

Rebar configurations – Stirrups

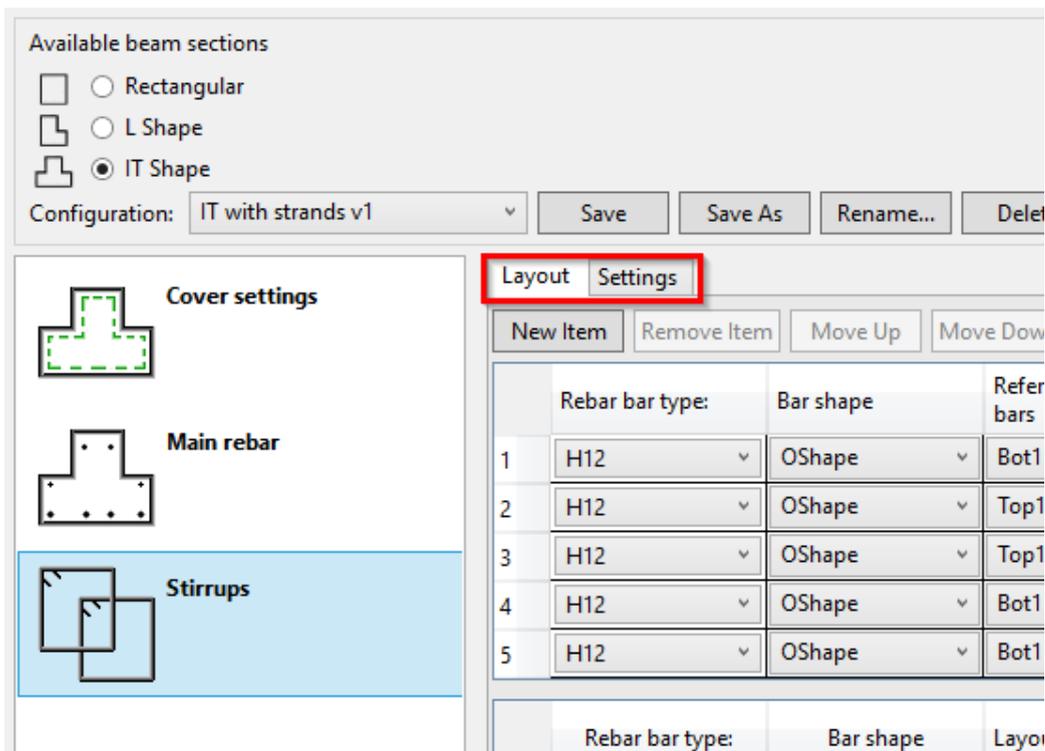
Modified on: Thu, 15 Apr, 2021 at 11:38 PM

After number and position of *Main rebar* are defined, it's time to set up stirrups.

In the *Stirrups rebar* window there are 2 tabs:

- **Layout tab** – define reinforcement settings here
- **Settings tab** – select common settings, like view in Solid, Partition, etc.

Beam Reinforcement Configurations



Available beam sections

Rectangular
 L Shape
 IT Shape

Configuration: IT with strands v1 Save Save As Rename... Delete

Cover settings
Main rebar
Stirrups

Layout Settings

New Item Remove Item Move Up Move Down

	Rebar bar type:	Bar shape	Refer bars
1	H12	OShape	Bot1
2	H12	OShape	Top1
3	H12	OShape	Top1
4	H12	OShape	Bot1
5	H12	OShape	Bot1

Rebar bar type: Bar shape Layo

In the **Layout tab**, use the New Item button to insert as many rows as needed. Use the adjacent buttons to move a row up or down or remove it.

Beam Reinforcement Configurations

Available beam sections

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 IT Shape

Configuration: IT with strands v1 Save Save As Rename... Delete

Layout Settings

New Item Remove Item Move Up Move Down

	Rebar bar type:	Bar shape	Reference bars	First bar	Second bar	Rebar start hook type:
1	H12	OShape	Bot1	1	4	Stirrup/Tie -
2	H12	OShape	Top1	1	3	Stirrup/Tie -
3	H12	OShape	Top1	1	3	Stirrup/Tie -
4	H12	OShape	Bot1	1	4	Stirrup/Tie -
5	H12	OShape	Bot1	1	4	Stirrup/Tie -

	Rebar bar type:	Bar shape	Layout type	L1	L2	L3
1	H12	OShape	ThreeSteps	0.2	0.6	0.2
2	H12	OShape	ThreeSteps	0.2	0.6	0.2

Settings for stirrups are configured in the table. Note that there is only one table; it is divided into an upper and lower part to avoid being excessively wide (the rows of the "upper" table simply continue as the rows of the "lower" table).

Beam Reinforcement Configurations

Available beam sections

Rectangular
 L Shape
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Configuration: IT with strands v1 Save Save As Rename... Delete

Layout Settings

New Item Remove Item Move Up Move Down

	Rebar bar type:	Bar shape	Reference bars	First bar	Second bar	Rebar start hook type:	Rebar end hook type:	Extend to the top	Anchorage length:
1	H12	OShape	Bot1	1	4	Stirrup/Tie - 90 d	Stirrup/Tie - 90 d	0 mm	250 mm
2	H12	OShape	Top1	1	3	Stirrup/Tie - 135	Stirrup/Tie - 135	0 mm	250 mm
3	H12	OShape	Top1	1	3	Stirrup/Tie - 135	Stirrup/Tie - 135	120 mm	250 mm
4	H12	OShape	Bot1	1	4	Stirrup/Tie - 90 d	Stirrup/Tie - 90 d	0 mm	250 mm
5	H12	OShape	Bot1	1	4	Stirrup/Tie - 90 d	Stirrup/Tie - 90 d	0 mm	250 mm

	Rebar bar type:	Bar shape	Layout type	L1	L2	L3	Step L1	Step L2	Step L3	Start Offset	End Offset
1	H12	OShape	ThreeSteps	0.2	0.6	0.2	70 mm	240 mm	70 mm	36 mm	36 mm
2	H12	OShape	ThreeSteps	0.2	0.6	0.2	70 mm	240 mm	70 mm	36 mm	36 mm
3	H12	OShape	ThreeSteps	0.2	0.6	0.2	70 mm	240 mm	70 mm	56 mm	56 mm
4	H12	OShape	OneBar	1	6	0	70 mm	100 mm	70 mm	47 mm	47 mm
5	H12	OShape	OneBar	0	6	1	70 mm	100 mm	70 mm	47 mm	47 mm

Layout rule - One Step

Layout rule - Three Steps

Layout rule - One Bar

Stirrup Shapes

Save & Close Cancel

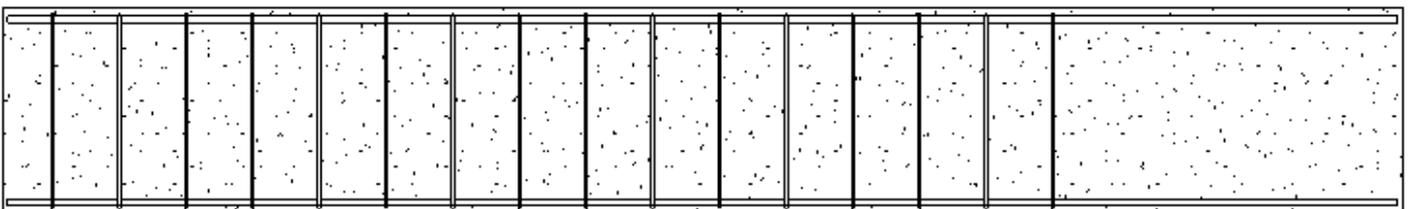
The upper table has settings for rebar type and shape while the lower table is for configuring stirrup layout along the beam.

Let's go through the available settings:

- **Rebar bar type** – Select Structural Rebar type.
- **Bar shape** – Select from available stirrup shapes described in the image shown at the bottom of the window.
- **Reference bars** – Pick Row position of Main rebar. You are able to tie selected bars of that row.
- **First/Second bar** – Here you have numbers of *Main rebar* at selected *Row position*, counting from left to right. Select bar numbers to be tied to selected stirrup shape.

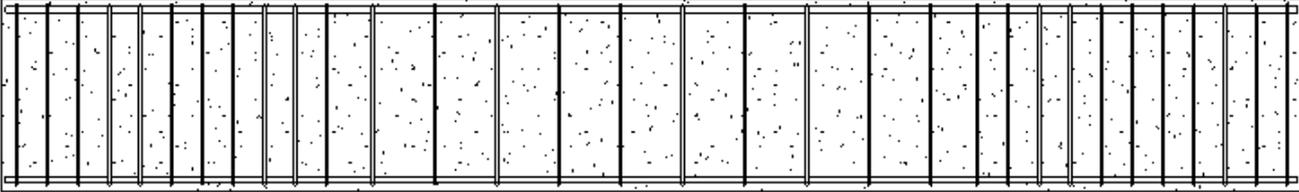
For example, if you select Bot1 and define that an O-shaped stirrup should go around 1 and 2 bar, then the stirrup will tie them and go up to the top cover of the beam.

- **Rebar start/end hook type** – hook types for stirrup ends.
- **Extend to the top** – Stirrup will go up, outside beam by defined distance.
- **Anchorage length** – defines how far U-shaped inverted stirrup should go into the beam. (Pertains only to U-shaped inverted stirrup.)
- **Layout Type**– Select layout rule for selected stirrup:
 - **One Step** – one set of rebar within defined distance of beam
 - **L1** – defines start offset of stirrup layout. Value is relative to beam length. Will work if value is greater than *Start offset*.
 - **L2** – defines length of stirrup layout. Relative value is used, 1 = full length of the beam.
 - **L3** – defines end offset of stirrup layout. Value is relative to beam length. Will work if value is greater than *End offset*.
 - **Step L1** – not active, has no influence
 - **Step L2** – step of stirrup layout
 - **Step L3** – not active, has no influence
 - **Offset at start** – offset from start of beam
 - **Offset at end** – offset from end of beam
 - **Centered** - bars will be centered in the region defined with Offset at start/end parameters. Available only for One Step layout rule.



- **Three Steps** –from 1 to 3 sets of rebar, may have different steps in each set
 - **L1** – distance for stirrup layout at the start of the beam. Value is relative to beam length.

- **L2** – distance for stirrup layout at the middle part of the beam. Value is relative to beam length.
- **L3** – distance for stirrup layout at the end of the beam. Value is relative to beam length.
- **Step L1** – step of stirrups in L1
- **Step L2** – step of stirrups in L2
- **Step L3** – step of stirrups in L3
- **Offset at start** – offset from start of beam
- **Offset at end** – offset from end of beam



- **One Bar** – one set of rebar with defined number of bars
 - **L1** – value may be 0 or 1. If 1, then layout will begin from start of beam and value of L3 will change to 0.
 - **L2** – number of bars
 - **L3** – value may be 0 or 1. If 1, then layout will begin from end of beam and value of L1 will change to 0.
 - **Step L1** – not active, has no influence
 - **Step L2** – defines step of stirrup
 - **Step L3** – not active, has no influence
 - **Offset at start** – offset from start of beam
 - **Offset at end** – offset from end of beam

