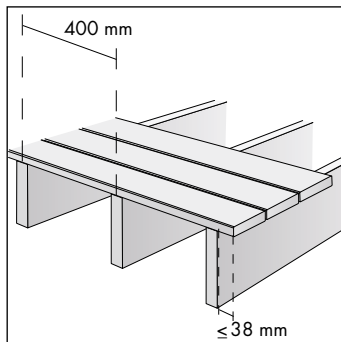




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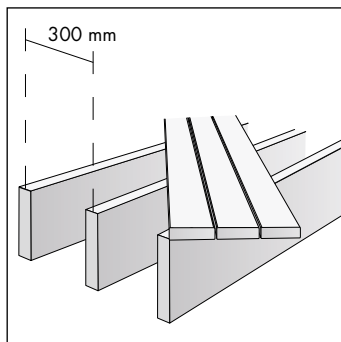
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SUB-STRUCTURES AND THE OPTIMAL ALIGNMENT OF DECK BOARDS



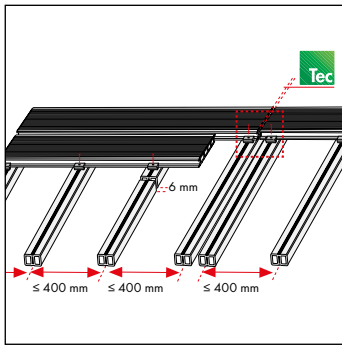
The design of the deck should be determined in advance as the substructure is depending on the design pattern. To use the cleaning effect of the rain water: install boards in direction of water flow with about 1-2 % incline.

The substructure should not hinder the drainage of ground surface water. If the rails are positioned at 90 degrees to the direction of the water flow, the substructure can be supplemented with UPM ProFi rubber pads laid underneath. This allows water to drain around the profile base. The amount of pads per joist depends on the type of the substructure. UPM ProFi Support Rail: 15 pieces/4 m Support Rail (max. 30 cm distance, centre to centre), or 12 pieces/m².



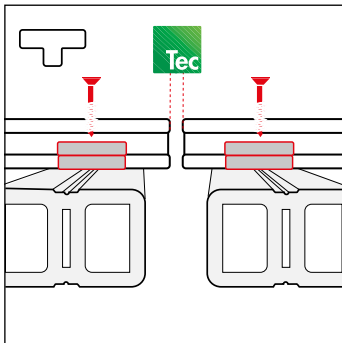
Elevated terraces must be built with UPM ProFi Alu Support Rail Large or timber joists. UPM ProFi Support Rails must be installed on a hard, flat surface only.

The joist spacing of support rails is max. 40 cm if the direction is 90° to boards. Less space between joists is needed at angles ≠ 90°. Heavy items (such as big flower pots, spa baths etc.) are to be taken into account at the planning stage: reduce the distance of the Support Rails.



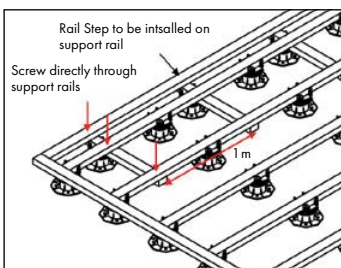
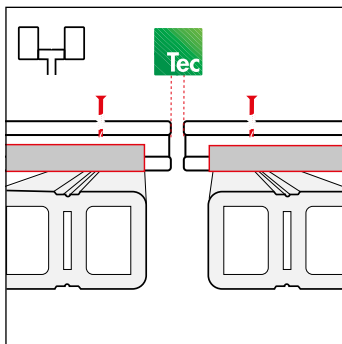
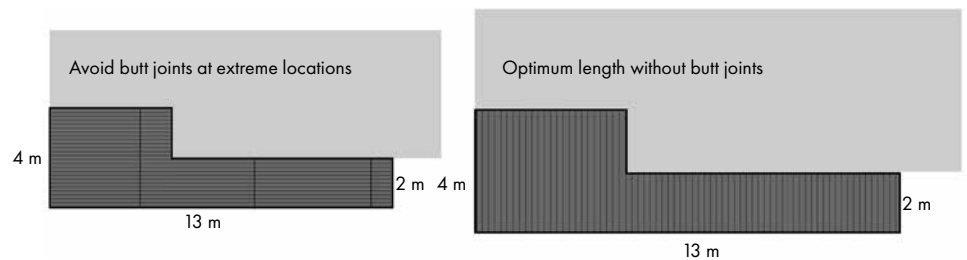
It will often be necessary to have joints in the decking boards. The position of the joints should be planned and determined beforehand, as one joint is needed at every board end and two joints must be laid in parallel at every break between the decking boards.

Support rails or joists must be fixed to the ground. If you use UPM ProFi Support Rails, these should be fixed by bolts or screws into the concrete at intervals of 100 cm.



If attachment to the ground is not possible, the sub-construction must be built as a rigid framework with cross-members. This construction method is mandatory for all roof terraces. The joists should be connected to each other with angle brackets for example. The distance between cross-members must not exceed 2 m.

At locations with extreme temperature changes it's advantageous to create as few butt joints as possible:



Installation of Rail Step on UPM ProFi Alu Support Rail Large with UPM ProFi Foot

If UPM ProFi Rail Step should be installed on UPM ProFi Alu Support Rail Large supported by UPM ProFi Foot (elevated terraces), the feet cannot be attached to the outer support rails on which the rail step is installed. In this case the foot can only be positioned on another support rail nearby the outer one. This, in some cases may lead to decreased stability of the deck edges.

The following helps to increase stability at the deck edges: Cut short pieces (~60 cm length) of support rails (Alu Support Rail Large or timber) underneath the joists in 90° to them and fix both by screwing directly through the joists, attaching the support rail pieces to the joists. The distance between two short pieces must not exceed 1 m. UPM ProFi Foot can be positioned directly underneath the rail step joist.

Please note: This can also be used with UPM ProFi Click System





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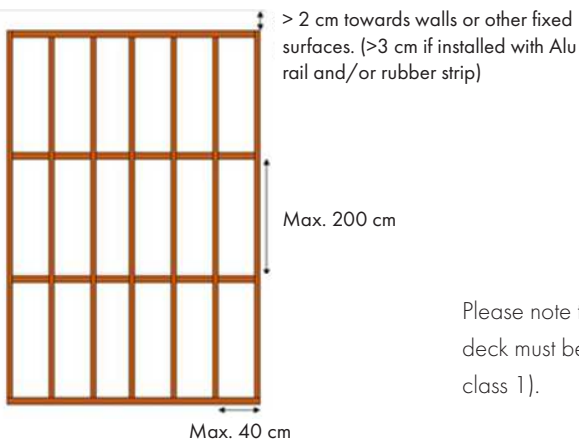
ROOF TERRACE



In general, fixation of support rails to the roof surface is not possible and differences in height need to be compensated. Best solution: Rigid framework with cross-members made of Alu Support Rail Large in combination with UPM ProFi UPM ProFi Foot and/or Rubber Pad. The maximum distance of cross-members must not exceed 2 m (centre to centre).



Other options: rigid framework constructed from timber or UPM ProFi Support Rails.

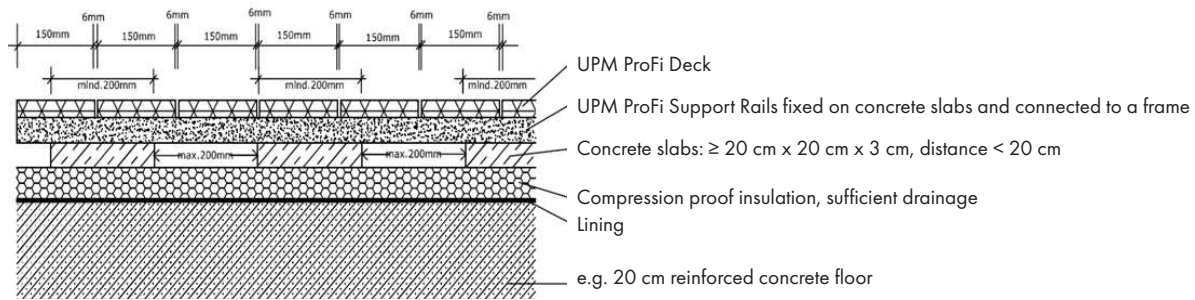


The joists must be connected to each other with L brackets for example.

If building height is limited, UPM ProFi Support Rail Small can be used and interconnected as well (e.g. by using L-bracket "UPM ProFi Fence Large Fastening Angle Kit").

Please note that UPM ProFi Support Rails must only be installed on hard flat surfaces. Any raised deck must be built on UPM ProFi Alu Support Rail Large or timber frame (hardwood, durability class 1).

Additional weighting can be positioned if necessary: Attach the substructure onto concrete slabs or at limited building height fix metal sheets on the support rails and place concrete slabs on it.



Please always note particular local conditions and ensure that you meet the requirements of the local building regulations.

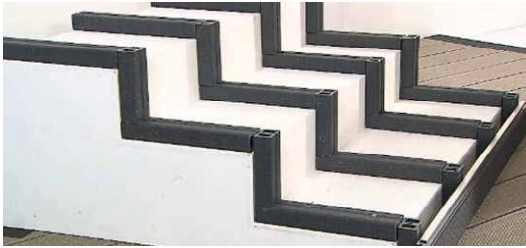




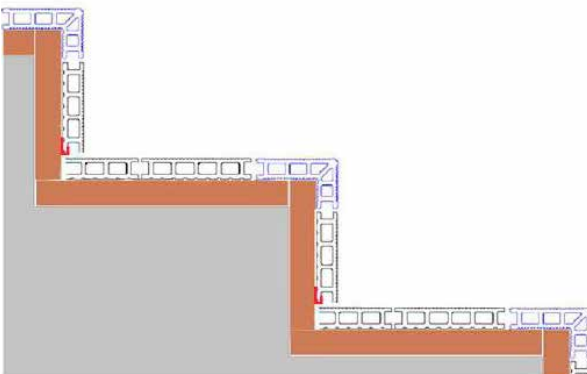
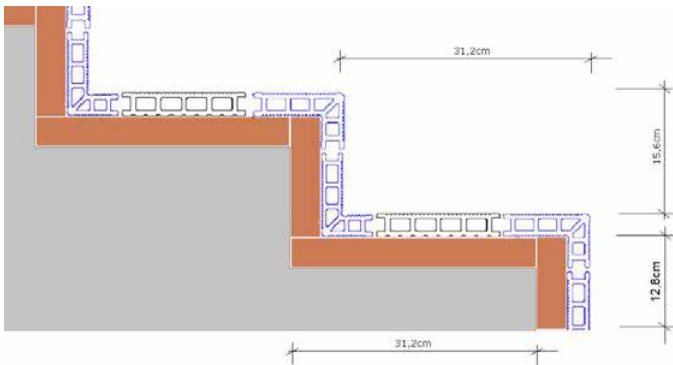
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STAIRS



Support Rails to be attached on flat surface, like concrete stairs.



Decking boards must be installed with UPM ProFi Alu Rail (instead of T-Clips) for more stability.

If the existing construction cannot be changed to match the dimensions of UPM ProFi profiles, best is to use UPM ProFi Rail Step at the front stair edge and UPM ProFi Deck boards in the internal corners. If needed, the deck boards can be cut lengthwise.

Please ensure that you meet the requirements of the local building regulations. UPM ProFi Support Rails must only be installed on hard flat surfaces. Any raised Deck must be built on UPM ProFi Alu Support Rail Large or on a timber frame. UPM ProFi Deck boards must not be used above ground floor applications, unless built on a solid load bearing surface: e.g. concrete steps.



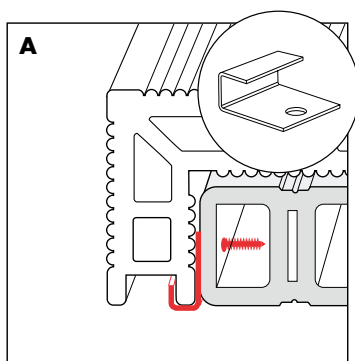


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POOL COVERS

Fixing Options



E.g. using Rail Step.

- Note drainage

