



PRODUCT MANUAL

MDi |  TOP | INDUCTION  N

The creation of a countertop involves a multitude of different variables, possible designs and other factors, and it is impossible to take all of them into account in this manual.

Inalco guarantees the quality of MDi products and the compliance of the manufacturing process with Spanish and international standards. However, the integrity of MDi materials must be safeguarded by the fabricator through correct handling and use and by the end user through suitable care and cleaning.

HANDLING AND LOADING	03
1. iTOP INDUCTION PACKING DETAILS	04
2. HANDLING AND LOADING	06
3. LOADING CAPACITY	09
4. CARRYING iTOP INDUCTION SLABS BY HAND	11
VISUAL INSPECTION OF THE SLABS	13
CUTTING	15
1. INTRODUCTION	16
2. CUTTING WITH A DISC CUTTER	17
3. MAKING CUT-OUTS	20
4. EDGES	25
FITTING	26
1. FITTING INDUCTION HOBS	27
2. REINFORCEMENTS	29
3. FITTING COUNTERTOPS	32
4. OBSERVATIONS	35
TECHNICAL INFORMATION	36
1. TECHNICAL CHARACTERISTICS ACCORDING AS PER RELATED STANDARD	37
2. TESTS APPLIED TO iTOP INDUCTION	39
3. iTOP INDUCTION DATA SHEET (AIDIMME)	41
DECLARATION OF CONFORMITY: MATERIALS IN CONTACT WITH FOOD	45
CLEANING	47
1. INITIAL CLEANING	48
2. EVERYDAY CLEANING	48
3. CLEANING INSTRUCTIONS BY TYPE OF STAIN	49
MATERIAL SAFETY DATA SHEET	50

HANDLING AND LOADING

1. iTOP INDUCTION PACKING DETAILS

iTOP INDUCTION are compact heavy slabs (150 x 320 cm) that need to be properly handled, taking all necessary safety precautions, including the use of safety gloves at all times. The following table shows their weight per slab, per A-frame and the number of slabs per frame.

PACKING				
Thickness	Weight of whole slab	Weight per m ²	Slabs per A-frame	Weight per A-frame
12 mm	150 kg	31.25 kg	20	3,1850 kg

The slabs are loaded vertically onto pallets, fastened to an iron A-frame, to ensure their safe transportation and storage.

This new iron A-frame is more resistant, stable and long-lasting, as well as being eco-friendlier since it can be recycled and processed as many times as necessary.



1. iTOP INDUCTION PACKING DETAILS

Once the slabs have been loaded onto an A-frame, they are protected with four polystyrene corner protectors. The slabs are also secured to the pallet with three straps positioned so that they run across black edge protectors, as shown in the photos, to avoid direct contact with the slabs. Then it is all plasticized to protect it from the rain and from the action of the elements.

Each A-frame bears a label with the name of the series, colour, finish and shade of the product, together with the batch number and quality rating to ensure its full identification. The label also lists packing details such as the weight, m² per A-frame and number of slabs per A-frame.

12mm



2. HANDLING & LOADING

To load, unload and transport the slabs, use a fork-lift truck, overhead crane or other similar lifting equipment, following the manufacturer's instructions at all times, complying with the maximum permitted loads, and making sure that the equipment is kept in good working order.

During the handling and transportation processes, the slabs should be kept in a balanced position, bearing in mind their centre of gravity, to prevent them from bending or breaking.

Before proceeding to load the pallets, check that the fork-lift truck meets the following requirements:

1. The highest point of the fork-lift truck must be less than 2,250 mm, because the entrance to the container is 2,270 mm high.
2. It must have a triplex mast, with a retracted height of less than 2,200 mm. The forks must be able to lift the load 1,440 mm without the extended mast reaching a height of over 2,270 mm.
3. Inalco recommends the use of fork-lift trucks with a loading capacity of 5,000 kg (a 600mm load centre).

When proceeding to unload the A-frames, secure the slabs with vulcanized rubber alligator hoisting clamps or conventional ones to prevent them from moving or falling off, and never exceed the maximum permitted load. Then remove the slabs one by one from alternate sides of the A-frame so as to keep it balanced and prevent it from tipping over.

If slings are used or any other handling equipment with metallic parts, make sure that the metal does not come into contact with the surface of the slabs.



2. HANDLING & LOADING

LOADING TRUCKS



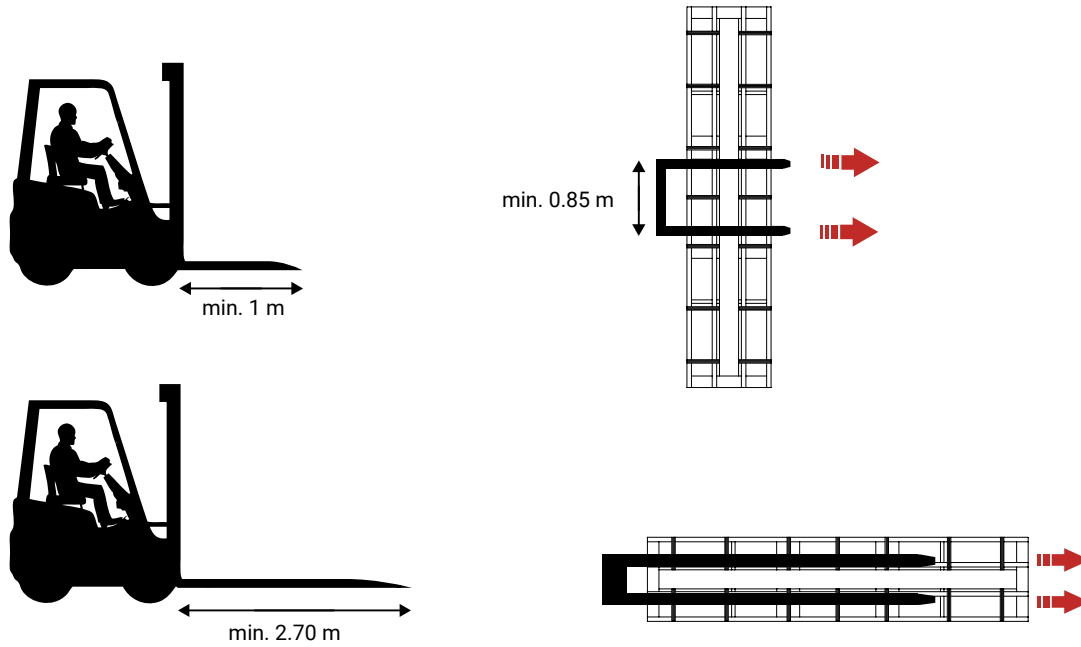
Make sure that no device used by the freight company to secure the load exerts any pressure on the iTOP INDUCTION slabs.

2. HANDLING & LOADING

LOADING CONTAINERS



2. HANDLING & LOADING



3. LOADING CAPACITY

150 x 320 cm iTOP INDUCTION

LOADING TRUCKS (13.5 m) 12mm-thick iTOP INDUCTION

PACKING				
Thickness	Weight of whole slab	Weight per m ²	Slabs per A-frame	Weight per A-frame
12 mm	150 kg	31.25 kg	20	3,185 kg

TRUCK CAPACITY 13.5 m			
Thickness	Number of A-frames	Total m ²	Total m ²
12 mm	7½	23,888 kg	720



3. LOADING CAPACITY

150 x 320 cm iTOP INDUCTION

PACKING				
Thickness	Weight of whole slab	Weight per m ²	Slabs per A-frame	Weight per A-frame
12 mm	150 kg	31.25 kg	20	3,185 kg

LOADING 20' CONTAINERS (235 x 589 x 239 cm) 12mm-thick iTOP INDUCTION

20' CONTAINER CAPACITY			
Thickness	Number of A-frames	Total m ²	Total m ²
12 mm	3	9,555 kg	288



LOADING 40' CONTAINERS (235 x 1203 x 239 cm) 12mm-thick iTOP INDUCTION

40' CONTAINER CAPACITY			
Thickness	Number of A-frames	Total m ²	Total m ²
12 mm	7 ½	23,888 kg	720

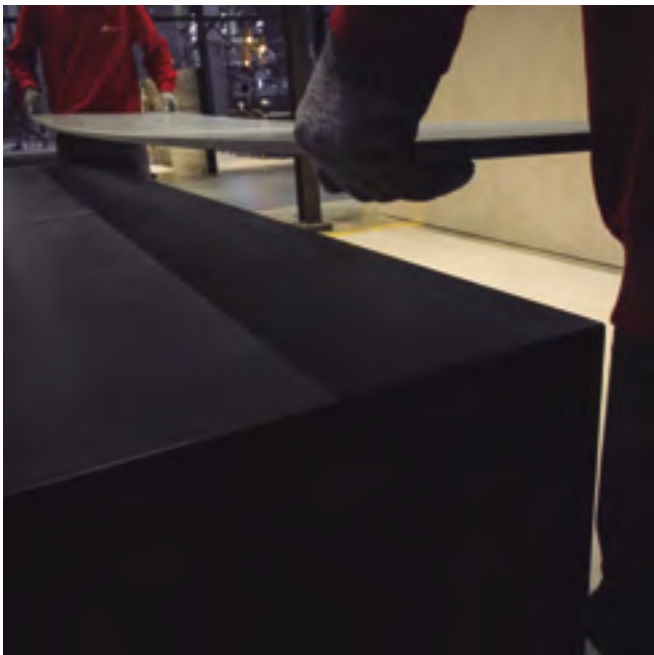


4. CARRYING iTOP INDUCTION SLABS BY HAND

Carrying iTOP INDUCTION slabs by hand.



Lifting an iTOP INDUCTION slab onto the cutting table.



4. CARRYING iTOP INDUCTION SLABS BY HAND

Long thin slabs (for instance skirting panels) should be clamped to an aluminium bar when carried to prevent them from sagging in the middle.



VISUAL INSPECTION OF THE SLABS

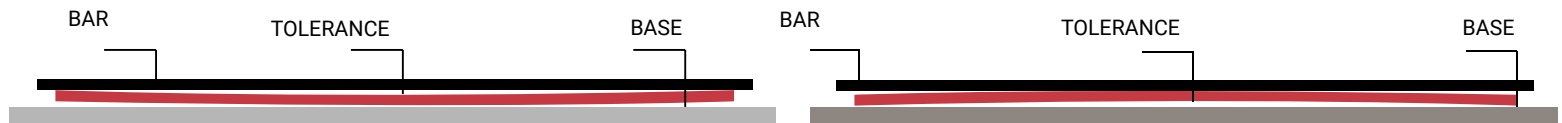
Before starting work on a slab, it should be cleaned and carefully inspected to make sure that it meets all the necessary quality requirements. Examine it in detail, first vertically on the A-frame and then horizontally before going any further.

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.

*** Curvature:**

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



How to measure the warpage.

Surface appearance:

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

ST	Usable area of slab: 1,500 x 3,200 mm Irregularity in similar colour < 3 mm Irregularity in different colour < 1 mm
CO	Usable area of slab: 750 x 3,200 mm
RD	Slabs for supporting countertops

Quality specifications:

Slabs of the characteristics shown below are not considered to be first-choice products (ST):

- An irregularity in a similar colour of over 3 mm.
- An irregularity in a different colour of over 1 mm.

The above irregularities might vary from one batch to another.

Their concentration on the surface of a slab will not affect its visual appeal.

CUTTING

1.INTRODUCTION

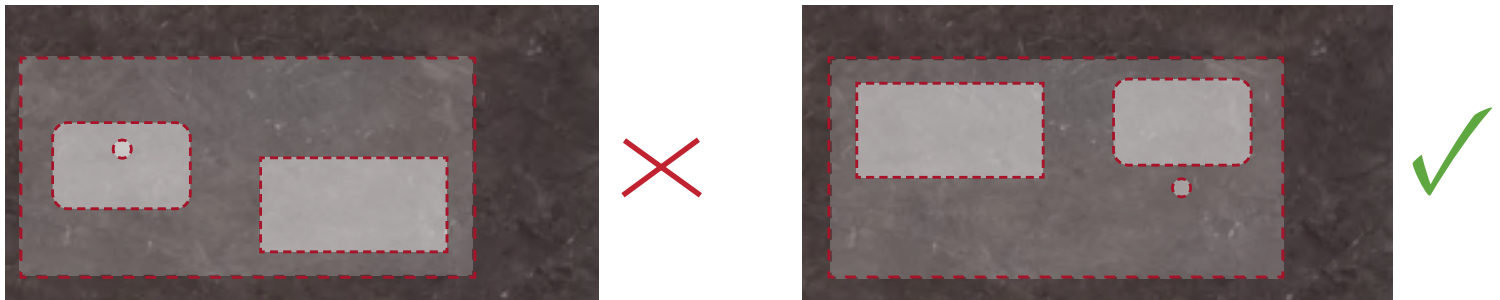
iTOP INDUCTION slabs are conspicuous for their outstanding technical properties. Their salient benefits include a very high resistance to scratches, impacts, high and low temperatures, staining and wear and tear. This makes them perfect for use as countertops. Because the surface is non-porous, it prevents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

iTOP INDUCTION 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.

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

THE 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.



2. CUTTING WITH A DISC CUTTER

Make sure that the whole slab rests on the cutting table. This should be solid and strong, with a flat level surface and no unevenness. A rubber or wooden mat should be placed between the slab and cutting table to cushion any vibrations from the disc.

For top-quality end results when cutting the slab, the cutting disc should be at least 1.5 mm bigger than the thickness of the slab. The right disc to use will depend on the make. It should be in good condition, with no surface flaws that might affect the quality of the cuts it makes. Follow the manufacturer's recommendations at all times with regard to the right revolutions and cutting speed. Examples of makes of cutting discs:



ADI (<http://www.aditools.com>)

	300 mm Ø	350 mm Ø	400 mm Ø
Revolutions	1,800 RPM	1,600 RPM	1,500 RPM
Cutting speed	1.2 m / min	1.2 m / min	1.2 m / min



FREDIMAR (<http://www.fredimar.com>)

	300 mm Ø	350 mm Ø	400 mm Ø
Revolutions	2,500 RPM	2,200 RPM	1,900 RPM
Cutting speed	1.5 m / min	1.5 m / min	1.5 m / min

2. CUTTING WITH A DISC CUTTER

To begin, remove an approximately 3cm-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.



Make sure that the disc is properly cooled with water as the slab is cut, because iTOP INDUCTION 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 more slowly than the recommended speed (at half the speed) to ensure a good finish.

In the case of Blanco Plus / Super Blanco 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.

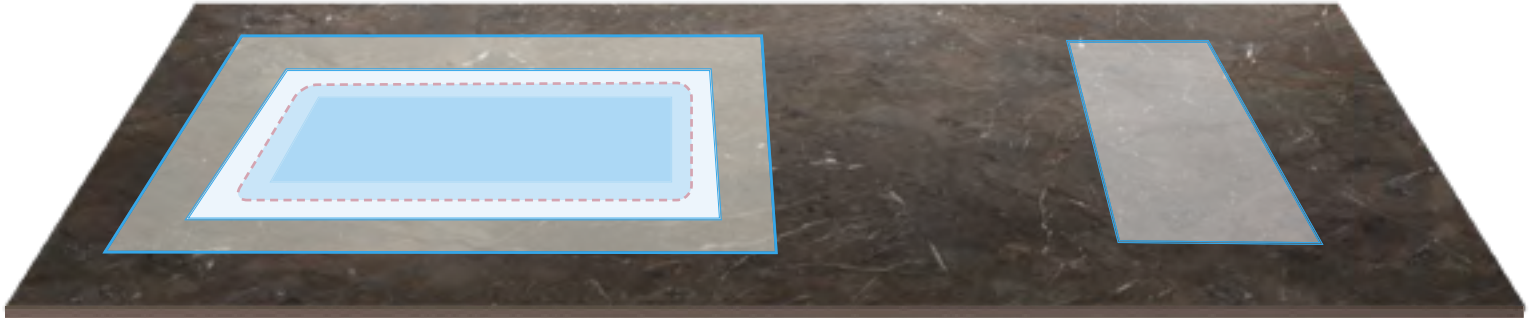



A cutting speed of 0.5 m per minute should be used to make 45° mitred joints.

3. MAKING CUT-OUTS

MAKING CUT-OUTS WITH A DISC CUTTER

Before starting to make a cut-out, check that the slab is stable and level and supported by the cutting bench. The suction pads should be free from dirt and impurities and be well distributed across the whole underside of the slab, especially under the area to be cut.

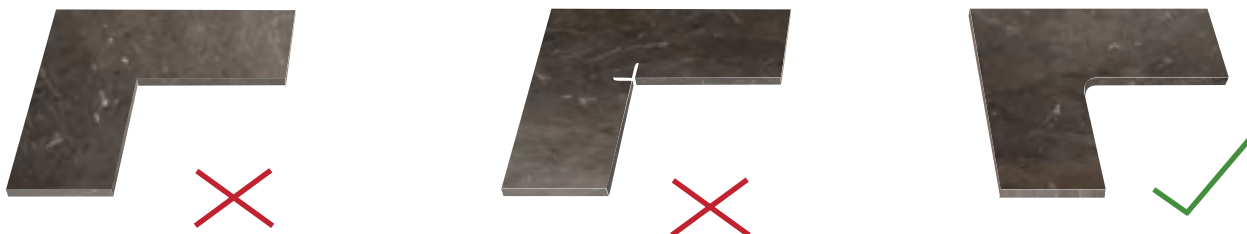


 Area of suction cups

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



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.

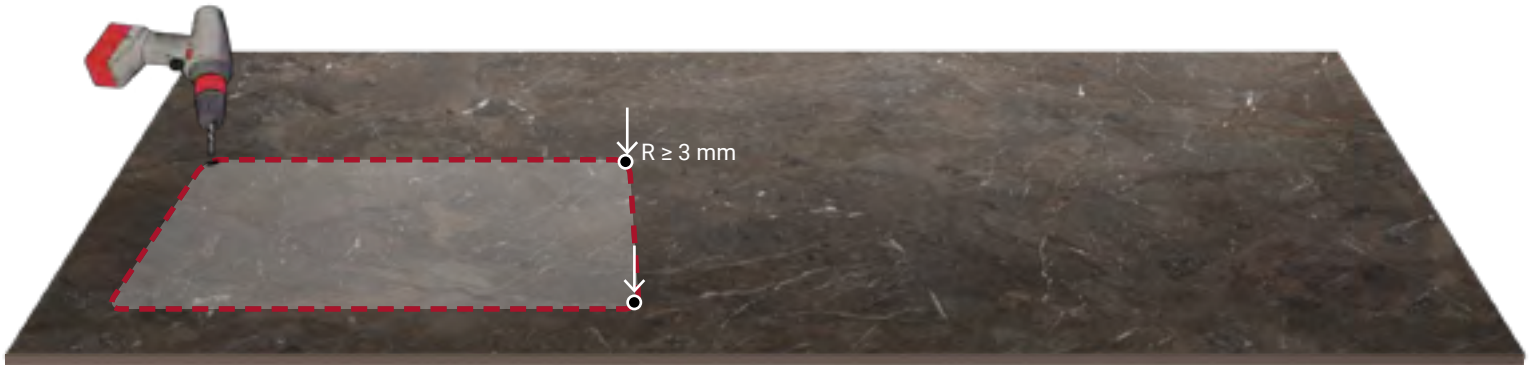


Always reinforce areas adjacent to cut sections with fibreglass to strengthen them and prevent any cracking.



3. MAKING CUT-OUTS

To make the corners of cut-outs, drill them using a bit with a radius of > 3 mm.



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 iTOP INDUCTION slab.

Cutter router bit:

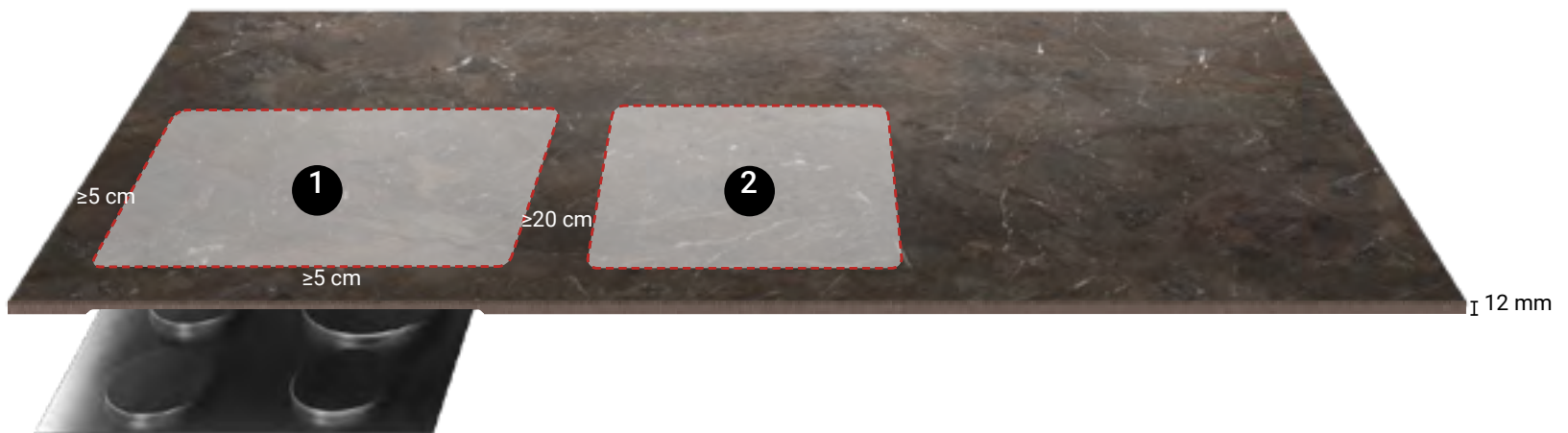
Do not use the oscillation mode when cutting as the slab might splinter. Paler-coloured slabs are harder to cut due to some of the raw materials used to make them. The cutting speed should be reduced in such cases to prevent the tools from overheating.

3. MAKING CUT-OUTS

To guarantee iTOP INDUCTION'S optimum performance, the thickness of the slab in the induction cooking area should be gradually trimmed down from 12 mm to 8 mm.

When a cut-out is made for the induction hob's control panel, a minimum safety margin of 10 cm should be left between the control box and the trimmed down area. The same safety margin should be left for any other cut-out in the slab.

To reduce the thickness of the slab, use a CNC router rabbeting bit at a very slow speed (0.5mm pass depth and 300mm feed rate) to avoid microfissures that might affect the integrity of iTOP INDUCTION slabs.



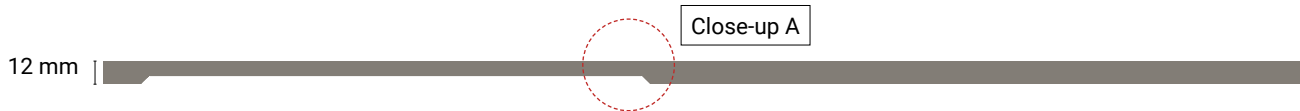
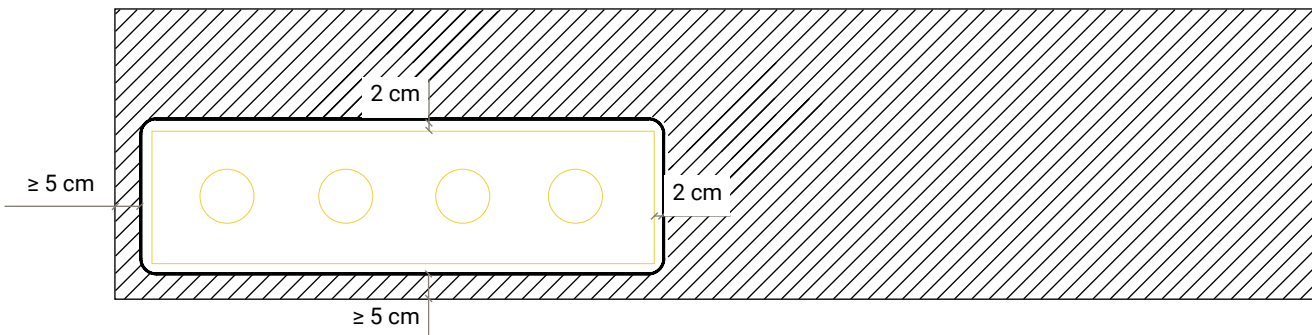
1 iTOP INDUCTION

2 Sink

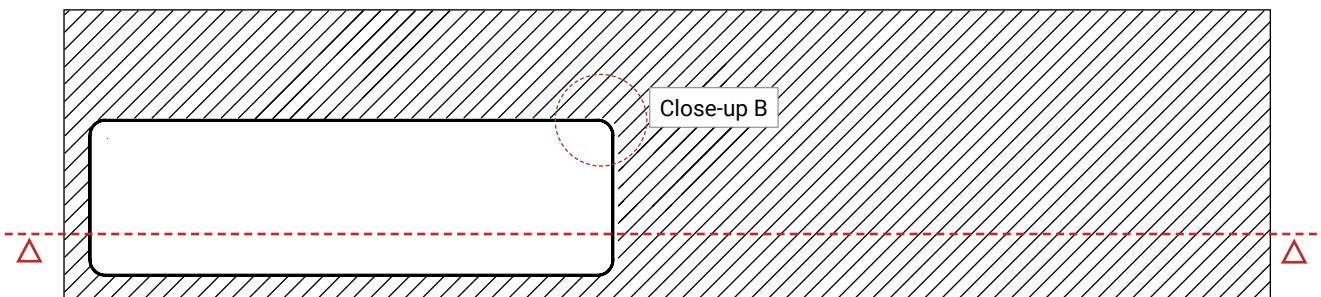
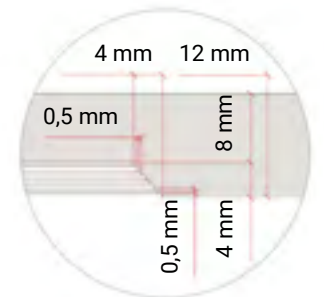
3. MAKING CUT-OUTS



- | | |
|-------------------------|--|
| 1 Extractor fan | 3 Control panel |
| 2 iTOP INDUCTION | 4 2cm gap between end of cutout and induction plate |



Close-up A



Close-up B



- | | | |
|-------------------------|-----------------|--------|
| MDi slab seen from rear | Induction plate | Rebate |
|-------------------------|-----------------|--------|

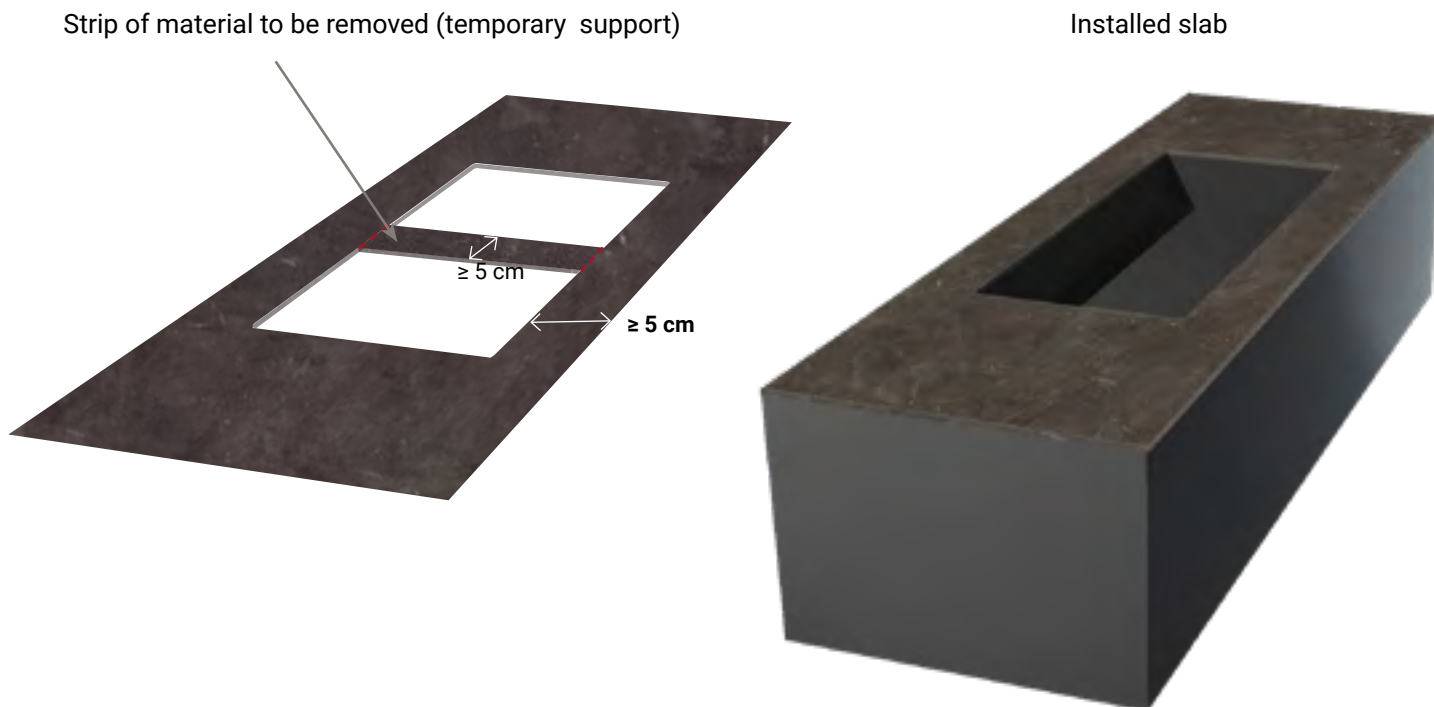
3. MAKING CUT-OUTS

PARAMETERS FOR CNC TOOLS

Tool	RPM	Speed (mm / min)
Core bit	4,500 - 5,500	10
Cutter router bit	4,500 - 5,500	150
Rabbeting 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 50 x 100 cm) 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 also that too slow a cutting speed can be counterproductive since the diamond edge might get damaged and the cutting disc have to be changed.

3. MAKING CUT-OUTS

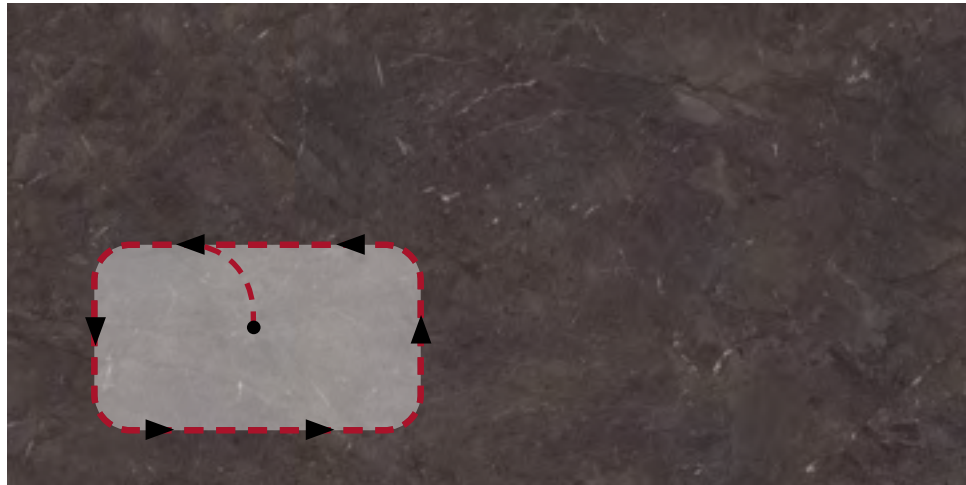
CUTTING WITH WATERJET EQUIPMENT

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). A pressure of about **3,800 bars** and cutting speed of **0.6 m / min** will be needed.

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 should be cut at a slower speed (half the recommended speed).

In the case of Blanco Plus / Super Blanco 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.



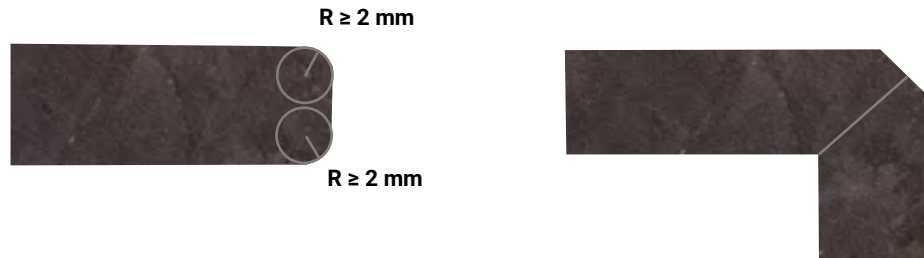
PARAMETERS FOR WATERJET CUTTING EQUIPMENT

Thickness	Speed	Pressure	Abrasive flow rate
12 mm	0.6 m/min	3,800 bars	0.4 kg / min

The figures shown above are recommended ones. The cutting speeds or abrasive flow rates can be adjusted to obtain a more specific finish.

4. EDGES

CUTTING EDGES



The edges should always be bevelled, with a rounded or mitred finish. This ensures added impact resistance, aesthetic appeal, and safety.

There are many types of possible edges, depending on the marble worker making the edges. Note that the bigger the bevel, the more visible the whole edge will be.

PROTECTING AND POLISHING THE EDGES

Once they have been cut, the edges of iTOP INDUCTION slabs must be treated with a sealant to waterproof them (FILASTONE PLUS ECO / FILA STOP DIRT / DEEP ENHANCER). These types of products enhance the edges and help to achieve a better finish.

The edges can also be polished once cut. For this purpose, use appropriate discs, always starting with finer grit ones and increasing the grit size progressively until the required finish is achieved.



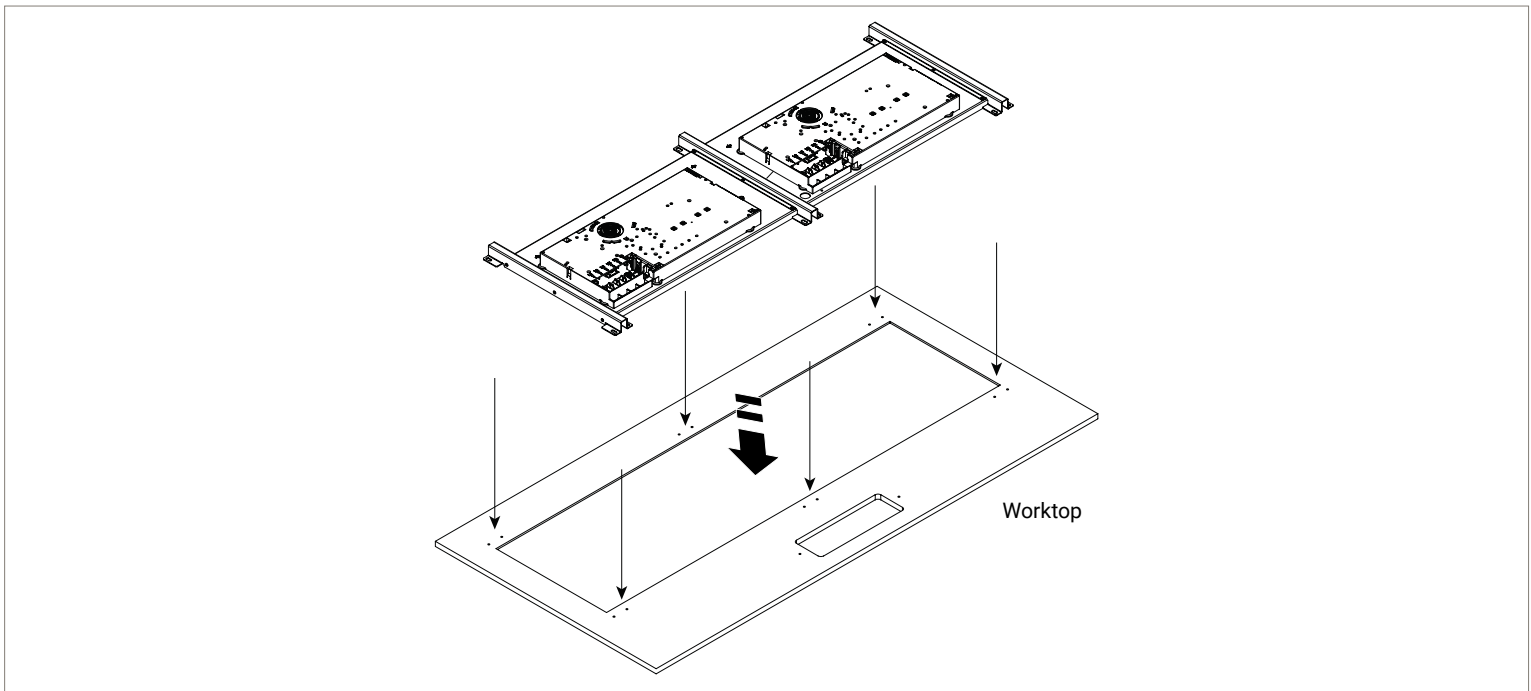
FITTING

1. FITTING INDUCTION HOBS

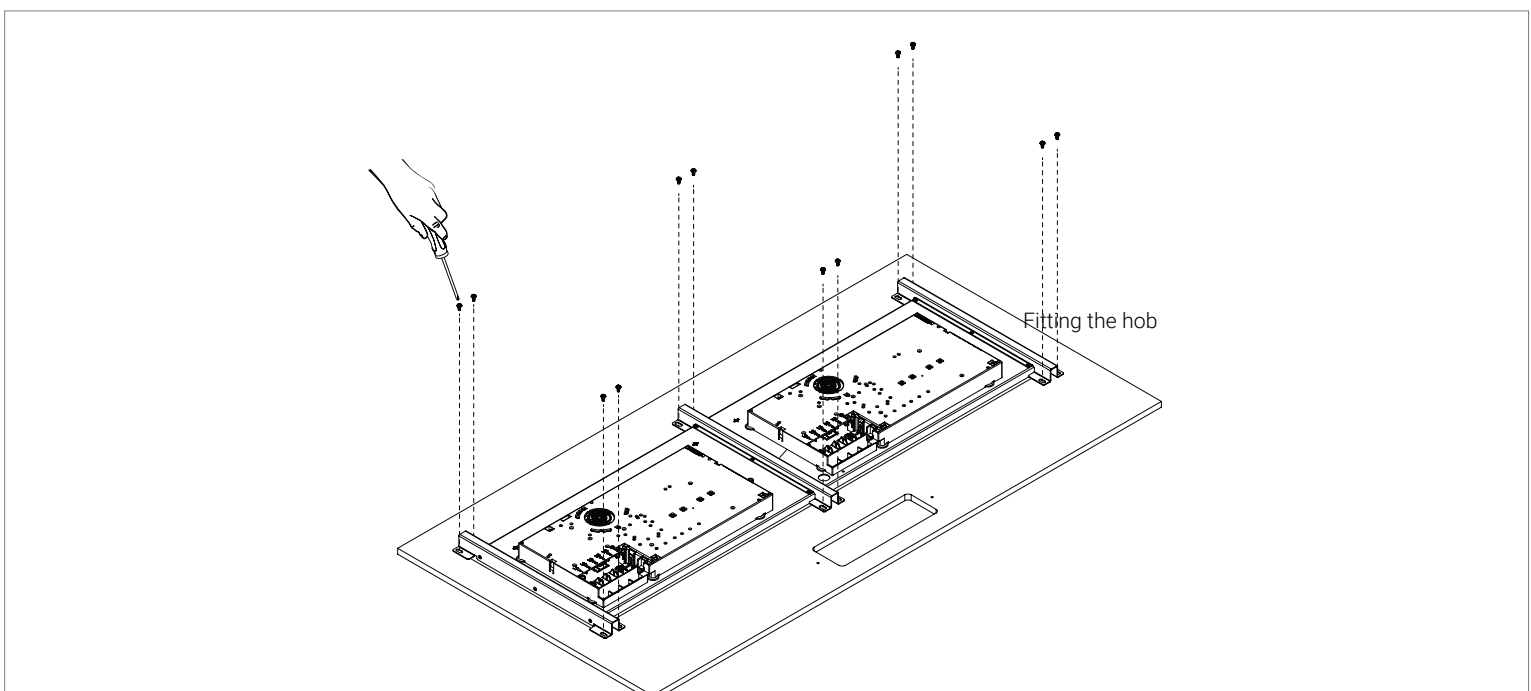
INSTALLATION PROCEDURE

To fit a hob, at least two people will be needed.

1. Fit the induction hob under the worktop in the cut-out designed for this purpose (with a thickness of 8 mm).



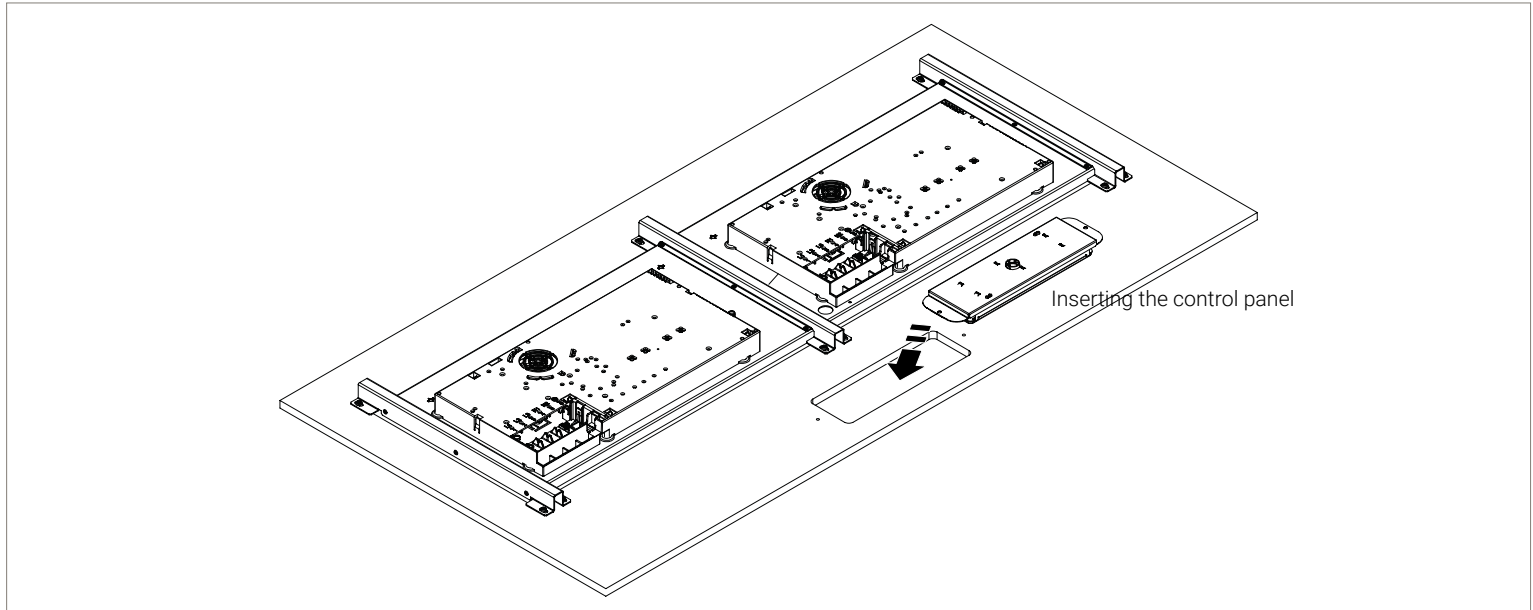
2. One person should hold the worktop to prevent it from moving while the other screws the hob in place (M4X8 screws), inserting two screws in each corner, as shown in the following image.



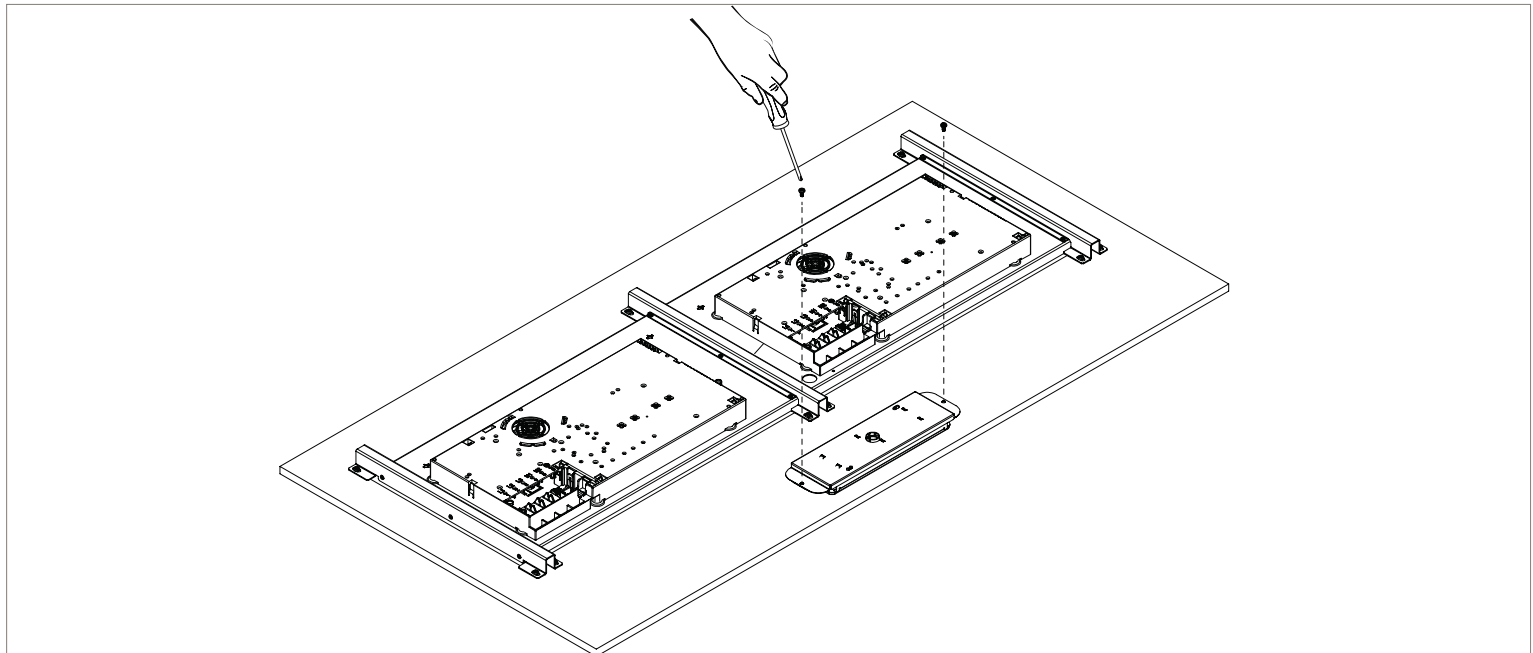
1. INSTALACIÓN DE INDUCCIÓN

3. Next, the control panel should be fitted in the intended space. Before proceeding to do so, first remove the two screws in the panel.

4. Fit the control panel in place, without the screws, making sure that the holes in the worktop are aligned with those of the control panel in the sides of the groove for securing the panel.



5. Then screw the control panel in place, using the two previously removed metric screws (M4X8).



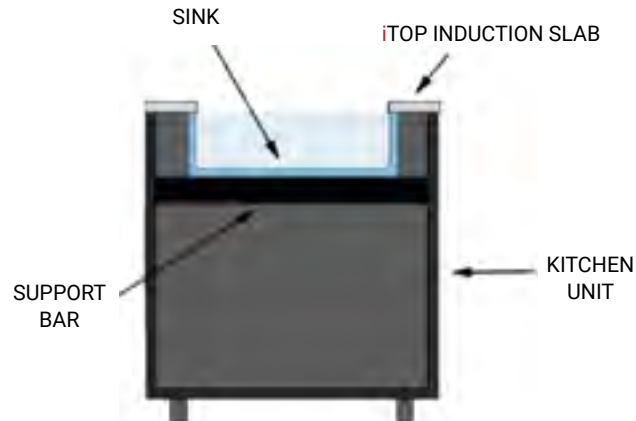
6. Next, use a caulk gun to run a strip of Pactan 6076 or Novasil SP 4667 silicone around the edge of the control panel. Once this has been done, remove any surplus silicone with a rubber spatula so that the silicone strip has a uniform appearance and it keeps the control panel firmly bonded in place around the whole perimeter. Remove the adhesive tape and do not touch the silicone until it is completely dry (leaving it for at least 24 hours, and 2 days in the case of cold, damp environments).

7. Connect the electricity supply lead to the power supply.

2. REINFORCEMENTS

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.



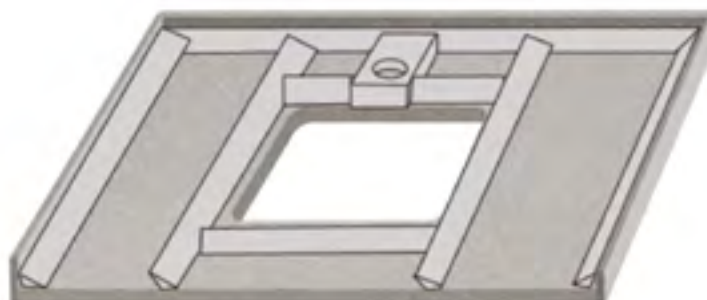
COUNTERTOP REINFORCEMENTS

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 iTOP INDUCTION slab, thus 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.**

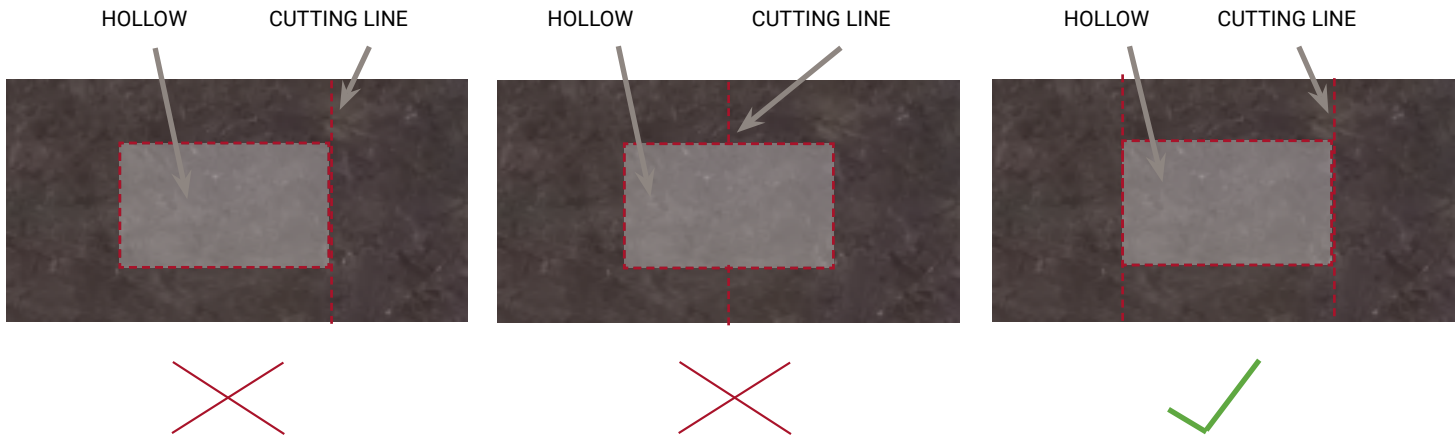
If the countertops have mitred edges, they must be reinforced at regular intervals along the whole perimeter of the surface to ensure added rigidity. These reinforcements must rest directly on the sides of the kitchen units. For the same reason, it is also important to reinforce the perimeter of cut-outs.

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.**



2. REINFORCEMENTS

EXAMPLES OF CUT-OUTS TO AVOID



RESTING THE SLAB ON THE KITCHEN UNITS

INALCO always recommends the installation of iTOP INDUCTION slabs on a continuous surface integrated into the kitchen furniture, since this will act as a support and provide greater stability.



2. REINFORCEMENTS

If the slab rests on a slatted base instead of a stable continuous surface, Inalco recommends a maximum distance of 25 cm between the slats. The following table shows the maximum weight that the countertop will withstand depending on the distance between the slats:

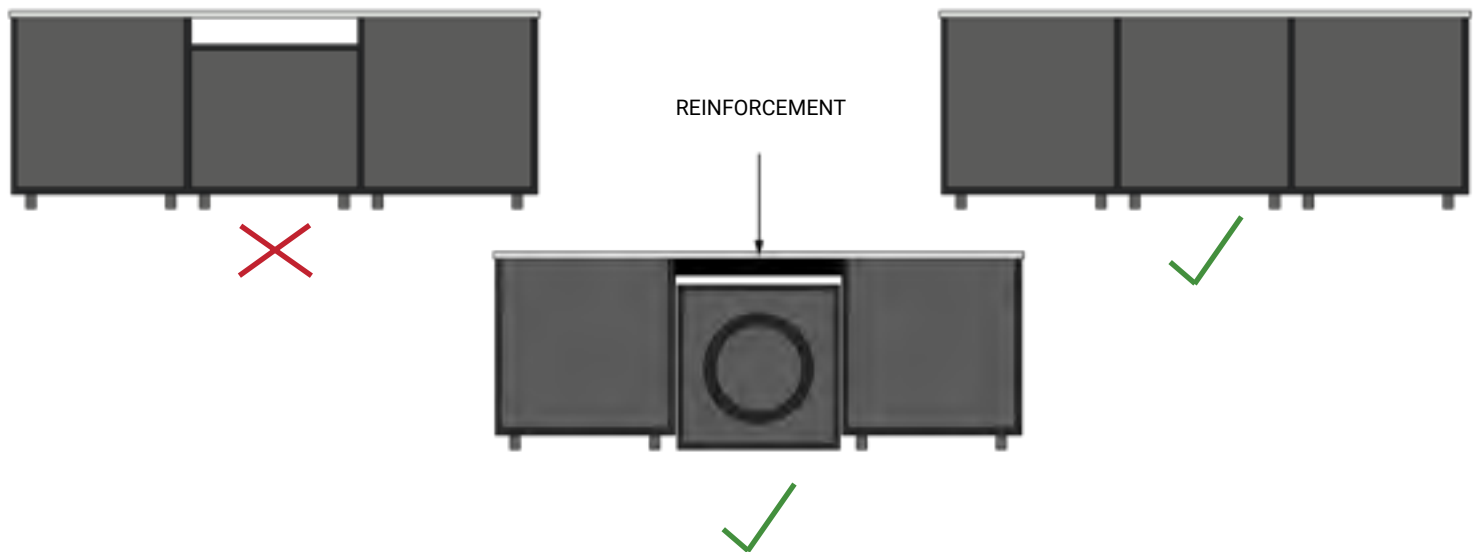
SIZE OF SUPPORTING BASE (cm)	DISTANCE BETWEEN SUPPORTS (cm)	PRESSURE BAR (cm)	RESISTANCE
120 x 60	118	100	348 Kg
60 x 60	59	100	559 Kg
45 x 60	43	100	867 Kg
30 x 60	28	100	1,017 Kg
25 x 60	23	100	1,189 Kg

3. FITTING COUNTERTOPS

KITCHEN UNITS, EXPANSION JOINTS AND OVERHANGS

Kitchen units

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



Expansion joints

To fill the joints, bond the slab to the units or under surface and bond the iTOP INDUCTION 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 INDUCTION slab, such as "No More Nails" or epoxy adhesives.

Projecting sections

During the planning stage, take into account the size of any projecting sections so as to avoid possible breaks during the countertop's everyday use. Generally speaking, these projecting sections should not jut out more than 10 cm from the edge of the base.



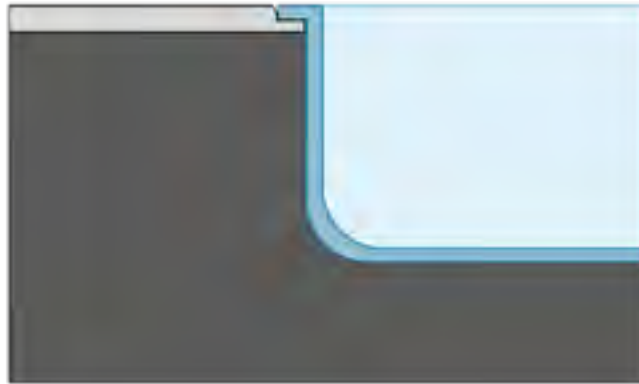
If you would like it to jut out more, a prior study must be made of the necessary reinforcements to use in each particular case.

3. FITTING COUNTERTOPS

SINKS

Flush-to-countertop sinks

To fit sinks flush with the iTOP INDUCTION slab, a rebate of no more than 6 mm should be made.



Under-counter 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.

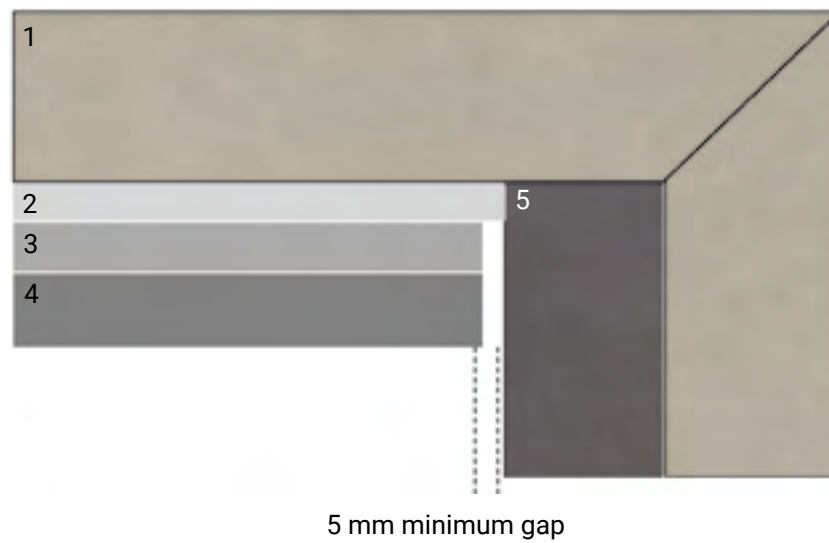


3. FITTING COUNTERTOPS

OUTDOOR COUNTERTOPS

When iTOP INDUCTION 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 epoxy or building adhesives, when bonding iTOP INDUCTION slabs in outdoor locations. To bond mitre joints, the adhesive should be suitable for outdoor use and resistant to ultraviolet rays.

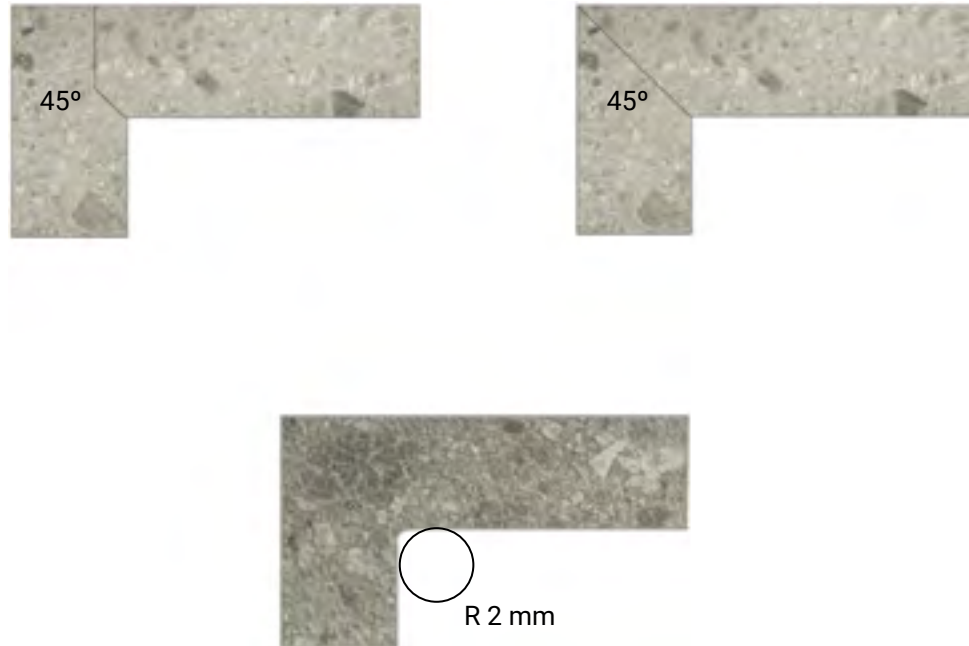


- 1- iTOP INDUCTION slab
- 2- C2-type cement-based adhesive, silicon or polyurethane
- 3- Reinforced cement slab or similar
- 4- Brick / stone / concrete base
- 5- Reinforcements made of an iTOP INDUCTION slab or another suitable material

4.OBSERVATIONS

L-SHAPED COUNTERTOPS

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. Make sure that the base units are in perfect condition and that they are level before fitting a countertop of this kind.

TECHNICAL INFORMATION

1. TECHNICAL CHARACTERISTICS AS PER THE RELATED STANDARD

TECHNICAL CHARACTERISTICS

iTOP INDUCTION is a non-toxic environmentally-friendly product that complies with European legislation under current EU regulation no. 305 of the European Parliament and the Council and other specific standards.

All first-choice products by INALCO comply with and even surpass ISO standards 13006 and EN 14411.

INALCO also has an internal Quality Control System, which it applies to the whole manufacturing and storage process.



1. TECHNICAL CHARACTERISTICS AS PER THE RELATED STANDARD

Technical characteristics ISO 13006 / GROUP Bla UNE - EN 14411 GROUP Bla		Reference standard	Required value	Mean value
Physical characteristics	Water absorption	EN-ISO 10545-3	≤ 0.5 %	≤ 0.1 %
	Breaking strength	EN-ISO 10545-4	≥ 1,300 N	Surpasses standard
	Bending strength	EN-ISO 10545-4	≥ 35 N / mm ²	Surpasses standard
	Resistance to impacts	EN-ISO 10545-5	≥ 0.55 without visible defects	> 0.80 without visible defects
	Resistance to deep abrasion	EN-ISO 10545-6	≤ 175 mm ³	≤ 135 mm ³
	Resistance to fire	UNE-EN 13501:1:07 + A1	-	A ₁
	Linear thermal expansion	EN-ISO 10545-8	-	≤ 9 x 10 ⁻⁶ K ⁻¹
	Thermal shock resistance	EN-ISO 10545-9	-	Resistant
	Frost resistance	EN-ISO 10545-12	Required	Resistant
Chemical characteristics	Resistance to household cleaning products and swimming pool additives	EN-ISO 10545-13	GB Min.	Resistant (A)
	Resistance to low concentrations of acids and alkalis	EN-ISO 10545-13	As indicated by manufacturer	Resistant (LA)
	Resistance to staining	EN-ISO 10545-14	Class 3 Min.	Class 5

(*) Results obtained from test samples.

(**) Do not use acidic cleaning products with a pH of less than 4.

2. TESTS APPLIED TO iTOP INDUCTION



IMPACT RESISTANCE



THERMAL SHOCK RESISTANCE

2. TESTS APPLIED TO iTOP INDUCTION

WATER ABSORPTION [EN-ISO 10545-3]

This determines the product's water absorption capacity (0.1%).

5	4	3	2	1
max				min

STAIN RESISTANCE [EN-ISO 10545-14]

This determines the surface's tendency to absorb stains.

A	B	C
max		min

LIGHT RESISTANCE [DIN 51094]

After exposing a slab to a powerful 400 W light for 30 days, no colour change or other surface alteration was detected.

5	4	3	2	1
max				min

HEAT RESISTANCE [EN-ISO 10545-9]

It does not burn or undergo any change when subjected to 10 cycles of temperatures ranging from 15°C to 145°C.

5	4	3	2	1
max				min

FROST RESISTANCE [EN-ISO 10545-12]

It is unaffected when subjected to over 100 freeze-thaw cycles of between +5°C and -5°C.

5	4	3	2	1
max				min

BREAKING STRENGTH [EN-ISO 10545-4]

A 500 x 500 x 12 mm slab, supported by 2 side bars with a 475 mm separation between them, is subjected to the pressure of a bar in the centre of it until it breaks (570 kg).

5	4	3	2	1
max				min

IMPACT RESISTANCE

A 200 g weight in a tube is dropped onto a 30 x 30 cm surface area from a height of 60 cm so that it falls onto a specific point, with no resulting damage.

5	4	3	2	1
max				min

THERMAL SHOCK RESISTANCE

A metal recipient with a temperature of 200°C is rested on a slab at a temperature of 15°C, with no resulting damage.

5	4	3	2	1
max				min

$$\text{min} = \frac{\text{Low resistance to test}}{\text{Mid-level result}}$$

$$\text{max} = \frac{\text{High resistance to test}}{\text{Optimum result}}$$

3. iTOP INDUCTION TECHNICAL DATA SHEET (AIDIMME)



MANUFACTURER:

INALCO
INDUSTRIAS ALCORENSES CONFEDERADAS, S.A.
C/ San Salvador, 54
12110 Alcora (Castellón) Spain
tel: (+34) 964 36 80 00
e-mail: correo@inalco.es | www.inalco.es

PRODUCT:

The tests described in this sheet have been carried out at Inalco's request in the laboratories of **AIDIMME (THE TECHNOLOGICAL INSTITUTE FOR METALWORK, FURNITURE, WOOD, PACKAGING AND ANCILLARY MATERIALS)**. The obtained results only relate to the analysed samples.

The said results are contained in the test reports **AIDIMME 1612099-01 and 1612099-02**.

UNE 56875V2 standard, "Kitchen furniture. Specifications, requirements and test methods" in situations of normal use.

UNE EN 438-4 standard on over 2mm-thick high-pressure laminates for general use and **UNE EN 438-6** on compact high-pressure laminates for outdoor use.

3. iTOP INDUCTION TECHNICAL DATA SHEET (AIDIMME)

CONDUCTED TESTS	STANDARD	
	STANDARD	OTHERS
SURFACE RESISTANCE TESTS		
Resistance to cold food products	UNE 56875V2	-
Resistance to cleaning products	UNE 56875V2	-
Resistance to hot food products	UNE 56875V2	-
Resistance to dry heat at 180°C	UNE 56875V2	UNE EN 438-4
Resistance to water vapour	UNE 56875V2	UNE EN 438-4
Abrasion resistance	UNE 56875V2	-
Scratch resistance	UNE 56875V2	UNE EN 438-4
Impact resistance to dropped ball	UNE 56875V2	-
Resistance to cleaning products	-	-
Stain resistance	-	UNE EN 438-4
Resistance to cigarette burns	-	UNE EN 438-4
AGEING TESTS		
Light fastness	UNE 56875V2	UNE EN 438-4
Appearance	-	-
Resistance to rubbing	-	UNE EN ISO 11640
Crack resistance	-	UNE EN 438-4
Cooling cycles	-	UNE 48 025
Dimensional stability at a high temperature	-	UNE EN 438-6
Climatic shock test	-	UNE EN 438-6

3. iTOP INDUCTION TECHNICAL DATA SHEET (AIDIMME)

TEST PRODUCT: iTOP INDUCTION SLABS
REF: AIDIMME 1612099-02

CHARACTERISTIC	RESULT	REQUIREMENT (UNE 56875V2) (heavy use)	REQUIREMENT (UNE 56867) OTHERS	REQUIREMENT (UNE EN 438-4) (UNE EN 438-6) OTHERS
Resistance to cold food products (Assessed after 24 hours)	Alkaline products: 0	0 Correct	-	-
	Acidic products: *			
Resistance to cleaning products (Assessed after 24 hours)	All products: 0	0 Correct	-	-
Resistance to hot food products (Assessed after 4 hours)	All products: 0	0 Correct	-	-
Resistance to dry heat at 180°C (Assessment)	Shine: 5 Colour: 5	Shine: ≥ 4 Colour: ≥ 5 Correct	Shine: ≥ 3 Colour: ≥ 4 Correct	Glossy finishes: ≥ 3 Other finishes: ≥ 4 Correct
Resistance to water vapour (Assessment)	Shine: 5 Colour: 5	Shine: ≥ 4 Colour: ≥ 4 Correct	Shine: ≥ 4 Colour: ≥ 4 Correct	Glossy finishes: ≥ 3 Other finishes: ≥ 4 Correct
Abrasion resistance - Initial point (cycles) - Resistance (cycles)	No surface wear and tear >1000 >1000	≥ 150 ≥ 350 Correct	≥ 100 ≥ 250 Correct	-
Scratch resistance (Assessment)	5	≥ 3 Correct	-	Smooth finishes: ≥ 2 Textured finishes: ≥ 3 Correct
Impact resistance to dropped ball -Dropped from a height of 40 cm (Assessment) -Ball dimensions (324 ± 10) g and (42.8 ± 0.5) mm	No cracking	No cracking Correct normal use	-	-
Light fastness (Assessment of grey scale)	5	≥ 4-5 Correct	≥ 4 Correct	≥ 4-5 Correct
Appearance (Assessment)	No flaws observed	-	No flaws Correct	-

* In the event of contact with 7% acetic acid, rinse with plenty of water within 3 hours.

3. iTOP INDUCTION TECHNICAL DATA SHEET (AIDIMME)

TEST PRODUCT: iTOP INDUCTION SLABS

REF: AIDIMME 1612099-02

CHARACTERISTIC	RESULT	REQUIREMENT (UNE 56875V2) (heavy use)	REQUIREMENT (UNE 56867) OTHER	REQUIREMENT (UNE EN 438-4) (UNE EN 438-6) OTHER
Resistance to cleaning products (Assessed after 16 hours)	All products: Shine: 5 Colour: 5	-	Shine: ≥ 3 Colour: ≥ 4 Correct	-
Impact resistance to dropped ball -Dropped from a height of 30 cm (Assessment) -Ball dimensions (324 ± 10) g and (42.8 ± 0.5) mm	0	-	≤1 Correct	-
Resistance to staining (Assessment)	All products: 5	-	-	≥ 4 Correct
Resistance to rubbing (Assessment of grey scale) - Dry (1000 cycles) - Wet (200 cycles) - Observations	5 5 No damage or wear and tear	-	-	UNE EN ISO 11640 No surface damage or wear and tear
Resistance to cigarette burns (Degree)	5	-	-	≥ 3 Correct
Crack resistance (Degree)	5	-	-	≥ 4 Correct
Dimensional stability at a high temperature (%)	0.02			Longitudinal: ≤ 0.3 Transversal: ≤ 0.6 Correct
Cooling cycles (Assessed after 40 cycles)	No visible deterioration	-	-	UNE 48 025 No visible deterioration
Climatic shock test Initial bending strength (N/mm ²) Final bending strength (N/mm ²) Level of resistance	50.9 50.3 0.99	-	-	Resistance: ≥ 0.95
Appearance (Degree)	5 No deterioration	-	-	Rating ≥ 4 Compliant

DECLARATION OF CONFORMITY

**MATERIALS IN CONTACT WITH FOOD
REGULATION (EC) 1935/2004
SPANISH ROYAL DECREE 891/2006**



MANUFACTURER

COMPANY NAME:	INDUSTRIAS ALCORENSES CONFEDERADAS S.A. (INALCO)
ADDRESS:	C/ SAN SALVADOR, 54, 12110 - ALCORA - CASTELLÓN (SPAIN)
PRODUCT IDENTIFICATION:	iTOP INDUCTION
DATE OF DECLARATION:	15/05/2020
REGULATION:	REGULATION (EC) 1935/2004 of October 27th 2004. SPANISH ROYAL DECREE 891/2006 of July 2006.

1. SCOPE OF DECLARATION:

This Product Safety Declaration provides information concerning the safety of **MDi iTOP INDUCTION** surfaces when in contact with food in accordance with European Regulation (EC) 1935/2004 of October 27th and its transposition to Spanish legislation by virtue of Spanish Royal Decree 891/2006 of July 21st.

2. DECLARATION OF CONFORMITY:

INDUSTRIAS ALCORENSES CONFEDERADAS, S.A., hereby declares:

That **MDi iTOP INDUCTION** surfaces do not represent any danger when they are in contact with food. This is endorsed by tests conducted by external laboratories, certified in accordance with specific regulations: European Regulation (EC) 1935/2004 and the UNE-EN ISO 10545-15: 1998 standard on the determination of lead and cadmium given off by glazed tiles.

(*) Report of test C201861.



CLEANING

1. INITIAL CLEANING

Following the fabrication and fitting of iTOP INDUCTION products, the whole surface should be given an initial clean using MDi TOTAL CARE.

MDi TOTAL CARE is a natural eco-friendly cleaning product for removing common stains from MDi products.

Please remember:

- Do not press the sponge down too hard on the surface to be cleaned. MDi TOTAL CARE contains materials of a certain particle size, and so if the same area is rubbed energetically or rubbed too many times, the surface of some finishes might acquire a slight shine.
- Sometimes a surface might have an imperceptible film of dirt or residues from cleaning products. Consequently, when MDi TOTAL CARE is used, it must be applied to the whole surface so as to clean it in a uniform way.

2. EVERYDAY CLEANING

iTOP INDUCTION is a non-porous surface, which makes it very easy to clean.

To remove environmental dust, just wipe the surface with a dry cloth. Do not use products that contain wax, polish or strong acids like hydrofluoric or sulphuric acid.

Only alkaline cleaning products should be used for everyday cleaning of iTOP INDUCTION, such as grease removers, washing up detergent or MDi TOTAL CARE.

With the passage of time and continual use, if more thorough cleaning is needed, repeat the cleaning operation that was used when the product was first fitted.

It is important not to drag heavy objects directly across the surface so as not to cause unnecessary scratches.

3. CLEANING INSTRUCTIONS BY TYPE OF STAIN

Stains should be removed as soon as they occur to prevent them from drying. Before any kind of product is used on the surface, test it out on a concealed area and leave it to act for 4 to 5 minutes. Then rinse it with plenty of water to check that the surface's colour or shine is not affected.

Examples of suitable commercial cleaning products for MDI iTOP INDUCTION surfaces are solvents, grease removers and ammonia. Do not use products with a pH of over 11 or under 4.

TYPE OF STAIN	STEP ONE	STPE TWO TYPE OF DETERGENT**	EXAMPLE OF DETERGENTS**
Cement, pencil marks, lime scale, scratches by metal objects, rust	Wash with water as soon as possible and rub the area gently with a cloth.	Acid	AKEMI Acid Cleaner, Deterdek by FILA, commercial cement remover
Epoxy grouting residues		Acid	AKEMI Epoxy Remover, Fila CR10, grease remover
Fat, grease, food, rubber, ink, felt tip pen, blood, nicotine, vomit, urine, etc.		Acid Solvent	AKEMI Stone Cleaner, AKEMI Intensive Cleaner, Fila PS/87
Graffiti, paint, varnish		Solvent	AKEMI Graffiti Remover, Fila NoPaint Star, commercial solvent
Coffee, tea, juice, soft drinks		Alkaline Oxidizing	AKEMI Algae and Moss Remover POWER, Fila SR/95
Candle wax or wax for repairing scratches, tree resin, remains of adhesive tape		Solvent	AKEMI Wax Stripper, AKEMI AFIN Acryclean, Filasolv, commercial solvent
Silicone		Acetone	AKEMI AFIN Acryclean, Fila Zero Sil, acetone
Dirty joints, wax-based care products		Acid	AKEMI Intensive Cleaner, Fuganet
Marks made by suction pads or polishing rollers		Acid	AKEMI Liquid Polish for Marble
Stains caused by plants, leaves, flowers or ink		Alkaline Solvent	AKEMI Algae and Moss Remover POWER
Hairspray, shoe polish		Alkaline	AKEMI AFIN Acryclean
Soot	Remove with a vacuum cleaner	Acid	AKEMI Stone Cleaner

* Acid food products (pH <4), such as vinegar, lemon or orange, should not be left in contact with the surface of iTOP INDUCTION slabs for over 3 hours.

** Acidic detergents: lime scale remover, cement remover, paint remover etc.

Alkaline detergents: basic cleaning products like grease removers or ammonia.

Solvents: Turpentine, acetone, alcohol, universal solvents etc.

Oxidizing detergents: diluted bleach, hydrogen peroxide etc.

*** For further information, visit www.akemi.com / www.filasolutions.com

MATERIAL SAFETY DATA SHEET

1. IDENTITY OF THE PRODUCT AND MANUFACTURER

Product:

iTOP INDUCTION

Recommended uses:

Countertops

Manufacturer:

INALCO (Industrias Alcorenses Confederadas S.A.)

Tel.: (+34) 964 368000

www.inalco.es

C/ San Salvador, 54, 12110 Alcora (Castellón - SPAIN)

Emergency telephone no.:

Medical Toxicological Information Service (+34) 91 562 0420



2. HAZARDS IDENTIFICATION

Classification of product:

The product is not classified as hazardous in accordance with Regulation (EC) No. 1272.

Hazards identification:

The product is inert and it does not pose any danger to health or to the environment with normal use. During the cutting and polishing process, dust may be released with suspended particles of crystalline silica (SiO₂) in an inhalable fraction.

Other hazards:

There are no hazards associated with the product. It is advisable to perform cutting operations in a well-ventilated place or using water-cooled cutting equipment due to the product's content in breathable crystalline silica.

3. INFORMATION / COMPOSITION OF COMPONENTS

Chemical composition: Mixture

Substance	CAS	EINECS	Concentration
Crystalline Silica	14808-60-7	238-878-4	10 - 15 %

4. FIRST AID

The product in its finished form does not require special preventive measures. During cutting, polishing, grinding or drilling operations, preventive measures should be taken to keep silica dust to a minimum.

Inhalation: Move away from source of exposure and breathe fresh air. Seek medical attention in the event of discomfort.

Contact with eyes: Flush eyes with abundant water for several minutes.

Contact with skin: The dust is not irritating to the skin. Wash with soap and water.

Ingestion: Not applicable.

5. FIRE-FIGHTING MEASURES

Extinguishing media: The product is not flammable and it is not a source of combustion. In the event of a fire in the immediate area, there is no restriction with regard to the extinguishing media.

Specific hazards arising from the mixture: The product's composition does not constitute a hazard in the event of fire.

Recommendations for firefighters: No special recommendations are needed.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Not applicable.

Environmental precautions: No special measures are required.

Cleaning-up method: Not applicable.

7. HANDLING AND STORAGE

Precautions for safe handling: The product requires special handling with suction cup systems, and special precautions must be taken when it is manually handled. Cut-resistant gloves should be used to prevent accidental injuries due to breakages. Shoes and safety goggles must be worn as protection against flying particles during machining or cutting. Avoid over-exertion when handling the slabs manually.

Storage: No special storage measures are required, except for protection against impacts so as to avoid possible breakages. The product should be stored in its original packaging until it is used.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters: Due to the possible release of dust during cutting and polishing operations, wet cutting and polishing systems should be used. The regulations regarding exposure values to crystalline silica are determined by Directive 2000/39/EC and Spanish Royal Decree 374 which refers readers to the values published by the INSHT.

DAILY EXPOSURE LIMIT VALUES (DELV)		
Substance	CAS no.	DELV
Crystalline Silica	14808-60-7	0.05 mg / m ³ (*)
Inhalable dust fraction		3 mg / m ³ (*)

(*) Limit values applied in Spain. See the applicable values for each pertinent country.

Exposure controls: Exposure to dust released during machining processes (cutting or polishing) must be controlled and kept to a minimum. To do so, joint and individual protective measures must be taken.

Minimize the generation of dust by using mechanical ventilation systems and water supply systems. Avoid the use of compressed air and make sure the air is constantly filtered.

Personal protection:



Respiratory protection:

Use respiratory protection against type P3 particles (EN-143).



Eye protection:

Use protective goggles to protect against flying particles.



Hand Protection:

The use of mechanical protective gloves is recommended to avoid accidental cuts due to broken parts.

Skin protection:

No skin protection is required.

9. PHYSICAL / CHEMICAL CHARACTERISTICS

Physical State:	Solid
Odour:	Odourless
Colour:	Depends on the model
PH:	Not applicable
Density:	2390 – 2410 Kg / m ³
Solubility in water:	Insoluble
Boiling point:	Not applicable
Melting point:	Not applicable
Other information:	No relevant data are known

10. STABILITY AND REACTIVITY

Reactivity:	Not applicable
Chemical stability:	Stable
Possibility of hazardous reactions:	None known
Conditions to avoid:	Formation of dust during processes
Incompatible materials:	Avoid contact with strong acids for prolonged periods
Hazardous decomposition products:	None known

11. TOXICOLOGICAL INFORMATION

The dust generated during machining, cutting and polishing processes contains silica particles in suspension. Prolonged exposure to breathable crystalline silica (SiO₂) can cause lung fibrosis and silicosis.

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

12. ECOLOGICAL INFORMATION

The product is not harmful to the environment and neither does it release materials that might be environmentally hazardous.

13. DISPOSAL CONSIDERATIONS

Taking as a reference, current legislation: European Directive 91/156 / EEC, Spanish Waste Act 10/98, and Spanish Royal Decree 1481 on Waste Disposal.

The waste generated by iTOP INDUCTION materials can be disposed through an authorized waste disposal manager.

Cardboard, paper and wood packaging should be recycled by authorized managers.

14. TRANSPORT INFORMATION

Transport by land (ADR/RID):	Unrestricted
Transport by sea (IMDG):	Unrestricted
Transport by air (ICAO/IATA):	Unrestricted

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

NFPA 704 risk rating system.



Risk – Health:	0
Flammability:	0
Reactivity:	0

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



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