RECOMMENDED TOOLS FOR MACHINING COUNTERTOPS

1. Blades
   a) Segmented blade for porcelain.

2. Grinding Discs
   a) Electroplated diamond grinding disc, type G30
      Refining and trimming edges.
   b) Cup wheels, medium, grain 60.
      Beveling and pre-grinding edges

3. Epoxy
   Soldapiedra Interior applications only. Not suitable for Exterior.
   Must be used with Tennax hardener.
   Color matching pigments available

4. Polishing Discs
   a) Silicon Carbide velcro discs for dry use.
      Grit 60, 120, 220, 400.
   a) Silicon Carbide velcro discs for wet use.

5. Core Drill 20-35 mm
   Electroplated diamond, cutting drill bits.
   20-35mm diameter.
   Use water for cooling.

Refer to installation recommendation manual for more info on interior and exterior adhesives and grouts.
1. NEOLITH SLAB DIMENSIONS:

**STANDARD SLAB DIMENSIONS**

The NEOLITH slab (3250 x 1560mm raw slab) is the largest available on the market.

*NEOLITH can be cut down to any size or format, maintaining the same technical and aesthetic properties.

NEOLITH slabs will now come without a fibre glass backing except Arctic White which will still have a fibre glass backing for reinforcement.

2. Handling NEOLITH:

NEOLITH slabs must be loaded, unloaded and transported by means of a forklift, gantry crane or other lifting device. In every case of handling and transport, the slabs should be balanced considering its center of gravity.

**Handling suggestions:**

1) Cut a 2 cm. thick plank to roughly the following dimensions: 3 meters x 20 cms.

2) Attach two fixtures to the edge of the plank. (This will prevent the plank from falling in between the slabs.)

3) Place the plank in between the slab(s) you want to lift. Make sure the plank is placed on the backside of the slab, where the fiberglass mesh is glued.

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5. Core Drill 6-12 mm

Electroplated diamond, cutting drill bits.
6-12mm diameter.
Use water for cooling.

6. 4” Angle grinder and 7” Buffer

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**NEOLITH 12MM COUNTER SURFACES**

1. Inspecting NEOLITH:

Before commencing fabrication perform a visual control of the slab for:

- Pigment contamination.
- Blisters, cracks & fissures.
- Warping.
Handling suggestions:
4) Place the clamp over the slab(s) and the plank.

5) Fix the clamp and lift the slab(s) with caution. Try to avoid sudden changes of direction.

Manual Handling suggestions:

Moving a NEOLITH slab:
THE RIGHT WAY! Carried vertically at all times

AVOID! Carrying horizontally
Manual Handling suggestions:

Placing a Neolith Slab on a bench:
THE RIGHT WAY! Supported and tilted

TRANSPORTING NEOLITH:

NEOLITH must always be in a vertical position when handling manually.

CUTTING NEOLITH:

Segmented blade for porcelain.

WET cutting

TABLE cutting
Regular bridge saws or cutting tables.

<table>
<thead>
<tr>
<th>Disc Diameter (mm)</th>
<th>RPM</th>
<th>Cutting speed (m/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 mm</td>
<td>2500</td>
<td>1,0</td>
</tr>
<tr>
<td>350 mm</td>
<td>2200</td>
<td>1,0</td>
</tr>
<tr>
<td>400 mm</td>
<td>1900</td>
<td>1,0</td>
</tr>
</tbody>
</table>

To ensure a good finish it is recommended to start and finish the cut with a slower speed of 0,3 m/min.

WATERJET cutting
Recommended cutting speed:

<table>
<thead>
<tr>
<th>Pressure (Bars)</th>
<th>Cutting speed (m/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3900</td>
<td>0,7</td>
</tr>
</tbody>
</table>

CNC Machines
Core bit for drilling holes - Recommended downwards speed:

<table>
<thead>
<tr>
<th>RPM</th>
<th>Cutting speed (mm/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4500</td>
<td>20</td>
</tr>
</tbody>
</table>

Finger bit - Recommended cutting speed:

<table>
<thead>
<tr>
<th>RPM</th>
<th>Cutting speed (mm/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4600</td>
<td>120</td>
</tr>
</tbody>
</table>

DRY cutting

Hand Tools
Using regular granite & marble hand tools, make use of safety systems, such as dust collectors.

<table>
<thead>
<tr>
<th>RPM</th>
<th>Cutting speed (m/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11000</td>
<td>0,7</td>
</tr>
</tbody>
</table>
NEOLITH-drilling holes:

Electroplated Diamond, Cutting Drill Bits.
NOTE: use the drill without the hammer action.

Recommendations for “L” cuts:
Drill prep holes in every inside corner before cutting L-shaped counter tops. This will relieve pressure and eliminate weak points.

Cut-outs

Requires a perfectly flat and straight working bench surface, as it can flex under surface unevenness.

NOTE: Cut-outs are made by first drilling out the corners. The minimum radius of the corner should be 6 mm.

Installing and fixing sinks

Undermount Sink
When installing an under-mount sink, the cut out should be a little bit smaller than the sink. Bevel and polish the internal edges.

Over-mount installation.
Flatten the edges of the cut-out and leave a space between the fixture and the edge of the cut-out.

Flush installation.
Fabricate a cut-out to fit the perimeter of the fixture. Afterwards mark the perimeter of the overlapping part of the fixture. Grind down carefully the thickness of the overlap to make sure the exterior of the overlap coincides with the surface of the countertop.

NEOLITH 45°mitre

Recommendations for cutting 12mm slabs: removing 2 -3 cm of the perimeter of the slab, the first and last 15 cm of a straight cut should be at 0,5 m/min, while using our new segmented blade allows a smooth & clean cut.

Machined Edges can be performed by any type of machine, with water.
Cut the slab directly at a 45 degrees angle. Reduce the 45 degree angle a bit on the back part of the mitred cut, to leave room for the adhesive.
Recommended speed: Depends on the diameter of the disc, as stated in the section on “Table cutting”
**NEOLITH 45°mitre - continued**

**Manual Cutting** can be done without water:
First you make a straight cut with a 4” Diamond blade, afterwards you grind down the edge with a electroplated diamond grinding disc, later on you finish and smoothen the 45° edge with a cup wheel.

**Recommended speed:** 1M/minute

**Dry Polishing NEOLITH:**

**Dry polishing:** up until grit 400.
Silicon Carbide velcro discs for dry use. Grit 60, 120, 220, 400.
**Recommended speed** 2.000 RPM
Start off with the lowest grit and finish with the highest grit, if required the edge can be buffed using polishing wax.

**Joining NEOLITH:**

- Ensure that all the edges are smooth and straight and line up properly before you joint Neolith.
- Attach one or two soft rubber suction cups on either side of the joint you are joining and attach turnbuckles between the suction cups. You will use this to pull the two pieces together as the seam dries. Leave room so you can work underneath the turnbuckle attachments.
- Apply adhesive and tighten the turnbuckles to squeeze the two pieces together. Don’t over tighten or you’ll pull the suction cups off the countertops.
- Pull a wet razor blade or putty knife along the edge of the adhesive to remove excess and to create a smooth seam that’s flush with the surface.
- Wait for the adhesive to dry, with the suction cups in place.
- Reinforce the seam underneath with recommended material.
- **DO NOT POLISHING THE SEAM.**

**Wet Polishing NEOLITH:**

Polished edges are fabricated by traditional polishing discs for granite of different grain sizes.

**Wet polishing:** up until grit 1500.

**NEOLITH Edges - General Note**

Neolith surfaces should always have a bevel or pencil edge between 3-5mm