RAI-FIX

SAFETY WITHHOLDING HOOK FOR TILES AND SLABS

Read this manual carefully before using the product. RAI-FIX is not a fixing system. RAI-FIX is a safety withholding hook to be applied on the back of the tile/slab (tile/slab set with adhesive) and to be subsequently attached to the wall/support via plugs and/or nails.

Being the RAI-FIX is a withholding safety device it is the designer that must evaluate the environment conditions (i.e. strong windy area, seismic zone, etc).

The use of the RAI-FIX hook does not exclude the processes of building control and maintenance and therefore the immediate restoration of any alterations.

The RAI-FIX hooks were undergone to traction resistance tests, carried out in a laboratory. While determining the minimum number of hooks to be used for each tile/slab, consider the payload declared for each hook and the combination between slab side width/slab weight/solidity and typology of support.

Warning
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 each job site, including consistency of the substrate and type of anchors used.

Always evaluate the length and the type of the expansion plug according to the characteristics of the support and the weight of the tile/slab. Using proper expansion plugs, the RAI-FIX system can be used also on walls covered with insulating layers.

CREATING THE SLOT

Position the RAI-CUT device on the back of the slab to carry out, as far as possible from the slab edge, the incision where inserting then the RAI-FIX hook.

Warning
- Decide the number of hooks to be used for each slab.
- Check the minimum tile/slab thickness.
- For proper use of the RAI-CUT device refer to its instruction manual.
- Check that the tile/slab is in tact and that the incision/slot has been properly done.

INSERTING THE SAFETY HOOK WITH STICKER

Obligatory for 5mm and optional for 6/8mm

Before insering the RAI-FIX in the groove clean it with a wet sponge. Fill the groove, without exceeding, with the polymeric sealant-adhesive MS. Insert the RAI-FIX and proceed with the coat (double spreading) of the adhesive for ceramic.

INSERTING THE SAFETY HOOK WITHOUT STICKER FOR 6/8MM

Eliminate from the hook any trace of oils or greases and insert the RAI-FIX hook in the incision. Ensure it is completely inserted and proceed with the coat (double spreading) of the adhesive for ceramic.

CHECK THE SUPPORT TO BE COVERED

Make sure that the surface to be tiled is solid and free of powder and/or grease.

Warning
Decide the length and type of the expansion plug according to the characteristics of the support and the weight of the tile/slab.

SPREAD THE ADHESIVE AND POSITIONING THE TILE/SLAB

Spread the adhesive on the support wall taking care not to invade the area where the RAI-FIX hook will be put. We suggest to apply the adhesive also on the back of the tile ("back buttering").

FIXING THE RAI-FIX HOOK

Drill the wall bit in correspondence with one of the holes of the RAI-FIX hook. Insert the anchor through the special hole in the RAI-FIX hook. Fix the RAI-FIX hook by means of the anchor screw.


Alternatively use a nailer.

REPLACING AN ALREADY LAID SLAB

In order to replace a slab laid with RAI-FIX following its damage or due to the failure of the adhesive that supports it, it is necessary to follow the following procedures:
1. Remove the slab and the adhesive present on the support behind the slab itself, removing all residues. At the end of this operation, the lower part of the RAI-FIX that were hooked to the removed slab will remain in view (see Fig. A).
2. Make a rectangular cut out with a minimum size of approximately 60x70mm (23.6"x27.5") on the slab

placed above the slab just removed and in correspondence with the RAI-FIX which were hooked to the removed slab. In order to carry out this operation:
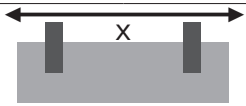
a. draw the perimeter of the cuts to be carried out on the slab above (see Fig B).

b. drill some Ø10mm holes in correspondence with the two upper corners of each cut to be carried out (the use of the Raimondi diamond core drills for wet use, is recommended).

c. perform the cut with an angle grinding machine following the perimeters drawn previously and remaining tangent to the Ø10 holes (see Fig. C).

3. Remove the old RAI-FIX paying attention not to damage the freshly cut tile (see Fig D).

4. Prepare the new slab with the RAI-FIX installed as previously described and in the same position in which they were installed on the removed slab.

5. Apply the adhesive to fasten the slab on the support (double coating is recommended) and lay the slab (see Fig E).

6. Fasten the new RAI-FIX hooks to the support with wall plugs as described in the previous paragraphs.

7. Prepare 2 ashlars of slab of the size suitable to cover the cut outs created on the slab above and lay them on the support (the ashlars will cover the RAI-FIX installed on the new tile). (see Fig F).

8. Plaster/touch up the joints around the new slab and the ashlars applied in the overall dimensions of the slab above in order to complete the work with artful precision.

B

C

D

E

A

F
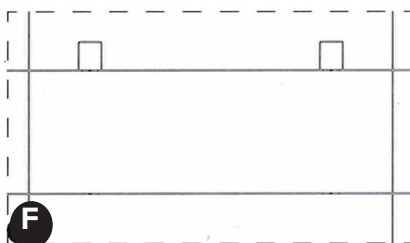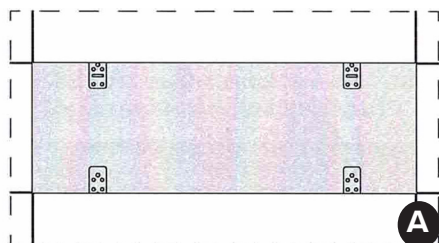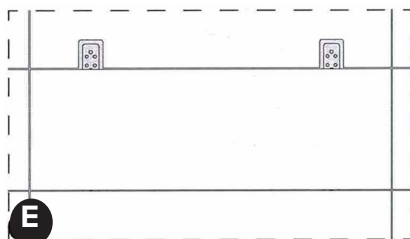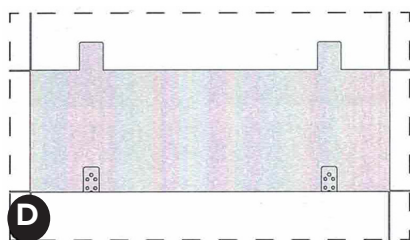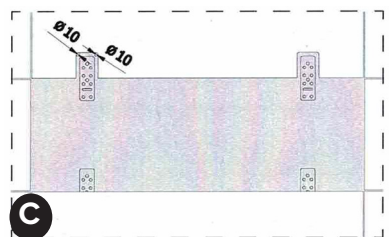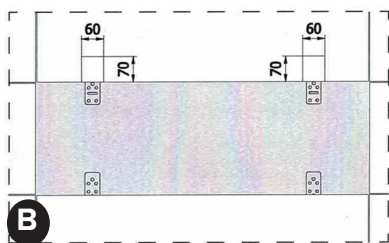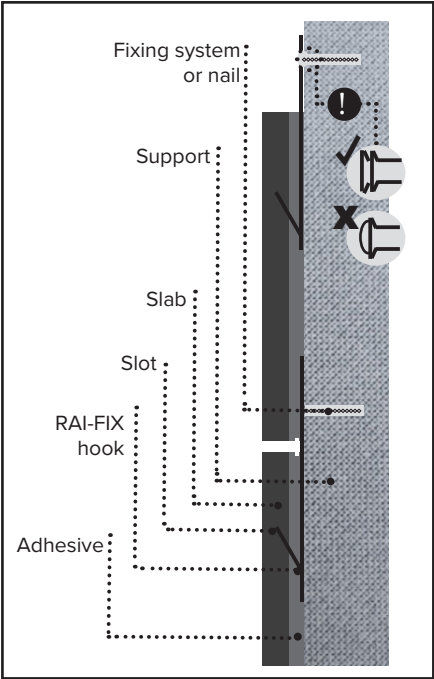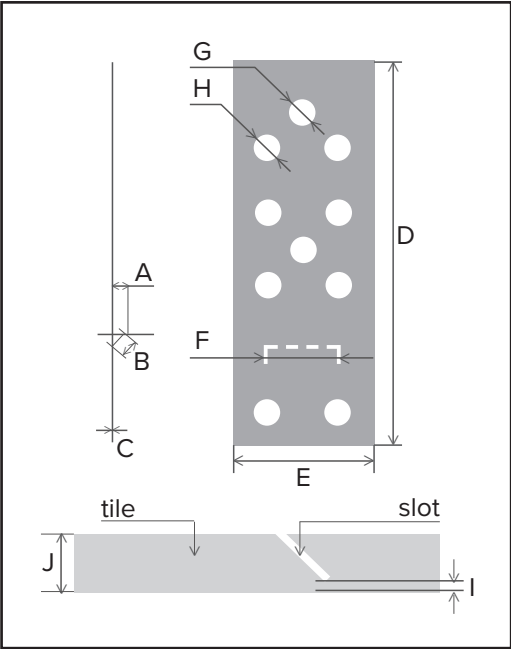
	RAI-FIX 5MM		RAI-FIX 6MM		RAI-FIX 8MM	
	MM	INCHES	MM	INCHES	MM	INCHES
A	3,0	0.12	4,5	0.18	6,4	0.25
B	3,0	0.12	6,0	0.24	8,0	0.31
C	0,5	0.02	0,5	0.02	0,5	0.02
D	120,0	4.72	120,0	4.72	120,0	4.72
E	40,0	1.57	40,0	1.57	40,0	1.57
F	25,0	0.98	25,0	0.98	25,0	0.98
G	Ø 9,0	Ø 0.35	Ø 9,0	Ø 0.35	Ø 9,0	Ø 0.35
H	Ø 8,0	Ø 0.31	Ø 8,0	Ø 0.31	Ø 8,0	Ø 0.31
I	1,5	0.06	1,5	0.06	1,5	0.06
J	5,0	0.2	6,0	0.24	8,0	0.31

All holes Ø 8mm except G (Ø 9mm)

		Maximum weight			
X		5mm	6mm	8mm	pcs
0 < x ≤60cm	0 < x ≤ 24"	33kgs	45kgs	37kgs	1
60 < x ≤ 200cm	24" < x ≤ 79"	66kgs	90kgs	74kgs	2
200 < x ≤ 320cm	79" < x ≤ 126"	99kgs	135kgs	111kgs	3

We recommend to keep a distance from each other of at least 40cm (16").

Conservatively, in the tables it has been considered halved loads compared to the maximum potential measured by the laboratory. The suggested consumption are purely indicative.