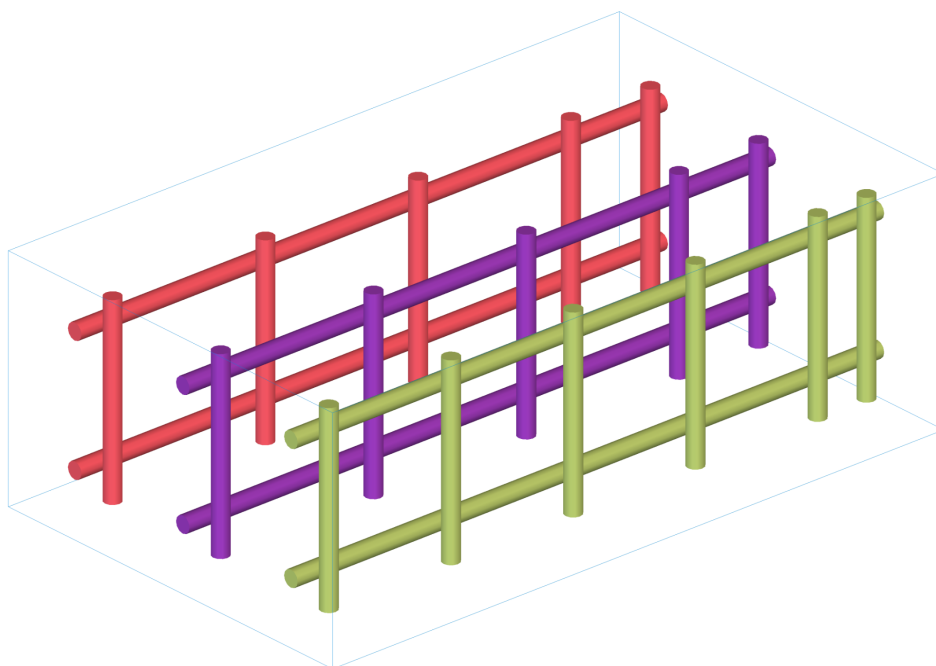




as_828(r)_WeldedMesh_01



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Foreword

The plugin **as_WeldedMesh_01 (r928)** was developed to reinforce concrete structures by flat welded meshes with only two longitudinal bars (like a ladder). Mesh is made by inputting two points, which defines its direction.

Main possibilities of the plugin are:

1. To set a height of the mesh that adapted to an element height
2. It is possible to create mesh by two different ways - by ordinary welded mesh or by rebar groups that are base on an auxiliary concrete beam
3. Automatically calculate number of cross bars depending on length of the mesh

This plugin allows to reinforce structures by flat welded meshes much easier than with using standard user-defined components.

Common data

Plugin contains an attribute **as_standard**, which has standard parameters for the plugin.

For insertion plugin it's necessary to select reinforced concrete element and pick two input points for direction of the mesh (see [figure 1](#)):

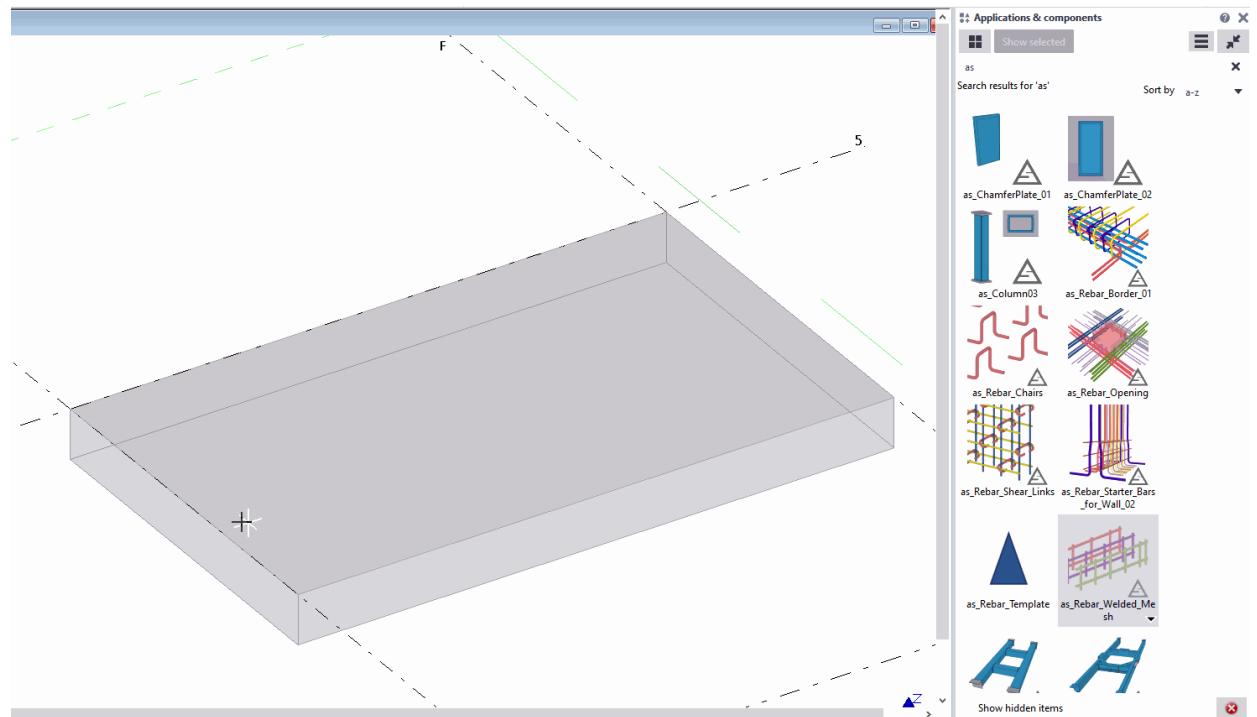


Figure 1. Example of creation



Main window of the plugin

In main plugins' window next group of properties are presented (see [figure 2](#)):

1. Group “**Dimensions**” - dimensions for welded mesh with covers (see [figure 2](#) area 1)
2. Group of properties “**Main mesh properties**”, “**Part properties**”, “**Spacing cross bars types and mesh rotation**” - setting properties for reinforcing mesh (see [figure 2](#) area 2)
3. Group properties “**Reinforcement properties**” - setting properties for bars (see [figure 2](#) area 3)

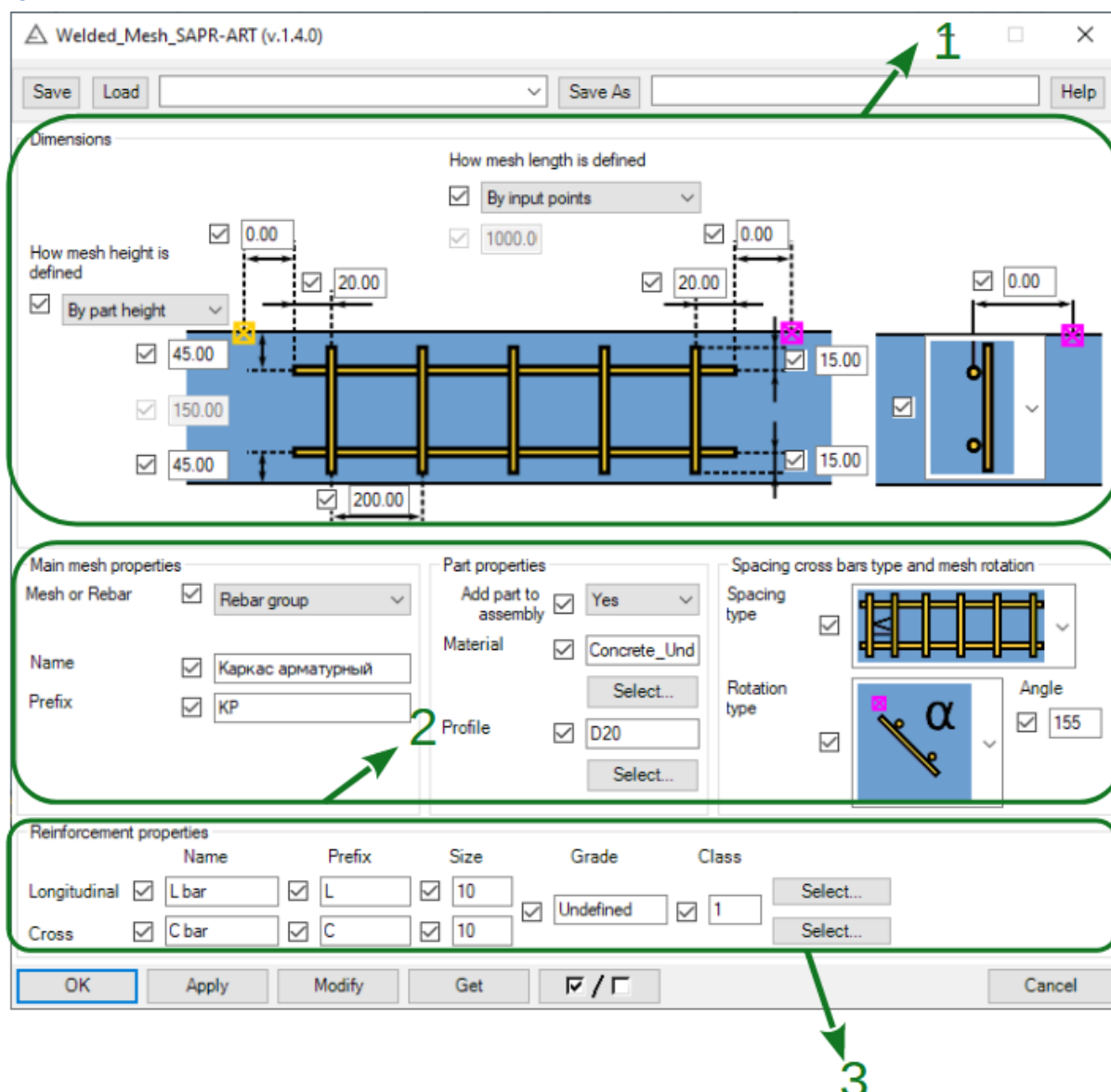


Figure 2. Main window of the plugin



Group “Dimensions”

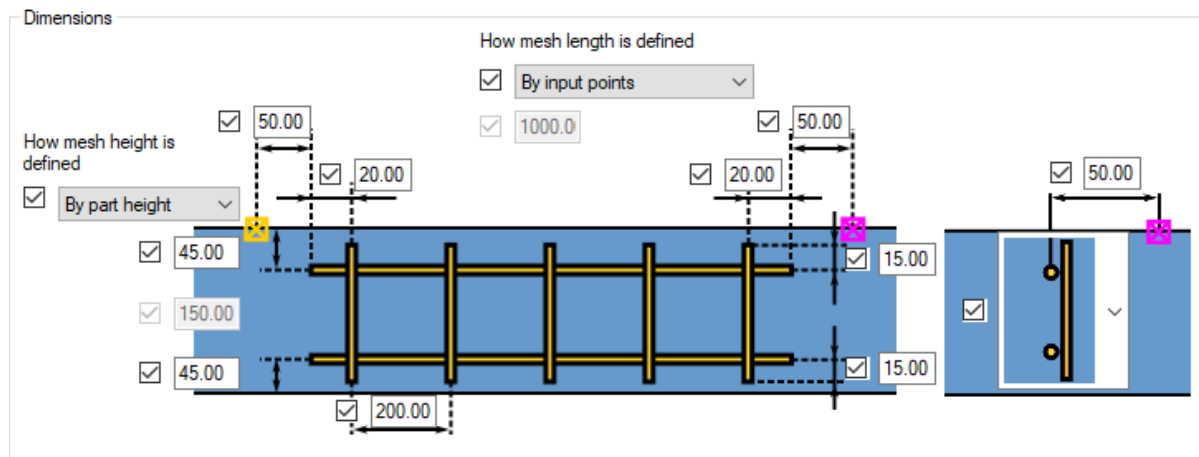


Figure 3. Group “Dimensions”

In this group of properties (see [figure 3](#)) it is possible to set next types of properties:

- Height of the mesh. It's possible to set height by two different ways - automatically or by manual input (realization of this property see [figure 4](#))

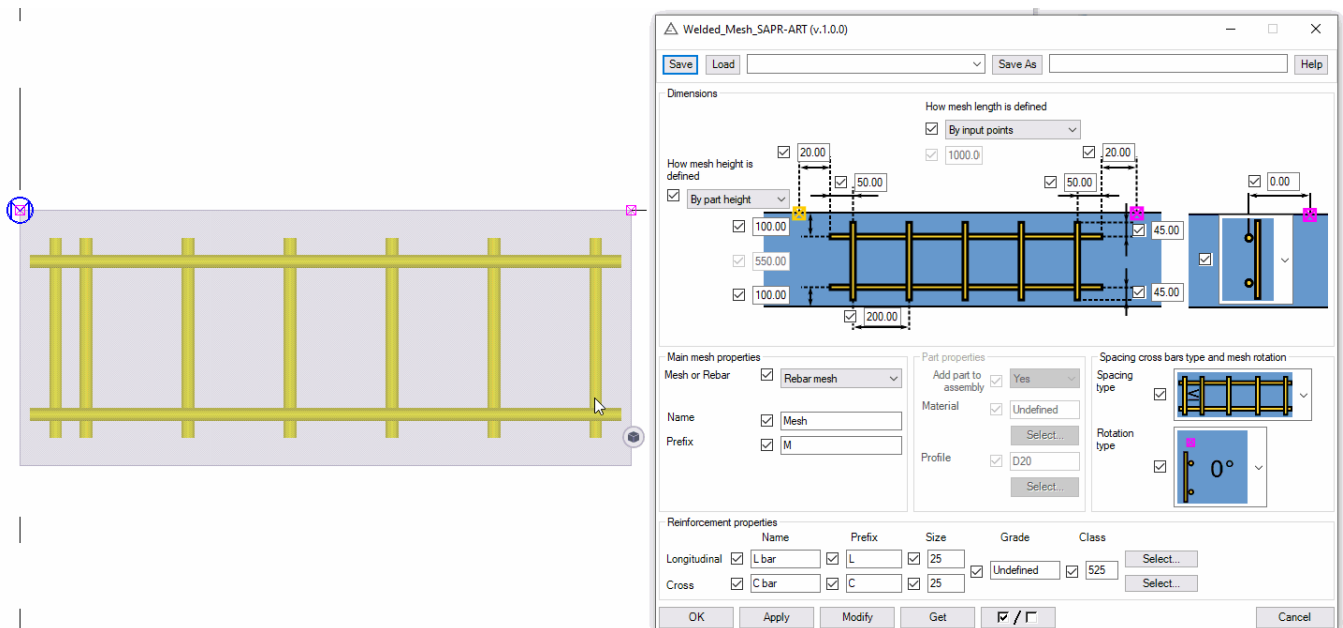


Figure 4. Modifying height of the mesh

- Length of the mesh. It is possible to set length by two different ways by two input points or by length (see [figure 5](#))

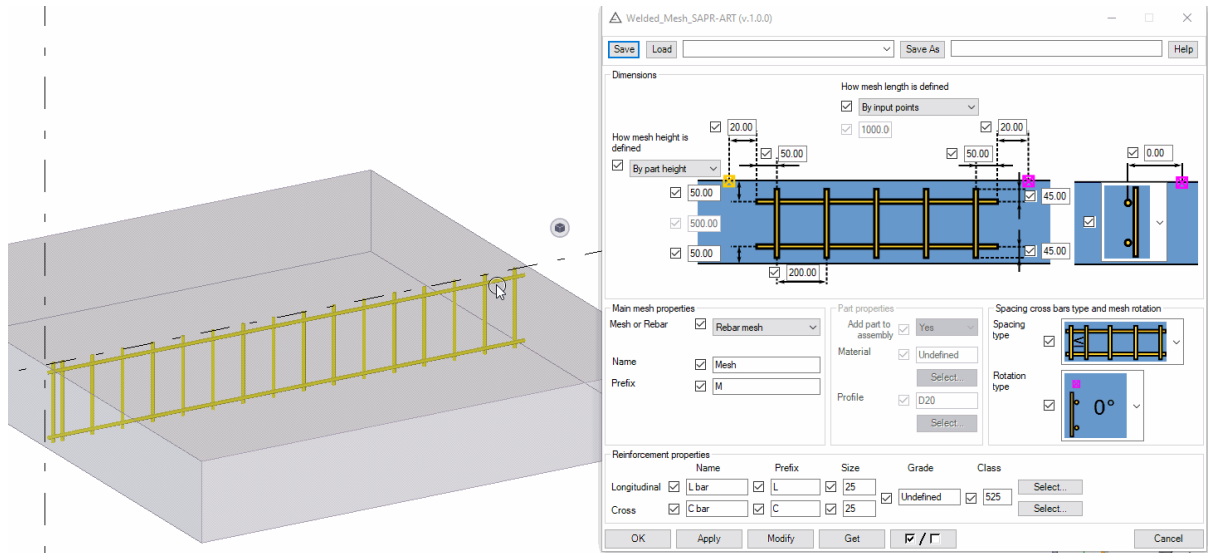


Figure 5. Modifying length of the mesh

- Modifying overhangs, spacings of the mesh and a cross bar location (see [figure 6](#))

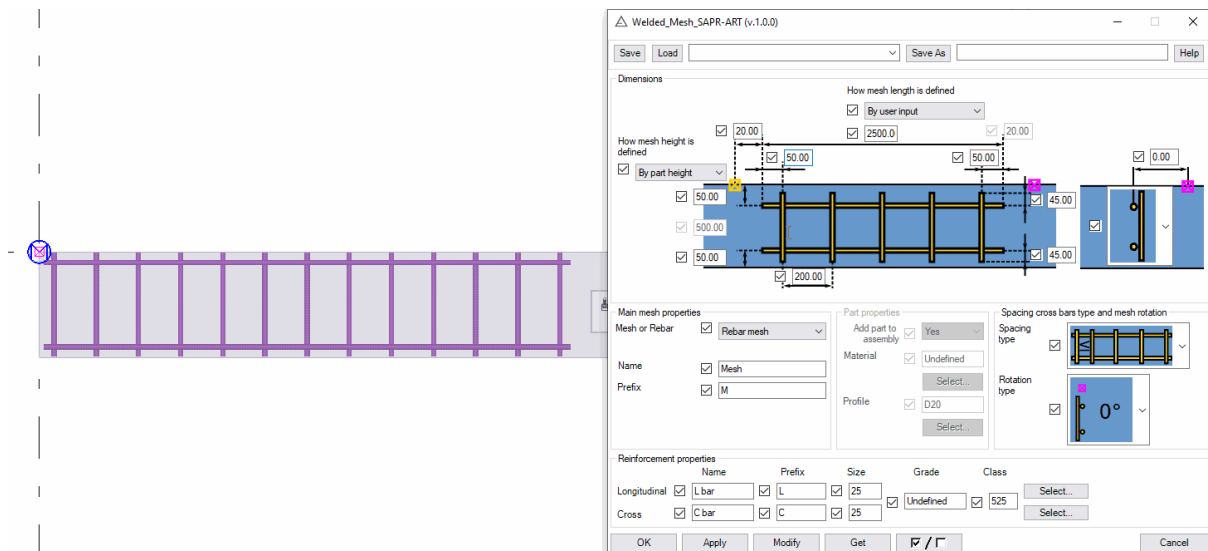


Figure 6. Modifying overhangs, spacings and cross bar location



Group “Main mesh properties”

Main mesh properties

Mesh or Rebar ☒ Rebar group

Name ☒ Mesh

Prefix ☒ M

Figure 7. Group of properties “Main mesh properties”

This group of settings (see [figure 7](#)) allows setting next properties for mesh:

- Creation type (by the mesh or by the rebar group)
- Name - name of the mesh
- Prefix - prefix of the mesh

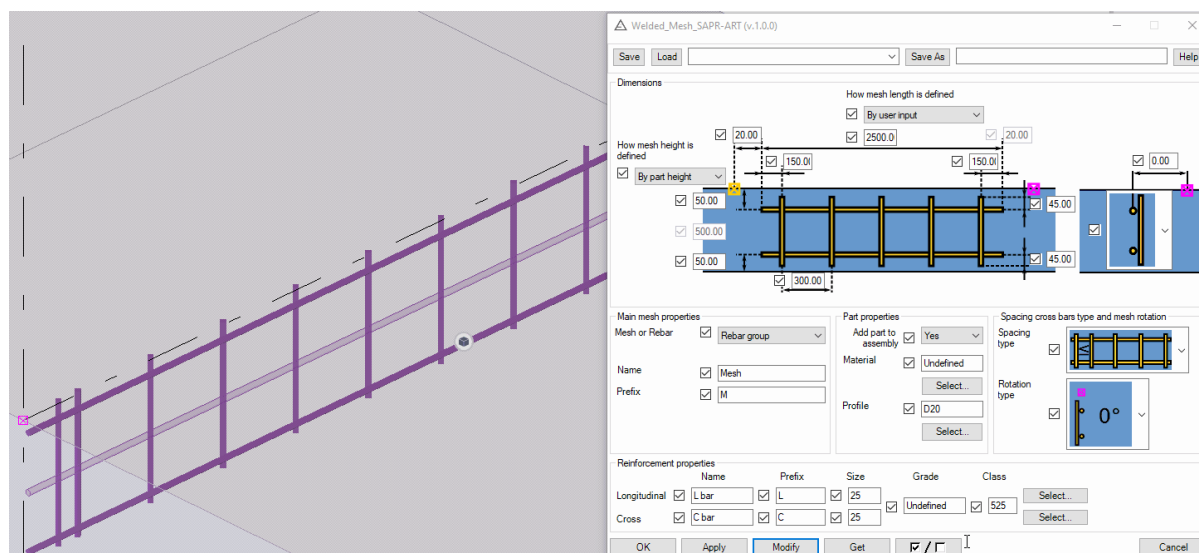


Figure 8. Different types of a creation



Group “Part properties”

Figure 9. Group “Part properties”

This group is active only when the mesh is created by a rebar group. It's possible to set next properties in this group (numbering of the list equals to numbers of areas in the [figure 9](#)):

1. Adding the part to concrete assembly.
2. Select material and profile for the part

Group “Spacings cross bars type and mesh rotation”

Figure 9. Group “Spacings cross bars type and mesh rotation”

Here it is possible to set:



1. Flexible spacing at the start or at the end (see [figure 10](#)). In version 1.4 it became possible to set a middle flexible spacing to the welded mesh.
2. Rotation of the welded mesh (see [figure 10](#))

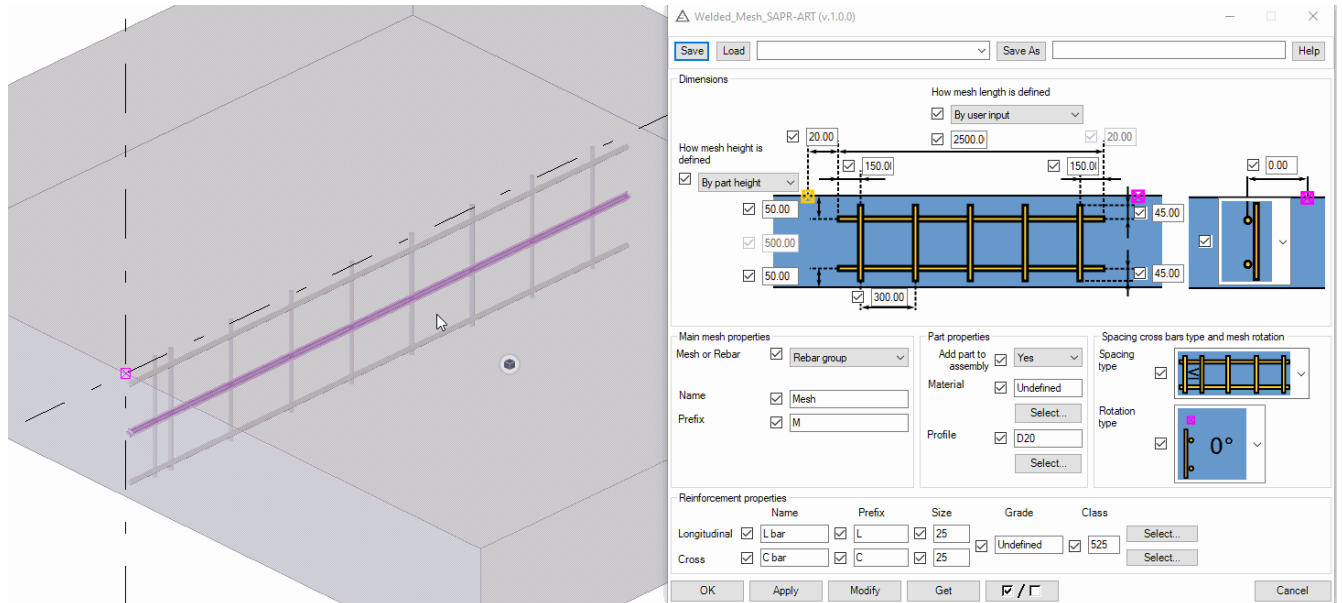


Figure 10. Rotation and modifying spacing type

3. In new version 1.4 it became possible to rotate the mesh at an random angle (see [figure 10.1](#))

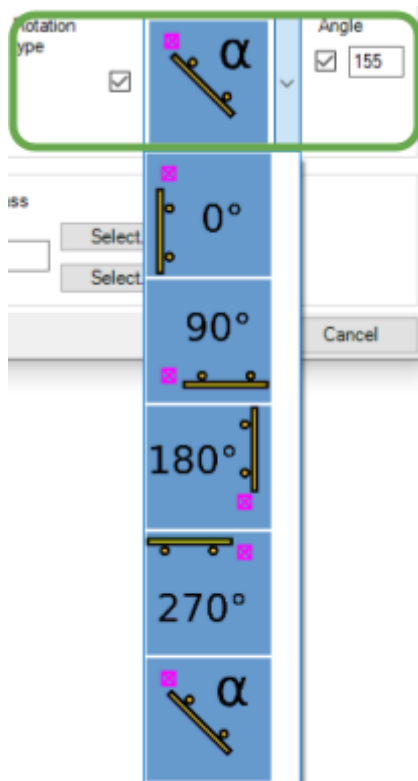


Figure 10.1. Rotation the mesh at an random angle



Group “Reinforcement properties”

Reinforcement properties							
		Name	Prefix	Size	Grade	Class	
Longitudinal	☒	L bar	☒	L	☒	10	☒
						Undefined	☒
							1
							Select...
Cross	☒	C bar	☒	C	☒	10	☒
							Select...

Figure 11. Group “Reinforcement properties”

This group allows setting properties for name, prefix, size, grade and class for longitudinal and cross bars.