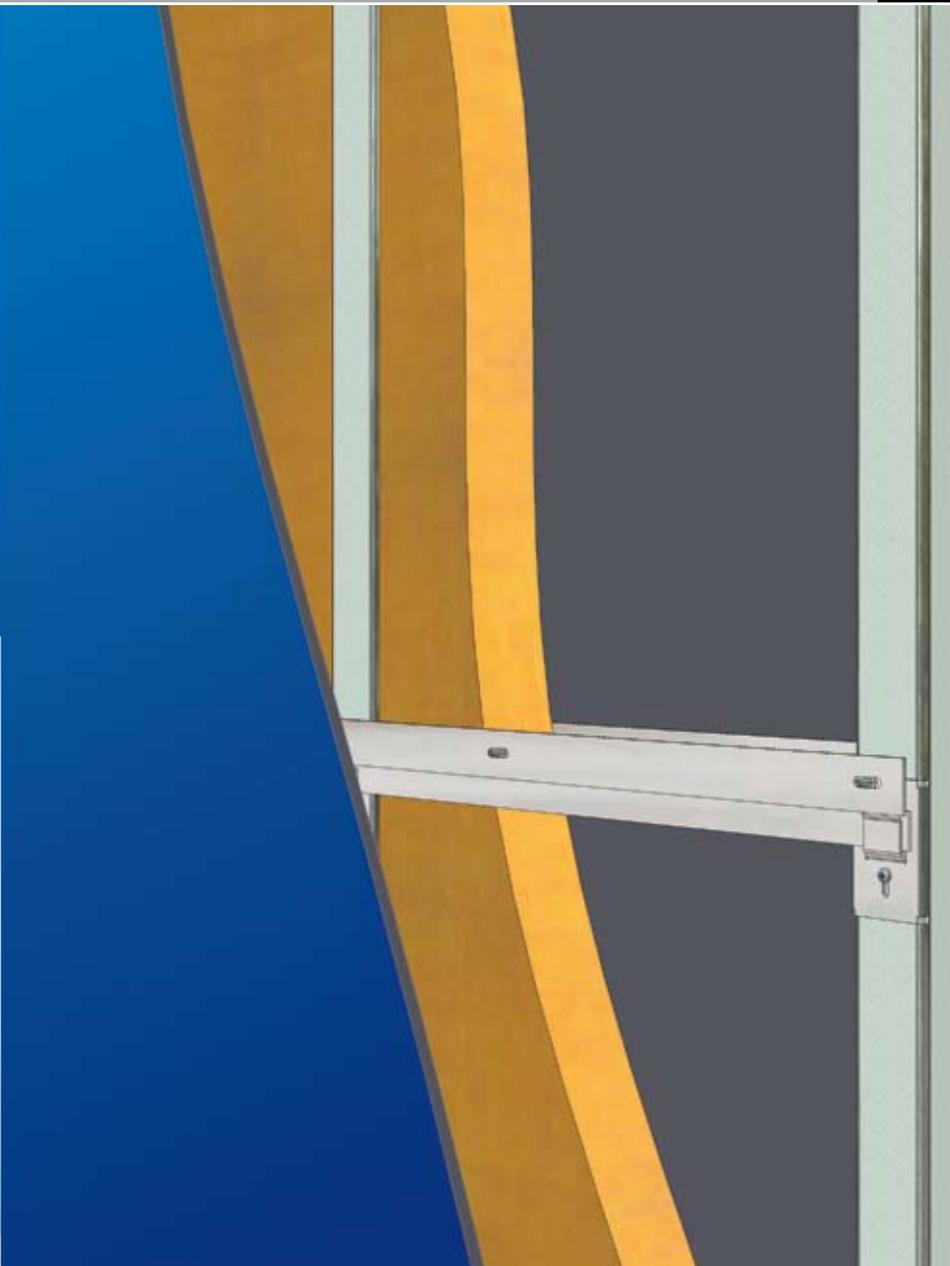


# INTERIOR SOLUTIONS

Think Trespa



TRESPA®



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# CONTENTS

Trespa wall lining from system to solution	4
TS2000 Invisible fixing with clips on metal studs	6
TS2000 Invisible fixing with clips on Trespa strips	8
Wainscoting using TS2000	11
TS2200 Invisible fixing with aluminium rails and brackets	12
TS2400 Invisible fixing with adhesive	13
TS2100 Visible fixing with screws or rivets	14

# TRESPA WALL LINING FROM SYSTEM TO SOLUTION

Trespa Virtuon wall lining and the TS2000 wall lining installation system are extremely compatible. Together they provide a practical and winning solution for walls of varying size and shape. Used extensively in critical interior applications, this combination meets the needs of installers and end-users.

In this brochure we describe next to TS2000 various alternative installation techniques for Trespa Virtuon such as invisible fixing with adhesives, with aluminium rails and brackets as well as visible fixing with screws or rivets.

## **TS2000 invisible wall lining installation system**

TS2000 is the most practical way to fix Trespa Virtuon panels invisibly. Developed by Trespa International, the TS2000 system saves time and costs because it is simple, fast and exceptionally user-friendly when compared to traditional fixing systems for wall lining.

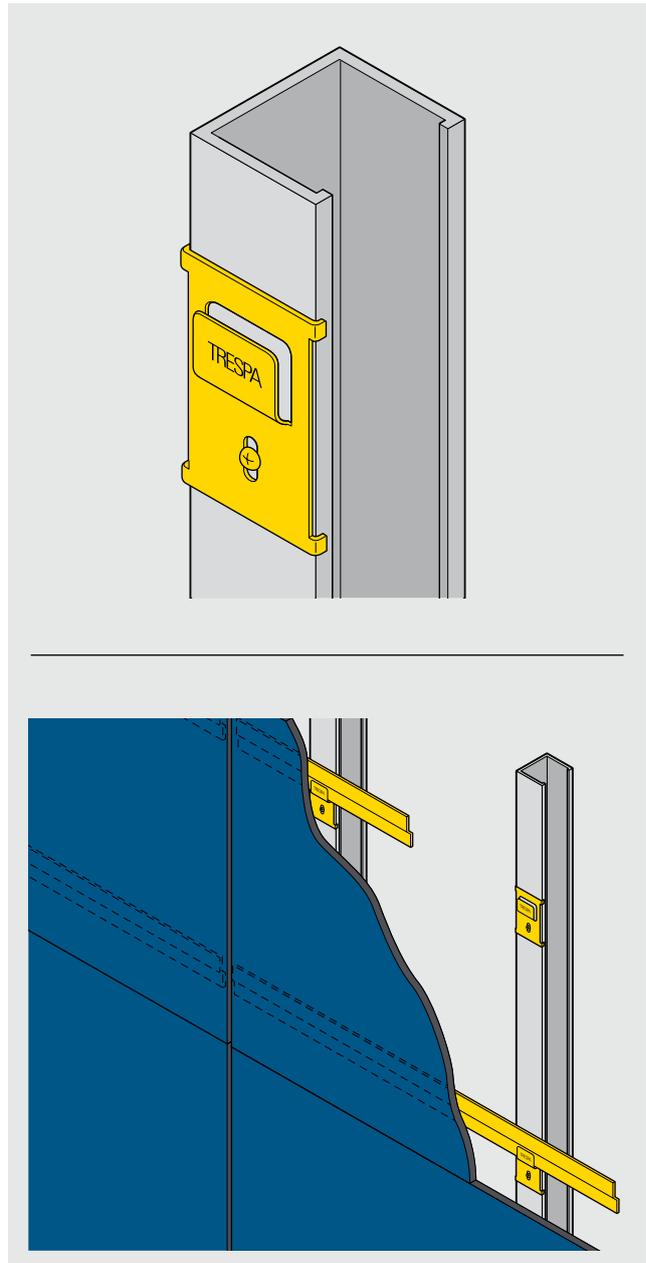
Apart from its aesthetics, the system is easy to dismount, allowing fast access to services concealed behind the wall or other functional requirements.

Using TS2000 high standards for both fire resistance and sound reduction can be met. Performances are supported by independent tests and reports.

## **TS2000: a choice of two types**

There are two varieties of the TS2000 system:

- TS2000 fixed with clips on metal stud for use in lightweight wall system (or drywall construction) for acclimatised clean areas;
- TS2000 fixed with clips on Trespa strips on any existing wall construction for use in high demanding interiors.





### **TS2000 helps you make the most of Trespa Virtuon**

Trespa Virtuon interior wall lining panels were developed for high demanding interior wall lining applications. These include hospitals, airports, leisure facilities and any other high traffic locations where dirt and bacteria pose a serious risk.

Official independent test reports on cleanability, hygiene and resistance to bacteria are available from Trespa International B.V.

### **Trespa Virtuon: highly individual and exceptionally functional**

Trespa Virtuon panels have a pore free decorative surface that is smooth, impermeable to pollution and micro-organisms and is impact resistant, with a unique brilliance and long-lasting aesthetic appeal.

The panels are manufactured using a proprietary EBC process, resulting in a surface that can be cleaned and disinfected frequently with minimum effort, keeping panels as new for many years, even in the most challenging environments.

Trespa Virtuon helps to create interiors with exceptionally high levels of hygiene in environments where bacteria and dirt pose a real threat. The panel's anti-microbial properties are incorporated in the product's surface without the use of anti-microbial additives. These properties will remain active throughout the product's lifetime.

Available in a choice of brilliant colours, textures and special effects (such as metallic colours) Trespa Virtuon combines cleanability, hygiene and aesthetics for long-lasting effectiveness and visual impact.

To underline this, Trespa Virtuon carries a product guarantee of 10 years on impact resistance, moisture resistance and cleanability.

# TS2000 INVISIBLE FIXING

## with clips on metal studs

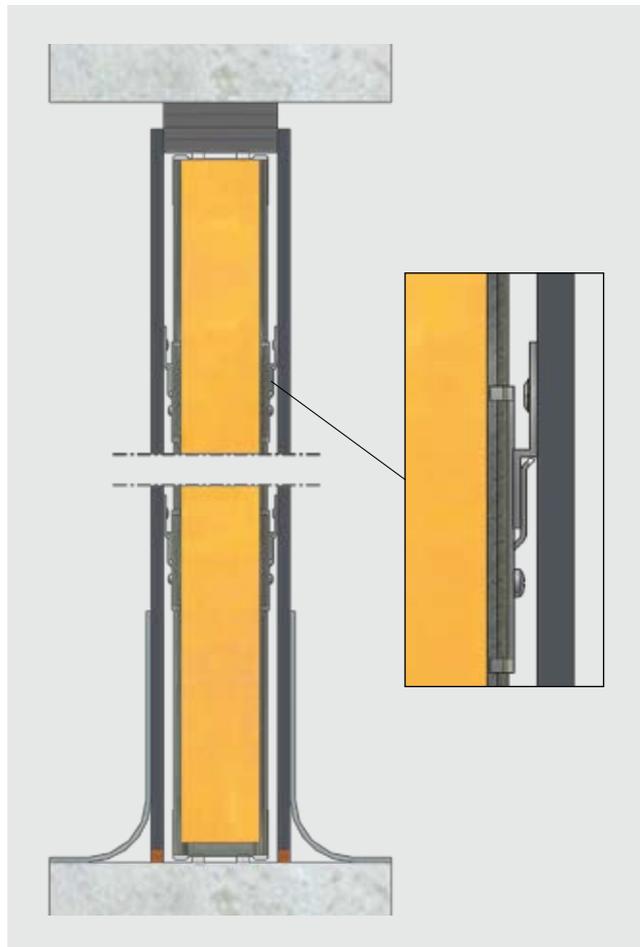
The TS2000 system allows the immediate installation of Trespa Virtuon (10 mm thick) panels on a metal stud framing system. This makes the system ideally suited for acclimatised clean areas, such as operating theatres, pharmacies and high tech production facilities.

### Ideal for acclimatised clean areas

In permanently acclimatised clean areas, where variations in temperature and humidity are kept to a minimum, a non-ventilated wall construction is possible. Here, the TS2000 system saves costs due to its simple, fast and cost-efficient installation when compared to traditional fixing systems for wall lining.

### Fire resistance and sound isolation

The TS2000 system has been tested for 30 minutes of fire resistance (EN13501-2:2003) and a weighed sound resistance index  $R_w$  of 57 dB (ISO 717-1:1996) using connecting details as shown here. Test reports are available from Trespa International B.V.





## Joins and connections

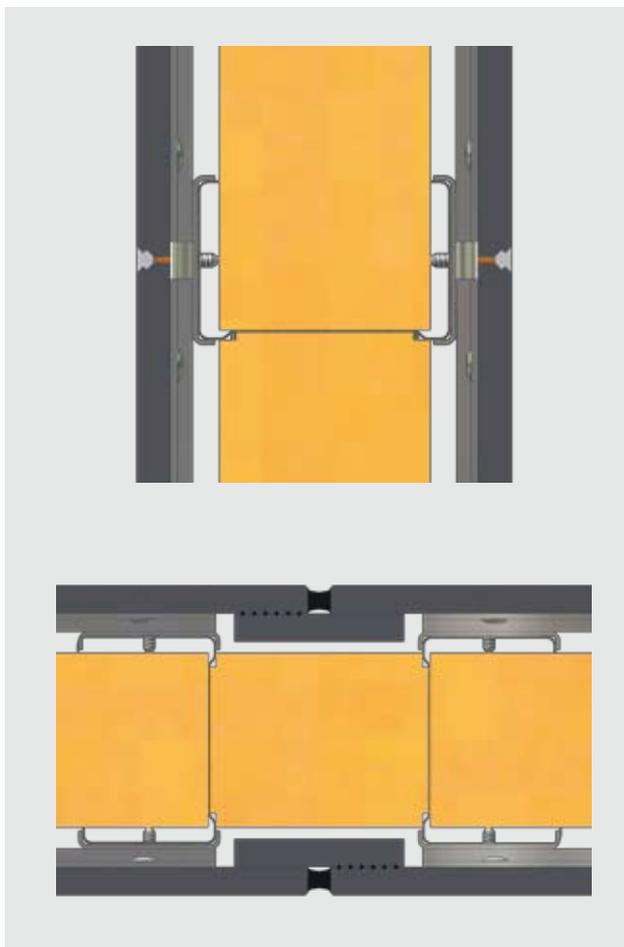
In permanently acclimatised clean areas expansion and contraction of materials will be limited to a minimum.

This provides a choice for joints and connections:

- different alternative connections to the flooring are possible. CAD details on alternative connections to flooring systems (skirting boards) are available from Trespa International B.V. These connections are being offered by flooring system manufacturers;
- wall lining panels can be connected by means of a special adhesive strip in the vertical joints;
- expansion joints are only required every 6 metres;
- joints can be finished flush by means of the TrespaCord or by various sealants. Disinfection reports are available from Trespa International B.V..

Alternative solutions for vertical joints include:

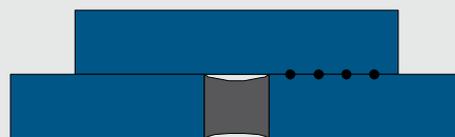
- Fixed joint (tested for 30 and 60 minutes of fire resistance)
- Expansion joint
- Tongue-and-groove
- Rebated joint



Fixed joint (tested for 30 and 60 minutes of fire resistance)



Expansion joint



Tongue-and-groove



Rebated joint



# TS2000 INVISIBLE FIXING

## with clips on Trespa strips

Using the TS2000 system, 10 mm Trespa Virtuon panels can be installed in front of a rear wall construction. This makes the system ideally suited for all areas where high demands are put on the wall lining construction. This system is suitable for finishing various types of wall construction, from gypsum board walls to prefabricated concrete systems.

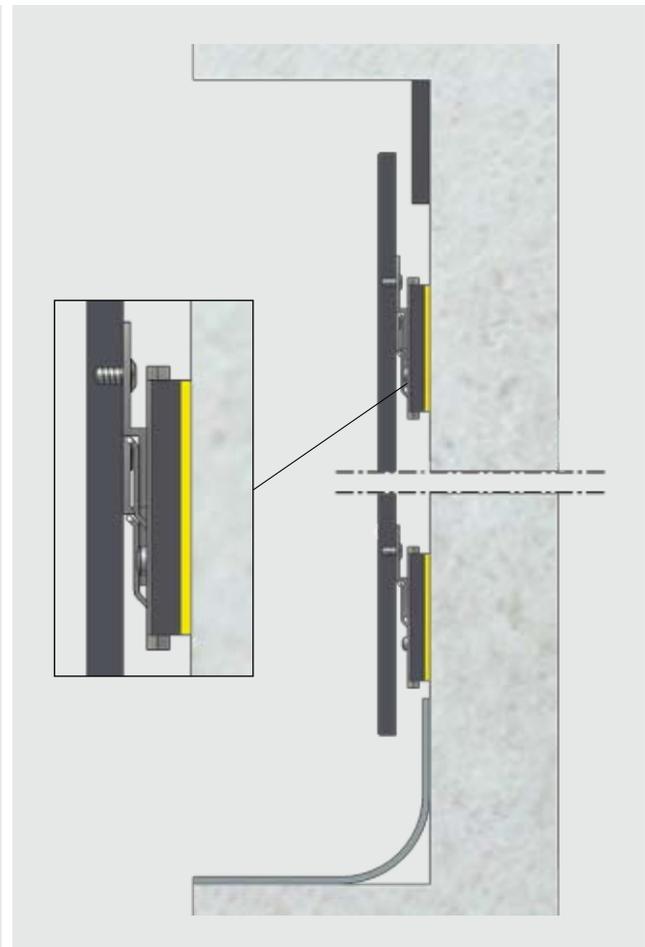
The TS2000 system allows the construction of both a fully back-ventilated wall lining system and a semi-sealed wall lining system, which can be used in clean areas such as operating theatres, pharmacies and high tech production facilities.

A fully back-ventilated wall lining system comprises:

- open floor and ceiling connections;
- horizontal or vertical profiles mounted to provide spacing.

A semi-sealed wall lining system comprises:

- an interconnected open space between the rear wall and the space above the (system) ceiling;
- horizontal profiles, mounted to provide spacing;
- closed joints and sealed connections to floor and ceiling.



## Fire resistance and sound isolations

Both fire resistance and sound isolation will depend largely on the properties of the rear wall construction as well as on the specific connections used for the floors and ceilings.

- The TS2000 wall lining construction with a metal stud system has been tested for fire resistance. The report shows that a fire resistance of 60 minutes (EN 13501-2:2003) is achievable. Test reports are available from Trespa International B.V.
- It has also been tested for sound insulation. In tested constructions the maximum achievable weighted sound resistance index  $R_w$  is 64 dB (ISO 717-1:1996). Test reports are available from Trespa International B.V..

The system saves costs due to a simple, fast and cost friendly installation in comparison to traditional fixing systems for wall lining.

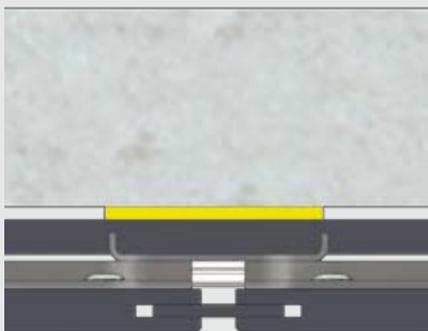
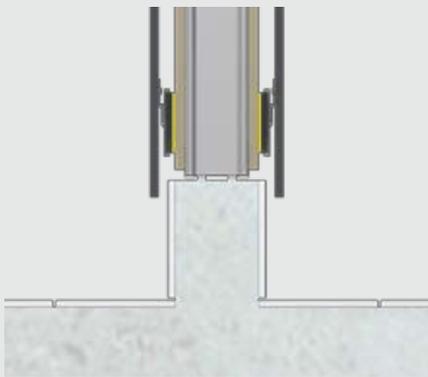
In wet areas (e.g. shower zones in sports centres) lightweight partition walls may be combined with the TS2000 system provided the metal-stud framework is positioned on an elevated level, in order to protect the insulation material and the gypsum board sheeting from getting wet.

## Joints and connections

Solutions for vertical joints include:

- Fixed joint
- Expansion joint
- Tongue-and-groove
- Rebated joint

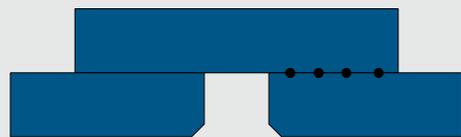
Wet areas



Fixed joint



Expansion joint

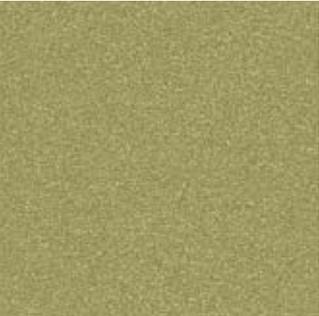


Tongue-and-groove



Rebated joint





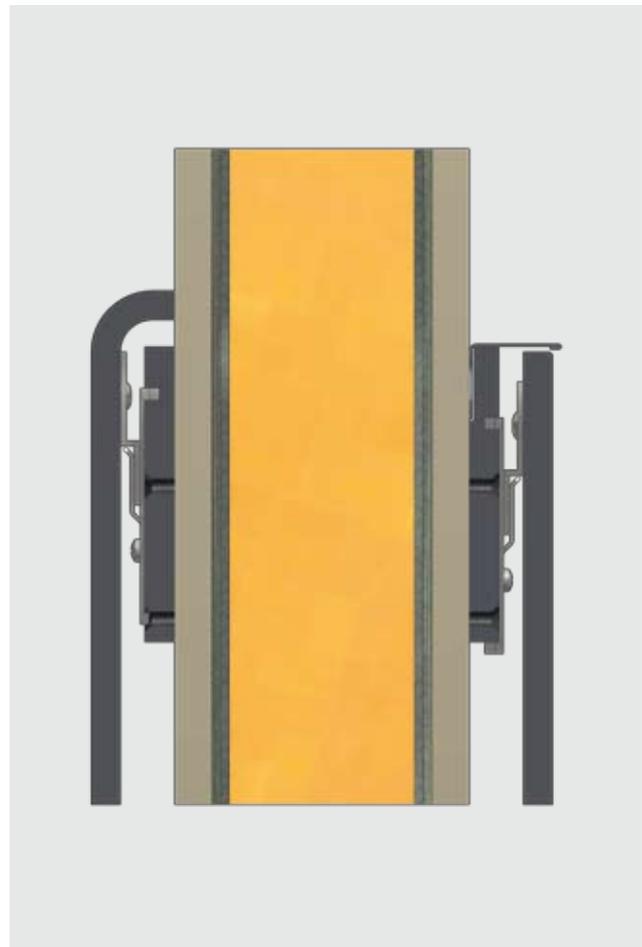
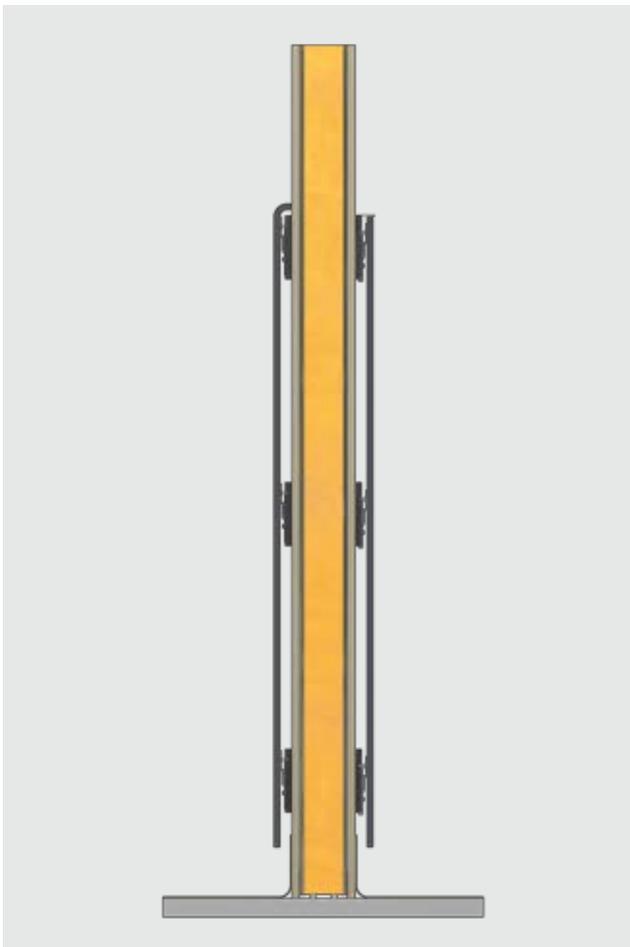
# WAINSCOTING using TS2000

The TS 2000 system supports the easy installation of wainscoting systems, combined with various end-profiles or handrail systems on top.

Typically, the front of a Trespa Virtuon (10 mm thick) panel stands 27 mm away from the face of the rear wall construction.

It is recommended that the connection to the flooring system is designed in such a way that both ventilation of the wainscoting system and cleanability of the flooring system are assured.

In general, we advise that a distance is kept of at least 50 mm between the flooring system and the bottom side of the panel. Applying washers at the fixing point with a thickness of at least 3 mm allows for continuous ventilation of the cavity behind the panel.



# TS2200 INVISIBLE FIXING

## with aluminium rails and brackets

Trespa Virtuon panels can be fixed invisibly using aluminium rails and brackets. The brackets are attached to the panels with thread-cutting screws or inserts. Pre-drilled holes must be made in such a way that a residual thickness of a least 2 mm remains on the visible side of the panel.

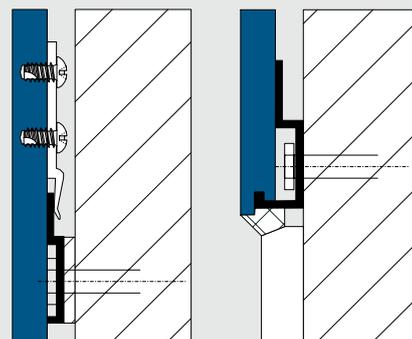
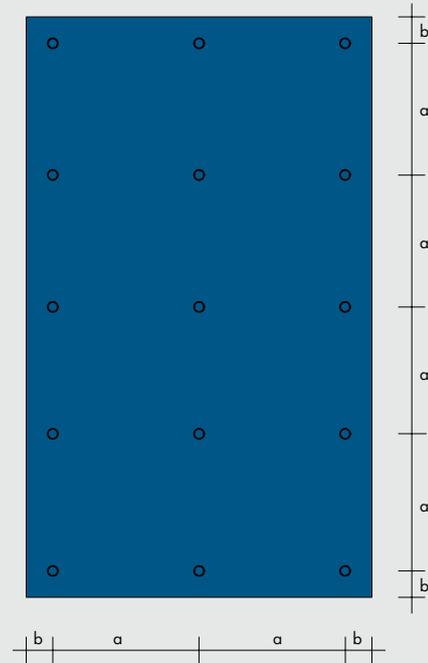
The sub-frame structure must be assembled in such a way that the area behind the panel can be ventilated to provide similar temperature and humidity on both sides of the panel.

All joints must be at least 8 mm wide.

### Fixing distances and edge clearances

- a = horizontal and vertical fixing distance (see table)
- b = edge fixing clearance
  - minimum 20 mm
  - maximum 10 x panel thickness

Maximum fixing centres (mm)	Panel thickness (mm)	
	10	13
2 fixings in one direction	750	950
3 or more fixings in one direction	900	1200



# TS2400 INVISIBLE FIXING

## with adhesive

Trespa Virtuon panels can be fixed onto a timber or metal sub-frame structure using special adhesive systems. The instructions for use of Trespa-recommended adhesive systems must be followed in order to achieve high-quality connections.

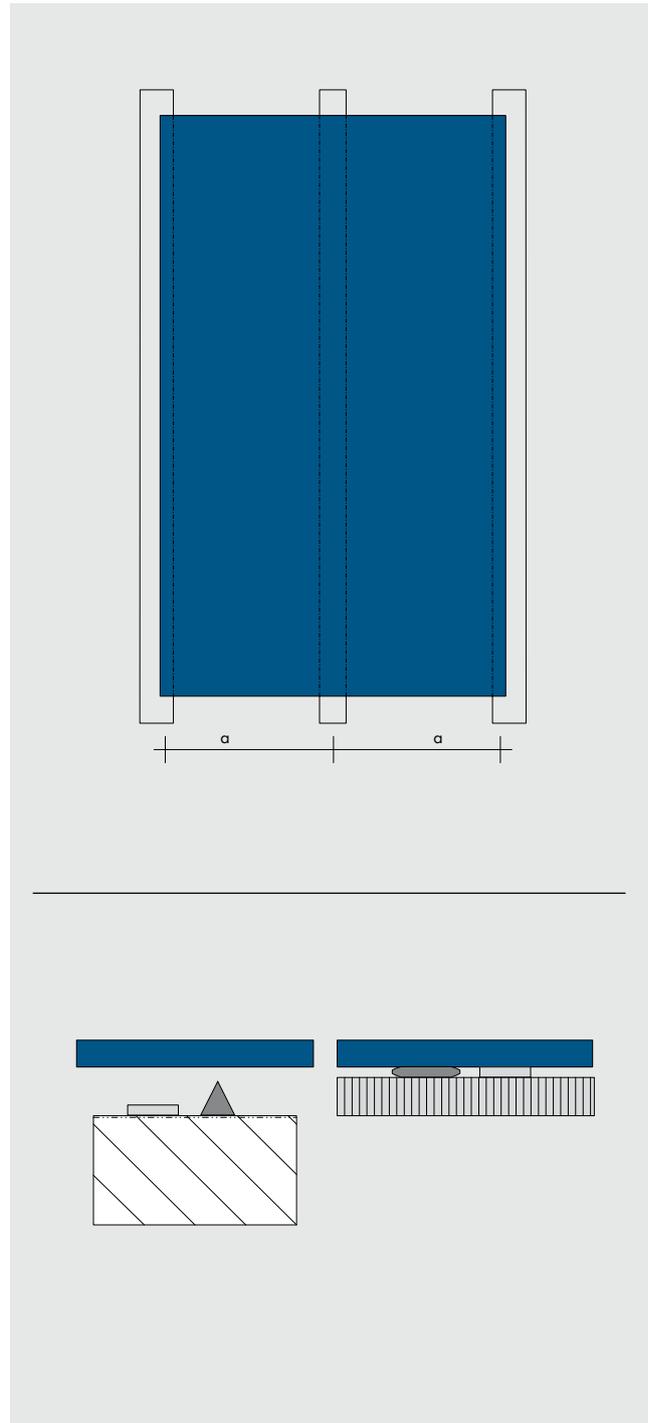
The sub-frame structure must be assembled in such a way that the area behind the panel can be ventilated so as to provide similar temperature and humidity on both sides of the panel. The adhesive beads must be applied only in a vertical direction and always in full height of the panel.

All joints must be at least 8 mm wide.

The maximum length of panels is limited to 2550 mm.

### Maximum horizontal fixing distances (a)

Maximum fixing centres (mm)	Panel thickness (mm)	
	8	10
2 fixings in one direction	600	650
3 or more fixings in one direction	650	650



# TS2100 VISIBLE FIXING

## with screws or rivets

Trespa Virtuon panels may be fixed to a timber sub-frame structure using fastfix screws for Trespa panels or they may be fixed to a metal sub-frame structure using aluminium rivets for Trespa panels.

The sub-frame structure must be assembled in such a way that the area behind the panel can be ventilated in order to provide similar temperature and humidity on both sides of the panel.

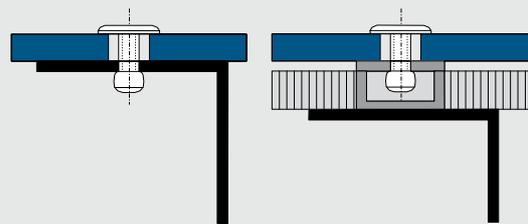
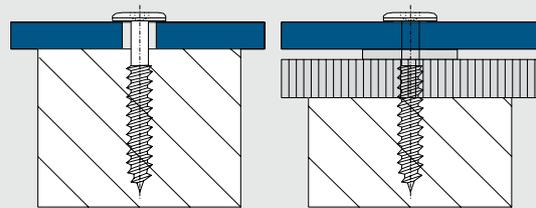
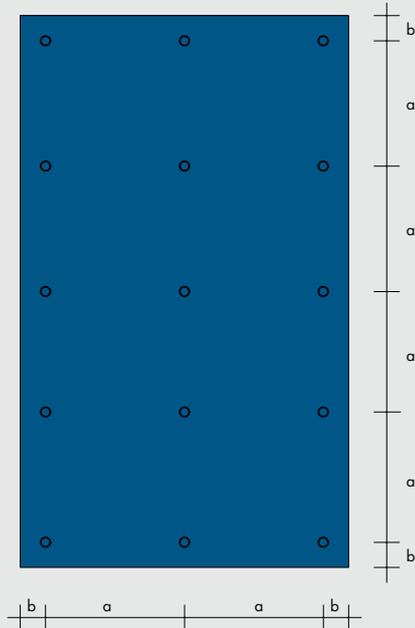
When fixing panels with screws or rivets it is important to ensure that panels can move freely and evenly. The diameter of all pre-drilled holes in the panels must be 8 mm when using fastfix screws that have a diameter of 4 mm. When using aluminium rivets that have a diameter of 5 mm, one hole - centrally positioned in the panel - must be pre-drilled with a diameter of 5,1 mm and all other holes must be pre-drilled with a diameter of 10 mm. A special nosepiece must be used on the riveting tool that keeps the head of the rivet 0,3 mm free from the surface of the panels.

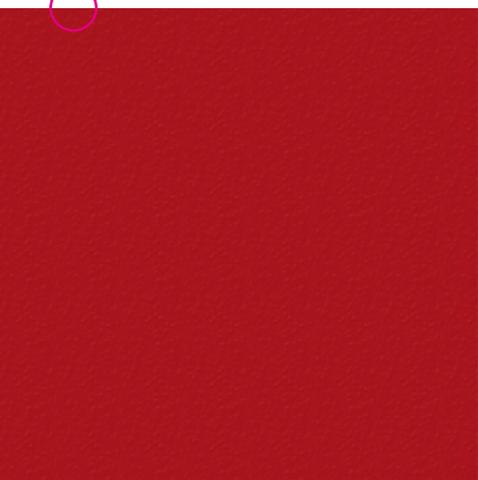
All joints must be at least 8 mm wide.

### Fixing distances and edge clearances

- a = horizontal and vertical fixing distance (see table)
- b = edge fixing clearance
  - minimum 20 mm
  - maximum 10 x panel thickness

Maximum fixing centres (mm)	Panel thickness (mm)	
	8	10
2 fixings in one direction	600	750
3 or more fixings in one direction	750	900





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Trespa guarantees quality of both products and services. We offer our customers optimal technical support as well as straightforward documentation. Proof of this approach is the award of the ISO 9001 and ISO 14001 certificates.



Whatever your requirements, Trespa offers a full support service. Please contact us for further information.

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