



EPIC ITALIAN PRODUCT EVOLUTION

PORCELAIN STONEWARE

320x160x1,2

126"x63"x1/2"

TECHNICAL MANUAL



EPIC 
ITALIAN PRODUCT EVOLUTION

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160 cm

EPIC

ITALIAN PRODUCT EVOLUTION

320 cm



A NEW EXPERIENCE DEDICATED TO YOU, OFFERING INNOVATION AND QUALITY.

EPIC is fine porcelain stoneware tiling with a uniform finish, made of 100% natural minerals. In Epic, nature meets ever-evolving innovation, allowing you to experience new fields of application. Featuring high performance and functionality, this collection lends any project maximum customisation opportunities and a design-led look.

**FINE PORCELAIN
STONEWARE**
9 TEXTURE
1 FORMAT
320x160 126”x63”
THICKNESS
12mm 1/2”
2 FINISHES
POLISHED
NATURAL

**SIZE/
FINISHES**

320x160x1,2
126”x63”x1/2”

SUGAR BLACK



natural - glossy

PLANET MOON



natural - glossy

CALACATTA TOP



natural - glossy

CALACATTA ORO



natural - glossy

CALACATTA SUPREME



natural - glossy

GLACIER



natural - glossy

STATUARIO LIGHT



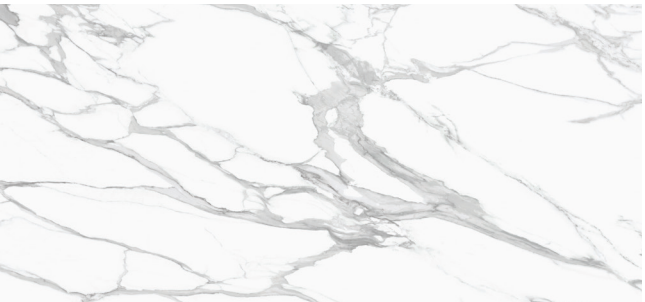
natural - glossy

STATUARIO



natural - glossy

STATUARIO EXTRA



natural - glossy

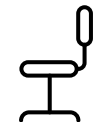
APPLICATIONS



**HOME
INDOOR**



HOSPITALITY



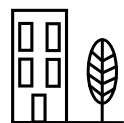
OFFICE BUILDING



SHOP BOUTIQUE



**COMMERCIAL
PUBLIC**



**EXTERNAL
CLADDING**

TECHNICAL PLUS



**EASY
MAINTENANCE**



**SCRATCH
RESISTANT**



WATERPROOF



**ACID
RESISTANT**
















**IMPACTS
RESISTANT**
















**FIRE
RESISTANT**

TECHNICAL INFORMATION

Unglazed fine porcelain stoneware slabs. Quality features compliant with test procedures envisaged by standard E.N. 14411. Appendix G, Group B1a UGL.		REFERENCE STANDARD REQUIREMENTS	STANDARD REQUIREMENT N ≥ 15 cm		SUGAR BLACK			PLANET MOON		GLACIER		CALACATTA ORO		CALACATTA SUPREME	
			(%)	(mm)	NATURAL	GLOSSY		NATURAL	GLOSSY	NATURAL	GLOSSY	NATURAL	GLOSSY	NATURAL	GLOSSY
	MOHS hardness	EN 101			6	4		5	4	6	4	5	4	6	4
	Crazing resistance	ISO 10545-11			OK	OK		OK	OK			OK	OK		
	Water mass absorbed, average value (%)	ISO 10545-3			0,04%	0,05%		0,07%	0,05%	0,04%	0,05%	0,10%	0,05%	0,04%	0,05%
	Breaking strength (N)	ISO 10545-4			5584.33	5000		5411.38	5000	5000	5000	5597.28	5636.79	5000	5000
	Breaking load (N)	ISO 10545-4			2899.20			2852.25				2915.25	2937		
	Bending resistance (N/mm²)	ISO 10545-4			57,4 N/mm²	53,00 N/mm²		57,33 N/mm²	53,00 N/mm²	53,00 N/mm²	53,00 N/mm²	57,61 N/mm²	56,79 N/mm²	53,00 N/mm²	53,00 N/mm²
	Deep abrasion resistance, unglazed slabs	ISO 10545-6			average rating 131 mm³	average rating 135 mm³		average rating 128 mm³	average rating 135 mm³	average rating 123 mm³	average rating 123 mm³	average rating 135 mm³	average rating 135 mm³	average rating 123 mm³	average rating 123 mm³
	Resistance to thermal shock	ISO 10545-9	Test method available		RESISTANT	RESISTANT		RESISTANT	RESISTANT	RESISTANT	RESISTANT	RESISTANT	RESISTANT	RESISTANT	RESISTANT
	Static friction coefficient (slip level)	ASTM C1028			DRY= 1,01 WET= 0,77	DRY= 1,27 WET= 0,38		DRY= 1,01 WET= 0,77	DRY= 1,27 WET= 0,38	DRY= 0,61 WET= 0,53	DRY= 1,27 WET= 0,38	DRY=0,89 WET=0,56	DRY=1,09 WET=0,39	DRY= 0,61 WET= 0,53	DRY= 1,27 WET= 0,38
	Dynamic friction coefficient	B. C. R.			Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70		Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70
	Stain resistance	ISO 10545-14	Test method available		Class 6	Class 5		Class 5	Class 5	Class 5	Class 5-3	Class 5	Class 5-4	Class 5	Class 5-3
	Resistance to low concentrations of acids and alkalis	ISO 10545-13	HCl 3% CITRIC ACID 100 g/l Koh 30 g/l		ULA	ULB		ULA	ULB	ULA	ULB	ULA	ULA / ULB	ULA	ULB
	Resistance to high concentrations of acids and alkalis		HCl 18% LACTIC ACID 5% Koh 100 g/l		UHA	UHB		UHA	UHB	UHA	UHB	UHA	UHB	UHA	UHB
	Resistance to household chemicals and swimming pool chemicals		AMMONIUM CHLORIDE 100 g/l SODIUM HYPOCHLORITE 20 mg/l		UA	UA		UA	UA	UA	UA	UA	UA	UA	UA
	BOT 3000	“DCOF (section 9.6 ANSI A 137.1.2012)”			WET = 0,64	WET = 0,22		WET = 0,56	WET = 0,22	WET = 0,50	WET = 0,21	WET = 0,40	WET = 0,22	WET = 0,50	WET = 0,21

INFORMAZIONI TECNICHE

Unglazed fine porcelain stoneware slabs. Quality features compliant with test procedures envisaged by standard E.N. 14411. Appendix G, Group B1a UGL.		REFERENCE STANDARD REQUIREMENTS	STANDARD REQUIREMENT N ≥ 15 cm		CALACATTA TOP			STATUARIO LIGHT		STATUARIO		STATUARIO EXTRA	
			(%)	(mm)	NATURAL	GLOSSY		NATURAL	GLOSSY	NATURAL	GLOSSY	NATURAL	GLOSSY
	MOHS hardness	EN 101			6	4		5	4	5	4	6	4
	Crazing resistance	ISO 10545-11			OK	OK		OK	OK	OK	OK		
	Water mass absorbed, average value (%)	ISO 10545-3			0,06%	0,05%		0,10%	0,10%	0,10%	0,08%	0,04%	0,05%
	Breaking strength (N)	ISO 10545-4			5800	5636.79		5597.28	5286.53	5597.28	5597.28	5000	5000
	Breaking load (N)	ISO 10545-4			2937	2937		2915.25	2754.5	2915.25	2915.25		
	Bending resistance (N/mm²)	ISO 10545-4			58,00 N/mm²	56,79 N/mm²		57,61 N/mm²	53,65 N/mm²	57,61 N/mm²	57,61 N/mm²	53,00 N/mm²	53,00 N/mm²
	Deep abrasion resistance, unglazed slabs	ISO 10545-6			average rating 132 mm³	average rating 135 mm³		average rating 139 mm³	average rating 135 mm³	average rating 135 mm³	average rating 135 mm³	average rating 123 mm³	average rating 123 mm³
	Resistance to thermal shock	ISO 10545-9	Test method available		RESISTANT	RESISTANT		RESISTANT	RESISTANT	RESISTANT	RESISTANT	RESISTANT	RESISTANT
	Static friction coefficient (slip level)	ASTM C1028			DRY= 1,09 WET= 0,39	DRY= 1,09 WET= 0,39		DRY= 0,89 WET= 0,56	DRY= 1,09 WET= 0,39	DRY=0,89 WET=0,56	DRY=1,09 WET=1,39	DRY= 0,61 WET= 0,53	DRY= 1,27 WET= 0,38
	Dynamic friction coefficient	B. C. R.			Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70		Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70	Ca = 0.62 Gb = 0.70
	Stain resistance	ISO 10545-14	Test method available		Class 5-4	Class 5-4		Class 5	Class 5-4	Class 5	Class 5-3	Class 5	Class 5-3
	Resistance to low concentrations of acids and alkalis	ISO 10545-13	HCl 3% CITRIC ACID 100 g/l Koh 30 g/l		ULA	ULA / ULB		ULA	ULA/ULB	ULA	ULA/ULB	ULA	ULB
	Resistance to high concentrations of acids and alkalis		HCl 18% LACTIC ACID 5% Koh 100 g/l		UHA	UHB		UHA	UHB	UHA	UHB	UHA	UHB
	Resistance to household chemicals and swimming pool chemicals		AMMONIUM CHLORIDE 100 g/l SODIUM HYPOCHLORITE 20 mg/l		UA	UA		UA	UA	UA	UA	UA	UA
	BOT 3000	“DCOF (section 9.6 ANSI A 137.1.2012)”			WET = 0,22	WET = 0,22		WET = 0,40	WET = 0,22	WET = 0,40	WET = 0,22	WET = 0,50	WET = 0,21

SUMMARY OF HANDLING AND STORAGE GUIDELINES

Adopting precautions, taking care of the material, and following guidelines, during the various activities (from handling to the various processing stages) reduces critical issues and neglect, so as to establish responsibilities more precisely. The guidelines refer to and take into account working habits, tools, and machinery in daily use, for the processing of stoneware and/or quartz.

SIZE	3200 x 1600 mm	126 x 63 Inch
WEIGHT PER m² / Ft²	29,30 Kg/m²	5,98 Lbs/Ft2
WEIGHT OF FULL SLAB	150 Kg	330 LBS
THICKNESS	12 mm	1/2 ”

PACKING



Dimensions:
Height: 221 cm
Depth: 54 cm
Length: 330 cm
Weight: 2.400 kg

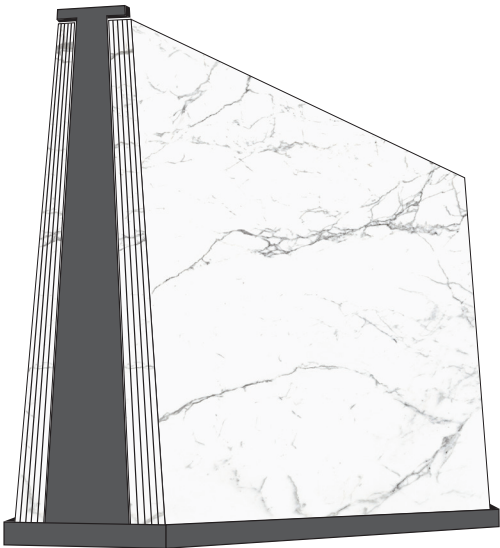
Each wooden crate contains
16 slabs measuring 160x320

CARRIAGE AND STORAGE

Inside the storage facilities, the slabs must be stored on trestles or tracks (provided that they are suitable for the material) made of either wood or metal, with the necessary vertical protection/ supports made of wood, plastic or rubber, provided to prevent abrasion and chipping in the areas where the slabs are resting, as significant unexpected blows can cause slab breakage.



Slabs can be laid one on top of another, although no slabs or parts of slabs must be rested on top of smaller slabs or waste materials; always check that all parts of the slab are resting on something and that there are no gaps. Do not rest stone or quartz material on top of ceramic slabs, especially those which are larger in size and thicker than the ceramic slabs.

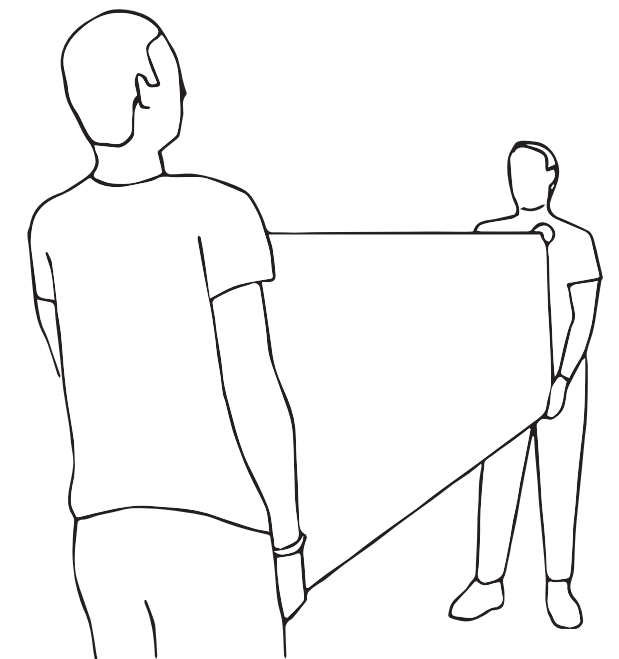
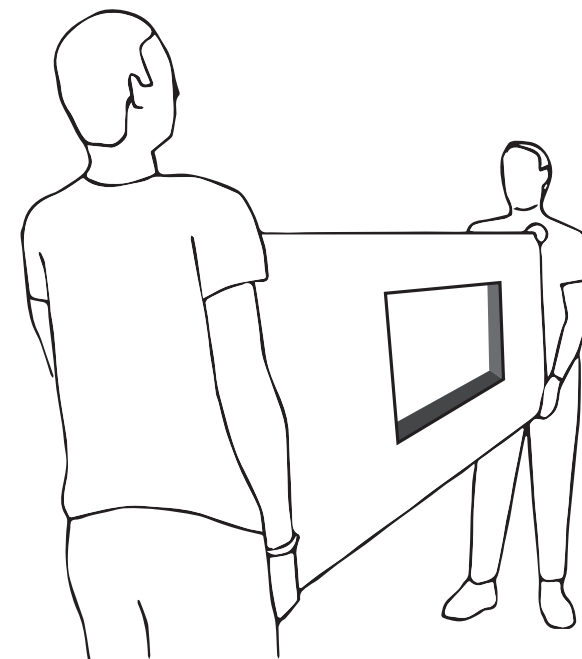


The slabs should always be handled with special care, to prevent blows which could result in chipping and/or breakage of the slabs.

When holding individual single slabs, take special care and position the gripper in the centre of the slab, complying with the weight limits specified by the machine, and using canvas slings to hold multiple slabs. On no account must steel cables be used as they can ruin the surface and edges of the slabs.

Handling cut pieces: Machined pieces must be handled using suitable protection, as the material can be extremely sharp.

The slabs must always be handled upright, never flat, even for slabs without cutouts. Cut material must be packed in appropriate crates, with corner protection and cushioning (e.g. polystyrene) around the outer parts which is as thick as possible, in order to increase protection in the event of blows; lack of or poor packaging around the outside and corners may cause slab breakage.

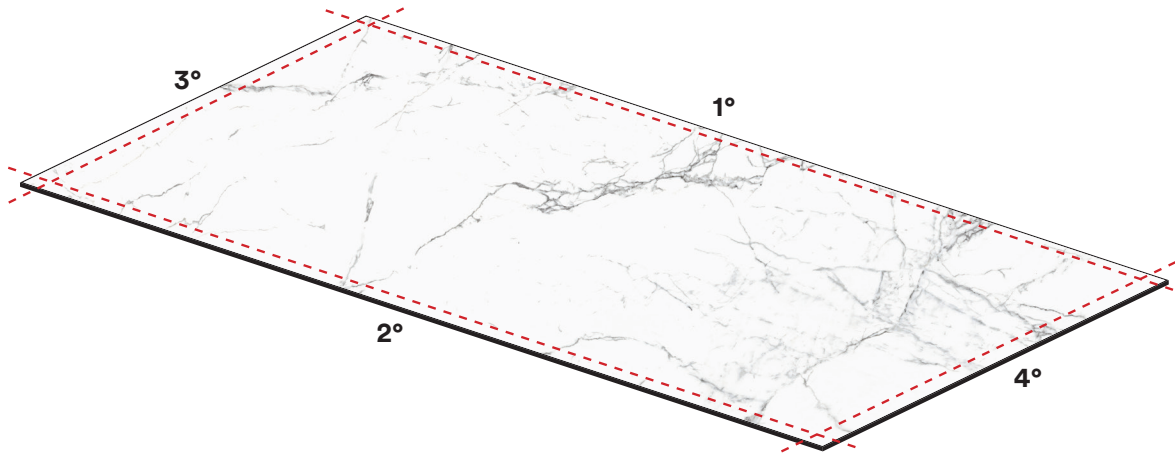


PROCESSING PRINCIPLES, CONTOUR CUTTING REQUIREMENTS

Before beginning any work, we recommend you clean the slab properly and check for any curvature, tonal differences, and any non-compliances with normal quality standards: no claims can be entered into once the material has been processed and/or laid.

BASIC CUTTING STANDARDS FOR 12mm EPIC

Before proceeding with any processing, it is essential to contour-cut the slab by 2/3 cm around the entire perimeter. This is not necessary on our veined white materials but it is recommended for black and grey shades.



We recommend you cut the slabs with a segmented cutting disc for ceramics. Speed at which the disc is lowered onto the bench 0.1 m/min. Disc recommended for cutting porcelain slabs: we recommend you use an ADI disc (type: MTJ64002) which can be used for both straight and 45° cutting. This tool can be used on different bridge cutters with different technical parameters.

DISC TECHNICAL INFORMATION

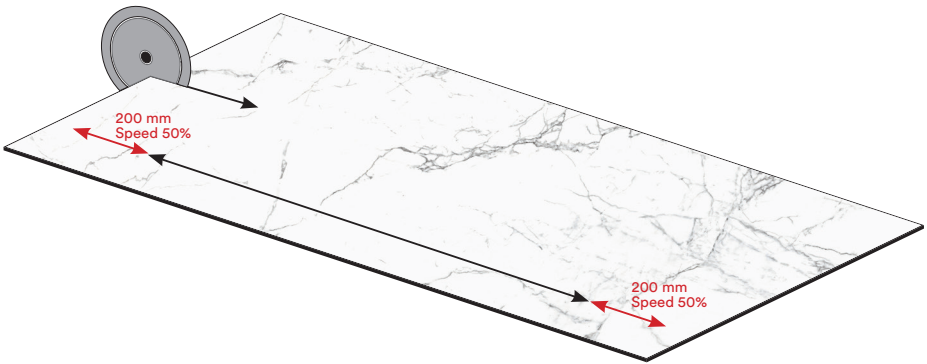


Cutting disc for ULTRA COMPACT MATERIALS with soft bond diamond segments for machines with reduced power (below 20HP). Reinforced body for 45 ° cutting with UCS and LKT materials and glass.

ADI CODE	DESCRIPTION	RPM	SPEED
MTJ64002	φ400 Bore φ60	1.600	500-1.500

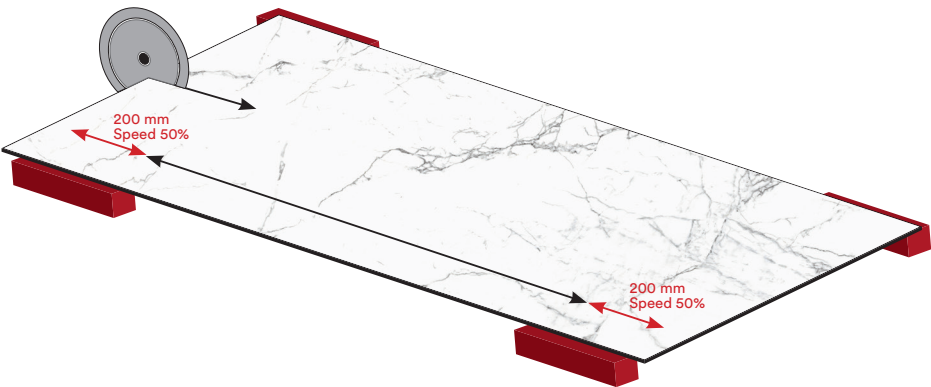
When cutting slabs with a 12 mm-thick disc, it is important to reduce the travel speed by 50% in the lead-in and lead-out (15/20 cm each), completing the cutting in two steps.

Make sure the disc runs all the way through the material (disc should protrude from the underside by 2 mm).



CUTTING PARAMETERS

DISC DIAMETER (mm)	RPM	CUTTING SPEED (CM/MIN)
400 mm	1600	80 cm/min (60cm/min during 45° cutting)



Make sure the slabs are fully supported on the cutting bench and that there is no waste on either the slab or the disc (the disk segments must be honed regularly). The slabs must be secured on the cutting bench with clamps. The use of a material such as Ecorubber (a high density rubber) between the bench and the material is recommended to improve cutting quality.

It is just as important that the slab is positioned completely parallel to the bench during cutting. Due to the density and hardness of the material, it is important to ensure perfect disc cooling. This means that it is vital that the jet of water is constant, has a high flow rate, and is aimed as close as possible to the cutting area, as well as the back of the disc. Disc travel speed during 45° cutting must be less than during a straight cut and we suggest a maximum speed of 60 cm/min.

When making the cutout for a washbasin or sink using a milling cutter, or CNC or waterjet machines, we recommend you avoid making right angles and stick to rounded corners, with a minimum radius of 5 mm. Make the cut in the upper part and then the lower part of the longer sides.

Always keep a minimum of 5 cm of material on the other side of where you start the cutout.



Please note that the parameters are approximate and must be compatible with the type of cutting disc, the machinery, and the instructions given by the tool and machine manufacturers. The use of a milling machine with a frequency changer is recommended in order to change the rpm and have an accurate overview, including that of the amperage, and so as not to have to rely solely on the subjective experience of the operator.

GUIDELINES AND PARAMETERS FOR WATERJET PROCESSING

SETTING REQUIREMENTS:

The slab must be contour-cut also in the case of waterjet cutting and it is advisable to carry out this procedure using a bridge milling machine (see instructions relating to the machinery). Always check the flatness of the waterjet bench and make sure that there is no processing waste left on it. The sheets that form the work bench surface must be in perfect condition, with as few separations as possible, so that the workpiece rests on the bench perfectly. Bench height water level: recommended water level: 2-3 mm above the work bench (therefore slightly floating). Whenever possible, for example in the case of cutting without holes, the start piercing must be performed from the outside of the top to be cut. In the case of corners, we recommended rounded corners with a minimum radius of 5 mm. When making the cutouts, start the piercing from the inside of the cutout and work outwards with a slight curvature.

We recommend that the cutouts be positioned at least 5 cm from the edge of the finished top.

Remember, as far as possible, to make the cutouts in the centre of the slab and in the straight sections in the side areas.

PROCESSING GUIDELINES:

Abrasion 0.35-0.45 Kg/Min. **Intake pressure** 600-700 bar
Cutting pressure 3500-3700 bar **Travel speed** 60-90 cm./min.

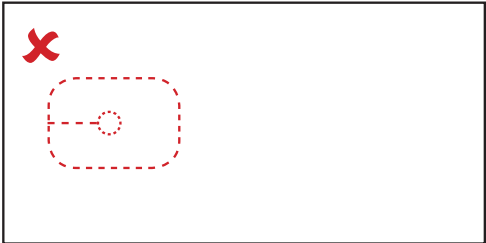
Data refer to 12 mm-thick materials; lower travel speeds ensure clear improvements in the cutting finish, which are then confirmed against the desired quality.

Please note that the parameters are approximate and must be compatible with the type of cutting disc, the machinery, and the instructions given by the tool and machine manufacturers.

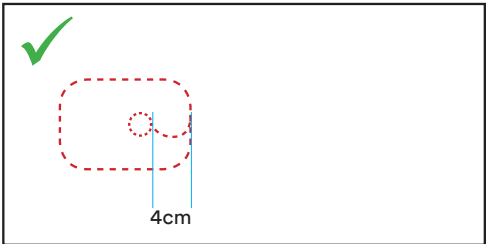
GUIDELINES AND PARAMETERS FOR CNC CUTTING SYSTEMS

Place the suction cups so that they provide the best possible support for the top, checking carefully that the pieces removed do not fall and therefore that all the pieces are properly supported. Make the cutout where the material is most present, always remembering to keep the minimum distance of 5 cm between the start of the cutout and the edge of the finished top. Start the cutout away from the corner, curving the cut slightly with respect to the start hole.

WRONG



RIGHT



TRAVEL SPEED WITH 35 MM CORE DRILL.

Travel speed: 15-20 mm/min. Chuck rpm: 2000-2200

CUTTING TRAVEL SPEED, PLUNGE CUTTING (END MILLER), DIAMETER: 19-22 MM

Travel speed: 300-350 mm/min. Chuck rpm: 5000-5500 Always take into account the tool guidelines and the parameters relating to the diameter of the miller and/or the n. of the tooth profile. Hone the drilling tools frequently (as a general rule every four cutouts).

FILOTOP TOOL (OR FINGER BITS FOR INCREMENTAL CUTTING

THICKNESS	TRAVEL SPEED mm/min(*)	CHUCK SPEED Rpm/min	MAX REMOVAL
12 mm	250	6000	2 mm/giro

Please note that the parameters are approximate and must be compatible with the type of cutting disc, the machinery, and the instructions given by the tool and machine manufacturers.

We recommend you chamfer the edges before finishing with the edge polish so as to reduce the risk of chipping. Check that the machine is set appropriately before carrying out the edge profiling. Follow the abrasive disc sequences based on the desired finish and the material.

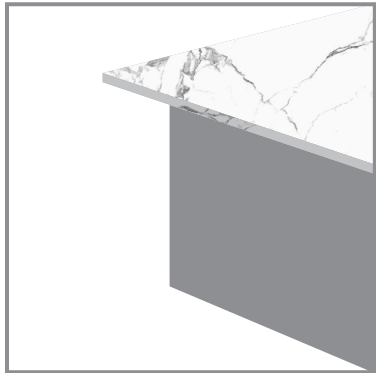
Make sure that the edge has a chamfer of at least 2 mm, which can be rounded or diagonal, to prevent chipping.

OVERHANGS WITH AND WITHOUT SUPPORTS

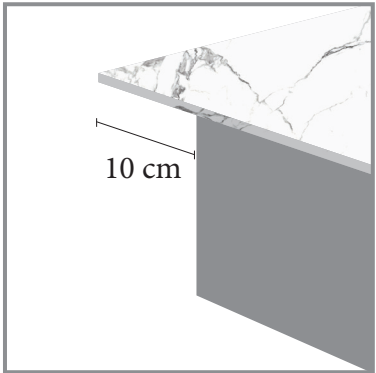
The maximum overhang length without any support must no more than 10 cm.

The static load-bearing capacity (sustainable weight) depends on whether or not there are any cutouts in the vicinity. It is always advisable to weigh up the matter objectively, as excess weight in the parts parallel to the cutouts can lead to breakage of the top.

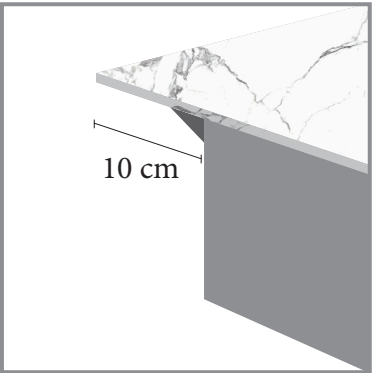
STANDARD OVERHANG



EXTENDED OVERHANG



EXTENDED OVERHANG WITH SUPPORT



For greater depths (up to a maximum of 30 cm), adequate support must be provided, at least every 60 cm, taking the same precautions regarding the cutouts as described above.



ROUTINE AND SPECIAL MAINTENANCE

For daily cleaning, simply use a damp microfibre cloth. Mopping up any highly staining products likely (e.g. coffee, tea, red wine) as quickly as possible after spilling makes cleaning easier. We recommend you use a neutral liquid detergent with a soft sponge or microfibre cloth.

Stubborn stains

Any stubborn marks may be removed by using a low-abrasion sponge beforehand (we do not recommend the use of steel scouring pads as they may leave metal residues that are hard to remove), using a specific product (see table) if necessary.

Precautions for use

Highly caustic substances (e.g. oven cleaners), acids or dyes must be removed extremely quickly, by washing the surface with water. Take care to avoid blows to the weaker areas (sides and edges). EPIC offers excellent resistance to thermal shock, which means hot pots and pans can be placed directly on the top, although we still recommend the use of hot mats. N.B. Ceramic knives can scratch the surface; we recommend you use chopping boards.

The table shows the result of in-house cleanability tests performed using substances commonly found in the kitchen:

TYPE OF STAIN	DETERGENT FOR UNTREATED SURFACES	DETERGENT FOR GLOSSY SURFACES
METAL RESIDUES	Neutral/acidic detergent	Neutral/acidic detergent
COCA COLA	Neutral detergent	Neutral detergent
LEMON	Neutral detergent	Neutral detergent
COFFEE/TEA	Neutral detergent	Neutral detergent/bleach
WINE	Neutral detergent	Neutral detergent/bleach
SAUCE/KETCHUP	Neutral detergent, cream or powdered detergent	Neutral detergent, cream or powdered detergent
OIL/GREASE/FAT	Alkaline detergent	Alkaline detergent

TABLE OF COMPARISON						
	Epic Natural	Epic Glossy	Quartz agglomerate	Granite	Marble	Solid surfaces
UV RESISTENT	*****	*****	**	*****	*****	**
HEAT RESISTANCE	*****	****	***	****	****	**
SCRATCH RESISTANCE	****	***	***	***	**	**
CHEMICAL & STAIN RESISTANCE	****	****	****	***	**	***
NON ABSORBENT	****	***	****	***	**	***
LOW MAINTENANCE	****	****	****	***	**	***

