

PROCESSING RECOMMENDATIONS FOR ULTRAFIT P5 WORKTOPS

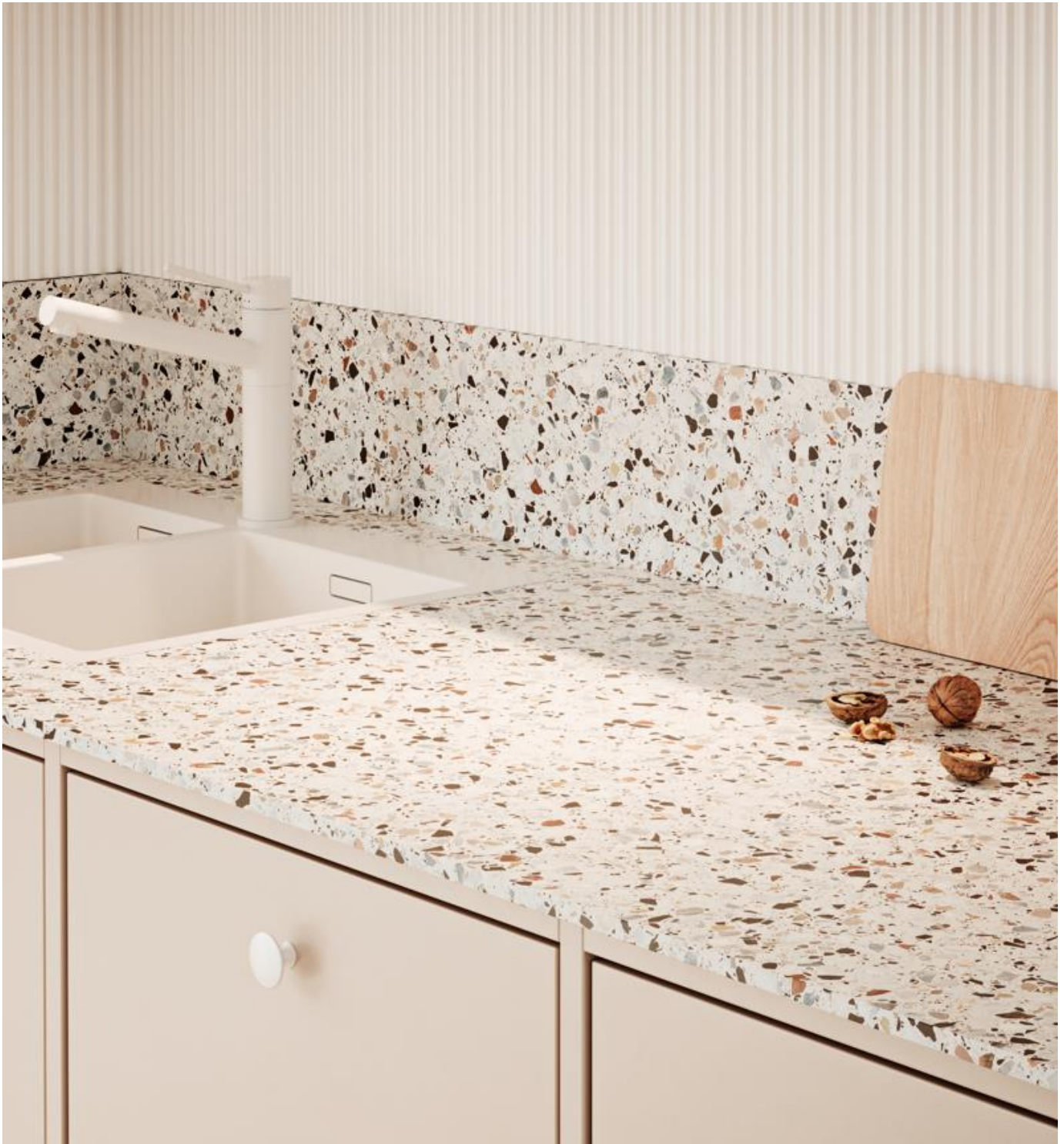


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SAFETY

- Before starting work, familiarize yourself with the available tools, processing recommendations and safety requirements.
Wear personal protective equipment such as gloves, safety goggles, ear protectors, dust protection / respiratory protection mask and safety shoes.



- Only authorized persons are allowed in the work area.
- To protect against electric shock and static electricity, all tools should be grounded.
- Move all wrenches and spanners away from the machines.
- Always keep the work area neat and clean.
- The workpiece should be secured, if necessary fixed with a screw clamp.
- Only tools in proper working condition and recommended accessories are allowed to be used.
- Before each use, check that the tools are intact and never leave them unattended.
- Hazardous substances, adhesives and other toxic or flammable materials should be stored according to the recommendations of the manufacturer of the material in question.
- Dust emissions should be reduced by using tools equipped with a vacuum cleaner or extractor.
- When working with materials that release vapors, always ventilate work rooms well to avoid health hazards.
- ULTRAFIT worktops are heavy. They should always be carried by two people. Mind any steps and edges when handling. Manual handling should be done with two people. The boards are best carried with the sharp edge up and using suction cups for lifting at the longitudinal edge.

TRANSPORTATION AND TRANSPORT PACKAGING

When transporting UltraFit worktops, use suitably large, flat and stable pallets. The worktops should be secured in a stack to prevent slipping. Abrasive dirt particles in the stack can cause damage to the surface of the worktops.

When packing and assembling, always take special care to protect the top of the board.

Useful tips for transporting worktops for final assembly:

1. Pack the worktops securely to ensure protection from damage. The boards must not bump one against the other, as there is a risk of damage.
2. Sink and cooktop cutouts should be reinforced for transportation.

3. Manual handling should be done by two people. The boards are best carried with the sharp edge up using suction cups for lifting at the longitudinal edge. When transporting flat, there is a risk of cracking or damaging the edge, which is why we recommend additional edge protection.

UltraFit worktops are packaged according to the diagrams enclosed herewith.

STORAGE

UltraFit worktops should be stored in dry, indoor storage areas under normal ambient conditions with temperatures between 16°C and 25°C and relative humidity between 50% and 75%, in a place protected from water, humidity and direct sunlight.

Worktops on racks should be stored flat on a stable pallet if the spacing between supports is greater than 900 mm, or on a supplied backing board if the spacing between supports will be less than 900 mm.

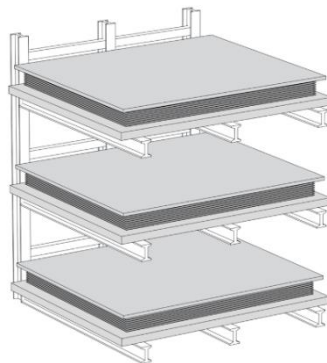


Figure 1: Proper flat storage

NOTE: It is not allowed to store worktops vertically when its working surface is not evenly supported over its entire surface, as extreme support at the ends of the worktops may cause permanent bending.

When handling unpacked UltraFit worktops, always lift them, do not move them toward each other or pull them one by one. Even small particles of dirt or debris from processing can damage the surface of the worktops.

PREPARING FOR INSTALLATION

UltraFit worktops should be properly acclimatized before processing and installation:

- It is recommended to acclimatize the worktops to room temperature at least 24 h before installation.
- The worktops should be installed and used under standard climate conditions, in closed, ventilated rooms, protecting them from excessive moisture, extreme temperatures or intense sunlight.

TOOLS AND MATERIALS

The following list includes tools and materials that may be needed to install UltraFit worktops:

- Vacuum cleaner / extractor
- Carpentry tools listed in this manual
- Wipes
- Pure denatured alcohol (ethanol also possible)
- Metal connectors
- Wooden connectors (biscuits)
- Polyvinyl acetate glue
- Mounting couplers

Recommended tools are:

- CNC processing center
- Table saw with undercutter, panel saw
- Plunge saw
- Plunge router
- Power drill
- Edge banding machine
- Biscuit joiner

GENERAL PROCESSING RECOMMENDATIONS

These processing recommendations apply to all UltraFit worktops regardless of decor or texture.

Satisfactory processing results can only be achieved by using high-quality, sharpened and clean tools.

All processing work is best done with the workshop machines listed above.

The rule of thumb for all processing methods is to avoid localized overheating due to improper tool guidance or improper or unsharpened tools.

SAWING – CUTTING AND FORMATTING

For sawing UltraFit worktops, we recommend using tools such as:

- table saw with undercutter
- panel saw
- plunge saw
-

a) Table saw with undercutter:

- master saw with trapezoidal-flat teeth [e.g., ITA Tools: 281.096.12M – standard version; 281.696.12M – chrome version]



Fig. 1: 281.096.12M



Fig. 2: 281.696.12M

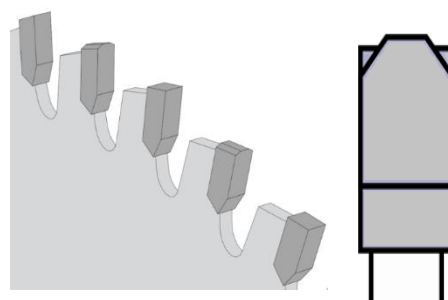


Fig. 3: Shape of teeth – trapezoidal-flat

- undercutter [e.g., ITA Tools; 288.125.24H – standard version; 288.720.24H – chrome version]



Fig. 4: 288.125.24H



Fig. 5: 288.720.24H

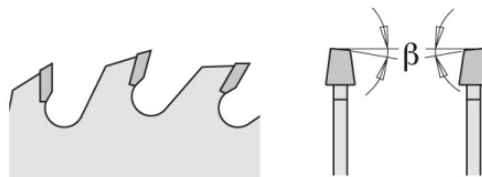


Fig. 6: Shape of teeth – trapezoidal

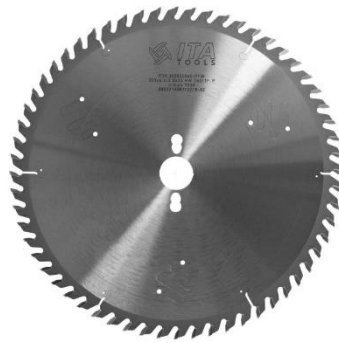
b) Panel saw with undercutter

- P29 series – circular saw blade with trapezoid-flat teeth with carbide teeth of increased hardness (KCR05+) with chrome-nickel coating. [e.g. ITA TOOLS: P29.300080072.00W]



Rys. 6: P29.300080072.00W

- Series P30 - Trapezoidal flat tooth blade with nano carbide teeth.
Provides much longer runs between sharpening. [e.g. ITA TOOLS: P30.300030072.PFW]

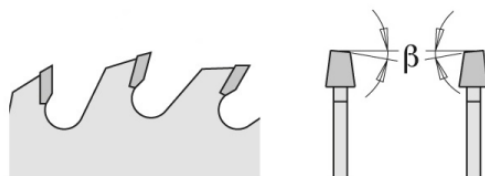


Rys. 7: P30.300030072.PFW

- Undercutters saws for panel saws:
P36 series - carbide undercutter with trapezoidal tooth. [e.g. ITA TOOLS: P36.100020020.000]



Rys. 8: P36.100020020.000



Rys. 6: Shape of teeth – trapezoidal

Recommended feed rate about 25 m/min. in the above machine tools.

c) Plunge saw:

- circular saw with trapezoidal-flat teeth [e.g., ITA Tools: CMT 281.760.48H, diameter: 160 mm, number of teeth: 56 pcs.]



Fig. 7: 281.760.48H

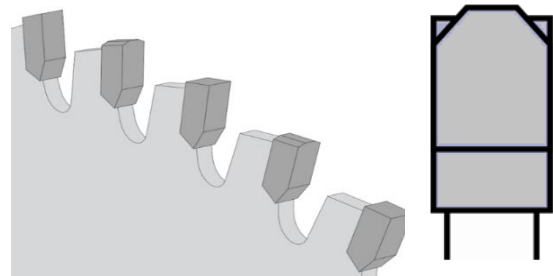


Fig. 8: Shape of teeth – trapezoidal-flat



Picture 1: Sawing (cutting) the board – using a plunge saw

Recommended feed rate: about 1.5 m/min.

NOTE: at higher speeds, breakouts may appear on the edge of the board visible from the exit side of the saw teeth. We recommend that cutting operations be carried out in two stages, i.e. first cut the material with a saw to a depth of about 1 mm, then repeat the operation, but through the entire thickness of the board, making sure that the blade of the saw protrudes about 10% of the value of the diameter of the blade below the material to be processed.

MILLING

Making through-holes, for example, for sinks, faucets, cable holes, and blind sockets for metal connectors, among others.

a) CNC processing center



Picture 2: shank cutter – diamond

Cutter type examples from ITA Tools:

DTA.10.021.12.0SR – eco version – one diamond plate spread over 3 spirals

DTN.12.025.12.0SR – two diamond plates spread over 4 spirals.

DTE.12.022.12.0DR – turbo version – three diamond plates spread over three spirals.



Fig. 9: DTA.10.021.12.0SR



Fig. 10: DTN.12.022.12.0DR



Fig. 11: DTE.12.025.12.0SR

b) Plunge router

- shank cutter – spiral, carbide blade; 2 blades with a diameter of 8 mm. Feed speed 0.85 m/min.

[e.g. ITA Tools: 191.080.11; 190.060.11],



Fig. 12: 190.060.11



Fig. 13: 191.080.11



Picture 3: Milling a hole using a plunge cutter and a template

NOTE: We recommend that milling operations be carried out in two stages, i.e. passing the cutter twice – 1 for half the thickness, 2 for the entire thickness of the material.

DRILLING

a) Through-drilling – drill blade angle below 90 degrees

Note: laying the element on a hard substrate (e.g., MDF) – to avoid tearing out the laminate at the exit of the drill.

Example of a drill bit – [e.g., ITA Tools: 314.050.41]



Fig. 14: 15314.050.41

b) Blind drilling

Used for embedding mounting couplers in the product. Drill bit with a centering spike and two blades on the perimeter. Example of a drill bit – [e.g., ITA Tools: 311.050.41; 313.050.41]



Fig. 15: 311.050.41



Fig. 16: 313.050.41



Picture 4: Drilling the hole

EDGING

For the edging of UltraFit worktops, it is recommended to use ABS and PVC edging with a minimum thickness of 0.8 mm.

a) Pass-through edge banding machine – for straight parts.



Picture 5: Edge banding machine

b) Edge banding machine – for curved parts (unit without table) [e.g. Virutex PEB250+]



Picture 6: Virutex PEB250+]

Hot melt and polyurethane adhesives can be used to band the edge.

NOTE: we recommend the use of polyurethane (PUR) adhesives due to the less visible adhesive bond and higher resistance of the adhesive joint to external factors (moisture, water, steam).

MOUNTING THE WORKTOP TO THE CABINET – GLUING AND SCREWING IT TO THE COUPLER



Gluing to the rims of the cabinet should be done with assembly adhesives (polyurethane). We also recommend additional mounting reinforcement by bolting to couplers embedded in the underside of the UltraFit top.

Picture 7: Drilling a hole for couplers

We recommend the following coupler types:

- a) metal screwed couplers
- b) brass expansion-driven couplers
- c) metal-plastic driven couplers

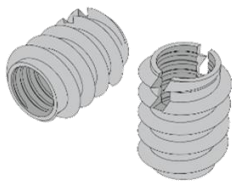


Figure 17: Metal screwed couplers

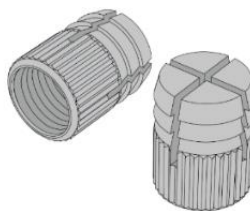


Fig. 18: Brass expansion - driven couplers

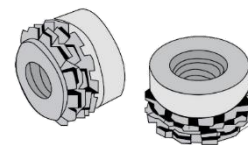


Fig. 19: Metal-plastic driven couplers



Picture 8: Drilled holes for couplers



Picture 9: Couplers embedded in pre-drilled holes

WORKTOP CONNECTIONS – STRAIGHT AND 45°

In both cases, the connections are made in the same way, i.e. two separate elements of the worktop are joined using special metal connectors or wooden biscuits in previously prepared slots using a biscuit joiner [e.g. Virutex: AB111N] and polyvinyl acetate glue. A method combining both can be used.

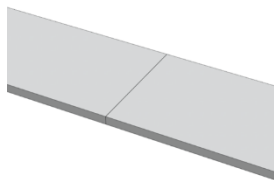


Fig. 20: Parallel connections

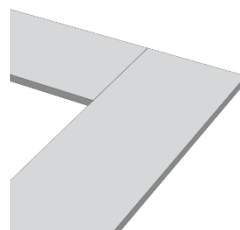


Fig. 21: Angle connections – 90°

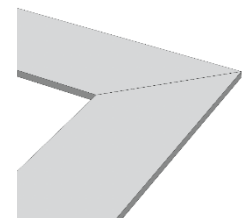


Fig. 22: Angle connections – 45°

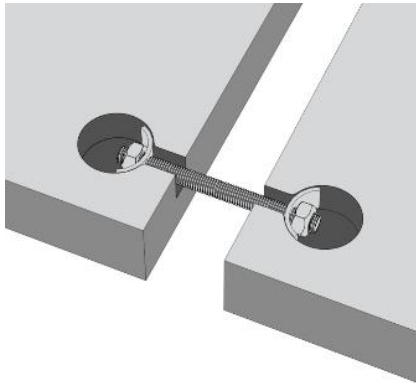


Fig. 23: Connection with a metal connector

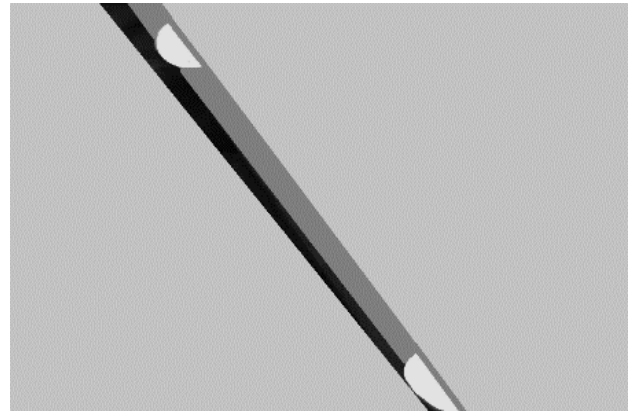


Fig. 24: Connection by means of wooden biscuits



Picture 10: AB111N biscuit joiner

NOTE: when connecting two UltraFit tops (narrow surface, not edged), we recommend using sealing silicone, additionally protecting against the penetration of water or other liquids.

ANGLE JOINT OF BOARDS

We recommend the following joining of boards:

- a) Using \varnothing 6 mm wooden plugs and assembly adhesive

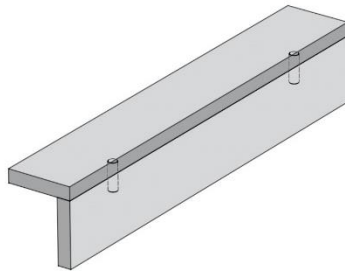


Fig. 26: Joining with wooden plugs

- b) Using wood screws with a diameter of \varnothing 3.5 mm (pre-drill holes with a diameter of 3 mm and make a larger socket for the screw head). Due to the high density of the board and the good retention of the screws in a narrow plane, the connection works very well.

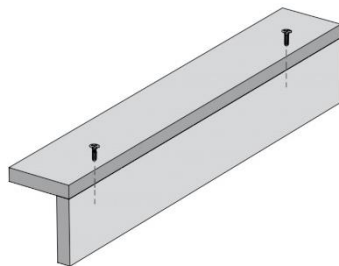


Fig. 27: Joining with screws

This type of application works well, for example, when assembling the body of cabinets

THICKENING AND STRENGTHENING THE WORKTOP

Due to the low thickness of UltraFit worktops, they may deflect under high point loads if the cabinet width exceeds 600 mm. To reduce the risk of deflection, we recommend thickening the top or reinforcing it according to the instructions below.

a) UltraFit worktop thickening

Joining the planes of two Ultra Fit tops as a thickening or reinforcement using contact adhesives [e.g. SPRAY-KON B707 600ml - Contact Adhesive Spray]



Picture 11: SPRAY-KON B707 600ml

We recommend applying contact adhesive evenly to both parts to be glued together, then joining the parts together and pressing firmly in a press or by hand using hard rubber rollers.

b) UltraFit worktop reinforcement – free-standing (extending beyond the edge of the cabinets).

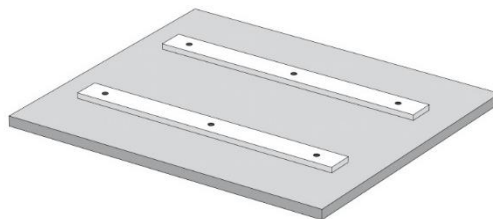


Fig. 28: Reinforcement using closed metal profile

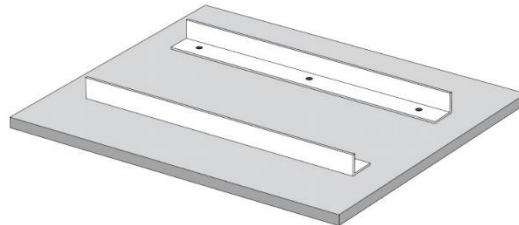


Fig. 29: Reinforcement using angle

The above-mentioned elements should be secured with couplers and bolts.

Reinforcement in the figure below with UltraFit board strip – installation at 90 degrees. Connection with wooden dowels and polyvinyl acetate glue.

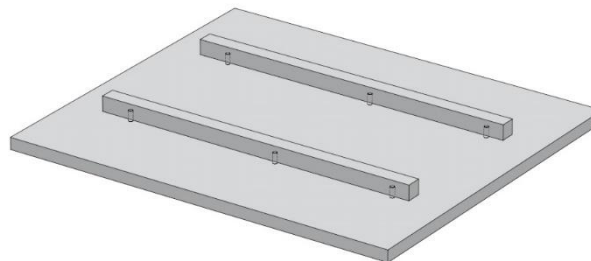


Fig. 30: Reinforcement using a strip from the worktop

NOTE: for under-top support spacing of more than 600 mm, it is also recommended to use under-top reinforcements according to the above instructions.

MOUNTING OF SINK AND WASHBASIN

Ultrafit worktops can be fitted with overlay sinks and washbasins.

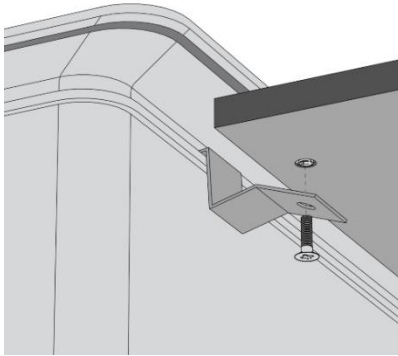


Fig. 31: Overlay sink

Two ways of attaching the sink/washbasin to the UltraFit worktop are possible:

- fixing with screws,
- fixing with couplers and screws – a method that enables reassembly.

NOTE: during the installation of the sink/washbasin, in all the above cases, seal the connection of the elements with silicone.

MOUNTING OF ULTRAFIT WORKTOP AS BACK PANEL

Ultra FIT worktops can be mounted to the wall just like Pfleiderer back panels. To do so, apply (polyurethane) assembly adhesive vertically at a distance of about 15-20 cm from each other. The thickness of the adhesive joint of about (3 mm) gives an expansion joint that allows air flow (ventilation) between the board and the wall.

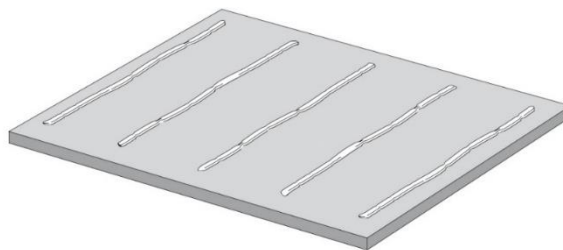


Fig. 32: Manner of applying the adhesive to bond the worktop with the wall

NOTE: do not apply the adhesive circumferentially, as this will prevent airflow and cause risk of the panel detaching from the wall surface. Do not use contact adhesives, only assembly adhesives.

MOUNTING OF HINGES

It is recommended to use hinges for thin fronts (hinges fixed with screw-in couplers and screws with metric threads).



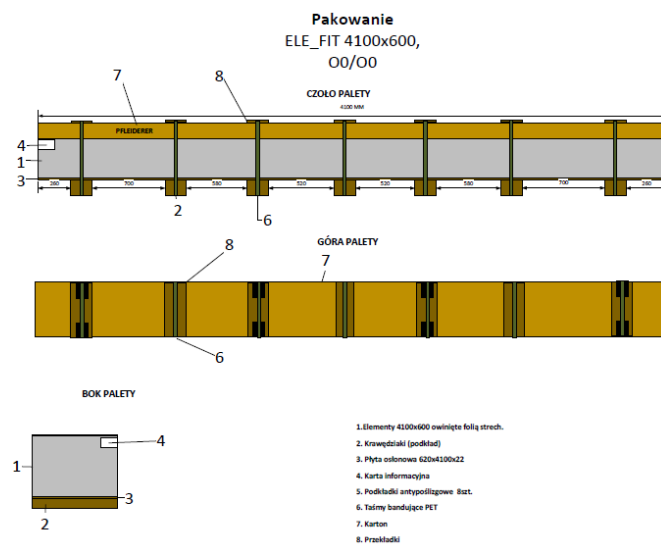
Picture 12, 13, 14: Using special hinges for thin board

NOTE: in the case of tall fronts, for example in closets, it is recommended to use special strips (so-called handles) for stiffening the tall element of the board.

For more technical details, visit our Youtube channel in Pfleiderer's TechStory videos or the Pfleiderer Academy e-learning platform: www.pfleiderer-szkolenia.com.

ATTACHEMENTS

Scheme of packing worktops in the width of 600 mm



Scheme of packing worktops in the width of 600 mm

