Perimeter Reinforcement

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Perimeter Edge Rebar

Rebar along the perimeter of a wall consists of straight bar and corner bar at the corners. Corner bar has anchoring length, as does straight bar when wall perimeter changes.



Configuration settings:

08/09/21, 09:14

R Modify Wall Reinforcement Configuration – 🗆 🗙												
Configuration: edge rebars v												
Common settings	Edg	je Rebar	Diagonal Rebar U/O-Stirrups									
4		lew ltem	Remove Item Move Up Move D	own								
External reinforcement		Count	Rebar Type	Anchorage Length	L-Shape Leg Length	Position	Edge Cover	Interior Cover	Exterior Cover	End Cover		
	1	2 ^ ▼	H12 × 6	i00 mm (600 mm	External and Internal	30 mm	40 mm	40 mm	30 mm		
Internal reinforcement	Syn	mbolic Pre	review									
Opening reinforcement		l	nternal									
**												
Perimeter reinforcement	t											
4	,		+++++++++++++++++++++++++++++++++++++++									+++-
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New Item – adds an additional line of reinforcement. A maximum of 2 lines are allowed.

Remove Item – removes reinforcement definition line.

Move Up/down – moves them in defined direction.

Count - defines how many bars you want to create at perimeter edge. A maximum of 2 rebar may be placed in one row.

Anchorage Length – defines the length of rebar that should extend from opening edge when the perimeter changes. If it will meet another edge, then the bar will be bent along interfering wall edge to meet anchorage length requirements.

L Shape Leg Length – what should be the length of L shape bar in the corners.

Position - the position of bars depends on their Count.

If Count=1, you can choose to place it at center or with offset from selected face.

If Count=2, they will be placed by using Interior and Exterior Cover values.

Edge Cover – distance from wall edge face to rebar face.

Interior Cover - cover from Internal Face of wall layer to rebar face. If Count=1, it is switched OFF and Position=Center.

Exterior Cover – cover from Exterior Face of wall layer to rebar face. If Count=1, it is switched OFF and Position=Center.

End Cover – if anchored bar meets another edge of the wall and is bent to meet anchorage length, this parameter will define the distance between that edge and bent bar face.

Perimeter Diagonal Rebar

Perimeter Diagonal Rebar refers to diagonal bar at the corners of perimeter.

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R Wall Reinfor	cement Configurations									-		×
Configuration:	diagonal rebar	~	Save	Save As Rename De	elete							
Common settings Edge Rebar Diagonal Rebar U/O-Stirrups Configuration New Item Remove Item Move Up Move Down												
E E	cternal reinforcement		Count	Rebar Type	Bar Length	Position	Edge Cover	Interior Cover	Exterior Cover	End Cover		
		1	1	H12 v	1600 mm	Center v	25 mm			25 mm		
I III III	iternal reinforcement	- Syr	mbolic Pre	eview								
¢	pening reinforcement			nternal								
FT P	erimeter reinforcement											
<	>								Save &	Close	Canc	el

Settings are similar as in Perimeter Edge Rebar definition. Different options are described below: **Bar Length** – length of rebar. If there is not enough space it will be bended along interfering wall edge. **Edge cover** – cover from corner of opening to rebar.



R Wall Reinforcement Configurations ×						
Configuration: Default Configuration	✓ Save Save As Ren	ame Delete				
Common settings	Edge Rebar Diagonal Rebar U/O-	Stirrups Create perimeter bars Vertical U-Stirrup reinforcement	✓ Horizontal U-Stirrup reinforcement			
External reinforcement	Rebar style: Rebar bar type: Rebar Hook Type:	StirrupTie H8 U bars No Hook	StirrupTie v H8 U bars v			
Internal reinforcement	Rebar Hook Orientation: Bottom/Start cover:	Right v 30 mm	Right v 30 mm			
Opening reinforcement	Top/End cover: External cover: Internal cover:	30 mm 38 mm 38 mm	30 mm 38 mm 38 mm			
Perimeter reinforcement	A-segment length: Step:	396 mm 400 mm	396 mm 400 mm			
	Distance: Usage:	50 mm Use for First Use for Last Use for Both	50 mm • Use for First Use for Last Use for Both			
< >	O-Stirrup hook type: O-Stirrup hook orientation:	✓ Vertical O-Stirrup: Vertical O-Stirrup: Stirrup/Tie - 135 deg. short × Right	Horizontal O-Stirrup: Horizontal O-Stirrup: Stirrup/Tie - 135 deg. short Right v			
			Save & Close Cancel			

Edge Rebar Diagonal Rebar U/O-	Stirrups	
	 Create perimeter bars Vertical U-Stirrup reinforcement 	✓ Horizontal U-Stirrup reinforcement
Rebar style:	StirrupTie v	StirrupTie v
Rebar bar type:	H12 *	H12 *

Create perimeter bars - if you want to create perimeter bars, turn ON. If not, switch OFF.

Vertical U-Stirrup reinforcement – turn ON if you want to have vertical U shape bars created at horizontal edges of the wall. **Horizontal U-Stirrup reinforcement** – turn ON if you want to have horizontal U shape bars created at vertical edges of the wall.

Select what settings should be used for U bar:

	Edge Rebar	Diagonal Rebar	U/O-Stirrups					
ſ			✓ Cre ✓ Ver	ate perimeter bars tical U-Stirrup reinfo	prcement	✓ Horizontal U-Stirrup rein	forcement	
	Rebar style:		Stirru	pTie	Ŷ	StirrupTie	*	
	Rebar bar ty	pe:	H8 U	bars	~	H8 U bars	Ŷ	
	Rebar Hook	Туре:	No He	ook	v	No Hook		
	Rebar Hook	Orientation:	Right		~	Right		
Bottom/Start cover:			30 mm		30 mm			
	Top/End cov	ver:		30 mm		30 mm		
	External cov	er:		38 mm		38 mm		
	Internal cov	er:		38 mm		38 mm		
	A-segment	length:		396 mm		396 mm		
	Step:			400 mm		400 mm		
1	First/Last S	pacing —						
	Distance:			50 mm		50 mm		
	Ucane			a for First		Ilse for First		

Rebar Style - Standard or StirrupTie options available. Recommended to use StirrupTie for U shape bar.

Rebar bar type - select from available rebar types in the project.

Rebar Hook Type - select hook type for U shape. Usually 'No Hook' will be selected.

Rebar Hook Orientation - choose direction of hook.

Edge Cover 1 – cover from wall perimeter face.

Edge Cover 2 – cover from opening if U bar turns to O shape in situations when A-segment length is bigger than gap between wall edge and opening.

External Cover – cover from external face of the wall layer.

Internal Cover – cover from internal face of the wall layer.

A-segment length – U bar length from the middle of short edge to the end of U legs.

Step - step of U bar along the edge of perimeter.

See explanatory images below:

Plan view:







First/Last Spacing:

08/09/21, 09:14

First/Last Spacing						
Distance:	50 mm	50 mm				
Usage:	 Use for First Use for Last Use for Both 	 Use for First Use for Last Use for Both 				

Distance – define distance from wall start/end to first rebar.

Use for First/Last - choose from which side of the wall rebar should be distributed.

Use for Both option works together with Minimal Rebar distance in common settings. Software will try to create rebar at start and end of the wall with defined distance, and then it will distribute bars from the start of the wall, and if last step is smaller than Minimal Rebar Distance, rebar at the end will be removed. (Check common settings description.)

O shape bars

O-shaped bars will be created instead of U bars if there is not enough space for U-shaped bars between perimeter edge face and opening edge face.

	✓ Vertical U-Stirrup reinforcement	Horizontal U-Stirrup reinforcement			
	Vertical O-Stirrup:	Horizontal O-Stirrup:			
O-Stirrup hook type:	Stirrup/Tie - 135 deg. short v	No Hook *			
O-Stirrup hook orientation:	Right v	Right v			



Vertical/Horizontal O-Stirrup reinforcement – turn ON if you want to create O bars instead of U bars if condition is met.
O-Stirrup hook type – choose from available hook types in the project.
O-Stirrup hook orientation – choose direction of hook.