

**INSTRUCTIONS**

**PANEL INSTALLATION**



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**alkus® | innovative systems**  
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alkus® AG  
Gewerbeweg 15  
9490 Vaduz  
Liechtenstein

Phone: +423 236 0030  
Fax: +423 236 0039  
E-Mail: [mail@alkus.li](mailto:mail@alkus.li)

**[www.alkus.li](http://www.alkus.li)**

## PANEL INSTALLATION

The alkus<sup>®</sup> solid plastic panels can be installed in any common formwork system in a few steps.



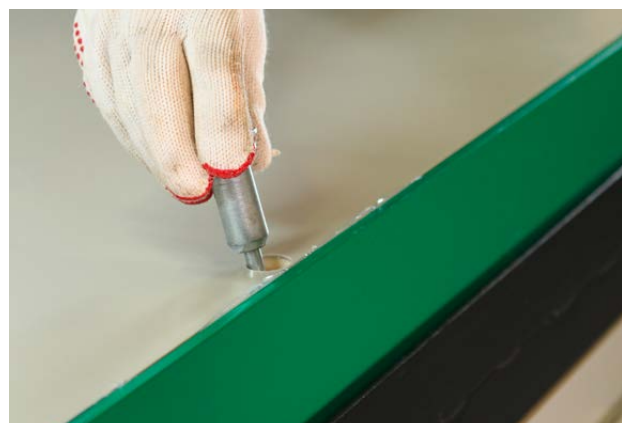
Although unnecessary for panel integrity, silicone may be gunned into the corner of the contact surface of the panel formwork to prevent concrete slurry entering the area between the formwork and the panel after installation.



The alkus<sup>®</sup> solid plastic panel is positioned in the panel formwork.



Guides are placed in the anchor holes in order to align the panel in the panel formwork.



Once the panel has been aligned correctly, the rivet holes are drilled through the panel into the panel formwork. The panel is simultaneously countersunk using a 120° countersink (see page 9).

- Drill bit diameter: 5.1 mm
- Rivet diameter -0.1 mm



Steel rivets are used to fix the panel due to its extensive service life. The panel can also be screwed into position from the rear.

- Steel rivet 5x20 for alkus® panels GM6 – GM10
- Steel rivet 5x25 for alkus®-panels GM11,5 – GM15; AL13 – AL17
- Steel rivet 5x33 for alkus®-panels AL18 – AL23



Use a pneumatic rivet gun to fix the rivets.



Since the alkus® panel neither swells nor shrinks, it is installed 'flush' into the panel formwork. This guarantees a perfect joint pattern from the very first use.



The gap between the lip of the panel formwork and the panel can be filled with silicone, but this is not absolutely necessary, as the panel does not absorb water and is resistant to moisture.

For aesthetic reasons, this can be done with gaps  $\geq 2$  mm



## CUTTING

alkus® panels can be cut and drilled using conventional woodworking tools. When sawing the panels, always allow sufficient feed to ensure the saw blade remains cool and does not become clogged with melted plastic.



### Sawing parameters

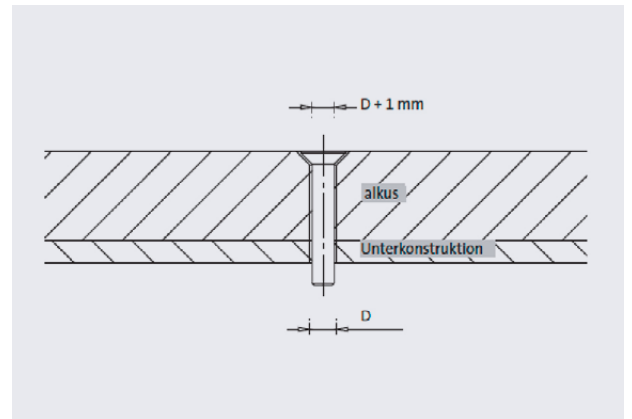
This data is for guidance only and alkus AG assumes no liability for any loss or damage caused by working with alkus panels. When using timber in conjunction with alkus, local regulations regarding extraction equipment must be followed.

Diameter of saw blade	450 mm
Number of sawteeth	21 pcs.
Performance	68 meter per sec.
Torque per min.	2890
Feed	15-20 m/min

## FIXING

### Screwing the panels from the front face

When the alkus<sup>®</sup> panel is fixed with screws the facing needs to be pre-drilled and countersunk – the diameter of the drill hole has to be approx. 1 mm wider than the screw diameter. Screws that are appropriate for the frame should be selected.

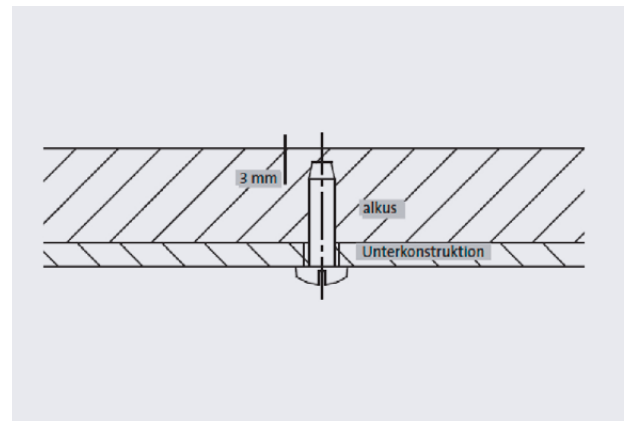


### Reverse fixing

If the alkus<sup>®</sup> sheet is to be reverse fixed from the frame side, a self tapping screw can be fixed using the holes in the frame. The length of the screw should be selected to prevent breaking through the face of the sheet.

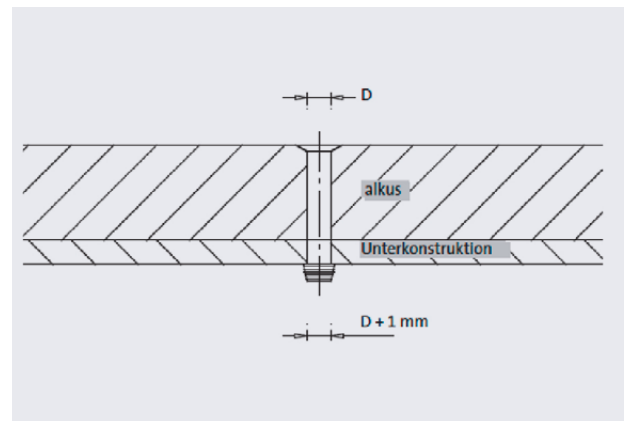
#### Rule of thumb:

Thickness of substructure + thickness of alkus<sup>®</sup>-sheet – 3 mm.



### Rivets

Rivets are always inserted on the facing side. The substructure and the alkus<sup>®</sup>-sheet have to be pre-drilled and countersunk. The diameter of the drill hole should equal the rivet diameter plus 0,1 mm.

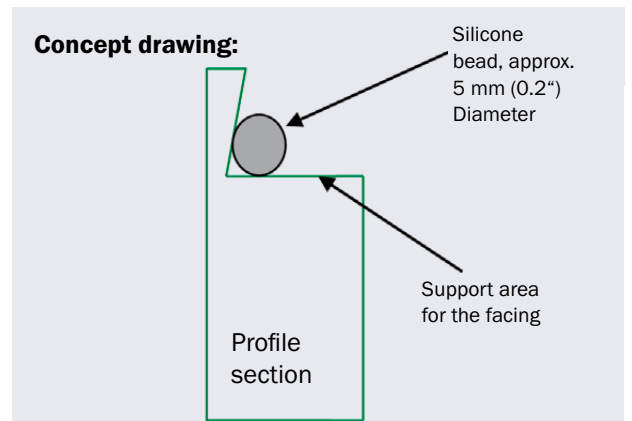




## GENERAL INFORMATION FOR THE ASSEMBLY OF ALKUS® PANELS

When installing an alkus® panel it is possible, although usually unnecessary, to bed the panel on a bead of silicone approximately 5mm (0.2") in diameter. If used, the bead must be continuous along all 4 sides of the frame.

See figures 1



See figures 2





**5,1 mm drill with counterbore**

HSCO spiral drill d=5.1 mm

120° counterbore for rivet holes

Counterbore for rivet holes

Alternatively, the rivet holes can be drilled in 2 steps using a standard 5.1 mm (0.2") drill and a 120° counterbore.



**Rivet gun**

For installation using rivets alkus recommends to use an electric or pneumatic rivet gun.



**Pneumatic silicone gun**

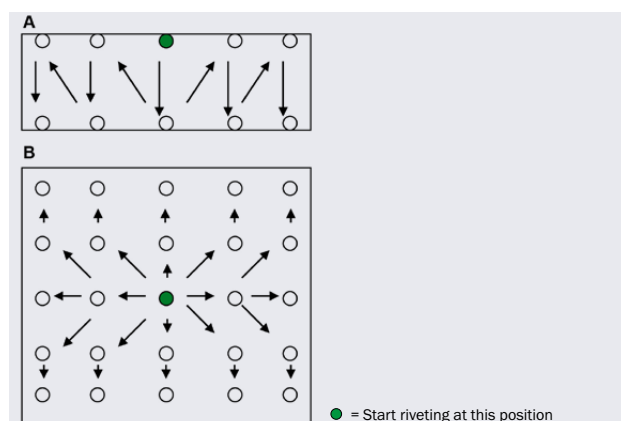
Alternatively, you can apply the silicone using a standard silicone gun.



**Order of riveting steps**

In order to prevent the facing from forming waves when riveting it, make sure to always rivet from the inside to the outside. See the examples in drawings A and B.

**Please note:** The rivet positions shown in the drawings are only examples and do not show the real rivet positions.



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**Sales & Marketing**

alkus<sup>®</sup> AG

Gewerbeweg 15  
9490 Vaduz  
Liechtenstein

Phone: +423 236 0030  
Fax: +423 236 0039  
E-Mail: [mail@alkus.li](mailto:mail@alkus.li)

**[www.alkus.li](http://www.alkus.li)**

**Research & Development**

alkus<sup>®</sup> GmbH & Co. KG  
Kunststoffverbundsysteme  
Bahnhofstrasse 6  
09111 Chemnitz  
Germany

Phone: +49 371 444 58837  
Fax: +49 371 444 58839  
E-Mail: [mail@alkus.de](mailto:mail@alkus.de)

**[www.alkus.de](http://www.alkus.de)**

