
ELEVATE

Designed by MUSEUM

TECHNICAL MANUAL

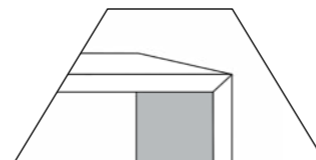


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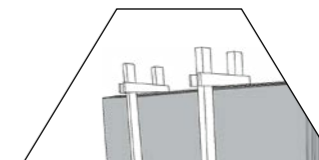
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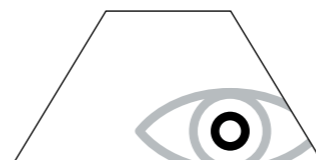
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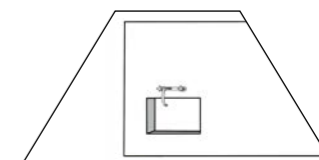
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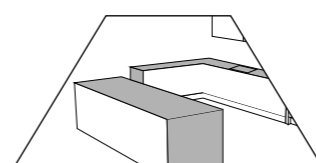
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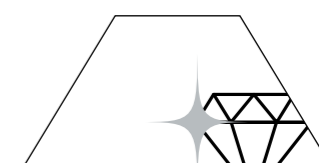
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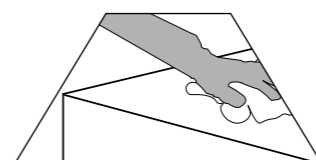
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01. ELEVATE PRODUCT

I.I COLLECTIONS

The largest format to date made with our 4D TECH technology—150x320 cm in a 12 mm thickness – has just been launched. This unique surface comes in three exclusive finishes: Premium Polished, Natural and Shaped.



PREMIUM POLISHED Polished crystal mirror finish with a perfect reflection.



NATURAL Matte texture with smooth and soft touch.

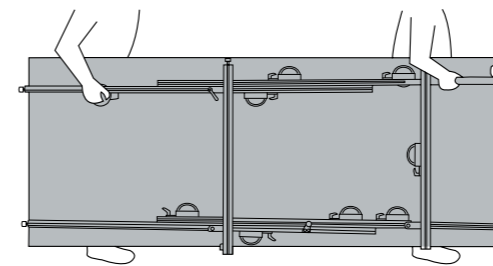


SHAPED Smooth texture, graphic perfectly coordinated with the relief.

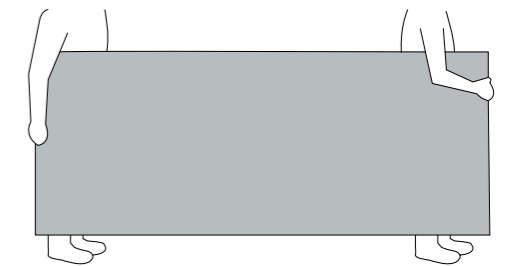
02. HANDLING AND STORAGE

2.1 HANDLING GUIDELINES

- When large-format ceramic tiles are handled, special care and maximum safety precautions should be taken to prevent dropped or broken tiles.
- Protective gloves should be worn to prevent injuries due to broken tiles or sharp edges.
- The tiles should be handled and/or moved individually by at least two people.
- When a tile is removed from its packaging, this can either be done by hand or by using some kind of lifting frame with suction cups. If the latter is used, moisten the suction cups first.
- If some kind of mechanical lifting or handling system is used, such as a frame with suction cups, follow the manufacturer's instructions.
- Carry the tile vertically with the long side parallel to the ground. Do not allow it to buckle in the middle.

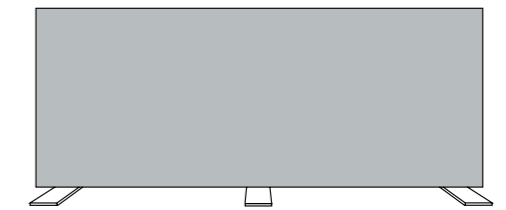
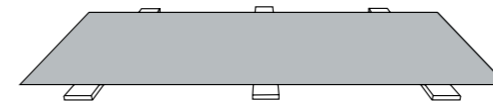


Handling with suction pads
(Held vertically with the long side
parallel to the ground)

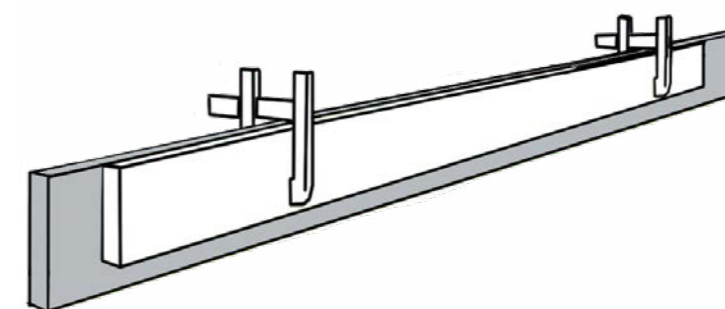


Handling without suction cups
(Held vertically with the long side
parallel to the ground)

- To protect the tile, never rest it directly on the floor or against a wall. Rest it on cork supports or similar to cushion the weight of the tile.

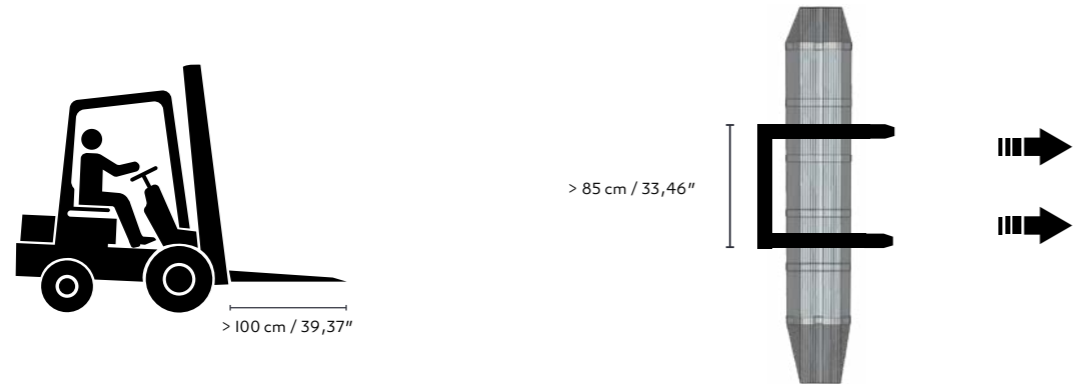


- Long narrow sections, should be secured to a wood or aluminium bar with C clamps before moving them anywhere. This will prevent them from bending.

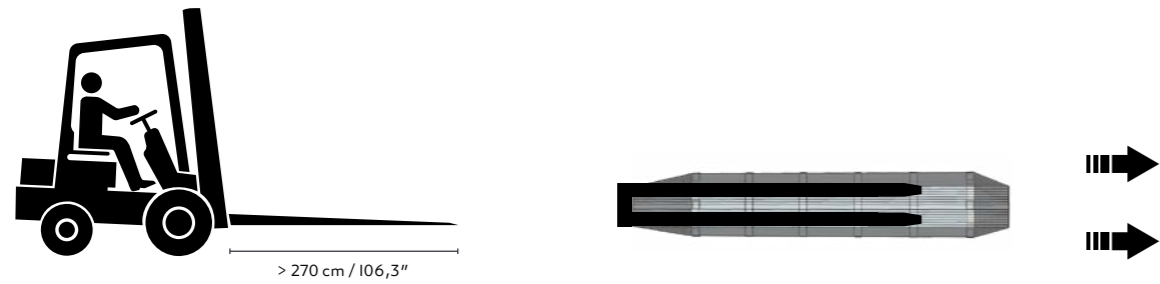


2.2 HANDLING WITH A FORKLIFT TRUCK

If a forklift truck is used, carry the A-Frame with the long side perpendicular to the forks. If it has to be carried with the short side perpendicular to the forks, open the forks to their maximum, make sure that there is a distance of at least 85cm between the forks, and slide them fully under the crate.



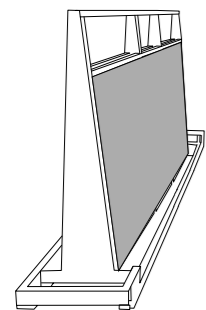
The forks should have a minimum length of 270 cm when the crate is positioned with the short side perpendicular to the forks.



2.3 CARRYING CAPACITY

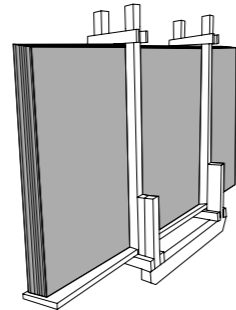
When the tiles are loaded onto trucks, whenever possible, A-Frame should be positioned with the long side perpendicular to the forks.

A-FRAME



| SIZES | | |
|----------|-----------------|-------|
| Large | Height | Width |
| 330 cm | 195 cm | 75 cm |
| 129.9" | 76.8" | 29.5" |
| CAPACITY | | |
| Slabs | m ² | kg |
| 20 | 96 | 3190 |
| Slabs | ft ² | lb |
| 20 | 1033 | 7033 |

BUNDLE

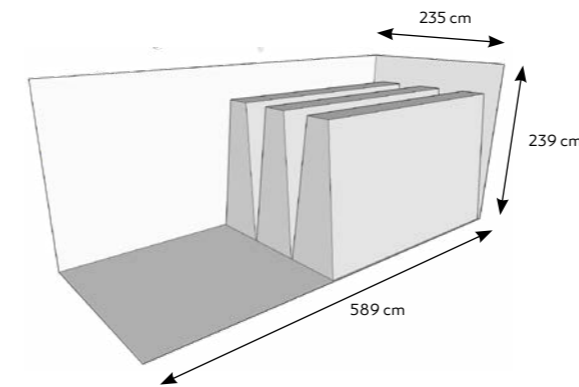


| SIZES | | |
|----------|-----------------|-------|
| Large | Height | Width |
| 330 cm | 195 cm | 55 cm |
| 129.9" | 76.8" | 21.7" |
| CAPACITY | | |
| Slabs | m ² | kg |
| 20 | 96 | 3000 |
| Slabs | ft ² | lb |
| 20 | 1033 | 6614 |

When containers are loaded, A-Frames should be carried with the short side perpendicular to the forks. In such an event, the minimum length of the forks should be 270 cm / 106.3". Forklift trucks with a carrying capacity of **5000 kg** should be used.

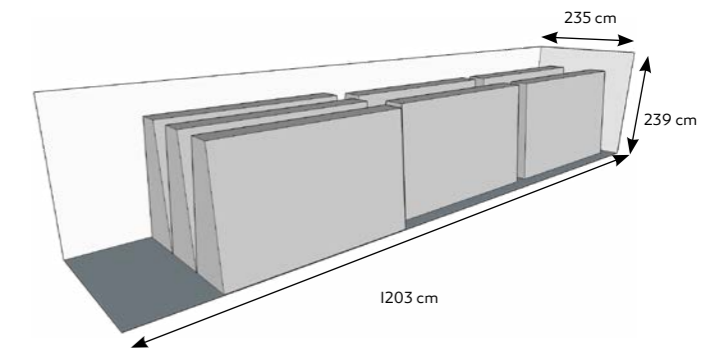
A-FRAME LOADING CONTAINER 20' (24.000 KG)

| A-Frames | m ² | kg |
|----------|-----------------|-------|
| 3 | 288 | 9570 |
| A-Frames | ft ² | lb |
| 3 | 3100 | 21099 |



A-FRAME LOADING CONTAINER 40' (24.000 KG)

| A-Frames | m ² | kg |
|----------|-----------------|-------|
| 7 | 672 | 22330 |
| A-Frames | ft ² | lb |
| 7 | 7231 | 49231 |



BUNDLES LOADING CONTAINER 20' (24.000 KG)

| Bundles | m ² | kg |
|---------|-----------------|-------|
| 7 | 672 | 21000 |
| Bundles | ft ² | lb |
| 7 | 7231 | 46297 |

BUNDLES LOADING CONTAINER 40' (24.000 KG)

| Bundles | m ² | kg |
|---------|-----------------|-------|
| 7 | 672 | 21000 |
| Bundles | ft ² | lb |
| 7 | 7231 | 46297 |

03. VISUAL INSPECTION

Before removing the slab from the A-frame it should be cleaned carefully and the entire surface should be meticulously checked in order to detect any possible flaws.

Once the slab has been placed on the worktop, and before carrying out any handling actions, you must ensure that the slab is in perfect condition. In this way, checks can be made to ensure that the slab has no surface flaws and that it has a uniform finish and flatness within the permitted limits. Other factors to bear in mind are the slab's thickness, shade and shine when compared with the rest of the batch. No claims will be accepted for fitted or fabricated materials if the flaw existed when they were supplied. The fabricator is responsible for deciding whether the slabs are suitable for use. In the event of uncertainty, the fabricator should contact the supplier before cutting or modifying the slabs in any way.

To check for flaws in MUSEUM slabs, place them perpendicular to you and observe them from a distance of one metre in natural light.

QUALITY ST

Usable area of slab 1500x3200 mm / 60x126"

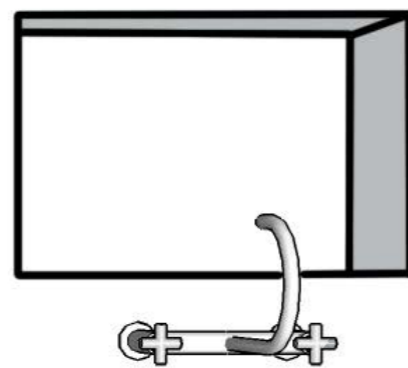
Maximun size of anomaly of similar shade <0.12" / <3 mm

Maximun size of anomaly of different shade <0.04" / <1 mm

* Curvature:

The maximum permitted curvature is < 2 mm / 0.08". This must be measured by resting the slab on a totally flat horizontal surface and measuring the maximum curvature point with a feeler gauge.

04. CUTTING PIECES



4.1 INTRODUCTION

MUSEUM slabs are conspicuous for their outstanding technical properties. Their salient benefits include a very high resistance to scratches, impacts, high and low temperatures, staining and wear and tear. This makes them perfect for use as countertops. Because the surface is non-porous, it prevents the spread of bacteria and mould, while also ensuring food grade properties.

MUSEUM slabs must be cut and handled using top-quality specific tools at all times. If the right tools are not used, problems might occur and the slabs, tools or machinery might even get damaged.



Gloves



Mask



Protective goggles

For this reason, before proceeding to cut and/or handle slabs, ask for details about the right tools to use.

DIRECTION OF THE SLABS

Before embarking on the cutting process, plan all the cuts to be made so as to take maximum advantage of the surface of the slab. Consider which way the slab should face when cutting or making holes in it. Make sure that all cut-outs are made nearer to the middle of the slab, as shown in the illustration, since this area is more resistant to any pressure generated during the cutting process.



4.2 CUTTING WITH A DISC CUTTER

To begin, remove an approximately 3 cm / 1.18" wide strip from each side so as to ensure a good edge while also reducing any stress (cutting the long sides first and then the short ones). The remaining slab can be used as it is, without cutting it down any more.



First cut a strip from each side to ensure a good edge and square corners.

The exact model of disc to use will depend on the manufacturer, but it must always be in perfect condition since this will affect the quality of the results. Always follow the manufacturer's recommendations regarding the RPM and cutting speed.



Cut the first and last 30 cm / 11.8" more slowly than the recommended speed (at half the speed)

Make sure that the disc is properly cooled with water as the slab is cut, because MUSEUM slabs are very hard and solid. The water jet should be aimed directly at the cutting point where the disc is in contact with the slab. Cut the first and last 30 cm / 11.8" more slowly than the recommended speed (at half the speed) to ensure a good finish. In the case of white product coloured slabs, reduce the cutting speed by half across the whole surface.

Never lower the disc directly onto the slab without having first drilled the corners. In exceptional cases when it is lowered directly, the disc cutter should be in automatic mode, functioning as slowly as possible.

For 45° mitred cuts, the cutting speed should be 1½ min.

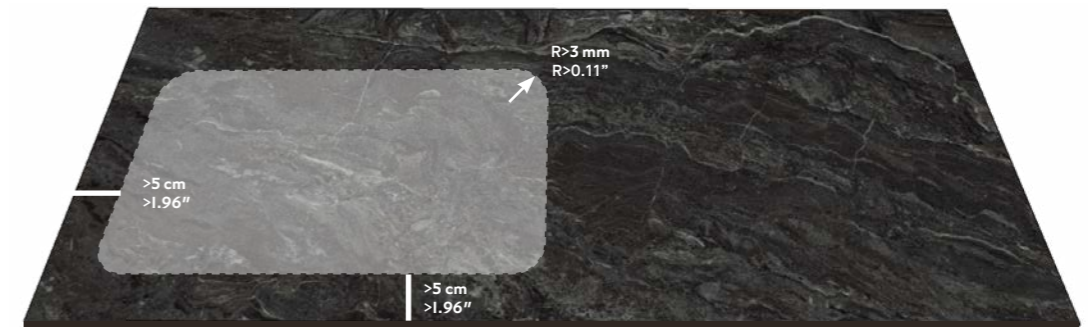
MAKING CUT-OUTS

Before starting to make a cut-out, check that the cutting table is stable, level and that the top provides sufficient support. The suction pads should be free from dirt and impurities and they should support the whole underside of the slab, particularly the area to be cut.



Area of suction cups

Always leave a minimum distance of 5 cm / 1.96" between the cut-out and the edge of the slab. The angles of cut-outs should have a minimum radius of 3 mm / 0.11".

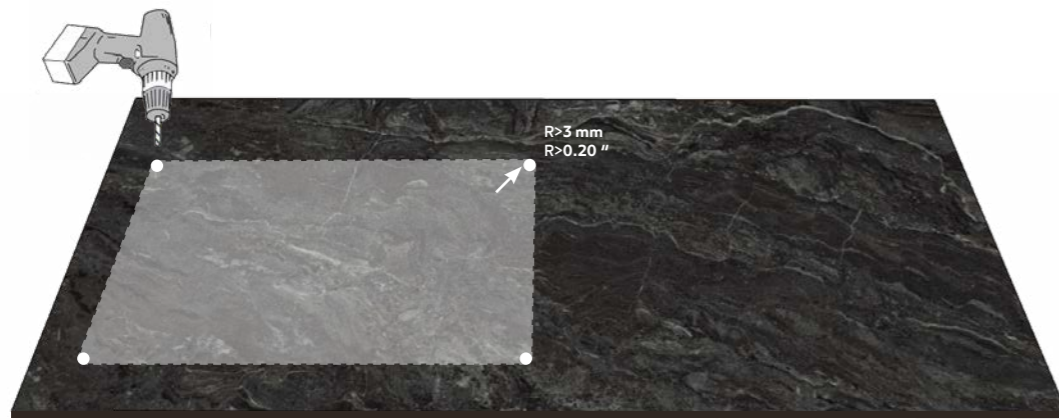


A bigger radius will ensure a higher structural resistance. In contrast, angles with no radius create a stress point on the surface. **NEVER LEAVE RIGHT ANGLES.**

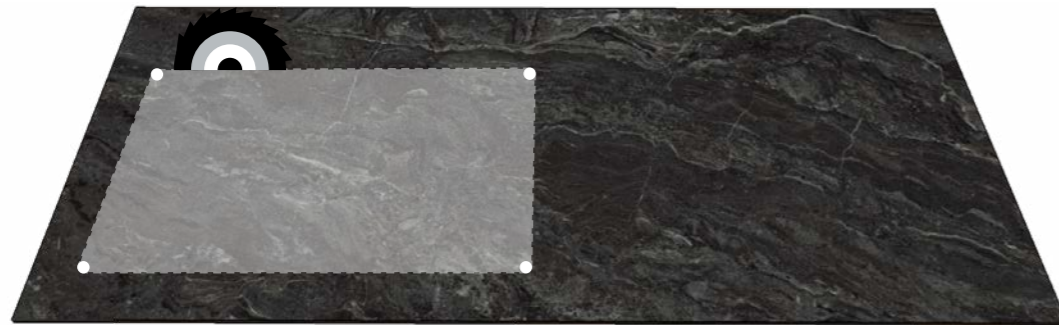


Always reinforce areas adjacent to cut sections with fibreglass to strengthen them and prevent any cracking.

Before proceeding to make the angles, drill the corners using a bit with a 3 mm / 0,20 " diameter or larger.



Next, cut from one hole to the next in a straight line, using a bridge saw and working at a minimum speed to prevent the slab from breaking due to the stress to which it is subject.



TIPS WHEN USING A CNC ROUTER

Core drill bit

Perforate the slab, working at the lowest speed, particularly at the end. Before proceeding to drill right through it, lift the drill bit up a little to relieve the pressure on the inside of the core bit.

Rabbeting router bit

Always start by making a hole first with a core drill bit. Do not drill straight down into the surface with the rabbeting router bit. Instead, drill down in stages. The first two times, just eliminate 0.5 mm. Do not remove more than 6 mm from a 12mm-thick slabs.

Cutter router bit

Do not use the oscillation mode when cutting as the slab might splinter. Paler-coloured slabs are harder to cut due to some of the raw materials used to make them. The cutting speed should be reduced in such cases to prevent the tools from overheating.

| Tool | RPM | Velocidad (mm/min) |
|----------------------|----------------|--------------------|
| Core drill bit | 4.500 - 5.500 | 10 |
| Rabbeting router bit | 4.500 - 5.500 | 150 |
| Cutter router bit | 8.000 - 10.000 | 250 |

PLANNING LARGE CUT-OUTS

If one or more large cut-outs have to be made (e.g. bigger than 50x100 cm / 19.6x39.2") to fit sinks, vitro-ceramic hobs etc., leave a strip to hold the countertop in place. This can then be cut off once the countertop has been installed. In this way, the likelihood of the slab breaking when it is handled or installed will be reduced.



If the wrong type of cutting tool is used, the machine or slab might be damaged or even break. Problems might also occur if the whole weight of the slab is concentrated on one single point as it is cut, due to pressure from the cutting disc. For this reason, it should be cut by passing the cutting disc across it several times. Remember, too, that too slow a cutting speed can be counterproductive since the diamond edge might get damaged and the cutting disc have to be changed.

4.3 CUTTING WITH WATERJET EQUIPMENT

Cut a 3 cm strip from each side to reduce the stress to which the slab is subject (first from the long sides and then from the short ones).

The slab should be fully supported by the cutting bed of the waterjet cutter. Finish the cut working toward the edge of the slab if the waterjet software permits this. The first and last 30 cm / 11.8" should be cut at a slower speed (half the recommended speed).

In the case of white coloured slabs, reduce the cutting speed by half across the whole surface.

Start inside the section to be cut out and move toward the cutting line at 60% of the recommended speed to prevent the slab from splintering. Use carpenter's squares to stop the slab from moving.



4.4 TOOLS

- 1.- Make sure that disc are suitable for cutting high-density porcelain tile materials.
- 2.- Correct rotational speed for the blade's diameter should be used.
- 3.- Work at the right RPM
- 4.- Make sure that the machine arbor has the same diameter as the disc hole. Never make the disc hole bigger without first contacting your supplier.
- 5.- Observe all necessary occupational safety precautions
- 6.- The disc should always be cooled with plenty of water.
- 7.- Check the water tanks from time to time and make sure that they do not get clogged up so as to guarantee a regular flow of water.
- 8.- Avoid any lateral pressure on the disc.

We recommend the use of the following tools:

Normal cutting disc



GRES CUT, diamond blade

| Diameter | Thickness | Height | Core | Bore |
|----------|-----------|--------|-----------------|-------|
| 360 mm. | 3,0 mm. | 10 mm. | normal & silent | 60/50 |
| 410 mm. | 3,2 mm. | 10 mm. | normal & silent | 60/50 |

| Slab Thickness | RPM Ø360 | RPM Ø410 | Feed speed ml/m |
|----------------|-----------|-----------|-----------------|
| 12 mm. | 2150-2500 | 1900-2200 | 1,2 - 1,5 |

Our suggestions:

- While entering and exiting the cut, reduce the speed feed of 40 - 50 %

Miter cutting disc



FORTYFIVE, diamond blade

| Diameter | Thickness | Height | Core | Bore |
|----------|-----------|--------|--------|-------|
| 350 mm. | 2,6 mm. | 8 mm. | silent | 60/50 |
| 400 mm. | 2,6 mm. | 8 mm. | silent | 60/50 |

| Slab Thickness | RPM Ø360 | RPM Ø410 | Feed speed ml/m |
|----------------|-----------|-----------|-----------------|
| 12 mm. | 2150-2500 | 1900-2200 | 1,0 - 1,2 |

Our suggestions:

- While cutting at 45% reduce the speed feed of 40 %

Milling



MILLING FINGER

Milling tools:

- Wet use
- Ø 19 mm
- Length 35 mm
- Standard fitting 1/2 gas

Milling and stubbing



ROUTER FOR INCREMENTAL CUTTING

Milling and rebating tools:

- Wet use
- Ø 20 mm
- Length 20 mm
- Standard fitting 1/2 gas

Profiles



CNC WHEELS

Tools for CNC machine useful to obtain different profiles on the edge of ceramic big slabs.

- Profile E
- Profile PE
- Profile TR
- Profile Z

Holes



CORE DRILLS

Tool useful to obtain holes.

- Wet use
- Ø 6 ÷ 100 mm
- Standard fitting 1/2 gas

Dry cut



DRY BLADE

Hand-cutting tools for portable machinery:

- Dry use
- Ø 105 - Ø 115 - Ø 125
- Bore 22,2 mm

Manual polishing

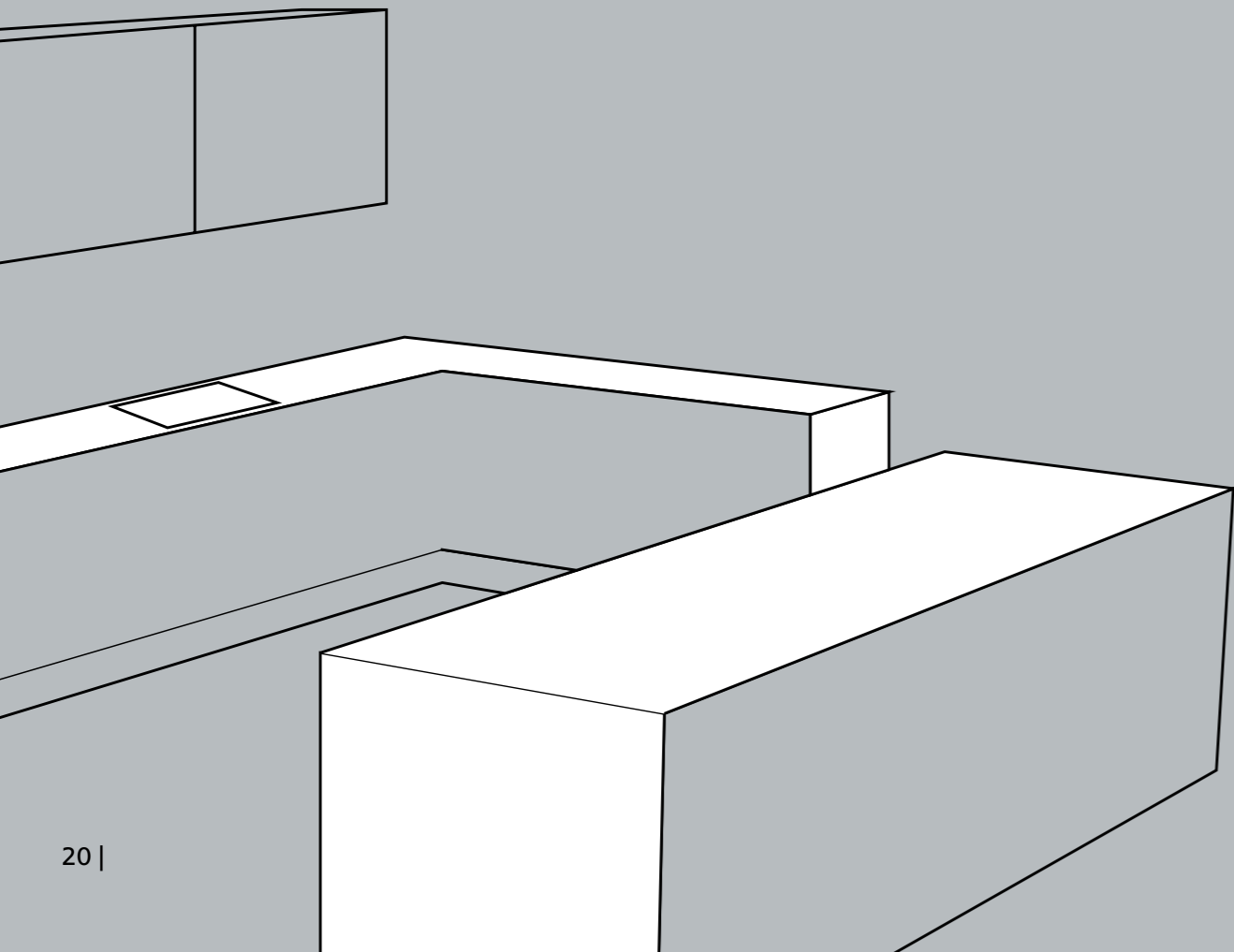


POLISHING PADS

tools for manual polishing

- Dry use
- Only 3 steps

05. PRODUCT INSTALATION



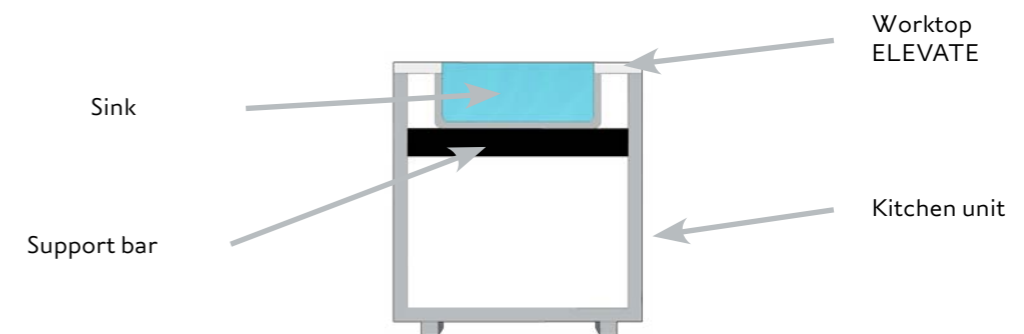
5.1 PROTECTING THE EDGES

The edges must be given a bevelled finish, taking particular care in the case of polished materials and making sure that no area is left unbevelled.

When the edges are finished off, a sealant must be applied to ensure a watertight seal. When the edges are polished, make sure that the right discs are used.

5.2 SINK SUPPORT BAR

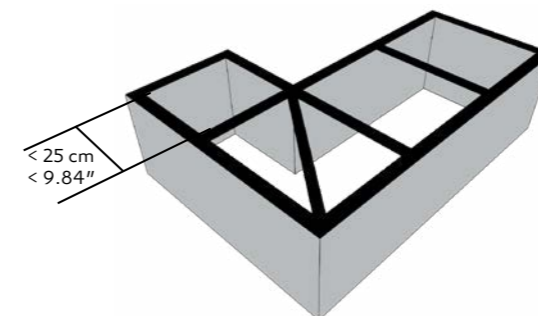
A support bar must be fitted below sinks. This should be fixed to the base unit on which the countertop rests. Without it, the weight of a full sink of water or other everyday utensils might cause the countertop to break or the sink to come loose.



5.3 COUNTERTOP REINFORCEMENTS

When perimeter areas of cut-outs are not supported by a solid base, they should be reinforced with suitable material to guarantee the countertop's stability and resistance. Before fitting other materials as reinforcements, remember that they might have a different coefficient of expansion to the MUSEUM slab, this causing the countertop to warp and possibly even making mitre joints split open in the mid or long term. **DO NOT USE REINFORCEMENTS MADE OF QUARTZ.**

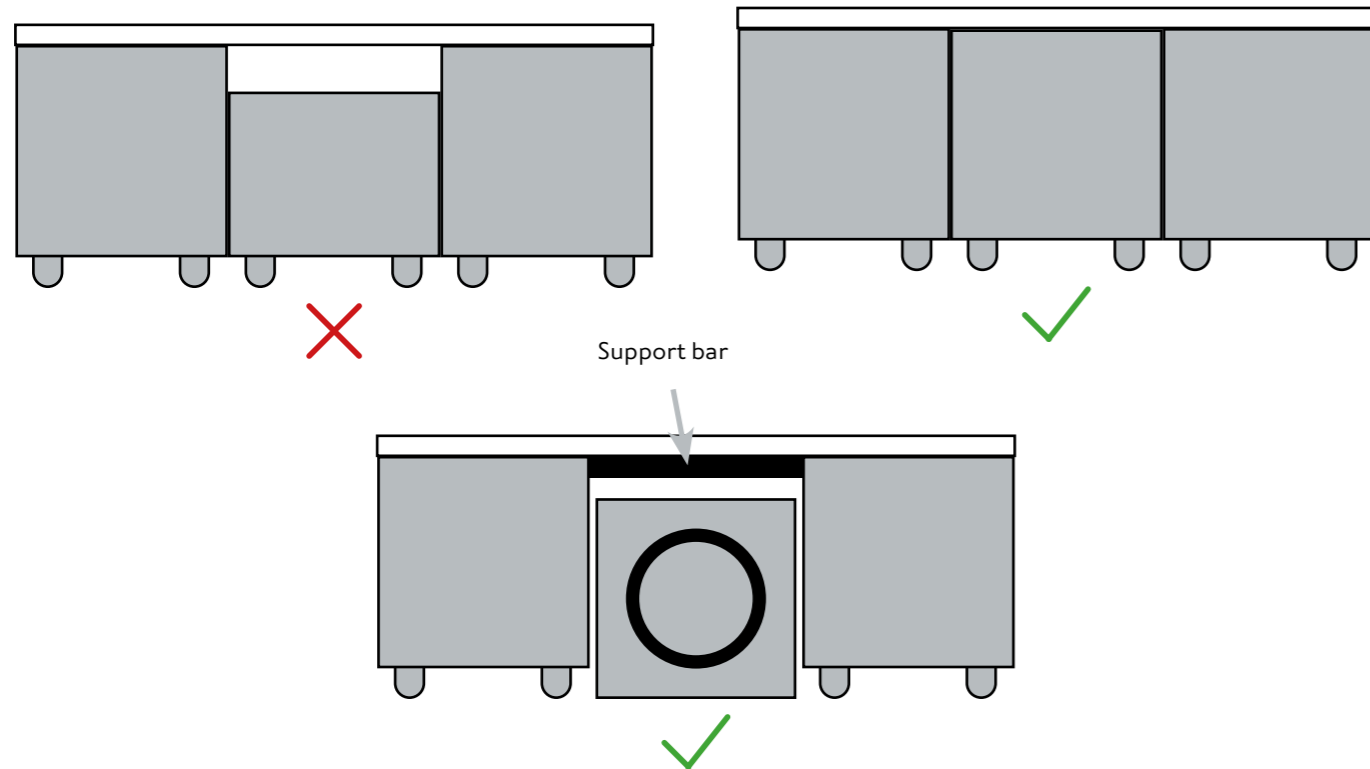
If the countertops have mitred edges, they must be reinforced at regular intervals along the whole perimeter of the surface to ensure added rigidity. These reinforcements must rest directly on the sides of the kitchen units. For the same reason, it is also important to reinforce the perimeter of cut-outs. Holes for tap fittings should also be reinforced with wood or another similar material. This will protect the slab when the taps are fitted and during their everyday use. **DO NOT USE QUARTZ REINFORCEMENTS.**



If the slab rests on a slatted base instead of a stable continuous surface, MUSEUM recommends a maximum distance of 25 cm / 9.84 " between the crossbars.

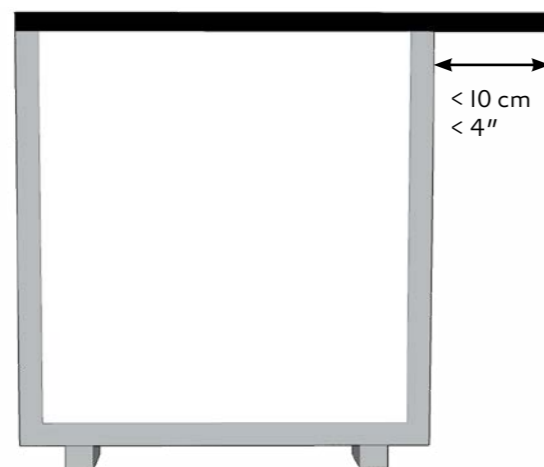
5.4 KITCHEN UNITS, EXPANSION JOINTS AND OVERHANGS

The units on which the iTOP slab is fitted must be level and in good condition. They must be fixed to one another and, if applicable, to the adjacent wall.



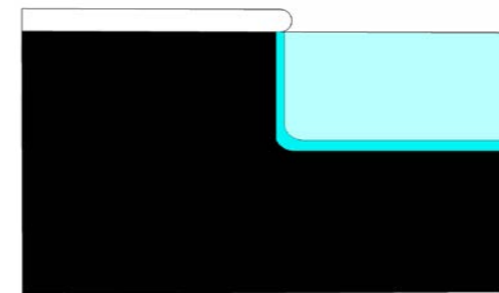
To fill the joints, bond the slab to the units or under surface and bond the iTOP rear trim to the wall. Use a flexible adhesive, such as a fully transparent one that allows for the slab's thermal linear expansion. Do not use non-flexible adhesives to bond the iTOP slab, such as "No More Nails" or epoxy adhesives.

Overhangs should never jut out more than 10cm / 4" from the edge of the supporting structure, otherwise the slab might break. If you would like it to jut out more, a prior study must be made of the necessary reinforcements to use in each particular case.



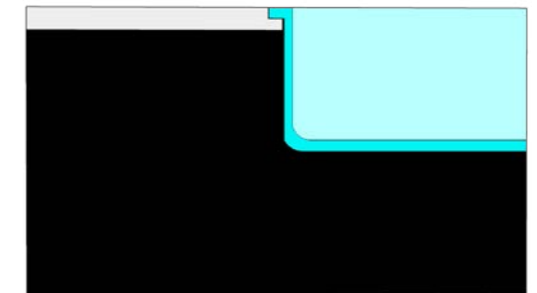
5.5 SINKS

Flush-to-countertop sinks



To avoid splintering, it is better to fit an under-counter sink. In such cases, a cut-out with a rounded edge and minimum 2 mm radius should be made.

Under-counter sinks



A rebate of no more than 6 mm should be made.

5.6 CERAMIC / INDUCTION HOBS

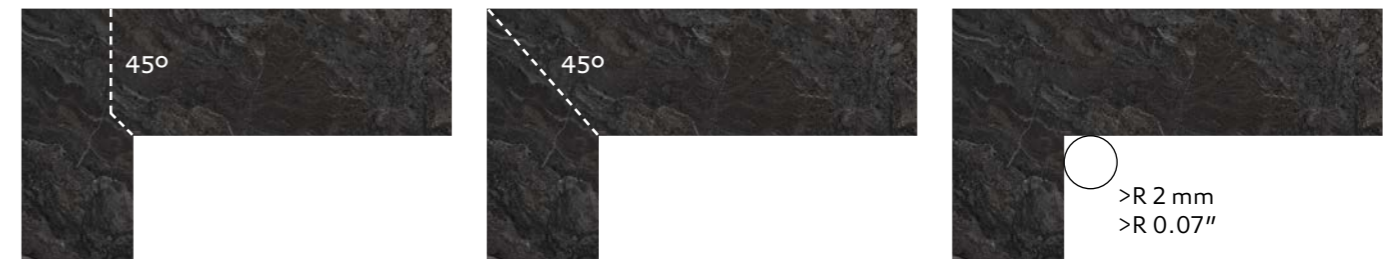
A gap of at least 2 mm should be left between the countertop and the induction hob. This should be filled with silicon able to withstand high temperatures or with the sealants provided by the manufacturer of the hob. Do not make a rebate of more than 6 mm in MUSEUM slabs.

5.7 OUTDOORS COUNTERTOPS

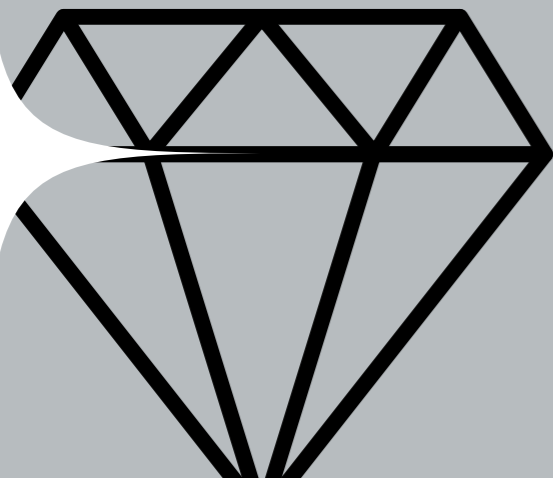
When slabs are fitted outside, materials should be avoided that might expand or contract when climatological changes occur, such as wood or chipboard. Avoid non-flexible adhesives, such as "No More Nails", epoxy or building adhesives, when bonding in outdoor locations. To bond mitre joints, the adhesive should be suitable for outdoor use and resistant to ultraviolet rays.

5.8 L-SHAPED WORKTOPS

L-shaped countertops should be divided into several parts in order to avoid 90° corners. L-shaped countertops made of a single slab without a mitre joint should have a minimum radius of 2 mm / 0.07". Make sure that the base units are in perfect condition and that they are level before fitting a countertop of this kind.



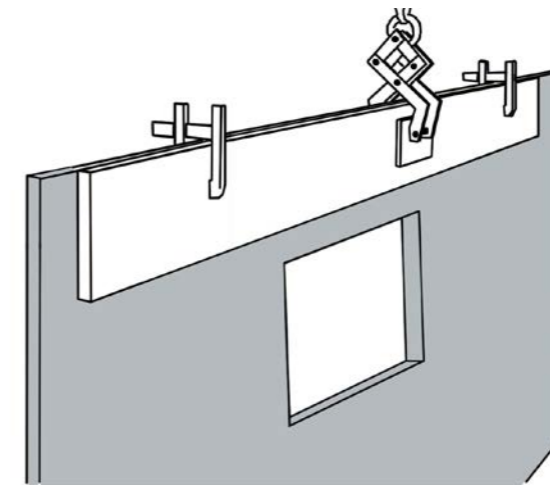
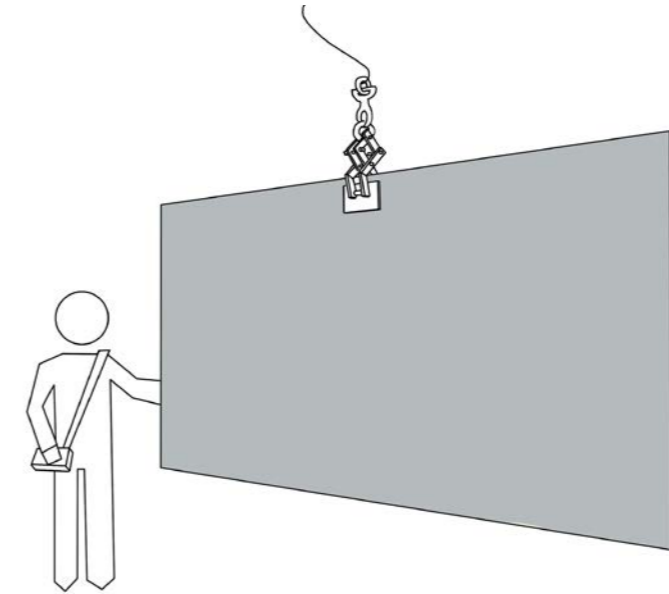
06. PREMIUM POLISHED FINISH



6.1 HANDLING

A vulcanized scissor clamp must be used to load, unload and transport the slabs, together with a forklift, overhead crane or lifting device. Always bear in mind the slabs' centre of gravity when transporting them.

They should be handled individually first removing the protective plastic. Make sure the slabs do not come into contact with metal surfaces. They must be protected properly.



6.2 MECHANICAL FABRICATION PROCEDURES

Slabs with a polished and satin finish should be cut with water-cooled cutting equipment.

6.3 WARNING WHEN USING WATERJET CUTTING EQUIPMENT

To avoid possible damage, before proceeding to cut the slab, make sure that the initial perforated hole is sufficiently far away from the working area.

6.4 BEVELLING THE EDGES

Special care must be taken when bevelling the edges of polished materials, making sure that no area is left unbevelled in order to avoid future damage.

6.5 POLISHING THE EDGES

To ensure a better shine and to avoid possible damage, the edges should be polished with water-cooled polishing equipment. damage.

6.6 CLEANING

As with natural and bush-hammered surfaces, the stains should be cleaned away as soon as they occur to prevent them from drying. Before any type of cleaning product is used on the surface, test it out on an area that is not very visible to check that the shine or colour are not affected by the product.

To clean surfaces with a polished finish, remember that their chemical resistance is lower than that of other finishes and so some substances might affect their appearance.

Do not clean the surfaces with metal or abrasive scouring pads. Do not use scouring pads or other cleaning materials that might be too rough for the surface. MUSEUM recommends cleaning utensils suitable for glassware (AKEMI Cleaner for Glass and Plastics / AKEMI Techno Ceramic Daily Cleaner).

Clean the surface with a damp cloth and soapy water and then dry it with an absorbent cloth. If the stain persists, moisten it with hot water, leave it to act, and then dry the surface with a clean dry cloth.

Suitable cleaning products for polished surfaces include solvents, grease removers and ammonia. Cleaning products to avoid include abrasive cleaners or sponges, hydrofluoric acid and other concentrated acids, bleach and products with a pH of more than 11 or under 4.

Although, in thermal shock tests, the polished finish was found to withstand extreme temperatures, it is better to use protective objects like coasters, table mats and napkins.

Likewise, do not cut anything directly on the countertop surface, throw objects onto it or drag them across it. Polished finishes should not be used in areas with sinks due to the greater likelihood of wear and tear from everyday use.

6.7 TIPS

MUSEUM was the pioneer in the production of mirror-effect polished porcelain tiles and has led the market. Early technology used to produce smaller formats has now evolved into what today is considered cutting-edge technical and aesthetic innovation: the MUSEUM tile polish finish.

This finish, featured in more MUSEUM products ranges, confers outstanding pattern depth and matchless luminosity on the various models, creating a sense of unparalleled beauty and supreme refinement.

The MUSEUM polished models are highly recommendable for use in residential areas, particularly as countertops, on indoor and outdoor walls and low traffic interior floors where there is no direct access from outdoors.

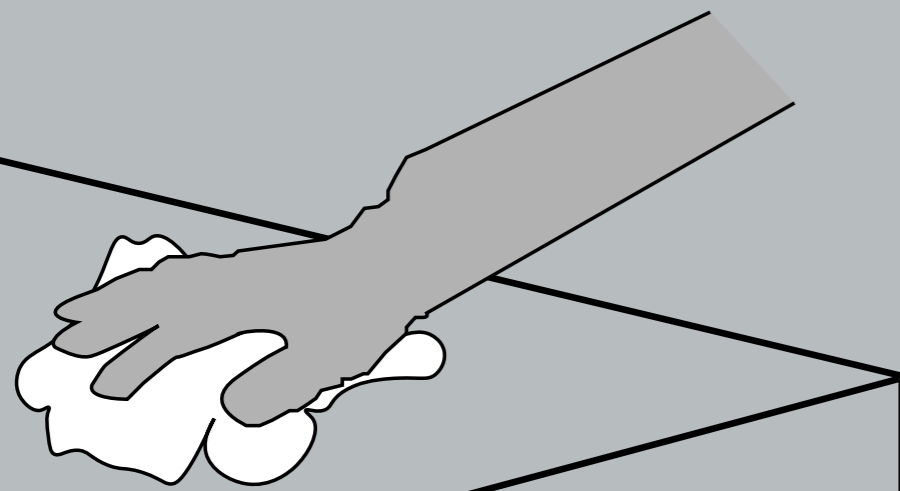
The nature of this finish requires special care when treating the surface. Steel scouring pads and sponges with coarse surfaces should be avoided, as well as bleach, caustic soda, abrasive cleaning agents or products with a pH value higher than 11.

Boards, cloths, napkins or coasters should be used when placing pans or any other type of kitchen utensils on MUSEUM polished surfaces. Likewise, you should not cut directly on the countertop in order to prevent any possible damage.

SCRATCHES REPAIR



07. CLEANING



7.1 DAILY CLEANING AND STAINS

| TYPE OF STAIN | FIRST STEP | SECOND STEP |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Daily cleaning | Neutral detergent | ----- |
| Wine, tea, coffee, blood, juice, soft drinks | Wash with water as soon as possible and rub. | Bleach, Ammonia, FABER: Coloured Stain Remover; AKEMI Algae and Moss Remover Power, FILA SR/95 |
| Culinary powders | Remove with a vacuum cleaner. | FABER: Alkaline Cleaner; AKEMI Basic Cleaning |
| Foods, fats and oils, dyes, vomit, blood, urine, felt tip pen, nicotine | Wash with water as soon as possible and rub the area gently with a cloth. | Universal Solvent, Acetone, Alcohol, Toluene; FABER: Solvent Stripper, Oil&Grease Remover, Deep Degreaser, Coloured Stain Remover; AKEMI: Intensive Cleaner; FILA: PS/87 |
| Carmine, shoe polish, hairspray | | Universal Solvent, Toluene, Alcohol, Acetone; FABER: Deep Degreaser; AKEMI: Afin Acryclean |
| Stains caused by plants, leaves, flowers, ink | | FABER: Coloured Stain Remover; AKEMI: Algae and Moss Remover Power |
| Cement, lime scale, pencil marks, scratches by metal | | 4% Chloridric Acid Solution (HCL); Commercial Cement Remover; FABER: Cement Remover; AKEMI: Acid Cleaner; FILA: Deterdek |
| Candle wax or wax for repairing scratches, tree resin, remains of adhesive tape | | Commercial Solvent; FABER: Deep Degreaser, Solvent Stripper; AKEMI Wax Stripper, AKEMI AFIN Acryclean, Filasolv |
| Rust | | AKEMI Rust Remover |
| Paint, varnish, graffiti | | Commercial Solvent, Alcohol, Acetone; FABER Graffiti Remover, AKEMI Graffiti Remover, FILA NoPaint Star |
| Dirty tile joints, wax-based care products | | FABER: Tile Cleaner, Deep Degreaser, AKEMI Intensive Cleaner, Fuganet |
| Silicone | | Acetone; FABER: Epoxy Cleaner, Solvent Stripper, AKEMI AFIN Acryclean, FILA Zero Sil |
| Epoxy grouting residues | | Grease Remover, Universal Solvent, Toluene; FABER: Epoxy Cleaner, Solvent Stripper; AKEMI Epoxy Remover, FILA CRI0 |
| Marks made by suction pads or polishing rollers | FABER: Alkaline Cleaner; AKEMI Liquid Polish Marble | |

ELEVATE

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