.



2.4/ MANUAL DRILLING

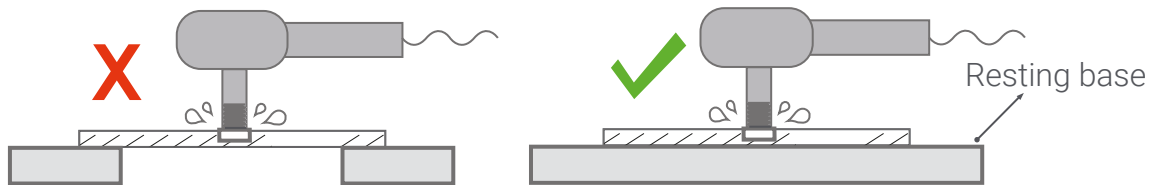
If cut-outs need to be made (for piping, wiring, air vents...) Lapitec can be drilled using the tools listed below and the indicated methods.

The part to be drilled must be suitably supported, as in the case of cutting; during drilling operations, all types of percussions must be avoided so as to prevent breakages.

To proceed with drilling, water must be used for cooling and to reduce dust. Lapitec SpA does not recommend dry cutting.

Processing must always start from the finished surface and proceed toward the unfinished one.

Attention: drilling must always start from the finished surface and proceed toward the unfinished one.



2.4.1/ Tools - crown drill bits for drilling on the job site

To process the material on-site, Lapitec SpA supplies and suggests specific tools, all tested and guaranteed. The approved tools are available at Lapitec SpA, which declares their suitability for use.

Diamond hole saw for drilling with manual tools (drills...)

Holes Ø 1/4 in HEX connection 1.800 - 2.000 RPM (for drill)
 Holes Ø 5/16 in HEX connection 1.800 - 2.000 RPM (for drill)
 Holes Ø 3/8 in HEX connection 1.800 - 2.000 RPM (for drill)
 Holes Ø 1/2 in HEX connection 1.800 - 2.000 RPM (for drill)
 Holes Ø 9/16 in HEX connection 1.800 - 2.000 RPM (for drill)
 Holes Ø 1/4 in M14 connection 1.800 - 2.000 RPM (for flex)
 Holes Ø 5/16 in M14 connection 1.800 - 2.000 RPM (for flex)
 Holes Ø 3/8 in M14 connection 1.800 - 2.000 RPM (for flex)
 Holes Ø 1/2 in M14 connection 1.800 - 2.000 RPM (for flex)
 Holes Ø 9/16 in M14 connection 1.800 - 2.000 RPM (for flex)
 Holes Ø 9/16 in M14 connection 3.000 - 11.000 RPM (for flex)
 Holes Ø 13/16 in M14 connection 3.000 - 11.000 RPM (for flex)
 Holes Ø 1 in M14 connection 3.000 - 11.000 RPM (for flex)
 Holes Ø 1 3/16 in M14 connection 3.000 - 11.000 RPM (for flex)
 Holes Ø 1 1/4 in M14 connection 3.000 - 11.000 RPM (for flex)
 Holes Ø 1 3/8 in M14 connection 3.000 - 11.000 RPM (for flex)
 Holes Ø 1 9/16 in M14 connection 3.000 - 11.000 RPM (for flex)
 Holes Ø 2 in M14 connection 3.000 - 11.000 RPM (for flex)



In the workshop with Fast Line: wet drilling

Workshop core drills diameter 1 3/8 in M14 1,500 - 2,500

2.5/ FINISHES

2.5.1/ Finish for countertop and side – LUX

Supplier	Tool	Sequence adopted
Sanwa - Kenma (Alpha Tools)	Dia Ceramica - Ex Ceramica Series	150R - 300R - 500R - 1000R - 2000R - 3000R
Weha	Es Wet Use - Ex Series - Hybrid Flash	1 - 2 - 3 - 4 - 5 - 6 - 7 50 - 100 - 200 - 400 - 800 - 1500 - 3000 H1 - H2 - H3
Italdiamant	Ds Series	50 - 100 - 200 - 400 - 800 - 1500 - 3000

2.5.2/ Finish for countertop and side- SATIN

Supplier	Tool	Sequence adopted
Sanwa - Kenma (Alpha Tools)	Dia Ceramica - TF Ceramica Series	150R - 300R - 500R*
Weha	Es Series - Hybrid Flash	50ES - 100ES - 200ES - 400ES - 800ES* H1 - H2
Italdiamant	Ds Series	50 - 100 - 200 - 400 - 800*

*Optional

See the technical manual of the tool manufacturer to determine the best working parameters.

2.6/ ASSEMBLY USING ADHESIVES

This paragraph deals with processes for bonding **Lapitec®** slabs to each other. For instructions on how to bond **Lapitec®** onto other supports, see the specific Finishes Manual.

Lapitec SpA has performed bonding tests on numerous products, not only for their technical performance, but also for the compatibility of their tone with the colours of **Lapitec®** slabs.

A number of Tenax branded products are proposed below, custom made for **Lapitec®** slabs and our colour range, inclusive of their technical specifications.

2.6.1/ Good standards for the use of adhesives

Before applying the adhesive, check that the surface to be glued is clean, properly dried and free of any type of treatment. If it is necessary to glue on a treated surface, it must be sanded with coarse sandpaper (60-80) so as to remove the treatments and create a rough surface that guarantees certain and long-lasting adhesion.

For greater safety on overhang gluing (45°), it is good standard practice to position a square or L-shaped profile about 1 1/4 x 1 1/4 in long on the hidden back of the material along the entire length of the gluing of the lintel.



When it is not possible to use **Lapitec®** to support the finished piece, choose a material with the same expansion coefficient as **Lapitec®** (e.g. Granite).

Disclaimer

When selecting the adhesive, the intended function and use of the workpiece must be considered in order to identify the most suitable product.

2.6.2/ STRONGBOND cartridge

Adhesive paste to glue **Lapitec®** suitable for both indoor and outdoor applications, also with persistent exposure to UV rays.

The Strongbond cartridge is characterized by having outstanding adhesion in very short times (1 hour, 1 hour and 15 minutes), allowing the cutting and polishing of the glued pieces. The hardened product has a smooth and bright surface that can be easily polished.

Instructions for use

The product is packaged in special twin-cartridges containing 7 17/64 us fl oz in a ratio of 2:1. The two chambers of the cartridge contain resin and a pre-dosed hardener.

All surfaces of the support to be treated must be clean, dry and without traces of dust and grease. In the case of glossy and/or smooth surfaces, it is recommended to sand the support before applying the adhesive.

Remove the threaded tip and pull out the stopper. Secure the mixer to the cartridge with the threaded nozzle.

Before applying the adhesive, it is good practice to extrude about 3/16 - 3/8 oz of product (half a cup of coffee) equivalent to a bead of about 12 - 17 1/2 in. This operation should be repeated each time the mixer is changed. After use, clean the tip with a piece of paper and close the cartridge. Throw away the used mixer. Use only guns compatible with the 2:1 cartridge.

The product will not harden under + 33,8°F.

Parameter	Value	Parameter	Value
Product	Epoxy resin	Shelf life	24 months
Type	Vertical application	Pot life	45-60 minutes
Scope	Indoor and Outdoor (Guaranteed for 15 years)	Workpiece can be handled after	15 minutes
Subject to yellowing	No	Max. working temp.	140°/-13°F
Colour	All colours	Trowel	Stainless steel or clean plastic
Product package	7.584 oz	Mass gel time 77°F	3-5 minutes



2.6.3/ STRONGBOND A+B

New generation, zero-yellowing in the sun, two-component glue for gluing **Lapitec®** suitable for both indoor and outdoor applications. Paste product without solvents and medium reactivity. Good harness. The glue hardens even at 32°F. The appearance of the hardened film is always bright and dry even in poor conditions of humidity and temperature. The use of white material is suggested where you must guarantee no yellowing of the resin in sunlight. Does not leave halos and does not alter the color. The hardening of the resin is only marginally influenced by the temperature. Product with VOC=0.

Instructions for use

Resin and hardening solution must be stored in the original containers. The hardening solution should be closed well during storage to prevent hardening. Do not place in contact with other resins or hardening solutions, even dry ones, that may alter the properties of the product. In automatic dosing systems, contact should be avoided with non stainless steel metallic parts. Take the necessary quantity in weight of the two components from the two containers with respect to the ratio of use, mix vigorously and proceed with use. During mixing use clean tools made of plastic or stainless steel. The use of non stainless steel metallic parts may damage the quality of the resin.

Never place any unused adhesive paste that has already been mixed with the catalyst back into the container. If the colour of the adhesive paste needs to be corrected, use the special Rainbow colouring pastes.

Make sure the material on which the Strongbond resin is applied is completely dry and clean.

Close the containers tightly after use and avoid prolonged contact with the air.

Parameter	Value	Parameter	Value
Product	Epoxy resin	Catalyst	70% in weight
Type	Vertical application	Pigment	1-2%
Scope	Indoor and Outdoor (Guaranteed for 15 years)	Shelf Life	12 months
Subject to yellowing	No	Pot life	24 hours
Colour	Clear	Workpiece can be handled after	1 hour and 15 minutes
Product package	17.64 oz	Max. working temp.	140°/-13°F
Catalyst package	12.35 oz	Trowel	Stainless steel or clean plastic
Pigment packages	4.58 in3	Max. working temp. 77°F	20-25 minutes



2.6.4/ FROZENBOND A+B

Extra strong, two-component epoxy adhesive in very soft and spreadable vertical thixotropic paste, ideal for both indoor and outdoor use, particularly ideal for cold climates. Recommended for outdoor use. High adhesive strength on multi-materials and resistant to atmospheric agents. Can also be applied on damp surfaces. Also ideal for mixed gluing such as: **Lapitec®-stone**, **Lapitec®-glass**, **Lapitec®-cement**, **Lapitec®-composite honeycomb type panels**, **Lapitec®-wood** or wood laminate panels. Sanding the surfaces to be glued before proceeding with gluing is advised and we suggest verifying the flatness of the finished piece after one month.

Instructions for use

Resin and hardening solution must be stored in the original containers. In automatic dosing systems, contact should be avoided with copper, brass metallic parts and similar alloys that can rust. Use plastics resistant to corrosive liquids. Never use PVC. Take the necessary quantity of the two components A and B in weight or volume from the containers in a 1:1 ratio. Mix vigorously and proceed with use.

During mixing, use clean tools. Never place any unused adhesive paste that has already been mixed with the catalyst back into the container. If the colour of the adhesive paste needs to be corrected, use the special Rainbow colouring pastes. Make sure the material on which the adhesive is applied is completely dry and clean. If using automatic dosing machines, we recommend checking the dose each day. When cleaning the tools, use only grease-free solvents such as acetone and butyl acetate. Always use gloves and goggles during use (see the safety data sheet). Close the containers tightly after use and avoid prolonged contact with the air.

Parameter	Value	Parameter	Value
Product	Epoxy resin	Catalyst	100% in weight
Type	Vertical application	Pigment	3%
Scope	Indoor and Outdoor	Shelf Life	2 years
Subject to yellowing	Slight over time on light colours	Pot life	24 hours
Colour	Beige	Workpiece can be handled after	4 hours
Product package	30.51 in3	Max. working temp.	140°/-13°F
Catalyst package	30.51 in3	Trowel	Plastic, clean
Pigment packages	4.58 in3	Gel time at 77°F	2 hours and 30 minutes



2.6.5/ FIREBOND

Compound for gluing **Lapitec®** ideal for indoor applications, has high resistance to heat and speedy processing. Excellent adhesion in very brief times, 60-90 minutes, with excellent workability, thereby allowing processing of the glued pieces in very short time even at low temperature. The hardened product has a very smooth and bright surface that can be easily polished. Good stability in sunlight.

Instructions for use

Before applying the product, ensure that the material is clean, dry and dust free. Take the necessary quantity of compound that you will need to use from the container/jar/can, add 2-3% of hardening solution in paste, mix vigorously and proceed with use. Never return unused compound mixed with the catalyst to the container.

Where the color of the compound needs to be corrected, use specific Rainbow coloring pastes. The color should be added before the catalyst, mixing the quantity needed to obtain the desired color and then add the catalyst to obtain hardening. An excess of coloring pasta or powdered pigments could alter the final characteristics of the compound.

Close the containers after use. Store the adhesive paste and catalyst away from light and the sun.

Parameter	Value	Parameter	Value
Product	Polyester resin	Catalyst	2-3% in weight
Type	Vertical application	Pigment	3%
Scope	Interiors	Shelf Life	6 months
Subject to yellowing	Yes	Pot life	40/50 minutes
Colour	Beige	Workpiece can be handled after	40/50 minutes
Product package	2 x 30.51 in3	Max. working temp.	248°F
Catalyst package	2.01 in3 tube	Trowel	Plastic
Pigment packages	4.58 in3	Get time in bulk 77°F	2-3 minutes



2.6.6/ RAINBOW

The previously described systems can be colored with universal Rainbow coloring agents in a range of colors aligned with the **Lapitec®** colors. The coloring paste mixes very well with all the compounds so that it can be easily colored.

The paragraph below indicates the correspondence between colours in the **Lapitec®** range and Tenax products.

Instructions for use

Add the colour or colours to the adhesive to obtain the desired shade. Mix thoroughly. Several colours can be added. It is important not to exceed the maximum recommended quantity, 2-3% in weight. An excessive amount of colouring paste may alter the quality of the adhesive. Close the containers after use. Store in the original containers. Store away from light and the sun.

Parameter	Value	Parameter	Value
Product	Coloured paste	Dosage	2-3% in weight
Package	4.58 in3		



2.6.7/ Lapitec® range correspondence

Lapitec® Material	Strongbond Colour	Description on label
Arabescato Bernini	ARABESCATO BERNINI	ARABESCATO BERNINI
Arabescato Canova	ARTICO	ARTICO - CANOVA - MICHELANGELO
Arabescato Corallo	BIANCO CREMA	ROMA - CORALLO - CREMA
Arabescato Donatello	BIANCO POLARE	CASABLANCA - DONATELLO - PERLA - POLARE
Arabescato Michelangelo	ARTICO	ARTICO - CANOVA - MICHELANGELO
Arabescato Perla	BIANCO POLARE	CASABLANCA - DONATELLO - PERLA - POLARE
Artico	ARTICO	ARTICO - CANOVA - MICHELANGELO
Avana	AVANA	AVANA
Avorio	AVORIO	AVORIO
Bianco Assoluto	BIANCO ASSOLUTO	BIANCO ASSOLUTO
Bianco Crema	BIANCO CREMA	ROMA - CORALLO - CREMA
Bianco Polare	BIANCO POLARE	CASABLANCA - DONATELLO - PERLA - POLARE
Berlin	GRIGIO CEMENTO	BERLIN - GRIGIO CEMENTO - LONDON
Brooklyn	TABACCO	BROOKLYN - TABACCO
Ebano	EBANO	EBANO
Grigio Cemento	GRIGIO CEMENTO	BERLIN - GRIGIO CEMENTO - LONDON
Grigio Piombo	GRIGIO PIOMBO	GRIGIO PIOMBO
London	GRIGIO CEMENTO	BERLIN - GRIGIO CEMENTO - LONDON
Moca	MOCA	MOCA
Nero Antracite	NERO ANTRACITE	NERO ANTRACITE
Nero Assoluto	NERO ASSOLUTO	NERO ASSOLUTO
Porfido Rosso	PORFIDO ROSSO	PORFIDO ROSSO
Sahara	SAHARA	SAHARA
Tabacco	TABACCO	BROOKLYN - TABACCO
Casablanca	BIANCO POLARE	CASABLANCA - DONATELLO - PERLA - POLARE
Roma	BIANCO CREMA	ROMA - CORALLO - CREMA

2.7/ BIO-CARE

Bio-Care is a technology whereby Titanium Dioxide (TiO_2) is applied to full body **Lapitec®** during the production process. It is an exclusive patent that gives the material antibacterial and self-cleaning properties. The functions of Bio-Care can be reactivated at any time by applying the Bio-Care kit. This treatment must be applied on the visible parts each time the material is processed (drilling, surface processing and cutting). Failure to use Bio-Care may inhibit the properties of the Titanium Dioxide (TiO_2) and compromise the typical qualities of **Lapitec®**.

How to apply

Make sure the surface is clean, dry and free of dust. Spread the Bio-Care One product evenly using a solvent-resistant cloth. When the product assumes a more viscous consistency (due to the evaporation of most of the solvent after about 2 minutes), remove the excess Bio-Care One with a clean cloth, taking care to remove any stains or shadows.

Attention: any shadows or stains left on the surface will become permanent once the treatment has completely hardened.

Treatment	Quantity oz/ft ²	Workpiece can be handled after
Bio-Care One	1.90 - 2.28	40 minutes

The surface can be handled 40 minutes after application; the treatment will have completely set and tests can be carried out after 7 days. The treatment can be manually applied on smaller surfaces. On slabs, the treatment must be applied using dedicated machinery. Given the minimal amount of product, it is recommended to apply **Lapitec®** Bio-Care One on several workpieces to be treated in a sequence.

Warning: do not turn upside down, store in a cool, dry place far from sources of heat.



2.8/ REPAIR KIT

The repair kit is composed of a 395nm UV torch, a coloured **Lapitec®** filler, 2 trowels, 1 diamond sheet 400 grit (usable on all finishes except Lux).

Instructions for use

Using the supplied trowel, thoroughly mix the filler until all the internal components are completely blended, then apply it in small quantities (drops) on the parts to be repaired.

Turn on the UV lamp and hold it over the repair to activate the solidification process (approx. 15-20 seconds). Manually check the compactness of the filler. Repeat the procedure until all chips have been filled.

Then protect the non-repaired section of the **Lapitec®** top with some masking tape to prevent the sandpaper from damaging the surface. Use the supplied diamond sandpaper to sand off any excess filler.

Then apply Bio-Care only on the repaired part to prolong the aesthetic effect of the repair over time.

Disclaimer

Failure to properly mix the filler may cause a difference in colour with respect to the **Lapitec®**.

The characteristics of the UV Lamp must be the same as those indicated by Lapitec, otherwise the filler may not completely react. For the Lux finish, use polishing paper for granite with grit up to 3000.

Poor chamfering on the edge of the workpiece may be the cause of chipping. For more information see the **Lapitec®** Technical Manual.

Duration of filler: 3 months in closed jar.

Hazard identification

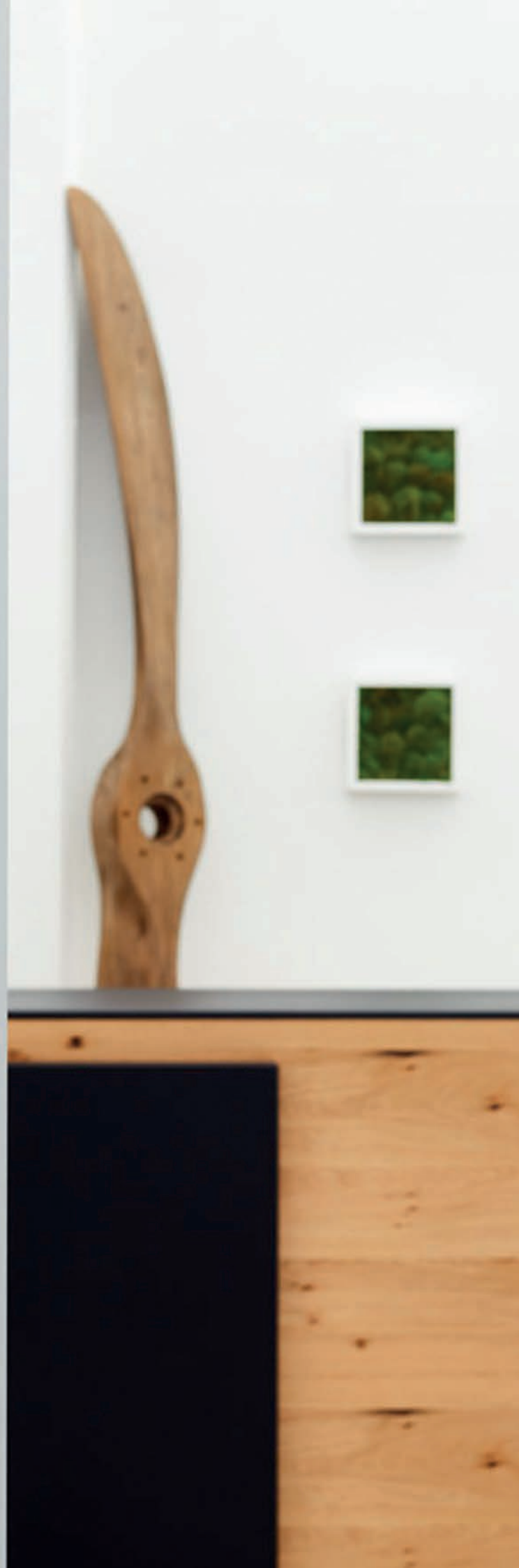
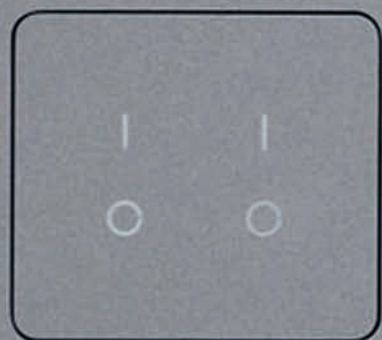
Classification of substance or mixture: the product is classified as hazardous pursuant to the provisions set out in Regulation (EC) 1272/2008 (CLP) (and subsequent amendments), the product therefore requires a safety data sheet compliant with the provisions of Regulation (EC) 1907/2006 and subsequent amendments. Any additional information regarding risks to health and safety and/or the environment are reported in sect. 11 and 12 of this data sheet.



watch the
video tutorial



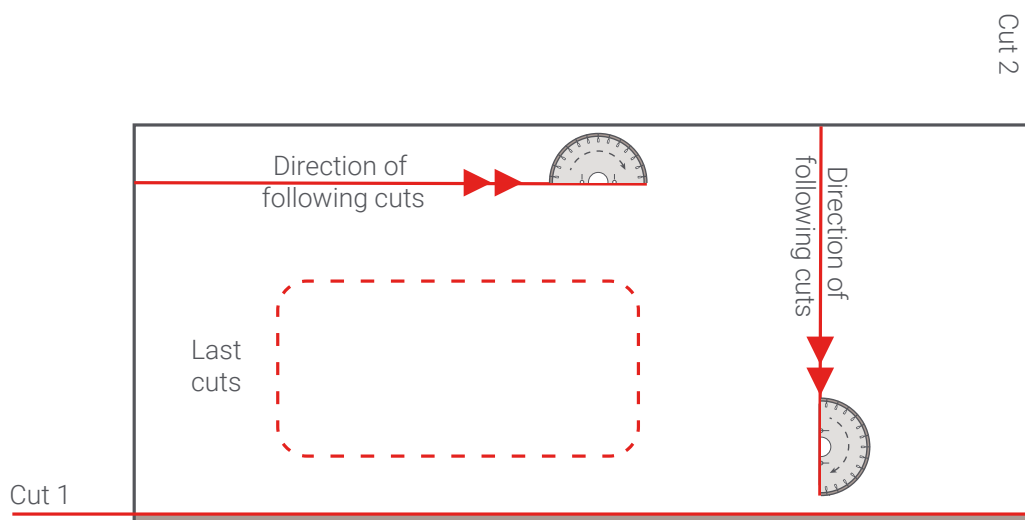




3. MECHANICAL MACHINING

3.1/ FUNDAMENTAL PRINCIPLES

Before performing any operation, the sheet must be trimmed with a longitudinal and transversal cut with incremental distance from the edge with respect to the thickness of the sheet (see the trimming diagrams). The subsequent cuts will be done starting from the rough side toward the side that was trimmed previously as indicated in the figure below. Trimming the 4 sides, there will be no restriction in the direction of the subsequent cuts.



Warnings

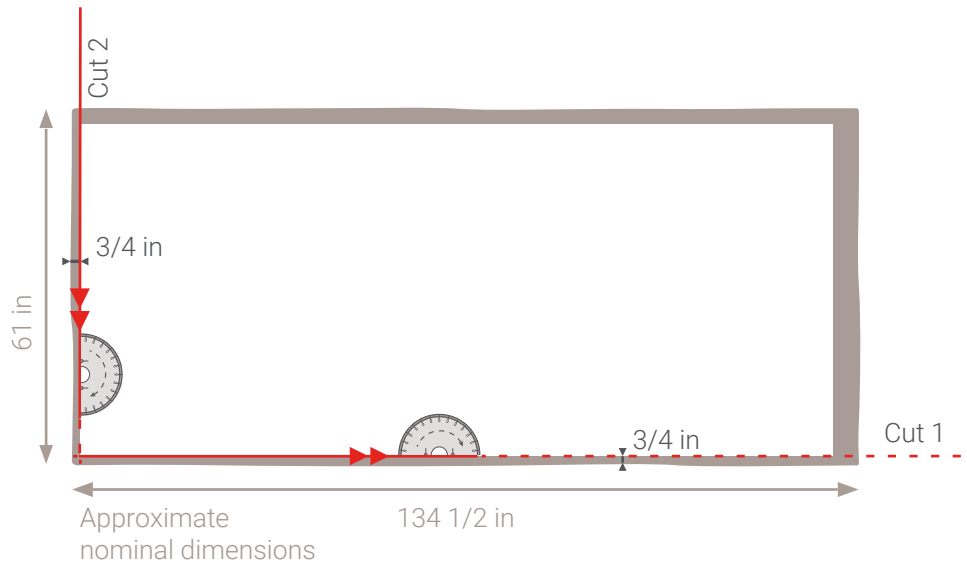
During use of the machinery, always comply with safety standards.

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry, even better if positioned vertically.

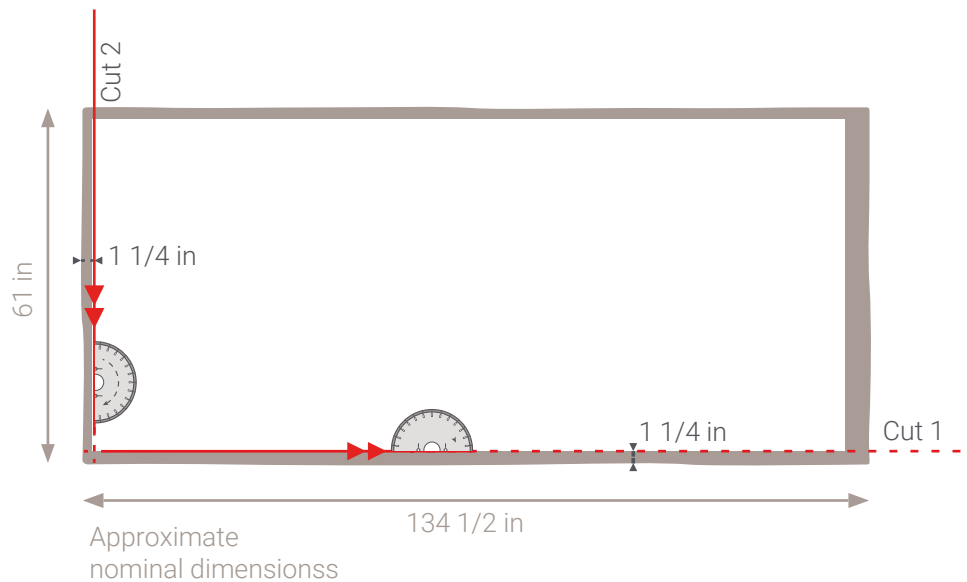
The cutting direction must always be in agreement with the rotation of the disc.

3.1.1/ Trimming diagrams

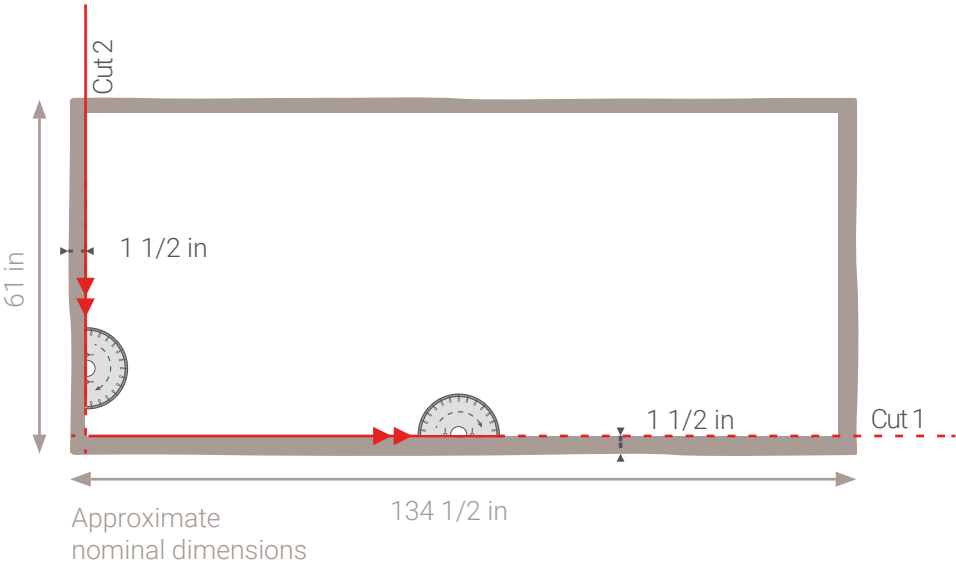
Thickness 1/2 in - Minimum trimming 3/4 in



Thickness 3/4 in - Minimum trimming 1 1/4 in



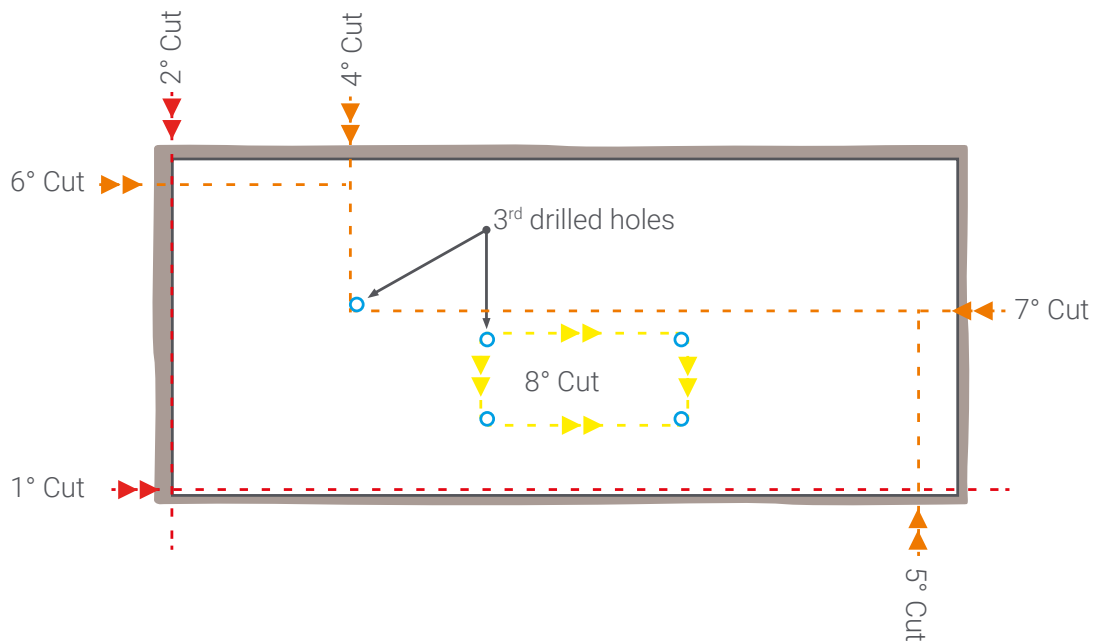
Thickness 1 1/4 in - Minimum trimming 1 1/2 in



3.2/ OPERATIONS WITH BRIDGE SAW

3.2.1/ Order of operations

Example of cutting diagram for bridge saw



Order of operation phases:

1. Sheet trimming (Red dashed line)
2. Drilling holes (Light blue dashed line)
3. Perimeter cuts of the countertop (Orange dashed line)
4. Interrupted cuts (Yellow dashed line)

Warnings

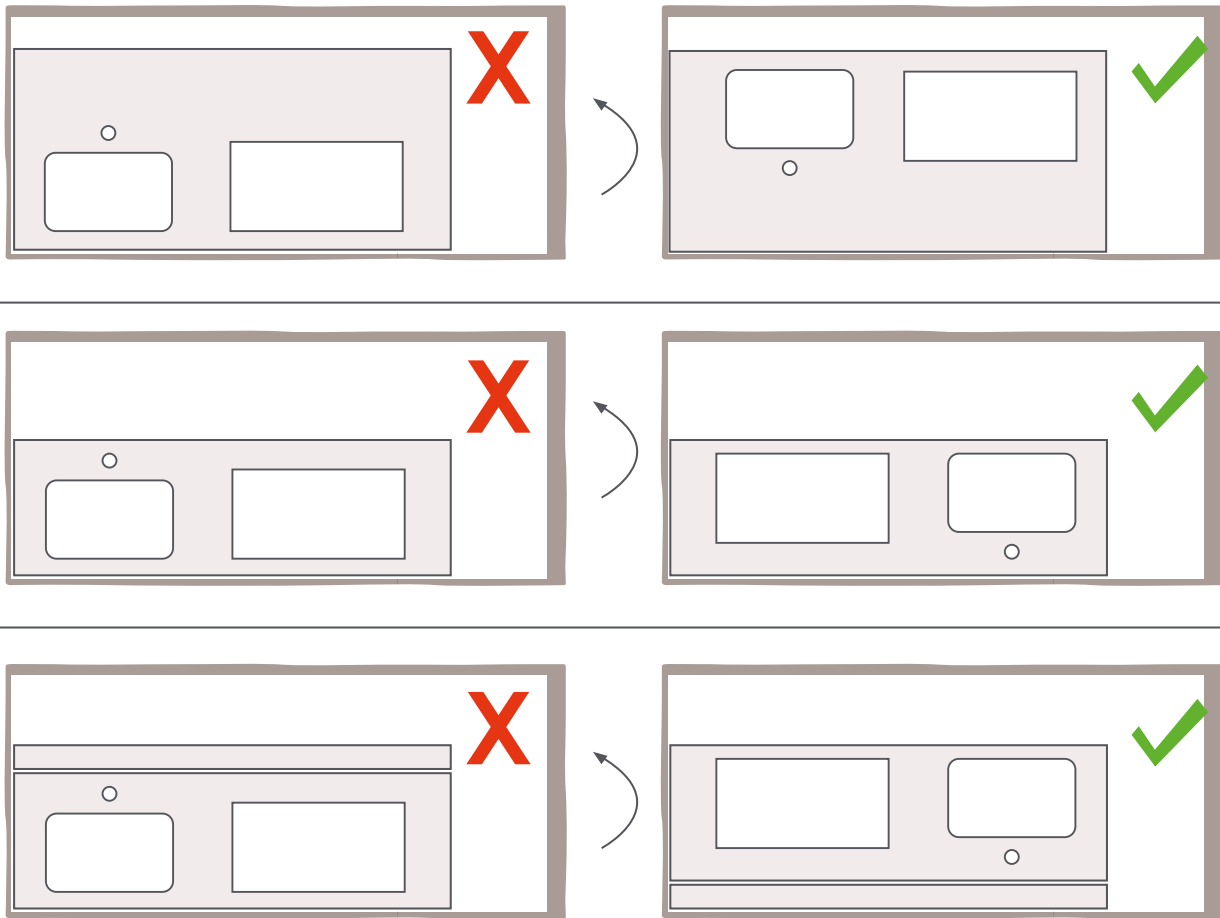
The cutting direction must always be in agreement with the rotation of the disc.

3.2.2/ Piece orientation

We recommend making the sink or stovetop holes toward the central part of the sheet and the lintels on the external sides of the same.

Incorrect fabrication

Correct fabrication



3.2.3/ Lapitec disc tool

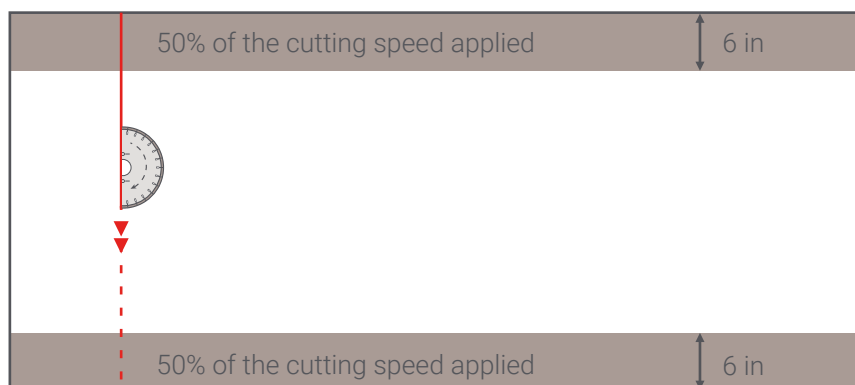
General measures

During cutting, use abundant water. The jet of water must be pointed to the front and side with respect to the disc plate, as close as possible to the cutting area (as illustrated in the figure below).

Attention: an insufficient flow of water will cause the disc to overheat, compromising the success of the operation and the tool itself.



Ensure that the cutting bench is in good condition and flat. Should the bench not be in good condition, we suggest placing a high density technical rubber mat between the material and the cutter bench, reducing vibrations and improving the finish of the cut.



Slow the feed rate down to 50% for the first 6 in and the last 6 in.

For cuts on small size pieces, we recommend blocking the material with special stops to avoid movement during the operation.

Attention: All data refers to Lapitec® brand discs

DISC ROTATION PARAMETERS

Ø Saw blade	Spindle Revolutions rpm	Peripheral speed ft/s
12	2100-2300	111
14	1800-2000	111
16	1600-1800	111
18	1400-1600	111
20	1260-1460	111

Note: if the number of spindle revolutions is fixed, you must choose the disc that requires the number of revolutions closes to those of the spindle.

CUTTING PARAMETERS

Type of cut	Feed rate in/min 1/2 in	Feed rate in/min 3/4 in	Feed rate in/min 1 1/4 in
Cut entrance from above sheet	4	4	4
Straight cut	55	32	24
Inclined cut	32	18	12

Warnings

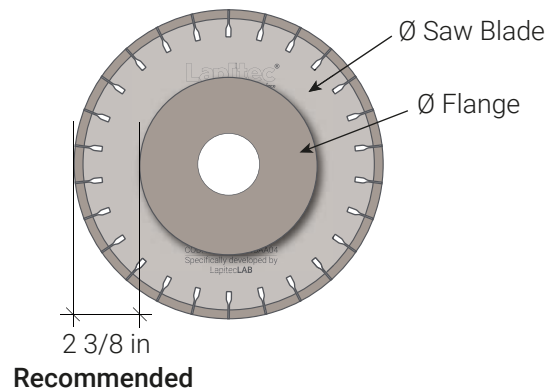
Any increase of spindle absorption indicates the need to sharpen the disc using an honing stone.

The parameters listed above should be understood to refer to machines with larger size flange, well directed and abundant water, flat bench and decelerations. In the absence of the aforementioned conditions, reduce the feed to the minimum of the listed parameters (1/2 in feed 55 in/min).

The disc must be chosen based on the characteristics of the machine, the thickness of the material being cut and the angle of inclination. The exposed part of the disc must be reduced as much as possible, considering 2 3/8 in inches of passage beyond the material to be indispensable.

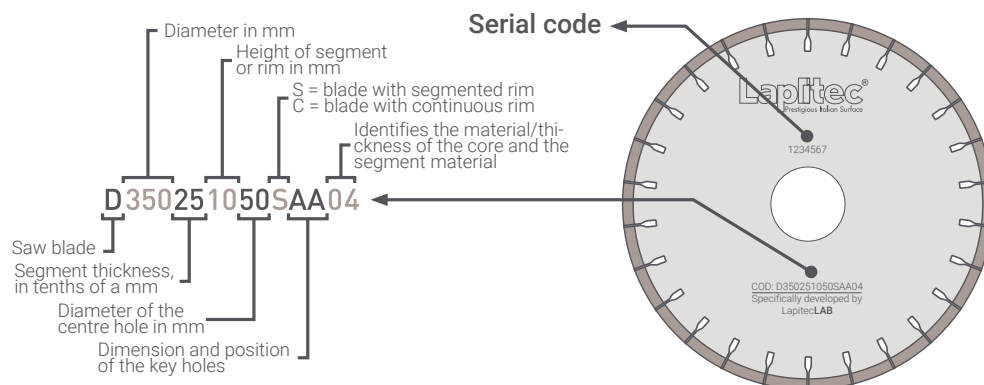
For reduction of the diameter of the central hole, we recommend using only the rings supplied by the disc manufacturer that came with the disc.

Flange sizing



Lapitec® discs coding

All discs developed by LapitecLAB are sold under the **Lapitec®** brand and follow a coding system for identification and reordering. Use **Lapitec®** brand discs only to cut **Lapitec®**. Use of the **Lapitec®** disc to cut other materials may cause damage to objects or people.



Lapitec® discs

Diameters 12-14-16-18-20 in



Note: custom sizes are available on request.



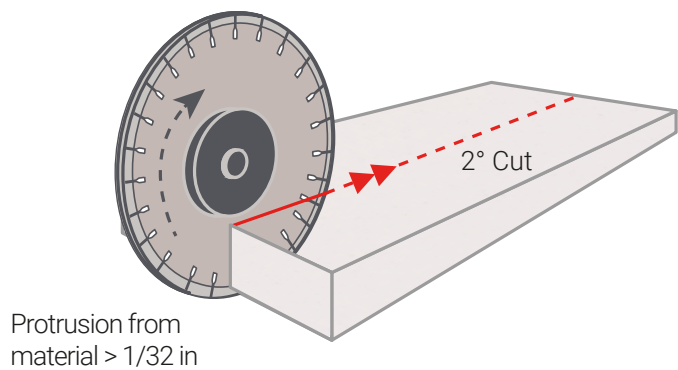
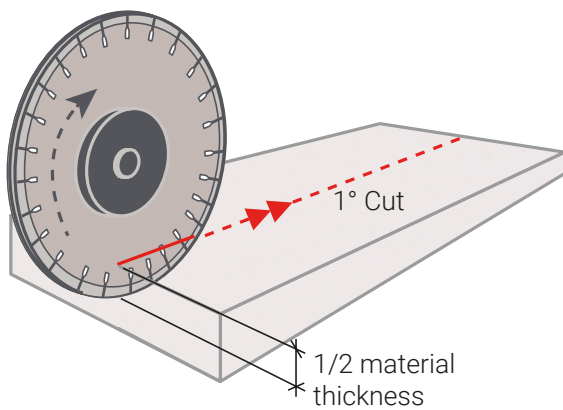
3.2.4/ Step-cutting

In the event that one or more of these specific conditions are present, step-cutting is recommended:

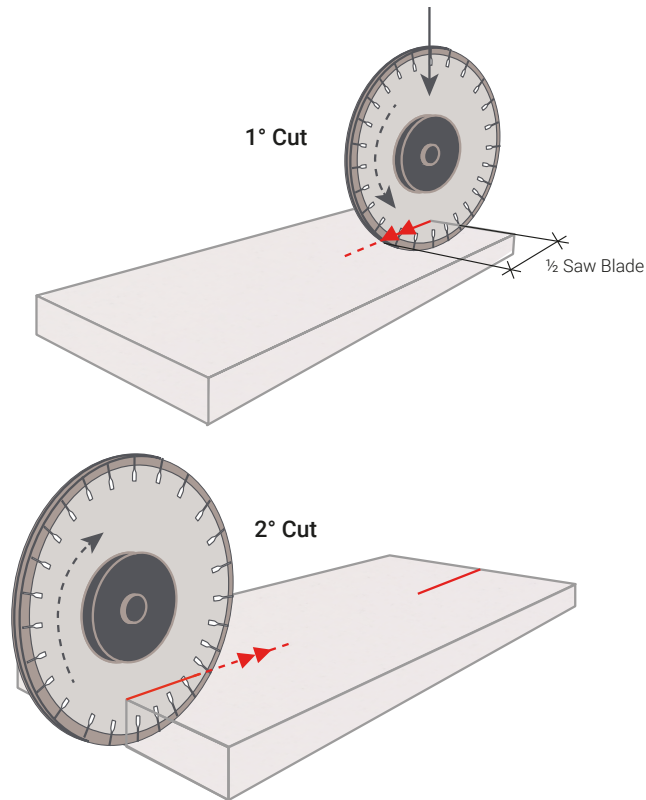
- you do not have the larger size flange;
- there is no abundant water;
- the disc is in poor condition;
- the resting surface not flat.

Type of cut	Feed rate in/min 3/4 in	Feed rate in/min 1 1/4 in
Straight cut	63	47
Inclined cut	35	24

STEP-CUTTING DIAGRAM

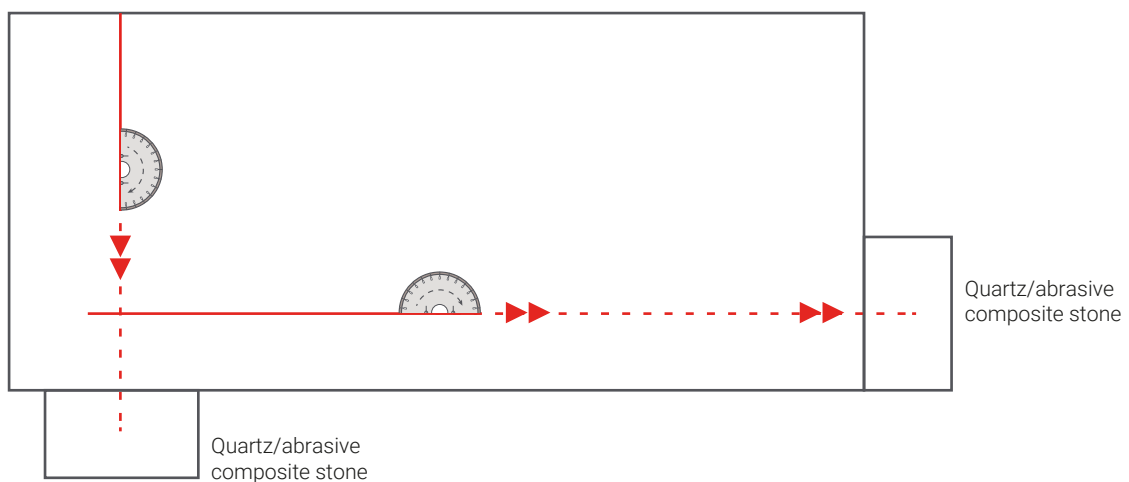


PRE-CUTTING DIAGRAM

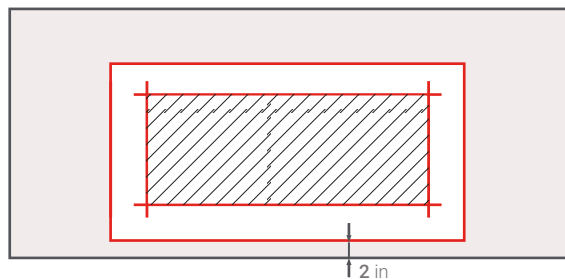
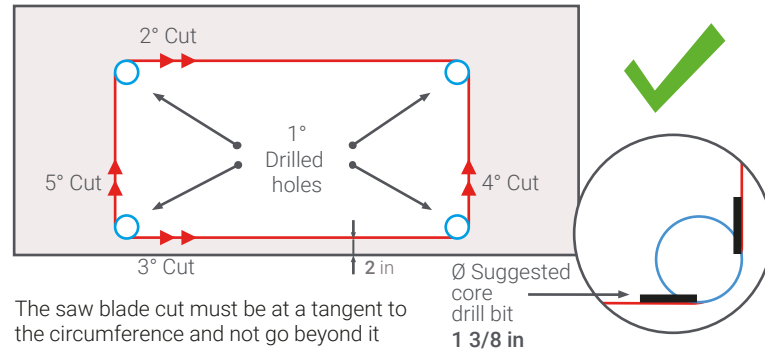


3.2.5/ Quartz agglomerate/abrasive stone

We recommend positioning a piece of quartz agglomerate/honing stone at the output of the **Lapitec®** disc cutting line. This will allow deviations of the disc as the material exits to be limited, avoiding unpleasant chipping and also allowing the disc to be sharpened.



3.2.6/ Sink cut diagram with disc

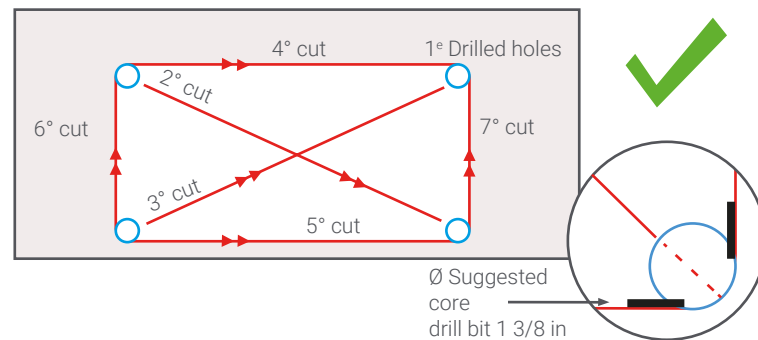


Specific measures

In the event that one or more of the following conditions are present:

- the resting base is not flat
- islands measuring more than 102 x 23 in
- sinks measuring more than 22 x 19 in

We recommend following the cutting diagram indicated below:



3.3/ OPERATIONS WITH WATERJET

3.3.1/ Parameters of operations with WaterJet

Low pressure entrance hole parameters (Piercing)

Thickness	Minimum pressure Bar	Minimum pressure Psi	Abrasive 80 Mesh lb/min
1/2 - 3/4 - 1 1/4	600	8700	0.77-0.99

Tips

When possible, drill the entrance hole on the outside of the sheet. Alternatively, the entrance hole a few tenths of an inch from the cutting perimeter is, in any case, never less than 3/16 in from the same.

High pressure cutting parameters

Thickness	Minimum pressure Bar	Minimum pressure Psi	Feed rate in/min	Abrasive 80 Mesh lb/min
1/2	3600-3800	52200-55100	19.7-35.5	0.77-0.99
3/4	3600-3800	52200-55100	15.7-19.7	0.77-0.99
1 1/4	3600-3800	52200-55100	7.9-11.8	0.77-0.99

Tips

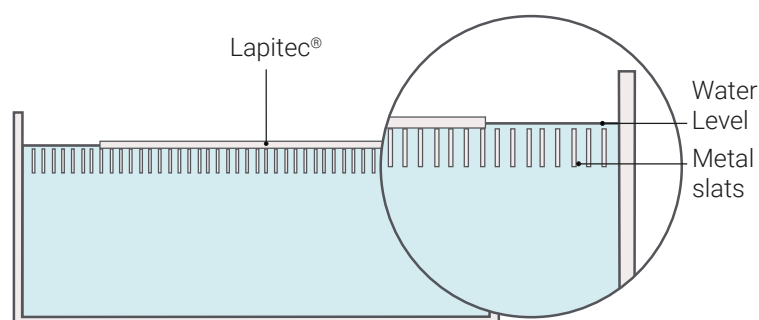
The data listed refers to maximum recommended values. To obtain a better finish, lower the feed parameters. Also, for the cut with Waterjet, the trimming operation is recommended as indicated in the "Trimming diagrams" indicated in the section 3.1 FUNDAMENTAL PRINCIPLES.

Ensure that the work bench is in good condition and flat. Furthermore, the piece must rest perfectly without interference of work scraps or elements of discontinuity.

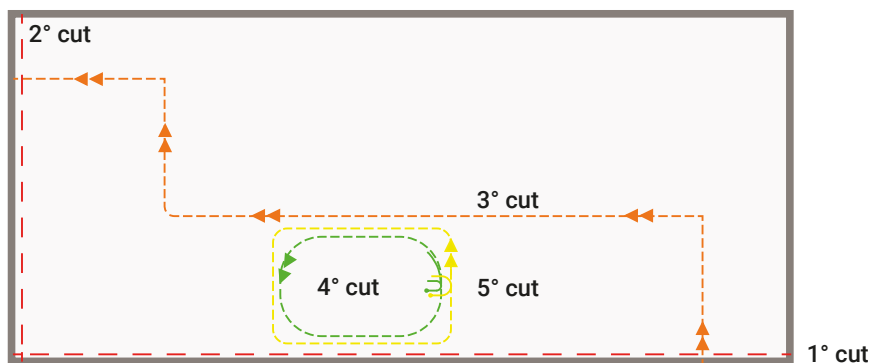
For angle equal to or lower than 90°, we recommend connecting the angle with a radius $\geq 3/16$ in.

WATER LEVEL IN THE WATERJET TANK:

To improve the finish in the part below the piece, we recommend maintaining the water level higher or the same as the Ø surface of the bench.



3.3.2/ Cutting sequence



Operation phases:

1. Sheet trimming (Red dashed line)
2. Sheet trimming (Red dashed line)
3. Piece shape cut (Orange dashed line)
4. Sink pre-cut, if necessary (Green dashed line)
5. Sink cut (Yellow dashed line)

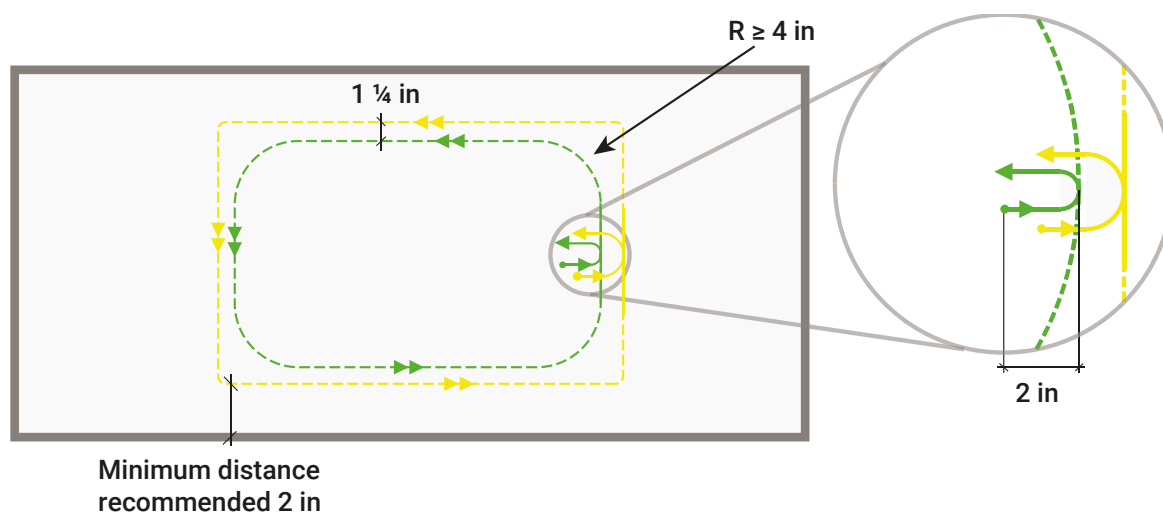
3.3.3/ Sink cut diagram

In the event that one or more of the following conditions are present:

- the resting base is not flat
- islands measuring more than 102 x 23 1/2 in
- sinkis measuring more than 22 x 19 in

We recommend following the cutting diagram indicated below:

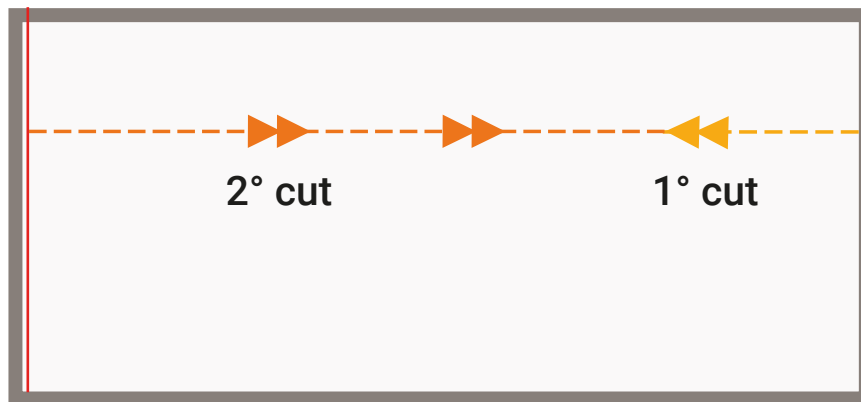
NOTE: the cutting of the sink opening must begin inside the pre-cut as indicated in the figure below.



3.3.4/ Pre-cutting diagram

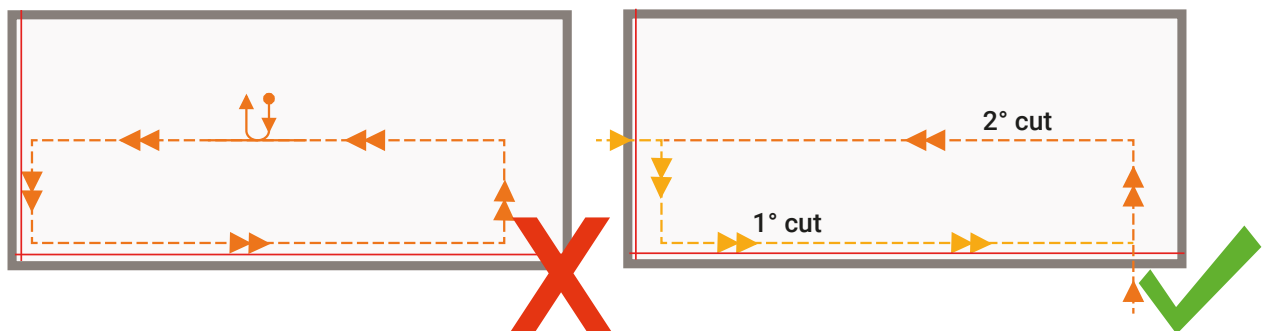
Specific measures: In the event that one or more of these specific conditions are present, step-cutting is recommended:

- you do not have the larger size flange;
- there is no abundant water;
- the disc is in poor condition;
- the resting surface not flat.



3.3.5/ Cutting diagram

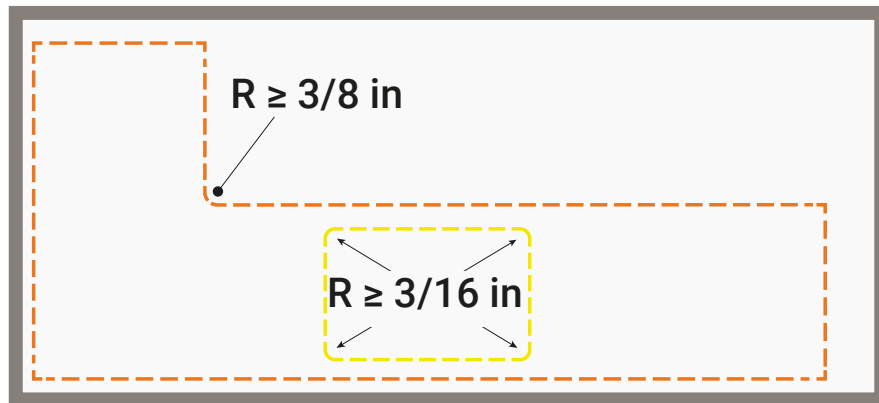
When you want to cut the shape of the countertop, it is advisable to subdivide the geometry into two parts, always beginning with the cuts at the exterior of the sheet. Cutting the shape will always be done after the trimming cuts.



3.3.6/ Radii

All the internal corners relative to a hole must have a minimum radius of 3/16 inches, internal corners referring to general geometry of the piece (e.g. L-shaped countertop) must have a minimum radius of 3/8 inches.

A higher radius confers greater structural resistance to the finished product, otherwise any corner not rounded creates a point of stress on the countertop.



3.4/ OPERATIONS WITH CONTOURING MACHINE

3.4.1/ Lapitec® finger bit tool

Parameters

Data referring to tool measuring \varnothing 7/8 in \varnothing with **Lapitec®** trademark for through cuts.

Thickness	Spindle Revolutions rpm	Feed rate in/min
1/2	3800-4200	14-16
3/4	3800-4200	12
1 1/4	3800-4200	8-10

Do not make cuts with oscillation of the tool. The excessive reduction of the cutting speed causes the closing of the tool cutting diamond, generating excessive push on the material with consequent breakage of the piece.

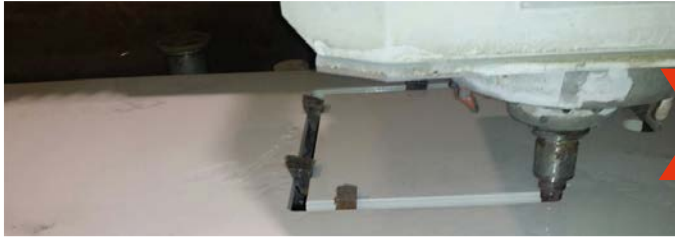
During the operation, use abundant and well directed water on the exterior and interior of the tool (as illustrated in the figure below).



3.4.2/ Sink cut with contouring machine

Before beginning operations with a coping machine, ensure that the work surface is adequately predisposed to guarantee correct execution.

All the operations must be performed in compliance with the indications in the Technical Manual, without the use of supports other than suction cups and Teflon positioning stops. The use of devices that act mechanically on the piece could cause it to break.



WEDGES



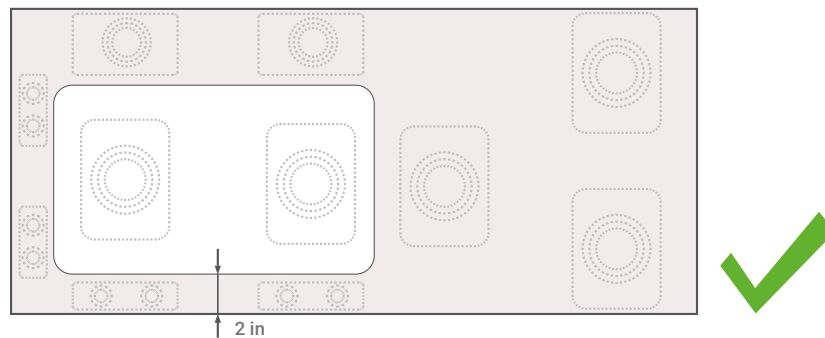
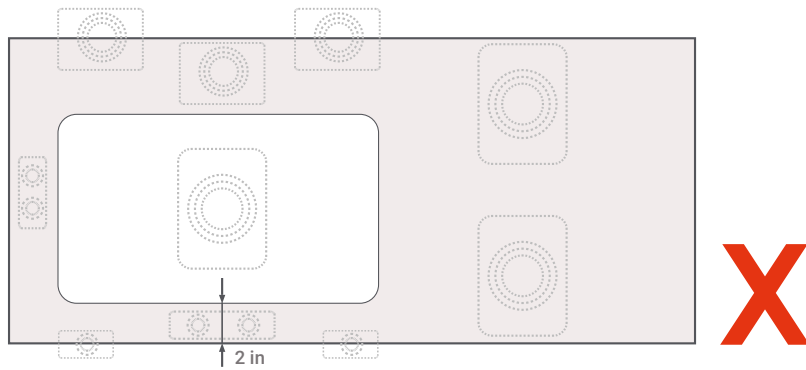
GRIPPERS



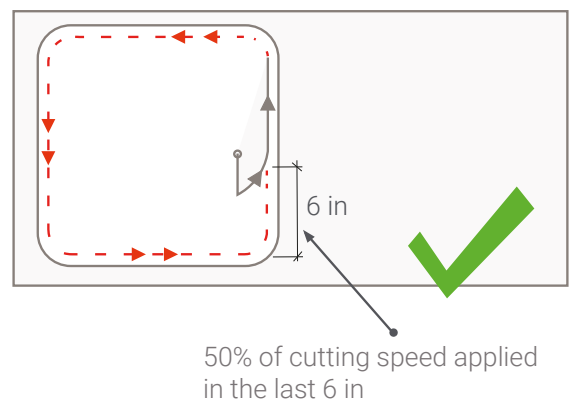
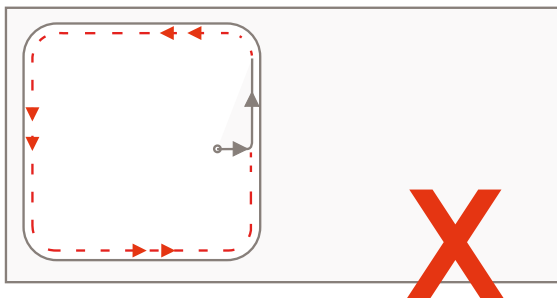
PISTONS

We recommend appropriately distributing the suction cups in order to sustain the most stressed areas of the piece during the operation. Use suction cups suitable for supporting the tightest areas (like the photo on the side).

Before positioning the piece, ensure that the suction cups are clean and that there is no residue from previous operations, otherwise we recommend rinsing them abundantly with clean water before use.

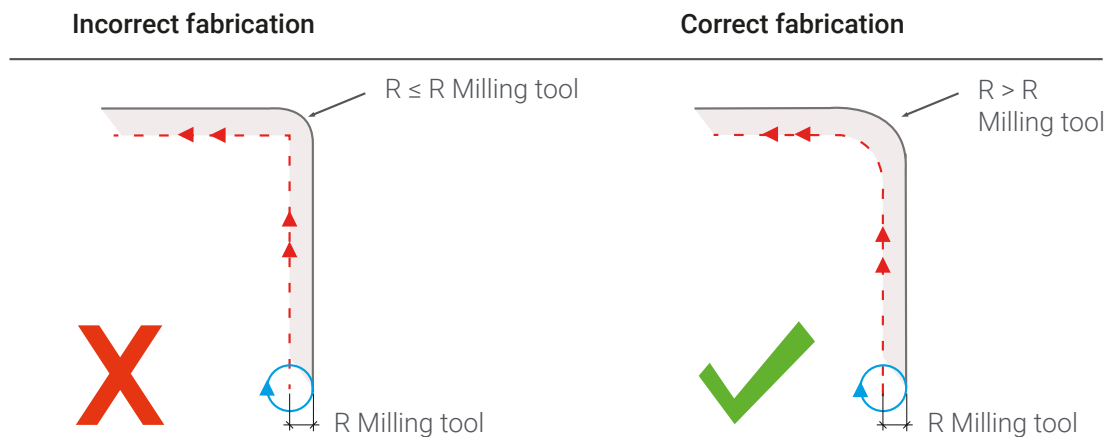


The entrance radius of the milling cutter must be wide to favor the exit of the tool at the end of the operation and to prevent slivering that could compromise the finished product.



50% of cutting speed applied in the last 6 in

It is advisable to make internal connections with a larger radius than the one of the milling cutter, this way the machine will perform a more fluid motion that is also less stressful for the material.



When using the milling tool on 1/2 in and 3/4 in thicknesses, it is advisable to centre the tool with respect the thicknesses of the slab, in this way vibrations and the force exerted on the workpiece and the tool are reduced. Also it is not recommended to oscillate the tool during cutting. We also recommend against performing oscillation during the cut.



Processing tips

Any breakage of the tool is attributable to:

- feed speed too high
- number of revolutions lower than the nominal revolutions of the tool
- insufficient cooling water

Any breakage of the piece is attributable to the fact that the material being cut bears the weight in a single point.

Solutions to implement:

Where possible, support the parts with suction cups that will be removed after the cut or execute the cut in a way that does not let the weight stress a corner, subdividing the side into two segments.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

3.4.3/ Lapitec® drilling tool

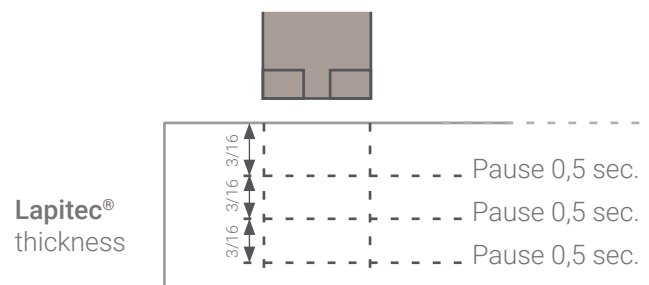
Parameters - Data refers to Lapitec® brand tool.

Available diameters	Spindle Revolutions rpm	Feed in/min
Ø 1 1/4	2000	13/16 - 1 3/16
Ø 1 3/8	1800	13/16 - 1 3/16
Ø 2 3/16/ 2 1/4	1200	13/16 - 1 3/16
Ø 2 3/4	900	13/16 - 1 3/16
Ø 4	650	13/16 - 1 3/16

Tips

During the operation, use abundant and well directed water on the exterior and interior of the tool.

To avoid slivering, we recommend against boring with oscillation.



To avoid denting on the back of the piece, we suggest stopping 1/16 in (2mm) from the bottom and completing the hole with hammering from the opposite side of the drilling.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry. For the faucet holes, we recommend placing a suction cup near the holes in order to correctly support the piece, avoiding compromising the final product.

3.4.4/ Lapitec® router for incremental cutting (finishing)

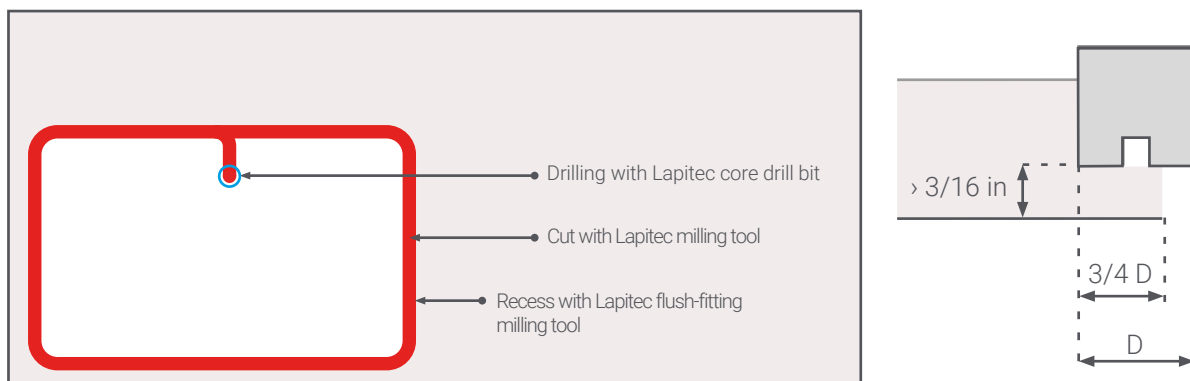
Parameters - Data refers to a Lapitec® brand tool

Available diameters	Spindle Revolutions rpm	Feed mm/min	Removal*
Ø 1/4	7500	4-8	1/64-1/32
Ø 5/16	7500	8-12	1/64-1/32
Ø 3/8	7000	12-16	1/64-1/32
Ø 1/2	6500	24-32	1/64-1/16
Ø 5/8	6000	32-60	1/64-1/16

* Use tools with 1/2 and 5/8 Ø to create the recess, and those with 1/4, 5/16 and 3/8 Ø for finishing the corners.

Tips

During the operation, use abundant and well directed water on the exterior and interior of the tool.



We recommend proceeding with the routing operation after executing the sink cut. It is also advisable to ensure that after the drop, at least 3/16 in of material thickness remain.

During the operation, use abundant and well directed water on the exterior and interior of the tool.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

3.4.5/ Lapitec® bushing tools

For blank drilling **Lapitec®**, we recommend using **Lapitec®** brand bushings.

Available diameters	Spindle Revolutions rpm	Feed in/min
Ø 1/4	6000	5/8 - 13/16
Ø 1/4 (KEIL)	6000	5/8 - 13/16
Ø 5/16	6000	5/8 - 13/16
Ø 3/8	6000	5/8 - 13/16
Ø 7/16 (FISCHER)	6000	5/8 - 13/16
Ø 1/2	6000	5/8 - 13/16

Tips

During the operation, use abundant and well directed water on the exterior and interior of the tool.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

3.4.6/ Lapitec® Keil/Fischer drilling kit

Tool for undercut boring for mechanical fastenings with Keil/Fischer system.

Given the hardness of the material, to avoid excessive wear of the slotting tool for the Keil/Fischer blind hole, Lapitec SpA suggests pre-drilling using a bushing tool (indicated above).

Type	Spindle Revolutions g/min	Feed mm/min
KEIL	6000	1/16
FISCHER	6000	1/16

3.4.7/ Lapitec® router for incremental cutting (roughing)

Tool for sink cut on continuous base, without suction cups.

Parameters - Data refers to a Lapitec® brand Ø 5/8 inch tool

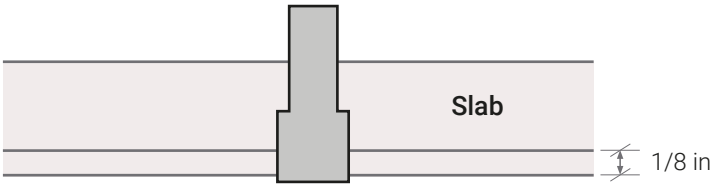
Thickness	Spindle Revolutions rpm	Feed in/min	Max removal in
1/2-3/4 - 1 1/4	6500	16-24	1/16

In order to avoid chipping in the lower area of the piece which could compromise its use, we recommend ending the step-cutting leaving 1/8 inches of material. Then this residue of material is removed in a single pass recessed at least 1/16 inches and with 50% of the speed previously used.

Also, remember that the increment/recessing between one pass and the next should be done on an area free of material (hole).

Tips

During the operation, use abundant and well directed water on the exterior and interior of the tool.



Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

3.4.8/ Lapitec® stubbing wheel tool

Parameters - Data refers to a Lapitec® brand tool.

Available diameters	Spindle Revolutions rpm	Feed in/min	Max removal mm
Ø 2	4500-5000	12	1/16
Ø 3 1/2	4000-4500	20	1/16

Tips

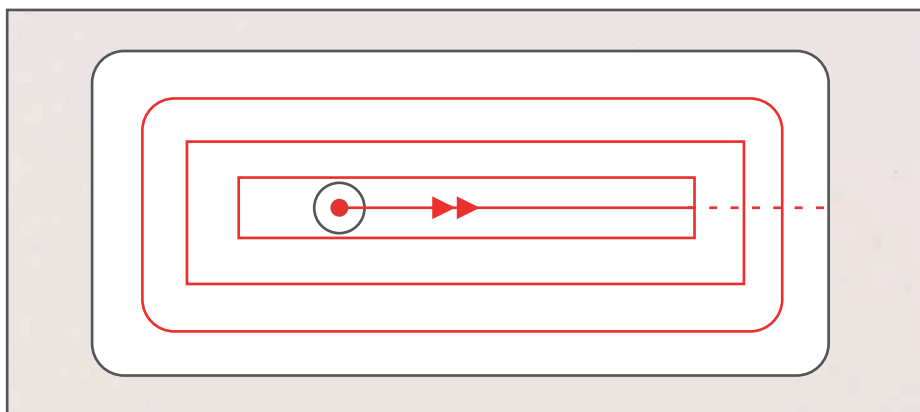
Remove a maximum of 1/16 inches per pass.

During the operation, use abundant and well directed water on the exterior and interior of the tool.

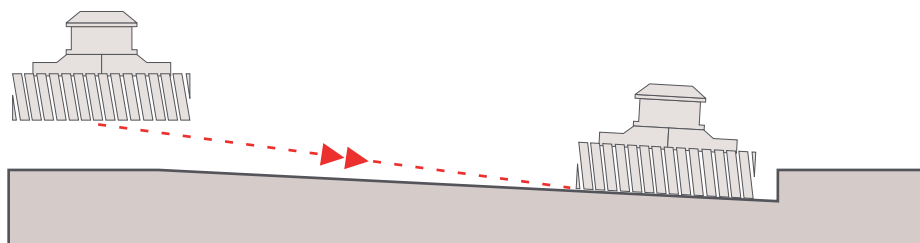
Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

Stripping diagram



Approach diagram



3.4.9/ Spherical milling tool for drip drainers*

For the **Lapitec®** channel milling cutter, we recommend using granite/ceramic spherical grinders.

Parameters - Data refers to brand ø 5/16 inch tool

Grinder	Spindle Revolutions rpm	Feed in/min
1	6000	10
2	6000	16
3	6000	16
4	6000	8

Tips

During the operation, use abundant and well directed water on the exterior and interior of the tool.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

3.4.10/ Engraving tool*

To make surface incisions, we recommend the use of a granite tool in PCD (polycrystalline diamond).

Thickness	Spindle Revolutions rpm	Feed in/min	Max removal in
1/2 - 3/4- 1 1/4 in	8000-10000	3-5	1/16

Tips

During the operation, use abundant and well directed water on the exterior and interior of the tool.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

* See the manufacturer's technical data sheet for the tool to define the appropriate processing parameters.

The tool operating parameters may vary depending on the manufacturer.

3.4.11/ Shaping or forming tool

For profiling **Lapitec®**, we recommend using granite/ceramic grinders.

Parameters - Data refers to brand ø 3 1/2 inch tool

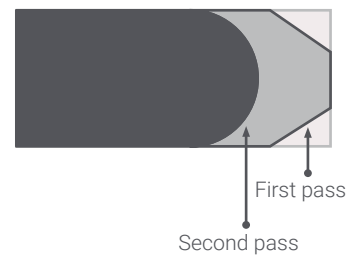
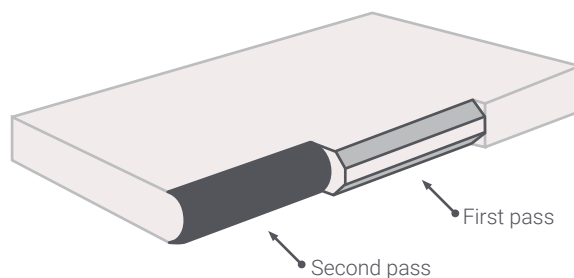
Grinder	Type	Spindle Revolutions rpm	Feed in/min
1	Metallic	5000-5500	39
2	Metallic	5000-5500	98
3	Metallic	5000-5500	98
4	Metallic	4500-5000	39
5	Polishing	2500-3000	35
6	Polishing	2500-3000	35
7	Polishing	2500-3000	35

Tips

During the operation, use abundant and well directed water on the exterior and interior of the tool.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.
For profiling shapes with large removals. We recommend subdividing the removal into 2 passes of the 1st metallic tool or using the breaker tool.



3.4.12/Polishing the countertop

For polishing **Lapitec®**, we recommend using granite polishing grinders.

Parameters - Data refers to brand ø 4 inch tool

LUX FINISH

Grinder	Grain	Spindle Revolutions rpm	Feed in/min	Compression *	Passes
1	GR 50	1200	236	0,5	1
2	GR 100	1200	236	0,5	1
3	GR 200	1200	236	0,6	1
4	GR 500	1200	236	0,8	2
5	GR 1000	1200	177	1	1
6	GR 2000	1200	177	0,5	2
7	GR 3000	1200	177	1	2

SATIN FINISH

Grinder	Grain	Spindle Revolutions g/min	Feed in/min	Compression *	Passes
1	GR 50	1200	236	0,5	1
2	GR 100	1200	236	0,5	1
3	GR 200	1200	236	0,6	1
4	180 GR BRUSH	1500	137	1	1

*Specific data for Breton® machines with polishing system with spindle current absorption control.

Warnings

After each operation, it is advisable to abundantly rinse the surface with clean water before the piece is dry.

3.4.13/Lapitec® brand tools



Lapitec® finger bit

Diameter 7/8 in



Lapitec® drilling tools

Diameters 1 1/4- 1 3/8- 2 1/4- 2 3/4 - 4 in



Lapitec® router for incremental cutting (finishing)

Diameters 1/4- 5/16- 3/8- 1/2- 5/8 in

Lapitec® router for incremental cutting (roughing)

Diameter 5/8 in



Lapitec® stubbing wheels

Milling tool diameter 2 and 3 1/2 in



Lapitec® bushing tools

Cup saw diameter 1/4- 5/16- 3/8- 7/16- 1/2 in



Keil-Fischer Lapitec® drilling kit

4. DESIGN PRINCIPLES

4.1/ INTERNAL CORNERS AND HOLES

All the internal corners relative to a hole must have a minimum radius of 3/16 inches, internal corners referring to general geometry of the piece (e.g. L-shaped countertop) must have a minimum radius of 3/8 inches.

A higher radius confers greater structural resistance to the finished product (see figure 1), otherwise any corner not rounded creates a point of stress on the countertop (see figures 2, 3 and 4).

We also recommend creating a minimum radius of 3/16 inches in the presence of columns or elements that require cutting of the countertop.

$R \geq 3/16$ in
 $R \geq 3/8$ in for industrial kitchen

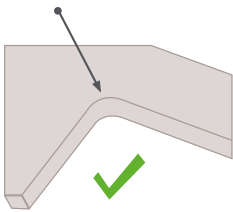


Figure 1

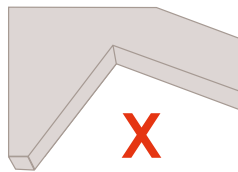


Figure 2

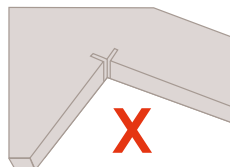


Figure 3

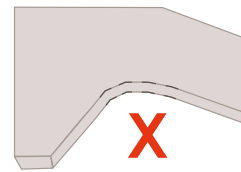
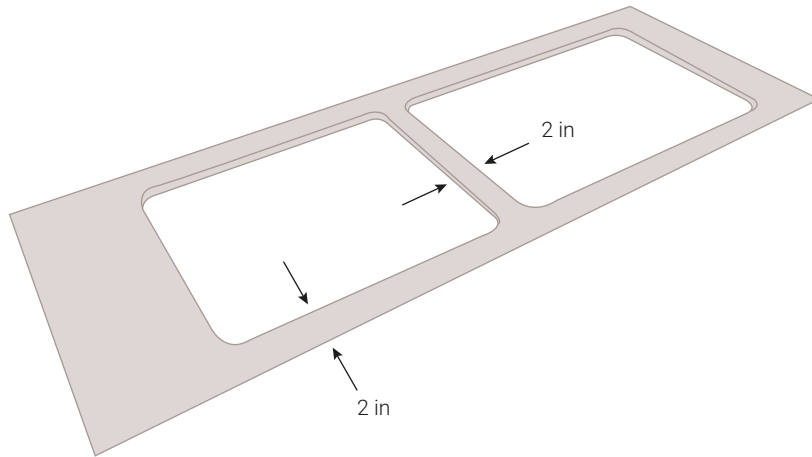


Figure 4

4.2/ MINIMUM DISTANCE BETWEEN EDGE AND HOLES

The minimum recommended distance between the **Lapitec®** countertop and the hole is 2 inches.



Warnings

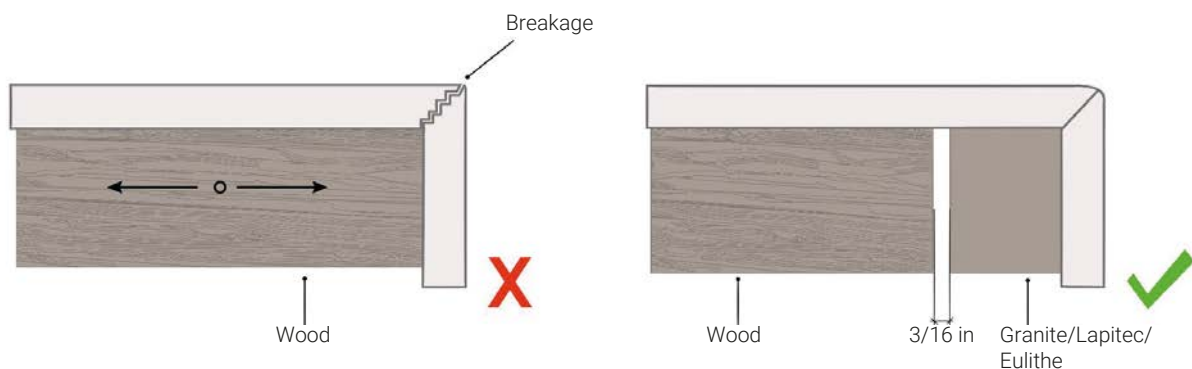
Between the **Lapitec®** countertop and the elements inserted within it, a sealant must be placed capable of compensating for the various thermal expansion due to daily use, such as silicone or other gaskets.

4.3/ OUTDOOR APPLICATION

In outdoor applications, with lamination or 45° bonding, it is recommended to support the lintel with a material having the same thermal expansion coefficient (granite, Lapitec, Rigid Foam...).

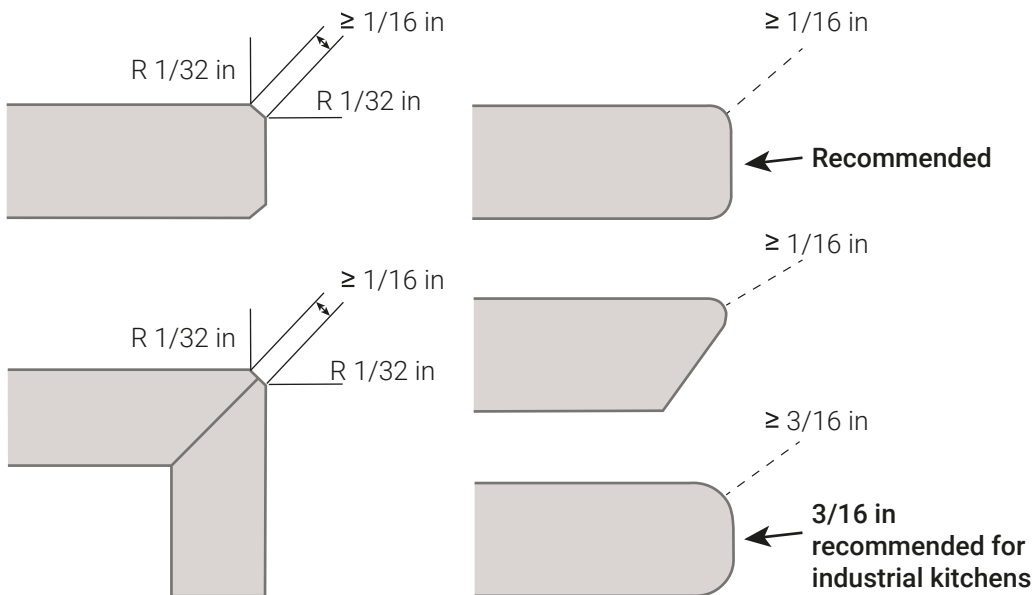
Therefore, the adhesive bond between the two pieces should not be supported with wood, which when exposed to the sun and weather may expand or swell, subsequently exerting pressure on the bonded parts and causing their detachment.

Moreover, it is recommended to maintain a gap of at least 3/16 inches between the wood and the top in order to absorb any thermal expansions.



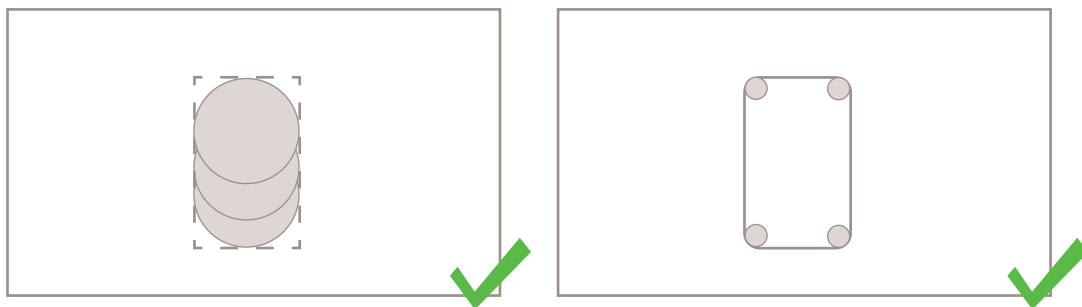
4.4/ EDGES OF THE COUNTERTOP

It is recommended to process the edges of the workpiece as indicated in the drawing. These instructions represent a good balance between aesthetics and functionality, while also guaranteeing a considerable reduction in the number of accidents with the product.



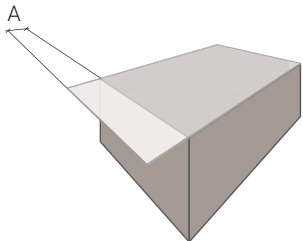
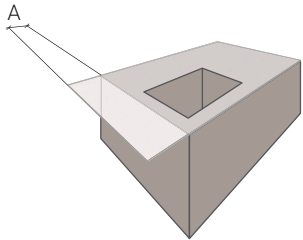
4.5/ ACCESSORY HOLES

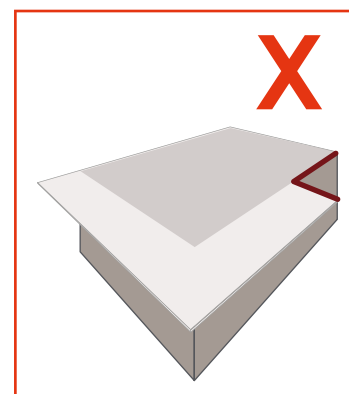
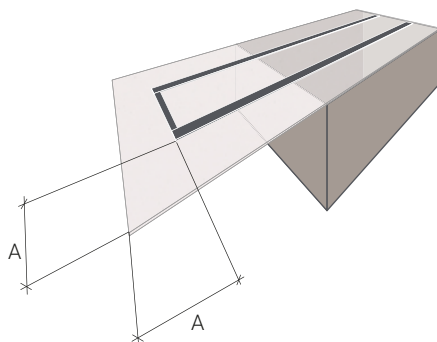
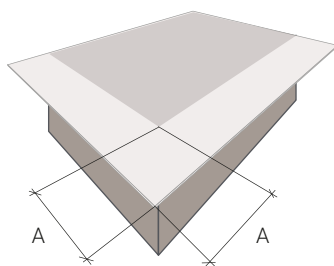
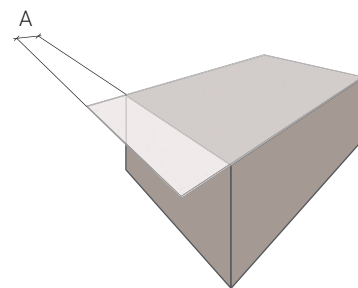
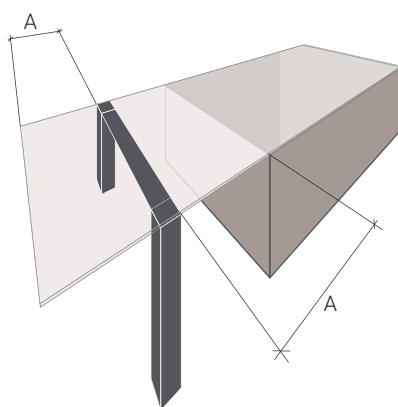
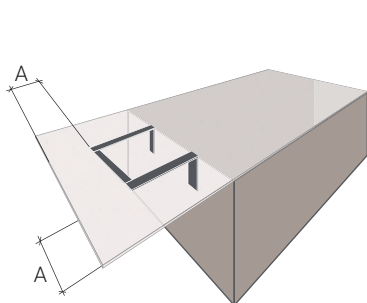
It is recommended to make circular cut-outs for accessories/switches as per the images shown below.



4.6/ OVERHANGS

When designing the top, it is a good idea to size the overhangs in accordance with the following table so as not to expose the workpiece to the risk of breakage during daily use.

	1/2 in	Thicknesses 3/4 in	1 1/4 in	Drawing
Worktop with unsupported overhang	$A < 6$ in	$A < 13 \frac{1}{2}$ in	$A < 19 \frac{1}{2}$ in	
Worktop with cutout with unsupported overhang	$A < 3 \frac{1}{2}$ in	$A < 8 \frac{1}{4}$ in	$A < 11 \frac{1}{2}$ in	

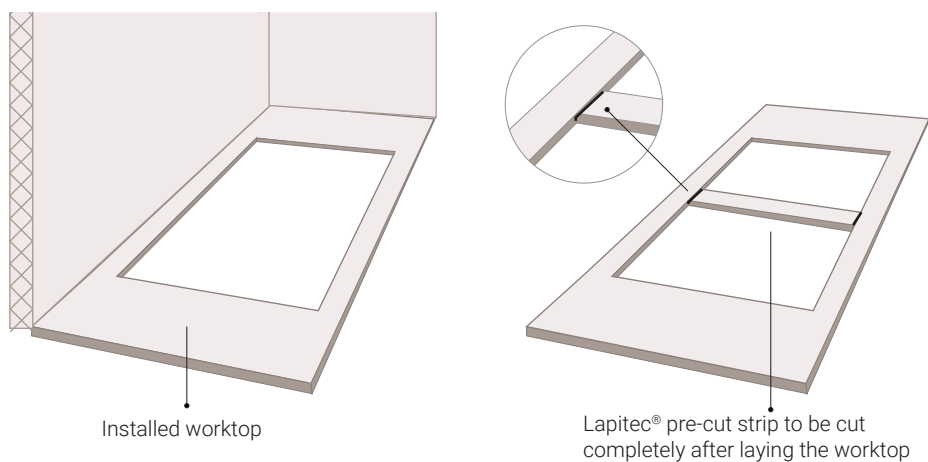


4.7/ LARGE HOLES

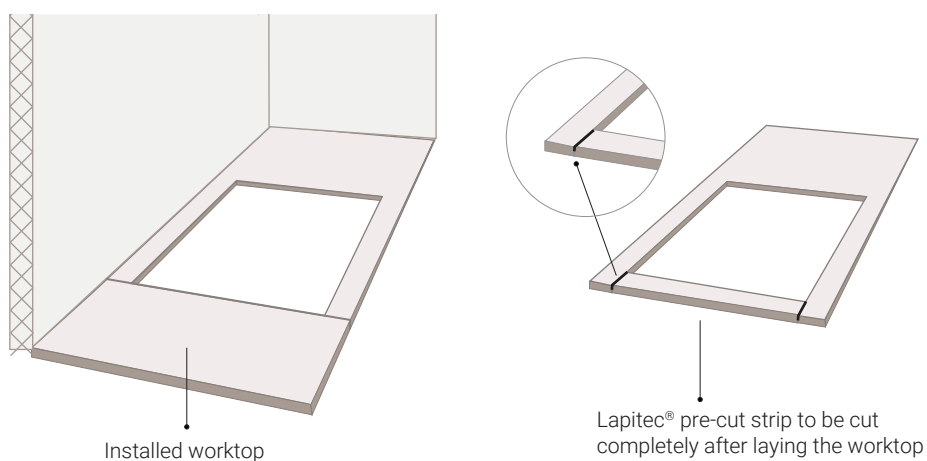
In the case of one or more large-sized cut-outs, or interrupted/open cut-outs, it is recommended to leave a strip of material to stiffen the top. The strip, already cut halfway into its thickness, will then be cut when installation is complete.

This will limit the possibility of breakage during handling and installation stages.

Case 1: large-sized cut-out



Case 2: interrupted sink cut-out





5. CLEANING, MAINTENANCE AND CARE

5.1/ ROUTINE CLEANING

For routine cleaning of **Lapitec®**, it is recommended to use a microfibre cloth to remove the dust from the surface. The **Lapitec®** top should be washed with warm water, possibly with the addition of a neutral detergent in the doses recommended by the manufacturer (such as vetril, glassex or FilaBrio). Then rinse with clean water and dry with a damp microfibre cloth or soft, non-abrasive sponge. For best results, it is recommended to clean any stains immediately without allowing them to dry.

WHAT NOT TO DO

Do not use dish-washing detergents, oily soaps, impregnating agents or other treatments. Certain detergents available on the market contain wax or polishing additives, which after several applications may leave an oily film on the surface that compromises the cleanliness and appearance of the **Lapitec®**.

5.2/ EXTRAORDINARY CLEANING

When routine cleaning is not sufficient, specific procedures must be carried out depending on the stain to be removed; in these cases, the use of aggressive, recommended products will not compromise the beauty of the top. The amount of time the stain is left on the surface has a strong influence on its removal, therefore cleaning is recommended as soon as possible.

It is recommended to start cleaning on a small portion of the area, checking the efficacy before applying the product across the entire surface. Do not use under any circumstances hydrochloric acid or caustic soda concentrates and products containing hydrofluoric acid and its derivatives.

Below is a table identifying the types of stains that may occur on the finishes and the products recommended by Fila Solution for their removal. Technical data sheets available on the website www.filasolution.com. The choice of detergent must be made based on the products reported in this table, or otherwise making sure that any other product has identical characteristics to those expressed herein.

Before proceeding, Lapitec SpA recommends contacting the provider of the cleaning products to obtain the most up-to-date documentation, always following the provided instructions.

After cleaning, the surfaces must be washed with plenty of warm water in order to remove all traces of the detergent used and dried with a cloth.

In the case of special needs, Lapitec SpA customer care can be contacted by writing to customercare@lapitec.com

Type of dirt	Type of detergent	Smooth surfaces (Lux, Satin)	Structured surfaces (Lithos, Vesuvio, Dune)
Limescale deposits	Descaler detergent (such as Fila Deterdek)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush
Aluminium marks	Descaler detergent (such as Fila Deterdek)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush
Pencil	Descaler detergent (such as Fila Deterdek)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush
Grease	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Coffee	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Ice cream	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Fruit juice	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Blood	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Wine	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Beer	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Ink	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Nicotine	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Urine and vomit	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Marker pen	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Coca Cola	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Hair dye	Degreaser detergent (such as Fila PS87)	Moist cloth	Non-abrasive sponge
Rubber	Degreaser detergent (such as Fila PS87)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush
Chewing Gum	Degreaser detergent (such as Fila PS87)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush
Rust	Descaler detergent (such as Fila No Rust)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush
Silicone	Specific detergent for the removal of silicone (such as Fila Zero Sil)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush
Candle wax	Solvent (such as Fila Solv)	Moist scratch-proof scotch-brite	Fine sorghum or plastic bristle brush

Notes

Stains such as ink, paint, wax, oil/grease can also be removed using solvents such as a nitro thinner or turpentine. Before applying the product on the entire surface of the finish, it is recommended to test its efficacy on a small portion first.

Do not use hydrochloric acid or caustic soda concentrates and products containing hydrofluoric acid and its derivatives.

Warnings

If the material is not cleaned after installation, or in the case of poor cleaning, Lapitec SpA denies all liability in regards to the efficacy of cleaning and maintenance operations.



6. LAPITEC SPA

Customer Care

All of the experience gained on international projects and through different assignments is exploited to perfect the product and accessories sold by Lapitec S.p.A. Through direct contact with customers, Lapitec SpA searches constantly for new solutions to make the service more and more complete and efficient for the various needs of use.

Should there be particular needs, please contact Lapitec SpA customer care at

customercare@lapitec.com

LapitecACADEMY - Training center

LapitecACADEMY is the division that handles training and supporting professionals who work with **Lapitec®** through training in the company and direct assistance. Thanks to the Academy Community service, all innovations and technical developments are promptly spread throughout the entire network of collaborators.

By participating in training courses conducted by LapitecACADEMY, each professional can earn Approved Fabricator certification and learn useful tips and techniques for working with **Lapitec®**.

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