

# TOPAKUSTIK®

## INSTALLATION MANUAL

Site tested, efficient installation  
solutions for TOPAKUSTIK® wall and  
ceiling finishes.

Please read completely before starting installation!

2006 Edition

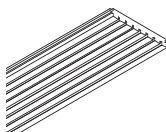


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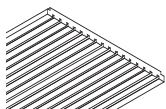
TOPAKUSTIK planks and panels can be easily mounted for a professional installation. This installation manual provides information to the TOPAKUSTIK installation contractor and the TOPAKUSTIK specifier.

The following recommendations are based upon professional installation experiences with TOPAKUSTIK products. For further information please consult our factory's technical customer service department or your country's technical distribution sales agent.



## **planks (fixed and seamless installation) 128 mm cover width planks**

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## **panels (removable installation) 320 to 1216 mm width panels**

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Important information:

10/11

Please refer to the middle of this instruction manual printed on yellow paper. Please read this information before starting installation. It contains important information about temperature and humidity conditions.

# Sorting, patterns and transverse joints

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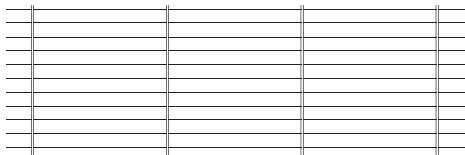
## Sorting

TOPAKUSTIK planks/panels are manufactured with selected veneers. Each veneer flitch has different natural characteristics (grain, colour etc.). We recommend sorting the TOPAKUSTIK planks/panels before installation.

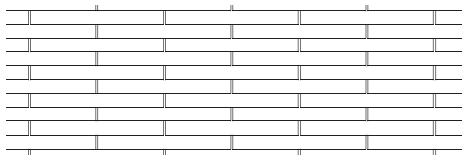
## Patterns

Attach transverse battens under each joint.

parallel transverse joints



staggered transverse joints

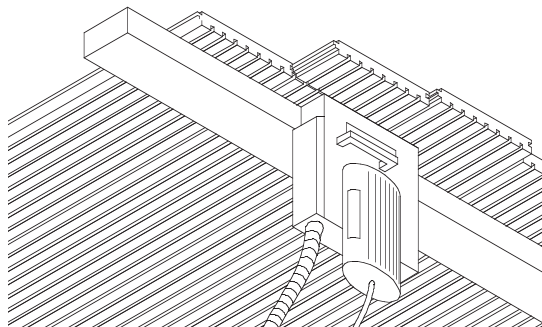


## Staggered transverse joints

TOPAKUSTIK planks are available in different lengths (see folder). If transverse joints are required, we recommend a gap between the cut ends of 3–4 mm to allow for changing temperature and humidity in rooms.

## Parallel transverse joints

Cut the length of mounted and acclimatized TOPAKUSTIK planks with for example a LAMELLO or TANGA milling machine. Expansion or contraction are possible before installation according to the humidity in the warehouse or on the building site.

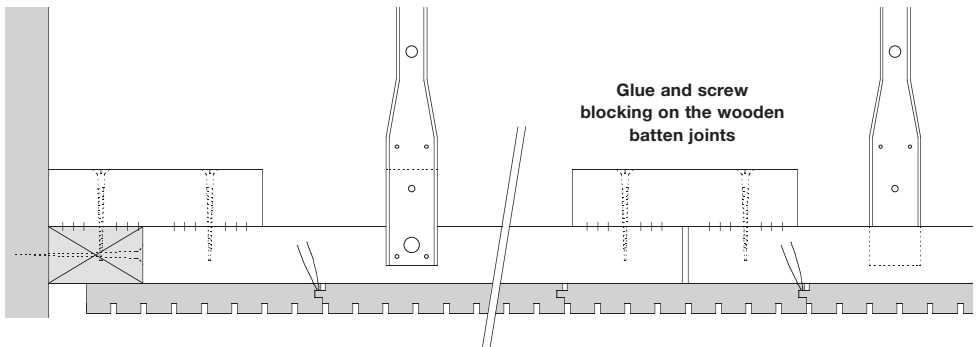
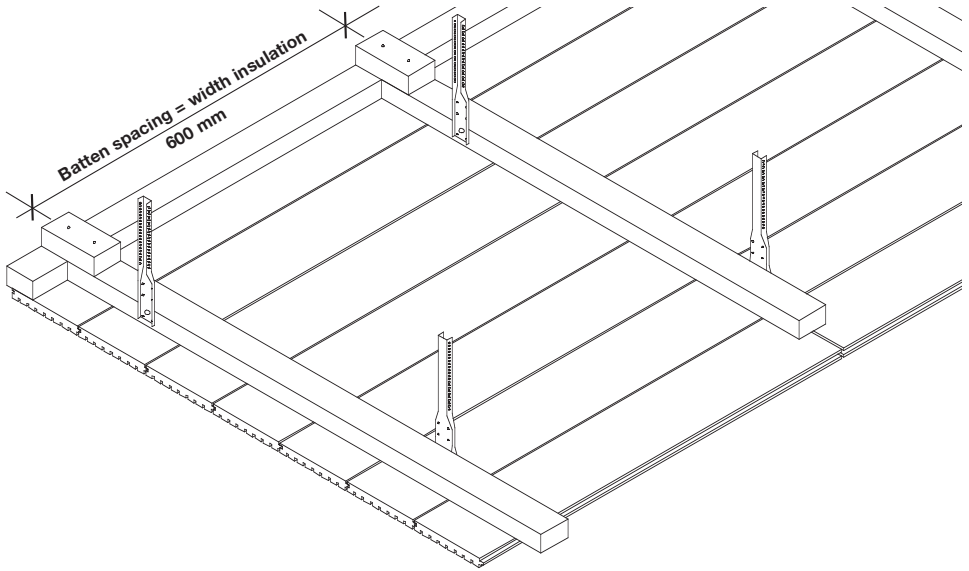


# Mounting with wooden battens

## Mounting with transverse wooden battens (wood humidity max. 10%).

### Subconstruction:

Install TOPAKUSTIK planks (without increased fire protection demands) to perfectly installed transverse wooden battens 60/30 mm made of planed, dry pine or equivalent. Ceiling strap installation with Nonius hangers (hangers installed in a staggered pattern). Hanger interval 800 mm, or installed directly, for instance with distance-screws. TOPAKUSTIK element joints to be located under the ceiling straps. Please observe the expansion and contraction (observe our important directions).



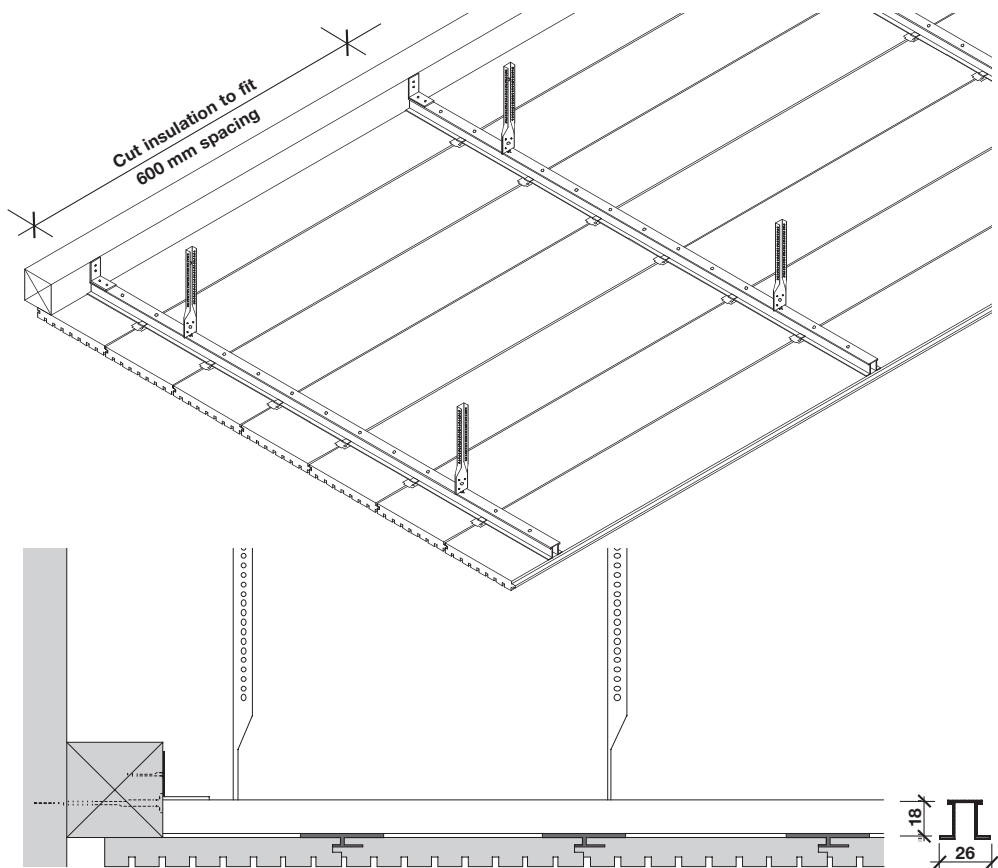
# Mounting to metal suspension with turning clips

Install TOPAKUSTIK planks (width 128 mm) by fastening with turning clips to metal profiles. Mounting of the metal profiles with Nonius hangers, interval 800 mm. Please consider the expansion and contraction of the TOPAKUSTIK planks. We recommend riveting every other turning clip to the profile. Staple the first and the last planks to a wooden batten attached to the wall as shown in the illustration.

## H-bar for ceiling and wall

The H-bar can be used for ceiling and for wall installation. The H-bar we have in stock and can therefore be delivered together with the Topakustik planks

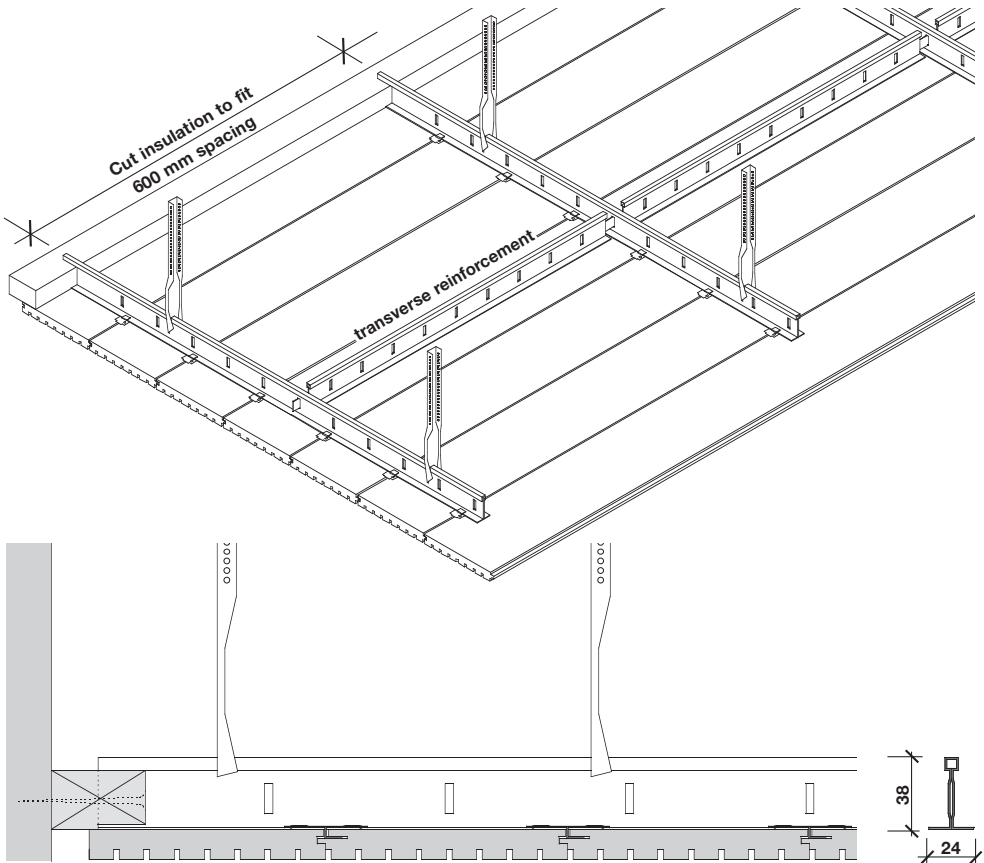
- H-bar 18x24 mm (in 3000 mm lengths)
- hanger Nonius (in boxes of 100 pcs)
- connector in length for H-bar (in boxes of 20 pcs)
- turning clips (in boxes of 100 pcs)



T-bar, only for ceilings

The T-bar can only be used for ceilings. We do not stock T-bars. Please use any proprietary T-bar with 24–26 mm width.

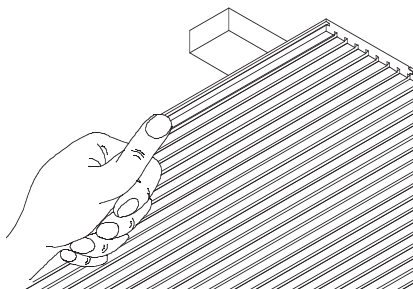
- Turning Clips (in boxes of 100 pcs)



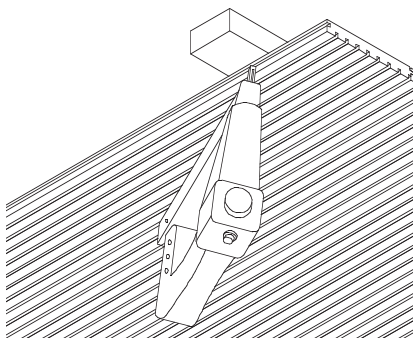
# Installation

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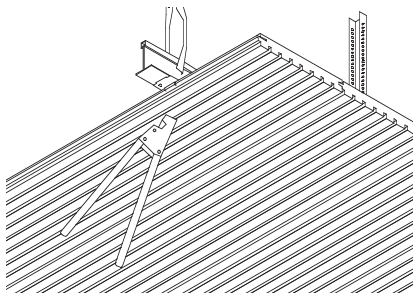
- The tongue and groove joint is milled very precisely, therefore push the planks together by hand only. If the joint does not locate perfectly, check if there are any protruding staples or foreign bodies in the groove.



- Fasten with a compressed air staple gun on the side of the groove or the tongue.
- We recommend 32 mm long staples.
- Adjust accurately the compressed air pressure. Insert the staples completely. Do not pierce the jaw of the groove.
- TOPAKUSTIK planks can be fastened in the grooves on the long edges.



- Fasten with turning clip to T-profile.
- We recommend every second turning clip is riveted to the T-profile.
- Nail and glue the first and end plank to the wall connection board (see pages 5–7).

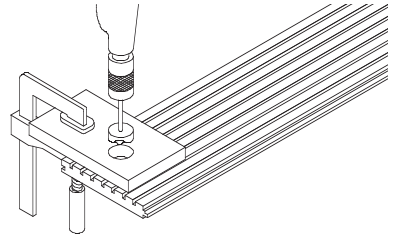
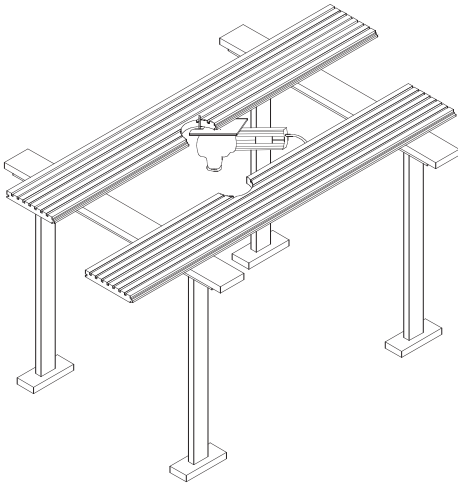


# Treatment before and after mounting

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## Bore-holes

- bore using a wooden template
- use template fixed into the grooves with pegs for boring on mounted ceilings

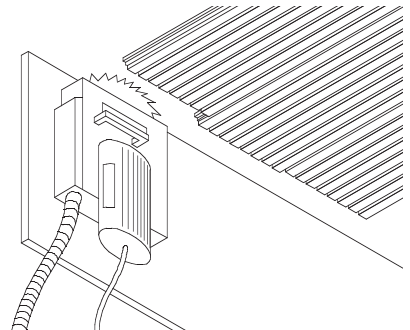
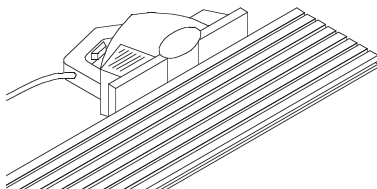


## Cutouts before mounting

- cut cleanly with a jigsaw from the back side of the planks / panels
- for visible cutouts on edges use a router and a template.

## Open joints transverse

- use a sharp cutting tool
- move reverse if necessary
- protect wall
- use jigsaw to cut the corners of the room
- avoid splinters on the plank / panel edges by using tape



## Open joints longitudinal

- plane along side



## **Please read completely before installation!**

### **Transportation and storage**

- Generally speaking, TOPAKUSTIK products must be protected from direct contact with moisture and humid air and be stored absolutely dry.
- The products must be stored lying flat on dry wooden planks or on palettes.
- The products must be completely protected from humidity with plastic wrap. Please pay special attention to moisture in the floor in new buildings!

### **Acclimatization**

- The products must be acclimatized for 3 to 4 days in the installation area before starting the installation. Please ensure that all products are equally exposed to the ambient conditions of the installation area.

### **Natural wood veneers**

- We recommend sorting the natural wood veneers by their wood grain and colour before installation.

### **Reinforcement**

Removable panels must be reinforced on the back side to guarantee the panels remain flat:

- Panels can be flat during installing but will warp because of material fatigue if not reinforced
- different climatic conditions in the area of installation and the ceiling void behind can result in warping of the ceiling panels

### **Cleaning**

- With a damp cloth and mild cleaning agent.
- Soft eraser for pencil lines.

### **Liability**

- Please comply with generally accepted practices when using wooden materials. Damage caused by further processing or excessive bending of the TOPAKUSTIK products will void any warranty claims.

### **Complaints**

- Any complaints must be registered in writing immediately after delivery and before installation.

### **Technical Modifications**

Subject to technical modifications without notice.

## Please read completely before installation!

### Climatic conditions – expansion and contraction of core materials

As a rule, TOPAKUSTIK products are manufactured from MDF (medium density fiberboard) or gypsum woodchip boards if a non-combustible fire rating is required. These boards have an 8–10 % humidity content during manufacture.

It is vital to check the air humidity and temperature during storage and installation.

The DIN (German Industry Standard) 68750/66754 and the SIA (Swiss Engineers and Architects Standard) 164/1 specify the following ranges in humidity and temperature:

– air humidity in %	minimum 35 %	–	maximum 60 %
– temperature	minimum 18°	–	maximum 30°
= air humidity per m <sup>3</sup>	5.5 g		18 g
△ Wood humidity content	7%		10,5%

If these standards are adhered to by the installer of the TOPAKUSTIK products, the maximum dimensional change of the MDF substrate amounts to 1,5 mm per metre. (10,5% – 7% = 3,5% x 0,04 % dilatation per 1% changes)

Topakustik panels must therefore be separated with joints of 3mm to 6 mm depending on their size. If this separation is less the following will happen:

- Increasing humidity: joints will be closer or closed and the panels may warp
- Decreasing humidity: joints will be larger

Topakustik planks with their joint free system are installed with no gap between the planks in width. If installation is carried out in high humidity conditions, the planks will shrink in a dry atmosphere – because of the small plank width of 128mm this shrinking is minor and cannot be seen. If the installation is carried out in very dry conditions (e.g. winter time) increases in humidity can not be absorbed. Planks have therefore to be separated with 0.5 mm distance. For swimming pools Topakustik planks are manufactured with a special dilatation profile (on request).

**General Rule: If installation is carried out in (almost) identical conditions as those when the rooms will be in use, problems with expansion and contraction can be prevented**

### Product tolerances:

**Planks:** the front edges of Topakustik planks are supplied with a clean 90 degree angle cut as a standard. The length tolerance amounts to +/- 2 mm. If requested, the planks can be supplied to a «fixed» dimension with a reduced tolerance of approx. +/- 0.25 mm per m<sup>1</sup>. This is only recommended for lengths shorter than 2 m because of the potential for greater expansion and contraction of core materials

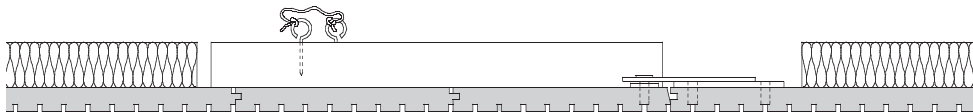
**Panels:** are produced on computer controlled machinery with tolerances of +/- 0,25 mm per 1 m

Topakustik products are delivered with small tolerances as above. By grooving and perforating, the surface area is increased by a factor of two or three, depending on the design. Therefore Topakustik products can react quickly to varying humidity and temperature conditions. Therefore size differences can occur before installation caused by expansion and contraction of core materials during storage and acclimatization

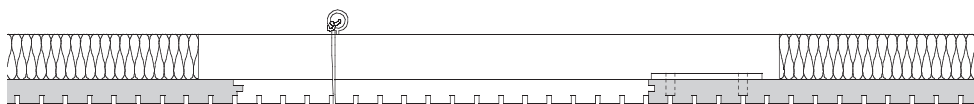
# Service/control panel

## A) opening downwards (with lock set)

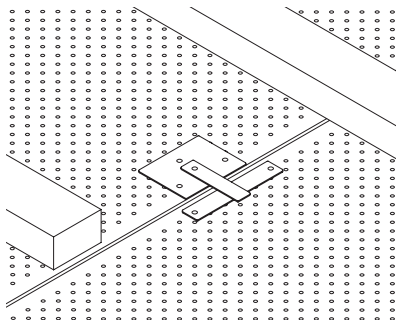
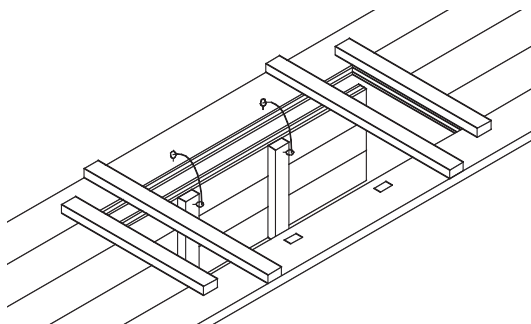
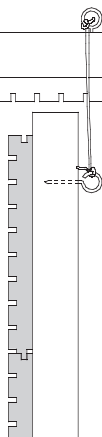
closed



open



open panel secured  
with a cord



Lock set

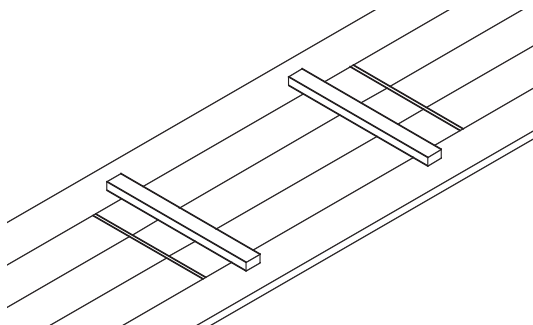
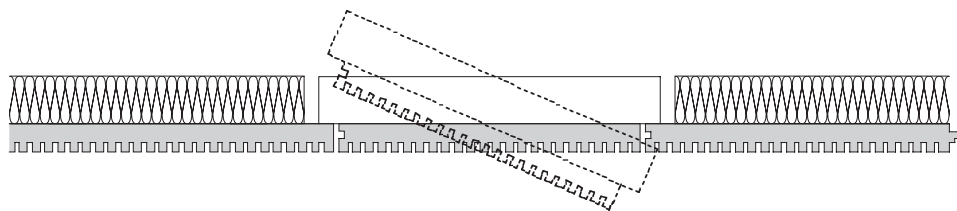
Latch 1 pc

Lock plate 1 pc

Inserts 6 pcs per box

Cord with an eyebolt and a hook screw

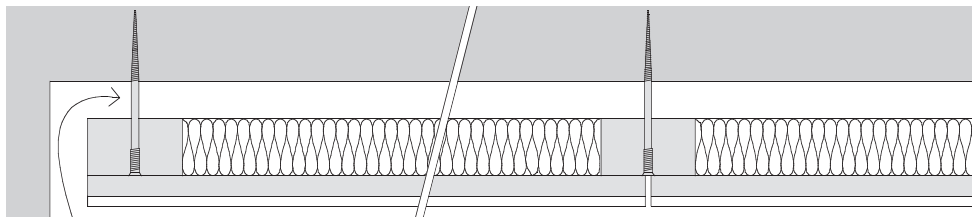
## B) opening upwards (without lock set)



3, 4 or 5 planks  
cut the tongue

## Open wall connection (for humid rooms)

## Longitudinal joint

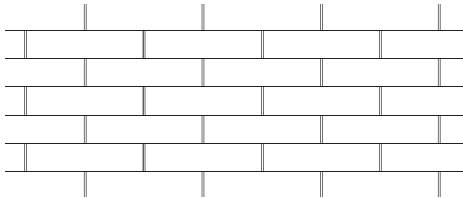


- Important: air circulation is required in humid rooms.
- Special moisture resistant core panels are required
- recommended screws and subconstruction

Longitudinal joint 3-6 mm

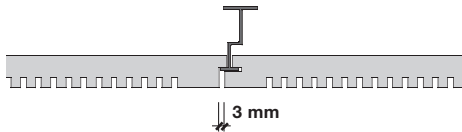
# Removable ceiling panels

## Mounting of the panels

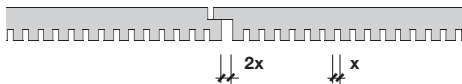


Small variations in the gaps between the cut ends are far less noticeable if the joints are staggered.

Panel joints must be visible:



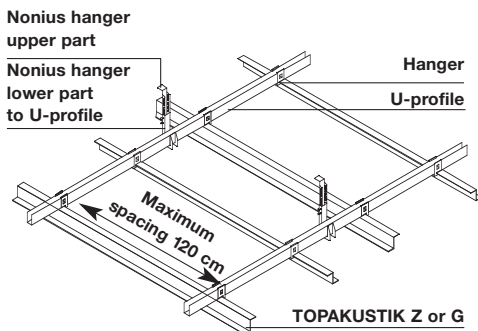
- The G-suspension system applied with panels with a 20 mm ungrooved border requires a visible joint of 3 mm.



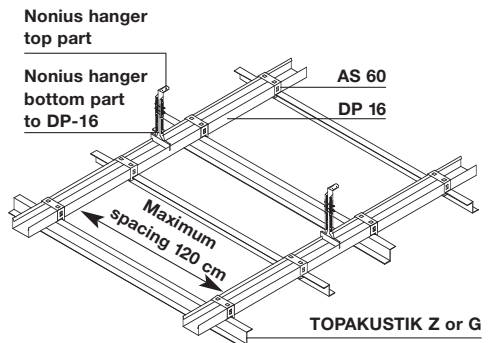
- The Z-suspension system requires a visible joint of the double groove width (for example Fineline 2 x 2 mm).

## Different suspension systems

### Type GEMAGRID

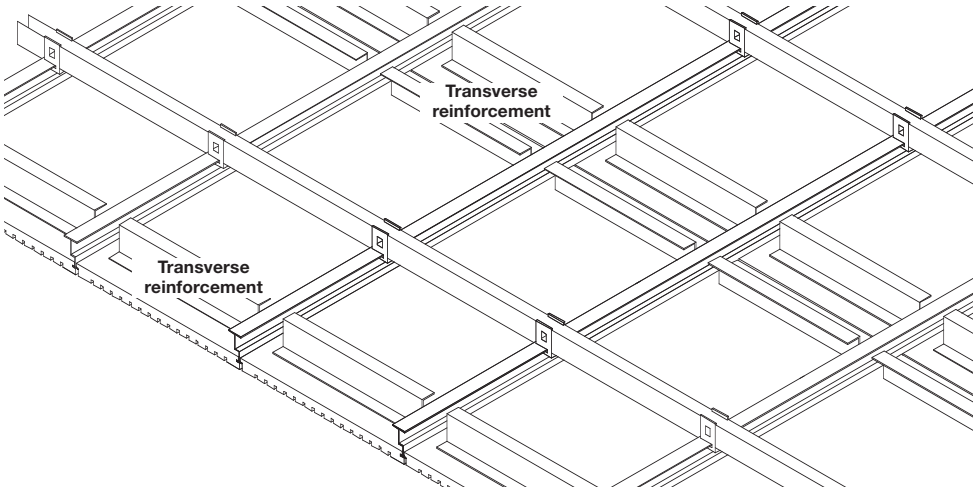


### Type Suckow + Fischer type 108

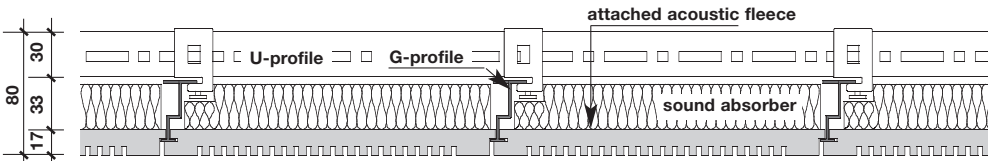


# G-suspension system

## Topakustik G-suspension system



- The G profiles are delivered in lengths of 5 m, and cut to the required length on site and fastened tightly to U-profile (3.093.100.100) with hanger (3.093.100.107).
- Attach transverse Z-profile reinforcement to the rear of the panels every 600 - 900 mm, depending on the panel size.
- **Important:** reinforce the square grid diagonally. This stabilizes the ceiling and prevents swaying. Type Suckkow + Fischer 108: counterscrew the transverse grid in continuous intervals with the Z-profile

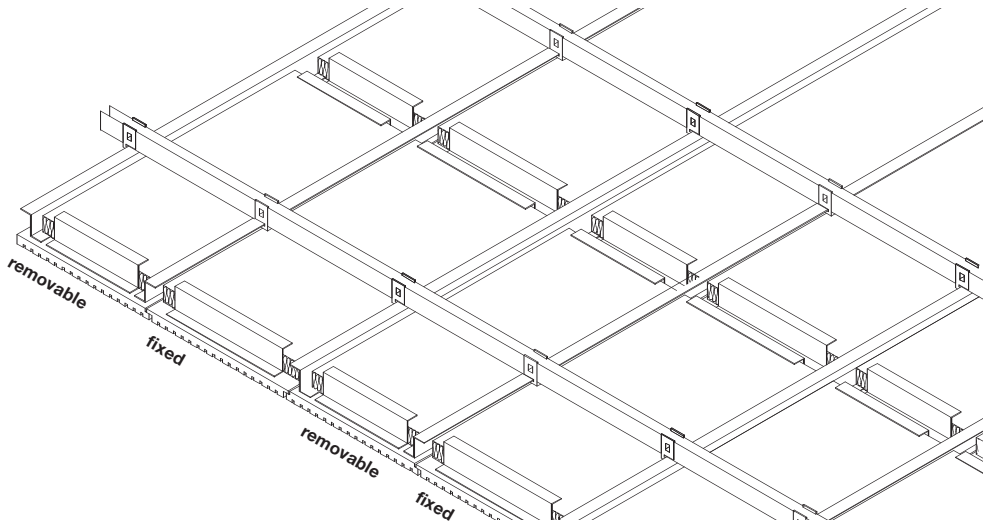


- Each element of the TOPAKUSTIK panel in the G-suspension system can be removed by slightly pushing upward.

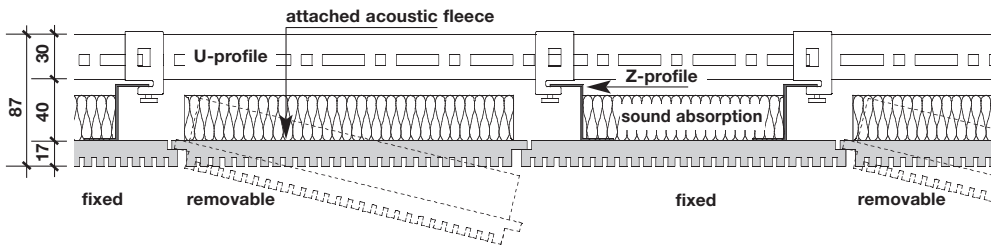
# Z-suspension system

## TOPAKUSTIK Z-suspension system

for multiple applications



- The Z-profiles are available in lengths of 5 m and are cut to the required length on site and fastened tightly into the standard perforation on the rear of the TOPAKUSTIK panels with the patented n'H bolts.
- Provide transverse reinforcements every 500–600 mm.
- **Important:** reinforce the square grid diagonally. This stabilizes the ceiling and prevents swaying. Type Suckow + Fischer 108: counterscrew the transverse grid in continuous intervals with the Z-profile.



- Every other panel in the TOPAKUSTIK Z-suspension system can be removed by pushing up and shifting.
- The fixed TOPAKUSTIK panels are easy removable by loosening the bolt and sliding back the Z-hangers.

# Z-suspension system: reinforcement, wall connections

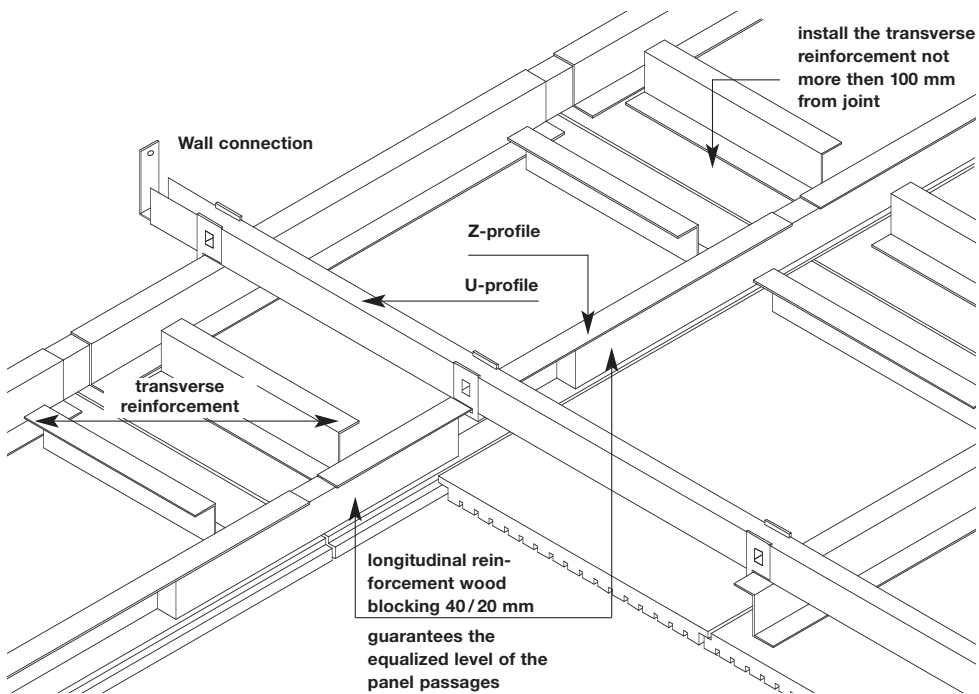
## Longitudinal and transverse reinforcement

transverse reinforcements

by panel length > 1000 mm 3 pcs

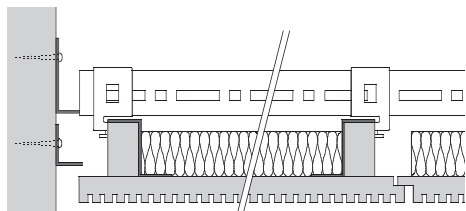
> 2000 mm 4 pcs

> 3000 mm 5 pcs

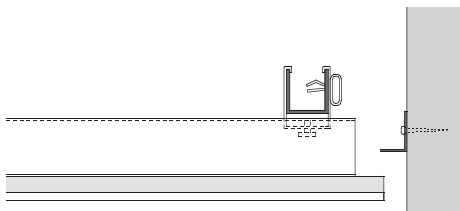


## Wall connection

longitudinal



transverse



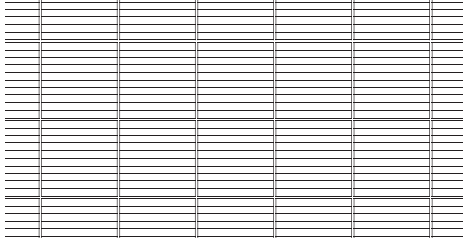


etc...

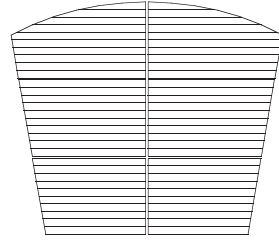
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TOPAKUSTIK -  
panels can also be used for:

**cross pattern ceilings**

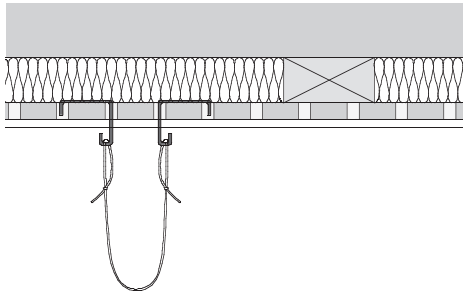


**special forms**

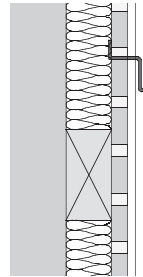


**Picture hooks**

ceiling

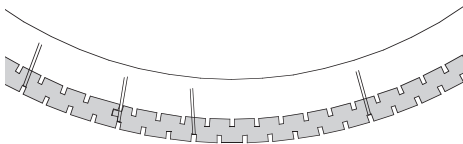


wall

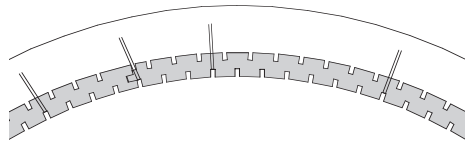


**Curved shapes**

convex



concave



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