iTOP | Ker
COUNTERTOPS

Cutting & handling recommendations

inalco

CONTENT

CUTTING & HANDLING RECOMMENDATIONS

iTOPKer PACKAGING

iTOPKer Solutions are compact heavy slabs that need to be properly handled. The following table shows their weight by slab, A-frame and number of slabs.

Weight of whole slab	≈ 150 kg
Weight per m^2	≈ 34 kg
Slabs per A-frame	20 piezas
Weight per A-frame	≈ 3150 kg

The slabs are packed vertically onto pallets, fastened to an A-frame, to ensure their safe transportation and storage. 3 strips of cardboard are placed lengthwise between the slabs, along their 1500mm side, to keep them separate.

Once all 20 slabs have been packed onto a pallet on their A-frame, the corners are protected with 4 cork corner protectors. The slabs are also secured to the pallets with 3 slings, mounted on wood strips to prevent them from coming into direct contact with the slabs. The pallet is then secured with plastic straps to protect it from the rain and 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.

HYGIENE & SAFETY

To handle iTOPKer porcelain slabs properly, the necessary safety precautions must be taken, including the use of safety gloves at all times.

INSPECTING THE SLABS

Before proceeding to fabricate a countertop, clean the slabs well and carry out exhaustive visual checks to make sure that they have no flaws.

No claim will be accepted for slabs once they have been installed or machined, even if they have factory flaws.

Surface appearance:
To check for flaws in iTOPKer Solutions slabs, place them perpendicular to you and observe them from a distance of one metre in natural light.

ST	Usable area of slab: 1500x3200 mm Irregularity in similar colour <3 mm Irregularity in different colour <1 mm
CO	Usable area of slab: 750x3200 mm
RD	Slabs for supporting countertops

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 highest curvature point with a feeler gauge.

LOADING & HANDLING

To load, unload and transport the slabs, use a forklift 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.

When removing the slabs from the A-frames, remember that they are fixed to the A-frame with vulcanized alligator clips or conventional ones to prevent them from moving or falling off, in compliance with the maximum permitted loads. 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.

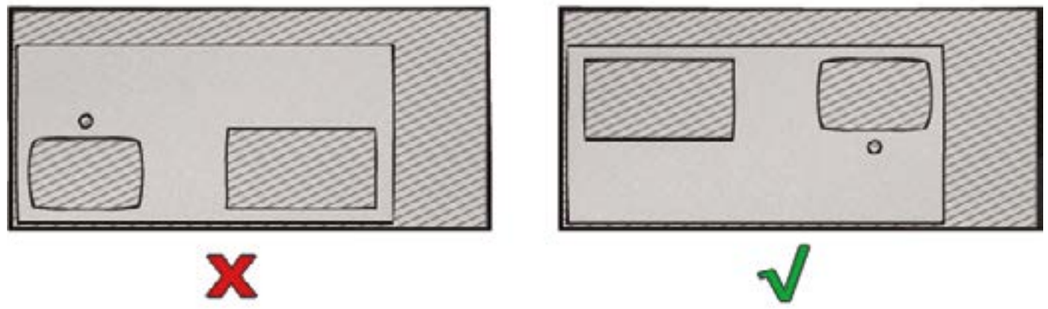
If slings are used or any other handling equipment with metallic parts, make sure that the metal does not come into contact with the surface of the slabs.

iTOPKer Solutions porcelain slabs are conspicuous for their outstanding technical properties. The key benefits they offer 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, this prevents the spread of bacteria and mould, while also ensuring food grade properties.

iTOPKer Solutions 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 iTOPKER slabs, ask for details of the right tools and equipment to use.

Orientation:
Plan how to cut the slab before beginning the cutting process so as to take maximum advantage of its surface. With this in mind, take into account which way the slab faces when cutting or making holes in it. Make sure that all cut-outs are made nearer the middle of the slab, as shown in the illustration, since this area is more resistant to any pressure generated by the cutting process.



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.

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 are:

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

	300 mm Ø	350 mm Ø	400 mm Ø
Revolutions	1800 RPM	1600 RPM	1500 RPM
Cutting speed	1,2 ml / min	1,2 ml / min	1,2 ml / min

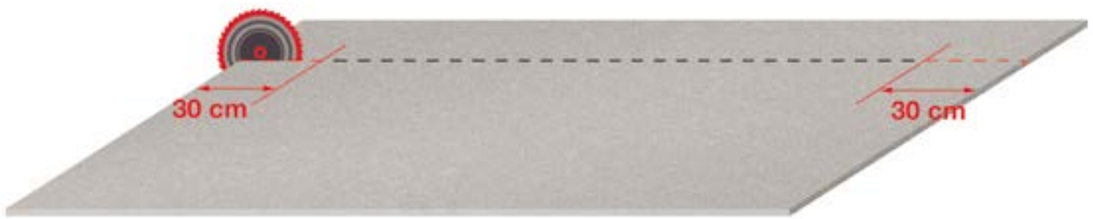
FREDIMAR (http://www.fredimar.com/es/)

	300 mm Ø	350 mm Ø	400 mm Ø
Revolutions	2500 RPM	2200 RPM	1900 RPM
Cutting speed	1,5 ml / min	1,5 ml / min	1,5 ml / min

To begin, cut a strip of approximately 3cm away from each side to reduce any stress (cutting the long sides first and then the short ones) and to ensure a good edge.

Make sure that the disc is properly cooled with water as the slab is cut, because iTOPKer porcelain 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 (half the speed) to ensure a good finish.

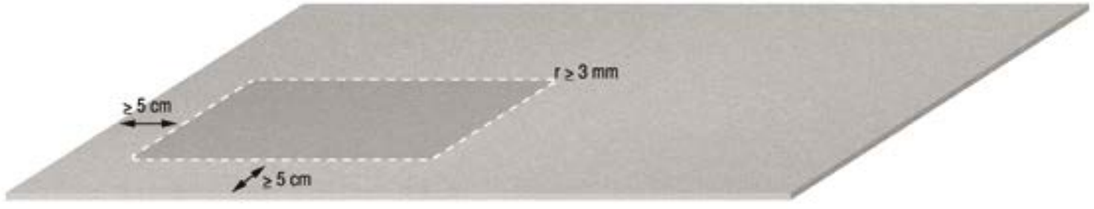
In the case of Blanco Plus coloured slabs, reduce the cutting speed by half across the whole surface.



The cutting speed for 45º mitred joints should be 0.5 ml/mins.

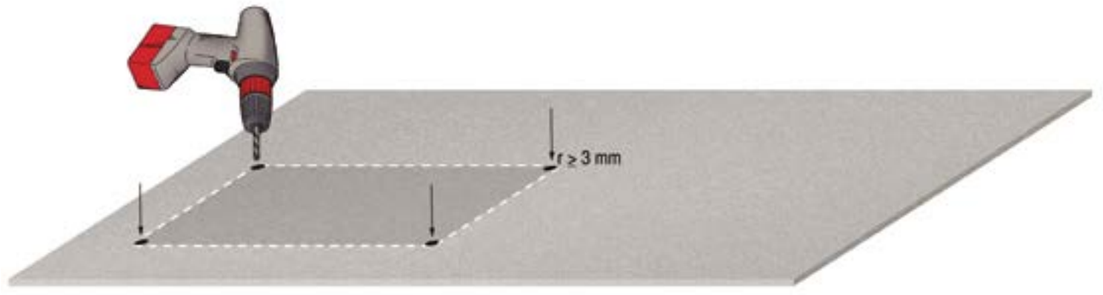
Making cut-outs with a cutting disc:

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.

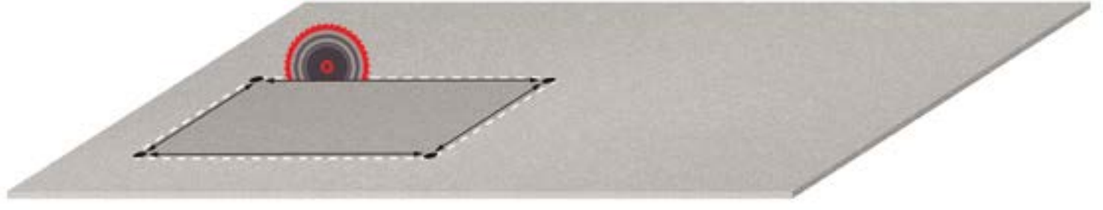


A bigger radius will ensure a higher structural resistance. In contrast, angles with no radius create a stress point on the surface. NEVER LEAVE 90º ANGLES.

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



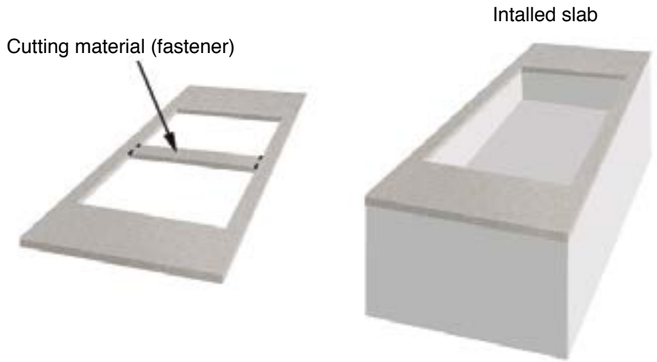
Next, cut from one hole to the next, in a straight line, using a bridge saw and working at a minimum speed to prevent the slab from breaking due to the stress to which it is subject.



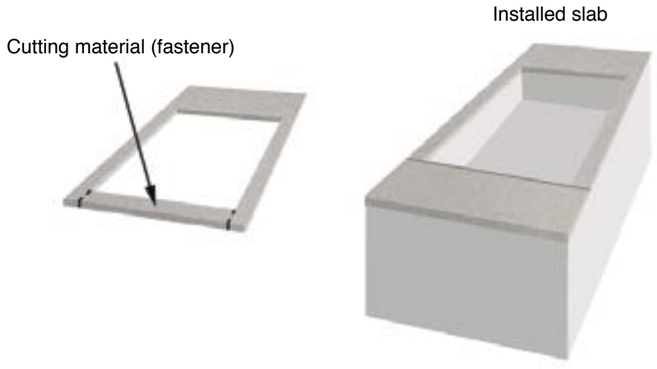
Planning large cut-outs:

If one or more large cut-outs have to be made, 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.

a) Large cut-out:



b) Interrupted sink cut-out:



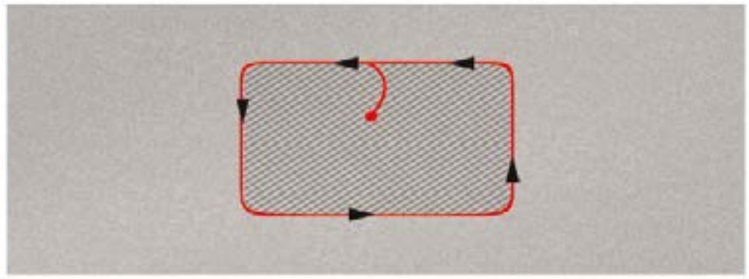
If the wrong type of cutting tool is used, the machine or slab might be damaged or even break. Problems might also occur if the whole weight of the slab is concentrated on one single point as it is cut, due to pressure from the cutting disc. For this reason, it should be cut by passing the cutting disc 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.

CUTTING WITH WATERJET EQUIPMENT

Cut a 3cm 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 3900 bares and cutting speed of 0.7 m/mins 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).

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.



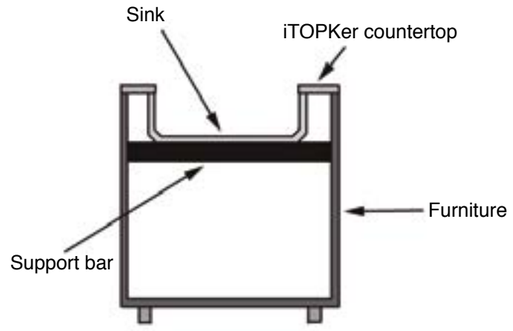
PROTECTING THE EDGES

Once they have been cut, the edges of iTOPKer Solutions countertops must be treated with a sealant to waterproof the slab (STOPDIRT / DEEP ENHANCER). Higher intensity on the edges and better finishes are achieved using this type of products.

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.

SINK SUPPORT

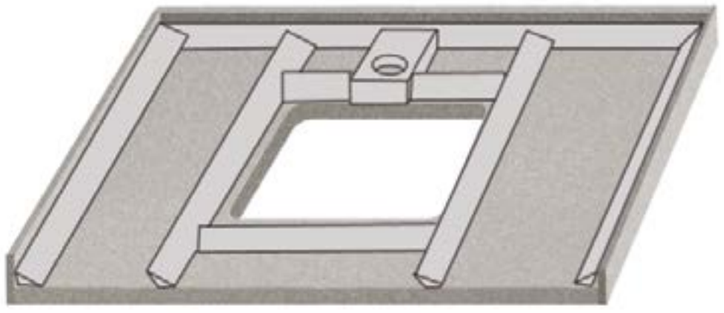
A support bar should be included in the case of large sinks. This should be fixed to the base on which the countertop rests. Without it, the weight of water from a fully open tap or other everyday materials might cause the countertop to break or come loose from the sink.



COUNTERTOP REINFORCEMENTS

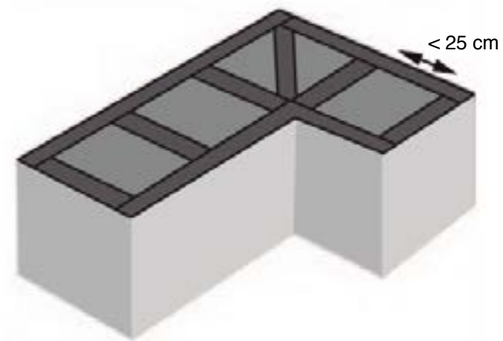
All joints in the countertop should be reinforced on the underside.

Areas round cut-outs that do not rest on a solid base should be reinforced with suitable material to guarantee stability and resistance.



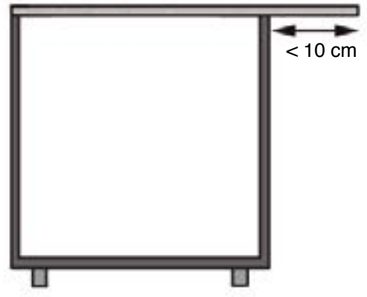
RESTING THE SLAB ON THE KITCHEN FURNITURE

If the slab rests on a slatted base instead of a stable solid surface, a minimum distance of 25 cm should be left between the crossbars, as indicated below:



PROJECTING SECTIONS

When the countertop is being designed, it is important to plan how much projecting sections jut out so that it does not break during normal use. Generally speaking, these projecting sections should not jut out more than 10 cm from the edge of the base.



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

Our technical documents do not cover all possible applications or factors involved in the installation and use of a material. For this reason, before our products are used, the project manager, architect or materials specifier should make sure that this and any other products used in the installation process are suitable for the intended use. In all circumstances, this person shall be fully liable for the results of their work.

In the event of failure to comply with these recommendations, Inalco shall be exempted from all liability for the material's improper use or faulty installation. No claims will be admitted for materials once they have been installed.

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