Safety withholding hook for tiles and slabs installed in facade with adhesive
RAI-FIX

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The Invisible Safety

The safety withholding hook RAI-FIX is a simple and effective device that prevents the tile/slab (set with adhesive) from falling down in the event of detachment from the wall.

When installing tiles/slabs larger than 12” (30 cm) (ceramic, porcelain, or natural stone with minimum thickness of ¼” (6mm) in façade with adhesive, it is required to use a mechanical safety system which prevents the tile/slab from falling down in the event of detachment of the adhesive.

Indeed adhesive guarantee perfect anchorage of the tile/slab only if perfectly applied. But this is not always the case.

In addition to that, it is hard to predict the strains the tile/slab will have to bear due to building’s settlement as well as expansion from temperature range, extreme weather conditions, earthquake, and so on…

Therefore, the safety withholding hook RAI-FIX is a crucial ally of the architect/designer (and of course of the buyer) to assure the maximum safety. In addition to that, RAI-FIX expands the design possibilities for tiles and slabs of any size can now be used.

Aesthetically speaking, RAI-FIX is the perfect solution since it is completely invisible once the façade is installed. In fact RAI-FIX has to be placed between the tile/slab and the wall and therefore it is 100% hidden.

The safety withholding hook RAI-FIX is made of stainless steel and can be used with tiles/slabs of minimum thickness ¼” (6mm).

The installation is very simple and is carried out directly on the jobsite in a few second.
### Technical specifications

#### RAI-FIX 6 mm

<table>
<thead>
<tr>
<th>Measure</th>
<th>mm</th>
<th>Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.5</td>
<td>0.18</td>
</tr>
<tr>
<td>B</td>
<td>6.0</td>
<td>0.24</td>
</tr>
<tr>
<td>C</td>
<td>0.5</td>
<td>0.02</td>
</tr>
<tr>
<td>D</td>
<td>120.0</td>
<td>4.72</td>
</tr>
<tr>
<td>E</td>
<td>40.0</td>
<td>1.57</td>
</tr>
<tr>
<td>F</td>
<td>25.0</td>
<td>0.98</td>
</tr>
<tr>
<td>G</td>
<td>Ø 9.0</td>
<td>0.35</td>
</tr>
<tr>
<td>H</td>
<td>Ø 8.0</td>
<td>0.31</td>
</tr>
<tr>
<td>i</td>
<td>1.5</td>
<td>0.06</td>
</tr>
<tr>
<td>J</td>
<td>6.0</td>
<td>0.24</td>
</tr>
</tbody>
</table>

#### RAI-FIX 8 mm

<table>
<thead>
<tr>
<th>Measure</th>
<th>mm</th>
<th>Inches</th>
</tr>
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<tbody>
<tr>
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<td>0.25</td>
</tr>
<tr>
<td>B</td>
<td>8.0</td>
<td>0.31</td>
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<tr>
<td>C</td>
<td>0.5</td>
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</tr>
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<tr>
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<td>8.0</td>
<td>0.31</td>
</tr>
</tbody>
</table>

*All holes Ø 8 mm except G (Ø 9 mm). - Les trous Ø 8 mm sauf G (Ø 9 mm). - Los agujeros de Ø 8 mm, excepto G (Ø 9 mm).*
RAI-FIX
Installation scheme & Technical details.

Indicative consumption

The suggested consumption is purely indicative.

Conservatively, in the tables it has been considered halved loads compared to the maximum potential measured by the laboratory.

In any case it is the designer’s task to determine the number of hooks per tile/slab according to the regulations in force and the specific variables of the each jobsite, including consistency of the substrate and type of anchors used.
How to use the LTGT grooving tool.

**Setting:**

*WARNING:* Before proceeding, make sure the grinder is turned off and unplugged.

- The groove requested has to be the same to the one in figure (2) and has to be made on the back of the slab;
- Put the slab (A) on a working stable bench with the back turned upwards;
- Screw the wing nuts off (B);
- Put the RAI-CUT (C) on the back of the slab (A);
- Adjust the square (D) so that it leans against the slab and tighten up the wing nuts (B);
- Connect the suction system to the joint (E) and switch on the suction;
- Make sure the switch of the grinder is on the OFF position
- Connect the grinder to the power plug;

**Use:**

*WARNING:* wear the individual security devices: ear muffs and protection gloves.

- Tightly hold the handle (F), always holding the tool lean against the slab (A). Turn on the grinder and move it until the end point of its movement (G);
- Make the first groove and evaluate the depth, then regulate the end point of cut (G) to realize the groove you see in figure (2).
- Make sure the safety RAI-FIX hook is completely fixed in the slab;
- Now you can make the grooves on the slab serially. Verify the correct execution of the grooves by applying, every 10 grooves, the safety hook RAI-FIX.

*WARNING:*

- The number of RAI-FIX hooks per slab has to be proportioned to the dimension and the weight of the slab.
- The length of the screw anchor for fixing the safety hook RAI-FIX has to be appropriate to the type of support you have on the wall.
- Slabs with cracks have to be rejected.
- The slabs, in which the safety RAI-FIX hook is not applied in depth, have to be rejected.
Creating the slot

Place the LTGT (RAI-CUT) device on the back of the tile/slab and create the slot in which the RAI-FIX hook will be placed.

Insert the RAI-FIX hook

Remove grease or eventual traces of oil from the hook and insert the RAI-FIX safety in the incision. Make sure to insert it thoroughly. Check the support to be covered. Make sure that the surface to be tiled is solid and free of powder and/or grease. Spread the adhesive on the support (wall), taking care not to invade the area where the hook will be put. We suggest to applying the adhesive on the back of the tile (“back buttering”).

Fixing the hook A

Drill the wall with Ø ¼” or 5/16” (6 or 8 mm) bit in correspondence of one of the holes of the RAI-FIX hook. Insert the anchor trough the special hole in the RAI-FIX hook.

Fixing the hook B

Fix the RAI-FIX hook by means of the anchor screw.

Alternatively use nail or cement board screw if you have wood or metal studs.
Item available

**LTGT**
Grooving tools for Mechanical System.
Adjustable cutting box to apply a groove on the back of the tile.

*Included:* Stainless steel box with vacuum connection.
Variable speed Grinder, with 5" Diamond Blade.

**LTGTM**
Grooving tools Box unit
For Mechanical System.
Adjustable cutting box to apply a groove on the back of the tile.

*Included:* Stainless steel box with vacuum connection.

**LTAT70 / LTAT120**
Mechanical System Anchors.
For the application of Tiles/slabs, marble etc.... the adhesive setting with format larger then 24" x 24" requires an extra mechanical setting.

Box of 70 (LTAT70) stainless steel anchor for 3/8" tile thickness (5/16" wings)
Box of 120 (LTAT120) stainless steel anchors for 3/8" tile thickness (5/16" wings)

**LT6AT120**
Mechanical System Anchors for min 1/4" thick tiles/slabs.
For the application of Tiles/slabs, marble etc., the adhesive setting with format larger then 24" x 24" requires an extra mechanical setting.

Box of 120 stainless steel anchors for 1/4" tile thickness (1/4" wings)