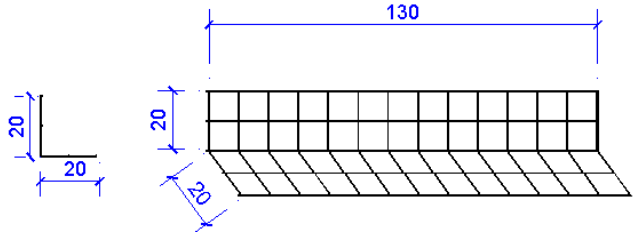
This guide is the document that summarizes the key points to be considered in the assembly of Zenon Panel. It is very important to consider the following points and apply them on site. Please contact with the company authorities for all details that are unclear or incomplete.

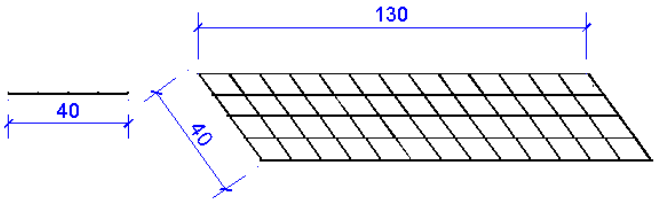
Materials required for installation

✓ 6mm Construction Rebar Cutters	✓ Spirit level	✓ Tape meter
✓ Hammer drill	✓ Hammer	✓ Chalk line
✓ Slate nipper	✓ Nail	✓ Knife
✓ Binding wire	✓ Board marker pen	✓ 8mm ribbed rebar

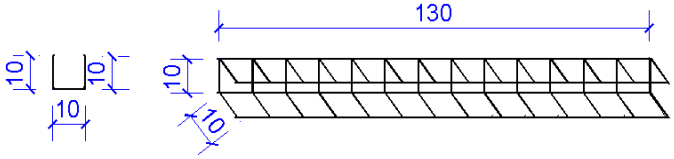
Connection meshes



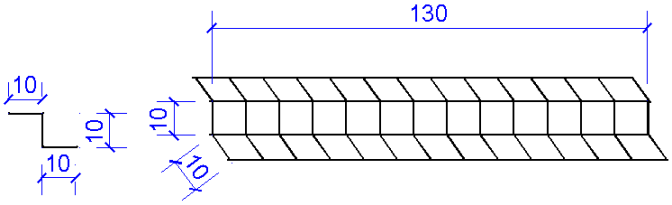
K130-40 Corner mesh



D130-40 Straight mesh



U130-30 "U" mesh

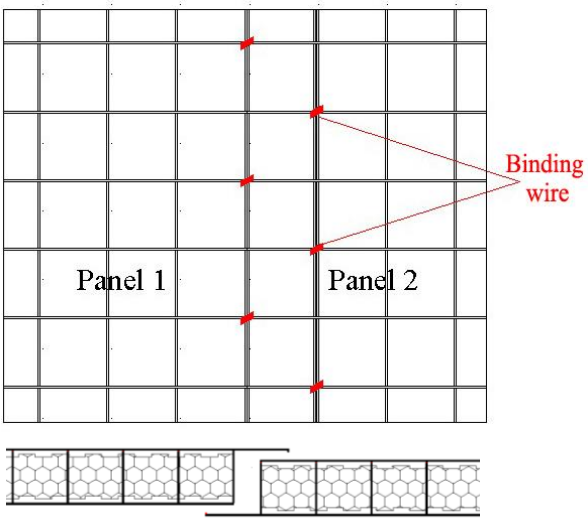


Z130-30 "Z" Mesh

Merge of panels and the use of connection meshes

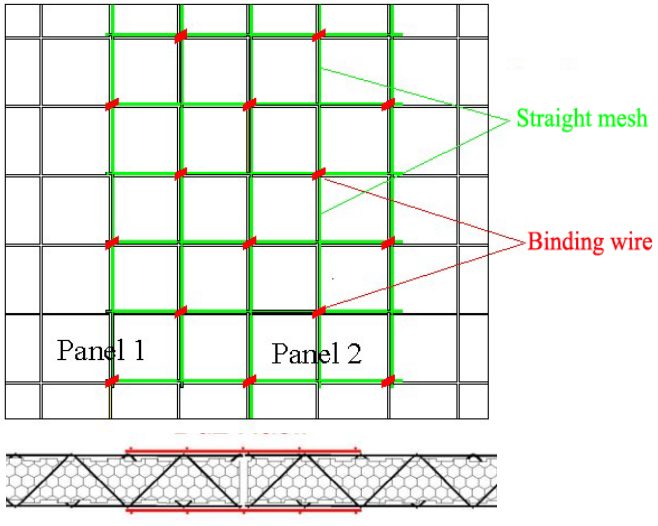
 # Merge of panels by tieing their overlap meshes

Take care that there are no gaps between the panes.



 # Merge of panels by using straight mesh

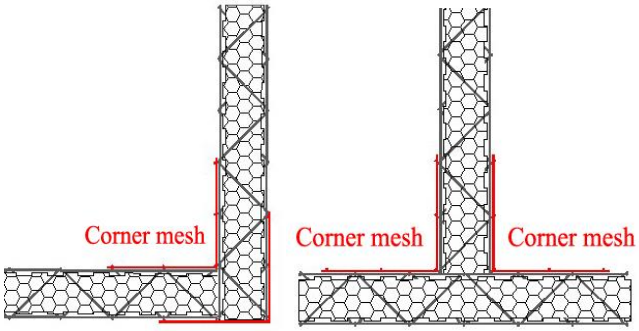
Straight mesh should be tied in the form of zigzags by the diagonal wire node points.



Note: The merge of the third panel should not be started until the first two panels are merged together without a gap. Otherwise, it is difficult to close the gap between the first two panels.

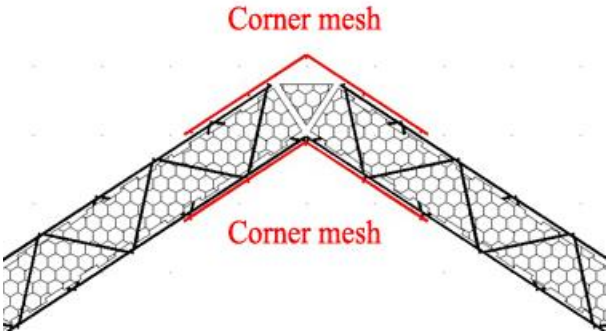
 # Merge of panels with corner meshes in angled joints

Corner meshes need to be tied both internally and externally.



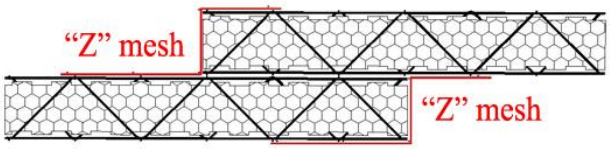
 # Merge of roof ridge panels with corner meshes

Corner meshes need to be tied both internally and externally.

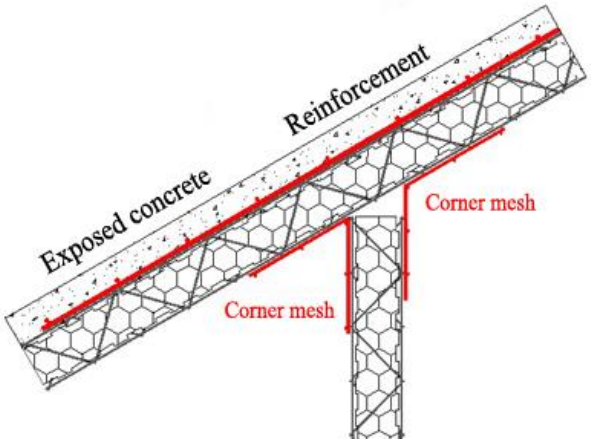


Note: In wall application, angular linearity of the panels must be checked before corner meshes are tied. After tieing the corner meshes, it is not possible to correct the angular linearity of the walls.

 # Merge of panels with "Z" meshes

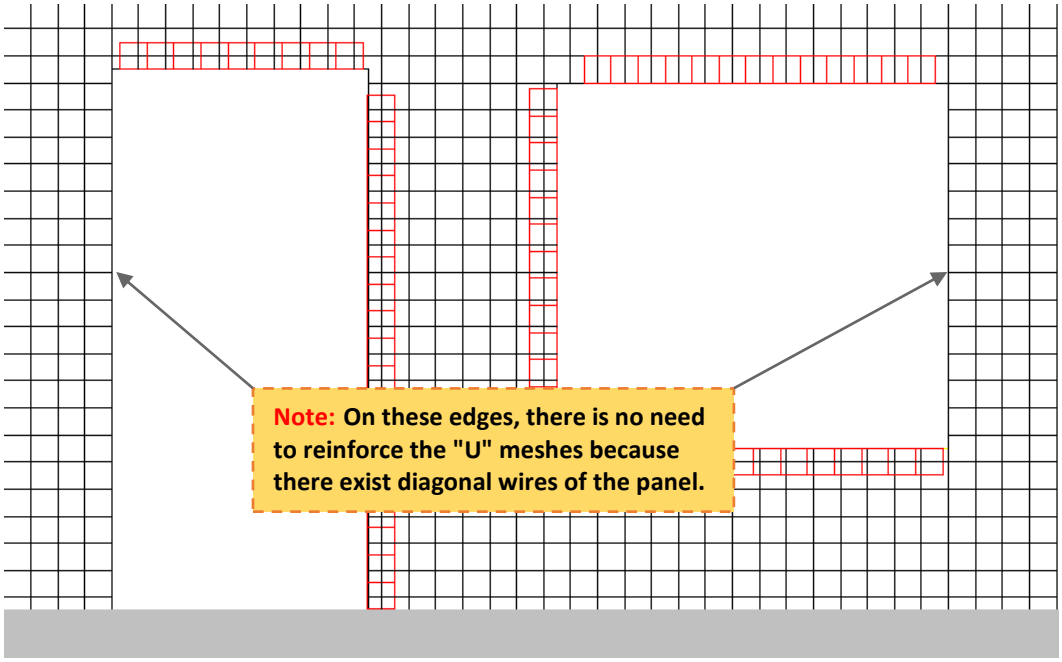


 # Use of corner meshes in junction of wall and floor panels

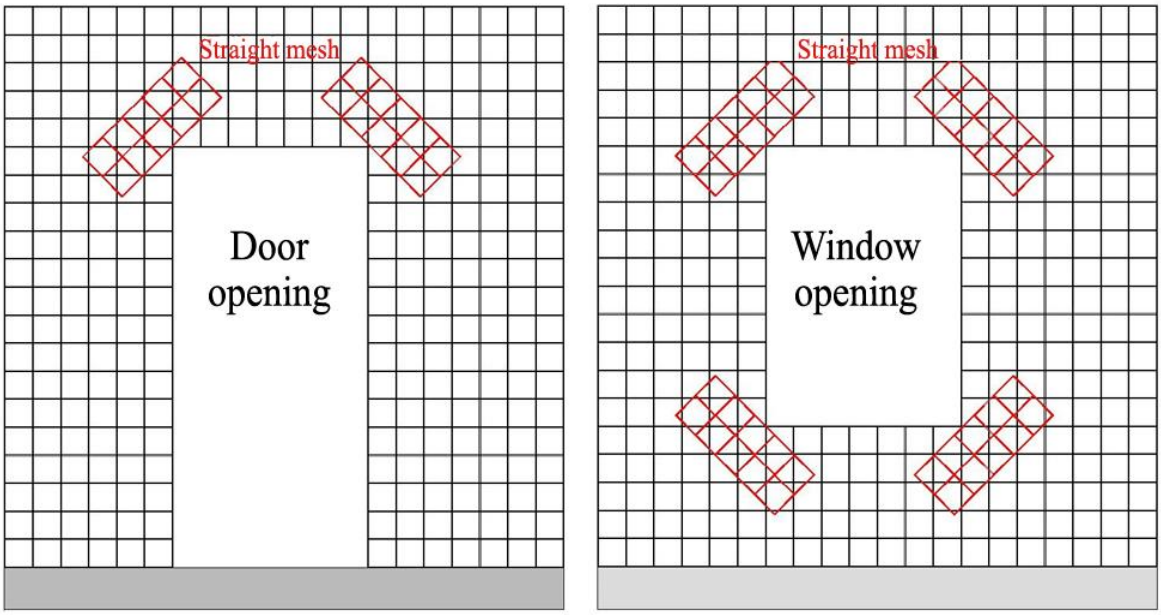


 # Reinforcement of door and window spaces with "U" mesh

Note: In Zenon Panel wall spaces, "U" mesh must be connected to the horizontal edges. On the vertical edges, if there is no diagonal wire, "U" mesh must be connected.



 # Reinforcement of door and window spaces with straight mesh

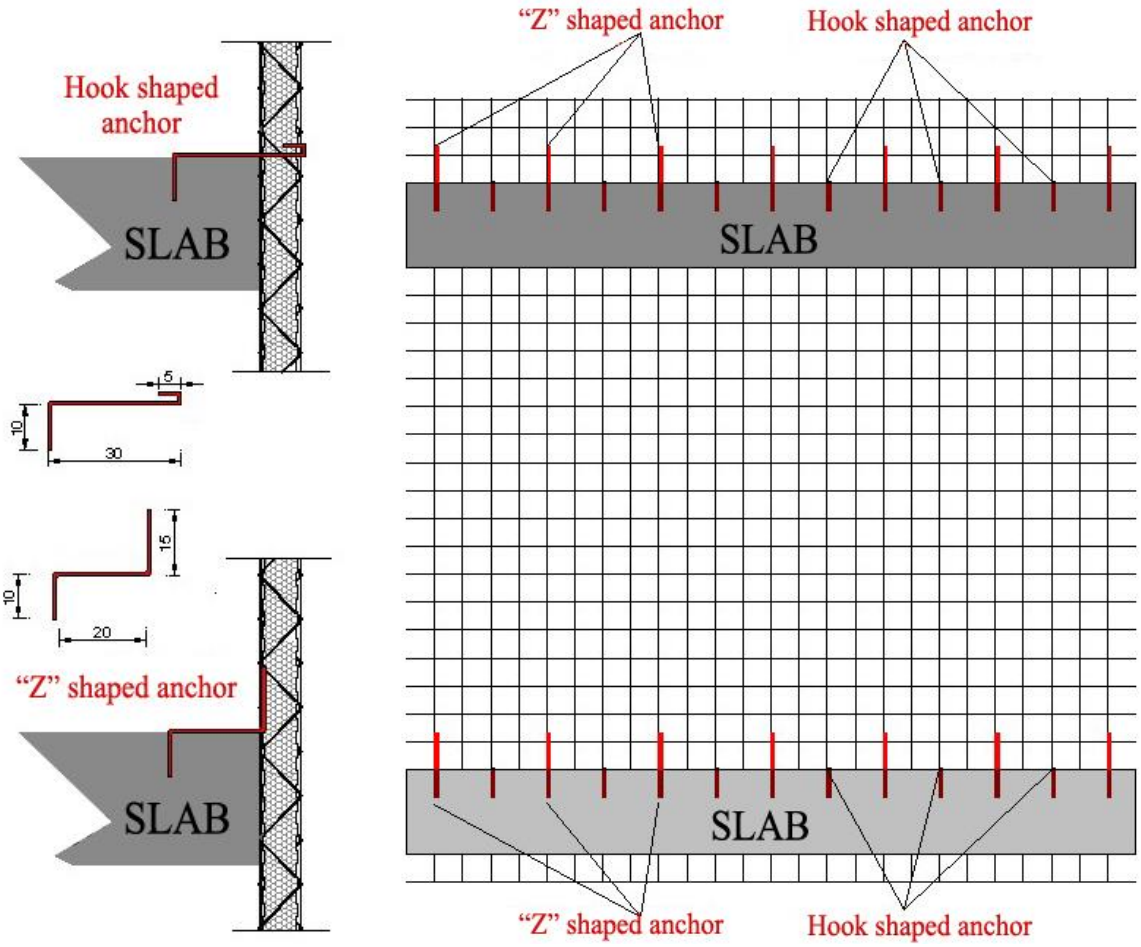


Anchorage details in wall applications

 # Curtain wall application (from outside the carcass)

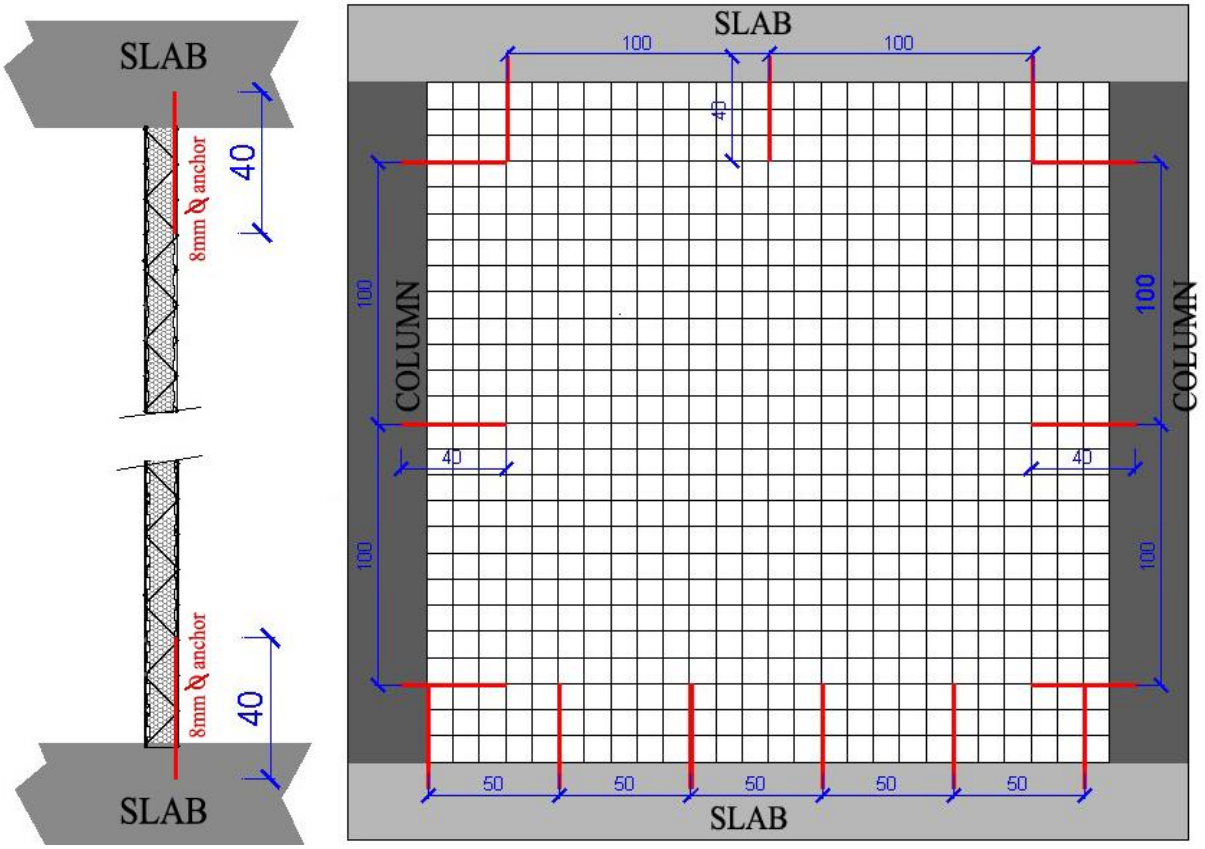
On each floor, "Z" shaped and hook shaped rebars are successively anchored at intervals of 20 cm.

Note: Before starting the exterior wall application, check that the slabs are properly aligned. In case of plumb error in the slabs, the wall application should be carried out taking into consideration the outermost slab and necessary measures should be taken in the other floor slabs. It is extremely important that the facade wall is plumb in vertical and horizontal axis. "You have to be sure that the wall is on level.



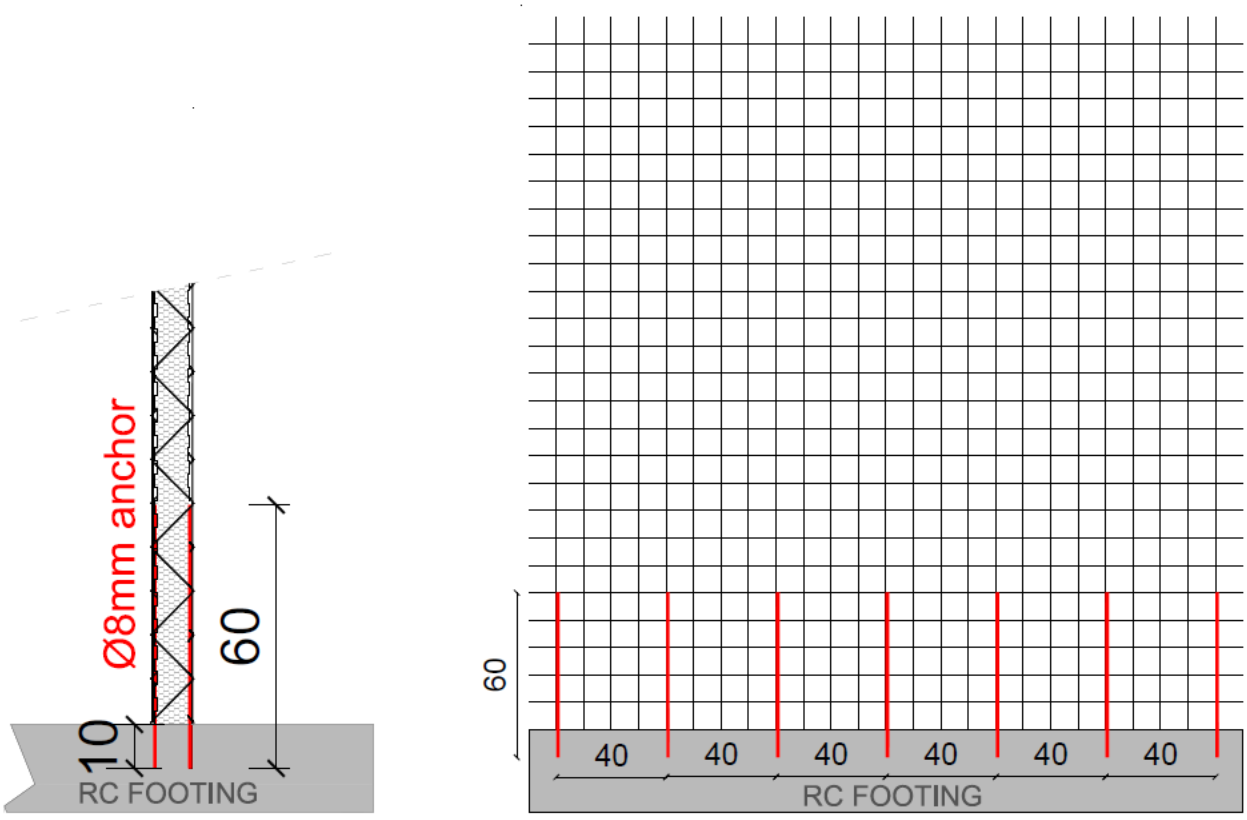
The wall which is applied as the separator inner wall (inside the frame)

Panels are anchored with rebar at intervals of 50 cm on the slab, and 1 m intervals on the column and ceiling. The anchoring rebar length is 40cm. The 10 cm of rebar is anchored to the frame and the remaining section is inserted into the panel and tied to the diagonal joint points.



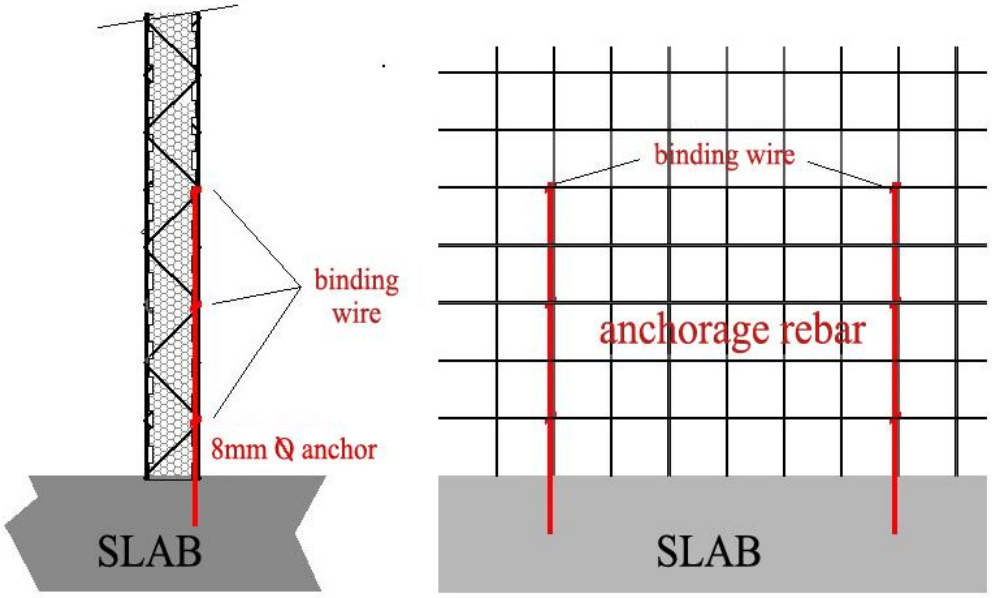
Load-bearing wall application

The Zenon Panel is anchored to the floor at 40cm intervals from both sides. Required length of the rebar is 60 cm. 10 cm part of rebar is anchored to ground, the remaining part is inserted into the panel and tied to the diagonal joint points.



 # Tie of anchorage rebars, at the diagonal joint points

Anchorage rebars are tied with 20 cm intervals, to the junction points of the diagonal wires.



Other details to watch out for when installing the wall

 # In the panel used as inner or outer wall, there can be a maximum single merge on each floor. Multiple merges on the panel cause weakness. To avoid weakness, the small part panels should not be used over the window or door frames.

 # During installation, the plumb balance of wall must be checked frequently. The smoothness of assembly should be checked with a spirit level and long aluminum profile. If minor errors that can be rectified in a very short time in the assembly phase are left uncorrected, they cause costly and troublesome work in plaster and other stages.

 # In application, if the Zenon Panel wall has a connection with a block wall, mesh corner bead should be used before final coat plaster.

The details which is needed to be considered in the plaster of the wall

 # For plaster mortar, 0-4mm sharp sand and 300kg/m3 cement are mixed. It is forbidden to use lime.

 # Use of concrete mixer machine is recommended for easy adjustment of scale and better mixing of mortar.

1st layer roughcast: As first layer of plaster, it is necessary to apply a high adherence mortar. The water content of the first-floor plaster should be slightly higher than the normal mortar's water ratio. After the first layer plaster is dry, second layer roughcast plaster can be applied.

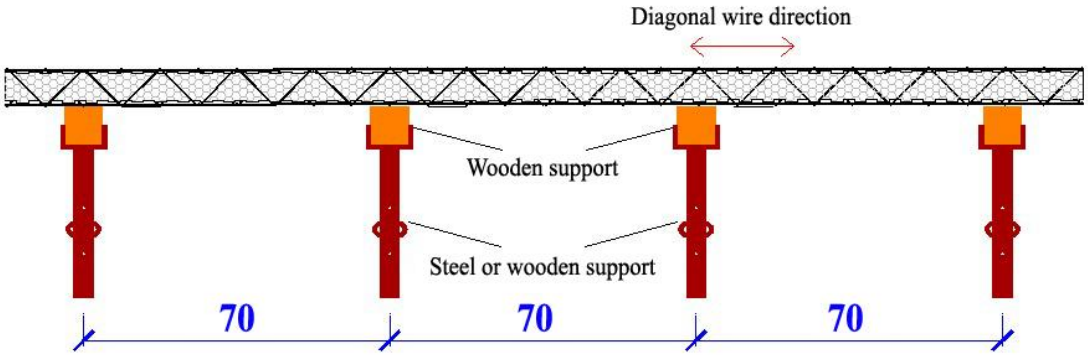
2nd layer roughcast: Layer 2 coarse plaster: The first layer is coarse plaster and the second layer plaster is applied together with a total plaster thickness of about 2.5 - 3 cm. Before a new layer is applied, it must be seen that the existing layer is sufficiently dried and set.

 # The next day after the application of the roughcast of one face of the wall, the roughcast of the other face should be applied.

 # Because of the use of high cement dosage plaster mortar, it is necessary to water the wall during summer months, especially when the weather is hot.

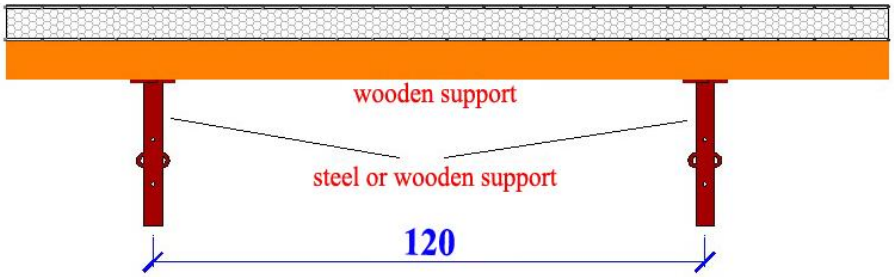
The details which is needed to be considered in the application of slab

Placement of the supports under the slab panel



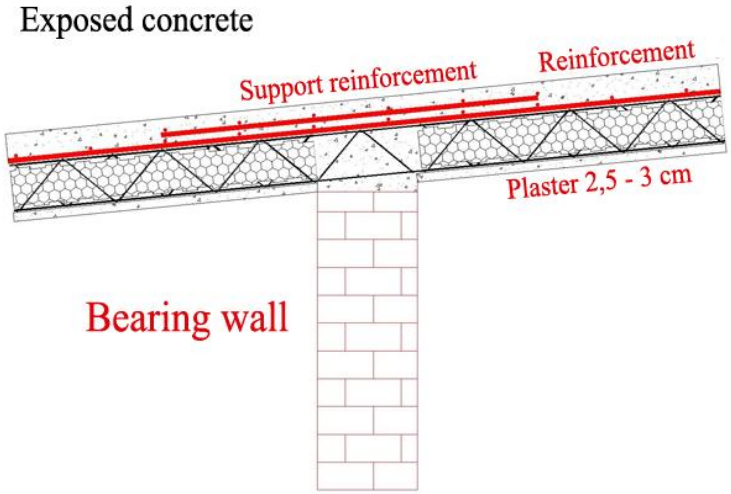
Note: Supports should be placed at intervals of no more than 70 cm. 10cm x 10cm timber should be preferred. Attention should be paid that there is no gap occur when merging the panels. Care should be taken to ensure that all ties are bond while merging panels.

Note: The distance should not be more than 120cm.



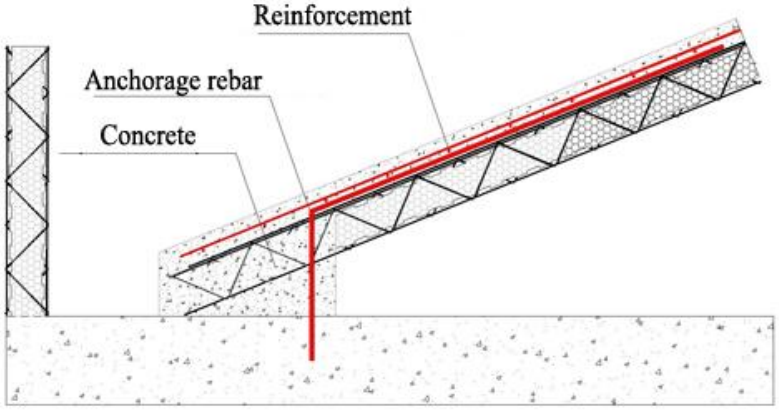
Masonry wall, slab panel combination detail

Note: EPS should be emptied that is over masonry wall



Detail of combination of the roof panel to the slab.

Note: Combinations with slabs or beams must be supported.



 # If the slab length is longer than the panel length, two panels are merged to reach the length. However, the additions must be made in a zig zag pattern to prevent these additions from causing weakness at the slab.