Fabrication for Counter Top

Locelain™

LN-303-2019

*** It is essential to follow the instructions for specification, sampling and acceptable use provided by the manufacturer which have been developed to comply with the Tile Council Of North America and the accepted National Standard of Specifications for Gauged Porcelain Tile Panels ANSI A137.3 ***

1. Cutting

(1) Bridge Saw: Tool setting

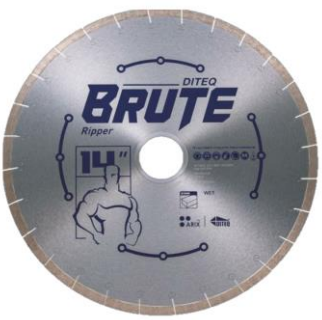
Proper setting of the equipment is most important for Fabricating Locelain product of good quality.

- Make sure that the saw blades do not shake during cutting and the saw blade direction align with the cutting direction.
- The Work bench must be solidly built, perfectly flat and free of residues and scraps of any size;
- When cutting small pieces, such as back splash strips, we recommend clamping the material to do not move.
- Enough water should be used at all time during cutting.
- Choose the proper saw blade type for Locelain. (Please find detailed information on chapter 5.Tools)

Below tool setting table is only reference. This value might be different depends on machines.

Slab	Blade diameter (mm)	rpm.	Cutting speed (m/min)
Polished (thickness: 6~12mm)	300	2300-2500	0.8 ~ 1.0
	350	2000-2200	
	400	1700-1900	
	450	1400-1800	
Satin, Matte (thickness: 6~12mm)	300	2300-2500	0.6 ~ 0.8
	350	2000-2200	
	400	1700-1900	
	450	1400-1800	

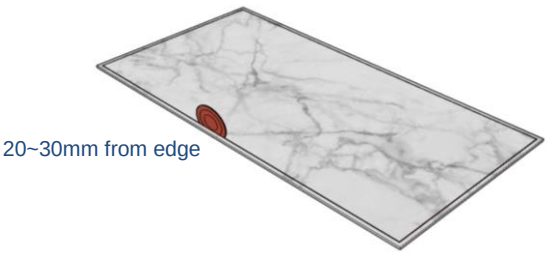
Bridge saw



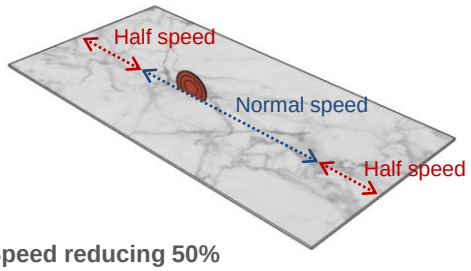
Saw blade

(2) Bridge Saw: Straight Cutting

Before cutting slabs, Locelain recommends side cutting which is removing 20-30 mm of material around the edges. This is essential to reduce the internal strain of the slab after the manufacturing process, which stain might cause breakages during fabrication process. This sides cutting is highly recommended on all colors and all thickness. (Even though, fabricator use water-jet, side cut is required before cutting.)
Do not make a plunge cut which cutting start in the middle of slab, always start cutting from outside of slab to inside.
During straight cutting It is important to reduce the cutting speed by 50% for 15-20 cm both at the beginning and at the end.



Side cutting



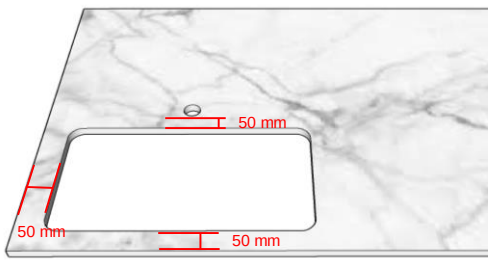
Speed reducing 50%
at the beginning and end of cutting

Note: Considering the possible variables during handling, cutting and drilling operations, accidental cracks or breakages cannot be compensated or managed by Locelain under any circumstance.
L-shaped Locelain counter top design having risk of cracks during fabrication and installation is not recommended.

2. Cut-out

(1) Cut-out plan

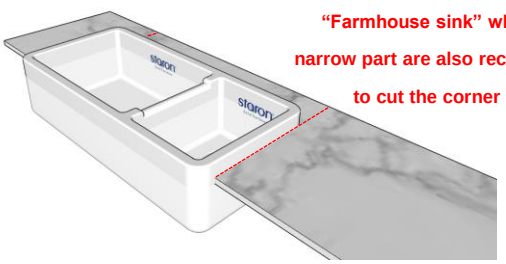
- When planning a cut-out place, the distance between a cut-out and the edge of the slab should be at least 50 mm as the picture. Also the distance between a hole for a faucet and the cut-out should be at least 50 mm.
- All corners need to have at least a 3mm radius.
- To prevent crack problem after installation, please divide narrow area design where some weight might be applied



Cut-out Location

In-correct

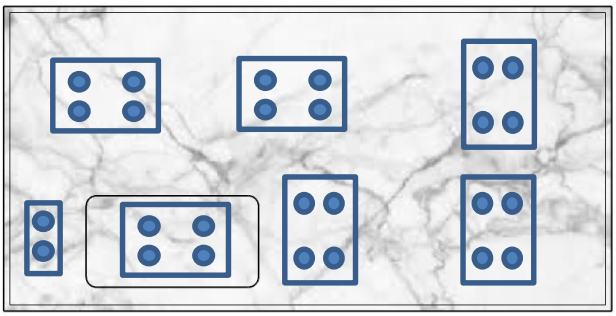
Correct



"Farmhouse sink" which has narrow part are also recommended to cut the corner part.

(3) CNC: Tool setting

Check that the bench is straight and level and that the suction cups are free of any debris. Check that there is enough support for the slab.
Make sure there are suction cups below the entire slab, especially below the part to be cut.

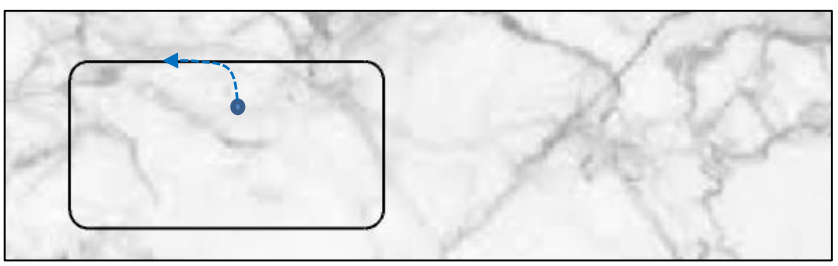


Below tool setting table is only reference. This value might be different depends on machines.

Tool	rpm	Speed (mm/min)
Crown bit (Core drill)	4,500~5,500	20
12mm Cutting bit (Cutting)	4,500~5,500	150
Router bit (Trimming)	8,000~10,000	250

(4) CNC: Cut-out

First drill a hole inside the cutout, using the crown bit. Afterwards, use the router bit to get closer to the cutting line. As you get closer to the cutting line, curve a bit; do not use a perpendicular approach as this could create a notch. At the end of the cut, reduce the speed to 50% as you complete the cutout.



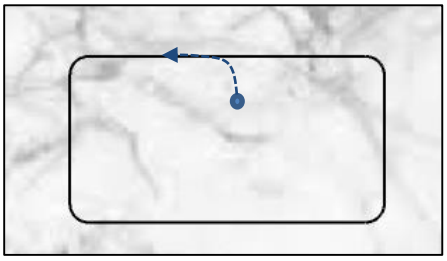
(5) Water jet: Tool setting

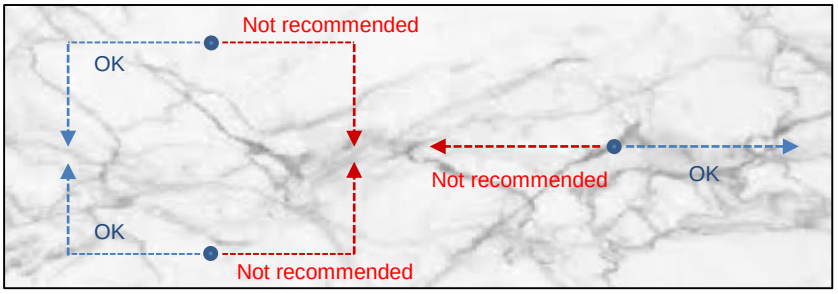
Locelain recommends taking the following precautions when using water-jet cutting instruments:
Cut the edges (2cm each) of the slab before performing any other operations in order to reduce the strain;
Check that the work bench is perfectly flat and totally free of residues or debris;
Check that the level of water in the machine is 2-3 mm above the level of the work bench, thus slightly floating;
To avoid any breakages, holes should be cut starting from the center of the slab, while any straight cuts must be started from the edges.

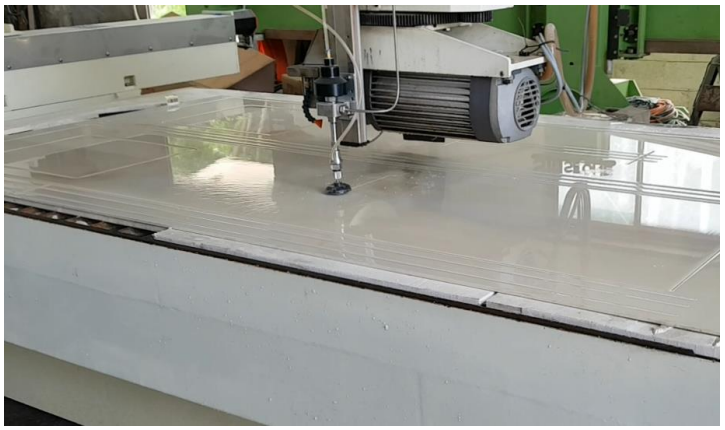
Abrasion	Starting pressure	Cutting pressure	Cutting speed
0.35-0.45 Kg/Min	600-700 bar	3500-3700 bar	70 cm/min for 6mm thickness 45 cm/min for 12mm thickness

(6) Water jet: Cut out

To do the cutouts, beginning the cut at an internal point in the cutout and then getting closer to the cut perimeter is recommended:
All inner corners require a minimum radius of 3 mm.
First cutting towards the edge of the slab from the hole or in parallel to the edge of the slab and following this direction to finish the part is recommended.
Making the first cut towards the center of the slab is not recommended.

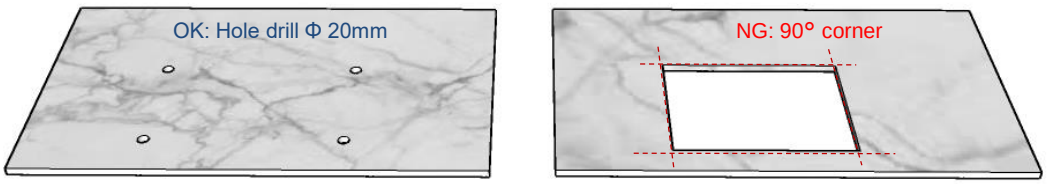






(7) Hand Tool: Cut-out

Precise drilling of the edges around the hole.
We recommend a diameter of at least 20 mm;
Make the adjoining linear cuts with a bridge saw.
Proceed to cut around the edge of the desired hole, avoiding sharp 90° corners by maintaining a radius of roughly 20 mm.

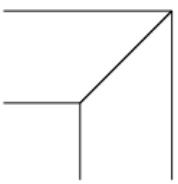


3. Edge build up

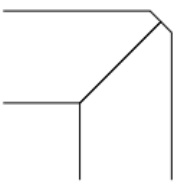
Locelain recommends the following finishes for the creation of worktop edges:
The type of edge finish will depend entirely on the chosen slab; in the case of rich colors and vein markings, for example, it is preferable to have a matching edge. For the best results, in the case of complex graphics, Locelain recommends finishing the slab according to B or C. If the slab has a simpler coloring (for example in the case of plain colors), the type of edge finish is up to the customer to decide.

Designs

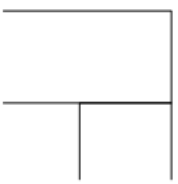
45° corner cut with bevel and polished edge.



Trim edge with assembled front trim (minimum bevel on the edge).



Trim edge with assembled front and bevel.



The front trim is fixed below the top.

4. Edge Polishing

To reduce the risk of the edge chipping, we recommend beveling the edges before applying the finish to the edges with the edge-
polishing machine.
Follow the sequence of abrasives according to the surface and finish desired, in line with these parameters:
Abrasive satin finish: 120-220-500;
Abrasive polished finish: 100-200-500-1000-2000;
Brush sequence: 36-46-80-120-(220-400)
Speed: 100/120 cm per minute

5. Packing

- Locelain products must be stored and transported vertically on the pallet. (Horizontal loading prohibited)
  In case of packing the slabs of different size, Larger size of slab should be placed on closer area from frame.

5. Tools

CSB J SLOT

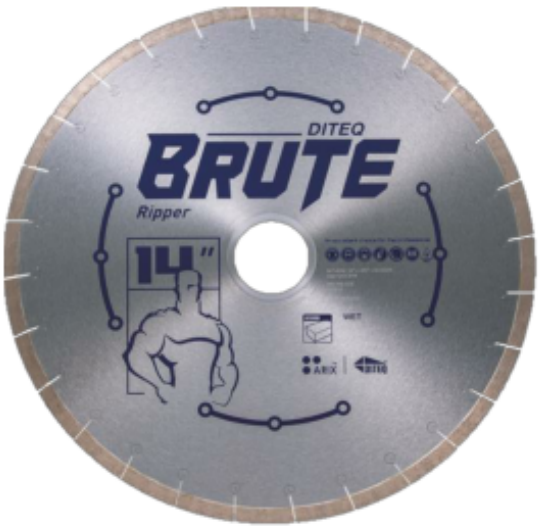
DITEQ DIAMOND TOOLS & EQUIPMENT

Product Code	Diameter	Segment(T x H)	Bore	M/C	Steel Core
CSB14E02	14"(350mm)	2.4 x 10	60/50	Bridge Saw	Non Silent
CSB14 R05	14"(350mm)	2.4 x 10	60/50	Bridge Saw	Silent
CSB16R02	16"(400mm)	3.2 x 10	60/00	Bridge Saw	Non Silent
CSB16R05	16"(400mm)	3.2 x 10	60/50	Bridge Saw	Silent
CSB18R01	18'(450mm)	3.2 x 10	60/50	Bridge Saw	Non Silent
CSB18R05	18'450mm)	3.2 x 10	60/50	Bridge Saw	Silent

Porcelain Tile Thickness	Blade RPM	Feed Rate
3mm/3+	2150 - 2500	1.5 - 1.8
6mm/6+	2150 - 2500	1.2 - 1.5
12mm/12+	2150 - 2500	1.0 - 1.2
20mm	2150 - 2500	0.8 - 1.0

Other Suggestions :

- ▶For miter cut(45 degree cut), reduce speed feed by 40%
- ▶For miter cut, recommend CSB series with non silent core
- ▶For wet use only



5. Tools

Product Code	Diameter	Segment Thicjkness	Segment Height	Bore
D50032	4"(105mm)	0.060'(1.2mm)	10	7/8"-5/8'
D50033	4.5"(115mm)	0.060"(1.2mm)	10	7/8"-5/8"
D50034	5"(125mm)	0.060"(1.2mm)	10	7/8"-5/8"
D50035	6"(150mm)	0.060"(1.2mm)	10	7/8"-5/8"
D50036	7'(180mm)	0.070"(1.8mm)	10	DM-7/8"-5/8"
	10"(250mm)	0.070"(1.8mm)	10	1"-5/8"

Product Code	Diameter	Segment Thicjkness	Segment Height	Bore
D50061	4"(105mm)	0.060'(1.2mm)	10	7/8"-5/8'
D50062	4.5"(115mm)	0.060"(1.2mm)	10	7/8"-5/8"
D50063	5"(125mm)	0.060"(1.2mm)	10	7/8"-5/8"
D50064	6"(150mm)	0.060"(1.2mm)	10	7/8"-5/8"
D50065	7'(180mm)	0.070"(1.8mm)	10	DM-7/8"-5/8"
D50066	10"(250mm)	0.070"(1.8mm)	10	1"-5/8"

Diameter	M/C	Max. RPM	Dry/Wet
4"(100mm)	Grinder	15000	Dry
4.5"(115mm)	Grinder	13000	Dry
5"(125mm)	Grinder	12000	Dry
6"(150mm)	Grinder	10185	Dry
7"(180mm)	Wet tile saw	7800	Wet
10"(250mm)	Wet tile saw	6115	Wet

D5003 series

D5006 series

5. Tools

Product Code	Diameter	Thread	Dry/Wet
CT1/2	1/2"	5/8"-11	Wet
CT3/4	3/4"	5/8"-11	Wet
CT1	1"	5/8"-11	Wet
CT1-1/4	1-1/4"	5/8"-11	Wet
CT1-3/8	1-3/8"	5/8"-11	Wet
CT1-1/2	1-1/2"	5/8"-11	Wet
CT2	2"	5/8"-11	Wet
CT2-3/8	2-3/8"	5/8'-11	Wet
CT2-5/8	2-5/8"	5/8"-11	Wet
CT3	3"	5/8"-11	Wet

Features

- Silver welded 8mm supreme segments
- Crown type with 3 grooves
- 5/8-11 female thread
- ½" gas CNC male thread ia also available
- Recommended RPM is 1600-2800