

3.5- DRAWING HORIZONTAL BOND BEAM

To draw horizontal bond beam, horizontal bond beam properties form is displayed by clicking the



button in the main window.

The image shows a dialog box titled "Horizontal Bond Beam Properties". It has a "General" tab selected. The dialog contains several input fields with their respective units:

Property	Value	Unit
Beam ID	H101	
Beam Width	20	cm
Beam Height	50	cm
Extra G Load	0	kg/m
Extra Q Load	0	kg/m
Eccentricity	0	cm

At the bottom of the dialog are "OK" and "Cancel" buttons.

There is no need to enter any information in the Beam ID section. The software automatically assigns names to beams while drawing.

Beam widths are entered as centimeters. Beam width is recommended to be equal to wall width.

Beam height value is entered. Beam height is recommended to be equal to horizontal bond beam over wall for short gaps, and for the long gaps it should satisfy deflection requirements.

The software pays attention to the horizontal bond beams over wall while drawing. It also automatically generates horizontal bond beams over door and window. Horizontal bond beams over door or window are erased, when a door or window is erased. They are moved when a door or window is moved. After drawing door or window, the user should not draw any horizontal bond beams in that area.

Static and concrete calculations are not performed by the software, as horizontal bond beams are generally used in short gaps. Use of beams with long gaps is not recommended; however, if they are used, static and concrete calculations and drawings must be completed independently. The software constructively draws the horizontal bond beam reinforcements in line with the earthquake code.

If a wall is defined over the slab, no load transfer is performed between up story walls and down story slabs. Hence, when it is necessary to define wall over the slab, it would be convenient to draw horizontal

bond beam under the wall (down story ceiling) If no horizontal bond beam is present, beam height can be equal to slab height.

Bond beams are used in masonry buildings, as they ensure that vertical loads are evenly transferred to walls and the slabs function according to the calculation estimates (lowers slab deflection by creating extra stiffness over the walls).