

**TRESPA**

## Installation guidelines Athlon furniture

### Trespa Athlon

Trespa Athlon is a flat panel based on thermosetting resins, homogeneously reinforced with cellulose fibres and manufactured under high pressure and temperature. Using special techniques, the panels have an integrated decorative surface made of melamine impregnated paper. The resulting properties make the panel material particularly suitable for a wide range of interior applications.

#### Properties

- exceptionally resistant to scratches and wear and tear
- unaffected by damp
- easy to clean with powerful disinfectants
- very impact resistant
- little dirt adhesion and easy to clean because of closed surface structure
- safe fire behaviour: does not melt, drip or explode; little smoke emission

#### Product range

##### Colours/decorative effects:

- plain colours
- speckled patterns
- fantasy colours
- wood decors

##### Surface structures:

- Quartz
- Crystal matt (not available in 8 and 10 mm)



##### Standard panel sizes:

- 3050 x 1530 mm
- 2550 x 1860 mm
- 3730 x 1860 mm

##### Standard panel thicknesses:

- 6, 8, 10, 13 and 16 mm



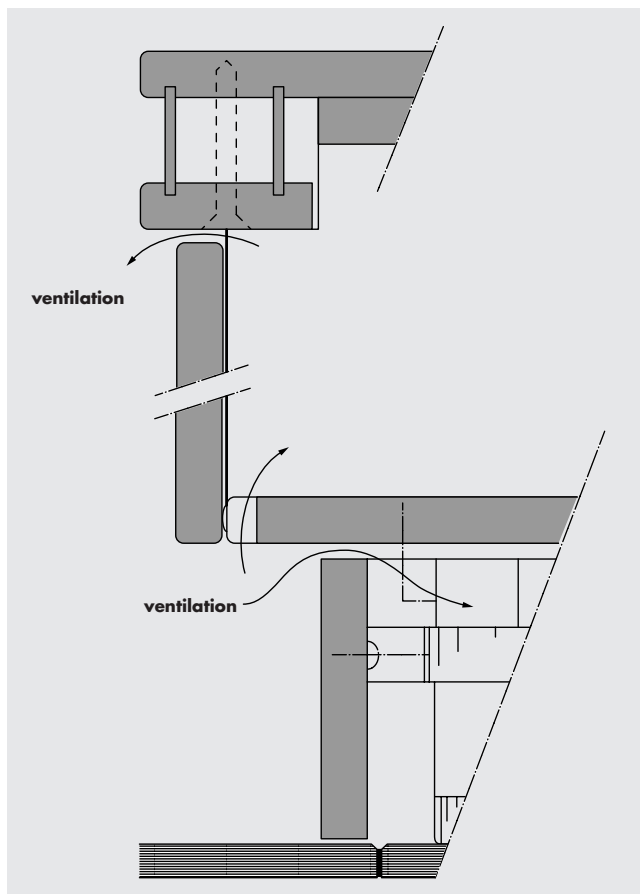
**All the best qualities in one panel**

# General installation guidelines

## Trespa Athlon

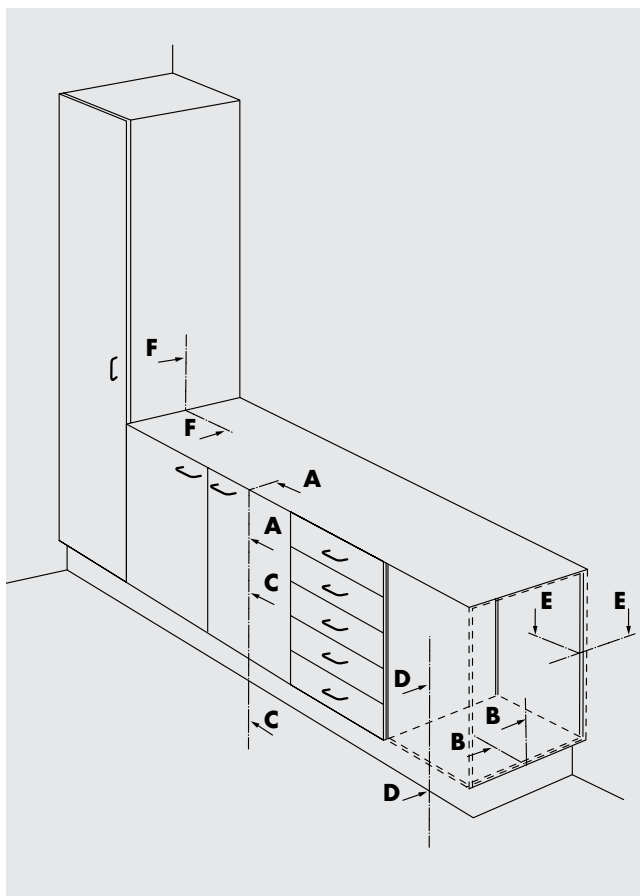
As a result of its composition, Trespa Athlon can work just like hard wood:

- The temperature and humidity acting on the front and rear sides should not differ over a long period of time: closed off spaces in Trespa furniture should therefore be well ventilated.
- Panel edges should not be permanently wet.
- In rooms with high moisture contents (bathrooms, swimming pools, etc.) a shrink and swell coefficient of 2.5 mm/m<sup>1</sup> should be taken into account. Such high moisture contents are not taken into account in the details mentioned in this brochure.



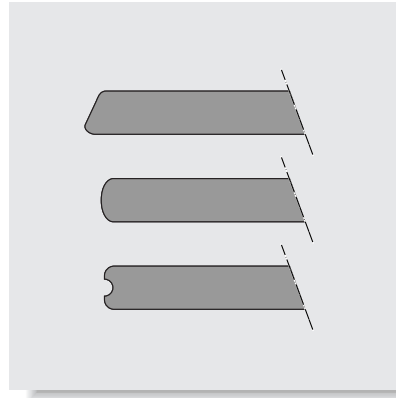
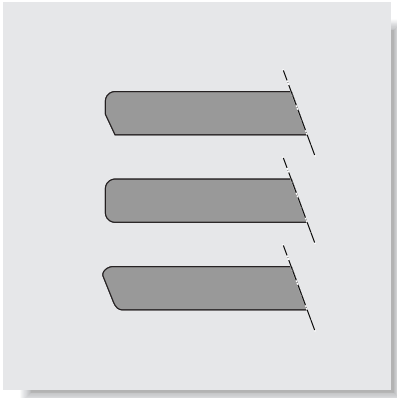
## Example

The joints in the wall units shown here are worked out in the following pages.

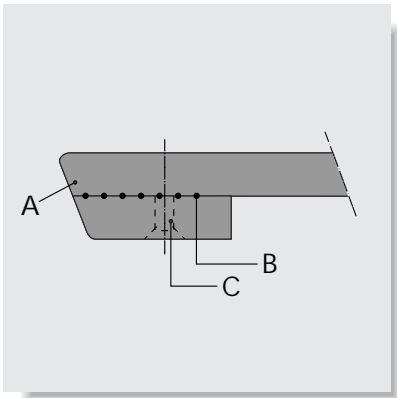


## Edge finish on the work surface (cross-section AA)

### Single ply

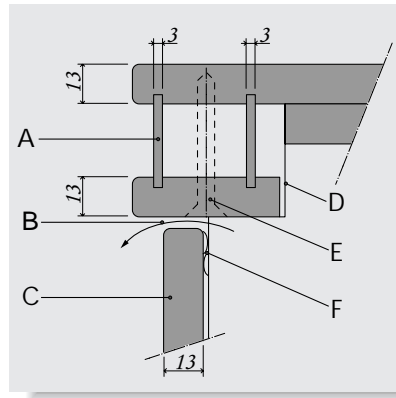


### Double ply



- A Planing after the glue has hardened
  - B Glued joint
  - C Mechanical joint
- Screw diameter:  
4.5 mm, pre-drill  
with 4 mm diameter

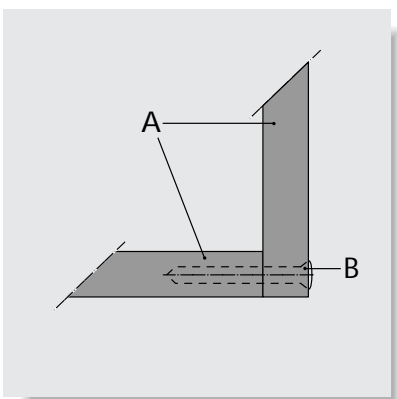
### Double ply with connector



- A Trespa 3 mm
  - B Ventilation
  - C Door
  - D Body
  - E Mechanical joint
  - F Door stops (rubber, PVC)
- Screw diameter:  
4.5 mm, pre-drill with  
4 mm diameter

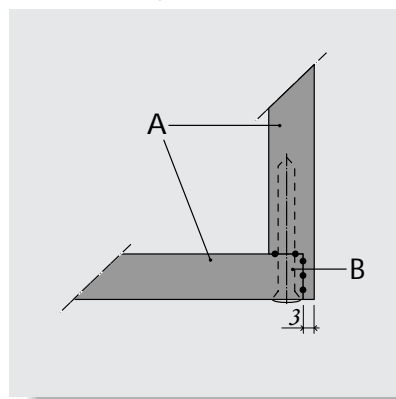
## Corner joint (cross-section BB)

### Screw-fixed



- A Trespa Athlon 13 mm
  - B Screw: 4.5 x 35 mm.
- Pre-drill with 4 mm diameter, depth 25 mm.  
If desired, place cover cap every ± 250 mm.  
Minimum distance from the edge: 20 mm.

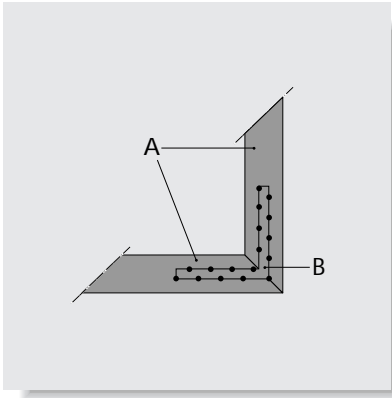
### Screw-fixed/glued with recess



- A Trespa Athlon 13 mm
  - B Screw: 4.5 x 35 mm.
- Pre-drill with 4 mm diameter, depth 25 mm.  
Minimum distance from the edge: 20 mm

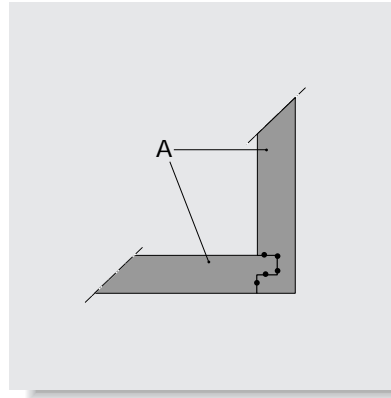
## Corner joint (cross-section BB)

With glue-fixed L profile



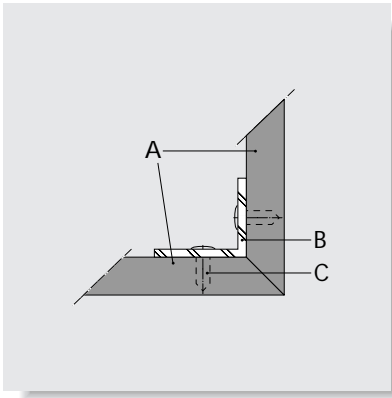
- A Trespa Athlon 13 mm
- B Aluminium L profile 30 x 30 x 3 mm

Glued



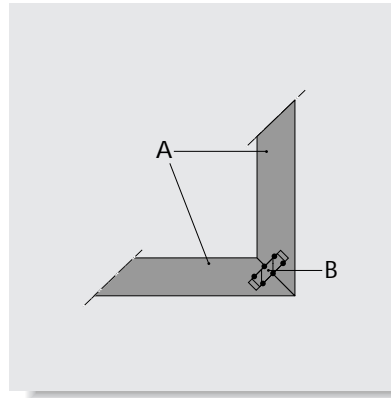
- A Trespa Athlon 13 mm

With screw-fixed L profile



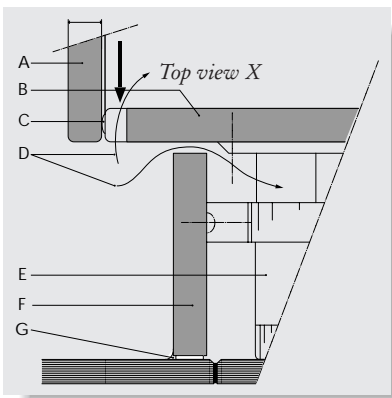
- A Trespa Athlon 13 mm
- B Aluminium L profile 30 x 30 x 3 mm
- Mechanical joint every  $\pm 100$  mm
- C Screw: 4 x 12 mm, pre-drill with 3 mm diameter, depth 10 mm

With glue-fixed tongue

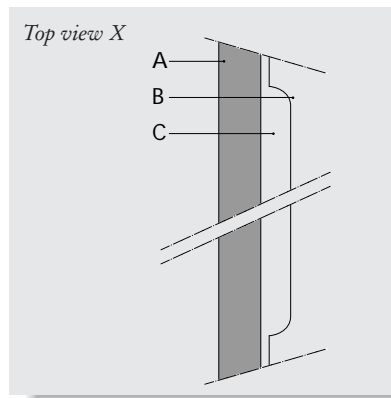


- A Trespa Athlon 13 mm
- B Aluminium or Trespa tongue

## Bottom edge-finish (cross-section CC)



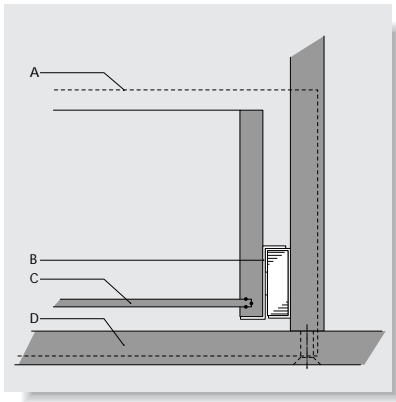
- A Door
- B Bottom panel
- C Door stop
- D Ventilation
- E Adjustable legs
- F Skirting (clicked)
- G Silicone sealing mastic



- A Door
- B Bottom panel
- C Ventilation spaces to improve ventilation, especially if high moisture levels are likely

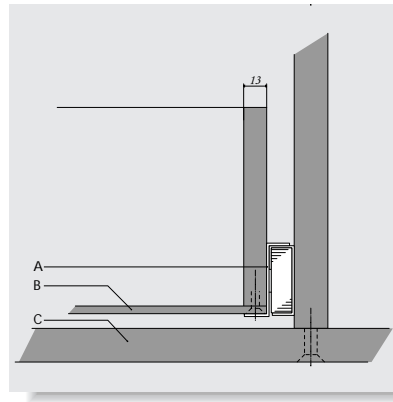
## Drawer finish (cross-section DD)

### Glue-fixed drawer base



- A Drawer front
- B Drawer rail
- C Drawer base in Trespa 3 mm
- D Bottom panel in Trespa 13 mm

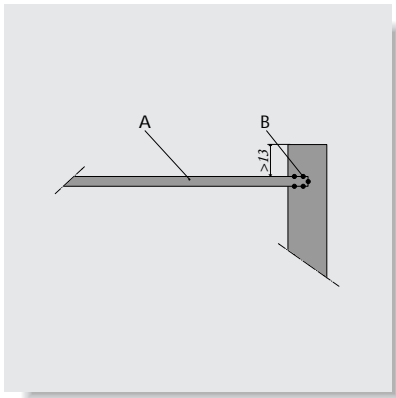
### Screw-fixed drawer base



- A Drawer rail
- B Drawer base in Trespa 3 mm or 6 mm (large surfaces)
- C Bottom panel in Trespa 13 mm

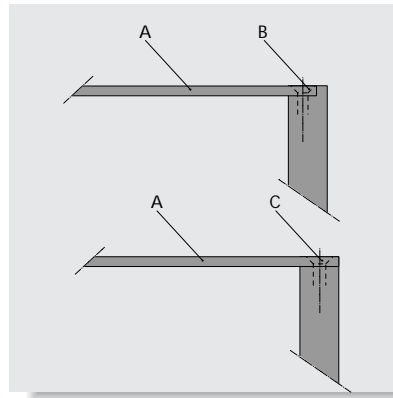
## Back panel finish (cross-section EE)

### Glue-fixed with 3/6 mm Trespa



- A Back panel in Trespa 3 mm or 6 mm
- B Glue

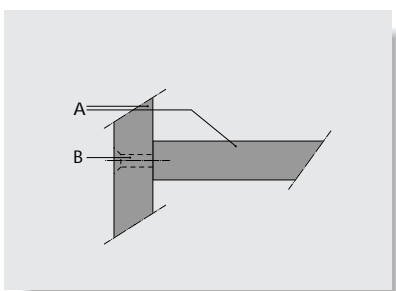
### Screw-fixed with 3/6 mm Trespa



- A Back panel in Trespa 3 mm or 6 mm
- B Screw diameter: 3.5 x 20 mm, Pre-drill diameter: 3 mm, depth: 20 mm
- C Screw diameter: 4.5 x 35 mm, Pre-drill diameter: 4 mm, depth: 35 mm

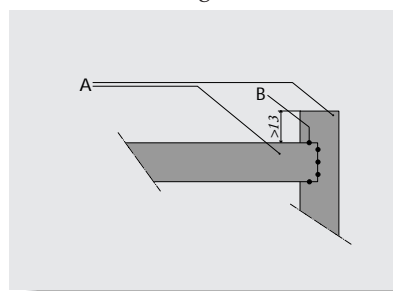
## T joints (cross-section FF)

### Screw-fixed



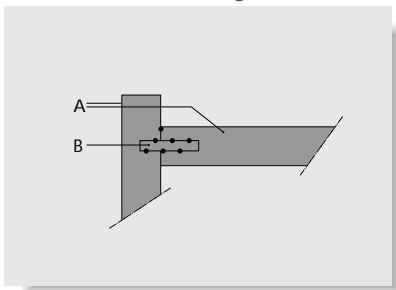
- A Trespa 13 mm
- B Mechanical joint. Screw diameter: 4.5 x 35 mm. Pre-drill diameter 4 mm, depth: 35 mm. Cover cap optional.

### Glue-fixed with groove



- A Trespa 13 mm
- B Glue

### Glue-fixed with tongue



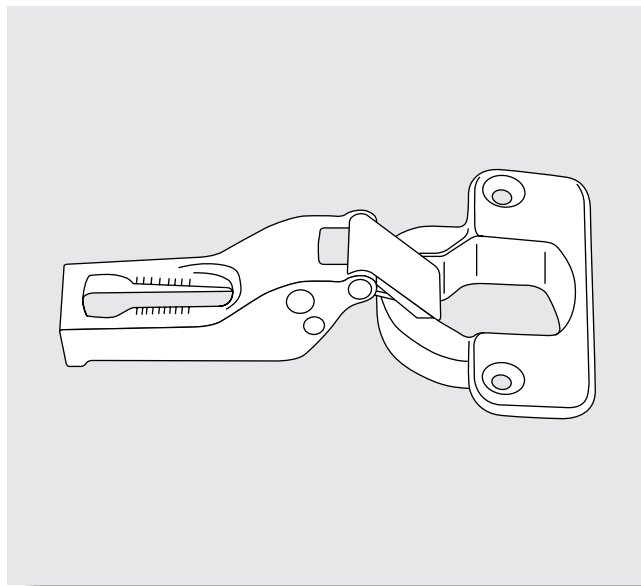
- A Trespa 13 mm
- B Aluminium or Trespa tongue or lamellas

# Hinges

## Concealed hinges

- **stainless steel:** use where high demands are placed on corrosion resistance and chemical resistance;
- **galvanised steel:** for the remaining applications

**Important:** if 13 mm thick doors are used, the drill-depth is 11 mm maximum, which makes some hinges unsuitable. Doors thicker than 13 mm are suitable for all hinges. The manufacturers instructions regarding maximum load, number of hinges, etc., should always be taken into account.

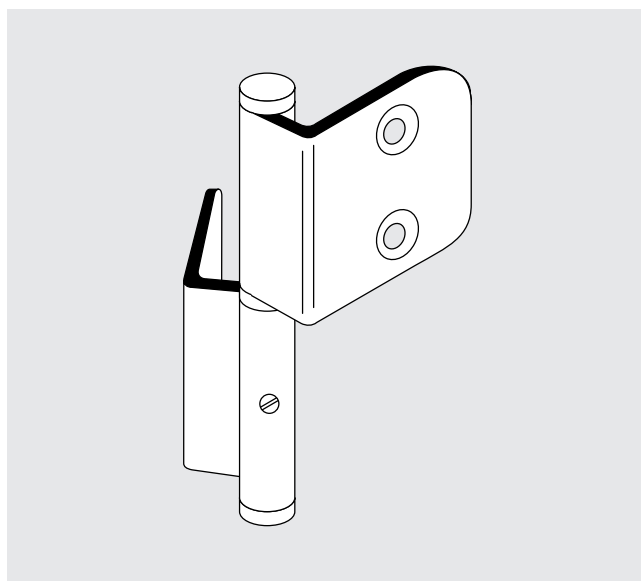


## Special Trespa hinges

- **stainless steel:** use where high demands are placed on corrosion resistance, chemical resistance, cleanability, etc.

**Important:** this hinge has been specially designed for use with Trespa and has the following properties:

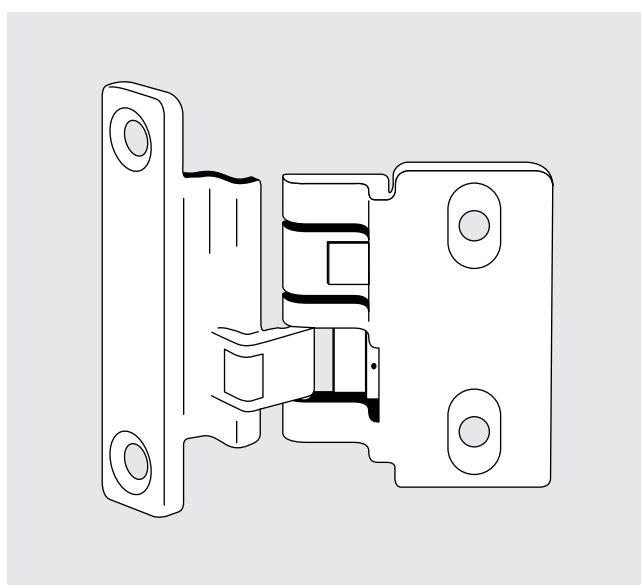
- corrosion resistant
- high resistance to chemicals
- wide opening angle up to 240°
- the entire cupboard space can be used



- **stainless steel:** use where high demands are placed on corrosion resistance and chemical resistance;
- **galvanised steel:** for the remaining applications

**Important:** this hinge is available with single or double hinge, with or without catch;

- special single-axle hinge
- wide opening angle up to 240°
- suitable for module systems
- 5 mm thick pin
- level with side panel when 13 mm panel is used



# Fixings

- **stainless steel:** use where high demands are placed on corrosion resistance and chemical resistance;
- **galvanised steel:** for the remaining applications

**Note:** all fixings described in the following section are available in specialised hardware stores.

## Thread cutting screws

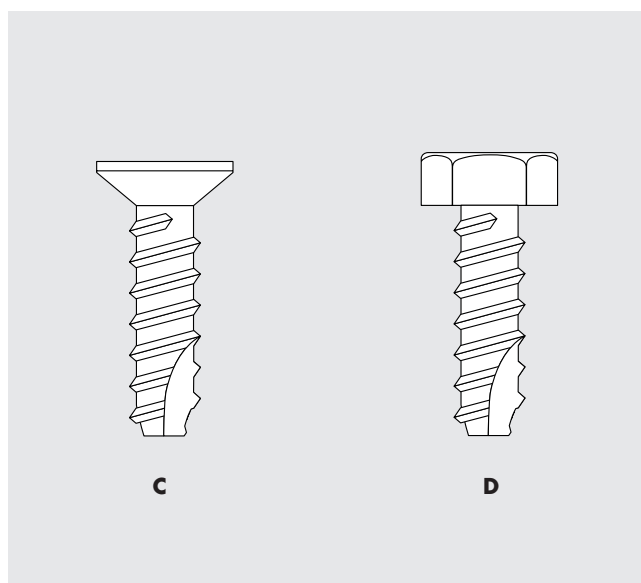
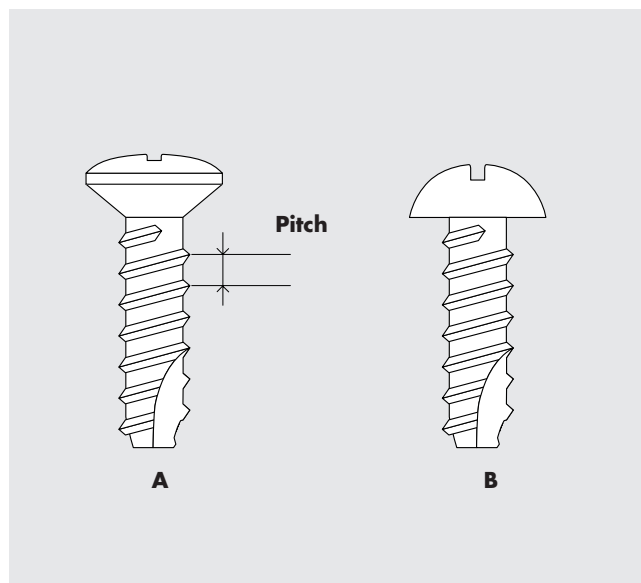
- a firm-fastening thread is cut in the Trespa core
- use screws with a small pitch
- **the drill hole-diameter** is the screw diameter minus the thread height
- screws can be greased to ease screwing
- **minimum panel thickness** when screwing perpendicular to the panel: 10 mm
- **minimum distance** from the edge when screwing parallel to the panel: 25 mm
- **minimum drill-depth** when screwing perpendicular to the panel, twice the screw diameter with a minimum of 1.5 mm remaining panel thickness is required
- **minimum screw-in depth:** 1.5 x the screw diameter
- **maximum screw diameter** when screwing parallel to the panel:

Trespa thickness	maximum screw diameter
10 mm	M4
13 mm	M6
16 mm	M10

### Types:

- A** raised countersunk head    DIN 7516 E
- B** mushroom head                DIN 7516 A
- C** flat countersunk head        DIN 7516 D
- D** hexagonal head                DIN 7513 A

A commonly used thread cutting screw is the Ejot-PT-S60 (special drill required!)



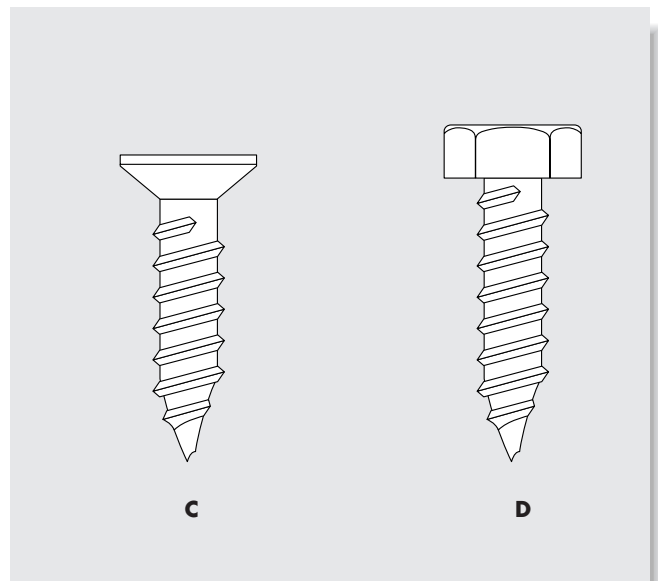
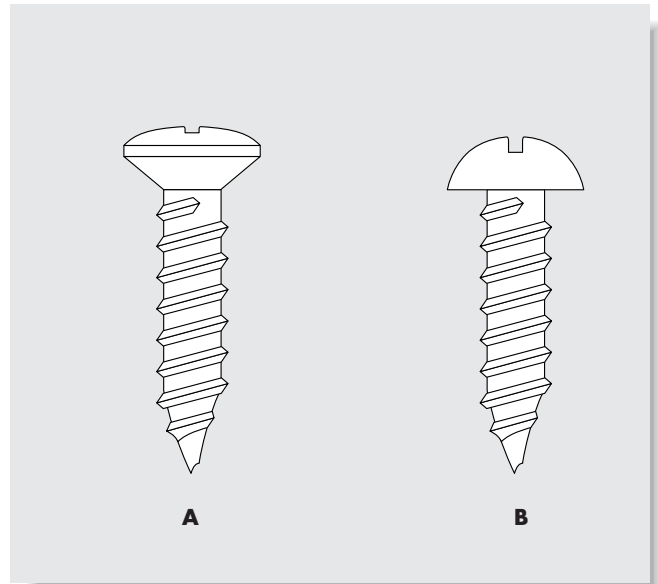
## Parkers or self tapping screws

- **pre-drill** with a drill diameter 0.3 to 0.5 mm smaller than the screw diameter
- screws can be greased to ease screwing
- **minimum panel thickness** when screwing perpendicular to the panel: 10 mm
- **minimum distance from the edge** when screwing parallel to the panel: 25 mm
- **minimum drill depth** when screwing perpendicular to the panel, three times the screw diameter with a **minimum of 1.5 mm remaining panel thickness** is required
- **minimum screw-in depth:** 2.5 x the screw diameter
- **maximum screw diameter** when screwing parallel to the panel:

Trespa thickness	maximum screw diameter
10 mm	3.9 mm
13 mm	4.8 mm
16 mm	6.3 mm

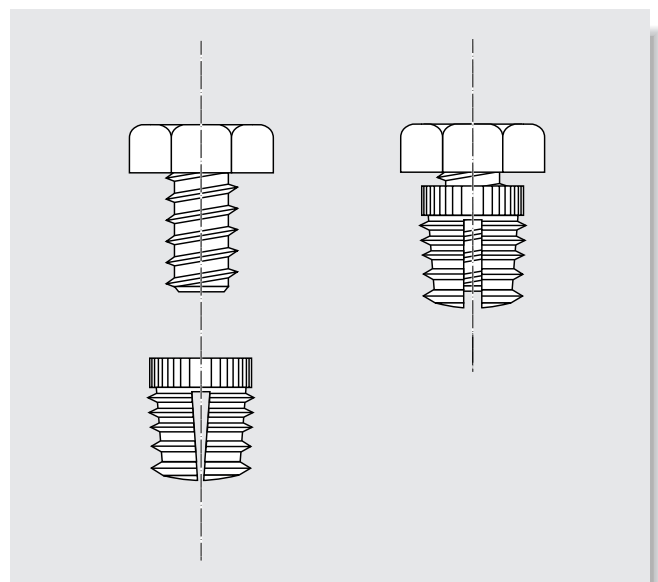
### Types:

<b>A</b> raised countersunk head	DIN 7983 C
<b>B</b> mushroom head	DIN 7981 C
<b>C</b> flat countersunk head	DIN 7982 C
<b>D</b> hexagonal head	DIN 7976 C



## Plugs or inserts

- suitable for fixings where high pull-out strengths are desired
- **pre-drill diameter** = plug diameter
- **minimum panel thickness:** 10 mm
- **minimum remaining panel thickness:** 1.5 mm
- the screws used are not thread cutting, usually M6
- drill bits with depth adjusters are available to prevent drilling too deep





# Glueing

- Trespa panels can be glued to each other and to almost any other material with one or two part adhesives, e.g. epoxy or polyurethane adhesive systems
- Glueing is usually carried out together with a mechanical joint to provide sufficient pressing during drying.

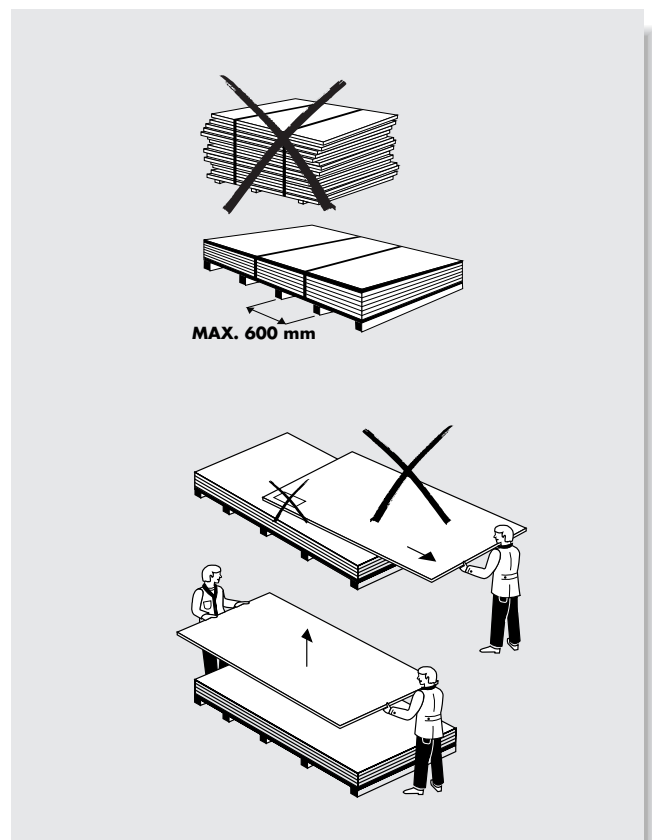
<i>Glue type</i>	<i>Application</i>	<i>Open time</i>	<i>Pressure</i>	<i>Pressure time</i>
<i>Epoxy</i>	<i>100-250 g/m<sup>2</sup></i>	<i>depends on type</i>	<i>0.2 N/mm<sup>2</sup></i>	<i>4-8 hours at 20°C</i>
<i>Polyurethane</i>	<i>100-250 g/m<sup>2</sup></i>	<i>depends on type</i>	<i>0.2 N/mm<sup>2</sup></i>	<i>4-8 hours at 20°C</i>

Please follow the instructions below for thickening the edges of panels with strips of Trespa:

- Panels and strips must have the same "grain direction".
- Panels, strips and adhesive must be pre-conditioned in the same way (temperature and humidity preferably the same as the future conditions of use).
- Remove grease from surfaces to be glued, slightly roughen them and ensure they are dust-free.

# Transportation and storage

- During transportation, use flat, stable pallets of at least the same dimensions as the panel.
- When moving a sheet, lift it to prevent scratches on the surface.
- The sheets should be stored in an enclosed area, protected against moisture and heat.
- For horizontal storage on pallets, the sheets should be supported over the entire surface with a protective layer between the pallet and the bottom sheet and also on the uppermost sheet.
- For vertical storage the sheets should be placed on their sides, exactly vertical and be supported over the full height.
- Remove stickers before installation.



# Processing

## Sawing

### Stationary circular saw

Section	Teeth	Number of revolutions	Blade thickness	Height setting
300 mm	72	6,000	3.4 mm	30 mm
350 mm	84	5,000	4.0 mm	35 mm
400 mm	96	4,000	4.8 mm	40 mm

### Feed

7 -22 m/min.

### Tooth

Alternate or trapezoidal flat tooth with carbide or diamond tip.

### Jig saw

Carbide-tipped, interior corners of cut-outs should be drilled first with 6 mm hole diameter.

### Entering tooth

At the decorative side of the panel if only this side will be in view.

### Cut edges

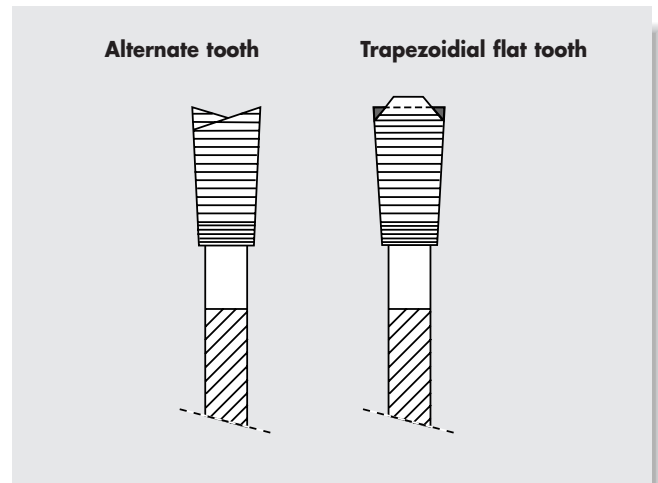
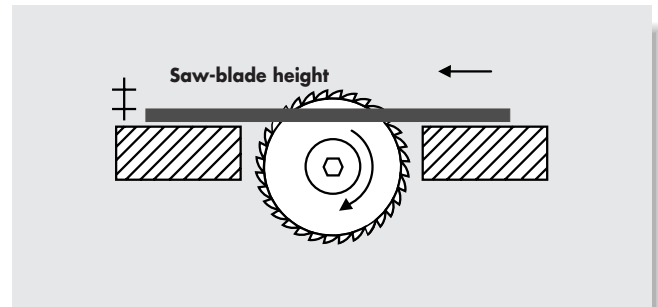
The best results are obtained with stationary machines. Any sharp edges can be removed with sand paper.

### Rake angle

A rake angle of 45° gives the best performance.

### Corner profiles

First cut to length, then saw to the correct length. Measure the length of leg from the corner.



## Routing

Do not remove the protective film on the Trespa panels until these are assembled. If the film burns or melts during routing, remove only the film in the edge areas.

### Manually operated routing cutter

<i>Diameter</i>	<i>Number of revolutions</i>	<i>Speed</i>	<i>Start</i>
20-25 mm	18,000-24,000	20-30 m/sec.	

### Manually operated spindle moulder

<i>Diameter</i>	<i>Number of revolutions</i>	<i>Speed</i>	<i>Start</i>
125 mm	6,000-9,000	40-60 m/sec. 5-15 m/min.	

### Routing shapes

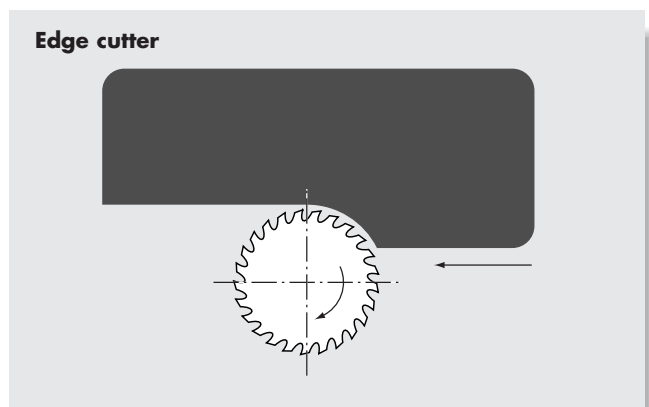
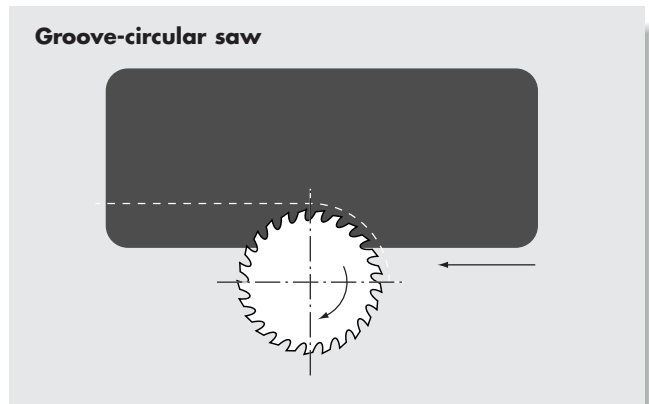
Straight and slanted bits for cutting edges and bevelling.

Hollow or round bits for rounded edges.

Diamond groove-circular saw blades for grooves.

### Materials

Cutters made of hard metal or diamond.

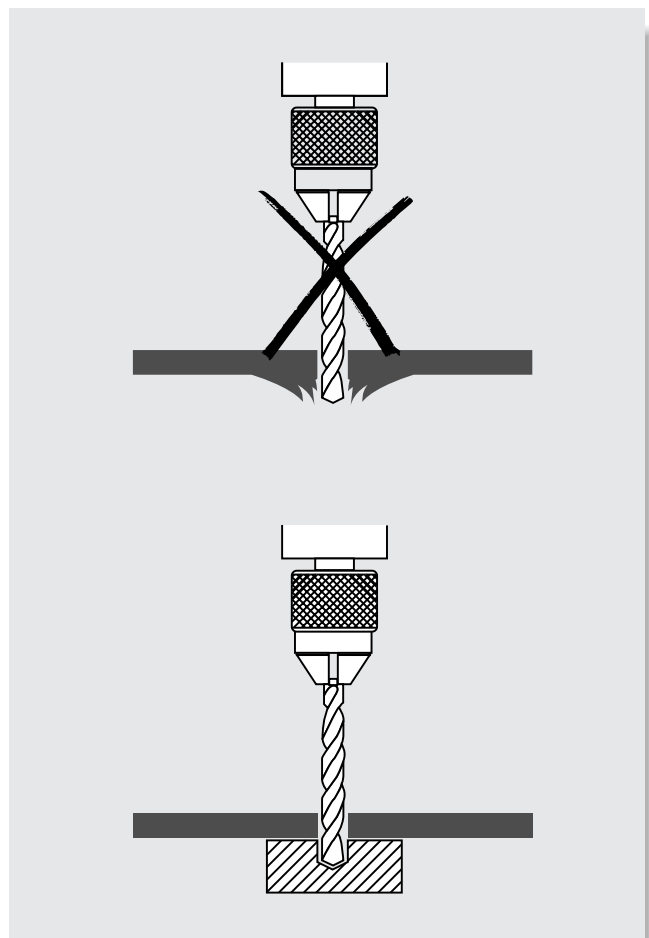


## Drilling

HSS drill, top angle 60-80°. Panels should be drilled with support sheets.

<i>Section</i>	<i>Number of revolutions</i>	<i>Start</i>
5 mm	3,000	60-120 mm/min.
8 mm	2,000	40- 80 mm/min.
10 mm	1,500	30- 60 mm/min.

Large holes, e.g. for suspension and locking equipment, are to be drilled with combination drills without a centering point.



# Quality.

## Trespa International BV

Trespa International BV specializes in high quality panel material for façade cladding and interior use. Trespa has both the expertise and the means to develop products for specific segments of the market. Trespa is continually looking for ways to protect the environment even more effectively.

## Three perfect product lines

Production of the façade cladding material Trespa Meteon is based on unique, patented techniques, which guarantee excellent weather resistance and colourfastness. Trespa Athlon, which offers you outstanding moisture resistance along with scratch and wear resistance, is particularly suitable for interior use. And Trespa TopLab <sup>PLUS</sup>, highly resistant to chemicals and designed for use as laboratory worktops, completes the product programme. With the products and services of the Inspirations line, Trespa meets specific wishes in state of the art architectural applications.

## ISO 9001



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 certificate.

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

# Typically Trespa.

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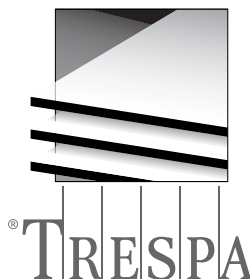
All information is based on our current state of knowledge. It is intended as information concerning our products and their application possibilities, and is therefore not intended as any form of guarantee with regard to any specific product characteristic.

## Colours

The colours in this document are printed, and therefore, may vary slightly from the original Trespa panel colours with respect to gloss, colour shades and surface texture. Original samples are available on request.

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All the best qualities in one panel

