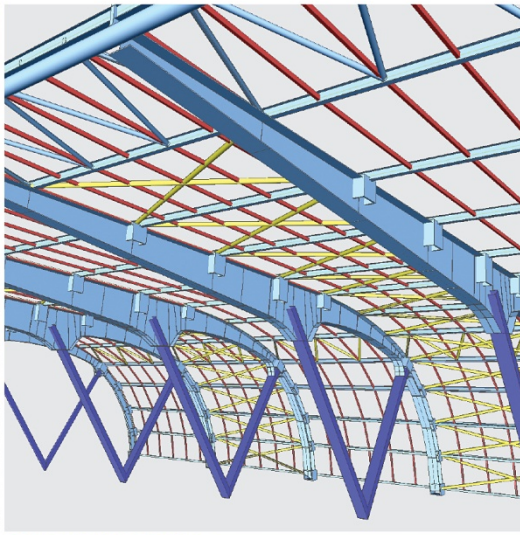
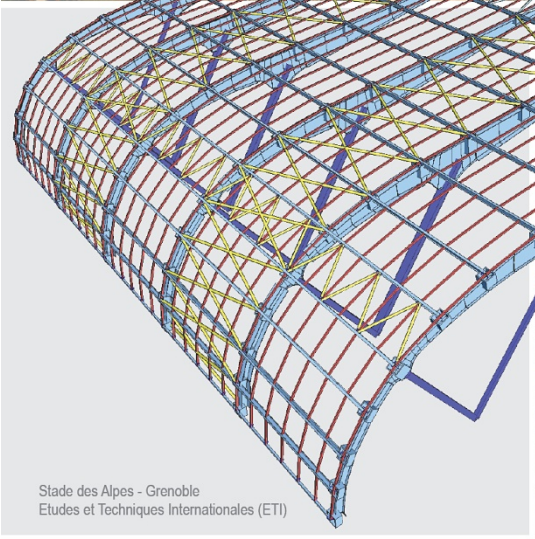
NEMETSCHEK Scia





Stade des Alpes - Grenoble
Etudes et Techniques Internationales (ETI)

Tutorial

Dimension styles

Scia Engineer

Table of contents

How to define the Dimension style, insert Dimension to the project and how to edit it.....4

Your task:..... 4

Definition of the Dimension style:..... 4

Inserting the Dimension line to the project:..... 6

Editing of Dimension line:..... 9

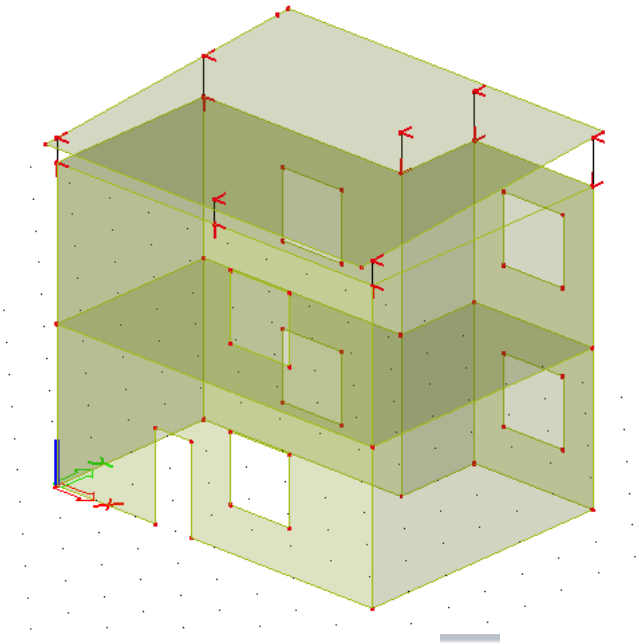
How to define the Dimension style, insert Dimension to the project and how to edit it

Your task:

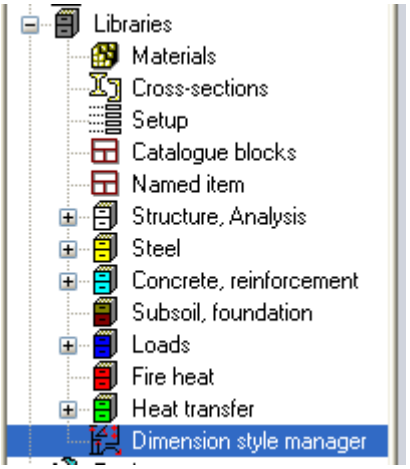
You will define the Dimension style for the project and you will insert some dimensions (dimension lines) to the model according to this predefined style.

Definition of the Dimension style:

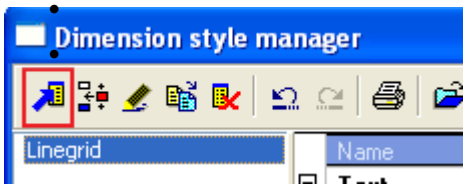
1) Open the attached project – Dim.esa. You can see a structure composed of 2D plates, 1D members and openings.



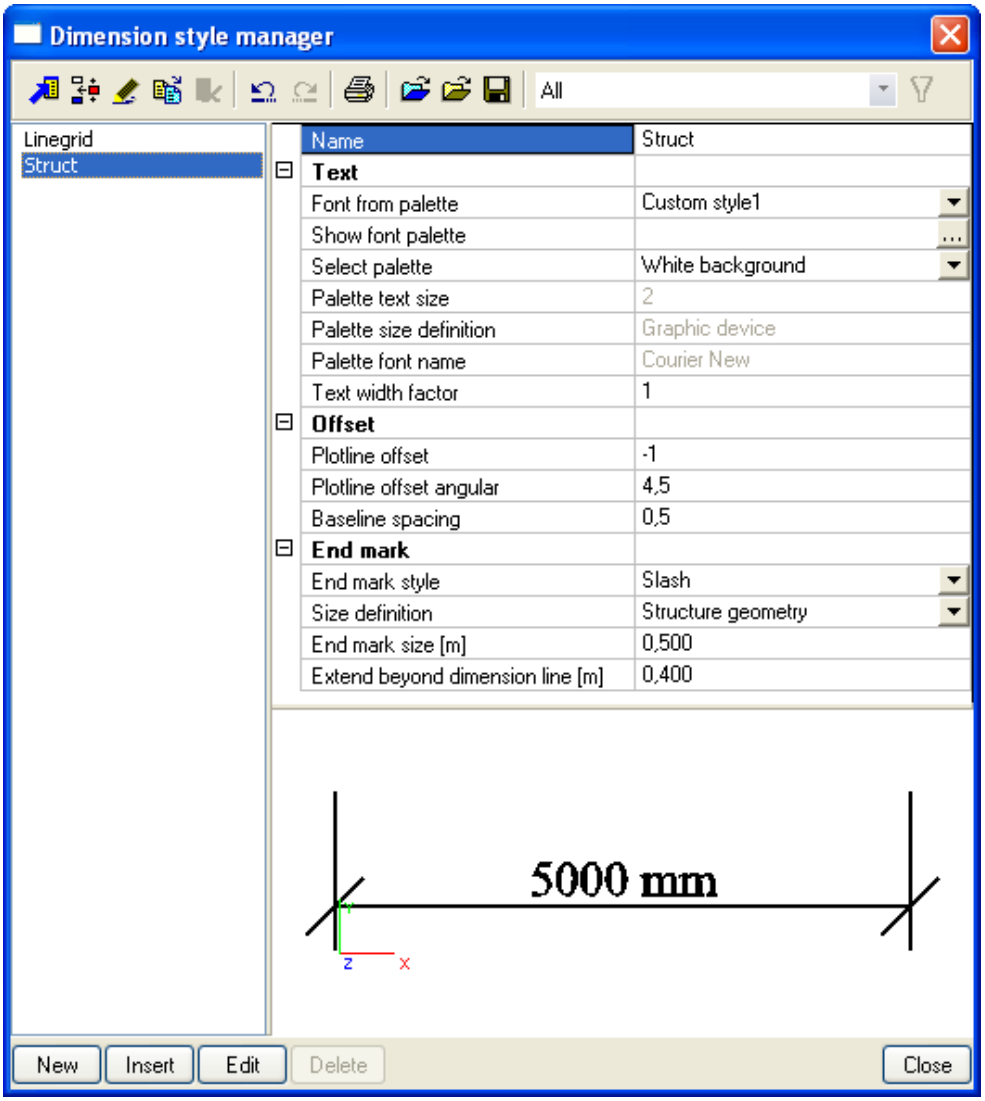
2) Check if snapping type “End points” is active. 
3) Find tool “Dimension style manager” in Libraries. This manager specifies Dimension styles which can be used in the project.



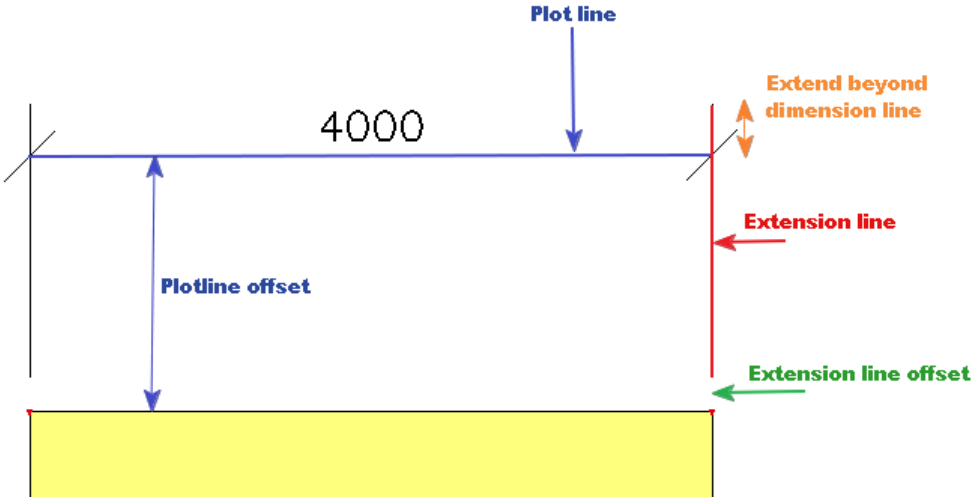
4) Open the dialogue and set a New style using the button in the top left corner.



5) Define the name of the style as “Struct” and fill in the rest of the dialogue according to the picture.

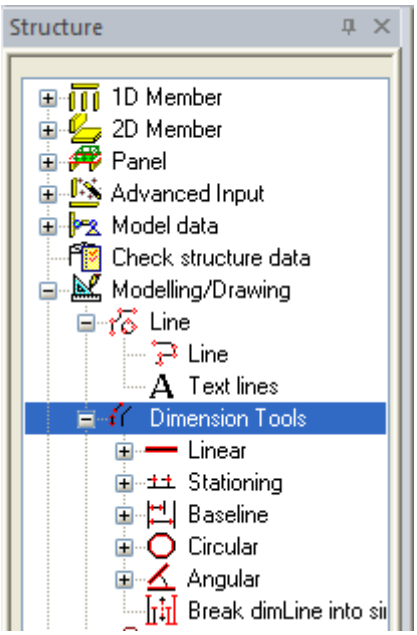


The description of the dimension line:

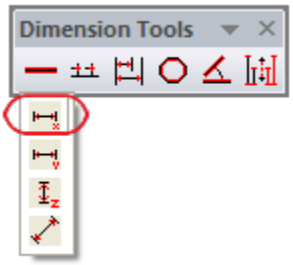


Inserting the Dimension line to the project:

1) Now you will set three main dimensions (X, Y and Z direction). You can find dimensions in service Structure->Modelling/Drawing->Dimension Tools or on the Dimension tools toolbar.

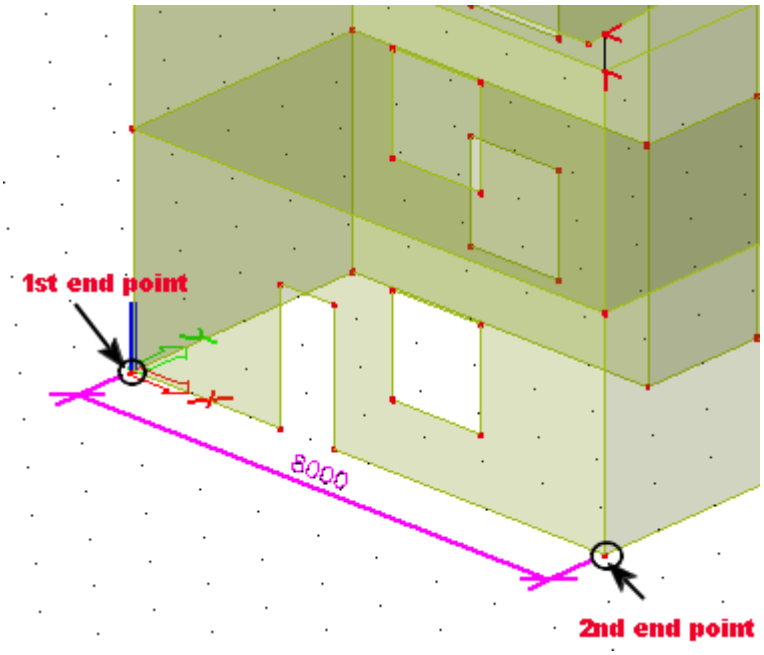


2) You select Linear dimension for the X direction.

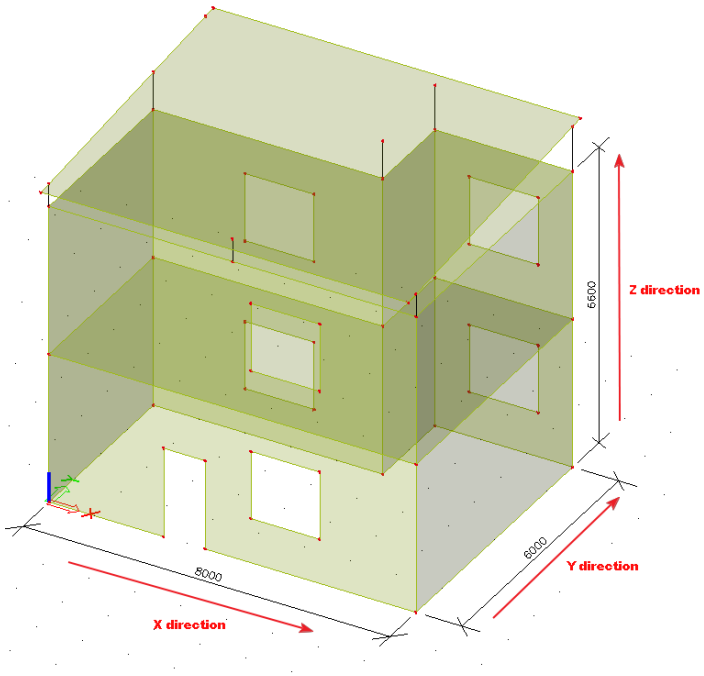


Then you select two end points (using snapping mode) at the bottom of the front wall to set the size of the wall in the X direction. (see the picture on the next page)

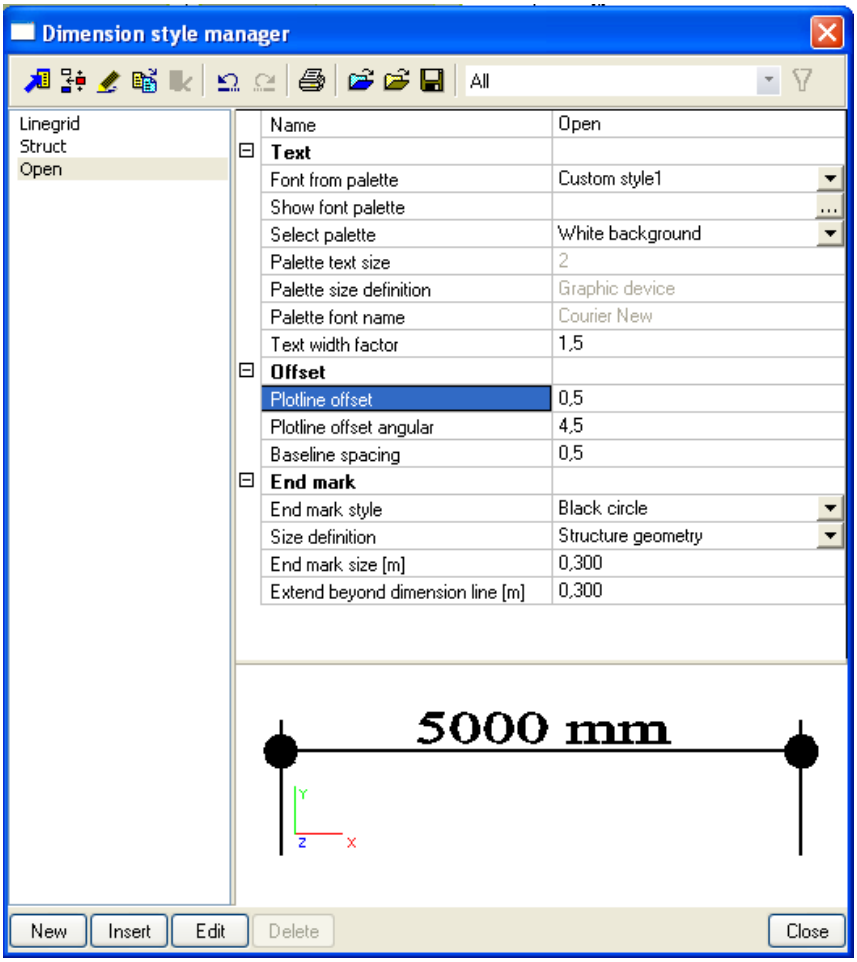
3) The dimension is continuous so after inserting the 2nd end point you confirm the operation by ESC. Now you can see the dimension pasted to the working plane in the X direction. It describes the width of the building.



4) You insert dimensions also in the Y and Z direction in the same way as in the X direction. You just need to use proper Dimension tools – the one with little Y  and little Z  , respectively.

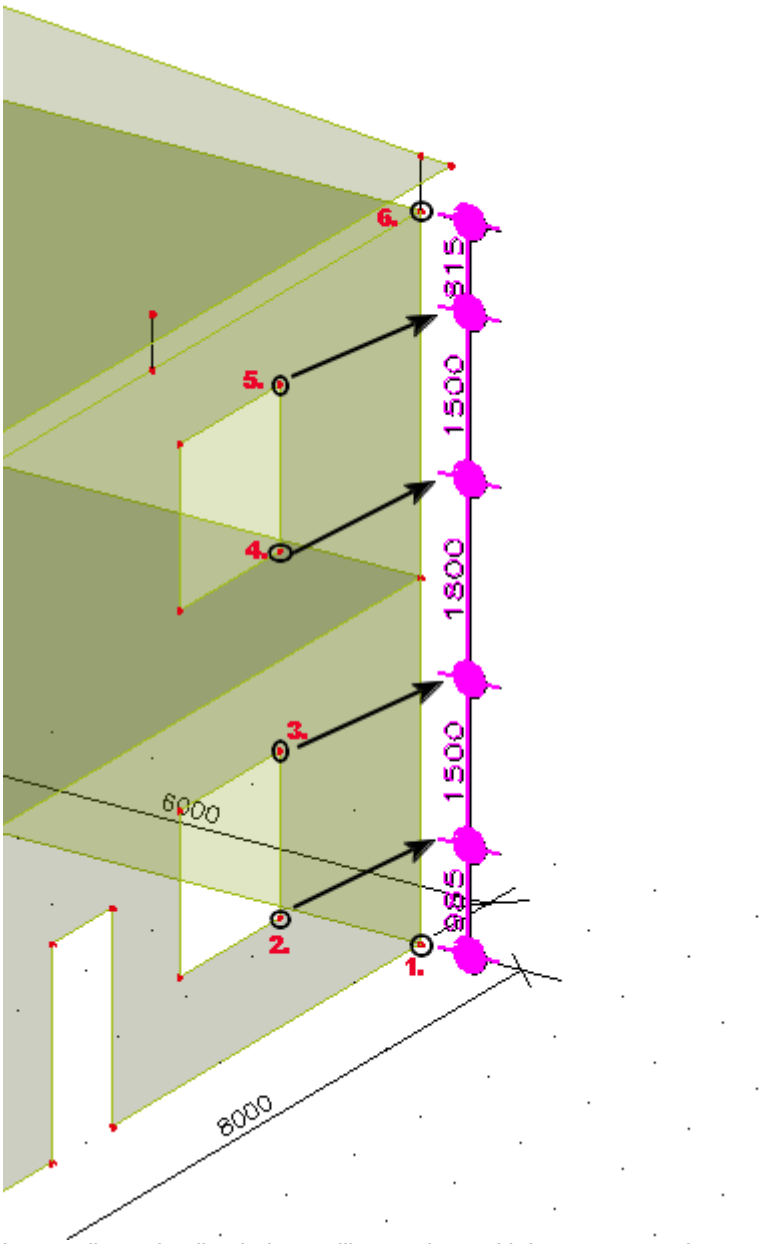


5) You define one more Dimension style for openings. Fill in the new style diylogue according to the picture below.



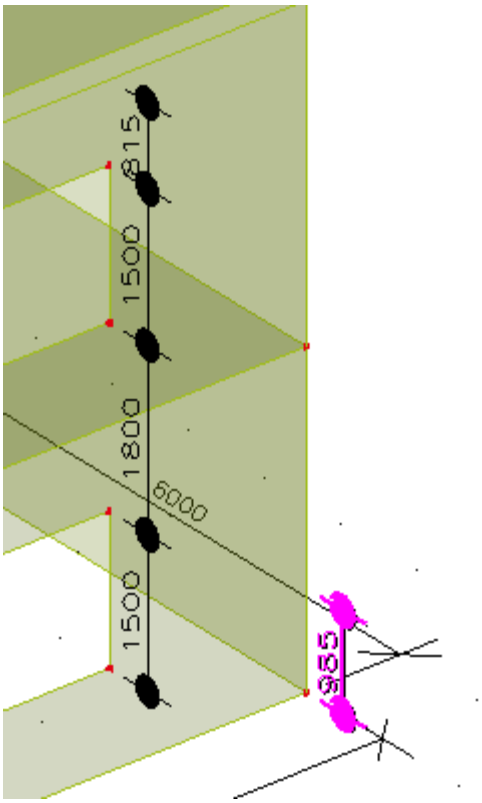
6) You use dimension in the Z direction and this time you create continuous dimension line. It starts at the bottom of the wall and it shows distances between windows in the front wall. You check the dimension style in the properties – it should be “Open”.

Order of selected end points is shown in the picture. You select six points. The first and the last one are on the edge of the wall and the rest is on opening corners.



7) Continuous dimension line behaves like one item with its own properties. You can divide a continuous dimension line to single dimensions. The tool for this operation is “Break dimLine to single dimLine”  .

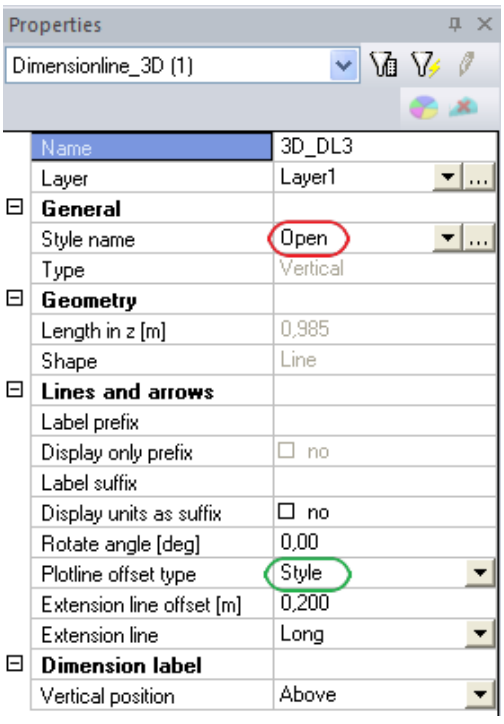
At first you select continuous dimension line for openings and then click the button for breaking. The dimension line splits to single dimensions which now can be edited separately. After splitting, each part has its own properties.



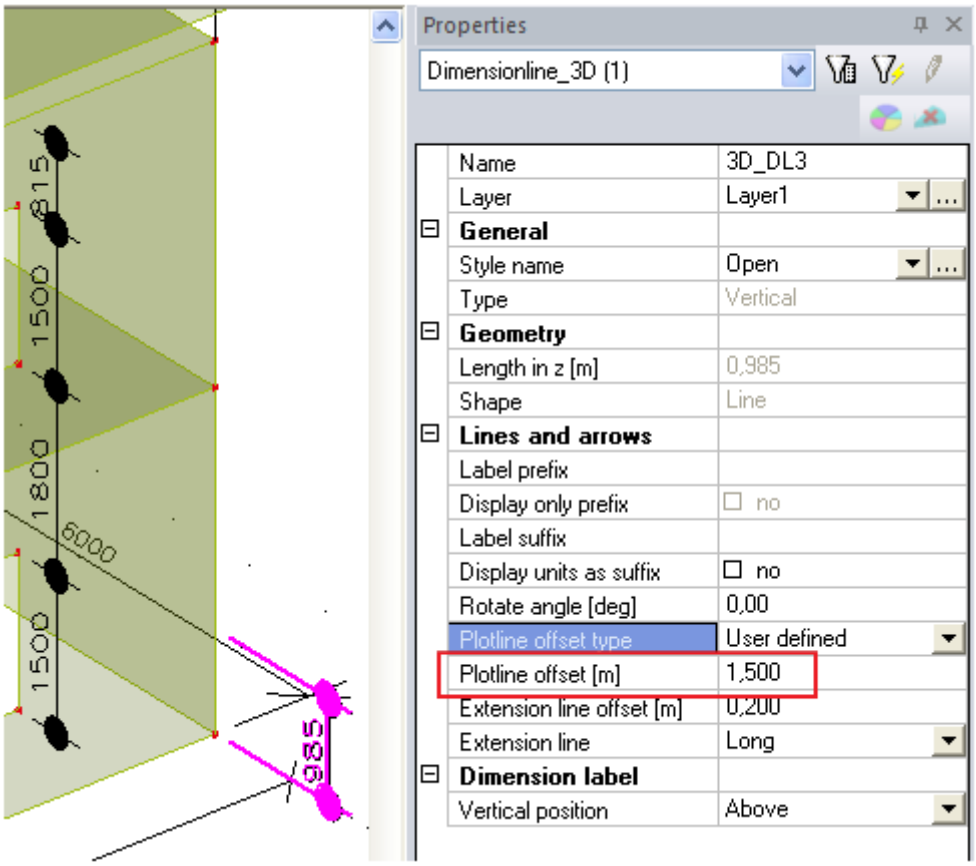
The first snapped point for every dimension defines its position. This is the reason why the first dimension line is displayed at the edge of the wall. Now you will edit this one.

Editing of Dimension line:

1) You select the lowest dimension line at the edge of the wall. The properties are displayed in the Property dialogue. You can see the selected dimension style – “Open”. The Plotline offset can be defined by “Style” (in the example – Open) or as “User defined”.

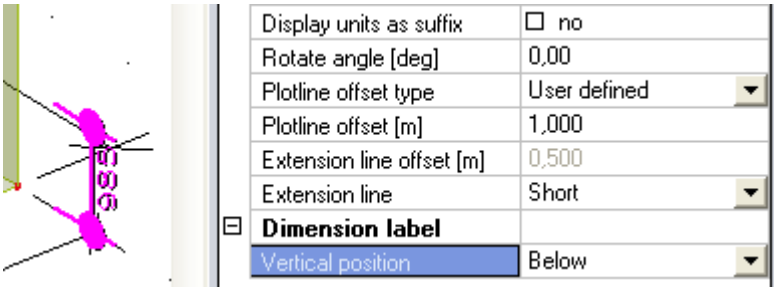


You change Plotline offset type to “User defined” and you can see the changes in the image of the dimension line. There is a new row in the properties. You can define a new plotline offset by number in this new row.

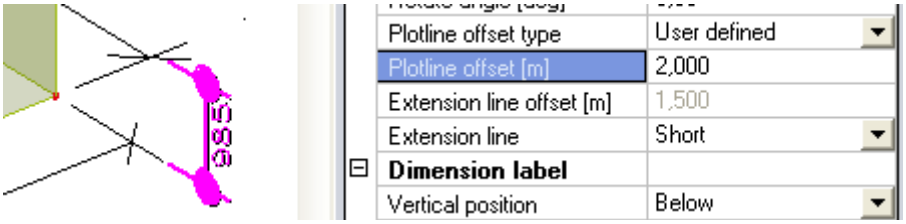


2) The plotline offset is now defined by the value in the properties and not by the definition in Dimension style “Open”.

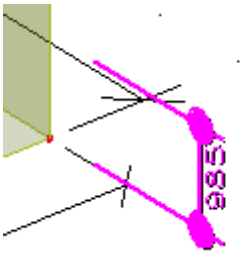
You set new values according to the next picture.



The extension line is non-editable. Extension line type “Short” has a default offset which is changed according to the Plotline offset. It always displays a short extension line. See example with Plotline offset 2m (picture below). You can see the difference from the extension lines offset which is defined by the Plotline offset value 1m (picture above).



An editable extension line offset is active only for type “Long”.



Display units as suffix	No
Rotate angle [deg]	0,00
Plotline offset type	User defined
Plotline offset [m]	2,000
Extension line offset [m]	0,600
Extension line	Long
Dimension label	
Vertical position	Below

The Final project with inserted Dimension lines and changed properties is in also attached: final_Dim.esa.