Door Reinforcement

Modified on: Fri, 9 Apr, 2021 at 8:51 AM

These are the settings for placing reinforcement around openings created by the Family of Door Category.

Common Settings

These are the first settings that you have to check if you want to use this part of the configuration. If these checkboxes are not turned on, the door opening will be reinforced with settings from Opening reinforcement or if it's at the edge - from Perimeter reinforcement settings.

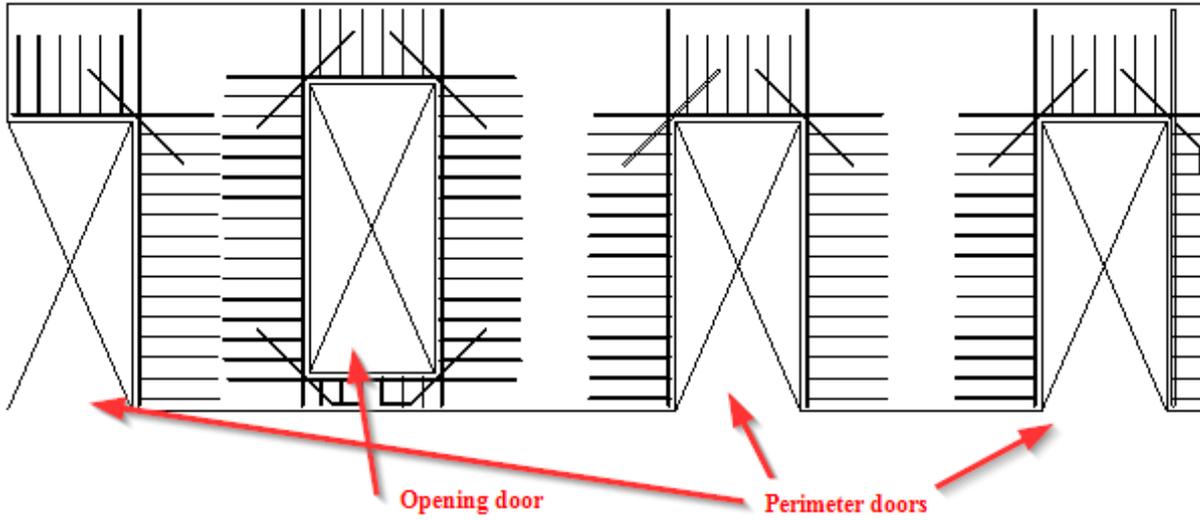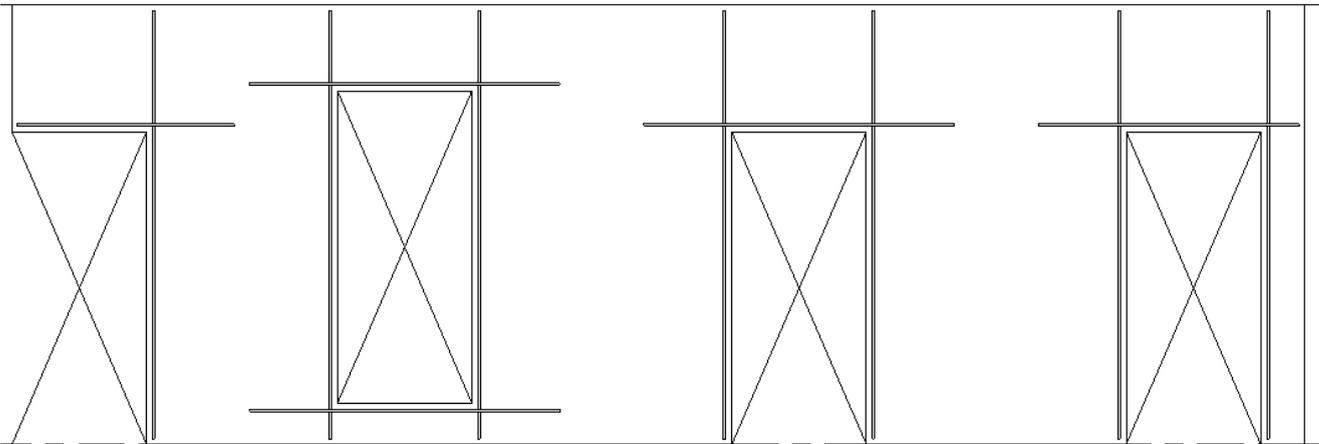**Create perimeter door rebar** - toggle ON/OFF to create rebar for doors on wall perimeter
Create opening door rebar - toggle ON/OFF to create rebar for doors inside wall boundary

Opening door   Perimeter doors

Edge Rebar - straight rebar on the sides of the Door opening.

| Edge Rebar | Diagonal Rebar | U/O-Stirrups | Common settings |

New Item | Remove Item | Move Up | Move Down

	Count	Min door width	Max door width	Rebar bar type:	Side	Length	Anchorage length	Position	Edge Cover	Interior Cover	Exterior Cover	End Cover
1	2	0 mm	1000 mm	H16	Top & Bottom	Extension	600 mm	External and Internal	43 mm	50 mm	50 mm	35 mm
2	2	0 mm	1000 mm	H16	Left & Right	To the Top	600 mm	External and Internal	43 mm	68 mm	68 mm	35 mm

New item - add as many rows as you need to define the number of required rebars. Parameters for the new row will be copied from the selected row.

Remove Item - remove selected row of settings

Move up/down - move selected row up or down

Count - how many rebars will be created along wall layer thickness with this row of settings. Possible values: 1 or 2; if more are needed, a new row should be created.

Min/Max door width - filter the size of openings for which this row of settings should be applied

Rebar bar type - select rebar Type

Side - select on which side of the opening rebar should be created. Left/Right is as you would look from the external side of the wall.

Length - there are few options here:

- *Extension* - rebar will be extended to both sides from the edge of the opening by the distance defined in the Anchorage length parameter.
- *To the Top* - rebar will be extended to the top of the wall but also toward the bottom by the distance defined in Anchorage length parameter.
- *To the Bottom-* rebar will be extended to the bottom of the wall but also toward the top by the distance defined in Anchorage length parameter.
- *Top to Bottom* - rebar will go from the top to the bottom of the wall.

Left/Right options are analogous to Top/Bottom.

Anchorage length - distance from opening edge to the end of the rebar

Position - position in the wall thickness direction. Depending on the selection, Interior, Exterior cover parameters will be available.
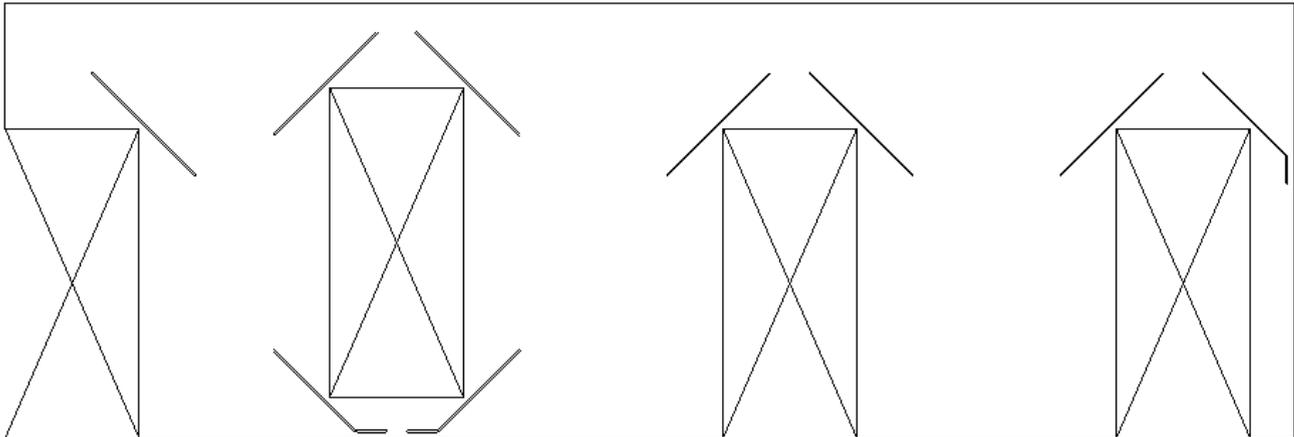
Edge Cover - distance from opening edge to the side of the rebar

Interior Cover - distance from the interior side of wall layer to the side of the rebar

Exterior Cover - distance from the exterior side of wall layer to the side of the rebar

End Cover - distance from the rebar end to the boundary of the wall

Diagonal Rebar - 45 degrees rebar at the corners of the Door opening.

	Count	Min door width	Max door width	Rebar bar type:	Side	Bar length	Position	Edge Cover	Interior Cover	Exterior Cover	End Cover
1	1	0 mm	1000 mm	H12	Top & Bottom	1000 mm	Center	35 mm			43 mm

Different settings:

Side - could be at both opening corners on the Top, Bottom or Top&Bottom.

Bar length - length of the rebar, which is with the same distance to both sides from the corner of the opening.

## U/O stirrups - U and O shape stirrups around the Door openings.
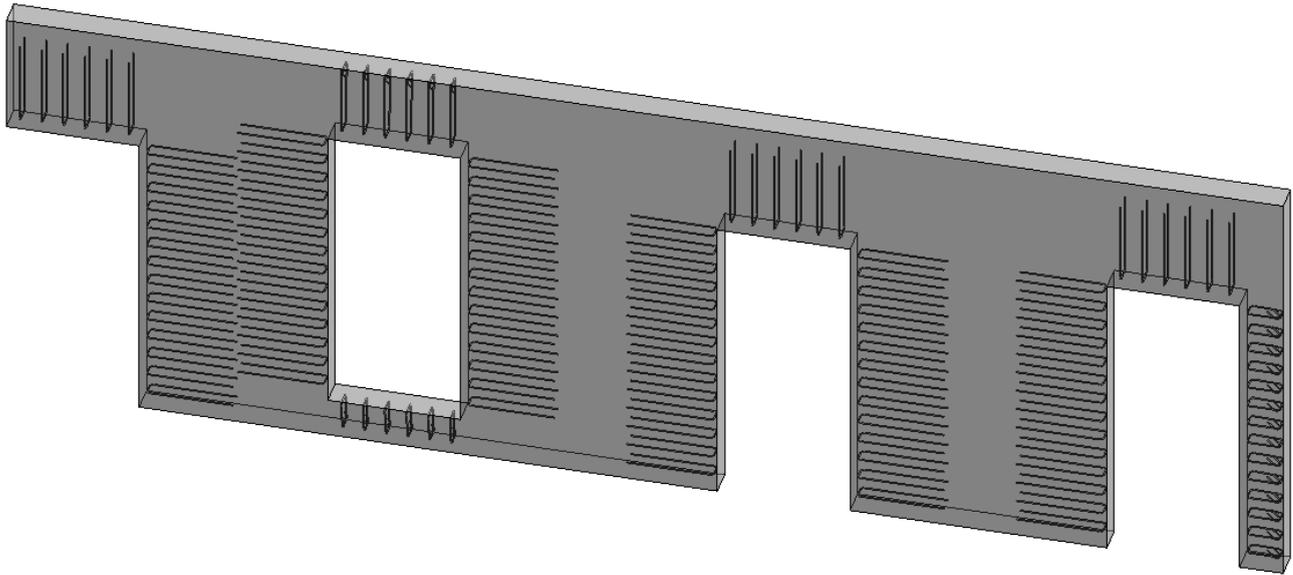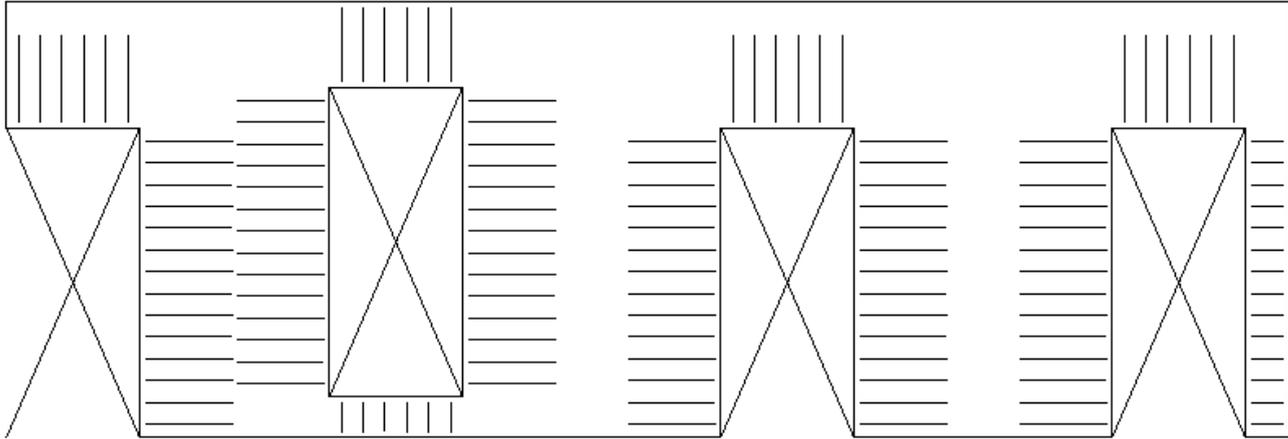
Edge Rebar	Diagonal Rebar	U/O-Stirrups	Common settings

New Item | Remove Item | Move Up | Move Down

	Min door width	Max door width	Side	Bar shape	Rebar bar type:	Min length	Bar length	Edge Cover	Interior Cover	Exterior Cover
1	0 mm	1000 mm	Top & Bottom ⌄	UShape ⌄	H8 ⌄	150 mm	600 mm	35 mm	35 mm	35 mm
2	0 mm	1000 mm	Left & Right ⌄	UShape ⌄	H8 ⌄	150 mm	600 mm	35 mm	45 mm	45 mm

	Spacing	Equal offsets	Start offset	End offset	Create O-Stirrup	Width for O-Stirrup	Rebar hook type:
1	150 mm	✔	50 mm		✔	800 mm	Stirrup/Tie - 135 deg ⌄
2	150 mm	✔	50 mm		✔	800 mm	Stirrup/Tie - 135 deg ⌄

Different settings:
Bar shape
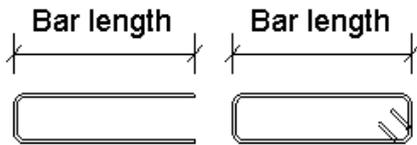
Min Length - if the actual bar length is less than this value, the bar will not be created.
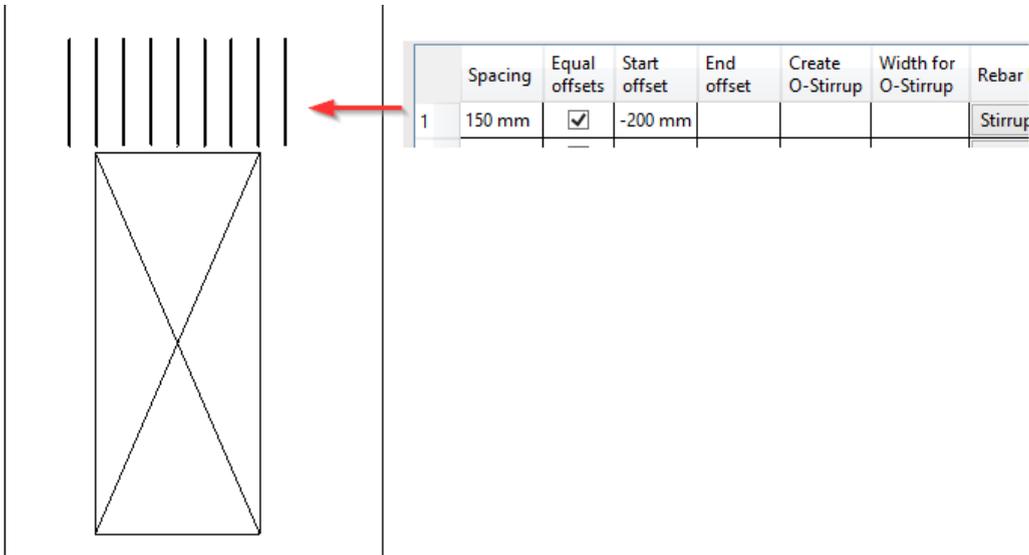
**Bar length** - length of the bar

Spacing - spacing between bars

Equal offsets - it will set equal distance from opening edges to the first/last stirrup. The layout is centered with the door edges.

Start offset - distance from the Bottom/Left of the opening. Entering a negative value will extend outside the edge of the opening.

End offset - distance from the Top/Right of the opening. Entering a negative value will extend outside the edge of the opening.

	Spacing	Equal offsets	Start offset	End offset	Create O-Stirrup	Width for O-Stirrup	Rebar
1	150 mm	✓	-200 mm				Stirrup

Create O-stirrup - available only if U-shape stirrup is selected. It will create O-shape rebar if the distance to the wall edge is smaller than the Bar length and the full U-shape rebar length doesn't fit.
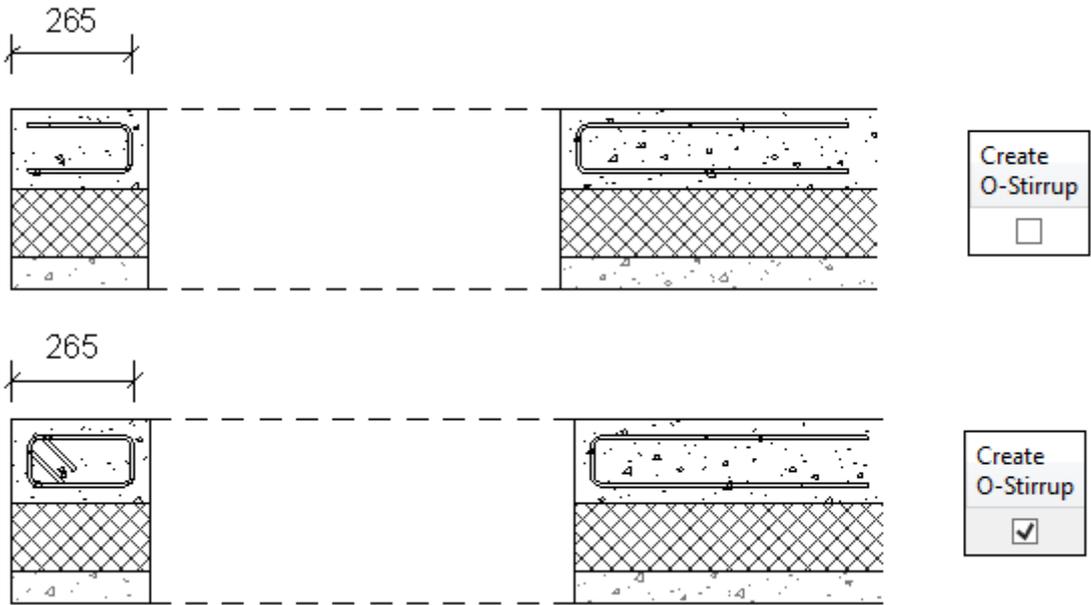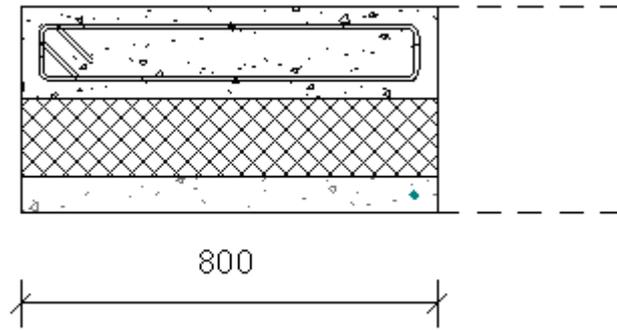

Width for O-Stirrup - available only if U-shape stirrup is selected. It will create O-shape rebar if the solid width from the Door opening to the wall edge is smaller than the defined distance. So, in this case, it will extend U-shape bar and turn it into O-shape bar.
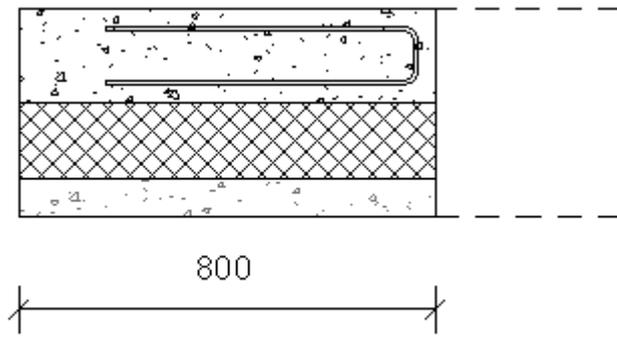
Create O-Stirrup	Width for O-Stirrup
☐	

Create O-Stirrup	Width for O-Stirrup
☑	900 mm

Create O-Stirrup	Width for O-Stirrup
☑	700 mm

Rebar hook type - hook type for O-shape rebar. Will be used on both ends of the rebar.