

# Processing instructions

## EGGER compact laminate

### 1. Storage

EGGER compact laminate must be stored in an enclosed and dry room at approximately 18 °C to 25 °C and a relative humidity of approximately 50% to 65%. Once the original packaging is removed, the compact laminate must be stored on full-surface, horizontal, straight, stable protective boards. Direct floor contact and/or exposure to sunlight must be avoided at all times. A laminated protective board (not rawboard) of at least the same format must be used to cover the top and bottom board (see Figure 1).



Figure 1: Horizontal storage of compact laminates

If horizontal storage is not possible, the compact laminate must be stored at an angle of approximately 80° against a full-surface support with counter-support. Using a laminated protective board of at least the same format is required for upright storage as well (see Figures 2 and 3).



Figure 2: Correct storage of compact laminates



Figure 3: Incorrect storage of compact laminates

## 1.1 Handling

After removing the packaging and prior to processing, compact laminates should be inspected for visible damage. In view of the relatively heavy weight, special care is required when transporting and handling compact laminates. As a rule, all persons transporting and/or handling compact laminates should wear personal safety equipment such as gloves, safety footwear and suitable work wear. The boards must be lifted. The decor sides should never be pushed against one another or dragged over one another (see Figure 4).

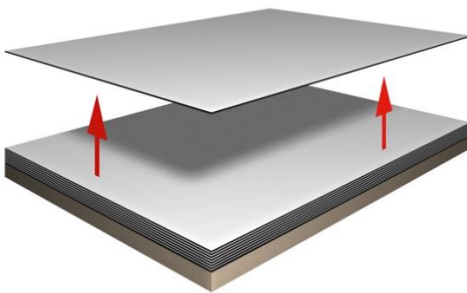


Figure 4: Correct lifting of compact laminates

## 1.2 Conditioning

Compact laminate reacts to changes in ambient conditions with dimensional movement. For this reason, storage and processing conditions for the elements should correspond as closely as possible to the climate at the subsequent place of use. Prior to installation, compact laminate elements should be conditioned for an adequate period of time at the installation location under the conditions of subsequent use. Compliance with the storage recommendations is required on construction sites as well.

## 2. Processing

Due to the high density and the high cutting forces that arise, the processing of compact laminates leads to shorter tool life compared to other wood-based materials. Sharp blades should be used to ensure optimal shredding and to avoid odour generation. Mainly carbide tools are used. Diamond-tipped tools are recommended for processing large quantities and when used in automated processing centres. Ensure that the tool blades are maintained in good condition to obtain satisfactory results. To ensure economical fabrication, especially prior to processing a large production batch or implementing challenging projects, it is advisable to consult manufacturers on the most appropriate tool selection.

### 2.1 Extraction system

#### Health hazard due to dust generation

Dust may be produced during processing. There is a risk of sensitising the skin and respiratory tract. Depending on the processing and the particle size, especially in the case of inhalation of dust, there may be further health hazards.

The generation of dust must be taken into account when assessing the risks at the workplace. Particularly in the case of machining processes (e.g. sawing, planning, milling), effective extraction must be used in accordance with the applicable occupational health and safety regulations. Suitable breathing protection has to be worn if no adequate extraction system is in place.

#### Fire and explosion hazard

Dust generated during processing can lead to fire and explosion hazards. Applicable safety and fire protection regulations must be observed.

### 2.2 Formatting and drilling

The use of panel or sizing saws is recommended for cutting compact laminate to size. In order to obtain a good cutting result, the relationship between number of teeth (Z), cutting speed (vc), and the feed rate (vf) should be taken into account. For finishing on the construction site, plunge saws and a suitable guide rail can be used.

#### Please bear in mind:

- Visible side (decor side) up
- Pay attention to the correct saw blade projection
- Adjusting the number of revolutions and number of teeth to the feed speed
- The use of a scoring circular blade is recommended to obtain clean cuts on the bottom of the board

Depending on saw blade projection, the entry and exit angle change, and thus also the quality of the cut edge. If the upper cut edge becomes unclean, the saw blade must be set higher. The saw blade must be set lower in case of an unclean cut on the bottom. The best height setting must be identified.

Diamond-tipped tools are recommended for processing compact laminate. The suitability of carbide-tipped tools is limited. Tools with segmented blades should not be used as far as possible, as the overcut in the overlap zone usually remains visible. Because of the high cutting pressure, secure workpiece and tool control is of particular importance. Numerous edge profiling options are available. Remaining signs of milling can be removed by sanding. An even edge colour can be achieved by applying a silicone-free oil. Sharp corners and edges should be rounded to eliminate the risk of injury. The following are suitable for the

treatment of EGGER compact laminates with silicone-free oils, for example: Innoplast Protector from Innotec or commercially available linseed oil.

Drill bits designed for plastic are best suited for drilling compact laminates. Please observe the specifications of the tool manufacturer. Twist drill bits for drilling metal or wood can also be used, however, the rotational speed and feed rate must be reduced.



Figure 5: Minimum distances of the drill holes to the edge of the board

For through-holes, the compact laminate should be resting on a solid base which can be drilled into. Good removal of the drilling chips must be ensured. Before the drill bit breaks through, the feed rate should be reduced in order to avoid break-outs on the exit side. For drill holes that do not go through, so-called blind holes, the minimum board thickness that must be kept is 1.5 mm. For drill holes parallel to the board surface, the minimum board thickness that must be kept on either side of the drill hole is 3 mm (see Figure 5). Cutting, milling and drilling tools should always be selected in coordination with the tool manufacturer.

### 3. Processing

Notwithstanding the good dimensional stability of compact laminate, changes in the ambient conditions can result in format changes. The orientation of the fibres in the core paper gives the compact laminate a production or running direction (see Figure 6).

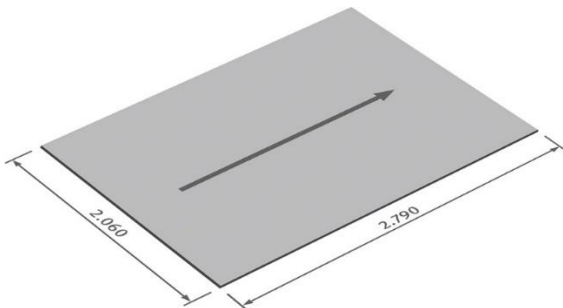


Figure 6: Production or running direction of the compact laminate

Format changes are approximately half as large in the longitudinal direction as in the crosswise direction. Format changes have to be taken into account from the outset in design and processing. As a rule, an expansion play of 2.0 mm/m should be taken into account. Different climate conditions in front of and behind the compact laminate elements can lead to warpage. It is therefore essential that compact laminate wall cladding installations always make provision for adequate ventilation to the rear of the boards, which allows temperature and humidity to equalise, as well as acclimatisation.

The production direction of double-sided decorative compact laminates can often only be identified from the production dimensions. Woodgrains and directionally printed decors constitute an exception. When working with cut-size panels, it is important to ensure that the production direction is always matched up during installation. In view of the risk of confusion with cut-to-size boards, the running direction should be marked on board leftovers.

**Attention:**

- Take into account an expansion play of 2.0 mm/m – the installation of compact laminates must always be carried out without constraints
- Execution with sufficient rear ventilation – compact laminates must be able to create a balance moisture on the front and back
- When installing cut-to-size parts, ensure the same direction of production

### 3.1 Cut-outs

Cut-outs and recesses, for example for switches, ventilator grilles or access points, must always be rounded off, as sharp-edged corners can lead to cracking (see Figures 7 and 8) below. Inside corners should be cut with an inner radius of at least 5 mm. All edges must be smooth, free of cracks and notches. Grooves and rebates also have to be rounded to avoid notch cracks. Cut-outs can be made directly with a router or pre-drilled with an appropriate radius and then sawn out from drill hole to drill hole. Sufficient expansion gaps must be allowed for integrated components.

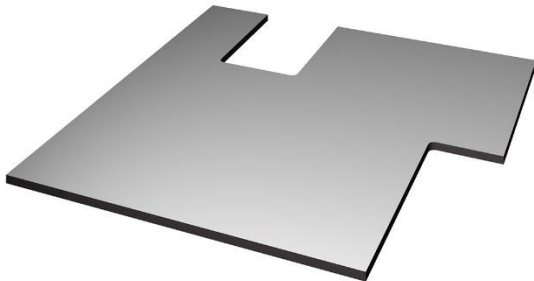


Figure 7: Corners with a radius of 5 mm

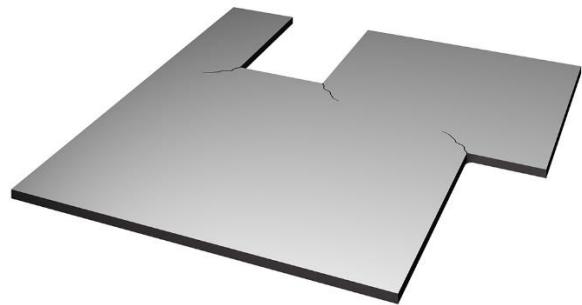


Figure 8: Corners with a smaller radius

### 3.2 Corner joints

Higher strength joints between compact laminate elements are achieved with the combination of gluing and fasteners, spring guides (e.g. made of compact laminate) or grooves. Note that compact laminate elements may only be joined to each other in the same production direction. Figures 9 to 14 below illustrate some possibilities for creating sturdy compact laminate joints.



Figure 9: Grooved



Figure 10: Grooved/rebated

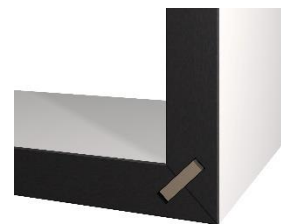


Figure 11: Tongue and groove



Figure 12: Angle spring

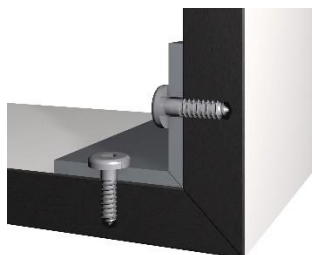


Figure 13: Metal profile, screw-fixed

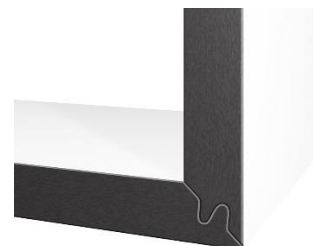


Figure 14: Profiled connections

### 3.3 Bonding

When gluing two compact laminate elements, it is important to ensure that dimensional changes are not obstructed. To avoid stress, only adequately conditioned compact laminates should be bonded together and always only in the same machine direction. Prior to bonding, the boards have to be free of dust, grease and dirt, and pre-treated as necessary. Own attempts are recommended. Please observe the processing guidelines of the adhesive manufacturer. **Depending on the type of application, the following instructions must be observed during bonding:**

#### 3.3.1 Bonding in furniture construction

##### Doubling and butt joint bonding

Visually thicker boards can be produced by doubling or upstands. When doubling, corresponding compact laminate strips are glued on in the edge area.

Bonding of butt joints, as is the case when joining two compact worktops, for example, is used as additional support to spring guides / lamellas. For more information, see section 4.7 Worktop joints and corner joints. The same running direction of the compact laminate parts must be ensured here. The tension-equalising single-component 1K Ottocoll M500 adhesive by Otto Chemie is, for example, a suitable product.

##### Adhesive recommendations:

###### OTTO CHEMIE

Ottocoll M500  
Ottocoll M560

###### INNOTECH

Adheseal Project  
Powerbond XS 330 15

###### JOWAT

Jowat 690.00

###### SIKA

SikaTack\* Panel



Figure 15: Doubling

##### Upstand / mitre joint

For thicknesses up to 100 mm or if the decor has to be visible on the edge for visual reasons, the upstand (Figure 16) is a possible solution. First, the two components to be connected together are mitred at 45°. Then the work piece is placed on a level surface, face side down, so that the tips of the mitres are touching. Adhesive tape is then applied to this butt joint.

It is also important to ensure that the parts run in the same direction. Then both work pieces have to be turned over with corresponding caution. Then the glue is applied (Figure 17) and then the shorter work piece or upstand is flipped up (Figure 18). Until the glue has set, the upstand or the mitre joint has to be secured in the correct position with adhesive tape. Ottocoll P 85 is an example of a possible adhesive.

**Adhesive recommendations:**

**OTTO CHEMIE**

Ottocoll P85  
Ottocoll P86 16 17 18

**WÜRTH**

PUR Rapid

**INNOTEK**

Repaplast Repair  
Timber Fix 30



Figure 16: Upstand of a compact laminate

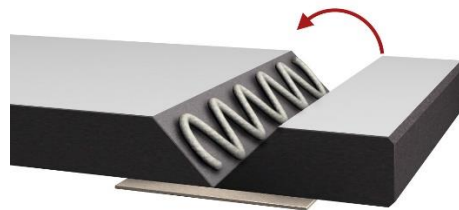


Figure 17: Apply adhesive in the mitre and fold together



Figure 18: Fold up the upstand and secure with adhesive tape

### 3.3.2 Bonding interior design

Bonding of compact laminates in the area of wall cladding must be carried out with a permanently elastic adhesive system specially developed for this purpose. The compact laminate can be bonded as wall cladding to solid wood, multiplex or metallic substructure materials. The specified adhesive thickness must be ensured in order to be able to elastically absorb any movements of the board. In order to invisibly glue compact laminate onto the substructure, we recommend Panel-loc from MBE, for example.

**Adhesive recommendations:**

**OTTO CHEMIE**

Ottocoll M500  
Ottocoll M560

**JOWAT**

Jowat 690.00

**INNOTEK**

Adheseal Project  
Powerbond XS 330

**MBE**

Panel-loc

**SIKA**

SikaTack\* Panel

**PRO  
PART**

**DKS  
Technik**

### 3.3.3 Surface bonding

Surface gluing of large dimensions is only possible in exceptional cases. Joints that are subject to major stress, for example due to vibrations, impacts or similar, should be reinforced with mechanical connecting elements.

Due to the material's inability to absorb moisture or emerging gases, full-surface bonding of EGGER compact laminates with laminate is not recommended.

## 3.4 Screwing

Cutting screw threads in compact laminate is straightforward. Self-tapping screws can also be used without a problem. Screws with a slow thread are recommended as they achieve a better pull-out resistance. Pre-drilling is essential in all cases. For high tensile loads, it is recommended to use a screw-in socket, e.g. RAMPA type ES or RAMPA type E for thin compact laminates from 6 mm. This also enables a higher degree of prefabrication and easier disassembly. A minimum of 25 mm must be observed for screw joints parallel to the board level and the bore hole diameter must be selected so that the board does not crack.

Surface screw joints with through-holes must have sufficient clearance to compensate for the dimensional movement resulting from temperature and humidity fluctuations. The diameter of the drill hole should be 2 to 3 mm larger than the diameter of the fastening device. In this way, tension due to the dilation and shrinking movement during changing weather can be avoided. The use of countersunk screws (see Figure 19) is not recommended, as these prevent the expansion of the board. Instead, flat-head screws should be used (see Figure 20). These are also available from various manufacturers (e.g. MBE) with head varnish.



Figure 19: Incorrect



Figure 20: Correct

#### ATTENTION:

- Make the diameter of the hole 2 to 3 mm larger than the diameter of the screw shank
- Avoid using countersunk screws
- Formation of sliding and fixed points

The design of fixed and sliding points is valid for vertical and horizontal designs regardless of the application, see next page.

### 3.4.1 Fixed points

The fixed point serves to evenly distribute the expansion play and should be positioned as centrally as possible. The bore hole diameter is equal to the diameter of the fastener.

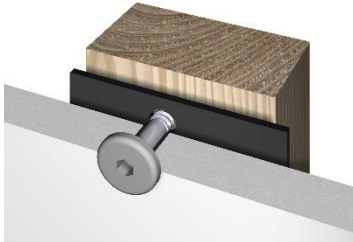


Figure 21: Incorrect fixation of a compact laminate

### 3.4.2 Floating points

The bore hole diameter of the floating points should be 2 to 3 mm larger than the fastener (see Figure 22). The bore hole should be covered by the head of the screw. Washers should be used when necessary. In the figures, an EPDM sealing band has been applied to the wooden substructure for protection against moisture. EPDM stands for ethylene propylene diene monomer. This is a synthetic rubber. EPDM is very resistant to UV, ozone and other atmospheric influences.

The required expansion play is established based on the largest distance of the fixed point to the board edge. The floating point drill hole diameter must be increased by 2 mm for every metre of length. In any case, the screw must be positioned exactly in the centre of the drill hole. If necessary, this can be ensured by using suitable drilling jigs. For interior applications, the fastening distances listed in the table can be used.

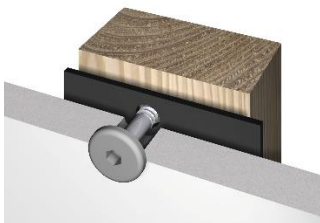


Figure 22: Correct fixation of a compact laminate

| Board thickness<br>[mm] | Maximum fastener spacing |        |
|-------------------------|--------------------------|--------|
|                         | a [mm]                   | b [mm] |
| 8                       | 790                      | 500    |
| 10                      | 920                      | 670    |
| 12                      | 960                      | 900    |
| 13                      | 970                      | 920    |

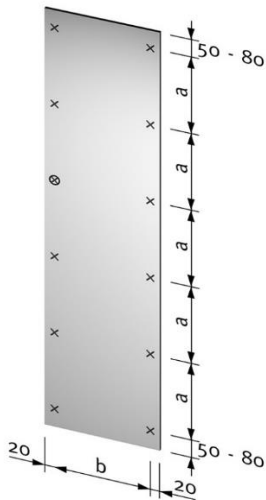


Figure 23

⊗ = Fixed point  
x = Floating point

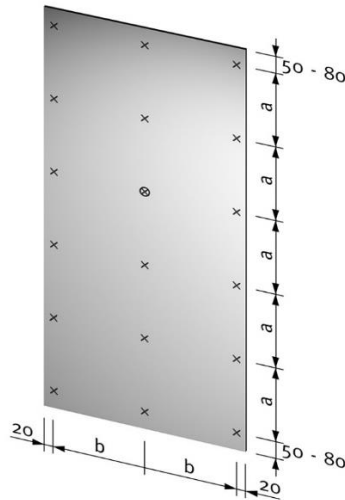


Figure 24

⊗ = Fixed point  
x = Floating point

## 4. Applications

### 4.1 Wall cladding

Thanks to its robustness and suitability for everyday use, EGGER compact laminate is particularly well suited for use as interior wall cladding. We recommend a minimum board thickness of 8 mm for such applications. The substrate should be completely dry before applying the cladding. Always ensure sufficient rear ventilation or acclimatisation of the boards. The material should not be exposed to trapped moisture. All parts to be joined together must follow the same production direction.

#### 4.1.1 Substructure and rear ventilation

Compact laminate must be attached to a stable, corrosion-resistant and force-fit substructure that securely supports the weight of the wall cladding and ensures ventilation behind the elements. In dry construction applications, the attachment of the substructure and the compact laminate must be anchored to the stud framing.

The selection of the fasteners has to be tailored to the substructure and the weight of the wall cladding. Different climate conditions in front of and behind the elements can lead to warpage. It is therefore essential that compact laminate wall cladding installations always make provision for adequate ventilation to the rear of the panels, which allows temperature and humidity to equalise. Ventilation must be towards the room side.

If there is no rear ventilation or a rear ventilation gap smaller than 2 cm, absorbent mineral substrates such as walls or the plaster must be pre-treated with waterproof, elastic barriers. Possible systems for this can be found under "Direct installation" on p. 16.

These barriers are generally painted on and prevent the penetration of water into the masonry, which is essential for an

application in a humid room. For more information on the use of compact laminates in humid conditions, see p. 17 under "Sanitary and shower enclosures".

Vertical battens generally permit air circulation. Where substructures are arranged horizontally, an appropriate construction must ensure that adequate ventilation is provided. The substructure should be vertically plumb to allow tension-free mounting of the entire panel surface. Suitable substructures include vertical strips of wood, aluminium or compact laminate.

The maximum spacing of the battens and/or substructure depends on the chosen compact laminate thickness. It is important to ensure that air inlet and outlet areas remain unobstructed so that air circulation is not impeded. Also ensure that the moisture of the surface to be panelled does not differ significantly from the moisture of the finished wall panel.

The following are differentiated:

- visible mechanical fastening
- concealed mechanical fastening
- concealed glued fastening

#### ATTENTION

- The installation of compact laminates must always be free of constraints
- It is imperative that compact laminates are able to create a balance moisture on the front and back

### 4.1.2 Visible mechanical fastening

Fixation is done via screws or rivets on the substructure. A sufficient expansion play and the right positioning of floating and fixed points must be taken into account. An EPDM tape must be used for decoupling when using wood as substructure. EPDM stands for ethylene propylene diene monomer. This is a synthetic rubber. EPDM is very resistant to UV, ozone and other atmospheric influences. The fasteners are available with head varnish to match the decors. The rivets must be fitted with an attachment that allows approx. 0.2 mm play in the rivet at the sliding points.

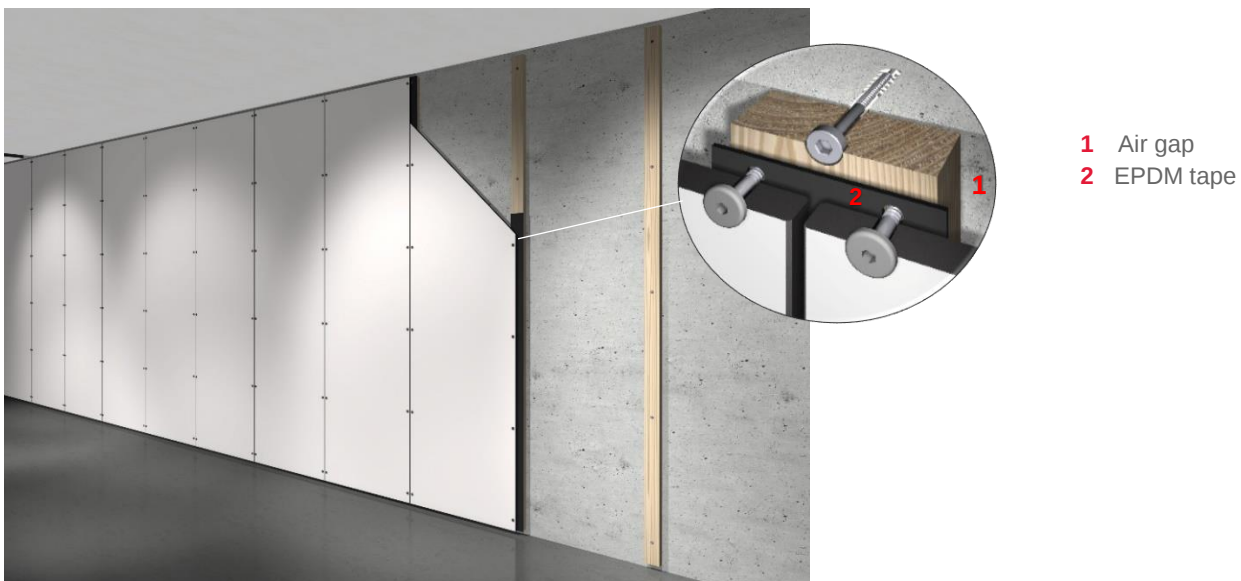


Figure 25: Visible mechanical fastening

#### 4.1.3 Concealed mechanical fastening

The concealed fastening of compact laminate by hanging permits straightforward disassembly and appears more visually appealing in comparison to visible fastening methods. Removing the boards is quick and simple. Cables and pipework installed behind the elements are easy to reach. Depending on the chosen fastening system, another advantage is that the elements can be adjusted later on. Tension-free mounting of the elements is also possible.

For all fastening methods that involve hanging, sufficient space must be allowed to raise and lower the elements. This air space or "hanging space" remains visible as a shadow gap.

##### Hanging by means of profile strips

For this fastening method, a groove is cut into the horizontal substructure to hold the rebate rail attached to the wall element. For ease of fitting, the tongue of the rebated rail should be thinner than the groove. The rebated rails on the compact laminate elements should not extend across the full width of the elements, they should be intermittent in order to permit vertical air circulation. Rebate rails made of plywood or metal Z-profiles can be readily used. If a secure screw joint cannot be achieved with thin compact laminate elements, additional gluing is also possible.

##### Hanging by means of metal hardware

Systems with metal hardware are also offered for mounting wall elements (see Figure 26). The chosen system must be used according to the manufacturer's recommendations to ensure secure installation.

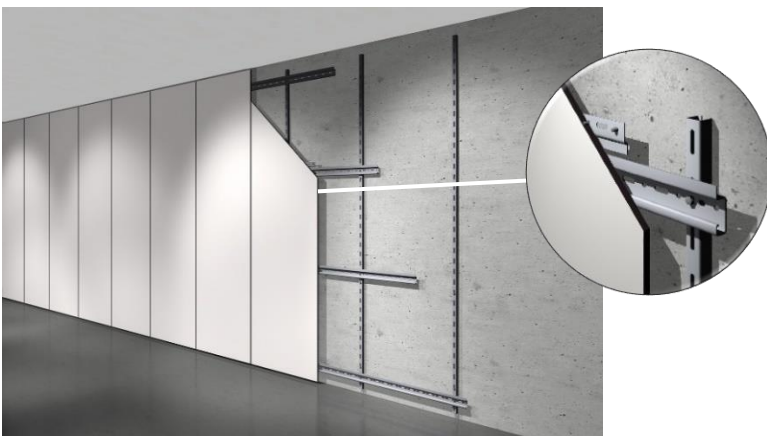


Figure 26: Concealed fastening of compact laminates

#### 4.1.4 Concealed glued fastening

Compact laminate can also be mounted by gluing it to a force-fit substructure using permanently elastic adhesive systems developed especially for the purpose. When using wood as a substructure, it is necessary to apply a primer as a preliminary step in order to ensure secure adhesion and moisture decoupling.

The systems consist of the glue, an installation band and the corresponding products for priming the surfaces prior to gluing. The mounting tape is intended for the first fixation. The permanent fixation is done with the glue. Setting the defined distance is another function of the mounting tape. This ensures the required glue thickness is achieved in order to be able to elastically

absorb any movements of the board. Observe the processing instructions of the glue manufacturer.

#### 4.1.5 Detailed designs

Irrespective of the selected substructure and the mounting system, the following detailed designs are usual in practice and provide the continued and unproblematic mounting of wall cladding.

##### Butt and joint formation

There are numerous possibilities for making joints or butt joints (see Figure 27 to 29). However, it is important to ensure that the elements have sufficient clearance for expansion.

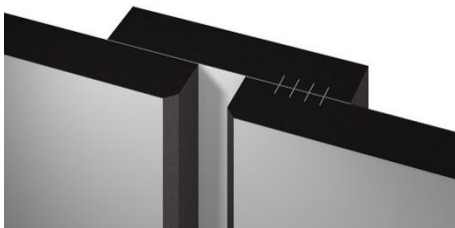


Figure 27



Figure 28



Figure 29

##### Top closure

The top closure of the wall cladding must be at a distance from the ceiling to ensure functional ventilation and is used for internal ventilation. The distance between the ceiling and the compact laminate also provides the necessary expansion play. To ensure the full functionality of the ventilation, the distance to the ceiling must correspond at least to the size of the ventilation gap.



Figure 30: Top closure of the wall cladding

- 1 Air gap
- 2 Mounting tape
- 3 Glue

##### Bottom closure

The bottom closure of wall cladding with compact laminate can be achieved in two ways.

Closure at a distance from the floor generally functions in the same way as the closure of the compact laminate. The distance between the compact laminate and the floor provides sufficient air circulation behind the compact laminate and prevents moisture from stalling behind the wall cladding. But a minimum distance of 50 mm to the floor must be observed. Installed bases

should be as thin as possible, so that a sufficiently large ventilation cross-section remains available.

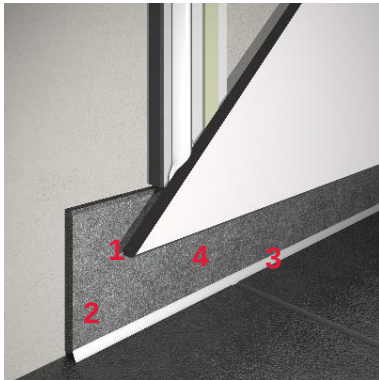


Figure 31: Bottom closure of the wall cladding

- 1 Air gap
- 2 Tile base
- 3 Silicone joint
- 4 Minimum distance to floor 50 mm

A flushfloor installation, used primarily for compact laminate in shower areas, requires the compact laminate to not be directly on the floor, as the board will expand and shrink. Compression tape maintains the necessary distance during installation, ensuring the later expansion play of the board.

The gap between the compact laminate and floor can subsequently be sealed with a silicone joint in order to prevent moisture from entering. To improve the silicone adhesion, the edge of the compact laminate should be bevelled. To achieve air circulation in the case of a bottom closure, the ventilation gap must be as large as possible.



Figure 32: Flushfloor installation for shower area

- 1 Compression tape (sealing tape)
- 2 Silicone joint

### Corner solution

In the case of corner solutions in humid conditions with compact laminate, a distance between the compact laminate and the wall equal to at least the thickness of the substructure must also be in place. The corner connection between the two compact laminates must be sufficiently large so that size changes due to climate modifications can be balanced out. If the corner connection needs to be sealed, for example when used in shower spaces, this is again done with the help of compression tape, in order to provide the expansion play. The gap between the individual compact laminates is protected from incoming moisture with an additional sealing silicon joint (Figure 33). Here, too, it is advisable to finish the edge with a bevel.

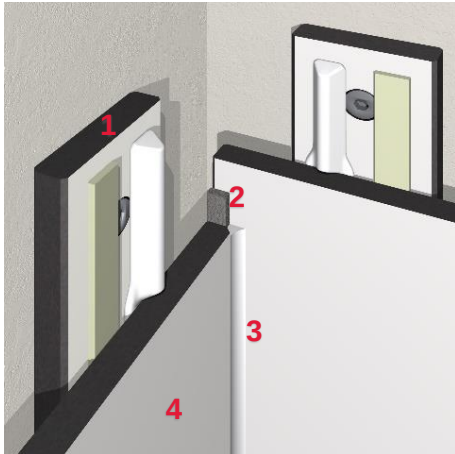


Figure 33: Corner solution in humid area

- 1 Compact laminate strip
- 2 Compression tape (sealing tape)
- 3 Silicone joint
- 4 Compact laminate

#### Surface butt

A usual crash protection solution for wall cladding in hospitals involves the use of compact laminate as half-height wall cladding. A seamless transition from the compact laminate to the drywall is necessary to this end. To ensure functional acclimatisation of the compact laminate, a stainless steel bracket can be used as a visual finish (Figure 34).

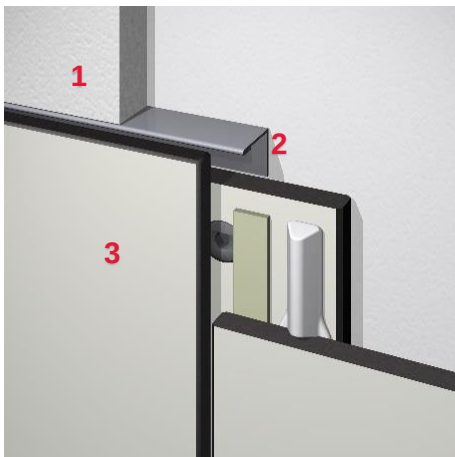


Figure 34: Flush installation

- 1 Wallpapered gypsum fibreboard
- 2 Stainless steel bracket
- 3 Compact laminate

#### Direct installation

For partial wall cladding, compact laminate boards are usually fixed directly to the wall by means of visible screw joints. As there is no ventilation to the rear of the elements, damp proofing must be installed between the compact laminate and the wall. A maximum height of the compact laminate of 300 mm is recommended. The damp proofing must be applied on the wall side.

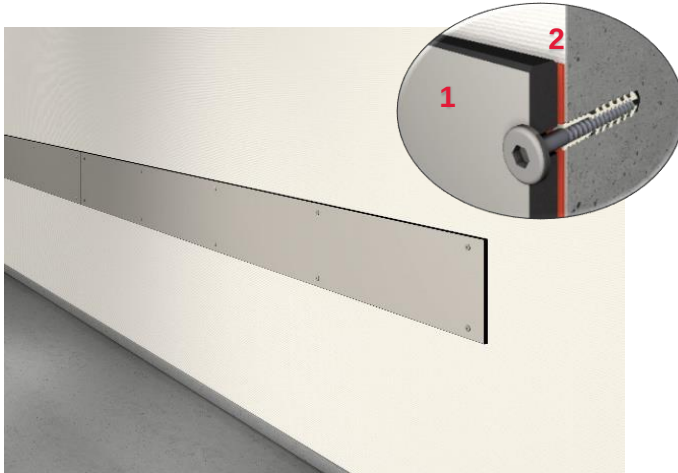


Figure 35: direct installation

- 1** Compact laminate
- 2** Damp proofing

#### Possible damp proofing

##### Liquid coatings

- OTTO CHEMIE: OTTOFLEX liquid foil
- FERMACELL: Fermacell liquid foil
- KNAUF: Knauf surface sealant

##### Sealing membranes

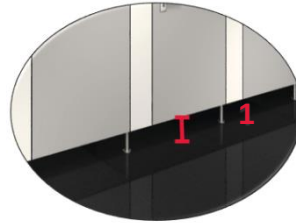
- OTTO CHEMIE: OTTOFLEX sealing membrane
- KNAUF: Knauf sealing and decoupling membrane

## 4.2 Sanitary and shower partitions

When compact laminate is used in sanitary facilities, it is important to ensure during design and installation that the compact laminate is not subject to standing water and that there is sufficient ventilation of the room. It is imperative to use only corrosion-free construction materials and fastening devices. Application in areas with high humidity requires the mechanical reinforcement of corner connections, for example using dowels or clips, and the use of an adhesive system that is waterproof after setting. For commercial applications subjected to increased wear and tear, a minimum distance of 120 mm must be maintained between the floor and lower edge of the board.



Figure 36



**1**Spacing 120 mm

Providing adequate ventilation in the rooms and ensuring that the compact laminate can dry after the shower stall is used is important.

Absorbent mineral substructures such as walls and/or plaster have to be primed with a waterproof elastic barrier. This barrier is generally brushed on and prevents water from penetrating the substructure. The German Construction Confederation offers a leaflet for such sealing and barrier products ("Waterproofing barriers for installations with tiles and boards").

This leaflet describes sealing compounds processed in the liquid state with tiles and boards for interior and exterior applications, taking into account defined moisture exposure classes and substructures. You will find corresponding sealing systems on p. 11 under "Direct installation". The moisture exposure classes of the materials have to be coordinated with the manufacturers or suppliers. Compliance with the processing instructions of the relevant manufacturers is mandatory.

#### ATTENTION

- Sealing the substrate for shower cladding
- Always use elements for cabin doors as longitudinal cuts
- Compact laminates may not be exposed to trapped moisture
- It is imperative that compact laminates are able to create a balance moisture on the front and back



Figure 37: Application example sanitary area © andreaswimmer.com

### 4.3 Furniture doors

Doors should not be wider than they are high. Since format changes are only half as large in the lengthwise direction compared to the crosswise direction, cutting door leaves in the lengthwise direction of the compact laminate is recommended. Excessive differences in temperature or relative humidity between the front and reverse sides of the door can cause the compact laminate to warp. This is why sufficient air circulation must be ensured, for example when installing toilet cubicles or changing rooms. The door width, height and weight are deciding factors for the number of hinges required. Other factors, such as the installation location or whether additional stress is to be expected from the attachment of coat hooks, for example, can vary greatly from case to case and must be taken into account.

The information provided (see Figure 38) should therefore be regarded as a guideline only for a door of 13 mm thickness and a width of up to 600 mm. Performing a trial mounting is recommended. For heavy duty applications, an additional hinge can be fitted at max. 100 mm below the upper hinge. The upper and lower hinges should be located at a minimum distance of 100 mm max., measured from the outer edge of the panel. Suitable hinges are offered, for example, by Häfele, Blum (Expando T) or Prämeta (Series 3000) (see Figure 39).

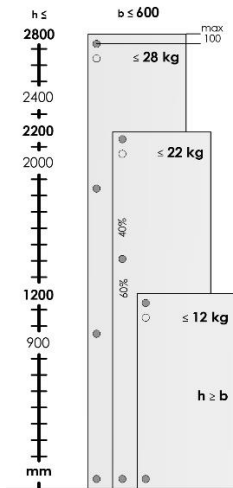


Figure 38: Guide values for a 13 mm thick door



Figure 39: Hinge  
Images: © Prämata

## 4.4 Tabletops

Compact laminate is very well suited for applications as tabletops, for example on office furniture, desks, school tables, conference room tables and work tables. The board thickness, mounting distances and projection over the base frame have to be laid out depending on the expected loads. Tabletops must have a minimum thickness of 10 mm so that sufficient material is available for secure screw connection. Fastening to the substructure can occur in several ways. It is important to guarantee a tension-free assembly. Screws can be driven directly into the board or a screw-in sleeve may be used. The fixing points in the substructure must be implemented with sufficient expansion play. The diameter of the drill hole should be 2 to 3 mm larger than the diameter of the fastening device.



Figure 40: Recommended fastening of the compact tabletop

| Board thickness [mm] | Projection [mm] | Mounting distance [mm] |
|----------------------|-----------------|------------------------|
| 10                   | max. 100        | 310                    |
| 12                   | max. 150        | 390                    |
| 13                   | max. 200        | 440                    |

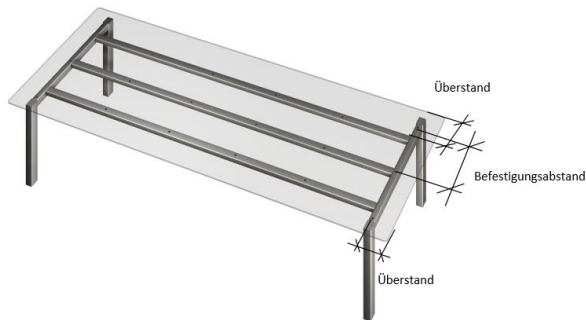


Figure 41: Application example with gaps

## 4.5 Installation of compact worktops

Compact worktops are very often used as worktops in kitchens or for washstands due to their moisture resistance and robustness.

When processing and constructing compact worktops, however, format changes must be taken into account from the outset. Ambient changes cause the worktop to shrink or expand. In the case of compact worktops, the change in format is about half as great in the longitudinal direction as it is large in the transverse direction. As a rule, an expansion play of 2 mm/m should be provided. Further information is available on p. 4 under "3. Processing."

## 4.6 Fitting sinks and hobs

Cut-outs for hobs or sinks must be produced according to the measurements and positioning details and/or using templates supplied by the manufacturer. Enclosed or integrated dry seals of the manufacturer are to be used according to the installation instructions – see Figure 42.

When making cut-outs in the compact worktop, the information in 3.1 "Cut-outs" must be observed to avoid cracking.

The cut-out edges must be carefully protected against moisture penetrating into the body. It is true that the compact worktop has a homogeneous and moisture-resistant board structure, which makes joint sealing not absolutely necessary. However, the latter prevents moisture from penetrating into the body.

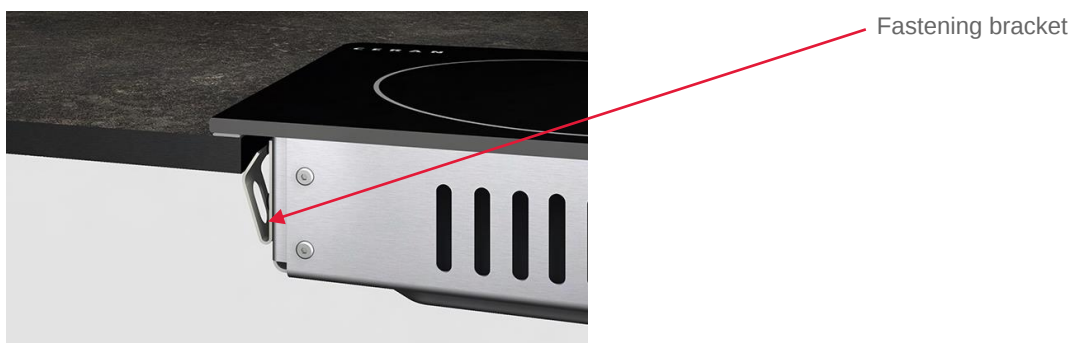
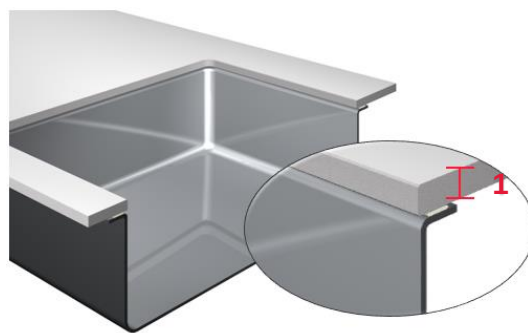


Figure 42: Sealing and fastening bracket

Ensure correct centring and an adequate safety margin to the cut edge, particularly for hobs. Follow the manufacturer's instructions. For safety reasons the hob should not rest against the cut edge since, under certain operating conditions, temperatures could rise to 150 °C. Other installation options are flush installation or the substructure solution.



Figure 43: Flush installation



1 Spacing 12 mm

Figure 44: Substructure installation

When mounting sinks, a special solution is required for the compact worktop. For this purpose, the EGGER fastening set is offered, which ensures easy installation – see Figure 45. In connection with compact worktops, the fastening strips are glued on edge – see Figure 46. For detailed information, please refer to the technical data sheet "EGGER sink installation kit".

For bonding the installation kit, a tension-equalising adhesive system such as the Ottocoll M500 from Otto Chemie should be used. Further adhesive recommendations can be found in section "3.3. Bonding" on p. 6.

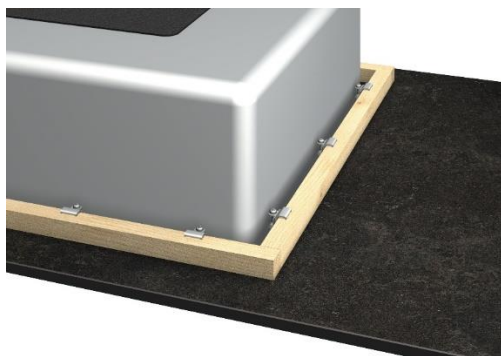


Figure 45: Installation with the EGGER installation kit

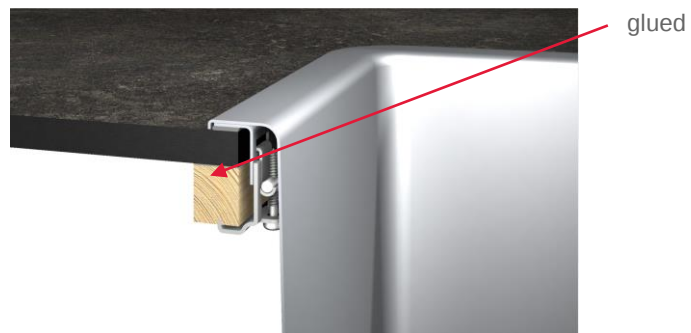


Figure 46: Skirting glued on edge

The remaining worktop rack should not be less than 50 mm wide at any one place. For ergonomic reasons, the distance between the hob area and an upright cupboard should not be less than 300 mm. Allow for the hob manufacturer's specified safety margin. The same distance is recommended for the gap between the sink and the hob – see Figure 47.

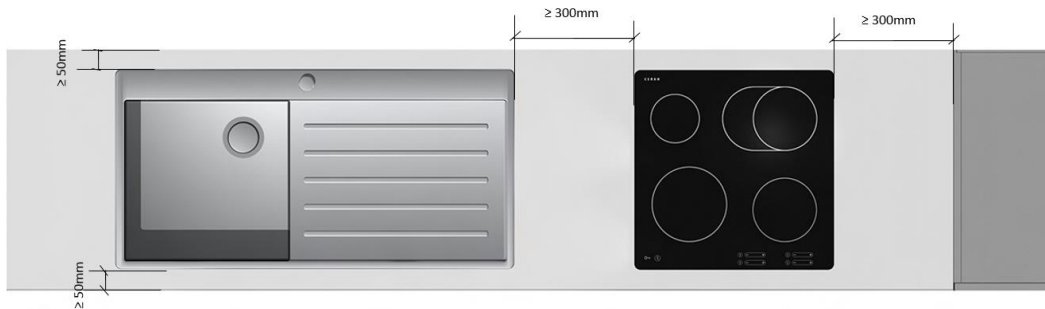


Figure 47: Recommended distance between sink and hob

For safety reasons as much as for ergonomic reasons, kitchen designs should be discussed with a kitchen specialist and fitting carried out by an authorised specialist. Particularly electricity, gas and water supply connections must be carried out by trained specialists. In the area of corner joints, a minimum distance of 300 mm must be taken into account when planning cut-outs or recesses – see Figures 48 and 49.

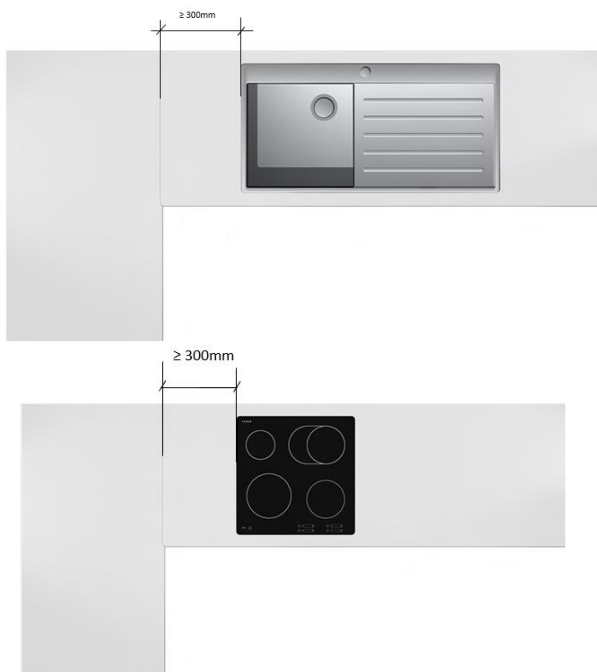


Figure 48: Correct minimum distance of 300 mm

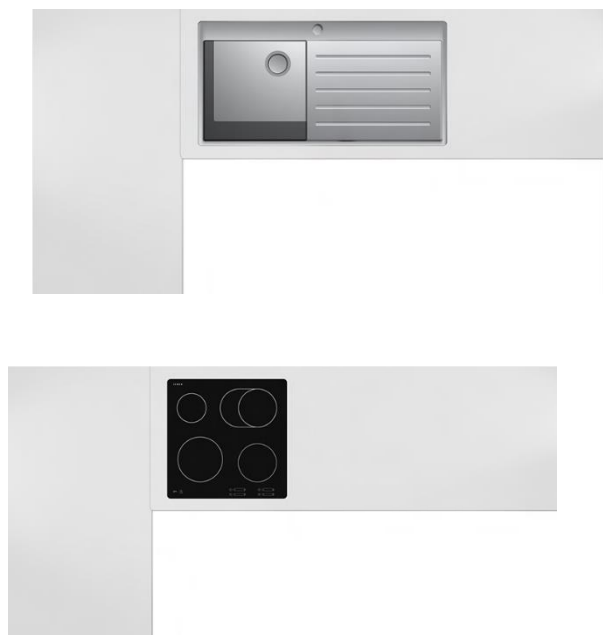


Figure 49: Incorrect minimum distance

Once the worktop has been cut, any further transportation must be carried out while observing the utmost caution as to prevent the board from snapping. Compact worktops must be carried upright because cut-outs can be damaged more easily if the boards are carried horizontally.

For conventional base units, a standard construction can generally be used. When constructing sink and/or cooker base units,

the installation of metal traverses is recommended – see Figure 50. The compact worktop is secured against possible bending by the metal traverse, as the worktops are weakened by sink and/or hob cut-outs and the contact surfaces on the base units are minimised.

In addition to stabilising, the metal traverses also serve to fix the worktop or boards – see Figure 51.

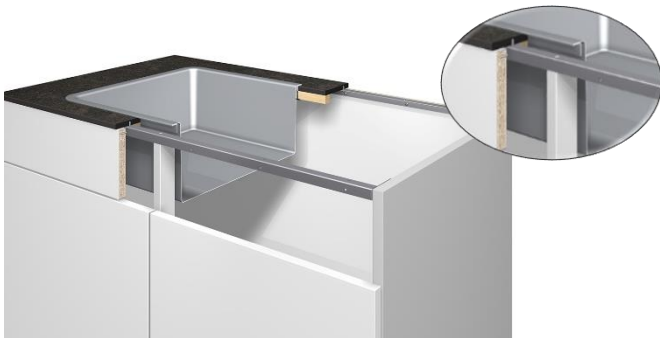


Figure 50: Stabilisation with metal traverse



Figure 51: Stabilisation with metal traverse

To mount the metal traverses, holes must be drilled in the body sides. The drilling pattern includes two holes with Ø 8 mm and 7 mm depth. A further hole with Ø 5 mm and 13 mm depth must be drilled, provided that the fastening is implemented by means of Euro screw 6.3 × 13 mm – see Figures 51 and 52.

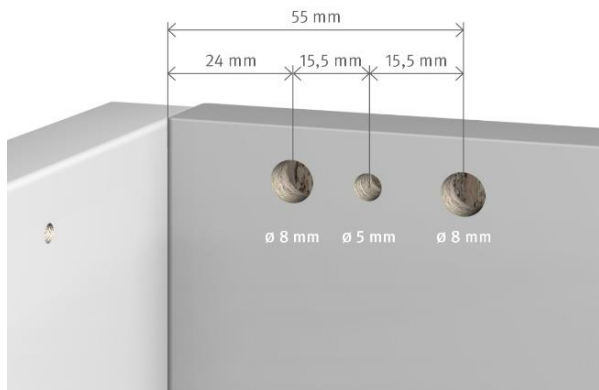


Figure 51: Recommended distances for drill holes



Figure 52: Example of application

The EGGER metal traverses are available for cabinet widths of 600, 800, 900, 1,000 and 1,200 mm, as well as for different body side thicknesses. The supplied fastening screws are used to mount compact worktops. Please note that the fastening screw is screwed to the worktop through the slotted hole in the metal traverse.

For more detailed information, please refer to the technical data sheet "EGGER metal traverses for floor cabinets".

## 4.7 Worktop joints and corner joints

In general, a worktop length of 4,100 mm allows jointless spanning so that board joints are avoided. On the other hand, worktop corner joints occur frequently. These should not be weakened by notches or cut-outs such as for hobs or sinks. Corner joints on worktops are made by mitring on the circular saw or routing using CNC routers and/or using hand-held routers with the aid of templates – see Figures 53 and 54.



Figure 53: Corner joint worktop on mitre



Figure 54: Corner joint worktop

Worktop joints and corner joints must be made to fit precisely and tightly. With compact worktops, sealing is not necessary due to the homogeneous worktop structure. Sealing of butt joints and corner joints, however, prevents moisture from penetrating into the body. For this purpose, the EGGER sealant was specially developed for sealing the butt joints (corner joints) of kitchen worktops. The flexible sealant reliably prevents the penetration of moisture and liquids into the butt joint. It is resistant to cleaning agents, water, grease, oil, etc., and is available in grey, white, black and brown. The content of the 10 g tube is sufficient for an average butt joint length of 600 mm – see Figure 55.

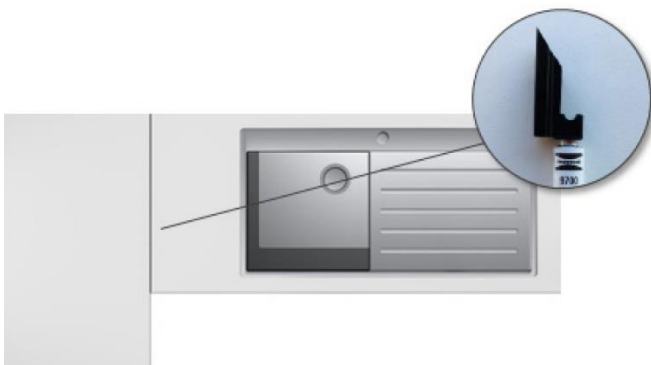


Figure 55: Butt joint bonding

The worktop already has bevel milling on the longitudinal edges. If the transverse sides are also bevelled, the contour milling that is usual for corner joints can be dispensed with. The bevel separates the two worktops from each other, i.e. the bevel on the front of the worktop is deliberately accentuated, as is also the case with stone worktops – see Figure 56. If the compact worktop is to be cut to length, it is recommended to apply a bevel of identical design.



Figure 56

The application of the sealant begins with piercing the membrane cap of the tube and then screwing on the black application aid – see Figure 55. The application aid is then guided along the top of the worktop butt joint and the sealing compound is pressed evenly out of the tube. Immediately after applying the sealant, the worktops must be joined and screwed together. Any residue that may have escaped should be removed immediately with a suitable cleaning agent.

For more detailed information and combination recommendations of the colours for the respective worktop decors, please refer to the technical data sheet "EGGER sealing for corner joints".

The individual worktops are fastened with the aid of mechanical fastening systems (worktop connectors) and are held in place by the use of fastening aids, so-called spring guides / lamellas, as well as additional gluing. The compact worktop requires the use of special worktop connectors due to its low material thickness. EGGER offers corresponding connectors as a set suitable for 12 mm thick worktops – see Figure 57. The compact laminate mill pocket for the connector is milled 8 mm deep. For additional details see Figure 58.



Figure 57: Fastening with worktop connector

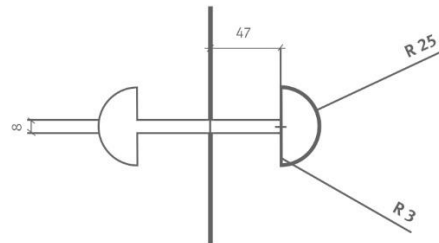


Figure 58: Mill pocket for connector

For further information, please refer to the technical data sheet "EGGER worktop connectors". The number of worktop connectors is determined by the worktop width. Two connectors each up to  $\leq 799$  mm width and three connectors  $\geq 800$  mm worktop width are common. The flushness of the butt joint is achieved by using the worktop surface as the reference edge for milling the grooves for the spring guides and by ensuring that they are firmly seated.

#### Proceed as follows:

1. Lay the worktops on the cupboard framework and check the joints including spring guides and grooves for correct fit.
2. Apply adhesive as described under point 3.3.1 Bonding of butt joints.
3. Apply sealing compound (e.g. EGGER sealant) evenly and continuously to the upper milled or cut edge, if necessary with an application aid. You should do this just before screwing the worktop connectors in place.
4. Join worktops, insert fittings and tighten screws slightly. Align worktops horizontally with wedges or levers and vertically using a rubber mallet or G-clamps (use jaw covers). Tighten worktop connectors fingertight after aligning. Take care when tightening that the two worktop surfaces remain aligned and the sealing compound emerges. Do not place any stress on the worktops while the sealant is hardening.
5. Remove excess sealing compound immediately. Clean the worktop surface using a suitable cleaning agent such as citrus cleaner or acetone. Caution: Acetone can affect the surface if left for a long period. We therefore recommend masking off the butt joint area with masking tape.

### 4.8 Fastening and wall joint

Before sealing the long edge of the worktop against a wall, make sure that it is not just adequately supported but is also joined to the sub-frame. Stresses can otherwise occur that will interfere with the sealing joint.

To connect to the body, the boards can be either screwed in (instructions under 3.4) or glued (instructions under 3.3). When gluing, make sure to use a permanently elastic adhesive system with the required adhesive thickness to be able to elastically absorb any movements of the board. Irrespective of the fastening type selected, it is necessary to provide an expansion play of 2 mm/m. In order to properly ventilate the compact laminate, it is necessary to design the upper part of the body as a traverse (see Figure 59).

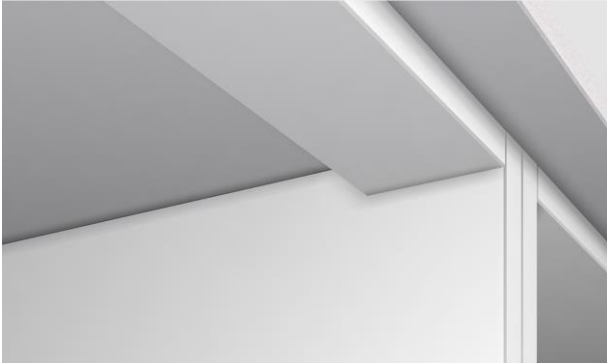


Figure 59: Top with traverse

The corner connections of two worktops are achieved with moisture-resistant connection discs, such as lamella.

When fitting, make sure that the worktop is not tilted towards the wall. This will result in water collecting at the joint area. Clean and degrease around the sealant area on both the worktop as well as the wall joint and pre-treat with a bonding agent depending on the sealing compound used.

It is advisable to use a laminate bonded board as the splashback panel. Detailed information on processing and installation can be found online at the product "Splashback panels" in the download area.

## 5. Recommended approaches to cleaning and usage

Due to the hygienic and dense surface, EGGER compact laminate does not require any special form of care. As a general rule, stains and spilled substances such as tea, coffee and wine, etc., should be cleaned up immediately, as the cleaning effort increases if they are left to dry. When cleaning is necessary, mild agents should be used. Cleaning agents must in particular not contain any abrasive components, as they may adversely affect the gloss level or scratch the surface.

The following information should be observed for daily use:

- Placing burning cigarettes on the surface of compact laminate causes surface damage. **Always use an ashtray.**
- Compact laminate surfaces should not be used as a cutting surface, as this can also leave cutting marks on compact laminate surfaces. **Always use a chopping board.**
- Putting hot items such as pots and pans on the compact laminate surface directly from the hob or straight out of the oven must be avoided, since the gloss level may change or surface damage may occur depending on the heat level. **Always use heat protection.**
- **Spilled liquids should always be wiped or cleaned up immediately** since extended exposure to certain substances can change the gloss level of compact laminate surfaces. Especially in the areas around cut-outs and joints, spilled liquids should always be cleaned up quickly and thoroughly.

→ These recommendations apply in particular to matt compact laminate surfaces as they are more prone to showing signs of use.

## 6. Disposal

Due to their very high calorific value, compact laminates are very suitable for thermal disposal in appropriate combustion plants. Specific national laws and ordinances on disposal must be observed in general.

### Provisional note:

These processing instructions have been carefully drawn up to the best of our knowledge. The information provided is based on practical experience, in-house testing and reflects our current level of knowledge. It is intended for information only and does not constitute a guarantee in terms of product properties or suitability for specific applications. We accept no liability for any mistakes, errors in standards, or printing errors. Furthermore, the continuous further development of EGGER compact laminate products as well as the amendment of standards and public documents may result in technical changes. The contents of this processing instruction should therefore not be considered as instructions for use, or as legally binding. Our General Terms and Conditions apply.